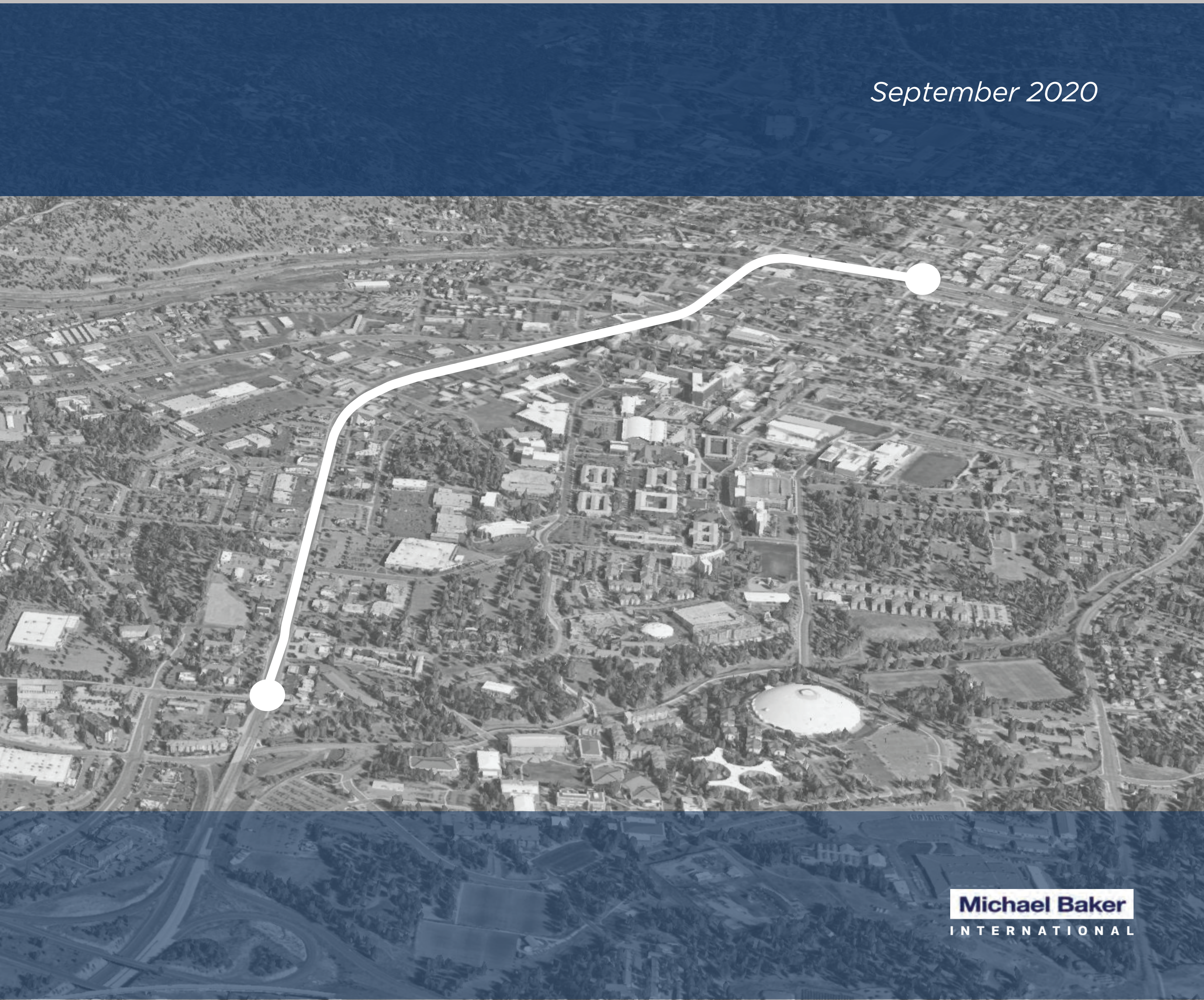
ADOT

Milton Road Corridor Master Plan

Working Paper #2 - Alternative Analysis

September 2020



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1.0 INTRODUCTION

1.1 Corridor Master Plan Purpose & Need

The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for the Milton Road 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 Milton Road right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the Milton Road 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-term and long-term System Alternatives.

