

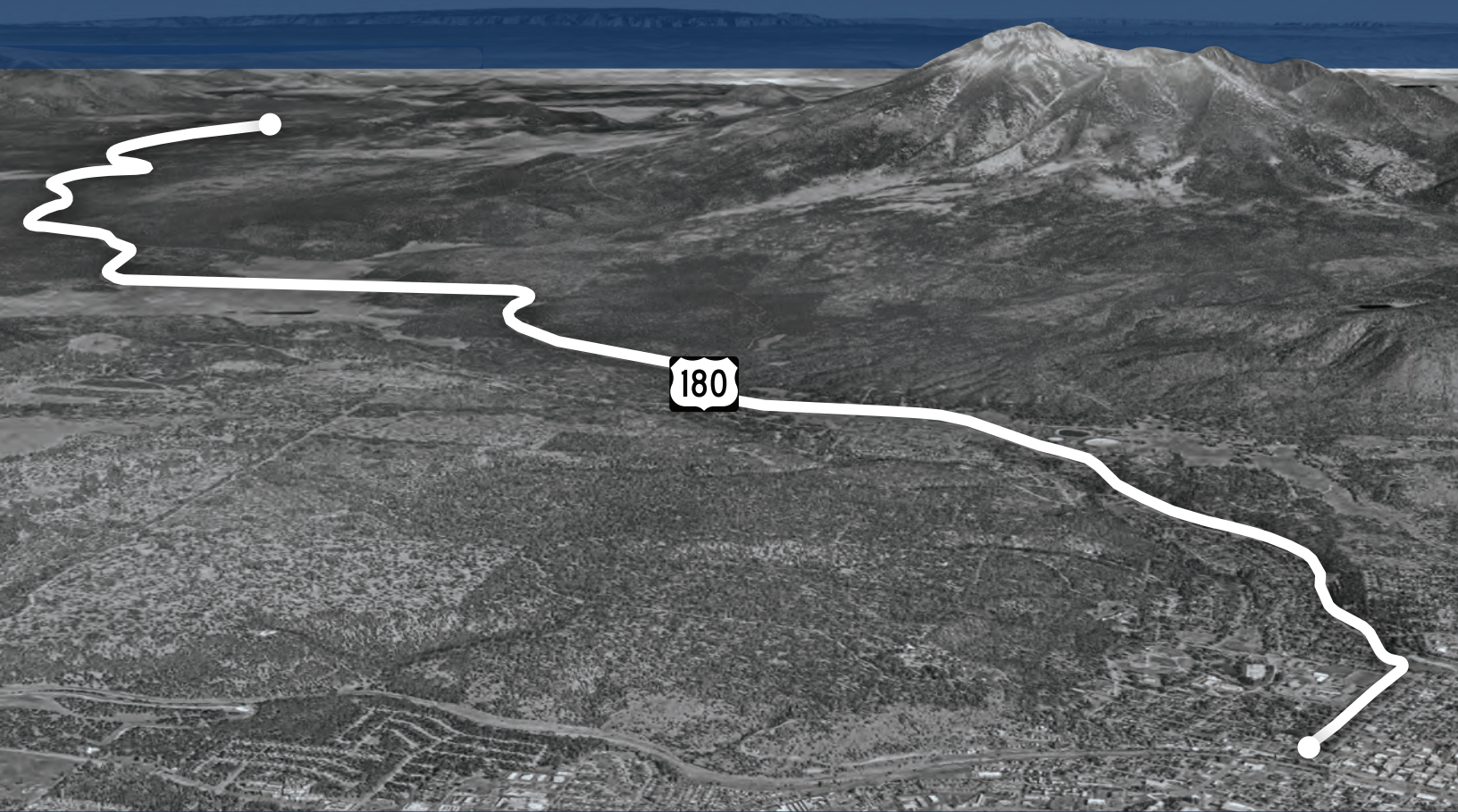


# US 180 Corridor Master Plan

*Working Paper #2 - Tier 2 & Tier 3 Analysis*



October 2020



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## 1.0 INTRODUCTION

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### 1.1 Corridor Master Plan Purpose & Need

The purpose of the US 180 Corridor Master Plan (CMP) is to identify a 20-year vision for the US 180 corridor that addresses the seven goals (expressed in Figure 1-1 below) by evaluating a mixture of previously recommended and newly introduced System Alternatives. These System Alternatives include a mix of alternatives that utilize and maintain the existing US 180 right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the US 180 corridor itself.

The System Alternatives are also complemented by a series of Base Build Spot Improvements – which constitute targeted, near term low investment mitigation measures that support mid and long-term System Alternatives.

The US 180 CMP process has included, and will continue to include public and stakeholder involvement that consists of a thorough and community-vetted, quantitative evaluation criteria exercise for the evaluation of the System Alternatives to ultimately reach a set of preferred System Alternative(s) and achieve an informed consensus by the Project Partners, stakeholders and citizens.

### 1.2 Project Partner Goals & Objectives

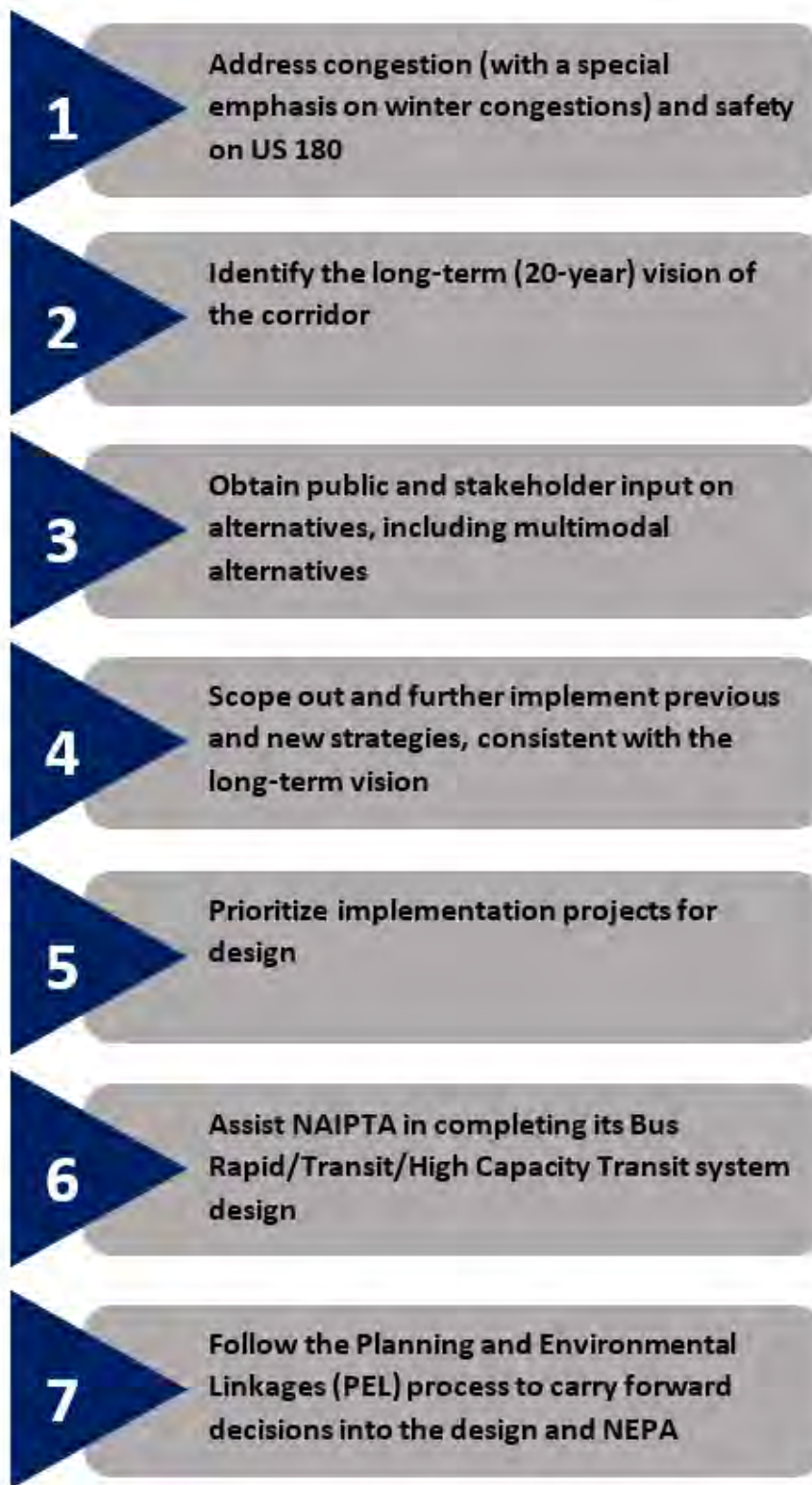
As part of the CMP Process, a team of Project Partners was assembled by representatives from the following agencies:

- Arizona Department of Transportation (ADOT);
- Flagstaff Metropolitan Planning Organization (FMPO) (AKA MetroPlan);
- Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) (AKA Mountain Line);
- City of Flagstaff;
- Coconino County;
- US Forest Service (USFS);
- Federal Highways Administration (FHWA);
- Northern Arizona University (NAU); and,
- BNSF.

The Project Partners are established to guide the success of the US 180 CMP planning process by maintaining a positive and supportive working relationship with all partnering agencies, communicating regularly, and staying committed to the project’s core values. The Project Partners met early in the planning process to agree upon and create a Charter (Appendix A) to establish a set of fundamental principles for the Partners to abide by. The Project Partners also established the following seven goals (**Figure 1-1**) for the US 180 CMP which are not prioritized in any particular order.



Figure 1-1: US 180 CMP Goals



### 1.3 US 180 Corridor Overview

US Highway 180 (US 180) is primarily an east-west running highway that travels through Texas, New Mexico and Arizona. Arizona’s portion is about 170 disconnected miles as it has been re-routed over the last several decades. In Arizona, US 180 goes through lightly populated areas between St. Johns and Holbrook, and then shares alignment with Interstate 40 (I-40) for approximately 85 miles to the City of Flagstaff. From Flagstaff, US 180 traverses northwest to its western terminus in Valle, Arizona. Illustrated in **Figure 1-2**, the US 180 Corridor Master Plan evaluates a 17.4-mile section of the highway northwest of the City of Flagstaff from the intersection of Historic Route 66 and Humphreys Street (Mile Post 215.44) to the Crowley Pit Snow Play Area (Mile Post 233.25).

This segment of US 180 is also known as the Fort Valley Highway 180 Scenic Corridor and is designated by the State of Arizona as a Scenic Road for its rural character and mountainous setting around the San Francisco Peaks. US 180 is the primary arterial thoroughfare for the surrounding rural residents and is suitable for low volume residential traffic. However, visitors seeking access to the Grand Canyon, Arizona Snowbowl, and other recreational sites within Coconino National Forest are dependent on US 180. The winter season is particularly challenging for traffic circulation on US 180, and at peak times the corridor is congested in a gridlock fashion, affecting local traffic while also posing a tremendous threat to emergency vehicle’s ability to effectively traverse the corridor. While the congestion problems are often viewed as the key issue, considering the challenges regarding bicyclists and pedestrians is essential. Addressing the traffic congestion while also implementing safe and efficient travel by all modes of transportation is the priority for US 180 CMP.

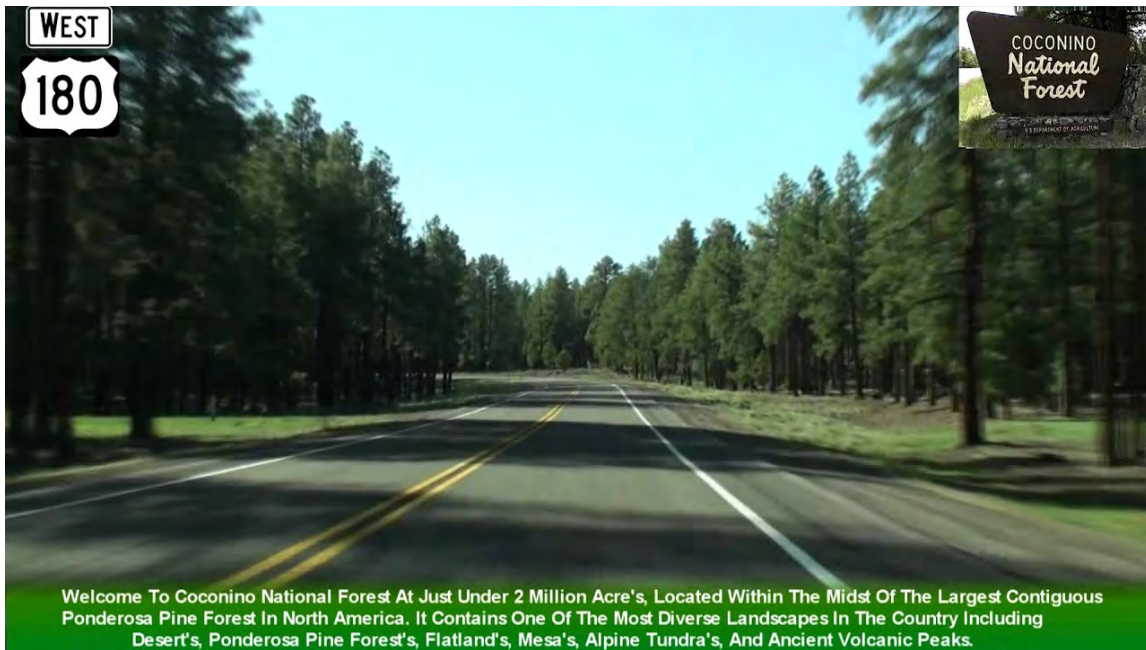
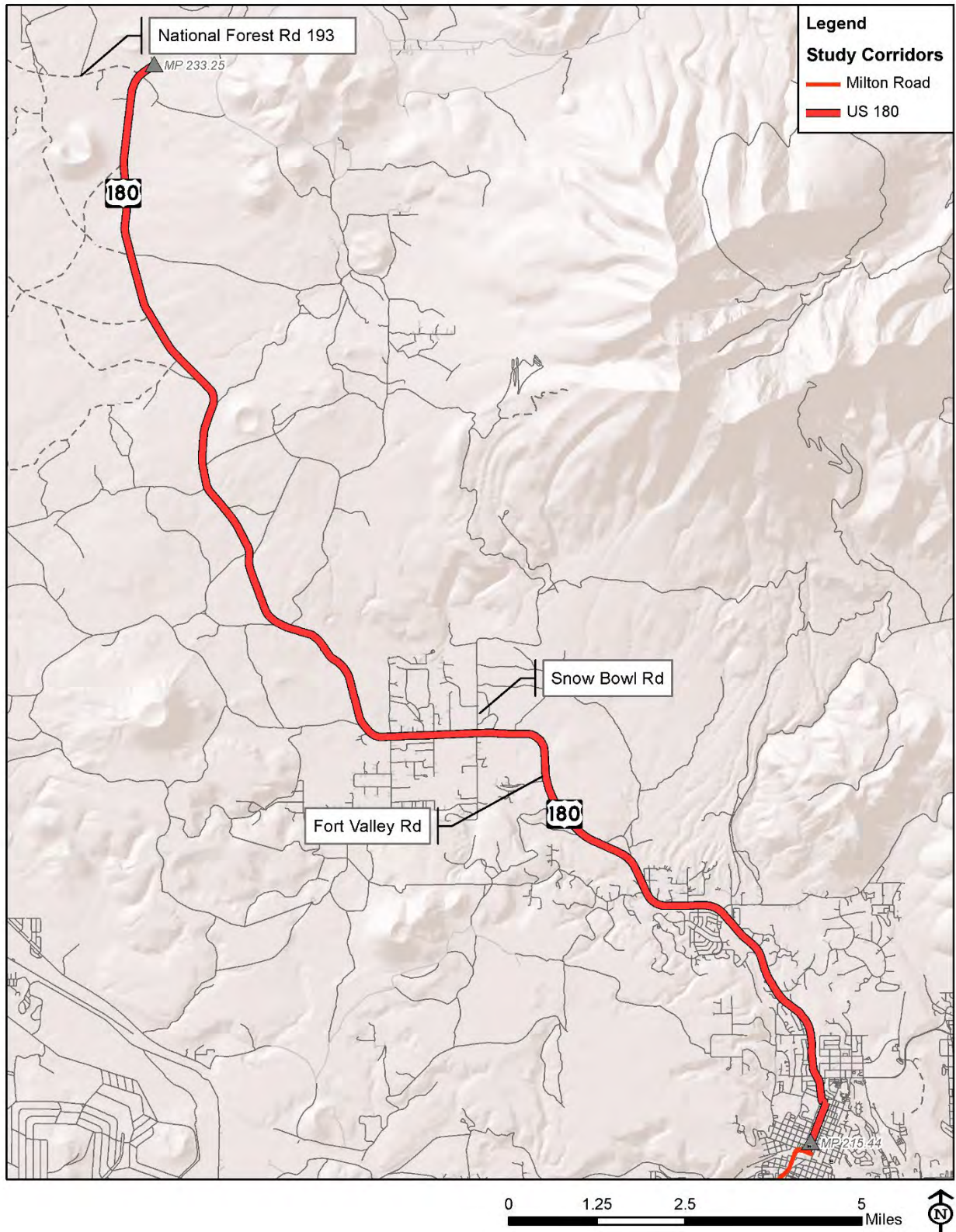




Figure 1-2: US 180 CMP Study Corridor



## 2.0 THREE TIER ALTERNATIVE EVALUATION PROCESS OVERVIEW

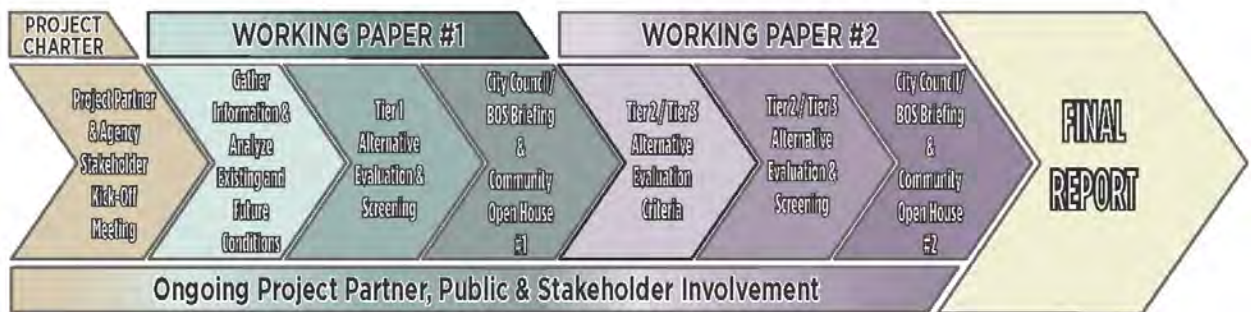
### 2.1 Working Paper #2 Objectives

The objective of *Working Paper #2 – Alternatives Analysis* is to describe the Tier 1, Tier 2, and Tier 3 Alternative Evaluation/Screening processes. *Working Paper #1 – Existing & Future Conditions* (Appendix B) and the Public Open House Meeting #1 were the foundation of Tier 1 Alternative Evaluation/Screening (refer to *Section 3.0 - Tier 1 Alternative Evaluation* for more information on Tier 1 Alternative Evaluation/Screening). However, this working paper will primarily focus on Tier 2 and Tier 3 Alternative Evaluation/Screening analysis and results. See *Section 4.0 - Tier 2 Alternative Evaluation & Selection* of this working paper for details regarding Tier 2 Evaluation/Screening analysis and results, and see *Section 5.0 - Tier 3 Alternative Evaluation* of this working paper for details regarding Tier 3 Evaluation/Screening analysis and results.

The results of Working Paper #2 will be presented to the City of Flagstaff City Council, the Coconino County Board of Supervisors, and the community through Virtual Public Open House Meeting/Survey #2 prior to the development of the Final Report, which will include a recommended alternative(s).

Figure 2-1 illustrates the progression of the US180 Road CMP process.

Figure 2-1: US 180 CMP Study Process



### 2.2 Three Tier Approach

The US 180 CMP alternative evaluation and screening process includes a Three Tier approach (**Figure 2-2**) that is discussed in detail in throughout this working paper. Each of the Three Tier Alternative Evaluation and Screening processes have been conducted under the guidance and advice of the Project Partners with updates and meetings at major milestones during the process. The Three Tiers are described below.

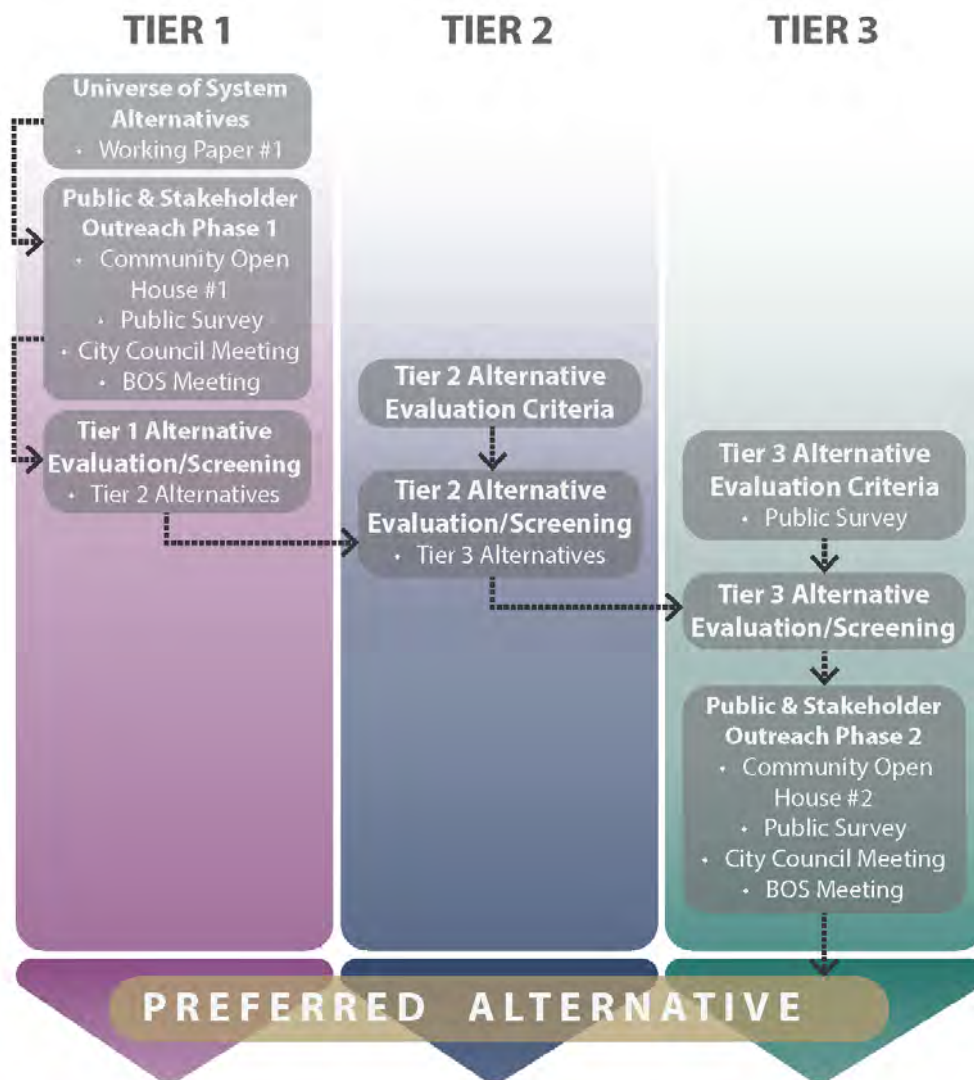
- **Tier 1 Alternative Evaluation** was based on public and stakeholder feedback on the Preliminary System Alternatives developed through the initial phases of the study



presented in *Working Paper #1 – Existing & Future Condition* (Appendix B) for the first screening of alternatives.

- **Tier 2 Alternative Evaluation** focused on the development of qualitative and quantitative evaluation criteria to analyze and measure the performance of the Tier 2 Alternatives.
- **Tier 3 Alternative Evaluation** expanded upon efforts conducted in the Tier 2 Alternative Evaluation phase to further analyze the remaining alternatives through a further refined series of diverse evaluation criteria focusing on quantitative measures to complement qualitative traffic modeling outputs to assess the overall performance of the Tier 3 Alternatives.

**Figure 2-2: Three Tier Alternative Evaluation Process Flowchart**



### 3.0 TIER 1 ALTERNATIVE EVALUATION

The foundation of Tier 1 Alternative Evaluation was based on public and stakeholder feedback on the Preliminary System Alternatives presented in *Working Paper #1 – Existing & Future Conditions* (Appendix B). The majority of the feedback was received at Public Open House Meeting #1 held at Flagstaff High School on May 3, 2018 in which 186 community members attended.

The primary objective of Public Open House Meeting #1 was to present the Preliminary System Alternatives for the US 180 CMP study corridor and seek public input to help the Project Partners determine which Preliminary System Alternatives should move forward into Tier 2 Alternative Evaluation. A simple sticky-dot prioritization exercise (just one of many sources of data captured at this meeting) was utilized on the display boards at four stations to capture which preliminary system alternatives were preferred - or not preferred - by meeting community members who attended the meeting. Each participant was given one sticky-dot for each alternative and then asked to place a sticker based on whether they believed each Preliminary System Alternative should either *Move Forward for Further Study*, *Be Eliminated from Further Study*, or *Move Forward for Further Study with Adjustment*. **Table 3-1** shows and summarizes the results of the sticky-dot prioritization exercise for each System Alternative with the total number of dots for each category. Refer to Appendix C for the *US 180 CMP Public Open House Meeting #1 Summary Report*



*Photo of public participation at the Public Open House Meeting #1*

Table 3-1: Preliminary System Alternative Sticky-Dot Prioritization Exercise Results from Public Open House #1

Station/Preliminary System Alternative	Move Forward for Further Study	Be Eliminated from Further Study	Move Forward for Further Study with Adjustment
<b>Station 2: System Alternatives Utilizing Existing Right-of-Way</b>			
<b>Preliminary System Alternative 1:</b> No Build (Maintain as Is)	Not Applicable		
<b>Base Build Spot improvements</b>	<b>See Base Build Spot Improvement Results</b>		
<b>Preliminary System Alternative 2:</b> Humphreys St Southbound PM Peak Managed Lane	<b>45</b>	35	0
<b>Station 3: System Alternatives that May Require Expanded Right-of-Way</b>			
<b>Preliminary System Alternative 3:</b> Four General Purpose Lanes, Center Median, Bike Lanes and Shoulders on both Sides	51	<b>52</b>	0
<b>Preliminary System Alternative 4:</b> US 180 AM and PM Peak Managed Lane from Meade Street south to Downtown	<b>48</b>	36	0
<b>Preliminary System Alternative 5:</b> Humphrey’s Street One Way Northbound for AM Peak & One Way Southbound for PM Peak, and right turn capacity at Beaver Street and Columbus, and Humphrey’s Street and SR 40B	17	<b>69</b>	1
<b>Preliminary System Alternative 6:</b> Dynamic Southbound Shoulder	<b>50</b>	28	1
<b>Station 4: Alternative Routes to US 180</b>			
<b>Preliminary System Alternative 7:</b> Columbus Avenue to Switzer Canyon Drive to Route 66	23	<b>36</b>	0
<b>Preliminary System Alternative 8:</b> Columbus Avenue to Beaver Street to Butler Avenue (Southbound One Way) & Butler Avenue to San Francisco Street to Columbus Drive	4	<b>48</b>	0
<b>Preliminary System Alternative 9:</b> Forest Ave to Turquoise Dr to Switzer Canyon Dr to Rte 66	8	<b>43</b>	0
<b>Preliminary System Alternative 10:</b> Cable Propelled Gondola	Previously Removed by Project Partners		
<b>Preliminary System Alternative 11:</b> Milton Road to West Route 66 to Flagstaff Ranch Rd to I-40	4	<b>48</b>	0
<b>Preliminary System Alternative 12:</b> Lone Tree Road	<b>65</b>	19	0
<b>Preliminary System Alternative 13:</b> Mike’s Pike St/Future Overpass/Humphrey’s St one way NB & Kendrick Street/Sitgreaves Street/existing underpass to Milton Road SB	10	<b>65</b>	0
<b>Preliminary System Alternative 14:</b> Milton Road to West Route 66 to Woodland’s Village Boulevard to Beulah Boulevard to John Wesley Powell Boulevard to I-17 South	10	<b>36</b>	0
<b>Preliminary System Alternative 15:</b> Bader Road to FS 518 to A-1 Mountain Road to I-40	67	<b>92</b>	0
<b>Preliminary System Alternative 16:</b> Snow Bowl Road to A-1 Mountain Road to I-40	56	<b>78</b>	0
<b>Preliminary System Alternative 17:</b> Wing Mountain Road to FS Road 222b to FS Road 171	<b>113</b>	28	0
<b>Preliminary System Alternative 18:</b> Hidden Hollow Road to FS 506 to I-40	<b>57</b>	56	0

## 4.0 TIER 2 ALTERNATIVE EVALUATION & SELECTION

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### 4.1 Tier 2 Alternative Evaluation

Subsequent to Public Open House Meeting #1 of May 3, 2018, the Project Partners deliberated over a series of meetings to discuss and select which US 180 alternatives that would proceed to the Tier 2 analysis stage. Utilizing the technical inputs and analysis presented in *Working Paper #1 Existing & Future Conditions* as well as drawing from the public and stakeholder inputs received from the public open house meeting and survey, the Project Partners evaluated the public feedback and technical findings to recommend Tier 1 alternatives for Tier 2 consideration.

The Project Partners were presented with the summary results of Public Open House Meeting #1. Based upon the information presented, as well as the previous technical considerations contained in Working Paper #1, the Project Partners agreed to move forward with the following system alternatives for Tier 2 consideration:

- No-Build;
- Alternative 2;
- Alternative 3;
- Alternative 4;
- Alternative 6;
- Alternative 7;
- Alternative 12
- Alternative 17; and
- Alternative 18.

**Table 4-1** shows which of the Tier 1 Preliminary System Alternatives were elected to move forward into Tier 2 Alternative Evaluation by the Project Partners.

### 4.2 Refinement of the Tier 2 Recommended Alternatives

Once the initial selection of the Tier 2 alternatives was established, the next series of Project Partner meetings began to focus on a refinement of the Tier 2 alternatives as previously presented. It was recognized by the Project Partners that, while the Tier 1 alternatives selected for Tier 2 analysis generally captured the range and functionality of facility types being sought/preferred, those roadway cross sections needed to reflect the possibility of what modernized improvements, particularly for multiple modes of travel, would look like for the Build alternative types. One newly introduced transit-specific alternative was also introduced by Mountain Line for Project Partner consideration in line with the project goals.



Table 4-1: Preliminary System Alternatives Elected to Move Forward into and Removed from Tier 2 Alternative Evaluation

Station/Preliminary System Alternative	Move Forward for Further Study	Be Eliminated from Further Study	Move Forward for Further Study with Adjustment
<b>Station 2: System Alternatives Utilizing Existing Right-of-Way</b>			
<b>Preliminary System Alternative 1:</b> No Build (Maintain as Is)	Not Applicable		
<b>Base Build Spot improvements</b>	<b>See Base Build Spot Improvement Results</b>		
<b>Preliminary System Alternative 2:</b> Humphreys St Southbound PM Peak Managed Lane	<b>45</b>	35	0
<b>Station 3: System Alternatives that May Require Expanded Right-of-Way</b>			
<b>Preliminary System Alternative 3:</b> Four General Purpose Lanes, Center Median, Bike Lanes and Shoulders on both Sides	51	<b>52</b>	0
<b>Preliminary System Alternative 4:</b> US 180 AM and PM Peak Managed Lane from Meade Street south to Downtown	<b>48</b>	36	0
<b>Preliminary System Alternative 5:</b> Humphrey's Street One Way Northbound for AM Peak & One Way Southbound for PM Peak, and right turn capacity at Beaver Street and Columbus, and Humphrey's Street and SR 40B	<b>17</b>	<b>69</b>	<b>1</b>
<b>Preliminary System Alternative 6:</b> Dynamic Southbound Shoulder	<b>50</b>	28	1
<b>Station 4: Alternative Routes to US 180</b>			
<b>Preliminary System Alternative 7:</b> Columbus Avenue to Switzer Canyon Drive to Route 66	23	<b>36</b>	0
<b>Preliminary System Alternative 8:</b> Columbus Avenue to Beaver Street to Butler Avenue (Southbound One Way) & Butler Avenue to San Francisco Street to Columbus Drive	4	<b>48</b>	0
<b>Preliminary System Alternative 9:</b> Forest Ave to Turquoise Dr to Switzer Canyon Dr to Rte 66	8	<b>43</b>	0
<b>Preliminary System Alternative 10:</b> Cable Propelled Gondola	Previously Removed by Project Partners		
<b>Preliminary System Alternative 11:</b> Milton Road to West Route 66 to Flagstaff Ranch Rd to I-40	4	<b>48</b>	0
<b>Preliminary System Alternative 12:</b> Lone Tree Road	<b>65</b>	19	0
<b>Preliminary System Alternative 13:</b> Mike's Pike St/Future Overpass/Humphrey's St one way NB & Kendrick Street/Sitgreaves Street/existing underpass to Milton Road SB	10	<b>65</b>	0
<b>Preliminary System Alternative 14:</b> Milton Road to West Route 66 to Woodland's Village Boulevard to Beulah Boulevard to John Wesley Powell Boulevard to I-17 South	10	<b>36</b>	0
<b>Preliminary System Alternative 15:</b> Bader Road to FS 518 to A-1 Mountain Road to I-40	67	<b>92</b>	0
<b>Preliminary System Alternative 16:</b> Snow Bowl Road to A-1 Mountain Road to I-40	56	<b>78</b>	0
<b>Preliminary System Alternative 17:</b> Wing Mountain Road to FS Road 222b to FS Road 171	<b>113</b>	28	0
<b>Preliminary System Alternative 18:</b> Hidden Hollow Road to FS 506 to I-40	<b>57</b>	56	0

Alternatives displayed with a strikethrough were eliminated from further study during the Tier 2 Alternative Evaluation

#### 4.2a Controlling Design Criteria

Borne out of Project Partner discussions and desire to refine the newly selected Tier 2 alternatives, it was determined that a set of Controlling Design Criteria were going to be collectively developed by the Project Partners to guide Tier 2 Alternative Evaluation.

The Controlling Design Criteria were created to:

1. To identify and compare identified FHWA, ADOT, and Flagstaff/MetroPlan/Mountain Line agency standards for the various roadway features in the Milton Road corridor and ensure that ADOT/FHWA standards are met.
2. Acknowledge that once ADOT/FHWA minimum standards are met, which City of Flagstaff/MetroPlan/Mountain Line standard(s) is preferred for inclusion in any refined Tier 2 Alternative.
3. To ensure if any variances or design exceptions would require FHWA approval.
4. Use this comparison to recognize that different agencies may have different views on preferred roadway feature dimensions during the Tier 2 Analysis. As such, it was felt to be important to the planning process to document the similarities and differences between agencies, while also aiding in helping assign potential construction cost obligations between agencies (if the need should arise based on the nature of any preferred alternative that may be identified in this study process).
5. In recognition of possible different preferences between agencies, it was discussed and confirmed what type and size of roadway features ADOT would/could contribute possible construction dollars towards (should a particular alternative be recommended through this study process), versus those roadway feature types above and beyond the ADOT standards that other agencies would be required to contribute construction cost (should the need arise).
6. Flagstaff/MetroPlan/Mountain Line collectively expressed that the current adopted Flagstaff minimum standards for roadway features were a bit dated and didn't necessarily represent current policies that reflect city preferences for certain roadway features. This resulted in identifying Flagstaff/MetroPlan/Mountain Line "current standards" and "preferred standards" separately.
7. The Controlling Design Criteria information would help inform and apply the Tier 2 evaluation criteria to quantify thresholds of scoring for bicycle and pedestrian oriented features across the various alternatives.

Over the course of several meetings, the Project Partners discussed and confirmed the series of Controlling Design Criteria shown in **Table 4-2**.

Table 4-2: Controlling Design Criteria

Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
<b>General Purpose Lane Width</b>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>*Arterial Minimum - 10' with low truck and bus volumes</li> <li>Arterial desired – 12' (AASHTO 7.3 Urban Arterials)</li> </ul> <p>* Anything below 12' has to obtain <a href="#">an</a> variance from the Assistant State Engineer over Roadway Engineering Group.</p>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>*Through lane Min – 11'</li> <li>Through lane Max – 16'</li> </ul> <p><b>Rural:</b></p> <ul style="list-style-type: none"> <li>Through lane Min – 12'</li> <li>Through lane Max – 12'</li> </ul> <p>* Anything below 12' has to obtain <a href="#">an</a> variance from the Assistant State Engineer over Roadway Engineering Group.</p>	<p><b>Urban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Rural US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul>	<p><b>Urban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>11'</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>11'</li> </ul> <p><b>Rural US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul>	<p>**For these categories, the preferred widths are less than the minimums, in contexts where the City/NAIPTA/FMPO have allowed for narrower lanes to improve multimodal functionality. In urban areas in particular, the Regional Plan supports this strategy based on a case by case assessment.</p>
<b>Left Turn Lane</b>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>*Auxiliary lane Min. – 10'</li> <li>Auxiliary lane Max. – 16'</li> </ul> <p>* Anything below 12' has to obtain <a href="#">an</a> variance from the Assistant State Engineer over Roadway Engineering Group.</p>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>*Auxiliary (turn) lane Min – 10'</li> <li>Auxiliary lane Max = none</li> </ul> <p><b>Rural:</b></p> <ul style="list-style-type: none"> <li>Auxiliary lane Min – 12'</li> <li>Auxiliary lane Max – 12'</li> </ul> <p>* Anything below 12' has to obtain <a href="#">an</a> variance from the Assistant State Engineer over Roadway Engineering Group.</p>	<p><b>Urban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Rural US 180:</b></p> <ul style="list-style-type: none"> <li>11'</li> </ul>	<p><b>Urban Milton:</b></p> <ul style="list-style-type: none"> <li>11'</li> </ul> <p><b>Urban US 180:</b></p> <ul style="list-style-type: none"> <li>10'</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Rural US 180:</b></p> <ul style="list-style-type: none"> <li>11'</li> </ul>	<p>**</p>
<b>Right Turn Lane</b>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>*Auxiliary lane Min. – 10'</li> <li>Auxiliary lane Max. – 16'</li> </ul> <p>* Anything below 12' has to obtain <a href="#">an</a> variance from the Assistant State Engineer over Roadway Engineering Group.</p>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>*Auxiliary (turn) lane Min – 10'</li> <li>Auxiliary lane Max = none</li> </ul> <p><b>Rural:</b></p> <ul style="list-style-type: none"> <li>Auxiliary lane Min – 12'</li> <li>Auxiliary lane Max – 12'</li> </ul> <p>* Anything below 12' has to obtain <a href="#">an</a> variance from the Assistant State Engineer over Roadway Engineering Group.</p>	<p><b>Urban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Rural US 180:</b></p> <ul style="list-style-type: none"> <li>11'</li> </ul>	<p><b>Urban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>11' - Regional Plan policy supports no RT lanes, except at major intersections</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>12'</li> </ul> <p><b>Rural US 180:</b></p> <ul style="list-style-type: none"> <li>11'</li> </ul>	<p>**</p>
<b>Median Width</b>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>Arterial minimum Median Width – 4'</li> <li>Arterial minimum Median Width for pedestrian refuge – 6'</li> <li>*Auxiliary lane Min. – 10'</li> <li>Auxiliary lane Max. – 16'</li> </ul> <p><b>Rural:</b></p> <p>Not applicable on US 180 cross sections</p> <p>* Anything below 12' has to obtain <a href="#">an</a> variance from the Assistant State Engineer over Roadway Engineering Group.</p>	<p><b>Urban:</b></p> <ul style="list-style-type: none"> <li>Raised - 16' Through lane - 4' with a turn lane</li> </ul> <p><b>Rural:</b></p> <p>Not applicable on US 180 cross sections</p>	<p><b>Urban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>4'</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>4'</li> </ul> <p><b>Rural US 180:</b></p> <p>Not Applicable</p>	<p><b>Urban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>4'</li> </ul> <p><b>Suburban Milton &amp; US 180:</b></p> <ul style="list-style-type: none"> <li>4'</li> </ul> <p><b>Rural US 180:</b></p> <p>Not Applicable</p>	

Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
Median Width (With Plantings)			<u>Urban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>8'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>8'</li> </ul> <u>Rural US 180:</u> Not Applicable	<u>Urban Milton:</u> <ul style="list-style-type: none"> <li>12'</li> </ul> <u>Urban US 180:</u> <ul style="list-style-type: none"> <li>11'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>12'</li> </ul> <u>Rural US 180:</u> Not Applicable	Same as left turn lane - would be wider when combined with a median separating the turn lane from oncoming traffic
Median Width (With Turn Lane)			<u>Urban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>15'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>15'</li> </ul> <u>Rural US 180:</u> Not Applicable	<u>Urban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>15'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>16'</li> </ul> <u>Rural US 180:</u> Not Applicable	This assumes 4-foot median with no plantings. Can be narrowed up to 1 foot.
Two Way Left Turn Lane	<ul style="list-style-type: none"> <li>• Raised Max –</li> <li>- *TWLT Min – 10'</li> <li>- TWLT Max – 12'</li> </ul> * Anything below 12' has to obtain <u>an</u> variance from the Assistant State Engineer over Roadway Engineering Group.	<ul style="list-style-type: none"> <li>• Raised Max –</li> <li>- *TWLT Min – 10'</li> <li>- TWLT Max – 12'</li> </ul> * Anything below 12' has to obtain <u>an</u> variance from the Assistant State Engineer over Roadway Engineering Group.	<ul style="list-style-type: none"> <li>• 11'</li> </ul>	<ul style="list-style-type: none"> <li>• 11' (12' for Suburban US 180)</li> </ul>	Urban contexts have narrower turn lanes to slow truck/bus traffic and because they are not preferred in this context for loading and unloading
Landscape Buffer/Parkway	Desired - 6' Minimum - 3' if a 5' sidewalk is provided	Desired = 5' Minimum = back of curb  The location of the sidewalk should be coordinated with the local government and with the Roadside Development Section when the highway project involves landscaping.	<u>Urban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 5'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 5'</li> </ul> <u>Rural US 180:</u> Not applicable	<u>Urban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 7'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 8'</li> </ul> <u>Rural US 180:</u> Not applicable	Furnishing strips and tree grates are preferred for the urban context associated with Milton and US 180 because it is consistent with the existing urban design
Utility Setback			<u>Urban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 1'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 2'</li> </ul> <u>Rural US 180:</u> Not applicable	<u>Urban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 1'</li> </ul> <u>Suburban Milton &amp; US 180:</u> <ul style="list-style-type: none"> <li>• 2'</li> </ul> <u>Rural US 180:</u> Not applicable	Used for poles, signage, utilities, etc. Used for sidewalk stabilization
Shoulder	<u>Rural Shoulder:</u> Desirable – 8' Minimum – 4'	<u>Rural Shoulder:</u> Desirable – 8' DHV > 200 vph Minimum – 6' DHV < 200 vph	<u>Rural US 180:</u> Not applicable within Flagstaff City Limits	<u>Rural US 180:</u> Not applicable within Flagstaff City Limits	



Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
Bike Lane	<p><u>Urban:</u> Desirable – 5’ <u>Minimum</u> – 4’</p> <p><u>Rural Shoulder:</u> Desirable – 8’ <u>Minimum</u> – 4’</p>	<p><u>Urban:</u> <u>See ADOT Bicycle Policy –</u> (1.f) incremental costs for construction and maintenance are funded by a local agency AND 2) the bicycle lane is included as a part of a bicycle facilities plan adopted by a local agency.)</p> <p>Desirable – 5’ <u>Minimum</u> – 4’</p> <p><u>Rural Shoulder:</u> Desirable – 8’ DHV &gt; 200 vph <u>Minimum</u> – 6’ DHV &lt; 200 vph</p>	<p><i>Measurements do not include gutter pan</i></p> <p><u>Urban Milton &amp; US 180:</u> • 4.5’</p> <p><u>Suburban Milton &amp; US 180:</u> • 4.5’</p> <p><u>Rural US 180:</u> • 4’</p>	<p><i>Measurements do not include gutter pan</i></p> <p><u>Urban Milton &amp; US 180:</u> • 6’ with Buffer</p> <p><u>Suburban Milton &amp; US 180:</u> • 6’ with Buffer</p> <p><u>Rural US 180:</u> • 8’</p>	buffer is a double stripe with crosshatch 1.5 foot wide
Sidewalk	Desired – 8’ Minimum – 4’ with a 5’ passing section every 200’.	5’ (unless local standards require greater and locals agree to pay additional cost of design, construction and agree to maintain the sidewalks.)	<p><u>Urban Milton &amp; US 180:</u> • 10’</p> <p><u>Suburban Milton:</u> • 10’</p> <p><u>Suburban US 180:</u> • 6’ (one-side - if paired with FUTs on other side)</p> <p><u>Rural US 180:</u> Not applicable on US 180 cross sections</p>	<p><u>Urban Milton &amp; US 180:</u> • 10’</p> <p><u>Suburban Milton:</u> • 10’</p> <p><u>Suburban US 180:</u> • 6’ (one-side - if paired with FUTs on other side)</p> <p><u>Rural US 180:</u> Not applicable on US 180 cross sections</p>	A sidewalk is preferred over a multi-use path on Milton Road.
Multi-Use Path/ Offset (parkway)			<p><u>Urban Milton &amp; US 180:</u> Not applicable</p> <p><u>Suburban Milton:</u> Not applicable</p> <p><u>Suburban US 180:</u> • 20’</p> <p><u>Rural US 180:</u> • 15’</p>	<p><u>Urban Milton &amp; US 180:</u> Not applicable</p> <p><u>Suburban Milton:</u> Not applicable</p> <p><u>Suburban US 180:</u> • 20’</p> <p><u>Rural US 180:</u> • 15’</p>	Dimension includes the parkway/buffer
Pedestrian Island Refuge (Pedestrian Islands at a Right Turn must meet ADA std)	6’ (info from NACTO), when 6 ft cannot be attained, narrower raised median is preferred, refuge is ideally 40 ft in length	ADOT does not have a standard for this so minimum would be AASHTO	<p><u>Urban Milton &amp; US 180:</u> • 6’</p> <p><u>Suburban Milton &amp; US 180:</u> • 6’</p> <p><u>Rural US 180:</u> • 6’</p>	<p><u>Urban Milton:</u> • 11’</p> <p><u>Urban US 180:</u> • 10’</p> <p><u>Suburban Milton &amp; US 180:</u> • 12’</p> <p><u>Rural US 180:</u> • 11’</p>	For preferred, a pedestrian island refuge can be as wide as the center lane, if one is present.

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Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
Bus Bay/Pullouts		<p>Bus pullouts may be required under any one of the following conditions:</p> <ol style="list-style-type: none"> <li>1) Posted speed limit is 35 mph or higher; and</li> <li>2) There are less than three through-travel lanes in the direction that the bus is traveling</li> <li>3) There is an identified bicycle facility adjacent to the travel lane.</li> </ol> <p>If a bus stop is to be located at an intersection where the traffic on the State highway is controlled by a traffic signal or stop sign, the bus stop must be located on the far side of the intersection. A bus stop sign, denoting the front of the location of a stopped bus, must be located 85 feet from the intersection's radius return</p> <p>ADOT construction detail C-05.50 has dimensions for a bus pullout.</p>	<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Rural US 180:</u></p> <p>Not applicable</p>	<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12' (NAIPTA does not prefer in this context, very site specific)</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Rural US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul>	<p>NAIPTA will not stop in ROW in a rural context, only stop will be Snowbowl lower parking lot.</p> <p>Bus Bays will not be used in BRT Alternatives.</p>
Side running shared bus bike lane (SBBL) (with right turns)			<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Rural US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul>	<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 16'</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 16'</li> </ul> <p><u>Rural US 180:</u></p> <ul style="list-style-type: none"> <li>• 16'</li> </ul>	Based on NACTO standards
Side running bus lane (with right turns)			<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Rural US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul>	<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul> <p><u>Rural US 180:</u></p> <ul style="list-style-type: none"> <li>• 12'</li> </ul>	Based on NACTO standards
Bus Stop (Back of Curb)			<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 8'</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 8'</li> </ul> <p><u>Rural US 180:</u></p> <ul style="list-style-type: none"> <li>• 8'</li> </ul>	<p><u>Urban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 10'</li> </ul> <p><u>Suburban Milton &amp; US 180:</u></p> <ul style="list-style-type: none"> <li>• 10'</li> </ul> <p><u>Rural US 180:</u></p> <ul style="list-style-type: none"> <li>• 8'</li> </ul>	This standard can vary when topography is in play due to ADA standards
Center Running transit - 2 lanes + buffer			<p><u>Urban &amp; Suburban Milton:</u></p> <ul style="list-style-type: none"> <li>• 25' (2, 11' lanes with 2, 1.5' buffers)</li> </ul> <p><u>Urban, Suburban, &amp; Rural US 180:</u></p> <p>Not Applicable</p>	<p><u>Urban &amp; Suburban Milton:</u></p> <ul style="list-style-type: none"> <li>• 28' (2, 12' lanes with 2, 2' buffers)</li> </ul> <p><u>Urban, Suburban, &amp; Rural US 180:</u></p> <p>Not Applicable</p>	See Assumptions for details

Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
Center Running Transit - Intersection Transit Station			<u>Urban &amp; Suburban Milton:</u> • 33' (2, 11' lanes with 2, 1.5' buffers and an 8' Platform) <u>Urban, Suburban, &amp; Rural US 180:</u> Not Applicable	<u>Urban &amp; Suburban Milton:</u> • 34' (2, 11' lanes with 2, 2' buffers and an 8' Platform) <u>Urban, Suburban, &amp; Rural US 180:</u> Not Applicable	See Assumptions for details  Option A: Scissors Platforms  Options B: Offset Platforms
Center Running Transit - Mid-Block Transit Station			<u>Urban &amp; Suburban Milton:</u> • 33' (2, 11' lanes with 2, 1.5' buffers and an 8' Platform) <u>Urban, Suburban, &amp; Rural US 180:</u> Not Applicable	<u>Urban &amp; Suburban Milton:</u> • 34' (2, 11' lanes with 2, 2' buffers and an 8' Platform) <u>Urban, Suburban, &amp; Rural US 180:</u> Not Applicable	See Assumptions for details  Option A: Scissors Platforms  Options B: Offset Platforms
Clear Recovery Zone	<u>Urban:</u> 4' - 6'  <u>Rural:</u> 14' - 18'	14' – 18'. Can be adjusted for right of way constraints in urban areas.			

**The Controlling Design Criteria would be used as a reference for each Alternative to ensure:**

- Minimum ADOT/FHWA standards are being met
- If any variances or design exceptions would require FHWA approval
- Once min standards are met, which FMPO/City/NAIPTA standard is preferred
- Understanding that if max ADOT standards are exceeded, it would be the local agency's responsibility to fund such enhancements
- Ensure that we do not recommend enhancements that exceed FMPO/City/NAIPTA policy/standards
- Prior to Tier 2 Analysis, we could review each alternative to ensure and reach consensus on a spec that meets the Controlling Design Criteria

**FMPO/City/NAIPTA Assumptions:**

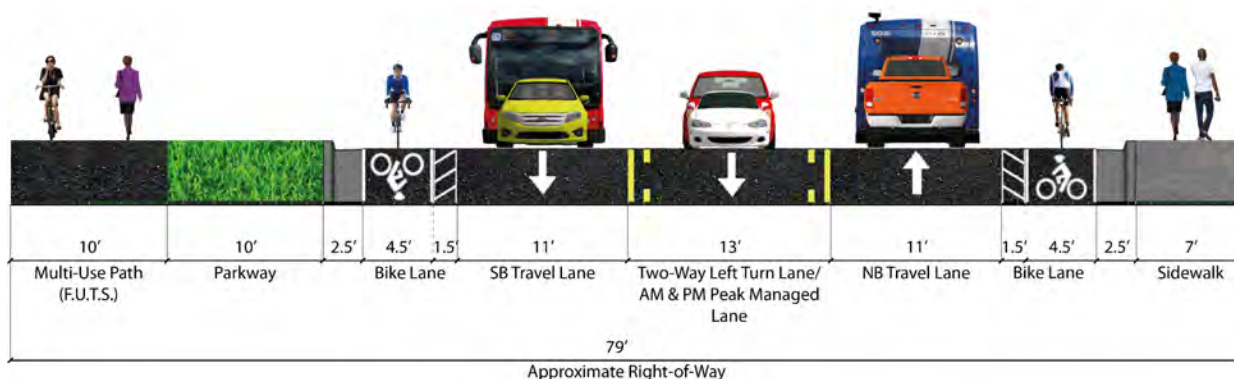
- Widths include the curb to its face
- Assumptions about widths of BRT center running features
- Center lane breakdown
- Side running lane
- Buffers could be added at for safety/landscape + beautification – approximate 2' each side (4' total)
- Some of the Preferred Minimum and Maximum Standards do not meet the City of Flagstaff's current engineering standards. The City of Flagstaff is in the process of updating its engineering standards and requested that the Preferred Minimum/Maximum standards, as shown in the Controlling Design Criteria be utilized.

In addition to the application of the Controlling Design Criteria to refine the Tier 2 alternatives, three additional alternatives were evaluated and added by the Project Partners. These are; 1) the refinement of Alternative 6 into Alternative 6a and 6b; 2) conversion of Alternative 9 into the No Build Alternative, and 3) introduction and review of newly introduced Bus-Rapid Transit (BRT) alternatives.

## 4.2b Refinement of Alternative 4 to hybrid Alternative 4a and Alternative 4b

While the public sentiment obtained from public open house meeting #1 (and survey) generally did not widely support the managed lane System Alternative 4 (as presented at the public open house meeting #1), the Project Partners respected the public’s feedback, yet also desired to maintain a diversity of options in order to allow for a full range of alternatives for public consideration and traffic operation analysis in Tier 2 analysis. The result of this discussion and analysis yielded two hybrid alternatives for Tier 2 analysis that had not been previously contemplated. These became System Alternative 4a and Alternative 4b, as shown in **Figure 4-1** and **Figure 4-2**:

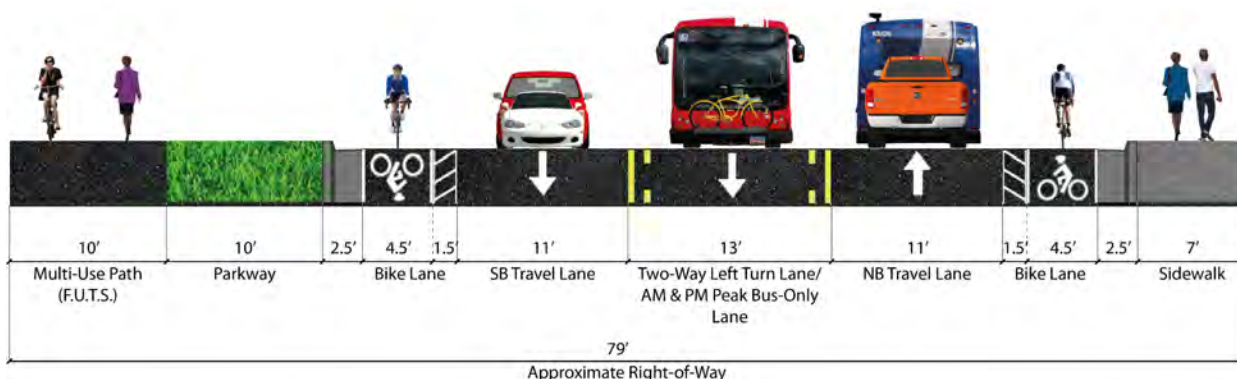
**Figure 4-1: System Alternative 4a Mid-Block Cross Section**



\*An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

\*\*Represents F.U.T.S. and sidewalks where present today, and assumes future sidewalks will be constructed with potential forthcoming development.

**Figure 4-2: System Alternative 4b Mid-Block Cross Section**



\*A design variance or exception would be required for 11' travel lanes which would need FHWA approval.

\*\*Represents F.U.T.S. and sidewalks where present today, and assumes future sidewalks will be constructed with potential forthcoming development.



#### 4.2c Alternative 12 Converts into the No-Build Alternative

Recognizing that the Lone Tree Overpass funding was now approved by Flagstaff voters via Proposition 420, System Alternative 9 – already closely resembling the No Build alternative, became redundant to the No Build alternative and not necessary for Tier 2 analysis. The important new distinction however was that, now that voter funding was approved for the Lone Tree Overpass, the Tier 2 analysis could now include the projected benefit of the Lone Tree Overpass into the Tier 2 traffic modeling exercise for the No-Build option and all other Tier 2 Alternatives.

### 4.3 Final Tier 2 Alternatives Presented

The Project Partners reached consensus on the nine Tier 2 alternatives that are introduced and described in the following sub-sections.

#### 4.3a No-Build

The No-Build option favors maintaining the existing US 180 right of way and facilities “as is”, which generally includes one travel lane in each direction with a center two-way left turn lane (TWTL) along the suburban character segments of US 180 (within the city limits), transitioning to (generally) one travel lane in each direction for the more rural segments of US 180 north and west of Schultz Pass Rd. The No-Build alternative is important for public and stakeholder consideration. It also meets FHWA and ADOT Planning and Environmental Linkages (PEL) guidance for certain planning studies and helps facilitate environmental studies should future implementation projects present themselves for consideration.

#### 4.3b System Alternative 2

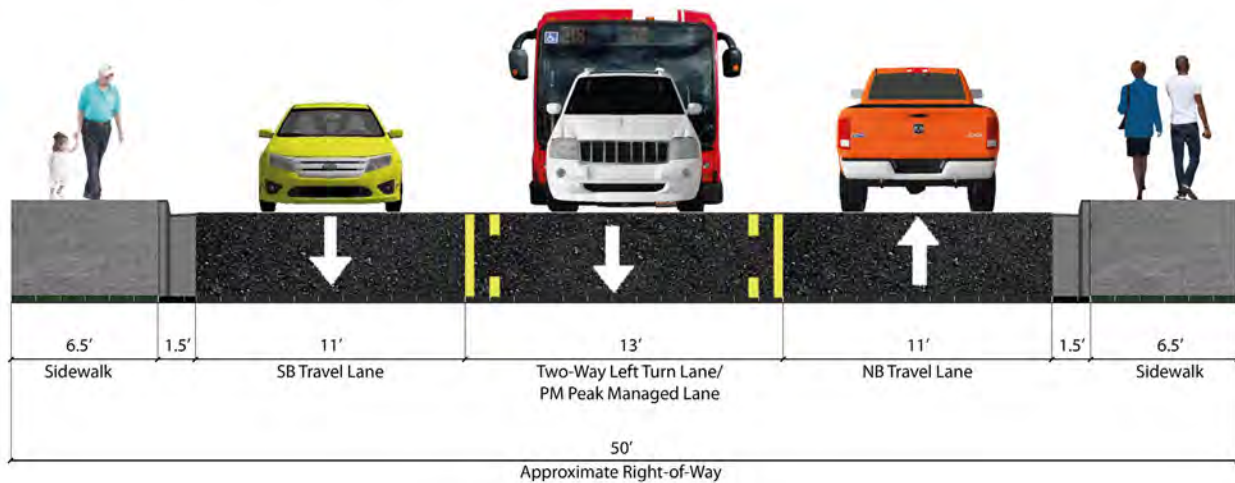
System Alternative 2 incorporates a managed center lane on Humphrey’s Street in the southbound direction during the PM peak period to accommodate the influx of southbound traffic generated from winter congestion. A managed lane, as the name implies, is a concept in which the center traffic lane (turn lane) may travel in either direction (however just southbound traffic only in this System Alternative), depending upon the time, day and/or operation sign/signal displayed. Reversible traffic lanes add capacity to a road and decrease congestion by borrowing capacity from the other (off-peak) direction. This holds especially true in situations where options for expanding the existing right-of-way are limited (existing right-of-way on Humphrey’s Street is 50 feet) or when traffic in the corridor is heavily imbalanced for a short period of time such as leading to/from a special event (snow play). This alternative is illustrated in **Figure 4-3**. It is important to note that this alternative would only be implemented on high volume snow play weekends along the US 180 corridor on Humphrey’s Street between Columbus Avenue and Historic Route 66.

The concept is often referred to by FHWA and transportation professionals, as “managed lanes” in that high demand on existing facilities, such as US 180/Humphrey’s Street, especially at peak demands are placed on the roadway, it necessitates the efficient management of those facilities.

There are a wide variety and combination of approaches to managed lane operations. These have typically encompassed such methods as:

- Static signing and striping;
- Changeable message signs;
- Lane control signals;
- Temporary traffic control devices;
- Law enforcement / legal restrictions; and
- Economic incentives / disincentives.

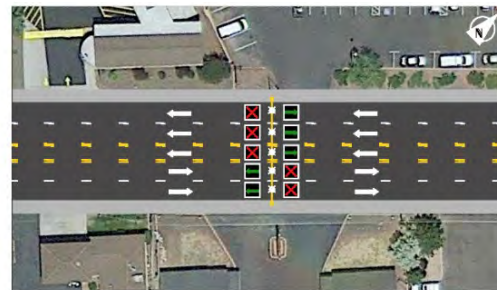
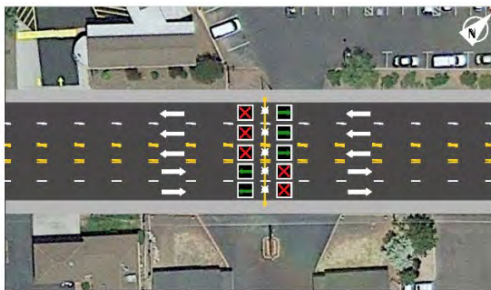
Figure 4-3: System Alternative 2 Mid-Block Cross Section



\*An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

Standard Traffic Designation

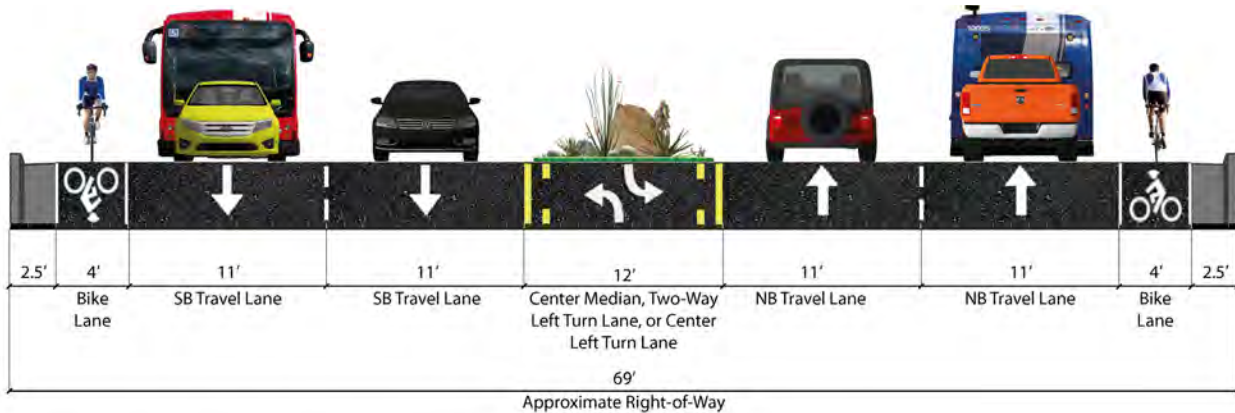
PM peak Period Traffic Designation



4.3c System Alternative 3

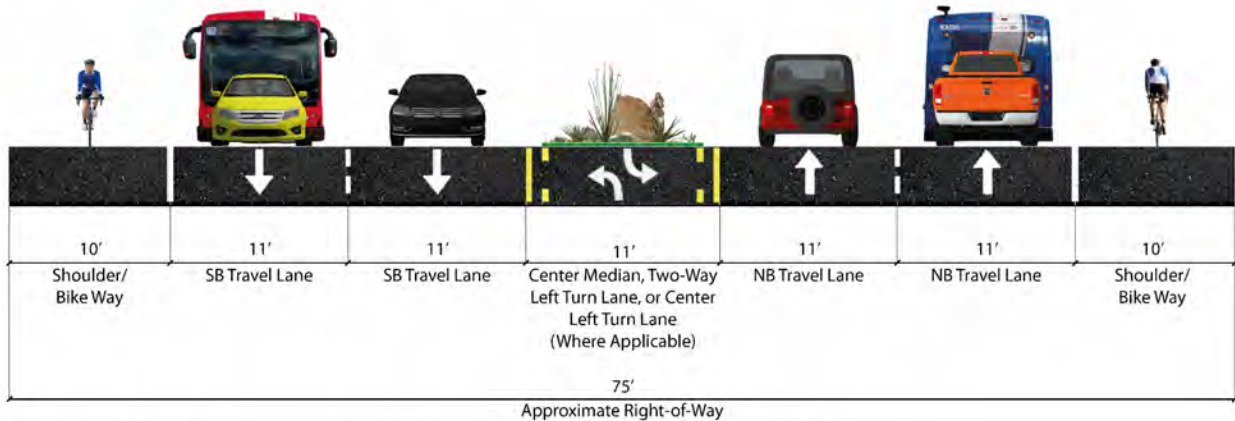
As illustrated in **Figure 4-4** and **Figure 4-5**, this System Alternative calls for four (4), 11-foot general purpose travel lanes, a 12-foot center turn lane (two-way left turn lane) and two, 10-foot shoulders that also may be utilized as bikeways. Each of the outside general purpose lanes would accommodate buses, vehicles and right turning movements. Landscaping setbacks are not included in this alternative. This alternative adds vehicular capacity to existing US 180 by adding two additional general purpose lanes (one south-bound, one north-bound) that do not currently exist. It is suggested that sidewalks be maintained where they currently exist today on both sides of US 180 (generally) from Beal Road to Columbus Avenue. The FUTS would also be maintained on the south side of US 180 as a protected (by the guard rail) shared use path.

**Figure 4-4: System Alternative 3 – Suburban Section Mid-Block Cross Section**



\*An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.  
\*\*Represents F.U.T.S. and sidewalks where present today, and assumes future sidewalks will be constructed with potential forthcoming development.

**Figure 4-5: System Alternative 3 – Rural Section Mid-Block Cross Section**



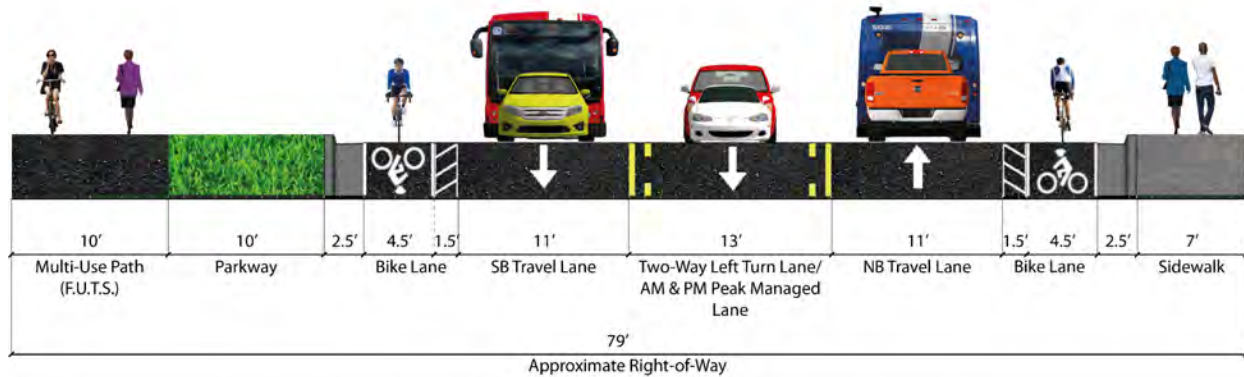
\*An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.  
\*\*Represents F.U.T.S. and sidewalks where present today, and assumes future sidewalks will be constructed with potential forthcoming development.

**4.3d System Alternative 4a**

This System Alternative that proposes a managed lane for the US 180 roadway segment that experiences congestion issues in the most “urban” segments of US 180 adjacent to residential neighborhoods at the gateway to downtown Flagstaff. From Meade Lane to Anderson Avenue, 90 feet of right-of-way currently exists. From Anderson Avenue to Forest Avenue, 65 feet of right-of-way exists. As a proposed “urban roadway section”, this System Alternative proposes to include sidewalks on both sides, bike lanes on both sides and maintain the FUTS on the south side of the roadway. In some locations, some or all of these facilities exist (for this roadway segment), in some cases they do not. For purposes of this System Alternative, a “complete street” that provides for all modes is identified.



Figure 4-6: System Alternative 4a Mid-Block Cross Section



\*An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

\*\*Represents F.U.T.S. and sidewalks where present today, and assumes future sidewalks will be constructed with potential forthcoming development.

### 4.3e System Alternative 4b

System Alternative 4b is similar to System Alternative 4a that proposes a managed lane for the US 180 roadway segment that experiences congestion issues in the most “urban” segments of US 180. However, the managed center lane would accommodate southbound buses only – a transit only managed lane. From Meade Lane to Anderson Avenue, 90 feet of right-of-way currently exists. From Anderson Avenue to Forest Avenue, 65 feet of right-of-way exists. As a proposed “urban roadway section”, this System Alternative proposes to include sidewalks on both sides, bike lanes on both sides and maintain the FUTS on the south side of the roadway. In some locations, some or all of these facilities exist (for this roadway segment), in some cases they do not. For purposes of this System Alternative, a “complete street” that provides for all modes is identified.

A transit only managed lane as the name implies, is a concept in which the middle traffic lane may travel in either direction, depending upon the time, day and/or operation sign/signal displayed. The transit only managed lane adds capacity to a road and decrease congestion by borrowing capacity from the other (off-peak) direction, or in this case, utilizing the two-way center turn lane as a transit-only lane.

There are a wide variety and combination of approaches to managed lane operations. These have typically encompassed such methods as:

- Static signing and striping;
- Changeable message signs;
- Lane control signals;
- Temporary traffic control devices;
- Law enforcement / legal restrictions; and
- Economic incentives / disincentives.

Figure 4-7: System Alternative 4b Mid-Block Cross Section



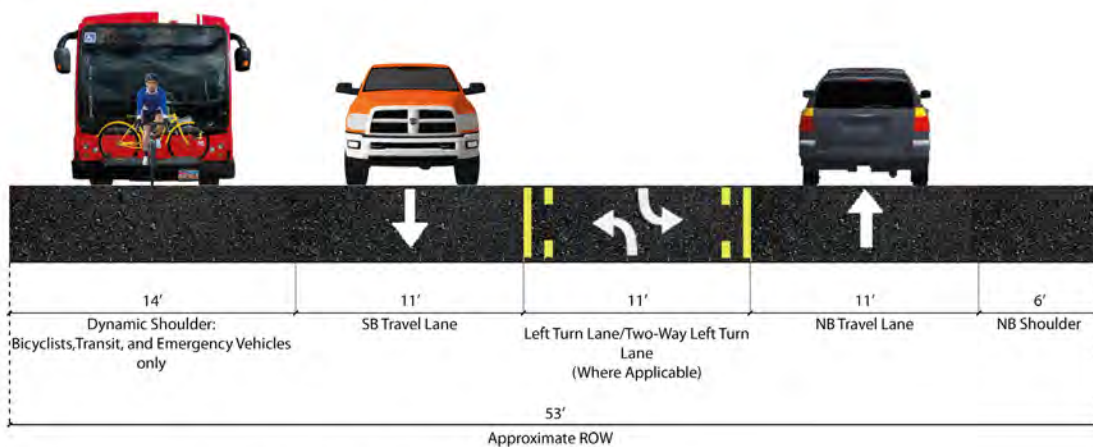
\*A design variance or exception would be required for 11' travel lanes which would need FHWA approval.

\*\*Represents F.U.T.S. and sidewalks where present today, and assumes future sidewalks will be constructed with potential forthcoming development.

### 4.3f System Alternative 6

System Alternative 6 would generally have minimal physical impact that does not require substantial amounts of additional right-of-way. Similar to a typical roadway shoulder, the “dynamic shoulder” proposed in System Alternative 6 would allow the use of pedestrians and bicyclists; but what separates the dynamic shoulder from a standard shoulder is during winter peak traffic congestion, the dynamic shoulder could support the use of transit and emergency vehicles to bypass vehicle congestion on US 180 general purpose lanes. However, pedestrians and bicyclists traversing on the shoulder would have to yield to both emergency and transit vehicles. Signage would need to be placed at appropriate intervals that would indicate the south bound shoulder is only permitted to non-motorized travel, and emergency and transit vehicles during winter peak traffic congestion. **Figure 4-8** is a graphic representation of System Alternative 6 during winter peak traffic.

Figure 4-8: System Alternative 6 Mid-Block Cross Section



\*A design variance or exception would be required for 11' travel lanes which would need FHWA approval.

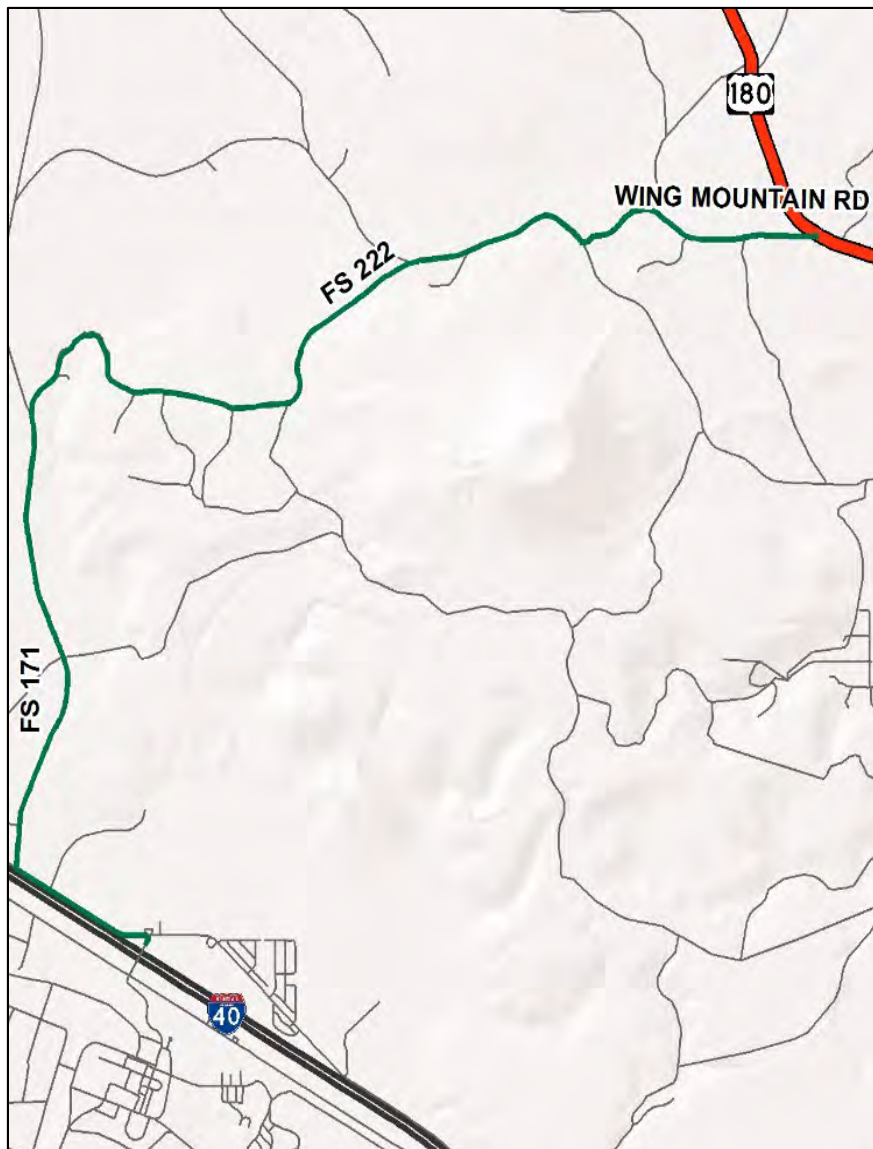
\*\*Represents F.U.T.S. and sidewalks where present today, and assumes future sidewalks will be constructed with potential forthcoming development.

4.3g System Alternative 17

System Alternatives 17 is an alternative route previously proposed by the US 180 Winter Traffic Study to bypass downtown Flagstaff by directly connecting US 180 to I-40. Local resident concerns regarding their proximity to rural residential properties off Bader Road and Snow Bowl Road prompted the need to explore other viable alternative routes.

Figure 4-9 illustrates the System Alternative 17 route, which is approximately 3.7 miles west of Snow Bowl Road. System Alternative 17 in total is a 10.3-mile connection to I-40 through Belmont, AZ utilizing the Wing Mountain access road (FS 222B) to Forest Service Roads 222 and 171. This is a long-term solution that would require extensive coordination with Coconino County and the Coconino National Forest and would require federal environmental clearance.

**Figure 4-9: System Alternative 17 Alignment**

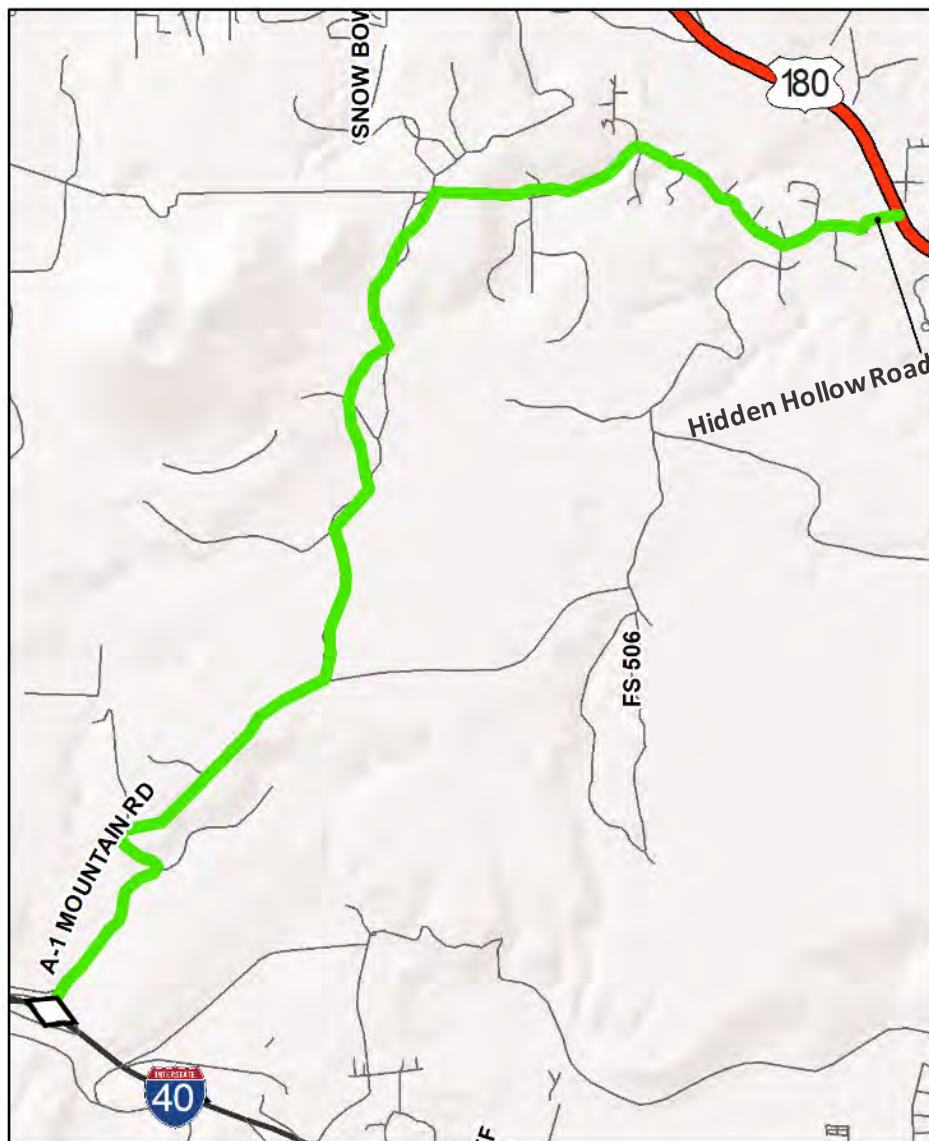


4.3h System Alternative 18

System Alternative 18 is an alternative route also previously proposed by the US 180 Winter Traffic Study to bypass downtown Flagstaff by directly connecting US 180 to I-40. Local resident concerns regarding their proximity to rural residential properties off Bader Road and Snow Bowl Road prompted the need to explore other viable alternative routes.

As shown in **Figure 4-10**, System Alternative 18 is a 6.9 mile alternative route that utilizes existing Forest Service roads. Travelers leaving Snow Bowl would head towards Flagstaff on US 180 and make a right turn onto FS 6149 for approximately ½ a mile to access Hidden Hollow Road (FS 668D) and then FS 506/518 for the remainder of the alignment. A southbound right turn deceleration lane on US 180 approaching Hidden Hollow Road will be necessary.

**Figure 4-10: System Alternative 18 Alignment**





#### 4.4 Tier 2 Evaluation Criteria

A series of Tier 2 evaluation criteria and weightings were developed to evaluate and measure the performance of the seven Tier 2 Alternatives. The Tier 2 evaluation criteria were crafted to be diverse in nature through the combination of quantitative and qualitative measurements specific to features of each Tier 2 Alternative.

The first step in developing the evaluation criteria was to identify general categories of roadway performance to measure the operational and environmental qualities of the corridor. The Consultant Team worked with the Project Partners and agreed to use the following categories – in no particular order of importance – on to measure and compare the Tier 2 Alternatives:

- Traffic Operations;
- Safety;
- Expand Travel Mode Choices;
- Public Acceptance;
- Construction/Implementation;
- Project Economics; and
- Environmental Impacts.

Once the categories were selected, the Consultant Team and the Project Partners created a preliminary list of evaluation criteria metrics for each category. The process included researching regulatory mandates across the state and with ADOT; understanding what issues were of highest importance for the ADOT Districts; communicating with ADOT and the Project Partners to understand strategic safety initiatives of the highest value within the various organizations and agencies; investigating measures to evaluate the level of difficulty of implementation through assessment of the costs and right-of-way impacts; and the public's acceptance of each alternative.

As a result, 16 different evaluation criteria were initially developed over the seven categories to use in Tier 2 Alternative evaluation process. **Table 4-3** describes the different evaluation criteria for each category and the following sections go into more detail.

**Table 4-3: Initial Tier 2 Evaluation Criteria**

Initial Tier 2 Evaluation Criteria		
Category	Evaluation Criteria	Description
Reduction in Vehicular Congestion	Improved Congestion – Volume/Capacity	ADOT’s Congestion Needs Score Tool is the source that calculates the results for the Improves Congestion criterion that essentially rates the performance of an alternative through a volume to capacity ratio.
	Travel Speed as Percentage of Base Free Flow Speed	This metric that measures reduction in vehicular congestion by comparing the 2040 travel speed in relative to the base free flow speed of the Milton Road corridor.
	Intersection Level-of-Service (LOS)	The Intersection LOS metric measures reduction in vehicular congestion by identifying the number of operationally failing intersections (LOS grade E or F) under the 2040 condition.
	Travel Time	The Travel Time criterion is a metric that measures reduction in vehicular congestion by calculating the amount of time it takes to travel the corridor from one end to the other.

Initial Tier 2 Evaluation Criteria		
Category	Evaluation Criteria	Description
Safety	Reduction in All Crashes	The Reduction in All Crashes metric measures safety performance of the No-Build option and the six Tier 2 Alternatives through the use Crash Modification Factors (CMFs) and Crash Reduction Factors (CRFs).
	Reduction in All Injury-Related Crashes	The Reduction in All Injury-Related Crashes metric measures safety performance of the No-Build option and the six Tier 2 Alternatives through the use Crash Modification Factors (CMFs) and Crash Reduction Factors (CRFs) for crashes only involving injuries.
	Reduction in Bicycle-Related Only Crashes	The Reduction in Bicycle-Related Only Crashes metric measures safety performance of the No-Build option and the six Tier 2 Alternatives through the use Crash Modification Factors (CMFs) and Crash Reduction Factors (CRFs) for crashes only involving injuries.
Expand Travel Mode Choices	Improved Pedestrian Facilities	The Improved Pedestrian Facilities criterion is a qualitative metric that measures how pedestrian facilities are improved utilizing the Controlling Design Criteria to see if pedestrian facilities meet or exceed minimum and preferred design standards of ADOT and the various Project Partner agencies.
	Improved Bicycle Facilities	The Improved Pedestrian Facilities criterion is a qualitative metric that measures how pedestrian facilities are improved utilizing the Controlling Design Criteria to see if pedestrian facilities meet or exceed minimum and preferred design standards of ADOT and the various Project Partner agencies.
	Transit Travel Time	The Improved Transit criterion is a metric that measures transit improvement by calculating the amount of time it takes for transit vehicles to travel the corridor from one end to the other.
Public Acceptance	Public Support	The Public Support metric measures the No-Build and Tier 2 Alternatives based on the percentage of support received by the public.
Construction/Implementation	Project Cost	The Project Cost criterion is a metric that measures the ease of construction/implementation by evaluating the total project cost to implement through detailed cost estimates.
	Right-of-Way Impact	The Right-of-Way Impact criterion is a metric that measures the ease of construction/implementation by evaluating the impact to the adjacent properties by calculating the impact by finding the amount land - in square feet - required for right-of-way acquisition.
Project Economics	Cost-Benefit (C-B) Analysis	The C-B Analysis metric measures the alternatives by calculating total Project cost by the performance of the Reduction in Congestion Criterion to compare costs vs. benefits.

Initial Tier 2 Evaluation Criteria		
Category	Evaluation Criteria	Description
Environmental Impacts	Environmental Impacts	The Environmental Impacts metric scores the No-Build and Tier 2 Alternatives on whether not they can be completed within existing right-of-way or not.

#### 4.5 Project Partner Weighting of the Tier 2 Evaluation Criteria

Once consensus on the Tier 2 Alternative Evaluation Criteria was reached among the Project Partners, the next step was to formulate and assign a weighting value to each criterion. The weight of the criterion is a numeric value that represents the level of importance of each criterion. The weights are then used to calculate the results of the evaluation of each criterion – the higher the weight results in a higher score for that criterion.

In order to determine a weight for each criterion, the Project Team developed an excel-based survey to distribute to each of the Project Partner agencies. The survey included in-depth instructions on how to populate the excel-based tool. The Project Partners were asked to provide two responses per agency that assigned each criterion a numeric value on a scale of 100 based on their perceived level of importance. For example, a completely balanced weight among the criterion would be 7.14 – the value of equilibrium.

$$\begin{array}{rcccl}
 100 & & / & & 14 & & = & & 7.14 \\
 \textit{Weighted} & & & & \textit{\# of} & & & & \textit{Value of} \\
 \textit{total} & & & & \textit{Criterion} & & & & \textit{Equilibrium}
 \end{array}$$

The Project Team was asked in the survey to adjust the value of equilibrium, by increasing or decreasing the number, based on their respective agency’s perception of the relative importance of each criterion. The two responses provided from each Project Partner agency were averaged to arrive at a final weight for each evaluation criteria.

The results of the criteria weighting survey show that the Project Partners shared some commonalities in their perceptions of which criterion were more important, while also some groups assigned a large portion of the points to the criteria that specifically align with their agency goals and objectives. For instance, ADOT had a fairly equal distribution with somewhat of an emphasis in Safety and Project Economics. On the other hand, Mountain Line (AKA NAIPTA) assigned the majority of their points into Expand Travel Mode Choices and Public Acceptance. The City of Flagstaff and the USFS both had a fairly equal distribution of points neat the value of equilibrium. Coconino County had a balanced distribution on points across all categories with the exception of Project Economics and Expand Travel Mode Choices by putting a lot of emphasis on Project Economics and a very little focus on Travel Mode Choices.

FHWA and BNSF decided to opt out of the Project Partner Weighting Survey of the Tier 2 Evaluation Criteria and thus their voided responses were not included in the Tier 2 Evaluation Criteria Weighting process.

**Table 4-4** captures the results of the Project Partner weighting survey and the assigned averages for each category based upon the survey inputs received.

Table 4-4: Project Partner Weighting Survey Results of the Tier 2 Evaluation Criteria

Category	Criteria	ADOT		NAIPTA		Coconino County		FMPO		USFS		Flagstaff		NAU		Average Response
		Response 1	Response 2	Response 1	Response 2	Response 1	Response 2	Response 1	Response 2	Response 1	Response 2	Response 1	Response 2	Response 1	Response 2	
Reduction in Vehicular Congestion	Improved Congestion Need Score (Volume/Capacity)	1	2	0	0	6	6	2.5	1.5	6	6	6.25	6.25	15	15	5.25
	Travel Speed as % of Base Free Flow Speed	4	3	0	0	6	6	2.5	1.5	6	5	6.25	6.25	0	0	3.32
	Improved Intersection LOS	8	5	7.5	7.5	6	6	2.5	1.5	6	6	6.25	6.25	8	8	6.04
	Signal/Stop Control Delay	4	3	0	0	6	6	2.5	1.5	6	6	5.55	5.55	0	0	3.29
	Travel Time	8	5	7.5	7.5	6	6	2.5	1.5	6	6	5.55	5.55	0	0	4.79
Safety	Reduction in Total Crashes	5	5	7.5	7.5	8.33	8.33	7.1	5.9	7	7	5.55	5.55	10	10	7.13
	Reduction in All Injury-Related Crashes	5	3	7.5	7.5	8.33	8.33	8.9	5.9	7	7	8	8	15	15	8.18
	Reduction in Bicycle-Related Only Crashes	15	10	7.5	7.5	8.33	8.33	1.8	5.9	7	7	5.55	5.55	5	5	7.10
Expand Travel Mode Choices	Improved Pedestrian Facilities	6	5	13.5	13.5	1.67	1.67	4.1	7.3	6	5	8	8	10	10	7.12
	Improved Bicycle Facilities	7	9	13	13	1.67	1.67	4.1	7.3	6	6	8	8	10	10	7.48
	Transit Travel Time	7	5	10	10	1.67	1.67	5.4	6.5	6	6	6.25	6.25	8	8	6.27
Public Acceptance	Public Support	4	10	10	10	5	5	16.2	16	6	7	6.25	6.25	7	7	8.26
Construction/Implementation	Project Cost	4	8	4	4	5	5	6.7	6.8	6	6	5	5	0	0	4.68
	ROW Impact	5	7	4	4	5	5	6.7	6.8	6	6	5	5	2	2	4.96
Project Economics	Cost-Benefit Analysis (Total Project Cost vs. reduction in congestion)	14	15	4	4	20	20	13.8	11.9	6	6	7	7	5	5	9.91
Environmental Impacts	Environmental Impacts	3	5	4	4	5	5	12.7	12.2	7	8	5.55	5.55	5	5	6.21
<b>TOTAL VALUE</b>		<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>



## 4.6 Final Tier 2 Evaluation Criteria

After the weighting of the Tier 2 Evaluation Criteria was determined, a series of meetings were conducted between the Consultant Team and the Project Partners to refine the Tier 2 Evaluation Criteria and develop a scoring methodology.

### 4.6a Refinement of Tier 2 Alternative Evaluation Criteria

As the Project Partners and the Consultant Team met to review the Tier 2 Evaluation Criteria, it became evident that some of the criteria had duplicative measures making the potential for an unequitable emphasis on some elements of the Tier 2 Evaluation Criteria. For instance, the Environmental Impacts Criterion and Right-of-Way Impacts Criterion both use right-of-way as the unit of measure putting extra emphasis on the application of right-of-way in the scoring of the Tier 2 Alternatives and the No-Build. This duplicative measure in right-of-way would seem to favor the No-Build and alternatives with a smaller right-of-way footprint while creating a disadvantage on alternatives with a wider footprint. As a result, the Consultant Team and the Project Partners determined this created an advantageous edge for some alternatives and decided to remove the Environmental Impacts Criterion from the Tier 2 Evaluation Criteria.

The Project Partners also discussed potential drawbacks of the Project Economics/Cost-Benefit (C-B) Analyses Criterion. Although this evaluative method is relatively straight forward, and versatile, the Project Partners decided against using a C-B analysis as a decision-making tool. Project Partners were mainly concerned with the potential subjectivity in identifying and quantifying costs and benefits. As a result, the Project Partners decided to remove the Project Economics/C-B Analyses Criterion from the Tier 2 Evaluation Criteria.

**Table 4-5** shows the final set of Tier 2 Evaluation Criteria used in the Tier 2 Alternative Evaluation process.

Table 4-5: Final Tier 2 Alternative Evaluation Criteria & Weightings

Evaluation Criteria				Weight	
Category	Criteria / Measure	Threshold / Formula	Modifier		
Reduction in Vehicular Congestion	Improves Congestion	Formula = (Best Result / Alternative Result) * Weight * 100 Ex - Alt 4: (6.25/11.03) * 5.25% * 100 = 2.97	N/A	5.25%	
	Travel Speed as % of Base Free Flow Speed	Formula = ((Alternative Result * 100) / Best Result) * Weight * 100 / 2 Ex - Alt 4: ((46.1%*100)/62)* 3.32% * 100 / 2 = 1.24	N/A	3.32%	
				AM	(1.66%)
				PM	(1.66%)
	Improved Intersection LOS	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (2/3) * 6.04% * 100 / 2 = 3.02	N/A	6.04%	
				AM	(3.02%)
				PM	(3.02%)
	Signal/Stop Control Delay	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (29.5/41.6) * 3.29% * 100 / 2 = 1.17	N/A	3.29%	
				AM	(1.645%)
				PM	(1.645%)
Travel Time:	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (339/560) * 4.79% * 100 / 2 = 1.45	N/A	4.79%		
			AM	(2.395%)	
			PM	(2.395%)	
Safety	Reduction in Total Crashes	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Alt 4: (19.4/28.98) * 7.13% * 100 = 4.77	N/A	7.13%	
	Reduced Injury Crashes	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Alt 5: (21.78/28.78) * 8.18% * 100 = 6.19	N/A	8.18%	
	Reduced Bicycle Crashes	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Alt 5: (14/14) * 7.10% * 100 = 7.10	N/A	7.10%	
Expand Travel Mode Choices	Pedestrian	Meets or Exceeds both ADOT's minimum standard and the City/FMPO/NAIPTA's (PP) preferred standards	1	7.12%	
			Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIPTA's (PP) preferred standards, but not both		0.5
			Maintains Existing Condition		0
	Bicycle	Meets or Exceeds both ADOT's minimum standard and the City/FMPO/NAIPTA's preferred standards	1	7.48%	
			Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIPTA's preferred standards, but not both		0.5
			Maintains Existing Condition		0
Transit	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (250/371) * 6.27% * 100 / 2 = 2.11	N/A	6.27%		
			AM	(3.135%)	
PM	(3.135%)				
Public Acceptance	Public Support	TBD	TBD	8.26%	
Construction/ Implementation	Project Cost <sup>#+-</sup>	Formula = (Best Result / (Alternative Result/10M)) * Weight * 100 Ex - Alt 4: (1/(40.542M/10M)) * 4.68% * 100 = 1.15	N/A	4.68%	
	ROW Impact <sup>+ -</sup> (Square Feet)	Formula = (Best Result / (Alternative Result/10K)) * Weight * 100 Ex - Alt 4: (1/(26,326/10K)) * 4.98% * 100 = 1.89	N/A	4.96%	
<b>Aggregate Score</b>				<b>83.88%</b>	
<b>Rank</b>					

#### 4.6b Tier 2 Evaluation Criteria Scoring Thresholds and Methodology

The Project Partners and the Consultant Team worked collaboratively to develop uniform scoring methodologies to be applied across all the Tier 2 Evaluation Criteria. The Project Partners and Consultant Team recognized the fact that the metrics used within the evaluation criteria fell into one of two categories – quantitative or qualitative – and determined a scoring methodology would have to be developed to complement the quantitative or qualitative nature of the evaluation criteria. The following sub-sections describe the Tier 2 Evaluation Criteria Scoring Methodology for the quantitative and qualitative evaluation criteria.

##### Quantitative Scoring Methodology

The quantitative Tier 2 Evaluation Criteria use inputs measured in the form of numbers with numerical values associated with each alternative. Given the numerical values-based nature of these criteria, the Consultant Team worked with ADOT to develop a scoring formula that compliments the quantitative complexion of the criteria. The formula developed for the quantitative evaluation criteria was derived from uses within ADOT’s Planning-to-Programming (P2P) process which is used to prioritize projects on the state’s highway system. The formula used to calculate the technical score for each of the quantitative Tier 2 Evaluation Criteria is as follows:

##### Quantitative Tier 2 Evaluation Criteria Scoring Formula

$$\text{Technical Score} = \left( \frac{\text{Alternative Result}}{\text{Best Result}} \right) * \text{Evaluation Criteria Weight}$$

**Results Ratio**
**Application of the Weight**

The quantitative Tier 2 Evaluation Criteria Scoring Formula has two fundamental steps or sub-calculations – the “Results Ratio” and the “Application of the Weight”. The first step or sub-calculation is the results ratio that divides an alternative’s result by the best result within a specific evaluation criterion. This step is formulated to reach a value of between one and zero relative to the result of best performing alternative within that specific evaluation criterion. The value of this ratio scales relative to the difference between the alternative result and the best result. Certain evaluation criteria have numeric metrics where the smaller values reflect a higher performing alternative. For example, the Travel Time Criterion is one of the “reverse ranked” criterion since the lesser travel time duration represents a higher performance. In order to preserve the functionality of the results ratio, the following formula is used for quantitative criteria with reverse ranked results:

##### Reverse Ranking Quantitative Tier 2 Evaluation Criteria Scoring Formula

$$\text{Technical Score} = \left( \frac{\text{Best Result}}{\text{Alternative Result}} \right) * \text{Evaluation Criteria Weight}$$

**Results Ratio**
**Application of the Weight**

The second step or sub-calculation of the formula is the application of the weight for a specific evaluation criteria determined through the weighing process described in *Section 4.5 - Project Partner Weighting of the Tier 2 Evaluation Criteria*. This calculation is simply applying the weight to the value of the results ratio that falls within the value of one and zero. The weight is applied through a simple multiplication of the weight percentage.

The Quantitative Tier 2 Evaluation Criteria Scoring Formula ensures the highest performing alternative receives the full amount of possible points which is determined by the evaluation criteria weight. For instance, if the Travel Time Criterion has an assigned weight of 2.40%, the most possible points an alternative can receive for the Travel Time Criterion is 2.40 points.

The following example for the application of the scoring formula illustrates how the quantitative scoring works through the numerical scaling relative to the results of the best performing alternative:

In the purpose of the example, three hypothetical alternatives have the following travel times:

- Alternative A: 339 seconds of travel time;
- Alternative B: 400 seconds of travel time; and
- Alternative C: 560 seconds travel time.

Since travel time is a reverse ranked measurement, the following formula is used to calculate the technical score:

$$\text{Technical Score} = (\text{Best Result} / \text{Alternative Result}) * \text{Weight} * 100$$

**Table 4-6** illustrates how the technical scores are calculated for each of the example alternatives for their respective travel time results.

**Table 4-6: Example Application of the Quantitative Scoring Formula**

Alternative	Travel Time Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative A	339 seconds	((339/339)	* 2.40% * 100	2.40
Alternative B	400 seconds	((339/400)	* 2.40% * 100	2.03
Alternative C	560 seconds	((339/560)	* 2.40% * 100	1.45

Alternative A has the best travel time and as a result of the formula Alternative A is awarded full possible points of 2.40 points. On the other hand, Alternative B and Alternative C receive a lower score relative to their difference in travel time compared to Alternative A – the alternative with the best result. In essence, the scoring formula is structured to assign points based on the difference between an alternative result and the best result, and the greater the difference will result in a lower score relative to the magnitude of the difference.

The following Tier 2 Evaluation Criteria use the Quantitative Scoring Methodology:

- Improved Congestion – Volume/Capacity;
- Travel Speed as Percentage of Base Free Flow Speed;
- Intersection Level-of-Service (LOS);
- Travel Time;
- Reduction in All Crashes;
- Reduction in Injury-Related Crashes;
- Reduction in Bicycle-Related Only Crashes;
- Transit Travel Time;



- Project Cost; and
- Right-of-Way Impact.

*Qualitative Scoring Methodology*

The subjectivity inherently infused within the qualitative evaluation criteria require a different scoring methodology than the quantitative evaluation criteria. The two qualitative Tier 2 Evaluation Criteria are Improved Pedestrian Facilities and Improved Bicycle Facilities which reference the Controlling Design Criteria discussed in *Section 4.2a - Controlling Design Criteria*. The Consultant Team and ADOT developed three thresholds to ensure compliance of the Controlling Design Criteria while simultaneously instill an advantage for alternatives that meet and exceed the design standards imbedded in the Controlling Design Criteria. The following three thresholds described in **Table 4-7** were developed with a corresponding modifier to be multiplied by the weight to calculate a score for the alternative.

**Table 4-7: Example Application of the Qualitative Scoring Formula**

	Qualitative Threshold	Modifier	Weight	Score
<b>1</b>	Meets or exceeds both ADOT’s minimum standard and the Project Partner preferred standards*	1	7.12	7.12
<b>2</b>	Meets or exceeds ADOT’s minimum standard OR the Project Partners preferred standards, but not both*	0.5		3.56
<b>3</b>	Maintains existing condition/does not meet any standards*	0		0

*\*Per the minimum and preferred standards outlined in the Controlling Design Criteria*

This scoring methodology ensures that alternatives with facilities that meet or exceed both ADOT’s minimum design standard and the Project Partner preferred design standard in the Controlling Design Criteria are awarded full possible points; while also permitting alternatives with facilities that meet or exceed ADOT’s minimum design standard OR the Project Partners preferred standards, but not both, to receive half of the possible points; and finally, confirm that all alternatives with facilities that maintain existing condition and/or does not meet any design standards receive zero points.

#### 4.7 Alternative Packaging

Recognizing that the Tier 2 Alternatives were initially developed for specific segments of the US 180 Corridor, a process of “packaging” the alternatives was necessary in order to create a complete and seamless corridor for traffic modeling purposes. The packaging process then included a merging and matching of each Alternative together with the varying character changes and intersection geometry of each roadway segment type (rural/suburban/urban). As depicted in **Figure 4-11** and **Table 4-8**, The US 180 corridor is split into four segments relative to the varying roadway and land character of each segment of US 180. The following three segments were derived through Project Partner discussion:

1. **Urban:** Humphrey’s Street from Route 66 to Columbus Avenue
2. **Suburban:** Fort Valley Road from Columbus Avenue to Peak View Street
3. **Rural Fringe:** Fort Valley Road from Peak View Street to Snowbowl Road
4. **Rural:** Fort Valley Road from Snow Bowl Road to MP 233.25

**Table 4-8: US 190 Tier 2 Alternative Packaging**

Segment		Alternative Packages						
		A	B	C	D	E*	F*	
1	Urban	No-Build	Alt 2	Alt 2	Alt 2	Alt 2	Alt 17 Wing Mountain	Alt 18 Hidden Hollow
2	Suburban		Alt 3 Suburban	Alt 4a	Alt 4b	Alt 6		
3	Rural Fringe		Alt 3 Rural	Alt 6	Alt 6	Alt 6	Bypass	
4	Rural		Alt 3 Rural	No-Build	No-Build	No-Build		

*\*The US 180 is considered under the No-Build condition under Alternative Package E and Alternative Package F*

The following pages provide graphical representation of the six alternative packages.

Figure 4-11: US 180 Study Corridor Segmentation

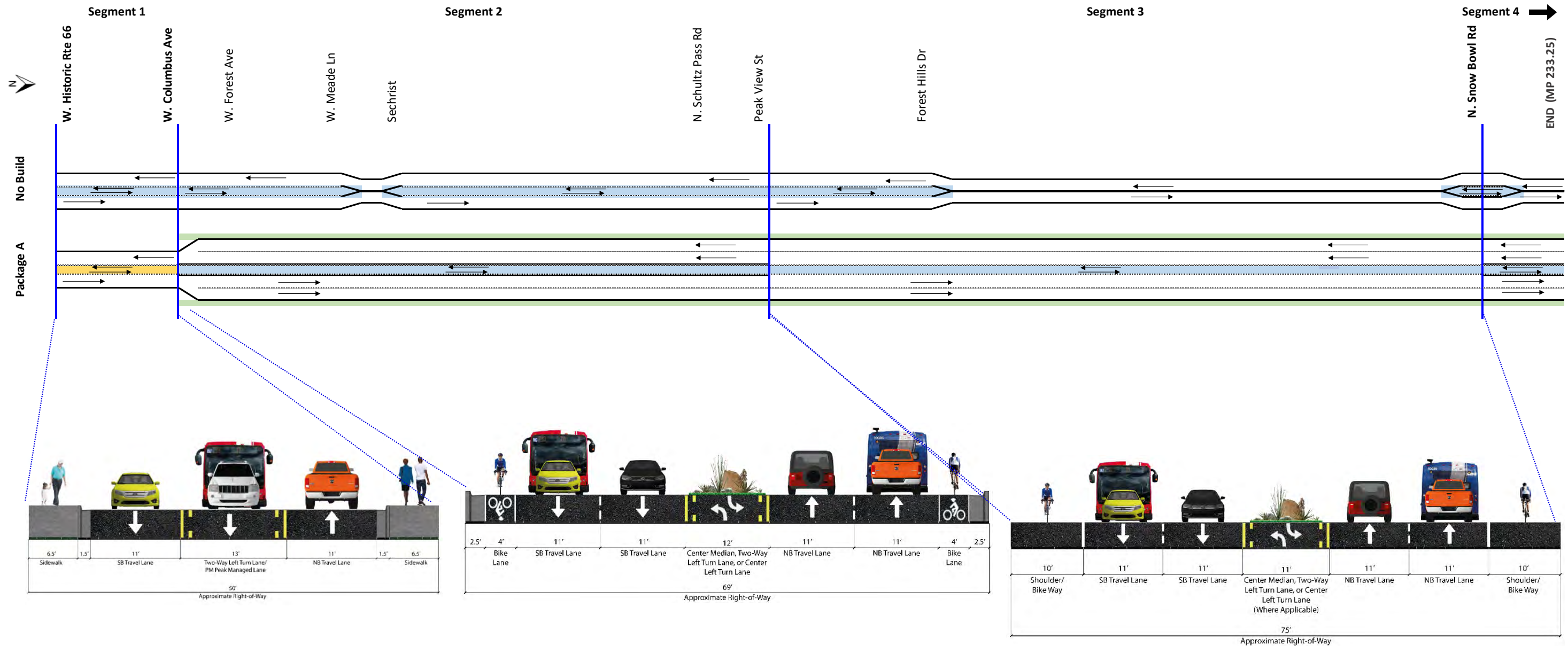




# Alternative Package A

- LEGEND**
- = General Purpose Lane
  - = Bike Lane/Bikeway
  - = Two-way Left Turn Lane (TWLTL)
  - = TWLTL or Peak Hour Managed Lane - All Traffic
  - = TWLTL or Peak Hour Managed Lane - Transit Only
  - = Dynamic Shoulder

Segment		Alternative Package						
		A	B	C	D	E (Alt 17 - Wing Mtn Rd)	F (Alt 18 - Hidden Hollow)	
1	Route 66 to Columbus (Urban)	No Build	Alt 2 - AM no change - PMSB managed lane	Alt 2 - AM no change - PMSB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	No Build	No Build
2	Columbus to Peak View (Suburban)		Alt 3 Suburban	Alt 4A - AM managed lane NB - PM managed lane SB	Alt 4B (Transit) - AM Bus NB - PM Bus SB	Alt 6 (Transit) - SB bus lane	No Build	No Build
3	Peak View to Snowbowl Rd (Rural)		Alt 3 Rural	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	No Build	No Build
4	Snowbowl Rd to MP 233.55 (Rural)		Alt 3 Rural	No Build	No Build	No Build	No Build	No Build

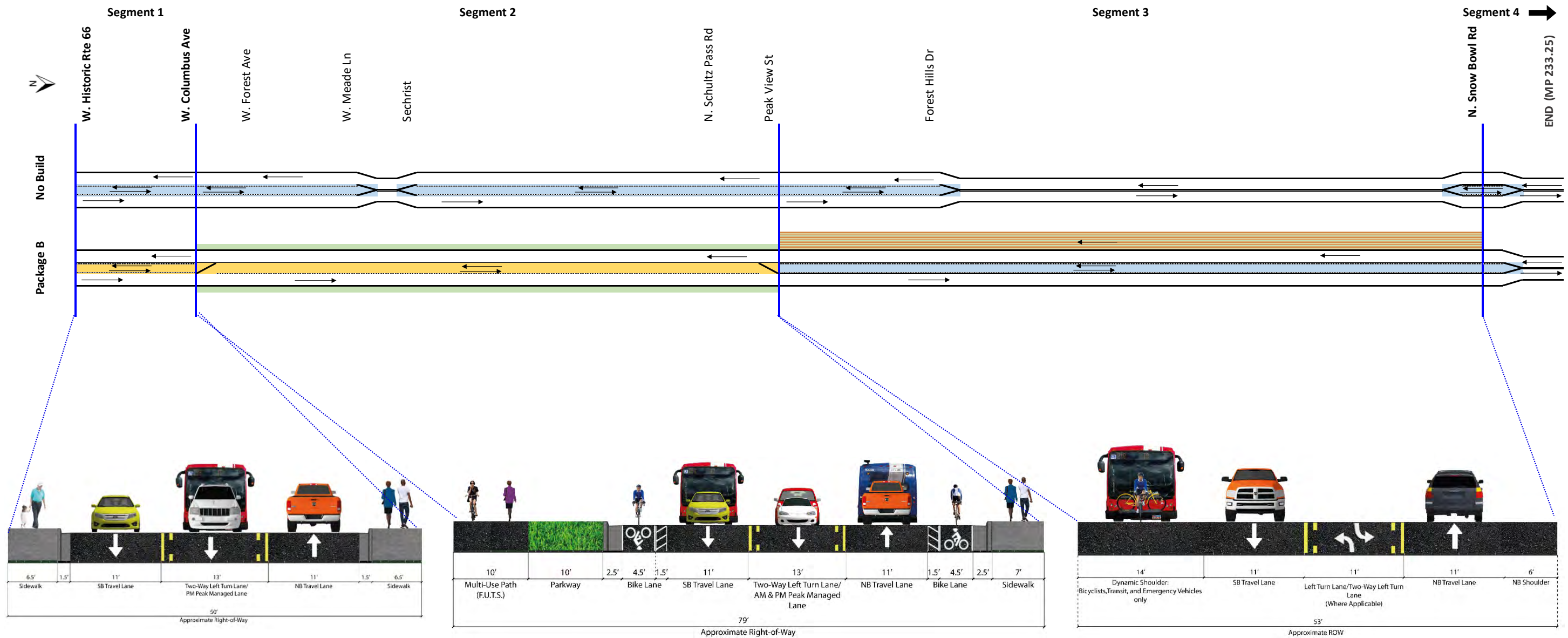




# Alternative Package B

- LEGEND**
- = General Purpose Lane
  - = Bike Lane/Bikeway
  - = Dynamic Shoulder
  - = Two-way Left Turn Lane (TWLTL)
  - = TWLTL or Peak Hour Managed Lane - All Traffic
  - = TWLTL or Peak Hour Managed Lane - Transit Only

Segment		No Build	Alternative Package					
			A	B	C	D	E (Alt 17 - Wing Mtn Rd)	F (Alt 18 - Hidden Hollow)
1	Route 66 to Columbus (Urban)	No Build	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	No Build	No Build
2	Columbus to Peak View (Suburban)		Alt 3 Suburban	Alt 4A - AM managed lane NB - PM managed lane SB	Alt 4B (Transit) - AM Bus NB - PM Bus SB	Alt 6 (Transit) - SB bus lane	No Build	No Build
3	Peak View to Snowbowl Rd (Rural)		Alt 3 Rural	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	No Build	No Build
4	Snowbowl Rd to MP 233.55 (Rural)		Alt 3 Rural	No Build	No Build	No Build	No Build	No Build

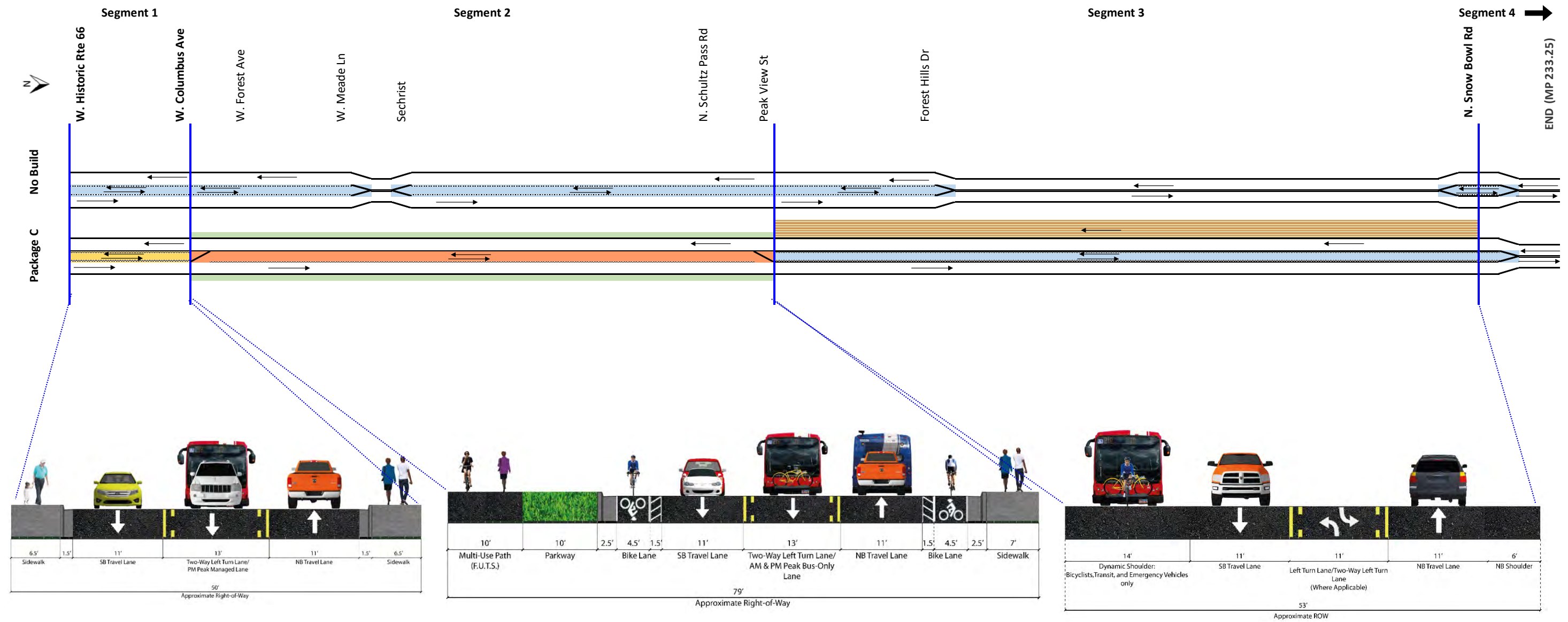


# Alternative Package C

**LEGEND**

- = General Purpose Lane
- = Bike Lane/Bikeway
- = Dynamic Shoulder
- = Two-way Left Turn Lane (TWLTL)
- = TWLTL or Peak Hour Managed Lane - All Traffic
- = TWLTL or Peak Hour Managed Lane - Transit Only

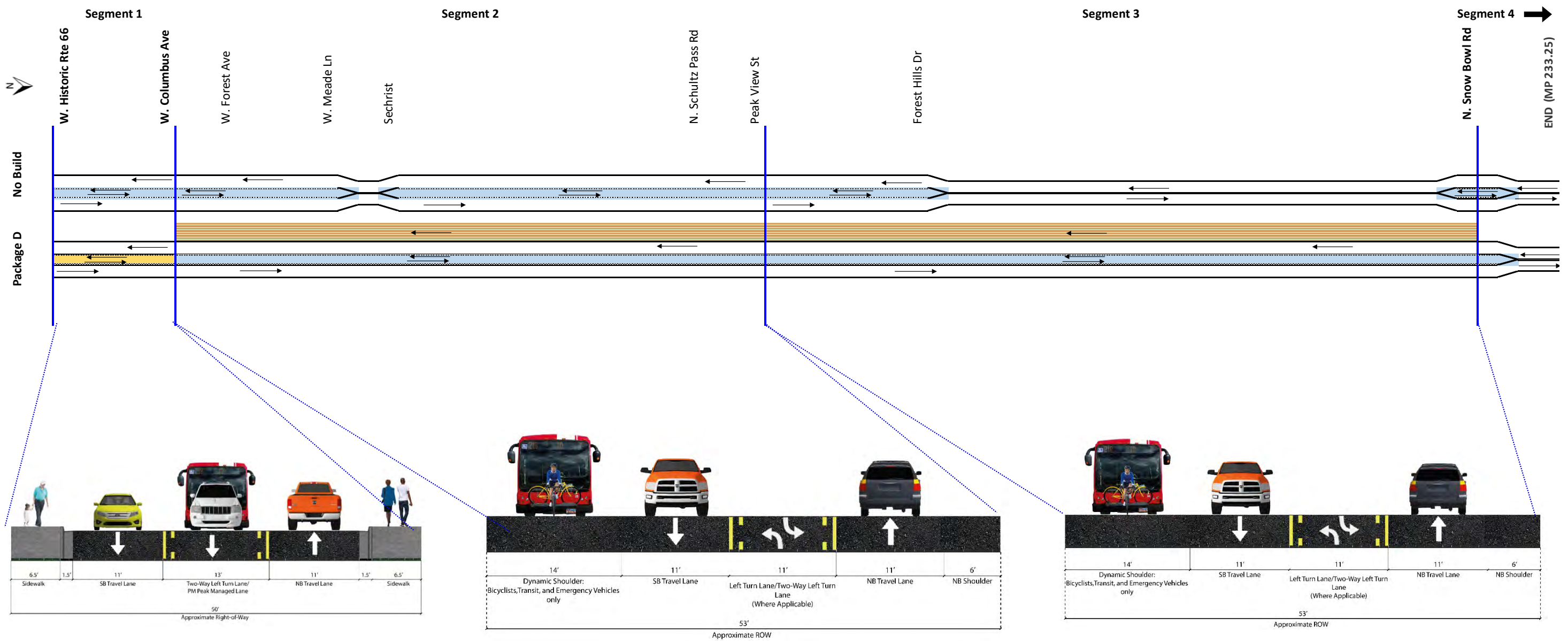
Segment		No Build	Alternative Package					
			A	B	C	D	E (Alt 17 - Wing Mtn Rd)	F (Alt 18 - Hidden Hollow)
1	Route 66 to Columbus (Urban)	No Build	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	No Build	No Build
2	Columbus to Peak View (Suburban)		Alt 3 Suburban	Alt 4A - AM managed lane NB - PM managed lane SB	Alt 4B (Transit) - AM Bus NB - PM Bus SB	Alt 6 (Transit) - SB bus lane	No Build	No Build
3	Peak View to Snowbowl Rd (Rural)		Alt 3 Rural	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	No Build	No Build
4	Snowbowl Rd to MP 233.55 (Rural)		Alt 3 Rural	No Build	No Build	No Build	No Build	No Build



# Alternative Package D

- LEGEND**
- = General Purpose Lane
  - = Bike Lane/Bikeway
  - = Dynamic Shoulder
  - = Two-way Left Turn Lane (TWLTL)
  - = TWLTL or Peak Hour Managed Lane - All Traffic
  - = TWLTL or Peak Hour Managed Lane - Transit Only

Segment		Alternative Package					
		A	B	C	D	E (Alt 17 - Wing Mtn Rd)	F (Alt 18 - Hidden Hollow)
1	Route 66 to Columbus (Urban)	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	No Build	No Build
2	Columbus to Peak View (Suburban)	Alt 3 Suburban	Alt 4A - AM managed lane NB - PM managed lane SB	Alt 4B (Transit) - AM Bus NB - PM Bus SB	Alt 6 (Transit) - SB bus lane	No Build	No Build
3	Peak View to Snowbowl Rd (Rural)	Alt 3 Rural	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit) - SB bus lane	No Build	No Build
4	Snowbowl Rd to MP 233.55 (Rural)	Alt 3 Rural	No Build	No Build	No Build	No Build	No Build

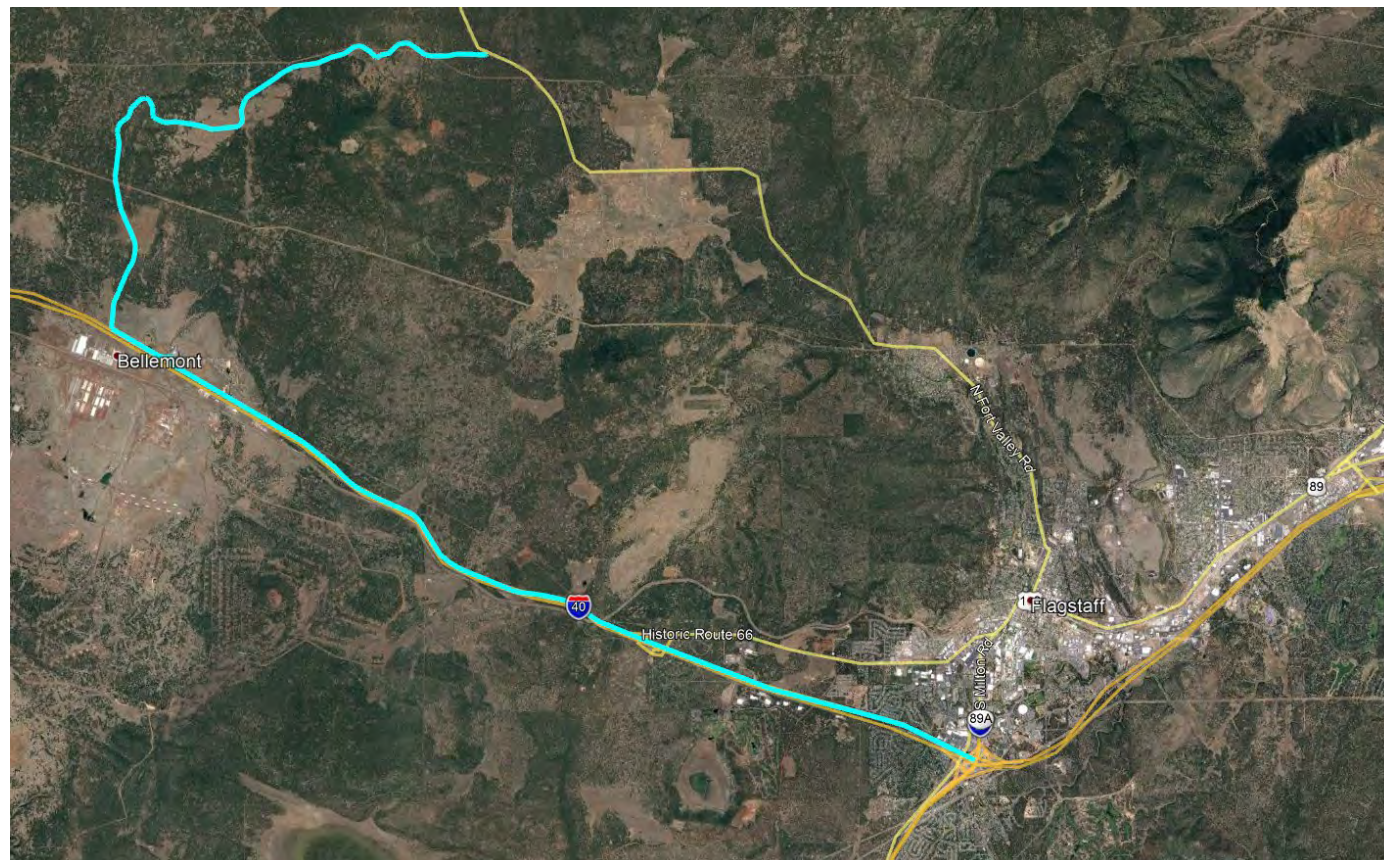




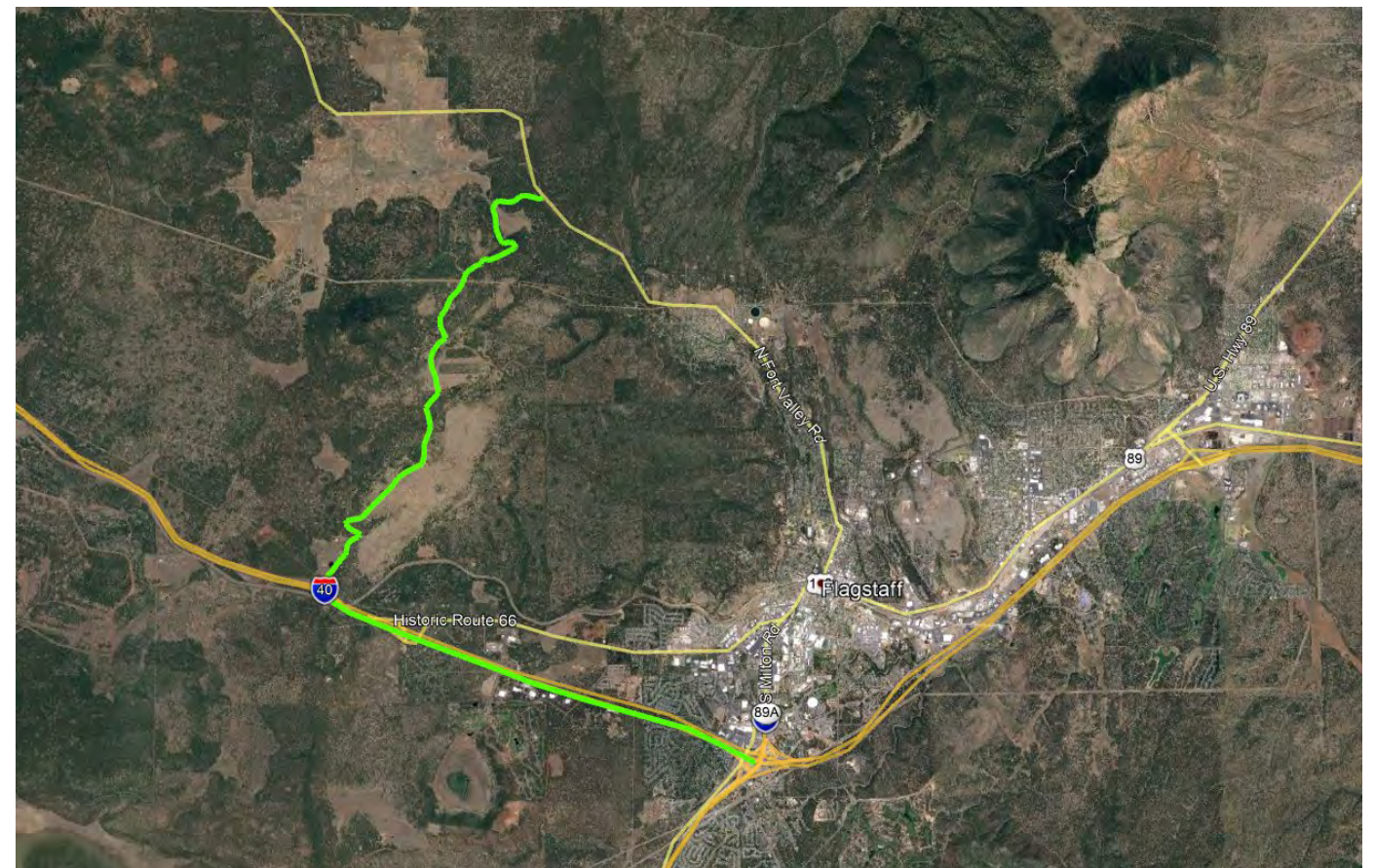
## Alternative Routes

Segment		No Build	Alternative Package				E (Alt 17 - Wing Mtn Rd)	F (Alt 18 - Hidden Hollow)
			A	B	C	D		
1	Route 66 to Columbus (Urban)	No Build	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	Alt 2 - AM no change - PM SB managed lane	No Build	No Build
2	Columbus to Peak View (Suburban)		Alt 3 Suburban	Alt 4A - AM managed lane NB - PM managed lane SB	Alt 4B (Transit) - AM Bus NB - PM Bus SB	Alt 6 (Transit) - SB bus lane	No Build	No Build
3	Peak View to Snowbowl Rd (Rural)		Alt 3 Rural	Alt 6 (Transit) - SB bus lane	Alt 6 (Transit)	Alt 6 (Transit) - SB bus lane	No Build	No Build
4	Snowbowl Rd to MP 233.55 (Rural)		Alt 3 Rural	No Build	No Build	No Build	No Build	No Build

### Alternative Package E Wing Mountain Road Route



### Alternative Package F Hidden Hollow Road Route





#### 4.8 Summary of Tier 2 Evaluation Criteria Results and Analysis Findings

This section describes a brief summary of the results for the Tier 2 Alternative Evaluation process of the seven Tier 2 Alternatives through the application of the Tier 2 Evaluation Criteria. Immediately following this summary, *Section 4.9 - Tier 2 Evaluation Criteria Detailed Results* includes more detailed results and a systematic synopsis for each of the Tier 2 Evaluation Criteria.

The US 180 CMP Tier 2 Alternatives range in performance rating based on the score of the Tier 2 Alternative Evaluation Criteria. The highest performing alternative received a score of 58.42 points while the lowest performing alternative received a score of 27.50 points – over a 30-point difference. **Table 4-9** ranks the alternatives from highest scoring to lowest scoring alternative.

**Table 4-9: Tier 2 Alternative Rankings Based on Tier 2 Evaluation Criteria Results**

Rank	Tier 2 Alternative	Score
1	Alternative A	58.42
2	Alternative D	41.38
3	No-Build	34.06
4	Alternative B	30.67
5	Alternative C	30.19
6	Alternative F	27.51
7	Alternative E	27.50

As demonstrated in **Table 4-9**, Alternative A received the highest score of 58.42 points followed by Alternative D with 41.38 points, No-Build with 34.06 points, Alternative B with 30.67 points, Alternative C with 30.19 points, Alternative F with 27.51 points, and Alternative E with 27.50 points.

The results of the Tier 2 Alternative Evaluation process appear to be aligned with the visual representation of the benefits and trade-offs associated with each of the alternatives. For instance, Alternative A intuitively could be expected to be the best performing alternative because the alternative includes a benefit for all modes of transportation by increasing vehicular capacity through the addition of two travel lanes and improving the corridor for bicyclist.

Conversely, Alternative F and Alternative E (alternative routes) did not perform as well as the other alternatives because these two alternatives do not significantly improve travel times and/or other vehicular operations of the US 180 corridor in an impactful manner. These two alternatives also have the significantly higher costs and right-of-way impacts compared to the other alternatives.

The reason why the No-Build option ranks third of all seven Tier 2 Alternatives could be primarily due to the zero cost and right-of-way impact, but also correlated with the fact that the No-Build condition performs operationally at a relatively high enough level when compared to the lower scoring alternatives across the other evaluation criteria. In theory, the No-Build option ranking third could provide a baseline for a hypothetical cost-benefit ratio where the alternatives that rank below the No-Build have a cost/impacts that outweigh the overall benefits, while the alternatives that rank above the No-Build have overall benefits that outweigh to the cost/impacts.

**Table 4-10** provides a summary of the results for Tier 2 Alternative Evaluation process.

Table 4-10: Detailed Results of the Tier 2 Evaluation Criteria

Evaluation Criteria				Weight	No Build		Package A		Package B		Package C		Package D		Package E (Alt 17)		Package F (Alt 18)	
Category	Criteria / Measure	Threshold / Formula	Modifier		Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score
Reduction in Vehicular Congestion	Improves Congestion (Average of existing and future volumes)	Formula = (Best Result / Alternative Result) * Weight * 100 Ex - Pkg C: (6.23/9.09) * 5.25% * 100 = 3.60	N/A	5.25%	9.23	3.54	6.23	5.25	8.88	3.68	9.09	3.60	9.09	3.60	8.05	4.06	7.75	4.22
	Travel Speed as % of Base Free Flow Speed	Formula = ((Alternative Result * 100) / Best Result) * Weight * 100 / 2 Ex - Pkg C: ((74.5%*100)/84.9) * 3.32% * 100 / 2 = 1.46	N/A	3.32%														
	AM			(1.66%)	84.8%	1.61	87.4%	1.66	82.4%	1.57	84.4%	1.60	82.6%	1.57	86.9%	1.65	86.0%	1.63
	PM			(1.66%)	83.4%	1.63	84.9%	1.66	76.6%	1.50	74.5%	1.46	75.3%	1.47	84.7%	1.66	84.9%	1.66
	Improved Intersection LOS	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Pkg C: (6/6) * 6.04% * 100 / 2 = 3.02	N/A	6.04%														
	AM			(3.02%)	6	3.02	6	3.02	6	3.02	6	3.02	6	3.02	6	3.02	6	3.02
	PM			(3.02%)	7	2.59	7	2.59	6	3.02	6	3.02	6	3.02	7	2.59	7	2.59
	Signal/Stop Control Delay	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Pkg C: (71.2/222.3) * 3.29% * 100 / 2 = 0.53	N/A	3.29%														
	AM			(1.645%)	164.8	0.71	162	0.72	195.6	0.60	222.3	0.53	290.5	0.40	71.2	1.65	80.2	1.46
	PM			(1.645%)	85.3	0.92	47.5	1.65	63.8	1.23	63.1	1.24	55.5	1.41	63.2	1.24	55.1	1.42
Travel Time:	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Pkg C: (931/965) * 4.79% * 100 / 2 = 2.31	N/A	4.79%															
AM			(2.395%)	959	2.33	931	2.40	986	2.26	965	2.31	987	2.26	935	2.39	945	2.36	
PM			(2.395%)	984	2.33	958	2.39	1073	2.14	1105	2.08	1092	2.10	959	2.39	957	2.40	
Safety	Reduction in Total Crashes	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Pkg C: (11.55/37.13) * 7.13% * 100 = 2.22	N/A	7.13%	0	0*	37.13	7.12	11.55	2.22	11.55	2.22	25.60	4.91	0	0*	0	0*
	Reduced Injury Crashes	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Pkg C: (11.50/46.12) * 8.18% * 100 = 2.04	N/A	8.18%	0	0*	46.41	8.18	14.63	2.58	11.50	2.03	23.75	4.18	0	0*	0	0*
	Reduced Bicycle Crashes	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Pkg C: (-5.31/3.5) * 7.10% * 100 = -10.78	N/A	7.10%	0	0*	3.50	7.10	-5.31	-7.10	-5.31	-7.10	0	0*	0	0*	0	0*
Expand Travel Mode Choices	Pedestrian	Meets or Exceeds both ADOT's minimum standard and the City/FMPO/NAIPTA's (PP) preferred standards	1															
		Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIPTA's (PP) preferred standards, but not both	0.5	7.12%	-	0.00	Varries	3.56	Varries	3.56	Varries	3.56	Varries	3.56	-	0.00	-	0.00
		Maintains Existing Condition	0															
	Bicycle	Meets or Exceeds both ADOT's minimum standard and the City/FMPO/NAIPTA's preferred standards	1															
		Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIPTA's preferred standards, but not both	0.5	7.48%	-	0.00	Varries	4.68	Varries	2.81	Varries	2.81	Varries	1.87	-	0.00	-	0.00
		Maintains Existing Condition	0															
Transit	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Pkg C: (755/893) * 6.27% * 100 / 2 = 2.65	N/A	6.27%															
AM			(3.135%)	834	2.84	862	2.74	895	2.64	893	2.65	1075	2.20	755	3.13	790	3.00	
PM			(3.135%)	894	2.90	866	3.00	1031	2.52	949	2.74	964	2.70	829	3.13	873	2.98	

Results continued on the following page

Evaluation Criteria				Weight	No Build	Package A	Package B	Package C	Package D	Package E (Alt 17)	Package F (Alt 18)							
Category	Criteria / Measure	Threshold / Formula	Modifier		Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score						
Public Acceptance	Public Support	TBD	TBD	8.26%	TBD		TBD		TBD		TBD							
Construction/Implementation	Project Cost <sup>#+-</sup>	Formula = (Best Result / (Alternative Result/10M)) * Weight * 100 Ex - Pkg C: (1/(24.576M/10M)) * 4.68% * 100 = 1.90	N/A	4.68%	\$0.00	4.68	\$87,291,544	0.54	\$24,576,648	1.90	\$24,576,648	1.90	\$20,652,488	2.27	\$80,265,491	0.58	\$62,352,890	0.75
	ROW Impact <sup>+*</sup> (Square Feet)	Formula = (Best Result / (Alternative Result/10K)) * Weight * 100 Ex - Pkg C: (1/(91,728/10K)) * 4.98% * 100 = 0.54	N/A	4.96%	0	4.96	303,909	0.16	91,728	0.54	91,728	0.54	58,968	0.84	2,557,843	0.02	1,993,306	0.02
<b>Aggregate Score</b>				83.88%	<b>34.06</b>		<b>58.42</b>		<b>30.67</b>		<b>30.19</b>		<b>41.38</b>		<b>27.50</b>		<b>27.51</b>	
<b>Rank</b>					<b>3</b>		<b>1</b>		<b>4</b>		<b>5</b>		<b>2</b>		<b>7</b>		<b>6</b>	

**Notes:**  
 \*If no bicycle lane is recommended as a component of the alternative (Alt. 2,3 rural, and 6) bicycle crash modification factors are not provided by the Clearinghouse, resulting in a score of zero. # Project Costs for managed lane alternatives do not include costs for permanent or variable message signing.  
 +A common denominator has been added to the formula to normalize the relationship between the best result and the other results due to the large disparity between the two. -ROW impact/cost does not include any costs that may be associated with a potential impact to an existing building.  
 Project Economics and Environmental Impacts criterion will be included in Tier 3 Alternative Evaluation Analysis.

## 4.9 Tier 2 Evaluation Criteria Detailed Results

This section describes the detailed results for the Tier 2 Alternative evaluation process of the seven Tier 2 Alternatives using the Evaluation Criteria, Scoring Thresholds and Scoring Thresholds discussed in the previous sections. Refer back to **Table 4-10** for the results presented in the following sub-sections.

### 4.9a Reduction in Vehicular Congestion - *Improves Congestion Criterion Results*

ADOT’s Congestion Needs Score (CNS) Tool is the source that calculates the results for the Improves Congestion criterion. The results of the CNS for each Tier 2 Alternative are displayed below in **Table 4-11**.



Table 4-11: Improves Congestion Criterion Results

ID #	Route	Future AADT (2040)	Capacity Threshold (2040)	Percent of Threshold (2040)	Future Congestion Need Score*	Future Congestion Need Score Average*	Fcnl Class
No-Build	Route 66 to Columbus	21,010	30,000	70.0%	14.01	9.23	2-lanes, Urban, Minor Arterial
	Columbus to Peak View	18,514	33,600	55.1%	11.02		2-lanes, Suburban, Minor Arterial
	Peak View to Snowbowl Rd	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector
	Snowbowl to MP 233.55	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector
Alt A	Route 66 to Columbus	21,010	31,250	67.2%	13.45	6.23	2-lanes, Urban, Minor Arterial except in the PM Peak. PM Peak (2 hours) - 3-lanes, Urban, Minor Arterial
	Columbus to Peak View	18,514	67,200	27.6%	5.51		4-lanes, Suburban, Minor Arterial
	Peak View to Snowbowl Rd	8,568	57,600	14.9%	2.97		4-lanes, Rural, Major Collector
	Snowbowl to MP 233.55	8,568	57,600	14.9%	2.97		4-lanes, Rural, Major Collector
Alt B	Route 66 to Columbus	21,010	31,250	67.2%	13.45	8.88	2-lanes, Urban, Minor Arterial except in the PM Peak. PM Peak (2 hours) - 3-lanes, Urban, Minor Arterial
	Columbus to Peak View	18,514	36,400	50.9%	10.17		2-lanes, Suburban, Minor Arterial except during peak hours. Peak hours (4 hours) - 3-lanes, Suburban, Minor Arterial (AM-NB, PM-SB managed lanes)
	Peak View to Snowbowl Rd	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector + Transit lane in the SB direction
	Snowbowl to MP 233.55	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector
Alt C	Route 66 to Columbus	21,010	31,250	67.2%	13.45	9.09	2-lanes, Urban, Minor Arterial except in the PM Peak. PM Peak (2 hours) - 3-lanes, Urban, Minor Arterial
	Columbus to Peak View	18,514	33,600	55.1%	11.02		2-lanes, Suburban, Minor Arterial + Transit lane during peak hours
	Peak View to Snowbowl Rd	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector + Transit lane in the SB direction
	Snowbowl to MP 233.55	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector
Alt D	Route 66 to Columbus	21,010	31,250	67.2%	13.45	9.09	2-lanes, Urban, Minor Arterial except in the PM Peak. PM Peak (2 hours) - 3-lanes, Urban, Minor Arterial
	Columbus to Peak View	18,514	33,600	55.1%	11.02		2-lanes, Suburban, Minor Arterial + Transit lane in the SB direction
	Peak View to Snowbowl Rd	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector + Transit lane in the SB direction
	Snowbowl to MP 233.55	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector
Alt 17	Route 66 to Columbus	18,909	30,000	63.0%	12.61	8.05	2-lanes, Urban, Minor Arterial
	Columbus to Peak View	16,414	33,600	48.9%	9.77		2-lanes, Suburban, Minor Arterial
	Peak View to Snowbowl Rd	6,468	28,800	22.5%	4.49		2-lanes, Rural, Major Collector
	Snowbowl to Alt 17 Intersection	10,668	28,800	37.0%	7.41		2-lanes, Rural, Major Collector
	Alt 17 Intersection to MP 233.55	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector
Alt 18	Route 66 to Columbus	18,909	30,000	63.0%	12.61	7.75	2-lanes, Urban, Minor Arterial
	Columbus to Peak View	16,414	33,600	48.9%	9.77		2-lanes, Suburban, Minor Arterial
	Peak View to Alt 18 Intersection	6,468	28,800	22.5%	4.49		2-lanes, Rural, Major Collector
	Alt 18 Intersection to Snowbowl	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector
	Snowbowl to MP 233.55	8,568	28,800	29.7%	5.95		2-lanes, Rural, Major Collector

The CNS results are “reversed ranked” whereby the lowest numbers represent the higher performing alternatives. Thus, Alternative A is the highest performing alternative with a CNS of 6.23, where the No-Build is the lowest performing alternative with a CNS of 9.23. The Tier 2 Alternatives are ranked below from highest to lowest in regards to CNS—the Improves Congestion criterion.

1. Alternative Package A – 6.23 CNS
2. Alternative Package F – 7.75 CNS
3. Alternative Package E – 8.05 CNS
4. Alternative Package B – 8.88 CNS
5. Alternative Package C – 9.09 CNS
5. Alternative Package D – 9.09 CNS
7. No-Build – 9.23 CNS

The CNS was calculated with the following four steps:

1. Identified the future AADTs from the FMPO Regional TDM Model traffic volumes.
2. Identified the Capacity Threshold through the multiplication of the number of vehicular lanes for each alternative by the capacity in accordance of facility type as noted **Table 4-12**. Milton Road is identified as an urban major arterial facility with an hourly maximum capacity of 800 vehicles per lane. Then Multiply by 24 hours to calculate the alternatives’ capacity threshold.

**Table 4-12: ADOT's Hourly Capacity Threshold Per Hour by Facility Type**

facility_code	facility_type	1-CBD	2-Urban	3-Suburban	4-Rural	5-SmTownCBD	6-OutOfState
0	HOV	2000	2000	2000	2000	2000	99999
1	Freeway	2000	2000	2000	2000	2000	99999
2	Major Arterial	700	800	900	1000	900	99999
3	Minor Arterial	550	625	700	800	700	99999
4	Major Collector	400	450	500	600	500	99999
5	Minor Collector	300	350	400	500	400	99999
7	Ramp	1000	1100	1200	1200	1200	99999
8	Metered Ramp	1000	1100	1200	1200	1200	99999
9	Centroid Connector	99999	99999	99999	99999	99999	99999

The formula below is an example of how the capacity threshold is calculated:

800		6	*	24		115,200
	*					
<i>Hourly lane capacity for an urban arterial*</i>		<i>Number of vehicular lanes</i>		<i>Hours of roadway operation</i>		<i>Calculated Capacity Threshold</i>

3. Divide the future AADT by the Capacity Threshold, then multiply the result by 100 to obtain a percentage.

(42,366	/	115,200)	*	100	=	36.8%
<i>2040 AADT</i>		<i>2040 Capacity Threshold</i>				<i>Percent of Threshold</i>

- Multiply the future AADT percentage by the maximum points possible (20) to obtain the Future CNS.

One assumption was used in the calculation of the CNS:

- 10% of the total traffic (in the vicinity of Route 66 and Columbus, which is approximately 2,100 daily trips in 2040) are diverted to the alternative routes

*Application of the Improves Congestion Results to Calculate the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Improves Congestion criterion. Refer back to *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* for the background behind the development of the formula. The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Best Result} / \text{Alternative Result}) * \text{Weight} * 100$$

**Table 4-13** shows how the scores were calculated for the No-Build option and the six Tier 2 Alternatives relative to the results of the Improves Congestion creation in order of highest to lowest scoring.

**Table 4-13: Improves Congestion Criterion Results in the Calculation of the Technical Score**

Alternative	Improves Congestion Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	6.23 CNS	((6.23/6.23)	* 5.25% * 100	5.25
Alt Package F	7.75 CNS	((6.23/7.75)	* 5.25% * 100	4.22
Alt Package E	8.05 CNS	((6.23/8.05)	* 5.25% * 100	4.06
Alt Package B	8.88 CNS	((6.23/8.88)	* 5.25% * 100	3.68
Alt Package C	9.09 CNS	((6.23/9.09)	* 5.25% * 100	3.60
Alt Package D	9.09 CNS	((6.23/9.09)	* 5.25% * 100	3.60
No-Build	9.23 CNS	((6.23/9.23)	* 5.25% * 100	3.54

**4.9b Reduction in Vehicular Congestion - Travel Speed as a Percentage of Base Free Flow Speed Criterion Results**

The Travel Speed as a Percentage of Base Free Flow Speed criterion is a metric that measures reduction in vehicular congestion by comparing the year 2040 travel speed in miles per hour (MPH) relative to the base free flow speed of 49.8 MPH. The results of the year 2040 travel speed for the No-Build option and the six Tier 2 Alternatives is output from the Vissim Model.

In order to reach a comprehensive measure, travel speeds during both the AM and PM time periods were used to measure the overall performance. The travel speeds in each direction of US 180 – eastbound and westbound – were averaged to reach combined travel speed for the AM and PM timeframes.

The results of the of the Travel Speed as a Percentage of Base Free Flow Speed criterion are shown below in **Table 4-14** for the No-Build option and other six Tier 2 Alternatives. Refer to Appendix D

for detailed Vissim model output results of the AM and PM Travel Speed as a Percentage of Base Free Flow Speed.

**Table 4-14: AM and PM Travel Speed as a % of Base Free Flow Speed Criterion Results**

AM - Average Speed		No Build AM	Package A AM	Package B AM	Package C AM	Package D AM	Package E AM	Package F AM
Corridor	Segment	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)
US-180 WB	1	11.9	12.5	10.9	11.6	9.9	15.5	14.5
US-180 WB	2	36.0	39.3	38.1	37.3	35.9	36.7	35.9
US-180 WB	3	48.4	50.8	49.8	48.8	48.4	48.7	48.5
US-180 WB	4	56.0	53.1	52.7	52.5	52.4	55.9	55.9
Entire Corridor		41.0	42.1	40.5	40.5	38.8	42.9	42.2

US-180 EB	4	56.2	56.3	56.2	56.2	56.2	55.9	56.2
US-180 EB	3	51.1	52.0	50.6	50.6	51.2	51.1	51.1
US-180 EB	2	35.2	39.0	34.1	35.3	35.2	36.0	35.2
US-180 EB	1	17.0	16.8	13.5	17.4	16.9	17.0	17.1
Entire Corridor		43.5	44.9	41.6	43.5	43.5	43.7	43.5

Average Speed of US-180 EB/WB - AM	42.2	43.5	41.1	42.0	41.1	43.3	42.8
Travel Speed as % of Base Free Flow Speed	84.8%	87.4%	82.4%	84.4%	82.6%	86.9%	86.0%

PM - Average Speed		No Build PM	Package A PM	Package B PM	Package C PM	Package D PM	Package E PM	Package F PM
Corridor	Segment	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)	Average Speed (mph)
Milton Rd NB		7.0	5.5	6.1	5.5	6.1	6.3	6.1
Milton Rd SB		12.5	11.9	11.6	11.9	11.6	11.6	12.0

US-180 WB	1	15.3	16.9	17.3	16.7	16.5	16.6	16.4
US-180 WB	2	33.5	35.8	34.3	32.9	34.0	33.7	33.7
US-180 WB	3	50.0	51.2	50.0	49.3	49.1	50.4	50.1
US-180 WB	4	55.7	52.9	50.9	50.9	50.8	55.2	55.2
Entire Corridor		42.8	43.0	41.8	41.0	41.3	42.5	42.4

US-180 EB	4	55.3	55.9	55.3	55.3	55.3	55.4	55.2
US-180 EB	3	49.6	51.6	49.3	49.0	49.0	49.8	49.5
US-180 EB	2	31.0	34.2	24.3	21.0	21.3	33.1	33.7
US-180 EB	1	14.1	12.9	8.9	9.6	10.2	16.1	16.6
Entire Corridor		40.3	41.5	34.4	33.2	33.7	41.9	42.2

Average Speed of US-180 NB/SB - PM	41.5	42.3	38.1	37.1	37.5	42.2	42.3
Travel Speed as Percent of Base Free Flow Speed	83.4%	84.9%	76.6%	74.5%	75.3%	84.7%	84.9%

As noted in the bottom row for the AM and PM time periods, the higher percentage of base free flow speed results in a higher performing alternative when evaluating the reduction of vehicular congestion. Alternative Package A has the fastest average travel speed in both time periods with an average travel speed of 43.5 MPH in the AM and an average travel speed of 42.3 MPH in the PM. As a result, Alternative Package A will also have the highest travel speed as a percent of base free flow speed in both the AM and PM time periods – receiving 87.4% and 84.9% respectively.

Conversely, Alternative Package C has the slowest average travel speed in the PM period at 37.1 MPH and has the third slowest travel speed by small margin in the AM time period at 42.0 MPH. As a result, Alternative Package C has the lowest percent of base flow speed in the PM at 74.5% and the third lowest in the AM at 84.4%.



The No-Build option and the Tier 2 Alternatives are ranked below for each time frame based on the results of the Travel Speed as a Percentage of Base Free Flow Speed criterion.

**AM**

1. Alternative Package A – 87.4% of base free flow speed (43.5 MPH)
2. Alternative Package E – 86.9% of base free flow speed (43.3 MPH)
3. Alternative Package F – 86.0% of base free flow speed (42.8 MPH)
4. No-Build – 84.8% of base free flow speed (42.2 MPH)
5. Alternative Package C – 84.4% of base free flow speed (42.0 MPH)
6. Alternative Package D – 82.6% of base free flow speed (41.1 MPH)
7. Alternative Package B – 82.4% of base free flow speed (41.1 MPH)

**PM**

1. Alternative Package A – 84.9% of base free flow speed (42.3 MPH)
1. Alternative Package F – 84.9% of base free flow speed (42.3 MPH)
3. Alternative Package E – 84.7% of base free flow speed (42.2 MPH)
4. No-Build – 83.4% of base free flow speed (41.5 MPH)
5. Alternative Package B – 76.6% of base free flow speed (38.1 MPH)
6. Alternative Package D – 75.3% of base free flow speed (37.5 MPH)
7. Alternative Package C – 74.5% of base free flow speed (37.1 MPH)

*Application of the Travel Speed as a Percentage of Base Free Flow Speed Criterion Results to Calculate the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Travel Speed as a Percentage Base Free Flow Speed criterion. The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Alternative Result} / \text{Best Result}) * \text{Weight} * 100$$

Since Travel Speed as a Percentage of Base Free Flow Speed was measured in both the AM and PM time periods - two values were produced each receiving half of the value of the 3.32% weight – or 1.66%.

**Table 4-15** and **Table 4-16** show how the AM and PM scores were calculated for the No-Build option and the other six Tier 2 Alternatives relative to the results of the Travel Speed as a Percentage of Base Free Flow Speed criterion in order of highest to lowest scoring.

**Table 4-15: AM Travel Speed as a % Base Free Flow Speed Criterion Results in the Calculation of the Technical Score**

Alternative	AM Travel Speed Result*	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	87.4%	((87.4/87.4)	* 1.66% * 100	1.66
Alt Package E	86.9%	((86.9/87.4)	* 1.66% * 100	1.65
Alt Package F	86.0%	((86.0/87.4)	* 1.66% * 100	
No-Build	84.8%	((84.8/87.4)	* 1.66% * 100	1.61
Alt Package C	84.4%	((84.4/87.4)	* 1.66% * 100	1.60

Alt Package D	82.6%	((82.6/87.4)	* 1.66% * 100	1.57
Alt Package B	82.4%	((82.4/87.4)	* 1.66% * 100	1.57

*\*The Travel Speed as A Percentage of Base Free Flow Speed was converted to a whole value prior to the formula which is not shown in this table*

**Table 4-16: AM Travel Speed as a % Base Free Flow Speed Criterion Results in the Calculation of the Technical Score**

Alternative	PM Travel Speed Result*	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	84.9%	((53.6/53.6)	* 1.66% * 100	1.66
Alt Package F	84.9%	((52.6/53.6)	* 1.66% * 100	1.66
Alt Package E	84.7%	((52.4/53.6)	* 1.66% * 100	1.65
No-Build	83.4%	((51.2/53.6)	* 1.66% * 100	1.63
Alt Package B	76.6%	((49.7/53.6)	* 1.66% * 100	1.50
Alt Package D	75.3%	((39.8/53.6)	* 1.66% * 100	1.47
Alt Package C	74.5%		* 1.66% * 100	1.46

*\*The Travel Speed as A Percentage of Base Free Flow Speed was converted to a whole value prior to the formula which is not shown in this table*

#### 4.9c Reduction in Vehicular Congestion – Intersection Level-of-Service (LOS) Criterion Results

The Intersection LOS criterion measures reduction in vehicular congestion by identifying the number of operationally failing intersections (LOS grade E or F) under the 2040 condition within the No-Build option the six other Tier 2 Alternatives. The intersection LOS results are an output from the Vissim Model.

The US 180 study corridor has 14 intersections that were evaluated under this LOS criterion, including:

- Humphreys Street & Route 66 (signalized);
- Humphreys Street & Aspen Avenue (signalized);
- Humphreys Street & Birch Avenue (signalized);
- Humphreys Street & Cherry Avenue (two-way stop-controlled);
- Humphreys Street & Dale Avenue (two-way stop-controlled);
- Humphreys Street & Elm Avenue (two-way stop-controlled);
- Humphreys Street & Fine Avenue (two-way stop-controlled);
- Humphreys Street & Hunt Avenue (two-way stop-controlled);
- Humphreys Street & Sullivan Avenue (two-way stop-controlled);
- Humphreys Street & Columbus Avenue (signalized);
- US-180 & Forest Avenue (signalized);
- US-180 & Shultz Pass Road (signalized);
- US-180 & Snow Bowl Road (two-way stop-controlled) and
- US-180 & Roundtree Road/Bader Road (two-way stop-controlled).

The LOS grades for each intersection were collected during both the AM and PM time periods in order to capture a comprehensive intersection performance – each receiving half of the 6.04% weight assigned to this criterion. **Table 4-17** shows the number of intersections within each LOS grade for the No-Build option and each of the Tier 2 Alternatives.

**Table 4-17: AM and PM Intersection Level-of-Service (LOS) Criterion Results**

Alternative	AM							PM						
	LOS Grade						Failing Intersections	LOS Grade						Failing Intersections
	A	B	C	D	E	F		A	B	C	D	E	F	
No-Build	4	3	1	0	0	6	6	2	3	2	0	0	7	7
Alt Package A	5	2	1	0	0	6	6	3	0	4	0	0	7	7
Alt Package B	4	3	0	1	0	6	6	2	2	3	1	0	6	6
Alt Package C	4	3	1	0	0	6	6	3	0	4	1	0	6	6
Alt Package D	3	4	1	0	0	6	6	3	0	3	2	0	6	6
Alt Package E	6	1	1	0	0	6	6	3	3	1	0	0	7	7
Alt Package F	5	2	1	0	0	6	6	4	2	1	0	0	7	7

As noted in **Table 4-17**, there is little to no variation in the number of failing intersections among the No-Build option and the six Tier 2 Alternatives in both the AM and PM time periods. The six or seven failing intersections are constant among the No-Build option and the Tier 2 Alternatives, where the two-way stop-controlled intersections on Humphrey’s Street are the only failing intersections. Refer to Appendix D for a more detailed result reflecting the intersection LOS output from the Vissim Model.

*Application of the Intersection LOS Results Criterion Results to Calculate the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Intersection LOS criterion. The following formula was used to calculate the scores:

$$Technical\ Score = (Best\ Result / Alternative\ Result) * Weight * 100$$

Since Intersection LOS was measured in both the AM and PM time periods, two values were produced - each receiving half of the 6.04% weight, or 3.02%.

**Table 4-18** and **Table 4-19** below show how the AM and PM scores were calculated for the No-Build option and the other six Tier 2 Alternatives relative to the results of the Intersection LOS criterion in order of highest to lowest scoring.

**Table 4-18: AM Intersection LOS Criterion Results in the Calculation of the Technical Score**

Alternative	AM LOS Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	6	((6/6)	* 3.02% * 100	3.02
Alt Package A	6	((6/6)	* 3.02% * 100	3.02
Alt Package B	6	((6/6)	* 3.02% * 100	3.02
Alt Package C	6	((6/6)	* 3.02% * 100	3.02
Alt Package D	6	((6/6)	* 3.02% * 100	3.02
Alt Package E	6	((6/6)	* 3.02% * 100	3.02
Alt Package F	6	((6/6)	* 3.02% * 100	3.02

**Table 4-19: PM Intersection LOS Criterion Results in the Calculation of the Technical Score**

Alternative	PM LOS Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package B	6	((6/6)	* 3.02% * 100	3.02
Alt Package C	6	((6/6)	* 3.02% * 100	3.02
Alt Package D	6	((6/6)	* 3.02% * 100	3.02
No-Build	7	((6/7)	* 3.02% * 100	2.59
Alt Package A	7	((6/7)	* 3.02% * 100	2.59
Alt Package E	7	((6/7)	* 3.02% * 100	2.59
Alt Package F	7	((6/7)	* 3.02% * 100	2.59

#### 4.9d Reduction in Vehicular Congestion – *Intersection Delay Criterion Results*

The Intersection Delay criterion measures reduction in vehicular congestion by evaluating the duration of delay at intersections under the year 2040 condition for the No-Build option as compared to the six other Tier 2 Alternatives. The intersection delay is calculated under seconds and is an output from the Vissim Model.

The 14 intersections evaluated under this criterion include:

- Humphreys Street & Route 66 (signalized);
- Humphreys Street & Aspen Avenue (signalized);
- Humphreys Street & Birch Avenue (signalized);
- Humphreys Street & Cherry Avenue (two-way stop-controlled);
- Humphreys Street & Dale Avenue (two-way stop-controlled);
- Humphreys Street & Elm Avenue (two-way stop-controlled);
- Humphreys Street & Fine Avenue (two-way stop-controlled);
- Humphreys Street & Hunt Avenue (two-way stop-controlled);
- Humphreys Street & Sullivan Avenue (two-way stop-controlled);
- Humphreys Street & Columbus Avenue (signalized);
- US-180 & Forest Avenue (signalized);
- US-180 & Shultz Pass Road (signalized);
- US-180 & Snow Bowl Road (two-way stop-controlled) and



- US-180 & Roundtree Road/Bader Road (two-way stop-controlled).

The intersection delay for each intersection were collected during both the AM and PM time periods in order to capture a comprehensive intersection performance – each receiving half of the 6.04% weight assigned to this criterion. **Table 4-20** and **Table 4-21** show the seconds of delay at each intersection for the No-Build option and the six Tier 2 Alternatives. Note the average delay among all intersections in both AM and PM time periods is the value used to measure performance.

**Table 4-20: AM Intersection Delay Criterion Results**

Intersection Volume, Delay, & LOS		No Build - AM		Package A - AM		Package B - AM		Package C - AM		Package D - AM		Package E - AM		Package F - AM	
Intersection	Control	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Humphreys St & Rte 66	Signal	17.6	B	16.8	B	19.8	B	17.3	B	19.5	B	14.5	B	15.5	B
Humphreys St & Aspen Ave	Signal	8.6	A	8.2	A	9.8	A	8.8	A	10.7	B	7.0	A	8.0	A
Humphreys St & Birch Ave	Signal	12.7	B	12.1	B	15.4	B	14.1	B	19.8	B	7.3	A	9.1	A
Humphreys St & Cherry Ave	Two-Way Stop-Control	440.4	F	394.7	F	489.6	F	437.4	F	523.8	F	211.7	F	230.0	F
Humphreys St & Dale Ave	Two-Way Stop-Control	486.2	F	394.6	F	382.3	F	512.7	F	693.0	F	77.9	F	132.5	F
Humphreys St & Elm Ave	Two-Way Stop-Control	488.7	F	410.4	F	730.3	F	523.3	F	566.0	F	224.9	F	295.7	F
Humphreys St & Fine Ave	Two-Way Stop-Control	241.4	F	343.1	F	359.3	F	353.6	F	577.7	F	144.7	F	113.5	F
Humphreys St & Hunt Ave	Two-Way Stop-Control	409.7	F	385.2	F	488.9	F	601.8	F	736.6	F	170.4	F	161.3	F
Humphreys St & Sullivan Ave	Two-Way Stop-Control	146.7	F	246.3	F	179.9	F	590.0	F	862.0	F	84.3	F	104.3	F
Humphreys St & Columbus Ave	Signal	30.3	C	27.9	C	36.0	D	28.9	C	29.9	C	28.7	C	28.0	C
US-180 & Forest Ave	Signal	11.2	B	7.2	A	14.0	B	11.2	B	16.4	B	9.7	A	10.9	B
US-180 & Shultz Pass Rd	Signal	5.4	A	4.6	A	6.8	A	7.0	A	5.5	A	5.6	A	5.5	A
US-180 & Snow Bowl Rd	Two-Way Stop-Control	8.6	A	8.3	A	5.2	A	5.2	A	5.2	A	9.5	A	8.4	A
US-180 & Roundtree Rd/Bader Rd	Two-Way Stop-Control	0.5	A	8.1	A	0.9	A	0.6	A	0.5	A	0.7	A	0.5	A
<b>Average Delay</b>		<b>164.8</b>		<b>162.0</b>		<b>195.6</b>		<b>222.3</b>		<b>290.5</b>		<b>71.2</b>		<b>80.2</b>	

**Table 4-21: PM Intersection Delay Criterion Results**

Intersection Volume, Delay, & LOS		No Build - PM		Package A - PM		Package B - PM		Package C - PM		Package D - PM		Package E - PM		Package F - PM	
Intersection	Control	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Humphreys St & Rte 66	Signal	23.0	C	25.91	C	28.41	C	27.34	C	28.28	C	16.43	B	18.87	B
Humphreys St & Aspen Ave	Signal	10.6	B	20.37	C	25.68	C	25.26	C	24.71	C	8.76	A	1657	8.55
Humphreys St & Birch Ave	Signal	16.7	B	21.09	C	33.64	C	33.18	C	29.02	C	13.16	B	1616	12.41
Humphreys St & Cherry Ave	Two-Way Stop-Control	304.3	F	129.11	F	189.96	F	223.09	F	161.72	F	171.17	F	1614	122.12
Humphreys St & Dale Ave	Two-Way Stop-Control	83.0	F	52.57	F	149.08	F	91.42	F	114.57	F	73.55	F	1545	101.84
Humphreys St & Elm Ave	Two-Way Stop-Control	219.7	F	74.36	F	152.15	F	119.64	F	92.23	F	117.98	F	1631	88.03
Humphreys St & Fine Ave	Two-Way Stop-Control	82.8	F	52.49	F	71.02	F	86.48	F	63.26	F	62.32	F	1525	54.23
Humphreys St & Hunt Ave	Two-Way Stop-Control	201.0	F	72.8	F	79.45	F	101.17	F	71.32	F	83.01	F	1611	131.67
Humphreys St & Sullivan Ave	Two-Way Stop-Control	88.9	F	59.8	F	84.58	F	81.71	F	91.43	F	186.02	F	1635	84.61
Humphreys St & Columbus Ave	Signal	32.3	C	31.7	C	38.06	D	39.17	D	39.41	D	27.21	C	2365	25.54
US-180 & Forest Ave	Signal	14.9	B	6.17	A	18.78	B	33.25	C	40.71	D	11	B	781	9.54
US-180 & Shultz Pass Rd	Signal	5.2	A	4.05	A	4.51	A	5.06	A	4.92	A	4.86	A	1176	4.67
US-180 & Snow Bowl Rd	Two-Way Stop-Control	110.1	F	106.78	F	10.85	B	9.9	A	8.78	A	107.97	F	754	108.34
US-180 & Roundtree Rd/Bader Rd	Two-Way Stop-Control	0.9	A	8.09	A	6.5	A	6.66	A	6.5	A	0.74	A	275	0.78
<b>Average Delay</b>		<b>85.3</b>		<b>47.5</b>		<b>63.8</b>		<b>63.1</b>		<b>55.5</b>		<b>63.2</b>		<b>55.1</b>	

Interestingly, the duration of the average delay among the No-Build option and the other six Tier 2 Alternatives are shorter in the PM time period compared to the AM time period, which is different from the trends experienced in the other Reduction in Vehicular Congestion criteria where the traffic operations or worse in the PM. The difference between the best performing alternative and the worst performing alternative in the PM is 37.7 seconds while the difference between the best and worst performing alternative in the AM is nearly 219 seconds. This is due to the fact that the Alternative Package D has an unusually long average delay of 290.5 seconds in the AM time period compared to the six Tier 2 Alternatives.

The No-Build and the Tier 2 Alternatives are ranked below for each time duration based on the results of the Intersection Delay criterion.

**AM**

1. Alternative Package E – 71.2 seconds of average delay
2. Alternative Package F – 80.2 seconds of average delay
3. Alternative Package A – 162.0 seconds of average delay
4. No-Build – 164.8 seconds of average delay
5. Alternative Package B – 195.6 seconds of average delay
6. Alternative Package C – 222.3 seconds of average delay
7. Alternative Package D – 290.5 seconds of average delay

**PM**

1. Alternative Package A – 47.5 seconds of average delay
2. Alternative Package F – 55.1 seconds of average delay
3. Alternative Package D – 55.5 seconds of average delay
4. Alternative Package C – 63.1 seconds of average delay
5. Alternative Package E – 63.2 seconds of average delay
6. Alternative Package B – 63.8 seconds of average delay
7. No-Build – 85.3 seconds of average delay

*Application of the Intersection Delay Criterion Results in the Calculation of the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Intersection Delay criterion. The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Best Result} / \text{Alternative Result}) * \text{Weight} * 100$$

Since Intersection Delay was measured in both the AM and PM time periods, two values were produced - each receiving half of the 3.29% weight, or 1.645%.

**Table 4-22** and **Table 4-23** show how the AM and PM scores were calculated for the No-Build option and the six Tier 2 Alternatives relative to the results of the Intersection Delay criterion in order of highest to lowest scoring.

**Table 4-22: AM Intersection Delay Criterion Results in the Calculation of the Technical Score**

Alternative	AM Delay Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package E	71.2 seconds	((71.2/71.2)	* 1.645% * 100	1.65
Alt Package F	80.2 seconds	((71.2/80.2)	* 1.645% * 100	1.46
Alt Package A	162.0 seconds	((71.2/162.0)	* 1.645% * 100	0.72
No-Build	164.8 seconds	((71.2/164.8)	* 1.645% * 100	0.71
Alt Package B	195.6 seconds	((71.2/195.6)	* 1.645% * 100	0.60
Alt Package C	222.3 seconds	((71.2/222.3)	* 1.645% * 100	0.53
Alt Package D	290.5 seconds	((71.2/290.5)	* 1.645% * 100	0.40

**Table 4-23: PM Intersection Delay Criterion Results in the Calculation of the Technical Score**

Alternative	PM Delay Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	47.5 seconds	((47.5/47.5)	* 1.645% * 100	1.65
Alt Package F	55.1 seconds	((47.5/55.1)	* 1.645% * 100	1.42
Alt Package D	55.5 seconds	((47.5/55.5)	* 1.645% * 100	1.41
Alt Package C	63.1 seconds	((47.5/63.1)	* 1.645% * 100	1.24
Alt Package E	63.2 seconds	((47.5/63.2)	* 1.645% * 100	1.24
Alt Package B	63.8 seconds	((47.5/63.8)	* 1.645% * 100	1.23
No-Build	85.3 seconds	((47.5/85.3)	* 1.645% * 100	0.92

#### 4.9e Reduction in Vehicular Congestion – *Travel Time Criterion Results*

The Travel Time criterion is a metric that measures reduction in vehicular congestion by calculating the amount of time it takes to travel the corridor from one end to the other. The results of the year 2040 travel time for the No-Build option and six other Tier 2 Alternatives is an output from the Vissim Model.

In order to reach a comprehensive measure, travel times during both the AM and PM time periods were used to measure the overall performance of this criterion – each receiving half of the 4.79% weight assigned to this criterion. The travel times in each direction of US 180 – eastbound and westbound – were also averaged to reach a combined travel time for each the AM and PM timeframes.

The results of the of the Travel Time are shown below in **Table 4-24** for the No-Build option and the six Tier 2 Alternatives.

**Table 4-24: AM Travel Time Criterion Results**

Alternative	AM Peak Hour				PM Peak Hour			
	Westbound		Eastbound		Westbound		Eastbound	
	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change
No Build	979	-	939	-	955	-	1,014	-
A	952	2.8%	909	3.2%	932	2.4%	985	2.9%
B	990	-1.1%	983	-4.7%	959	-0.4%	1,187	-17.1%
C	991	-1.2%	938	0.1%	979	-2.5%	1,230	-21.3%
D	1,033	-5.5%	940	-0.1%	972	-1.8%	1,211	-19.4%
E Wing Mntn bypass	935	4.5%	935	0.4%	944	1.2%	975	3.8%
F Hidden Hollow bypass	951	2.9%	939	0.0%	946	0.9%	968	4.5%

Average Travel Time	AM		PM	
No Build	959	-	985	-
A	931	2.9%	959	2.7%
B	987	-2.8%	1,073	-9.0%
C	965	-0.6%	1,105	-12.3%
D	987	-2.8%	1,092	-10.9%
E Wing Mntn bypass	935	2.5%	960	2.6%
F Hidden Hollow bypass	945	1.4%	957	2.8%

The average travel time between the westbound and eastbound direction for the No-Build option is 959 seconds (15.9 minutes) in the AM and 985 seconds (16.4 minutes) in the PM – approximately a 30 second difference in average travel time between the AM and PM time periods. The No-Build travel time results is the baseline condition for calculating the travel time percent change for each of the Tier 2 Alternatives.

Alternative Package A is the only alternative that has an improved travel time condition compared to the No-Build option in both the AM and PM time periods, while the two alternative routes (Alternative Package E and Alternative Package F) also have an improved travel time. However, the decrease in travel times for Alternative Package A, Alternative Package E, and Alternative Package F are all minimal/negligible.

The No-Build option and the Tier 2 Alternatives are ranked below for each time duration based on the Vissim model results of the Travel Time criterion.

**AM**

1. Alternative Package A – 931 seconds of average travel time
2. Alternative Package E – 935 seconds of average travel time
3. Alternative Package F – 945 seconds of average travel time
4. No-Build – 959 seconds of average travel time
5. Alternative Package C – 965 seconds of average travel time
6. Alternative Package B – 987 seconds of average travel time
6. Alternative Package D – 987 seconds of average travel time



**PM**

1. Alternative Package F – 957 seconds of average travel time
2. Alternative Package A – 959 seconds of average travel time
3. Alternative Package E – 960 seconds of average travel time
4. No-Build – 985 seconds of average travel time
5. Alternative Package B – 1,073 seconds of average travel time
6. Alternative Package D – 1,092 seconds of average travel time
7. Alternative Package C – 1,105 seconds of average travel time

*Application of the Travel Time Results in the Calculation of the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Travel Time criterion. The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Best Result} / \text{Alternative Result}) * \text{Weight} * 100$$

Since Travel Time was measured in both the AM and PM time periods, two values were produced - each receiving half the value of the 4.79% weight, or 2.395%.

**Table 4-25** and **Table 4-26** below show how the AM and PM scores were calculated for the No-Build option and six other Tier 2 Alternatives relative to the results of the Travel Time criterion in order of highest to lowest scoring.

**Table 4-25: AM Travel Time Results in the Calculation of the Technical Score**

Alternative	AM Travel Time Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	931 seconds	((931/931)	* 2.395% * 100	2.40
Alt Package E	935 seconds	((931/931)	* 2.395% * 100	2.39
Alt Package F	945 seconds	((931/931)	* 2.395% * 100	2.36
No-Build	959 seconds	((931/931)	* 2.395% * 100	2.33
Alt Package C	965 seconds	((931/931)	* 2.395% * 100	2.31
Alt Package B	987 seconds	((931/931)	* 2.395% * 100	2.26
Alt Package D	987 seconds	((931/931)	* 2.395% * 100	2.26

**Table 4-26: PM Travel Time Results in the Calculation of the Technical Score**

Alternative	PM Travel Time Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package F	957 seconds	((957/957)	* 2.395% * 100	2.40
Alt Package A	959 seconds	((957/959)	* 2.395% * 100	2.39
Alt Package E	960 seconds	((957/960)	* 2.395% * 100	2.39
No-Build	985 seconds	((957/985)	* 2.395% * 100	2.33
Alt Package B	1,073 seconds	((957/1,073)	* 2.395% * 100	2.14
Alt Package D	1,092 seconds	((957/1,092)	* 2.395% * 100	2.10
Alt Package C	1,105 seconds	((957/1,105)	* 2.395% * 100	2.08

#### 4.9f Safety - Reduction in All Crashes Criterion Results

The Reduction in All Crashes metric measures safety performance of the No-Build option and the six Tier 2 Alternatives through the use Crash Modification Factors (CMFs) and Crash Reduction Factors (CRFs). The Crash Modification Factor Clearinghouse is the source of all CMFs and CRFs, and according to the Clearinghouse, a CMF is a multiplicative factor that indicates the proportion of crashes that would be expected after implementing a countermeasure. Examples of countermeasures include installing a traffic signal, increasing the width of edgelines, and installing a median barrier. CMFs with a value less than 1.0 indicate an expected decrease in crashes. CMFs greater than 1.0 indicate an expected increase in crashes. The Clearinghouse also identifies a CRF as another way of representing the expected effect of a countermeasure in terms of the percentage decrease in crashes. The formula to convert a CMF to a CRF is as follows:

$$CRF = 100 * (1 - CMF)$$

For example, the application of adding one traffic lane in each direction has a CMF of 0.807 for all crashes according to the Clearinghouse, so the CRF for adding a lane in each direction is 19.3% as shown in the formula below:

$$(1 / 0.807) * 100 = 19.3\%$$

*CMF of adding one lane in each direction*                      *CRF of adding one lane in each direction*

The Reduction in All Crashes Criterion used an approach to combine the CMFs of the different countermeasure included in each of the Tier 2 Alternatives to reach a combined CRF for each alternative. As a result, the alternatives with higher CRFs – greater potential in reduction in all crashes - were the alternatives that scored higher within this criterion. The combined CRF for this criterion includes all crash types (injury and non-injury related crashes). **Table 4-27** shows the combined CRF for all crashes for the six Tier 2 Alternatives. The No-Build condition receives no CRFs since no countermeasures would be implemented. Refer to Appendix E for the detailed methodology on how the CRFs were calculated.

**Table 4-27: Reduction in All Crashes Criterion Results**

Alternative	CRF for All Crashes
No-Build	No CRF
Alternative Package A	37.13% CRF for all crashes
Alternative Package B	11.55% CRF for all crashes
Alternative Package C	11.55% CRF for all crashes
Alternative Package D	25.60% CRF for all crashes
Alternative Package E*	0
Alternative Package F*	0

*\*No infrastructure changes made to the mainline US 180 corridor automatically receiving a 0% CRF*

*Application of the Reduction in All Crashes Criterion Results in the Calculation of the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Reduction in All Crashes Criterion. The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Alternative Result} / \text{Best Result}) * \text{Weight} * 100$$

**Table 4-28** shows how the scores were calculated for combined CRFs for all crashes for the No-Build option and the six Tier 2 Alternatives relative to the results of the Reduction in All Crashes Criterion in order of highest scoring to lowest scoring.

**Table 4-28: Reduction in All Crashes Criterion Results in the Calculation of the Technical Score**

Alternative	CRF for All Crashes*	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	37.13%	((37.13/37.13)	* 7.13% * 100	7.13
Alt Package D	25.60%	((25.60/37.13)	* 7.13% * 100	4.91
Alt Package B	11.55%	((11.55/37.13)	* 7.13% * 100	2.22
Alt Package C	11.55%	((11.55/37.13)	* 7.13% * 100	2.22
Alt Package E	No CRF and no formula used – automatically received a score of 0			0
Alt Package F	No CRF and no formula used – automatically received a score of 0			0
No-Build	No CRF and no formula used – automatically received a score of 0			0

*\*The CRF was converted to a whole value prior to the formula which is not shown in this table*

**4.9g Safety - Reduction in Injury-Related Crashes Criterion Results**

The Reduction in Injury-Related Crashes metric measures safety performance of the No-Build option and the six Tier 2 Alternatives through the use Crash Modification Factors (CMFs) and Crash Reduction Factors (CRFs). The Crash Modification Factor Clearinghouse is the source of all CMFs and CRFs, and according to the clearinghouse, a CMF is a multiplicative factor that indicates the proportion of crashes that would be expected after implementing a countermeasure. Examples of countermeasures include installing a traffic signal, increasing the width of edgelines, and installing a median barrier. CMFs with a value less than 1.0 indicate an expected decrease in crashes. CMFs greater than 1.0 indicate an expected increase in crashes. The Clearinghouse also identifies a CRF as another way of representing the expected effect of a countermeasure in terms of the percentage decrease in crashes. The formula to convert a CMF to a CRF is as follows:

$$\text{CRF} = 100 * (1 - \text{CMF})$$

For example, the application of adding one traffic lane in each direction has a CMF of 0.807 for all crashes according to the Clearinghouse, so the CRF for adding a lane in each direction is 19.3% as shown in the formula below:

$$(1 / 0.807) * 100 = 19.3\%$$

*CMF of adding one lane in each direction*
*CRF of adding one lane in each direction*

The Reduction in Injury-Related Crashes Criterion used an approach to combine the CMFs of the different countermeasure included in each of the Tier 2 Alternatives to reach a combined CRF for each alternative. As a result, the alternatives with higher CRFs – greater potential in reduction in injury-related crashes only - were the alternatives that scored higher within this criterion. The combined CRF for this criterion includes injury-related crashes only. **Table 4-29** shows the combined CRF for the injury-related crashes for the six Tier 2 Alternatives. The No-Build condition receives no CRFs since no countermeasures would be implemented. Refer to Appendix E for the detailed methodology on how CRFs were calculated.

**Table 4-29: Reduction in Injury-Related Crashes Criterion Results**

Alternative	CRF for Injury Crashes
No-Build	No CRF
Alternative Package A	46.41% CRF for injury crashes
Alternative Package B	14.63% CRF for injury crashes
Alternative Package C	11.50% CRF for injury crashes
Alternative Package D	23.75% CRF for injury crashes
Alternative Package E*	0% CRF for injury crashes
Alternative Package F*	0% CRF for injury crashes

*\*No infrastructure changes made to the mainline US 180 corridor automatically receiving a 0% CRF*

*Application of the Reduction in Injury-Related Crashes Criterion Results in the Calculation of the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Reduction in Injury-Related Crashes Criterion. The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Alternative Result} / \text{Best Result}) * \text{Weight} * 100$$

**Table 4-30** shows how the scores were calculated for combined CRFs for injury-related crashes for the No-Build option and the six Tier 2 Alternatives relative to the results of the Reduction in Injury-Related Crashes Criterion in order of highest scoring to lowest scoring.

**Table 4-30: Reduction in Injury-Related Crashes Criterion Results in the Calculation of the Technical Score**

Alternative	CRF for Injury Crashes*	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	46.41%	((46.41/46.41)	* 8.18% * 100	8.18
Alt Package D	23.75%	((23.75/46.41)	* 8.18% * 100	4.18
Alt Package B	14.63%	((14.63/46.41)	* 8.18% * 100	2.58
Alt Package C	11.50%	((11.50/46.41)	* 8.18% * 100	2.03
Alt Package E	No CRF and no formula used – automatically received a score of 0			0
Alt Package F	No CRF and no formula used – automatically received a score of 0			0
No-Build	No CRF and no formula used – automatically received a score of 0			0

*\*The CRF was converted to a whole value prior to the formula which is not shown in this table*



#### 4.9h Safety - Reduction in Bicycle-Related Only Crashes Criterion Results

The Reduction in Bicycle-Related Crashes metric measures safety performance of the No-Build option and the six Tier 2 Alternatives also using Crash Modification Factors (CMFs) and Crash Reduction Factors (CRFs). **Table 4-31** shows the combined CRF for the injury-related crashes for the six Tier 2 Alternatives. The No-Build condition receives no CRFs since no countermeasures would be implemented. Refer to Appendix E for the detailed methodology on how CRFs were calculated.

**Table 4-31: Reduction in Bicycle-Related Only Crashes Criterion Results**

Alternative	CRF for Bicycle Crashes
No-Build	0% CRF for bicycle crashes
Alternative Package A	3.50% CRF for bicycle crashes
Alternative Package B	-5.31% CRF for bicycle crashes
Alternative Package C	-5.31% CRF for bicycle crashes
Alternative Package D	0% CRF for bicycle crashes
Alternative Package E	0% CRF for bicycle crashes
Alternative Package F	0% CRF for bicycle crashes
<i>*If no bicycle lane is recommended as a component of the alternative (Alt. 3, 4, 6A, 6b) bicycle crash modification factors are not provided by the Clearinghouse, resulting in a score of zero.</i>	

#### Application of the Reduction in Bicycle-Related Crashes Criterion Results in the Calculation of the Technical Score

The quantitative approach previously described was used to calculate the scores:

$$\text{Technical Score} = (\text{Alternative Result} / \text{Best Result}) * \text{Weight} * 100$$

**Table 4-32** shows how the scores were calculated for combined CRFs for bicycle-related crashes for the No-Build option and the six Tier 2 Alternatives relative to the results of the Reduction in Bicycle-Related Crashes Criterion in order of highest scoring to lowest scoring.

**Table 4-32: Reduction in Bicycle-Related Crashes Criterion Results in the Calculation of the Technical Score**

Alternative	CRF for Bicycle Crashes	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package A	3.50%	((3.50/3.50)	* 7.10% * 100	7.10
Alt Package D*	0%	((0/3.50)	* 7.10% * 100	7.10
Alt Package E*	0%	((0/3.50)	* 7.10% * 100	0
Alt Package F*	0%	((0/3.50)	* 7.10% * 100	0
No-Build*	0%	((0/3.50)	* 7.10% * 100	0
Alt Package B	-5.31%	No formula was used and automatically received negative 7.1 for an increase in crashes		-7.1
Alt Package C	-5.31%	No formula was used and automatically received negative 7.1 for an increase in crashes		-7.1
<i>*If no bicycle lane is recommended as a component of the alternative (Alt. 3, 4, 6A, 6b) bicycle crash modification factors are not provided by the Clearinghouse, resulting in a score of zero.</i>				

#### 4.9i Expand Travel Mode Choices - Improved Pedestrian Facilities Criterion Results

The Improved Pedestrian Facilities criterion is one of the qualitative metrics of the Tier 2 Evaluation Criteria. This criterion qualitatively measures how pedestrian facilities are improved utilizing the Controlling Design Criteria previously discussed in *Section 4.2a - Controlling Design Criteria*. The width of the sidewalk is the determining factor used in the calculation of the score.

Given the qualitative nature of this criterion, a series of thresholds were developed to measure the magnitude of improvement over the baseline condition (No-Build) and a modifier was assigned to each threshold to calculate the weighted score. **Table 4-33** below shows the thresholds and the modifier used to calculate the score for the Improved Pedestrian Facilities criterion.

**Table 4-33: Qualitative Scoring Measures of the Pedestrian Facilities Criterion**

Sidewalk Width Threshold Rank		Modifier	Weight	Score
1	Meets or exceeds both ADOT’s minimum standard and the Project Partner preferred standards*	1	7.12	7.12
2	Meets or exceeds ADOT’s minimum standard OR the Project Partners preferred standards, but not both*	0.5		3.56
3	Maintains existing condition/does not meet any standards	0		0

*\*Per the minimum and preferred standards outlined in the Controlling Design Criteria*

The various sidewalk widths excerpted from the Controlling Design Criteria are shown in **Table 4-34**.

**Table 4-34: Improved Pedestrian Facilities Criterion Results**

Alternative	Result/Threshold
No-Build	Maintains existing condition/does not meet any standards*
Alternative Package A	Meets or exceeds both ADOT and Project Partner Standards, but not both*
Alternative Package B	Meets or exceeds both ADOT and Project Partner Standards, but not both*
Alternative Package C	Meets or exceeds both ADOT and Project Partner Standards, but not both*
Alternative Package D	Meets or exceeds both ADOT and Project Partner Standards, but not both*
Alternative Package E	Maintains existing condition/does not meet any standards*
Alternative Package F	Maintains existing condition/does not meet any standards*

*\*Per the minimum and preferred standards outlined in the Controlling Design Criteria*

#### Application of the Improved Pedestrian Facilities Criterion Results in the Calculation of the Technical Score

The Improved Pedestrian Facilities criterion results are illustrated in **Table 4-35**.

**Table 4-35: Improved Pedestrian Facility Criterion Technical Score**

Alternative	Result/Threshold	Score
No-Build	Maintains existing condition/does not meet any standards*	0
Alternative Package A	Meets or exceeds both ADOT and Project Partner Standards, but not both*	3.56
Alternative Package B	Meets or exceeds both ADOT and Project Partner Standards, but not both*	3.56
Alternative Package C	Meets or exceeds both ADOT and Project Partner Standards, but not both*	3.56
Alternative Package D	Meets or exceeds both ADOT and Project Partner Standards, but not both*	3.56
Alternative Package E	Maintains existing condition/does not meet any standards*	0
Alternative Package F	Maintains existing condition/does not meet any standards*	0

*\*Per the minimum and preferred standards outlined in the Controlling Design Criteria*

**4.9j Expand Travel Mode Choices - Improved Bicycle Facilities Criterion Results**

The Improved Bicycle Facilities criterion is another one of the qualitative metrics. This criterion qualitatively measures how bicycle facilities are improved utilizing the Controlling Design Criteria previously discussed in *Section 4.2a - Controlling Design Criteria*. The width of the bike lane and buffer, or SBBL and buffer are two key determining factors used in the calculation of the Improved Bicycle Facilities score.

Similar to the Improved Pedestrian Facilities criterion, the qualitative nature of this criterion resulted in the development of a series of thresholds to measure the magnitude of improvement and a modifier was assigned to each threshold to calculate the weighted score. **Table 4-36** below shows the thresholds and the modifier used to calculate the score for the Improved Bicycle Facilities criterion.

**Table 4-36: Qualitative Scoring Measures of the Bike Facilities Criterion**

Bike Facility Width Threshold Rank		Modifier	Weight	Score
<b>1</b>	Meets or exceeds both ADOT’s minimum standard and the Project Partner preferred standards*	1	7.48	7.48
<b>2</b>	Meets or exceeds ADOT’s minimum standard OR the Project Partners preferred standards, but not both*	0.5		3.74
<b>3</b>	Maintains existing condition/does not meet any standards*	0		0

*\*Per the minimum and preferred standards outlined in the Controlling Design Criteria*

The various bicycle facility widths excerpted from the Controlling Design Criteria are shown in **Table 4-37**. The No-Build, Alternative E, and Alternate F maintain the existing condition while the other alternatives have a varying condition of the bicycle facility which resulted in a partial score.

**Table 4-37: Improved Bicycle Facilities Criterion Results**

Alternative	Result/Threshold
No-Build	Maintains existing condition/does not meet any standards*
Alternative Package A	The condition of the bicycle facility varies across the corridor resulting in a partial score*
Alternative Package B	The condition of the bicycle facility varies across the corridor resulting in a partial score*
Alternative Package C	The condition of the bicycle facility varies across the corridor resulting in a partial score*
Alternative Package D	The condition of the bicycle facility varies across the corridor resulting in a partial score*
Alternative Package E	Maintains existing condition/does not meet any standards*
Alternative Package F	Meets or exceeds both ADOT and Project Partner Standards*

*\*Per the minimum and preferred standards outlined in the Controlling Design Criteria*

*Application of the Improved Bicycle Facilities Criterion Results in the Calculation of the Technical Score*

The Improved Bicycle Facilities criterion results are illustrated in **Table 4-38**.

**Table 4-38: Improved Bicycle Facilities Criterion Technical Score**

Alternative	Result/Threshold	Score
No-Build	Maintains existing condition/does not meet any standards*	0
Alternative Package A	The condition of the bicycle facility varies across the corridor resulting in a partial score*	4.68
Alternative Package B	The condition of the bicycle facility varies across the corridor resulting in a partial score*	2.81
Alternative Package C	The condition of the bicycle facility varies across the corridor resulting in a partial score*	2.81
Alternative Package D	The condition of the bicycle facility varies across the corridor resulting in a partial score*	1.87
Alternative Package E	Maintains existing condition/does not meet any standards*	0
Alternative Package F	Meets or exceeds both ADOT and Project Partner Standards*	7.12

*\*Per the minimum and preferred standards outlined in the Controlling Design Criteria*

**4.9k Expand Travel Mode Choices - Transit Travel Time Criterion Results**

The Transit Travel Time criterion is a metric that measures transit improvement by calculating the amount of time it takes for transit vehicles to travel the corridor from one end to the other – or in other words calculating transit travel time. The results of the transit travel time for the No-Build option and six other Tier 2 Alternatives is under the year 2040 condition and is an output from the Vissim Model.

In order to reach a comprehensive measure, transit travel times during both the AM and PM time periods were used to measure the overall performance of this criterion – each receiving half the value of the 6.27% weight assigned to this criterion, or 3.135% per time duration. The transit



travel speeds in each direction of US 180 – eastbound and westbound – were also averaged to reach a combined travel speed for each of the AM and PM durations.

The results of the of the Transit Travel Time are shown below in **Table 4-39** for the No-Build option and six other Tier 2 Alternatives.

**Table 4-39: Transit Travel Time Criterion Results \***

Alternative	AM Peak Hour				PM Peak Hour			
	Westbound		Eastbound		Westbound		Eastbound	
	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change	Travel Time (sec)	Travel Time % Change
No Build	1,096	-	572	-	990	-	798	-
A	1,176	-7.3%	548	4.2%	883	10.8%	848	-6.3%
B	1,212	-10.6%	578	-1.0%	919	7.2%	1,144	-43.4%
C	1,217	-11.0%	569	0.5%	947	4.3%	951	-19.2%
D	1,599	-45.9%	551	3.7%	933	5.8%	994	-24.6%
E Wing Mntn bypass	946	13.7%	564	1.4%	879	11.2%	779	2.4%
F Hidden Hollow bypass	1,018	7.1%	562	1.7%	987	0.3%	758	5.0%
<b>Average Travel Time</b>	<b>AM</b>		<b>PM</b>		<b>AM</b>		<b>PM</b>	
No Build	834	-	894	-	834	-	894	-
A	862	-2.6%	866	2.6%	862	-2.6%	866	2.6%
B	895	-5.6%	1,032	-12.5%	895	-5.6%	1,032	-12.5%
C	893	-5.4%	949	-5.0%	893	-5.4%	949	-5.0%
D	1,075	-22.0%	964	-6.3%	1,075	-22.0%	964	-6.3%
E Wing Mntn bypass	755	7.2%	829	5.9%	755	7.2%	829	5.9%
F Hidden Hollow bypass	790	4.0%	873	2.0%	790	4.0%	873	2.0%

The average transit travel time between the eastbound and westbound direction for the No-Build option is 834 seconds (13.9 minutes) in the AM and 894 seconds (14.9 minutes) in the PM – a one-minute difference in transit travel time between AM and PM. The No-Build travel time results is the baseline condition for calculating the travel time percent change for each of the Tier 2 Alternatives.

Only the alternative routes – Alternative E and Alternative F - have an improved transit travel time compared to the No-Build option in the AM and in the PM. However, the improvement is somewhat negligible. Each of the other alternatives have an overall increase in transit travel time. The No-Build option and the Tier 2 Alternatives are ranked below for each time duration based on the Vissim model results of the Transit Travel Time criterion.

**AM**

1. Alternative Package E – 755 seconds of average transit travel time
2. Alternative Package F – 790 seconds of average transit travel time
3. No-Build – 834 seconds of average transit travel time
4. Alternative Package A – 862 seconds of average transit travel time

5. Alternative Package C – 893 seconds of average transit travel time
6. Alternative Package B – 895 seconds of average transit travel time
7. Alternative Package D – 1,075 seconds of average transit travel time

**PM**

1. Alternative Package E – 829 seconds of average transit travel time
2. Alternative Package F – 873 seconds of average transit travel time
3. Alternative Package A – 866 seconds of average transit travel time
4. No-Build – 894 seconds of average transit travel time
5. Alternative Package C – 949 seconds of average transit travel time
6. Alternative Package D – 964 seconds of average transit travel time
7. Alternative Package B – 1,032 seconds of average transit travel time

*Application of the Transit Travel Time Criterion Results in the Calculation of the Technical Score*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Transit Travel Time criterion. The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Best Result} / \text{Alternative Result}) * \text{Weight} * 100$$

Since Transit travel time was measured in both the AM and PM time periods, two values were produced - each receiving half the value of the 6.27% weight, or 3.135%.

**Table 4-40** and **Table 4-41** below show how the AM and PM scores were calculated for the No-Build option and the six other Tier 2 Alternatives relative to the results of the Travel Time criterion in order of highest to lowest scoring.

**Table 4-40: AM Transit Travel Time Criterion Results in the Calculation of the Technical Score**

Alternative	AM Travel Time Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package E	755 seconds	((755/755)	* 3.135% * 100	3.13
Alt Package F	790 seconds	((755/790)	* 3.135% * 100	3.00
No-Build	834 seconds	((755/834)	* 3.135% * 100	2.84
Alt Package A	862 seconds	((755/862)	* 3.135% * 100	2.74
Alt Package C	893 seconds	((755/893)	* 3.135% * 100	2.65
Alt Package B	895 seconds	((755/895)	* 3.135% * 100	2.64
Alt Package D	1,075 seconds	((755/1,075)	* 3.135% * 100	2.20

**Table 4-41: PM Transit Travel Time Criterion Results in the Calculation of the Technical Score**

Alternative	PM Travel Time Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alt Package E	829 seconds	((829/829)	* 3.135% * 100	3.13
Alt Package F	873 seconds	((829/873)	* 3.135% * 100	2.98
Alt Package A	866 seconds	((829/866)	* 3.135% * 100	3.00
No-Build	894 seconds	((829/894)	* 3.135% * 100	2.90
Alt Package C	949 seconds	((829/949)	* 3.135% * 100	2.74
Alt Package D	964 seconds	((829/964)	* 3.135% * 100	2.70
Alt Package B	1,032 seconds	((829/1,032)	* 3.135% * 100	2.52

#### 4.9I Construction/Implementation – Project Cost Criterion Results

The Project Cost Criterion is a metric that measures the ease of construction/implementation by evaluating the total project cost to implement the No-Build option and six other Tier 2 Alternatives. This criterion is intended to reflect the fact that more expensive alternatives are generally more difficult to implement than a less expensive alternatives, and thus alternatives with lower projected costs would score higher than alternatives with more expensive cost estimates.

The No-Build option assumes no cost in order to implement while a detailed planning-level cost estimate was developed for each of the other Tier 2 Alternatives. **Table 4-42** below shows the total project cost for implementation of each Alternative.

**Table 4-42: Project Cost Criterion Results**

Alternative	Project Cost Estimate <sup>1</sup>
No-Build	No Cost
Alternative Package A	\$87,291,544
Alternative Package B	\$24,576,648
Alternative Package C	\$24,576,648
Alternative Package D	\$20,652,488
Alternative Package E	\$80,265,491
Alternative Package F	\$62,352,890

*1 ROW impact/cost does not include any costs that may be associated with a potential impact to an existing building*

As anticipated, the more expansive build alternatives have higher project costs than the narrower build alternatives. Alternative A has the highest project cost estimate of \$87,291,544 while Alternative D has the lowest project cost estimates of \$20,652,488. Refer to Appendix F to see the detailed cost estimates for each alternative.

#### Application of the Project Cost Criterion Results Criterion Results in the Calculation of the Technical Score

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Project Cost criterion. One

unique element of the formula used for the Project Cost criterion is that a common denominator of \$10,000,000 was added to the formula to normalize the ratio between the best result and the other results due to the large disparity between the zero cost for the No-Build option compared to the costs of the other six Tier 2 Alternatives. In addition, the value of \$1 was also used in the formula for the cost of the No-Build option since inputting a zero would make all scores result in a zero).

The following formula was used to calculate the scores:

$$\text{Technical Score} = (\text{Best Result} / (\text{Alternative Result}/10\text{M})) * \text{Weight} * 100$$

**Table 4-43** below shows how the scores were calculated for each alternative relative to the results of the Cost of Implementation criterion in order of highest scoring alternative to the lowest scoring alternative.

**Table 4-43: Project Cost Criterion Results in the Calculation of the Technical Score**

Alternative	Project Cost <sup>123</sup>	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	No Cost	No formula used, automatically received full weighted points		4.68
Alt Package D	\$20,652,488	(1/57.695M(/10M))	* 4.68% *100))	2.27
Alt Package B	\$24,576,648	(1/40.542M(/10M))	* 4.68% *100))	1.90
Alt Package C	\$24,576,648	(1/55.137M(/10M))	* 4.68% *100))	1.90
Alt Package F	\$62,352,890	(1/73.667M(/10M))	* 4.68% *100))	0.75
Alt Package E	\$80,265,491	(1/60.994M(/10M))	* 4.68% *100))	0.58
Alt Package A	\$87,291,544	(1/40.514M(/10M))	* 4.68% *100))	0.54

1 Project Costs for managed lane alternatives do not include costs for permanent or variable message signing.  
2 A common denominator has been added to the formula to normalize the relationship between the best result and the other results due to the large disparity between the two.  
3 ROW impact/cost does not include any costs that may be associated with a potential impact to an existing building.

#### 4.9m Construction/Implementation - Right-of-Way Impact Criterion Results

The right-of-way impact criterion is a metric that measures the amount of right-of-way that will be necessary to implement each alternative. The method to calculate the impact was produced by estimating the amount of land - in square feet - required for right-of-way acquisition to build the alternatives. The No-Build option assumes no right-of-way impact to implement while a detailed process to map and calculate the potential right-of-way impact was conducted for each of the other six Tier 2 Alternatives. **Table 4-44** below shows the total right-of-way impact for the implementation of each Tier 2 Alternative.



**Table 4-44: Right-of-Way Impact Criterion Results**

Alternative	Right-of-Way Impact*
No-Build	No Impact
Alternative Package A	303,909 ft <sup>2</sup>
Alternative Package B	91,728 ft <sup>2</sup>
Alternative Package C	91,728 ft <sup>2</sup>
Alternative Package D	58,968 ft <sup>2</sup>
Alternative Package E	2,557,843 ft <sup>2</sup>
Alternative Package F	1,993,306 ft <sup>2</sup>
*Does not include intersection configurations and thus the right-of-way impact only includes the mid-block width over the length of the study corridor	

The more expansive build alternatives will naturally have a larger right-of-way footprint than the narrower alternatives. However, Alternative Package’s B and Alternative C have the same right-of-way width of 100 feet and have a substantially smaller right-of-way footprint than Alternative Package A. Alternative Package D has the smallest right-of-way impact while the two alternative route have the largest impact because they consist of a newly introduced facility through Coconino National Forest.

*Application of the Right-of-Way Impact Results*

The quantitative approach previously described in *Section 4.6b - Tier 2 Evaluation Criteria Scoring Thresholds and Methodology* was used to calculate the score for the Right-of-Way Impact criterion. One unique element of the formula used for the Right-of-Way Impact criterion is that a common denominator of 10,000 ft<sup>2</sup> was added to the formula to normalize the ratio between the best result and the other results due to the large disparity between the zero impact for the No-Build option compared to the costs of the other six Tier 2 Alternatives. In addition, the value of 1 ft<sup>2</sup> was also used in the formula for the cost of the No-Build option since inputting a zero would make all scores result in a zero). The following formula was used to calculate the scores:

The following formula was used to calculate the scores:

$$\text{Formula} = (\text{Best Result} / (\text{Alternative Result}/10K)) * \text{Weight} * 100$$

**Table 4-45** below shows how the scores were calculated for each alternative relative to the results of the Right-of-Way Impact creation in order of highest scoring alternative to the lowest scoring alternative.

**Table 4-45: Right-of-Way Impact Criterion Results in the Calculation of the Technical Score**

Alternative	Right-of-Way Impact*	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	No Impact	No formula used, automatically received full points		4.96
Alt Package D	58,968 ft <sup>2</sup>	(1/(58,968/10K))	(* 4.96% *100))	0.84
Alt Package B	91,728 ft <sup>2</sup>	(1/(91,728/10K))	(* 4.96% *100))	0.54
Alt Package C	91,728 ft <sup>2</sup>	(1/(91,728/10K))	(* 4.96% *100))	0.54
Alt Package A	303,909 ft <sup>2</sup>	(1/(303,909/10K))	(* 4.96% *100))	0.16
Alt Package F	1,993,306 ft <sup>2</sup>	(1/1,993,306/10K))	(* 4.96% *100))	0.02
Alt Package E	2,557,843 ft <sup>2</sup>	(1/(2,557,843/10K))	(* 4.96% *100))	0.02

*\*Does not include intersection configurations and thus the right-of-way impact only includes the mid-block width over the length of the corridor*

#### 4.10 Tier 2 Alternatives Recommended for Tier 3 Analysis

Based on the Tier 2 Modeling results and Evaluation Criteria results, the Project Partners agreed to eliminate Alternative Packages E (aka Alternative 17 - Wing Mountain bypass) and F (aka Alternative 18 - Hidden Hollow bypass) from further analysis in Tier 3), however, the group agreed that the alternative routes are being eliminated for Tier 3 analysis, but that we may still want to use the alternate route modeling findings to compare/contrast future US 180 alternative findings and that the future public presentation on US 180 alternatives needs to include the rationale as to why these alternatives were eliminated. Ultimately, the Project Partners felt that the significantly higher construction costs of the alternate bypass routes could not be supported/justified by the minimal/negligible improvements to traffic operations on US 180.

Without improvements to Milton Road or the application of select spot improvements, the US 180 Alternative Packages provide a negligible improvement to vehicle travel time, transit travel times, or signal LOS/delay. As a result, the Project Partners decided Alternative Packages A, B, C, and D require further discussion with the following two options to consider moving forward:

- **Option 1-** Delay US 180 Tier 3 analysis until a Recommended Alternative is identified on Milton Rd. Then, add the Milton Recommended Alt + Spot Improvements to model and re-run together with US 180 Alternative Packages.
- **Option 2:** Eliminate poor-performing US 180 Alternative Packages from further analysis.

The Project Partners also agreed to add a No Build Plus Spot Improvements alternative (No-Build Plus) for Tier 3 analysis.

## 5.0 TIER 3 ALTERNATIVE EVALUATION

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Based on the recommendations from the Project Partners, the following alternatives are included in the Tier 3 Alternative Evaluation:

- No-Build;
- No-Build Plus Spot Improvements (No-Build Plus);
- Alternative A;
- Alternative B;
- Alternative C; and
- Alternative D.

### 5.1a Spot Improvements

As previously introduced, one component that separates the Tier 3 Alternative Evaluation process from the Tier 2 Alternative Evaluation process is the inclusion of spot improvements. The Tier 2 traffic modeling analysis focused on a comparison of the alternatives by largely comparing various aspects of travel lane operations only.

Through a progression of meetings between the Consultant Team and the Project Partners, a series of spot improvements were developed to be integrated into all the Tier 3 Alternatives, except the No-Build alternative. Spot improvements were recognized by the Project Partners as being desired to potentially inventory which type of low investment enhancements could/should be included as part of the No Build Plus alternative (newly introduced to the Tier 3 process), but also recognize the desire and value of incorporating and measuring the effectiveness (or not) of other desired enhancements such as pedestrian, bicycle, transit, safety and traffic operations along the US 180 corridor.

The spot improvements are concentrated at intersections since the alternative’s cross section address the mid-block applications. Spot improvements were also characterized in one of the following categories:

- |                       |                |
|-----------------------|----------------|
| • Roadway Geometry;   | • Pedestrian;  |
| • Roadway Operations; | • Bicycle; and |
| • Vehicular Safety;   | • Transit.     |
| • Access Management;  |                |

Once the spot improvement inventory was completed, the Project Partners collaborated and recognized the variation in the spot improvement applications and identified the need to assign specific improvements to certain Tier 3 Alternatives. Spot improvements are assigned to the Tier 3 Alternatives by one of the three applications:

- |                                |                     |
|--------------------------------|---------------------|
| • No Build + Alternative Only; | • All Alternatives. |
| • Build Alternatives Only; or  |                     |

Project Partners discussed and confirmed the Tier 3 Alternative Spot Improvement Inventory as shown in **Table 5-1**.

Table 5-1: Tier 3 Alternative Spot Improvement Inventory

Spot Improvement Alternative Applicability Key  
<sup>1</sup> No Build + Alternative Only  
<sup>2</sup> Build Alternatives Only  
<sup>3</sup> All Alternatives

Corridor Intersections	Roadway Geometry	Roadway Operations	Vehicular Safety	Access Management	Pedestrian	Bicycle	Transit
Humphrey's Street (signalized)		<ul style="list-style-type: none"> <li>Dual Left turn on SB Humphrey's St to EB Milton Rd.<sup>2</sup></li> <li>Dual Left Turn on Milton Rd to NB Humphrey's St (requires two NB travel lanes on Humphrey's St)<sup>2</sup></li> <li>Florida T Concept, in conjunction with the appropriate signal phasing adjustments<sup>2</sup></li> </ul>		<ul style="list-style-type: none"> <li>Restrict U-Turns<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Ladder/High-Visibility Cross walks<sup>3</sup></li> <li>ADA-compliant curb ramps<sup>3</sup></li> <li>Pedestrian crossing improvements<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Bicycle signal detection and actuation<sup>3</sup></li> <li>Combined Bike Lane/Right Turn Lane<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Transit signal prioritization<sup>3</sup></li> </ul>
Columbus Street (signalized)	<ul style="list-style-type: none"> <li>Roundabout<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Dual left turn lanes (NB Humphrey's to WB US 180)<sup>2</sup></li> <li>Dedicated right and left turn phase for vehicles (EB US 180 to SB Humphrey's)<sup>2</sup></li> <li>Longer left turn phases (NB Humphrey's to WB US 180)<sup>2</sup></li> <li>Overlap EB right turn phase with NB left Turn phase<sup>2</sup></li> </ul>			<ul style="list-style-type: none"> <li>Ladder/High-Visibility Cross walks<sup>3</sup></li> <li>ADA-compliant curb ramps<sup>3</sup></li> <li>Sidewalk widening<sup>2</sup></li> <li>Angle ramps on the SE corner with a pork chop<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Bicycle signal detection and actuation<sup>3</sup></li> <li>Combined Bike Lane/Right Turn Lane<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Transit signal prioritization<sup>3</sup></li> </ul>
Forest Avenue (stop controlled)		<ul style="list-style-type: none"> <li>Restrict WB left turn<sup>3</sup></li> </ul>		<ul style="list-style-type: none"> <li>Two raised medians in existing turn lanes (south and east legs). Keep the raised medians for the pedestrian refuge and for the center running lane alts, the center lane will have to merge into the other lane at these segments<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian signal<sup>3</sup></li> <li>Ladder/High-Visibility Cross walks<sup>3</sup></li> <li>ADA-compliant curb ramps<sup>3</sup></li> <li>Sidewalk widening<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Combined Bike Lane/Right Turn Lane for WB Forest Ave. to NB US 180 with sharrow<sup>3</sup></li> <li>Continue WB bike lane through intersection<sup>3</sup></li> </ul>	

Spot Improvement Alternative Applicability Key

<sup>1</sup> No Build + Alternative Only

<sup>2</sup> Build Alternatives Only

<sup>3</sup> All Alternatives

Corridor Intersections	Roadway Geometry	Roadway Operations	Vehicular Safety	Access Management	Pedestrian	Bicycle	Transit
Sechrist Drive (stop controlled)		<ul style="list-style-type: none"> <li>NB right turn lane extension<sup>3</sup></li> </ul>			<ul style="list-style-type: none"> <li>Pedestrian signal (RRFB)</li> <li>Ladder/High-Visibility Cross walks<sup>3</sup></li> <li>ADA-compliant curb ramps<sup>3</sup></li> <li>Sidewalk widening<sup>2</sup></li> <li>Grade separated crossing<sup>2</sup></li> <li>Pedestrian warning signage<sup>3</sup></li> </ul>		<ul style="list-style-type: none"> <li>Existing bus stop on the NB side (east side)<sup>3</sup></li> </ul>
Schultz Pass Drive (signalized)					<ul style="list-style-type: none"> <li>Ladder/High-Visibility Cross walks<sup>3</sup></li> <li>ADA-compliant curb ramps<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Bicycle signal detection and actuation<sup>3</sup></li> <li>Combined Bike Lane/Right Turn Lane<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Transit signal prioritization<sup>3</sup></li> </ul>
Snow Bowl Road (Stop Controlled)	<ul style="list-style-type: none"> <li>Roundabout<sup>2</sup></li> <li>Traffic signal<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Additional right turn lane (WB US180)<sup>2</sup></li> <li>Additional left turn lane (SB Snow Bowl Rd)<sup>3</sup></li> <li>Enhance pavement striping of existing pavement section to create an additional NB receiving lane on Snow Bowl Road<sup>3</sup></li> </ul>			<ul style="list-style-type: none"> <li>Ladder/High-Visibility Cross walks<sup>3</sup></li> <li>Pedestrian signal<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Bicycle signal detection and actuation (if traffic signal is installed)<sup>2</sup></li> </ul>	
Other Spot Improvements		<ul style="list-style-type: none"> <li>Right turn deceleration lanes<sup>2</sup></li> <li>Left turn lanes<sup>2</sup></li> <li>DMS Signage<sup>3</sup></li> <li>Traffic/pedestrian signal at Elm Street<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>Rumble strips<sup>3</sup></li> <li>Safety edges<sup>3</sup></li> <li>High visibility edge line striping<sup>3</sup></li> <li>Raised pavement markers<sup>3</sup></li> <li>Delineators<sup>3</sup></li> <li>Guard rails<sup>3</sup></li> <li>High visibility signage<sup>3</sup></li> <li>Wildlife crossings (AZGFD guidance -MP 224.8, 228.8, and 218)<sup>2</sup></li> <li>Turn lane extensions<sup>3</sup></li> <li>Speed feedback signage<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Raised Medians with left turn lanes<sup>2</sup></li> <li>Restrict U-Turns<sup>3</sup></li> <li>Right turn restrictions<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian mid-block crossings/signals</li> <li>Mid-block sidewalk widening</li> <li>Enhanced crosswalks</li> <li>Pedestrian scale lighting (FUTS)</li> <li>Pedestrian warning signage</li> <li>Pedestrian crossing at Meade, Anderson St, and near the Museum</li> </ul>	<ul style="list-style-type: none"> <li>Bike Lane<sup>2</sup></li> <li>Buffered Bike Lane<sup>2</sup></li> <li>Multi-use path<sup>2</sup></li> <li>Bicycle mid-block crossings/signals<sup>3</sup></li> <li>Bicycle signage<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Enhanced Transit Shelters<sup>3</sup></li> <li>Planned bus stop on the NB side of Anderson Road (east side)<sup>3</sup></li> </ul>



**Spot Improvement Alternative Applicability Key**

<sup>1</sup> No Build + Alternative Only

<sup>2</sup> Build Alternatives Only

<sup>3</sup> All Alternatives

Corridor Intersections	Roadway Geometry	Roadway Operations	Vehicular Safety	Access Management	Pedestrian	Bicycle	Transit
			<ul style="list-style-type: none"> <li>Shoulder widening between Magdalena Rd (MP 219.16) and Hidden Hollow Rd (MP 219.65) – this spot improvement could cost more than just the cost of additional pavement due to the steep slope.<sup>3</sup></li> </ul>				

## 5.2 Tier 3 Evaluation Criteria

Similar to the Tier 2 Alternative Evaluation process, a series of Tier 3 Evaluation Criteria and Weightings were developed to evaluate and measure the performance of the six Tier 3 Alternatives. The Tier 3 evaluation criteria were crafted to be diverse in nature, although the Tier 3 Evaluation Criteria tend to focus more on quantitative measurements and remove any qualitative metrics carried over from Tier 2 Alternative Evaluation process.

The Project Partners held a series of meetings to determine which of the Tier 2 Evaluation Criteria would carry over to the Tier 3 Evaluation Criteria; which Tier 2 Evaluation Criteria should be eliminated from the Tier 3 Evaluation Criteria; which of the Tier 2 Evaluation Criteria need to be revised in order to move into the Tier 3 Evaluation Criteria; and finally, consider potential new evaluation criteria to the Tier 3 Evaluation process. Any newly introduced or revised criteria had to comply with three criteria considerations in order to be included in the Tier 3 Evaluation Criteria.

1. Cannot be duplicative with any other criteria
2. Needs to be objective and data-driven in nature
3. Feasible/reasonable to evaluate

A few members of the Project Partners were elected to participate in a separate small working group assigned to determine and develop the Tier 3 Evaluation Criteria under the criteria considerations.

These meetings of the Consultant Team and the Tier 3 Evaluation Criteria Task Force produced a new set of more refined group of evaluation metrics to be included in the Tier 3 Evaluation Criteria. Detailed notes were collected and distributed during the progression of meetings and can be referenced in Appendix G.

As a result of the small work group meetings, 17 different evaluation criteria were developed to apply in Tier 3 Alternative Evaluation process, 11 of which were newly introduced evaluation criteria. The newly introduced alternative evaluation criteria include:

- Network Delay;
- Conflict Points;
- Bicycle Comfort Index;
- Pedestrian Comfort Index;
- Transit Ridership;
- Title VI Impacts;
- Neighborhood Impacts;
- Air Quality;
- Wildlife Mitigation; and
- Community Character.

**Table 5-2** illustrates the evolution from the Tier 2 Evaluation Criteria to the Tier 3 Evaluation Criteria, while **Table 5-3** shows the final set of Tier 3 Evaluation Criteria .



Table 5-2: Evolution of the Tier 3 Evaluation Criteria

Final T3 Evaluation Criteria					Criteria Considerations: 1) Is it duplicative? 2) Is it objective (data-driven)? 3) Feasible/reasonable to evaluate?	Result
Category	Criteria / Measure	Scoring Formula	Acceptance Threshold	Weight (TBD)	Notes	Notes
Traffic Operations	Level of Service (Volume / Capacity Ratio)	Formula = (Best Result / Alternative Result) * Weight * 100 Ex - Alt 4: (6.25/11.03) * 5.25% * 100 = 2.97	N/A	TBD	Project Partners agreed to keep this criterion and that a separate Task Force would verify the data and metrics for this criterion.	Keep
	Travel Speed as % of Base-Free Flow Speed (AM)	Formula = ((Alternative Result - 100) / Best Result) * Weight * 100 / 2 Ex - Alt 4: ((46-100)/62) * 3.32% * 100 / 2 = -1.24	N/A	TBD	See meeting notes for details.	Remove
	Travel Speed as % of Base-Free Flow Speed (PM)	Formula = ((Alternative Result - 100) / Best Result) * Weight * 100 / 2 Ex - Alt 4: ((46-100)/62) * 3.32% * 100 / 2 = -1.24	N/A	TBD	See meeting notes for details.	Remove
	Improved Intersection LOS (AM)	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (2/3) * 6.04% * 100 / 2 = 3.02	N/A	TBD	See meeting notes for details.	Remove
	Improved Intersection LOS (PM)	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (2/3) * 6.04% * 100 / 2 = 3.02	N/A	TBD	See meeting notes for details.	Remove
	Signal/Stop Control Delay (AM)	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (29.5/41.6) * 3.20% * 100 / 2 = 1.17	N/A	TBD	Model output to be documented in final report, but Project Partners agreed to remove. See meeting notes for details.	Remove
	Signal/Stop Control Delay (PM)	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (29.5/41.6) * 3.20% * 100 / 2 = 1.17	N/A	TBD	Model output to be documented in final report, but Project Partners agreed to remove. See meeting notes for details.	Remove
Travel Time (AM/PM, both directions)	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (339/560) * 4.79% * 100 / 2 = 1.45	Average of NB (AM/PM) & SB (AM/PM) must be positive.  No direction / timeframe may exceed -5% of existing.	TBD	See meeting notes for details.	Keep	
NEW: Network Delay	Model output of VISSIM	TBD - After review model output	TBD	See meeting notes for details.	Keep	
Safety	Reduction in Total Crashes (Based on CMFs)	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Alt 4: (19.4/28.98) * 7.13% * 100 = 4.77	TBD	TBD	See meeting notes for details.	Remove
	Reduced Injury Crashes (Based on CMFs)	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Alt 5: (21.78/28.78) * 8.18% * 100 = 6.19	TBD	TBD	See meeting notes for details.	Remove
	Reduced Bicycle Crashes (Based on CMFs)	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Alt 5: (14/14) * 7.10% * 100 = 7.10	TBD	TBD	See meeting notes for details.	Remove
	NEW: HCM or FMPO Safety Tool(s)			TBD	See meeting notes for details.	Remove
	NEW: Reduction in Conflict Points	Formula: (Alternative Result / Best Result) * Weight * 100	N/A	TBD	See meeting notes for details.	Keep
Expand Travel Mode Choices	Pedestrian - Sidewalk Conditions	Meets or Exceeds both ADOT's minimum standard and the City/FMPO/NAIRTA's (PP) preferred standards Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIRTA's (PP) preferred standards, but not both Maintains Existing Condition		TBD	See meeting notes for details.	Remove
	NEW: Bike & Pedestrian - Average Crossing Distance	Formula = (Best Result / Alternative Result) * Weight * 100	N/A	TBD	See meeting notes for details.	Remove
	Bicycle Environmental Quality Index	Subtotal Score from index	N/A	TBD	Keep with minor revision. Refer to Bike & Pedestrian Index and meeting notes for details.	Keep
	Pedestrian Environmental Quality Index	Subtotal Score from index	N/A	TBD	Keep with minor revision. Refer to Bike & Pedestrian Index and meeting notes for details.	Keep
	Bicycle	Meets or Exceeds both ADOT's minimum standard and the City/FMPO/NAIRTA's preferred standards Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIRTA's preferred standards, but not both Maintains Existing Condition		TBD	See meeting notes for details.	Remove
	Transit Travel Time (AM/PM, both directions)	Formula = (Best Result / Alternative Result) * Weight * 100 / 2 Ex - Alt 4: (250/371) * 6.27% * 100 / 2 = 2.11	Average of NB (AM/PM) & SB (AM/PM) must be positive.  No direction / timeframe may exceed -5% of existing.	TBD	See meeting notes for details.	Keep
	NEW: Transit Ridership	Formula = (Best Result / Alternative Result) * Weight * 100	N/A	TBD	See meeting notes for details.	Keep
Public Acceptance	Public Support	# of Public Support Formula = (Best Result / Alternative Result) * Weight * 100	Majority of public support (>51%)	TBD	Keep as a placeholder. See meeting notes for details.	Keep
Cost / Implementation	Construction Cost	Formula = (Best Result / (Alternative Result/10M)) * Weight * 100 Ex - Alt 4: (1/(40.542M/10M)) * 4.68% * 100 = 1.15	N/A	TBD	See meeting notes for details.	Keep
	ROW Impact (Square Feet)	Formula = (Best Result / (Alternative Result/10K)) * Weight * 100 Ex - Alt 4: (1/(26.326/10K)) * 4.98% * 100 = 1.89	N/A	TBD	See meeting notes for details.	Keep
	NEW: Maintenance Cost	(Cost to Maintain 1 mile of road X 20 years X # of lanes) / (Sq. Ft. cost of landscaping) Formula = Best Result / Alternative Result * Weight * 100	N/A	TBD	See meeting notes for details.	Remove
	NEW: Implementation Opportunities	Formula = Best Result / Alternative Result	N/A	TBD	Project Partners agreed to keep, but consensus on a measure/metric is pending. See meeting notes for details.	Keep
	NEW: Cost / Benefit Analysis	TBD	TBD	TBD	See meeting notes for details.	Remove
Environmental Impacts	NEW: Neighborhood Impacts	FMPO Model	TBD	TBD	Project Partners agreed to keep. Sara Dechter proposed to consider additional metrics. Consensus on additional metrics pending. See meeting notes for details.	Keep
	NEW: Title VI Impacts	FMPO Model	TBD	TBD	Project Partners agreed to keep. Sara Dechter proposed to consider additional metrics. Consensus on additional metrics pending. See meeting notes for details.	Keep
	NEW: Air Quality	Same output as Network Delay	TBD	TBD	See meeting notes for details.	Keep
	NEW: Stormwater Impacts		TBD	TBD	See meeting notes for details.	Remove
	NEW (US180 only): Wildlife Mitigation	TBD - Will compare AGFD recommended mitigation sites with animal crash data	TBD	TBD	See meeting notes for details.	Keep
	Others (not recommended)	See Notes	N/A	N/A	See meeting notes for details.	Remove
Community Character	Great Street	50% - Meets *City 2030 Regional Plan Policy 50% - Public Survey Output  *Formula for City 2030 Policy: % of corridor able to accommodate trees + % of corridor with "wide" sidewalks	TBD	TBD	See meeting notes for details.	Keep

The sub-criteria in calculating the Pedestrian Comfort Index and the Bicycle Comfort Index are on the following Page



**Bicycle Comfort Index Evaluation Criteria**

Bicycle Evaluation Criteria	Thresholds	Score
Bicycle Facility Type	No bike facility	0.0
	Shared-lane facility	0.5
	Bike lane	1.0
	Buffered bike lane	2.0
Number of Total Vehicle Through Lanes	8	0.0
	6	1.0
	4	1.5
	2	2.0
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
	< 3,000	2.0
Presence of Median:	No median	0.0
	TWLT / Left Turn Lane (no median)	1.0
	Left turn Lane with median	1.5
	Left turn Lane with planted median	2.0
		<b>/8</b>

**Pedestrian Comfort Index Evaluation Criteria**

Pedestrian Evaluation Criteria	Thresholds	Score
Sidewalk Width	6' wide or less	0.0
	6' - 7' wide	1.0
	7' - 9' wide	1.5
	Greater than 9' wide	2.0
Horizontal Buffer Width (select all):	No buffer	0.0
	0' - 3' buffer	0.5
	3' - 6' buffer	1.0
	6' - 9' buffer	1.5
	Greater than 9' buffer	2.0
Number of Total Vehicle Through Lanes	8	0.0
	6	1.0
	4	1.5
	2	2.0
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
	< 3,000	2
Presence of Median:	No median	0.0
	TWLT / Left Turn Lane (no median)	1.0
	Left turn Lane with median (>5)	1.5
	Left turn Lane with planted median (<5)	2.0
		<b>/10</b>

Table 5-3: Final Tier 3 Evaluation Criteria

Final T3 Evaluation Criteria		
Category	Metrics	Scoring Formula
Traffic Operations	Level of Service (Volume / Capacity Ratio)	Result = (Alternative Result/ Best Result ) * Weight * 100
	Travel Time (AM) - minutes	Result = (Best Result / Alternative Result) * Weight * 100
	Travel Time (PM) - minutes	
	Network Delay (AM) - hours	Result = (Best Result / Alternative Result) * Weight * 100
	Network Delay (PM) - hours	
Vehicular Safety	Reduction in Conflict Points	Result = (Best Result / Alternative Result) * Weight * 100
Expand Travel Mode Choices	Bicycle Comfort Quality Index	Result = (Alternative Result/ Best Result ) * Weight * 100
	Pedestrian Comfort Index	Result = (Alternative Result/ Best Result ) * Weight * 100
	Transit Travel Time (AM) - minutes	Result = (Best Result / Alternative Result) * Weight * 100
	Transit Travel Time (PM) - minutes	
	Transit Ridership	Result = (Alternative Result/ Best Result ) * Weight * 100
Public Acceptance	Public Support	# of Public Support Result = (Best Result / Alternative Result) * Weight * 100
Cost / Implementation	Construction Cost	Result = (Best Result / (Alternative Result/10M)) * Weight * 100
	ROW Impact (Square Feet)	Result= (Best Result / (Alternative Result/10K)) * Weight * 100
	Implementation Opportunities	Result = (Alternative Result/ Best Result ) * Weight * 100
Environmental Impacts	Neighborhood Impacts	Result = (Best Result/Alternative Result) * Weight * 100
	Title VI Impacts	Result = (Best Result/Alternative Result) * Weight * 100
	Air Quality	Result = (Best Result/Alternative Result) * Weight * 100
Community Character	Great Street	50% - Meets *City 2030 Regional Plan Policy 50% - Public Survey Output  *Formula for City 2030 Policy: % of corridor able to accommodate trees + % of corridor with "wide" sidewalks



### 5.3 Weighting of the Tier 3 Evaluation Criteria

Tier 3 Evaluation Criteria weights were developed after the Project Partner reached consensus and the Tier 3 Evaluation Criteria were finalized. The Tier 3 Evaluation Criteria Weights were determined through the combined results of a Project Partner and a community-based survey.

#### 5.3a Project Partner Tier 3 Evaluation Criteria Weighting Survey

Similar to the exercise conducted in Tier 2, the Project Partners were provided a survey to populate their desired weight (level of importance/preference) for each of the Tier 3 Evaluation Category and Criteria. This survey used a pair-wise comparison mathematical analysis; allowing each respondent to systematically evaluate each Evaluation Criteria Category against each other two at a time and set their relative impact in achieving the project goals. This exercise was repeated for the criteria under each category. Each Project Partner Agency was afforded two responses. Each and all responses from the Project Partners were averaged together to create the weightings. Refer to Appendix H for more information regarding the Project Partner Tier 3 Evaluation Criteria Weighting Survey.

#### 5.3b Community Tier 3 Evaluation Criteria Weighting Survey

The Project Partners desired the public’s perspective and input be integrated into the Tier 3 Evaluation Criteria Weighting process. As a result, a Public Survey created by a separate subcommittee of Project Partners was launched on August 10, 2020 within the City of Flagstaff’s Online Community Forum. The public only evaluated the criteria categories and not the individual criteria underneath each. The survey was live for two weeks and had 813 attendees and 562 responses. A full detailed report of the Public Survey can be referenced in Appendix I.

#### 5.3c Final Tier 3 Evaluation Criteria Weights

A meeting was held amongst the Project Partners and the Consultant Team to review the results of the Project Partner and Public Tier 3 Evaluation Criteria Weighting Surveys to develop an equitable approach in aggregating the results of each survey to ultimately finalize the Tier 3 Evaluation Criteria Weighting. The Project Partners reached consensus on one of the approaches and decided to use Option 3 as the approach to combine the results of the Project Partner and Public Tier 3 Evaluation Criteria Weighting Surveys. Reference the meeting notes in Appendix J for more information about the four approaches discussed for aggregating the results of the two surveys.

**Table 5-4** shows the finalized Tier 3 Evaluation Category and Criteria Weighting results used in the Tier 3 Alternative Evaluation process.

Table 5-4: Final Tier 3 Evaluation Criteria Weighting

Tier 3 Evaluation Criteria Categories	Public & Project Partner Weighting Survey Results (Option 3)	Tier 3 Evaluation Criteria	Project Partner Criteria Weighting Survey Results	Final Tier 3 Weighting
Traffic Operations	12.4	Level of Service	16.2%	2.0%
		Travel Time	54.9%	6.8%
		Network Delay	29.0%	3.6%
Safety	15.1	Conflict Points	N/A	15.1%
Expand Travel Mode	17.4	Bicycle Comfort Index	33.6%	5.8%
		Pedestrian Comfort Index	28.4%	4.9%
		Transit Travel Time	18.0%	3.1%
		Transit Ridership	20.0%	3.48%
Public Acceptance	12.5	Public Acceptance	N/A	12.5%
Cost / Implementation	12.3	Construction Cost	35.8%	4.4%
		ROW Impact	37.1%	4.6%
		Implementation Opportunities	27.1%	3.3%
Environmental Impacts	15.7	Neighborhood Impacts	25.5%	4.0%
		Title VI Impacts	21.2%	3.3%
		Air Quality	23.1%	3.6%
		Wildlife Mitigation	30.2%	4.7%
Community Character	14.6	Great Street	N/A	14.6%

## 5.4 Tier 3 Analysis & No Build Plus Alternative Recommendation

Following the confirmation of the Tier 3 Evaluation Criteria, the Project Partners met on August 25, 2020 to review the US 180 CMP Tier 3 model results and discuss the correlation of the Milton Road CMP Tier 3 results to the US 180 CMP Tier 2 Evaluation Criteria results and the Tier 3 Alternative Evaluation and Screening process. Refer to Appendix J for the US 180 model results and meeting summary.

As noted in *Section 4.9 - Tier 2 Evaluation Criteria Detailed Results*, the increase in travel time and poor performance of the operational metrics of the various Tier 2 alternative packages have a significant correlation to the operations on Milton Road – particularly in the southbound direction. Thus, since there are no significant travel time improvements on Milton Road resulting from the Milton Road Tier 3 Alternative Evaluation process (Appendix K), the opportunity or likelihood for operational improvements on US 180 is nearly non-existent.

In other words, Milton Road operations are a significant influence on the impacts to operations on US 180 (particularly for southbound PM movements) and US 180 travel performance cannot be improved without first addressing the congestion issues on Milton Road. It was also noted that Mountain Line completed a US 180 Implementation Plan in 2018, finding that winter weekend congestion delays were typically in the 25- to 30-minute range. Specifically, peak travel time analyzed during the winter season from 2014-2018 showed that for 58% of the winter days, drivers experienced delay of 15 minutes or less, 19% of the winter days drivers experienced delays of 16-20 minutes, 10% of the winter days had delay of 21-30 minutes, and 13% of the days drivers experienced delays longer than 30 minutes. Recent enhancements such as increased transit headways, the enforcement of no parking along the US 180 roadway, and snow play area closures (Wing Mountain) have contributed to overall improvements on US 180 during winter weekends.

Recognizing the combination of these multiple factors, the Project Partners discussed the following approach to the US 180 Tier 3 Alternative Evaluation Process:

1. Identify the No-Build Plus as the recommended alternative for US 180; and
2. If the public agrees, the other US 180 Tier 3 Alternates would not to go through the Tier 3 Alternative Evaluation and Screening process.

The No-Build Plus alternative on US 180 offers improvements without expanding the right-of-way including bike, pedestrian, wildlife, and intersection safety improvements on US 180 per the previously identified spot improvement inventory in *Section 5.1a - Spot Improvements*.

The Project Partners noted that not all bicycle and pedestrian infrastructure gaps are addressed within the currently defined spot improvement inventory and expressed shared interest in introducing a new Tier 3 Alternative - the “No-Build Enhanced”. The No Build Enhanced would expand on the US 180 No-Build Plus to also include a select number of additional spot improvements, such as closing sidewalk gaps (not requiring additional right-of-way) that were not previously identified in the former No Build Plus alternative.

The Project Partners will evaluate and select a refined set of spot improvements for US 180 once the Milton Road preferred alternative is identified. This future exercise will, in essence, generate

a new No-Build Hybrid recommended alternative for the US 180 corridor. As a result, the remaining alternatives will not undergo the Tier 3 Alternative Evaluation process.



# Appendix A – Project Partner Charter

# PARTNERSHIP CHARTER

## Milton Road & US 180 Corridor Master Plans

August 2, 2017

ADOT  
FMPO  
NAIPTA  
CITY OF FLAGSTAFF  
COCONINO COUNTY

USFS  
FHWA  
NAU



---

### MISSION STATEMENT

AS PROJECT PARTNERS, WE ARE COMMITTED TO FOSTERING AND MAINTAINING A POSITIVE AND SUPPORTIVE WORKING RELATIONSHIP WITH ALL AGENCY PROJECT PARTNERS THROUGHOUT THIS MASTER PLANNING PROCESS. AS PROJECT PARTNERS, WE HOLD COMMUNICATION, THESE COMMITMENTS, AND COOPERATION AS CORE PRINCIPLES FACILITATING THE SUCCESS OF THESE CORRIDOR MASTER PLANS.

---

### PARTNERSHIP VALUES

MUTUAL RESPECT	LISTENING WITH AN OPEN MIND	HONESTY
POSITIVE COMMUNICATION	OPENNESS	TACT
TRUST IN EACH OTHER	LEAD BY EXAMPLE	PERSONAL INTEGRITY
COMMIT TO ATTEND MEETINGS	WILLING TO COMPROMISE	HAVE FUN
FOLLOW THROUGH ON ASSIGNMENTS	VALUE INNOVATIVE IDEAS	

# PARTNERSHIP CHARTER

## Milton Road & US 180 Corridor Master Plans

August 2, 2017

---

### 2017 PARTNERSHIP GOALS

#### TEAMWORK

Develop and maintain a positive partnering relationship by encouraging the support and mutual respect of all project partners and the planning process.

#### MUTUAL GOALS

Seek to accomplish the mutually beneficial objectives of finalizing the long term vision for Milton Road and US 180 and prioritize future design projects for both corridors.

#### CONTINUOUS IMPROVEMENT

Evaluating the progress of the partnership and identify opportunities for improvement as needed.

#### TIMELINESS

Being on time for meetings, promptly following up on requests for information and following up on commitments.

#### CONFLICT RESOLUTION

Embrace conflicts as opportunities for improvement and be willing to resolve differences in a constructive and timely manner.



# PARTNERSHIP CHARTER

## Milton Road & US 180 Corridor Master Plans

August 2, 2017

---

### Milton Road Corridor Master Plan Goals

- 1) Address year round congestion and safety on Milton Rd.
- 2) Identify the Long-Term (20-year) vision of the corridor.
- 3) Obtain public and stakeholder input on alternatives, including multimodal alternatives (answer the question: Are we going to expand Milton Rd?)
- 4) Scope out and further implement previous and new strategies, consistent with the Long-Term vision.
- 5) Prioritize implementation projects for design.
- 6) Assist NAIPTA in completing its Bus Rapid/High Capacity Transit system design.
- 7) Follow the “PEL” process to carry forward decisions into Design & NEPA.





# PARTNERSHIP CHARTER

## Milton Road & US 180 Corridor Master Plans

August 2, 2017

---

### US 180 Corridor Master Plan Goals

- 1) Address congestion (with special emphasis on winter congestion) and safety on US 180.
- 2) Identify the Long-Term (20-year) vision of the corridor.
- 3) Obtain public and stakeholder input on alternatives, including multimodal alternatives (answer the question: Are we going to expand US 180 or create an Alternate Route?)
- 4) Scope out and further implement previous and new strategies, consistent with the Long-Term vision.
- 5) Prioritize implementation projects for design.
- 6) Address snow play parking issues on US 180 during winter weekends.
- 7) Follow the “PEL” process to carry forward decisions into Design & NEPA.



# PARTNERSHIP CHARTER

## Milton Road & US 180 Corridor Master Plans

August 2, 2017



SIGNED, WEDNESDAY, AUGUST 2<sup>nd</sup>, 2017

<i>Paul Bowen</i>	<i>Jim Vi</i>	_____
<i>Charles Menden</i>	<i>John A. ...</i>	_____
<i>M. ...</i>	<i>Romare Truety</i>	_____
<i>R. Banett</i>	<i>Debra Mollet</i>	_____
<i>Stephen ...</i>	<i>Erika ...</i>	_____
<i>A. Mace</i>	<i>Ann ...</i>	_____
<i>Joe ...</i>	<i>David ...</i>	_____
<i>[Signature]</i>	<i>[Signature]</i>	_____
<i>[Signature]</i>		_____



# Appendix B – Working Paper #1 Existing & Future Conditions



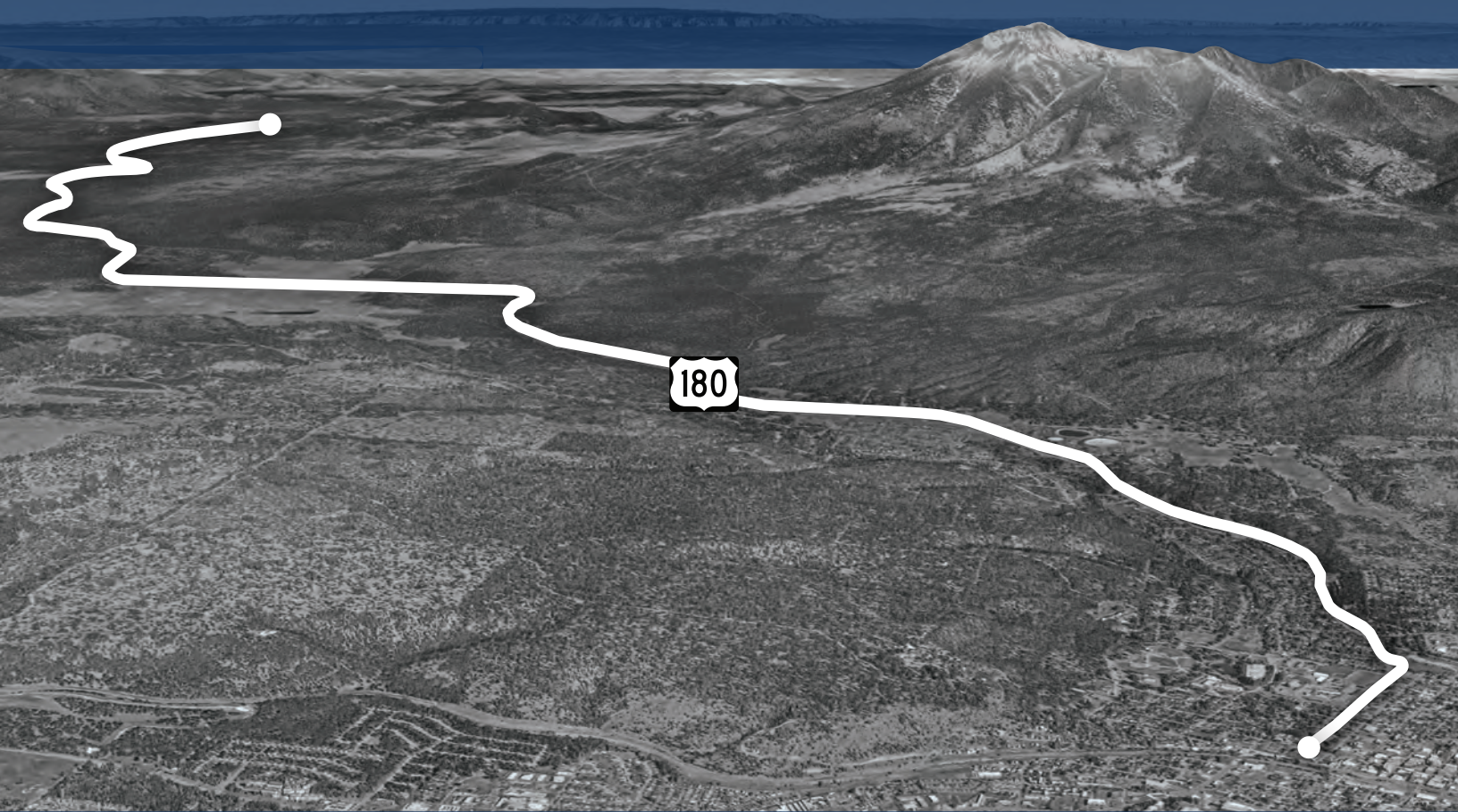


# ADOT

## US 180 Corridor Master Plan

Working Paper #1:  
Existing & Future Conditions

April 2018



**Michael Baker**  
INTERNATIONAL



# US 180 CORRIDOR MASTER PLAN

Working Paper #1 – Current & Future Conditions Report

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## EXECUTIVE SUMMARY

Submitted in future as part of Work Task 8: Draft Final Report.

## CHAPTER 1: STUDY INTRODUCTION & OVERVIEW

### US 180 Corridor Master Plan Purpose & Need

The purpose of the US 180 Corridor Master Plan (CMP) is to identify a 20-year vision for the US 180 corridor that addresses current safety and traffic congestion issues by evaluating a mixture of previously recommended and newly introduced System Alternatives. These System Alternatives include a mix of alternatives that utilize and maintain the existing US 180 right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the US 180 corridor itself.

The System Alternatives are also complemented by a series of Base Build Spot Improvements – which constitute targeted, near term low investment mitigation measures that support mid and long-term System Alternatives. Chapter 9 of this report describes the System Alternatives and Base Build Spot Improvements in greater detail.