The Milton Road CMP process has included, and will to continue to include, public and stakeholder involvement that consists of a thorough and community-vetted, quantitative evaluation criteria exercise for the review 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 the community.

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 the
- BNSF

The Project Partners are established to guide the success of the Milton Road 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 Milton Road CMP which are not prioritized in any particular order.

Figure 1-1: Milton Road CMP Goals

1. Address year-round congestion and safety on Milton Road
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.

1.3 Milton Road Corridor Overview

The nature and function of Milton Road has changed over the years with the evolution and growth of the City of Flagstaff. Historically, Milton Road primarily served residents and visitors as a connection between Interstate 17 (I-17) to downtown Flagstaff, Interstate 40 (I-40), Historic Route 66 and US Highway 180 (US 180). Although Milton Road continues to serve in that capacity today, the roadway is now a formidable commercial corridor for NAU students and residents throughout Coconino County. Milton Road is home to a considerable portion of the destination commercial retail growth south of downtown. Illustrated in **Figure 1-2**, the Milton Road Corridor Master Plan study corridor consists of a 1.8-mile segment from West Forest Meadows Street (Mile Post 402.16) to Beaver Street (MP 180.20).

Milton Road is a multi-functional corridor serving residents and regional visitors as the gateway to the Grand Canyon and recreational sites in the Coconino National Forest. There is an extensive list of issues within the study corridor, including severe traffic congestion caused by the combination of local traffic and visitors, especially during the winter snow play season. The frequency and close proximity of driveways and intersections causes access management conflicts, and Milton Road's proximity to a significant number of commercial, employer and housing destinations, as well as adjacency to Northern Arizona University brings multimodal challenges facing bicyclists, pedestrians and transit users.

Chapter 5: Existing Roadway and Corridor Conditions of *Working Paper #1 Existing & Future Conditions* offers a more comprehensive examination of the existing travel and operational characteristics of Milton Road. Refer to Appendix B for reference to *Working Paper #1 Existing & Future Conditions*.

looking northbound on Milton Road at the southern terminus of the corridor

Source: City of Flagstaff

Figure 1-2: Milton Road CMP Study Corridor

2.0 THREE TIER ALTERNATIVE EVALUATION PROCESS OVERVIEW

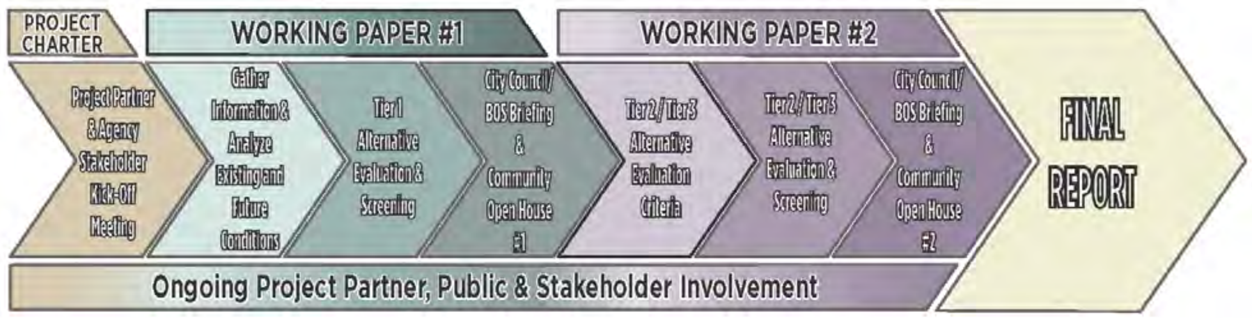
2.1 Working Paper #2 Objectives

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 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 Milton Road CMP process.