The US 180 CMP process will include an extensive public and stakeholder involvement process that consists a thorough and community-vetted, quantitative evaluation criteria exercise for the evaluation of the System Alternatives to ultimately reach a set of preferred System Alternative(s) and achieve an informed consensus by the Project Partners, stakeholders and citizens.

### Project Partner Goals & Objectives

As part of the CMP Process, a team of Project Partners (Partners) was assembled by representatives from the following agencies:

- Arizona Department of Transportation (ADOT)
- Flagstaff Metropolitan Planning Organization (FMPO)
- Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA)
- City of Flagstaff
- Coconino County
- US Forest Service (USFS)
- Federal Highways Administration (FHWA)
- Northern Arizona University (NAU)
- Burlington Northern Santa Fe Railroad (BNSF)

The Project Partners are established to guide the success of the US 180 CMP planning process by maintaining a positive and supportive working relationship with all partnering agencies, hold regular communication, and stay committed to the project's core values. The Project Partners met early in the planning process to agree upon and create a Charter ([Appendix X](#)) to establish a set of fundamental principles for the Partners to abide by. The Project Partners also established the following seven goals for the US 180 CMP which are not prioritized in any particular order:



# US 180 CORRIDOR MASTER PLAN

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- 1** Address congestion (with a special emphasis on winter congestions) and safety on US 180
- 2** Identify the long-term (20-year) vision of the corridor
- 3** Obtain public and stakeholder input on alternatives, including multimodal alternatives
- 4** Scope out and further implement previous and new strategies, consistent with the long-term vision
- 5** Prioritize implementation projects for design
- 6** Assist NAIPTA in completing its Bus Rapid/Transit/High Capacity Transit system design
- 7** Follow the Planning and Environmental Linkages (PEL) process to carry forward decisions into the design and NEPA





# US 180 CORRIDOR MASTER PLAN

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## US 180 Corridor Review

US Highway 180 (US 180) is primarily an east-west running highway that travels through Texas, New Mexico and Arizona. Arizona’s portion is about 170 disconnected miles as it has been re-routed over the last several decades. In Arizona, US 180 goes through lightly populated areas between St. Johns and Holbrook, and then shares alignment with Interstate 40 (I-40) for approximately 85 miles to the City of Flagstaff. From Flagstaff, US 180 traverses northwest to its western terminus in Valle, Arizona. Illustrated in **Figure 1-1**, the US 180 Corridor Master Plan will look at the 17.4-mile section of the highway northwest of the City of Flagstaff from the intersection of Historic Route 66 and Humphreys Street (Mile Post 215.44) to the Crowley Pit Snow Play Area (Mile Post 232.25).

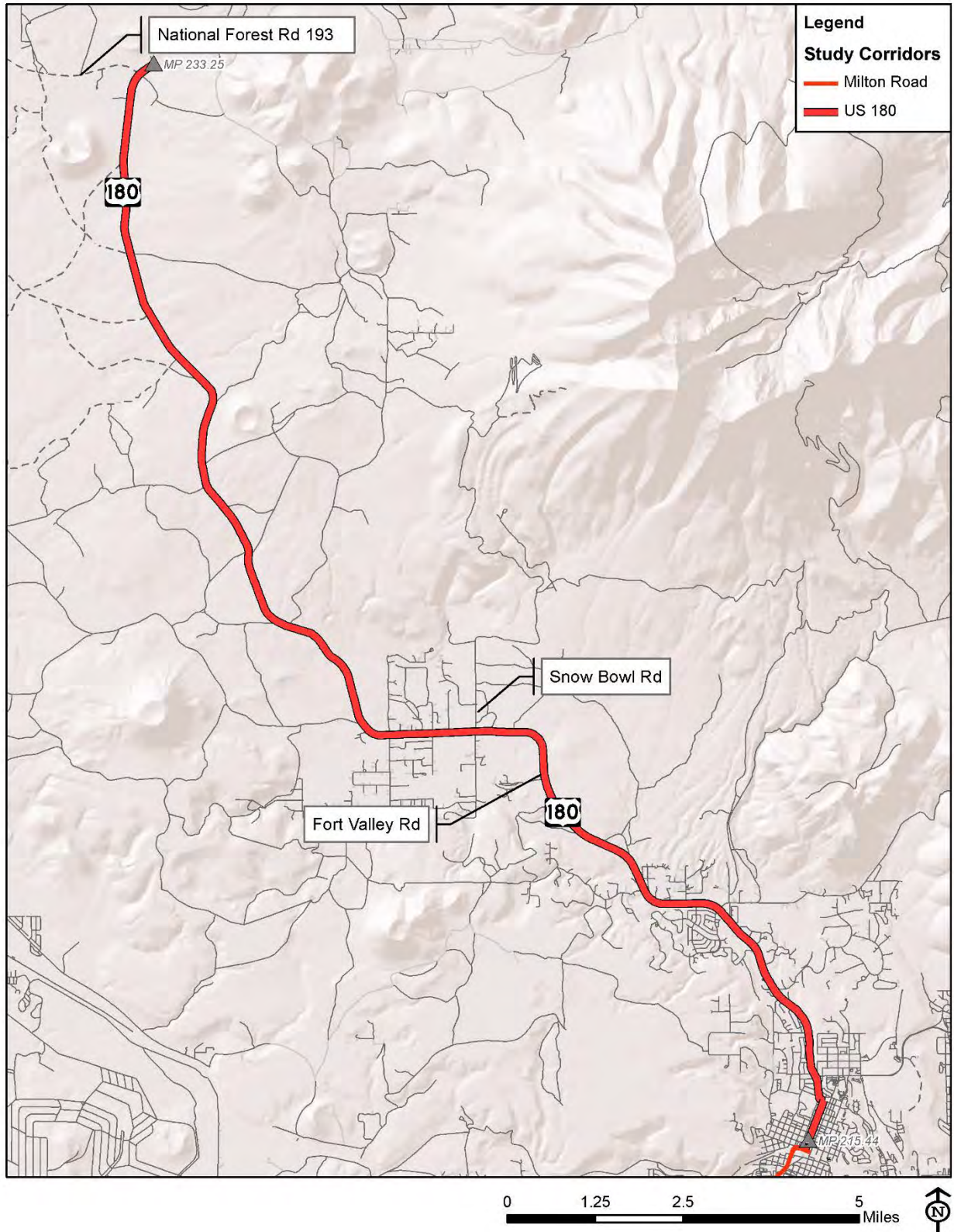
This segment of US 180 is also known as the Fort Valley Highway 180 Scenic Corridor and is designated by the State of Arizona as a Scenic Road for its rural character and mountainous setting around the San Francisco Peaks. US 180 is the primary arterial thoroughfare for the surrounding rural residents and is suitable for low volume residential traffic. However, visitors seeking access to the Grand Canyon, Arizona Snowbowl, and other recreational sites within Coconino National Forest are dependent on US 180. The winter season is particularly challenging for traffic circulation on US 180, and at peak times the corridor is seriously congested in a gridlock fashion, affecting local traffic while also posing a tremendous threat to emergency vehicle’s ability to effectively traverse the corridor. While the congestion problems are often viewed as the key issue, considering the challenges regarding bicyclists and pedestrians is essential. Addressing the traffic congestion while also implementing safe and efficient travel by all modes of transportation is the priority for US 180 CMP.



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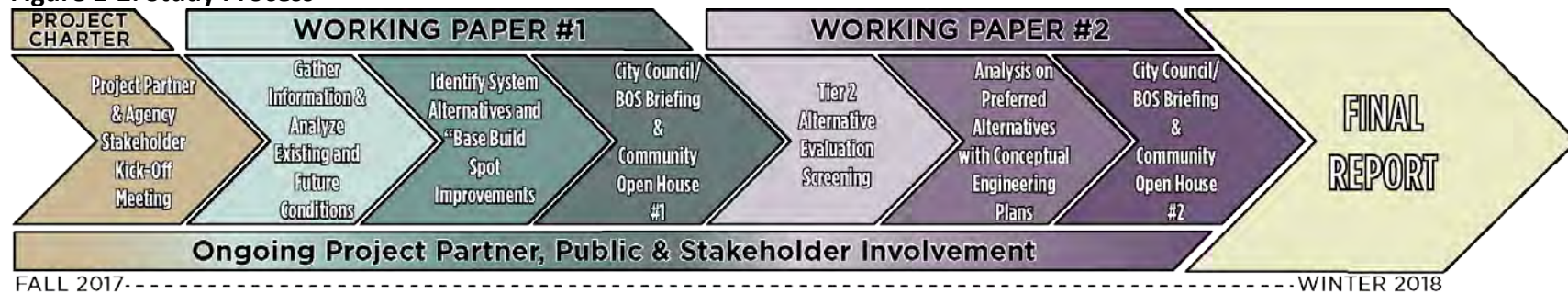
Figure 1-1: US 180 CMP Study Corridor



## Study Process

The US 180 CMP goal of identifying a shared vision for System Alternative(s) to alleviate traffic congestion and address safety issues. The study process will consist of the review of existing and future conditions, an understanding of previous relevant studies, extensive community and stakeholder input, and a quantitative evaluation process. The Project Partners will meet with the Study Team to provide guidance and oversight throughout the planning process. The extensive public and stakeholder involvement process will include meetings the with the Coconino County Board of Supervisors, the Flagstaff City Council and two Public Open House meetings at key project milestones. As illustrated in **Figure 1-2**, the entire US 180 CMP process will occur over an approximate 14-month timeframe from the Fall of 2017 to the winter of 2018.

**Figure 1-2: Study Process**



## Working Paper 1 Objectives

Working Paper #1 is the first of two working papers for the US 180 CMP. The objectives of Working Paper #1 include:

1. Review and summarize pertinent information from previously adopted relevant plans, studies and reports.
2. Collect and analyze existing and future conditions relating to traffic and level of service characteristics, population and growth projections.
3. Provide an environmental overview of the US 180 corridor.
4. Identify, describe and depict the System Alternatives developed from existing studies and newly introduced concepts.
5. Identify a preliminary set of near term Base Build Spot Improvements that will complement and support the longer-term System Alternatives. The Base Build Spot Improvements will evolve and expand as Preferred Alternatives are identified and analyzed as a future task in the study process.





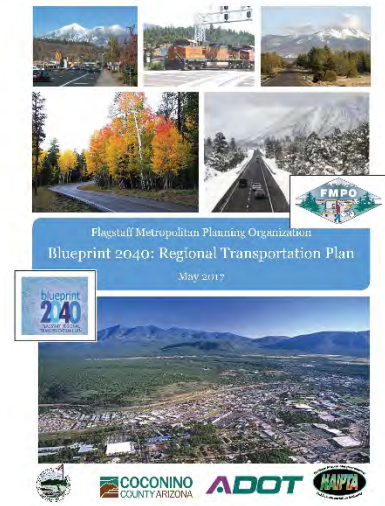
## CHAPTER 2: PREVIOUS & ONGOING STUDIES, PLANS & REPORTS

This chapter offers a review and synopsis of existing studies, plans or reports that may influence the planning process of the US 180 CMP. These studies and reports offer insights into the existing transportation issues and potential recommendations that may be associated with the US 180 corridor.

### FMPO Blueprint 2040: Regional Transportation Plan (FMPO, City of Flagstaff, NAIPTA, ADOT, Coconino County) 2017

This extensive plan and process recently culminated in May of 2017. “Blueprint 2040” sets transportation direction and priorities for Flagstaff and the surrounding Coconino County region. *Blueprint 2040* meets the Flagstaff Metropolitan Planning Organization’s (FMPO) federal mandate for regional transportation planning and the ideas presented in the RTP define the vision of the region and guide the transportation system infrastructure and investment choices that will serve the area best.

The RTP assumes that a continuation of the voter-approved Transportation Sales Tax (.00426) will extend for another 20 years beyond its current June 30, 2020 expiration date. The RTP notes that an extension of this sales tax would generate an estimated \$195 million over the 20-year period. These revenues would be used to fund (and/or partner with other state and federal agencies) transportation infrastructure projects identified in the RTP.



Key concepts or themes that the RTP addresses include:

#### Renewed commitment to Connectivity

- People Matter – an efficient system recognizes that time is valuable
- Smart and Connected Matters – connectivity provides choice, redundancy and shorter distances
- Environment Matters – a more efficient system for all modes is better for the planet

#### Renewed commitment to Multimodalism

- People Matter – health, safety and affordability benefits are gained from alternate modes
- Place Matters – human-scaled environments for walking and biking make places welcoming
- Prosperity Matters – walking, biking and transit allow for vibrant social engagement that energizes activity centers
- Environment Matters – non-motorized travel choices and efficient, well-designed motorized systems protect the natural beauty and health of the region

#### Renewed commitment to Partnership

- Cooperation Matters – government-to-government relations will be vital to achieve the system, project design and funding envisioned in *Blueprint 2040*





# US 180 CORRIDOR MASTER PLAN

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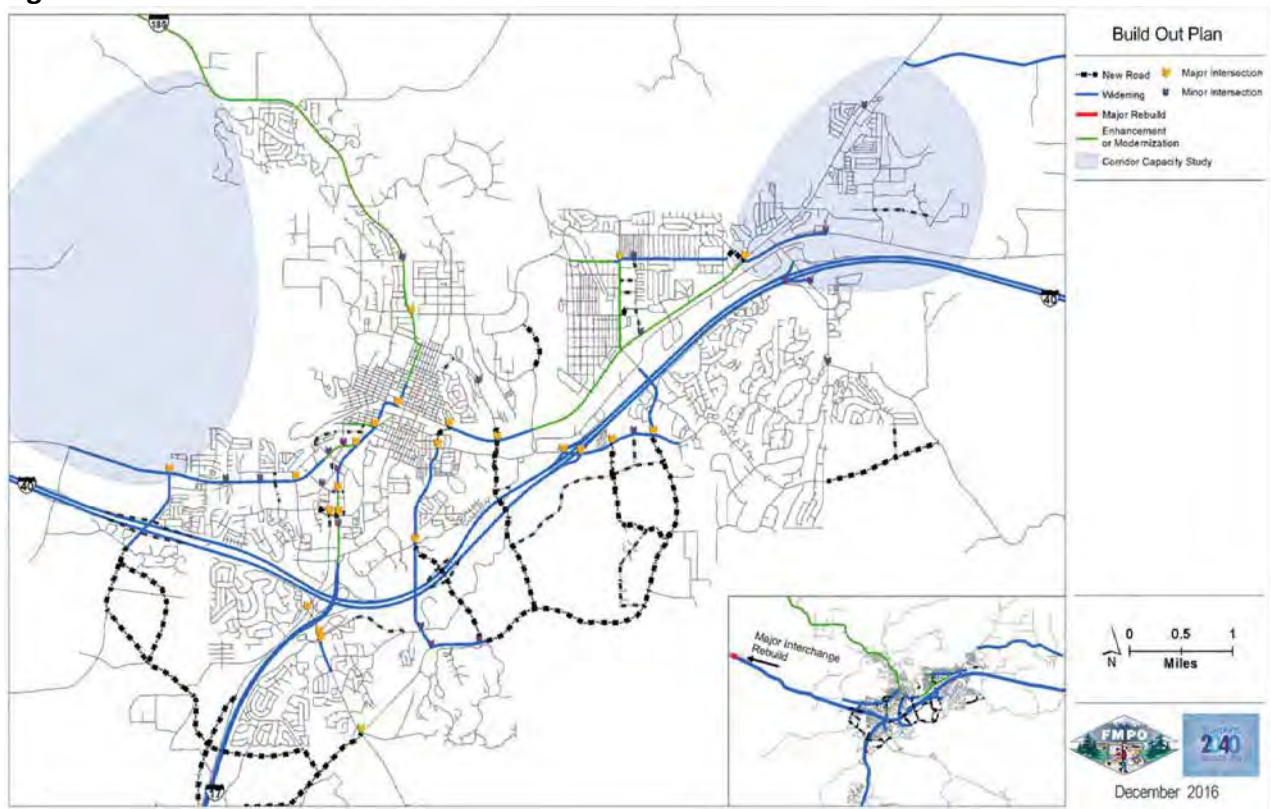
- Trust and Transparency Matter – *Transportation Decision 2000*, a series of dedicated sales tax propositions, started regional investments in transportation on an unprecedented scale. Dozens of projects have been promised and built, garnering public trust. *Blueprint 2040* is the next step in a trust-building dialogue between regional decision makers and the public.

The RTP plan and process was an extensive undertaking. A Steering Committee of 11 community leaders met over seven months to provide input on priorities. More than 600 people actively participated online and tens of thousands more were made aware through three *Cityscape* articles and numerous newspaper editorials and stories.

The RTP reviewed local and national trends and conditions, evaluated and ranked numerous project types with a series of performance measures for transit systems, roads and streets, pedestrian and bicycle facilities, and freight. A funding analysis was conducted over the various priority projects and ultimately a set of project priorities and program alternatives were recommended.

**Figure 2-1** identifies the roads and streets build out plan from the RTP. This includes road projects in the multimodal program recommended to be delivered in the next 20 years. Nearly \$280,000,000 in sales tax funds, grants and other revenues are projected to be available to deliver the projects in the RTP.

**Figure 2-1: Roads & Streets Build Out Plan**



*FMPO Blueprint 2040: Regional Transportation Plan, 2017*

**Figure 2-2** below provides a detailed listing of each of the projects by types, project/community rank, estimated cost and funding source. What is noteworthy for this US 180 CMP is that Milton Road widening ranked #1 amongst all project types, and is noted to be a “project of opportunity” in that



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additional project partners such as ADOT would be needed to successfully fund and construct this project. Important to note that the 20-Year Program Summary does not include a bypass alternative for US 180 because the plan does not support the bypass for two primary reasons. First, it is not clear that the majority of the region supports the facility. Second, it is expensive and largely serves a need experienced 15-20 days of the year, which is the relief from the three to four-hour traffic backups experienced during the holiday winter weekends.

**Figure 2-2: 20-Year Program Summary**

Project ID	Project Name	Rank	Years of Construction		Cost (2013 \$)	Finance
BRT	Bus Rapid Transit	26	2021		\$46,870,000	Loan/Grants
	Bus Rapid Transit - Operating		Annual	\$1,250,000	\$25,000,000	Cash/Grants
LTR_43	Lone Tree Road widening South	8	2025		\$13,825,046	Bond
FOU_22	Fourth Street Bridge	15	2023		\$7,296,878	Bond
HCT_27	High Country Trail Extension	99	2036-2040		\$2,708,541	Cash
FOU_23	Fourth Street Widening	30	2025		\$6,004,460	Bond
	Soliere to Butler					
JWP_37	J.W. Powell (Airport)	12	2031-2035		\$11,494,668	Bond
LTR_42	Lone Tree Road widening North	6	2030		\$9,164,054	Bond
BUT_6	Butler Avenue Widening	9	2028		\$13,322,891	Bond
SW_Short	Short term sidewalks (100% draft ATMP** recommendation)	90	2021	2022	\$2,589,413	Cash
SW_Mid_1	Mid-term sidewalks (50% draft ATMP** recommendation)	91	2022	2026	\$5,888,332	Cash
X_Med	Crossings/Grade Separations	74	2022	2036-2040	\$12,100,000	Cash
MIL_54	Milton Road Widening*	1	Phased		\$36,559,211	Cash
Reserve	Projects of Opportunity*/Partnering		Annual	\$1,250,000	\$4,000,000	Cash
			balance after Projects of Opportunity*			
Programs	TDM/ITS/etc.**		Annual	\$600,000	\$12,000,000	Cash
Coconino	Unspecified County Project(s)		Varies		\$12,000,000	Cash
<b>Subtotal</b>					<b>\$220,823,494</b>	
	Inflation & Debt Financing***				\$59,176,506	
<b>Total</b>					<b>\$280,000,000</b>	

\* Milton widening is assumed to be the project of opportunity for this program. Reserve funds would be applied to project costs. Project scope may be reduced or require more ADOT participation

\*\* ATMP is Active Transportation Master Plan, TDM is Travel Demand Management, ITS is Intelligent Transportation Systems

\*\*\* Inflation and debt financing costs are presumed to be the balance of available funds

Source: FMPO Blueprint 2040: Regional Transportation Plan, 2017



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## US 180 Winter Traffic Study (FMPO) 2012

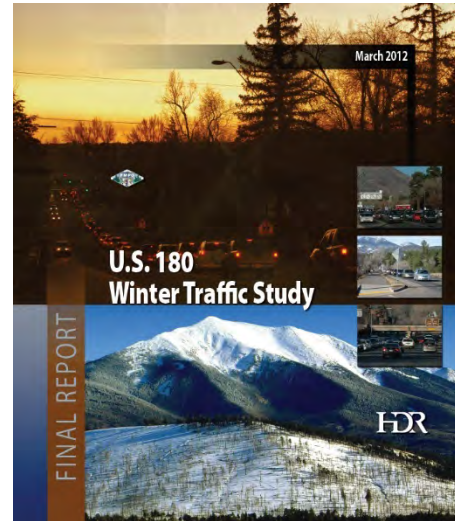
The *US 180 Winter Traffic Study* was prepared in response to increased congestion on US 180 as the primary route to ski and snow play areas, especially during long holiday weekends. On the six to eight holiday snow play weekends each year, visitors leaving the ski and snow play areas bring southbound travel to a virtual standstill on U.S. 180. Business and resort operators worried that the delays from the extreme congestion will discourage repeat ski and snow play visitors and have a long-term impact on the Flagstaff tourist economy.

This plan was developed to identify near, mid and long-term strategies to reduce winter traffic congestion on US 180.

A sampling of some of the key issues, observations and recommendations offered by the Plan include:

- Travel times on US 180 between Wing Mountain Snow Play Area and Route 66 nearly doubled between 3:00 pm and 5:00 pm when the winter recreation areas close.
- While there is traffic friction on US 180 from winter recreation activities, the traffic model suggested that key intersections on Milton Road are the main cause of lengthy congestion periods on US 180.
- Emergency responded, such as police, fire, and ambulance services, have experienced and fear longer response times and access challenges during the winter traffic congestion.
- Successful reduction in the duration of peak winter afternoon traffic congestion will require iterations where strategies are applied, evaluated and refined and require the cooperation of multiple agencies and stakeholders.
- Extensive public and stakeholder outreach was conducted with over 300 people offering comments and suggestions.
- Average daily traffic counts taken at several locations along US 180 showed moderate to substantial increase in daily traffic from routine weekends to the MLK holiday weekend.
- Over a three year sample period, 47% of all crashes along the US 180 corridor occurred on a Friday, Saturday or Sunday.

The Plan offers the following recommendations displayed in **Table 2-1**.





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**Table 2-1: US 180 Peak Winter Weekend Traffic Strategy Implementation Plan**

Priority	Strategy	Description	Time Frame
<b>Near-Term Strategies</b>			
1	Traffic Signal Timing	Add green signal time on southbound Milton Road at Butler Avenue and Route 66.	Tested in November, 2011, and implemented for 2011-2012 winter season
2	Traveler Information System	Provide travel time information to U.S. 180 travelers	Within five years
3	Traffic Signing Plan	Guide signs showing alternate routes and travel times; additional safety signing	Within five years
4	Early Departure Incentives	Coupons for local restaurants to encourage early departure	Within five years
<b>Mid-Term Strategies</b>			
5	Dispersed Snow Play Sites	New snow play sites outside the U.S. 180 corridor	5 to 10 years
6	Transit	New transit service to Snowbowl and Wing Mountain Snow Play Area	5 to 10 years
7	Managed Lane	Humphreys Street center left turn lane managed to accommodate southbound/ eastbound traffic	5 to 10 years
<b>Long-Term Strategies</b>			
8	New Road Capacity	Add capacity to corridor through either widening existing corridors or constructing a new road	10 to 20 years

Note, that this plan was published in 2012 and many of the strategies listed above have been implemented, particularly the Short- and Mid-Term Strategies.

Source: U.S. 180 Winter Traffic Study, HDR 2012



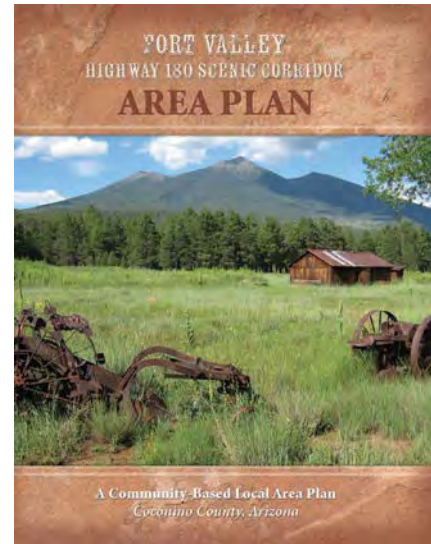


## Fort Valley Highway 180 Scenic Corridor Area Plan (Coconino County) 2011

The Fort Valley Highway 180 Scenic Corridor Area Plan is an amendment to the Coconino County Comprehensive Plan and is tailored to specific conditions in the Fort Valley Highway 180 Scenic Corridor. The purpose of this area plan is to guide development in the Fort Valley Highway 180 Scenic Corridor area for at least the next ten years. The overriding planning issue(s) driving the preparation of the Plan was the quality of life of residents and property owners, as well as visitors. Maintaining the aesthetic qualities of this rural area and desire to maintain an independent lifestyle without excessive regulation from the County is a balance that was sought and guided the planning process.

Some notable observations from this Plan include:

- Although the Planning Committee discussed winter traffic congestion at length, ultimately no attempt was made to resolve the issue because the Committee recognized that a regional, broad-based approach is needed and is being pursued by other governmental entities.
- Finding a suitable location for a bypass road (connecting US 180 to I-40) that is acceptable to residents and property owners of the planning area is a major obstacle because any bypass would negatively impact nearby residents, as well as natural features such as wildlife. In the absence of a specific proposed route to consider, the Planning Committee did not attempt to develop policies in relation to a bypass road.
- The existing road system of the planning area reflects the rural nature of the community, with many roads being unimproved and privately maintained.
- Residents generally promote the expansion of alternative modes of transportation.
- Transportation Goal #4: Encourage ADOT to widen shoulders along Highway 180 between the Flagstaff city limits and Snow Bowl Road to have consistent conditions that will enhance safety of bicyclists and others.
- Transportation Goal #5: Encourage ADOT to provide additional parking areas along Highway 180 for summer use.
- Transportation Goal #6: Coordinate efforts among the County, City of Flagstaff, and ADOT to enhance pedestrian and public transportation and the aesthetic appearance of Highway 180 in the area of a possible historical and cultural activity center at the southern end of the planning area.



## Lone Tree Road Corridor Study (City of Flagstaff/FMPO) 2006

The purpose of the *Lone Tree Corridor Study* was to identify and evaluate a potential gateway corridor to the central section of the City of Flagstaff in accordance with the city's Regional Land Use and Transportation Plan. This study focused on a north-south study area generally located in the vicinity of the current Lone Tree Road in order to enhance regional mobility, improve community and local circulation and minimize side friction between adjacent land uses and the corridor. The report was to be used as an adopted plan for the preservation of the Preferred Lone Tree Road corridor.

The study identifies a Preferred Alternative (**Figure 2-3**) that essentially includes a 4-lane collector roadway with raised median with bicycle and pedestrian facilities along both sides of the roadway. The report notes the need to enhance regional connectivity by establishing a traffic interchange to I-40 and a grade separated crossing over the BNSF railway mainline. This preferred alternative would also serve as an alternative route for snow travelers which would reduce congestion, especially along Milton Road .





# US 180 CORRIDOR MASTER PLAN

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Figure 2-3: Lone Tree Corridor Study Preferred Alternative



Source: Lone Tree Corridor Study, DMJM Harris | AECOM 2006



### Flagstaff High Occupancy Housing Draft Specific Plan (City of Flagstaff) July 2017

The goal of the *High Occupancy Housing (HOH) Specific Plan* is to produce a new Specific Plan for the City of Flagstaff that defines future urban patterns for High Occupancy Housing (HOH) developments while not neglecting the “active stewardship of the natural and built environment”. The HOH Specific Plan has been developed in response to community concerns surrounding some of the larger buildings recently completed or in development stages, particularly associated with the need for additional off campus student housing to accommodate current and future growth of the NAU student population. leading to increased daily congestion on Milton Road and is projected to get worse complicating peak winter traffic congestion.

The Plan defines HOH as, “a development with at least 30 units or 75 bedrooms per acre in dormitory or apartment-style units”. The Plan offers an extensive review of existing HOH developments (such as The Grove, The Standard, Village at Aspen Place, The Hub, etc.), history of the zoning and land use considerations influencing HOH developments, and site analysis and design considerations for future HOH opportunities in Flagstaff. The Plan concludes with a series of goals, policies and implementation strategies.

Key findings and considerations that influence transportation considerations include:

- Key activity centers and HOH sites are located along Milton Road.
- Three neighborhood scale activity centers along US 180 would allow for limited high density and HOH residential development.
- Description and location map of where HOH opportunities are currently allowed.
- In a 2014 survey of pedestrians, no or missing sidewalks or difficult crossings were the top reason that walking in Flagstaff was considered uncomfortable.
- Vehicle miles traveled per capita per day has dropped from 21 miles in 2007 to under 17 miles in 2016.
- There is a strong relationship between establishing HOH locations and multimodal mobility necessary to serve future HOH areas.



High Occupancy Housing  
DRAFT Specific Plan  
Public Review Draft - July 28, 2017

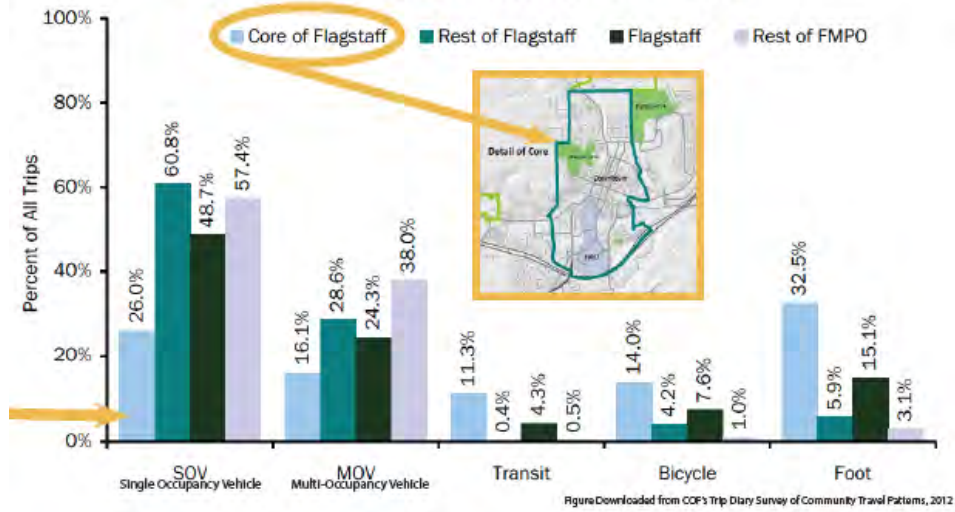


This public review draft is being distributed for a 60-day comment period. Comments should be submitted to the City by September 27, 2017 in order to be timely. Comments can be submitted to:  
Dora Decker, AICP  
Comprehensive Planning  
211 W. Aspen Ave.  
Flagstaff, AZ 86001  
Or email at:  
pdecker@flagstaffaz.gov





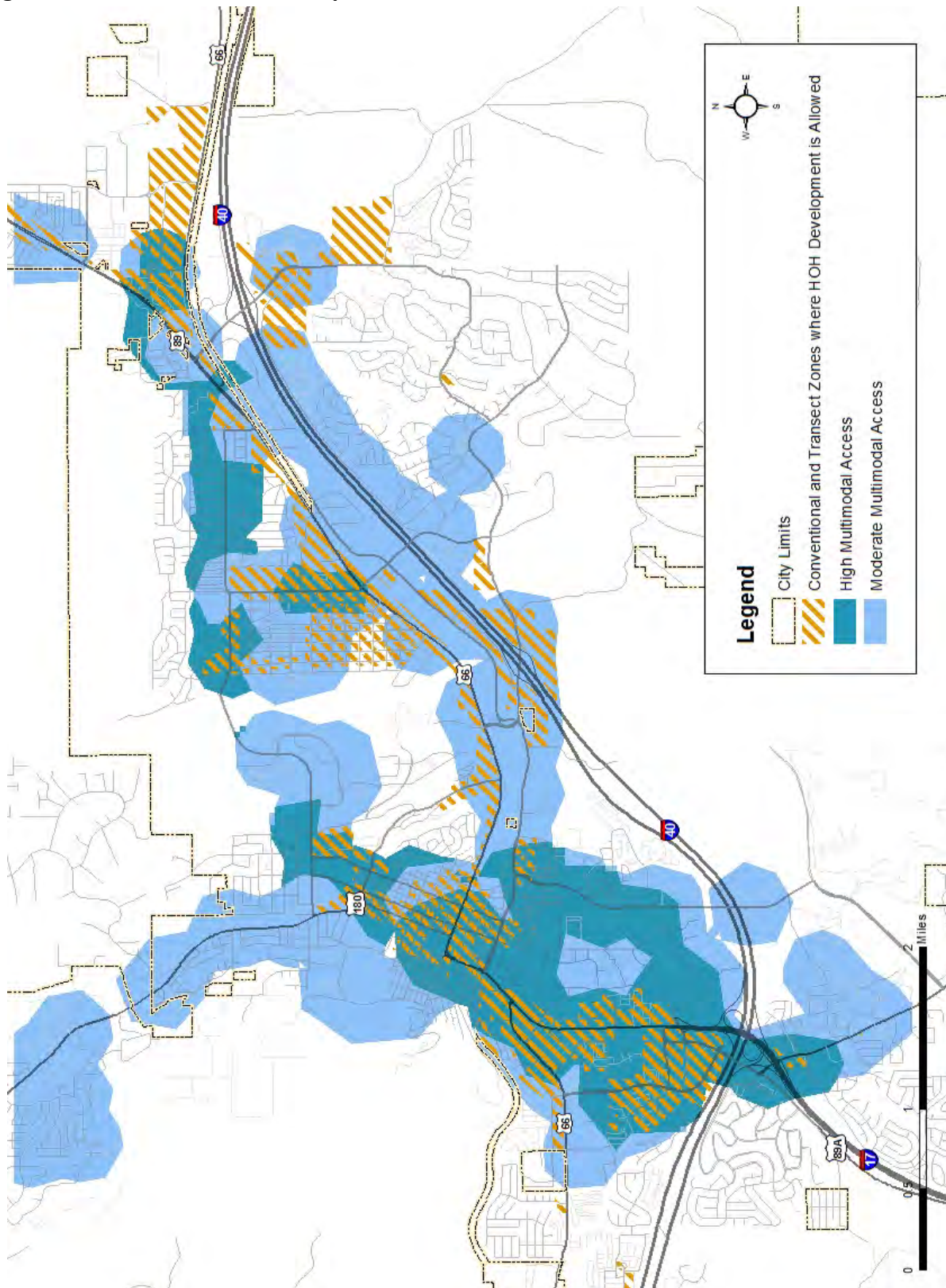
**Figure 2-4: Modal Share of All Trips by Area of Residence (2012)**



Source: City of Flagstaff High Occupancy Housing Draft Specific Plan



Figure 2-5: Potential HOH Development Zones

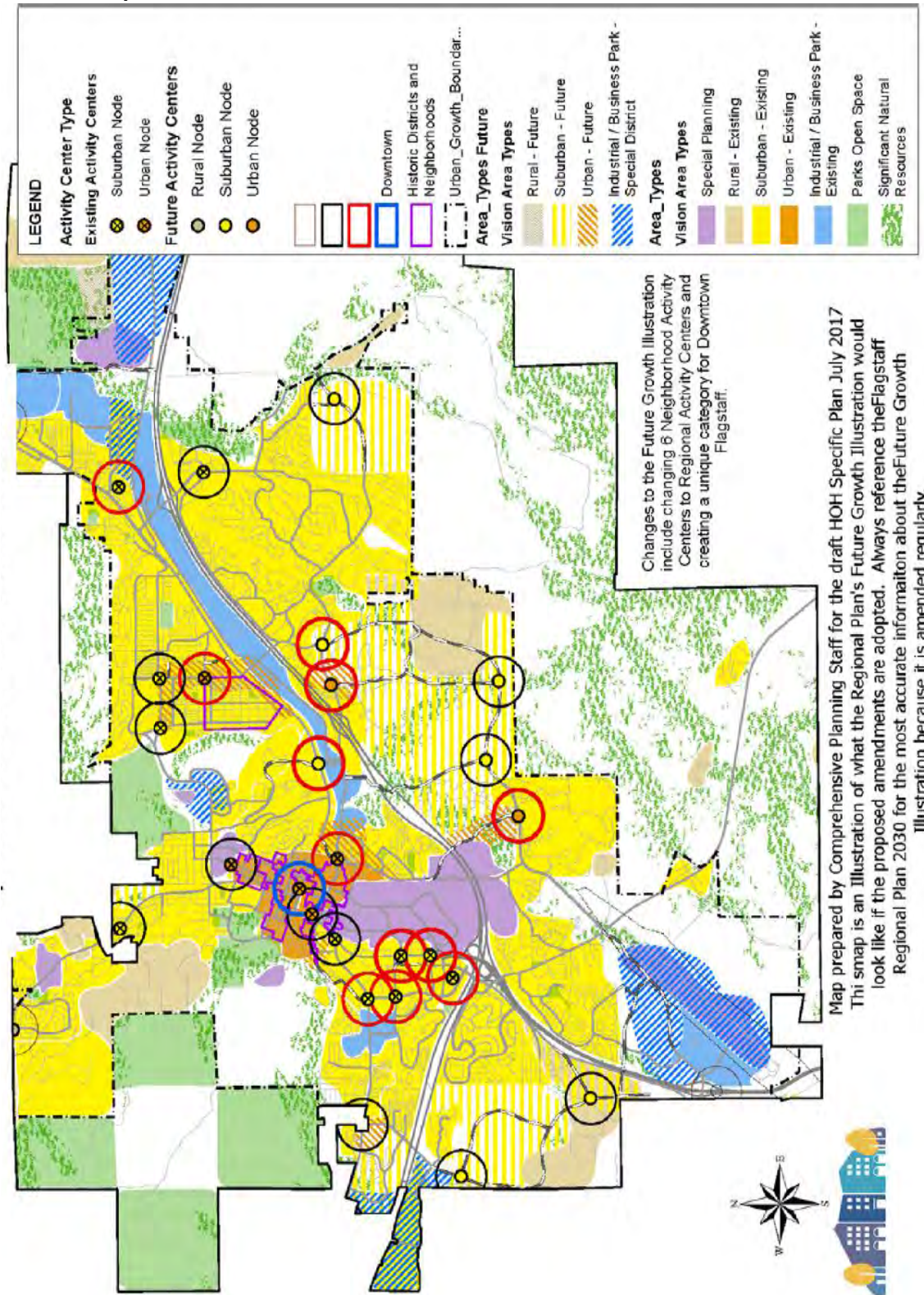


Source: City of Flagstaff High Occupancy Housing Draft Specific Plan





Figure 2-6: Proposed Future Growth Illustration



Source: City of Flagstaff High Occupancy Housing Draft Specific Plan



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## Beulah-University Alignment Study (City of Flagstaff) 2015

The purpose of the *Beulah-University Alignment Study* was undertaken to provide alignment alternatives and roadway cross-sections for Beulah Boulevard and University Avenue/Drive based on an analysis of study area constraints and anticipated traffic impacts of connecting Beulah Boulevard and University Avenue/Drive. The study was conducted in response to a proposed public-private partnership intended to relocate ADOT's current administrative offices at the southwest corner of Milton Road and University Drive in anticipation of commercial and mixed-use development opportunities.

The study conducted a capacity analysis (with growth scenario) and developed a series of conceptual and candidate alternatives that evaluated the advantages and disadvantages of the potential roadway alignment/connection of Beulah Blvd. to University Drive. The report also identifies adjacent site development characteristics/constraints, safety, cost, and multimodal design considerations to inform the public-private partnership process in their evaluation of the development potential of this property.



## Five-Year Transit Plan (NAIPTA) 2017

The Five-Year Transit Plan was adopted in December 2017 and was produced for NAIPTA's Mountain Line fixed bus service. The main focal point of the report is how NAIPTA should prioritize future service investments, specifically addressing the trade-offs between higher frequency service, longer spans of daily service, or increased coverage. The plan includes near-term goals through an enhanced short-term network under a budget similar to the existing, as well as a future funding scenario that includes a permanent transit network with greater coverage area and high frequency routes. The plan also includes transit-supportive policies and practices that should be implemented in the next five years. Milton Road is identified as one of the permanent transit routes in the permanent transit network as a north-south corridor connecting downtown with the Beulah Roads. However, Milton Road is also noted as a pedestrian-hostile roadway and notes the Beulah Road extension as a viable transit corridor with more opportunity to develop transit-oriented development. The five year transit plan also suggests relocating The Downtown Connection Center currently located to Phoenix Ave and Milton Road because access for busses and pedestrians is challenging due to the high speeds, congestion, limited turns and long waits associated with Milton Road/Historic Route 66 and the railroad.

Five-Year Transit Plan  
ADOPTED DECEMBER 7, 2017

For the Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA), Mountain Line



## NAIPTA Transit Spine Locally Preferred Alternative Final Report (June 2016)

The purpose of this project was to determine a Locally Preferred Alternative (LPA) for the Transit Spine cross-town transit connector. The Transit Spine is envisioned to be a corridor-based Bus Rapid Transit



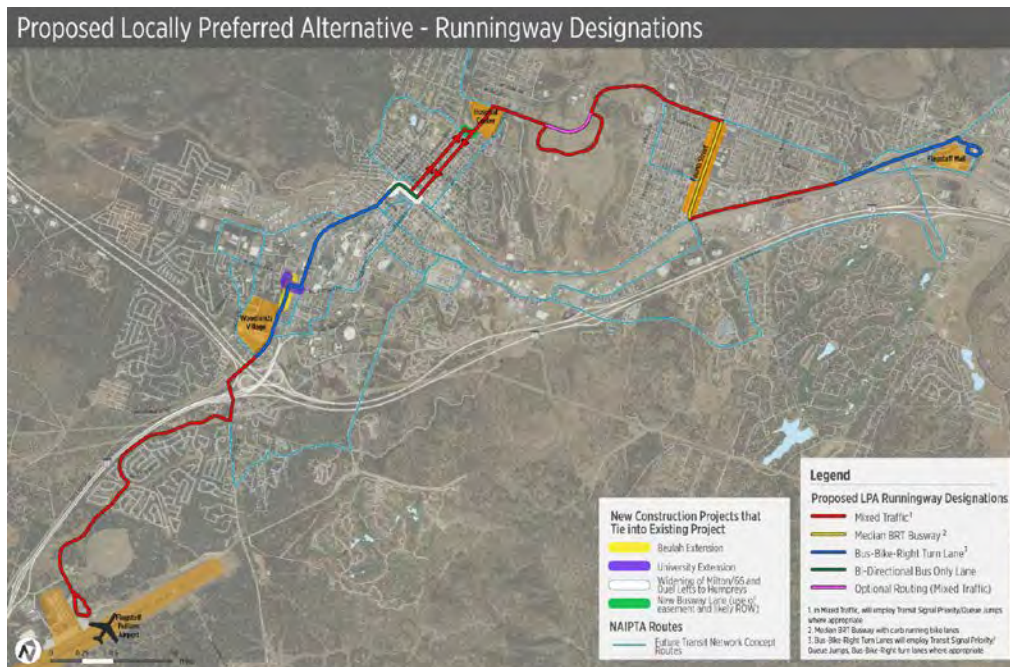


# US 180 CORRIDOR MASTER PLAN

Working Paper #1 – Current & Future Conditions Report

(BRT) service that connects key activity centers, including the airport, downtown and Flagstaff Mall. The Transit Spine will also provide enhanced transit service in Flagstaff, offering more convenient and attractive service than existing transit service and travel options in the area.

The selected LPA, considered to meet a NAIPTA project policy goal, is a corridor-based bus rapid transit service operating between the Flagstaff Mall and Flagstaff Pulliam Airport, on Marketplace Drive/South Mall Way, Route 66/89A, N. 4<sup>th</sup> Street, Cedar Avenue, Gemini Road, Forest Avenue, a one-way couplet of N. Humphreys Street (NB) and N. Beaver Street (SB), Rt. 66, S. Milton Road, W. University, S Beulah, Lake Mary Road, High Country Trail, and Pulliam to the Flagstaff Pulliam Airport.



## Flagstaff Regional Five Year & Long Range Transit Plan (NAIPTA/ADOT) 2013

The *Flagstaff Regional Five Year & Long Range Transit Plan* proposes a long-term vision for Flagstaff’s regional public transportation system and identifies and establishes a short-, mid-, and long-term service plan; funding plan; and implementation plan. Bus transit services were historically operated by Coconino County when in 2006, NAIPTA was formed to provide a regional approach to transit in and around Flagstaff. NAIPTA staff has successfully implemented several of the 2005 Plan recommendations, including implementing Mountain Link rapid bus service in 2011. With the accomplishment of many of the original goals, this Plan identifies a series of goals and objectives and short-term (years 1-5), mid-term (years 6-10) and long term (years 11-20) for transit services in the Flagstaff area.



# US 180 CORRIDOR MASTER PLAN

Working Paper #1 – Current & Future Conditions Report

## City of Flagstaff DRAFT Active Transportation Master Plan (City of Flagstaff and FMPO) 2015

The City of Flagstaff and FMPO are currently preparing an Active Transportation Master Plan to serve as a detailed guide to enhance walking, biking, and trails in Flagstaff. The Plan discusses and provides maps for existing and future proposed sidewalks, bike lanes (and bikeway networks), the Flagstaff Urban Trail System (FUTS), at grade and grade separated crossings and neighborhood connectors. This ongoing draft plan has many details, but some of the key takeaways include:

- There are approximately 300 miles of existing sidewalks in Flagstaff, but there are 60 miles of missing sidewalks along major streets
- The missing sidewalks have been inventoried and prioritized totaling \$37.5 million in sidewalk improvements
- There are approximately 130 miles of existing bike lanes and shoulders on Flagstaff streets, but there are about 53 miles of missing bike lanes from candidate city streets.
- 22 miles of the missing 53 miles of bike lanes could be completed by providing striping to existing facilities at an estimated cost of \$1.84 million.
- 13 miles of additional bike lanes require reconstruction at an estimated cost of \$6.72 million
- The FUTS system is a shared use path that connects neighborhoods, shopping, employment areas, schools, parks and the surrounding National Forest.
- Presently, there is 56 miles in the FUTS system, 75 miles of planned trails for a total of 130 miles planned for the FUTS system.
- There are 1400 existing at-grade pedestrian crossings in Flagstaff. There are 65 new locations where additional at-grade crossings are needed.
- According to the study, US 180 has 11 potential crossing locations between Route 66 and Shultz Pass Road.

### City of Flagstaff Active Transportation Master Plan



## CHAPTER 3: PUBLIC & STAKEHOLDER ENGAGEMENT

Public and Stakeholder engagement in the US 180 CMP is imperative to the success of this project.

### Public Engagement Goals & Objectives

- Enhance and broaden the awareness of this project.
- Promote an understanding of purpose and need for the US 180 CMP.
- Provide ample opportunities for residents, business owners and stakeholders of Flagstaff and Coconino County to provide input during the study process, and prior to recommendations being made.

There are a considerable number of individuals, agencies, interested stakeholders and community members that will assist and guide in the preparation and recommendations developed in the US 180 CMP.

### Project Partners

The ADOT Multi-Modal Planning Division is conducting this study in cooperation with several Project Partnering Agencies committed to preparing a long-term CMP for US 180. A Project Partner is a stakeholder who is actively engaged in the leadership of the project by helping develop the project charter that includes a mission statement, values, goals and objectives. Project Partners will meet at least bi-monthly, review deliverables, provide strategic direction, and input through the duration of the CMPs. The Project Partnering Agencies for this project include:



**Arizona Department of Transportation (ADOT)**



**Flagstaff Metropolitan Planning Organization (FMPO)**



**Coconino County**



**Northern Arizona Intergovernmental Public Transit Authority (NAIPTA)**



**Burlington Northern Santa Fe (BNSF)**



**United States Forest Service (USFS)**



# US 180 CORRIDOR MASTER PLAN

Working Paper #1 – Current & Future Conditions Report



**City of Flagstaff**



**Federal Highway Administration (FHWA)**



**Northern Arizona University (NAU)**

## Project Stakeholders

Project Stakeholders include representatives from the Partner agencies, but also include an expanded group of representatives from other agencies and organizations. The Project Stakeholders will meet with Project Partners at key milestones to review and provide input on major deliverables. An Agency Stakeholder list will be provided to the Project Partners for review.

The Project Partners and Project Stakeholders are tasked with overseeing the project study team's efforts over the course of the entire process. They will review draft documents, attend meetings at key project milestones and offer feedback and guidance to ensure that the CMP meet desired project goals and objectives. Project Stakeholders will also assist the study team in advertising, communicating and delivering public notices for public open house meetings and scheduled meetings with elected officials to receive project updates at key project milestones.

## Project Partner Charter

On August 2, 2017, a Project Partner Charter was developed as a formal expression of the partnership values, mission and goals that the Project Partners are committed to for the duration of this project (**Figure 3-1**). The Charter will continually serve as a guide to ADOT and its Project Partners to develop, maintain and enhance the partnership for the US 180 CMP process. The Charter helps create and maintain is a plan for project success by;

1. Creating goals, values and structure to a process that may have multiple, varied viewpoints on key project issues.
2. Serving as a conflict prevention tool designed for project partners to avoid be reminded of the project mission, values and goals in the event that future conflict arises.





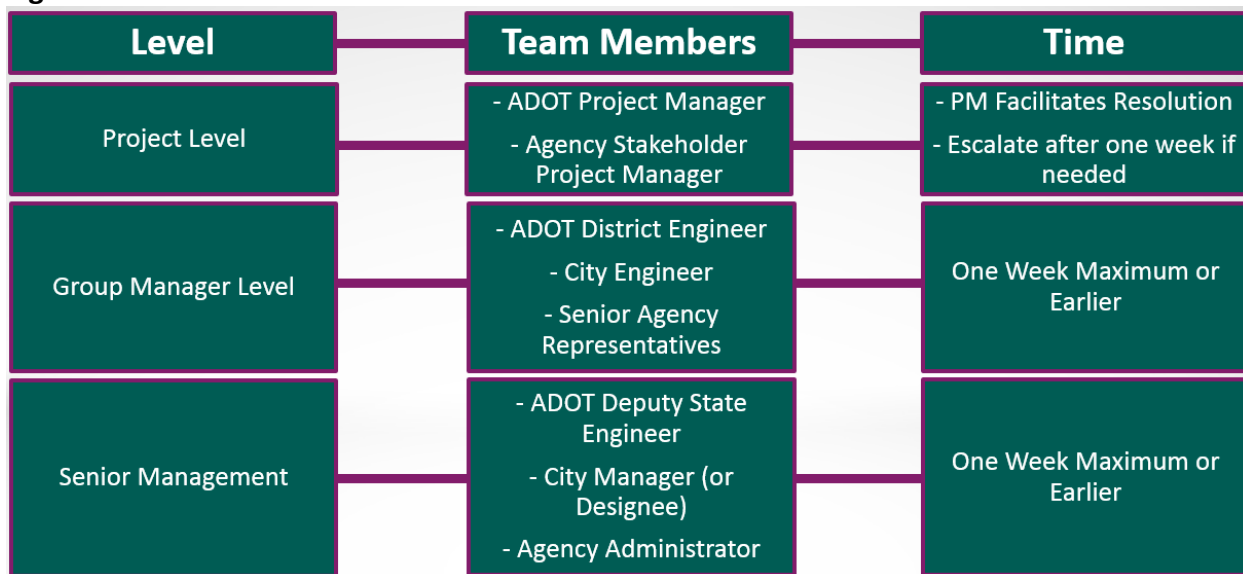
Figure 3-2: Project Partner Charter



### Issue Escalation Ladder

In instances where certain project types can generate multiple points of view or opinions on how to achieve commonly held objectives, issues or disagreements may arise over the course of the project. For several years, ADOT has been utilizing a “issue escalation ladder” that is intended to be utilized for resolving issues when and if they should arise (**Figure 3-3**). Originally developed for use on construction projects, a less rigid but constructive issue escalation ladder is established for the US 180 CMP.

**Figure 3-3: Issue Escalation Ladder**



### Public Involvement Plan

A complete Public Involvement Plan has been prepared as a separate and detailed document to describe the objectives, stakeholder engagement opportunities, key messages and various public outreach tools and methods that will be employed throughout the life of the US 180 CMP process. The full Public Involvement Plan for the US 180 CMP can be found in Appendix X. The discussion below represent select excerpts from the Public Involvement Plan.

### Public Outreach Methods

The goals and objectives for the US 180 CMP – alleviating congestion levels have been a source of local community dialogue for quite some time. Due to the nature of this project, it is inherit that the success of this project in large measure will be the ability to obtain an informed consensus and community acceptance for the preferred alternative(s). The goal of any public outreach effort is to educate the public on the study, provide opportunities for public and stakeholder input at key project milestones and build an informed consensus for study recommendations.

In response to these project needs and objectives, a robust public and stakeholder engagement plan has been prepared. The project team will conduct a two-phase approach to obtain public input at key project milestones. Two public open house meetings will be conducted – the first is intended to solicit input and feedback on the System Alternatives and which alternatives are being recommended for



further study. The second public open house meeting will focus on the review and comment of the recommended alternatives.

This study process will also include two Flagstaff City Council and Coconino County Board of Supervisor briefings to obtain their feedback and guidance at key project milestones.

A project website has been established to serve as a hub for all project information. ADOT is hosting the website at:

- [www.azdot.gov/MiltonCorridorMasterPlan](http://www.azdot.gov/MiltonCorridorMasterPlan)
- [www.azdot.gov/US180CorridorMasterPlan](http://www.azdot.gov/US180CorridorMasterPlan)

This project website will serve as a repository for project documents as well as a virtual notice board for upcoming meetings, surveys, and social media. Other participation tools can be embedded in or linked to from the main project webpage.

This project will utilize several traditional and electronic tools and methods to notify interested stakeholders, business owners and residents of project updates, public open house meetings and other project information at key milestones over the course of the planning process. Press releases and meeting notifications will be coordinated with outlets such as the Arizona Daily Sun, Flagstaff Business News, Greater Flagstaff Chamber of Commerce, ABC 15 and KAFF News to name a few.

Please see Appendix X for a complete copy of the “Public Involvement Plan” for the US 180 CMP for a more complete description of the public and stakeholder outreach methods.



## CHAPTER 4: EXISTING LAND USE, DEMOGRAPHIC & SOCIO-ECONOMIC CONDITIONS

### Land Ownership

As **Figure 4-3** clearly demonstrates, the United States Forest Service is the largest landowner (Coconino National Forest) along the 17 mile US 180 CMP corridor. The areas within the current Flagstaff municipal limits are almost entirely owned by private ownership interests. Private ownership interests are also centralized in the Fort Valley/Baderville area along both sides of US 180 between Snow Bowl Road (FS 516) and Bader Road.

### Existing Land Use & Activity Centers

Existing land uses along the US 180 corridor evolve from an urban/suburban setting along the southern portions of the US 180 CMP corridor near the City of Flagstaff and transition to more rural residential and natural area open spaces (Coconino National Forest) along the central and northern segments of the US 180 CMP corridor.

Describing the corridor from south to north, along Humphrey’s Street in downtown Flagstaff, a diverse mixture of urbanized land uses including Flagstaff City Hall, Wheeler Park, Marriott Residence Inn, various shops and restaurants and convenience commercial uses catering to locals and tourists dominate the road frontage along Humphrey’s Street from Milton Road to Columbus Ave. Flagstaff High School, Bashas’ grocery store and other retail services are located at/near the Columbus/Fort Valley Road (US 180) intersection. Some other noteworthy destinations along US 180 include Pioneer Museum, Coconino Center for the Arts, and Flagstaff Arts and Leadership Academy.

Moving north along the corridor, a series of low to medium density single family residential homes, 2-3 multiple family residential communities, intermittent commercial services, Sechrist Elementary School and the Museum of Northern Arizona are found along US 180 to Shultz Pass Road.

Moving north, the land use landscape becomes distinctively more rural in nature as it continues through Fort Valley Ranches and the Baderville area. Snow Bowl Road provides access to Snow Bowl Ski Resort.

Continuing north, open spaces of the National Forest dominate the US 180 corridor landscape and the winter recreation areas of Wing Mountain Snow Play Area, Arizona Nordic Village, and Crowley Pit are located.

The Wing Mountain Snow Play Area has been a popular family destination attracting thousands of visitors every snow season. On peak winter usage, up to 1000 visitors were not uncommon. The facility has 500 parking spaces. However, the operator canceled their special use permit to operate the facility and Wing Mountain is closed for the 2017-2018 winter recreation season and most likely into the foreseeable future.

The Arizona Nordic Village has also been a popular winter (and summer) destination for cross country skiing, snowshoeing and other outdoor adventures. Also operated under a special use permit from the USFS, the destination remains popular and will likely expand its operations in the coming years.

Crowley Pit has historically been a smaller and less formal snow play area, but it too is closed for the 2017-2018 snow season. Challenged by the lack of structured parking, “No Parking” signs have been





placed along the shoulders of US 180 (near Crowley Pit and beyond) to assist with in the safety in the area.

## Existing Zoning

Consistent with the existing open space land use and ownership patterns, the vast majority of the lands in the US 180 CMP study area are zoned “Open Space and Conservation” by Coconino County. Please see **Figure 4.4** for additional detail.

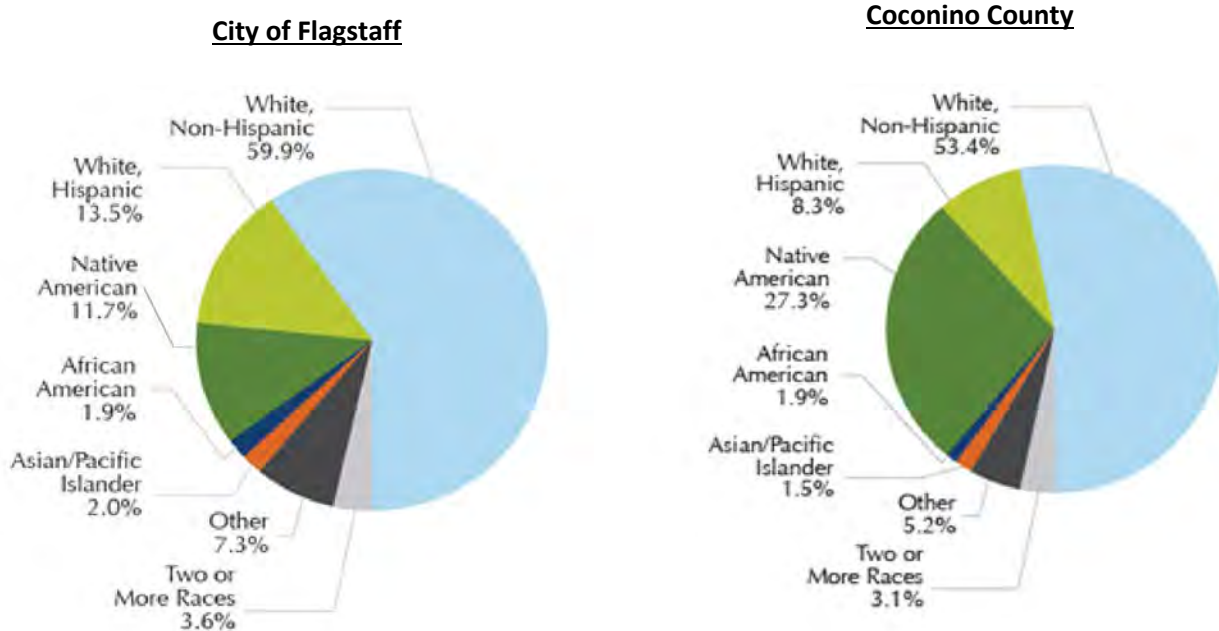
Private properties located in the Fort Valley/Baderville area are zoned low density rural residential districts that include Rural Residential 2-acre minimum, 2.5-acre minimum and 4-acre minimum under the Coconino County Zoning Ordinance.

## Demographic & Socioeconomic Conditions

### City of Flagstaff & Regional General Demographic & Socioeconomic Information

According to the US Census Bureau, the 2016 estimated population of Flagstaff was approximately 71,000 (US Census Bureau, Population Division, 2017). **Figure 4-1** shows that both the city (approximately 40%) as well as Coconino County (46%) are both ethnically diverse with prominent minority populations.

**Figure 4-1: Flagstaff and Coconino County Ethnicity**

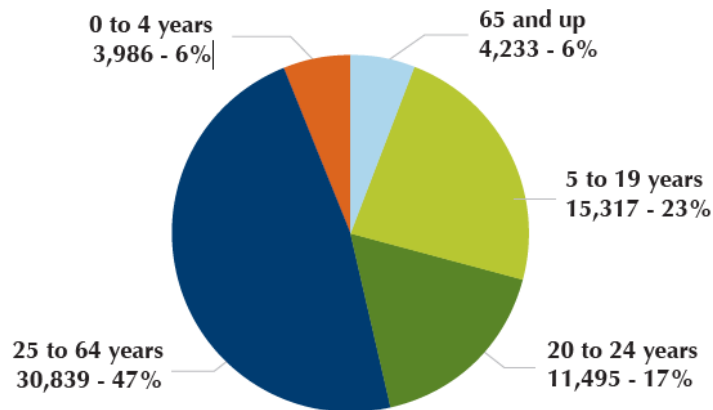


Source: 2010 U.S. Census Bureau, decennial census

The population growth occurring over the last two decades is largely connected to the growth and development of Northern Arizona University which currently has over 21,000 students enrolled (HOH Study). **Figure 4-2** shows that the majority of the population (47%) is between 25 to 64 years old and the median age of approximately 26 years old which is lower than the state of Arizona median age of 36 years old.



**Figure 4-2: City of Flagstaff Population Age**



Source: 2010 U.S. Census Bureau, decennial census

The large student population and generally young community members also effects the housing situation where the city has traditional homes with families as well as a large number of individuals living alone. On the other hand, almost 20% of the housing unit within the are non-family households because of the student population. Unlike other communities, the large student and young population is also related to how the majority of the residents have rental homes (55%) whereas only 45% of the homes are owner occupied (<https://population.az.gov/census-data>). The City also has an undersupplied housing market which leads to affordability issues and a high amount of rental properties. The 2016 median housing sale price is \$315,500 while the median household income is approximately \$49,000 (U.S. Census Bureau). 24% of the Flagstaff population is living in poverty.

### Demographic & Socioeconomic Data Adjacent to the US 180 Corridor

Depicted in **Figure 4-5**, the US 180 corridor extends through four census tracts which include Census Tract 1, 2, 11.12, and 22. Utilizing data generated from the U.S. Census Bureau, some information connected to transportation issues were pulled to highlight socioeconomic and demographic conditions directly adjacent to the US 180 corridor in **Figure 4-6** through **Figure 4-8**.

There are a higher number of total residents (8,463 to 9,913 residents) within Census Tract 2, but Census Tracts 1,2 and 12 have a higher population. Census Tract 22 is large in size compared to the other tracts and is primarily open rural land so that is why there is less population density. Census Tracts 1 and 2 also have a higher percentage of the people living below the poverty line. Similar to population, the high number of people living below poverty Census. On the other hand, Census Tracts 22 and 1 have an older population compared to the other Census Tracts as many retirees seek the quiet real life to escape hectic urban lifestyle. The high density of people, low income, and a generally young population takes place along US 180 to the south which is a recipe to generate a high volume of trips through alternative modes of transportation, however, the US 180 corridor currently does not have adequate infrastructure to support the high demand.



Figure 4-3: US 180 Corridor Land Ownership

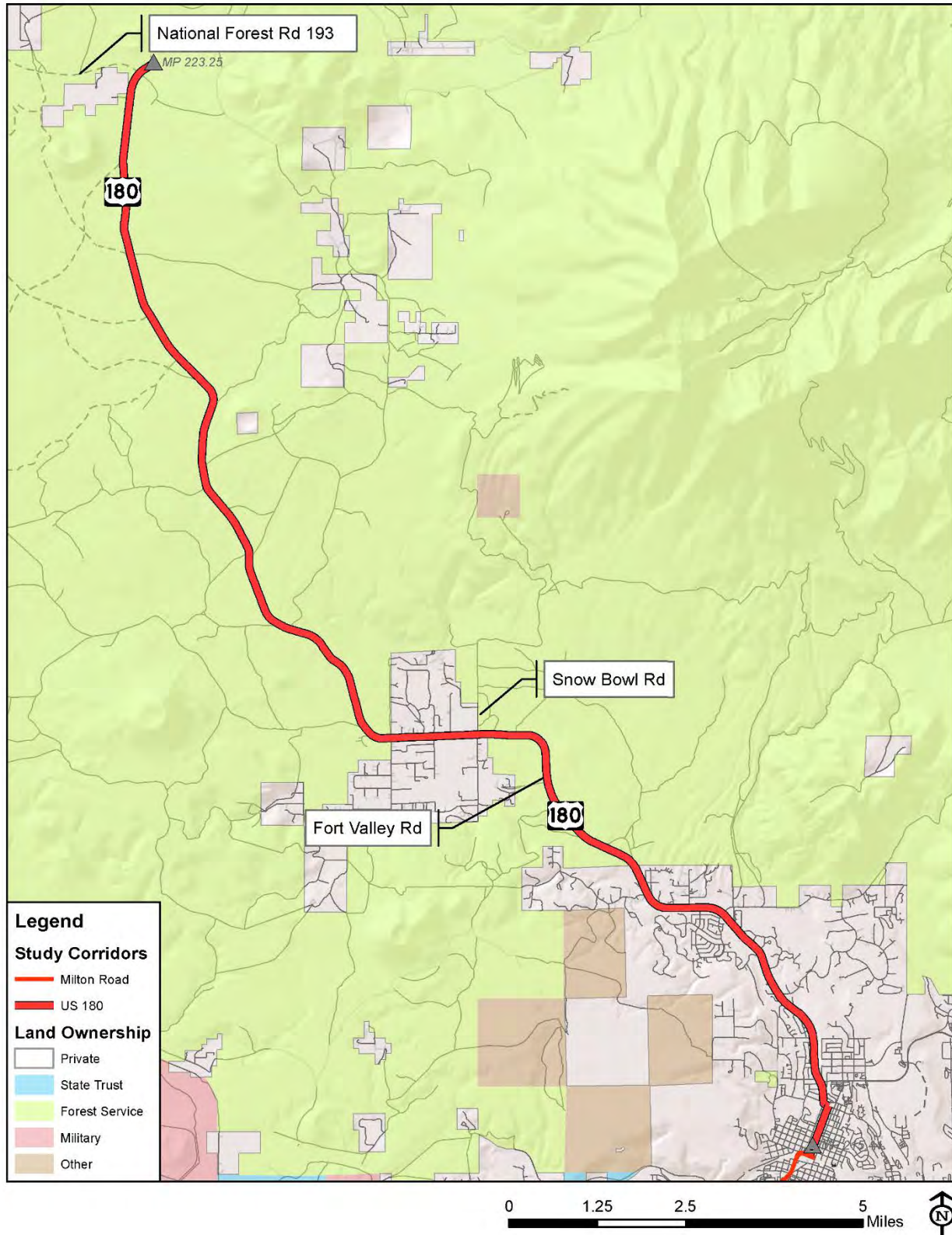




Figure 4-4: US 180 Corridor Existing Zoning

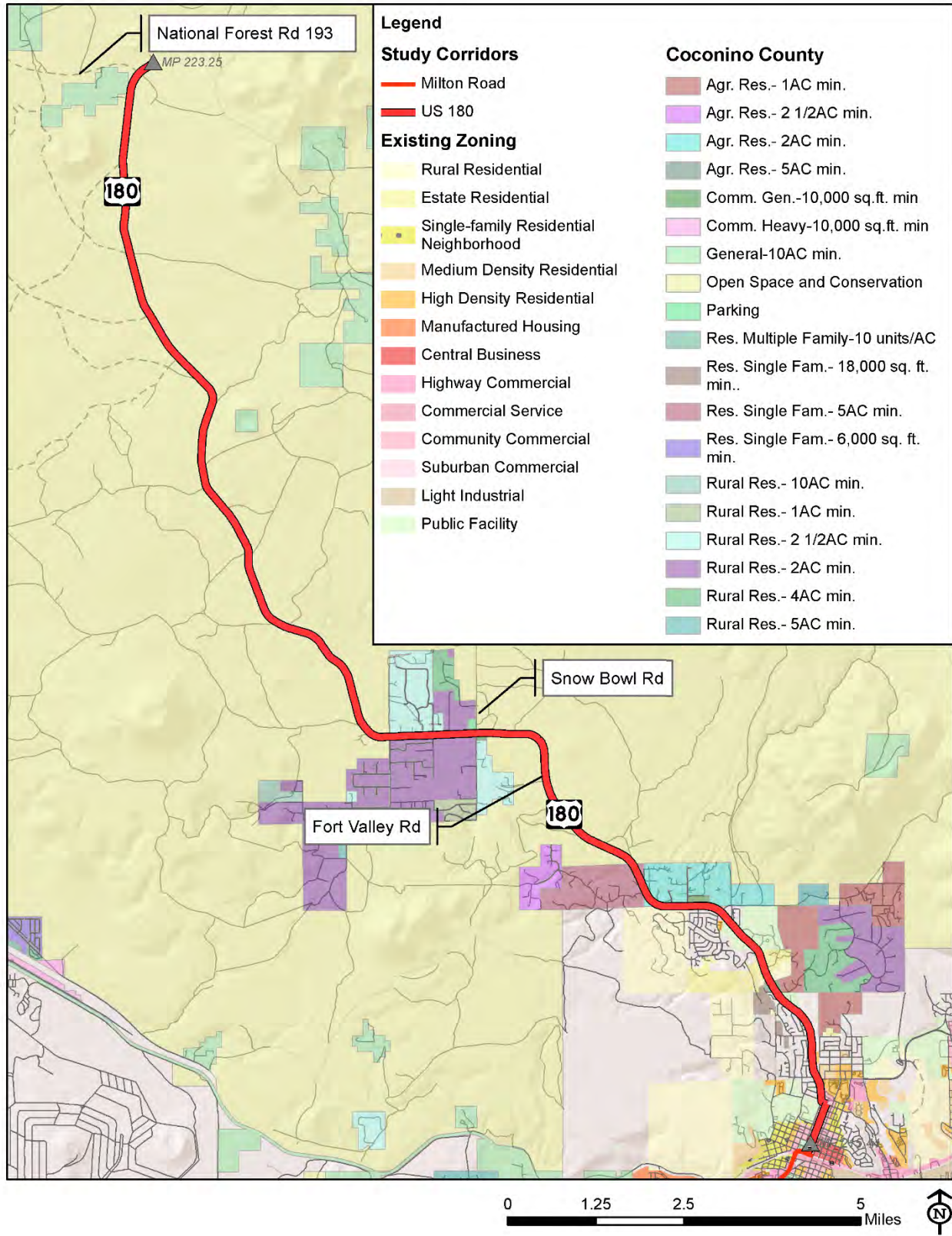




Figure 4-5: US 180 Corridor Adjacent Census Tracts

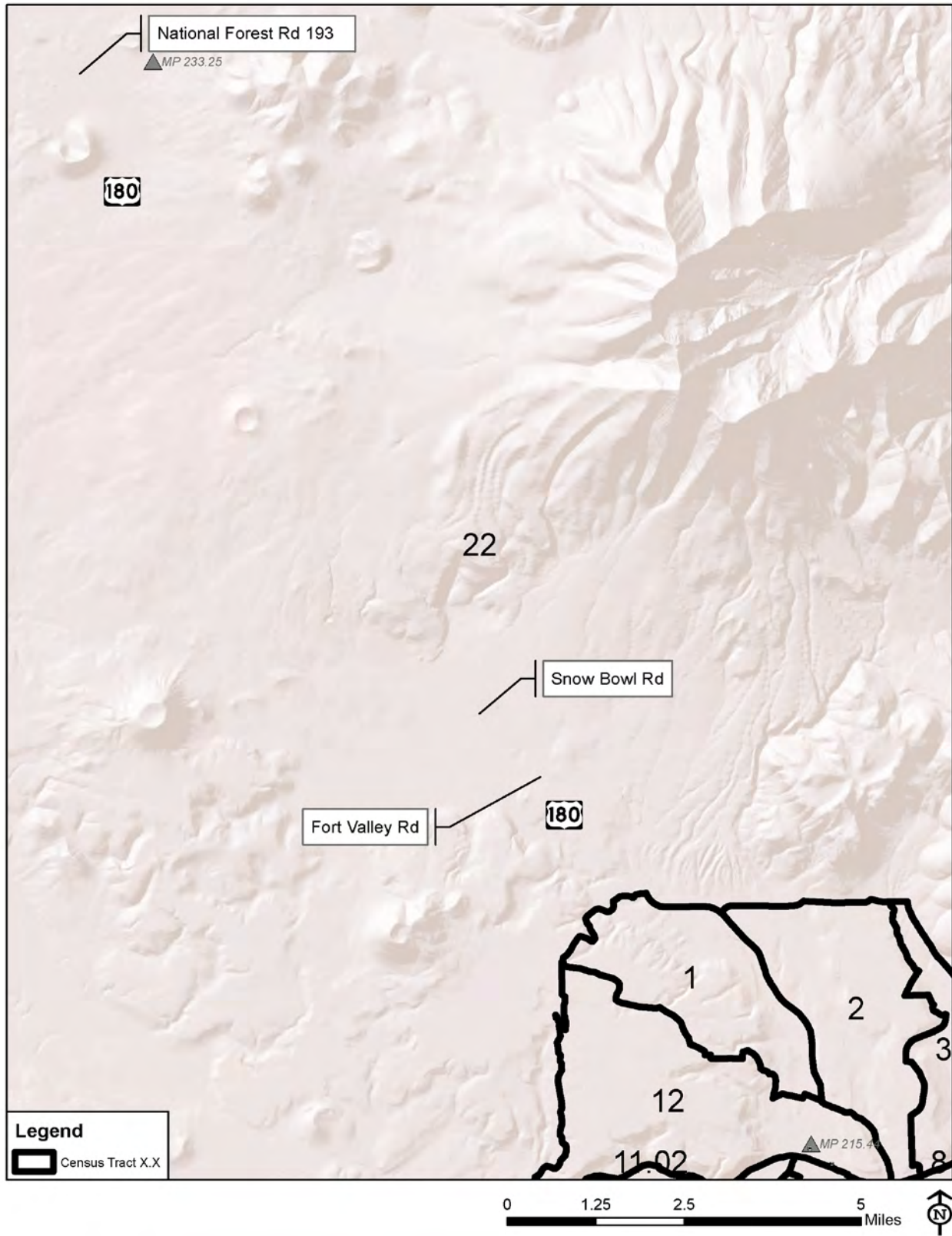


Figure 4-6: US 180 Corridor Percent of Population Living Below Poverty

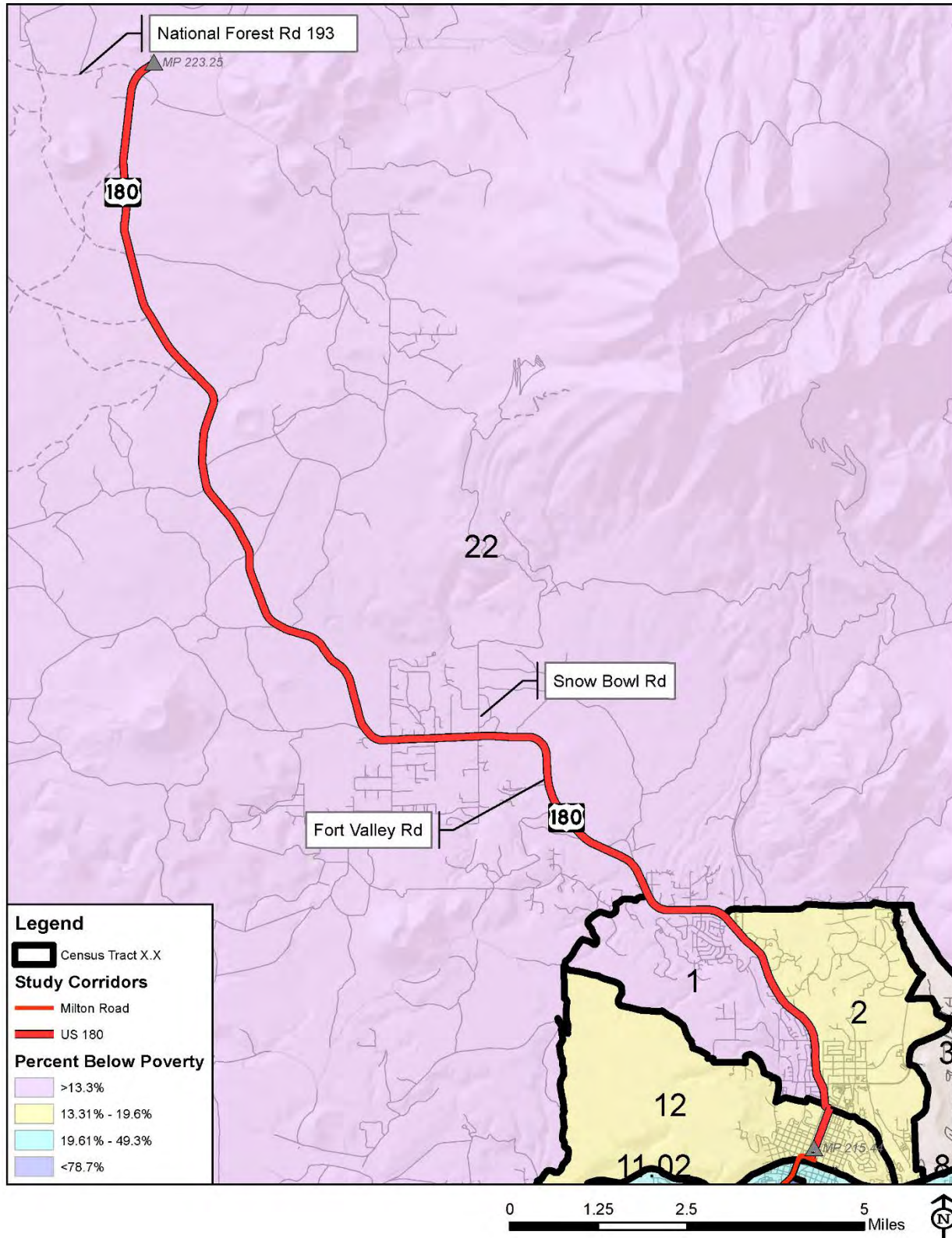
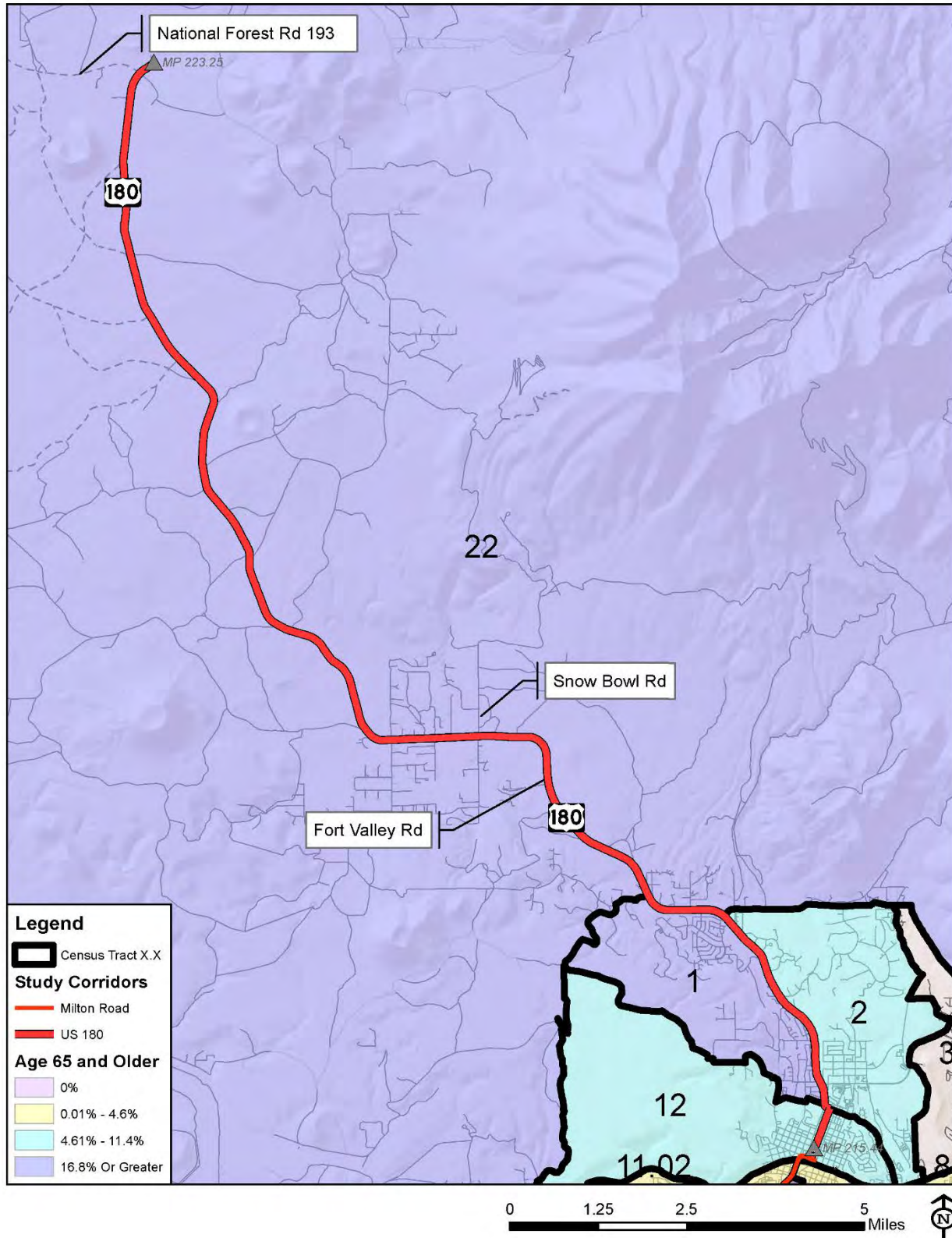
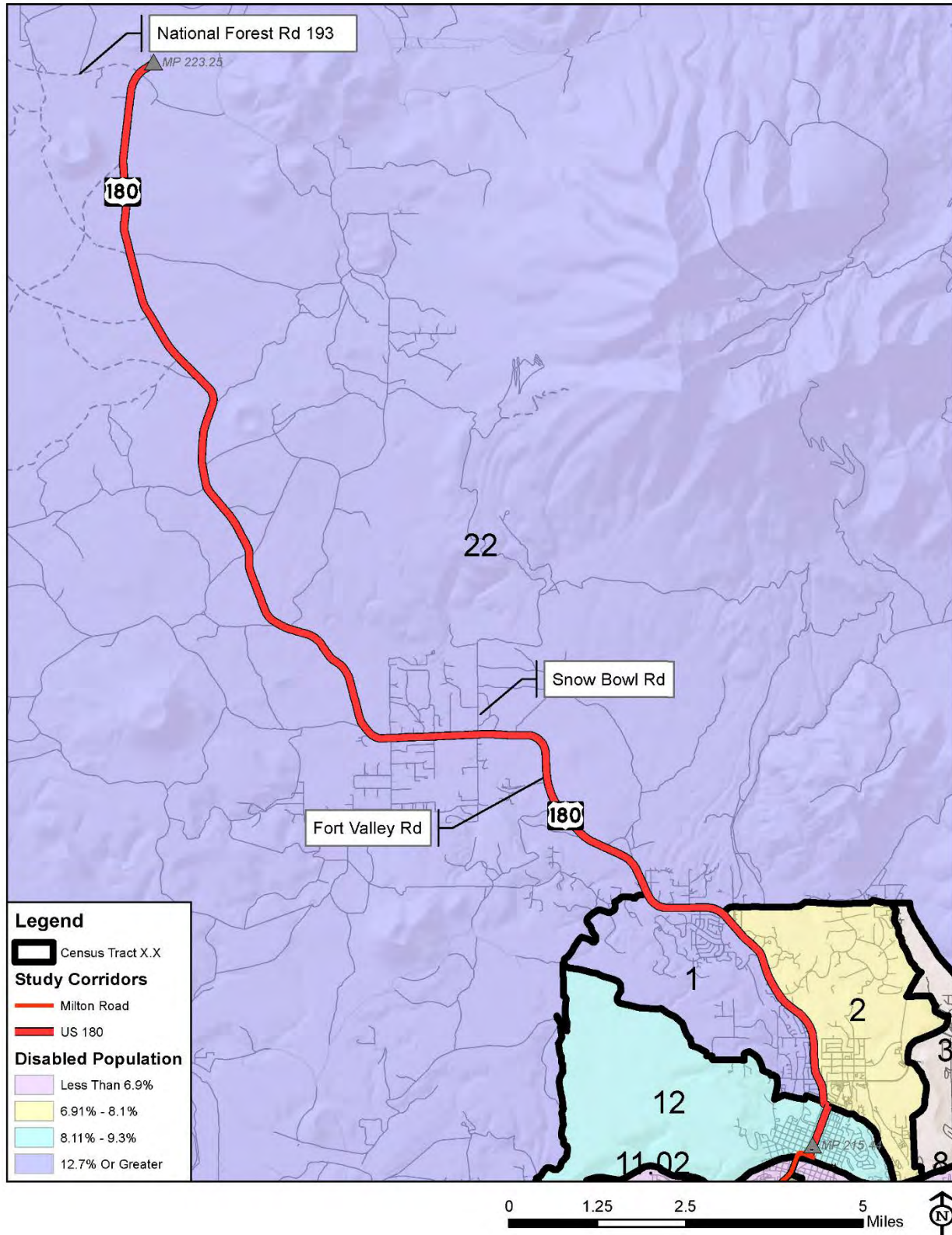




Figure 4-7: US 180 Percent of Population 65 years of Age and Older



**Figure 4-8: US 180 Percent Disabled Population**





## CHAPTER 5: EXISTING ROADWAY & CORRIDOR CONDITIONS

The major elements of the existing transportation system are documented in this section and summarizes the status/condition of each element. Major elements include roadway configuration, bridges, pavement conditions, roadway/intersection operation and performance, non-motorized modes of transportation within the study area.

### Functional Classification

Functional classification is the grouping of streets and highways into classes according to the character of service in which they are intended to provide. **Figure 5-1** and **Figure 5-2** depict the current FHWA approved functional classification for roadways within the study area. Roadways that are not functionally classified by FHWA are not eligible for federal funding. The functional classification of the roadways within the study corridor are as follows:

- FHWA/ADOT functional classification – Humphreys Street/US 180 is classified as a Minor Arterial from SR 40B to Peak View Street (approximately 0.3 miles west of Shultz Pass Road). West of Peak View Street, US 180 is classified as a Major Collector. The intersecting streets on Humphreys Street / US 180 are classified as local roads and Major Collectors (Aspen Avenue, Birch Avenue, Cherry Avenue, Columbus Avenue, Forest Avenue, Navajo Drive, Meade Lane and Shultz Pass Road).
- City of Flagstaff functional classification – Humphreys Street / US 180 within the study corridor is classified as a Major Arterial. The intersecting streets on Humphreys Street / US 180 are classified as local roads, Minor Arterials (Columbus Avenue east of Humphreys Street / US 180 and Forest Avenue), and Minor Collectors (Aspen Avenue, Birch Avenue, Cherry Avenue, Elm Avenue west of Humphreys Street / US 180, Navajo Road, Beal Road, Meade Lane, Fremont Boulevard and Peak View Street).

### Roadway and Lane Configuration

The US 180 CMP study corridor is primarily a three-lane corridor with one through lane in each direction and a center two-way left-turn lane south of Shultz Pass Road. Between Shultz Pass Road and the Wing Mountain Snow Play Area, US 180 is a two-lane roadway with one lane in each direction with the exception of the vicinity of Snow Bowl Road. US 180 widens to a three-lane roadway in the vicinity of Snow Bowl Road with one lane in each direction and a two-way left-turn lane. Dedicated left-turn and right-turn lanes exist at intersections. Curb, gutter and sidewalk exists on both sides of Humphreys Street. Curb, gutter and sidewalk does not exist on most of the US 180 CMP study corridor. **Figure 5-3** depicts the existing lane configurations and left/right-turn lane lengths at the following intersections along the study corridor:

- Columbus Avenue,
- Forest Avenue, and
- Shultz Pass Road.



## Posted Speed Limits, Traffic Control and Lighting Conditions

### Posted Speed Limit

The posted speed limit on Humphreys Street / US 180 is 25 miles per hour (mph). The posted speed limit on US 180 is 35 mph between Humphreys Street and Creekside Drive, 45 mph between Creekside Drive and Forest Hills Drive and 55 mph between Forest Hill Drive and the Wing Mountain Snow Play Area.

### Traffic Control

**Figure 5-4** and **Figure 5-5** depict the traffic control for the study area intersections along the along the US 180 study corridor. In addition to the traffic signals, there are several stop controlled intersections along the corridor. On Humphreys Street, the stop controlled intersections are located at approximately 360 feet along the roadway.

### Lighting Conditions

Adequate lighting is essential for the effective operations of an arterial roadway, particularly to improve intersection sight distance during the night time. However, due to Flagstaff's and Coconino County's stringent lighting codes, additional street lights will only be placed where desperately needed.

Roadway lighting along the US 180 corridor is as follows:

- East side of Humphreys Street between Milton Road and Columbus Avenue/US 180,
- West side of US 180 between Humphreys Street and Meade Lane,
- East side of US 180 between Meade Lane and Louise Lane,
- East side of US 180 between Creekside Drive and Research Center Drive, and

Roadway lighting does not exist on US 180:

- Between Louise Lane and Creekside Drive,
- Between Research Center Drive and Shultz Pass Road with the exception of one street light at Valley Crest Street, and
- Between Shultz Pass Road and the Wing Mountain Snow Play Area.

Intersection lighting exists at the study area signalized intersections.



Figure 5-1: FHWA Functional Classification of Roadways

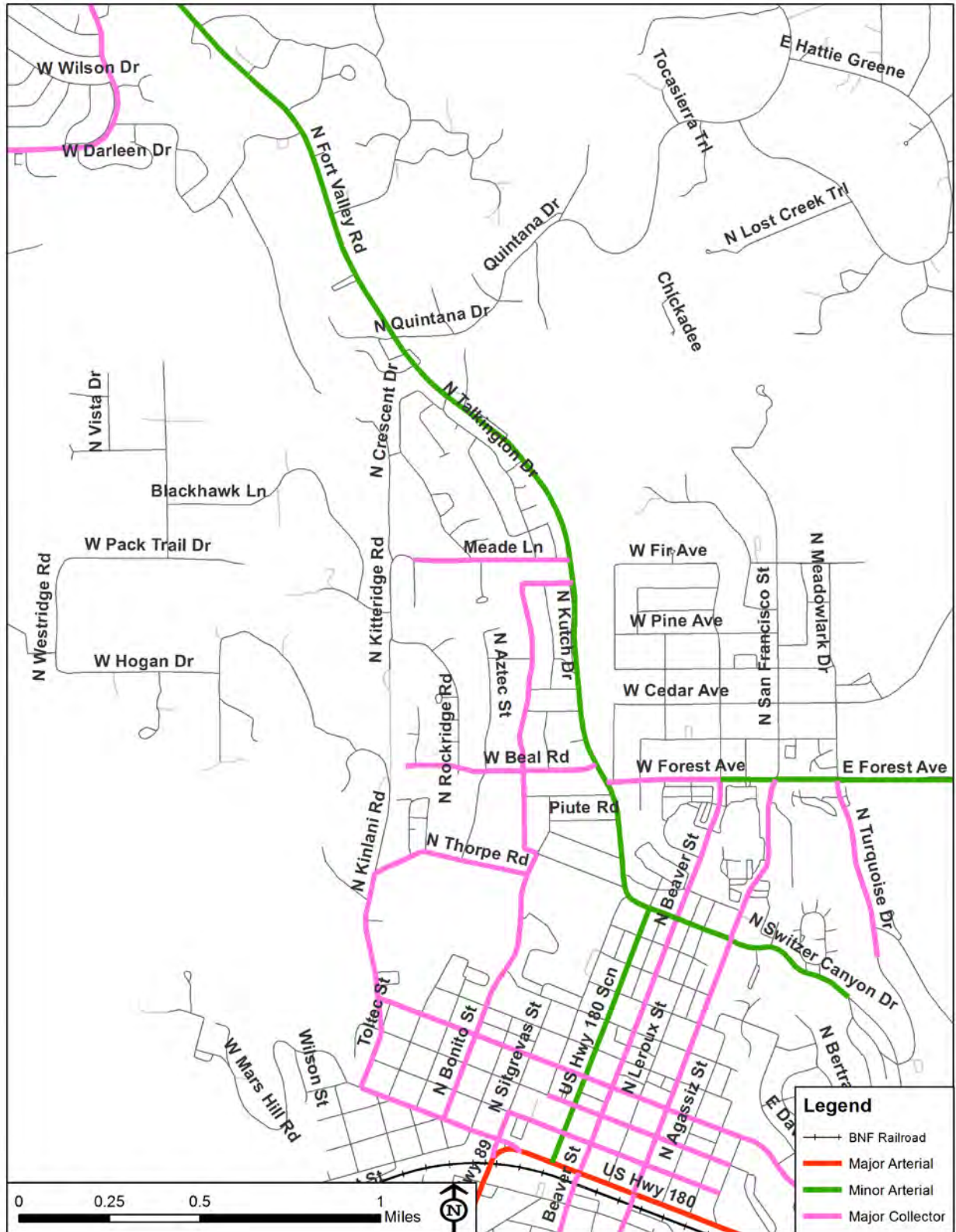


Figure 5-2: FHWA Functional Classification of Roadways (Continued)

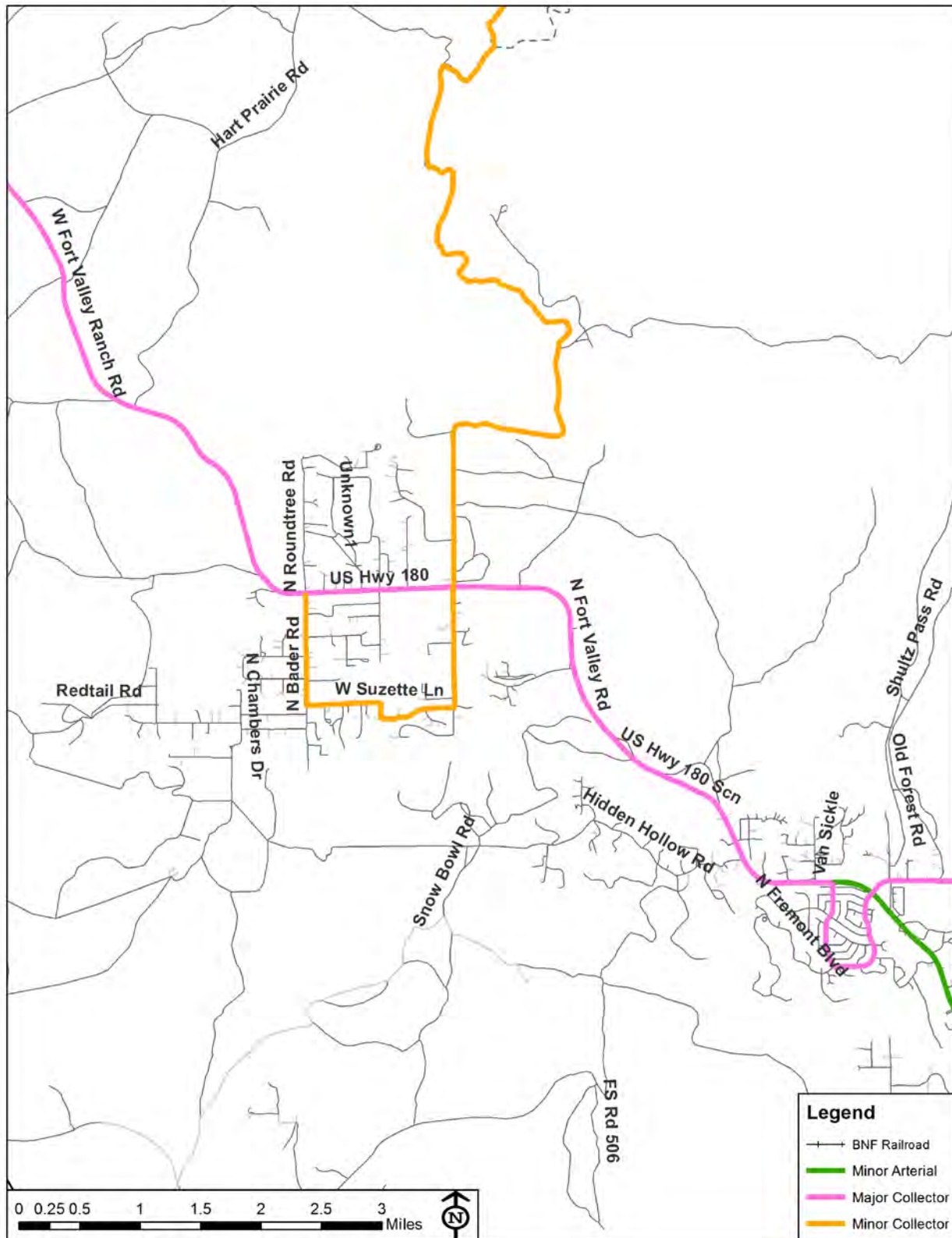




Figure 5-3: Existing 2017 Intersection Control and Lane Geometry

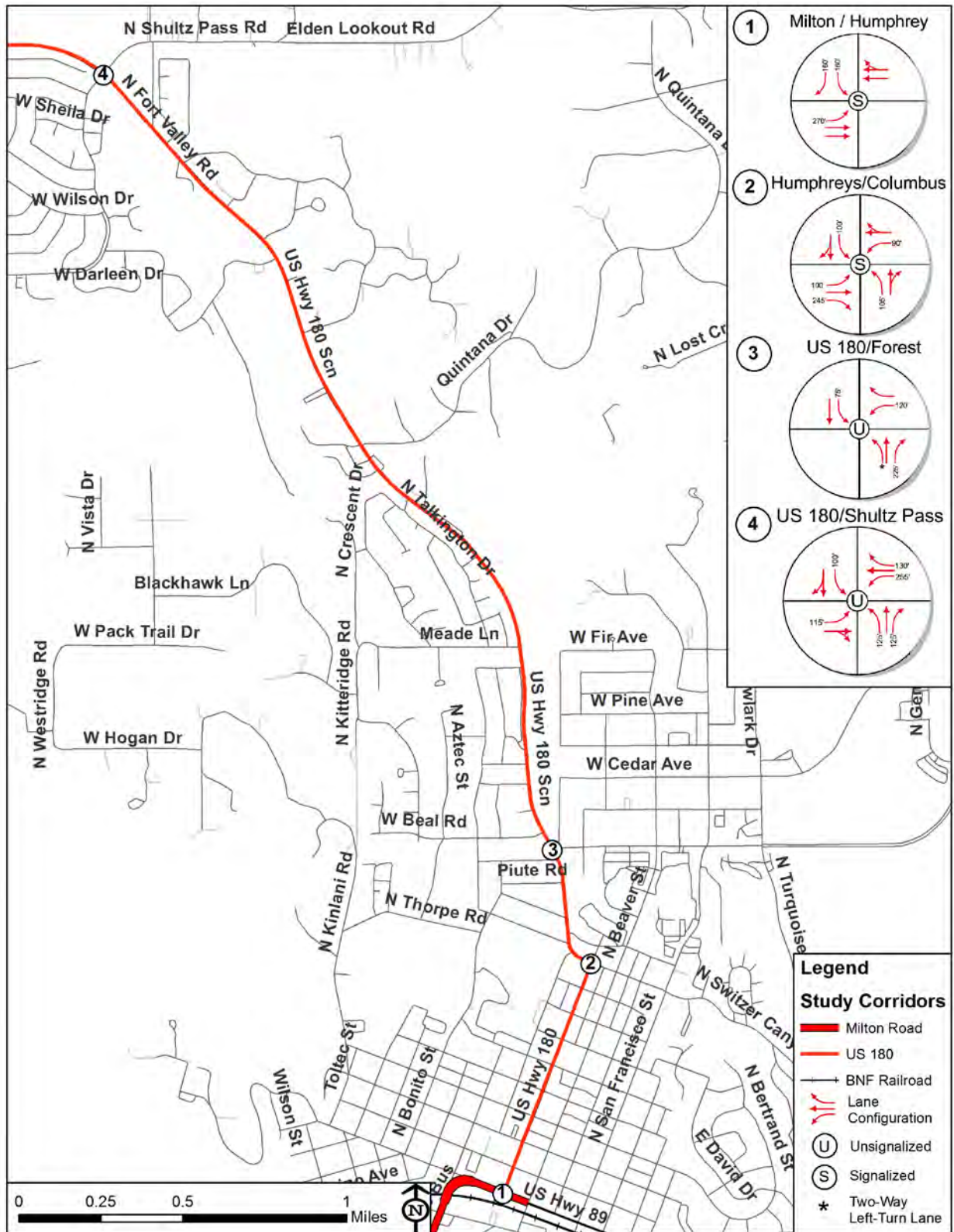


Figure 5-4: Existing Traffic Control at Study Intersections

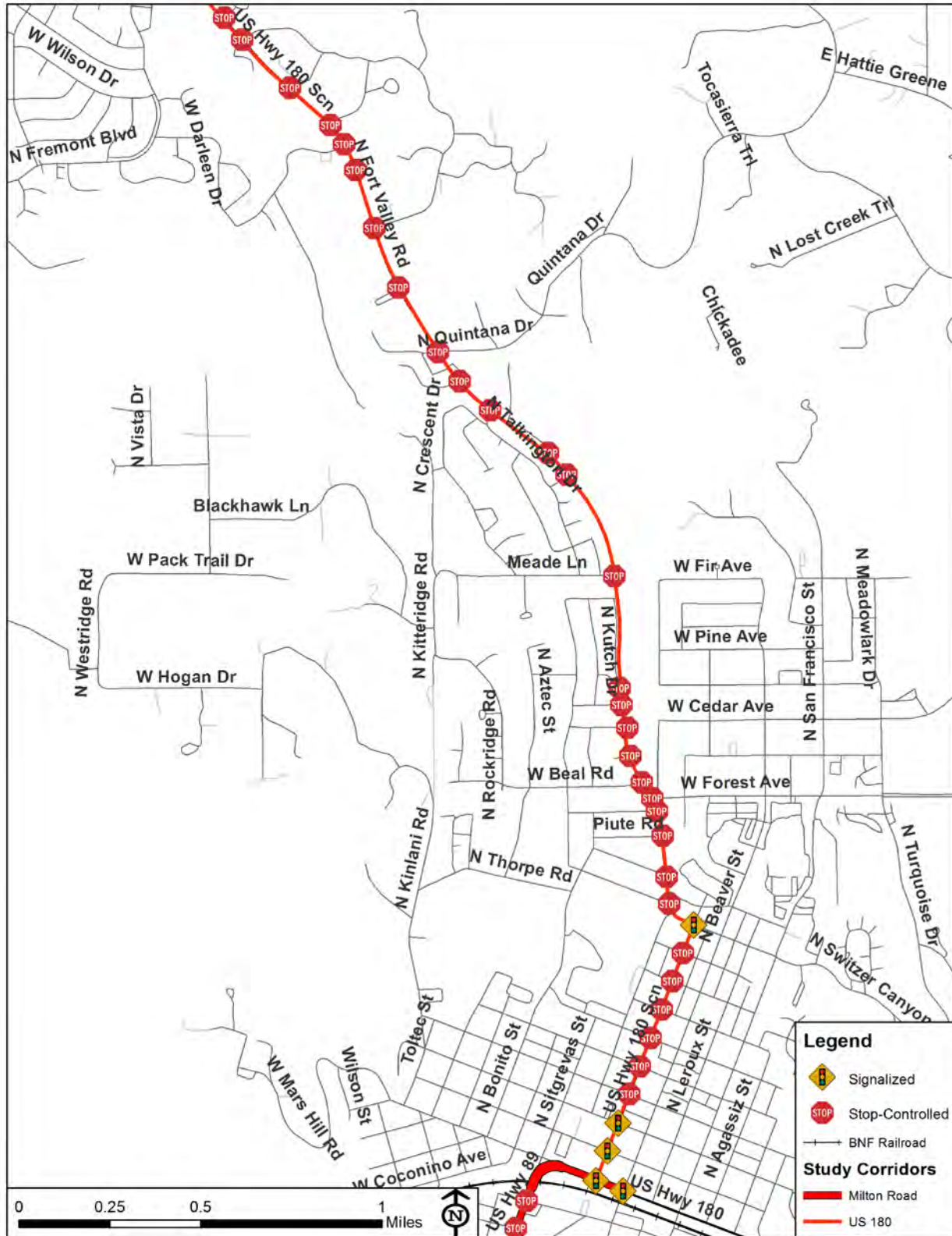
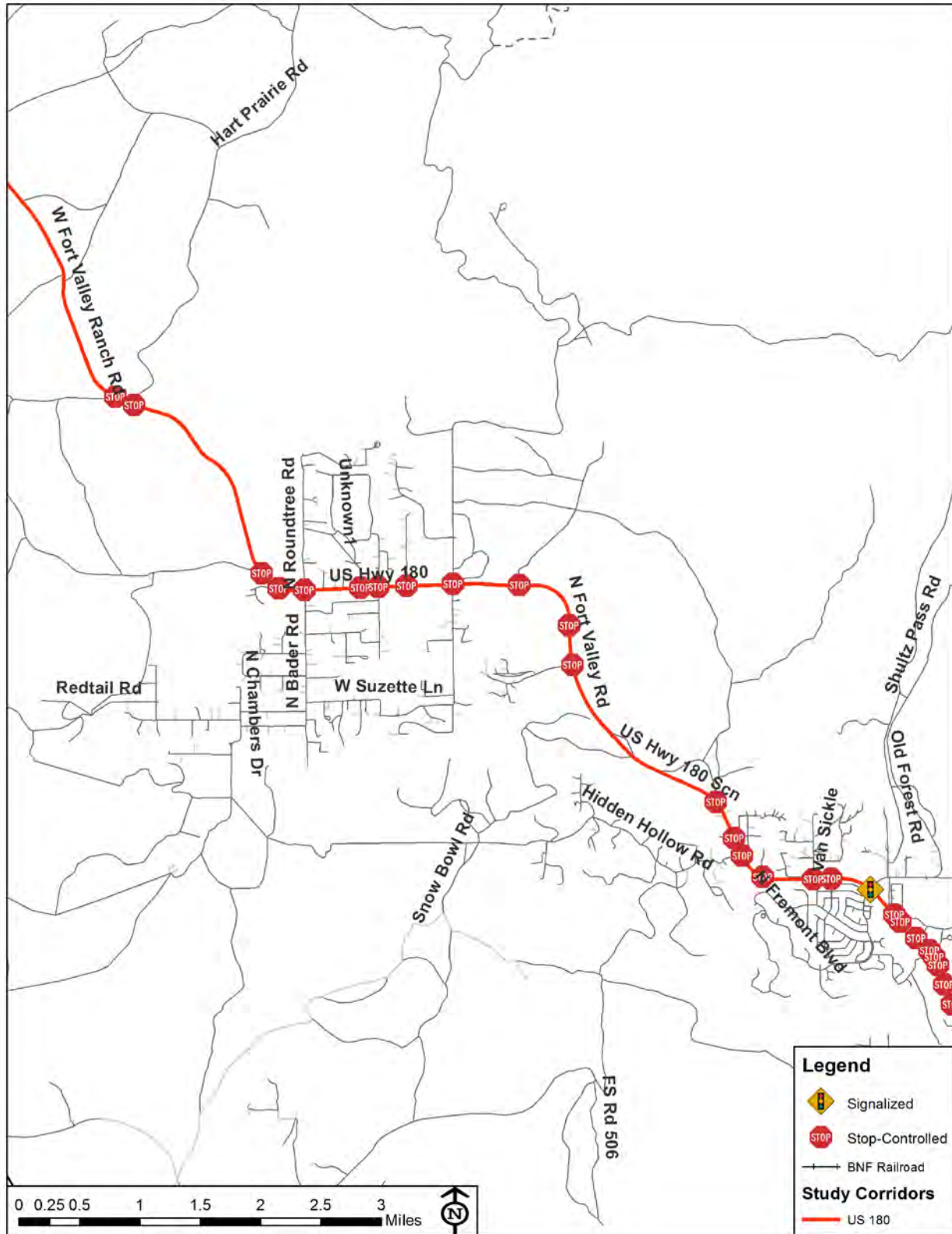




Figure 5-5: Existing Traffic Control at Study Intersections (Continued)



## Existing Travel Conditions, LOS & Congestion

### Historical Traffic Volumes

Historical daily traffic volumes between the years 2011 and 2017 for the US 180 corridor are available on the ADOT Transportation Data Management System (TDMS) website. Historical daily traffic volumes on hourly intervals are also available on the ADOT TDMS website.

### Existing Traffic Volumes

Peak hour turning movement counts were collected in fifteen-minute intervals from 11:00 AM to 1:00 PM and from 4:00 PM to 6:00 PM at various signalized and unsignalized intersections along the study corridor. It is important to note that the study corridor does not have a traditional AM peak hour, but rather a significant Mid-Day peak hour. Therefore, Mid-Day and PM peak hour traffic volumes were collected at intersections along the corridor.

### Existing Roadway Level-of-Service

Traffic congestion levels were estimated for the US 180 study corridor using the existing 24-hour daily traffic volumes. The degree of congestion is expressed in terms of level-of-service (LOS)

### Bicycle & Pedestrian Counts

**Table 5-1** and **Table 5-2** summarizes the number of pedestrians and bicyclists respectively at the study area intersections within the US 180 study corridor during the Mid-Day and PM peak hours.

The highest number of pedestrians crossing US 180 occurred at Columbus Avenue. Pedestrian volume is generally observed to be higher during the PM peak hour at the study area intersections.

The highest number of bicyclists crossing US 180 occurred at Shultz Pass Road. Bicycle volume is observed to be higher during the PM peak hour at the study area intersections.

**Table 5-1: Existing Pedestrian Crossing Volume**

Intersection	North Leg		South Leg		East Leg		West Leg	
	Mid-Day	PM	Mid-Day	PM	Mid-Day	PM	Mid-Day	PM
Humphreys St	6	20	0	0	0	0	0	0
Columbus Ave	0	1	0	4	0	7	24	13
Forest Ave	0	0	1	6	1	7	0	0
Shultz Pass Rd	1	0	0	0	0	0	0	1

**Table 5-2: Existing Bicycle Crossing Volume**

Intersection	North Leg		South Leg		East Leg		West Leg	
	Mid-Day	PM	Mid-Day	PM	Mid-Day	PM	Mid-Day	PM
Humphreys St	2	6	0	0	1	1	0	1
Columbus Ave	0	3	1	6	0	3	3	3
Forest Ave	0	0	0	5	1	7	0	1
Shultz Pass Rd	0	17	1	2	0	8	1	3





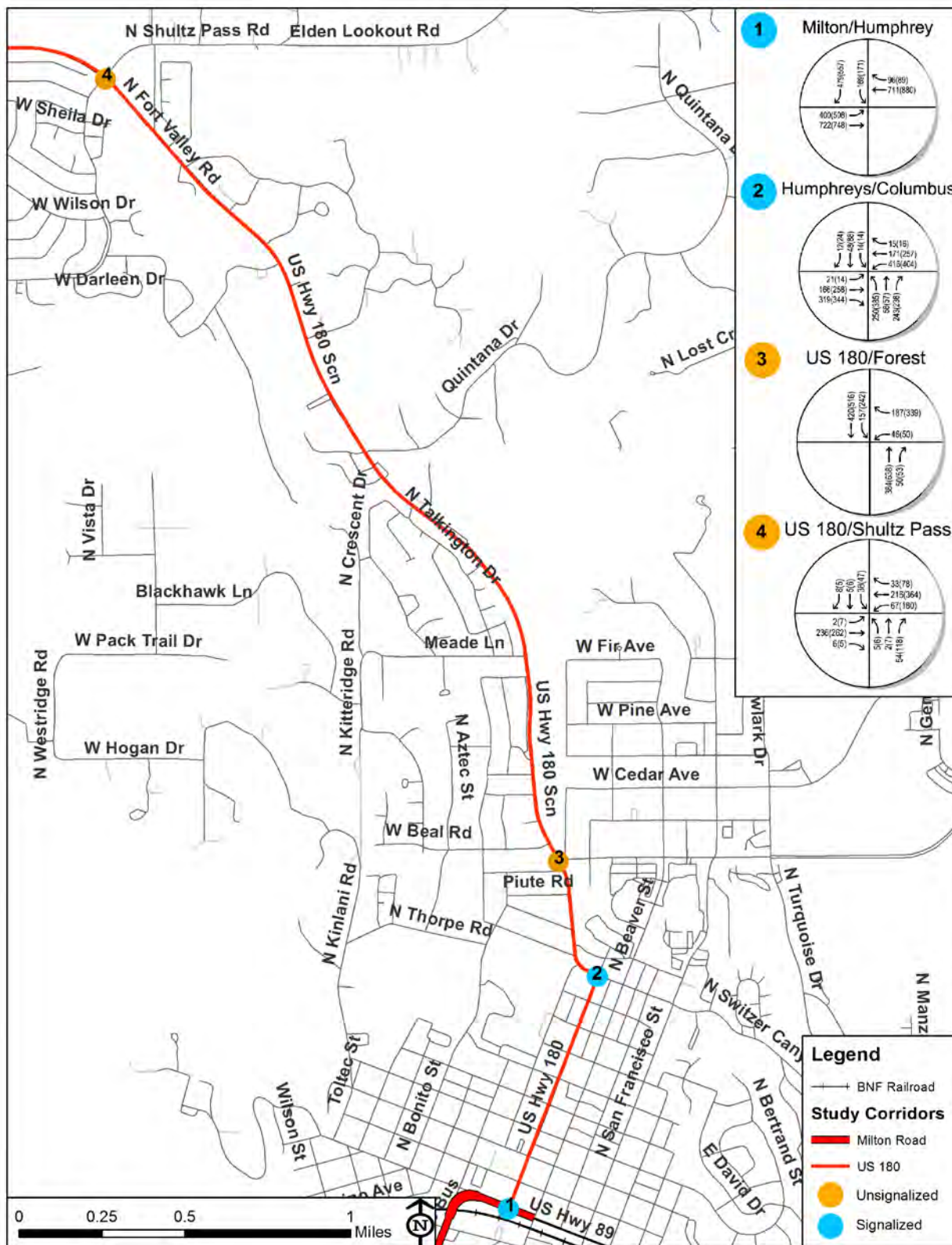
## Existing Intersection Operational Analysis

### Existing Turning Movement Volumes

Peak hour turning movement counts were collected in fifteen-minute intervals from 11:00 AM to 1:00 PM and from 4:00 PM to 6:00 PM at various signalized and unsignalized intersections along the study corridor. It is important to note that the study corridor does not have a traditional AM peak hour, but rather a significant Mid-Day peak hour. Therefore, Mid-Day and PM peak hour traffic volumes were collected at intersections along the corridor. **Figure 5-6** shows the Mid-Day and PM peak hour traffic volumes at various signalized and unsignalized intersections along the study corridor.



Figure 5-6: Existing 2017 Peak Hour Traffic Volumes – (MD) PM Peak Hours




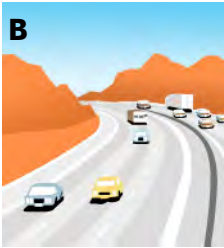




## Existing Intersection Level-of-Service (LOS)

The ability of a transportation system to transmit the transportation demand is characterized as its level of service (LOS). LOS is a rating system from “A”, representing the best operation, to “F”, representing the worst operation. The appropriate reference for LOS operation is the Highway Capacity Manual, published by the Transportation Research Board. This manual characterizes the LOS for an urban street facility as described in **Table 5-3**. Urban Street facilities are described as having interrupted flow (signals, all-way stops, or roundabouts) at a spacing of 2 miles or less. The LOS descriptions below are applicable for arterial and collector streets.

In general, LOS A and B represent no congestion, LOS C and D represent moderate congestion, and LOS E and F represent severe congestion.



**Table 5-3: Level of Service Criteria for Urban Street Facilities**

Level-of-Service	Characterized by <i>Highway Capacity Manual</i> as:
<p><b>A</b></p> 	<p>Primarily free-flow speed. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at the boundary intersections is minimal. The travel speed exceeds 85 percent of the base free-flow speed.</p>
<p><b>B</b></p> 	<p>Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67 percent and 85 percent of the base free-flow speed.</p>
<p><b>C</b></p> 	<p>Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50 percent and 67 percent of the base-flow speed.</p>
<p><b>D</b></p> 	<p>Less stable condition in which small increases in flow may cause substantial increases in delay and decrease in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40 percent and 50 percent of the base free-flow speed.</p>
<p><b>E</b></p> 	<p>Unstable operation and significant delay. Such operation may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30 percent and 40 percent of the base free-flow speed.</p>
<p><b>F</b></p> 	<p>Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30 percent or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections has a volume-to-capacity ratio greater than 1.0.</p>



LOS can be calculated for roadway segments, intersections, and freeway mainline lanes and ramps. LOS estimates also can be calculated for different periods, including daily conditions and peak hour conditions. The LOS analysis discussed in this section focuses on planning level analysis of study area intersections. LOS based on peak hour turning movement volumes and anticipated delay is discussed in the following section.

The delay and LOS are calculated for the intersection and each approach. **Table 5-4** lists the LOS criteria for signalized and unsignalized intersections as stated in the HCM manual.

**Table 5-4: Level-of-Service Criteria at Signalized and Unsignalized Intersections**

Level-of-Service	Average Control Delay	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	>20-35	>15-25
D	>35-55	>25-35
E	>55-80	>35-50
F	>80	>50

As mentioned in the *Existing Turning Movement Volumes* section of this report, 2017 peak hour turning movement counts were collected at the key intersections along the US 180 study corridor. Existing 2017 peak hour turning movement volumes at intersections along the US 180 study corridor are shown in **Figure 5-6**.

One of the important conditions for determining LOS at an intersection is the number of lanes provided for each movement on each approach at the intersection. **Figure 5-3**, **Figure 5-7** and **Figure 5-8** depict the existing lane configuration and traffic control at the study intersections along the US 180 corridor.

LOS for the study intersections was analyzed using *Synchro 9* software, which utilizes the criteria in **Table 5-4**. The input and output of these analyses are provided as **Appendix XX** to this report. **Table 5-5** presents the existing 2017 LOS summary for the study intersections along the US 180 corridor.