Figure 2-1: Milton Road CMP Study Process



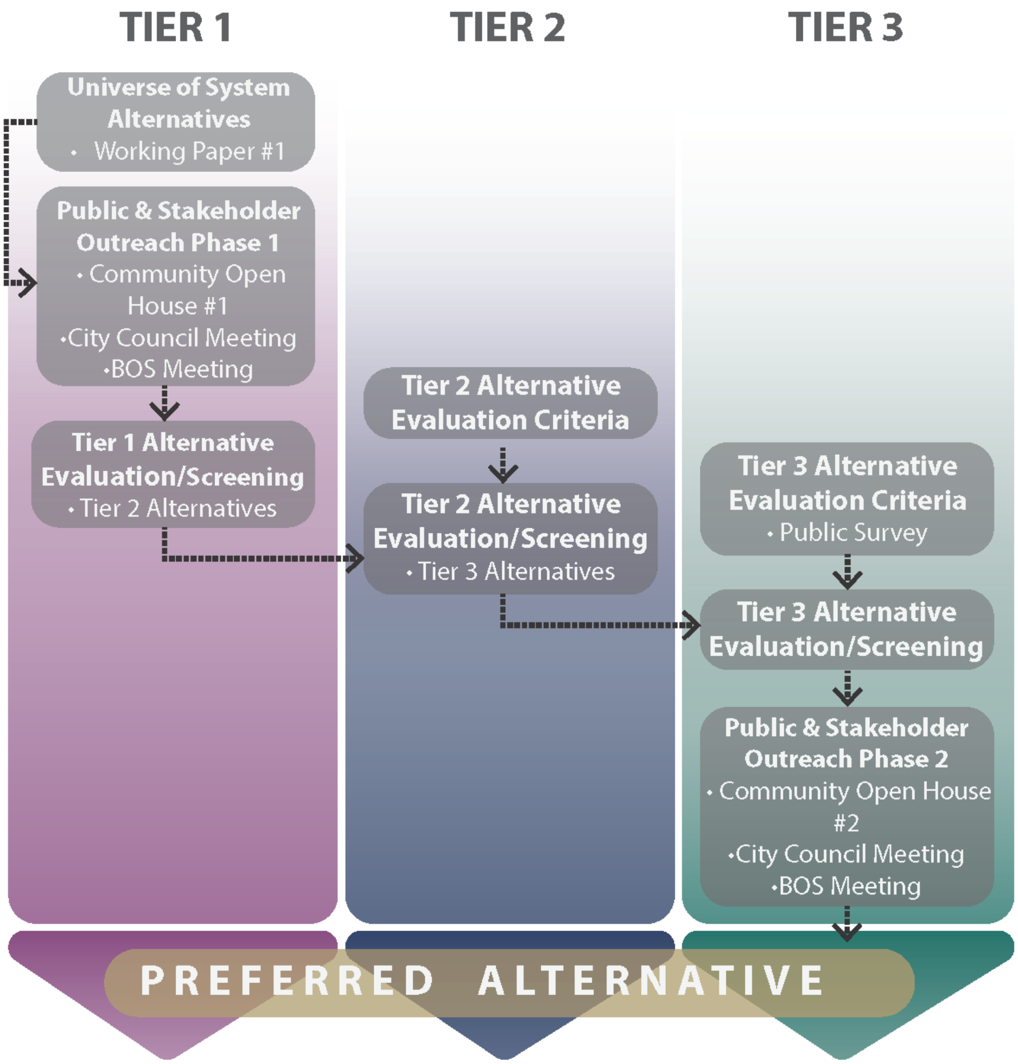
2.2 Three Tier Approach

The Milton Road 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 10, 2018 in which 86 community members attended.