Figure 5-7: Existing 2017 Lane Geometry

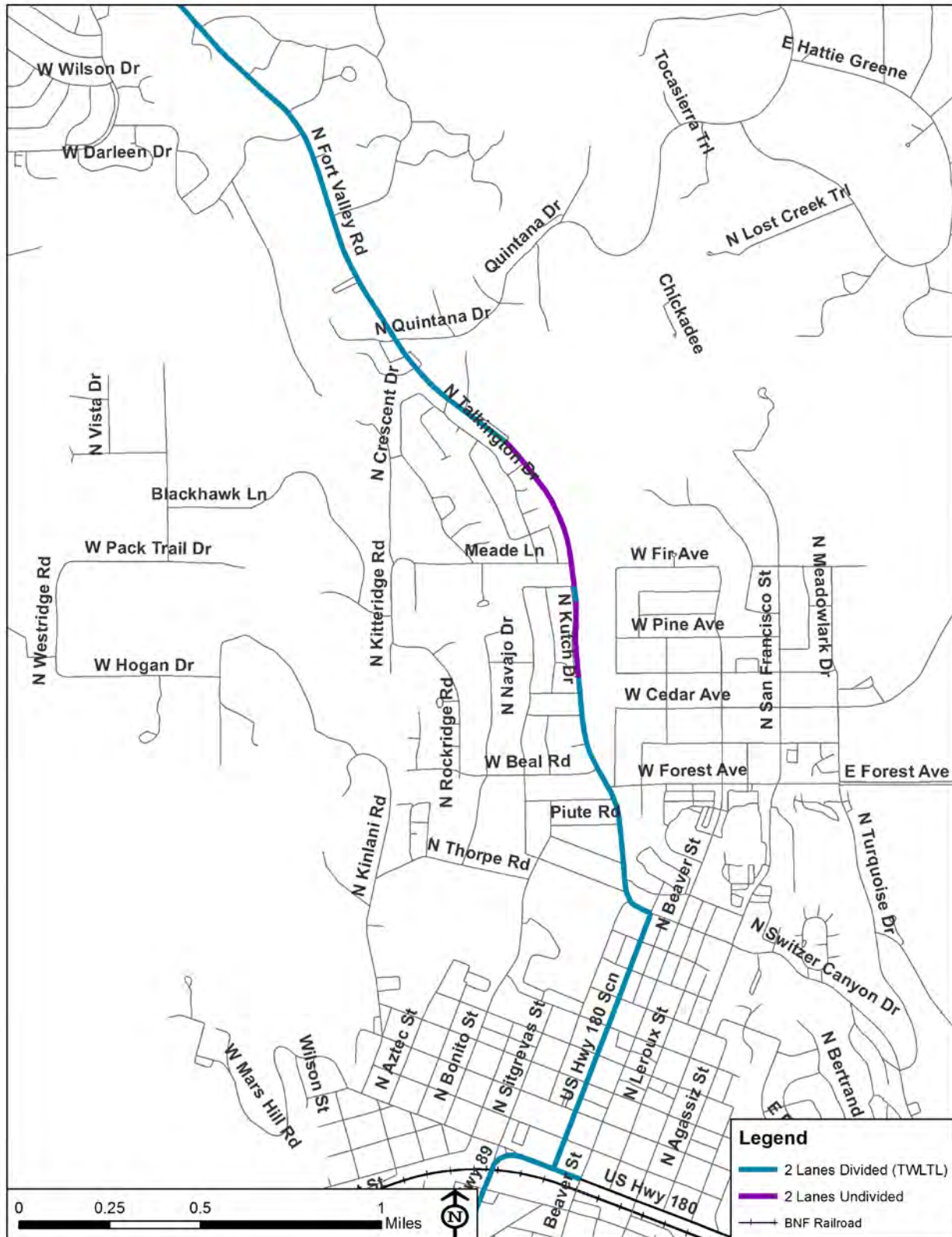
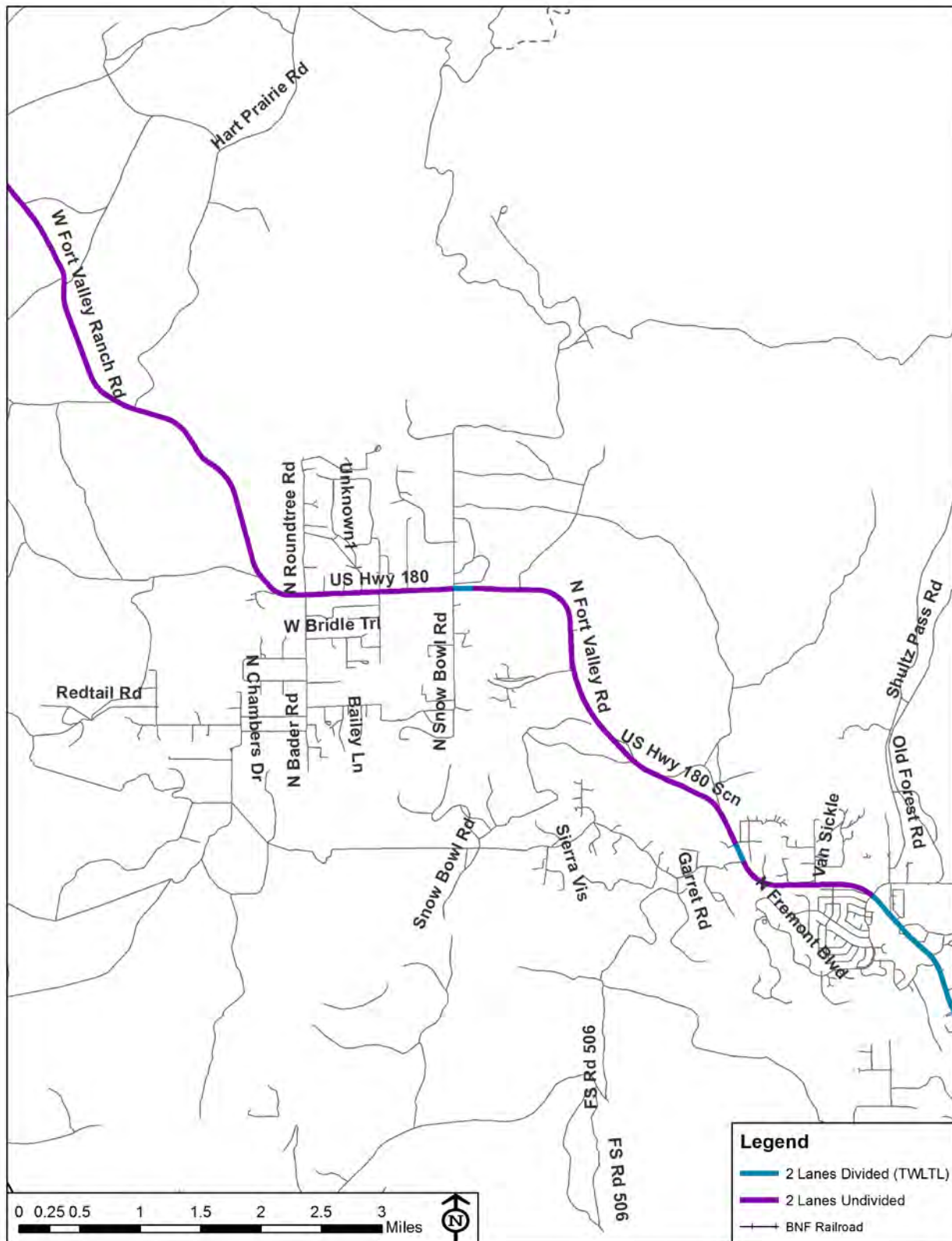


Figure 5-8: Existing 2017 Lane Geometry (Continued)



**Table 5-5: Existing 2017 LOS at Signalized and Unsignalized Intersections**

Intersection	Approach	2017 MD Peak		2017 PM Peak	
		LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)
<b>Milton Rd and Humphreys St</b>	Northbound	-	-	-	-
	Southbound	D	49.3	D	51.3
	Eastbound	A	6.8	C	20.3
	Westbound	B	13.6	C	21.8
	<b>Overall</b>	<b>B</b>	<b>19.6</b>	<b>C</b>	<b>28.5</b>
<b>Humphreys St and Columbus Ave</b>	Northbound	B	15.8	B	19.2
	Southbound	C	25.0	C	32.5
	Eastbound	C	32.4	D	41.2
	Westbound	C	29.6	D	45.8
	<b>Overall</b>	<b>C</b>	<b>25.8</b>	<b>D</b>	<b>35.0</b>
<b>US 180 and Forest Ave</b>	Northbound	A	0.0	A	0.0
	Southbound	A	2.3	A	3.2
	Eastbound	-	-	-	-
	Westbound	B	13.2	D	29.7
	<b>Overall</b>	<b>A*</b>	<b>3.6</b>	<b>A*</b>	<b>7.6</b>
<b>US 180 and Shultz Pass Rd</b>	Northbound	B	19.9	C	20.3
	Southbound	C	20.1	C	20.2
	Eastbound	A	6.5	A	6.6
	Westbound	A	6.1	A	7.2
	<b>Overall</b>	<b>A</b>	<b>8.5</b>	<b>A</b>	<b>9.3</b>

\*Synchro output did not include HCM LOS. LOS reported is based on the Average Delay

The signalized and unsignalized study area intersections operate at LOS “D” or better with the existing 2017 traffic volumes, existing lane geometrics and existing signal timing. All the approaches operate at LOS “D” or better with the exception of the southbound approach at the intersection of Milton Road and Humphreys Street, which operates at LOS “E” during the PM peak hour.





## Existing Non-Motorized Mobility

### Existing Bike Facilities

Bicycle lanes does not exist on Humphreys Street between Milton Road and Columbus Avenue. Bicycle lanes exist on both sides of US 180 between Humphreys Street and Snow Bowl Road. There are no existing bike lane roadway marking or signs posted in association with the existing bike lanes with the exception of the “Begin Right Turn Lane Yield to Bikes” signs at right-turn lanes between Sechrist Elementary School and Valley Crest Street. The FUTS Trail does exist along the south side of US 180 from Navajo Drive to Stevanna Way where it crosses the US 180 roadway and continues north.

### Existing Pedestrian Facilities

Continuous sidewalks exist on both sides of Humphreys Street between Milton Road and Columbus Avenue. Between Humphreys Street and Shultz Pass Road, sidewalk exists on both sides of US 180 along the developments frontage, with an exception of a sidewalk gap south of Sechrist Elementary school on the north side of US 180. On the other hand, there is Sidewalk does not exist on either side of US 180 between Shultz Pass Road and the northern terminus of the corridor (MP 233.25).

### Existing Transit Services

The Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) is the transit agency in Northern Arizona operating Mountain Line, Mountain Lift and Mountain Link systems in Flagstaff.

Mountain Line and Mountain Lift services are available along the US 180 study corridor. Bus service is not available on Humphreys Street between Aspen Avenue and Columbus Avenue and on US 180 between Navajo Drive and Forest Avenue. Mountain Line Route 5 runs on Humphreys Street between Milton Road and Aspen Avenue, on US 180 between Humphreys Street and Navajo Drive and between Forest Avenue and Peak View Road. Bus stops for Route 5 of Mountain Line are located at the following locations along the US 180 study corridor:

- North of Forest Avenue – northbound direction,
- South of Whipple Road – southbound direction,
- North of Meade Lane – northbound direction
- South of Meade Lane – southbound direction,
- South of Louise Drive – northbound direction,
- North of Stevanna Way – southbound direction,
- North of Blue Willow Road – northbound direction,
- South of Valley Crest Street – northbound direction, and
- South of Research Center Drive – southbound direction.

The bus stop located south of Valley Crest Street have covered structure to accommodate sitting pedestrians and provide shading structures.

Mountain Lift is a shared-ride program, which is an origin to destination, demand-responsive paratransit service that mirrors Mountain Line fixed-route service in terms of service times and areas. Mountain Lift service is available to people with disabilities who do not have the functional ability to ride fixed-route buses, either permanently or under certain conditions. US 180 between Hidden Hollow Road and Forest Avenue falls within the Mountain Lift service area.



## Access Management Guidelines

Access management is defined as the process or development of a program intended to ensure that major arterials, intersections and freeway systems serving a community or region will operate safely and efficiently while adequately meeting the access needs of the abutting land uses along the roadway. Effective access management programs control the location, spacing, design, and operation of driveways, median openings and intersections to reduce the number of vehicular conflict points.

Driveway and access management guidelines for ADOT and City of Flagstaff are summarized below:

### ADOT

A summary of the ADOT Traffic Engineering Guidelines and Procedures (TGP) Section 1060 – Median Openings for urban areas is shown below:

1. All median openings shall be designed to include median storage lanes for both directions of travel.
2. Spacing between median openings at intersections shall not be less than 330 feet.
3. In urban areas, median openings between intersections may be established for public safety and convenience if the opening is not closer than 660 feet to an intersection with an improved public street or another median opening.
4. Median openings may be established for business generating relatively high traffic volumes, provided that:
  - a. The minimum left-turn traffic volume is 500 vehicles per day or 100 vehicles during the peak hour in urban areas where the major street speed limit is less than 40 miles per hour.
  - b. The minimum left-turn traffic volume is 350 vehicles per day or 70 vehicles during the peak hour in urban areas where the major street posted speed limit is 40 mph or greater.
  - c. The distance to the nearest adjacent median opening is not less than 330 feet.

### City of Flagstaff

A summary of the City of Flagstaff access management guidelines, included in Engineering Design Standards and Specifications for New Infrastructure Section 13-10-006-0001 are as follows:

1. Distances between centerlines of adjacent intersections shall be a minimum of 135 feet, regardless of the direction of the intersection streets.
2. The minimum spacing of driveways to signalized and unsignalized intersections shall be in accordance to **Table 5-6** below:



**Table 5-6: Minimum Spacing of Driveways to Intersections per City of Flagstaff**

Posted Speed (mph)	Spacing	
	Signalized	Unsignalized
≤ 30	230	-
30	-	115
35	275	135
40	320	155
45	365	180

### Current Access

Each access point along the study corridor was identified through a review of aerial mapping. All the driveways and intersections along the US 180 study corridor are full access. Full access driveways and intersections generally allow all traffic movements on all approaches. These intersections are either STOP controlled on both the side streets or traffic signal controlled.

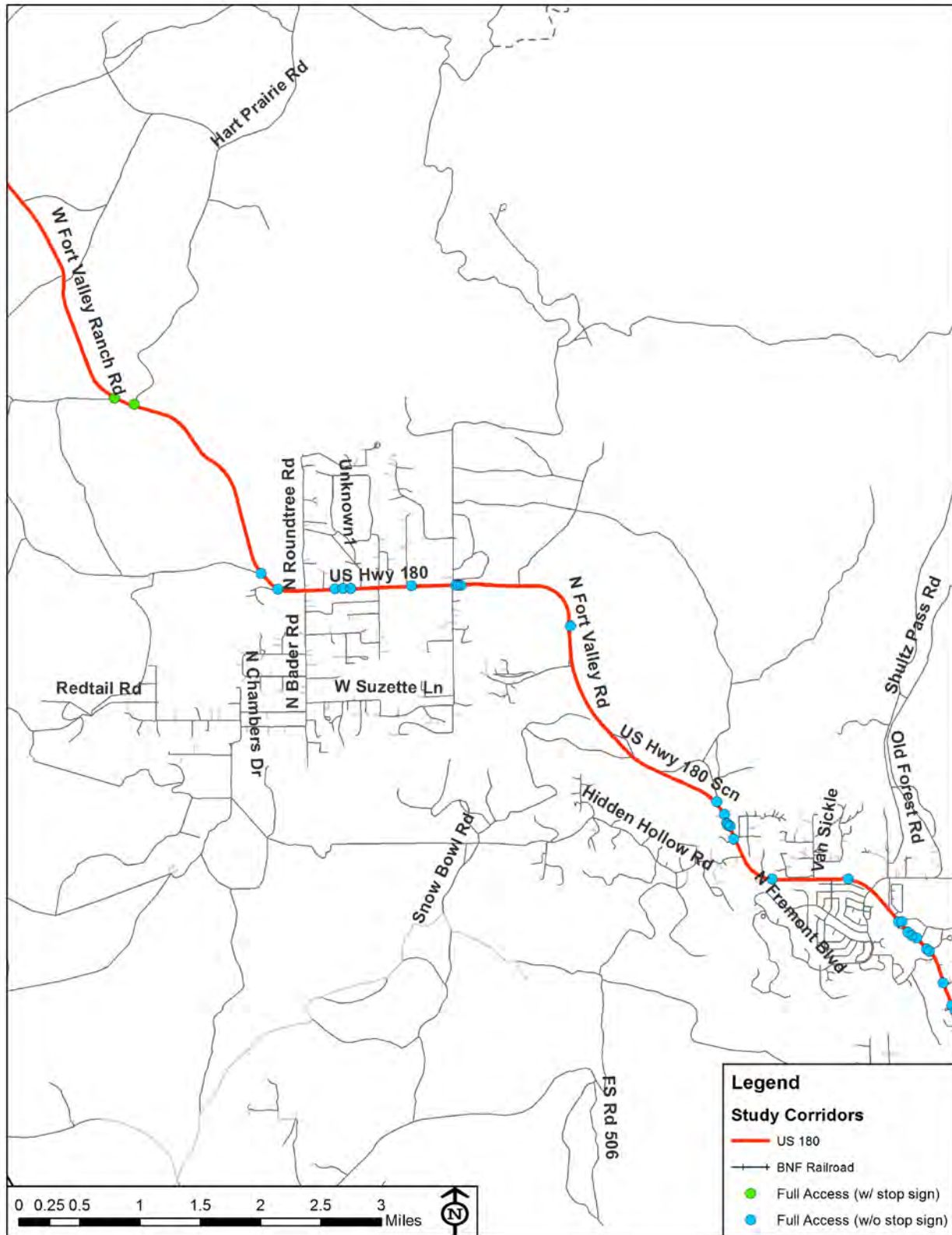
**Figure 5-9** and **Figure 5-10** illustrate the locations of existing driveways and intersections along the study corridor. The US 180 corridor has a large number of driveways along the corridor, particularly concentrated along the Humphrey’s Street segment. Humphreys Street has a two-way left-turn lane between Milton Road and Columbus Avenue. US 180 has a two-way left-turn lane between Humphreys Street and Shultz Pass Road. Due to the absence of the raised median along the corridor, access control at existing driveways and intersections is limited.







Figure 5-10: Existing Access Points (Continued)



## Existing Pavement Conditions

The pavement surface for the entire corridor is asphaltic concrete. Pavement condition data was obtained from the street view of Google Earth and cursory field review of the US 180 corridor. Roadway conditions at the time of the Google Earth review were defined as:

**Good Condition:** Like new pavement with few defects as perceived by field reviewers, no sign of cracking and pavement deterioration, no maintenance is required as cracks are barely visible or well-sealed.

**Fair Condition:** Slight rutting, and/or cracking, and/or roughness that became noticeable by field reviewers. The road may also be bumpy but not enough to reduce vehicle speed, and may have some pavement raveling.

**Poor Condition:** Multiple cracks, potholes, roughness, and/or bleeding are apparent on roadway. Roadway may be uncomfortable to vehicle occupants and drivers may need to correct or avoid road defects. Previous road repairs are deteriorated and require maintenance.

Based on the Google Earth and cursory field review, Humphreys Street between Milton Road and US 180 and US 180 between Humphreys Street and Shultz Pass Road appears to be in a good condition with minor longitudinal cracking. Between Shultz Pass Road and Roundtree Road, US 180 appears to be in a good condition with no notable pavement deformations. Between Roundtree Road and the Wing Mountain Snow Play Area, US 180 is experiencing minor longitudinal and traverse cracking and appears to be in a good condition through the corridor.



**CHAPTER 6: EXISTING CORRIDOR SAFETY CONSIDERATIONS**

A crash analysis was conducted for the study corridor to identify trends, patterns, predominant crash types, and high crash intersections. The purpose of the crash analysis is to discover safety hazard locations that need to be addressed to improve area safety. Crash data for the five-year period from January 1, 2012 to December 31, 2016 was obtained from the Arizona Department of Transportation Traffic Records Section.

**Vehicular Crash Data Analysis (5 years)**

Crash data for the five-year period from January 1, 2012 to December 31, 2016 was obtained from the Arizona Department of Transportation Traffic Records Section. Within the five-year analysis period, 575 crashes occurred within the US 180 study corridor.

**Injury Severity**

There were seven fatalities reported in the analysis period within the study area, two each in the years 2012, 2014 and 2016, and one in the years 2013. 146 of 575 crashes (25%) within the study corridor resulted in an injury crash, which is less than the statewide average injury crash percentage for the year 2012 to 2016 (31%). A comparison of total crashes number of crashes that occurred within the five-year period for the US 180 study corridor and the Statewide average is shown in **Table 6-1**.

**Table 6-1: Crash Severity Comparison**

Crash Severity	Number	US 180 %	Statewide Average %*
Fatal	7	0.12%	1%
Injury	146	25%	31%
Property Damage Only	422	75%	68%

*\*Average of all crashes from 2012-2016*

**Figure 6-1** shows the location of crashes along US 180 on a map and categorizing them by the severity of the injury. There is the highest concentration of crashes on Humphrey’s Street between Route 66 and Columbus Avenue.

**Figure 6-2** illustrates the percentage of crashes that occurred along the corridor during the five-year analysis period based in the severity of crashes

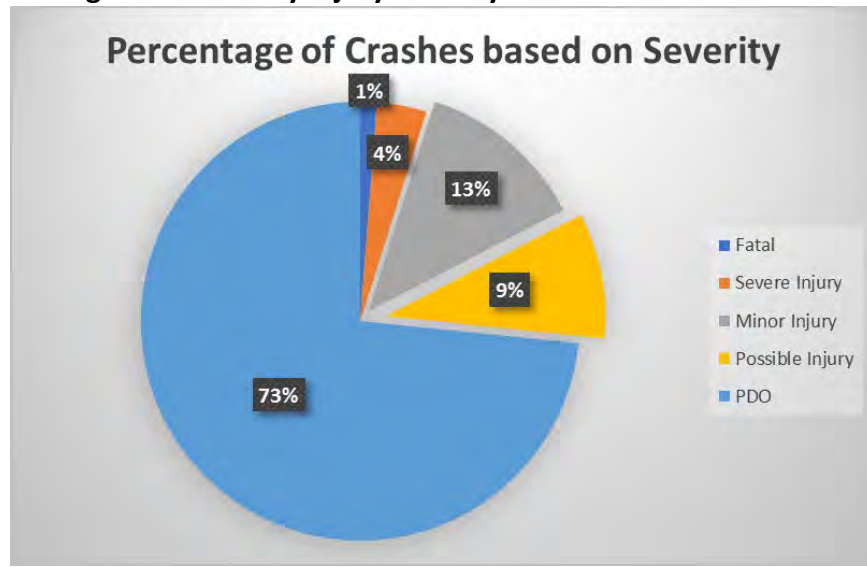








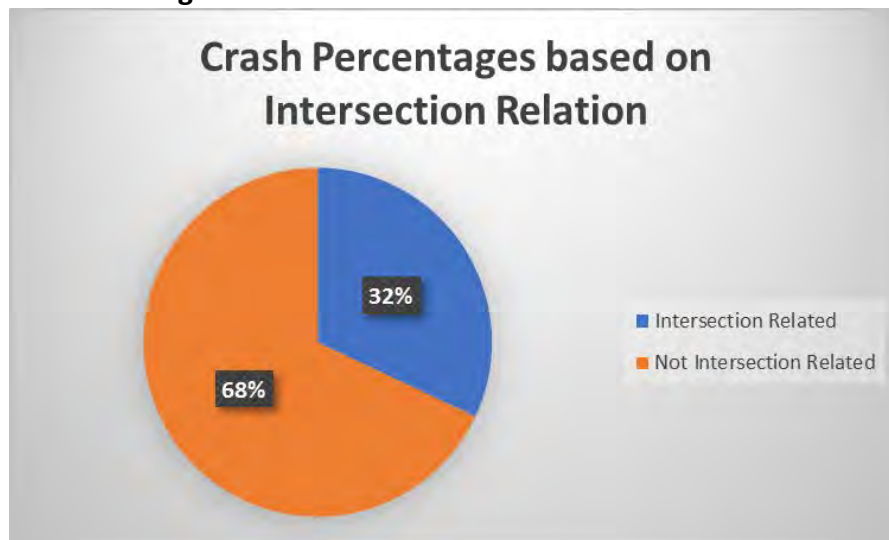
**Figure 6-2: Percentage of Crashes by Injury Severity**



### Intersection Relation

As shown in **Figure 6-3**, 32% of the total crashes within the five-year analysis period occurred at intersections. For the purposes of this analysis, intersection and non-intersection related crashes were based on the “Junction Relation” column included in the crash data excel files.

**Figure 6-3: Crash Percentages based on Intersection Relation**



**Table 6-2** depicts a summary of the intersection related crashes along the US 180 study corridor.

**Table 6-2: Summary of Intersection Crashes**

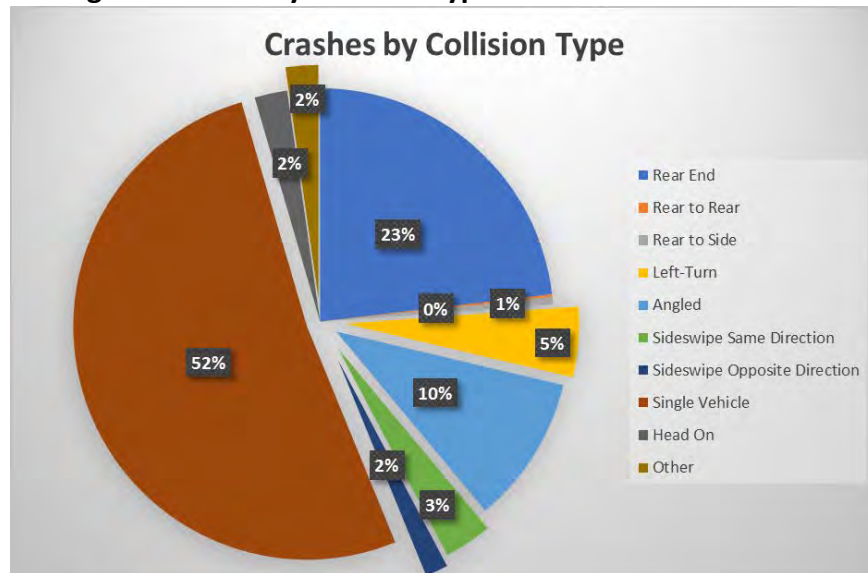
Intersection	Humphreys St	Columbus	Forest Rd	Shultz Pass Rd		
<b>Total Crashes</b>	<b>77</b>	<b>14</b>	<b>21</b>	<b>5</b>		
<b>Severity</b>	Fatality	1	0	0	0	
	Severe Injury	3	1	1	0	
	Minor Injury	2	1	5	1	
	Possible Injury	17	1	1	0	
	PDO	54	11	14	4	
<b>Type of Collision</b>	Angle	5	4	7	1	
	Head On	2	2	1	1	
	Sideswipe	9	0	3	0	
	Left-Turn	9	0	3	0	
	Rear End	38	8	5	2	
	Rear to Rear	0	0	0	0	
	Rear to Side	0	0	0	0	
	Pedestrian	1	0	0	0	
	Bike	6	0	1	0	
	Single Vehicle	4	0	1	1	
	Other/Unknown	2	0	0	0	
	<b>Light Conditions</b>	Daylight	66	14	17	4
		Dawn	3	0	0	0
Dusk		3	0	1	0	
Dark Lighted		4	0	2	0	
Dark not Lighted		1	0	1	1	

### Collision Manner

**Figure 6-4** illustrates the percentage of crashes that occurred along the corridor during the five-year study period by collision type. As shown in the Figure, 52% of the total crashes during the five-year analysis period were single vehicle collisions, 23% were rear end and 10% were angled. 93% of the reported single vehicle collisions occurred at locations other than intersections, the remaining 7% occurred at intersections. 53% of the reported rear end collisions were non-intersection related crashes, the remaining of the 47% were intersection related crashes.



**Figure 6-4: Percentage of Crashes by Collision Type**



**Crashes by Year**

**Figure 6-5** illustrates the total number of crashes that occurred along the corridor during the five-year study period in each year. As shown in the Figure, the corridor experiences the highest number of crashes in the year 2015 (with total 130 crashes).

**Figure 6-5: Total Crashes by Year**

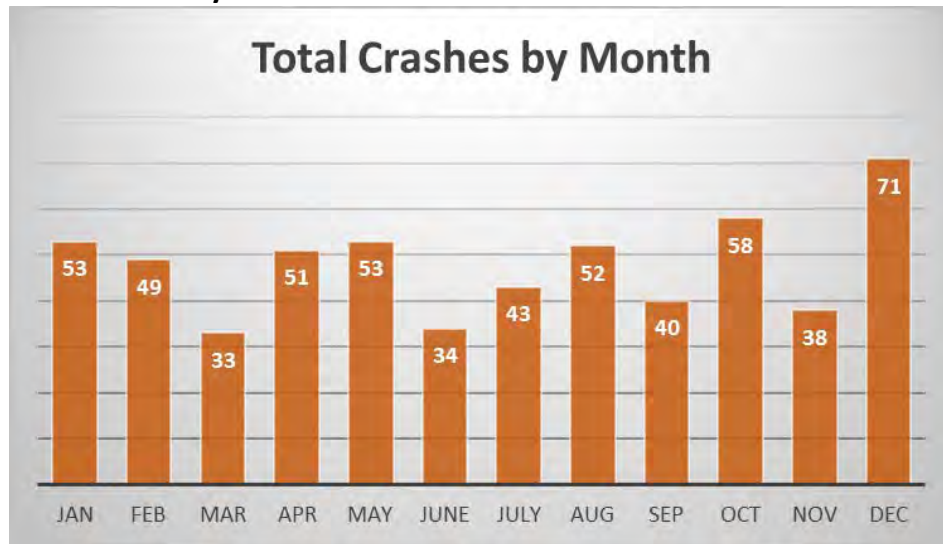


**Crashes by the Time of the Year**

illustrates the total number of crashes that occurred along the corridor during the five-year analysis period by month. As shown in **Figure 6-6**, highest number of crashes occurred in the month of December.



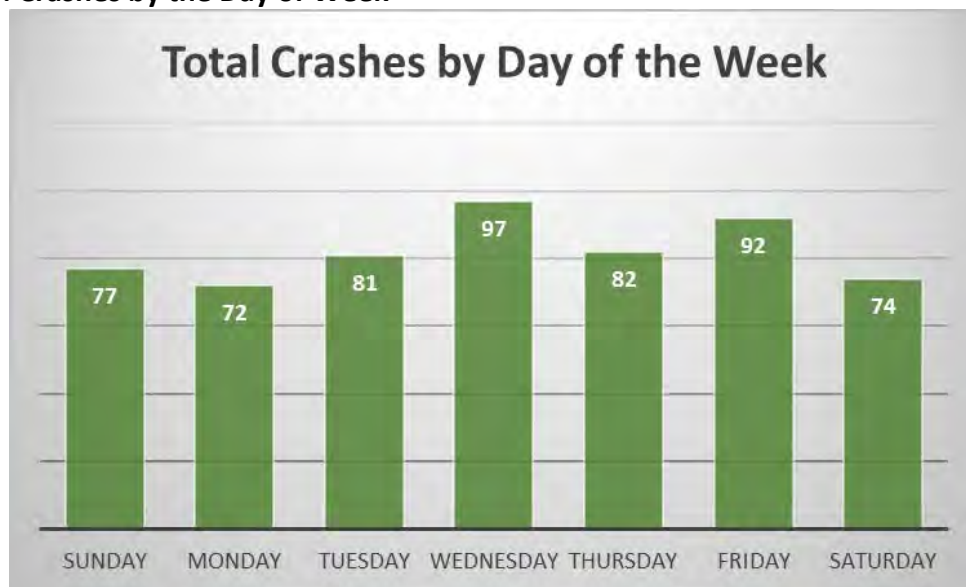
**Figure 6-6: Total Crashes by Month**



**Crashes by the Day of the Week**

**Figure 6-7** illustrates the total number of crashes that occurred along the corridor during the five-year analysis period by the day of the week. As shown in the Figure, the majority of crashes occurred during weekday, the highest number of crashes occurring on Wednesdays.

**Figure 6-7: Crashes by the Day of Week**



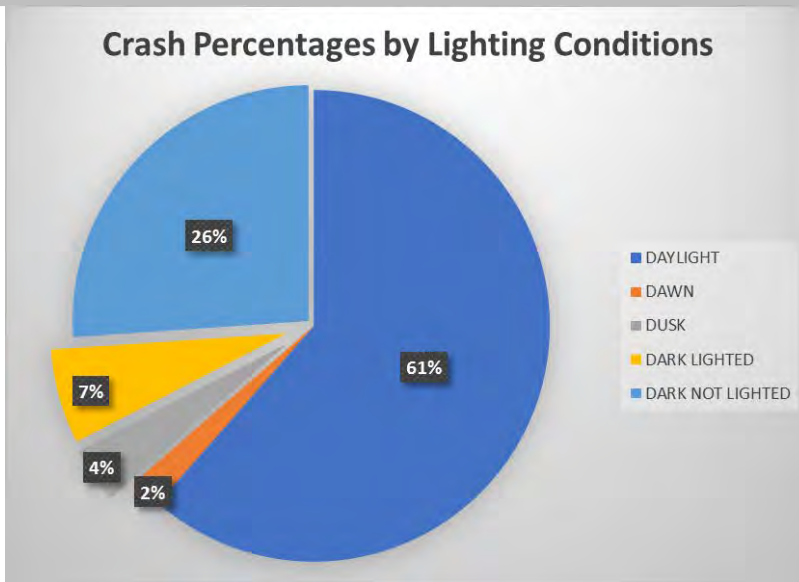
**Lighting Conditions**

**Figure 6-8** illustrates the total crashes percentages that occurred along the corridor during the five-year analysis period based on the lighting conditions of the study area. As shown in the Figure, 61% of the total crashes occurred during daylight and 26% of the crashes occurred during dark conditions with no lighting.

**Figure 6-8: Crash Percentages by Lighting Conditions**



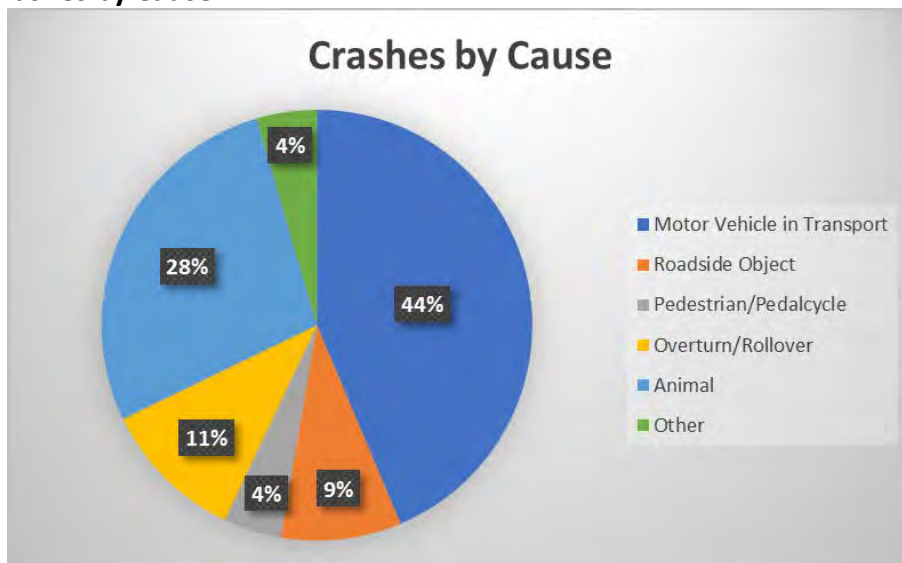




**Crashes by Cause (change pie chart to numbers from %)**

Analyzing the crash events assists in identifying hazards that cause safety issues along study roadways. **Figure 6-9** illustrates the total number of crashes that occurred along the corridor during the five-year analysis period based on the reason for the collision. Based on five-year crash data on the US 180 study corridor, 251 of the total 575 crashes were caused due to a motor vehicle in transport. Of the remaining 325 crashes, 56 were due a roadside object, 25 were pedestrian/pedal cycle related, 63 were due to overturn/rollover and 159 were caused due to an animal. The number of crashes caused by an animal is higher than other similar corridors and needs further investigation. Parked vehicle, ditch/embankment related crashes and other crashes were minimal along the study corridor.

**Figure 6-9: Crashes by Cause**

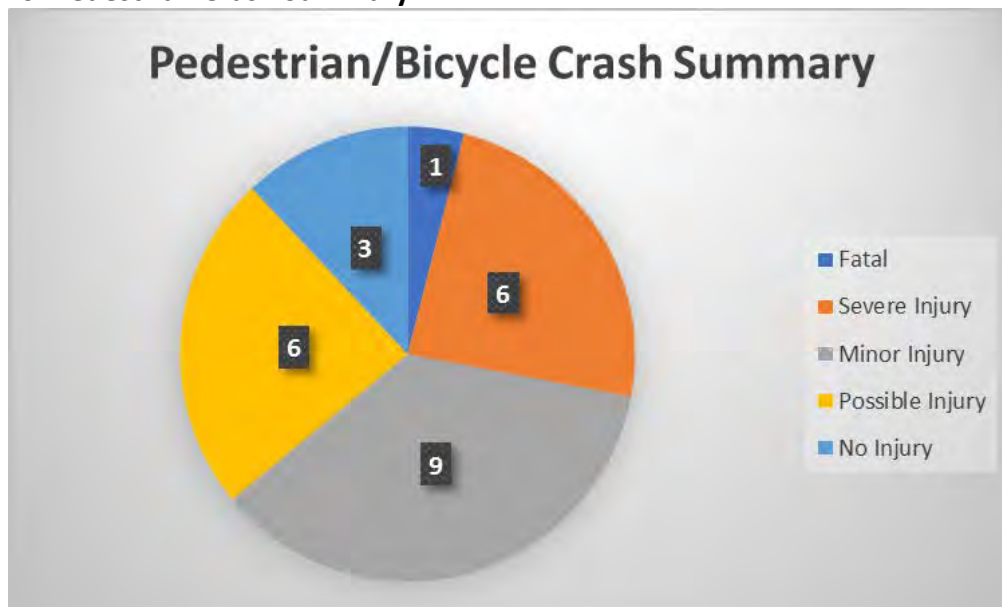


## Pedestrian/Bicycle Crash Data Analysis

As mentioned in the *Crashes by Cause* section of the report, 25 of the total 575 crashes were pedestrian/pedal cycle related collisions. **Figure 6-10** illustrates the total number of pedestrian/pedal cycle crashes that occurred along the corridor during the five-year analysis period.

One of the 26 pedestrian/pedal cycle related crash resulted in fatality in the year 2014. This fatality was caused when a driver on a motor vehicle was trying to overtake a pedal cyclist. This fatality occurred during wet and day light conditions. Speed too fast for the conditions was reported as a factor resulting in the fatality. Of the remaining pedestrian / pedal cycle related crashes, 3 were no injury crashes and 21 were injury crashes.

**Figure 6-10: Pedestrian Crash Summary**



## Mid-Block Crossings

Crosswalks along the US 180 study corridor exist at all the signalized intersections and many of the unsignalized intersections. There is one existing mid-block crossing along the US 180 study corridor located at Sechrist Elementary School. The following unsignalized intersections feature at least one crosswalk:

- US 180/Humphreys Street and Cherry Avenue (north leg)
- US 180/Fort Valley Road and Navajo Road (west leg)
- US 180/Fort Valley Road and Apache Road (west leg)
- US 180/Fort Valley Road and Piute Road (west leg)
- US 180/Fort Valley Road and Havasupai Road (west leg)
- US 180/Fort Valley Road and Forest Avenue (south and east legs)
- US 180/Fort Valley Road and Beal Road (west leg)
- US 180/Fort Valley Road and Deanna Way (west leg)
- US 180/Fort Valley Road and Whipple Road (west leg)
- US 180/Fort Valley Road and Whiting Road (west leg)



- US 180/Fort Valley Road and Anderson Road (west leg)
- US 180/Fort Valley Road and Meade Lane (west leg)
- US 180/Fort Valley Road and N Louise (west leg)
- US 180/Fort Valley Road and Quintana Drive (east leg)
- US 180/Fort Valley Road and Creekside Drive (west and east legs)
- US 180/Fort Valley Road and Colton Court (west leg)
- US 180/Fort Valley Road and Blue Willow Road (west leg)



**CHAPTER 7: FUTURE TRAFFIC CONDITIONS**

**Projected Traffic Conditions & Congestion**

The primary purpose of forecasting future traffic volumes is to estimate the additional travel demand added to existing roadways and to forecast congestion levels due to projected growth in population and employment. The following section presents the corridor intersection traffic volumes and levels of congestion, if no roadway improvements are made (*No-Build Condition*). It should be noted that the Project Partners are continuing to analyze and refine future traffic condition modeling parameters. To supplement the analysis and findings described in this chapter, additional future traffic projections will be provided from the Flagstaff Metropolitan Planning Organization (FMPO). This supplemental modeling methodology, analysis and results will be described in Working Paper #2.

**Roadway Network**

Existing intersection control and lane geometry was also used for the design year analysis for the intersections along the US 180 study corridor.

**Design Year 2040 Traffic Volumes**

*Growth Rate*

Historical average daily traffic volume information at various locations along the US 180 study corridor were obtained from the ADOT Transportation Data Management System (TDMS) website. The historical daily traffic volumes obtained from the ADOT TDMS website were used to calculate the growth rate within the study area. **Table 7-1** shows the growth rate calculations for the study area.

**Table 7-1: Growth Rate Calculations**

Year	ADT	Yearly Growth %	Average Growth %
<b>Humphreys, S of Columbus</b>			<b>1.35%</b>
2011	13,878		
		1.33%	
2016	14,825		
<b>Fort Valley, S of Forest</b>			
2012	13,364		
		1.11%	
2017	14,123		
<b>US 180, N of Quintana Dr</b>			
2011	12,238		
		1.31%	
2016	13,064		
<b>US 180, S of Ft Valley Ranch Road</b>			
2011	4,295		
		1.64%	
2016	4,659		

Based on the historical daily traffic volumes obtained from the ADOT TDMS website, the average exponential growth rate was calculated to be 1.35% along the US 180 study corridor. A conservative 1.5% exponential growth rate has been applied to the 2017 traffic volumes to calculate the 2040 traffic volumes.





## Peak Seasonal Traffic Volumes

Existing 2017 traffic volumes at intersections along US 180 were collected on September 12, 2017. Arizona Snowbowl Ski Resort, Wing Mountain Snow Play Area, Crowley Pit Snow Play Area and various other informal snow play areas exist along US 180. Due to these various winter visitor destinations, traffic volumes along US 180 are expected to be higher during the snow season than the September 2017 traffic volumes. Continuous traffic counters data is available for the year 2015 and 2016 on the ADOT TDMS website for US 180 south of Forest Avenue. Upon reviewing the traffic patterns at the continuous traffic counts station on US 180 south of Forest Avenue, it was determined that the traffic volumes during the winter season were generally higher when the Arizona Snowbowl Ski Resort, Arizona Nordic Village, and Crowley Pit Snow Play Area were open for business.

**Table 7-2** shows historical the week of September weekday traffic volumes, peak season traffic volumes and the difference in between the peak season and September traffic volumes on US 180.

**Table 7-2: Seasonal Traffic Volumes and Adjustment Factors**

Year	September Volume	Peak Season		Difference in Volume
		Date	Volume	
2015-2016	13,822	1/2/16	19,731	5,909
2016-2017	13,676	1/14/17	18,037	4,361

As shown in **Table 7-2**, in the 2015-2016 snow season, there were 5,909 more peak seasonal daily traffic volumes than the September traffic volumes. In the 2016-2017 snow season, there were 4,361 more peak seasonal daily traffic volumes than the September traffic volumes. To be conservative, for the purposes of this analysis, the 2015-2016 winter season volumes were used for the analysis. The 2015-2016 peak winter season daily traffic volumes were approximately 5,900 vehicles more than the September traffic volumes.

The ADOT TDMS website also includes the hourly directional traffic volumes at the counting locations. For the peak directional hourly volumes for September 2015 and January 2016. **Table 7-3** shows the direction hourly volume for September 2015 and January 2016, and the difference in the volume.

**Table 7-3: Peak Directional Hourly Volumes**

Month	Northbound		Southbound	
	MD	PM	MD	PM
September	436	743	456	539
January	1,190	515	712	968
<b>Difference</b>	<b>754</b>	<b>-228</b>	<b>256</b>	<b>429</b>

For the purposes of this analysis, the peak snow seasonal traffic is expected to only impact the north-south through traffic on US 180. As shown in **Table 7-3**, the peak directional traffic volumes were higher in the winter peak season during the Mid-day and PM peak hours with the exception of the PM peak hour volumes in the northbound direction. The northbound traffic volume is higher in the off-peak season than the peak winter season. As shown in **Table 7-3**, the snow traffic on US 180 is expected to be as follows:

- Northbound – 754 during the Mid-day peak hour, and
- Southbound – 256 during the Mid-day peak hour and 429 during the PM peak hour.



The northbound traffic volumes during the PM peak hour are higher in the month of September than the winter peak season volumes. Therefore, the September northbound PM peak hour traffic volume shall be used for the analysis.

Changes to the existing snow play areas or the Snowbowl Ski Resort, or developing new snow play areas along US 180 is not known at this time. However, a minimal 0.5% growth factor is expected to be appropriate for the snow traffic along US 180. Therefore, a 0.5% growth factor is applied to the snow traffic on US 180. **Table 7-4** shows the peak snow traffic with the 0.5% growth factor.

**Table 7-4: Snow Traffic with 0.5% Growth Factor**

Northbound	Southbound	
	MD	PM
758	258	432

### Peak Hour Volumes

For the purposes of this analysis, year 2040 is considered as the design year. Peak hour turning movement volumes for the intersections along the US 180 study corridor were developed by applying the growth rate to the existing 2017 traffic volumes and adding the peak snow traffic volumes. Peak hour traffic volumes for the year 2040 along the US 180 study corridor are developed as follows:

1. Turning movement volumes on US 180 and approach volumes on the side streets during the Mid-day and PM peak hours – existing 2017 traffic volumes \* 1.5% exponential growth rate, as described in **Growth Rate** section.
2. Northbound volume on US 180 during the Mid-day peak hour shall be the addition of the following volumes:
  - a. existing 2017 traffic volumes \* 1.5% exponential growth rate, as described in **Growth Rate** section,
  - b. Peak northbound Mid-day peak hour snow traffic, shown in **Table 7-4**.
3. Northbound volume on US 180 during the PM peak hour – existing 2017 traffic volumes \* calculated exponential growth rate of 1.35%, as shown in **Table 7-1**.
4. Southbound traffic volume on US 180 during the Mid-day peak hour shall be the addition of the following volumes:
  - a. existing 2017 traffic volumes \* 1.5% exponential growth rate, as described in **Growth Rate** section,
  - b. Peak southbound Mid-day peak hour snow traffic, shown in **Table 7-4**.
5. Southbound traffic volume on US 180 during the PM peak hour shall be the addition of the following volumes:
  - a. existing 2017 traffic volumes \* 1.5% exponential growth rate, as described in **Growth Rate** section,
  - b. Peak southbound PM peak hour snow traffic, shown in **Table 7-4**.
6. Traffic volumes at the intersection of Milton Road and Humphreys Street:
  - a. existing 2017 traffic volumes \* 1.5% exponential growth rate, as described in **Growth Rate** section,
7. Peak southbound PM peak hour snow traffic, shown in **Table 7-4**.

Peak hour traffic volumes for the year 2040 are shown in **Figure 7-1**.



### Future Intersection Operational Analysis

The operational analysis for the future conditions was conducted utilizing the projected turning movement volumes with existing roadway geometry, traffic control and signal timing. **Figure 7-2** shows the intersection control and lane geometry for the year 2040 along the US 180 study corridor.



Figure 7-1: 2040 Peak Hour Traffic Volumes Including Snow Traffic Volumes

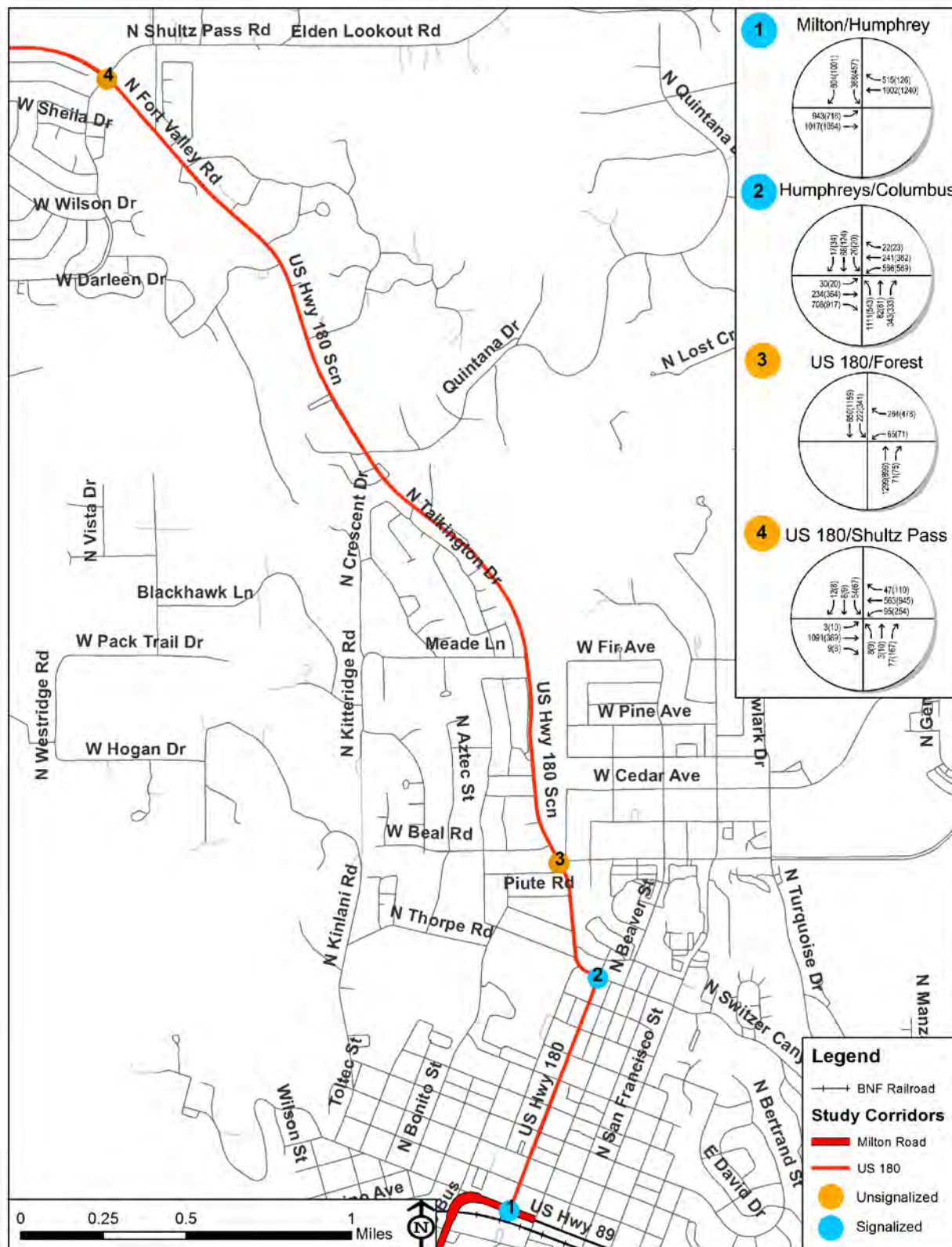
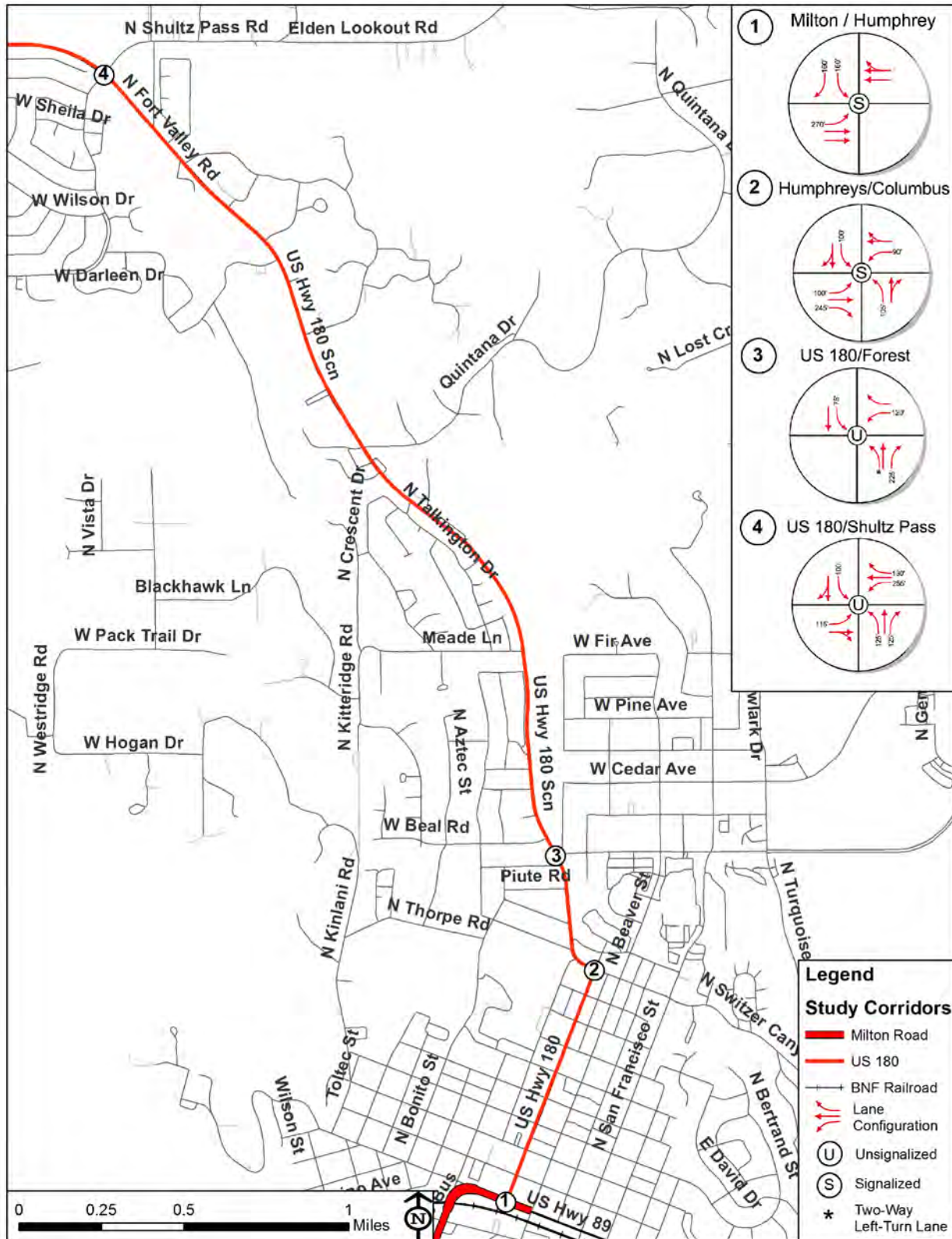




Figure 7-2: 2040 Intersection Control and Lane Geometry



## Design Year 2040 LOS

Level-of-Service for the study area intersections along the US 180 study corridor is analyzed for the year 2040 with the Mid-day and PM peak hour traffic volumes. The LOS for the signalized and unsignalized study area intersections are described in **Existing Intersection LOS** section of this report. Future 2040 peak hour traffic volumes, shown in **Figure 7-1**, and future intersection control and lane geometry, shown in **Figure 7-2**, were utilized to determine the future 2040 peak hour LOS at the study area intersections. **Table 7-5** presents the 2040 peak hour LOS summary for the intersections along the US 180 study corridor. The input and output of these analyses are provided as **Appendix X** to this report.

**Table 7-5: 2040 Peak Hour LOS at Signalized and Unsignalized Intersections**

Intersection	Approach	2040 MD Peak		2040 PM Peak	
		LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)
<b>Milton Rd and Humphreys St</b>	Northbound	-	-	-	-
	Southbound	F	404.9	F	1476.8
	Eastbound	F	572.2	F	263.6
	Westbound	F	622.0	F	152.6
	<b>Overall</b>	<b>F</b>	<b>546.3</b>	<b>F</b>	<b>615.6</b>
<b>Humphreys St and Columbus Ave</b>	Northbound	F	1256.9	F	92.0
	Southbound	D	35.4	D	42.1
	Eastbound	E	67.4	F	1035.9
	Westbound	F	290.2	F	407.2
	<b>Overall</b>	<b>F</b>	<b>648.8</b>	<b>F</b>	<b>540.3</b>
<b>US 180 and Forest Ave</b>	Northbound	A	0.0	A	0.0
	Southbound	A	3.4	A	3.1
	Eastbound	-	-	-	-
	Westbound	F	572.3	F	738.5
	<b>Overall</b>	<b>F*</b>	<b>69.3</b>	<b>F*</b>	<b>135.7</b>
<b>US 180 and Shultz Pass Rd</b>	Northbound	C	20.0	C	20.7
	Southbound	C	20.3	C	20.5
	Eastbound	F	152.4	A	7.5
	Westbound	C	23.4	C	22.7
	<b>Overall</b>	<b>F</b>	<b>95.4</b>	<b>B</b>	<b>19.4</b>

\*Synchro output did not include HCM LOS. LOS reported is based on the Average Delay

As shown in **Table 7-5**, the overall 2040 peak hour LOS at the intersections along the US 180 study corridor is expected to be “F” at the signalized and unsignalized study area intersections with the exception of US 180 and Shultz Pass Road. US 180 and Shultz Pass Road is expected to operate at LOS “B” during the PM peak hour.

The high traffic volumes on US 180 and existing intersection control and lane geometry can be attributed to the poor LOS at the intersections along the US 180 study corridor.



## Short-Term Projected Traffic Conditions and Needs

In addition to the design year 2040 analysis, operational analysis at the intersections was performed to determine the growth rate and the timeline when the intersections along the US 180 study corridor could not handle the projected traffic volumes with the existing intersection control and lane geometrics.

Different iterations were performed by applying 2% and 3% exponential growth rates to the 2017 traffic volumes at the study intersections. The 2017 existing intersection control, lane geometrics and signal timing were used for the iterations. Based on the results of these analysis, the following intersections are expected to operate at unacceptable LOS:

- Clay/Butler Avenue – in approximately 4 years with 2% exponential growth rate and 2.5 years with 3% exponential growth rate,
- Clay/Butler Avenue and Forest Meadows Street – in approximately 4.75 years with 2% exponential growth rate and 3 years with 3% exponential growth rate,
- Clay/Butler Avenue, Forest Meadows Street and Malpais Lane – in approximately 7 years with 2% exponential growth rate and 4.75 years with 3% exponential growth rate,
- Clay/Butler Avenue, Forest Meadows Street, Malpais Lane and Route 66 – in approximately 8.5 years with 2% exponential growth rate and 5.5 years with 3% exponential growth rate, and
- Humphreys Street, Clay/Butler Avenue, Route 66, Forest Meadows Street, Phoenix Avenue and Malpais Lane – in approximately 9 years with 2% exponential growth rate and 6 years with 3% exponential growth rate.



## CHAPTER 8: US 180 CORRIDOR MASTER PLAN ENVIRONMENTAL OVERVIEW

The purpose of the environmental overview for the US 180 Corridor Master Plan is to outline existing environmental resources, conditions and information in the study area by describing the natural, cultural and social resources, and environmental conditions and potential concerns. This information will be used to both avoid developing alternatives that should be ruled out based on environmental challenges that likely can't be overcome as well as recognizing and minimizing environmental impacts in alternatives that will be carried forward for added evaluation and study.

This is not the first environmental overview performed in the study area. This overview represents a combination of some newly obtained information and a significant compilation of existing information from previous studies. In fact, specific guidance from the Project Partners suggested that due to the large volume of existing environmental overview information from other recent studies in the area, the Project Partners desired that this environmental overview be streamlined to summarize the most salient components from existing studies and minimize the efforts to generating new data to the extent it is already available. Much of the information summarized herein is provided from a recent environmental overview for the Flagstaff/Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) Transit Spine Route Study (Kimley-Horn, 2016) and the Fort Valley Highway 180 Scenic Corridor Area Plan (2011) is relevant for this corridor.

### General Information

Environmental stewardship in Flagstaff and Coconino County are long held core values. The Flagstaff Regional Plan 2030 identifies eight guiding principles identified to help promote future development. These eight guiding principles represent the collective community values. These sample principles have carried on into the Blueprint 2040 regional plan. These include: the environment matters, sustainability matters, a smart and connected community matters, prosperity matters, people matter, place matters, cooperation matters and trust and transparency matter. A key point identified in this is that it is important to the community not to sacrifice natural resources. The number one value for the community was open space.

Key environmental issues noted at a February 2016 FMPO/ADOT long range transportation planning meeting for the region had attendees expressing support (p. 32, Blueprint 2040) for an “increased focus on system preservation, creating redundancy and resiliency across all modes and particularly in rural areas, strong support for tourism and recreation and sensitivity to environmental concerns.” Key environmental issues or concerns noted were noise pollution, salt on roads, wildlife and dark skies lighting.

There is year-round tourism in the area with Snowbowl, the North Pole Experience, Bearizona and the Twin Arrows Casino in the region. Increased winter season tourism activity for key snow play recreation destinations along US 180 such as the Arizona Snow Bowl Resort, Wing Mountain Recreation Area (no current permittee in 2018), Crowley Pit and the Arizona Nordic Village attract visitors and compound traffic congestion on US 180, particularly at peak morning and afternoon travel times on holiday weekends.





The Fort Valley Highway 180 Scenic Corridor Area Plan focuses on an overriding concern to the quality of life of residents, property owners and visitors. There is a desire to maintain the aesthetic qualities of the area and a desire to maintain a more independent lifestyle without excessive regulation by the County. Important issues noted in the Fort Valley Area Plan include: Natural Environment, Water and Wastewater, Public Safety, Utilities and Solid Waste Disposal, Transportation, Open Spaces, Natural Areas, and Outdoor Recreation, Community Character and Growth and Development (Fort Valley Plan, 2011; pp. ix-xii).

Key items noted in the plan include specific important issues including, “improvement of air quality by reducing smoke from wood stoves and dust from construction and roads, limitation of lighting to protect dark skies, protection of natural quiet from noise from roads and others sources, reduction of construction impacts on soils, management practices used in Coconino National Forest, maintenance of native vegetation, reduction of non-native plants, maintenance of wildlife corridors and habitat, and reduction of impacts on environmentally sensitive lands, especially floodplains and other wetlands.

Health and welfare of the community is encouraged by protecting and conserving existing water sources improving water quality and wastewater disposal, and reducing contaminants in stormwater runoff. (Fort Valley Plan, 2011; p. ix).”

## Threatened, Endangered & Sensitive Species

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) System (<https://ecos.fws.gov/ipac/>) was reviewed to identify special status state species and federally listed threatened, endangered and candidate species potentially affected by activities in the US 180 corridor. The IPaC system identifies species listed as threatened or endangered under the Endangered Species Act. In addition to this information, the IPaC system also identifies species that are candidates or are proposed for listing under the Endangered Species Act. The search of the IPaC system was conducted in January 2018. The species listed in the vicinity of the project area are listed in **Table 8-1**.

**Table 8-1: Federally Listed Species**

Common Name	Scientific Name	Status
<b>Birds</b>		
California Condor	<i>Gymnogyps californianus</i>	Experimental Population Non-Essential
California Condor	<i>Gymnogyps californianus</i>	Endangered
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	Threatened
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened
<b>Reptiles</b>		
Northern Mexican Gartersnake	<i>Thamnophis eques megalops</i>	Threatened
<b>Fishes</b>		



Roundtail Chub	<i>Gila robusta</i>	Proposed Threatened
<b>Flowering Plants</b>		
San Francisco Peaks Ragwort	<i>Packera franciscana</i>	Threatened*

\*Final critical habitat for the San Francisco Peaks Ragwort has been determined. This project area is outside the critical habitat area.

Mexican Spotted Owl critical habitat is near the corridor and also immediately borders the existing right of way at Mileposts 233-235.

In addition to the endangered species information, there are 19 species of migratory birds that may impact the project area. These include the bird species noted in **Table 8-2**.

**Table 8-2: Migratory Birds potentially impacted by the Project Location**

Common Name	Scientific Name	Status
<b>Migratory Birds</b>		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Not a BCC*; Concern due to Eagle Act
Bendire’s Thrasher	<i>Toxostoma bendirei</i>	BCC
Black Throated Sparrow	<i>Amphispiza bilineata</i>	BCC
Black-chinned Sparrow	<i>Spizella atrogularis</i>	BCC
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	BCC
Chestnut-collared Longspur	<i>Calcarius ornatus</i>	BCC
Elf Owl	<i>Micrathene whitneyi</i>	BCC
Golden Eagle	<i>Aquila chrysaetos</i>	Not a BCC; Concern due to Eagle Act
Grace’s Warbler	<i>Dendroica graciae</i>	BCC
Gray Vireo	<i>Vireo vicinior</i>	BCC
Lark Bunting	<i>Calamospiza melanocorys</i>	BCC
Lewis’s Woodpecker	<i>Melanerpes lewis</i>	BCC
Mexican Whip-poor-will	<i>Antrostomus arizonae</i>	BCC
Phainopepla	<i>Phainopepla nitens</i>	BCC
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	BCC
Red-faced Warbler	<i>Cardellina rubrifrons</i>	BCC



Common Name	Scientific Name	Status
<b>Migratory Birds</b>		
Rufous Hummingbird	<i>Selasphorus rufus</i>	BCC
Rufous-winged Sparrow	<i>Aimophila carpalis</i>	BCC
Virginia’s Warbler	<i>Vermivora virginiae</i>	BCC

\*BCC = Bird of Conservation Concern

It should be noted that the Coconino National Forest also maintains a forest service sensitive species list and a list of Management Indicator Species. Any projects that occur on the Coconino National Forest must review and analyze species on these lists. These lists are currently found at the following website, [https://www.fs.usda.gov/detail/coconino/landmanagement/resourcemanagement/?cid=fsbdev3\\_054807](https://www.fs.usda.gov/detail/coconino/landmanagement/resourcemanagement/?cid=fsbdev3_054807) . It is recommended the Coconino National Forest be contacted to verify these represent the most current information available.

It is also recommended that a more in-depth evaluation should occur prior to any construction or modifications to the roadway. A new biological review should also be performed to see if any new information is known within the project area prior to new development or redevelopment occurring.

## Wildlife Movement

Largely developed urbanized areas, such as along the US 180 corridor, present a barrier to the movement of wildlife. Many rural areas just outside the city of Flagstaff of course represent large swatches of publicly managed lands where wildlife is abundant. According to the Arizona Wildlife Linkages Workgroup (AWLW) Wildlife Linkages Assessment report, the US 180 corridor traverses through two wildlife linkage areas. The AWLW represents a collaboration between ADOT and nine other public and non-profit agencies to identify statewide wildlife movement corridors amongst large publicly managed land areas. According to the Arizona Game and Fish Online Environmental Review Tool (<https://azhgis2.esri.com>), there is a wildlife corridor identified as the Peaks to Rim Linkage Design that is near the Fort Valley area.

The two wildlife linkages are linkage 14- Valle – Belmont (p. 49) and linkage 16 – Flagstaff (p. 50) depicted in **Figure 8-1**.

The Valle-Belmont linkage runs along US 180 for roughly one mile on each side of the corridor. The linkage area is predominately Petran Montane Conifer Forests but also contain Great Basin Conifer Woodlands and Plains and Great Basin Grasslands. the identified species migratory and movements patterns effected by the corridor include Allen’s Big-eared, American Peregrine Falcon, Arizona Myotis, Black bear, Elk, Fringed Myotis, Long-eared Myotis, Long-legged Myotis, Mexican Spotted Owl, Mountain Lion, Mule Deer, Navajo, Mexican Vole, Northern Goshawk, Northern Leopard Frog, and Pale Townsend’s Big-eared Bat. Development and urbanization within the linkage area are the only other threats other than the US 180 corridor.

The Flagstaff linkage area surrounds the city of Flagstaff with predominantly Petran Montane Conifer Forest vegetation and the identified species migratory and movements patterns effected by the corridor



include Allen’s Big-eared Bat, Arizona Myotis, Black Bear, Elk, Fringed Myotis, Gray Fox, Mexican Spotted Owl, Northern Goshawk, and Riparian Obligates. The other major threats to the Flagstaff Wildlife Linkage are the BSNF railroad, I-40 and urbanization

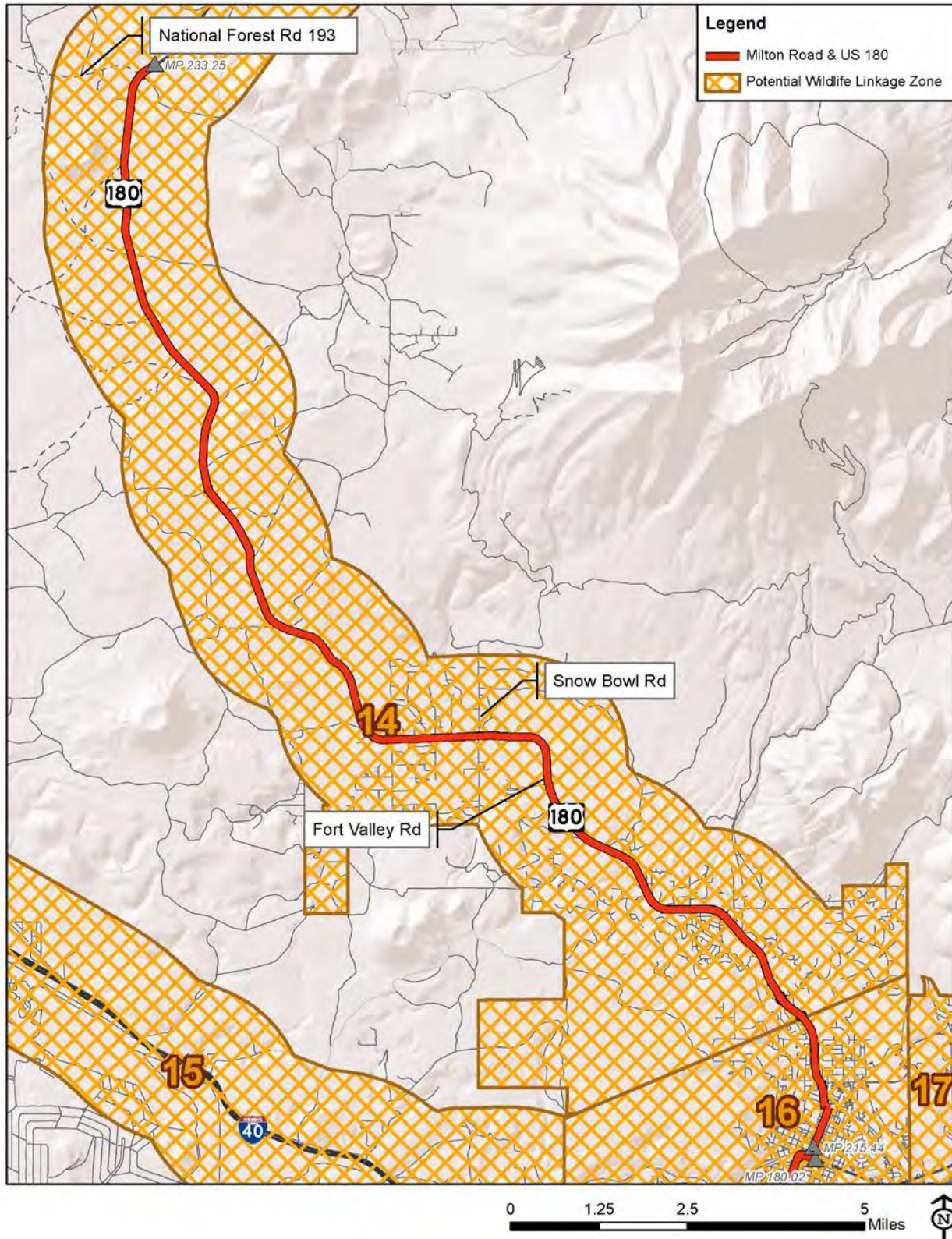
Within the US 180 Corridor, there has been some discussion about a US 180 bypass due to the impact of winter activity on the US 180 corridor. Although, it is not included in the Blueprint 2040 plan in the foreseeable future, it was expressed that measures should be taken to protect wildlife and prevent development from expanding in the corridor (p. 32, Blueprint 2040). If a bypass is envisioned in the future, consideration for wildlife movement should be taken into account. Blueprint 2040 (p. 182) states that there is no US 180 bypass in the plan for two primary reasons, “First, it is not clear a majority of the region supports the facility. Second, it is expensive and largely serves a need experienced 15-20 days of the year. Other reasons include environmental impacts. Blueprint 2040 policy is to preserve the opportunity for the facility while continuing to seek solutions”.

One of the items noted in Blueprint 2040 (pp. 32 & 218) was the desire for the Flagstaff region to consider the establishment of an urban wildlife policy. It has been noted that in several locations within existing and future areas, roadways and wildlife have the potential to come into conflict with one another with undesirable outcomes. By establishing an urban wildlife policy, this could assist with safety efforts and wildlife habitat protection. A future evaluation should look into whether there is an urban wildlife policy that could impact this project area.





Figure 8-1: Wildlife Linkage Zones



Source: ADOT Wildlife Linkages Assessment



## Invasive, Noxious Weeds & Protected Arizona Native Plants

As noted in the Microsimulation Environmental Overview Study (Kimley Horn, 2016), no invasive/noxious weed species were noted during a windshield reconnaissance survey for the US 180 study area. It is recommended that prior to construction, a presence/absence survey should be conducted to determine if any species are present in the construction area and to determine if any mitigation measures are required per Executive Order 13112 and the Arizona Native Plant Law.

Similarly, a native plant survey should also be conducted for individual development projects/sites to determine if any protected native plant species are impacted due to a future development project.

It is also advisable that prior to conducting these surveys that the ADOT biology team and Natural Resources professionals in the North-Central District should be consulted to determine their experience with invasive/noxious weeds and native plants in the project area.

## Water Quality, Water Resources & Floodplains

The US 180 Corridor is located within both the Little Colorado/San Juan and the Verde Watersheds (**Figure 8-2**).

There are no impaired or outstanding waters in the study area. ADEQ’s electronic mapping portal (<http://gisweb.azdeq.gov/arcgis/emaps/?topic=assessed>) does not show any water quality concerns at this time. In the future, should development occur in the corridor, the impaired water list and outstanding waters list should be reviewed for any updates. Should new waters be listed, there may be a requirement to address water quality concerns.

The City of Flagstaff and Coconino County are regulated by the Phase II stormwater program administered by ADEQ under AZPDES permit AZG2016-002.

A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) for the study area indicates that the area has mapped floodplains. The list of FEMA FIRM panels in the study area include:

- 04005C6809G
- 04005C6806G
- 04005C6807G
- 04005C6802G
- 04005C6440G
- 04005C6425G
- 04005C5975G

**Figure 8-3** illustrates the floodways in proximity to the Study Area. The first location is where the Rio de Flag intersects with US 180 west of Snowbowl Rd near Catalina Road. There is currently a culvert and other stormwater infrastructure in place to mitigate flooding. The land surrounding this location falls within both the 100-year and 500-year flood plains, indicating a 1% and .02% chance this area will experience flooding every year. The second location is where the Rio de Flag meanders along US 180 near Hidden Hollow Road, and US 180 falls within both the 100- and 500-year floodplains for roughly a half-mile between Meadow Lane and Failte Lane. The third location along US 180 threatened by flooding is north of Quintana Drive where Schultz Creek intersects with US 180. There is currently a culvert and other infrastructure installed at this location to address immediate flooding concerns, however, some parts of US 180 fall within both the 100- and 500-year floodplains.





As noted in the Kimley-Horn report (pp. 16-18, 2016) a summary of groundwater conditions, surface water conditions, sections 401, 402 (stormwater - AZPDES) and 404 of the CWA as well as floodplains are described. Key environmental considerations for future development evaluations would need to include considerations for 404 permits, 401 certification statements and issues related to the City of Flagstaff and/or Coconino County's MS4 permits.

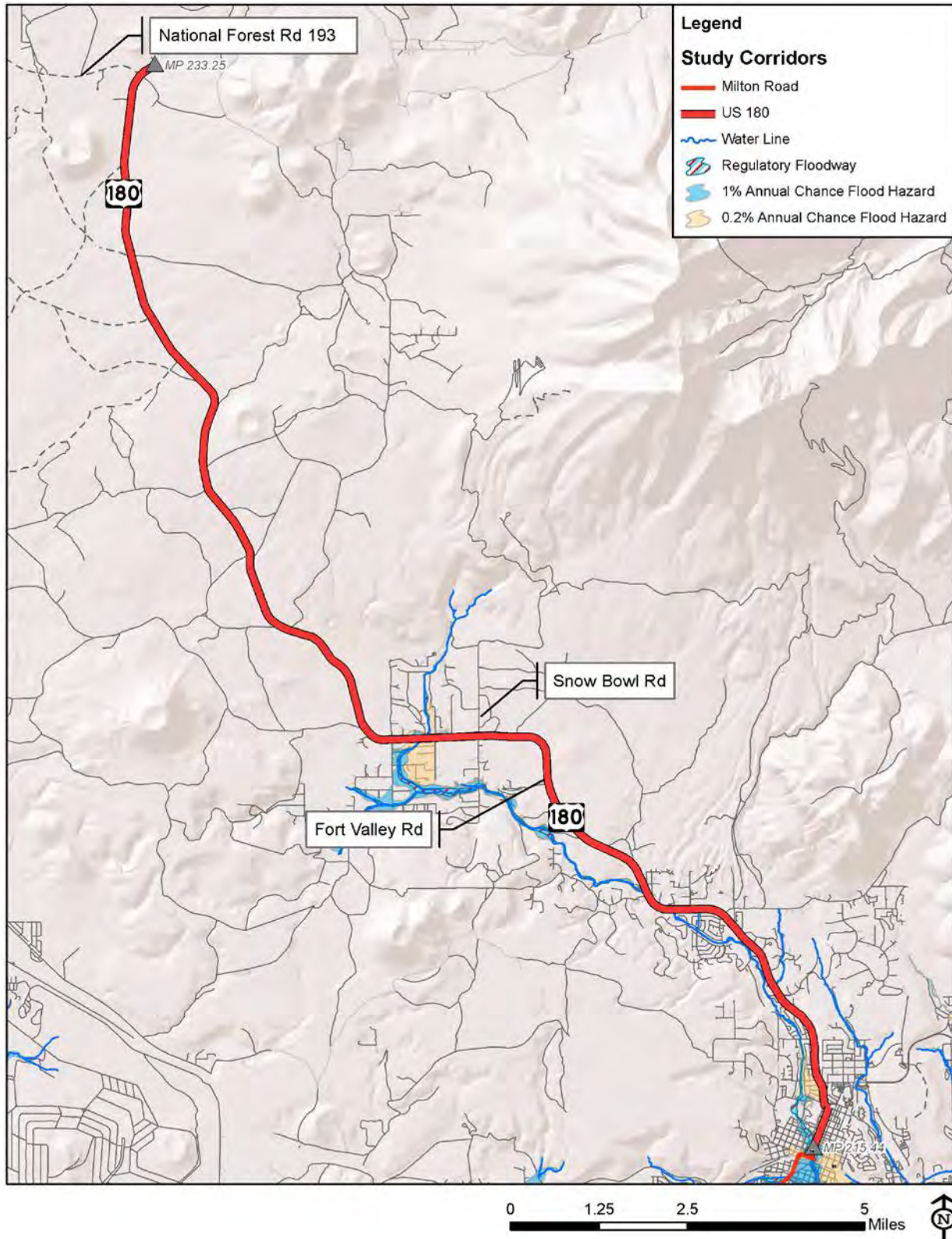
**Figure 8-2: Arizona Watersheds**



Source: US Department of Agriculture (USDA): Natural Resources Conservation Service - Arizona



Figure 8-3: Flood Hazard



Source: Federal Emergency Management Agency (FEMA) National Flood Hazard Layer





## Noise

Noise generated by high capacity roadways such as US 180 is a condition that occurs with urbanization and must be balanced by developing appropriate land uses along high capacity corridors. The evaluation of alternatives for the US 180 CMP should consider the land uses adjacent to the proposed alternatives. ADOT's Noise Abatement Policy and FHWA Noise Abatement Criteria identify generally acceptable levels of traffic noise for varying land use types. US 180 is a designated scenic corridor that travels through predominately residential and rural environments. ADOT and FHWA will consider mitigation measures for homes, schools and churches for noise levels of 64 dBA or higher.

Noise should to be generally be evaluated in the review of viable alternatives to ensure there are no disproportionately high and adverse effects of transportation programs, policies, and activities on minority and low-income populations for Title VI Environmental and Social Justice evaluation. If noise if found to be a concern when considering alternatives, a detailed noise study (beyond the scope of this project) would need to be conducted to identify if existing or proposed noise levels exceed acceptable noise thresholds.

ADOT recently updated their noise policy in May 2017. It is called the "Arizona Department of Transportation Noise Abatement Requirements". All federal projects that require a new noise analysis or existing projects that have yet to begin a noise analysis are required to follow these new requirements.

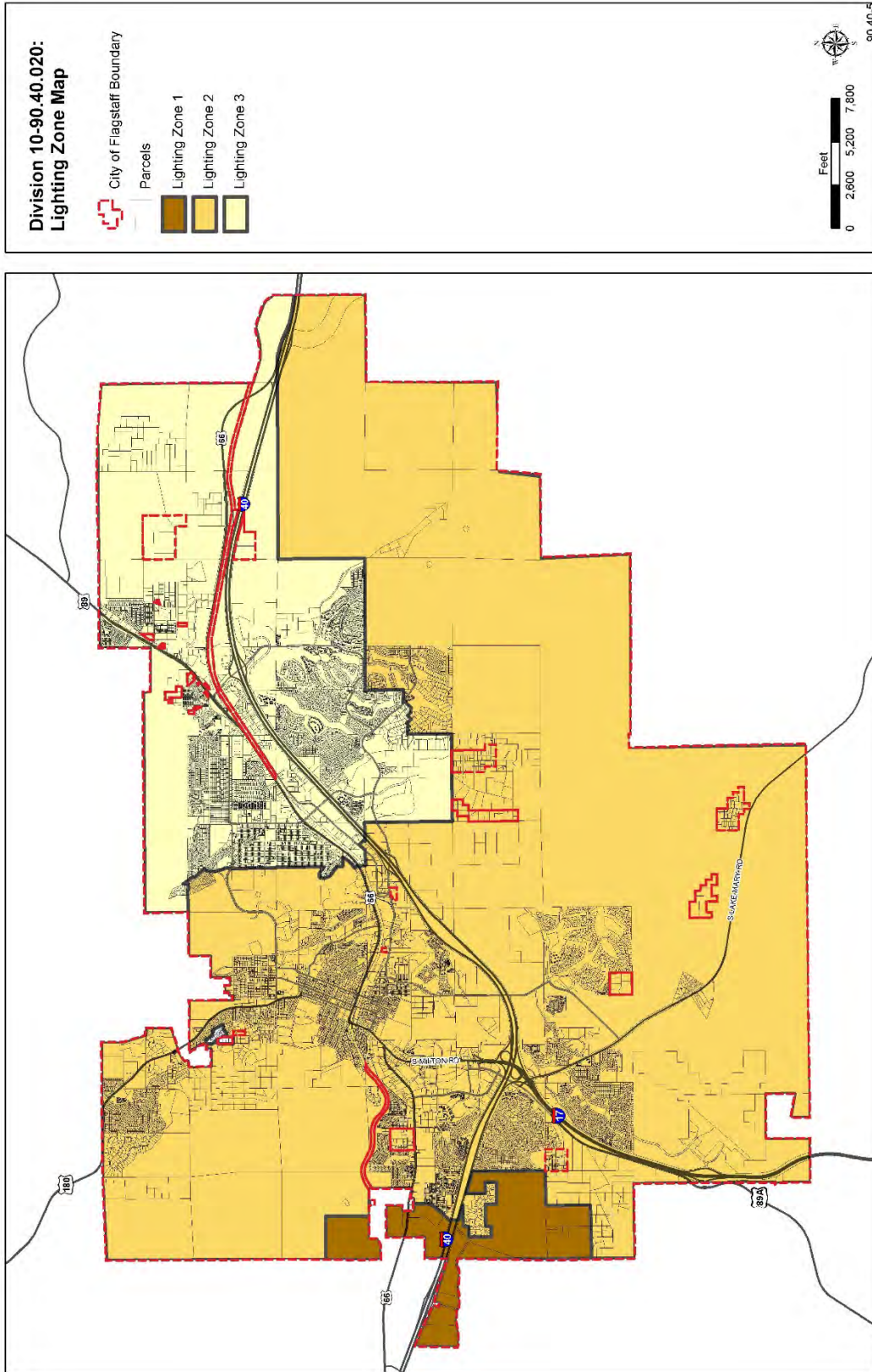
## Visual Resources

Visual resources in the area are described on pages 40-41 of the Microsimulation Environmental Overview Study (Kimley Horn, 2016). The San Francisco Peaks Scenic Road is along US 180 and extends north of the City of Flagstaff.

In addition to the discussion of visual resources and viewsheds in the area, there is a great deal of concern in the Flagstaff area and northern Arizona related to ambient light pollution and sky glow. The City of Flagstaff has adopted lighting standards (Division 10-50.70: Outdoor Lighting Standards) that resulted in its recognition as the world's first International Dark Sky City in October 2001 (**Figure 8-4**). The lighting code is greatly valued by residents of the area. It helps ensure the dark skies are enjoyed by the Flagstaff community, its visitors and still provide safe and efficient lighting for public safety and provides an ideal natural resource for the astronomical industry in the area. The Flagstaff Dark Skies Coalition celebrates, promotes and protects the glorious dark skies of Flagstaff and northern Arizona. The support and importance to the public on maintaining Flagstaff's dark skies has and Northern Arizona skies has been noted in many reports, studies, and public meetings over the years. It has been referenced most recently in the Fort Valley Plan (2011), the NAIPTA study (2016) and Blueprint 2040 (2017). Although a study of lighting standards and light pollution is not directly required by NEPA, consideration into the importance of maintaining dark skies in the area is highly valued. Given the designation of the corridor, measures should be taken to address these issues as further development in the corridor occurs and spending the time on the resources to be protected is important.



**Figure 8-4: City of Flagstaff Lighting Zone Map**



## Air Quality

Air quality in the US 180 corridor (and surrounding areas in Flagstaff and Coconino County) is in attainment for all criteria pollutants, which include Ozone, Particulate Matter and Carbon Monoxide. ADEQ’s electronic mapping portal (<http://gisweb.azdeq.gov/arcgis/emaps/?topic=nonattain>) does not show any nonattainment areas near the study area at this time. Should future development occur in the corridor, a reassessment to verify this is still the case is warranted.

As noted in the Blueprint 2040 Regional Transportation Plan (Chapter 17, p. 204), “The Flagstaff region’s air quality is currently in attainment, so the region is not eligible to receive special funding. However, ozone levels have exceeded federal limits to the extent that the Arizona Department of Environmental Quality briefly considered recommending to the EPA that Coconino County be designated as non-attainment for ozone. Implementing low cost solutions now can mitigate future mandated processes and solutions that will be more expensive.” If dust control measures are not appropriately implemented during construction activity there is the potential for temporary negative air quality impacts.

Winter traffic congestion due to the winter snowplay areas resulted in a great deal of attention within the Fort Valley planning area about the possibility for the construction of a road linking Highway 180 to Interstate 40 and bypassing the City of Flagstaff. This area plan was developed in 2011, but through subsequent discussions and the development of Blueprint 2040, the US 180 bypass was not included in the long range plan. Although at this time a potential bypass is not included in Blueprint 2040 (2017), there is still some consideration for further study and evaluation if conditions change.

There has also been concern expressed regarding the use of salt on roads at public meetings due to its potential environmental impact. If salt is not used, other alternatives may include the expanded use of sand and cinders. Particulate matter from sand and cinders has the potential to become air borne and thus an air quality concern. As a result, an awareness of winter storm management operations by ADOT and the City of Flagstaff may need to be reviewed prior to drawing any conclusions on air quality in the region.

## Hazardous Materials

A review performed by Kimley Horn in the Microsimulation Environmental Overview Study identified over 200 regulated facilities throughout the NAIPTA study area (Section 3.6, Kimley-Horn, 2016). Documented concerns included underground storage tanks, leaking underground storage tanks and varying degrees of contamination related to soil and or groundwater.

**Figure 8-5** shows the underground storage tanks and leaking underground storage tanks adjacent to the US 180 Corridor. There are a total of 14 underground storage tanks and two leaking underground storage tanks. One of the two of leaking underground storage tanks are closed. One of the Fort Valley Gaser underground storage tanks near the southern extents of the corridor at the northwest corner of the intersection of Columbus Avenue and Humphreys Street leaking tank that has not been decommissioned. Refer to **Table 8-3** list the underground storage tanks adjacent to the US 180 corridor.



**Table 8-3: Underground Storage Tanks**

Name/Location	Number of Tanks	Status
<b>All Underground Storage Tanks</b>		
Exxon – Fort Valley	5	Closed: 5 Open: 0
Fort Valley Chevron	3	Closed: 0 Open: 3
Fort Valley Gaser	3	Closed: 0 Open: 0
Kendrick Park	2	Closed: 2 Open: 0
Purcell	1	Closed: 1 Open: 0
<b>Leaking Underground Storage Tanks</b>		
Exxon – Fort Valley	1	Closed
Fort Valley Gaser	1	Open

Source: Arizona Department of Environmental Quality (ADEQ)

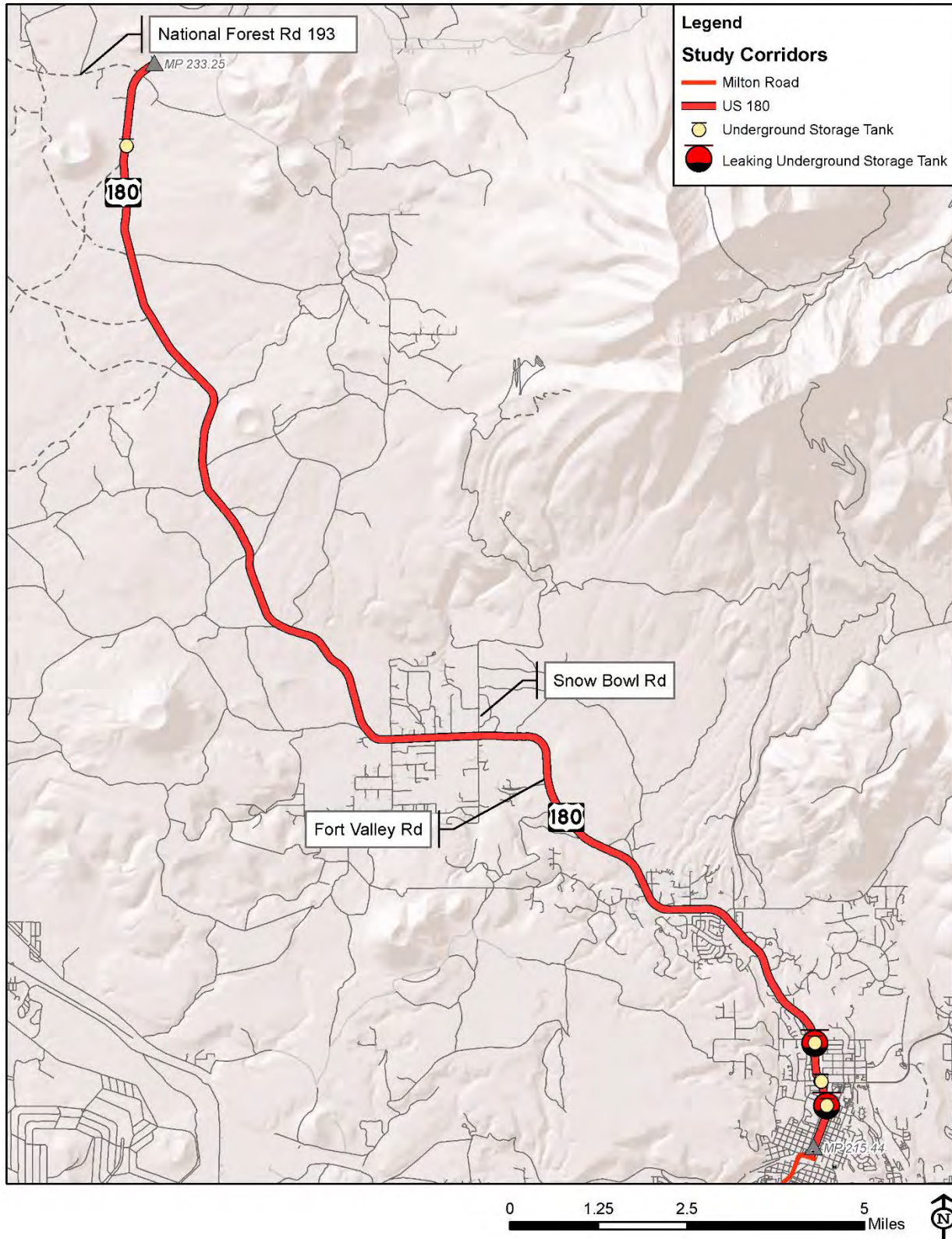
Remediation of some facilities was pending or undocumented. Should there be any land acquisitions, or easements a Phase I Environmental Site Assessment would be recommended. Hazardous materials surveys should be conducted for any abatement/demolition of any buildings with asbestos surveys and any paint striping on the roadway or highways should be evaluated for lead based paint prior to any disturbance including milling or grinding operations. These evaluations would need to be done prior to any disturbance and would require coordination with the Hazardous Materials Coordinator at ADOT in the Environmental Planning Group.

Furthermore, there are no hazardous materials restricted routes in northern Arizona or the study area.





Figure 8-5: Underground Storage Tanks



Source: Arizona Department of Environmental Quality (ADEQ)



## Cultural Resources

This section presents an overview of cultural resources that occur within the study area, which is defined herein as a 200-ft wide corridor along US 180, which shares the Humphrey’s Street and Fort Valley Road alignments. The study area extended a distance of approximately 11 miles from the intersection of historic Route 66 in Flagstaff, to CNF Road 222B, near the Wing Mountain Snow Play Area. A formal Class I literature review was not completed for this Corridor Master Plan study. For this project, Archaeological Consulting Services, Ltd. (ACS) conducted a desktop review of the online AZSITE Cultural Resources Database (AZSITE), the ADOT Historic Preservation Team Portal (Portal), and the online repository of the National Register of Historic Places (NRHP) to identify archaeological sites, historical structures (both in-use and abandoned), and historic-age buildings. ACS also visited the Arizona State Historic Preservation Office (SHPO) to obtain information on architectural surveys conducted along the corridor. Finally, ACS contacted the City of Flagstaff’s Historic Preservation Office to obtain any information on locally listed or inventoried historic neighborhoods and individual historic buildings within or immediately adjacent to the 200-ft wide study area. No field visits or surveys were conducted for this study.

Limited archival research was conducted in order to identify building resources that were greater than 50 years of age (resources constructed prior to 1968). Given the limited scope of work for this phase of the project, only online sources were reviewed to identify historical resources within the study area. The archival research was conducted by Thomas Jones, ACS Historian, and included a review of online USGS aerial photographs, supplemented by the parcel information available on the Coconino County Assessor’s online interactive parcel viewer (Coconino County 2017; U.S. Geological Survey 2017).

The limited cultural resource review identified a total of 69 cultural resources within or immediately adjacent to the study area, including six archaeological sites, three in-use historic structures, one NRHP-listed historic property, three NRHP-listed historic districts, and 45 individual historic-age buildings, most of which have not been documented or evaluated for eligibility in the NRHP. The three in-use historic structures are linear highways (i.e., US Highways 66, 89, and 180), all of which have been determined eligible under Criterion D as part of the Arizona State Highway System (1912–1955) (Federal Highway Administration and Arizona State Historic Preservation Office 2002). Per the *Interim Procedures for the Treatment of Historic Roads* (2002), impacts to characteristics of a historic highway eligible under Criterion D are assessed to determine if the location or function/design of a roadway will be affected, which would result in an adverse effect to the resource. Ubiquitous components of the Historic State Highway System are not typically recommended for further documentation in a formal Historic State Highway System report in accordance with the *Interim Procedures*, which state that only “historic roadway features...considered worth recording...would be documented” with photographs and a feature table including appropriate measurements and descriptions.

Of additional consideration, per the *Interim Procedures for the Treatment of Historic Roads* (2002), Historic US Highway 66 (Route 66) and the Apache Trail, as “Crown Jewels” of the Arizona State Highway System, are to be evaluated under multiple criteria for eligibility to the NRHP (Federal Highway Administration and Arizona State Historic Preservation Office 2002). Therefore, in addition to Criterion D, Route 66 as a whole has also been determined eligible for inclusion in the NRHP under Criterion A for its association with the development of Federal Aid transportation projects in Arizona. In some



instances, Route 66 highway segments exhibiting distinctive engineering attributes or distinctive bridges and culverts have been determined eligible under Criterion C.

Additionally, a number of historic-age houses were located within or adjacent to the study area. These houses are located on the northern fringe of the Flagstaff municipal boundary and exemplify post-World War II expansion of the Flagstaff community (ca.1946–1970s). These houses are components of 11 residential subdivisions that would likely derive their NRHP significance under Criterion A for community planning and development. All houses located within and adjacent to the study area would require inventory to evaluate integrity within each subdivision, and to assess contributors to a potential historic residential district, as well as each subdivision's character-defining features (e.g., streets, vegetation, irrigation system, etc.).

Cultural resources identified by the research, including the 11 historic-age subdivisions, are presented in the tables below (**Table 8-4 - Table 8-5**). From this information, ACS identified areas of sensitivity along the US 180 corridor, including the presence of known Section 4f properties. Cultural resources that have been listed, or recommended/determined eligible for listing in the NRHP were coded in green. Cultural resources for which eligibility has not been evaluated were coded in yellow, and cultural resources recommended or determined ineligible were coded in red. Areas not coded represent locations not associated with a known cultural resource.

As noted above, the purpose of this study was to identify known cultural resources that intersected the study area corridor. As the project area itself was not defined for the current effort beyond the 200-ft wide study corridor, should additional phases of the project advance for further consideration, ACS recommends that future studies include identification of a formal area of potential effects, followed by a formal Class I literature review, Class III survey (as needed), and historic building inventory and assessment to fully determine any historic properties that occur within or adjacent to the corridor.





**Table 8-4: Summary of Previously Recorded Cultural Resources**

Site Number <sup>1</sup>	Site Type	Eligibility (Criterion) <sup>2</sup>	Section 4f Resource	Reference(s)
<i>AZ I:3:10(ASM)</i>	Historic US Highway 89	Determined Eligible (D) (SHPO: 11/15/2002)		(Federal Highway Administration and Arizona State Historic Preservation Office 2002; Stone 1985)
<i>AZ I:14:5(ASM)</i>	Beale Wagon Road	Determined Eligible (A,B) (SHPO: 10/22/2008)	Yes	AZSITE Inventory No. 60033 (Weaver 1992)
<i>AZ I:14:337(ASM)</i> <i>AR-03-04-03-123(CNF)</i>	Possible logging camp w/features and artifacts	Unevaluated		AZSITE Inventory No. 60155
<i>AZ I:15:156(ASM)</i>	Historic US Highway 66	Determined Eligible (A,C,D) (SHPO: 11/15/2002 and 5/10/2011)	Yes	(Federal Highway Administration and Arizona State Historic Preservation Office 2002; Lonardo 2006)
<i>AZ Q:7:74(ASM)</i>	US 180 and SR 61	Determined Eligible (D) (SHPO: 5/29/2007)		AZSITE Inventory No. 87256 (Bowler 2012)
<i>NA 16331</i>	McMillan Homestead and wagon trail (Museum of Northern Arizona)	National Register Listed (C) (SHPO: 3/5/1975)	Yes	AZSITE Inventory No. 80635 (Wilson 1975)
<i>NA 18221</i>	Historic trash scatter	Unevaluated		AZSITE Inventory No. 81463
<i>NA 18228</i>	Abandoned logging camp with structures and artifacts	Unevaluated		AZSITE Inventory No. 81468
<i>NA 18231</i>	Trash scatter/dump	Unevaluated		AZSITE Inventory No. 81465
<i>AR 03-04-03-4735(CNF)</i>	No information	No information		ADOT Portal Record Search
	Flagstaff Townsite Residential Historic District	Determined Eligible (A,B,C) (SHPO: 2/20/1986)	Yes	(Woodward and Stein 1985)
	North End Historic Residential District	Determined Eligible (A,B,C) (SHPO: 2/20/1986)	Yes	(Woodward et al. 1985)
<i>NA 19395</i>	USFS Fort Valley Experimental Forest Station Historic District	Determined Eligible (A,B,C) (SHPO: 6/6/2000)	Yes	(Olberding 1998)

<sup>1</sup> Italicized site numbers represent in-use structures or resources.

<sup>2</sup> Recommended=Archaeologist's opinion; Determined: SHPO concurrence with recommendation.





**Table 8-5: Historical Buildings (Constructed prior to 1968)**

Parcel No.	Address	Property Name	Previously Inventoried/ Documented	Previous Project <sup>1</sup>	Eligibility Status <sup>2</sup>	Section 4f Resource	Comments
100-21-012A	211 W Aspen Avenue	Flagstaff City Hall (Hiway Diner No. 7)	Yes	Route 66 Survey (Inv. No. 309)	Not Eligible		Demolished
100-21-006	122 W Route 66	Rodeway Inn (Townhouse Motel)	Yes	Route 66 Survey (Inv. No. 310)	Recommended Ind. Eligible (A)	Yes	
100-10-012A	204 W Birch Ave	American Legion Post 3	No		Unevaluated		
100-10-020	215 N Humphrey's St	L.A.L.E. Salon	Yes	Flagstaff Townsite Residential District	Noncontributing		Postdates 1935
100-10-019	219 N Humphrey's St	Valerie Core Realtor	Yes	Flagstaff Townsite Residential District	Noncontributing		Postdates 1935
100-10-007	121 W Cherry Ave		No		Unevaluated		
100-09-001E	309 N Humphrey's St	Hair Trends	Yes	Flagstaff Townsite Residential District Inv. No. 5-17	Contributor (A, B, C)	Yes	
100-09-010	317 N Humphrey's St	Head First Hair Designs	No		Unevaluated		
100-09-009	319 N Humphrey's St	Vredevoogd, Lynn Ellen	No		Unevaluated		
101-13-008A	320 N Humphrey's St	San Francisco De Assisi Roman Catholic Church	No		Unevaluated		A likely significant property <sup>4</sup>
100-04-003A	150 W Dale Ave	Nordstrom & Associates	No		Unevaluated		
100-04-016	409 W Humphrey's St	Ameriprise Financial	No		Unevaluated		
100-04-015A	211 W Elm Avenue	Foot Care Specialist	Yes	North End Residential District	Noncontributing		Modern
100-03-001	503 N Humphrey's St	Josephine's Bistro	Yes	North End Residential District Inv. No. 5-52	Contributor (A, B, C)	Yes	
100-03-010	504 N Humphrey's St	High Country Dentistry	Yes	North End Residential District	Noncontributing		Postdates 1935



# US 180 CORRIDOR MASTER PLAN

Working Paper #1 – Current & Future Conditions Report



Parcel No.	Address	Property Name	Previously Inventoried/ Documented	Previous Project <sup>1</sup>	Eligibility Status <sup>2</sup>	Section 4f Resource	Comments
100-03-011	508 N Humphrey's St	Raptor Ranch	Yes	North End Residential District	Noncontributing		Modern
100-03-005A	507 N Humphrey's St	Salvation Army	No		Unevaluated		
100-03-012	510 N Humphrey's St	CBC Advisors	No		Unevaluated		
100-03-013	516 N Humphrey's St	Lululemon Athletica	No		Unevaluated		
100-03-014A	119 W Fine Ave	Edward Jones Financial	No		Unevaluated		
101-07-015E	601 N Humphrey's St	Sky Engineering	No		Unevaluated		
101-07-015A	609 N Humphrey's St	Residence	No		Unevaluated		
101-07-008	612 N Humphrey's St	Residence	No		Unevaluated		
101-07-011B	621 N Humphrey's St	Residence	No		Unevaluated		
101-06-007	708 N Humphrey's St	Residence	No		Unevaluated		
101-06-015	709 N Humphrey's St	Residence	No		Unevaluated		
101-06-014	711 N Humphrey's St	Residence	No		Unevaluated		
101-06-008	712 N Humphrey's St	Residence	No		Unevaluated		
101-03-016B	204 W Sullivan Ave	Ski Haus Rental	No		Unevaluated		
101-03-007C	804 N Humphrey's St	Residence	No		Unevaluated		
101-03-008	808 N Humphrey's St	Residence	No		Unevaluated		



# US 180 CORRIDOR MASTER PLAN

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Parcel No.	Address	Property Name	Previously Inventoried/ Documented	Previous Project <sup>1</sup>	Eligibility Status <sup>2</sup>	Section 4f Resource	Comments
101-03-015	809 N Humphrey's St	Flagstaff Clinic of Naturopathic Medicine	No		Unevaluated		
101-03-009	810 N Humphrey's St	Residence	No		Unevaluated		
101-03-014	811 N Humphrey's St	Residence	No		Unevaluated		
101-03013	817 N Humphrey's St	Residence	No		Unevaluated		
101-03-029	120 W Columbus Ave	Residences (rentals)	No		Unevaluated		
101-03-031E	250 W Columbus Ave	Service Station	No		Unevaluated		
Multiple Residential Properties		Mountain View	No		Unevaluated		Potential historic residential districts
		Mountain View Additional Lots	No				
		Kaibab Plaza Unit 1	No				
		Kaibab Plaza Unit 2	No				
		Kaibab Plaza Unit 3	No				
		Antelope Valley Unit 1	No				
		Antelope Valley Unit 2	No				
		Antelope Valley Unit 3	No				
		Coconino Estates Plat 1	No				
		Coconino Estates Plat 2	No				
		Mt Elden Addition	No				
102-08-001	1404 N Fort Valley Rd	Residence	No		Unevaluated		
102-07-001A	1800 N Fort Valley Rd	Café (Service Station)	No		Unevaluated		



# US 180 CORRIDOR MASTER PLAN

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Parcel No.	Address	Property Name	Previously Inventoried/ Documented	Previous Project <sup>1</sup>	Eligibility Status <sup>2</sup>	Section 4f Resource	Comments
102-02-056A	2230 N Fort Valley Rd	Elementary School	No		Unevaluated		
102-02-002A	2340 N Fort Valley Rd	Pioneer Museum / Arizona Historical Society	Yes	Flagstaff Multiple Resource Area (MRA)	National Register Listed (A,C)	Yes	
102-02-055							
111-01-006C	3100 N Fort Valley Rd	Museum of Northern Arizona (McMillan Homestead )		See below <sup>3</sup>		Yes	Homestead is listed on the local register as a landmark <sup>4</sup>
111-01-001F	3101 N Fort Valley Rd						
300-45-013B	5205 N Fort Valley Rd	Residence	No		Unevaluated		
300-45-013D	3185 Hidden Valley Rd	Residence	No		Unevaluated		

<sup>1</sup> Route 66 Survey: (Motley Design Group 2012) | Flagstaff Townsite Residential Historic District (Woodward and Stein 1985) | North End Residential Historic District (Woodward et al. 1985) | USFS Fort Valley Experimental Forest Station Historic District (Olberding 1998) | Flagstaff MRA (Woodward 1985)

<sup>2</sup> Ind. Eligible. = Individually eligible | Contributor = Contributor to an eligible district | Noncontributing = Not eligible as a contributor to a historic district.

<sup>3</sup> The McMillan Homestead was individually listed in the National Register under Criterion C and is currently owned by the Museum of Northern Arizona (MNA). The MNA is an extensive property that encompasses additional historical buildings and structures that are yet to be evaluated either individually, or as a potential historic district.

<sup>4</sup> Karl Eberhard personal communication, October 25, 2017





## CHAPTER 9: CONSIDERATION OF EXISTING AND NEWLY DEVELOPED ALTERNATIVES

### Identifying Existing Alternatives to Date

A Project Partners directive identified at the onset of this study process was to obtain a clearer understanding of the existing “universe of alternatives” from previously prepared reports and to develop new possible alternatives for consideration for the US 180 CMP process.

The first step in evaluating and defining the existing alternatives was a thorough review of the 2012 US 180 Winter Traffic Study. The *US 180 Winter Traffic Study* was prepared in response to increased congestion on US 180 as the primary route to ski and snow play areas, especially during long holiday weekends. On the six to eight holiday weekend evenings each year, visitors leaving the ski areas and snow play areas bring southbound travel to a virtual standstill on US 180. Business and resort operators worried that the delays from the extreme congestion will discourage repeat ski and snow play visitors and have a long-term impact on the Flagstaff tourist economy.

This Plan was developed to identify near-, mid- and long-term strategies to reduce winter traffic congestion on US 180 listed in **Table 9-1**.

**Table 9-1: US 180 Winter Traffic Study Strategies**

Priority	Strategy	Description	Time Frame
<b>Near-Term Strategies</b>			
1	Traffic Signal Timing	Add green signal time on southbound Milton Road at Butler Avenue and Route 66.	Tested in November, 2011, and implemented for 2011-2012 winter season
2	Traveler Information System	Provide travel time information to U.S. 180 travelers	Within five years
3	Traffic Signing Plan	Guide signs showing alternate routes and travel times; additional safety signing	Within five years
4	Early Departure Incentives	Coupons for local restaurants to encourage early departure	Within five years
<b>Mid-Term Strategies</b>			
5	Dispersed Snow Play Sites	New snow play sites outside the U.S. 180 corridor	5 to 10 years
6	Transit	New transit service to Snowbowl and Wing Mountain Snow Play Area	5 to 10 years
7	Managed Lane	Humphreys Street center left turn lane managed to accommodate southbound/ eastbound traffic	5 to 10 years
<b>Long-Term Strategies</b>			
8	New Road Capacity	Add capacity to corridor through either widening existing corridors or constructing a new road	10 to 20 years

Source: FMPO U.S. 180 Winter Traffic Study, HDT 2006

Building upon the foundation of alternatives derived from the US 180 Winter Traffic Study, the Project Partners aided the Study Team in contributing additional alternatives for consideration for this US 180 CMP study. This “Universe of Existing Alternatives” matrix as it became known as, was introduced and vetted with the Project Partners.



## Creation of Additional Alternatives for Consideration

Once the “Universe of Existing Alternatives” was completed, the Study Team and Project Partners collaboratively developed an additional list of “newly introduced alternatives”. The Study Team developed a listing of newly introduced alternatives for Project Partner consideration. These alternatives are described and depicted in greater on **Table 9-2**.

**Table 9-2: US 180 CMP Universe of Existing Alternatives**

Alternative Alignments	Operations	Added Road Capacity/Managed Lanes	Policy Recommendations	Low Investment Spot/Segment/Intersection Improvements
Columbus - Switzer Canyon Drive - Route 66	Stagger arrival and departure times (1/2 day morning pass)	4 General Purpose lanes, center median, and bike lane/shoulder	Winter Recreation Parking Pass	Roundabout at Intersection of Snow Bowl Road and US 180
Columbus - Switzer Canyon - Beaver Street - Butler Ave.	Optimization of green light PM peak on southbound Milton Road at Butler Ave. and south Route 66	Center turn lane on Humphrey's Street managed for southbound PM peak, or carpool designation, or transit dedication	Dispersed snow play sites - Ft. Tuthill, McMillan Mesa; Flagstaff Winter Advisory Task Force identifying suitable sites	Intersection Improvements - Freemont Street/US 180 intersection improvements (been a study; no warrant), Meade Lane and Forest Ave.
Forest Ave - Turquoise Dr. - Switzer Canyon - Route 66	City of Flagstaff and ADOT link signal coordination	Center lane on US 180 managed as a travel lane reversed for AM and PM peaks (South of Meade Lane to Downtown only).	Add reduce or eliminate public parking up at Snow Bowl, Nordic center and Wing Mountain	Cherry, Elm and Hunt to provide Intersection improvements
Forest Ave. - San Francisco St. - Butler Ave.	Traveler Information System - travel time estimates on variable message signs at Snow Bowl, Snow Play Areas, and I-17	Turn Humphreys into a one direction north bound or south bound for AM and PM peaks during large snow event weekends. Add an eastbound right turn lane between Humphreys and Beaver on Columbus to facilitate additional southbound traffic. At the intersection of SR-40B there would be two lanes turning southbound Milton and two lanes turning westbound SR-40B.	No Build Option (maintain as is)	Dual southbound right turn from Humphrey's to southbound Milton Road
Cable Propelled Gondola - from Downtown to Snow Bowl Rd.	Overall traffic signage improvements			
Milton Rd.; Route 66; Flagstaff Ranch Road; I-40; I-17	Adaptive signal control for all ADOT routes within the City			
Lone Tree Road (assuming TI at I-40 and connection to Route 66)	Access Management (Turn Lanes on warranted rural US180 Intersections / Access Controls on Humphreys)			
Mike's Pike/ overpass/Humphreys one way NB and Kendrick St./Stigraewer/overpass to Milton Rd. one way SB				
Milton Rd.; Route 66; Woodland's Village Blvd.; Beulah Blvd; John Wesley Powell Blvd./I-17				
Bader Road-FS 518/581 - A-1 Mountain Road - I-40 Exit 190				
Snow Bowl Road - A-1 Mountain Road				

A total of 35 potential projects that spanned a wide variety of project types, such as; alternative alignments, managed lanes, transit, added road capacity, policy recommendations and intersection improvements were documents and vetted by the Project Partners.

## Evolution of the Universe of Alternatives to System Alternatives and Base Build Spot Improvements

As the Project Partners began to review that information in greater detail, it was generally felt that the information was useful from a technical point of view, but due to the sheer number and variation of project types, the approach was likely going to be difficult to manage, equitably evaluate and rank alternatives. It was also felt that this approach would be confusing in describing the interrelationship of these diverse alternatives to the general public.

For these reasons, the Project Partners identified the need and desire to streamline and simplify the various existing and newly introduced alternatives by “bundling” them into a more manageable set of “System Alternatives” and “Base Build Spot Improvements”. These new set of alternatives are derived from the previous “Universe of Alternatives” tables and will enable a more straight-forward presentation of the alternatives and ability for the Project Partners, stakeholders and public to equitably compare, rank and prioritize these alternatives.



“Preliminary System Alternatives” include the previously described alternative routes and added road capacity/managed lanes. “Base Build Spot Improvements” include the previously described low investment/spot improvements. The idea is that the “Preliminary System Alternatives” will be presented for comparison and ranking to the public (including cross-sections graphically depicting the facilities). Preliminary System Alternatives that receive the most favorable feedback or consensus from the public and interested stakeholders will proceed forward as “Preferred System Alternatives” for a more detailed technical and quantitative analysis and ranking.

The intent of the “Base Build Spot Improvements” is that these type of improvements, regardless of which System Alternative is ultimately selected, will likely be necessary in the short term to support the longer-term System Alternative improvements. As such, the listing of Base Build Spot Improvements will evolve as the System Alternative becomes more refined as the process moves forward.

## Preliminary System Alternatives

As **Table 9-3** shows, there are three categories of Preliminary System Alternatives for US 180 CMP consideration. These are; 1) Preliminary System Alternatives that utilize the existing right of way. 2) Preliminary System Alternatives that require and expanded right of way, and 3) Preliminary Alternative Routes.

**Table 9-3: US 180 Preliminary System Alternatives**

PRELIMINARY SYSTEM ALTERNATIVES	
Within Existing Right-of-Way	
1.	No Build Option (maintain as is)
2.	Humphrey’s Street Southbound PM Peak Managed Lane (Reversible Center Lane)
Added Capacity/Managed Lanes	
3.	Four General Purpose Lanes (GP), Center Median, Bike Lanes and Shoulders on both Sides
4.	US 180 AM and PM Peak Managed Lane from Meade Street south to Downtown (Reversible Center Lane)
5.	Humphrey’s Street One Way Northbound for AM Peak & One Way Southbound for PM Peak, and right turn capacity at Beaver Street and Columbus, and Humphrey’s Street and SR 40B
6.	Dynamic Southbound Shoulder (North of Forest Avenue)
Alternative Routes	
7.	Columbus Avenue to Switzer Canyon Drive to Route 66
8.	Columbus Avenue to Beaver Street to Butler Avenue, (Southbound One Way) & Butler Avenue to San Francisco Street to Columbus Drive (Northbound One Way)
9.	Forest Avenue to Turquoise Drive to Switzer Canyon Drive to Route 66
10.	Cable Propelled Gondola - from downtown to Snow Bowl Rd
11.	Milton Road to West Route 66 to Flagstaff Ranch Road to I-40



12. Lone Tree Road (assuming TI at I-40 and connection to Route 66)
13. Mike’s Pike Street to a Future Overpass to Humphrey’s Street one-way northbound (AM Peak) & Kendrick Street to Sitgreaves Street to existing underpass to Milton Road southbound (PM Peak)
14. Milton Road to West Route 66 to Woodland’s Village Boulevard to Beulah Boulevard to John Wesley Powell Boulevard to I-17 South
15. Bader Road to FS 518 to A-1 Mountain Road to I-40
16. Snow Bowl Road to A-1 Mountain Road to I-40
17. Wing Mountain Road to FS Road 222 to FS Road 111
18. Hidden Hollow Road to FS 506 to Route 66 to I-40

It should be noted that the Preliminary System Alternatives described below are conceptual in nature and are intended to represent a variety of possible approaches to mitigate traffic congestion of US 180. Variations of each alternative could be considered based on the context, character and specific design measures of any particular road segment within the broader study corridor. Each of these Preliminary System Alternatives will be reviewed and discussed by the Project Partners and interested stakeholders to gauge the community acceptance or preference for these preliminary, conceptual System Alternatives. The Preliminary System Alternatives that receive the most supportive interest and/or input from Project Partners and interested stakeholders will proceed forward as Preferred System Alternatives that will receive additional technical evaluation and traffic modeling analysis in order to quantitatively determine the operational efficiency, safety and performance of each Preferred Alternative.

For each of the Preliminary System Alternatives presented below, additional considerations for access management, safety and signal timing require additional traffic modeling and design considerations and analysis should the alternative receive future consideration moving forward.

Each of the Preliminary System Alternatives are described and depicted below.

*Preliminary System Alternatives Utilizing Existing Right of Way*

**1. No Build (maintain as is)**

A “No Build” option is identified for consideration and future ranking/prioritization. The “No Build” options favors maintaining the existing US 180 right of way and facilities “as is”. The No Build alternative is important for public and stakeholder consideration. It also meets FHWA and ADOT Planning and Environmental Linkages (PEL) guidance (further explained in Chapter 7) for certain planning studies and helps facilitate environmental studies should future implementation projects present themselves for consideration.

**2. Humphrey’s Street Southbound PM Peak Managed Lane (Reversible Center Lane)**

A “Reversible Lane” as the name implies, is a concept in which the center traffic lane (turn lane) may travel in either direction (however just southbound traffic only in this System Alternative), depending upon the time, day and/or operation sign/signal displayed. Reversible traffic lanes add capacity to a road and decrease congestion by borrowing capacity from the other (off-peak) direction. This holds especially





true in situations where options for expanding the existing right of way are limited (existing right-of-way on Humphrey’s Street is 50 feet) or when traffic in the corridor is heavily imbalanced for a short period of time such as leading to/from a special event (snow play). This alternative is illustrated in **Figure 9-1** and **Figure 9-2**. It is important to note that this alternative would only be implemented along the US 180 corridor on Humphrey’s Street between Columbus Avenue and Historic Route 66.

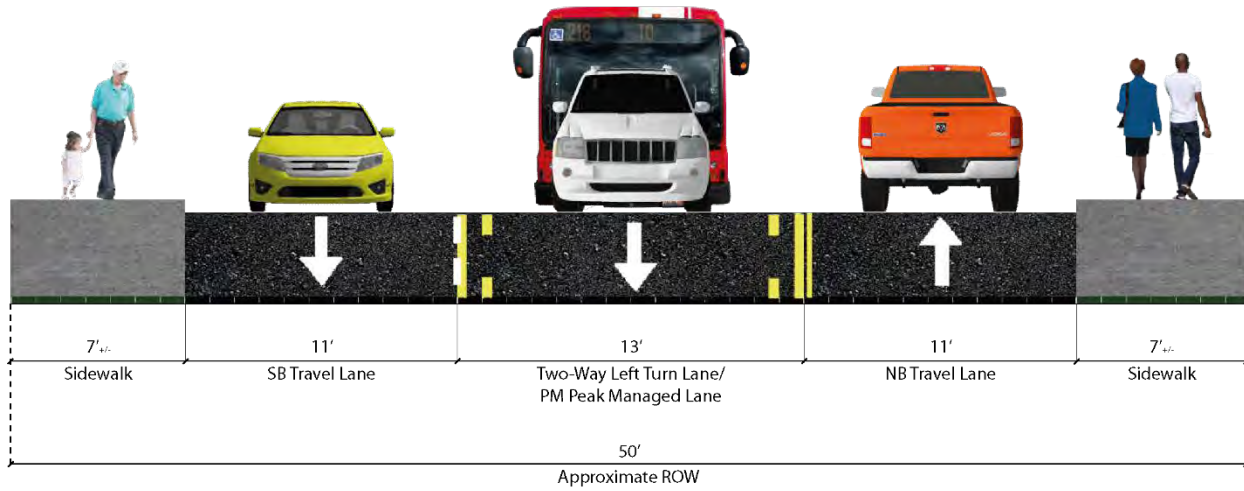
The concept is often referred to by FHWA and transportation professionals, as “managed lanes” in that high demand on existing facilities, such as US 180/Humphrey’s Street, especially at peak demands are placed on the roadway, it necessitates the efficient management of those facilities.

There are a wide variety and combination of approaches to managed lane operations. These have typically encompassed such methods as:

- Static signing and striping
- Changeable message signs
- Lane control signals
- Temporary traffic control devices
- Law enforcement / legal restrictions
- Economic incentives / disincentives

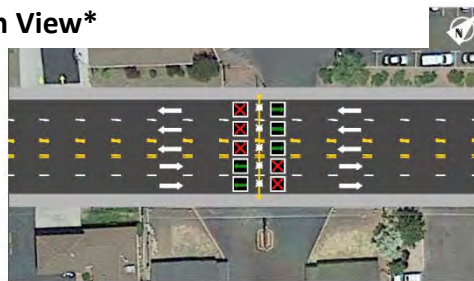


**Figure 9-1: US 180 System Alternative 2 Cross-Section\***

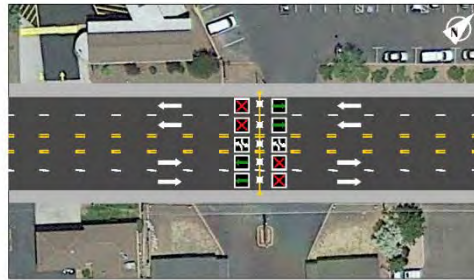


**Figure 9-2: US 180 System Alternative 2 Plan View\***

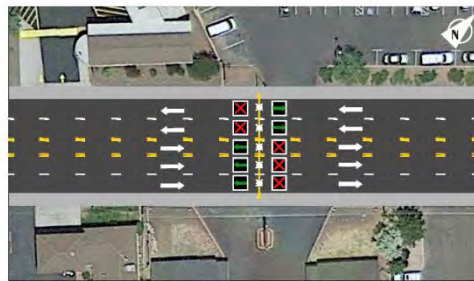
**AM Peak Period  
Traffic Designation**



**Mid-Day / Standard  
Traffic Designation**



**PM peak Period  
Traffic Designation**



*\*Detailed traffic studies are necessary to apply this concept to any arterial/highway such as US 180 to address matters safety, access management (especially with the high number of existing driveways) and multimodal considerations.*

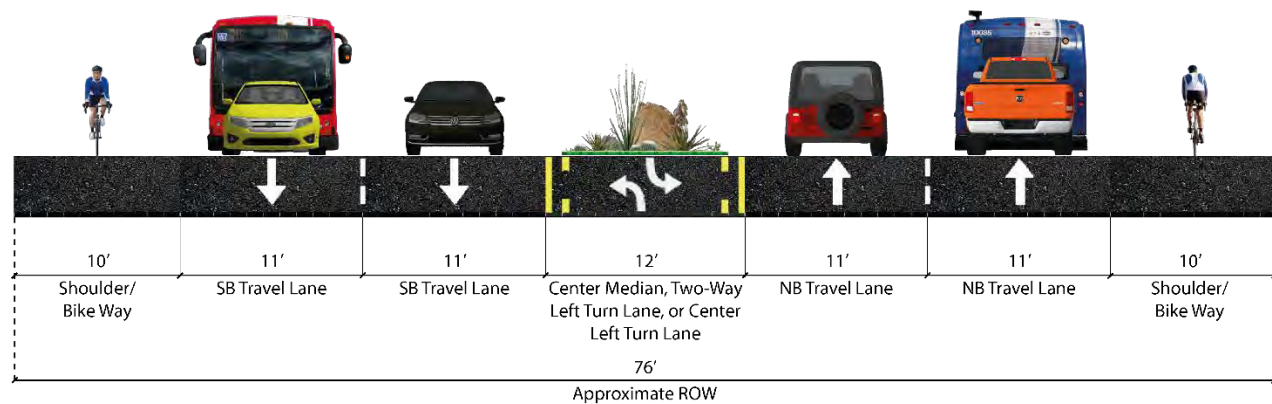
## Preliminary System Alternatives Requiring Expanded Right-of-Way

Note: Per the Road Configuration Inventory presented in the US 180 Winter Traffic Study, the existing right-of-way for US 180 varies from 50-feet to 100 feet, depending on roadway segment. The majority of road segments for US 180 average 65-80 feet in width. As such, it is assumed that the System Alternatives presented below will require some level of additional right of way expansion.

### 3. Four General Purpose Lanes, Center Median, Bike Lanes and Shoulders on both Sides

As Figure 9-3 illustrates, this Preliminary System Alternative calls for four (4), 11-foot general purpose travel lanes, a 12-foot center turn lane (two-way left turn lane) and two, 10-foot shoulders that also may be utilized as bikeways. Each of the outside general purpose lanes would accommodate buses, vehicles and right turning movements. Landscaping setbacks are not included in this alternative. This alternative adds vehicular capacity to existing US 180 by adding two additional general purpose lanes (one south-bound, one north-bound) that do not currently exist. It is suggested that sidewalks be maintained where they currently exist today on both sides of US 180 (generally) from Beal Road to Columbus Avenue. The FUTS would also be maintained on the south side of US 180 as a protected (by the guard rail) shared use path.

Figure 9-3: US 180 System Alternative 3 Cross-Section



### 4. US 180 AM and PM Peak Managed Lane from Meade Street south to Downtown (Reversible Center Lane)

This Preliminary System Alternative that proposes a managed lane for the US 180 roadway segment that experiences congestion issues in the most “urban” segments of US 180 adjacent to residential neighborhoods at the gateway to downtown Flagstaff. From Meade Lane to Anderson Avenue, 90 feet of right-of-way currently exists. From Anderson Avenue to Forest Avenue, 65 feet of right-of-way exists. As a proposed “urban roadway section”, this System Alternative proposes to include sidewalks on both sides, bike lanes on both sides and maintain the FUTS on the south side of the roadway. In some locations, some or all of these facilities exist (for this roadway segment), in some cases they do not. For



purposes of this Preliminary System Alternative, a “complete street” that provides for all modes is identified.

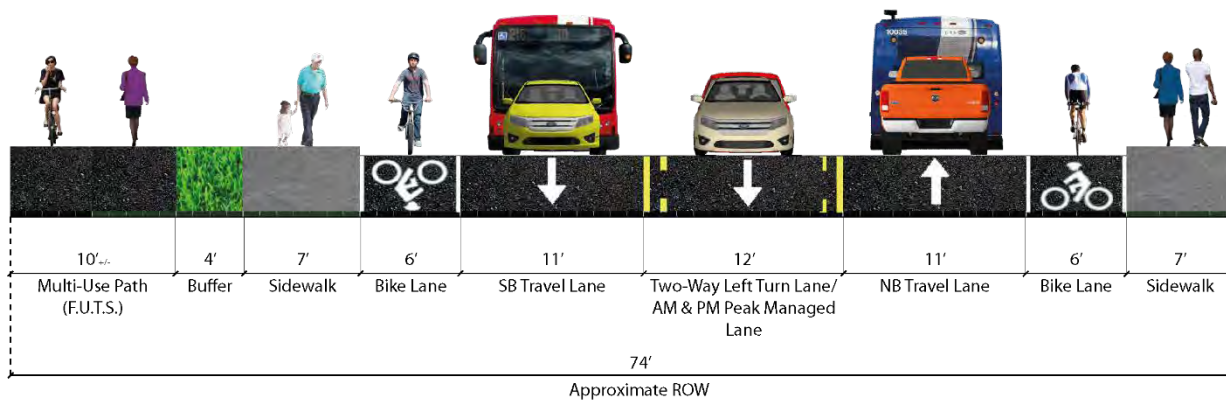
A “Reversible Lane” as the name implies, is a concept in which the middle traffic lane may travel in either direction, depending upon the time, day and/or operation sign/signal displayed. Reversible traffic lanes add capacity to a road and decrease congestion by borrowing capacity from the other (off-peak) direction. This holds especially true in situations where options for expanding the existing right of way are limited (existing right-of-way on Humphrey’s Street is 50 feet) or when traffic in the corridor is heavily imbalanced for a short period of time such as leading to/from a special event.

The concept is often referred to by FHWA and transportation professionals, as “managed lanes” in that high demand on existing facilities, such as US 180, especially at peak demands are placed on the roadway, it necessitates the efficient management of those facilities. This alternative is displayed in **Figure 9-4.**

There are a wide variety and combination of approaches to managed lane operations. These have typically encompassed such methods as:

- Static signing and striping
- Changeable message signs
- Lane Controls
- Temporary traffic control devices
- Law enforcement / legal restrictions
- Economic incentives / disincentives

**Figure 9-4: US 180 System Alternative 4 Cross-Section\***



*\*Detailed traffic studies are necessary to apply this concept to any arterial/highway such as US 180 to address matters safety, access management (especially with the high number of existing driveways) and multimodal considerations.*



## 5. Humphrey’s Street One Way Northbound for AM Peak & One Way Southbound for PM Peak, and right turn capacity at Beaver Street and Columbus, and Humphrey’s Street and SR 40B

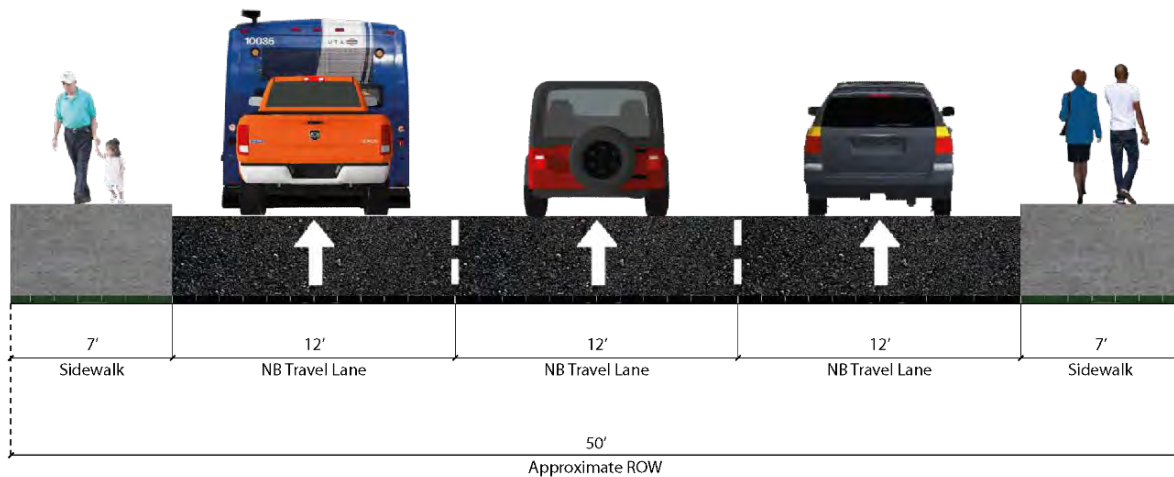
This Preliminary System Alternative calls for Humphrey’s Street between Business 40 and Columbus Street to convert both general purpose lanes and center turn lane into one-way directional traffic flows – northbound for the AM peak and southbound for the PM peak.

An eastbound right turn lane on Columbus to Beaver Street is suggested to complement this alternative by helping mitigate southbound PM peak volumes as an alternative to Humphrey’s Street. Two southbound right turn lanes to west bound Business 40 is also suggested. **Figure 9-5** depicts the northbound AM peak condition only.

There are a wide variety and combination of approaches to managed lane operations. These have typically encompassed such methods as:

- Static signing and striping
- Changeable message signs
- Lane control signals
- Temporary traffic control devices
- Law enforcement / legal restrictions
- Economic incentives / disincentives

**Figure 9-5: US 180 System Alternative 5 Cross-Section\***



*\*Detailed traffic studies are necessary to apply this concept to any arterial/highway such as US 180 to address matters safety, access management (especially with the high number of existing driveways) and multimodal considerations.*

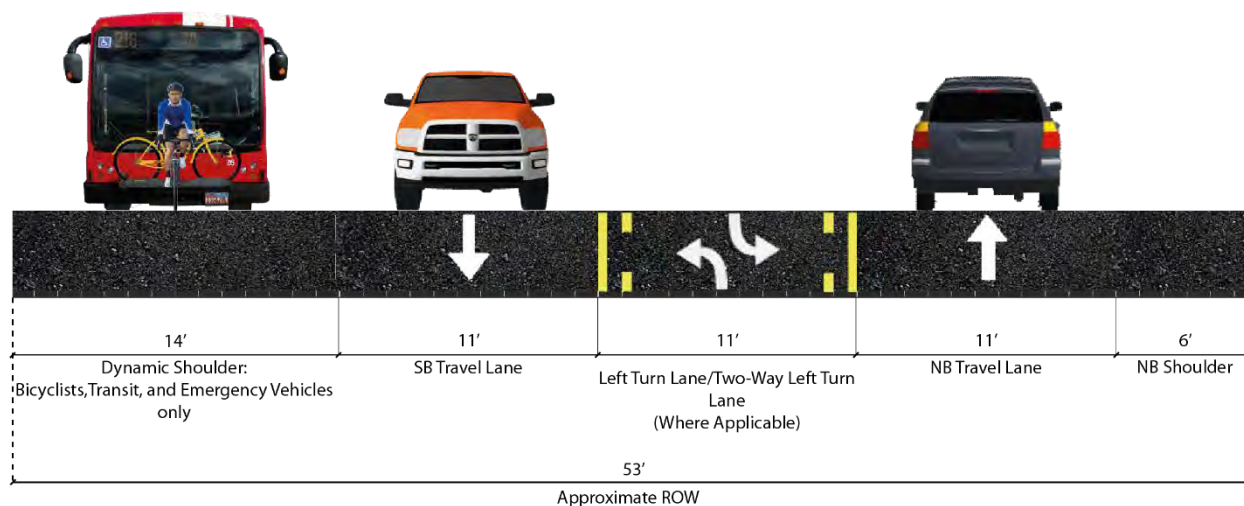
## 6. Dynamic Southbound Shoulder

System Alternative 6 would generally have minimal impact and does not require substantial amounts of additional right-of-way. Similar to a typical roadway shoulder, the dynamic shoulder would allow the use of pedestrians and bicyclists; but what separates the dynamic shoulder from a standard shoulder is during winter peak traffic congestion, the dynamic shoulder would support the use of transit and emergency vehicles to bypass vehicle congestion on US 180 general purpose lanes. However,



pedestrians and bicyclists traversing on the shoulder would have to yield to both emergency and transit vehicles. Signage would need to be placed at appropriate intervals that would indicate the south bound shoulder is only permitted to non-motorized travel, and emergency and transit vehicles during winter peak traffic congestion. **Figure 9-6** is a graphic representation of System Alternative 6 during winter peak traffic.

**Figure 9-6: US 180 System Alternative 6 Cross Section**



### Alternate Routes to US 180

Alternative Route Preliminary System Alternatives are intended to explore other potential roadway corridor options besides US 180 itself for establishing supportive routes to disperse peak volumes and potentially reducing traffic congestion on US 180. US 180 serves as the primary roadway corridor to and from the snow recreation areas in the Flagstaff area. There are however, a series of possible alternative routes that are contemplated to redirect traffic at select segments of existing and future planned roadways. The US 180 Alternative Routes are depicted in **Figure 9-7** and include:

- Columbus Avenue to Switzer Canyon Drive to Route 66,
- Columbus Avenue to Beaver Street to Butler Avenue (Southbound One Way) & Butler Avenue to San Francisco Street to Columbus Drive,
- Forest Avenue to Turquoise Drive to Switzer Canyon Drive to Route 66,
- Cable Propelled Gondola,
- Milton Road to West Route 66 to Flagstaff Ranch Road to I-40,
- Lone Tree Road,
- Mike’s Pike Street/Future Overpass/Humphrey’s Street one way northbound & Kendrick Street/Sitgreaves Street/existing underpass to Milton Road southbound,
- Milton Road to West Route 66 to Woodland’s Village Boulevard to Beulah Boulevard to John Wesley Powell Boulevard to I-17 South,

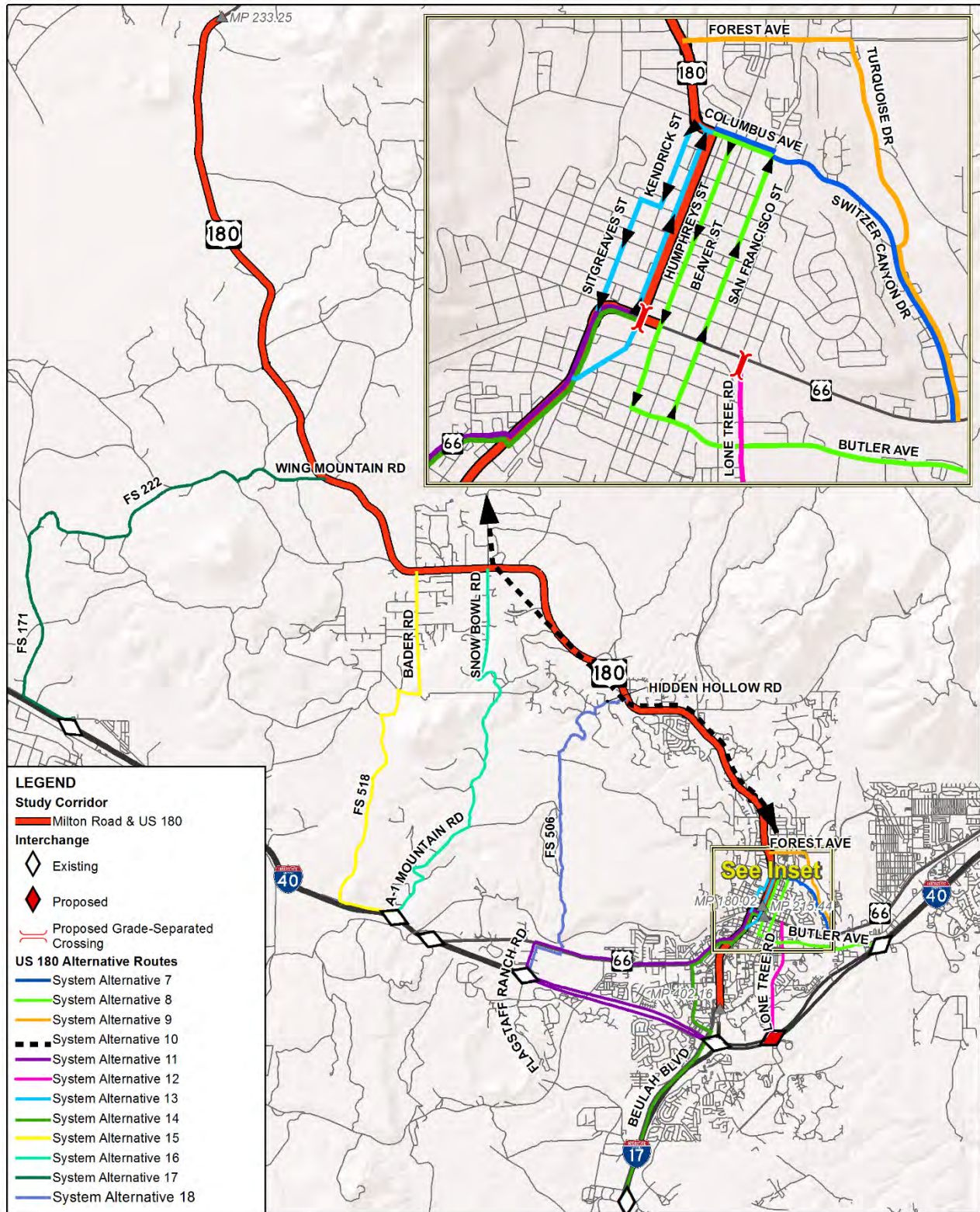


- Bader Road to FS 518 to A-1 Mountain Road to I-40,
- Snow Bowl Road to A-1 Mountain Road to I-40, and
- Wing Mountain Road to FS Road 222 to FS Road 111.





Figure 9-7: US 180 Alternative Routes





## 7. Columbus Avenue to Switzer Canyon Drive to Route 66

As **Figure 9-8** shows, this Preliminary Alternate route would focus upon travelers utilizing Columbus Avenue to Switzer Canyon Drive to Route 66 as an alternative to avoiding the typical congestion occurring on Humphrey’s Street. Columbus Avenue and Switzer Canyon Drive are three-lane collector roadways that consist of two general purpose lanes and a center turn lane except for the southern segment of Switzer Canyon from Turquoise Drive to Route 66 which is a two-lane collector roadway with no center turn lane. Intersection management at Columbus Avenue and US 180/Humphrey’s Street will be a major component to this alternative route.

This Preliminary Alternative Route would primarily benefit the winter recreation PM peak southbound traffic. Travelers with southern destinations (Phoenix/Tucson) could proceed east on Route 66 to Ponderosa Parkway, then to Butler Avenue and its interchange with I-40 west to then proceed to I-17 south.

**Figure 9-8: US 180 System Alternative 7**



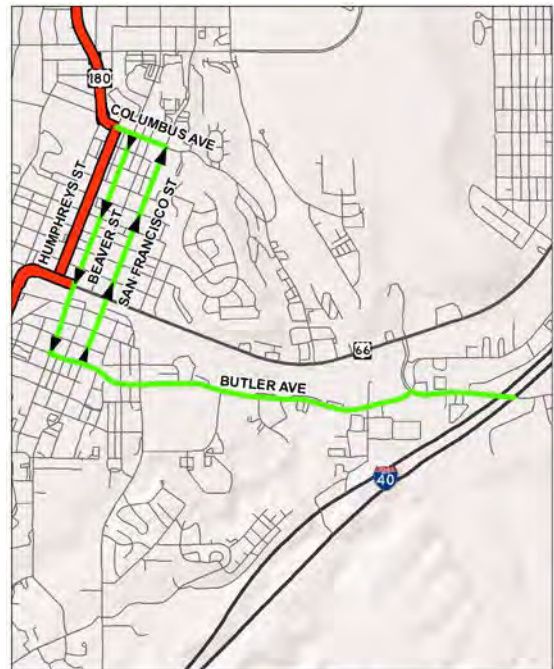
## 8. Columbus Avenue to Beaver Street to Butler Avenue, (Southbound One Way) & Butler Avenue to San Francisco Street to Columbus Drive (Northbound One Way)

As **Figure 9-9** shows, this Preliminary System Alternate Route would focus upon southbound US 180 PM peak vehicles by utilizing Columbus Avenue to Beaver Street (southbound only directional flows). Beaver Street currently has an at-grade crossing of the BNSF railway mainline and continues to its intersection with Butler Avenue. Vehicles could opt to turn west on Butler to intersect with Milton, but would likely prefer to travel east on Butler Avenue to the I-40 interchange in order to avoid the southbound PM peak congestion on Milton Road. Intersection management at Columbus Avenue and US 180/Humphrey’s Street will be a major component to this alternative route.

Columbus Avenue is three-lane collector roadway that consists of two general purpose lanes and a center turn lane. There is no dedicated right turn onto southbound Beaver Street and the lack of distance and minimal stacking depth from the Humphrey’s Street intersection is a constraint. Beaver Street is a two-lane, one-way southbound roadway with on street parking in a downtown, pedestrian scale setting that also possess a likely constraint to this alternative route.

The northbound AM Peak direction would propose Butler Street to San Francisco Street (at grade crossing of the BNSF railway mainline) to westbound Columbus Drive. San Francisco Street is a two-lane roadway with on street parking in a downtown, pedestrian scale setting like Beaver Street, which likely possess a constraint to a safe and comfortable carrying capacity of high vehicle volumes. San Francisco Street does possess moderate to generous west bound turning movement storage onto westbound Columbus Street.

**Figure 9-9: US 180 System Alternative 8**



## 9. Forest Avenue to Turquoise Drive to Switzer Canyon Drive to Route 66

This Preliminary System Alternate Route (Figure 9-10) could possibly assist AM peak northbound and PM peak southbound vehicles, though the route is a bit more circuitous in nature. Southbound US 180 does have a dedicated left turn lane at Forest Avenue with moderate storage. Forest Avenue is a three-lane collector roadway that consists of two general purpose lanes and a center turn lane with bike lanes on both sides of the roadway to its intersection with San Francisco Street. Forest Avenue does have fairly steep grades in areas that may pose safety concerns in winter conditions. From San Francisco Street east to Turquoise Drive, Forest Avenue is a five-lane facility with four general purpose lanes and a center turn lane. Forest Avenue serves as the primary access to the Flagstaff Medical Center and single family residential homes to the north.

Turquoise Drive is a low volume two-lane facility serving mostly single family residential uses and has sweeping radius at its southern terminus leading to its intersection with Switzer Canyon Drive. The southbound left turn lane has little to moderate storage capacity. Switzer Canyon Drive from Turquoise Drive to Route 66 is a two-lane collector roadway with no center turn lane.

Figure 9-10: US 180 System Alternative 9



## 10. Cable Propelled Gondola

High speed gondolas are used in some ski resort towns in the United States and abroad to alleviate winter recreation congestion. Conceptually, a gondola system for Flagstaff's winter recreation needs would connect downtown to Snow Bowl. The cable propelled gondola was initially identified as a possible long-term alternative in the US 180 Winter Traffic Study. The study notes that more detailed studies would be necessary to explore the economic cost effectiveness and environmental practicality of a gondola system with respect to its potential to be situated in proximity to the environmentally and culturally sensitive Kachina Peaks Wilderness Area. Project Partners had a discussion about the complexity and sensitivity of the cable propelled gondola and all agreed to eliminate this preliminary alternative from consideration in the US 180 CMP.

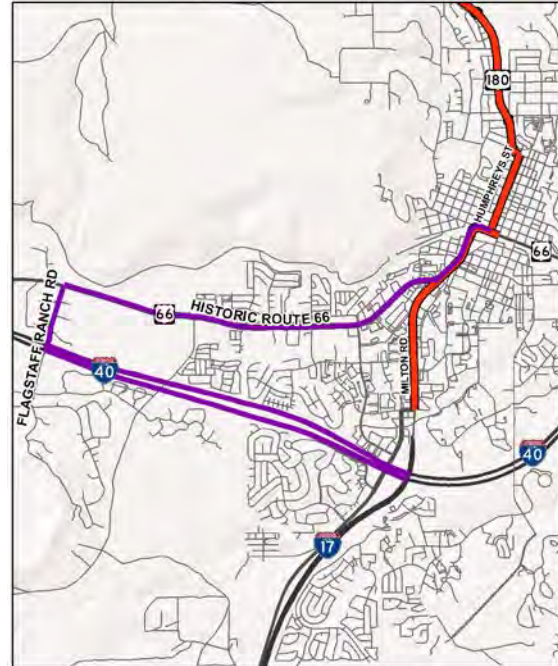


## 11. Milton Road to West Route 66 to Flagstaff Ranch Road to I-40

Intended to partially alleviate the winter recreation southbound PM peak, this Preliminary System Alternate Route would divert southbound PM peak vehicles off Milton Road to West Route 66. The southbound approach to West Route 66 does have a dedicated right turn lane with approximately 250 feet of storage. Vehicles would travel for three miles west on West Route 66 to Flagstaff Ranch Road. West Route 66 is a five-lane roadway with four general purpose lanes and a center turn lane from Milton Road to Pinnacle Street where the roadway narrows to one west bound lane, two eastbound lanes and a center turn lane to its intersection with Woodland’s Village Boulevard. West of Woodland’s Village Boulevard, West Route 66 again narrows to a three-lane roadway that includes two general purpose lanes and a center turn lane.

Flagstaff Ranch Road offers full traffic interchange access to I-40 where the majority of winter recreation vehicles likely will continue approximately 2.75 miles to I-17 South. Please see **Figure 9-11** for an illustration of this Preliminary Alternate alignment.

**Figure 9-11: US 180 System Alternative 11**



## 12. Lone Tree Road (assuming TI at I-40 and connection to Route 66)

This Preliminary System Alternate Route would focus upon the use and potential expansion of Lone Tree Road to provide supplemental capacity to Milton Road. Currently, Lone Tree Road is located approximately ¼ of a mile due east of Milton Road and is generally a two-lane collector roadway that primarily serves access for local destinations. The Flagstaff Regional Plan calls for Lone Tree Road to ultimately connect JW Powell Boulevard and downtown Flagstaff.

The Lone Tree Road Corridor Study, completed in 2006, underscores the need to establish additional north-south links within the central portions of Flagstaff. However, the study also notes that significant features such as a traffic interchange to connect with I-40 and grade separated crossing of the BNSF railway mainline are instrumental facilities to enhance the local and regional effectiveness of Lone Tree Road (and therefore congestion reduction of Milton Road).

The Preferred Alternative (**Figure 9-12**) from the Lone Tree Road Corridor Study recommends a 100-foot right-of-way whose typical roadway section consists of four general purpose travel lanes (two in each direction), a raised median, on street bicycle lanes, pathways on both sides, a sidewalk on one side and a FUTS trail on one side.



**Figure 9-12: US 180 System Alternative 12**



Source: Lone Tree Corridor Study, DMJM Harris | AECOM 2006





### 13. Mike’s Pike Street to a Future Overpass to Humphrey’s Street one-way northbound (AM Peak) & Kendrick Street to Sitgreaves Street to existing underpass to Milton Road southbound (PM Peak)

This Preliminary System Alternate Route is intended to bypass the usual northbound congestion between the Milton Road curvature and BNSF underpass to the Route 66/Humphrey’s Street intersection. As shown in **Figure 9-13**, this Preliminary System Alternate Route proposes to have northbound AM Peak vehicles divert off Milton Road at Mike’s Pike Street at a northbound one-way managed lane to a future proposed overpass of the BNSF railway mainline to Humphrey’s Street. Humphrey’s Street would then utilize a managed lane concept as well to accommodate one-way AM peak flows to its intersection with Columbus Avenue.

**Figure 9-13: US 180 System Alternative 13**



The northbound leg of this Preliminary System Alternate Route would constitute a long-term solution as a proposed overpass requiring right-of-way acquisition, design and construction is needed. Detailed design studies would be necessary to evaluate the appropriateness of the overpass and the impact of its merging grade onto Humphrey’s Street with daily traffic functions of Humphrey’s Street and the surrounding land uses. Also, a traffic impact analysis to evaluate the potential use of Mike’s Pike as a one-way northbound roadway (managed lanes) for winter recreation weekends only is suggested, particularly with the ongoing and planned redevelopment activities adjacent to Mike’s Pike.

The southbound leg of this Preliminary System Alternate Route would utilize managed one-way lanes and would consist of southbound PM peak vehicles turning right onto Kendrick Street to reduce congestion on Humphrey’s Street. There would likely need to be a double southbound right turn lane on US 180 to Kendrick Street. Kendrick Street is a two-lane local street with on street parking adjacent to Flagstaff High School. The construction of mid-block crossing or a HAWK on Kendricks Street would be necessary on to insure there is a safe and controlled crossing between Flagstaff Highschool and their associated parking lot on the opposite side of Kendricks Street. Southbound vehicles would divert to Sitgreaves street via a four way stop at Elm Street, continue south on Kendrick Street to its current outlet to south Milton Road at the Santa Fe Avenue/Milton Road intersection. Sitgreaves Street is a two-lane local street with heavily utilized on street parking in a historic neighborhood which is a concern/challenge to the viability of this southbound leg. The limited storage depth of the southbound Milton Road merging lane at the underpass also warrants addition study should this Preliminary System Alternative receive further consideration in this study. In addition, the intersection of Sitgreaves Street and Route 66/Milton Road will likely need to be reconfigured to become signalized.



## 14. Milton Road to West Route 66 to Woodland’s Village Boulevard to Beulah Boulevard to John Wesley Powell Boulevard to I-17 South

Primarily intended to partially alleviate the winter recreation southbound PM peak, this Preliminary System Alternate Route (**Figure 9-14**) would divert southbound PM peak vehicles off Milton Road to West Route 66. The southbound approach to West Route 66 does have a dedicated right turn lane with approximately 250 feet of storage. Vehicles would travel for three miles west on West Route 66 to Flagstaff Ranch Road. West Route 66 is a five-lane roadway with four general purpose lanes and a center turn lane from Milton Road to Pinnacle Street where the roadway narrows to one westbound lane, two eastbound lanes and a center turn lane to its intersection with Woodland’s Village Boulevard.

Vehicles would then travel south on Woodland’s Village Boulevard for approximately one mile to Beulah Boulevard. The dedicated left turn lane from westbound Route 66 to southbound Woodland’s Village Boulevard has moderate storage depth (approximately 135-feet) and would likely require further study and extension to accommodate an increase in winter recreation PM peak volumes.

Woodland’s Village Boulevard is a four-lane divided, access controlled, collector roadway with two general purpose southbound travel lanes to Beulah Boulevard. At its approach to Beulah Boulevard, the outside general purpose lane transitions to a dedicated right turn lane to southbound Beulah Boulevard.

Avoiding the congestion on Milton Road, southbound travels remain on Beulah Boulevard approximately 2.75 miles to the JW Powell traffic interchange to I-17 south. Beulah Boulevard is primarily a two-lane roadway for the entire length of this leg of the route.

**Figure 9-14: US 180 System Alternative 14**



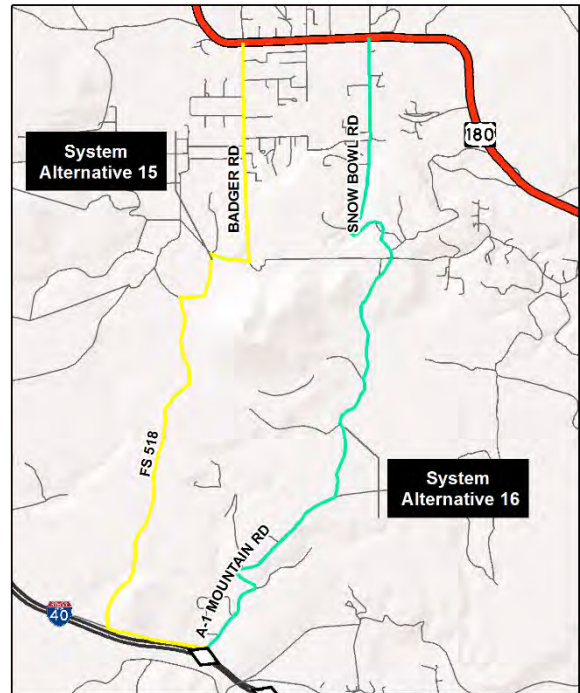
## 15. Bader Road to FS 518 to A-1 Mountain Road to I-40

As initially identified and discussed in the US 180 Winter Traffic Study, possible improvement to an existing US Forest Service road to provide a bypass to downtown Flagstaff and more direct connection between US 180 and I-40 is contemplated. Please see **Figure 9-15** for reference to the location of this Preliminary System Alternate Route. The length of this proposed route is 7.6 miles.

As noted in the US 180 Winter Traffic Study, this is a long-term solution that would require extensive coordination with Coconino County, the US Forest Service and would require federal environmental clearance. Funding sources for road improvements and maintenance would also need to be identified. Concerns about this alternative’s possible encroachment and disruption to the rural lifestyle and land use character of the Fort Valley/Baderville area is also an important consideration.

This Preliminary System Alternate Route would likely only contemplate a seasonal a temporary use of this roadway during peak winter recreation periods. Additional discussion by the Project Partners and stakeholders is needed to determine the level of roadway design for such a roadway. The US 180 Winter Traffic Study identifies a two-lane paved road section with eight foot shoulders, however other variations in design could be contemplated.

**Figure 9-15: US 180 System Alternative 15**





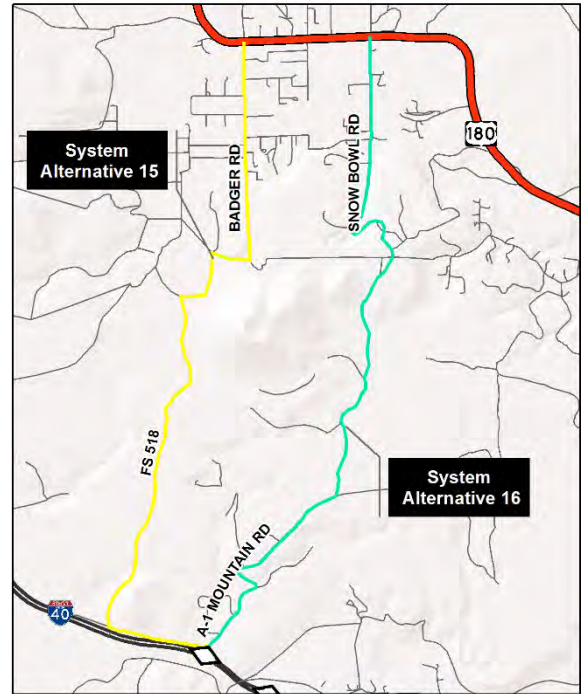
**16. Snow Bowl Road to A-1 Mountain Road to I-40**

As initially identified and discussed in the US 180 Winter Traffic Study, possible improvement to an existing Forest Service road to provide a bypass to downtown Flagstaff and more direct connection between US 180 and I-40 is contemplated. Please see **Figure 9-16** for reference to the location of this Preliminary System Alternate Route. The length of this proposed route is 7.3 miles.

As noted in the US 180 Winter Traffic Study, this is a long-term solution that would require extensive coordination with Coconino County and the Coconino National Forest and would require federal environmental clearance. The lighting options would need to be low-profile due to the proximity to the Naval Observatory. Funding sources for road improvements and maintenance would also need to be identified.

This Preliminary System Alternate Route would likely only contemplate a seasonal a temporary use of this roadway during peak winter recreation periods. Additional discussion by the Project Partners and stakeholders is needed to determine the level of roadway design for such a roadway. The US 180 Winter Traffic Study identifies a two-lane paved road section with eight foot shoulders, however other variations in design could be contemplated.

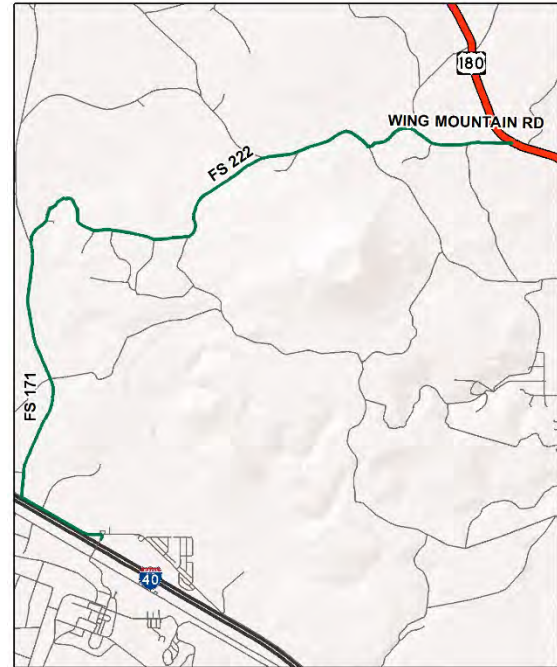
**Figure 9-16: US 180 System Alternative 16**



**17. Wing Mountain Road (FS 222B) to FS 222 to FS 171 to I-40**

System Alternatives 16 and 17 were formerly proposed by the US 180 Winter Traffic Study as alternative routes to directly connect US 180 to I-40. Local resident concerns regarding their proximity to rural residential properties off Bader Road and Snow Bowl Road has prompted the need to explore other viable alternative routes.

**Figure 9-17: US 180 System Alternative 17**



**Figure 9-17** illustrates US 180 System Alternative 17 which is 3.7 miles west of Snow Bowl Road. System Alternative 17 is a 10.3 mile connection to I-40 through Belmont, AZ utilizing the Wing Mountain access road (FS 222B) to Forest Service Roads 222 and 171.

This is a long-term solution that would require extensive coordination with Coconino County and the Coconino National Forest and would require federal environmental clearance. The lighting options would need to be low-profile due to the proximity to the Naval Observatory. Funding sources for road improvements and maintenance would also need to be identified.

This Preliminary System Alternate Route would likely only contemplate a seasonal a temporary use of this roadway during peak winter recreation periods. This alternative is longer than the other proposed alternative routes which would result in higher costs and additional coordination. Additional discussion by the Project Partners and stakeholders is needed to determine the level of roadway design.



**18. Hidden Hollow Road to FS 506 to Route 66 to I-40**

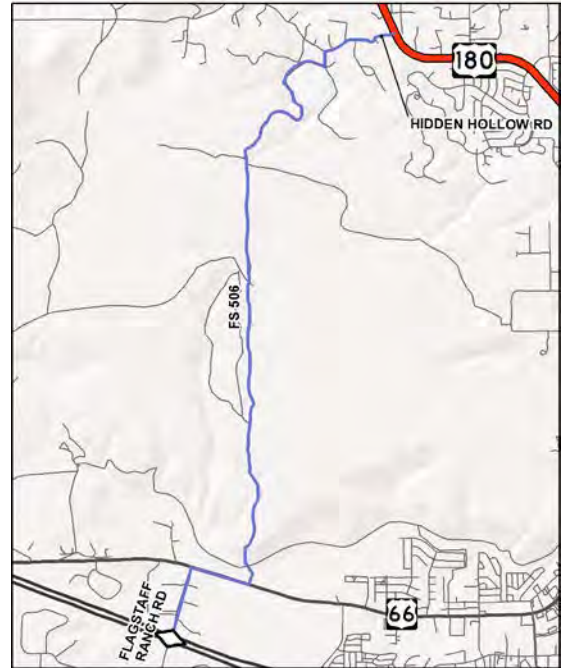
System Alternative 18, as shown in **Figure 9-18**, is a 5.5 mile alternative route that utilizes existing forest service roads to bypass Flagstaff by connecting US 180 to I-40. Travelers leaving Snow Bowl would head towards Flagstaff on US 180 and make a right turn onto Hidden Hollow Road for approximately ½ a mile to access FS 506. A southbound right turn deceleration lane on US 180 approaching Hidden Hollow Road will likely be necessary. Visitors would then travel on FS 506 for roughly four miles to run up and over Observatory Mesa to connect with Route 66 between Woody Mountain Road and Flagstaff Ranch Road before reaching I-40. This alternative does intersect with the BNSF railroad and BNSF would likely not allow an at-grade crossing, so an overpass would likely need to be constructed in order to fulfill this alternative route.

This is a long-term solution that would require extensive coordination with Coconino County and the Coconino National Forest and would require federal environmental clearance. The lighting options would need to be low-profile due to the proximity to the Naval Observatory.

Funding sources for road improvements and maintenance would also need to be identified.

This Preliminary System Alternate Route would likely only contemplate a seasonal a temporary use of this roadway during peak winter recreation periods. Additional discussion by the Project Partners and stakeholders is needed to determine the level of roadway design.

**Figure 9-18: System Alternative 18**



## References Cited

Bowler, Maggie R.

- 2012 *A Cultural Resources Survey of 59.15 Acres along US Highway 180, within and outside ADOT Right-of-way, between milepost 216.20 and milepost 224.06, in Flagstaff, Coconino County, Arizona.* Report no. AZG0907-099. AZTEC Engineering, Phoenix.

Coconino County

- 2017 Coconino County Arizona Assessor. Electronic Document, <http://www.coconino.az.gov/119/Assessor>, accessed October 11, 2017.

Federal Highway Administration, Arizona Department of Transportation, and Arizona State Historic Preservation Office

- 2002 Interim Procedures for the Treatment of Historic Roads. 15 November, 2002.

Lonardo, Cara

- 2006 *A Cultural Resources Survey of State Route 40 Business Between Mileposts 193.2 and 197.2, Flagstaff, Coconino County, Arizona.* Technical Report No. 065026. Logan Simpson Design, Tempe.

Motley Design Group, LLC

- 2012 An Historic Resource Survey of Route 66 in Arizona. Manuscript on file, Arizona State Historic Preservation Office, Phoenix.

Olberding, Susan Deaver

- 1998 *National Register of Historic Places Nomination Form: USFS Fort valley Experimental Forest Station Historic District.* Manuscript on file, Arizona State Historic Preservation Office, Phoenix.

Stone, Lyle M.

- 1985 *Cultural Resource Survey of a Proposed Highway Reconstruction Project on U.S. 89/66 (Santa Fe Avenue) in Flagstaff, Coconino County, Arizona.* ADOT Project No. M-951-6(1). Archaeological Research Services, Tempe.

U.S. Geological Survey

- 2017 USGS Earth Explorer Online Data. Electronic Document, <https://earthexplorer.usgs.gov/>, accessed August 24, 2017.

Weaver, Donald E., Jr.

- 1992 *An Archaeological Survey of 2.8 Miles of the US 180 Right-of-Way between Mileposts 220 and 222.8 Northwest of Flagstaff, Coconino County, Arizona.* Plateau Mountain Desert Research, Flagstaff.





Wilson, Majorie

1975 *National Register of Historic Places Inventory Form: The Homestead*. Manuscript on file, Arizona State Historic Preservation Office, Phoenix.

Woodward, James, and Pat Stein

1985 *National Register of Historic Places Nomination Form: Flagstaff Townsite Historic Residential District*. Manuscript on file, Arizona State Historic Preservation Office, Phoenix.

Woodward, James W.

1985 Historic Resources of Flagstaff (Flagstaff Multiple Resource Area). National Register of Historic Places Nomination Form. Manuscript on file, State Historic Preservation Office, Phoenix.

Woodward, James W., Pat Stein, and Deborah House

1985 National Register of Historic Places Nomination Form: North End Historic Residential District. State Historic Preservation Office, Phoenix.



# Appendix C – Public Open House #1 Summary Report

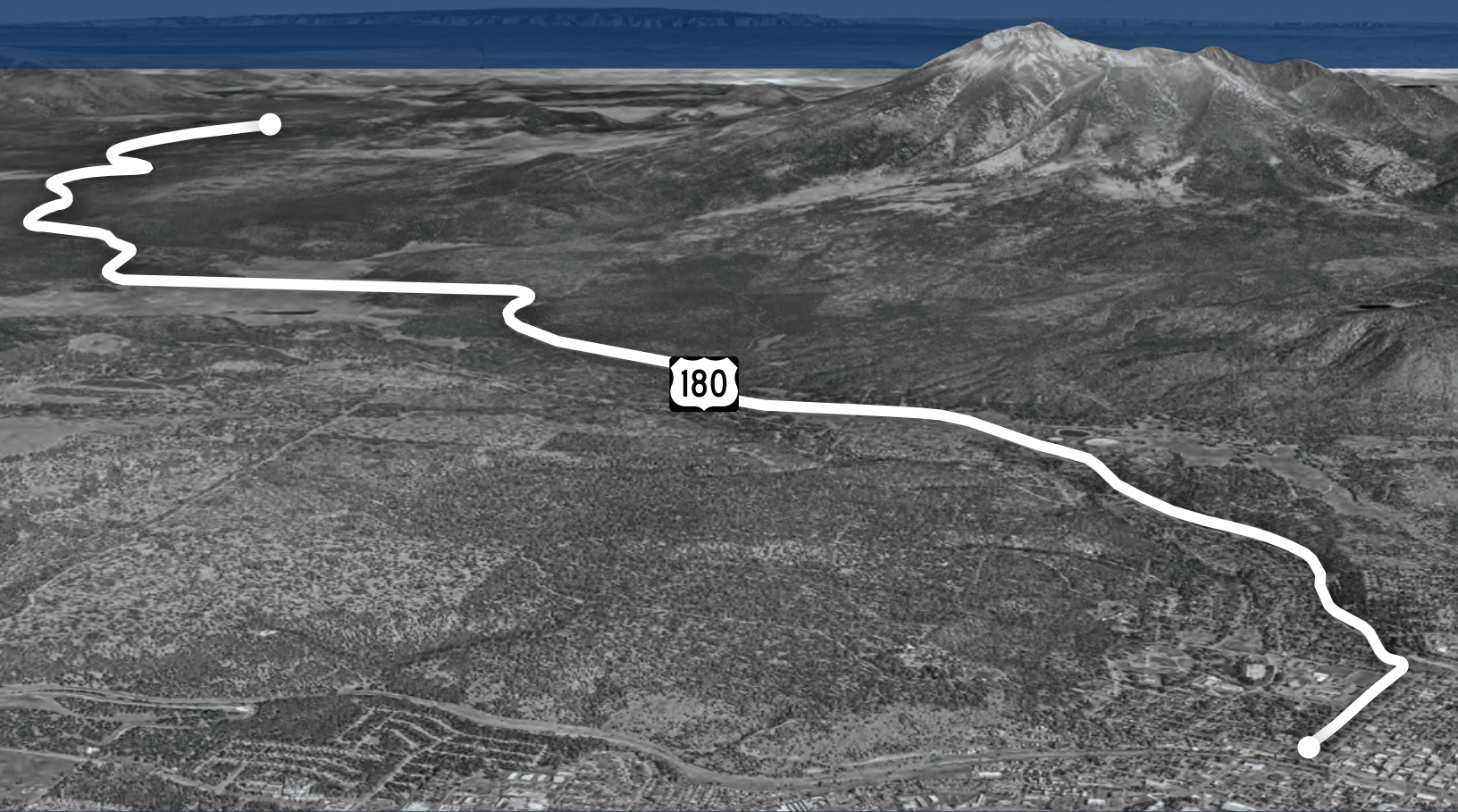


# ADOT

## US 180 Corridor Master Plan

Public Open House Meeting #1:  
Meeting Summary Report

June 2018



**Michael Baker**  
INTERNATIONAL

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## PURPOSE OF THE US 180 CORRIDOR MASTER PLAN

### Introduction

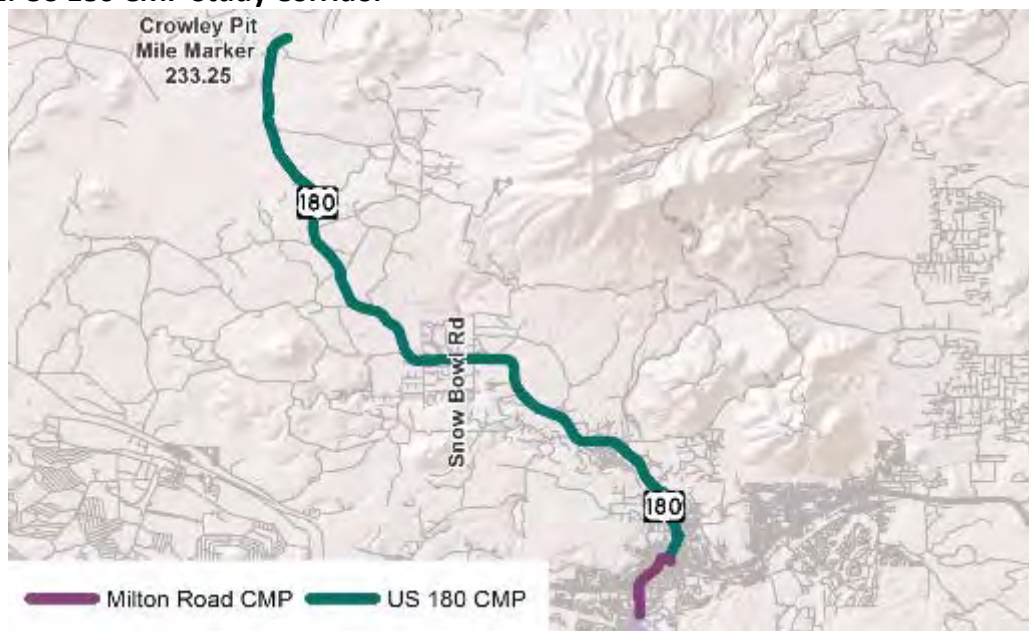
The Arizona Department of Transportation (ADOT) in conjunction with the Federal Highway Administration (FHWA), City of Flagstaff, Flagstaff Metropolitan Planning Organization (FMPO), and other project partners are studying potential improvements to US 180 between mile post 215.44 and mile post 233.25 (see **Figure 1** for map of study corridor).

The purpose of the US 180 Corridor Master Plan (CMP) is to identify a 20-year vision for the US 180 corridor that addresses current safety and traffic congestion issues by evaluating a mixture of previously recommended and newly introduced System Alternatives. These System Alternatives include a mix of alternatives that utilize and maintain the existing US 180 right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the US 180 corridor itself.

The System Alternatives are also complemented by a series of Base Build Spot Improvements – which constitute targeted, near term low investment mitigation measures that support mid and long-term System Alternatives.

The US 180 CMP process will include an extensive public and stakeholder involvement process that consists a thorough and community-vetted, quantitative evaluation criteria exercise for the evaluation of the System Alternatives to ultimately reach a set of preferred System Alternative(s) and achieve an informed consensus by the Project Partners, stakeholders and citizens.

**Figure 1: US 180 CMP Study Corridor**



## PUBLIC OPEN HOUSE MEETING #1 PURPOSE

As part of the project process, the Public Open House Meeting #1 was held to introduce the project and obtain public and stakeholder input regarding the System Alternatives. This Report documents the process following up to the public open house, the format of the Public Open House Meeting #1 that was held to solicit public comments, and summarizes the results and the comments received at the meeting. This report also provides a summary of all comments received by May 31, 2018.

The purpose of the Public Open House Meeting #1 was to provide an introduction to the study and preliminary information regarding the study process, and to display the preliminary universe of system alternatives for the US 180 Study Corridor. In addition, this was also an opportunity for attendees to ask questions submit comments, and participate in a sticky-dot voting exercise for each alternative to lead to a list of preferred alternatives. Approximately of 186 people attended the public open house.

## PUBLIC OPEN HOUSE MEETING #1 NOTIFICATION PROCEDURES

ADOT held the US 180 CMP Public Open House Meeting #1 on May 3, 2018. Public outreach methods included sending out mailers to residents adjacent to the US 180 study corridor, playing radio advertisements, posting social media announcements, and displaying paper and online newspaper advertisements. This section represents a summary of the outreach.

### Newspaper Advertisements

Newspaper advertisements providing the date and location of the US 180 CMP Public Open House Meeting #1 were published in the following newspapers:

- Daily Sun News (April 24, 2018)

Copies of the advertisement can be found in Appendix A.

### Online Newspaper Advertisements

The Public Open House Meeting #1 information, date, and time were also released to the public as another method to notify community members. The following websites published an advertisement for the meeting:

- Norther Arizona Gazette ([www.northernarizonagazette.com](http://www.northernarizonagazette.com))
- ADOT Media Center ([www.azdot.gov/media/News/news-release.com](http://www.azdot.gov/media/News/news-release.com))
- Flagstaff Biking ([www.http://flagstaffbiking.org](http://www.flagstaffbiking.org))
- Arizona Daily Sun ([ww.azdailysun.com](http://www.azdailysun.com))
- Northern Arizona’s Locally Owned News Paper ([www.flagstaffbusinessnews.com](http://www.flagstaffbusinessnews.com))

### Social Media

Multiple Project Partners utilized their respective Facebook pages to advertise the Public Open House Meeting #1 to the community. The following agencies/municipalities posted on their Facebook pages:

- City of Flagstaff Facebook



- ADOT Facebook
- NAIPTA Mountain Line Facebook
- Coconino County

## Website

The project website was developed and the web address was published on all informational materials. Public meeting information and project details were provided on the website: [www.azdot.gov/US180CorridorMasterPlan](http://www.azdot.gov/US180CorridorMasterPlan)

## PUBLIC OPEN HOUSE MEETING #1 FORMAT

### Introduction

The US 180 CMP Public Open House Meeting #1 was held on May 3, 2018 from 6:00 p.m. to 8:00 p.m. at The Commons at Flagstaff High School, 400 W. Elm Avenue, Flagstaff, Arizona 86001. The Public Open House Meeting #1 began with attendee registration at the entrance, where attendees were asked to sign-in and were provided an agenda of the meeting with a “road map” of the meeting room layout. The sign-in sheets were created to update the mailing list as well as account for the number of attendees. A copy of the sign-in sheets can be found in Appendix B. Attendees were then asked to participate in a pinning exercise which asked them to place a pin on a map (**Figure 2**) approximately where they lived. This exercise was widely accepted and appreciated by the attendees, which provided useful geographical reference behind the feedback and comments received at the meeting. The results from the map pinning exercise can be found in Appendix C.

**Figure 2: Pinning Exercise Map**



### Presentation

At 6:15 p.m. the consultant project manager, Kevin Kugler, gave a brief PowerPoint presentation about the study. A copy of the PowerPoint presentation can be found in Appendix D and covered the following topics:

- Welcome & Introductions
- Meeting’s Agenda
- Open House Format & Objectives
- US 180 CMP Study Corridor & Project Goals
- US 180 CMP Project Work Plan & Schedule
- Next Steps
- Methods of Providing Comments
- Q & A





Mr. Kugler began the presentation by introducing himself and welcoming all of the attendees and the Flagstaff Unified School District for hosting the meeting. Mr. Kugler then indicated that there were various colleagues and Project Partners in attendance to assist him, noting they would be wearing name tags, but did not want to take the time to introduce everyone. Mr. Kugler said he would go into a brief presentation and about the project and the format of the public meeting, and then take 3-5 questions following the presentation, but wanted to make sure all questions were answered, so additional question cards were handed out to all attendees who could fill them out and hand them in following the presentation. A copy of the question card can be found in Appendix E. Mr. Kugler then reviewed the Agenda for the evening followed by the format and objectives of the US 180 CMP Public Open House. Mr. Kugler then presented the US 180 Study Corridor, the US 180 CMP Goals, and the project process/schedule. Mr. Kugler concluded the presentation by talking about the next steps of the project and informing the attendees about the five different Stations at the meeting and described the format of the open house and the various ways to provide comments. The presentation concluded at 6:33 p.m. and the open house forum began.

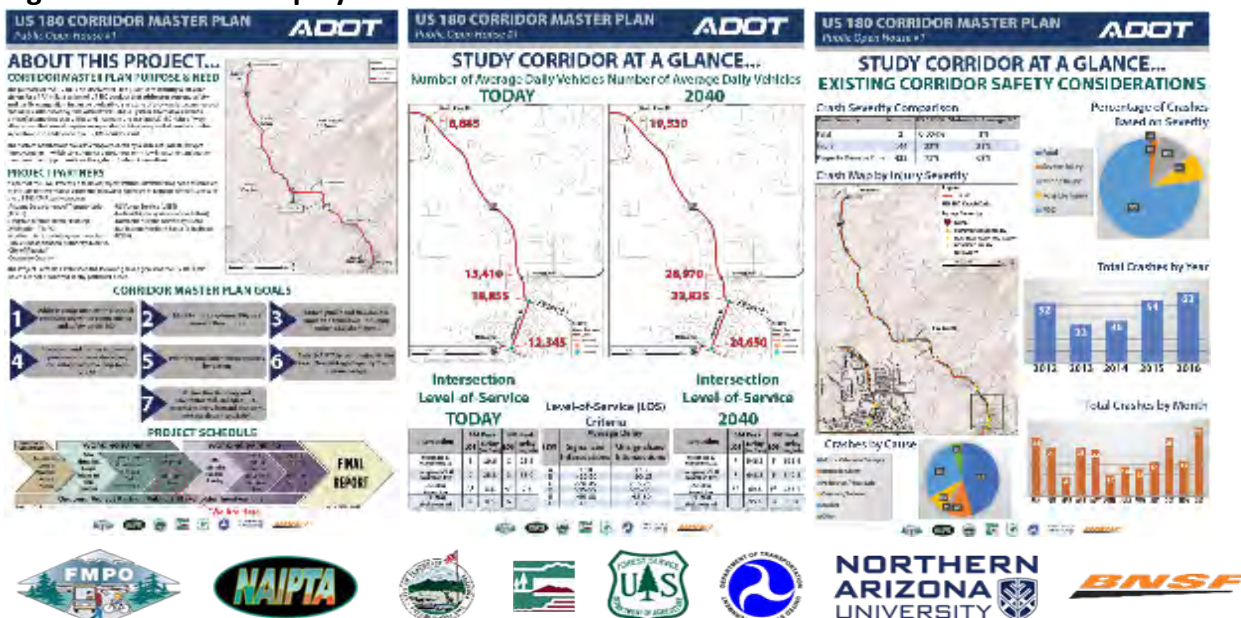
## Open House

As the open house forum began, attendees were encouraged to walk around and visit the various stations, view the displays boards of the various preliminary system alternatives, ask questions of project staff, participate in the sticky-dot prioritization exercise, and fill out a comment card for each station for additional feedback. A series of display boards were created for each of five stations describing the project and showing the universe of preliminary system alternatives. The following sections describe the Public Open House Meeting #1 stations.

### Station 1: About the Project/Study Area at a Glance

Station 1 provided a display board with information about the project, project purpose, project goals, and the project schedule. The station also included two display boards with existing and future conditions of the US 180 Study Corridor, which included current and future traffic volumes and existing crash data, patterns and trends. The three display boards in Station 1 are shown in **Figure 3** and can be found in Appendix F.

**Figure 3: Station 1 Display Boards**



### Station 2: System Alternatives Utilizing Existing Right-of-Way

Station 2 provided display boards for the three preliminary system alternatives that utilize existing right-of-way within the US 180 CMP Study Corridor which include:

- Preliminary System Alternative 1: No Build (Maintain as Is),
- Base Build Spot Improvements
- Preliminary System Alternative 2: Humphreys St Southbound PM Peak Managed Lane.

The three display boards in Station 2 are shown in **Figure 4** and can be found in Appendix G.

**Figure 4: Station 2 Display Boards**



### Station 3: System Alternatives that May Require Expanded Right-of-Way

Station 3 provided display boards for the four preliminary system alternatives that may require expanded right-of-way within the US 180 CMP Study Corridor; which include:

- Preliminary System Alternative 3: Four General Purpose Lanes, Center Median, Bike Lanes and Shoulders on both Sides
- Preliminary System Alternative 4: US 180 AM and PM Peak Managed Lane from Meade Street south to Downtown
- Preliminary System Alternative 5: Humphrey’s Street One Way Northbound for AM Peak & One Way Southbound for PM Peak, and right turn capacity at Beaver Street and Columbus, and Humphrey’s Street and SR 40B, and Preliminary
- System Alternative 6: Dynamic Southbound Shoulder.

The three display boards in Station 3 are shown in **Figure 5** and can be found in Appendix H.

**Figure 5: Station 3 Display Boards**



## Station 4: Alternative Routes to US 180

Station 4 provided display boards for the 12 preliminary system alternative routes to the US 180 CMP Study Corridor, which include:

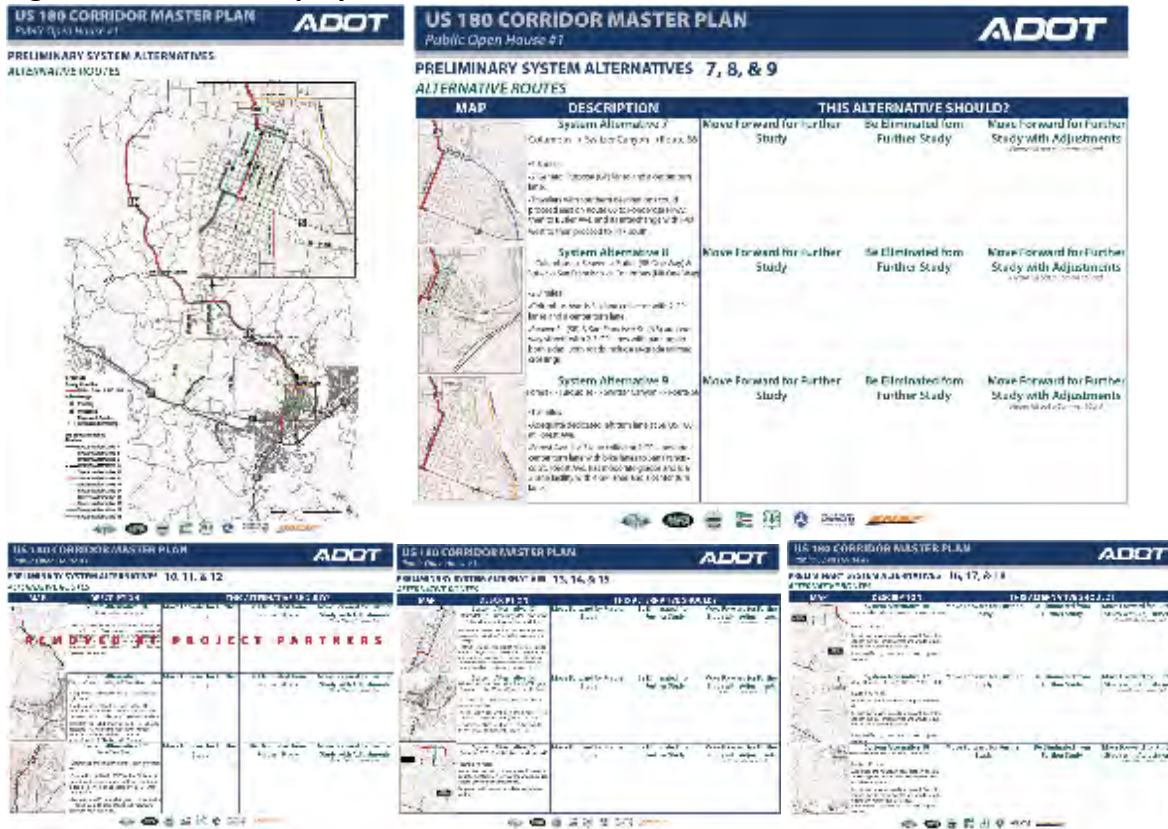
- Preliminary System Alternative 7: Columbus Avenue to Switzer Canyon Drive to Route 66
- Preliminary System Alternative 8: Columbus Avenue to Beaver Street to Butler Avenue (Southbound One Way) & Butler Avenue to San Francisco Street to Columbus Drive
- Preliminary System Alternative 9: Forest Avenue to Turquoise Drive to Switzer Canyon Drive to Route 66, Preliminary System Alternative 10: Cable Propelled Gondola
- Preliminary System Alternative 11: Milton Road to West Route 66 to Flagstaff Ranch Road to I-40 Preliminary System Alternative 12: Lone Tree Road
- Preliminary System Alternative 13: Mike's Pike Street/Future Overpass/Humphrey's Street one way northbound & Kendrick Street/Sitgreaves Street/existing underpass to Milton Road southbound, Preliminary System Alternative 14: Milton Road to West Route 66 to Woodland's Village Boulevard to Beulah Boulevard to John Wesley Powell Boulevard to I-17 South
- Preliminary System Alternative 15: Bader Road to FS 518 to A-1 Mountain Road to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Road to FS Road 222 to FS Road 111
- Preliminary System Alternative 18: Hidden Hollow Road to FS 506 to I-40

The three display boards in Station 4 are shown in **Figure 6** and can be found in Appendix I.





Figure 6: Station 4 Display Boards





## Station 5: NAIPTA Study

Northern Arizona Intergovernmental Public Transit Authority (NAIPTA) had a station describing a complementary study of how transit and transportation demand management could be used to reduce winter congestion specifically.

## Mapping Exercise

In addition to Station 1 through Station 5, there was a separate station dedicated to a mapping exercise that consisted of a series of large roll plot aerial maps of the US 180 CMP Study Corridor. These roll plot maps provided an opportunity for attendees to offer custom feedback by drawing and making notations and/or observations about US 180 directly onto the large maps. Attendees were encouraged to jot down/identify areas of typical congestion, safety concern, crashes, poor lighting, and other issues and opportunities. A copy of the results from the mapping exercise can be found in Appendix J.

## Public Comment Summary

This section presents a summary of the comments received during the Public Open House Meeting #1 meeting. The comments received were obtained in three different formats, which include questions cards, the sticky-dot prioritization exercise for the preliminary system alternatives, station comment cards, and emails sent to the project email address ([US180@mbakerintl.com](mailto:US180@mbakerintl.com)). A total of 204 comments were received as of May 31, 2018.

## Question Cards

When public meetings occur, it is critical that to make an effort to collect all public feedback and input. Question cards were handed out to during the presentation to allow the attendees an opportunity to ask a question to the project team if they did not get a chance to ask a question over the microphone during the presentation, or who may not have felt comfortable asking a question over the microphone. A total of 16 question cards were collected and can be found in Appendix K.

## Preliminary System Alternative Sticky-Dot Prioritization Exercise

The primary objective of Public Open House Meeting #1 Meeting #1 was to present the Preliminary System Alternatives for the US 180 study corridor, and seek public input to help the Project Partners determine which Preliminary System Alternatives should move forward for additional study or not. A simple sticky-dot prioritization exercise was utilized on the display boards at Stations 1-4 to capture which preliminary system alternatives were preferred or not by meeting attendees. Each participant was given 18 dot stickers (one for each alternative), and asked them to place a sticker based on whether they believed each Preliminary System Alternative should either *Move Forward for Further Study*, *Be Eliminated from Further Study*, or *Move Forward for Further Study with Adjustment*. **Table 1** shows the results of the sticky-dot prioritization exercise for each System Alternative with the total number of dots for each category. **Table 1** summarizes the feedback received through this sticky dot exercise. The Preliminary System Alternative display boards with the sticky-dot prioritization exercise results can be found in Appendix G through Appendix I.



**Table 1: Preliminary System Alternative Sticky-Dot Prioritization Exercise Results**

Station/Preliminary System Alternative	Move Forward for Further Study	Be Eliminated from Further Study	Move Forward for Further Study with Adjustment
<b>Station 2: System Alternatives Utilizing Existing Right-of-Way</b>			
<b>Preliminary System Alternative 1: No Build (Maintain as Is)</b>	Not Applicable		
<b>Base Build Spot improvements</b>	See <b>Table 2</b>		
<b>Preliminary System Alternative 2: Humphreys St Southbound PM Peak Managed Lane</b>	<b>45</b>	35	0
<b>Station 3: System Alternatives that May Require Expanded Right-of-Way</b>			
<b>Preliminary System Alternative 3: Four General Purpose Lanes, Center Median, Bike Lanes and Shoulders on both Sides</b>	51	<b>52</b>	0
<b>Preliminary System Alternative 4: US 180 AM and PM Peak Managed Lane from Meade Street south to Downtown</b>	<b>48</b>	36	0
<b>Preliminary System Alternative 5: Humphrey’s Street One Way Northbound for AM Peak &amp; One Way Southbound for PM Peak, and right turn capacity at Beaver Street and Columbus, and Humphrey’s Street and SR 40B</b>	17	<b>69</b>	1
<b>Preliminary System Alternative 6: Dynamic Southbound Shoulder</b>	<b>50</b>	28	1
<b>Station 4: Alternative Routes to US 180</b>			
<b>Preliminary System Alternative 7: Columbus Avenue to Switzer Canyon Drive to Route 66</b>	23	<b>36</b>	0
<b>Preliminary System Alternative 8: Columbus Avenue to Beaver Street to Butler Avenue (Southbound One Way) &amp; Butler Avenue to San Francisco Street to Columbus Drive</b>	4	<b>48</b>	0
<b>Preliminary System Alternative 9: Forest Avenue to Turquoise Drive to Switzer Canyon Drive to Route 66</b>	8	<b>43</b>	0
<b>Preliminary System Alternative 10: Cable Propelled Gondola</b>	Previously Removed by Project Partners		
<b>Preliminary System Alternative 11: Milton Road to West Route 66 to Flagstaff Ranch Rd to I-40</b>	4	<b>48</b>	0
<b>Preliminary System Alternative 12: Lone Tree Road</b>	<b>65</b>	19	0
<b>Preliminary System Alternative 13: Mike’s Pike Street/Future Overpass/Humphrey’s Street one way northbound &amp; Kendrick Street/Sitgreaves Street/existing underpass to Milton Road southbound</b>	10	<b>65</b>	0
<b>Preliminary System Alternative 14: Milton Road to West Route 66 to Woodland’s Village Boulevard to Beulah Boulevard to John Wesley Powell Boulevard to I-17 South</b>	10	<b>36</b>	0
<b>Preliminary System Alternative 15: Bader Road to FS 518 to A-1 Mountain Road to I-40</b>	67	<b>92</b>	0
<b>Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40</b>	56	<b>78</b>	0
<b>Preliminary System Alternative 17: Wing Mountain Road to FS Road 222 to FS Road 111</b>	<b>113</b>	28	0
<b>Preliminary System Alternative 18: Hidden Hollow Road to FS 506 to I-40</b>	<b>57</b>	56	0



In addition to the sticky-dot prioritization exercise, Public Open House Meeting #1 attendees were given the opportunity to provide additional comments on post-it notes for each preliminary system alternative. The following comments were captured on post-it notes for each preliminary system alternative:

### *Station 2: System Alternatives Utilizing Existing Right-of-Way*

#### *No Build (Maintain as Is)*

No Additional Comments were received.

#### *Base Build Spot Improvements*

This table indicates the number of supporting votes received for each type of base build spot improvement type.

**Table 2: Base Build Spot Improvements Stick-Dot Results**

BASE BUILD SPOT IMPROVEMENT TYPE	NUMBER OF SUPPORTING VOTES
Mid-Block Pedestrian Crossings	44
Pedestrian/Bicycle Overpass	62
Pedestrian/Bicycle Underpass	39
Bike Lanes	33
Multi-Use Path	59

The additional comments received on the Base Build Spot Improvement Display Board included:

- Wildlife crossings?
- Mid-block crossing at Forest Avenue and US 180 (x2).
- Mid-block crossing at Late for the Train.
- Mid-block crossing at Sechrist School.
- HAWKS are ineffective when drivers are unfamiliar with them. Given that a high proportion of drivers on US 180 are visitors, HAWKS are not viable.
- US 180 is far too wide for a pedestrian/bicycle overpass
- US 180 and Forest Avenue need a better crossing – pedestrian/bicycle overpass
- Sechrist School overpass
- MNA and Sechrist School need an overpass
- Fort valley/Humphrey’s Street and Columbus Avenue Intersections would be good locations for pedestrian/bicycle underpasses.
- Sechrist School underpass is a better option than an overpass because it won’t stop traffic and is better for our weather. Less risk for people jumping off, rock throwing and allows tall trucks.
- Need an underpass at Sechrist School
- Forest Avenue and Fort Valley Road intersections are good locations for underpasses
- Fix corner of US 180 for wide bike lanes on both sides of the street north of Cheshire.
- Bike lanes should be eliminated when there is ample room for both bikers and walkers on asphalted oaths above the curb.
- Speeds are too high on US 180 for bike lanes.
- Need a continuous paved off-street multi-use path



- Bike must be physically protected from cars. I bike US 180 regularly and it is terrifying!
- Need a bike path from MNA to the Canyon! (x3)
- Move Sechrist School off US 180 to a different location (x3)
- Build a roundabout at Forest Avenue and US 180

*Preliminary System Alternative 2: Humphreys St Southbound PM Peak Managed Lane*

The additional comments received on the Preliminary System Alternative 2 Display Board included:

- City of Tucson had these and removed them in the early 2000's due to accidents and safety concerns.
  - Turn lane is currently used as alternative driving lane from Forest Avenue to Humphrey's Street
- Station 3: System Alternatives that May Require Expanded Right-of-Way

*Station 3: System Alternatives that May Require Expanded Right-of-Way*

*Preliminary System Alternative 3: Four General Purpose Lanes, Center Median, Bike Lanes and Shoulders on both Sides*

The additional comments received on the Preliminary System Alternative 3 Display Board included:

- This would not be effective unless working in conjunction with a widening or more effective use of Humphrey's Street, as the intersection at Humphrey's Street and Columbus Avenue is the bottleneck.
- Reasonable? Practical?
- Maybe if you had a bus only lane and continued infrastructure for transit to Snowbowl during winter.

*Preliminary System Alternative 4: US 180 AM and PM Peak Managed Lane from Meade Street south to Downtown*

The additional comments received on the Preliminary System Alternative 4 Display Board included:

- Meade is access from Fratelli's & late for the train.
- Use one 10-foot pedestrian/bike trail on each side to reduce the total width and save traditional look of the street.
- Reasonable? Practical?

*Preliminary System Alternative 5: Humphrey's Street One Way Northbound for AM Peak & One Way Southbound for PM Peak, and right turn capacity at Beaver Street and Columbus, and Humphrey's Street and SR 40B*

The additional comments received on the Preliminary System Alternative 5 Display Board included:

- Safety concern of vehicle accidents during inclement weather.

*Preliminary System Alternative 6: Dynamic Southbound Shoulder*

The additional comments received on the Preliminary System Alternative 6 Display Board included:

- Creek Side Drive is just north of Quintana Street and Grand Canyon trust on the east side.
- Way too dangerous for bikes on dynamic shoulder.





- Needs to be easily understood by tourists. As a case study look at Grant “suicide lane” in Tucson, Az. This lane was dangerous and eliminated in the early 2000’s.
- This seems extremely dangerous for cyclists.
- Need transit also for school buses dedicated lane or extra lane for cars on Forest Avenue to Sechrist, because of Sechrist Elementary School boundary (North of Forest Ave/Cedar all the way to 4<sup>th</sup> Street) parent/bus traffic comes down Forest Avenue on US 180 – Traffic is backed up to San Francisco Street on Forest Avenue in the morning, especially during ski season, and significantly impacts US 180 traffic in the morning (8:00-8:45 am).

### *Station 4: Alternative Routes to US 180*

The additional comments received on the Preliminary System Alternative 7 through Preliminary System Alternative 18 Display Boards included:


- In lieu to Lone Tree Road Alternative Route– add an over/under pass at Ponderosa to aid north/south movement
- The Alternative Routes outside of Flagstaff are a waste of tax dollars because all snow gear rental places, restaurants, and fuels stops are in town.
- Do not go through any neighborhoods
- Preliminary System Alternative 17 is the only alternative route that does not go through a neighborhood – go this route!
- The Snow Bowl Road Route would block an important wildlife corridor. Contact Hannah Griscom at AZ Game & Fish for more information.

### **Station Comment Cards**

Supplemental Comment Cards were provided to meeting attendees at each station for additional and further detailed input/feedback on the various preliminary system alternatives. Comment cards were not provided at Station 5: NAIPTA Transit Study. A total of 136 comment cards were received, with 27 comment cards collected at Station 1, 20 comments cards collected at Station 2, 29 comment cards collected at Station 3, and 60 comment cards collected at Station 4. The comment cards received for each station can be found in Appendix L through Appendix O.



## Appendix A - US 180 Public Open House Meeting #1 Advertisement



# Corridor Master Plan Open House

### PUBLIC OPEN HOUSE

The Arizona Department of Transportation in conjunction with the Federal Highway Administration and other Project Partners, are conducting a Corridor Master Plan study for US 180 in Flagstaff and Coconino County. The study corridor consists of a 17.4-mile section of the highway from the intersection of Historic Route 66 and Humphreys Street (milepost 215.44) to the Crowley Pit Snow Play Area (milepost 233.25).


The purpose of the US 180 Corridor Master Plan is to identify a 20-year vision for the US 180 corridor that addresses current and future safety, traffic congestion, and transit issues by evaluating a mixture of previously recommended and newly introduced System Alternatives. These System Alternatives include a mix of alternatives that utilize and maintain the existing US 180 right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the US 180 corridor itself.

**Thursday, May 3, 2018**  
**6 to 8 p.m.**  
**Flagstaff High School Commons**  
**400 W. Elm Avenue**  
**Flagstaff, AZ 86001**

**Your Input is Important!**


- Participate in the public meeting
- Provide comments
- Visit the project website

[www.azdot.gov/US180CorridorMasterPlan](http://www.azdot.gov/US180CorridorMasterPlan)



Pursuant to Title VI of the Civil Rights Act of 1964, and the Americans with Disabilities Act (ADA), ADOT does not discriminate on the basis of race, color, national origin, age, gender or disability. Persons that require a reasonable accommodation based on language or disability should contact Community Relations project manager Mackenzie Kirby at 928-525-6494 or email MKirby@azdot.gov. Requests should be made as early as possible to ensure the state has an opportunity to address the accommodation.

De acuerdo con el título VI de la Ley de Derechos Civiles de 1964 y la Ley de Estadounidenses con Discapacidades (ADA por sus siglas en Inglés), el Departamento de Transporte de Arizona (ADOT por sus siglas en Inglés) no discrimina por raza, color, nacionalidad, edad, género o discapacidad. Personas que requieren asistencia (dentro de lo razonable) ya sea por el idioma o por discapacidad deben ponerse en contacto Mackenzie Kirby 928-525-6494 o en MKirby@azdot.gov. Las solicitudes deben hacerse lo más pronto posible para asegurar que el equipo encargado del proyecto tenga la oportunidad de hacer los arreglos necesarios.



**ADOT Project Number: P181203P Federal Aid Number: MPD-S(018)**







US 180 Corridor Master Plan Public Open House #1	
Flagstaff High School: The Commons 400 W. Elm Avenue Flagstaff, Arizona 86001	Thursday, May 3, 2018 6:00 pm – 8:00 pm
Sign-In Sheet	

Name	E-mail
Randon Cupp	
Stacy Matteson	
Cindy Daskocil	
KAREN WARREN	
Mona Schmidt	
Robbie Schmidt	
Deborah Collins	
Jana Dechter	
Estelle Hollander	
Douglas Sato	
Cynthia Baughmer	
ED SAINES	
Naomi Morrison	
David Blanchard	
ROBERT SHIPLEY	
Ethan Blasius	
BRAD LUKY	
Sharon Galbraith	
Tatiana Smith	
Jensen Womack	
GREG SCHARF	
Christina Osgood	
JOAN MARTINI	
Magley	
Jeffrey DeLap	
Ryan Brydenthal	
Jamie Whelan	
Janet Koons	
Ala Klapp	
Carlton Johnson	
Susan Helms	
ROGER SMITH	
JEFF GOULDEN	
Richard Holm	
Connie Kim	
Adam DeLise	
GREG MACE	
Mark Spinti	
Jennifer Spinti	





# US 180 CORRIDOR MASTER PLAN

Public Open House #1 – Meeting Summary Report



US 180 Corridor Master Plan	
Public Open House #1	
Flagstaff High School: The Commons 400 W. Elm Avenue Flagstaff, Arizona 86001	Thursday, May 3, 2018 6:00 pm – 8:00 pm
Sign-In Sheet	

Name	E-mail
Barbara Cress	
Barry+Debbie Martin	
Dennis Lavin	
Robert A. Davis	
Kathryn Davis	
Ann + Andrew Johnson	
Jan Mural	
DENNIS HOMAN	
RANDY WHITAKER	
CHRIS RHODE	
DAVID SHAFER	
Don Woods	
Tom Rose	
KATHERINE FAER	
PATRICK KOHNEN	
M. WOODS	
John Lindertal	
Laura Shearin	
Alice Freer	
JANICE FREER	
KIM AUSTIN	
Julie Leid	
Christi Carlson	
Mike + Cass Mitchell	
Alida+Dawn Dierker	
Sue Martin-Coskey	
CATHY THOEMMES	
JOHN VANLANDINGHAM	
Amanda J. Fert	
Richard Rogers	
Nate White	
Patricia Hardman	
Mary Harmon	
Christine Cox	
JONATHAN MCINTIRE	
SAT BEST	
NEFF Maurer	
Tom Smura	
JIM DESKOCIL	
Ed Smayth	



# US 180 CORRIDOR MASTER PLAN

Public Open House #1 – Meeting Summary Report



US 180 Corridor Master Plan Public Open House #1	
Flagstaff High School: The Commons 400 W. Elm Avenue Flagstaff, Arizona 86001	Thursday, May 3, 2018 6:00 pm – 8:00 pm
Sign-In Sheet	

Name	E-mail
John Kondratuk	
Robert Strayer	
Russell Collins	
DAVE DORRICK	
Kody Rhoads	
JIM MCCARTHY	
TOM BOUGHTNER	
Louise Kisluga	
Kerth Beckea	
MARK HAUGHTWORT	
EMERY LAMAN	
Hannah Griseom	
TJ Willner	
PAUL Davis	
Gerry Craig	
Roddy Phillips	
JEFF Coker	
Jason Sues	
John Venkat	
Rebecca Delcamp	
Sandra Smith	
Edward Smith	
Joan Luckow	
Kay Ainsworth	
Kyle Wormsbecker	
Linda Jalbert	
LANCE DISKIN	
Margie Gowden	
Evan Wardington	
Art Beland	
Jonah Walsh	
Matt Jardine	
Robert Naughton	
Kim Tittelkaugh	
Danrel Folke	
DAN OKOLI	
Murim Magbanchi	
Fayem Ajibushi	
Julie Stone	
Kim CAMPBELL	







# US 180 CORRIDOR MASTER PLAN

Public Open House #1 – Meeting Summary Report



US 180 Corridor Master Plan Public Open House #1	
Flagstaff High School: The Commons 400 W. Elm Avenue Flagstaff, Arizona 86001	Thursday, May 3, 2018 6:00 pm – 8:00 pm
Sign-In Sheet	

Name	E-mail
Brian Poturalski	
Carole Gilmore	
RICHARD & LAVERNE JEANNE	
BRETT & MARY WOODS	
TIM DALEGOWSKI	
MICHELE RALSTON	
DAVID & JILLIAN SARTY	
ANTHONY QUINTILE	
John Nauman	
Matt Mitchell	
MARTINE	
CHUCK GILICK	
Kurt Knittle	
MARILYN WEISSMAN	
Anna Wittke	
W K Moser	
David Anning	
Austin Simmons	
Rick Barrett	
Boris Koh	
Ahmad Al-mohammedsalah	
shayea Abashibah	
Brandon Short	
Kathy Sechrist	
Kelly Rowell (kel.rowell@gmail)	
Katarina Kerjala	
CARLY LONG	
Mike Townsend	
JEFF T. [unclear]	
Ngom Kalvin	
John Taylor	
MATT FAHY	
EVE Coffman	
Susan Galighatty	
Mike [unclear]	
Shane Bille	
MATTHEW BUSH	
Eric Carlson	
Guillermo Cortes	





Appendix C - US 180 Public Open House Pinning Exercise

**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1

**ADOT**

**TELL US WHERE YOU LIVE...**  
Place a Pin Where You Generally Live

US 180 CMP Study Corridor





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**TELL US WHERE YOU LIVE...**

Place a Pin Where You Generally Live



Appendix D - US 180 Public Open House PowerPoint Presentation

**US 180 Corridor Master Plan**  
**Public Open House**

FMPO NAIPTA [Arizona State Seal] [Flag] [UAS] [Northern Arizona University Logo] NORTHERN ARIZONA UNIVERSITY BNSF

May 3, 2018

Michael Baker INTERNATIONAL

**WELCOME & INTRODUCTIONS**

ADOT FMPO NAIPTA [Arizona State Seal] [Flag] [UAS] [Northern Arizona University Logo] NORTHERN ARIZONA UNIVERSITY BNSF

Michael Baker INTERNATIONAL





## TONIGHT'S AGENDA

- I. Welcome & Introductions
- II. Open House Format & Objectives
- III. Project Introduction
  - a) Study Corridor Limits
  - b) Project Partners
  - c) Project Goals
- IV. Project Work Plan & Project Schedule
- V. Next Steps
- VI. How You Can Provide Comments Tonight



## II. OPEN HOUSE FORMAT & OBJECTIVES

- 1) Introduce the Project to Residents and Stakeholders
- 2) Confirm the Project Goals
- 3) Receive Your Feedback On:
  - Identifying any new or modified alternatives for US 180;
  - Identifying any alternatives for US 180 that should be eliminated; and
  - NAIPTA's concurrent US 180 Study





### III. PROJECT INTRODUCTION

#### US 180 CMP Study Corridor



### III. PROJECT INTRODUCTION

#### Project Partners:

- Arizona Department of Transportation
- Flagstaff Metropolitan Planning Organization
- City of Flagstaff
- Coconino County
- US Forest Service
- Federal Highways Administration
- Northern Arizona University
- Northern Arizona Intergovernmental Public Transportation Authority
- Burlington Northern Santa Fe Railroad



### III. PROJECT INTRODUCTION

**US 180 CMP Goals:**

- 1 Address congestion (with a special emphasis on winter congestions) and safety on US 180
- 2 Identify the long-term (20-year) vision of the corridor
- 3 Obtain public and stakeholder input on alternatives, including multimodal alternatives
- 4 Scope out and further implement previous and new strategies, consistent with the long-term vision
- 5 Prioritize implementation projects for design
- 6 Assist NAIPTA in completing its Bus Rapid/Transit/High Capacity Transit system design
- 7 Follow the Planning and Environmental Linkages (PEL) process to carry forward decisions into the design and NEPA

Michael Baker INTERNATIONAL

### IV. PROJECT WORK PLAN & PROJECT SCHEDULE

**US 180 CMP Process:**

FALL 2017 WINTER 2018

Michael Baker INTERNATIONAL



## V. NEXT STEPS

- ▶ Eliminate, add or refine alternatives based on public input
- ▶ Perform detailed analysis of refined alternatives
- ▶ Public surveys on refined alternatives
- ▶ Second Public Open House Meeting (Fall 2018)
- ▶ Final Recommendations (December 2018)



## VI. How You Can Provide Comments Tonight

### *THERE ARE MANY WAYS...*

- 1) Questions and Comments at 5 “Stations”
- 2) Ask any Project Representative
- 3) Poster Boards/Sticky Dot/Sticky Note Exercises at Stations
- 4) Mapping Exercise – roll plots
- 5) Comment Cards – at each Station
- 6) Visit the Project Website at:
  - [www.azdot.gov/US180CorridorMasterPlan](http://www.azdot.gov/US180CorridorMasterPlan)
  - Submit comments or questions to: [US180Project@mbakerintl.com](mailto:US180Project@mbakerintl.com)





Appendix E - US 180 Public Open House Question Card



**QUESTION CARD**

If you have a question(s) that you would like answered at the end of the presentation, please write your question(s) on this card and pass it to an ADOT project representative. We have limited time for questions and answers to allow you time to speak directly with project staff. If we do not get to your question, we encourage you to speak with a project representative. Thank you for printing legibly.

Name: \_\_\_\_\_ Email: \_\_\_\_\_





Appendix F - Station 1: About the Project/Study Area at a Glance Display Boards

**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1

**ABOUT THIS PROJECT...**  
**CORRIDOR MASTER PLAN PURPOSE & NEED**

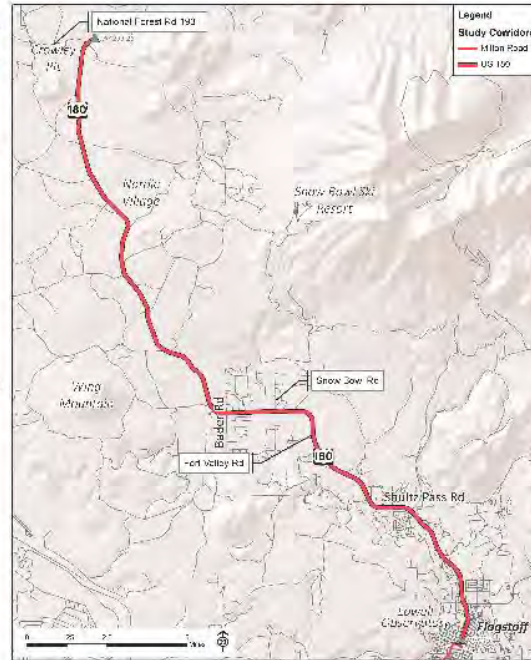
The purpose of the US 180 Corridor Master Plan (CMP) is to **identify a 20-year vision** for a 17.4 miles section of US 180 corridor that **addresses current safety and traffic congestion issues** by evaluating a mixture of previously recommended and newly introduced System Alternatives. These System Alternatives include a mix of alternatives that utilize and maintain the existing US 180 right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the US 180 corridor itself.

The System Alternatives are also complemented by a series of Base Build Spot Improvements – which constitute targeted, near-term low investment mitigation measures that support mid- and long-term System Alternatives.

**PROJECT PARTNERS**

As part of the CMP Process, a team of Project Partners (Partners) has been assembled to include representatives from the following agencies to help guide the success of the US 180 CMP study process:

- Arizona Department of Transportation (ADOT)
- Flagstaff Metropolitan Planning Organization (FMPO)
- Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA)
- City of Flagstaff
- Coconino County
- US Forest Service (USFS)
- Federal Highways Administration (FHWA)
- Northern Arizona University (NAU)
- Burlington Northern Santa Fe Railroad (BNSF)

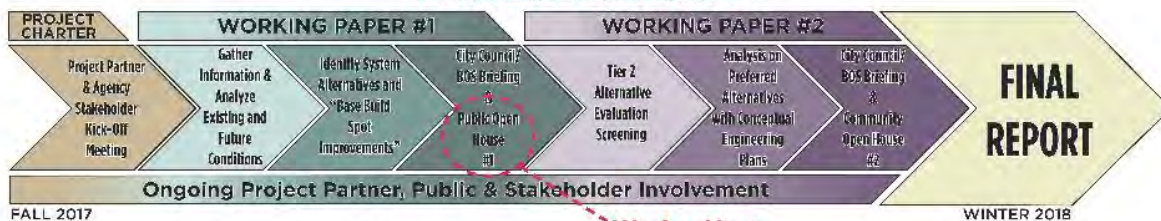


The Project Partners established the following seven goals for the US 180 CMP which are not prioritized in any particular order:

**CORRIDOR MASTER PLAN GOALS**



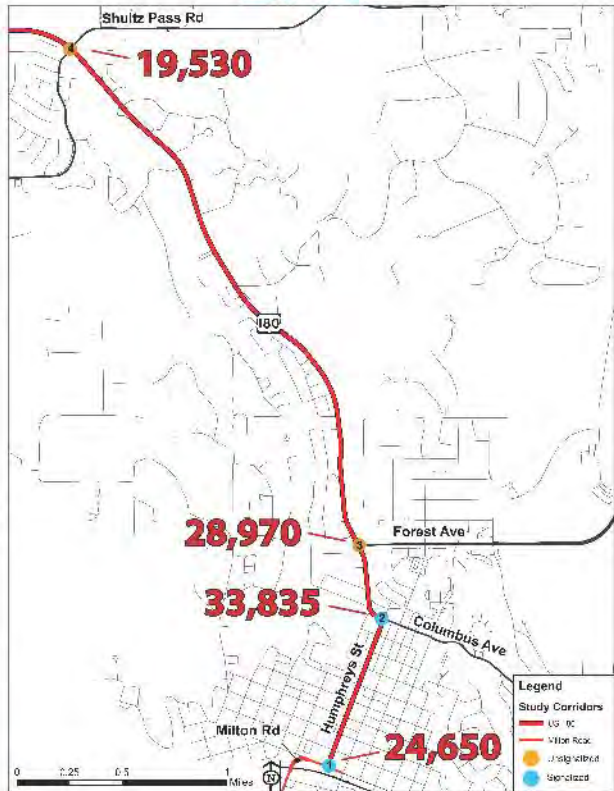
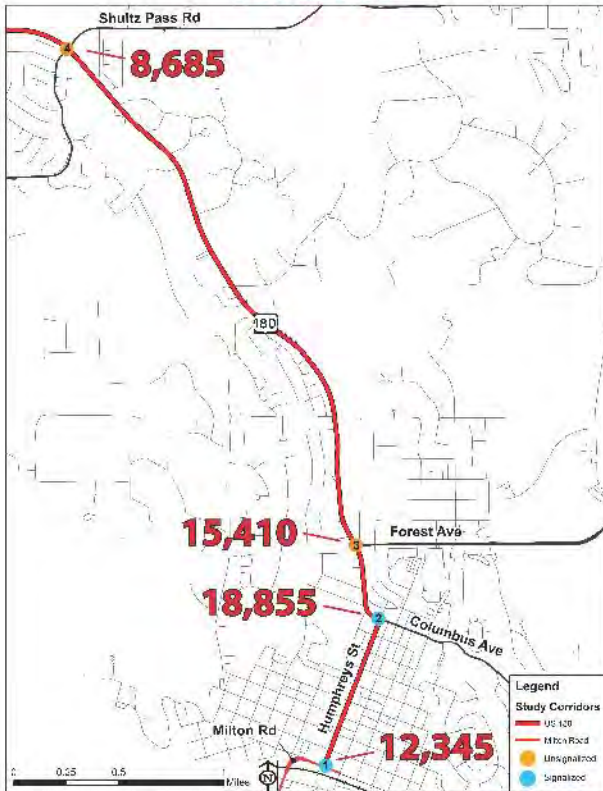
**PROJECT SCHEDULE**





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1

**STUDY CORRIDOR AT A GLANCE...**  
Number of Average Daily Vehicles **TODAY**      Number of Average Daily Vehicles **2040**



NOTE: Vehicle Counts Observed on Tuesday, September 12, 2017

**Intersection Level-of-Service TODAY**

**Level-of-Service (LOS) Criteria**

**Intersection Level-of-Service 2040**

Intersection	AM Peak		PM Peak	
	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)
Milton Rd & Humphreys St	B	19.6	C	28.5
Humphreys St & Columbus Ave	C	25.8	D	35.0
US 180 & Forest Ave	A*	3.6	A*	7.6
US 180 & Shultz Pass Rd	A	8.5	A	9.3

LOS	Average Delay	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Intersection	AM Peak		PM Peak	
	LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)
Milton Rd & Humphreys St	F	546.3	F	615.6
Humphreys St & Columbus Ave	F	648.8	F	540.3
US 180 & Forest Ave	F*	69.3	F*	135.7
US 180 & Shultz Pass Rd	F	95.4	B	19.4

\*From LOS A down to F with an increase of 10% in LOS. (LOS determined based on 180-day delay)

\*From LOS E down to F with an increase of 10% in LOS. (LOS determined based on 180-day delay)





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



# STUDY CORRIDOR AT A GLANCE... EXISTING CORRIDOR SAFETY CONSIDERATIONS

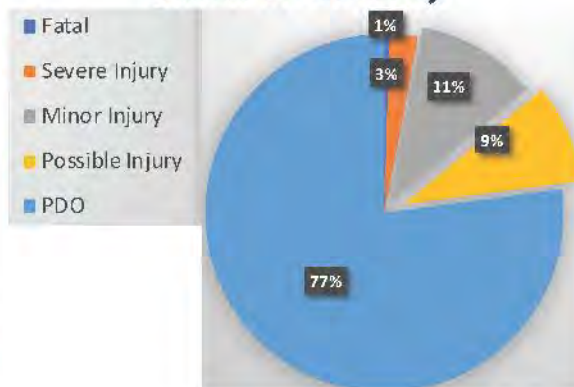
## Crash Severity Comparison

Crash Severity	Number	US 180 %	Statewide Average %*
Fatal	2	0.004%	1%
Injury	146	25%	31%
Property Damage Only	422	75%	68%

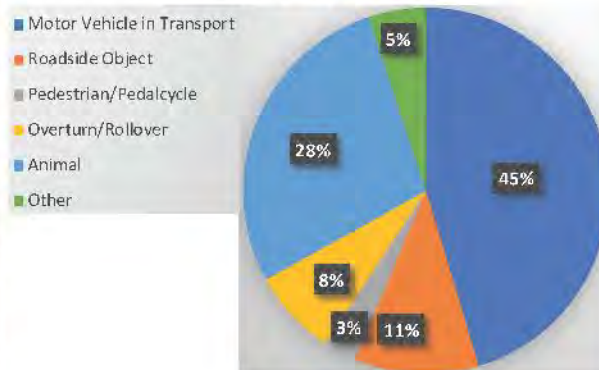
## Crash Map by Injury Severity



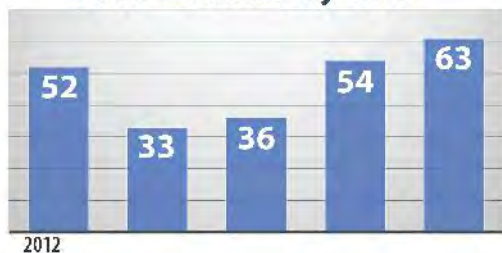
## Percentage of Crashes Based on Severity



## Crashes by Cause



## Total Crashes by Year



## Total Crashes by Month





Appendix G - Station 2: System Alternatives Utilizing Existing Right-of-Way Display Boards

**US 180 CORRIDOR MASTER PLAN** **ADOT**

Public Open House #1

## PRELIMINARY SYSTEM ALTERNATIVE 2

### Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)

Mid-Day / Standard Traffic Designation

PM Peak Period / Winter Traffic Designation

Approximate ROW

*Note: Detailed traffic studies are necessary to apply this concept to any arterial/highway such as US 180 to address matters of safety, access management (especially with the high number of existing driveways) and multimodal considerations.*

### FEATURES:

- A "Reversible Lane" as the name implies, is a concept in which the center traffic lane (turn lane) may travel in either direction (however just southbound traffic during winter PM peak periods only), depending upon the time, day and/or operation sign/signal displayed.
- Reversible traffic lanes (aka managed lanes) add capacity to a road and decrease congestion by borrowing capacity from the other (off-peak) direction. There are a wide variety and combination of approaches to managed lane operations. These have typically encompassed such methods as:
  - Static signing and striping
  - Changeable message signs
  - Economic incentives / disincentives
  - Lane Controls
  - Temporary traffic control devices
  - Law enforcement / legal restrictions
- It is important to note that this alternative would only be implemented along the US 180 corridor on Humphrey's Street between Columbus Avenue and Historic Route 66.

### THIS ALTERNATIVE SHOULD?

**Move Forward for Further Study**

**Be Eliminated from Further Study**

**Move Forward for Further Study with Adjustments**

*Please Fill out a Comment Card*









Appendix H - Station 3: System Alternatives that May Require Expanded Right-of-Way Display Boards

**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1

## PRELIMINARY SYSTEM ALTERNATIVE 3

### Four General Purpose Lanes, Center Median/Turn Lane, and Bike Way & Shoulder on Both Sides of the Road

10'	11'	11'	12'	11'	11'	10'
Shoulder/ Bike Way	SB Travel Lane	SB Travel Lane	Center Median, Two-Way Left Turn Lane, or Center Left Turn Lane	NB Travel Lane	NB Travel Lane	Shoulder/ Bike Way
76'						
Approximate ROW						

### FEATURES:

- This alternative adds vehicular capacity to existing US 180 by adding two additional general purpose lanes
- General purpose lanes would accommodate buses, vehicles and right turning movements.
- It is suggested that sidewalks be maintained where they currently exist today on both sides of US 180. Generally from Beal Road to Columbus Avenue.
- The F.U.T.S. would also be maintained as a protected shared use path.

### THIS ALTERNATIVE SHOULD?

**Move Forward for Further Study**

**Be Eliminated from Further Study**

**Move Forward for Further Study with Adjustments**

Please Fill out a Comment Card

It would be effective if the road is widened to 100 feet. It would be more effective if the road is widened to 120 feet. It would be more effective if the road is widened to 140 feet. It would be more effective if the road is widened to 160 feet. It would be more effective if the road is widened to 180 feet. It would be more effective if the road is widened to 200 feet. It would be more effective if the road is widened to 220 feet. It would be more effective if the road is widened to 240 feet. It would be more effective if the road is widened to 260 feet. It would be more effective if the road is widened to 280 feet. It would be more effective if the road is widened to 300 feet.

Note: Per the Road Configuration Inventory presented in the US 180 Winter Traffic Study, the existing right-of-way for US 180 varies from 50-feet to 100 feet, depending on roadway segment. The majority of road segments for US 180 average 65-80 feet in width. As such, it is assumed that this System Alternative will require some level of additional right of way expansion.

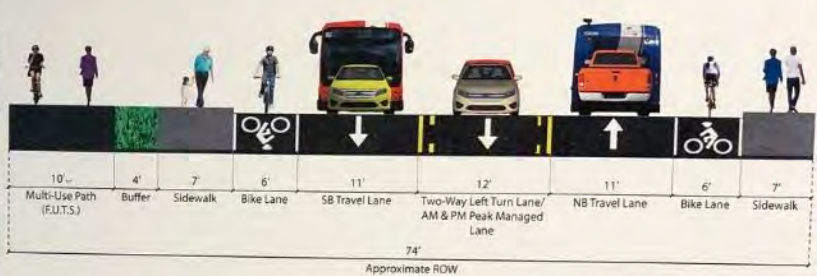




**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**PRELIMINARY SYSTEM ALTERNATIVE 4**  
US 180 AM and PM Peak Managed Lane from Meade Street  
South to Downtown (Reversible Center Lane)



MEMORANDUM  
FROM: FRAZELLI  
DATE: 10/15/14  
RE: TRAFFIC

Note: Detailed traffic studies are necessary to apply this concept to any arterial/highway such as US 180 to address matters of safety, access management (especially with the high number of existing driveways) and multimodal considerations.

**FEATURES:**

- Reversible traffic lanes (aka managed lanes) add capacity to a road and decrease congestion by borrowing capacity from the other (off-peak) direction. There are a wide variety and combination of approaches to managed lane operations. These have typically encompassed such methods as:
  - Static signing and striping
  - Changeable message signs
  - Economic incentives / disincentives
  - Lane Controls
  - Temporary traffic control devices
  - Law enforcement / legal restrictions
- This Alternative also includes sidewalks and bike lanes on both sides
- The F.U.T.S. would also be maintained as a protected shared use path.

**THIS ALTERNATIVE SHOULD?**

**Move Forward for Further Study**

**Be Eliminated from Further Study**

**Move Forward for Further Study with Adjustments**  
Please Fill out a Comment Card

Note: Per the Road Configuration Inventory presented in the US 180 Winter Traffic Study, the existing right-of-way for US 180 varies from 50-feet to 100 feet, depending on roadway segment. The majority of road segments for US 180 average 65-80 feet in width. As such, it is assumed that this System Alternative will require some level of additional right of way expansion.





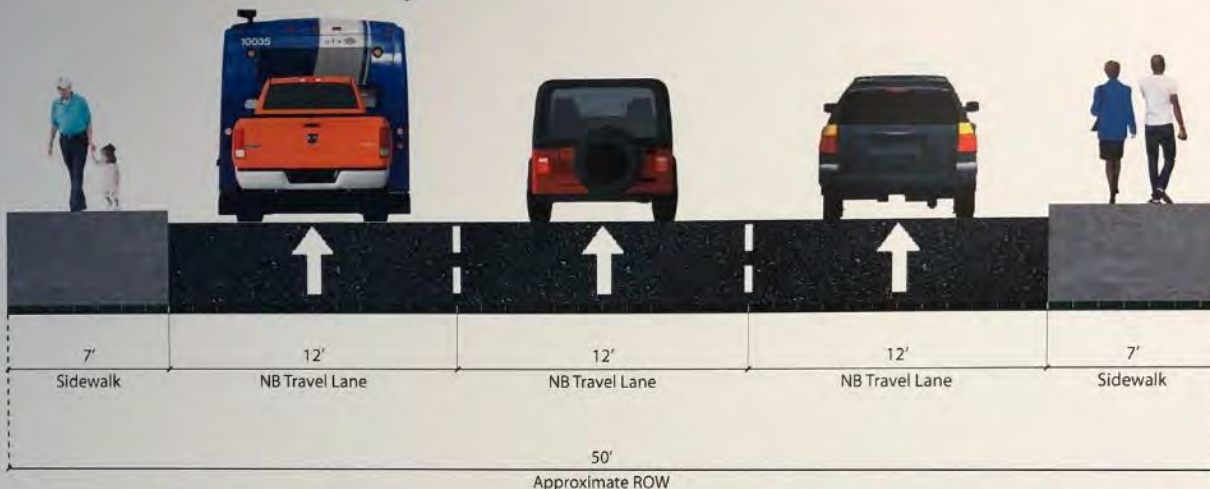
US 180 CORRIDOR MASTER PLAN

Public Open House #1



# PRELIMINARY SYSTEM ALTERNATIVE 5

## Humphrey's Street One Way Northbound for AM Peak & One Way Southbound for PM Peak



### FEATURES:

- This Preliminary System Alternative calls for Humphrey's Street between Business 40 and Columbus Street to convert both general purpose lanes and center turn lane into one way directional traffic flows:

- Northbound for the AM Peak and
- Southbound for the PM Peak

- Figure above depicts the northbound AM peak condition only.

- An eastbound right turn lane on Columbus to Beaver Street is suggested to complement this alternative by helping mitigate southbound PM peak volumes as an alternative to Humphrey's Street.

- Two southbound right turn lanes to westbound Business 40 is also suggested.

### THIS ALTERNATIVE SHOULD?

Move Forward for Further Study

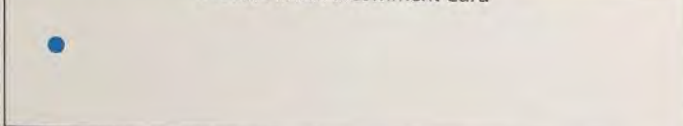


Be Eliminated from Further Study



Move Forward for Further Study with Adjustments

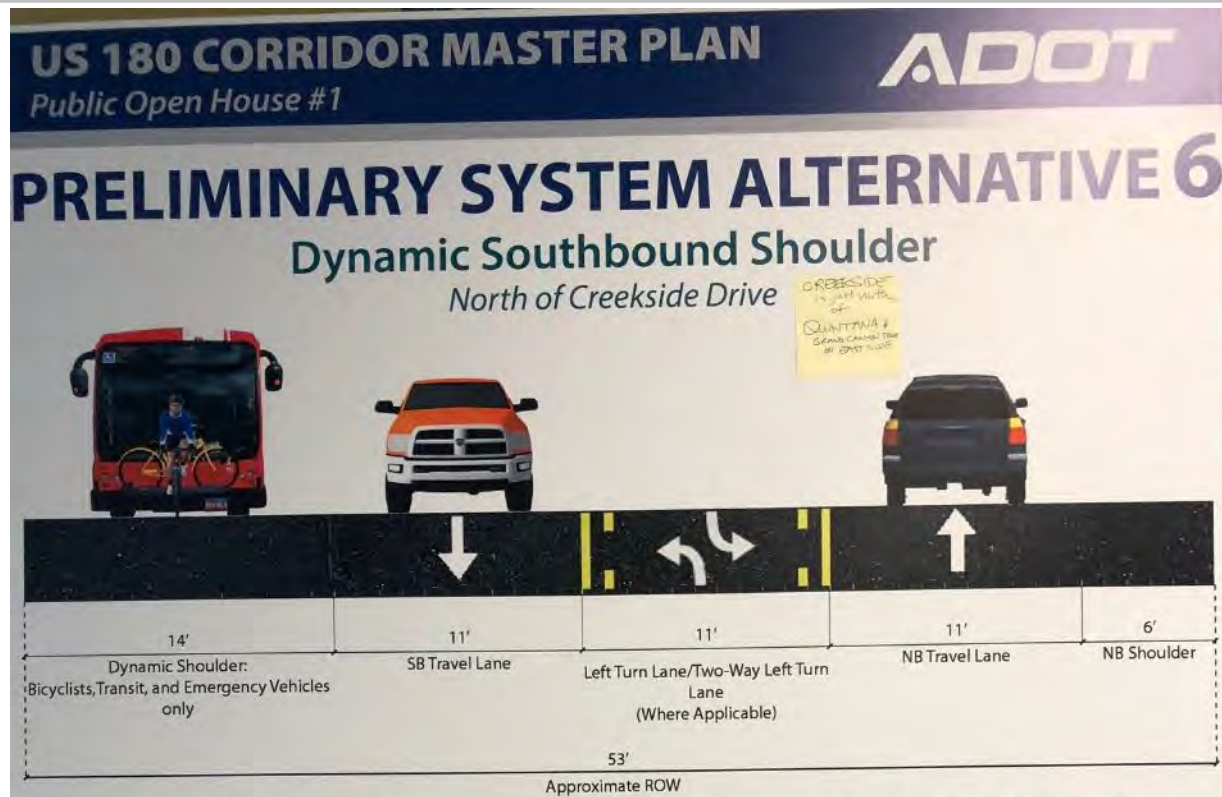
Please Fill out a Comment Card



Note: Per the Road Configuration Inventory presented in the US 180 Winter Traffic Study, the existing right-of-way for US 180 varies from 50-feet to 100 feet, depending on roadway segment. The majority of road segments for US 180 average 65-80 feet in width. As such, it is assumed that this System Alternative will require some level of additional right of way expansion.







**FEATURES:**

- This Preliminary System Alternative would generally have minimal impact and does not require substantial amounts of additional right-of-way
- The dynamic shoulder would support the use of transit and emergency vehicles to bypass congestion on US 180 general purpose lanes during winter peak traffic congestion only
- The dynamic shoulder would accommodate pedestrians and bicyclists on any other standard day.
- Signage would need to be placed at appropriate intervals that would indicate the southbound shoulder is only permitted to non-motorized travel, and emergency and transit vehicles during winter peak traffic congestion.

**THIS ALTERNATIVE SHOULD?**

**Move Forward for Further Study**

**Be Eliminated from Further Study**

**Move Forward for Further Study with Adjustments**  
Please Fill out a Comment Card

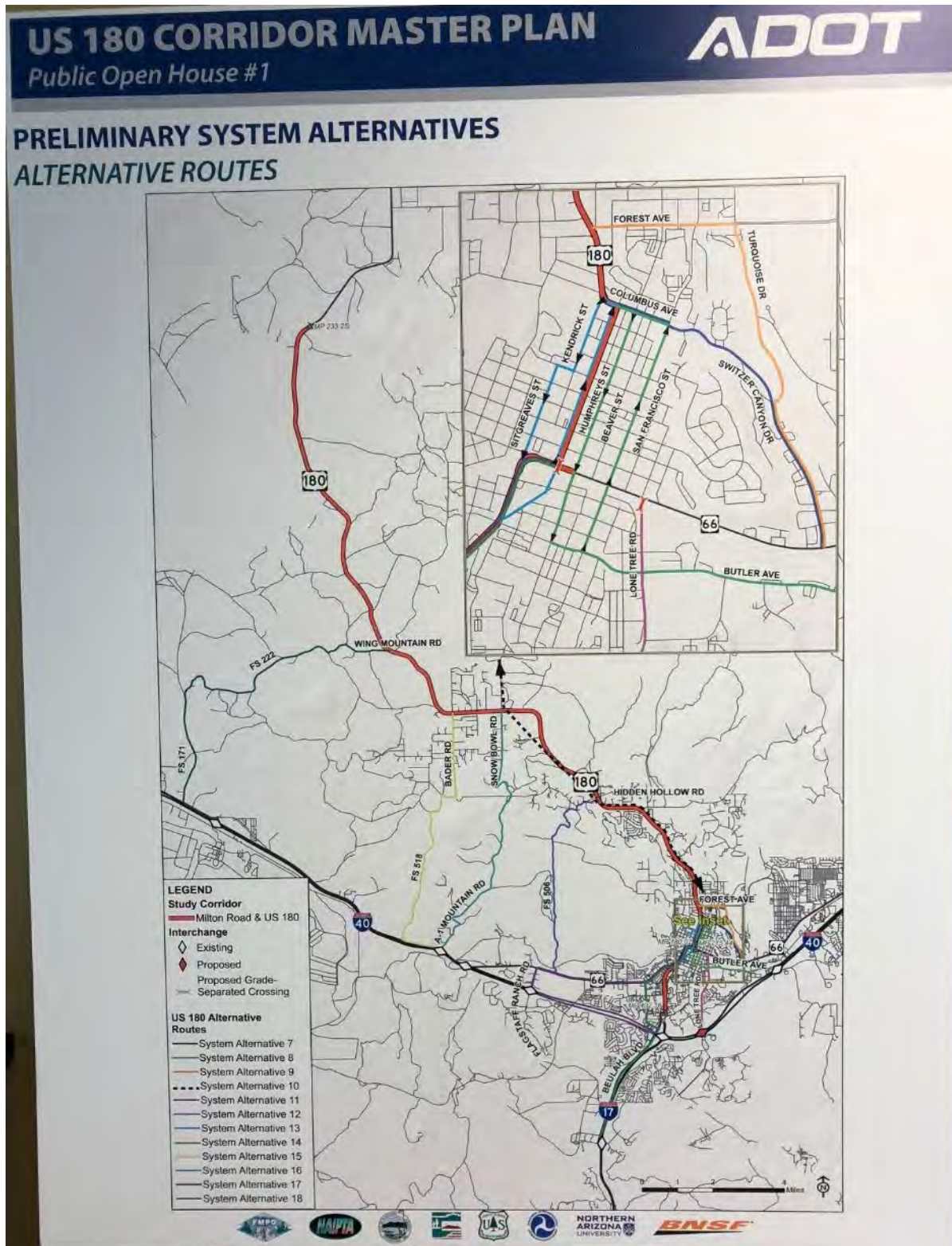
*Handwritten notes on the diagram include: 'CREEKSIDE', 'QUANTINA #', 'Need Transit for...', 'DANGER FOR BIKES', 'Should be really wide...', 'As a study look at...', 'Surge Lane', 'This lane was dangerous and eliminated in peak early 2000s', 'Need to be really wide...', 'Should be really wide...', 'As a study look at...', 'Surge Lane', 'This lane was dangerous and eliminated in peak early 2000s', 'Need Transit for...', 'DANGER FOR BIKES', 'Should be really wide...', 'As a study look at...', 'Surge Lane', 'This lane was dangerous and eliminated in peak early 2000s'.*

Note: Per the Road Configuration Inventory presented in the US 180 Winter Traffic Study, the existing right-of-way for US 180 varies from 50-feet to 100 feet, depending on roadway segment. The majority of road segments for US 180 average 65-80 feet in width. As such, it is assumed that this System Alternative will require some level of additional right of way expansion.





Appendix I - Station 4: Alternative Routes to US 180 Display Boards





## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### PRELIMINARY SYSTEM ALTERNATIVES 7, 8, & 9

#### ALTERNATIVE ROUTES

MAP	DESCRIPTION	THIS ALTERNATIVE SHOULD?		
	<b>System Alternative 7</b> Columbus -> Switzer Canyon -> Route 66  • 1.3 miles • 2 General Purpose (GP) lanes and a center turn lane. • Travelers with southern destinations could proceed east on Route 66 to Ponderosa Pkwy, then to Butler Ave, and its interchange with I-40 west to then proceed to I-17 south.	Move Forward for Further Study	Be Eliminated from Further Study	Move Forward for Further Study with Adjustments <i>Please Fill out a Comment Card</i>
	<b>System Alternative 8</b> Columbus -> Beaver -> Butler (SB One Way) & Butler -> San Francisco -> Columbus (NB One Way)  • 2.8 miles • Columbus Ave. is 3 a lane collector with 2 GP lanes and a center turn lane. • Beaver St. (SB) & San Francisco St. (NB) are one-way streets with 2-3 GP lanes with parking on both sides. Both roads include at-grade railroad crossings.	Move Forward for Further Study	Be Eliminated from Further Study	Move Forward for Further Study with Adjustments <i>Please Fill out a Comment Card</i>
	<b>System Alternative 9</b> Forest -> Turquoise -> Switzer Canyon -> Route 66  • 1.8 miles • Adequate dedicated left turn lane at SB US 180 at Forest Ave. • Forest Ave. is a 3 lane collector 2 GP lanes and a center turn lane with bike lanes to San Francisco St. Forest Ave. has moderate grades and is a 5 lane facility with 4 GP lanes and a center turn lane.	Move Forward for Further Study	Be Eliminated from Further Study	Move Forward for Further Study with Adjustments <i>Please Fill out a Comment Card</i>





US 180 CORRIDOR MASTER PLAN Public Open House #1		ADOT	
PRELIMINARY SYSTEM ALTERNATIVES 10, 11, & 12			
ALTERNATIVE ROUTES			
MAP	DESCRIPTION	THIS ALTERNATIVE SHOULD?	
	<b>System Alternative 10</b> Cable Propelled Gondola  Detailed studies would be necessary to explore the economic cost effectiveness and environmental potential of a gondola system with respect to potential to sit in proximity to the environmentally and culturally sensitive Kachina Peaks Wilderness Area.	Move Forward for Further Study	Be Eliminated from Further Study
	<b>System Alternative 11</b> Milton -> Route 66 -> Flagstaff Ranch Road -> I-140 -SB approach to Route 66 has a 250 ft. dedicated right turn. -Route 66 at its widest is 5 lanes with 4 GP lanes and a center turn lane, and is 3 lanes at its narrowest with 2 GP lanes and a center turn lane. -Flagstaff Ranch Rd. offers full traffic interchange access to I-140 where the majority of winter recreation vehicles likely will continue approximately 2.75 miles to I-17 south.	Move Forward for Further Study	Be Eliminated from Further Study
	<b>System Alternative 12</b> Lone Tree Road -Located approximately ¾ miles east of Milton Rd. -Planned to be 100 ft. ROW with 4 GP lanes, a raised median, bike lanes, pathways on both sides, a sidewalk on one side and a FUTS trail on one side. -Requires a traffic interchange to connect with I-140 and a grade-separated BNSF railway to connect with Route 66.	Move Forward for Further Study	Be Eliminated from Further Study
		Move Forward for Further Study with Adjustments <i>Please Fill out a Comment Card</i>	Move Forward for Further Study with Adjustments <i>Please Fill out a Comment Card</i>

**PROJECT PARTNERS**





US 180 CORRIDOR MASTER PLAN Public Open House #1		ADOT	
PRELIMINARY SYSTEM ALTERNATIVES 13, 14, & 15			
ALTERNATIVE ROUTES			
MAP	DESCRIPTION	THIS ALTERNATIVE SHOULD?	
	<b>System Alternative 13</b> Mike's Pike -> Humphreys (NB one way) & Kendrick -> Stigreaves -> Milton -NB traffic to Mike's Pike St. to a future proposed overpass to Humphreys St. with a managed lane concept. -SB traffic to 2 lane Kendrick St. then right turn at Elm St. to Stigreaves St. which is a 2 lane local street with on-street parking. Then merge onto Milton Rd. southbound. Additional analysis needed of overpass and adjacent redevelopment efforts.	Move Forward for Further Study	Be Eliminated from Further Study
	<b>System Alternative 14</b> Milton -> Route 66 -> Woodland's Village -> Beulah -> John Wesley Powell -> I-17 South -Route 66 is a 5 lane roadway with 4 GP lanes and a center turn lane. -Woodland's Village Blvd. is a 4 lane divided, access controlled, collector roadway with 2 GP lanes. -2.75 miles of 2 lane roadway on Beulah Blvd. to the JW Powell traffic interchange to I-17.	Move Forward for Further Study	Be Eliminated from Further Study
	<b>System Alternative 15</b> Bader -> FS 518 -> A-1 Mountain -> I-40 -Route is 7.6 miles. -Requires extensive coordination with Coconino County, the US Forest Service and would require federal environmental clearance. -Proposed facility could be a dirt road or paved roadway.	Move Forward for Further Study	Be Eliminated from Further Study
		Move Forward for Further Study with Adjustments <i>Please fill out a Comment Card</i>	Move Forward for Further Study with Adjustments <i>Please fill out a Comment Card</i>

ADOT  
-Hwy 180  
and  
US 180









## Appendix J - Mapping Exercise

The entire roll plot cannot be included in this report due to their size, however, the files can be downloaded using the link provided below:

<https://eftp.mbakerintl.com/message/APB6r7RsjmkFd8QxKNCjsR>

Contact [brian.snider@mbakerintl.com](mailto:brian.snider@mbakerintl.com) if the link is not working or has expired.