The primary objective of Public Open House Meeting #1 was to present the Preliminary System Alternatives for the Milton Road 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 *Milton Road 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
Station 2: System Alternatives Utilizing Existing Right-of-Way			
Preliminary System Alternative 1: No-Build (Maintain as Is)	Not Applicable		
Base Build Spot improvements	See Table 2		
Preliminary System Alternative 2: Milton Road Reversible Lane	2	**34**	4
Preliminary System Alternative 3: Six, 11-Foot General Purpose Lanes with Center Median/Turn Lane with 6-foot Sidewalks	17	**26**	2
Preliminary System Alternative 4: Four, 11-Foot General Purpose Lanes with Center Median/Left Turn Lane, and two 14-foot Shared Bus/Bike Lanes (SBBL) with 7-foot sidewalks	**34**	7	8
Station 3: System Alternatives that May Require Expanded Right-of-Way			
Preliminary System Alternative 5: Six, 11-Foot General Purpose Lanes with a Center Median/Center Turn Lane, and 6-Foot Bicycle Lanes with 6-Foot Sidewalks	**25**	20	3
Preliminary System Alternative 6: Six, 11-Foot General Purpose Lanes, Two 13-Foot Shared Bus/Bike Lanes (SBBL), and Center Median/Turn Lane with 7-Foot Sidewalks	4	**36**	0
Preliminary System Alternative 7: Eight, 11-Foot General Purpose Lanes	0	**42**	2
Preliminary System Alternative 8: Four, 11-Foot General Purpose Lanes, Two 14-Foot Shared Bus/Bike Lanes (SBBL), 14-Foot Landscaped Median, 10-Foot Landscaped Setbacks, and 10-Foot Sidewalks	17	**34**	0
Station 4: Alternative Routes to Milton Road			
Preliminary System Alternative 9: Milton Road No Build and Lone Tree Design Concept Report	**43**	3	1
Preliminary System Alternative 10: Backage Road Improvement: Clay Avenue/Malpais Lane/McCracken/Blackbird Roost Street	2	**17**	2
Preliminary System Alternative 10: Backage Road Improvement: West Route 66/Riordan Ranch Street	**22**	0	9
Preliminary System Alternative 10: Backage Road Improvement: Metz Walk Extension to Plaza Way	8	**10**	3
Preliminary System Alternative 10: Backage Road Improvement: Plaza Way/Yale Street/University Avenue	**14**	6	4
Preliminary System Alternative 10: Backage Road Improvement: Route 66/Yale Street/Beulah Blvd. Extension/Ft. Tuthill	**33**	7	1

4.0 TIER 2 ALTERNATIVE EVALUATION & SELECTION

4.1 Tier 2 Alternative Evaluation

Subsequent to Public Open House Meeting #1 of May 10, 2018, the Project Partners deliberated over a series of meetings to discuss and select which Milton Road 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 3;
- Alternative 4;
- Alternative 5;
- Alternative 6; and
- Alternative 9.

Table 4-1 on the following pages 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. Some modified BRT alternatives were also introduced by Mountain Line for Project Partner consideration in line with the project goals.

It is worth noting here that the Tier 1 System Alternatives included a series of alternate routes to Milton Road known as “backage roads” that were collectively captured as System Alternative 10 in Tier 1. Through the Project Partner review and deliberation of the public inputs and operational challenges of the backage road concept, Alternative 10 was eliminated from Tier 2 consideration as those improvements are outside ADOT control. Should the City assess that backage roads are beneficial to the corridor it may include them in its plans and programs.