### Route 66 to Columbus Avenue









Quintana Road to Shultz Pass Road









## Appendix K – US 180 Public Open House Presentation Question Cards

US 180 CORRIDOR MASTER PLAN

### QUESTION CARD

If you have a question(s) that you would like answered at the end of the presentation, please write your question(s) on this card and pass it to an ADOT project representative. We have limited time for questions and answers to allow you time to speak directly with project staff. If we do not get to your question, we encourage you to speak with a project representative. Thank you for printing legibly.

*comment: restriction truck traffic through Milton 180. All tour buses or giant trucks should use I-40 to let to go to grand Canyon.*

Name: \_\_\_\_\_ Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN

### QUESTION CARD

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*IF ONE OF THE ALTERNATE ROUTES TAKES OVER PORTIONS OF THE COCONINO NATIONAL FOREST*

- 1) HOW WILL ADOT ACQUIRE THE LAND?*
- 2) WHAT PORTIONS OF LAND WILL BE USED IN A LAND SWAP SO THE NATIONAL / COCONINO FOREST IS NOT REDUCED IN SIZE?*

Name: \_\_\_\_\_ Email: \_\_\_\_\_





### QUESTION CARD

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WHY DID THE STUDY AREA STOP AT CROWLEY PIT AND NOT GO TO VALLE? THIS IS A 20 year PLAN. LOTS OF MORE ALTERNATIVES.

Name: TERRY O'NEAL



Email:

### QUESTION CARD

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Is this study being done because of traffic problems during snowy weather times only?

Name:



Email:



US 180 CORRIDOR MASTER PLAN  
Public Open House #1



### QUESTION CARD

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Almost All solutions / Acts shown on posters show technological issues and are silent on social / cultural issues. Is there anyone on the "team" who is <sup>has expertise</sup> ~~specifically~~ in social & cultural impacts?

Name: John Tingerthe



Email:



US 180 CORRIDOR MASTER PLAN  
Public Open House #1



### QUESTION CARD

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Why are you cutting off the questions?

people seem to want to keep up the verbal conversation!

Name:



Email:





### QUESTION CARD

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We would like to have a left turn signal  
from 180 onto Fremont  
Thank you

Name: Sarah Kondratuk Email:

### QUESTION CARD

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CAN THERE BE A RIGHT TURN ARROW FROM  
180 ONTO HUMPHRIES. THERE IS A LEFT TURN  
ARROW FROM HUMPHRIES ONTO 180. COULD USE  
THIS TIME.

ANY CHANCE OF LEFT TURN ARROW FROM  
180 ONTO FREMONT? WOULD HELP RESIDENTS

Name: John Kondratuk Email:



### QUESTION CARD

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I hope the 180 within city limits is not going to be widened - because the ~~house~~ house values of many people will decline and we will have the road right under the windows. Impact on environment and quality of ~~five~~ lives will be great.

Name: \_\_\_\_\_

Email: \_\_\_\_\_



### QUESTION CARD

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Why would you consider disrupting existing neighborhoods when you can go through uninhabited forest land? Sure it will cost more but ~~that~~ going through neighborhoods will cost us

Name: Ed - Sandra Shute

Email:



## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### QUESTION CARD

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What plans are evolving to handle emergency evacuation routes, even in the corridor from Humphreys to north of Chestine?

Name: \_\_\_\_\_

Email: \_\_\_\_\_



## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### QUESTION CARD

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- 180 is a dangerous road to cross in town. If the current 180 right of way is used how will you make Sechrist school, Lake for Train, & Forest crossings safe??  
- There is no good ped/bikeway thru downtown. Can this project fix this?

Name: \_\_\_\_\_

Email: \_\_\_\_\_





### QUESTION CARD

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If you ignore property owners and decide a route that goes on our street are you going to give us a significant tax cut because you not only disrupt our peaceful lifestyle but bring down property value? -

Name: Ed +  
Sandra Smith

Email:



### QUESTION CARD

If you have a question(s) that you would like answered at the end of the presentation, please write your question(s) on this card and pass it to an ADOT project representative. We have limited time for questions and answers to allow you time to speak directly with project staff. If we do not get to your question, we encourage you to speak with a project representative. Thank you for printing legibly.

Why is so much of the planning concerned with single driver cars and trucks. If ADOT is serious about solving these problems they need to make proposals that include issues of buildy infill, reduced parky lots, genuine and safe pedestrian or bike options. Otherwise ADOT is just building new roads to be instantly filled up with more cars.

Name: Jason Matteson

Email:





US 180 CORRIDOR MASTER PLAN  
Public Open House #1



### QUESTION CARD

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Why not put the road through an undeveloped area? Build a new road?

Name: \_\_\_\_\_

Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN  
Public Open House #1



### QUESTION CARD

If you have a question(s) that you would like answered at the end of the presentation, please write your question(s) on this card and pass it to an ADOT project representative. We have limited time for questions and answers to allow you time to speak directly with project staff. If we do not get to your question, we encourage you to speak with a project representative. Thank you for printing legibly.

MUST INCLUDE PULL OUTS ON 180 FOR SNOW PLAYERS ALL THE WAY TO THE 7,000 FT LEVEL. THEY ARE NOT GOING TO ~~STAY~~ STOP COMING.

Name: TERY O'NEAL

Email:



Appendix L- Station 1: About the Project/Study Area at a Glance Comment Cards

**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1

**ADOT**

### STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
*A WIDENED GRAVEL (MAINTAINED) ROAD 222 TO AL MOUNTAIN*
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
*SIGNIFICANT GROWTH IN GRAND CANYON TRAFFIC, SNOWBOWL TRAFFIC, AND RESIDENTIAL TRAFFIC FROM NEW HOUSING*
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*- CONGESTION  
- SAFETY  
- OVER USE*
4. Please provide any additional comments you may wish to offer:  
*THANK YOU FOR ADDRESSING THE PROBLEM*

OPTIONAL ONLY: Name: Adam Deibel Email:

**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1

**ADOT**

### STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
*Permanant bypass from I-40 + Bellmont to FS Road 222. Take most truck traffic off 180 new neighborhoods + schools.*
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
*more congestion*
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*Congestion  
emergency access  
accidents*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY: Name: \_\_\_\_\_ Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
*alternative route - current residents are trapped if wreck occurs BTWN meade ln + schultz hwy*
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
*Too many vehicles*
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*1. ALTERNATIVE ROUTE for situations in which primary US180 route is blocked*      *2. INSUFFICIENT TRAFFIC signals*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
*Build a toll on 180. residents have a pass to get through, All other traffic (snow play) must park in snow play parking area south of town & take a bus to the snow play area.*
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
*Its not sufficient to accomodate traffic*
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*Safety*  
*Expense*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_





STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

*Determine where between Flag + Williams an alternative road can be constructed if I-180 connecting to 180 above snowbowl Road.*

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

*Grid lock on certain days & times*

3. What do you see as the TOP THREE issues for the US 180 corridor?

*Must have 2 lanes in each direction on Highways.*

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name:

*Jonathan M. Antea*



Email:

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

*Build (or use existing) alternative road.*

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

*More accidents - More traffic delays.*

3. What do you see as the TOP THREE issues for the US 180 corridor?

- 1. Slow, delayed traffic*
- 2. Too many accidents*
- 3. Inconsiderate snow plowers*

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name:



Email:



US 180 CORRIDOR MASTER PLAN Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the US 180 corridor?

I THINK THAT THERE SHOULD ONLY BE A "DOUBLE YELLOW" LINES BETWEEN HUNPHYS + SNOWBOWL ROAD

4. Please provide any additional comments you may wish to offer:

PLEASE DO NOT PROCEED WITH ANY PLANS TO GO THROUGH EXISTING NEIGHBORHOODS

OPTIONAL ONLY:

Name:

J.M.



Email:

NONE

US 180 CORRIDOR MASTER PLAN Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the US 180 corridor?

not enough speed signs from snow bowl heading down

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name:



Email:



STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

*more traffic to Flag Ranch Rd - 66 - Milton*

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

*Inside Flagstaff*

3. What do you see as the TOP THREE issues for the US 180 corridor?

*A bunch of NIMBY's pushing Flag's planning failures on other communities*

4. Please provide any additional comments you may wish to offer:

*Move G.C. traffic to 64 by Williams*

OPTIONAL ONLY:

Name: \_\_\_\_\_



Email: \_\_\_\_\_

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

*Action - no more discussions.*

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

*Severe congestion*

3. What do you see as the TOP THREE issues for the US 180 corridor? *Currently:*

*1) Speeding vehicles, especially during commute hours A.M. + P.M. -*

*2) Congestion*

*3) an alternative route must be built*

4. Please provide any additional comments you may wish to offer:

*Widening the road is only a bandaid fix. An alternative route must be built. i.e. 180/I40 connect*

OPTIONAL ONLY:

Name: \_\_\_\_\_



Email: \_\_\_\_\_





STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?
3. What do you see as the TOP THREE issues for the US 180 corridor?

4. Please provide any additional comments you may wish to offer:

*Projected vehicle use of 180 outside city limits cannot be based solely on past increases because the availability of private land for residences is very limited.*

OPTIONAL ONLY:

Name:

*John Vanbet*

Email:



STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

*BYPASS THROUGH U.S.F.S. 222*

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

*1 - DEPENDANT ON WEATHER (SNOW)*

3. What do you see as the TOP THREE issues for the US 180 corridor?

*1 PROVIDE A ALTERNATE EGRESSES TO I-40*

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name:

Email:



US 180 CORRIDOR MASTER PLAN  
Public Open House #1



STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?
3. What do you see as the TOP THREE issues for the US 180 corridor?
4. Please provide any additional comments you may wish to offer:

*What % of crashes are weather related in the winter months. This may indicate a need for an operational solution as well as a design issue.*

OPTIONAL ONLY:

Name: *Genny Craig*

Email:



US 180 CORRIDOR MASTER PLAN  
Public Open House #1



STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?
3. What do you see as the TOP THREE issues for the US 180 corridor?
4. Please provide any additional comments you may wish to offer:

*Acquire property for alternative routes.*

*Safety (bike + car)  
winter used  
schools along 180*

*There needs to be more than one route out of town going north on 180.*

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 1 COMMENT CARD**

1. What can be done now to prepare for the future of the US 180 corridor? (20 years) *Maybe this is just too expensive given number of days of congestion*  
 Consider alternate route to snowplay areas (Al Mountain Rd). During low snow winters like the one we just had, the only snow is at higher elevations (e.g. 8000 ft near the Nordic Center). Developing snow play

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
 It is already difficult to turn left or right from Forest onto 180 at certain times of the day. This intersection needs traffic control now - light or roundabout.

3. What do you see as the TOP THREE issues for the US 180 corridor?  
 1. Acquiring property to expand road  
 2. Making road safe for bicyclists  
 3. Planning for winter traffic congestion  
 4. Developing alternate route to higher elevation snowplay areas -> too expensive?

4. Please provide any additional comments you may wish to offer:  
 areas in other parts of town want help because people will go to where the snow is (along 180).

OPTIONAL ONLY:  
 Name: Jennifer Spirtz Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 1 COMMENT CARD**

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
 Move U.S. 180 out west of city, there will still be local traffic (lots of it) on HUMPHREYS, COLUMBUS, FORT VALLEY.

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
 TOO MANY

3. What do you see as the TOP THREE issues for the US 180 corridor?  
 1. SAFETY  
 2. CONSTANT GRIDLOCK  
 3. WILL NOT BUILD ANY PAVED ALTERNATIVES TO THE WEST OF CITY

4. Please provide any additional comments you may wish to offer:  
 MANY OF THE ALTERNATIVES WILL RUIN NEIGHBORHOODS THAT ARE HISTORIC. THINK WEST OF CITY FOR ROAD, BUS, CARPOOL, TRAFFIC INFORMATION FOR ACTUAL RESULTS.

OPTIONAL ONLY:  
 Name: ROBERT J. BEST Email: \_\_\_\_\_





US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
*Bike Path to Badaville*
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
*Congestion R/T Bottleneck of Downtown  
Need to Bypass Downtown*
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*① Is only route option  
② Forest / Humphrey Intersection  
③ Sechrist - crossing*
4. Please provide any additional comments you may wish to offer:  
*IS Deadly For cars & bike/ped.*

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
*Save \$ to Improve*
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
*MAINTENANCE*
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*Safety, Space, Maintenance*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 1 COMMENT CARD**

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

*go find me as concerned not will be dedicated*

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the US 180 corridor?

- 1. Seasonal traffic not enough to dedicate \$ to paving alternatives*
- 2. Over capacity seasonally (winter + NAU + summer) now!*
- 3. No real alternatives without big \$ as low hanging fruit / cheap options already tried*

4. Please provide any additional comments you may wish to offer:

*Traffic counts should be captured on road at road intersections of Beaver St, San Francisco St, Switzer Camp, Forest St connecting to US 180 or Rt 66 because we are already using these as alternatives to US 180. Case in point when Beaver has been closed, the traffic on US 180 (Humphreys)*

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 1 COMMENT CARD**

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the US 180 corridor?

- 1. Congestion North (ski-school traffic) in a.m. 8-9:00 ish*
- 2. South (ski) flow 2:30-3:00 - 6:00*
- 3. Intersection 180 + Meade - Fratelli business + neighborhood share turn lane - many near misses as I turn R on Meade + south bound turn into business*

OPTIONAL ONLY:

Name: Naomi Morrison

Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)  
*Build alternative routes, Build bike lanes, Address congestion @ Secret school*
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?  
*Traffic congestion, safety*
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*① Bike/pedestrian safety ② Delays by secret school ③ Delays by snow play*
4. Please provide any additional comments you may wish to offer:  
*If you collected the data, I bet you would find delays by Secret car greater than those caused by snow play*

OPTIONAL ONLY: Name: David Arning Email:



US 180 CORRIDOR MASTER PLAN Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?
3. What do you see as the TOP THREE issues for the US 180 corridor?  
*Speeding vehicles*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY: Name: \_\_\_\_\_ Email: \_\_\_\_\_ *All over*





Please install a permanent, solar powered "Your Speed Is" sign near Whiting + Fort Valley Rd. Few cars travel the speed limit and this makes it so dangerous to turn onto Ft Valley Rd. This is also dangerous for bicyclists. This is every day speeding traffic + not limited to winter traffic.

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)
2. What roadway issues do you think the US 180 corridor will have in the next 20 years?
3. What do you see as the TOP THREE issues for the US 180 corridor?
4. Please provide any additional comments you may wish to offer:

ON BACK

OPTIONAL ONLY: Name: MAT FAHY

Email:



PROJECTIONS OF GROWTH  
(PAGES 72 AND FOLLOWING  
IN CMP DOCUMENT) SEEM  
UNREALISTICALLY LOW.  
SEVERAL YEARS' DATA  
SHOULD BE ANALYZED,  
NOT JUST 15/16, MOVING  
AVERAGES OVER SEVERAL  
MONTHS (NOT JUST SEPTEMBER/  
JANUARY COMPARISONS) SHOULD  
BE CALCULATED, ETC.

PROJECTIONS ON PAGE 79 ARE  
FRIGHTENING - AND THEY'RE  
MOSTLY LIKELY "CONSERVATIVE."

**STATION 1 COMMENT CARD**

1. What can be done now to prepare for the future of the US 180 corridor? (20 years)

2. What roadway issues do you think the US 180 corridor will have in the next 20 years?

*more traffic  
more bikes*

3. What do you see as the TOP THREE issues for the US 180 corridor?

*1. busy snow weekends in winter  
2. bike + pedestrian safety  
3. Daily traffic on Humphreys + out Ft. Valley to Museum*

4. Please provide any additional comments you may wish to offer:

*Please turn over* →

OPTIONAL ONLY:  
Name:

*Barbara Cress*

Email:



There are 2 separate issues:

- ① 180 congestion on snow weekends
- ② Humphreys and 180 traffic daily-long-term problem

① for the few snow weekends a year there was one strategy employed a few years ago that was very effective

- Place human traffic control officers on Columbus at Humphreys, Beaver, San Francisco to direct traffic manually - no traffic lights
- Switzer
- Also officers at ~~the~~ Humphreys + Rt 66,
- Rt 66 for control

- this would involve some costs but only when the need was present - it worked very well the few times it was tried. Traffic at Humphreys either turn South or went straight to Switzer. Also North traffic was allowed to turn left onto Ft Valley periodically.





Appendix M - Station 2: System Alternatives Utilizing Existing Right-of-Way Comment Cards



**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  YES  NO  
 Additional Comments (optional):  
*No more lanes for single vehicle drivers would support carpool and/or transit lanes*
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  YES  NO  
 Additional Comments (optional):  
*It's already really dangerous as a pedestrian on this street I don't need for people to drive faster*
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support?  YES  NO  
 Additional Comments (optional):
 

↑
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
 Name: Emily Melhorn Email:



**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  YES  NO  
 Additional Comments (optional):
 

(YES circled)
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  YES  NO  
 Additional Comments (optional):
 

(NO circled)
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support?  YES  NO  
 Additional Comments (optional): *BECAUSE OF THE CHOKER POINTS TRAFFIC WILL STILL BACK UP*

(NO circled)
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
 Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES  NO   
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES  NO   
Additional Comments (optional):
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support? YES  NO   
Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:  
*I DON'T THINK Hwy 180 SHOULD BE WIDENED.*

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES  NO   
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES  NO   
Additional Comments (optional):
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support? YES  NO   
Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:  
*I have concerns about signage on the middle lane to make it clearly obvious what its status is. Also, do crashes increase when these types of lanes are implemented?  
Additional lights needed for those trying to cross Humphrey's/turn left.  
It seems like this is a viable alternative that won't increase the width of the right-of-way*

OPTIONAL ONLY:  
Name: *Jennifer Spinti* Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? **YES** **NO** (circled)

Additional Comments (optional):
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? **YES** **NO**

Additional Comments (optional): *But also need to fix humphrey to milton & time lights for traffic flow*
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support? **YES** **NO** (circled)

Additional Comments (optional): *Bottle neck is DT down town*
4. Please provide any additional comments you may wish to offer:

*No bike lanes and don't open Beaver!*

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? **YES** **NO** (circled)

Additional Comments (optional):
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? **YES** **NO**

Additional Comments (optional): *We simply need more space.*
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support? **YES** / **NO**

Additional Comments (optional): *Depends*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  YES  NO  
Additional Comments (optional):

2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  YES  NO  
Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support?  YES  NO

Additional Comments (optional): *Flag high bus traffic comes from*

4. Please provide any additional comments you may wish to offer:  
*4th in a.m. - Forest-Beaver-Columbus + 2 on Humphrey to access FHS in a.m. FHS bus traffic exit on Humphreys all directions in p.m. especially*

*I live off 180 + work with school buses. Traffic is only severe in mornings with parent to Sechrist traffic combined with Southbound in a.m. morning + southbound traffic in p.m. Other seasons + time of days not serious*

OPTIONAL ONLY:  
Name: *Naomi Morrison* Email:   
*Humphreys combines traffic from other areas + is almost always bad.*

**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  YES  NO  
Additional Comments (optional):

2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  YES  NO  
Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support?  YES  NO  
Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  YES  NO  
Additional Comments (optional): *w/ a parking lot for snowplowers south of town,*
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  YES  NO  
Additional Comments (optional): *absolutely, but really its only a bandaid. The problem is much larger than that.*
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support?  YES  NO  
Additional Comments (optional): *Humphreys is the best option but in time or even immediately, it won't be sufficient.*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  YES  NO  
Additional Comments (optional): *Absolutely Not*
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  YES  NO  
Additional Comments (optional):
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support?  YES  NO  
Additional Comments (optional): *It would be OK but only as a short-term temporary*
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: *Jonathan McIntire*

Email:





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES  NO   
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES  NO   
Additional Comments (optional):
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES  NO   
Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:  
*Reversible lanes - do accidents increase? what is the national data show?*

OPTIONAL ONLY:  
 Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES  NO   
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES  NO   
Additional Comments (optional):
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES  NO   
Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:  
*None of these things resolves, you are trying to move 2+ lanes of traffic to 1 lane of traffic*

OPTIONAL ONLY:  
 Name: \_\_\_\_\_ Email: \_\_\_\_\_





**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES      NO  
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES      NO  
Additional Comments (optional): *CITY & COUNTY LIGHTING ORDINANCES MUST BE FOLLOWED BY ADOT*
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support? YES      NO  
Additional Comments (optional): *WITHIN CITY & COUNTY BOUNDARIES*
  
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



*5-3-2018*

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES      NO  
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES      NO  
Additional Comments (optional): *Prohibit Left Turns During Managed Operation.*
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternativ that you would support? YES      NO  
Additional Comments (optional):
  
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES      NO  
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES      NO  
Additional Comments (optional):
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES      NO  
Additional Comments (optional):
  
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_



Email: \_\_\_\_\_

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES      NO  
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES      NO  
Additional Comments (optional):
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES      NO  
Additional Comments (optional):
  
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_



Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  
Additional Comments (optional): YES  NO
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  
Additional Comments (optional): YES  NO
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support?  
Additional Comments (optional): YES  NO
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_



Email: \_\_\_\_\_

**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)?  
Additional Comments (optional): YES  NO
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)?  
Additional Comments (optional): YES  NO
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support?  
Additional Comments (optional): YES  NO
4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_



Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 2 COMMENT CARD**

1. Would you support System Alternative #1, No Build (maintain as is)? YES      NO  
Additional Comments (optional):
  
2. Would you support System Alternative #2, Humphrey's Street Southbound PM Peak Managed Lane (Reversible Center Lane)? YES      NO  
Additional Comments (optional):  
*① how to ~~fix~~ get Northbound travel + residents out to Ft. Valley, left turn at Rt 66 + Humphreys also backs up ~~on~~ during drive home hours, so people need northbound option.*
  
3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES      NO  
Additional Comments (optional):  
*if concerns above could be handled for locals + tourists*
  
4. Please provide any additional comments you may wish to offer:

over →

OPTIONAL ONLY: Barbara Cress

Email: \_\_\_\_\_



*• Something needs to be done about the left turn "island" by the underpass - it backs up in pm + interfere with Milton + Rt 66 traffic + left turn onto Humphreys. If left onto Santa Fe was ~~to~~ closed, then left onto Humphreys would not block traffic - could back up to where "island" is now*



**Appendix N - Station 3: System Alternatives that May Require Expanded Right-of-Way Comment Cards**

**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES  NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- |                               |   |
|-------------------------------|---|
| a. Existing right of way only | d. US 180 is fine the way it is                               |
| b. Expanded right of way only | e. Don't care as long as the solution helps reduce congestion |
| c. Either is ok to study      |   |

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES  NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES  NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES  NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

still bottlenecks - more traffic off US 180.

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

NO

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support?

YES

NO

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?  YES  NO

Additional Comments (optional): if you let the traffic through close the campus! make snowplayers park south of town & take a bus to the snow play areas. There are towns w/ no cars allowed in certain areas or campus. Its the least expensive option.

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES NO

Additional Comments (optional): NO we live down here. why are we being punished, make the out of towners pay for this & make them take a bus

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES  **NO**

Additional Comments (optional):

*An alternative-permanent Bypass road from I-40 & Bellmont to 222 Winy Mt. is the only solution - this will eliminate most tourist traffic & snow ply traffic. US 180 from Humphreys to Snowbowl should be local traffic only.*

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?  
Circle one or more:

- |                               |   |
|-------------------------------|---|
| a. Existing right of way only | d. US 180 is fine the way it is                               |
| b. Expanded right of way only | e. Don't care as long as the solution helps reduce congestion |
| c. Either is ok to study      |   |

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES  **NO**

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_





**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?  
Circle one or more:

- |                               |   |
|-------------------------------|---|
| a. Existing right of way only | d. US 180 is fine the way it is                               |
| b. Expanded right of way only | e. Don't care as long as the solution helps reduce congestion |
| c. Either is ok to study      |   |

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable YES NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

*There are ski resorts in other places where people must take the shuttles up to ski. Cars are left in town. Seems simple enough. People love their cars - so what*

OPTIONAL ONLY

Name: Satsansar Best

Email:



**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1 **ADOT**

**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES    NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?  
Circle one or more:

- |  |   |
|--|---|
| a. Existing right of way only                                  | d. US 180 is fine the way it is                               |
| <input checked="" type="radio"/> b. Expanded right of way only | e. Don't care as long as the solution helps reduce congestion |
| <input type="radio"/> c. Either is ok to study                 |   |

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES     NO

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES  NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES  NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





### STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES  NO

Additional Comments (optional): *yes, as long as they are coordinated with traffic flow at affected Stoplights*

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- |   |   |
|---|---|
| <input type="radio"/> a. Existing right of way only       | <input type="radio"/> d. US 180 is fine the way it is                               |
| <input type="radio"/> b. Expanded right of way only       | <input type="radio"/> e. Don't care as long as the solution helps reduce congestion |
| <input checked="" type="radio"/> c. Either is ok to study |   |

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES  NO

alternative that you would support?  
Additional Comments (optional):

*yes, as long as coordinated with appropriate upgrading/ managing Stoplights at Rt.66+Butter, Rt.66+Humphreys + ~~B~~ Humphrey's + Columbus.*

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study

- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

Send cards to I40 west to Williams & North

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES

NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



US 180 CORRIDOR MASTER PLAN  
Public Open House #1



STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES  NO

Additional Comments (optional):

*You need to move it out of town. Att 18 is the best*

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- |   |   |
|---|---|
| a. Existing right of way only                             | d. US 180 is fine the way it is                               |
| b. Expanded right of way only                             | e. Don't care as long as the solution helps reduce congestion |
| <input checked="" type="radio"/> c. Either is ok to study |   |

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support?

YES  NO

Additional Comments (optional):

*only temporarily until you move 180 out of town*

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY  
Name: *Jeffrey DeLap*

Email:





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1 **ADOT**

**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?  
Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

*CITY + COUNTY LIGHTING ORDINANCES MUST BE FOLLOWED BY ADOT WITHIN CITY + COUNTY BOUNDARIES.*

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable YES NO

alternative that you would support?  
Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN**   
Public Open House #1

**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES  NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d.  US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES  NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES  NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- |  |   |
|--|---|
| <input type="radio"/> a. Existing right of way only            | <input type="radio"/> d. US 180 is fine the way it is                               |
| <input checked="" type="radio"/> b. Expanded right of way only | <input type="radio"/> e. Don't care as long as the solution helps reduce congestion |
| <input type="radio"/> c. Either is ok to study                 |   |

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support?

YES  NO

Additional Comments (optional): *But it is confusing!*

4. Please provide any additional comments you may wish to offer:

*Seasonal Traffic light & turning lane improvement at intersection w/ Snowbowl Rd (ski area).*

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES  NO

Additional Comments (optional):

The studies suggest cars are running into each other. Trying to move them faster will not make this safer.

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?  
Circle one or more:

- a. Existing right of way only  
b. Expanded right of way only  
c. Either is ok to study  
d.  US 180 is fine the way it is  
e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

The congestion issue is overstated. There is no reason cars passing through neighborhoods merely something should change the structure of those neighborhoods.

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES  NO

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

Extra lanes must be separated from cars, physically. Otherwise they are not safe and just collect the debris from cars.

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_



**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES



Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

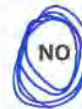


- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES



alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

*It just seems like it would take forever & won't save the problem.*

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:



a. Existing right of way only

b. Expanded right of way only

c. Either is ok to study



d. US 180 is fine the way it is

e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES

NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?  YES  NO

Additional Comments (optional): *Snow play is not going away*

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only  
b. Expanded right of way only  
 c. Either is ok to study  
d. US 180 is fine the way it is  
e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):  
*An alternative route really is needed*

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support?  YES  NO

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:  
*Bike used should be encouraged. The ride from town to Snowbowl should be safety*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES NO

alternative that you would support?

Additional Comments (optional):

*Freight Sys #6 (Very Dangerous if not Very Clear) Main purpose for Emergency vehicles & Local (weekly) use. (Dynamic) Weekend use by tourists (NOT Dynamic).*

4. Please provide any additional comments you may wish to offer:

*Move Forward w/ Study ☺*

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES NO

Additional Comments (optional):

*Bus lanes only*

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support? YES  NO

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_ Email: \_\_\_\_\_





### STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only  
 b. Expanded right of way only  
c. Either is ok to study

- d. US 180 is fine the way it is  
e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES

NO

alternative that you would support?

Additional Comments (optional):

*I support the middle lane being switched, but not the entire road*

4. Please provide any additional comments you may wish to offer:

*Dynamic shoulder doesn't solve any congestion issues*

OPTIONAL ONLY:

Name:

*Jennifer Spinti*

Email:



US 180 CORRIDOR MASTER PLAN  
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study

- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES

NO

alternative that you would support?

Additional Comments (optional):

NOT WHEN PEOPLE CALL THEM  
SUICIDE LANES IN OTHER LOCALES.

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY  
Name: ROBERT J. BEST

Email: \_\_\_\_\_



**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

No Bottle Neck is 180/Humphrey intersection & then lights on Humphreys to Milton which is Always backed up.

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study

- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

Just needs safe expansion for Bicyclists - no disappearing Bike Paths

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable alternative that you would support?

YES

NO

Additional Comments (optional):

too many side streets that need two lanes -

4. Please provide any additional comments you may wish to offer:

Bike lanes Both sides that Dont disappear or narrow.  
Free & Frequent Buses  
Bus only lanes.

OPTIONAL ONLY:  
Name:

Elizabeth

Email:





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES NO

Additional Comments (optional):

*in areas where right of way would not need to be expanded unless on unoccupied areas*

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?  
Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

*Worst area is between Forest & Sedrist School in a.m.*

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable  YES  NO

alternative that you would support?  
Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

*Comments on a yellow note already  
Sedrist boundary is north of Forest/Cedar to 4th Street. Parents/bus traffic coming off Forest to 180 causes major congestion between Forest & Sedrist  
- 8:00 - 8:45 or so*

*Baderville, Chino Valley  
Coconino State*

OPTIONAL ONLY:  
Name: Naomi Morrison

Email:

*I also live off 180*



**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES

NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer;

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN**   
Public Open House #1

**STATION 3 COMMENT CARD**

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety? YES  NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?  
Circle one or more:

- a. Existing right of way only
- b. Expanded right of way only
- c. Either is ok to study
- d. US 180 is fine the way it is
- e. Don't care as long as the solution helps reduce congestion

Additional Comments (optional):

*Winter congestion is ~ 14 days per year*

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable YES  NO

alternative that you would support?

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





## STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on US 180 is necessary to help address congestion (emphasis on winter recreation) and safety?

YES

NO

Additional Comments (optional):

*traffic*  
It would help, however, still funnel into limited town surface streets (Humphreys + Beaver) and onto already overcrowded Milton by the underpass.

2. Generally speaking, would you prefer that future alternatives for US 180 be designed to help address congestion (emphasis on winter recreation) and safety utilize existing right-of-way only, or expanded right-of-way?

Circle one or more:

- |                               |   |
|-------------------------------|---|
| a. Existing right of way only | d. US 180 is fine the way it is                               |
| b. Expanded right of way only | e. Don't care as long as the solution helps reduce congestion |
| c. Either is ok to study      |   |

Additional Comments (optional):

*I don't understand the question*

3. Generally speaking, does any kind of reversible lane concept for US 180 (northbound in the morning; southbound in the afternoon) sound like a viable

YES

NO

alternative that you would support?

Additional Comments (optional):

*Perhaps*  
But there still has to be a convenient way for people to go North to get to 180 to return to home or ~~or~~ continue on Hwy 180 out of town

4. Please provide any additional comments you may wish to offer:

*Again - are you ~~trying~~ trying to solve snow play traffic or daily traffic - for snow play not of the alternatives would be very helpful. ~~and~~ For Routine traffic could possibly help.*

OPTIONAL ONLY:

Name:

*Barbara Cress*

Email:



Ideas For Snow play congestion

1. instead of ~~the~~ closing parking areas clear out multiple parking areas along 180 w/ signage "Parking 1 mile ahead," etc. For those who want to "play." They are going to come + with Wing Mt + ~~the~~ Crowley closed they need some where to park + play. Of course - play areas NOT on 180 would help also.
2. Human Traffic ~~the~~ Control officers along lights on ~~at~~ Columbus and on Rt 66 at Switzer + Humphrey to direct traffic (no traffic lights). It was tried before + worked well. Best strategy I've seen in 35 years I've lived in Cheshire.



Comment

I would like to see the bypass go through Forest Land (like around Wing Mountain). Not going on local roads past houses, limited access except at Wing Mtn, possibility to expand in the future if ADOT owns the right of way. Can serve as fire break for flycatcher. Need to provide wildlife crossing areas (under or overpasses).

If we trade Nat. Forest Land for AZ State Trust Land, <sup>then buy the trust land,</sup> then we can also help with the topi land settlement.

- Anne Wittle





Appendix O - Station 4: Alternative Routes to US 180 Comment Cards

**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a.  I prefer that any proposed solutions look to widen US 180
  - b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c.  I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

People live on all the other options

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?

But they are all band-aids

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*No Routes thru Tort Valley Neighborhood*

4. Would you support the use of alternative routes to US 180 that use existing *EVER* city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*more direct*  
*Combine 16 + 18 to new route*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?

- Circle All That You Support:
- combine to new route avoiding private property*
- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*Most intuitive for Phoenix Region; progressively less intuitive as options move north on 180.*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
 (Preliminary System Alternatives 15, 16, 17, and 18)  
 Optional: Why or why not? THIS ALTERNATE ROUTE IS ABSOLUTELY NECESSARY. NO OTHER SOLUTIONS WILL SUFFICE TO SOLVE THE USEFUL 180 PROBLEMS.
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
 Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?  
 ALL ARE BETTER THAN WHAT EXISTS NOW. 15-17 ALL OFFER THE OPTION TO LEAVE SB ROAD IN TWO DIFFERENT DIRECTIONS.
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
 Optional: Why or why not? NONE OF THESE OPTIONS ARE SUFFICIENT ENOUGH TO ADDRESS THE CURRENT PROBLEMS.
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180 → *highly only*
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*FS. Rd 222 & down to 40*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40 — *WINTER*
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: *K. Finner*

Email:





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a.  I prefer that any proposed solutions look to widen US 180
- b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
- c.  I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)

Optional: Why or why not?

*Because you want to funnel traffic thru neighborhoods in Baderville. Traffic trespassing, litter, & noise pollution are problems already.*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?

Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*This is the least intrusive expensive. won't fix congestion issues.*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?

**YES** **NO**

Optional: Why or why not?

*Widen 180 or use center lane for traffic*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*Widen 180 or use shuttle buses. Use center lane for outgoing traffic in late afternoon.*

OPTIONAL ONLY  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not? *unnecessary to address winter congestion*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not? *with reason - can these alt routes be rotated eg - don't use forest during heavy snow, etc*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way) *w/ new crossing this is worst congestion*
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not? *No more traffic thru downtown*

OPTIONAL ONLY: Name: *Linda Jalbert*

Email:



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*I don't feel that managing traffic using existing roads + lights + transit has been properly explored and exhausted. Alternative routes would only address snowbound traffic, not overall congestion issues.*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?  
*would be more expensive + have rural character + wildlife impacts.*  
*None, but I dislike Alt 18 the most due to wildlife corridor that runs through the route.*
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  **YES**  **NO**  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd *← need alt route to Freeways*
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY: Name: AZGFD Hannah Grisem Email:





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? YES  NO 

(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*BECAUSE THEY GO THROUGH NEIGHBORHOODS.*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?  
*ALL OTHER ARE THROUGH NEIGHBORHOODS.*
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? YES  NO 

Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not? *ALL-*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a.  I prefer that any proposed solutions look to widen US 180
  - b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c.  I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? YES  NO 

(Preliminary System Alternatives 15, 16, 17, and 18)

Optional: Why or why not?  
*Because of dense neighborhoods - would approve if through forest where it doesn't impact existing homes*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40 NO NO NO
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?  
*None - widen existing highway - That is designated highway. People who bought homes on 180 (new) it was a highway we bought on expects to be away from highway*
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7-14)? YES  NO 

Optional: Why or why not? *Impacts homes that think they are in country - Elbe migration*
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY: Name: Sandra Smith Email:



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
 (Preliminary System Alternatives 15, 16, 17, and 18)  
 Optional: Why or why not? *Least impact to residence w/ children. Bader rd alone has 6 families with children under 5. Right now they can play and go from house to house. More traffic would ruin this and undermine the community.*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
 Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
 Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: Kyle Wormsbecker

Email:





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a.  I prefer that any proposed solutions look to widen US 180
  - b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c.  I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 – 14)? **YES**  **NO**  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY: Name: Ed Smith Email:





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*Consider leaving 180 via Ft Valley Ranch Road i.e. between Hidden Hollow and*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?

*Sub Bowl avoids most residences!*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a.  I prefer that any proposed solutions look to widen US 180
- b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
- c.  I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

*alt Rte 17 only - no hwy's through neighborhoods  
We need to learn from history - People do not want hwy thru neighborhoods*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?

Circle All That You Support:

*NONE*

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*I can not support any alt route through neighborhoods*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?

**YES** **NO**

Optional: Why or why not?

*Re direct congestion away from Milton / Humphreys*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- ✗ Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*more traffic away from Milton & Humphreys*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
 (Preliminary System Alternatives 15, 16, 17, and 18) *along the Pipeline*  
 Optional: Why or why not?  
*I would also like to see a 2 Lane Road From Shultz Pass To 89 with 3 on 4 Feeders south into town*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
 Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
 Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd *Needed for a long time!!*
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY: Name: Douglas Sabo Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

*TAKE TRAFFIC outside + OFF 180 + Redirects to I-40 which can handle the Traffic.*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

*TAKES TRAFFIC OFF US 180.*

Optional: Why or why not?

*US 180 - needs to have an alternative route  
(1) growing populations. (2) Bottlenecks Traffic when it gets to schrist school. (3) current residents are TRAPPED if there is a blocking wrecker.*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?

*NOTEFFECTIVE*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*Doesnt Solve the Problem + has extreme expense. "BAND-AID" Approach.*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a. I prefer that any proposed solutions look to widen US 180
- b. I prefer that any proposed solution look at alternative routes instead of widening US 180 ?
- c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**   
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

*We subsidize Snowbowl + visitors should have to come through Flagstaff. Otherwise we are giving revenue to elsewhere in county!*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

*Besides, major wildlife corridors in forest west of town.*

- Preliminary System Alternative 15: ~~Bader Rd to FS 518 to A-1 Mountain Rd to I-40~~
  - Preliminary System Alternative 16: ~~Snow Bowl Road to A-1 Mountain Road to I-40~~
  - Preliminary System Alternative 17: ~~Wing Mountain Rd to FS 222 to FS 171 to I-40~~
  - Preliminary System Alternative 18: ~~Hidden Hollow Rd to FS 506 to Route 66 to I-40~~
- Optional: Why or why not?

*See above. I am shocked that forced park-and-ride bus to Snowbowl is not an option instead. Better yet, change*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7-14)? **so city gets revenue!** **YES**  **NO**   
Optional: Why or why not?

*Flagstaff subsidizes Snowbowl - visitors' dollars should be kept in Flag.*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*Fourth Street should connect to JW Powell.*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_

*Make snowbowl visitors use a park + -ride system!*





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1 **ADOT**

### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 if fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
- Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a. I prefer that any proposed solutions look to widen US 180
- b. I prefer that any proposed solution look at alternative routes instead of widening US 180
- c. I believe that US 180 if fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)

Optional: Why or why not?

It moves congestion (Traffic) out of Town and elevates bottle Necking traffic on Ft. Valley.

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?

Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

Alternative 18 - moves traffic out of Flag and comes out beyond most Residential Homes.

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO

Optional: Why or why not?

NO - Does not eliminate traffic problem.  
No - Very Costly to Purchase property/Businesses

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

NONE  
The Flagstaff area will continue to grow. This problem needs attention now! - it will just be more expensive at a later time.

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

PAVED!

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?

ONLY IF THEY ARE PAVED!

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

HUMPREY'S IS THE MAJOR BOTTLENECK!

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?  
*Too much impact on animal corridor noise, trash, loss of peaceful enjoyment & quantity of life*
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES**  **NO**  
Optional: Why or why not?  
*same as above*
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_ Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? YES   NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Long Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40Optional: Why or why not?

My house is on this Bader Rd.
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?

*It would ease congestion on Milton/Humphreys - the goal*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?

*Same as above*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*Relieve the traffic on Humphreys!  
30 yrs. on Humphreys and it is ridiculous how busy the road has become*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a. I prefer that any proposed solutions look to widen US 180
- b. I prefer that any proposed solution look at alternative routes instead of widening US 180
- c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? YES  NO   
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

*Community impacts!*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? YES  NO   
Optional: Why or why not?

*NO FS*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
 (Preliminary System Alternatives 15, 16, 17, and 18)  
 Optional: Why or why not? *You must get 180 out of town. Anything else only puts off the inevitable. The city is going to grow. You would have to purchase too much private property.*
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
 Circle All That You Support: *to widen 180.*
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?  
*Alt. 18 is the plan that disrupts the least property owners. Gets 180 out of town and allows room for growth.*
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
 Optional: Why or why not?
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?  
*No*
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not? *You can not expand 180 enough to take care of the problems when you go thru town. We need to quit thinking Flagstaff is not going to grow and plan for it, for a change.*

OPTIONAL ONLY  
 Name: Jeffrey DeLap Email:



**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? (Preliminary System Alternatives 15, 16, 17, and 18) **YES**  **NO**   
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES**  **NO**   
Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_ Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*1 Line on bader rd*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*IT'S THE ONLY OPTION TO REDUCE CONGESTION*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - ~~Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40~~
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### STATION 4 COMMENT CARD

- Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - I prefer that any proposed solutions look to widen US 180
  - I prefer that any proposed solution look at alternative routes instead of widening US 180
  - I believe that US 180 is fine the way it is
- Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
- If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40Optional: Why or why not?
- Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
- If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

new suggestion: locals only lane

OPTIONAL ONLY:  
Name:

Emily

Email:



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*Not connections through neighborhood. Not Bader or Snowbowl Rd.*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES**  **NO**  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





## US 180 CORRIDOR MASTER PLAN ADOT Public Open House #1

### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 if fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*I live in Fort Valley. 2nd route to town needed  
I support using South Snowbowl Rd.*
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?  
*The intersection of 180 and snowbowl Rd makes the most sense to me*
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
- Optional: Why or why not?

OPTIONAL ONLY:

Name: Ethan Blasius

Email: \_\_\_\_\_



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? YES  NO  (Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? YES  NO   
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

*fm*

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?  
*Improves into neighborhoods*
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_ Email: \_\_\_\_\_





## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180 - *This solution only works once the Milton solution is addressed also!*
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not? *As long as they do not go through neighborhoods!*
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40 ~~to I-40~~
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
- Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a.  I prefer that any proposed solutions look to widen US 180
- b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
- c.  I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)

Optional: Why or why not?

*Safety, #s of vehicles, neighborhood congestion*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?

Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO

Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a. I prefer that any proposed solutions look to widen US 180
- b. I prefer that any proposed solution look at alternative routes instead of widening US 180
- c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

*#1 best to avoid residences + least cost to construct but perhaps 15, 16, 18 for locals have a relief. In winter living in Cheshire if access to Flagstaff was closed, my ONLY option to get out is a multi-hour drive to Valle then Williams to I-40! Not (POOR) option!*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?  
*Why not straightest, avoids residential and least climbing hills or descending in grade elevation. Also ~~alt 17~~ connects close to I-40 Exit but the Pilot Gas intersection needs improvement*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?

*Not Alts 7-9 as they are already being used as alt. Proof when Beaver St was shut down this winter twice traffic backups on Humphreys - it was horrible!! Please don't put traffic on Suttercamp, San Francisco, Beaver, Humphreys over sitgreaves as total US 180 traffic*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Already used* Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Already used* Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Already used* Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Already used* Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- End it! Great!* Preliminary System Alternative 12: Lone Tree Rd
- Doesn't help Milton* Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- yes* Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** NO  
(Preliminary System Alternatives 15, 16, 17, and 18)

Optional: Why or why not?

*Keep Tourist and visitors easy routes back to town and taking load off 180 and downtown streets*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*Use ALT 15 and 18 and connect them south of Bader-Ville Rd, FS 506 would curve N.West to meet FS 518*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** NO

Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 15: Canyon Dr to Route 66
- Preliminary System Alternative 16: t to Butler Ave (southbound one way) and d one way)
- Preliminary System Alternative 17: Butler Ave to S
- Preliminary System Alternative 18: to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 19: Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 20: verpass to Humphreys St (northbound one (southbound one way)
- Preliminary System Alternative 21: Woodland's Village Blvd to Beulah Ave to

*Preliminary System ALT 15  
Use F.S. 506 North and connect to Snow bowl Rd  
Combine ALT 15 and 18*

Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_ Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 if fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not? *I fear many homes & other businesses, museums etc. along that route - schools, churches also.  
② We need to get traffic congestion out of center of town & residential areas.*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not? *City roadway & street - already overburdened.*
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - ~~Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66~~
  - ~~Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)~~
  - ~~Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66~~
  - ~~Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40~~
  - ~~Preliminary System Alternative 12: Lone Tree Rd~~
  - ~~Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)~~
  - ~~Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17~~
 Optional: Why or why not? *The main goal should be to save our city - business & especially residential areas. Stop this!  
all of the above are located in residential & business areas.  
Bad for business & completely destructive to all residential*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

### STATION 4 COMMENT CARD

- Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - I prefer that any proposed solutions look to widen US 180
  - I prefer that any proposed solution look at alternative routes instead of widening US 180
  - I believe that US 180 is fine the way it is
- Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
- If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40Optional: Why or why not?
- Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?
- If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not? *What ever happened to a road over to the McMillan Mesa + around Buffalo Park to connect to 180 to help traffic on Rt 66 + Milton on a daily bases and also as alternative if 180 is closed due to accident, fire, etc. Those out 180 are cut off with no alternatives*

OPTIONAL ONLY: Name: \_\_\_\_\_ Email: \_\_\_\_\_

*if 180 is closed*





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? (Preliminary System Alternatives 15, 16, 17, and 18)  YES  NO  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?

*NOT INTRUSIVE TO OUR NEIGHBORHOODS!*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?

*S.A.A. ↑*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*NO - DUE TO THE HIGH-DENSITY APARTMENTS BEING BUILT.*

*HWY. 66 IS ALREADY TAXED AT RUSH HOUR!*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 if fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not? *There is not room for a 180 that is much bigger*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not? *SAFETY, ADD CAPACITY, ADD ACCESS TO FOREST.*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not? *Voted already w/*
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not? *Already voted*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 if fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?  
*TRAFFIC should not be routed through baderville*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  **YES** **NO**  
Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?  
*LOCALS ONLY LANES*

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**

Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):

- a. I prefer that any proposed solutions look to widen US 180
- b. I prefer that any proposed solution look at alternative routes instead of widening US 180
- c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**

(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

*I support Park's Ride Transit that keeps individual drivers out of cars*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?

Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES**  **NO**

Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a.  I prefer that any proposed solutions look to widen US 180
  - b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c.  I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES**  **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  **YES**  **NO**  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?   
*ALTI 2  
Consider: Milton To 66 To Yale/Bedlah To JWP To I-17.*

OPTIONAL ONLY:  
Name: Gerry Craig Email:





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? YES NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
 

?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not? BEST CHOICE!
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? YES NO  
Optional: Why or why not?
 

?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:

Name: \_\_\_\_\_ Email: \_\_\_\_\_





## US 180 CORRIDOR MASTER PLAN

Public Open House #1



### STATION 4 COMMENT CARD

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a.  I prefer that any proposed solutions look to widen US 180
  - b.  I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c.  I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)

Optional: Why or why not?

Routing people to the snow (at 8000 ft elevation near Nordic Center) around Flagstaff would eliminate congestion downtown.

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?

Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

I support the most cost-effective

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY

Name:

Jennifer Spinti

Email:



**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?

*Not sure these would help because many people spend night in hotels + have to access Snodgrass from Flag + NAU students + locals*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  
Optional: Why or why not?

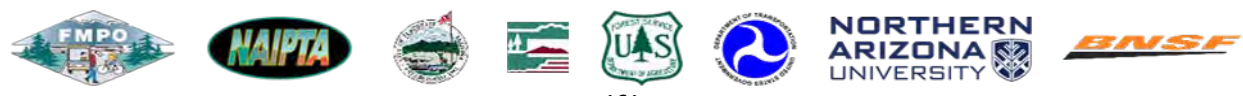
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sitgreaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY  
Name: Sarahi Mamson

Email:  *Transportation*





### US 180 CORRIDOR MASTER PLAN

Public Open House #1



### STATION 4 COMMENT CARD

- Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - I prefer that any proposed solutions look to widen US 180
  - I prefer that any proposed solution look at alternative routes instead of widening US 180
  - I believe that US 180 is fine the way it is
- Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
- If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40Optional: Why or why not?

*CITY AND COUNTY LIGHTING ORDINANCES MUST BE FOLLOWED BY ADOT WITHIN CITY AND COUNTY BOUNDARIES*
- Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?

*CITY AND COUNTY BOUNDARIES*
- If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only);
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40?  YES  NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)?  YES  NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not? DOES NOT REDUCE CONGESTION !!!

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 if fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? YES  NO 

(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?  
*Destroy neighborhood impact FLAG BUSINESS* *cheer up more open space and forest lands all because FLAG doesn't know how to plan*
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? YES  NO 

Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
- Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
- Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
- Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40

Optional: Why or why not?

*SHOULD HELP RELIEVE  
SOME CONGESTION IN CITY*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**  
Optional: Why or why not?

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*ALL WOULD RUIN  
HISTORIC AREAS (except 14, which is bad)*

OPTIONAL ONLY:

Name: ROBERT J. PEASE Email: \_\_\_\_\_





**US 180 CORRIDOR MASTER PLAN**  
Public Open House #1



**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
  - a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is
  
2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** NO  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?
  
3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:
  - Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
 Optional: Why or why not?
  
4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** NO  
Optional: Why or why not?
  
5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?
  - Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
  - Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
  - Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
  - Preliminary System Alternative 12: Lone Tree Rd
  - Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
  - Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17
 Optional: Why or why not?

OPTIONAL ONLY:  
Name: \_\_\_\_\_

Email: \_\_\_\_\_



**US 180 CORRIDOR MASTER PLAN** **ADOT**  
Public Open House #1

**STATION 4 COMMENT CARD**

1. Which would you prefer to help address congestion (emphasis on winter recreation) and safety on US 180 (Circle One Only):
- a. I prefer that any proposed solutions look to widen US 180
  - b. I prefer that any proposed solution look at alternative routes instead of widening US 180
  - c. I believe that US 180 is fine the way it is

2. Would you support the construction of alternate routes to US 180 that connect US 180 to I-40? **YES** **NO**  
(Preliminary System Alternatives 15, 16, 17, and 18)  
Optional: Why or why not?

*To take the amount of traffic off Humphreys & Ft Valley + Melton*

3. If you support the use of alternative routes to US 180, which of the Alternatives would you consider supporting?  
Circle All That You Support:

- Preliminary System Alternative 15: Bader Rd to FS 518 to A-1 Mountain Rd to I-40
  - Preliminary System Alternative 16: Snow Bowl Road to A-1 Mountain Road to I-40
  - Preliminary System Alternative 17: Wing Mountain Rd to FS 222 to FS 171 to I-40
  - Preliminary System Alternative 18: Hidden Hollow Rd to FS 506 to Route 66 to I-40
- Optional: Why or why not?  
*15 & 16 would bypass most of downtown + residential areas*
- too far out*  
*not far enough out*

4. Would you support the use of alternative routes to US 180 that use existing city/county roadways (Preliminary System Alternatives 7 - 14)? **YES** **NO**

Optional: Why or why not?  
*Doesn't really solve the city congestion - just different routes but same traffic amount*

5. If you support the use of alternative routes to US 180 that utilize existing city/county roadways, which of the Alternatives would you consider supporting?

- Preliminary System Alternative 7: Columbus Ave to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 8: Columbus Ave to Beaver St to Butler Ave (southbound one way) and Butler Ave to San Francisco St to Columbus Ave (northbound one way)
- Preliminary System Alternative 9: Forest Ave to Turquoise Dr to Switzer Canyon Dr to Route 66
- Preliminary System Alternative 11: Milton Rd to Route 66 to Flagstaff Ranch Rd to I-40
- Preliminary System Alternative 12: Lone Tree Rd
- Preliminary System Alternative 13: Mike's Pike St to Future Overpass to Humphreys St (northbound one way) and Kendrick St to Elm St to Sit greaves St to Milton Rd (southbound one way)
- Preliminary System Alternative 14: Milton Rd to Route 66 to Woodland's Village Blvd to Beulah Ave to John Wesley Powell to I-17

Optional: Why or why not?

*Please see back*

OPTIONAL ONLY: Name: Barbara Cross Email: \_\_\_\_\_





Alternative 15-18 should not be considered  
just to alleviate snow play traffic.

~~also the long-term problems of local traffic~~  
~~probably~~

Roads outside of town off A-1 Mtn  
would not really help locals on a daily  
commute and/or would create  
way too much traffic through rural  
communities. A beltway - ~~around~~  
~~and~~ circling town would help  
more than paving dirt forest road.  
Not just for 180 but Milton + Rt 66





# Appendix D – Tier 2 Detailed Traffic Model Results

AM - Average Speed		No Build AM	Package A AM		Package B AM		Package C AM		Package D AM		Package E AM		Package F AM	
Corridor	Segment	Average Speed (mph)	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change
US-180 WB	1	11.9	12.5	4.7%	10.9	-8.6%	11.6	-2.9%	9.9	-17.0%	15.5	30.1%	14.5	21.1%
US-180 WB	2	36.0	39.3	9.1%	38.1	5.8%	37.3	3.7%	35.9	-0.1%	36.7	1.9%	35.9	-0.4%
US-180 WB	3	48.4	50.8	4.9%	49.8	3.0%	48.8	0.9%	48.4	-0.1%	48.7	0.6%	48.5	0.3%
US-180 WB	4	56.0	53.1	-5.3%	52.7	-6.0%	52.5	-6.3%	52.4	-6.5%	55.9	-0.3%	55.9	-0.2%
Entire Corridor		41.0	42.1	2.9%	40.5	-1.0%	40.5	-1.2%	38.8	-5.2%	42.9	4.7%	42.2	3.0%

US-180 EB	4	56.2	56.3	0.2%	56.2	0.0%	56.2	0.0%	56.2	0.0%	55.9	-0.5%	56.2	0.0%
US-180 EB	3	51.1	52.0	1.9%	50.6	-0.8%	50.6	-0.8%	51.2	0.2%	51.1	0.0%	51.1	0.0%
US-180 EB	2	35.2	39.0	10.7%	34.1	-3.1%	35.3	0.3%	35.2	0.1%	36.0	2.3%	35.2	0.0%
US-180 EB	1	17.0	16.8	-1.1%	13.5	-20.5%	17.4	2.1%	16.9	-1.0%	17.0	-0.3%	17.1	0.5%
Entire Corridor		43.5	44.9	3.3%	41.6	-4.4%	43.5	0.1%	43.5	-0.1%	43.7	0.4%	43.5	0.1%

Average Speed of US-180 EB/WB - AM	42.2	43.5	41.1	42.0	41.1	43.3	42.8
Travel Speed as %of Base Free Flow Speed	84.8%	87.4%	82.4%	84.4%	82.6%	86.9%	86.0%

PM - Average Speed		No Build PM	Package A PM		Package B PM		Package C PM		Package D PM		Package E PM		Package F PM	
Corridor		Average Speed (mph)	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change
Milton Rd NB		7.0	5.5	-21.9%	6.1	-12.7%	5.5	-21.9%	6.1	-12.7%	6.3	-10.6%	6.1	-13.2%
Milton Rd SB		12.5	11.9	-4.4%	11.6	-7.4%	11.9	-4.4%	11.6	-7.4%	11.6	-6.7%	12.0	-3.9%

US-180 WB	1	15.3	16.9	10.9%	17.3	13.6%	16.7	9.4%	16.5	8.2%	16.6	9.0%	16.4	7.8%
US-180 WB	2	33.5	35.8	6.9%	34.3	2.2%	32.9	-1.9%	34.0	1.3%	33.7	0.4%	33.7	0.5%
US-180 WB	3	50.0	51.2	2.3%	50.0	-0.1%	49.3	-1.5%	49.1	-1.8%	50.4	0.7%	50.1	0.2%
US-180 WB	4	55.7	52.9	-4.9%	50.9	-8.6%	50.9	-8.6%	50.8	-8.8%	55.2	-0.9%	55.2	-0.9%
Entire Corridor		42.8	43.0	0.6%	41.8	-2.2%	41.0	-4.2%	41.3	-3.6%	42.5	-0.7%	42.4	-0.9%

US-180 EB	4	55.3	55.9	1.1%	55.3	0.0%	55.3	0.1%	55.3	0.1%	55.4	0.2%	55.2	-0.2%
US-180 EB	3	49.6	51.6	4.2%	49.3	-0.6%	49.0	-1.2%	49.0	-1.1%	49.8	0.4%	49.5	-0.1%
US-180 EB	2	31.0	34.2	10.5%	24.3	-21.7%	21.0	-32.2%	21.3	-31.2%	33.1	6.6%	33.7	8.6%
US-180 EB	1	14.1	12.9	-8.2%	8.9	-36.6%	9.6	-31.7%	10.2	-27.4%	16.1	14.0%	16.6	17.7%
Entire Corridor		40.3	41.5	3.0%	34.4	-14.6%	33.2	-17.6%	33.7	-16.3%	41.9	4.0%	42.2	4.8%

Average Speed of US-180 NB/SB - PM	41.5	42.3	38.1	37.1	37.5	42.2	42.3
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Travel Speed as Percent of Base Free Flow Speed

83.4%

84.9%

76.6%

74.5%

75.3%

84.7%

84.9%

Base Free Flow Speed

49.8



AM - Average Travel Time					No Build AM	Package A AM							Package B AM					
Corridor	Segment	Begin	End	Distance (mi)	Travel Time (sec)	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicle s	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)
US-180 WB	1	Rte 66	Columbus Ave	0.6	167	160	7.5	2.7	4.5%	12.5	0.6	4.7%	1882	183	-15.7	3.0	-9.4%	10.9
US-180 WB	2	Columbus Ave	Peak View	2.6	262	240	21.8	4.0	8.3%	39.3	3.3	9.1%	764	248	14.3	4.1	5.5%	38.1
US-180 WB	3	Peak View	Snow Bowl Rd	3.8	281	268	13.2	4.5	4.7%	50.8	2.4	4.9%	310	273	8.1	4.5	2.9%	49.8
US-180 WB	4	Snow Bowl Rd	MP 233	4.2	269	284	-15.0	4.7	-5.6%	53.1	-3.0	-5.3%	111	287	-17.1	4.8	-6.3%	52.7
Entire Corridor				11.1	979	952	27.5	15.9	2.8%	42.1	1.2	2.9%	3067	990	-10.3	16.5	-1.1%	40.5

US-180 EB	4	MP 233	Snow Bowl Rd	4.2	270	269	0.5	4.5	0.2%	56.3	0.1	0.2%	96	269	0.1	4.5	0.0%	56.2
US-180 EB	3	Snow Bowl Rd	Peak View	4.0	279	274	5.3	4.6	1.9%	52.0	1.0	1.9%	131	282	-2.2	4.7	-0.8%	50.6
US-180 EB	2	Peak View	Columbus Ave	2.6	264	239	25.6	4.0	9.7%	39.0	3.8	10.7%	583	273	-8.4	4.5	-3.2%	34.1
US-180 EB	1	Columbus Ave	Rte 66	0.6	126	128	-1.4	2.1	-1.1%	16.8	-0.2	-1.1%	1100	159	-32.5	2.6	-25.8%	13.5
Entire Corridor				11.3	939	909	30.1	15.2	3.2%	44.9	1.4	3.3%	1910	983	-43.1	16.4	-4.6%	41.6

Average Travel Time of US-180 NB/SB - AM

959.4    930.6

986.1

-0.119

PM - Average Travel Time					No Build PM	Package A PM							Package B PM					
Corridor	Segment	Begin	End	Distance (mi)	Travel Time (sec)	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicle s	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)
US-180 WB	1	Rte 66	Columbus Ave	0.6	131	118	12.8	2.0	9.8%	16.9	1.7	10.9%	1176	115	15.7	1.9	12.0%	17.3
US-180 WB	2	Columbus Ave	Peak View	2.6	281	263	18.1	4.4	6.4%	35.8	2.3	6.9%	706	275	6.1	4.6	2.2%	34.3
US-180 WB	3	Peak View	Snow Bowl Rd	3.8	272	266	6.1	4.4	2.2%	51.2	1.1	2.3%	127	272	-0.3	4.5	-0.1%	50.0
US-180 WB	4	Snow Bowl Rd	MP 233	4.2	271	285	-14.0	4.8	-5.2%	52.9	-2.7	-4.9%	120	296	-25.4	4.9	-9.4%	50.9
Entire Corridor				11.1	955	932	23.0	15.5	2.4%	43.0	0.3	0.6%	2129	959	-3.9	16.0	-0.4%	41.8

US-180 EB	4	MP 233	Snow Bowl Rd	4.2	274	271	3.0	4.5	1.1%	55.9	0.6	1.1%	237	274	-0.1	4.6	0.0%	55.3
US-180 EB	3	Snow Bowl Rd	Peak View	4.0	288	276	11.5	4.6	4.0%	51.6	2.1	4.2%	742	289	-1.7	4.8	-0.6%	49.3
US-180 EB	2	Peak View	Columbus Ave	2.6	300	271	28.4	4.5	9.5%	34.2	3.2	10.5%	1607	383	-83.2	6.4	-27.7%	24.3
US-180 EB	1	Columbus Ave	Rte 66	0.6	153	166	-13.7	2.8	-8.9%	12.9	-1.2	-8.2%	2823	241	-88.0	4.0	-57.7%	8.9
Entire Corridor				11.3	1014	985	29.2	16.4	2.9%	41.5	1.2	3.0%	5409	1187	-173.0	19.8	-17.1%	34.4

Average Travel Time of US-180 NB/SB - PM

984.4    958.3

1072.8



		Package C AM								Package D AM								Package E AM			
Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time Percent Change
-1.0	-8.6%	1908	172	-5.1	2.9	-3.0%	11.6	-0.4	-2.9%	1954	201	-34.2	3.4	-20.5%	9.9	-2.0	-17.0%	1820	128	38.7	23.2%
2.1	5.8%	853	253	9.4	4.2	3.6%	37.3	1.3	3.7%	879	262	-0.4	4.4	-0.1%	35.9	-0.1	-0.1%	759	257	4.9	1.9%
1.4	3.0%	329	278	2.4	4.6	0.8%	48.8	0.4	0.9%	330	281	-0.3	4.7	-0.1%	48.4	0.0	-0.1%	266	279	1.6	0.6%
-3.3	-6.0%	132	288	-18.2	4.8	-6.7%	52.5	-3.5	-6.3%	134	288	-18.9	4.8	-7.0%	52.4	-3.7	-6.5%	152	270	-0.8	-0.3%
-0.4	-1.0%	3222	991	-11.4	16.5	-1.2%	40.5	-0.5	-1.2%	3297	1033	-53.7	17.2	-5.5%	38.8	-2.1	-5.2%	2997	935	44.4	4.5%

0.0	0.0%	96	269	0.1	4.5	0.0%	56.2	0.0	0.0%	96	270	0.0	4.5	0.0%	56.2	0.0	0.0%	96	271	-1.4	-0.5%
-0.4	-0.8%	136	282	-2.3	4.7	-0.8%	50.6	-0.4	-0.8%	136	279	0.6	4.6	0.2%	51.2	0.1	0.2%	135	279	0.0	0.0%
-1.1	-3.1%	639	263	0.9	4.4	0.3%	35.3	0.1	0.3%	777	264	0.1	4.4	0.1%	35.2	0.0	0.1%	667	258	5.9	2.2%
-3.5	-20.5%	1097	124	2.6	2.1	2.1%	17.4	0.4	2.1%	1267	128	-1.3	2.1	-1.0%	16.9	-0.2	-1.0%	1284	127	-0.4	-0.3%
-1.9	-4.4%	1968	938	1.3	15.6	0.1%	43.5	0.1	0.1%	2276	940	-0.5	15.7	-0.1%	43.5	0.0	-0.1%	2182	935	4.1	0.4%

964.5

986.5

935.2

		Package C PM								Package D PM								Package E PM			
Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time Percent Change
2.1	13.6%	1131	119	11.3	2.0	8.6%	16.7	1.4	9.4%	1088	121	9.9	2.0	7.6%	16.5	1.3	8.2%	1143	120	10.8	8.2%
0.7	2.2%	711	287	-5.6	4.8	-2.0%	32.9	-0.6	-1.9%	693	278	3.6	4.6	1.3%	34.0	0.4	1.3%	739	280	1.0	0.4%
-0.1	-0.1%	127	276	-4.1	4.6	-1.5%	49.3	-0.7	-1.5%	117	277	-4.9	4.6	-1.8%	49.1	-0.9	-1.8%	130	270	1.8	0.7%
-4.8	-8.6%	118	297	-25.5	4.9	-9.4%	50.9	-4.8	-8.6%	113	297	-26.1	5.0	-9.6%	50.8	-4.9	-8.8%	174	274	-2.6	-0.9%
-0.9	-2.2%	2087	979	-23.9	16.3	-2.5%	41.0	-1.8	-4.2%	2011	972	-17.4	16.2	-1.8%	41.3	-1.5	-3.6%	2186	944	11.0	1.2%

0.0	0.0%	237	274	0.2	4.6	0.1%	55.3	0.0	0.1%	237	274	0.2	4.6	0.1%	55.3	0.0	0.1%	237	273	0.4	0.2%
-0.3	-0.6%	744	291	-3.6	4.9	-1.2%	49.0	-0.6	-1.2%	744	291	-3.3	4.9	-1.2%	49.0	-0.6	-1.1%	505	287	1.1	0.4%
-6.7	-21.7%	1695	442	-142.2	7.4	-47.4%	21.0	-10.0	-32.2%	1699	436	-136.0	7.3	-45.4%	21.3	-9.7	-31.2%	1193	281	18.6	6.2%
-5.2	-36.6%	2798	223	-70.8	3.7	-46.4%	9.6	-4.5	-31.7%	2778	210	-57.7	3.5	-37.8%	10.2	-3.9	-27.4%	2446	134	18.8	12.3%
-5.9	-14.6%	5474	1230	-216.3	20.5	-21.3%	33.2	-7.1	-17.6%	5458	1211	-196.9	20.2	-19.4%	33.7	-6.6	-16.3%	4381	975	38.9	3.8%

1104.5

1091.5

959.4





Package F AM			
Vehicles	Travel Time (sec)	Difference (sec)	Travel Time Percent Change
1752	138	29.1	17.4%
731	263	-1.0	-0.4%
259	280	0.8	0.3%
149	270	-0.5	-0.2%
<b>2891</b>	<b>951</b>	<b>28.4</b>	<b>2.9%</b>

96	270	0.0	0.0%
135	279	0.0	0.0%
638	264	0.0	0.0%
1232	126	0.6	0.5%
<b>2101</b>	<b>939</b>	<b>0.6</b>	<b>0.1%</b>

944.9

Package F PM			
Vehicles	Travel Time (sec)	Difference (sec)	Travel Time Percent Change
1048	121	9.4	7.2%
723	280	1.4	0.5%
131	271	0.4	0.2%
172	274	-2.5	-0.9%
<b>2074</b>	<b>946</b>	<b>8.7</b>	<b>0.9%</b>

237	274	-0.4	-0.2%
502	288	-0.4	-0.1%
1192	276	23.9	8.0%
2474	130	23.0	15.0%
<b>4405</b>	<b>968</b>	<b>46.0</b>	<b>4.5%</b>

957.0

	No Build	Package A	Package B	Package C	Package D	Package E	Package F
Rte 66 to Columbus Ave	2.8	2.7	3.0	2.9	3.4	2.1	2.3
Columbus Ave to Peak View St	4.4	4.0	4.1	4.2	4.4	4.3	4.4
Peak View St to Snow Bowl Rd	4.7	4.5	4.5	4.6	4.7	4.7	4.7
Snow Bowl Rd to MP 233	4.5	4.7	4.8	4.8	4.8	4.5	4.5

**Total** 16.3 15.9 16.5 16.5 17.2 15.6 15.8  
**Average Speed** 41.0 42.1 40.5 40.5 38.8 42.9 42.2

MP 233 to Snow Bowl Rd	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Snow Bowl Rd to Peak View St	4.7	4.6	4.7	4.7	4.6	4.7	4.7
Peak View St to Columbus Ave	4.4	4.0	4.5	4.4	4.4	4.3	4.4
Columbus Ave to Rte 66	2.1	2.1	2.6	2.1	2.1	2.1	2.1

**Total** 15.7 15.2 16.4 15.6 15.7 15.6 15.6  
**Average Speed** 43.5 44.9 41.6 43.5 43.5 43.7 43.5

**Average Speed** 43.5 44.9 41.6 43.5 43.5 43.7 43.5

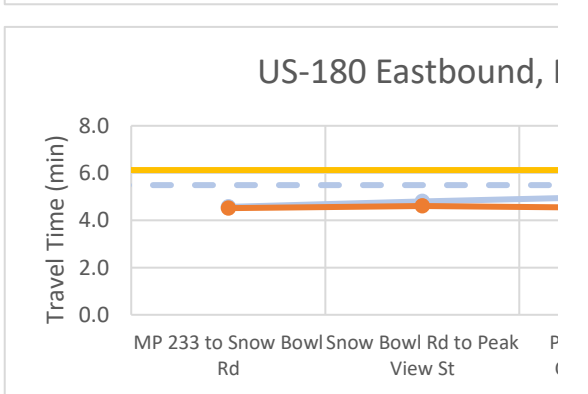
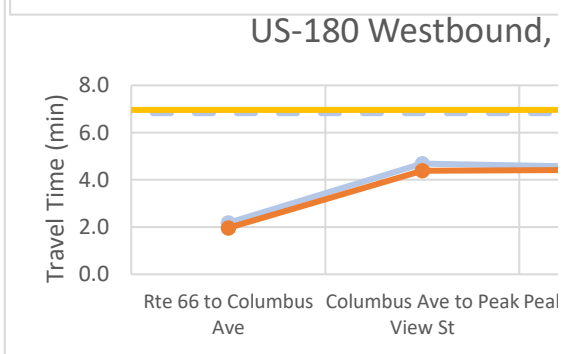
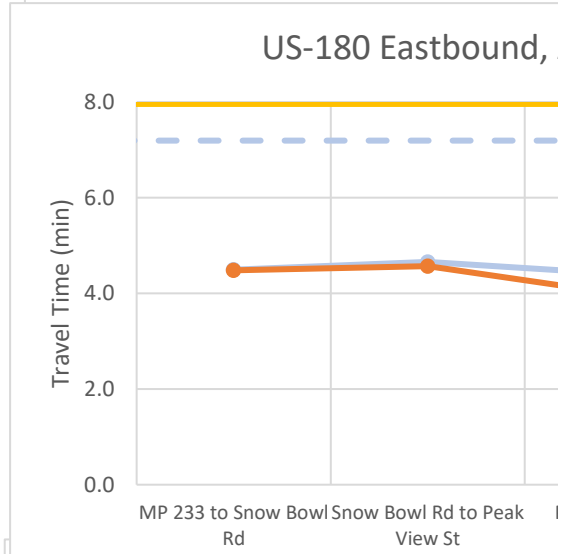
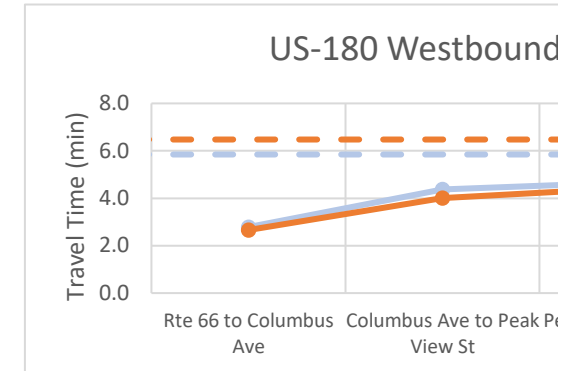
	No Build	Package A	Package B	Package C	Package D	Package E	Package F
Rte 66 to Columbus Ave	2.2	2.0	1.9	2.0	2.0	2.0	2.0
Columbus Ave to Peak View St	4.7	4.4	4.6	4.8	4.6	4.7	4.7
Peak View St to Snow Bowl Rd	4.5	4.4	4.5	4.6	4.6	4.5	4.5
Snow Bowl Rd to MP 233	4.5	4.8	4.9	4.9	5.0	4.6	4.6

**Total** 15.9 15.5 16.0 16.3 16.2 15.7 15.8  
**Average Speed** 42.8 43.0 41.8 41.0 41.3 42.5 42.4

MP 233 to Snow Bowl Rd	4.6	4.5	4.6	4.6	4.6	4.6	4.6
Snow Bowl Rd to Peak View St	4.8	4.6	4.8	4.9	4.9	4.8	4.8
Peak View St to Columbus Ave	5.0	4.5	6.4	7.4	7.3	4.7	4.6
Columbus Ave to Rte 66	2.5	2.8	4.0	3.7	3.5	2.2	2.2

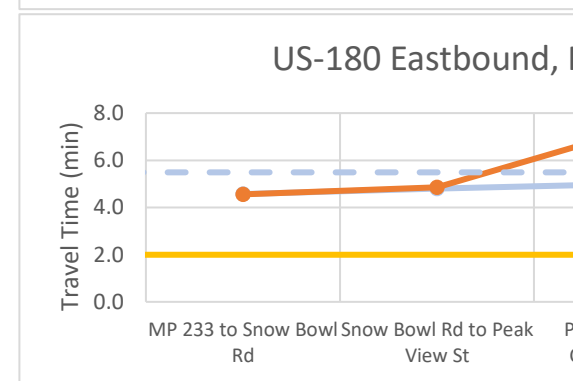
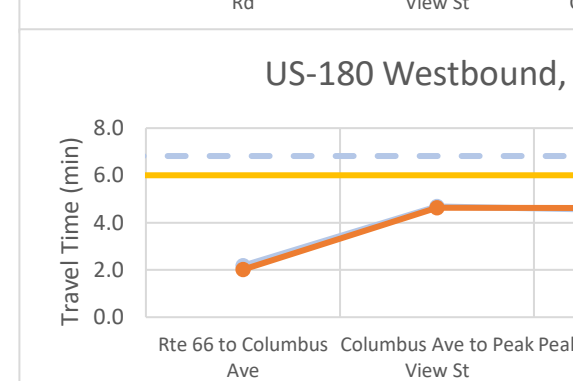
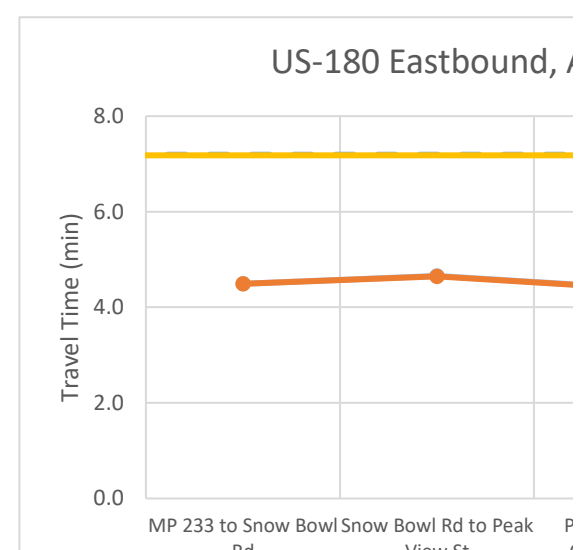
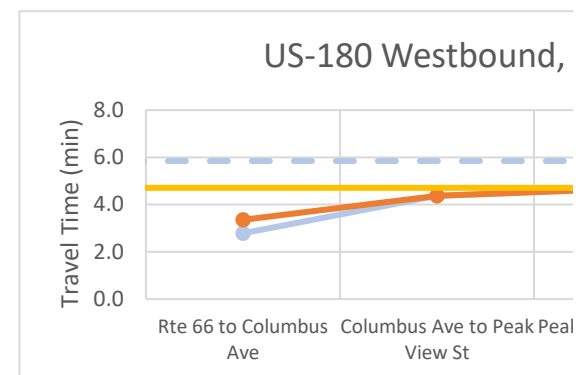
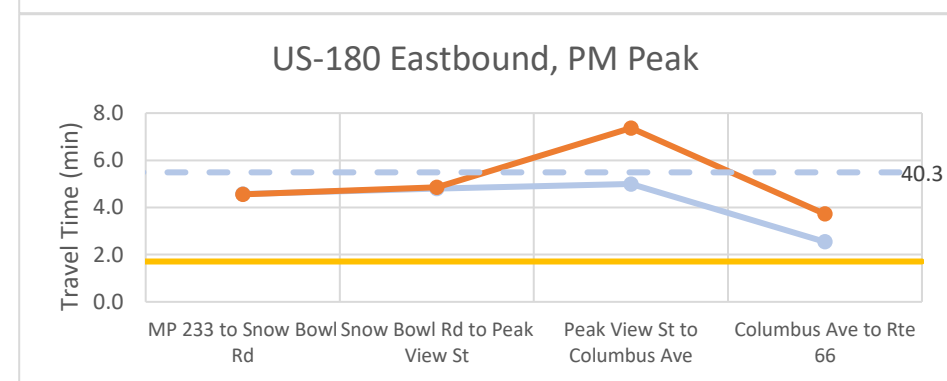
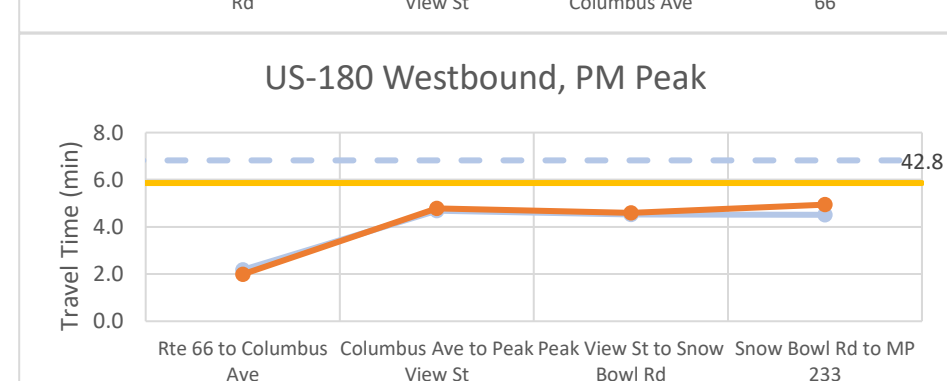
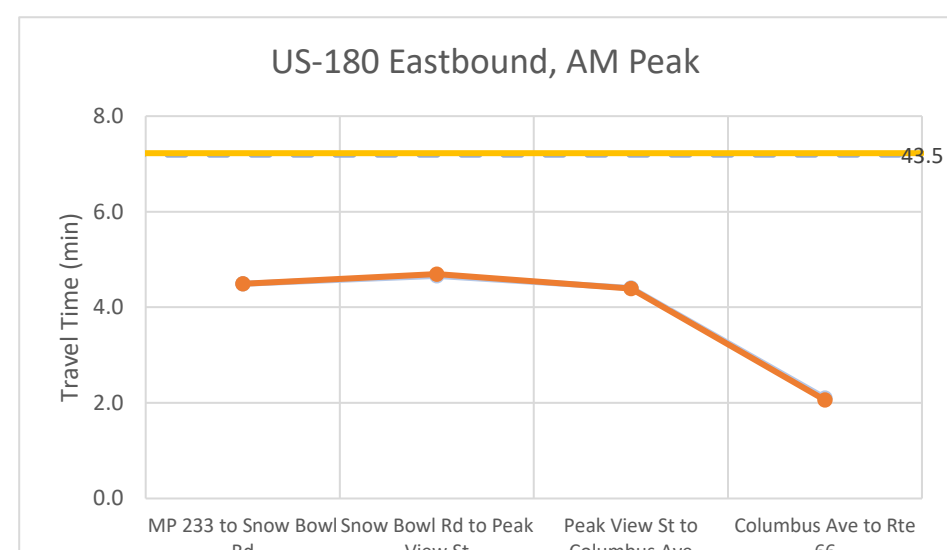
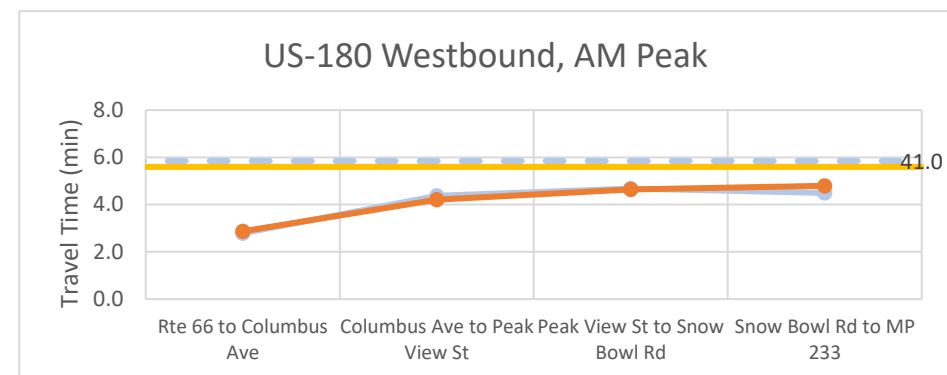
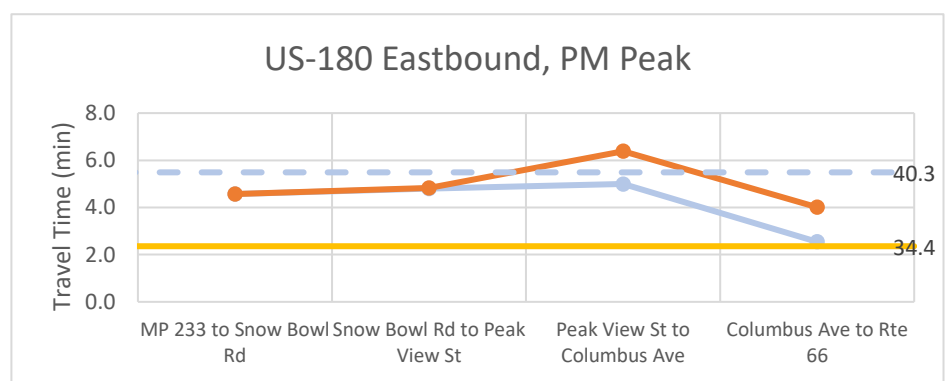
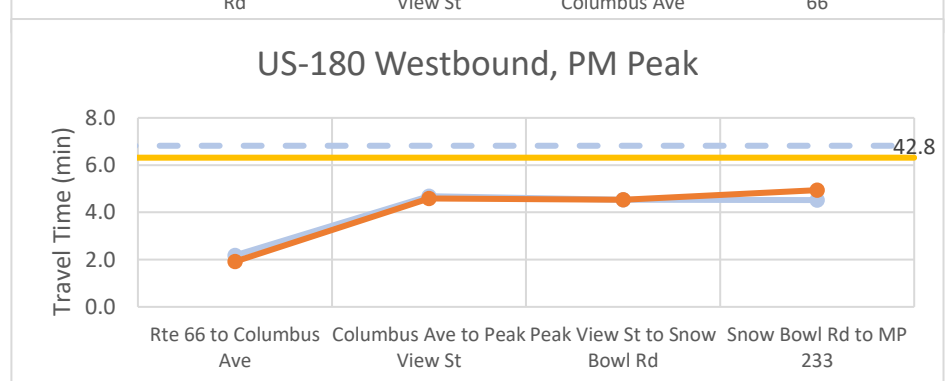
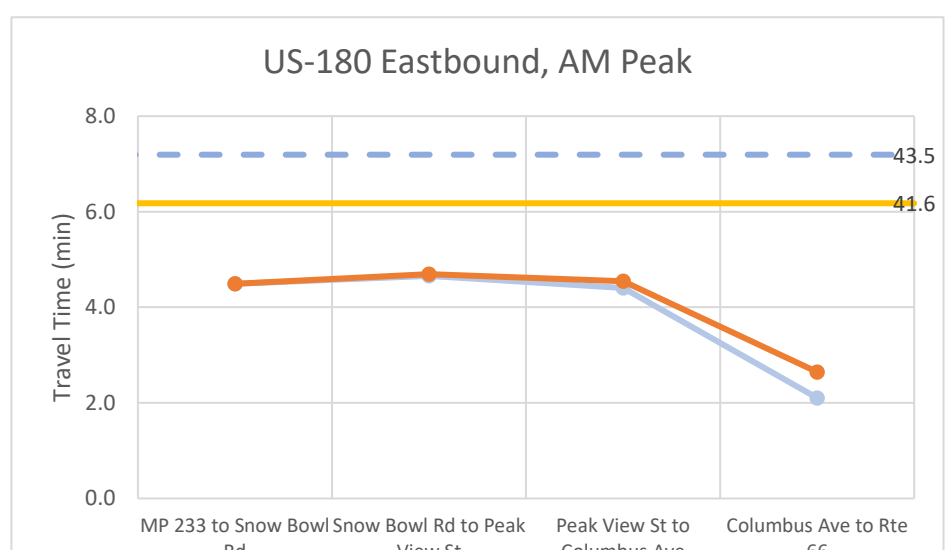
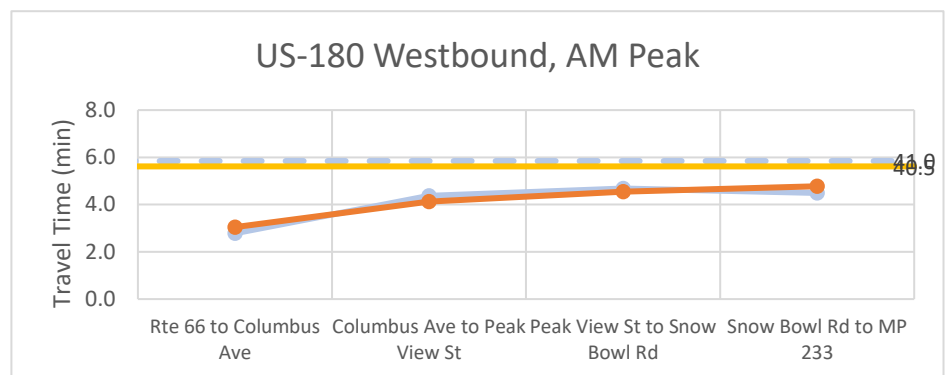
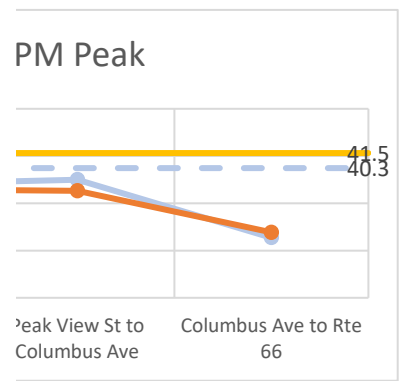
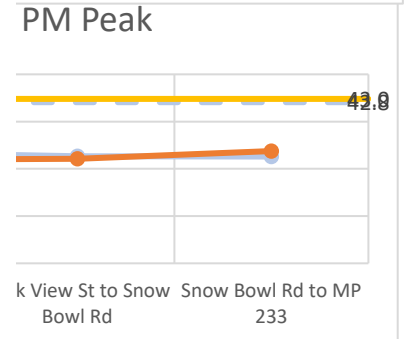
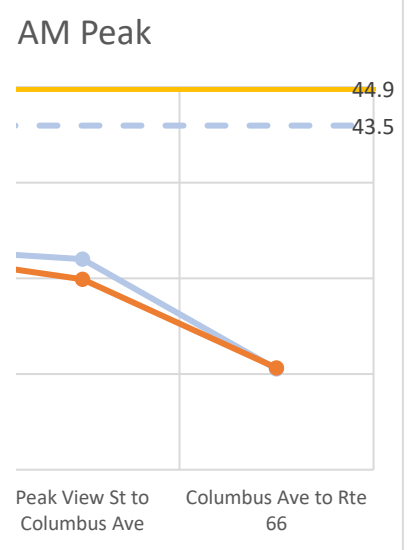
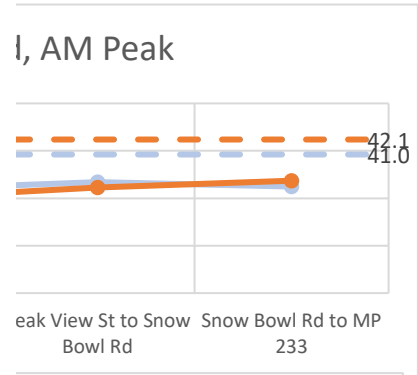
**Total** 16.9 16.4 19.8 20.5 20.2 16.3 16.1  
**Average Speed** 40.3 41.5 34.4 33.2 33.7 41.9 42.2

**Average Speed**



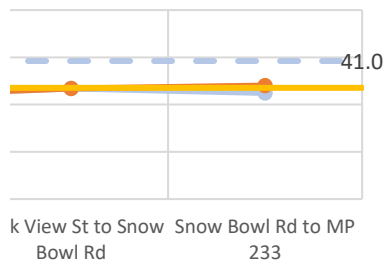




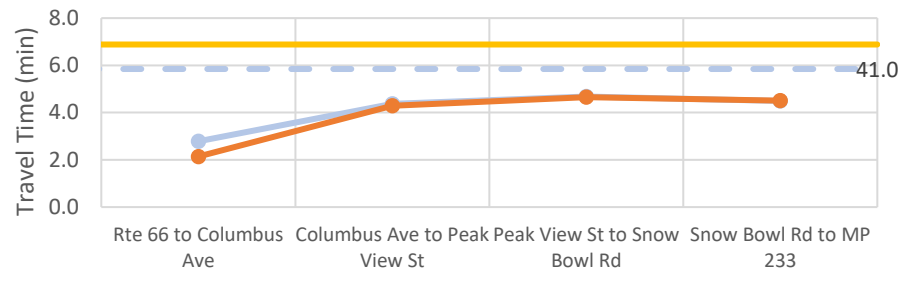




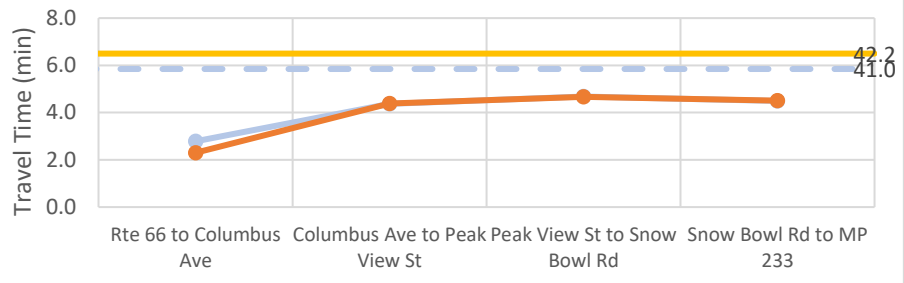
### AM Peak



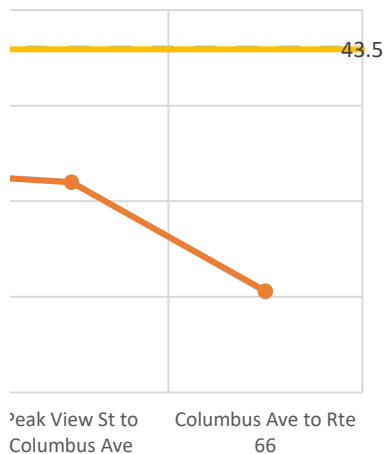
### US-180 Westbound, AM Peak



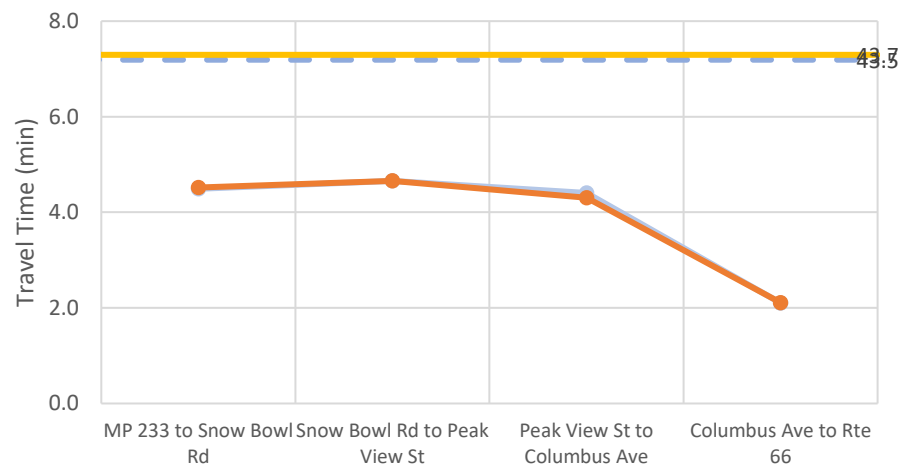
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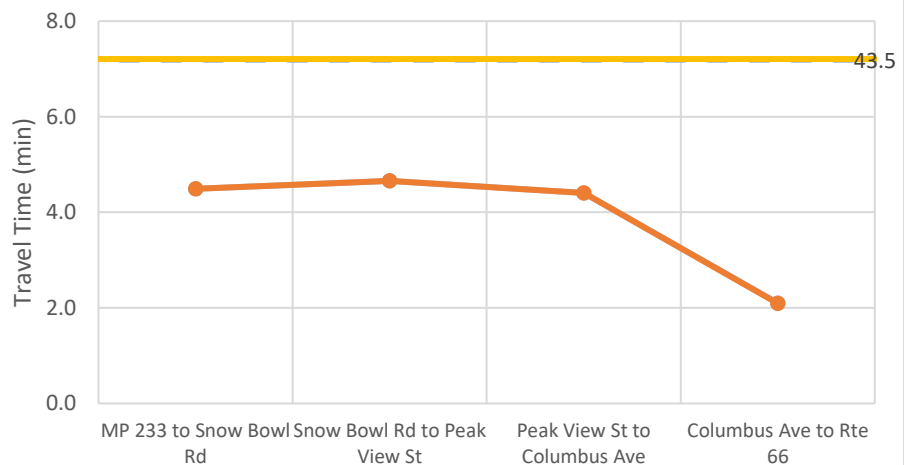
### AM Peak



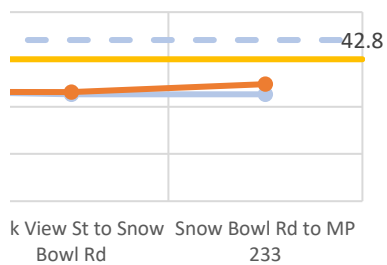
### US-180 Eastbound, AM Peak



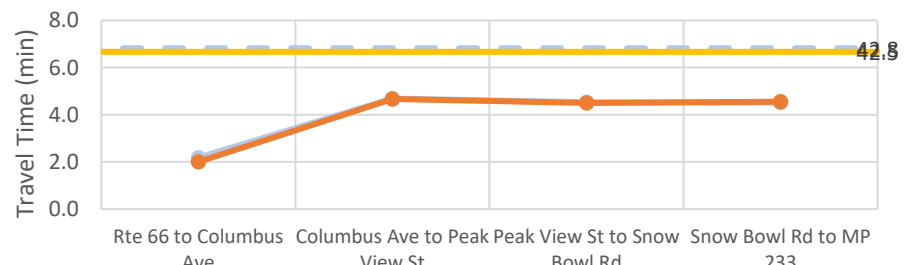
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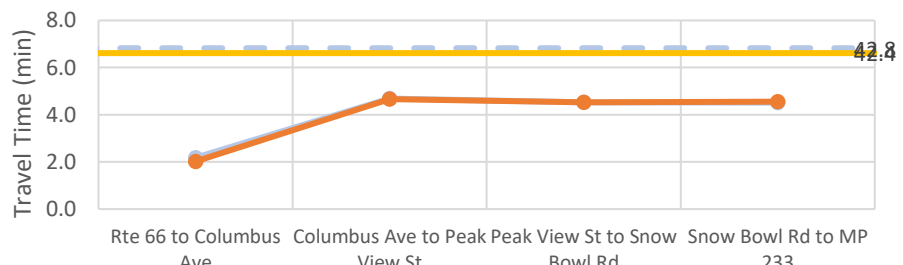
### PM Peak



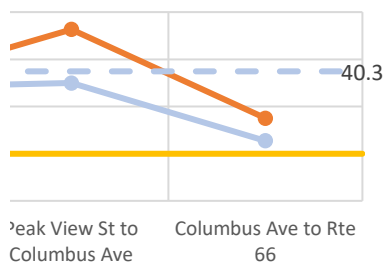
### US-180 Westbound, PM Peak



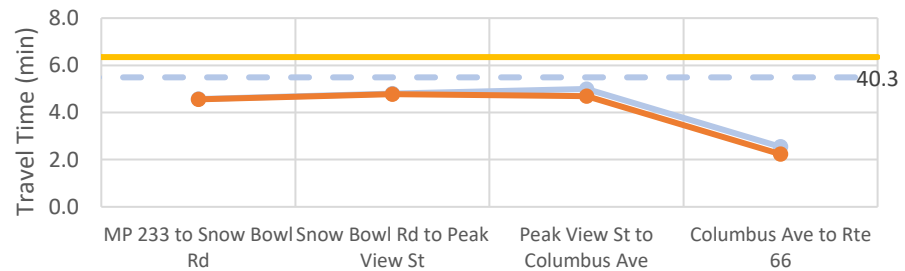
### US-180 Westbound, PM Peak



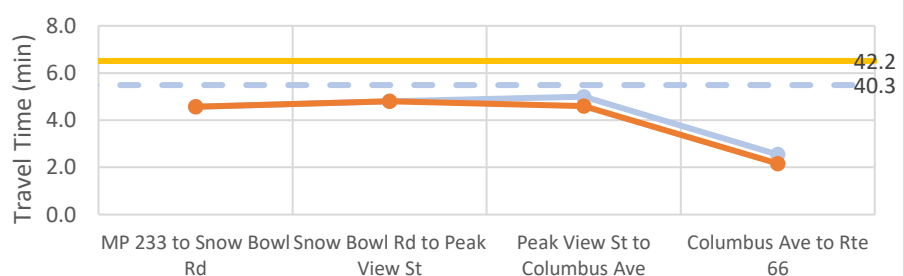
### PM Peak



### US-180 Eastbound, PM Peak



### US-180 Eastbound, PM Peak







AM - Average Travel Time					No Build AM	Package A AM										Package A PM			
Corridor	Segment	Begin	End	Distance (mi)	Travel Time (sec)	Travel Time (min)	Average Speed (mph)	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)
US-180 WB	1	Rte 66	Columbus Ave	0.6	557	9.3	3.6	6	674	-117.4	11.2	-21.1%	3.0	-0.6	-17.4%	5	691	-134.5	11.5
US-180 WB	2	Columbus Ave	Peak View	2.6	256	4.3	36.8	4	236	20.9	3.9	8.1%	40.0	3.3	8.9%	2	243	13.0	4.1
US-180 WB	3	Peak View	Snow Bowl Rd	3.8	282	4.7	48.1	2	266	16.1	4.4	5.7%	51.0	2.9	6.0%	1	277	5.5	4.6
Entire Corridor				6.9	1096	18.3	22.8	12	1176	-80.5	19.6	-7.3%	21.3	-1.6	-6.8%	8	1212	-115.9	20.2

US-180 EB	3	Snow Bowl Rd	Peak View	4.0	287	4.8	49.8	2	285	1.3	4.8	0.4%	50.0	0.2	0.5%	2	288	-1.3	4.8
US-180 EB	2	Peak View	Columbus Ave	2.6	262	4.4	35.5	4	241	20.8	4.0	7.9%	38.6	3.1	8.6%	4	273	-10.9	4.5
US-180 EB	1	Columbus Ave	Rte 66	0.1	23	0.4	10.6	1	22	1.2	0.4	5.1%	11.2	0.6	5.4%	1	17	5.7	0.3
Entire Corridor				6.6	572	9.5	41.7	7	548	23.2	9.1	4.1%	43.4	1.8	4.2%	7	578	-6.5	9.6

PM - Average Travel Time					No Build PM	Package A PM										Package A PM			
Corridor	Segment	Begin	End	Distance (mi)	Travel Time (sec)	Travel Time (min)	Average Speed (mph)	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)
US-180 WB	1	Rte 66	Columbus Ave	0.6	443	7.4	4.5	6	349	93.3	5.8	21.1%	5.7	1.2	26.7%	7	374	69.1	6.2
US-180 WB	2	Columbus Ave	Peak View	2.6	272	4.5	34.7	4	262	10.2	4.4	3.7%	36.0	1.3	3.9%	4	274	-2.1	4.6
US-180 WB	3	Peak View	Snow Bowl Rd	3.8	276	4.6	49.3	1	272	4.0	4.5	1.5%	50.0	0.7	1.5%	1	271	4.7	4.5
Entire Corridor				6.9	990	16.5	24.0	11	883	107.5	14.7	10.9%	28.3	4.3	17.9%	12	919	71.7	15.3

US-180 EB	3	Snow Bowl Rd	Peak View	4.0	285	4.8	50.0	1	284	1.4	4.7	0.5%	50.2	0.3	0.5%	2	283	2.0	4.7
US-180 EB	2	Peak View	Columbus Ave	2.6	272	4.5	34.1	2	264	8.9	4.4	3.3%	35.3	1.1	3.4%	3	413	-140.3	6.9
US-180 EB	1	Columbus Ave	Rte 66	0.6	240	4.0	8.9	3	301	-60.4	5.0	-25.1%	7.2	-1.8	-20.1%	3	448	-207.5	7.5
Entire Corridor				7.1	798	13.3	29.8	6	848	-50.1	14.1	-6.3%	30.3	0.5	1.6%	8	1144	-345.7	19.1

Average Travel Time of US-180 NB/SB - PM

894.3

865.6

1031.3

ge B AM				Package C AM								Package D AM									
Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)
-24.1%	2.9	-0.7	-19.4%	6	701	-144.4	11.7	-25.9%	2.8	-0.7	-20.6%	5	1068	-511.4	17.8	-91.8%	1.9	-1.7	-47.9%	6	322
5.1%	38.8	2.0	5.4%	4	241	15.5	4.0	6.0%	39.1	2.4	6.4%	2	254	2.4	4.2	0.9%	37.1	0.3	0.9%	4	356
1.9%	49.1	1.0	2.0%	2	275	7.4	4.6	2.6%	49.4	1.3	2.7%	1	277	5.9	4.6	2.1%	49.1	1.0	2.1%	2	268
-10.6%	20.6	-2.2	-9.6%	12	1217	-121.5	20.3	-11.1%	20.6	-2.3	-10.0%	8	1599	-503.2	26.6	-45.9%	15.6	-7.2	-31.5%	12	946

-0.4%	49.5	-0.2	-0.4%	2	287	-0.4	4.8	-0.1%	49.7	-0.1	-0.1%	2	285	1.8	4.7	0.6%	50.1	0.3	0.6%	2	286
-4.2%	34.1	-1.4	-4.0%	4	260	1.9	4.3	0.7%	35.8	0.3	0.7%	4	239	22.4	4.0	8.6%	38.8	3.3	9.4%	4	255
24.7%	14.1	3.5	32.7%	1	22	1.4	0.4	5.8%	11.2	0.7	6.2%	2	27	-3.7	0.4	-15.8%	9.1	-1.4	-13.6%	1	23
-1.1%	41.2	-0.5	-1.1%	7	569	2.9	9.5	0.5%	41.9	0.2	0.5%	8	551	20.6	9.2	3.6%	43.2	1.6	3.7%	7	564

ge B PM				Package C PM								Package D PM									
Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)
15.6%	5.3	0.8	18.5%	7	381	62.0	6.3	14.0%	5.2	0.7	16.3%	6	381	61.8	6.3	14.0%	5.2	0.7	16.2%	5	333
-0.8%	34.4	-0.3	-0.8%	4	286	-14.4	4.8	-5.3%	32.9	-1.7	-5.0%	3	276	-3.8	4.6	-1.4%	34.2	-0.5	-1.4%	2	272
1.7%	50.1	0.9	1.7%	1	280	-4.1	4.7	-1.5%	48.5	-0.7	-1.5%	1	277	-0.6	4.6	-0.2%	49.2	-0.1	-0.2%	1	274
7.2%	27.2	3.2	13.3%	12	947	43.5	15.8	4.4%	26.4	2.4	9.9%	10	933	57.4	15.6	5.8%	26.8	2.8	11.6%	8	879

0.7%	50.3	0.4	0.7%	2	279	6.3	4.7	2.2%	51.1	1.1	2.2%	2	284	1.1	4.7	0.4%	50.2	0.2	0.4%	1	286
-51.5%	22.5	-11.6	-34.0%	4	359	-86.6	6.0	-31.8%	25.9	-8.2	-24.1%	4	377	-104.7	6.3	-38.4%	24.6	-9.5	-27.8%	2	275
-86.3%	4.8	-4.1	-46.3%	3	313	-72.6	5.2	-30.2%	6.9	-2.1	-23.2%	3	333	-92.4	5.5	-38.4%	6.5	-2.5	-27.8%	3	217
-43.3%	22.5	-7.3	-24.6%	9	951	-153.0	15.9	-19.2%	27.0	-2.8	-9.4%	9	994	-195.9	16.6	-24.5%	25.9	-4.0	-13.3%	6	779

949.1

963.6

828.9



Package E AM						Package F AM			
Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time Percent Change
234.6	5.4	42.1%	6.2	2.6	72.8%	5	388	169.3	30.4%
-99.2	5.9	-38.7%	26.5	-10.3	-27.9%	2	362	-106.0	-41.3%
13.9	4.5	4.9%	50.6	2.5	5.2%	1	268	14.7	5.2%
149.4	15.8	13.6%	26.4	3.6	15.8%	8	1018	78.0	7.1%

0.4	4.8	0.1%	49.8	0.1	0.1%	2	287	-0.5	-0.2%
7.1	4.2	2.7%	36.5	1.0	2.8%	4	252	10.2	3.9%
-0.1	0.4	-0.3%	10.6	0.0	-0.3%	1	23	0.3	1.3%
7.3	9.4	1.3%	42.2	0.5	1.3%	7	562	10.0	1.7%

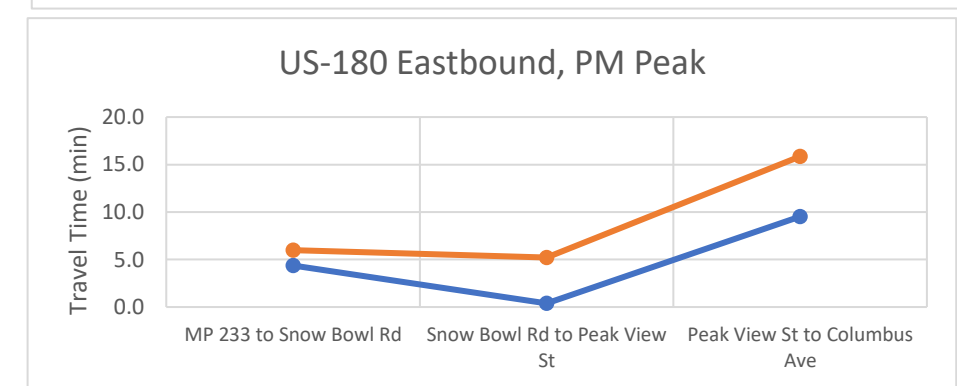
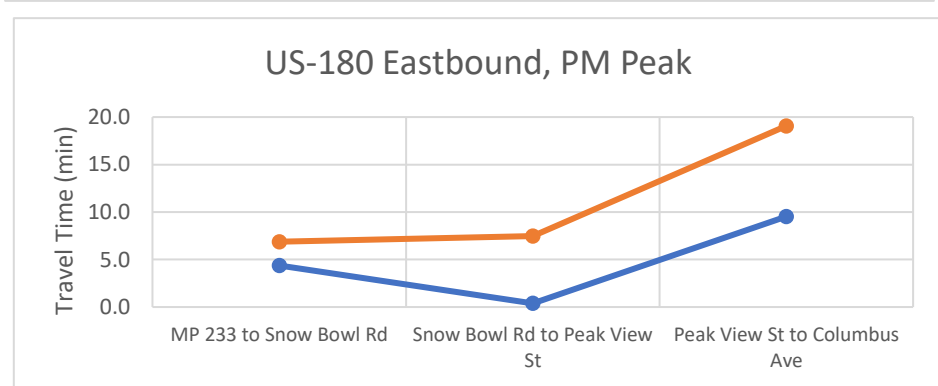
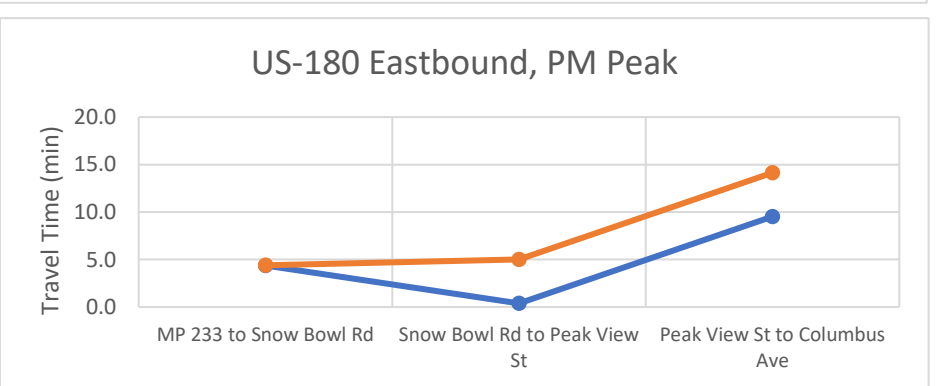
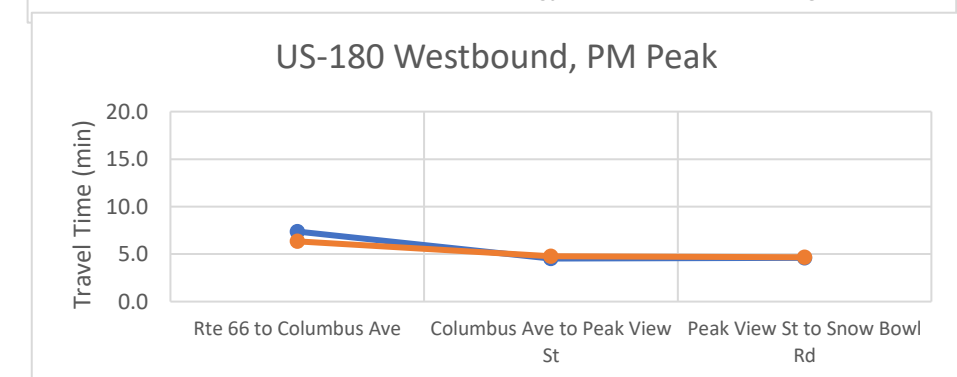
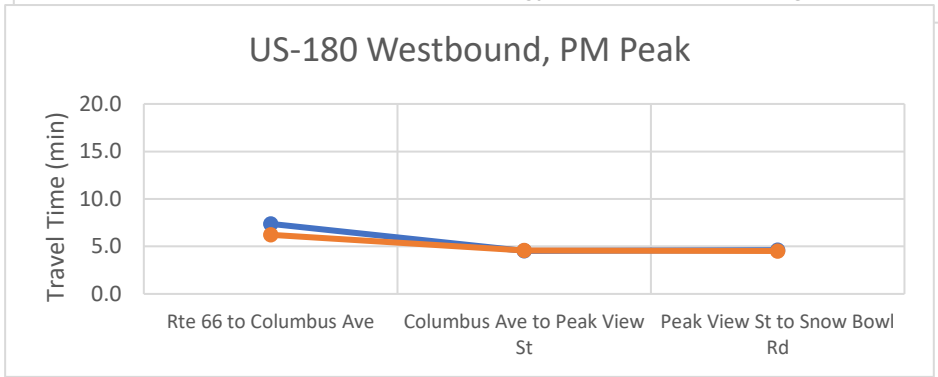
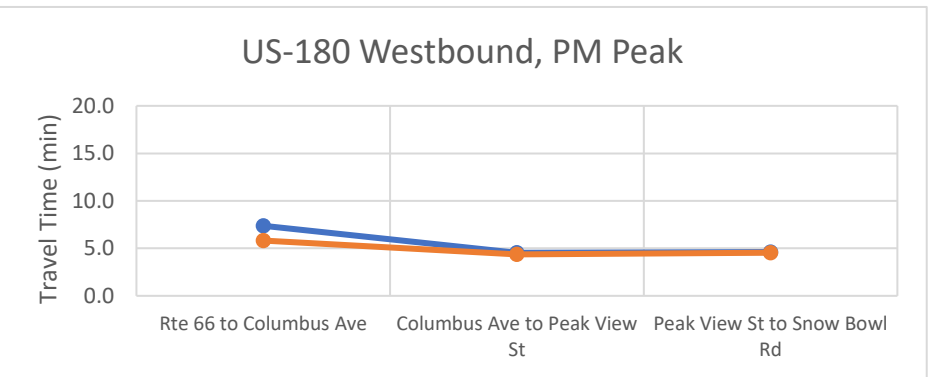
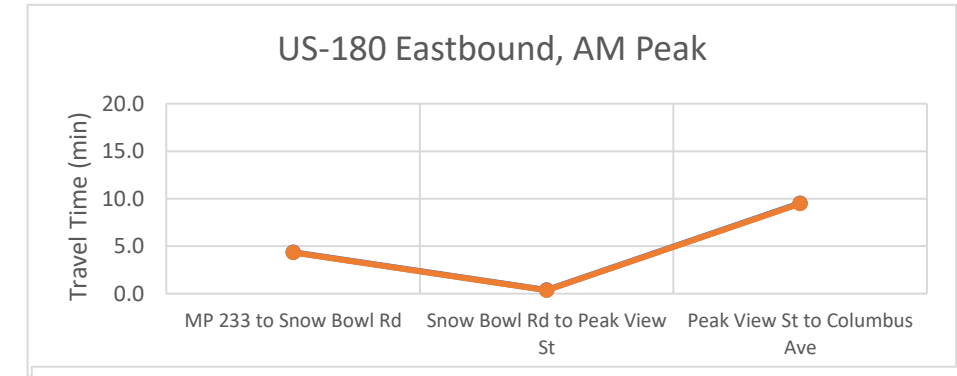
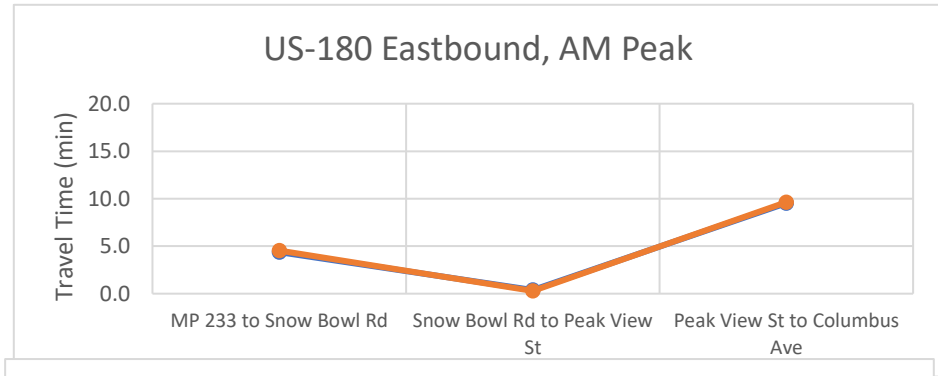
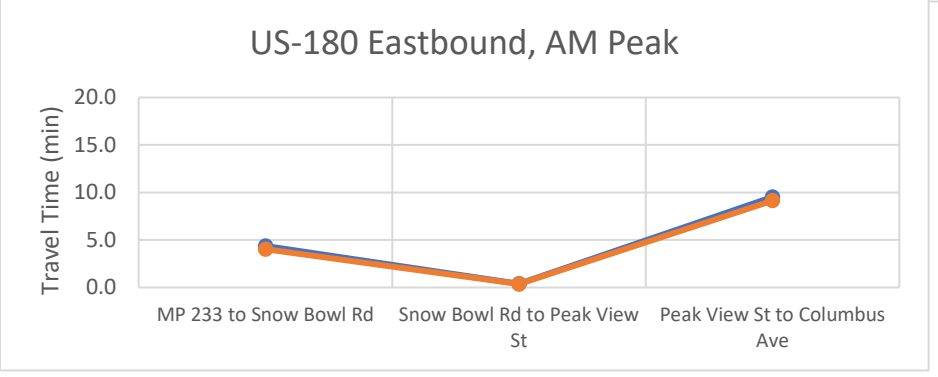
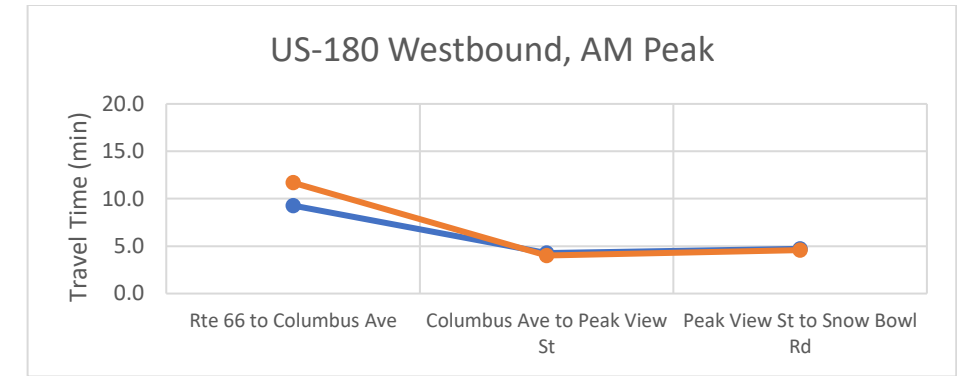
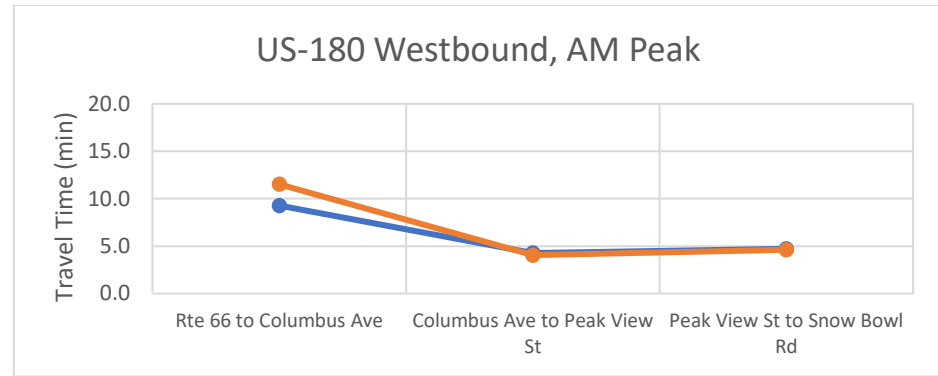
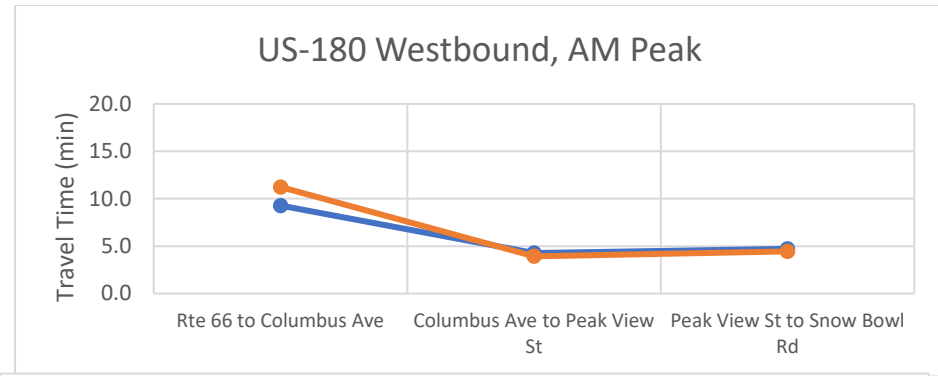
Package E PM						Package F PM			
Difference (sec)	Travel Time (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change	Vehicles	Travel Time (sec)	Difference (sec)	Travel Time Percent Change
109.6	5.6	24.8%	6.0	1.5	32.9%	6	441	1.4	0.3%
-0.1	4.5	0.0%	34.7	0.0	0.0%	2	274	-2.6	-1.0%
1.7	4.6	0.6%	49.6	0.3	0.6%	1	271	4.7	1.7%
111.2	14.7	11.2%	28.5	4.4	18.4%	9	987	3.5	0.4%

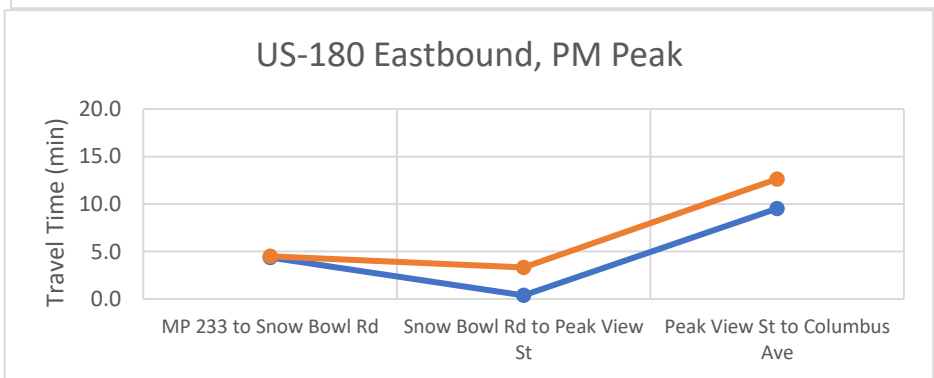
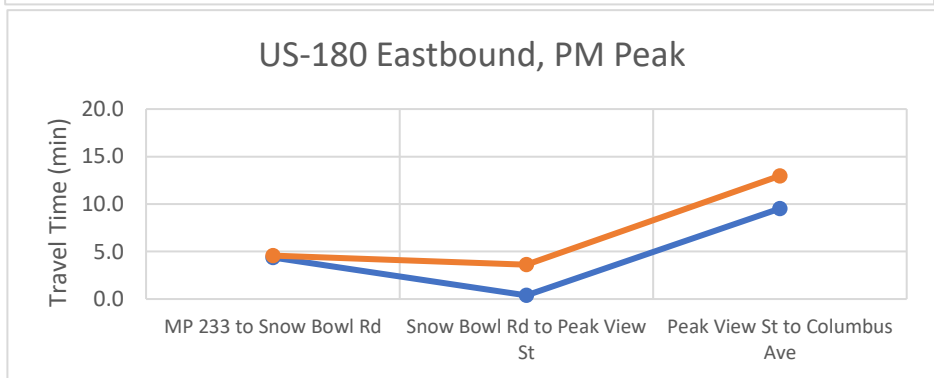
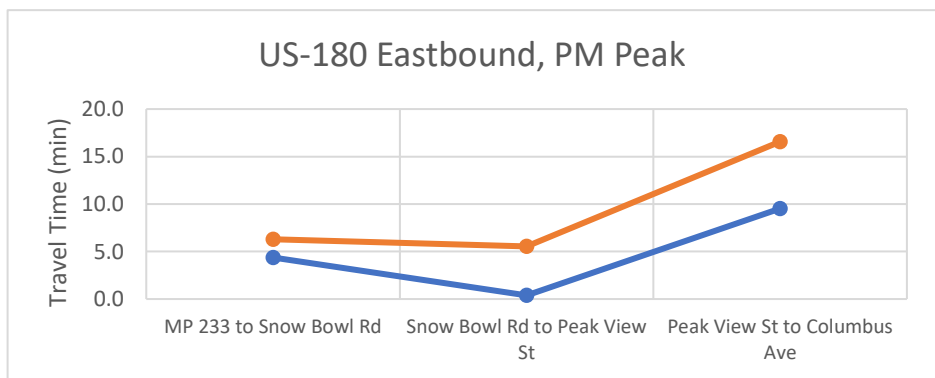
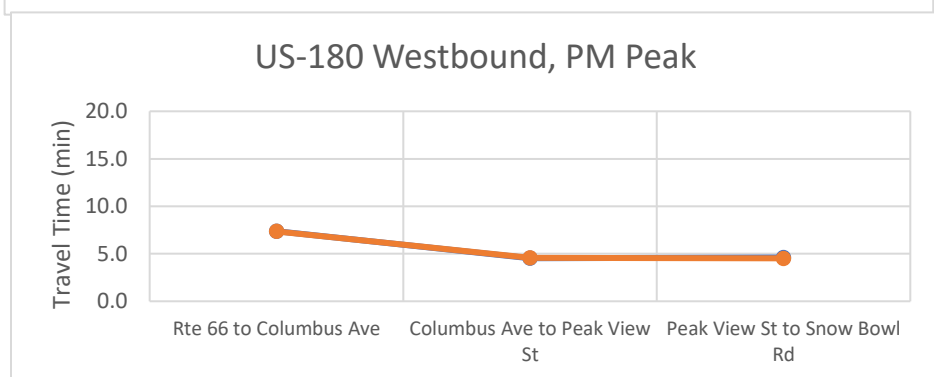
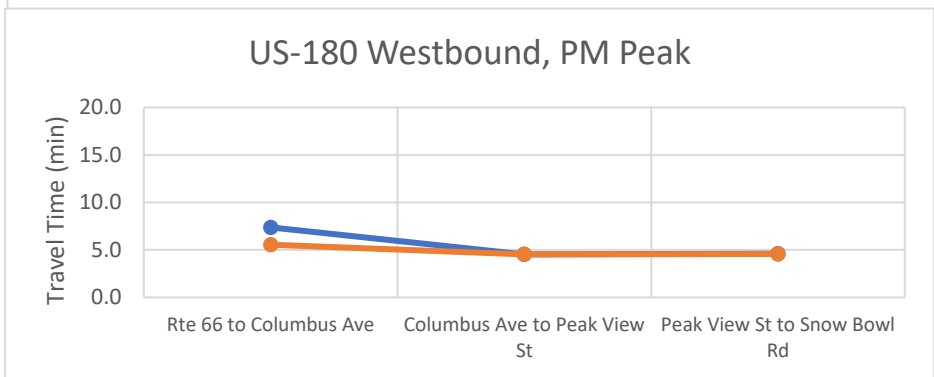
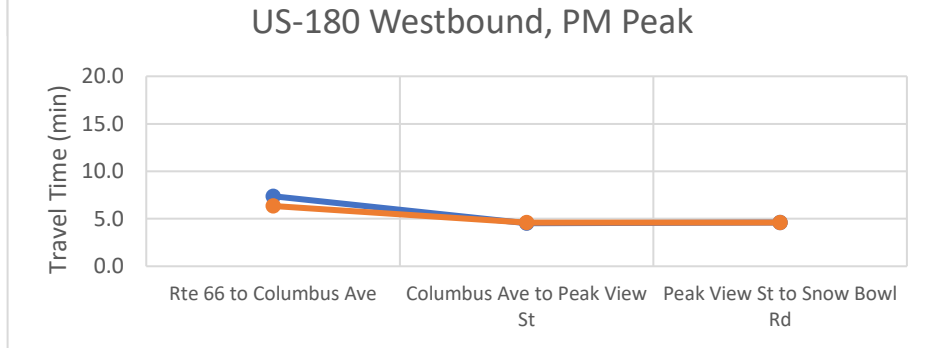
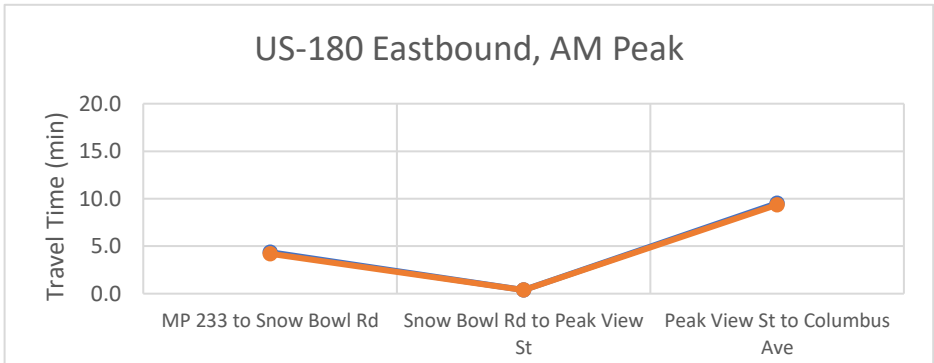
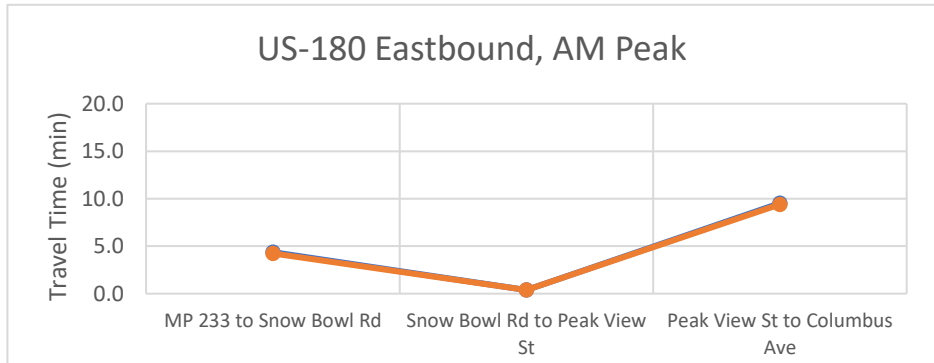
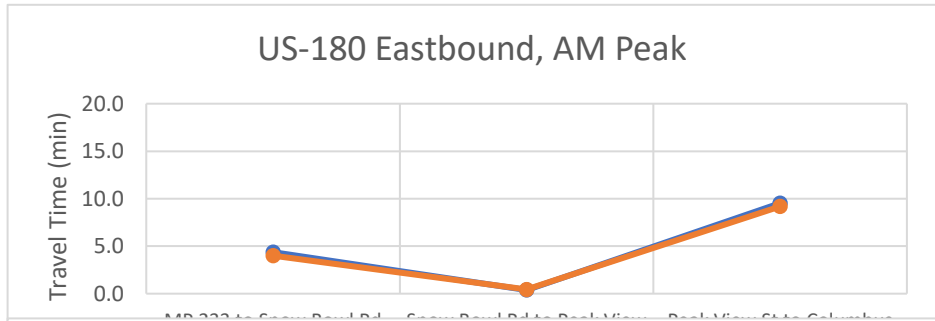
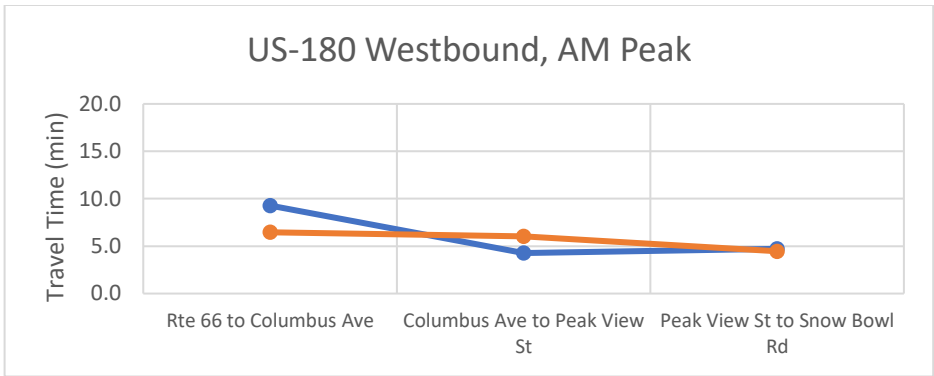
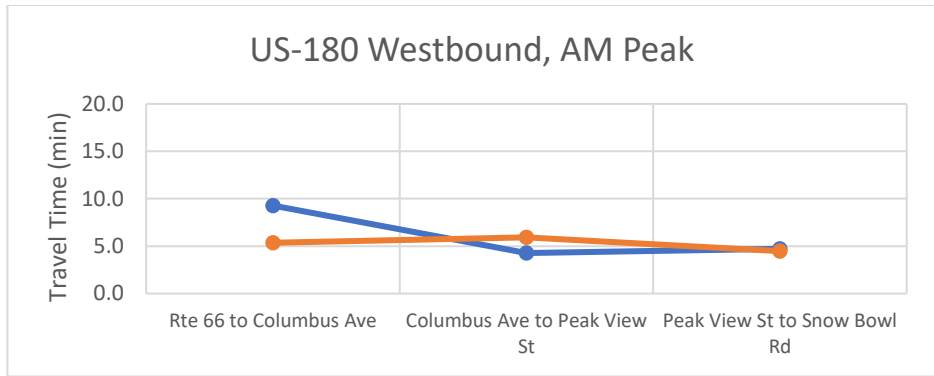
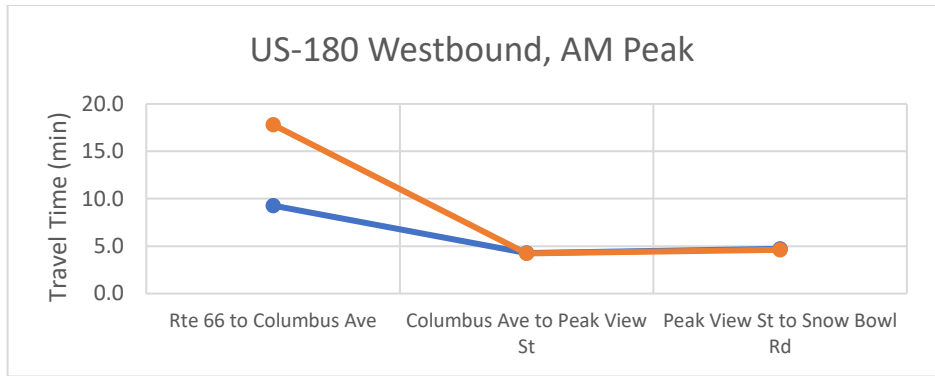
-0.8	4.8	-0.3%	49.8	-0.1	-0.3%	1	288	-2.6	-0.9%
-3.0	4.6	-1.1%	33.7	-0.4	-1.1%	2	271	1.6	0.6%
23.3	3.6	9.7%	9.9	1.0	10.7%	3	199	40.8	17.0%
19.6	13.0	2.5%	33.0	3.2	10.7%	6	758	39.9	5.0%

872.6

	No Build	Package A	Package B	Package C	Package D	Package E	Package F
Rte 66 to Columbus Ave	9.3	11.2	11.5	11.7	17.8	5.4	6.5
Columbus Ave to Peak View	4.3	3.9	4.1	4.0	4.2	5.9	6.0
Peak View St to Snow Bowl I	4.7	4.4	4.6	4.6	4.6	4.5	4.5
Total	18.3	19.6	20.2	20.3	26.6	15.8	17.0
MP 233 to Snow Bowl Rd	4.4	4.0	4.5	4.3	4.0	4.2	4.2
Snow Bowl Rd to Peak View	0.4	0.4	0.3	0.4	0.4	0.4	0.4
Peak View St to Columbus A	9.5	9.1	9.6	9.5	9.2	9.4	9.4
Total	14.3	13.5	14.5	14.2	13.6	14.0	13.9

	No Build	Package A	Package B	Package C	Package D	Package E	Package F
Rte 66 to Columbus Ave	7.4	5.8	6.2	6.3	6.3	5.6	7.4
Columbus Ave to Peak View	4.5	4.4	4.6	4.8	4.6	4.5	4.6
Peak View St to Snow Bowl I	4.6	4.5	4.5	4.7	4.6	4.6	4.5
Total	16.5	14.7	15.3	15.8	15.6	14.7	16.4
MP 233 to Snow Bowl Rd	4.5	4.4	6.9	6.0	6.3	4.6	4.5
Snow Bowl Rd to Peak View	4.0	5.0	7.5	5.2	5.5	3.6	3.3
Peak View St to Columbus A	13.3	14.1	19.1	15.9	16.6	13.0	12.6
Total	21.8	23.5	33.4	27.1	28.4	21.2	20.5







AM - Average Speed		No Build AM	Package A AM		Package B AM		Package C AM		Package D AM		Package E AM		Package F AM	
Corridor	Segment	Average Speed (mph)	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change
US-180 WB	1	11.9	12.5	4.7%	10.9	-8.6%	11.6	-2.9%	9.9	-17.0%	15.5	30.1%	14.5	21.1%
US-180 WB	2	36.0	39.3	9.1%	38.1	5.8%	37.3	3.7%	35.9	-0.1%	36.7	1.9%	35.9	-0.4%
US-180 WB	3	48.4	50.8	4.9%	49.8	3.0%	48.8	0.9%	48.4	-0.1%	48.7	0.6%	48.5	0.3%
US-180 WB	4	56.0	53.1	-5.3%	52.7	-6.0%	52.5	-6.3%	52.4	-6.5%	55.9	-0.3%	55.9	-0.2%
Entire Corridor		41.0	42.1	2.9%	40.5	-1.0%	40.5	-1.2%	38.8	-5.2%	42.9	4.7%	42.2	3.0%

US-180 EB	4	56.2	56.3	0.2%	56.2	0.0%	56.2	0.0%	56.2	0.0%	55.9	-0.5%	56.2	0.0%
US-180 EB	3	51.1	52.0	1.9%	50.6	-0.8%	50.6	-0.8%	51.2	0.2%	51.1	0.0%	51.1	0.0%
US-180 EB	2	35.2	39.0	10.7%	34.1	-3.1%	35.3	0.3%	35.2	0.1%	36.0	2.3%	35.2	0.0%
US-180 EB	1	17.0	16.8	-1.1%	13.5	-20.5%	17.4	2.1%	16.9	-1.0%	17.0	-0.3%	17.1	0.5%
Entire Corridor		43.5	44.9	3.3%	41.6	-4.4%	43.5	0.1%	43.5	-0.1%	43.7	0.4%	43.5	0.1%

Average Speed of US-180 EB/WB - AM	42.2	43.5	41.1	42.0	41.1	43.3	42.8
Travel Speed as %of Base Free Flow Speed	84.8%	87.4%	82.4%	84.4%	82.6%	86.9%	86.0%

PM - Average Speed		No Build PM	Package A PM		Package B PM		Package C PM		Package D PM		Package E PM		Package F PM	
Corridor		Average Speed (mph)	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change	Average Speed (mph)	Average Speed Percent Change
Milton Rd NB		7.0	5.5	-21.9%	6.1	-12.7%	5.5	-21.9%	6.1	-12.7%	6.3	-10.6%	6.1	-13.2%
Milton Rd SB		12.5	11.9	-4.4%	11.6	-7.4%	11.9	-4.4%	11.6	-7.4%	11.6	-6.7%	12.0	-3.9%

US-180 WB	1	15.3	16.9	10.9%	17.3	13.6%	16.7	9.4%	16.5	8.2%	16.6	9.0%	16.4	7.8%
US-180 WB	2	33.5	35.8	6.9%	34.3	2.2%	32.9	-1.9%	34.0	1.3%	33.7	0.4%	33.7	0.5%
US-180 WB	3	50.0	51.2	2.3%	50.0	-0.1%	49.3	-1.5%	49.1	-1.8%	50.4	0.7%	50.1	0.2%
US-180 WB	4	55.7	52.9	-4.9%	50.9	-8.6%	50.9	-8.6%	50.8	-8.8%	55.2	-0.9%	55.2	-0.9%
Entire Corridor		42.8	43.0	0.6%	41.8	-2.2%	41.0	-4.2%	41.3	-3.6%	42.5	-0.7%	42.4	-0.9%

US-180 EB	4	55.3	55.9	1.1%	55.3	0.0%	55.3	0.1%	55.3	0.1%	55.4	0.2%	55.2	-0.2%
US-180 EB	3	49.6	51.6	4.2%	49.3	-0.6%	49.0	-1.2%	49.0	-1.1%	49.8	0.4%	49.5	-0.1%
US-180 EB	2	31.0	34.2	10.5%	24.3	-21.7%	21.0	-32.2%	21.3	-31.2%	33.1	6.6%	33.7	8.6%
US-180 EB	1	14.1	12.9	-8.2%	8.9	-36.6%	9.6	-31.7%	10.2	-27.4%	16.1	14.0%	16.6	17.7%
Entire Corridor		40.3	41.5	3.0%	34.4	-14.6%	33.2	-17.6%	33.7	-16.3%	41.9	4.0%	42.2	4.8%

Average Speed of US-180 NB/SB - PM	41.5	42.3	38.1	37.1	37.5	42.2	42.3
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Travel Speed as Percent of Base Free Flow Speed

83.4%

84.9%

76.6%

74.5%

75.3%

84.7%

84.9%

Base Free Flow Speed

49.8

Intersection Volume, Delay, & LOS			No Build - AM			Package A - AM			Package B - AM			Package C - AM			Package D - AM			Package E - AM			Package F - AM												
Intersection	Control	Delay	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS					
Humphreys St & Rte 66	Signal	17.6	B	2753	-0.6%	16.8	4.3%	B	2593	-6.4%	19.8	-12.8%	B	2593	-6.4%	17.3	1.6%	B	2709	-2.2%	19.5	-11.2%	B	2721	-1.8%	14.5	17.6%	B	2640	-4.7%	15.5	11.5%	B
Humphreys St & Aspen Ave	Signal	8.6	A	1491	-0.4%	8.2	5.1%	A	1385	-7.5%	9.8	-13.5%	A	1386	-7.4%	8.8	-2.3%	A	1463	-2.3%	10.7	-24.3%	B	1432	-4.3%	7.0	19.0%	A	1387	-7.3%	8.0	6.4%	A
Humphreys St & Birch Ave	Signal	12.7	B	1485	-0.1%	12.1	5.0%	B	1366	-8.1%	15.4	-21.1%	B	1373	-7.7%	14.1	-10.5%	B	1454	-2.2%	19.8	-55.7%	B	1427	-4.0%	7.3	43.0%	A	1377	-7.4%	9.1	28.5%	A
Humphreys St & Cherry Ave	Two-Way Stop-Control	440.4	F	1572	0.0%	394.7	10.4%	F	1419	-9.7%	489.6	-11.2%	F	1446	-8.0%	437.4	0.7%	F	1535	-2.4%	523.8	-18.9%	F	1517	-3.5%	211.7	51.9%	F	1459	-7.2%	230.0	47.8%	F
Humphreys St & Dale Ave	Two-Way Stop-Control	486.2	F	1517	0.3%	394.6	18.8%	F	1367	-9.6%	382.3	21.4%	F	1391	-8.1%	512.7	-5.5%	F	1476	-2.4%	693.0	-42.5%	F	1463	-3.3%	77.9	84.0%	F	1407	-7.0%	132.5	72.7%	F
Humphreys St & Elm Ave	Two-Way Stop-Control	488.7	F	1651	0.6%	410.4	16.0%	F	1461	-11.0%	730.3	-49.4%	F	1506	-8.2%	523.3	-7.1%	F	1604	-2.3%	566.0	-15.8%	F	1594	-2.9%	224.9	54.0%	F	1531	-6.7%	295.7	39.5%	F
Humphreys St & Fine Ave	Two-Way Stop-Control	241.4	F	1487	-0.2%	343.1	-42.1%	F	1320	-11.4%	359.3	-48.9%	F	1346	-9.7%	353.6	-46.5%	F	1465	-1.7%	577.7	-139.3%	F	1440	-3.4%	144.7	40.0%	F	1383	-7.2%	113.5	53.0%	F
Humphreys St & Hunt Ave	Two-Way Stop-Control	409.7	F	1528	-0.2%	385.2	6.0%	F	1334	-12.9%	488.9	-19.3%	F	1379	-9.9%	601.8	-46.9%	F	1507	-1.6%	736.6	-79.8%	F	1482	-3.2%	170.4	58.4%	F	1421	-7.2%	161.3	60.6%	F
Humphreys St & Sullivan Ave	Two-Way Stop-Control	146.7	F	1580	-0.4%	246.3	-67.9%	F	1369	-13.7%	179.9	-22.6%	F	1505	-5.2%	590.0	-302.1%	F	1562	-1.6%	862.0	-487.5%	F	1534	-3.3%	84.3	42.6%	F	1473	-7.2%	104.3	28.9%	F
Humphreys St & Columbus Ave	Signal	30.3	C	2209	-0.2%	27.9	7.9%	C	1918	-13.4%	36.0	-18.6%	D	2106	-4.9%	28.9	4.7%	C	2194	-0.9%	29.9	1.3%	C	2160	-2.4%	28.7	5.5%	C	2070	-6.5%	28.0	7.7%	C
US-180 & Forest Ave	Signal	11.2	B	2053	62.9%	7.2	35.4%	A	1742	38.3%	14.0	-24.4%	B	384	-69.5%	11.2	0.4%	B	399	-68.3%	16.4	-46.6%	B	766	-39.2%	9.7	13.7%	A	733	-41.8%	10.9	3.1%	B
US-180 & Shultz Pass Rd	Signal	5.4	A	1106	-0.1%	4.6	14.5%	A	1018	-8.0%	6.8	-26.5%	A	1081	-2.3%	7.0	-30.6%	A	1090	-1.5%	5.5	-2.2%	A	1038	-6.2%	5.6	-4.5%	A	1012	-8.6%	5.5	-2.8%	A
US-180 & Snow Bowl Rd	Two-Way Stop-Control	8.6	A	482	0.6%	8.3	3.3%	A	453	-5.4%	5.2	39.3%	A	471	-1.7%	5.2	39.1%	A	470	-1.9%	5.2	39.2%	A	484	1.0%	9.5	-11.3%	A	486	1.5%	8.4	1.6%	A
US-180 & Roundtree Rd/Bader Rd	Two-Way Stop-Control	0.5	A	192	1.1%	8.1	-1577.1%	A	176	-7.4%	0.9	-77.1%	A	189	-0.5%	0.6	-22.9%	A	189	-0.5%	0.5	-8.3%	A	268	41.1%	0.7	-37.5%	A	187	-1.6%	0.5	0.0%	A

164.8	162.0	195.6	222.3	290.5	71.2	80.2
2307.8	-2%	19%	35%	76%	-57%	-51%
3501.5	-16%	4%	14%	38%	-46%	-46%
	2932.8	3630.6	3995.1	4843.5	1880.9	1894.4



Intersection Volume, Delay, & LOS		No Build - PM		Package A - PM					Package B - PM					Package C - PM					Package D - PM					Package E - PM					Package F - PM				
Intersection	Control	Delay	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS	Volume	% Change	Delay	% Change	LOS
Humphreys St & Rte 66	Signal	23.0	C	2750	1.0%	25.91	-12.7%	C	2849	4.6%	28.41	-23.5%	C	2762	1.4%	27.34	-18.9%	C	2692	-1.1%	28.28	-23.0%	C	2681	-1.5%	16.43	28.6%	B	2563	-5.9%	18.87	18.0%	B
Humphreys St & Aspen Ave	Signal	10.6	B	1752	1.0%	20.37	-91.8%	C	1784	2.9%	25.68	-141.8%	C	1755	1.2%	25.26	-137.9%	C	1737	0.2%	24.71	-132.7%	C	1681	-3.1%	8.76	17.5%	A	1657	-4.4%	8.55	19.5%	A
Humphreys St & Birch Ave	Signal	16.7	B	1709	1.4%	21.09	-26.0%	C	1738	3.1%	33.64	-101.0%	C	1710	1.4%	33.18	-98.2%	C	1692	0.4%	29.02	-73.4%	C	1632	-3.2%	13.16	21.4%	B	1616	-4.2%	12.41	25.9%	B
Humphreys St & Cherry Ave	Two-Way Stop-Control	304.3	F	1713	2.5%	129.11	57.6%	F	1718	2.8%	189.96	37.6%	F	1695	1.4%	223.09	26.7%	F	1678	0.4%	161.72	46.9%	F	1623	-2.9%	171.17	43.7%	F	1614	-3.5%	122.12	59.9%	F
Humphreys St & Dale Ave	Two-Way Stop-Control	83.0	F	1650	1.5%	52.57	36.6%	F	1703	4.7%	149.08	-79.7%	F	1681	3.4%	91.42	-10.2%	F	1651	1.5%	114.57	-38.1%	F	1562	-3.9%	73.55	11.4%	F	1545	-5.0%	101.84	-22.7%	F
Humphreys St & Elm Ave	Two-Way Stop-Control	219.7	F	1731	1.2%	74.36	66.2%	F	1786	4.4%	152.15	30.7%	F	1770	3.5%	119.64	45.5%	F	1735	1.5%	92.23	58.0%	F	1644	-3.9%	117.98	46.3%	F	1631	-4.6%	88.03	59.9%	F
Humphreys St & Fine Ave	Two-Way Stop-Control	82.8	F	1631	1.3%	52.49	36.6%	F	1702	5.7%	71.02	14.3%	F	1684	4.6%	86.48	-4.4%	F	1651	2.5%	63.26	23.6%	F	1540	-4.3%	62.32	24.8%	F	1525	-5.3%	54.23	34.5%	F
Humphreys St & Hunt Ave	Two-Way Stop-Control	201.0	F	1709	0.9%	72.8	63.8%	F	1785	5.4%	79.45	60.5%	F	1770	4.5%	101.17	49.7%	F	1734	2.4%	71.32	64.5%	F	1622	-4.3%	83.01	58.7%	F	1611	-4.9%	131.67	34.5%	F
Humphreys St & Sullivan Ave	Two-Way Stop-Control	88.9	F	1736	0.8%	59.8	32.7%	F	1814	5.3%	84.58	4.9%	F	1798	4.4%	81.71	8.1%	F	1764	2.4%	91.43	-2.8%	F	1649	-4.3%	186.02	-109.2%	F	1635	-5.1%	84.61	4.8%	F
Humphreys St & Columbus Ave	Signal	32.3	C	2448	1.1%	31.7	1.9%	C	2501	3.3%	38.06	-17.7%	D	2477	2.3%	39.17	-21.2%	D	2407	-0.6%	39.41	-21.9%	D	2374	-2.0%	27.21	15.8%	C	2365	-2.4%	25.54	21.0%	C
US-180 & Forest Ave	Signal	14.9	B	2346	15.2%	6.17	58.7%	A	2423	18.9%	18.78	-25.8%	B	439	-78.4%	33.25	-122.7%	C	390	-80.9%	40.71	-172.7%	D	780	-61.7%	11	26.3%	B	781	-61.7%	9.54	36.1%	A
US-180 & Shultz Pass Rd	Signal	5.2	A	1286	1.0%	4.05	22.3%	A	1401	10.1%	4.51	13.4%	A	1397	9.7%	5.06	2.9%	A	1365	7.2%	4.92	5.6%	A	1183	-7.1%	4.86	6.7%	A	1176	-7.6%	4.67	10.4%	A
US-180 & Snow Bowl Rd	Two-Way Stop-Control	110.1	F	756	1.3%	106.78	3.1%	F	877	17.6%	10.85	90.1%	B	877	17.6%	9.9	91.0%	A	869	16.5%	8.78	92.0%	A	756	1.3%	107.97	2.0%	F	754	1.1%	108.34	1.6%	F
US-180 & Roundtree Rd/Bader Rd	Two-Way Stop-Control	0.9	A	274	0.7%	8.09	-779.3%	A	272	0.0%	6.5	-606.5%	A	271	-0.4%	6.66	-623.9%	A	265	-2.6%	6.5	-606.5%	A	385	41.5%	0.74	19.6%	A	275	1.1%	0.78	15.2%	A

85.3	47.5	63.8	63.1	55.5	63.2	55.1
1193.6	-44% 665.3	-25% 892.7	-26% 883.3	-35% 776.9	-26% 884.2	-35% 771.2

# Appendix E – Tier 2 Safety Calculations



**Alternative 2 (Urban)**

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Remove Two-Way Left-turn lane*	All	5	1.563	-0.563	1.725	All
	All	5	1.887	-0.887		Rear End
	A,B,C	4	1.538	-0.538	1.538	All
Install an additional lane (SB Direction)	K,A,B,C	3	0.760	24	0.750	All
	K,A,B,C	3	0.750	25		All
	K,A,B,C	3	0.740	26		All

\* CMF's does not exist for removing TWLTL. There, "Introduce TWLTL (two-way left turn lanes) on rural two lane roads" was used and assumed that removing a TWLTL will have the inverse impact (1/CMF of installing TWLTL) of introducing TWLTL

$CMF = CMF1 - (1 - CMF2/2) - (1 - CMF3/3) \dots$

Severity	CMF's	CRF's
All	1.725	-72.465
Injury	1.413	-41.346

- K Fatal
- A Incapacitating
- B Non-Incapacitating
- C Not visible but complains pain
- O no injury
- U unknown



### Alternative 3 (Rural)

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Install an additional lane (NB Direction)	K,A,B,C	3	0.760	24	0.750	All
	K,A,B,C	3	0.750	25		All
	K,A,B,C	3	0.740	26		All
Install an additional lane (SB Direction)	K,A,B,C	3	0.760	24	0.750	All
	K,A,B,C	3	0.750	25		All
	K,A,B,C	3	0.740	26		All
Introduce TWLTL (two-way left turn lanes) on rural two lane roads	All	5	0.640	36	0.585	All
	All	5	0.530	47		Rear End
	A,B,C	4	0.650	35	0.650	All
Provide raised median	All	4	0.610	39	0.708	All
	K,A	4	0.560	44		All
	A,B	5	0.780	22		All
	A,B	5	0.880	12		All
	K,A,B,C	4	0.610	39		All
Widen Shoulder	All	4	0.771	22.9	0.735	All
	All	4	0.617	38.3		All
	All	4	0.817	18.3		All
	K,A,B,C	4	0.688	31.2	0.667	All
	K,A,B,C	4	0.500	50		All
	K,A,B,C	4	0.814	18.6		All

$$CMF=CMF1-(1-CMF2/2)-(1-CMF3/3)...$$

	Severity	CMF's	CRF's
with raised median	All	0.4775	52.250
	Injury	0.444	55.567
without raised median	All	0.453	54.750
	Injury	0.425	57.483

**Alternative 3 (Suburban)**

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Install an additional lane (NB Direction)	K,A,B,C	3	0.760	24	0.750	All
	K,A,B,C	3	0.750	25		All
	K,A,B,C	3	0.740	26		All
Install an additional lane (SB Direction)	K,A,B,C	3	0.760	24	0.750	All
	K,A,B,C	3	0.750	25		All
	K,A,B,C	3	0.740	26		All
Introduce TWLTL (two-way left turn lanes) on rural two lane roads	All	5	0.640	36	0.585	All
	All	5	0.530	47		Rear End
	A,B,C	4	0.650	35	0.650	All
Provide raised median	All	4	0.610	39	0.708	All
	K,A	4	0.560	44		All
	A,B	5	0.780	22		All
	A,B	5	0.880	12		All
	K,A,B,C	4	0.610	39		All
Install Bicycle Lanes	K,A,B,C	3	1.140	-14	1.140	All
	All	3	1.050	-5	1.050	All
	All	3	0.860	14	0.860	Bicycle

$CMF = CMF1 - (1 - CMF2/2) - (1 - CMF3/3) \dots$

	Severity	CMF's	CRF's
with raised median	All	0.635	36.500
	Injury	0.563	43.750
without raised median	All	0.610	39.000
	Injury	0.543	45.667

Bicycle Crashes	Severity	CMF's	CRF's
	All	0.860	14.000

### Alternative 4a

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Remove Two-Way Left-turn lane*	All	5	1.563	-0.563	1.725	All
	All	5	1.887	-0.887		Rear End
	A,B,C	4	1.538	-0.538	1.538	All
Install an additional lane (SB Direction)	K,A,B,C	3	0.760	24	0.750	All
	K,A,B,C	3	0.750	25		All
	K,A,B,C	3	0.740	26		All
Install Bicycle Lanes	K,A,B,C	3	1.140	-14	1.140	All
	All	3	1.050	-5	1.050	All
	All	3	0.860	14	0.860	Bicycle
Install Shared Use Path	All	3	0.750	25	0.750	Vehicle/Bicycle
Install Sidewalk	All	3	1.780	-78	1.780	Vehicle/Bicycle
	All	3	1.870	-87	1.870	Vehicle/Bicycle

\* CMF's does not exist for removing TWLTL. There, "Introduce TWLTL (two-way left turn lanes) on rural two lane roads" was used and assumed that removing a TWLTL will have the inverse impact (1/CMF of installing TWLTL) of introducing TWLTL

$$CMF = CMF1 - (1 - CMF2/2) - (1 - CMF3/3) \dots$$

Severity	CMF's	CRF's
All	1.750	-74.965
Injury	1.460	-46.013

Bicycle Crashes

Severity	CMF's	CRF's
All	1.213	-21.250

No CMF's are available for injury severity for bus lane



### Alternative 4b

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Remove Two-Way Left-turn lane*	All	5	1.563	-0.563	1.725	All
	All	5	1.887	-0.887		Rear End
	A,B,C	4	1.538	-0.538	1.538	All
Bus Lane (*Implement transit lane priority)	All	4	0.806	19.4	0.806	All
Install Bicycle Lanes	K,A,B,C	3	1.140	-14	1.140	All
	All	3	1.050	-5	1.050	All
	All	3	0.860	14	0.860	Bicycle
Install Shared Use Path	All	3	0.750	25	0.750	Vehicle/Bicycle
Install Sidewalk	All	3	1.780	-78	1.780	Vehicle/Bicycle
	All	3	1.870	-87	1.870	Vehicle/Bicycle

\* CMF's does not exist for removing TWLTL. There, "Introduce TWLTL (two-way left turn lanes) on rural two lane roads" was used and assumed that removing a TWLTL will have the inverse impact (1/CMF of installing TWLTL) of introducing TWLTL

$$CMF = CMF1 - (1 - CMF2/2) - (1 - CMF3/3) \dots$$

Severity	CMF's	CRF's
All	1.644	-64.431
Injury	1.608	-60.846

Bicycle Crashes

Severity	CMF's	CRF's
All	1.213	-21.250

No CMF's are available for injury severity for bus lane

### Alternative 6

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Introduce TWLTL (two-way left turn lanes) on rural two lane roads	All	5	0.640	36	0.585	All
	All	5	0.530	47		Rear End
	A,B,C	4	0.650	35	0.650	All
Bus Lane (*Implement transit lane priority)	All	4	0.806	19.4	0.806	All

$$CMF = CMF1 - (1 - CMF2/2) - (1 - CMF3/3) \dots$$

All Crashes (with Bus lane and Bike Lane)

Severity	CMF's	CRF's
All	0.488	51.200
Injury	0.650	35.000

No CMF's are available for injury severity for bus lane

Total Crashes

Alternative Package							
Segment	No Build	A	B	C	D	E (Alt 17 - Alt Route)	F (Alt 18 - Alt Route)
Route 66 to Columbus	0	-72.47	-72.47	-72.47	-72.47	0	0
Columbus to Peak View	0	39.00	-74.97	-64.43	51.20	0	0
Peak View to Snowbowl Rd	0	54.75	51.20	51.20	51.20	0	0
Snowbowl Rd to MP 233.55	0	54.75	0.00	0.00	0.00	0	0
<b>Average CMF</b>	<b>0</b>	<b>19.01</b>	<b>-24.06</b>	<b>-21.42</b>	<b>7.48</b>	<b>0</b>	<b>0</b>

Injury Crashes

Alternative Package							
Segment	No Build	A	B	C	D	E (Alt 17 - Alt Route)	F (Alt 18 - Alt Route)
Route 66 to Columbus	0	-41.35	-41.35	-41.35	-41.35	0	0
Columbus to Peak View	0	45.67	-46.01	-60.85	35.00	0	0
Peak View to Snowbowl Rd	0	57.48	35.00	35.00	35.00	0	0
Snowbowl Rd to MP 233.55	0	57.48	0.00	0.00	0.00	0	0
<b>Average CMF</b>	<b>0</b>	<b>29.82</b>	<b>-13.09</b>	<b>-16.80</b>	<b>7.16</b>	<b>0</b>	<b>0</b>

Bicycle Crashes

Alternative Package							
Segment	No Build	A	B	C	D	E (Alt 17 - Alt Route)	F (Alt 18 - Alt Route)
Route 66 to Columbus	0	0	0	0	0	0	0
Columbus to Peak View	0	14	-21.25	-21.25	0	0	0
Peak View to Snowbowl Rd	0	0	0	0	0	0	0
Snowbowl Rd to MP 233.55	0	0	0	0	0	0	0
<b>Average CMF</b>	<b>0</b>	<b>3.5</b>	<b>-5.31</b>	<b>-5.31</b>	<b>0</b>	<b>0</b>	<b>0</b>



# Appendix F – Tier 2 Planning-Level Cost Estimates

**ESTIMATE OF PROBABLE COSTS**  
**US180, Route 66 to Columbus Ave**  
**Alternative 2**

**ALTERNATIVE 2**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
OBLITERATE PAVEMENT MARKING (STRIPE)	L.FT.	15,152	\$1.00	\$15,152
OBLITERATE PAVEMENT MARKING	EACH	23	\$100.00	\$2,300
DUAL COMPONENT PAVEMENT MARKING (WHITE EPOXY)	L.FT.	4,775	\$0.25	\$1,194
DUAL COMPONENT PAVEMENT MARKING (YELLOW EPOXY)	L.FT.	10,377	\$0.25	\$2,594
DUAL COMPONENT PAVEMENT LEGEND	EACH	23	\$200.00	\$4,600
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$25,840</b>
MISCELLANEOUS WORK (10%)	COST	10%		\$2,584
	<b>Subtotal</b>			<b>\$28,424</b>
MAINTENANCE AND PROTECTION OF TRAFFIC (15%)	COST	15%		\$4,264
CONSTRUCTION SURVEYING AND LAYOUT (15%)	COST	15%		\$4,264
	<b>Subtotal</b>			<b>\$36,951</b>
MOBILIZATION (10%)	COST	10%		\$3,695
	<b>Subtotal</b>			<b>\$40,646</b>
CONTIGENCIES (5%)	COST	5%		\$2,032
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$3,658
	<b>Subtotal</b>			<b>\$46,337</b>
<b>DETAILED ESTIMATE</b>				<b>\$46,337</b>
ENGINEERING DESIGN (10%)	COST	10%		\$4,633.68
	<b>Subtotal</b>			<b>\$4,634</b>
<b>OTHER COST TOTAL</b>				<b>\$4,634</b>
<b>SUMMARY</b>				
	<b>DETAILED ESTIMATE</b>			<b>\$46,337</b>
	<b>OTHER COST TOTAL</b>			<b>\$4,634</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$51,000</b>

**ESTIMATE OF PROBABLE COSTS**  
**US180, Columbus Ave to Peak View Rd**  
**Alternative 3 Suburban**

**ALTERNATIVE 3 - SUBURBAN (Columbus Ave to Peak View Ave)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$1,325,000	\$1,325,000
REMOVAL OF AC PAVEMENT	SQ.YD.	34,242	\$20	\$684,844
AGGREGATE BASE, CLASS 2	CU.YD.	15,980	\$150	\$2,397,000
ASPHALTIC CONCRETE PAVEMENT	TON	25,766	\$250	\$6,441,500
CONCRETE CURB AND GUTTER	L.FT.	30,818	\$25	\$770,450
CONCRETE SIDEWALK RAMP	EACH	50	\$5,000	\$250,000
CONCRETE DRIVEWAYS	EACH	20	\$3,000	\$60,000
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$11,928,794</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$2,385,759
<b>Subtotal</b>				<b>\$14,314,553</b>
DUST PALLIATIVE (1%)	COST	1%		\$143,146
FURNISH WATER (1%)	COST	1%		\$143,146
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$1,717,746
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$143,146
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$286,291
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$286,291
<b>Subtotal</b>				<b>\$17,034,318</b>
MOBILIZATION (10%)	COST	10%		\$1,703,432
<b>Subtotal</b>				<b>\$18,737,750</b>
CONTIGENCIES (5%)	COST	5%		\$936,887
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$1,686,397
<b>Subtotal</b>				<b>\$21,361,035</b>
<b>DETAILED ESTIMATE</b>				<b>\$21,361,035</b>
ENGINEERING DESIGN (8%)	COST	8%		\$1,708,883
UTILITIES (20%)	COST	20%		\$4,272,207
<b>Subtotal</b>				<b>\$5,981,090</b>
<b>OTHER COST TOTAL</b>				<b>\$5,981,090</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$21,361,000</b>
<b>OTHER COST TOTAL</b>				<b>\$5,981,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$27,342,000</b>



**ESTIMATE OF PROBABLE COSTS**  
**US180, Columbus Ave to Peak View Rd**  
**Alternative 3 Rural (R1)**

**ALTERNATIVE 3 - RURAL (Columbus Ave to Peak View Rd)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$1,325,000	\$1,325,000
REMOVAL OF AC PAVEMENT	SQ.YD.	34,242	\$20	\$684,844
AGGREGATE BASE, CLASS 2	CU.YD.	20,165	\$150	\$3,024,750
ASPHALTIC CONCRETE PAVEMENT	TON	32,514	\$250	\$8,128,500
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$13,163,094</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$2,632,619
<b>Subtotal</b>				<b>\$15,795,713</b>
DUST PALLIATIVE (1%)	COST	1%		\$157,957
FURNISH WATER (1%)	COST	1%		\$157,957
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$1,895,486
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$157,957
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$315,914
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$315,914
<b>Subtotal</b>				<b>\$18,796,898</b>
MOBILIZATION (10%)	COST	10%		\$1,879,690
<b>Subtotal</b>				<b>\$20,676,588</b>
CONTIGENCIES (5%)	COST	5%		\$1,033,829
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$1,860,893
<b>Subtotal</b>				<b>\$23,571,310</b>
<b>DETAILED ESTIMATE</b>				<b>\$23,571,310</b>
ENGINEERING DESIGN (8%)	COST	8%		\$1,885,705
UTILITIES (20%)	COST	20%		\$4,714,262
<b>Subtotal</b>				<b>\$6,599,967</b>
<b>OTHER COST TOTAL</b>				<b>\$6,599,967</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$23,571,000</b>
<b>OTHER COST TOTAL</b>				<b>\$6,600,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$30,171,000</b>

**ESTIMATE OF PROBABLE COSTS**  
**US180, Columbus Ave to Peak View Rd**  
**Alternative 3 Rural (R2)**

**ALTERNATIVE 3 - RURAL (Columbus Ave to Peak View Rd)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$1,325,000	\$1,325,000
REMOVAL OF AC PAVEMENT	SQ.YD.	34,242	\$20	\$684,844
AGGREGATE BASE, CLASS 2	CU.YD.	15,980	\$150	\$2,397,000
ASPHALTIC CONCRETE PAVEMENT	TON	25,766	\$250	\$6,441,500
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$10,848,344</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$2,169,669
<b>Subtotal</b>				<b>\$13,018,013</b>
DUST PALLIATIVE (1%)	COST	1%		\$130,180
FURNISH WATER (1%)	COST	1%		\$130,180
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$1,562,162
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$130,180
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$260,360
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$260,360
<b>Subtotal</b>				<b>\$15,491,435</b>
MOBILIZATION (10%)	COST	10%		\$1,549,144
<b>Subtotal</b>				<b>\$17,040,579</b>
CONTIGENCIES (5%)	COST	5%		\$852,029
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$1,533,652
<b>Subtotal</b>				<b>\$19,426,260</b>
<b>DETAILED ESTIMATE</b>				<b>\$19,426,260</b>
ENGINEERING DESIGN (8%)	COST	8%		\$1,554,101
UTILITIES (20%)	COST	20%		\$3,885,252
<b>Subtotal</b>				<b>\$5,439,353</b>
<b>OTHER COST TOTAL</b>				<b>\$5,439,353</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$19,426,000</b>
<b>OTHER COST TOTAL</b>				<b>\$5,439,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$24,865,000</b>

**ESTIMATE OF PROBABLE COSTS**  
**US180, Columbus Ave to Peak View Rd**  
**Alternative 4a/4b**

**ALTERNATIVE 4a/4b (Columbus Ave to Peak View Ave)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$1,325,000	\$1,325,000
REMOVAL OF AC PAVEMENT	SQ.YD.	13,697	\$20	\$273,938
AGGREGATE BASE, CLASS 2	CU.YD.	4,566	\$150	\$684,900
ASPHALTIC CONCRETE PAVEMENT	TON	7,362	\$250	\$1,840,500
CONCRETE CURB AND GUTTER	L.FT.	30,818	\$25	\$770,450
CONCRETE SIDEWALK RAMP	EACH	50	\$5,000	\$250,000
CONCRETE DRIVEWAYS	EACH	20	\$3,000	\$60,000
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$5,204,788</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$1,040,958
	<b>Subtotal</b>			<b>\$6,245,746</b>
DUST PALLIATIVE (1%)	COST	1%		\$62,457
FURNISH WATER (1%)	COST	1%		\$62,457
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$749,489
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$62,457
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$124,915
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$124,915
	<b>Subtotal</b>			<b>\$7,432,437</b>
MOBILIZATION (10%)	COST	10%		\$743,244
	<b>Subtotal</b>			<b>\$8,175,681</b>
CONTIGENCIES (5%)	COST	5%		\$408,784
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$735,811
	<b>Subtotal</b>			<b>\$9,320,276</b>
<b>DETAILED ESTIMATE</b>				<b>\$9,320,276</b>
ENGINEERING DESIGN (8%)	COST	8%		\$745,622
RIGHT OF WAY	SQ. FT.			\$0
UTILITIES (20%)	COST	20%		\$1,864,055
	<b>Subtotal</b>			<b>\$2,609,677</b>
<b>OTHER COST TOTAL</b>				<b>\$2,609,677</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$9,320,000</b>
<b>OTHER COST TOTAL</b>				<b>\$2,610,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$11,930,000</b>



**ESTIMATE OF PROBABLE COSTS**  
**US180, Columbus Ave to Peak View Rd**  
**Alternative 6a**

**ALTERNATIVE 6a (Columbus Ave to Peak View Ave)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$1,325,000	\$1,325,000
REMOVAL OF AC PAVEMENT	SQ.YD.	13,697	\$20	\$273,938
AGGREGATE BASE, CLASS 2	CU.YD.	5,327	\$150	\$799,050
ASPHALTIC CONCRETE PAVEMENT	TON	8,589	\$250	\$2,147,250
CONCRETE SIDEWALK RAMP	EACH	50	\$5,000	\$250,000
CONCRETE DRIVEWAYS	EACH	20	\$3,000	\$60,000
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$4,855,238</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$971,048
<b>Subtotal</b>				<b>\$5,826,286</b>
DUST PALLIATIVE (1%)	COST	1%		\$58,263
FURNISH WATER (1%)	COST	1%		\$58,263
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$699,154
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$58,263
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$116,526
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$116,526
<b>Subtotal</b>				<b>\$6,933,280</b>
MOBILIZATION (10%)	COST	10%		\$693,328
<b>Subtotal</b>				<b>\$7,626,608</b>
CONTIGENCIES (5%)	COST	5%		\$381,330
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$686,395
<b>Subtotal</b>				<b>\$8,694,333</b>
<b>DETAILED ESTIMATE</b>				<b>\$8,694,333</b>
ENGINEERING DESIGN (8%)	COST	8%		\$695,547
UTILITIES (20%)	COST	20%		\$1,738,867
<b>Subtotal</b>				<b>\$2,434,413</b>
<b>OTHER COST TOTAL</b>				<b>\$2,434,413</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$8,694,000</b>
<b>OTHER COST TOTAL</b>				<b>\$2,434,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$11,128,000</b>

**ESTIMATE OF PROBABLE COSTS**  
**US180, Peak View Rd to Snow Bowl**  
**Alternative 6b**

**ALTERNATIVE 6b (Peak View Rd to MP 233.55)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF AC PAVEMENT	SQ.YD.	21,948	\$20	\$438,956
AGGREGATE BASE, CLASS 2	CU.YD.	6,828	\$150	\$1,024,200
ASPHALTIC CONCRETE PAVEMENT	TON	11,010	\$250	\$2,752,500
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$4,215,656</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$843,131
<b>Subtotal</b>				<b>\$5,058,787</b>
DUST PALLIATIVE (1%)	COST	1%		\$50,588
FURNISH WATER (1%)	COST	1%		\$50,588
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$607,054
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$50,588
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$101,176
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$101,176
<b>Subtotal</b>				<b>\$6,019,957</b>
MOBILIZATION (10%)	COST	10%		\$601,996
<b>Subtotal</b>				<b>\$6,621,952</b>
CONTIGENCIES (5%)	COST	5%		\$331,098
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$595,976
<b>Subtotal</b>				<b>\$7,549,026</b>
<b>DETAILED ESTIMATE</b>				<b>\$7,549,026</b>
ENGINEERING DESIGN (8%)	COST	8%		\$603,922
UTILITIES (5%)	COST	5%		\$377,451
<b>Subtotal</b>				<b>\$981,373</b>
<b>OTHER COST TOTAL</b>				<b>\$981,373</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$7,549,000</b>
<b>OTHER COST TOTAL</b>				<b>\$981,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$8,530,000</b>

# Appendix G – Tier 3 Evaluation Criteria Project Partner Comment Log



Project Partner	Date	Comment
Dave Wessel, City of Flagstaff, NAIPTA, & Jenny Niemann	3/10	<p>The following individuals provided input to or reviewed these comments            NAIPTA: Kate Morley, Bizzy Collins            FMPO: Jeff Meilbeck, David Wessel, Martin Ince (PEQI/BEQI only)            City of Flagstaff: Jeff Bauman, Sara Dechter (reviewed comments and added detail to Community Character)</p> <p>Yellow highlighted items will require further confirmation from the relevant agencies. They are additions I made to clarify or expand upon a point or, as in the case of public involvement comments, drawn from separate conversations with local agency staff.</p> <p>City Sustainability is in support of all points made in the original memo below. These additional (grey) comments represent Jenny's supplemental responses, from the Sustainability Section, and have not been reviewed by the group represented by the memo.</p> <p><b>1. Applies to All</b></p> <ul style="list-style-type: none"> <li>a. How do we determine which spot improvements we should do regardless of cross section?  <i>RESPONSE: Addressed with the color-coding and the footnotes in the Potential Spot Improvements Matrix (Separate File).</i></li> <li>b. Need to spend time ranking between categories for weighting, discussing them and reaching consensus.  <i>RESPONSE: This should be addressed though upcoming Project Partner discussion and the development of the acceptance thresholds.</i></li> <li>c. Need to determine which results are actually meaningful or make a material difference before we give or don't give credit (saving or adding 10secs to vehicle travel time at cost of what?).  <i>RESPONSE: Generally speaking, the identification of acceptance thresholds for each criterion will guide meaningful results. Moreover, this is addressed in part through the spot improvements and the pedestrian/bicycle criterion under horizontal buffer.</i></li> <li>d. What are the assumptions on medians and turns lanes. How much they extend should matter in how much credit we give certain scenarios for landscaping, sidewalk, etc.  <i>RESPONSE: The final Spot Improvement list, Tier 3 Evaluation Criteria (bike/ped index), and criteria weighting should address this.</i></li> <li>e. Large question about if a different network fix could fix a flaw in a scenario, how do we determine if we don't discount the score of the scenario by planning for the other fix.  <i>RESPONSE: During the February 2020 two-day Spot Improvement workshop, a few intersections were identified to run multiple spot improvement scenarios (the Santa Fe/Sitgreaves/R66 intersection for example). Such scenario results will be shared with the partners to determine the best spot improvement to be included in the No Build + and Build alternatives for the specific scenarios identified during the workshop. Minor adjustments could be considered to the Recommended Alternative(s) if performance between Tier 2 and Tier 3 is worsened at any intersection or segment (comparison of the data</i></li> </ul>

Project Partner	Date	Comment
		<p><i>output will tell us that), but it is not feasible to run multiple iterations or scenarios of each alternative outside of what has been identified during the February 2020 two-day workshop.</i></p> <ul style="list-style-type: none"> <li>i. Improvements like extra through lanes, turn lanes or extra turn lanes that are only just above a threshold, might be reviewed for a solution by a network or system fix.  <b>RESPONSE:</b> See response to 1e.</li> <li>ii. Backage roads, cross-access easements, and internal circulation requirements and successful mode shift could reduce the demand and need for some improvements  <b>RESPONSE:</b> As previously discussed and decided, this process will only evaluate the performance of backage roads through the quantitative output of the network delay criterion. ADOT will provide a list of backage roads recommended to include an additional receiving lane where dual left turn lanes are implemented at intersections along the Milton Road study corridor. It was also previously discussed and agreed by the Project Partners that only funded CIP projects and the Lone Tree Road widening project (although not currently funded in a CIP) were added to the base model, and it's not feasible to analyze various scenarios of backage roads. ADOT has the intention of providing a formal recommendation in the final report that a supplemental/subsequent master plan/analysis of the backage roads following the Milton Road CMP process.</li> <li>iii. The City cannot guarantee these improvements will happen, but can make commitments to trying.  <b>RESPONSE:</b> Noted. Will review implementation strategies with the Project Partners as part of the Draft/Final Report (after Working Paper 2: Alternatives Analysis).           <ul style="list-style-type: none"> <li>1. Master plans, regulatory changes and proposition 419 partnering funds are all within the immediate realm of possibility.  <b>RESPONSE:</b> Noted. See previous responses.</li> <li>2. New funding based on the plan outcomes is another, yet lower, potentiality.  <b>RESPONSE:</b> Noted. See previous responses.</li> </ul> </li> </ul> <p><b>2. Traffic Operations</b></p> <ul style="list-style-type: none"> <li>a. General  <b>RESPONSE:</b> During our call on Jan. 25, the group reached concurrence on an approach that the overall throughput be identified via the Congestion Needs Score computations using a traditional spreadsheet approach, not through the VISSIM modeling efforts which would be time consuming and impactful to the modeling budget.           <ul style="list-style-type: none"> <li>i. Overall throughput (or utility) is not addressed.               <ul style="list-style-type: none"> <li>1. # vehicles * occupancy</li> </ul> </li> </ul> </li> </ul>

Project Partner	Date	Comment
		<p>a. For alternatives with additional general purpose lanes, the increased volume should be addressed here.  <i>RESPONSE: Agreed, we need to collectively discuss and determine an induced demand growth factor to be applied to alternatives with expanded GP lanes – 30 to 40% is probably too high and perhaps should be closer to 20%. More detail on this in the response to 2b.</i></p> <p>2. # buses * occupancy, # pedestrians, and # bicycles</p> <p>a. The Regional Travel Model (current version) estimates person trips and produces OD matrices between traffic analysis zones. It should be possible to quantify these for peds and bikes within a certain distance of the corridor.  <i>RESPONSE: Does the Regional TDM reach an output for the throughput of pedestrian and bicycles through an input derived from an assumption? This project did not contemplate the quantification of bikes and peds user trips.</i></p> <p>ii. Reiterate that overall throughput should be added to the information provided in this process, both within the criteria used and public information. Throughput is a critical piece of information for decision-making here (even if it can only be provided for automobiles and buses).  <i>RESPONSE: Agreed, throughput is an important piece of the puzzle, just trying to determine a feasible, reasonable, and objective approach to compute total throughput for each mode - See response to 2a.</i></p> <p><b>b. Level of Service</b></p> <p>i. Issues remain that the road widening options adding general purpose lanes will attract something like 30-40% more traffic skewing this measure for those alternatives.  <i>RESPONSE: Agreed, a discussion has been had (that the Alternatives with additional GP lanes will attract more traffic). This won't be captured with a specific criterion, but the impacts of more traffic will be captured in the LOS, travel times, and the network delay criterion. An approach/growth factor need to be agreed upon – 30-40% is probably too high and perhaps 20% makes more sense? Group to Discuss on April 9<sup>th</sup> meeting.</i></p> <p>1. Options:</p> <p>a. Increase the volume for these alternatives based on FMPO regional model</p> <p>b. Transparency dictates this overestimation of benefits is clearly stated  <i>RESPONSE: Likely to rely on FMPO and use Regional TDM or reach concurrence on a standard growth factor. More to discuss on April 9<sup>th</sup>.</i></p>



Project Partner	Date	Comment
		<p>ii. Acceptance Threshold – line up with RTP standards. Also aligns with Regional Plan service tables, though the segment to intersection correlation may not be perfect  <i>RESPONSE: ADOT believes the RTP guidance should be considered, but not be the sole guide for this CMP process. Also, the 5% value ADOT provided was a bit preliminary and generic at the time and was meant to be starting point to stimulate discussion. ADOT also recognizes that 5% may be a bit limiting, but would prefer to identify if a specific location, the entire corridor, or if one spot is where this percentage makes sense. The preliminary 5% figure was based on the No build (existing condition) scenario.</i></p> <p>1. Reporting by segment may be useful as volumes changes over the length of the corridor  <i>RESPONSE: This is a good point, and, not exclusive to the LOS criterion, and should be discussed about all criteria. ADOT recommends the group should discuss the best method moving into Tier 3 at the April 9<sup>th</sup> meeting.</i>  <b>or urban areas we might consider LOS E or F. For suburban areas we might consider LOS</b>  <i>RESPONSE: Noted</i></p> <p>c. <b>Travel Time</b></p> <p>i. Reporting this on a per vehicle basis may be helpful, especially if volumes are changed.  <i>RESPONSE: Agreed, could be a useful/helpful metric, however, too specific for this level of analysis. There is the potential this metric could be identified in the final report.</i></p> <p>ii. Threshold should be some base level of utility. <b>Perhaps exceeding +/- 30 seconds or even 1 minute before leaving a neutral value.</b>  <i>RESPONSE: A 30 second threshold is more practical than a 1-minute threshold. Group to discuss if we evaluate the time itself or a percentage difference between alternatives, but we do need to establish a minimum threshold.</i></p> <p>1. Holding to threshold should not prevent another mode from meeting a minimum level of performance  <i>RESPONSE: Agreed, the goal is for all modes to operate smoothly across the corridor.</i></p> <p>2. The acceptance threshold detail, that ‘no direction/timeframe may exceed 5% of existing’ seems to be quite limiting.  <i>RESPONSE: Understood – see above response to cii.</i></p> <p>a. Is the ‘existing’ the no-build, future condition? Or, no-build existing condition? Isn’t it possible that we’ll see a 5% increase in timeframe, REGARDLESS of the alternative chosen, just due to anticipated growth?</p>

Project Partner	Date	Comment
		<p><i><b>RESPONSE:</b> “Existing” is the existing condition (No-Build) with projected traffic volume. Will need to run VISSIM model to determine if spot improvements at select intersections are the source of the problem, then isolate and re-visit after reviewing model results.</i></p> <p>b. Having that acceptance threshold be able to automatically derail alternatives seems to say that this is the most important item – it can remove an alternative regardless of the other criteria. Is that what this is saying??</p> <p><i><b>RESPONSE:</b> The intention was to equitably develop acceptance thresholds for other criterion as well.</i></p> <p>iii. Report out minimum and maximum times from the 10 +/- travel time runs for each alternative. This provides some sense of reliability.  <i><b>RESPONSE:</b> Agreed, the intention is to report this level of detail through the model results and discuss the results in Working Paper #2.</i></p> <p>iv. How do we value creating equity or inequity in the system. I.e. - if we save a pedestrian 3 minutes but cost cars 10 secs, saving the ped should have an equity value. Similarly, adherence to a threshold in for one mode should not be allowed to prevent another mode from achieving a minimum level of service or performance.  <i><b>RESPONSE:</b> The goal is for all modes to preform smoothly across the corridor. Equity among modes is accommodated through the extensive criteria under the “Expand Travel Modes Choices” category– the multimodal nature of the criteria and application of acceptance thresholds are designed to accomplish equity/balance of performance as much as reasonably possible among all modes.</i></p> <p>d. Network Delay  <i><b>RESPONSE:</b> Jessica to provide a more detailed overview and response at our April 9<sup>th</sup> meeting as it is difficult to articulate in depth here.</i></p> <p>i. Please remind us: Is this a Dynamic Traffic Assignment model that will show reassignment of vehicles from Lone Tee or Woodlands-W.66 to Milton if Milton widening occurs?  <i><b>RESPONSE:</b> See response to 2d.</i></p> <p>ii. If DTA is not in effect, explain how network delay would change with each alternative  <i><b>RESPONSE:</b> See response to 2d</i></p>

Project Partner	Date	Comment
		<p>iii. Does this 'network delay' criterion exclude the delay experienced on Milton, specifically, since I believe it is accounted for in the 'travel time' metric just above? Otherwise, this seems to be double-counting the benefits of reduced travel time?  <b>RESPONSE:</b> See response to 2d</p> <p><b>3. Safety</b>  <b>ADOT COMMENT:</b> ADOT Traffic Safety Section (TSS) evaluated the draft Tier 3 Evaluation Criteria and generally agreed with the approach along with subtle adjustments that have been incorporated. ADOT TSS approved the addition of the "Reduction in Conflict Points" criterion and how Spot Improvements are utilized to address micro-safety concerns.</p> <p>Please note that the ADOT TSS recognizes center running bus platforms as a safety concern for pedestrians as it introduces the potential likelihood for pedestrians to run/dart across the street into traffic to "catch a bus," and it is recommended by the ADOT TSS to quantify this potential "risk" to pedestrians in the evaluation criteria. Please note in this context that there is a distinct difference between a pedestrian refuge and a center bus platform.</p> <p>a. Crash Mitigation Factors may be the best option available.  <b>RESPONSE:</b> Agreed, we investigated alternative evaluation measures as we previously discussed with the Project Partners; however, even with its acknowledged limitations, using CMF appears to be the most reasonable and feasible approach to measure safety.</p> <p>b. Review all previous comments to assure a more thorough analysis  <b>RESPONSE:</b> Crash data on Milton Road, compared to statewide averages, does not support additional analysis beyond what has been, and is continuing to be completed for this project. The one pedestrian fatality near Target will be mitigated though the planned grade separated pedestrian crossing.</p> <p>i. Look at CMF's for all modes across all or most types of improvements  <b>RESPONSE:</b> Agreed— see the general response to safety.</p> <p>1. i.e., widening helps automobiles but hurts pedestrians  <b>RESPONSE:</b> This is evaluated and measured in the PEQI-specific criteria.</p> <p>2. How do we take into account this relationship – that while widening may reduce automobile collisions, it could increase pedestrians' exposure to collisions by increasing the crossing difference. How is this change in safety/ exposure accounted for?</p>



Project Partner	Date	Comment
		<p style="text-align: center;"><i><b>RESPONSE:</b> This is evaluated and measured in the BEQI- and PEQI-specific criteria.</i></p> <p>c. Apply CMF to heat map of crash types to assure better alignment between factors and crashes  <i><b>RESPONSE:</b> Per previous group discussion on this issue, it was agreed that this exercise will not be conducted due to crash rate less than state averages.</i></p> <p style="padding-left: 40px;">i. May need to apply this at a segment level and then aggregate to a corridor score to adequately evaluate spot improvements  <i><b>RESPONSE:</b> Agreed, this topic should be discussed with Project Partners on the April 9<sup>th</sup> meeting.</i></p> <p>d. Reduction in conflict points – may need to apply by segment and have a hypothetical median treatment to estimate changes to driveway turns  <i><b>RESPONSE:</b> This is addressed in the application of spot improvements and through the access management analysis of the preferred alternative and we are addressing this by segment. However, this can be part of the greater segment-level analysis vs. corridor-level analysis discussion during the April 9<sup>th</sup> meeting.</i></p> <p><b>4. Expand Mode Choice</b></p> <p>a. PEQI: The thresholds for several need to go into the negative range as they are detrimental to walking and biking (see recommended changes)  <i><b>RESPONSE:</b> ADOT TSS believes negative scores should not be introduced into the evaluation criteria if the result is not worse than existing conditions and meets the current standard. ADOT TSS prefers a “neutral” score (or 0) is acceptable under these circumstances. Also, if we introduce a negative score here, we would need to introduce negative scores uniformly across all other criteria for an equitable range of valuation for all criterion.</i></p> <p style="padding-left: 40px;">i. Buffer width – “No buffer” should be negative</p> <p style="padding-left: 80px;">1. A vehicular turn lane should not count in the calculation  <i><b>RESPONSE:</b> Agreed, this was NOT the intention under the PEQI criteria.</i></p> <p style="padding-left: 80px;">2. A bike lane might count in the calculation.  <i><b>RESPONSE:</b> This was the intention under the original PEQI criteria.</i></p> <p style="padding-left: 40px;">ii. Number of lanes – 8 lanes should be negative  <i><b>RESPONSE:</b> See response to 4a. Moreover, ADOT TSS feels that if signal timing is appropriately established additional lanes would not reduce safety.</i></p> <p style="padding-left: 40px;">iii. Median – “no median” should be negative</p>

Project Partner	Date	Comment
		<p><b>RESPONSE:</b> See response to 4a.</p> <ol style="list-style-type: none"> <li>1. Since medians serve as an impromptu refuge, scaling this to length of median of a certain width is appropriate.           <p><b>RESPONSE:</b> Agreed, “impromptu” pedestrian refuge. Medians will not be evaluated as pedestrian refuge as there is a distinct difference between pedestrian refuge and medians (especially narrower medians).</p> <ol style="list-style-type: none"> <li>a. Requires some hypothetical or assumed median application               <p><b>RESPONSE:</b> Looking to avoid building in assumptions when possible. although the ability to accomplish this measurement is contingent on the result of the greater segment-level analysis vs. corridor-level analysis discussion during the April 9<sup>th</sup> meeting.</p> </li> <li>b. The frequency of these medians, as long as they meet a minimum length, should also receive credit.               <p><b>RESPONSE:</b> Agreed – although the ability to accomplish this measurement is contingent on the result of the greater segment-level analysis vs. corridor-level analysis discussion during the April 9<sup>th</sup> meeting.</p> </li> </ol> </li> <li>iv. Traffic volumes should be scaled to Milton (or 180) and factored to curb lane           <p><b>RESPONSE:</b> This is an acceptable approach, though, initial Project Partner guidance indicated to NOT scale the volumes to the study corridor. Please note that if the group agrees to scale the traffic volumes criterion to the study corridor volumes, then ADOT also recommends all other criteria within the PEQI/BEQI need to be proportionately scaled to the study corridor as well.</p> </li> <li>v. Driveway frequency might be added as a measure. Even if it doesn’t change per alternative it does illustrate the quality of the environment and may indicate the need to overcompensate in some areas to gain a reasonable environment quality.           <p><b>RESPONSE:</b> This is addressed in the spot improvements and we are only recommending a reduction of driveways in Alternative 5 and Alternative 13. The possible approach is to evaluate the frequency of/reduction of driveways in the application of access management to the preferred alternative. Additionally, the intention is also address frequency of/reduction of driveways in the report through a recommended policy (best practices) statement identifying the appropriate number of driveways within a certain distance based on land use type, but also take into account the City of Flagstaff fire access requirements.</p> </li> </ol>

Project Partner	Date	Comment
		<p>vi. 3.5 or less is a floor -Sara’s initial take on the 10 point scale.  <i>RESPONSE: Issue to be further vetted as a group.</i></p> <p>vii. This need for a negative range is particularly critical; otherwise, alternatives are getting points for things that are actually negative to the pedestrian and biking negative quality.  <i>RESPONSE: Please see response to comment 4a.</i></p> <p>b. BEQI – It might be possible to combine facility type and width. There may also be a benefit to recognizing the type of buffer in that more physical and vertical elements provide greater levels of comfort.  <i>RESPONSE: The proposed BEQI index was largely framed around the FMPO Bicycle Comfort Index that separates the “bicycle lane presence” criterion and the “bicycle lane width” criterion, and the two criteria are typically separated in other evaluation indices found through our best practices research. The recommendation is to keep them separate unless there is a profound disposition to merge the criteria.</i></p> <p>i. Traffic volumes should be scaled to Milton (or 180) and factored to curb lane  <i>RESPONSE: This is an acceptable approach, though, initial Project Partner guidance indicated to NOT scale the volumes to the study corridor. Please note that if the group agrees to scale the traffic volumes criterion to the study corridor volumes, then ADOT also recommends all other criteria within the PEQI/BEQI need to be proportionately scaled to the study corridor as well.</i></p> <p>ii. Some of the criteria are interactive. For instance, once volume reaches a certain point, then under no conditions is anything less than a wide or even buffered bike lane acceptable.  <i>RESPONSE: The interactive evaluation of some criteria is possible as conducted through the industry-accepted “level of Stress” analysis, although, the intention of the Tier 3 Evaluation Criteria is to measure the range of alternatives as a result of the Tier 2 analysis - not a broad range of alternatives. However, this interactive evaluation of bicycle facility type in relationship to traffic volume and speed can be noted in the report(s).</i></p> <p>c. The PEQI/BEQI needs to include distance between enhanced crossings or the “NEW” distance of crossing can be changed as the number of through lanes addresses that  <i>RESPONSE: Distance between crossings - Since we don’t have differences between build alternatives in the number of crossings, we are not going to include this as it would provide an inequitable score against the NB and NB+ Alternatives Crossing width - The width of crossing is captured in the travel time criterion as the longer crossing times create longer travel times. Although, this should be discussed at the April 9<sup>th</sup> meeting. In addition, the definition of “enhanced” crossings needs to be clarified at the meeting.</i></p>



Project Partner	Date	Comment
		<p>i. Based on the RTP and other literature, scaling up at 330' increments up to 1650' seems to make sense.</p> <p>ii. Enhancements range from striping at low end to grade separation at the high end  <i>RESPONSE: This needs to be discussed as a group.</i></p> <p>iii. To reiterate support for including the 'distance between enhanced crossings' and 'distance of crossing' criterion in the PEQI/BEQI: these metrics can serve as a proxy for bike and pedestrian travel time or utility of the corridor. These are important metrics as they relate to expanding travel modes, because they speak to the convenience of the mode. For example, if a crosswalk is removed from one leg of an intersection, forcing pedestrians to cross three streets at three signal phases, instead of crossing one street at one signal phase, this greatly increases pedestrian travel time and reduces utility of the corridor. How is this change accounted for? I realize it may be difficult to quantify this, but if we consider automobile travel time, we should be attempting to estimate it for bikes/peds as well.  <i>RESPONSE: Noted – see above responses.</i></p> <p>1. The City's regional traffic model has included density of crossings in a given area, which could be helpful here.  <i>RESPONSE: Noted</i></p> <p>d. Transit Travel Time – NAIPTA will develop thresholds for travel time savings sufficient to save adding a bus to meet frequency goals and the cost associated with it versus saving time that ensures better on time performance  <i>RESPONSE: We agree that NAIPTA would assist in the development of these thresholds. Although, please note that these should have the same relative acceptance thresholds with the transit travel time and the vehicular travel time criteria. We can consider this, but we need to maintain consistency between the two.</i></p> <p>5. <b>Public Involvement</b> – represents notes from meetings with select City staff. May not reflect all partner participants from City and MPO.  <i>RESPONSE: Noted – we are looking for inclusive comments and need to vet these with all representation of the Project Partners.</i></p> <p>a. Ultimately, the City believes a locally adopted master plan for the Milton Corridor that includes the backage road system and adjoining land uses will be necessary.  <i>RESPONSE: As previously discussed and decided, this process will only evaluate the performance of backage roads through the quantitative output of the network delay criterion. ADOT will provide a list of backage roads recommended to include an additional receiving lane where dual left turn lanes are implemented at intersections along the Milton Road study</i></p>

Project Partner	Date	Comment
		<p>corridor. It was also previously discussed and agreed by the Project Partners that only funded CIP projects and the Lone Tree Road widening project (although not currently funded in a CIP) were added to the base model, and it's not feasible to analyze various scenarios of backage roads. ADOT has the intention of providing a formal recommendation in the final report that a supplemental/subsequent master plan/analysis of the backage roads following the Milton Road CMP process.</p> <ul style="list-style-type: none"> <li>i. The plan would address cross-section, backage roads, internal block circulation, basis for future regulation  <i>RESPONSE: Please see response to comment 5/5a.</i></li> <li>ii. The plan would be adopted by resolution, not ordinance.  <i>RESPONSE: This would be preferred, but needs discussion.</i></li> <li>iii. The plan will require at a minimum a hearing before the Council and the Planning &amp; Zoning Commission. Each of these bodies will benefit from at least one work session.  <i>RESPONSE: The plan will follow the process of the Project Partner-accepted Public Involvement Plan. ADOT recently provided a presentation update for all Project Partners to utilize in updating their respective agency staff, management, committees, and commissions. ADOT will provide an update to the City Council and County Board of Supervisors prior to the next public meetings. These materials could be shared.</i></li> <li>iv. Presentations before all City Commissions is advised.  <i>RESPONSE: The plan will follow the process of the Project Partner-accepted Public Involvement Plan.</i></li> <li>v. A public charrette process, similar in nature to that conducted by FMPO, is recommended.  <i>RESPONSE: The plan will follow the process of the Project Partner-accepted Public Involvement Plan.</i>        On-line survey support is recommended to expand participation.       <ul style="list-style-type: none"> <li>1. <b>NOTE: the City's on line forum is a subject of budget discussions. It may not be available past October when the subscription expires.</b>  <i>RESPONSE: The plan will follow the process of the Project Partner-accepted Public Involvement Plan.</i></li> </ul> </li> <li>b. The City MP process will gain credibility if alternatives are presented to the public for consideration without a recommendation entering the process.  <i>RESPONSE: Though this project will look to follow the NEPA process/methods for public outreach, please note that it is not required, nor has it been determined if we will have a formal recommended alternative. Our approach to the public meeting will be discussed by the Project Partners prior to the public meeting.</i> <ul style="list-style-type: none"> <li>i. Alternatives are more fairly presented or more easily produced if they include the alternative road cross-sections</li> </ul> </li> </ul>

Project Partner	Date	Comment
		<p><i>RESPONSE: We have included the cross sections of each Alternative at the first public meeting and intend to do so again at the next public meeting.</i></p> <p>If an ADOT recommended alternative exists prior to entering the City Master Plan process, the City could attempt to hold that plan (or cross-section) as a constant.</p> <p><i>RESPONSE: Noted</i></p> <ol style="list-style-type: none"> <li>1. The public involvement process advocated by ADOT for the Milton CMP at this time does not bode well for strong public consensus  <i>RESPONSE: The plan will follow the process of the Project Partner-accepted Public Involvement Plan.</i></li> <li>2. A city process introduces the risk of the public (or a broader cross-section of the public) rejecting or calling for major modification of the ADOT recommended alternative  <i>RESPONSE: The plan will follow the process of the Project Partner-accepted Public Involvement Plan.</i></li> </ol> <p>c. Just a note of caution against using phrasing like ‘majority of the public support’. This may be interpreted as a majority of the Flagstaff community in support of an option, when in reality this means a majority of the public meeting participants. Those two, unfortunately, are not the same thing (this is not unique to the ADOT process, rather something the City deals with as well). This metric doesn’t take into account different groups of stakeholders, which may have very distinct and/or opposing views, despite ‘majority support.’  <i>RESPONSE: With Project Partner input, we will revise the language to ensure that we don’t falsely convey that message.</i></p> <p>d. If the suggested City Master Plan process outlined above is not accepted, it is strongly recommended that ADOT adopt many of the process steps outlined, including City Commission involvement, Council working sessions, public charrette, etc.  <i>RESPONSE: The plan will follow the process of the Project Partner-accepted Public Involvement Plan.</i></p> <p><b>6. Cost</b></p> <ol style="list-style-type: none"> <li>a. Attractiveness for grants       <ol style="list-style-type: none"> <li>i. Suggest that the be scored 0-1-2: Not eligible, applicable, competitive</li> <li>ii. Other criteria might be applied           <ol style="list-style-type: none"> <li>1. HSIP: CMF scores and injuries and fatalities</li> <li>2. BUILD:               <ol style="list-style-type: none"> <li>a. State of Good Repair = neutral</li> <li>b. Safety = HSIP (CMF, etc.)</li> </ol> </li> </ol> </li> </ol> </li> </ol>



Project Partner	Date	Comment
		<p>c. Economic Competitiveness = travel time, size of investment</p> <p>d. Quality of Life = mode choice, great street</p> <p>e. Partners = maybe no differentiation. May speculate on District formation possibilities</p> <p>f. BCA = if FMPO tool works, use it</p> <p>3. ATCMTD (technology): Feel that it applies to all</p> <p>4. INFRA = don't believe it applies, tends to be highway freight focused</p> <p>5. FLAP = US 180 only. Could be differences between alternatives</p> <p>6. CIG = Transit. Should be differences between alternatives</p> <p>iii. The magnitude of the eligible grant award amounts should apply somehow. May need to be conservative as some grants don't have a cap. Also need to recognize partners' ability to match.</p> <p><i>RESPONSE: We feel that system operations and performance, not the potential for funding eligibility, should drive the evaluation and recommendations for a preferred alternative. While funding potential is certainly important, our recommendation is to address potential funding sources based on the final preferred alternative in the final report with a high-level review of potential grant funding applicability/eligibility.</i></p> <p><b>7. Environmental Impact</b></p> <p>a. Neighborhood Impacts: Likely La Plaza Vieja as only Title VI community. Could evaluate traffic volumes on Clay and Blackbird Roost. Could also look at volumes along Route 66 and Milton as proxies for noise. Finally, robust study out of Denver demonstrated that traffic volumes are more readily tolerated if the urban design quality of the adjoining arterial is high, so maybe an offset using community character?</p> <p><i>RESPONSE: Noted – refer to the response to 7b.</i></p> <p>i. Can traffic volume be used as a measurement for environmental impact? Due to impacts on walkability and quality of life? Seems like an easy metric to get and utilize here.</p> <p><b>b. Air quality: Add VMT to Network Delay</b></p> <p><i>RESPONSE: The addition of measuring VMT to measure air quality can be added, although, we will seek assistance from FMPO to take the lead role in conducting the neighborhood and Title VI analysis. Please refer to the notes in the Evaluation criteria document and we can discuss this more as a group during the April 9<sup>th</sup> meeting.</i></p> <p>i. Just to reiterate this important – delay is not the only contributor to air quality issues; traffic volumes should be included here.</p>

Project Partner	Date	Comment
		<p><i><b>RESPONSE:</b> Further discussion is needed to determine if this can be objectively and feasibly applied to the evaluation criteria or if it will be a discussion point in the final report.</i></p> <p>c. Stormwater impacts are not subjective. We can make simple assumptions from the overall amount of additional impervious surfaces, increased landscaped buffers, and the resulting stormwater impacts. Even if modeled data isn't available or practical, couldn't a simple binary code suffice to indicate improvement or a ranking of the amount of stormwater features added?  <i><b>RESPONSE:</b> Stormwater impacts are peripheral to the goals and objectives of this project and would require assumptions that would lessen the inherent value of such an analysis. We do not recommend this be included in the Tier 3 analysis.</i></p> <p>d. Recommend including a criterion for greenhouse gas emissions, which can be estimated using VMT, as a key environmental impact. This is a critical goal of the City of Flagstaff, and one of City Council's top priorities. Jenny Niemann in COF Sustainability is happy to assist.  <i><b>RESPONSE:</b> Noted - Air quality is already addressed in a previous criterion/response to 7b.</i></p> <p><b>8. Community Character</b></p> <p>a. Wide sidewalk should start at 8' minimum as 6' is the standard.  <i><b>RESPONSE:</b> The various sidewalk widths were vetted and agreed upon with the Project Partners during the Controlling Design Criteria exercise. Moreover, the evaluation of sidewalk width is captured in the PEQI criteria.</i></p> <p>b. Accommodation of street trees in the right-of-way is preferred. It appears that two alternatives will do this (6b and 13).  <i><b>RESPONSE:</b> Please note that the ADOT Roadside Design Guidelines suggest there are no species of trees that can feasibly be within ADOT ROW since all mature trees eventually grow to be wider than 4" in trunk diameter. An additional concern with trees within the parkway are their lack of resiliency to salt – as a result, all trees shall be on the back side of the sidewalk outside of ADOT ROW and cannot be planted within the clear zone.</i></p> <p>c. Accommodation of street furniture and vertical elements like breakaway banner poles between the curb and sidewalk should get some credit.  <i><b>RESPONSE:</b> This level of detail will not be measured in the Tier 3 alternative evaluation.</i></p> <p>d. Buffer area between sidewalk and curb should be credited here and in mode choice category as it serves two purposes.  <i><b>RESPONSE:</b> the evaluation of sidewalk width is captured in the PEQI criteria</i></p> <p>e. It is noted that the City can achieve some or even most landscaping goals through regulatory means outside the right-of-way. However, those landscaping elements do not serve as a separation from vehicular traffic.</p>

Project Partner	Date	Comment
		<p><i>RESPONSE: This will be a discussion during the final design and elements outside of the proposed ROW will not impact the evaluation of alternative within this CMP process. Also note that all additional landscaping will be the City's/FMPO's responsibility if requested above and beyond ADOT standard details and specifications.</i></p> <p>f. The score for this category needs to be offset by the prevalence of right-turn lanes for each alternative. Alternatives 6a and 6b, for example, will preserve the buffer for almost its entire length. All others will be subject to some percentage of right turn lanes. I missed that part of the conversation where apparently the existence of additional general-purpose lanes should reduce the demand or need for right turn lanes. I appreciate that and caution that volumes will go up with the additional lanes.</p>
Nate Reisner	3/10	<ol style="list-style-type: none"> <li> <p><b>Traffic Operations:</b> NCD believes we should Add criteria for rating both travel time for GP+Bus. Goal is to have both modes moving efficiently through the corridor. Ratio between the two.</p> <p><i>RESPONSE: The idea is to measure and see if all modes are moving though the corridor and not just improve the corridor, and we think this element could be documented within the Report(s) instead of adding a new criterion since this is essentially captured already in the two existing criteria. Our desire is to keep the two modes reported separately.</i></p> </li> <li> <p><b>Traffic Operations - LOS Criteria Note:</b> Transit Capacity should be placed in Expand Mode Choice category, not the Traffic Operations category. Total LOS of everyone on the highway should be measured in the Traffic Operations section.</p> <p><i>RESPONSE: Before any decision is made, we need to better understand how transit capacity is measured - NAIPTA/AECOM to provide measurable thresholds.</i></p> </li> <li> <p><b>Traffic Operations:</b> Recommend changing this to highway operations.</p> <p><i>RESPONSE: We feel the intent is the same, perhaps just semantics in terminology. Consider the term, "Transportation System Operations" as alternate language.</i></p> </li> <li> <p><b>Traffic Operations:</b> NCD &amp; NRT agree that the Network Delays should be in the final report, but explain the difference/benefit of measuring Network Delay verses Travel Time.</p> <p><i>RESPONSE: Per previous response, Jessica to provide additional explanation on network delay at our upcoming April 9<sup>th</sup> meeting.</i></p> </li> <li> <p><b>Safety:</b> First 3 criteria - NCD/NRT feel that there are CMF CRF factors available to measure/compare the benefits of the addition of bicycle lanes. Keep Reduced Bicycle Crashes as a Criteria. Can use other professionally acknowledged crash mitigations, that are backed by pier review studies as well. NCD believes we should keep reduced crashes as well.</p> </li> </ol>



Project Partner	Date	Comment
		<p><i><b>RESPONSE:</b> Agreed – this will be discussed further at the April 9<sup>th</sup> meeting. Additionally, it is felt that any other metrics outside of CMF’s are subjective and not universally recognized/accepted. Michael Baker to provide additional insight on the use of CMFs from the Highway Safety Manual for future Project Partner reference.</i></p> <p>6. <b>Safety - Reduction in Conflict Points:</b> NCD/NRT would like more information on how this criteria could be a beneficial tool to compare alternatives.  <i><b>RESPONSE:</b> ADOT TSS has been utilizing conflict points and is their preference in this case. There needs to be consensus on what defines a conflict point and ADOT TSS will provide this guidance, then Michael Baker will develop an approach to vet with the Project Partners.</i></p> <p>7. <b>Expand Travel Modes:</b> This is the section where transit capacity, identified in the traffic operations, should be addressed.  <i><b>RESPONSE:</b> Will seek input from NAIPTA regarding how transit capacity could be evaluated and discuss with Partners.</i></p> <p>8. <b>Expand Travel Modes - Transit Ridership Criteria:</b> I don't think we can use the potential ridership based on the buss being full. If you ride the bus during peak hours of when our traffic is counted, then you will see 80%-90% of the bus capacity is still available. Does NAIPTA have a count of passengers broken down by the hour per route and how that has grown in the past 5 years? If so then I think we can use something like this.  <i><b>RESPONSE:</b> NAIPTA provided ADOT with ridership projections for each alternative. NAIPTA could explain how the data was derived as needed.</i></p> <p>9. <b>Public Acceptance:</b> NCD/NTR - Public support data from previous public outreach should not be included in tier 3. Need to provide public exhibits depicting right of way impact including spot improvements and intersection improvements, traffic data and estimated costs.  <i><b>RESPONSE:</b> Agreed. If “Public Acceptance” is kept as a Tier 3 criterion, it would serve as a placeholder until after the final public meetings. ADOT’s preference is to remove the “Public Acceptance” criterion from the Tier 3 Evaluation Criteria (for Partner discussion). MBI will produce Public Involvement Summary Reports following the next round of public meetings for Project Partner review and assisting with selecting the Recommended Alternative.</i></p> <p>10. <b>Cost/Implementation:</b> NCD/NRT suggest that the intersection and/or spot improvements be detailed for a better construction cost estimate.  <i><b>RESPONSE:</b> Agreed – Tier 3 construction cost estimates will be more detailed capturing spot improvements and intersections.</i></p>

Project Partner	Date	Comment
		<p>11. <b>Cost/Implementation:</b> NCD feels that the maintenance cost criteria is not significant for these alternatives.  <i>RESPONSE: Agreed – ADOT’s preference is to remove the criterion as variances between alternatives are anticipated to be negligible at this stage.</i></p> <p>12. <b>Cost/Implementation – Implementation Opportunities:</b> NCD believes this should be addressed in the report but not a tier 3 rating criteria. We should not be making recommendations on what to implement based on current identified funding sources. The recommendations should be based on the best operations of the roadway.  <i>RESPONSE: Agreed - The cost criterion needs to be feasible and reasonable to evaluate, and the provided “funding eligibility” criterion is not reasonable or feasible. Our recommendation is to address potential funding sources based on the final preferred alternative in the final report with a broad-brush analysis approach. In addition, this CMP process should not mold the project on funding eligibility, instead, the we prefer the process to mold the project on performance measures.</i></p> <p>13. <b>Cost/Implementation - Cost / Benefit Analysis:</b> NCD - The tool Dave provided is based on crashes. I am not sure we would get a benefit based on goals of criteria of the study without making our own.  <i>RESPONSE: Agreed – we will not use the FMPO C/B tool and we can either discuss another option or remove this criterion from the Tier 3 Evaluation Criteria.</i></p> <p>14. COF does not have a definition or design standard for "great street". Until they have one that is acceptable to implement on an ADOT highway then we can not include in the study. We could rate based on possibility to implement great street features. Most items City planners are wanting to discuss right now are size of trees, types of trees, specific roadside furniture. Those are final design features not planning level features.  <i>RESPONSE: Agreed - The definition of “Great Streets” is subjective and our recommendation is to find a way to measure this in relationship to a design standard, and if this is not possible, this criterion should be removed. If a solution cannot be agreed upon, this could be incorporated into the public involvement process.</i></p>
Bizzy Collins	3/10	<p>First, we’d like to express full support of MetroPlan and the City’s Milton/US 180 CMP Spot Improvement and Evaluation Criteria Review document. Specifically, the recommendations for bike, pedestrian, public involvement, and community character encapsulate important project goals and we hope they can be discussed with the larger group.  <i>RESPONSE: Part One - It is recommended that one frequency scenario be selected and utilized consistently across all alternatives. The output results will be captured in the Transit Travel Time criterion. Will defer to NAIPTA recommending a frequency to model and Project Partner concurrence. Part Two &amp; Three – All modes (including bike, ped, and transit) are currently included in the draft Tier 3 Evaluation Criteria. Any proposed changes could be discussed during the April 9<sup>th</sup> meeting. The weighting of the Tier 3 Evaluation Criteria will be determined collectively by the Project Partners once consensus is reached on the criteria.</i></p>

Project Partner	Date	Comment																																						
		<p>Second, for the transit travel time criterion, we'd like to propose a two-part assessment that gets combined into one score:</p> <p><b>Part One</b>                      I included an example below. Travel times are showing the entire BRT corridor, not just Milton. The scoring of part one would be significant points for alternative 13 because we could actually see the reduction of one entire bus to achieve higher frequencies (comparison in red text). Once we see how travel times compare between alternatives, we could identify what range of points make sense.</p> <table border="1" data-bbox="373 560 1801 982"> <thead> <tr> <th>Alternative</th> <th>NB</th> <th>SB</th> <th>Frequency</th> <th># buses</th> </tr> </thead> <tbody> <tr> <td>No Build</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>No Build + Spot Improvements</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Alt 5 GP</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td rowspan="3">Alt 6A side running +2 GP And Alt 6B side running +3 GP</td> <td rowspan="3">20:18</td> <td rowspan="3">17:36</td> <td>15</td> <td>3</td> </tr> <tr> <td>10</td> <td>5</td> </tr> <tr> <td>8</td> <td>6</td> </tr> <tr> <td rowspan="3">Alt 13</td> <td rowspan="3">17:39</td> <td rowspan="3">18:27</td> <td>15</td> <td>3</td> </tr> <tr> <td>10</td> <td>4</td> </tr> <tr> <td>8</td> <td>5</td> </tr> </tbody> </table> <p><b>Part Two</b>                      Score alternatives based on car travel times compared to bus moving time (bus travel time x 54%). This could introduce an aspect of equity into the evaluation, as transportation disadvantaged populations rely heavily on public transit for their transportation needs.</p>	Alternative	NB	SB	Frequency	# buses	No Build					No Build + Spot Improvements					Alt 5 GP					Alt 6A side running +2 GP And Alt 6B side running +3 GP	20:18	17:36	15	3	10	5	8	6	Alt 13	17:39	18:27	15	3	10	4	8	5
Alternative	NB	SB	Frequency	# buses																																				
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			10	5																																				
			8	6																																				
Alt 13	17:39	18:27	15	3																																				
			10	4																																				
			8	5																																				



Project Partner	Date	Comment										
		<p style="text-align: center;"><b>Bus Run Time Components</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Bus Run Time Components Data</caption> <thead> <tr> <th>Component</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>In Motion</td> <td>54%</td> </tr> <tr> <td>Passenger Delays</td> <td>22%</td> </tr> <tr> <td>Traffic Delays</td> <td>21%</td> </tr> <tr> <td>Other Delays</td> <td>3%</td> </tr> </tbody> </table> <p>Third, while we touch on it in Part Two of transit travel time criterion, we would like to see equity integrated into the evaluation criteria. We've done some digging and have not found a good criterion that applies to the CMP, but would like to integrate it into the other evaluation criteria as appropriate. I was unable to verify the statistic, but something like 30% of Flagstaff's population does not drive. Our projects should reflect the diverse transportation needs of the communities we serve.</p>	Component	Percentage	In Motion	54%	Passenger Delays	22%	Traffic Delays	21%	Other Delays	3%
Component	Percentage											
In Motion	54%											
Passenger Delays	22%											
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# Appendix H – Tier 3 Evaluation Criteria Project Partner Weighting Survey

**Project Partner Evaluation Criteria Weighting Survey**

**Introduction:**

The purpose of the Tier 3 Alternative Evaluation Criteria analysis is to expand upon efforts conducted in the Tier 2 Alternative Evaluation Criteria & Analysis Phase to further analyze the remaining Milton Road CMP Alternatives through a refined series of evaluation criteria and methodologies.

The objective of this Tier 3 Alternative Evaluation Criteria Weighting Survey is to develop and assign Project Partner weighting to each of the tier 3 evaluation criterion in a comprehensive and equitable fashion by integrating a consensus-based pairwise comparison exercise for all of the Tier 3 Evaluation Criterion.

The survey is conducted through an excel-based tool. This page provides a brief explanation while the following tab - "Instructions" - includes detailed step-by-step instructions to complete this survey.

**Objective:**

The objective of this survey is to develop weights for both the Tier 3 Evaluation Criteria Categories and Measures. Refer to the "T3 Evaluation Criteria" Tab for the complete list of Tier 3 Evaluation Criteria.

The first portion of the survey is to develop weights through a pairwise comparison exercise for the seven Tier 3 Evaluation Criteria Categories:

- Traffic Operations
- Safety
- Expand Travel Mode Choices
- Public Acceptance
- Cost / Implementation
- Environmental Impacts
- Community Character

This portion of the survey is conducted on the green tab labeled - "T3 EC Category Survey"

The second portion of the survey is to develop weights for the criteria for each of the T3 Evaluation Criteria Categories. However, the weighting survey is only necessary for the categories with more than one criterion. Those categories include:

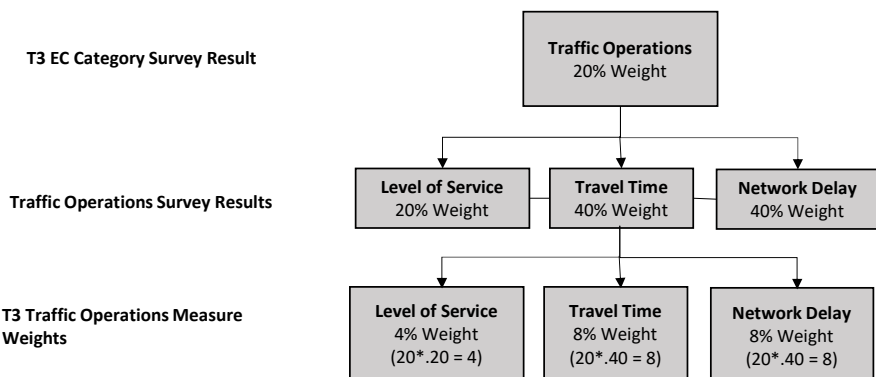
- Traffic Operations
- Expand Travel Mode Choices
- Cost / Implementation
- Environmental Impacts

This portion of the survey is conducted in each of the corresponding blue tabs labeled- "Traffic Ops Criteria Survey", "Mode Choices Criteria Survey", "Implementation Criteria Survey", and "Environmental Criteria Survey".

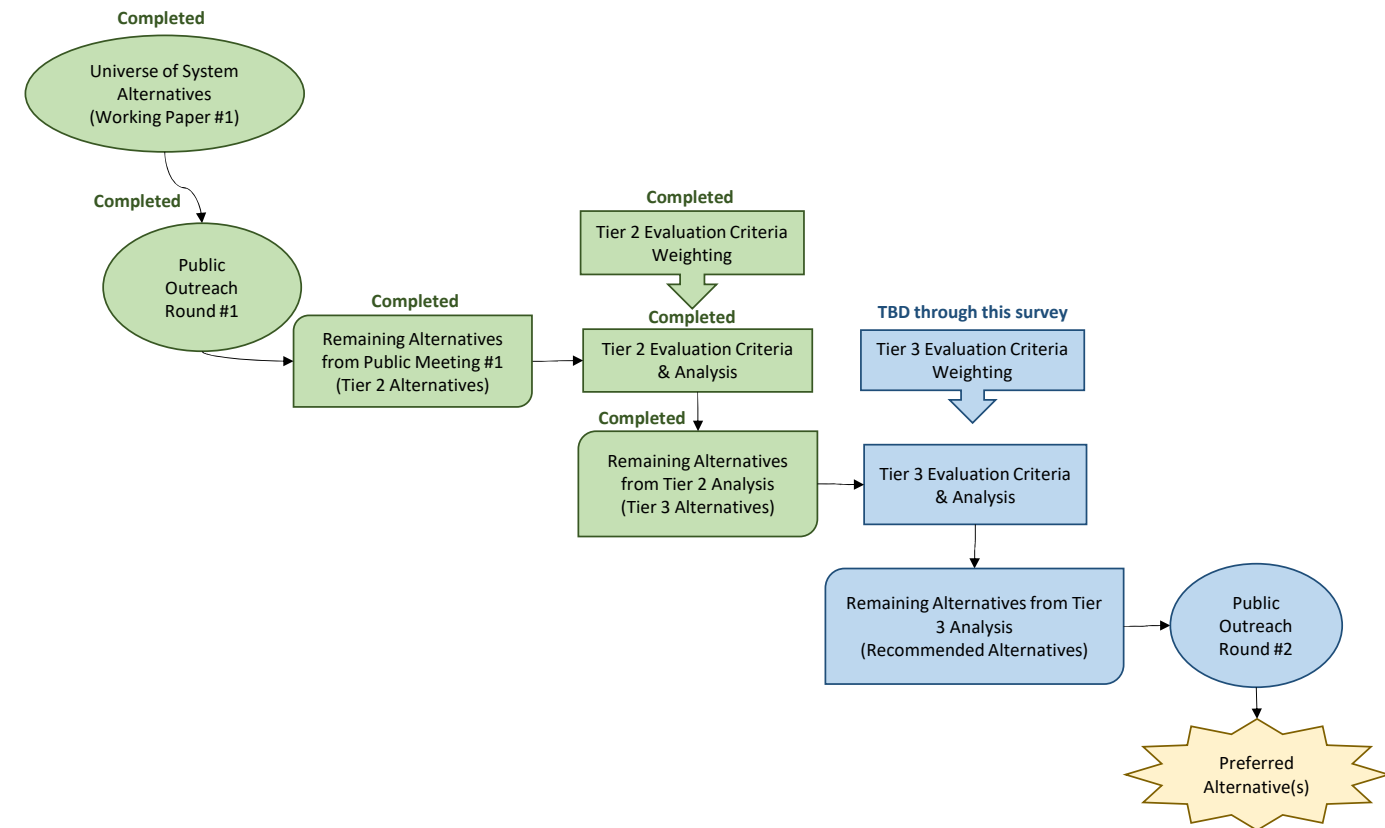
**Implementation:**

Each agency represented by the Project Partners will be permitted of two responses each. Once all responses have been received, the Project Team will compile the pairwise comparison results from each tab and calculate a geometric mean among all responses provided by the Project Partners. This calculation will arrive at an equitable and a quantitatively constructed, Project Partner-defined weights for both the Tier 3 Evaluation Criteria Categories and the Tier 3 Evaluation Criteria Measures.

Here is an example of how the relationship between the weights for the Tier 3 Evaluation Criteria Category and the Tier 3 Evaluation Criteria Measures. The weights are derived as a percentage that sum up to 100%. For example, if the Traffic Operations category receives a weight of 20% among the six other categories. The survey results for weight of the criteria within the Traffic Operations Category will make up a portion of the 20%. See the example below for illustration.



**Questions:**





For questions or assistance with populating the survey please contact:

**Dan Gabiou**  
602-712-7025  
dgabiou@azdot.gov

or

**Brian Snider**  
847-650-7214  
brian.snider@mbakerintl.com

#### Credits:

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Author: Klaus D. Goepel, BPMSG

<https://bpmsg.com/contact-form/>

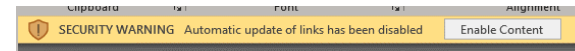
## Instructions for using this Survey

### Quick Start:

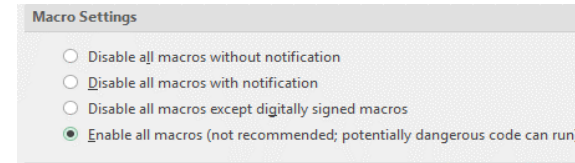
#### Setup

To ensure full workbook capabilities of the survey, contents of the workbook and macros must be enabled

**Enable Contents:** The use of this survey causes the 'Enable Contents' button to display when opening this workbook. Click the button to allow functions within the survey to work.

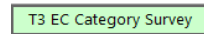


**Enable Macros:** The survey relies on macros to auto populate calculations, be sure to enable macros (File --> Options --> Trust Center --> Trust Center Settings --> Macro Settings --> Enable macros)



### Tier 3 Evaluation Criteria Category Survey:

Click on the green tab below - "T3 EC Category Survey"

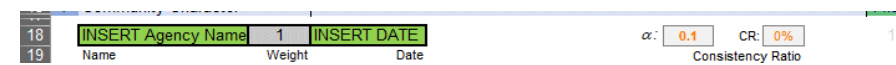


#### Setup

To ensure the survey works correctly, please only populate information and edit the worksheet using the light green cells

##### Step 1:

To ensure the Project Team can determine which agency the respondent is from, please populate the name of your Agency and the Date in which you completed the survey - Row 18



### Conducting the Pairwise Comparison For the Tier 3 Evaluation Criteria Categories

To ensure the survey works correctly, please only populate information and edit the worksheet using the light green cells

##### Step 1:

Before conducting the pairwise comparison survey, please take note of the table in Rows 6 - 13.



n	T3 Evaluation Criteria Categories	RGM	%
1	Traffic Operations	14.3%	
2	Safety	14.3%	
3	Expand Travel Mode Choices	14.3%	
4	Public Acceptance	14.3%	
5	Cost / Implementaion	14.3%	
6	Environmental Impacts	14.3%	
7	Community Character	14.3%	

In this table, you will see the seven Tier 3 Evaluation Categories identified in the "T3 Evaluation Criteria Tab" Before populating the survey, the table will include an equally distributed weight among the seven categories - 14.3%. The 14.3% weight is the calculated weight for the seven categories equally:  $100\% / 7 = 14.3\%$

We will refer to this value as the "Value of Equilibrium"

As you continue populating the pairwise comparison survey (instructions below), this table will automatically adjust the weights in real-time for each category based on your responses. You can use this table as a guide while you populate the preference survey.

##### Step 2:

In Rows 20 - 48, you will see a four-column table that lists all seven on the Tier 3 Evaluation Criteria Categories. The table is constructed to allow you to compare each Tier 3 Evaluation Criteria Category against each other on a numerical scale of importance, or preference. This is where you will be conducting the pairwise comparison survey for each of the T3 Evaluation Criteria Categories.

In this table, you will use the two columns most further to the right, highlighted in light green, to populate your preferences to determine which categories are more important to you. You need to look at the T3 Evaluation Category in Column A and B and determine which one of each pair is more important, A or B, and how much more on a scale 1-9 as given below.

Use a drop down menu in the "A or B" column to determine if the category in A or B column is more important category to you



i	j	A	B	more important?	Scale A or B (1-9)
1	2	Traffic Operations	Safety	B	2
1	3	Traffic Operations	Expand Travel Mode Choices	A	1
1	4	Traffic Operations	Public Acceptance	B	8
1	5	Traffic Operations	Cost / Implementaion	A	5
1	6	Traffic Operations	Environmental Impacts	A	6
1	7	Traffic Operations	Community Character	A	8

i	j	A	B	more important?	Scale A or B (1-9)
1	2	Traffic Operations	Safety		
1	3	Traffic Operations	Expand Travel Mode Choices		
1	4	Traffic Operations	Public Acceptance		
1	5	Traffic Operations	Cost / Implementaion		
1	6	Traffic Operations	Environmental Impacts		
1	7	Traffic Operations	Community Character		
2	3	Safety	Expand Travel Mode Choices		
2	4	Safety	Public Acceptance		
2	5	Safety	Cost / Implementaion		
2	6	Safety	Environmental Impacts		
2	7	Safety	Community Character		
3	4	Expand Travel Mode Choices	Public Acceptance		
3	5	Expand Travel Mode Choices	Cost / Implementaion		
3	6	Expand Travel Mode Choices	Environmental Impacts		
3	7	Expand Travel Mode Choices	Community Character		
4	5	Public Acceptance	Cost / Implementaion		
4	6	Public Acceptance	Environmental Impacts		
4	7	Public Acceptance	Community Character		
4	8	Cost / Implementaion	Environmental Impacts		

Then, in the next column, reading "Scale", type a number 1 - 9 in that cell that determines the level of importance between the two categories using the scale listed below:

44	5 7	Cost / Implementation	Environmental Impacts		
45	5 8		Community Character		
47	6 7	Environmental Impacts	Community Character		
48	6 8				

		T3 Evaluation Criteria Categories		more important?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety	B	3
1	3		Expand Travel Mode Choices	A	4
1	4		Public Acceptance	A	3
1	5		Cost / Implementation	A	5
1	6		Environmental Impacts	A	6
1	7		Community Character	A	8
1	8				

In this example, the respondent believes that the Safety Category is **Moderately More Important** than the Traffic Operations Category, or on other words, the Traffic Operations Category and the Safety Category have a pairwise preference that, **experiences and judgement lightly favor one element over another**, favoring the Safety Category.

This determination is based on the Pairwise Comparison Preference Numerical scale listed below:

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values

Use the Pairwise Comparison Preference Numerical Scale (1 - 9) to help determine the order of magnitude when deciding the level of importance of other Tier 3 Evaluation Criteria Categories compared to Traffic Operations

		T3 Evaluation Criteria Categories		more important?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety	B	3
1	3		Expand Travel Mode Choices	A	4
1	4		Public Acceptance	A	3
1	5		Cost / Implementation	A	5
1	6		Environmental Impacts	A	6
1	7		Community Character	A	8
1	8				

You will note that the summary table in Rows 6 - 13 mentioned earlier will have adjusted to reflect your responses.

**Step 3:**

Using the process described in Step 2, continue populating the pairwise comparison survey by determining which Tier 3 Evaluation Criteria Category is more important than the other.


		T3 Evaluation Criteria Categories		more important?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety	B	3
1	3		Expand Travel Mode Choices	A	4
1	4		Public Acceptance	A	3
1	5		Cost / Implementation	A	5
1	6		Environmental Impacts	A	6
1	7		Community Character	A	8
1	8				
2	3	Safety	Expand Travel Mode Choices	A	2
2	4		Public Acceptance	A	3
2	5		Cost / Implementation	A	5
2	6		Environmental Impacts	A	6
2	7		Community Character	A	8
2	8				
3	4	Expand Travel Mode Choices	Public Acceptance	A	2
3	5		Cost / Implementation	A	4
3	6		Environmental Impacts	A	5
3	7		Community Character	A	8
3	8				
4	5	Public Acceptance	Cost / Implementation	A	2
4	6		Environmental Impacts	A	4
4	7		Community Character	A	8
4	8				
5	6	Cost / Implementation	Environmental Impacts	B	2
5	7		Community Character	A	5
5	8				
6	7	Environmental Impacts	Community Character	A	5
6	8				
7	8				



**Step 4:**

Once completed, you may, at your discretion, adjust highlighted comparisons 1 to 3 to improve consistency.

This is an indication of inconsistent inputs. The most inconsistent judgment is marked with "1". The text field after the marking shows the ideal, most consistent judgment (A4, A9 and A3 in the example above). Participants might slightly modify the highlighted judgments in direction of the ideal judgment, in order to improve consistency.




A	9	1	A4
A	8		
A	7	2	A9
A	6	2	A3
A	5		

After reviewing all answers, ideally no line will be highlighted and consistency is within the given threshold to make the result reliable. In addition to the consistency ratio, errors for each weights are indicated. It can happen that even with a consistency ratio below 10%, errors are significant, and some weights are overlapping within the error range

$\alpha$ : 0.1 CR 32%  
Consistency Ratio

**Step 5:**

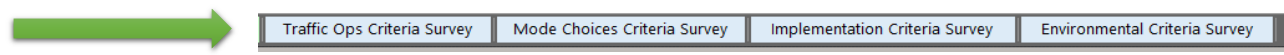
The final step is to check your results once you've completed populated the pairwise comparison survey and adjusted your inputs to fix any potential inconsistencies (as mentioned in Step 4). Review the table in Rows 6 - 13 mentioned earlier to confirm that the final results of the weight of each Tier 3 Evaluation Criteria Category reflects your intuition.



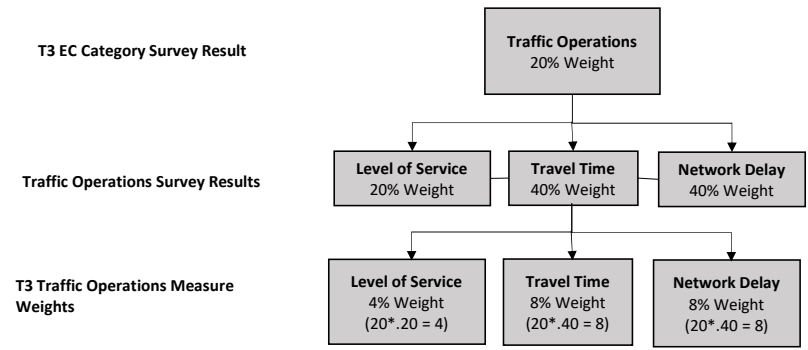
n	T3 Evaluation Criteria Categories	RGMM	+/-
1	Traffic Operations	30.0%	15.7%
2	Safety	29.8%	11.6%
3	Expand Travel Mode Choices	16.4%	7.8%
4	Public Acceptance	11.1%	3.5%
5	Cost / Implementaion	5.3%	2.1%
6	Environmental Impacts	5.6%	2.6%
7	Community Character	1.9%	1.0%

**Tier 3 Evaluation Criteria Category Survey:**

Repeat Steps 1 - 5 for each of the Tier 3 Evaluation Crtieta Category criteriom/measure in the blue Tabs.



As described in the *Overview Tab*, here is an example of how the relationship between the weights for the Tier 3 Evaluation Criteria Category and the Tier 3 Evaluation Criteria Measures. The weights are derived as a percentage that sum up to 100%. For example, if the Traffic Operations category receives a weight of 20% among the six other categories. The survey results for weight of the criteria within the Traffic Operations Category will make up a portion of the 20%. See the example below for illustration.



## US 180 Corridor Master Plan

n= 7

Objective: The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for Milton Road that addresses current safety and traffic congestion issues by evaluating a mixture of previously recommended and newly introduced System Alternatives.

### Only input data in the light green fields!

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A or B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	T3 Evaluation Criteria Categories	RGMM	+/-
1	Traffic Operations	14.3%	
2	Safety	14.3%	
3	Expand Travel Mode Choices	14.3%	
4	Public Acceptance	14.3%	
5	Cost / Implementaion	14.3%	
6	Environmental Impacts	14.3%	
7	Community Character	14.3%	

INSERT Agency Name  INSERT DATE

$\alpha$ :  CR:

Name Weight Date Consistency Ratio

		T3 Evaluation Criteria Categories		more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety		
1	3		Expand Travel Mode Choices		
1	4		Public Acceptance		
1	5		Cost / Implementaion		
1	6		Environmental Impacts		
1	7		Community Character		
1	8				
2	3	Safety	Expand Travel Mode Choices		
2	4		Public Acceptance		
2	5		Cost / Implementaion		
2	6		Environmental Impacts		
2	7		Community Character		
2	8				
3	4	Expand Travel Mode Choices	Public Acceptance		
3	5		Cost / Implementaion		
3	6		Environmental Impacts		
3	7		Community Character		
3	8				
4	5	Public Acceptance	Cost / Implementaion		
4	6		Environmental Impacts		
4	7		Community Character		
4	8				
5	6	Cost / Implementaion	Environmental Impacts		
5	7		Community Character		
5	8				
6	7	Environmental Impacts	Community Character		
6	8				
7	8				

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, it dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values

## US 180 Corridor Master Plan

n= 3

Objective: The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for Milton Road that addresses current safety and traffic congestion issues by evaluating a mixture of previously recommended and newly introduced System Alternatives.

### Only input data in the light green fields!

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A or B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	Traffic Operations Criteria	RGMM	+/-
1	Level of Service (V/C)	33.3%	
2	Travel Time	33.3%	
3	Network Delay	33.3%	

$\alpha$ :  CR:

		Criteria		more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Level of Service (V/C)	Travel Time		
1	3		Network Delay		
1	4				
1	5				
1	6				
1	7				
1	8				
2	3		Travel Time	Network Delay	
2	4				
2	5				
2	6				

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values



## US 180 Corridor Master Plan

n= 4

Objective: The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for Milton Road that addresses current safety and traffic congestion issues by evaluating a mixture of previously recommended and newly introduced System Alternatives.

### Only input data in the light green fields!

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A or B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	Expand Tavel Mode Choices	Comment	RGMM	+/-
1	Bicycle Comfort Index		25.0%	
2	Pedestrian Comfort Index		25.0%	
3	Transit Travel Time		25.0%	
4	Transit Ridership		25.0%	

$\alpha$ :  CR:

1

Name Weight Date Consistency Ratio

		Criteria		more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Bicycle Comfort Index	Pedestrian Comfort Index		
1	3		Transit Travel Time		
1	4		Transit Ridership		
1	5				
1	6				
1	7				
1	8				
2	3	Pedestrian Comfort Index	Transit Travel Time		
2	4		Transit Ridership		
2	5				
2	6				
2	7				
2	8				
3	4	Transit Travel Time	Transit Ridership		
3	5				
3	6				
3	7				
3	8				

A  
B

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values



## US 180 Corridor Master Plan

n= 4

Objective: The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for Milton Road that addresses current safety and traffic congestion issues by evaluating a mixture of previously recommended and newly introduced System Alternatives.

### Only input data in the light green fields!

Please compare the importance of the elements in relation to the objective and fill in the table: Which element of each pair is more important, **A or B**, and **how much** more on a scale 1-9 as given below.