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**
Station 2: System Alternatives Utilizing Existing Right-of-Way			
Preliminary System Alternative 1: No-Build (Maintain as Is)	Not Applicable		
Base Build Spot improvements	See Table 2		
~~Preliminary System Alternative 2: Milton Road Reversible Lane~~	~~2~~	**~~34~~**	4
Preliminary System Alternative 3: Six, 11-Foot General Purpose Lanes with Center Median/Turn Lane with 6-foot Sidewalks	17	**26**	2
Preliminary System Alternative 4: Four, 11-Foot General Purpose Lanes with Center Median/Left Turn Lane, and two 14-foot Shared Bus/Bike Lanes (SBBL) with 7-foot sidewalks	**34**	7	8
Station 3: System Alternatives that May Require Expanded Right-of-Way			
Preliminary System Alternative 5: Six, 11-Foot General Purpose Lanes with a Center Median/Center Turn Lane, and 6-Foot Bicycle Lanes with 6-Foot Sidewalks	**25**	20	3
Preliminary System Alternative 6: Six, 11-Foot General Purpose Lanes, Two 13-Foot Shared Bus/Bike Lanes (SBBL), and Center Median/Turn Lane with 7-Foot Sidewalks	4	**36**	0
~~Preliminary System Alternative 7: Eight, 11-Foot General Purpose Lanes~~	~~0~~	**~~42~~**	~~2~~
~~Preliminary System Alternative 8: Four, 11-Foot General Purpose Lanes, Two 14-Foot Shared Bus/Bike Lanes (SBBL), 14-Foot Landscaped Median, 10-Foot Landscaped Setbacks, and 10-Foot Sidewalks~~	~~17~~	**~~34~~**	~~0~~
Station 4: Alternative Routes to Milton Road			
Preliminary System Alternative 9: Milton Road No Build and Lone Tree Design Concept Report	**43**	3	1
~~Preliminary System Alternative 10: Backage Road Improvement: Clay Avenue/Malpais Lane/McCracken/Blackbird Roost Street~~	~~2~~	**~~17~~**	~~2~~
~~Preliminary System Alternative 10: Backage Road Improvement: West Route 66/Riordan Ranch Street~~	**~~22~~**	~~0~~	~~9~~
~~Preliminary System Alternative 10: Backage Road Improvement: Metz Walk Extension to Plaza Way~~	~~8~~	**~~10~~**	~~3~~
~~Preliminary System Alternative 10: Backage Road Improvement: Plaza Way/Yale Street/University Avenue~~	**~~14~~**	~~6~~	4
~~Preliminary System Alternative 10: Backage Road Improvement: Route 66/Yale Street/Beulah Blvd. Extension/Ft. Tuthill~~	**~~33~~**	~~7~~	~~1~~
Notes: *Alternatives displayed with a strikethrough were eliminated from further study during the Tier 2 Alternative Evaluation*			

4.2a Controlling Design Criteria

Born 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
General Purpose Lane Width	**Urban:** • *Arterial Minimum - 10' with low truck and bus volumes • Arterial desired – 12' (AASHTO 7.3 Urban Arterials) * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	**Urban:** • *Through lane Min – 11' • Through lane Max – 16' **Rural:** • Through lane Min – 12' Through lane Max – 12' * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	**Urban Milton & US 180:** • 12' **Suburban Milton & US 180:** • 12' **Rural US 180:** • 12'	**Urban Milton & US 180:** • 11' **Suburban Milton & US 180:** • 11' **Rural US 180:** • 12'	**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.
Left Turn Lane	**Urban:** • *Auxiliary lane Min. – 10' • Auxiliary lane Max. – 16' * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	**Urban:** • *Auxiliary (turn) lane Min – 10' • Auxiliary lane Max = none **Rural:** • Auxiliary lane Min – 12' • Auxiliary lane Max – 12' * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	**Urban Milton & US 180:** • 12 **Suburban Milton & US 180:** • 12' **Rural US 180:** • 11'	**Urban Milton:** • 11' **Urban US 180:** • 10' **Suburban Milton & US 180:** • 12' **Rural US 180:** • 11'	**
Right Turn Lane	**Urban:** • *Auxiliary lane Min. – 10' • Auxiliary lane Max. – 16' * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	**Urban:** • *Auxiliary (turn) lane Min – 10' • Auxiliary lane Max = none **Rural:** • Auxiliary lane Min – 12' • Auxiliary lane Max – 12' * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	**Urban Milton & US 180:** • 12' **Suburban Milton & US 180:** • 12' **Rural US 180:** • 11'	**Urban Milton & US 180:** • 11' - Regional Plan policy supports no RT lanes, except at major intersections **Suburban Milton & US 180:** • 12' **Rural US 180:** • 11'	**
Median Width	**Urban:** • Arterial minimum Median Width – 4' • Arterial minimum Median Width for pedestrian refuge – 6' • *Auxiliary lane Min. – 10' • Auxiliary lane Max. – 16' **Rural:** Not applicable on US 180 cross sections * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	**Urban:** • Raised - 16' Through lane - 4' with a turn lane **Rural:** Not applicable on US 180 cross sections	**Urban Milton & US 180:** • 4' **Suburban Milton & US 180:** • 4' **Rural US 180:** Not Applicable	**Urban Milton & US 180:** • 4' **Suburban Milton & US 180:** • 4' **Rural US 180:** Not Applicable	

Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
Median Width (With Plantings)			**Urban Milton & US 180:** • 8’ **Suburban Milton & US 180:** • 8’ **Rural US 180:** Not Applicable	**Urban Milton:** • 12’ **Urban US 180:** • 11’ **Suburban Milton & US 180:** • 12’ **Rural US 180:** 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)			**Urban Milton & US 180:** • 15’ **Suburban Milton & US 180:** • 15’ **Rural US 180:** Not Applicable	**Urban Milton & US 180:** • 15’ **Suburban Milton & US 180:** • 16’ **Rural US 180:** Not Applicable	This assumes 4-foot median with no plantings. Can be narrowed up to 1 foot.
Two Way Left Turn Lane	• **Raised Max –** - *TWLT Min – 10’ - TWLT Max – 12’ * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	• **Raised Max –** - *TWLT Min – 10’ - TWLT Max – 12’ * Anything below 12' has to obtain an variance from the Assistant State Engineer over Roadway Engineering Group.	• 11’	• 11’ (12’ for Suburban US 180)	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.	**Urban Milton & US 180:** • 5’ **Suburban Milton & US 180:** • 5’ **Rural US 180:** Not applicable	**Urban Milton & US 180:** • 7’ **Suburban Milton & US 180:** • 8’ **Rural US 180:** 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			**Urban Milton & US 180:** • 1’ **Suburban Milton & US 180:** • 2’ **Rural US 180:** Not applicable	**Urban Milton & US 180:** • 1’ **Suburban Milton & US 180:** • 2’ **Rural US 180:** Not applicable	Used for poles, signage, utilities, etc. Used for sidewalk stabilization
Shoulder	**Rural Shoulder:** Desirable – 8’ Minimum - 4’	**Rural Shoulder:** Desirable – 8’ DHV > 200 vph Minimum - 6’ DHV<200 vph	**Rural US 180:** Not applicable within Flagstaff City Limits	**Rural US 180:** Not applicable within Flagstaff City Limits	

Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
Bike Lane	**Urban:** Desirable – 5’ Minimum - 4’ **Rural Shoulder:** Desirable – 8’ Minimum - 4’	**Urban:** **See ADOT Bicycle Policy –** (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.) Desirable – 5’ Minimum - 4’ **Rural Shoulder:** Desirable – 8’ DHV > 200 vph Minimum - 6’ DHV<200 vph	*Measurements do not include gutter pan* **Urban Milton & US 180:** • 4.5’ **Suburban Milton & US 180:** • 4.5’ **Rural US 180:** • 4’	*Measurements do not include gutter pan* **Urban Milton & US 180:** • 6’ with Buffer **Suburban Milton & US 180:** • 6’ with Buffer **Rural US 180:** • 8’	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.)	**Urban Milton & US 180:** • 10’ **Suburban Milton:** • 10’ **Suburban US 180:** • 6’ (one-side - if paired with FUTs on other side) **Rural US 180:** Not applicable on US 180 cross sections	**Urban Milton & US 180:** • 10’ **Suburban Milton:** • 10’ **Suburban US 180:** • 6’ (one-side - if paired with FUTs on other side) **Rural US 180:** Not applicable on US 180 cross sections	A sidewalk is preferred over a multi-use path on Milton Road.
Multi-Use Path/ Offset (parkway)			**Urban Milton & US 180:** Not applicable **Suburban Milton:** Not applicable **Suburban US 180:** • 20’ **Rural US 180:** • 15’	**Urban Milton & US 180:** Not applicable **Suburban Milton:** Not applicable **Suburban US 180:** • 20’ **Rural US 180:** • 15’	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	**Urban Milton & US 180:** • 6’ **Suburban Milton & US 180:** • 6’ **Rural US 180:** • 6’	**Urban Milton:** • 11’ **Urban US 180:** • 10’ **Suburban Milton & US 180:** • 12’ **Rural US 180:** • 11’	For preferred, a pedestrian island refuge can be as wide as the center lane, if one is present.