Once completed, you might adjust highlighted comparisons 1 to 3 to improve consistency.

n	Environmental Impacts	Comment	RGMM	+/-
1	Neighborhood Impacts		25.0%	
2	Title VI Impacts		25.0%	
3	Air Quality		25.0%	
4	Wildlife Mitigation		25.0%	

ADOT - 1	1	
Name	Weight	Date

$\alpha$ : 0.1 CR: 0%

1

		Criteria		more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Neighborhood Impacts	Title VI Impacts		
1	3		Air Quality		
1	4		Wildlife Mitigation		
1	5				
1	6				
1	7				
1	8				
2	3		Title VI Impacts	Air Quality	
2	4	Wildlife Mitigation			
2	5				
2	6				
2	7				
3	4	Air Quality	Wildlife Mitigation		
3	5				
3	6				
3	7				
3	8				

A  
B

Intensity	Definition	Explanation
1	Equal importance	Two elements contribute equally to the objective
3	Moderate importance	Experience and judgment slightly favor one element over another
5	Strong Importance	Experience and judgment strongly favor one element over another
7	Very strong importance	One element is favored very strongly over another, its dominance is demonstrated in practice
9	Extreme importance	The evidence favoring one element over another is of the highest possible order of affirmation

2,4,6,8 can be used to express intermediate values



# Appendix I – Tier 3 Evaluation Criteria Public Weighting Survey





# Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

August 24, 2020, 3:34 PM

## Contents

i.	Summary of registered responses	2
ii.	Survey questions	10
iii.	Individual registered responses	12

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

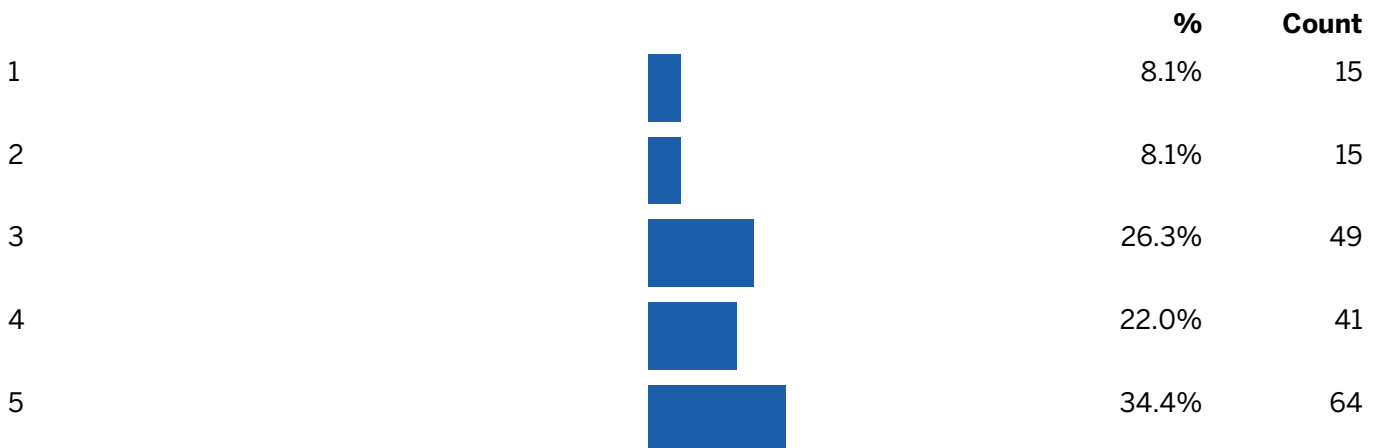
# Summary Of Registered Responses

**As of August 24, 2020, 3:34 PM, this forum had:**    **Topic Start**  
Attendees: 812    August 6, 2020, 7:49 PM  
Registered Responses: 187  
Hours of Public Comment: 9.4

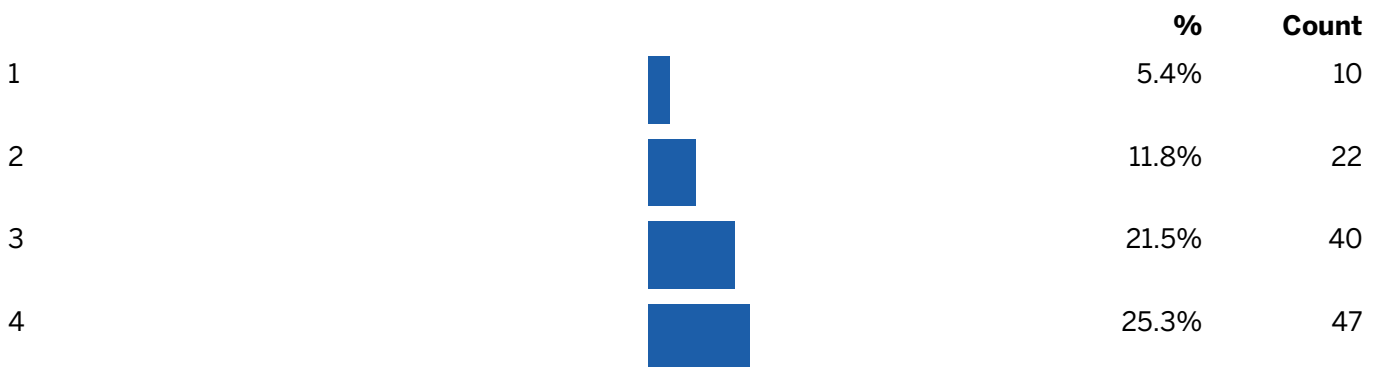
### QUESTION 1

**How important are these qualities for the future Milton Road (1=less important, 5=very important)?**

#### Improve Vehicular Safety



#### Enhance Community Character





## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey






What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

		%	Count
5		32.8%	61

### Improve Traffic Movement

		%	Count
1		7.0%	13
2		5.9%	11
3		11.8%	22
4		14.5%	27
5		59.7%	111

### Expand Travel Choices

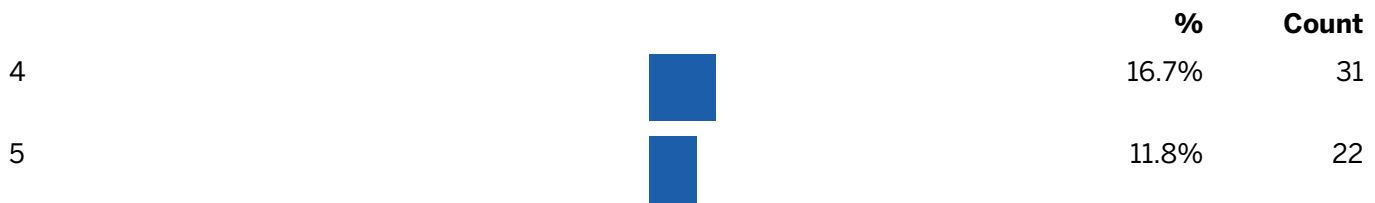
		%	Count
1		2.7%	5
2		6.5%	12
3		18.3%	34
4		18.3%	34
5		52.7%	98

### Limit Property Impacts & Project Costs

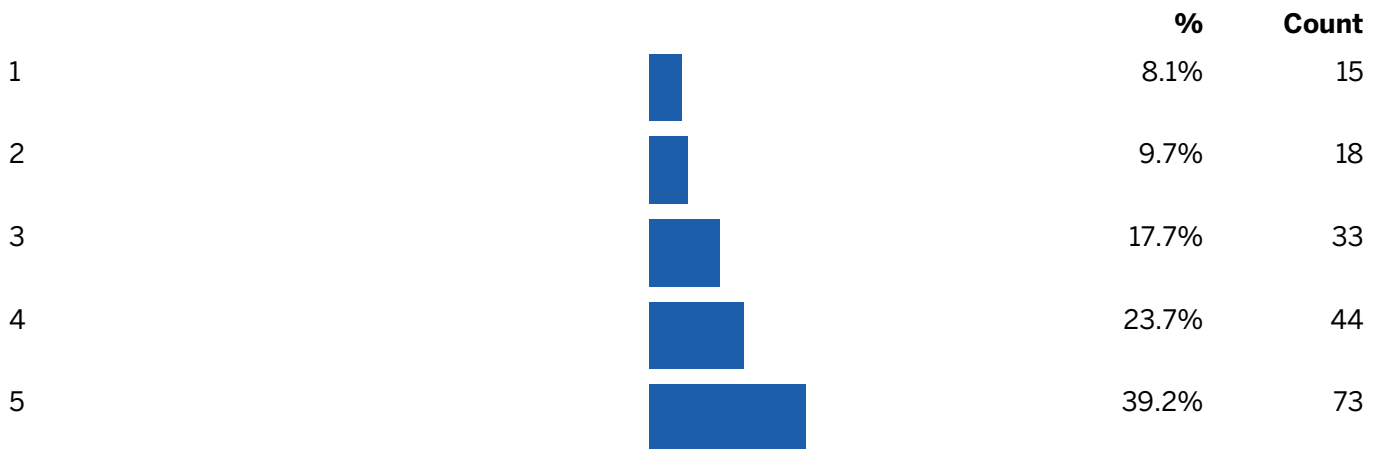
		%	Count
1		16.1%	30
2		21.5%	40
3		31.7%	59

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

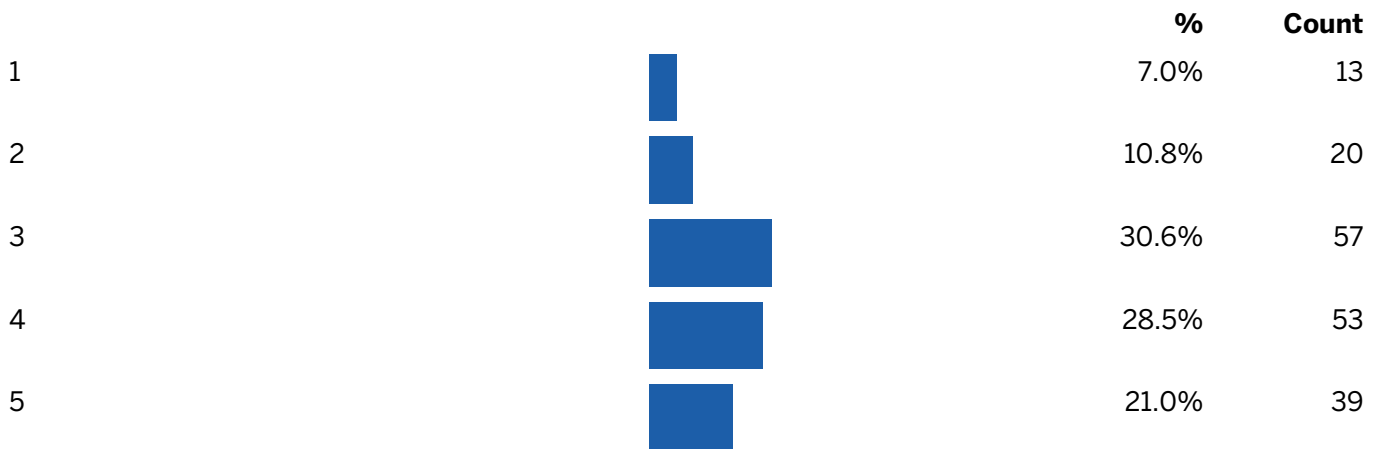
What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?



### Limit Social & Environmental Impacts



### Public Support

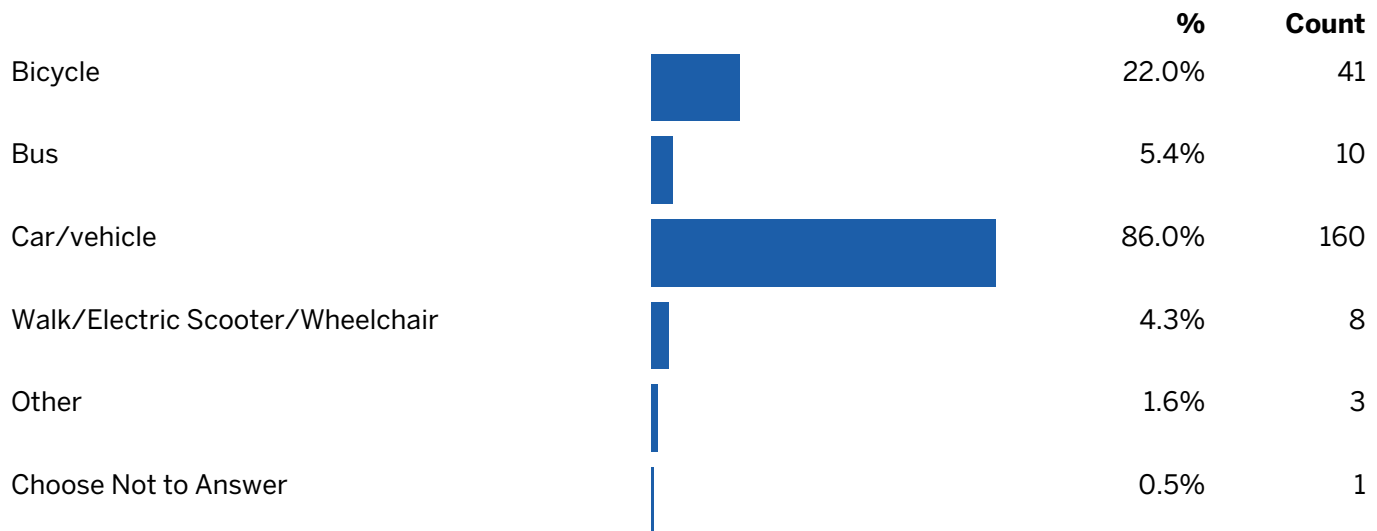


## QUESTION 2

What is currently your primary transportation option on Milton Road?

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?



### QUESTION 3

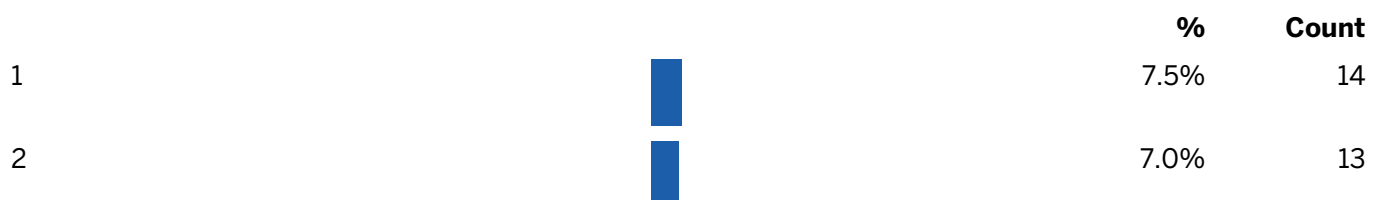
**Do you live within walking distance of Milton Road?**



### QUESTION 4

**How important are these qualities for the future Humphreys Street and US 180 (Fort Valley Rd) (1=less important, 5=very important)?**

**Improve Vehicular Safety**



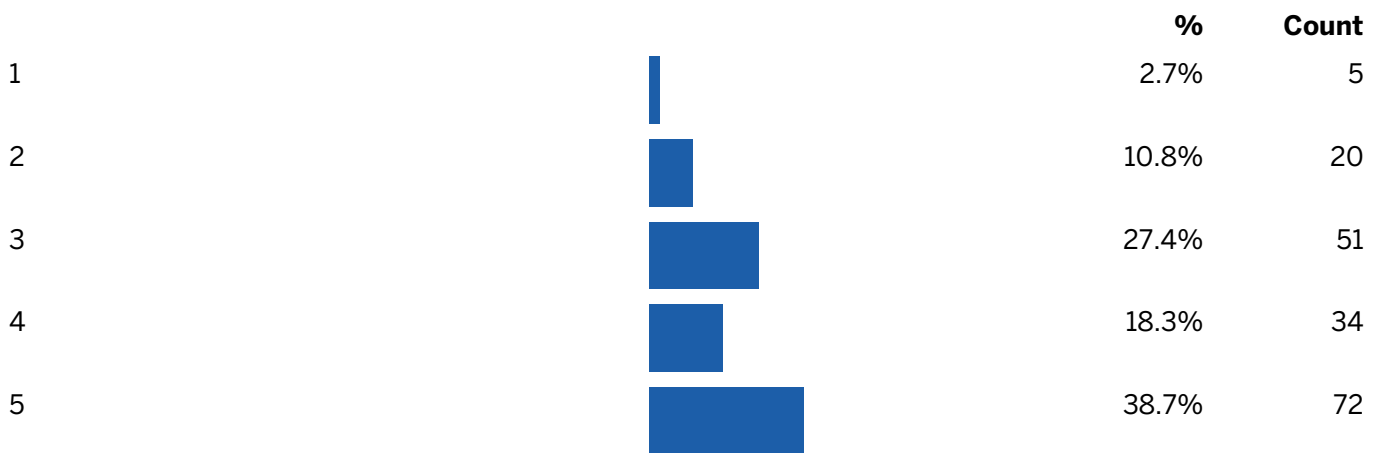


## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

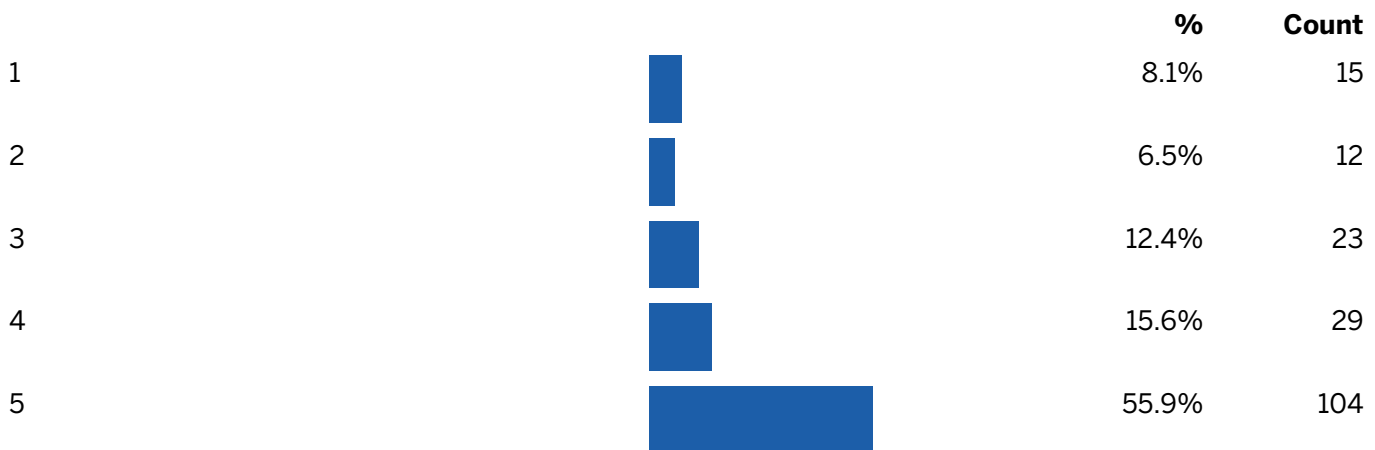
What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?



### Enhance Community Character



### Improve Traffic Movement

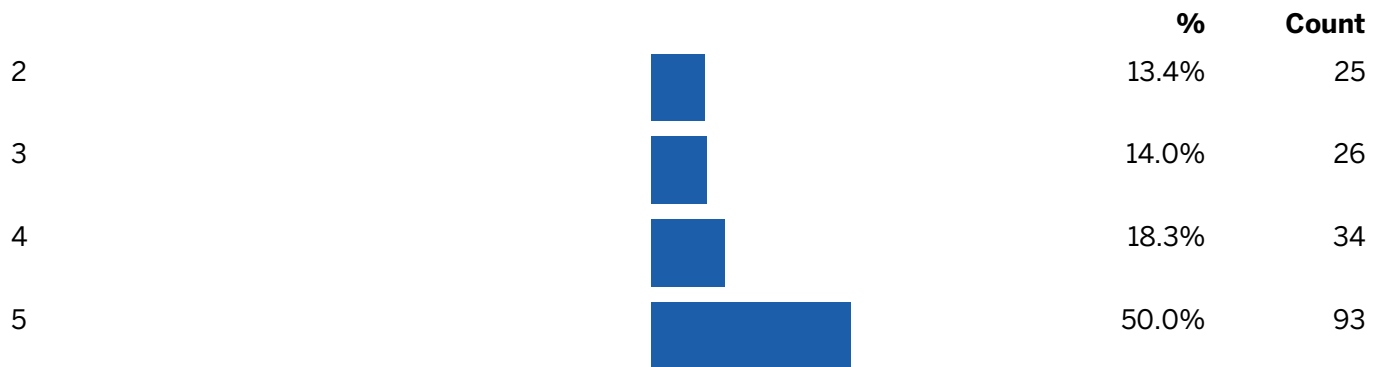


### Expand Travel Choices

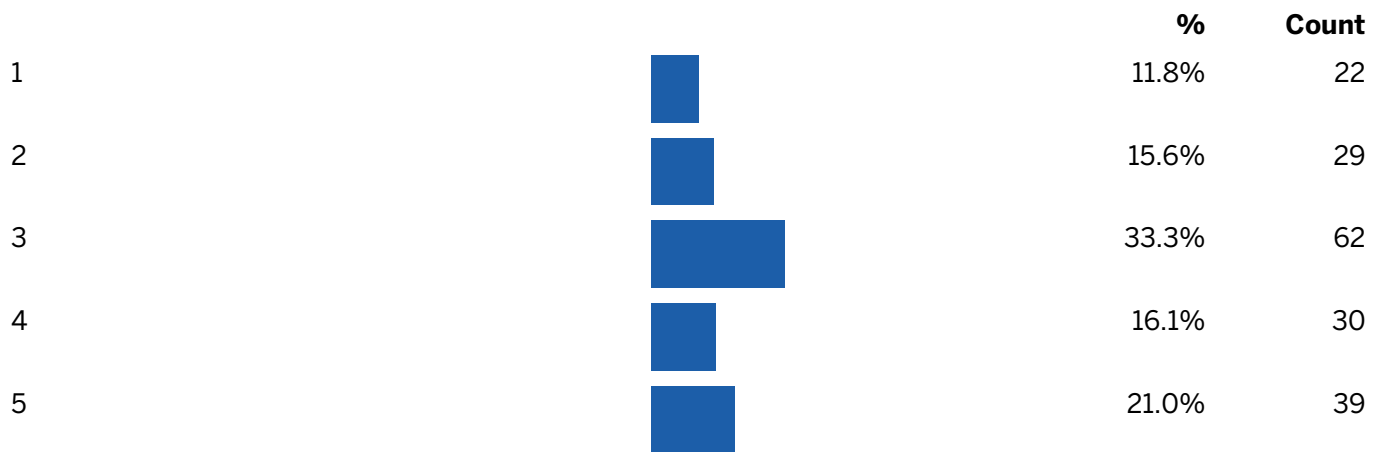


## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?



### Limit Property Impacts & Project Costs



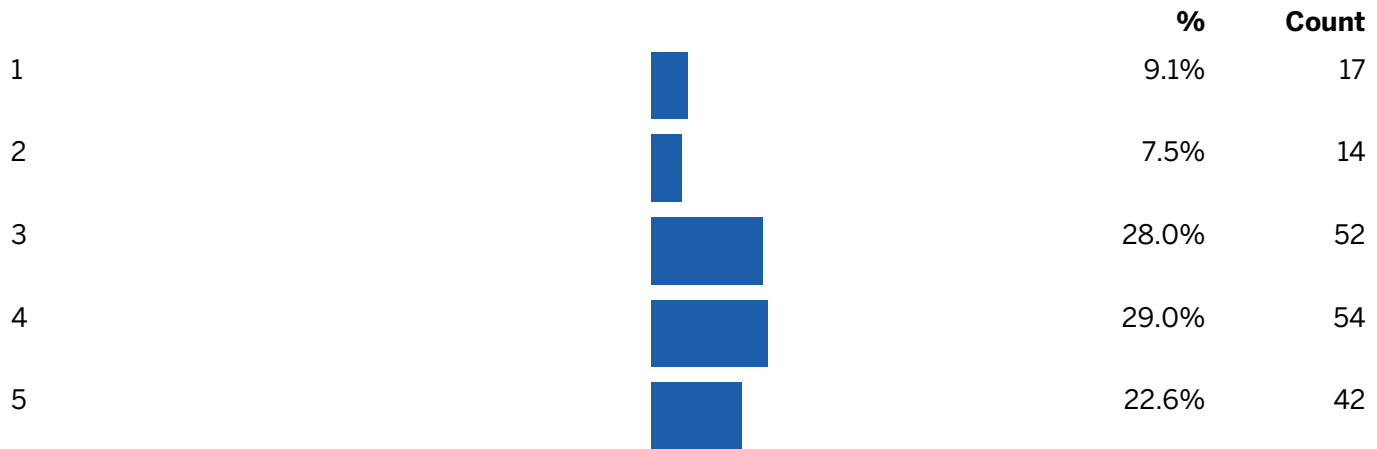
### Limit Social & Environmental Impacts



### Public Support

**Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey**

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?



QUESTION 5

**What is currently your primary transportation option on Humphreys Street?**



QUESTION 6

**What is currently your primary transportation option on US 180 (Fort Valley Rd)?**



### Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

		<b>%</b>	<b>Count</b>
Car/vehicle		83.8%	155
Walk/Electric Scooter/Wheelchair		7.6%	14
Other		2.2%	4

#### QUESTION 7

**Do you live within walking distance of Humphreys Street or US 180 (Fort Valley Rd)?**

		<b>%</b>	<b>Count</b>
Yes		48.9%	91
No		50.0%	93
Choose Not to Answer		1.1%	2

#### QUESTION 8

**Please provide any comments regarding future improvements to Humphreys Street or US 180 (Fort Valley Rd)**

Answered	109
Skipped	78



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Survey Questions

#### QUESTION 1

**How important are these qualities for the future Milton Road (1=less important, 5=very important)?**

##### Row choices

- Improve Vehicular Safety
- Enhance Community Character
- Improve Traffic Movement
- Expand Travel Choices
- Limit Property Impacts & Project Costs
- Limit Social & Environmental Impacts
- Public Support

##### Column choices

- 1
- 2
- 3
- 4
- 5

##### Row choices

- Improve Vehicular Safety
- Enhance Community Character
- Improve Traffic Movement
- Expand Travel Choices
- Limit Property Impacts & Project Costs
- Limit Social & Environmental Impacts
- Public Support

##### Column choices

- 1
- 2
- 3
- 4
- 5

#### QUESTION 5

**What is currently your primary transportation option on Humphreys Street?**

- Bicycle
- Bus
- Car/vehicle
- Walk/Electric Scooter/Wheelchair
- Other
- Choose Not to Answer

#### QUESTION 2

**What is currently your primary transportation option on Milton Road?**

- Bicycle
- Bus
- Car/vehicle
- Walk/Electric Scooter/Wheelchair
- Other
- Choose Not to Answer

#### QUESTION 6

**What is currently your primary transportation option on US 180 (Fort Valley Rd)?**

- Bicycle
- Bus
- Car/vehicle
- Walk/Electric Scooter/Wheelchair
- Other
- Choose Not to Answer

#### QUESTION 3

**Do you live within walking distance of Milton Road?**

- Yes
- No
- Don't Know
- Choose Not to Answer

#### QUESTION 7

**Do you live within walking distance of Humphreys Street or US 180 (Fort Valley Rd)?**

#### QUESTION 4

**How important are these qualities for the future Humphreys Street and US 180 (Fort Valley Rd) (1=less important, 5=very important)?**

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Yes
- No
- Don't Know
- Choose Not to Answer

### QUESTION 8

**Please provide any comments regarding future improvements to Humphreys Street or US 180 (Fort Valley Rd)**

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Individual Registered Responses

#### Name not available

inside City Limits

August 11, 2020, 4:42 AM

#### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 3

#### Question 2

- Bicycle
- Bus
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

#### Question 3

- Yes

#### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 3

#### Question 5

- Bus
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

#### Question 6

- Bus
- Car/vehicle

#### Question 7

- No

#### Question 8

No response

#### Name not shown

inside City Limits

August 11, 2020, 5:09 AM

#### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 3

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 7

- No

### Question 8

No response

### Name not shown

outside City Limits

August 11, 2020, 5:32 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 1

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 3  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Should connect 40 to 180 to bypass the whole problem.

### Name not shown

inside City Limits

August 11, 2020, 5:38 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 2  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 1  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 7



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Yes

### Question 8

I live near US 180. I hear people from other parts of Flagstaff and outside of Flagstaff complain about congestion on US 180, but for the most part my neighbors do not. This is because it becomes congested on winter weekends when Snow Bowl is closing, but the other 99% of the time, it is fine. Please do not widen or "improve" this road to carry more traffic. It will only bring more traffic, more speed, and more problems.

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### Name not available

inside City Limits

August 11, 2020, 6:08 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Need a better way to cross the tracks, Humphreys should merge directly into 66 without a stoplight/turn to get under the tracks.

Better shoulder on 180 and strict enforcement of snow play traffic

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### Name not shown

inside City Limits

August 11, 2020, 6:18 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Bicycle
- Bus
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Bus
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 6:25 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 1  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 6:32 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Widen 180 to 4 or 5 lanes. Make Humphreys a one way street? Make an adjacent street one way in the opposite direction.

### Name not available

outside City Limits

August 11, 2020, 6:38 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

## Barry A Bertani

inside City Limits

August 11, 2020, 6:38 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 7

- No

### Question 8

Not sure. Few options.

### Name not shown

inside City Limits

August 11, 2020, 6:41 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Kathryn Kozak

inside City Limits

August 11, 2020, 6:57 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 8

The noise of Fort Valley Road has become much more obvious over the last few years. Something needs to be done to address the road noise for the residents of Coconino Estates. Please consider ways to mitigate the road noise.

- Car/vehicle

### Question 7

- Yes

### Question 8

There needs to be a traffic light at the intersection of Forrest, N. Fort Valley Rd and Beal. It is unsafe for pedestrians crossing Fort Valley and it is becoming an increasingly dangerous intersection for vehicles turning.

### Name not shown

inside City Limits

August 11, 2020, 7:00 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bus
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Bus
- Car/vehicle

### Question 6

- Bicycle
- Bus

### Name not shown

inside City Limits

August 11, 2020, 7:09 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 1

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 1

### Question 5

- Bicycle
- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 7:19 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 3  
Public Support: 2

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle

### Name not shown

inside City Limits

August 11, 2020, 7:31 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Car/vehicle

### Question 7

- Yes

### Question 8

Add road at A1 Mountain road to bypass this route.

#### Name not shown

outside City Limits

August 11, 2020, 7:32 AM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Bicycle

- Car/vehicle

### Question 7

- Yes

### Question 8

Need to add lanes where possible and improve the bike lanes to improve biker safety and reduce biker/vehicle conflicts.

Have seen a number of deer killed between Sechrist School the Colton House - not sure if a wildlife crossing would be economically justified or not.

#### Name not shown

inside City Limits

August 11, 2020, 7:41 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not shown

inside City Limits

August 11, 2020, 7:49 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not shown

inside City Limits

August 11, 2020, 7:50 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 2  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle

### Question 6

- Bicycle



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 7

- Yes

### Question 8

Slow auto traffic down and engineer quality pathways for cyclists/pedestrians/multimodal transport. Plant trees for shade either in the middle or on the sides. The road should be built with Flagstaff's carbon neutral plan in mind.

### Name not available

inside City Limits

August 11, 2020, 7:56 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

The inability to safely cross this highway with a traffic light via bicycle is a limiter for my family.

### Name not available

inside City Limits

August 11, 2020, 8:02 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Yes

### Question 8

Generally traffic flows very well on US180 (not counting busy winter days). The main concern is the ability of people in Coconino Estates to get in and out of their neighborhood safely. I think 1 or 2 traffic circles between Navajo and Louise along US180 would help with this. I would be extremely opposed to another traffic light on this section of road. I think there needs to be a better/safer way for pedestrians to cross Humphreys near Dale or Elm. A bridge/tunnel would be nice but so would a pedestrian cross walk with flashing lights. Using features to pinch the road similar to the pinch at Sechrist would help slow traffic down too.

**Name not available**  
inside City Limits

August 11, 2020, 8:12 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

Humphreys has the opportunity to expand downtown and be a great live/work/shopping street. Currently has few pedestrian crossings, causing a barrier to safely access downtown from west downtown. Add bike lanes if possible and increase crossing opportunities, especially near Flagstaff High School. Also widen sidewalks to make it more comfortable to walk since cars drive fast. Same for US180. This road needs safer crossing opportunities, especially to the schools. Has fairly good bike facilities but lack of crossings makes it difficult to traverse.

**Name not shown**  
outside City Limits

August 11, 2020, 8:15 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

The winter traffic has become an increasing problem. For local residents the congestion present a nuisance a safety problem.

### Name not shown

inside City Limits

August 11, 2020, 8:17 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5

Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

No response

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 8:18 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

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### Name not shown

inside City Limits

August 11, 2020, 8:22 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5

Public Support: 4

### Question 5

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

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### Name not shown

inside City Limits

August 11, 2020, 8:33 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

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### Name not shown

inside City Limits

August 11, 2020, 8:34 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

I live in Cheshire and WOULD LOVE to use the bus much more frequently, but without more frequent service and more stops, this is problematic for me. I do use the FUTS trail for biking in and out of town, but would love to see bike lanes dominate ALL downtown intersections and be designed in ways that are safer for pedestrians and bikers:

<https://bicycledutch.wordpress.com/2018/02/20/a-common-urban-intersection-in-the-netherlands/>

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### Name not shown

inside City Limits

August 11, 2020, 8:36 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 1  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 2

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Many alternatives are available for pedestrians and bicyclists outside of the highways corridor. Given limited space most emphasis should be on vehicle travel and pedestrian/bicycle crossings.

Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

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### Name not shown

inside City Limits

August 11, 2020, 8:40 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4

---

### Name not shown

outside City Limits

August 11, 2020, 9:02 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Add additional traffic lanes wherever possible, especially at intersections. Investigate adding a middle lane that would be one way during certain times of the day to move large amounts of traffic into and out of the city. For example, the middle lane could be southbound from 4:00 p.m. through 7:00 p.m. to move traffic returning from skiing and sledding in the winter.

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### Name not shown

inside City Limits

August 11, 2020, 9:02 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4

Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not shown

inside City Limits

August 11, 2020, 9:11 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Walk/Electric Scooter/Wheelchair

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not shown

inside City Limits

August 11, 2020, 9:22 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 1  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 5

Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

As with Milton, I will avoid Humphreys when possible during certain times of day and times of year. There aren't any options when heading northwest, but generally after getting past Humphreys, the drive on 180 is nice. Site distance is an issue with some of the turns out of Coconino Estates onto 180 and I tried making the left from Forest Ave once at the wrong time of day and I won't be trying that again. I would frequently use the parallel FUTS trail if I lived in the area.

---

### Name not available

inside City Limits

August 11, 2020, 9:28 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 7

- Yes

### Question 8

The paved urban trail system is great on 180. However, the fact that it requires crossing the road at Sechrist School causes major safety issues, as well as traffic backups. Consideration of a pedestrian bridge and/or adding a continuous urban trail on the North side of the road (Sechrist School side) back into town would be helpful. Also, the intersection at Forest Hill and 180 is super dangerous from a pedestrian and cyclist perspective--there needs to be a pedestrian bridge there to improve safety and minimize traffic back-ups.

---

### Name not shown

inside City Limits

August 11, 2020, 9:42 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 4  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 4  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

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### Name not shown

inside City Limits

August 11, 2020, 9:46 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not shown

inside City Limits

August 11, 2020, 9:49 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bus

- Walk/Electric Scooter/Wheelchair

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Bus
- Walk/Electric Scooter/Wheelchair

### Question 6

- Bus
- Walk/Electric Scooter/Wheelchair

### Question 7

- No

### Question 8

Creating wildlife crossings are very important to me to ensure the safety of wildlife and cars.

---

### Name not shown

inside City Limits

August 11, 2020, 9:55 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not shown

inside City Limits

August 11, 2020, 10:12 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

Great bicycle trails/ urban trails in area. Bus service is limited but good. The crossing at 180 and cedar is still really dangerous for bikers/pedestrians need a flashing light- many cars just barrel through and I have almost been hit walking bike on crosswalk numerous times.

### Name not shown

inside City Limits

August 11, 2020, 10:17 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 2

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

This corridor gets clogged on holiday and winter weekends. Some small changes in recent years have been improvements (Mountain Line to Snowbowl and restricting left turns from Forest Ave). However, the real problem here is two-fold:

- 1) It is simply overcrowded
- 2) There is no alternative for getting from west of Flagstaff (Snowbowl Area) I-17 US-89A other than Highway 180

These problems cannot and will not be alleviated without a) capacity improvements to 180, and b) a viable alternative route from west of Flagstaff to I-17 south

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### Name not available

inside City Limits

August 11, 2020, 10:19 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 1

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 1

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Please do not implement Door Zone bike lanes or bike lanes that interact with multiple driveways (right-hook collision situation). The speed on Humphreys St is slow enough, and bikes go fast enough downhill, for mixed traffic if the street is set up for success and avoids design elements that are misunderstood by drivers (unsafe bike lane --> drivers get frustrated that you aren't using it; shoulder stripe --> makes it look like a bike lane that you're not using).  
For the US180 section, consider benchmarking the Moab Canyon Pathway.



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Thank you.

Valley Rd. Access to Fort Valley and 180 should occur west of town possibly via I-40 to remove traffic through town.

### Kurt Eckstein

outside City Limits

August 11, 2020, 10:23 AM

#### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 5

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 5

#### Question 5

- Car/vehicle

#### Question 6

No response

#### Question 7

- No

#### Question 8

Complicate travel via Humphreys street to Fort Valley Rd. Make it difficult to use Humphreys street or any street east of Humphreys to get to Fort

### Name not shown

outside City Limits

August 11, 2020, 10:41 AM

#### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 2  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

#### Question 2

- Bicycle
- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 2  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2  
Public Support: 4

#### Question 5

- Bicycle
- Car/vehicle

#### Question 6

- Bicycle
- Car/vehicle

#### Question 7

- No

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 8

The fact that "Improve Safety" is only briefly defined in the preliminary instructions for the survey fundamentally corrupts the results of the survey.

A cyclist or pedestrian will most certainly think the "Improve Safety" is a good option, but unless they are very closely following the directions of the survey, they won't know that this means "vehicular safety" only.

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### Name not available

inside City Limits

August 11, 2020, 11:16 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

Add a bike lane! The fact that there aren't any bicycle accommodations on Humphreys already is embarrassing for flagstaff. This needs to be addressed and is more important than "improving the safety and traffic flow of vehicular transportation".

---

### Name not shown

outside City Limits

August 11, 2020, 11:16 AM

### Question 1

Improve Vehicular Safety: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 7

- No

### Question 8

No response

### Name not shown

inside City Limits

August 11, 2020, 11:53 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not shown

outside City Limits

August 11, 2020, 11:57 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 8

Additional lane(s) on Hwy 180 from Snowbowl Road to Humphreys.

### Name not available

inside City Limits

August 11, 2020, 11:57 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

In my opinion, the only improvement necessary on Fort Valley Rd. is a crosswalk signal at the urban trail/bike path crossing at Forest Ave. Please don't think about adding driving lanes or any sort of bypass route. If people are worried about traffic congestion during the ski season, shuttles to Snowbowl would be a much better solution. Also, I hope Flagstaff will prioritize adding and improving bike lanes and bike path/urban trail routes in general, and certainly on the Milton/Humphrey's/Fort Valley corridor.

### Todd Kennedy

inside City Limits

August 11, 2020, 12:15 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 7

- Yes

### Question 8

Both these roads need more points where pedestrians and bikes can cross safely

### Name not available

outside City Limits

August 11, 2020, 12:17 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

This area is also heavily traveled as more people are choosing to live in rural areas. Ski season makes traffic very slow

### Bob Larkin

inside City Limits

August 11, 2020, 12:28 PM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 1  
Improve Traffic Movement: 3  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 3  
Improve Traffic Movement: 2  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Walk/Electric Scooter/Wheelchair

### Question 6

- Car/vehicle

### Question 7

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 12:31 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 12:46 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Give right turn lanes and center turn lanes where there are homes or streets.

---

### Michael Banker

inside City Limits

August 11, 2020, 12:58 PM

#### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

#### Question 7

- No

#### Question 8

Although all the categories are a 5, the environmental impact should be

rated a 10. The City of Flagstaff is already encouraging deforestation of properties with their totally inappropriate zoning incentives. Let's not compound that with bad environmental decisions by ADOT.

---

### Name not available

inside City Limits

August 11, 2020, 1:08 PM

#### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 5

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 5

#### Question 5

- Car/vehicle

#### Question 6

- Bicycle

#### Question 7

- No

#### Question 8

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

I don't know how to do it, but the intersection needs to be redone. There's a continual back up before/after school is out in that area. US180 is the only way to get to communities and recreation in the area. A new road that would allow traffic to flow off of Route 66 to the neighborhoods of Cheshire or US 180 would help the congestion on Milton and US180, but then Route 66 would be worse than what it is now with a 2-lane road. The separate walking/bike path is good for safety issues along US 180. I would think if we could have separate purposeful built walking and bike patch separate from streets, this would encourage locals to think twice about using cars, especially if electric bike were able to use the paths.

---

**Name not available**  
outside City Limits  
August 11, 2020, 1:27 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

**Name not shown**  
inside City Limits  
August 11, 2020, 1:41 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Yes

### Question 8

Sidewalk on the east side of 180 seems critical. There are no easy walking options for those living in multifamily properties on that side of the highway, which forces them to cross the street illegally to access the urban trail on the opposite side of the street. This can be very dangerous during busy times.

### Name not available

inside City Limits

August 11, 2020, 1:42 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 2:01 PM

### Question 1

Improve Traffic Movement: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Traffic Movement: 5

### Question 5

- Car/vehicle

### Question 6

- Other - car, bus and bicycle

### Question 7

- Yes

### Question 8

The FUTS trail on 180 is in horrible shape and riding a bike on it is very bumpy. 180 seems like a pinch point if there is ever an evacuation of residents and people have to head out to the west.

### Name not available

inside City Limits

August 11, 2020, 2:16 PM

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 2  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

the sidewalks are in need of repair and some of the corners on Humphreys you can not see oncoming traffic and it makes for a risky turn in or out.

---

### Name not shown

inside City Limits

August 11, 2020, 2:55 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits

August 11, 2020, 3:17 PM

### Question 1

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

#### Name not available

outside City Limits

August 11, 2020, 3:41 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

I live on Hidden Hollow Road and would NOT at all be in favor of it being used as an alternative route. It would ruin our rural residential lifestyle including the peace and quiet we currently enjoy.

---

#### Name not shown

inside City Limits

August 11, 2020, 3:48 PM

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Other - Bike, Run, Walk, Car

### Question 6

- Other - Bike and Run closer in, Car farther out

### Question 7

- Yes

### Question 8

This route needs to be safe and smooth. Now largely commercial in town, it can be dicey to cross Humphries in non-ski season. BUT - bypassing this route with some of the prior proposed routes that take visitors out of the town area of Flag will do a huge disservice to local businesses. US 180 desperately needs a wide safe bike,run,pull-off lane. The upgrade to the Cheshire curve was long overdue but did NOT improve bike rider or runner safety because of lack of a lane around both curves before and after the service station.

### Name not available

outside City Limits

August 11, 2020, 4:25 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

The snow play and ski resort traffic has not gotten better.

---

### Name not shown

inside City Limits



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

August 11, 2020, 4:39 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

As the only access to the Peaks, Snowbowl & the Grand Canyon from Flagstaff, Humphreys St., a small neighborhood street and Ft. Valley Rd are being forced to accommodate freeway amounts of tourist traffic from Phoenix & surrounds. These 2 lane streets were not designed to carry the amount of traffic they have been forced to and it degrades the neighborhoods they were originally established to serve.

### Name not shown

inside City Limits

August 11, 2020, 5:01 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

Flagstaff needs to have a safe, comprehensive, interconnected, easy to access network of trails so that walkers and bikers can get from anywhere to anywhere in Flagstaff without conflict from vehicular traffic. Humphreys Street has the Karen Cooper Trail as an alternative to driving. Fort Valley Road has the Fort Valley Trail and the Karen Cooper Trails as

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

an alternative to driving. The Karen Cooper Trail needs to connect to the south with a FUTS trail near Milton. The Fort Valley Trail needs to connect with the Karen Cooper Trail on both its southern and northern ends. The Fort Valley Trail needs to continue north from its current terminus at Fremont Blvd.

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 5:04 PM

#### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 2

#### Question 2

- Other - Car for commuting through or large shopping trips. Walking for dining or small shopping trips.

#### Question 3

- Yes

#### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 3

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

#### Question 7

### Name not available

inside City Limits

August 11, 2020, 5:10 PM

#### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

#### Question 2

- Car/vehicle

#### Question 3

- Yes

#### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

#### Question 7

- Yes

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 5:10 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

The shared vehicle and bike lanes seem very dangerous especially with the hill and volume of car traffic passing through, much of which is from out of town. I can't link the source right now (on mobile phone) but roads where cars and bike traffic are expected to share the road without separate facilities increase risk for accidents.

### Ian T

inside City Limits

August 11, 2020, 5:50 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle
- Walk/Electric Scooter/Wheelchair
- Other - Running

### Question 6

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Car/vehicle
- Walk/Electric Scooter/Wheelchair
- Other - Running

### Question 7

- Yes

### Question 8

1) A bike/pedestrian overpass or underpass to safely cross 180. The current options: the light at Humphrey's & 180, bottom of Chevron Hill, Sechrist, and at Fort Valley & Schultz Pass Rd aren't well placed and traffic abide.

2) Extend the Flagstaff Urban Trail from Sechrist to Humphrey's on the east side of the road.

Thank you!

---

### Name not available

outside City Limits

August 11, 2020, 6:02 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits

August 11, 2020, 6:23 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not shown

inside City Limits

August 11, 2020, 6:30 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

Protected bicycle lane

---

### Name not shown

outside City Limits

August 11, 2020, 6:46 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Car/vehicle

### Question 7

- No

### Question 8

Don't destroy open/green space. Alternative routes are probably needed to deal with bottlenecks.

### Name not available

inside City Limits

August 11, 2020, 7:04 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

ridiculous traffic in winter!, getting worse in summer! One way in and One way out for all traffic!!

### Name not shown

inside City Limits

August 11, 2020, 7:43 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 11, 2020, 7:52 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not shown

inside City Limits

August 11, 2020, 8:54 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 3  
Public Support: 1

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

See above

would also be helpful.

---

### Name not available

outside City Limits

August 12, 2020, 5:19 AM

#### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

#### Question 7

- No

#### Question 8

The additional turn lane now under construction at the south end of Humphreys is likely to be helpful. A pedestrian overpass in this area

---

### Name not shown

inside City Limits

August 12, 2020, 7:48 AM

#### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 2  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 4

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

#### Question 7

- No

#### Question 8

Improve hey 180 shoulders for emergencies - snowbowl traffic is so limited, just deal with it, 10 years we will be lucky to have real snow on the



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

highways and ski hill and the backup starts DT anyway, so get creative with lane usage at peak hour.

has left turn arrow to US180 install right hand turn arrow for traffic to turn south on Humphreys from US180.

---

### Bryan Slaughter

inside City Limits

August 12, 2020, 7:52 AM

#### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

#### Question 7

- No

#### Question 8

Larger signs that show alternate routes to I-40. When north bound traffic

---

### Name not available

outside City Limits

August 12, 2020, 8:04 AM

#### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

#### Question 5

- Car/vehicle

#### Question 6

- Car/vehicle

#### Question 7

- No

#### Question 8

Snow traffic is still an issue

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Name not available

inside City Limits

August 12, 2020, 8:23 AM

#### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3

#### Question 2

- Car/vehicle

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5

#### Question 5

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

#### Question 6

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

#### Question 7

- Yes

#### Question 8

No response

---

### Name not shown

inside City Limits

August 12, 2020, 8:44 AM

#### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 3  
Public Support: 3

#### Question 2

- Bicycle
- Bus

#### Question 3

- No

#### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 3

#### Question 5

- Bicycle
- Walk/Electric Scooter/Wheelchair

#### Question 6

- Bicycle
- Bus
- Car/vehicle

#### Question 7

- No

#### Question 8

The need for improved traffic flow on Ft Valley & Humphrey's is minimal, in my opinion. The traffic on these roads is primarily recreational in nature. As a local accessing businesses, the bike lanes & separated FUTS extending to the Museum of Northern Arizona are sufficient for me to navigate on my bicycle, and there are plenty of lights to allow for crossing

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Humphrey's even when there are a lot of cars on the road. When I am driving to a recreational destination such as the Grand Canyon or AZ Snowbowl, I have the option to travel on non-peak hours to avoid the crowds, or accepting that the small price I pay for playing in Northern Arizona is sitting in 20-30 minutes of stop & go traffic. I think that the transportation district & the resort could do more to make AZ Snowbowl shuttles an appealing option for skiers, particularly for locals (one idea would be offering season rentals on lockers -- I would be more incentivized to take the bus if I didn't have to carry my skiing equipment on every time), but those options are likely outside of the purview of ADOT.

---

**Name not available**  
inside City Limits  
August 12, 2020, 9:26 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

**Name not available**  
inside City Limits  
August 12, 2020, 9:31 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 7

- No

### Question 8

Faster. I mean, they have these cars now, electric cars they call them. Fast, very fast, but sometimes they also catch fire. Not very safe.

### Name not shown

outside City Limits

August 12, 2020, 9:32 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not shown

inside City Limits

August 12, 2020, 9:36 AM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Walk/Electric Scooter/Wheelchair

### Question 6

- Walk/Electric Scooter/Wheelchair

### Question 7



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Yes

### Question 8

No response

---

### Name not available

inside City Limits

August 12, 2020, 9:42 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

180 I think is fine. The transition from 66 to 180 via Humphreys is a cluster, with very limited room to expand roads and improve traffic capacity. Honestly, if I had authoritarian power to do whatever I wanted, I'd build a big bypass road straight from the Flagstaff Ranch Rd exit on I-40 north to meet 180 just west of Cheshire. That would divert all Snowbowl/Grand Canyon bound traffic out of downtown, but, ugh, would probably have some tough environmental impacts.

---

### Name not available

inside City Limits

August 12, 2020, 9:54 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle

### Question 6

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Name not available

inside City Limits

August 12, 2020, 10:04 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 7

- Yes

### Question 8

more cross walks and bike lanes please

---

### Name not available

outside City Limits

August 12, 2020, 10:40 AM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

No response

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 12, 2020, 11:00 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 1

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Joe Shannon

inside City Limits

August 12, 2020, 11:16 AM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle

### Question 6

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

Very busy all year round these days. Although I hate writing this but we do need another road off I-40. Such as the A1 Mtn exist to south Snowbowl Rd. Yes, the Friends of Baderville will protest, however we do not need a "Campfire" situation where people could not leave the area and perished in their cars. The Museum Fire let us know that evacuations will be occurring in our future.

---

### Name not available

inside City Limits

August 12, 2020, 11:28 AM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 5  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- No

### Question 8

Need to be aware of animal populations along 180 to not negatively impact them

---

### Name not available

inside City Limits

August 12, 2020, 12:03 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Public Support: 5

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

Bike safety

---

### Brandie Gowey

inside City Limits

August 12, 2020, 12:04 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5

Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

too much air pollution

---

### Name not available

inside City Limits

August 12, 2020, 12:11 PM

### Question 1

Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bicycle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 1  
Improve Traffic Movement: 2  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5

### Question 5

- Bicycle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Bicycle

### Question 7

- No

### Question 8

No response

### Name not shown

inside City Limits

August 12, 2020, 12:19 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not available

outside City Limits

August 12, 2020, 12:30 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Bicycle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 7

- Yes

### Question 8

Between Snow Bowl Road and Roundtree Rd on 180, there is NO safe way to ride a bike. A little bike path OR a sidewalk would be a tremendously welcome addition!!! There is about 10 inches of asphalt beyond the white line to try and maneuver. NOT Safe in any way with cars and trucks going 65 mph within a couple feet. Please PLAN for the people living in Fort Valley to be able to move around the area using a safe path along 180. Thanks very much!!

### Stephanie Arcusa

inside City Limits

August 12, 2020, 12:49 PM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 3  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 3  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

Keep the protected bike path on US 180. Humphreys is dangerous for pedestrians and cyclists to cross. Humphreys needs more protected crossings.

### Name not available

inside City Limits

August 12, 2020, 1:15 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

US 180 needs traffic lights for safe driving.

---

### Name not available

inside City Limits

August 12, 2020, 1:26 PM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

1) It is super dangerous to ride a bike west between Humphreys and Santa Fe. There is no proper bike lane and people fly. 2) It is also impossible to cross to the north at Humphreys. This whole curve area between Humphreys and Milton is not sensible from a cyclist's perspective. 3) And please don't put an underground tunnel; as a female I won't use that at night. 4) The bike lane along 180 up to Cheshire is awesome!! 5) Biking north on 180 north of the bike lane ending is scary! I do it sometimes but fast high profile vehicles have nearly blown me over.

---

### Name not shown

inside City Limits

August 12, 2020, 1:41 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

If there were more bike racks I would ride my bike more. Bike racks can be used to reduce traffic not just to look pretty like a planter.

### Name not shown

inside City Limits

August 12, 2020, 1:50 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle
- Bus

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not shown

outside City Limits

August 12, 2020, 1:58 PM

### Question 1

Improve Vehicular Safety: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Hard to generalize across both of these - important, I think, to keep community character in mind along Humphreys, but environmental considerations (especially wildlife) and road safety much more important along US 180. Public transit (eg rapid route buses) to access the cultural amenities along 180 and to reach all the way to Snowbowl Rd and other snowplay destinations are crucial for reducing congestion and improving safety.

---

**Name not available**

inside City Limits

August 12, 2020, 3:07 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle
- Other - Walking

### Question 7

- Yes

### Question 8

Difficult to cross and pull out onto Ft. Valley with cars going way above 35 mph.  
which is supposed to begin near fire station. In ski season, backup of cars a hazard not only to get in/out of our street, but also problem if fire truck needs to get through. Too much traffic/traffic noise on road, need alternative routes.

---

**Name not available**

inside City Limits

August 12, 2020, 3:21 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 1  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Name not shown

inside City Limits

August 12, 2020, 4:22 PM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5

Public Support: 5

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- No

### Question 8

Including safer options for Bicycle Travel would be wonderful. Currently most cyclists utilize the FUTS or neighborhood streets. Some of the expansion of the bicycle lane on 180 has been noted and appreciated!

---

### Name not shown

inside City Limits

August 12, 2020, 4:33 PM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 3  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 4  
Improve Traffic Movement: 1  
Expand Travel Choices: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

180 has insufficient pedestrian/bike crossings. It is a very dangerous road, especially for the many residents who try and cross the road for school or to access Fratelli's/Late for the Train. The road should NOT be widened - the traffic congestion should be mitigated through a bus rapid transit lane (using existing infrastructure to accommodate a bus). The FUTS trail adjacent to 180 is dangerous as most cars pull out through the intersection trying to enter 180 and traffic on 180 turning on to side roads do not properly account for bikers and pedestrians. Widening the road to accommodate car traffic will not alleviate congestion and is not worth the enormous cost.

---

### Name not shown

inside City Limits

August 12, 2020, 4:56 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

We have travel impacts during the winter ski season on US180 and Humphreys Street (which people use to get to 180). Those roads need to be widened with a bike/walking path that is safe. Even more parking available to pull off 180 for snow play.

---

### Name not available

inside City Limits

August 12, 2020, 5:04 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bus
- Car/vehicle



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Choose Not to Answer

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

The intersection of Humphreys and Hwy 180 is HORRIBLE !!! If and extended vehicle (semi truck or truck with travel trailer) are making a left turn off Humphreys onto Hwy 180 they have a difficult time making the turn. If a vehicle is in the outside lane of Hwy 180 waiting for the light to change it gets pretty scary as these extended vehicles come close to hitting the vehicle as they do not have enough room.

---

### Name not available

inside City Limits

August 12, 2020, 5:25 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Left turns arrows at lighted intersections needed; hopefully Humphreys widening will help with the back up at the intersection of Humphreys and Rte. 66  
Should the current left turn onto Santa Fe be modified to limit traffic back up on Milton?

---

### Name not shown

outside City Limits

August 12, 2020, 5:35 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Add more public transportation, particularly for tourists. Encourage all snowplayers to use the bus rather than drive.

---

### Name not available

inside City Limits

August 12, 2020, 6:53 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Name not available

inside City Limits

August 12, 2020, 7:03 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

- Bicycle
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

To many people coming to our town to recreate and something has to change. Emergency vehicles are impacted during high traffic volumes. People that live on 180 are at the mercy of traffic. Not a good situation for a quality living experience.

---

### Name not available

inside City Limits

August 12, 2020, 7:08 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5

Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Name not available

inside City Limits

August 12, 2020, 9:19 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 1  
Improve Traffic Movement: 1  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Tell mayor Evans that while she's pretty good at her job, she needs to step up and protect our open spaces or there will be none left.

---

**Jeff Duncan**

inside City Limits

August 13, 2020, 6:40 AM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

Noise, Noise, Noise. Grants for noise blocking wall along ALL of US180. Also a lighted pedestrian crossing near Meade would help the safety of our neighborhood and help local nearby businesses. Thank you for listening.

---

**Name not shown**

outside City Limits

August 13, 2020, 8:53 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits

August 13, 2020, 9:19 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 7

- Yes

### Question 8

I think that the City of Flagstaff, Coconino County and ADOT should consider construction of a new route to Grand Canyon that skirts the western edge of Flagstaff.

---

### Name not available

inside City Limits

August 13, 2020, 10:21 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 1  
Public Support: 3

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

The logistics of this I believe to be challenging, but paving a road between Baderville and i40 would be extremely helpful. An example would be some of the Forrest service roads that get you from Baderville to Forrest service road 506 that turns into Mountain Road and is the A-1 Mountain interchange at i40.

More law enforcement support on 180 during snow season is also essential. It can be SCARY with the people parked on the roads trying to sled. Like young children running in and out of the highway scary.

Another smaller helpful item would be adding green turn arrows at the light at the intersection of 180 and Fremont Blvd/ Shultz Pass. I was actually surprised it wasn't added when the light first went in as it can be extremely difficult to turn left from 180 onto Fremont.

---

**Name not available**

outside City Limits

August 13, 2020, 12:28 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Closer to the Humphreys/downtown area, I can see that there is a need for enhanced community character and expanded travel choices.

For 180, we just need to be able to get into and out of the town we work in, spend money in, and depend on for health and human services.

---

**Mark Daniels**

outside City Limits

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

August 13, 2020, 1:48 PM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 2

- Bicycle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Bicycle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not shown

inside City Limits

August 13, 2020, 11:34 PM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 1

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 1

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

No response

---

### Rebecca Conti

outside City Limits

August 14, 2020, 6:58 AM

### Question 1

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

While I very much wish to improve conditions along the Milton/Humphreys/Fort Valley Road corridor, I think a bypass around the city with access to Snowbowl is more important. No matter what improvements are made to the corridor, if traffic is backed up with cars from Phoenix, the quality of life for those of us in this area will be damaged. Thank you for listening.

### Name not shown

inside City Limits

August 14, 2020, 7:00 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Name not available

outside City Limits

August 14, 2020, 7:18 AM

### Question 1



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Vehicular Safety: 2  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 1  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 1  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Mark Haughwout

inside City Limits

August 14, 2020, 7:38 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 1

Improve Traffic Movement: 1  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 1  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Humphreys street is not suitable for biking. Bikes should be re-directed to Kendrick or Beaver.

US180 needs separated bike lanes all the way from Columbus to past Cheshire.

---

### Name not available

inside City Limits

August 14, 2020, 7:48 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 3  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Living in there Cheshire neighborhood means that during a good snowy winter, having to go downtown after 3pm on a Saturday or a Sunday is a nightmare.

---

**Name not available**  
inside City Limits  
August 14, 2020, 7:55 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4

---

**Name not shown**  
inside City Limits  
August 14, 2020, 8:04 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 2

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Bicycle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle
- Bus
- Car/vehicle

### Question 6

- Bicycle
- Bus
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 7

- No

### Question 8

maintain beauty and preservation of environment

---

### Name not shown

inside City Limits

August 14, 2020, 8:32 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 1  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits

August 14, 2020, 10:12 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 3

- Choose Not to Answer

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Choose Not to Answer

### Question 8

Again less cars would be good.

---

### Name not shown

inside City Limits

August 14, 2020, 10:52 AM

### Question 1

Improve Vehicular Safety: 4

Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 1  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Brittain Davis

inside City Limits

August 14, 2020, 11:18 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 5



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Pedestrian bridges over Humphreys and 66/Santa Fe for people walking downtown (especially important for major events)

### Name not available

inside City Limits

August 14, 2020, 12:33 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5

Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not available

outside City Limits

August 14, 2020, 1:19 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4

### Question 5

No response

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits

August 14, 2020, 1:44 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 7

- No

### Question 8

A crosswalk by Fratelli Pizza would increase pedestrian safety. Also, for runners and walkers, more options to cross on 180 will assist with social distancing.

---

### Name not available

inside City Limits

August 14, 2020, 2:42 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

### Name not available

outside City Limits  
August 14, 2020, 9:05 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits  
August 15, 2020, 5:24 AM

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### Name not available

inside City Limits  
August 15, 2020, 5:52 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits

August 15, 2020, 6:23 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

outside City Limits

August 15, 2020, 6:23 AM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 3  
Improve Traffic Movement: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 1  
Public Support: 2

### Question 2

- Car/vehicle



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

outside City Limits

August 15, 2020, 7:03 AM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 3  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Choose Not to Answer

### Question 8

No response

---

### Caleb Garcia

inside City Limits

August 15, 2020, 10:50 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Find alternate routes for Snowbowl traffic. This will help the traffic flow that impacts HW 180, Humphreys and ultimately Milton rd.

---

### Alan Petersen

inside City Limits

August 15, 2020, 11:09 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5

Improve Traffic Movement: 2  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

Provide safe bicycle lanes and other bicycle infrastructure!!!!!!!!!!!!!!

---

### Name not shown

inside City Limits

August 15, 2020, 1:22 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 5

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

No response

---

**Name not available**  
outside City Limits  
August 15, 2020, 2:05 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Humphreys should NOT be widened. Neither should US 180. That will become the near equivalent of a freeway running through downtown and the northwest corridor. Please DO NOT add traffic lights to Humphreys - they will only slow down traffic even further. However, a roundabout at the corner of Humphreys and Aspen would be a great improvement and keep traffic flowing. The current light there stops traffic to numerous vehicles for the occasional car traveling east on Aspen. Regarding US 180, an alternative route to SnowBowl is greatly needed, for example a road from I-40 West over the mesa south of Baderville would be a great improvement. It is difficult for residents of the US 180 corridor to drive into town on weekends during snow season. Additionally, the City should NOT build any homes at the corner of US 180 and Schultz Pass Rd. There is so much congestion already! That land should be used for a small park or green space.

---

**Name not available**  
outside City Limits  
August 15, 2020, 3:30 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 2  
Public Support: 2

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 2

- Bicycle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 2  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 1  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

US 180 traffic, especially in the winter, is close to saturation. The 180 corridor is full up.

### Name not shown

inside City Limits

August 15, 2020, 4:36 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not available

inside City Limits

August 15, 2020, 7:54 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 2

- Car/vehicle



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Other - Car since it is not safe to bicycle on Humphreys

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

Compensate impacted property owners with something that decreases their carbon footprint or enhances/improves their business.

---

### Name not available

inside City Limits

August 16, 2020, 3:40 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle
- Other - Car since biking on Milton is not safe

### Question 3

---

### Name not shown

inside City Limits

August 17, 2020, 12:06 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 1  
Improve Traffic Movement: 1  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Bus

### Question 3

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

• No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 1  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 1  
Public Support: 3

### Question 5

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not shown

inside City Limits

August 17, 2020, 1:51 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 2

- Bicycle

### Question 3

• No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 1  
Improve Traffic Movement: 5  
Expand Travel Choices: 1  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

just build a road from I-40 to snowbowl already

---

### Dillon Metcalfe

inside City Limits

August 17, 2020, 3:27 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 2

- Bicycle

### Question 3

- No

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Bicycle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

The bicycle option is pretty good there already. There is a bike path adjacent to 180, and it detours around Humphreys to get downtown. Prioritize bike paths elsewhere with the limited budget.

---

### Name not available

inside City Limits

August 18, 2020, 10:54 AM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 1  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 3  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Bicycle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

Milton should be improved to provide more safety and ease of travel for pedestrians and bikers.

---

### Name not shown

inside City Limits

August 18, 2020, 11:45 AM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 2  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 3

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 3  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

I think the bike path is super nice and wonderful to have. It would be great if it went further allowing access to snowbowl safely via a path. This would keep road cyclists happy and safe!

### Name not shown

outside City Limits

August 18, 2020, 12:50 PM

### Question 1

Improve Vehicular Safety: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 2  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not shown

inside City Limits

August 18, 2020, 11:23 PM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Bus

### Question 3

- Yes

### Question 4



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Vehicular Safety: 2  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

### Name not available

inside City Limits

August 19, 2020, 9:14 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5

Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

More cross-walks on 180, more protection for bicyclists.

### Name not available

inside City Limits

August 19, 2020, 2:20 PM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 5  
Improve Traffic Movement: 3

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Please consider bicycle & pedestrian safety and use.

## Judy Hoffman

inside City Limits

August 20, 2020, 11:49 AM

### Question 1

Improve Vehicular Safety: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle
- Walk/Electric Scooter/Wheelchair

### Question 7

- Yes

### Question 8

Shocked when i saw sign saying that 77 apartments will be built across the street from Anderson. Not good. Have lived on Fort Valley (on frontage road) for almost 43 years. If you are going to destroy the area anymore you had better just purchase my house now.

## Name not shown

inside City Limits

August 20, 2020, 9:32 PM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Social & Environmental Impacts: 2  
Public Support: 3

### Question 5

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

Would be nice to have a bike lane on Humphreys St. A speed limit radar would be helpful on Fort Valley, as many people speed.

### Name not available

inside City Limits

August 21, 2020, 8:56 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 2  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 2  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 2  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Bicycle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

Left turn light needed by FALA.

### Name not shown

inside City Limits

August 21, 2020, 9:34 AM

### Question 1

Improve Vehicular Safety: 5  
Enhance Community Character: 3  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 2

- Bicycle
- Bus
- Walk/Electric Scooter/Wheelchair

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 5  
Enhance Community Character: 2  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Bicycle
- Bus
- Walk/Electric Scooter/Wheelchair

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Bicycle
- Bus
- Walk/Electric Scooter/Wheelchair

### Question 7

- Yes

### Question 8

No response

- Walk/Electric Scooter/Wheelchair

### Question 6

- Walk/Electric Scooter/Wheelchair

### Question 7

- Yes

### Question 8

No response

### Name not shown

inside City Limits

August 21, 2020, 10:29 AM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 1  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 1  
Public Support: 2

### Question 5

- Car/vehicle

### Name not shown

inside City Limits

August 21, 2020, 11:06 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 2

### Question 5

- Bicycle



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

Having worked for Guardian ambulance for 10 years I have personally responded to a number of vehicle vs. bicycle collisions along the US 180 bike path, most resulting from a northbound bicycle being struck by an automobile from a west side street. I now commonly wait 30-60 seconds until such a vehicle has departed if I am riding north, but others are often not aware of the hazard. A separated bike lane on the east side of the road would do wonders to alleviate injuries resulting from such collisions.

### Name not available

inside City Limits

August 21, 2020, 11:09 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 2

- Bicycle
- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Bicycle
- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

No response

### Name not available

inside City Limits

August 21, 2020, 12:57 PM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Bicycle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 5

- Car/vehicle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

No response

### Name not available

inside City Limits

August 21, 2020, 1:26 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

---

### Name not shown

inside City Limits

August 21, 2020, 1:57 PM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 3  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 3  
Improve Traffic Movement: 2  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 2

### Question 5

- Car/vehicle

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### Question 6

- Bicycle

### Question 7

- Yes

### Question 8

Hard to imagine a solution for this section that will work except either 1) If/when climate change makes Snowbowl close... which will probably happen just as we're finishing whatever traffic solution we find to this problem. or 2) we develop true mass-transit solutions for the major attractors (eg schools and Snowbowl) that people will actually use. I tried using the bus to Snowbowl twice and gave up, there was too little capacity. Similarly if we can't find good transportation alternatives for schools (instead of what seems like every parent driving every child to school) it remains a problem. I would much prefer alternative #2 because it could develop into healthier children and neighborhoods and not just be the standard solution of applying more and more traffic lanes, which divide and diminish the character of a town. Steamboat Springs has committed to truly workable public and tourist transportation for their ski area and their downtown area as have other towns, and I suspect the same would be true of school transport as well. BTW I ride a bicycle on streets adjacent to Humphreys. The current configuration of Humphreys is not comfortable for a bicyclist and not pleasant for pedestrians.

### Name not available

inside City Limits

August 21, 2020, 1:58 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 4  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- Choose Not to Answer

### Question 4

Improve Vehicular Safety: 2  
Enhance Community Character: 3  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 4  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

No response

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### Name not shown

inside City Limits

August 21, 2020, 3:06 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 1  
Public Support: 4

### Question 2

- Other - Motorcycle

### Question 3

- Yes

### Question 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Vehicular Safety: 5  
Enhance Community Character: 4  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 2  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Bicycle

### Question 7

- No

### Question 8

Crosswalks marked for bus stop is important to me. With warning flashers.

---

### Name not shown

inside City Limits

August 21, 2020, 4:42 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4

Enhance Community Character: 3  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

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### Name not shown

outside City Limits

August 21, 2020, 5:07 PM

### Question 1

Improve Vehicular Safety: 1  
Enhance Community Character: 2  
Improve Traffic Movement: 1  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 1  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 1  
Enhance Community Character: 2  
Improve Traffic Movement: 1



## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 1

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

"The curve" on 180, between Magdalena and Hidden Hollow/Forest Hills, is extremely dangerous for walkers, runners, bikers, etc. I regularly run on this part of 180. I think the safety of pedestrian/non-vehicular traffic should be prioritized here. A crushed gravel FUTS-style path, separated from the highway by a barrier such as a guard rail, would be ideal. I also believe speeds should be reduced between the Summit Fire Station just north of this curve and the stoplight at Cheshire. The allowed speeds are too high for an area with adjacent residences, higher pedestrian/non-vehicular use, etc.

---

### Susie Garretson

outside City Limits

August 22, 2020, 1:05 PM

### Question 1

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 5

- Car/vehicle

### Question 6

- Bicycle
- Car/vehicle

### Question 7

- Yes

### Question 8

Add wider bicycle & walking lanes on 180  
Add roundabouts where stoplights are especially at Humphreys/Columbus; Add roundabouts for side streets to enter as well.  
During high snow play times: Add obvious diversion to southbound traffic to Switzer Canyon, which also would need roundabouts for that route; Work with forest service not to allow any more snow play activities or expansion of snow play businesses; Work with forest service and yourselves to create snow play areas off the freeway exits south, west, & east of town, as well as Lake Mary Road - many many people who come up here just want a place to park so they can build snowmen and throw snowballs and take pictures & picnic, so all that is needed is the parking lot and a big field or place they can run around - some can include easy sledding.

---

### Name not shown

inside City Limits

August 22, 2020, 3:52 PM

### Question 1

Improve Vehicular Safety: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 5

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 4  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- No

### Question 8

No response

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#### Name not shown

outside City Limits

August 23, 2020, 3:00 PM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 2  
Improve Traffic Movement: 5

Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 5  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 5

- Car/vehicle

### Question 6

- Walk/Electric Scooter/Wheelchair

### Question 7

- Yes

### Question 8

180 improvements should include a shoulder or path leading beyond the Peak View Street around the next curve in 180 until the shoulder opens up/widens. This will enhance runner/walker/biker safety as well as vehicular safety in this tight corridor.

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#### Name not available

inside City Limits

August 23, 2020, 4:30 PM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

Improve Traffic Movement: 5  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 3  
Public Support: 2

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 4  
Public Support: 2

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

The speed limit should be reduced; in my opinion, the speed limit should be reduced down to 25 mph on those roads. My family and friends are put in unsafe positions daily, every time they need to merge onto, or off of Humphries and 180. Additionally, both of those roads are either adjacent-to, or a block away from schools. I also believe a stoplight at 180 and Forest would improve safety, as well as improve the environmental impact on the surrounding neighborhoods. A stoplight at the elementary school on 180 might also be a good idea.

---

**Name not shown**

inside City Limits

August 24, 2020, 7:16 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 2  
Improve Traffic Movement: 3  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 4  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- No

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 5  
Improve Traffic Movement: 2  
Expand Travel Choices: 2  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

The speed must be reduced in the residential area, especially from Navajo to the museum. The current speeds and blind curves make entering and exiting side streets dangerous and difficult. Not only is 35mph too fast but many, if not most drivers are attempting to go much faster and near misses, road rage and excessive noise are common.

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**Name not available**

inside City Limits

## Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

August 24, 2020, 7:53 AM

### Question 1

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 4  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 4

### Question 2

- Car/vehicle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 4  
Enhance Community Character: 5  
Improve Traffic Movement: 3  
Expand Travel Choices: 3  
Limit Property Impacts & Project Costs: 5  
Limit Social & Environmental Impacts: 5  
Public Support: 5

### Question 5

- Car/vehicle

### Question 6

- Car/vehicle

### Question 7

- Yes

### Question 8

PLEASE slow the traffic down on Fort Valley Road! It has become a highway thoroughfare through an historic quiet neighborhood. Twenty five miles per hour beginning at and up too the Museum of Northern Arizona or "have the guts" to slow traffic to 19mph like on the NAU campus. It has become impossible to safely enter Fort Valley traffic from the neighborhood or businesses and apartment complexes on the East side of the road. I have seen many near misses and several accidents. A

high school boy was hit on his bike last year, had his jaw broken, and missed half his junior year at FHS. Does another tragedy have to happen before speed problem is mitigated? The turn lane has become a passing lane too. Fort Valley Road has become dangerous.

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### Name not available

inside City Limits

August 24, 2020, 9:42 AM

### Question 1

Improve Vehicular Safety: 2  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 5  
Public Support: 3

### Question 2

- Bicycle

### Question 3

- Yes

### Question 4

Improve Vehicular Safety: 3  
Enhance Community Character: 4  
Improve Traffic Movement: 3  
Expand Travel Choices: 5  
Limit Property Impacts & Project Costs: 3  
Limit Social & Environmental Impacts: 4  
Public Support: 4

### Question 5

- Bicycle

### Question 6

- Bicycle

### Question 7

- No



## **Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey**

What qualities should be most important when planning improvements for Milton Road, Humphreys Street, and US 180 (Fort Valley Rd)?

### **Question 8**

Again, we need to move people, not cars. In the new design, we need to have separated bicycle lanes and to prioritize bus travel.

# Appendix J – August 25, 2020 Project Partner Meeting Notes



**ADOT Milton Road & US 180 Corridor Master Plan**  
 Tier 3 Modeling and Survey Results  
 Project Partner Meeting Minutes  
 August 25, 2020

**Meeting Agenda**

- I. Review Milton Rd. Tier 3 Traffic Model results
- II. Review Tier 2 US 180 model results – decision on US 180 (No-Build Plus or delay analysis)
- III. Review Public Survey Results
- IV. Review Project Partner Survey Results
- V. Revise/Finalize Milton Rd. Tier 3 Evaluation Criteria Weighting
- VI. Revise/Finalize US 180 Tier 3 Evaluation Criteria Weighting
- VII. Next Steps

**Meeting Attendees**

Name	Agency/Organization
Dan Gabiou	ADOT
Nate Reisner	ADOT
John Wennes	ADOT
Steve Orosz	ADOT
Rick Barrett	City of Flagstaff
Patrick McGervey	USFS
Ed Stillings	FHWA
Dave Wessel	MetroPlan
Martin Ince	MetroPlan
Kate Morley	Mountain Line
Greg Mace	NAU
Kevin Kugler	Michael Baker International
Alex Thomas	Michael Baker International
Jessica Belowich	Michael Baker International
Brian Snider	Michael Baker International

**Attachments**

1. Final Project Partner Approved Tier 3 Evaluation Criteria
2. Project Partner Meeting PowerPoint Presentation
3. Tier 3 Evaluation Criteria Weighting Public Survey Results
4. Tier 3 Evaluation Criteria Partner Weighting Survey Results
5. Options for Merging Public Survey and Project Partner Survey Results

After roll call was completed, Dan Gabiou turned the presentation over to Kevin Kugler to present the Agenda Item I – Tier 3 Milton Rd. traffic model results

## I. Review Milton Rd. Tier 3 Traffic Model results

Utilizing Cisco WebEx, Kevin Kugler began by briefly reviewing the meeting agenda and how there were many important items on today's meeting. He reminded the Partners that the information being presented today was distributed to the Partners last week in order to review the traffic model results prior to the meeting. Mr. Kugler also noted that continuing project momentum was important and as such, it was hopeful that the Partners would confirm the T3 Evaluation Criteria and decide on US 180 preferred alternative by the conclusion of this meeting.

Using slide #4, Mr. Kugler briefly reminded the Partners of the Milton Rd. Tier 3 alternatives and then turned the presentation over to Jessica Belowich to discuss the Milton Rd. T3 traffic model results.

### A. Milton Rd. T3 Travel Times & Transit Travel Times

Ms. Belowich began by reminding the Project Partners that the primary difference between the Tier 2 and Tier 3 analysis was the introduction of the spot improvements for each alternative. The inventory of spot improvements was developed and agreed to by the Project Partners. Ms. Belowich noted that not all suggested spot improvements offer improved operations to the system, as there were items like dual left turn lanes, the addition of two new traffic signals, and the inclusion of two HAWKS that have more negative impacts on certain metrics such as travel times. Transit Signal Priority (TSP) was also added at select intersections.

Ms. Belowich continued to review the Travel Time results (slide 5) while also reviewing the findings for transit travel times (slide 6). Ms. Belowich then concluded the portion of the presentation on Travel Time results.

#### ***Project Partner Discussion***

No concerns or issues were expressed among the Project Partners on the Travel Time information presented, other than clarify the number of HAWKS and location of the two proposed signals. No additional questions or concerns were expressed by the Partners.

### B. Network Delay

Ms. Belowich explained that network delay was defined as the total number of hours of delay in the model as a whole, including US 180. Latent delay represents the delay of vehicles that can't make it into the model. She went on to review the network delay results (slide 7), noting that generally speaking, spot improvements were effective across all alternatives in the AM peak hour, but less effective in the PM peak hour.

#### ***Project Partner Discussion***

Dave Wessel asked Jessica to describe, "what is in the network"? Ms. Belowich and Alex Thomas responded with a description of the approximate model network parameters. No additional questions or concerns were expressed by the Partners.



C. Intersection Delay and LOS

Ms. Belowich reminded the Partners that intersection delay and LOS were not a Tier 3 Evaluation Criteria per se, but noted that these metrics were an important measure of operational effectiveness that the Partners had requested to see and be reported upon in Working Paper #2. She then went on to identify the fact that Phoenix Ave. and Santa Fe greatly improve with the introduction of a signal (except No-Build) and that Mikes Pike continues to perform poorly.

**Project Partner Discussion**

Dave Wessel noted that he would like to see this information (slide 8) color coded to express the number of “steps of improvement” over the No-Build alternative. Ms. Belowich confirmed that this can be done. Rick Barrett asked for a clarification on the reasoning behind the Mikes Pike LOS results. Alex Thomas responded that the LOS results for Mike Pike were largely a byproduct of some modeling spill-over affect from Butler Avenue since the Mikes Pike intersection is in close proximity to Butler Ave. In modeling terms, this was thought to be a bit of a false negative as this metric is measured from vehicle flow. Ms. Belowich offered that the traffic modeling team would like to offer some suggestions to improve the performance of the Butler Clay and University Drive intersections in the future. No additional questions or concerns were expressed by the Partners.

D. HAWK Signal Comparisons

MS. Belowich reviewed slides 9, 10, 11 and 12 that illustrate a comparison of with and without HAWKs for travel time and transit travel time comparing the No-Build and Alt 5 alternatives. She noted that when compared to the travel times without the HAWK application, the difference in travel times (with and without the HAWK application) was negligible and thus not a significant impact on travel times in general. Ms. Belowich also reviewed the HAWK impact on network delay (slide 11) noting that there is no significant impact on the Milton Rd. corridor. Finally, she reviewed slide 12 comparing the intersection delay/LOS comparison of with and without HAWKs, noting that there was very little difference between the two.

**Project Partner Discussion**

Martin Ince asked about the information contained in the last row on slides 9 and 10. Ms. Belowich responded that this information was an oversight and should not have been included on the slide and apologized for the confusion. Dave Wessel asked to confirm the number of HAWKs included in the model. Ms. Belowich responded that there were two HAWKs identified. Dave Wessel asked if any of the intersection LOS F results were made more severe by the inclusion of the HAWKs. Ms. Belowich responded that no there was not. Dave Wessel asked about if the model witnessed any negative impacts to the proposed signals at Phoenix Ave. and Santa Fe. Ms. Belowich responded that the model did show some platooning, but not to the level where there was a cause for concern. Nate Reisner noted that the HAWKs did not have a significant impact, but offered that other spot improvements identified might have a negative impacts and that we may wish to modify those when evaluating the preferred alternative in the future. Ms. Belowich agreed and offered that we will be looking at additional refinements when applying to the preferred alternative. Dan Gabiou suggested that we should highlight this point in Working Paper #2.

## II. Review Tier 2 US 180 Model Results – Decision on US 180 (No-Build Plus or delay analysis)

Ms. Belowich continued the presentation by providing a brief overview and reminder of the US 180 modeling packages that were prepared and presented to the Partners in the Tier 2 modeling process. She briefly reviewed slides 13-19 that illustrate the various Tier 2, US 180 modeling packages with corresponding cross sections. Ms. Belowich concluded that, just as was identified in the Tier 2 analysis, there is a significant correlation to the delay on US 180 to the operations on Milton Rd. Moreover, if there is no significant travel time improvements on Milton Rd., the potential to see an improvement on US 180 is non-existent. In other words, Milton Rd. operations are a significant contributor to the impacts to operation on US 180. She reminded the Partners that per the previous slides, the T3 analysis suggests that there was no significant improvement to travel time on Milton Rd.

### ***Project Partner Discussion and Decision***

Dan Gabiou noted that comparing the results shown in slide 5, if there is no significant improvement to Milton Rd. travel time and that the build alternatives offered worse to negligible travel time change. He noted that Milton Rd. southbound in particular showed worsened southbound travel time change. Mr. Gabiou noted that as a result, there is really no need to increase capacity on US 180, and as such, he was recommending the Partners consider the No-Build Plus as the preferred alternative for US 180. He noted that this observation was first mentioned at a Partner meeting in December of 2019.

In reviewing slide 23, Dan Gabiou stated that staff's recommendation for US 180; 1) identify the No Build Plus as the recommended alternative for US 180 in Working Paper #2, and 2) If the public agrees, no further analysis was needed for US 180. He reminded the Partners that the No Build Plus alternative on US 180 still offers bike, pedestrian, wildlife and intersection safety improvements on US 180 per the previously identified spot improvement inventory.

Martin Ince inquired about the northbound direction on US 180 and was there an opportunity to close any existing sidewalk gaps? Mr. Kugler asked for clarification on location of the gaps and said that closing existing sidewalk gaps were not currently included in the spot improvement inventory for US 180. Dan Gabiou suggested that we could expand the US 180 preferred alternative as a "No-Build Plus Plus" per se so as to expand or modify the previous No-Build Plus alternative to also include a select number of additional spot improvements (not requiring additional right-of-way) that were not previously identified.

Nate Reisner noted that we need to keep the dual left turns at Humphrey's since ADOT was building a new bridge at the Rio de Flag to accommodate this second left turn lane. Steve Orosz asked if we included a dual left for No-Build Plus on Milton Rd. Dan Gabiou reminded the Partners that the intent of the No-Build Plus alternative was to avoid any additional right-of-way that would be needed to accommodate the suggested improvement. Mr. Kugler went on to review the listing of approved spot improvements for the intersection of Humphrey's and Route 66 (Milton Rd.).

Dave Wessel said he was ok with the recommendation for the No-Build Plus Plus alternative for US 180, noting that he would like to see bike and ped gaps included and that these may require some additional right-of-way.

Greg Mace asked how he would explain this recommendation to friends and neighbors who live off US 180. Dan Gabiou responded that he could review the T3 and T2 modeling results and that the previous bypass

alternatives presented in Tier 2 offered no additional travel time savings. Mr. Kugler added that much of the public feedback received also suggested that many residents along US 180 did not support a widening of the roadway, feeling that it would just invite more cars and traffic. Greg Mace then confirmed he would support the No-Build Plus Plus as the preferred alternative for US 180.

Pat McGervey offered that he would like to see US 180 be carried forward in the Tier 3 modeling process to do everything we could on US 180 before making a final decision.

Nate Reisner said that he supports the No-Build Plus Plus as the preferred alternative for US 180.

Kate Morley said she recalls the limited travel time savings on US 180, but wondered how this would be presented to the public. Dan Gabiou said the public will consider the No-Build Plus and No-Build Plus Plus options for US 180 (noting that we will develop a new term to replace “plus-plus”).

Pat McGervey said the fact that both options will be presented to the public addressed his initial concern and noted that he would also support the No-Build Plus Plus as the preferred alternative for US 180.

Rick Barrett had a question about the southbound results on Milton Rd, asking why they had worsened? Dan Gabiou responded by re-confirming the results conveyed on slide 5. Mr. Barrett said that he now understands and agreed that he can support the No-Build Plus Plus as the preferred alternative for US 180.

Dan Gabiou offered that we will ensure that the information presented at the public meeting will highlight non-capital improvements that have helped the operations of the corridors.

Kate Morley asked if we would apply the T3 evaluation criteria to US 180 or would we show the difference between the No-Build Plus and No-Build Plus Plus alternatives? Martin Ince suggested that we should compare the two alternatives for the public. Kevin Kugler responded that we can show the differences between the two alternatives in Working Paper #2 and receive public input at the public meeting. Dan Gabiou went on to say that we will take the public input received and in the draft final report include a final recommendation for US 180.

Rick Barret said he desires to capture this fact in Working Paper #2, and how this result/recommendation is similar to the Winter Needs Congestion Study for US 180. He was not sure that the City Engineers office can make this recommendation without broader input from others. Dan Gabiou said that he would follow up with staff on this.

Kate Morley asked how the Partners were going to weed out the spot improvements on US 180. Dan Gabiou responded that the draft final report will include a likely refined alternative with adjustments resulting from Partner and public inputs received.

**Partner Decision** – each Partner agreed that US 180 will not require Tier 3 modeling and that we will carry forward the No-Build Plus and No-Build Plus Plus alternatives for US 180.

### III., IV., V. and VI. Review of Public Survey and Project Partner Survey Results and Finalize the Milton Rd. and US 180 Tier 3 Evaluation Criteria Weighting

Brian Snider began the discussion with an overview of the Project Partner pairwise surveys for Milton Rd. and US 180 that was created to assist in of weights to each of the T3 evaluation criteria and sub-criteria. Referring to slides 25 and 26, Mr. Snider reviewed the results of the pairwise survey. He noted that the 53% consensus rating was considered a low to moderate rating. He underscored the results that the top three weighted criteria are; 1) Expand travel Mode Choices (22.9%), 2) Safety (18.5%), and 3) Community Character (14.2%).

Dan Gabiou then reviewed a spreadsheet that he prepared that day (since the public survey only closed the day before this meeting) in an effort to show a comparison between the public survey and Project partner survey results. This information was shown on the WebEx. Mr. Gabiou noted that in the comparison of the two survey results, Cost/Implementation, Expand Travel Mode Choices, and Community Character represented the criteria where the biggest difference in responses between the two surveys. Mr. Gabiou reminded the Partners that the bike and ped index and Community Character criteria have some redundancies and that 1/3 of the Environmental Impact criteria (Air Quality) is somewhat duplicative with the Network Delay criteria. He also noted that the percentages shown reflect a simple averaging of the responses and do not reflect an increase or decrease in any categories. The group suggested that there may be still a few paper copies of the survey out there from Title VI communities.

Mr. Gabiou then referred to the two options for the Partners to consider. These options were intended to define an approach to achieve consensus on the most appropriate and equitable method to blend the public survey and Partner pairwise survey results in order to establish/determine one weighting for each criterion. Mr. Gabiou presented the two options identified on the spreadsheet.

#### ***Project Partner Discussion and Decision***

##### ***Partner Pairwise Survey***

Dave Wessel asked what the percent difference column represented. Mr. Snider responded that it represented the percent difference from equilibrium (for each individual category) of 14.3% for this exercise. Dave Wessel added that he liked the academic nature of the exercise, thought it was clean and that he was not surprised by the results. Nate Reisner added that he was surprised that the Safety criteria scored so high considering that the Safety criteria has only one sub-criteria. Dave Wessel asked, and the group confirmed that the survey specified “vehicular safety”.

##### ***Public Survey Results/Consensus on Establishing Criteria Weighting***

After Mr. Gabiou completed his review and findings on his spreadsheet, Dave Wessel asked why he used the responses with the “5-priority” responses. Dan Gabiou responded that he used these responses since they reflect the top priorities for survey respondents. Mr. Wessel responded that he was concerned that using the top priorities only (#5 responses) that did not include the plurality and he did not want to see extra weight given for just the top picks. He went on to state that he felt that perhaps we should consider using the top two rows (#4 and #5 responses) as be a preferred way to approach this to not give extra weight to the top picks. Mr. Wessel went on to review the public survey responses regarding the priorities



of bike and ped users and also referred to a Denver-area study about the perception of traffic in comparison to the quality of urban design.

Kate Morley commented that she did not understand the rationale of why the Partners were attempting to make adjustments (up or down) to reconcile these two survey responses. Martin Ince noted that he wasn't sure that tweaking survey inputs received was a valid exercise. Greg Mace noted that he liked to use the raw data received and not do an exercise to average the weighting. After some additional discussion on general approach, Dave Wessel suggested that we identify a third option for consideration.

This third option became the "Average of All Responses - Project Partner Survey and Public Survey". Dan Gabiou suggested that we could include a fourth option that included making the Traffic Operations and Safety criteria the same weight by increasing Expand Travel Mode Choices by 5.4% and decreasing safety by 5.4%. Option 4 was categorized as the "Modified Average of All Responses - Project Partner Survey and Public Survey".

### **Project Partner Decision**

The Partners then took a vote on what option to use to reconcile the Partner survey responses and the public survey responses to determine the T3 evaluation criteria weighting. The vote was to select either Option 3 or Option 4. The results were:

Option 3:

Yes – Greg M., Kate M., Pat M., Dave W., Martin I., Rick B.

No – Nate R.

Option 4:

Yes – Nate R.

No - Greg M., Kate M., Pat M., Dave W., Martin I., Rick B.

Option 3 prevails.

Dave Wessel then thanked Dan Gabiou for facilitating the issue escalation meetings and agreeing to conduct the public survey. He felt the project was better served as a result.

## **VIII. Next Steps**

Mr. Kugler reviewed the content on slide 29 denoting the project next steps. He said now that the Partners have confirmed an approach to the weighting of the T3 evaluation criteria, the Michael Baker team would apply the Milton Rd. T3 model results to the Milton Rd. alternatives. Brian Snider reminded the group that the weighting of the T3 sub-criteria were being established using the results of Partner pairwise survey. Mr. Snider displayed a graphic on WebEx showing how the percentage weights for the sub-criteria were derived from the pairwise survey tool.

Mr. Kugler then explained that the results of the T3 analysis will include a draft prioritization of the Milton Rd. alternatives. This information will be included in Working Paper #2 that the Michael Baker team is currently drafting. Once the draft of Working Paper #2 is completed, it will be distributed to the Project Partners for their review and comment. Mr. Kugler concluded his comments by noting that, as Working

Paper #2 is being reviewed and finalized with the Partners, Michael Baker will begin to plan and prepare for the roll out of the public involvement activities that will consist of City Council and Board of Supervisor project briefings, a community open house meeting, a second public survey and outreach activities with the business community.

Dave Wessel asked if the Partners will receive a summary table of the T3 Evaluation Criteria with weightings. Mr. Kugler responded that Michael Baker could prepare this summary sheet and distribute that to the Partners. Dave Wessel closed the meeting by noting that he was going to look at the public survey results in a little more detail.



# Attachment 1: Final Project Partner Approved Tier 3 Evaluation Criteria



## Attachment 2: Project Partner Meeting PowerPoint Presentation





## Attachment 3: Tier 3 Evaluation Criteria Public Survey Results:



## Attachment 4: Tier 3 Evaluation Criteria Project Partner Survey Results



# Attachment 5: Options for Merging Public Survey Results and Project Partner Survey Results



# Appendix K – Tier 3 Evaluation Criteria Calculations





**Milton Road Tier 3 Travel Time Summary Table**

Alternative	T3 Rank	AM Peak Hour				PM Peak Hour			
		Northbound		Southbound		Northbound		Southbound	
		Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change
No Build	5	9.9	-	5.2	-	6.6	-	6.6	-
No Build Plus	3	5.9	40.7%	5.6	-7.6%	6.9	-4.8%	8.1	-23.3%
5	1	5.5	44.5%	5.4	-3.7%	6.8	-2.7%	7.6	-15.3%
6a	2	5.5	44.3%	5.7	-10.1%	6.9	-4.8%	7.4	-11.9%
6b	6	6.9	30.5%	6.3	-20.4%	7.3	-11.2%	7.9	-19.7%
13	4	6.5	34.6%	6.5	-24.5%	7.6	-15.1%	7.3	-11.3%

Total	Total
28.3	-
26.5	6.4%
25.3	10.8%
25.5	9.8%
28.4	-0.2%
27.9	1.5%

Alternative
No Build
No Build Plus
5
6a
6b
13

Average AM Travel Time	
7.6	
5.8	24.1%
5.5	27.9%
5.6	25.6%
6.6	13.0%
6.5	14.3%

Average PM Travel Time	
6.6	
7.5	-14.0%
7.2	-9.0%
7.1	-8.4%
7.6	-15.4%
7.4	-13.2%

**Milton Road Tier 3 Network Delay Results**

Alternative	T3 Rank	AM Peak Hour						PM Peak Hour					
		Network Delay (hrs)	Network Delay % Change	Latent Delay (hrs)	Latent Delay % Change	Total Delay (hrs)	Total Delay % Change	Network Delay (hrs)	Network Delay % Change	Latent Delay (hrs)	Latent Delay % Change	Total Delay (hrs)	Total Delay % Change
No Build	6	645	-	780	-	1,425	-	824	-	1,346	-	2,170	-
No Build Plus	5	525	18.6%	844	-8.2%	1,369	3.9%	800	3.0%	1,424	-5.8%	2,224	-2.5%
5	3	526	18.4%	695	10.9%	1,221	14.3%	769	6.7%	1,342	0.3%	2,111	2.7%
6a	1	528	18.2%	659	15.5%	1,187	16.7%	779	5.5%	1,229	8.7%	2,008	7.5%
6b	4	604	6.3%	626	19.8%	1,230	13.7%	826	-0.2%	1,320	1.9%	2,146	1.1%
13	2	601	6.7%	616	21.0%	1,217	14.5%	954	-15.7%	1,365	-1.4%	2,319	-6.8%

3,595	-
3,593	0.0%
3,332	7.3%
3,195	11.1%
3,376	6.0%
3,536	1.6%

## Milton Road Tier 3 Conflict Points Results

	Name	Milton Rd / Forest Meadows St	Milton Rd / University Dr	Milton Rd / Plaza Way	Milton Rd / Riordan Rd	Milton Rd / Butler Ave & Historic Rt 66	Milton Rd / Phoenix Ave	Milton Rd / Santa Fe Ave	Milton Rd / Humphreys St	Total	
No Build	Car-PED	21	25	28	28	11	21	12	0	5	151
	Car-Bike	13	16	12	12	5	13	12	1	5	89
	Car-Car	42	53	34	33	12	40	38	2	11	265
	Total	76	94	74	73	28	74	62	3	21	505
	No Build +	Car-PED	23	25	28	28	11	21	28	0	5
Car-Bike		14	16	12	12	5	13	12	1	5	90
Car-Car		50	53	33	33	12	40	38	2	11	272
Total		87	94	73	73	28	74	78	3	21	531
Alt 5		Car-PED	34	27	34	38	15	36	32	0	7
	Car-Bike	13	14	11	13	6	11	12	1	7	88
	Car-Car	54	66	49	66	21	54	46	3	17	376
	Total	101	107	94	117	42	101	90	4	31	687
	Alt 6a	Car-PED	34	28	38	42	17	38	32	0	7
Car-Bike		13	16	11	13	5	11	11	1	7	88
Car-Car		54	78	62	81	27	60	45	3	17	427
Total		101	122	111	136	49	109	88	4	31	751
Alt 6b		Car-PED	32	26	34	38	15	34	28	0	7
	Car-Bike	13	16	11	13	5	11	10	1	7	87
	Car-Car	50	62	52	70	23	51	36	2	19	365
	Total	95	104	97	121	43	96	74	3	33	666
	Alt 13	Car-PED	32	27	34	38	15	36	28	0	7
Car-Bike		13	16	11	13	5	12	12	1	7	90
Car-Car		50	66	54	72	25	61	38	2	19	387
Total		95	109	99	123	45	109	78	3	33	694



Milton Road Tier 3 Pedestrian Comfort Index and Bicycle Comfort Index Results

Pedestrian Comfort Index Evaluation Criteria		
No-Build		
Pedestrian Evaluation Criteria	Thresholds	Score
Sidewalk Width	6' wide or less	0
	6' - 7' wide	1
	7' - 9' wide	1.5
	Greater than 9' wide	2
Horizontal Buffer Width (select all):	No buffer	0
	0' - 3' buffer	0.5
	3' - 6' buffer	1
	6' - 9' buffer	1.5
Number of Total Vehicle Through Lanes	Greater than 9' buffer	2
	8	0
	6	1
	4	1.5
Traffic Volume: (Curb Lane)	2	2
	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
Presence of Median:	3,000 - 6,000	1.5
	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>3</b>

Bicycle Comfort Index Evaluation Criteria		
No-Build		
Bicycle Evaluation Criteria	Thresholds	Score
Bicycle Facility Type	No bike facility	0
	Shared-lane facility	0.5
	Bike lane	1
	Buffered bike lane	2
Number of Total Vehicle Through Lanes	8	0
	6	1
	4	1.5
	2	2
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
Presence of Median:	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>3</b>

Pedestrian Comfort Index Evaluation Criteria		
No-Build+		
Pedestrian Evaluation Criteria	Thresholds	Score
Sidewalk Width	6' wide or less	0
	6' - 7' wide	1
	7' - 9' wide	1.5
	Greater than 9' wide	2
Horizontal Buffer Width (select all):	No buffer	0
	0' - 3' buffer	0.5
	3' - 6' buffer	1
	6' - 9' buffer	1.5
Number of Total Vehicle Through Lanes	Greater than 9' buffer	2
	8	0
	6	1
	4	1.5
Traffic Volume: (Curb Lane)	2	2
	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
Presence of Median:	3,000 - 6,000	1.5
	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>4</b>

Bicycle Comfort Index Evaluation Criteria		
No-Build+		
Bicycle Evaluation Criteria	Thresholds	Score
Bicycle Facility Type	No bike facility	0
	Shared-lane facility	0.5
	Bike lane	1
	Buffered bike lane	2
Number of Total Vehicle Through Lanes	8	0
	6	1
	4	1.5
	2	2
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
Presence of Median:	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>4</b>

Pedestrian Comfort Index Evaluation Criteria		
Alternative 5		
Pedestrian Evaluation Criteria	Thresholds	Score
Sidewalk Width	6' wide or less	0
	6' - 7' wide	1
	7' - 9' wide	1.5
	Greater than 9' wide	2
Horizontal Buffer Width (select all):	No buffer	0
	0' - 3' buffer	0.5
	3' - 6' buffer	1
	6' - 9' buffer	1.5
Number of Total Vehicle Through Lanes	Greater than 9' buffer	2
	8	0
	6	1
	4	1.5
Traffic Volume: (Curb Lane)	2	2
	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
Presence of Median:	3,000 - 6,000	1.5
	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>6.5</b>

Bicycle Comfort Index Evaluation Criteria		
Alternative 5		
Bicycle Evaluation Criteria	Thresholds	Score
Bicycle Facility Type	No bike facility	0
	Shared-lane facility	0.5
	Bike lane	1
	Buffered bike lane	2
Number of Total Vehicle Through Lanes	8	0
	6	1
	4	1.5
	2	2
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
Presence of Median:	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>5.5</b>

Pedestrian Comfort Index Evaluation Criteria		
Alternative 6a		
Pedestrian Evaluation Criteria	Thresholds	Score
Sidewalk Width	6' wide or less	0
	6' - 7' wide	1
	7' - 9' wide	1.5
	Greater than 9' wide	2
Horizontal Buffer Width (select all):	No buffer	0
	0' - 3' buffer	0.5
	3' - 6' buffer	1
	6' - 9' buffer	1.5
Number of Total Vehicle Through Lanes	Greater than 9' buffer	2
	8	0
	6	1
	4	1.5
Traffic Volume: (Curb Lane)	2	2
	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
Presence of Median:	3,000 - 6,000	1.5
	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>8</b>

Bicycle Comfort Index Evaluation Criteria		
Alternative 6a		
Bicycle Evaluation Criteria	Thresholds	Score
Bicycle Facility Type	No bike facility	0
	Shared-lane facility	0.5
	Bike lane	1
	Buffered bike lane	2
Number of Total Vehicle Through Lanes	8	0
	6	1
	4	1.5
	2	2
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
Presence of Median:	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>5.5</b>

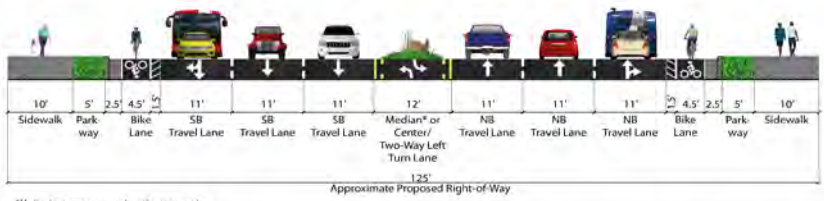
Pedestrian Comfort Index Evaluation Criteria		
Alternative 6b		
Pedestrian Evaluation Criteria	Thresholds	Score
Sidewalk Width	6' wide or less	0
	6' - 7' wide	1
	7' - 9' wide	1.5
	Greater than 9' wide	2
Horizontal Buffer Width (select all):	No buffer	0
	0' - 3' buffer	0.5
	3' - 6' buffer	1
	6' - 9' buffer	1.5
Number of Total Vehicle Through Lanes	Greater than 9' buffer	2
	8	0
	6	1
	4	1.5
Traffic Volume: (Curb Lane)	2	2
	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
Presence of Median:	3,000 - 6,000	1.5
	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>9</b>

Bicycle Comfort Index Evaluation Criteria		
Alternative 6b		
Bicycle Evaluation Criteria	Thresholds	Score
Bicycle Facility Type	No bike facility	0
	Shared-lane facility	0.5
	Bike lane	1
	Buffered bike lane	2
Number of Total Vehicle Through Lanes	8	0
	6	1
	4	1.5
	2	2
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
Presence of Median:	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>6</b>

Pedestrian Comfort Index Evaluation Criteria		
Alternative 13		
Pedestrian Evaluation Criteria	Thresholds	Score
Sidewalk Width	6' wide or less	0
	6' - 7' wide	1
	7' - 9' wide	1.5
	Greater than 9' wide	2
Horizontal Buffer Width (select all):	No buffer	0
	0' - 3' buffer	0.5
	3' - 6' buffer	1
	6' - 9' buffer	1.5
Number of Total Vehicle Through Lanes	Greater than 9' buffer	2
	8	0
	6	1
	4	1.5
Traffic Volume: (Curb Lane)	2	2
	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
Presence of Median:	3,000 - 6,000	1.5
	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>6</b>

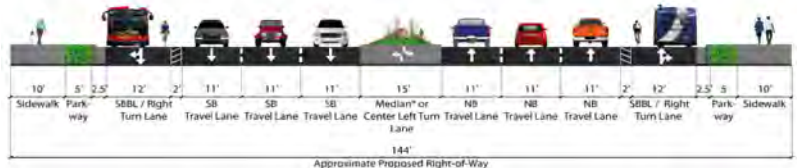
Bicycle Comfort Index Evaluation Criteria		
Alternative 13		
Bicycle Evaluation Criteria	Thresholds	Score
Bicycle Facility Type	No bike facility	0
	Shared-lane facility	0.5
	Bike lane	1
	Buffered bike lane	2
Number of Total Vehicle Through Lanes	8	0
	6	1
	4	1.5
	2	2
Traffic Volume: (Curb Lane)	> 12,000	0
	9,000 - 12,000	0.5
	6,000 - 9,000	1
	3,000 - 6,000	1.5
Presence of Median:	< 3,000	2
	No median	0
	TWLT / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		<b>4</b>

System Alternative 5



\*Median treatment may vary along the study corridor.  
 \*\*An ADOT design description and FHWA approval would be required for the application of 11' travel lanes.

Milton Road Corridor Master Plan System Alternative 6a



\*Median treatment may vary along the study corridor.  
 \*\*An ADOT design description and FHWA approval would be required for the application of 11' travel lanes.

Milton Road Corridor Master Plan System Alternative 6b



\*Median treatment may vary along the study corridor.  
 \*\*An ADOT design description and FHWA approval would be required for the application of 11' travel lanes.

Milton Road Corridor Master Plan System Alternative 13 (Mid-Block)



\*An ADOT design description and FHWA approval would be required for the installation of 11' travel lanes.

Milton Road Tier 3 Travel Time Summary Table - Transit

Alternative	T3 Rank	AM Peak Hour				PM Peak Hour			
		Northbound		Southbound		Northbound		Southbound	
		Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change	Travel Time (min)	Travel Time % Change
No Build	6	9.4	-	6.4	-	5.0	-	6.6	-
No Build Plus	2	5.0	46.8%	4.4	31.6%	5.5	-9.5%	6.7	-0.9%
5	4	5.7	39.8%	4.9	23.7%	5.8	-15.0%	6.0	9.2%
6a	3	4.7	50.2%	5.1	20.0%	4.6	8.7%	5.6	15.9%
6b	1	4.1	56.2%	4.7	27.3%	5.4	-6.8%	6.0	9.9%
13	5	5.0	46.4%	5.7	11.7%	6.0	-19.6%	6.6	0.4%

27.5	-
21.6	21.4%
22.4	18.6%
20.0	27.3%
20.1	26.8%
23.3	15.1%

Alternative
No Build
No Build Plus
5
6a
6b
13

Average AM Travel Time	
7.9	
4.7	40.6%
5.3	33.3%
4.9	37.9%
4.4	44.5%
5.4	32.3%

Average PM Travel Time	
5.8	
6.1	-4.6%
5.9	-1.2%
5.1	12.8%
5.7	2.7%
6.3	-8.2%

**ESTIMATE OF PROBABLE COSTS  
MILTON ROAD CORRIDOR MASTER PLAN**

**No-Build+ - (Forest Meadows to Beaver)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
<b>Spot Improvements</b>	<b>L.S.</b>	<b>1</b>	<b>\$3,430,950</b>	<b>\$3,430,950</b>
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$3,430,950</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$686,190
<b>Subtotal</b>				<b>\$4,117,140</b>
DUST PALLIATIVE (1%)	COST	1%		\$41,171
FURNISH WATER (1%)	COST	1%		\$41,171
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$494,057
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$41,171
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$82,343
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$82,343
<b>Subtotal</b>				<b>\$4,899,397</b>
MOBILIZATION (10%)	COST	10%		\$489,940
<b>Subtotal</b>				<b>\$5,389,336</b>
CONTIGENCIES (5%)	COST	5%		\$269,467
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$485,040
<b>Subtotal</b>				<b>\$6,143,843</b>
<b>DETAILED ESTIMATE</b>				<b>\$6,143,843</b>
ENGINEERING DESIGN (8%)	COST	8%		\$491,507
RIGHT OF WAY	SQ. FT.	53,884	\$36	\$1,939,839
UTILITIES (20%)	COST	20%		\$1,228,769
<b>Subtotal</b>				<b>\$3,660,115</b>
<b>OTHER COST TOTAL</b>				<b>\$3,660,115</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$6,144,000</b>
<b>OTHER COST TOTAL</b>				<b>\$3,660,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$9,804,000</b>

**ESTIMATE OF PROBABLE COSTS  
MILTON ROAD CORRIDOR MASTER PLAN**

**ALTERNATIVE 5 - (Forest Meadows to Beaver)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$770,000	\$770,000
REMOVAL OF AC PAVEMENT	SQ.YD.	60,207	\$20	\$1,204,133
AGGREGATE BASE, CLASS 2	CU.YD.	12,543	\$150	\$1,881,450
ASPHALTIC CONCRETE PAVEMENT	TON	32,359	\$250	\$8,089,750
CONCRETE CURB AND GUTTER	L.FT.	18,062	\$25	\$451,550
CONCRETE SIDEWALK	SQ.FT.	180,620	\$15	\$2,709,300
CONCRETE SIDEWALK RAMP	EACH	60	\$7,500	\$450,000
CONCRETE DRIVEWAYS	EACH	80	\$5,000	\$400,000
TRAFFIC SIGNALS	EACH	8	\$400,000	\$3,200,000
LANDSCAPE (PARKWAY)	SQ.FT.	90,310	\$12	\$1,083,720
SPOT IMPROVEMENTS	L.S.	1	\$7,685,100	\$7,685,100
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$27,925,003</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$5,585,001
<b>Subtotal</b>				<b>\$33,510,004</b>
DUST PALLIATIVE (1%)	COST	1%		\$335,100
FURNISH WATER (1%)	COST	1%		\$335,100
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$4,021,200
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$335,100
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$670,200
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$670,200
<b>Subtotal</b>				<b>\$39,876,904</b>
MOBILIZATION (10%)	COST	10%		\$3,987,690
<b>Subtotal</b>				<b>\$43,864,595</b>
CONTIGENCIES (5%)	COST	5%		\$2,193,230
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$3,947,814
<b>Subtotal</b>				<b>\$50,005,638</b>
<b>DETAILED ESTIMATE</b>				<b>\$50,005,638</b>
ENGINEERING DESIGN (8%)	COST	8%		\$4,000,451
RIGHT OF WAY	SQ. FT.	253,662	\$36	\$9,131,834
UTILITIES (20%)	COST	20%		\$10,001,128
<b>Subtotal</b>				<b>\$23,133,413</b>
<b>OTHER COST TOTAL</b>				<b>\$23,133,413</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$50,006,000</b>
<b>OTHER COST TOTAL</b>				<b>\$23,133,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$73,139,000</b>



**ESTIMATE OF PROBABLE COSTS  
MILTON ROAD CORRIDOR MASTER PLAN**

**ALTERNATIVE 6a - (Forest Meadows to Beaver)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$770,000	\$770,000
REMOVAL OF AC PAVEMENT	SQ.YD.	60,207	\$20	\$1,204,133
AGGREGATE BASE, CLASS 2	CU.YD.	15,191	\$150	\$2,278,650
ASPHALTIC CONCRETE PAVEMENT	TON	39,191	\$250	\$9,797,750
CONCRETE CURB AND GUTTER	L.FT.	18,062	\$25	\$451,550
CONCRETE SIDEWALK	SQ.FT.	180,620	\$15	\$2,709,300
CONCRETE SIDEWALK RAMP	EACH	60	\$7,500	\$450,000
CONCRETE DRIVEWAYS	EACH	80	\$5,000	\$400,000
TRAFFIC SIGNALS	EACH	8	\$400,000	\$3,200,000
LANDSCAPE (PARKWAY)	SQ.FT.	90,310	\$12	\$1,083,720
SPOT IMPROVEMENTS	L.S.	1	\$7,685,100	\$7,685,100
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$30,030,203</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$6,006,041
<b>Subtotal</b>				<b>\$36,036,244</b>
DUST PALLIATIVE (1%)	COST	1%		\$360,362
FURNISH WATER (1%)	COST	1%		\$360,362
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$4,324,349
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$360,362
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$720,725
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$720,725
<b>Subtotal</b>				<b>\$42,883,130</b>
MOBILIZATION (10%)	COST	10%		\$4,288,313
<b>Subtotal</b>				<b>\$47,171,443</b>
CONTIGENCIES (5%)	COST	5%		\$2,358,572
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$4,245,430
<b>Subtotal</b>				<b>\$53,775,445</b>
<b>DETAILED ESTIMATE</b>				<b>\$53,775,445</b>
ENGINEERING DESIGN (8%)	COST	8%		\$4,302,036
RIGHT OF WAY	SQ. FT.	398,689	\$36	\$14,352,804
UTILITIES (20%)	COST	20%		\$10,755,089
<b>Subtotal</b>				<b>\$29,409,929</b>
<b>OTHER COST TOTAL</b>				<b>\$29,409,929</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$53,775,000</b>
<b>OTHER COST TOTAL</b>				<b>\$29,410,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$83,185,000</b>

**ESTIMATE OF PROBABLE COSTS  
MILTON ROAD CORRIDOR MASTER PLAN**

**ALTERNATIVE 6a - (Forest Meadows to Beaver)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$770,000	\$770,000
REMOVAL OF AC PAVEMENT	SQ.YD.	60,207	\$20	\$1,204,133
AGGREGATE BASE, CLASS 2	CU.YD.	12,125	\$150	\$1,818,750
ASPHALTIC CONCRETE PAVEMENT	TON	31,281	\$250	\$7,820,250
CONCRETE CURB AND GUTTER	L.FT.	18,062	\$25	\$451,550
CONCRETE SIDEWALK	SQ.FT.	180,620	\$15	\$2,709,300
CONCRETE SIDEWALK RAMP	EACH	60	\$7,500	\$450,000
CONCRETE DRIVEWAYS	EACH	80	\$5,000	\$400,000
TRAFFIC SIGNALS	EACH	8	\$400,000	\$3,200,000
LANDSCAPE (PARKWAY)	SQ.FT.	144,496	\$12	\$1,733,952
SPOT IMPROVEMENTS	L.S.	1	\$7,685,100	\$7,685,100
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$28,243,035</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$5,648,607
<b>Subtotal</b>				<b>\$33,891,642</b>
DUST PALLIATIVE (1%)	COST	1%		\$338,916
FURNISH WATER (1%)	COST	1%		\$338,916
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$4,066,997
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$338,916
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$677,833
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$677,833
<b>Subtotal</b>				<b>\$40,331,054</b>
MOBILIZATION (10%)	COST	10%		\$4,033,105
<b>Subtotal</b>				<b>\$44,364,159</b>
CONTIGENCIES (5%)	COST	5%		\$2,218,208
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$3,992,774
<b>Subtotal</b>				<b>\$50,575,142</b>
<b>DETAILED ESTIMATE</b>				<b>\$50,575,142</b>
ENGINEERING DESIGN (8%)	COST	8%		\$4,046,011
RIGHT OF WAY	SQ. FT.	271,345	\$36	\$9,768,417
UTILITIES (20%)	COST	20%		\$10,115,028
<b>Subtotal</b>				<b>\$23,929,456</b>
<b>OTHER COST TOTAL</b>				<b>\$23,929,456</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$50,575,000</b>
<b>OTHER COST TOTAL</b>				<b>\$23,929,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$74,504,000</b>

**ESTIMATE OF PROBABLE COSTS  
MILTON ROAD CORRIDOR MASTER PLAN**

**ALTERNATIVE 13 Mid-Block - (Forest Meadows to Beaver)**

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
REMOVAL OF CONCRETE CURB AND GUTTER, SIDEWALK, DRIVEWAY & SLA	L.S.	1	\$770,000	\$770,000
REMOVAL OF AC PAVEMENT	SQ.YD.	60,207	\$20	\$1,204,133
AGGREGATE BASE, CLASS 2	CU.YD.	11,707	\$150	\$1,756,050
ASPHALTIC CONCRETE PAVEMENT	TON	30,202	\$250	\$7,550,500
CONCRETE CURB AND GUTTER	L.FT.	18,062	\$25	\$451,550
CONCRETE SIDEWALK	SQ.FT.	180,620	\$15	\$2,709,300
CONCRETE SIDEWALK RAMP	EACH	60	\$7,500	\$450,000
CONCRETE DRIVEWAYS	EACH	80	\$5,000	\$400,000
TRAFFIC SIGNALS	EACH	8	\$400,000	\$3,200,000
LANDSCAPE (PARKWAY)	SQ.FT.	180,620	\$12	\$2,167,440
SPOT IMPROVEMENTS	L.S.	1	\$8,585,100	\$8,585,100
<b>DCR DETAILED ESTIMATE SUBTOTAL</b>				<b>\$29,244,073</b>
MISCELLANEOUS WORK (20%)	COST	20%		\$5,848,815
<b>Subtotal</b>				<b>\$35,092,888</b>
DUST PALLIATIVE (1%)	COST	1%		\$350,929
FURNISH WATER (1%)	COST	1%		\$350,929
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		\$4,211,147
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		\$350,929
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		\$701,858
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		\$701,858
<b>Subtotal</b>				<b>\$41,760,536</b>
MOBILIZATION (10%)	COST	10%		\$4,176,054
<b>Subtotal</b>				<b>\$45,936,590</b>
CONTIGENCIES (5%)	COST	5%		\$2,296,829
CONSTRUCTION ENGINEERING (9%)	COST	9%		\$4,134,293
<b>Subtotal</b>				<b>\$52,367,712</b>
<b>DETAILED ESTIMATE</b>				<b>\$52,367,712</b>
ENGINEERING DESIGN (8%)	COST	8%		\$4,189,417
RIGHT OF WAY	SQ. FT.	286,207	\$36	\$10,303,441
UTILITIES (20%)	COST	20%		\$10,473,542
<b>Subtotal</b>				<b>\$24,966,400</b>
<b>OTHER COST TOTAL</b>				<b>\$24,966,400</b>
<b>SUMMARY</b>				
<b>DETAILED ESTIMATE</b>				<b>\$52,368,000</b>
<b>OTHER COST TOTAL</b>				<b>\$24,966,000</b>
<b>TOTAL PROJECT CONSTRUCTION COST</b>				<b>\$77,334,000</b>

NOTE: All Agency Funding Sources Max Available limits are hypothetical with the exception of Mountain Line.

Funding Source	Max Available	Alternative: No Build			Alternative: No Build Plus			Alternative 5 - 6GP			Alternative 6a - 6GP, bbtI			Alternative 6b - 4GP, bbtI			Alternative 13 - 4GP, CRL		
		Size (mills)	Odds	Raw S*O	Size **	Odds	Raw	Size	Odds	Raw	Size	Odds	Raw	Size	Odds	Raw	Size	Odds	Raw

Grant																				
HSIP	5	0.0	1.6	0.0	1.0	1.6	1.6	1.0	1.6	1.6	1.0	1.6	1.6	1.0	1.6	1.6	1.0	1.6	1.6	
BUILD (Max 25)	25	0.0	0.4	0.0	12.0	0.4	4.8	12.0	0.4	4.8	12.0	0.4	4.8	12.0	0.4	4.8	12.0	0.4	4.8	
INFRA (Min 100)	100	0.0	0.6	0.0	50.0	0.6	30.0	50.0	0.6	30.0	50.0	0.6	30.0	50.0	0.6	30.0	50.0	0.6	30.0	
CIG (Max total award 50)) (60% grant	50	0.0	1	0.0	7.0	1	7.0	7.0	1.5	10.5	51.2	2	102.3	42.8	2	85.5	43.9	3	131.7	
State 5307/5339* (max 10)	10	0.0	0.7	0.0	2.9	0.7	2.0	2.9	0.7	2.0	10.0	0.7	7.0	10.0	0.7	7.0	10.0	0.7	7.0	
ATCMTD - technology deployment	12	0.0	1.2	0.0	3.0	1.2	3.6	3.0	1.2	3.6	3.0	1.2	3.6	3.0	1.2	3.6	3.0	1.2	3.6	
CRISI - rail safety & infrastructure																				

\* Use only for raising federal share of CIG grant to up to 80%. Maximum reasonably available funds for Mountain Line is \$10M  
 \*\* Size cannot exceed Max Available

Score (Raw) Total All Sources				15.0			49.0			52.5			149.3			132.5			178.7
Cost (mills) - includes R/W				1.0			9.8			85.4			95.5			74.5			77.3
Score/Cost (potential to pay)				15.0			5.0			0.6			1.6			1.8			2.3
<b>Normalized (highest = 100)</b>				<b>100.0</b>			<b>33.4</b>			<b>4.1</b>			<b>10.4</b>			<b>11.9</b>			<b>15.4</b>

<b>BRT costs* (if Baker has better breakdown, please provide)</b>							7.0			7.0			51.2			42.8			43.9
TSP (mills) required per CIG	2						2			2			2			2			2
Bus Lanes @ \$2.2M/mile	6.0												6.0			6			6.0
Sidewalks	3						3			3			3			3			3
Stations @ \$300k ea	1.2						1.2			1.2			1.2			1			1.2
Crossings @ \$200k ea	0.8						0.8			0.8			0.8			1			0.8
R/W	40%	of cost. BRT = % of alternative R/W needed for S/W, Bike, bus					0.0			0.0			38.2			29.8			30.9
BRT costs							7.0			7.0			51.2			43			43.9

<b>Match Test</b>																			
Match Required (all grants)		0.0			45.7			45.7			76.9			71.3			72.1		
Match Test		SUCCESS			FAIL			FAIL			FAIL			FAIL			FAIL		

**Guidance**  
 Agency funding is not considered and blocked out. The score only includes grant awards.

**Size (grant):**  
 Max grant size is based on historic NC The estimate does not represent a commitment.  
 Size is based on average award or ger What would you recommend to your governing body.  
**Odds:** Maybe qualify agency source as "match only"  
 Grant level odds are based on an average of number of awards divided by number of applications and dollars awarded divided by dollars requested.

**Commentary**  
 This exercise and criteria represents the potential to pay, not the absolute ability to pay  
 HSIP and ATCMTD and INFRA likely don't change per alternative.  
 No build base is problematic. Earlier version effectively assumed local dollars were available for other means and used those to set base line  
 Is this adaptable to US 180?  
 Might further recommend changing odds based on general eligibility. For instance, INFRA is freight oriented. HSIP required fatalities and severe injuries. Both of these might have lower odds.  
 5307/5339 - use only to reduce match on CIG? Assume that there are not additional eligible transit projects outside of BRT eligible elements that would "allow" use of additional 5307 funds  
 However, may wish to permit ped/bike costs above and beyond Milton project costs or at least acknowledge possibility/probability  
 CIG grant should show total project cost (up to 50 million) for each alternative. Our approach would be for CIG federal portion to cover the BRT aspects of the project (bus real estate, TSP, etc.) and look to local partners for overmatch to cover aspects that aren't transit-supportive, such as the additional GP lane in alt 6a.  
 Mountain Line local match would be equal among the alternatives  
 Mountain Line can use other federal grants to go as high as 80% federal share on CIG supported project  
 Up to 50 million but includes San Fran/Beaver, but these are small

Problem in that it allows an agency to favor an alternative that does not meet with partner consensus, support in word but not deed  
 The consensus alternative may not align as well with individual agency priorities and so fall down those respective priority lists for funding

Local agency funds must be available to match all grants  
 How does one address a 20-30 year horizon and the odds of receiving one or more grants over time?  
 Set grant to amount of match available

Match Test: Adds up required match for all grants and determines if the local agency funds are adequate. Don't have to meet all match. Not likely to receive all grants

Up to 50 million but includes San Fran/Beaver, but these are small

Problem in that it allows an agency to favor an alternative that does not meet with partner consensus, support in word but not deed  
 The consensus alternative may not align as well with individual agency priorities and so fall down those respective priority lists for funding

Local agency funds must be available to match all grants  
 How does one address a 20-30 year horizon and the odds of receiving one or more grants over time?



## 2040 GHG Emissions

## Emission Factors

	VMT	lbs CO2e		Percentage	lbs CO2e/mile (2040)
<b>No Build</b>	42,545	22,305	<b>Standard US automobile</b>	97%	0.519417434
<b>No Build Plus</b>	41,396	21,703	<b>Commercial semi truck</b>	3%	0.681054574
<b>Alternative 5</b>	42,683	22,377			
<b>Alternative 6A</b>	43,349	22,726			
<b>Alternative 6B</b>	42,469	22,265			
<b>Alternative 13</b>	43,855	22,992			

### Notes:

1. Emissions are presented in pounds (lbs) carbon dioxide equivalent (CO2e) and metric tons (MT) CO2e.
2. Speed variance between alternatives is small so emission factors do not consider speed.
3. Emissions factors for Coconino County, Arizona were obtained from EPA MOVES model, <https://www.epa.gov/moves/latest-version-motor-vehicle-emission-simulator-moves>.
4. All fuel types are included. "Standard US automobile" represents Passenger Car and Passenger Truck in MOVES model. "Commercial semi truck" represents Light Commercial Truck, Refuse Truck, Single Unit Short-haul and Long-haul Truck, and Combination Short-haul and Long-haul Truck in MOVES model.
5. Urban Unrestricted Access roadway type was selected in MOVES model.