Roadway Feature	FHWA Standard	ADOT Standard	Flagstaff/FMPO/NAIPTA Standard	Flagstaff/FMPO/NAIPTA Preferred Standard	Notes
Bus Bay/Pullouts		Bus pullouts may be required under any one of the following conditions: 1) Posted speed limit is 35 mph or higher; and 2) There are less than three through-travel lanes in the direction that the bus is traveling 3) There is an identified bicycle facility adjacent to the travel lane. 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 ADOT construction detail C-05.50 has dimensions for a bus pullout.	Urban Milton & US 180: • 12' Suburban Milton & US 180: • 12' Rural US 180: Not applicable	Urban Milton & US 180: • 12' (NAIPTA does not prefer in this context, very site specific) Suburban Milton & US 180: • 12' Rural US 180: • 12'	NAIPTA will not stop in ROW in a rural context, only stop will be Snowbowl lower parking lot. Bus Bays will not be used in BRT Alternatives.
Side running shared bus bike lane (SBBL) (with right turns)			Urban Milton & US 180: • 12' Suburban Milton & US 180: • 12' Rural US 180: • 12'	Urban Milton & US 180: • 16' Suburban Milton & US 180: • 16' Rural US 180: • 16'	Based on NACTO standards
Side running bus lane (with right turns)			Urban Milton & US 180: • 12' Suburban Milton & US 180: • 12' Rural US 180: • 12'	Urban Milton & US 180: • 12' Suburban Milton & US 180: • 12' Rural US 180: • 12'	Based on NACTO standards
Bus Stop (Back of Curb)			Urban Milton & US 180: • 8' Suburban Milton & US 180: • 8' Rural US 180: • 8'	Urban Milton & US 180: • 10' Suburban Milton & US 180: • 10' Rural US 180: • 8'	This standard can vary when topography is in play due to ADA standards
Center Running transit - 2 lanes + buffer			Urban & Suburban Milton: • 25' (2, 11' lanes with 2, 1.5' buffers) Urban, Suburban, & Rural US 180: Not Applicable	Urban & Suburban Milton: • 28' (2, 12' lanes with 2, 2' buffers) Urban, Suburban, & Rural US 180: Not Applicable	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			**Urban & Suburban Milton:** • 33' (2, 11' lanes with 2, 1.5' buffers and an 8' Platform) **Urban, Suburban, & Rural US 180:** Not Applicable	**Urban & Suburban Milton:** • 34' (2, 11' lanes with 2, 2' buffers and an 8' Platform) **Urban, Suburban, & Rural US 180:** Not Applicable	See Assumptions for details Option A: Scissors Platforms Options B: Offset Platforms
Center Running Transit - Mid-Block Transit Station			**Urban & Suburban Milton:** • 33' (2, 11' lanes with 2, 1.5' buffers and an 8' Platform) **Urban, Suburban, & Rural US 180:** Not Applicable	**Urban & Suburban Milton:** • 34' (2, 11' lanes with 2, 2' buffers and an 8' Platform) **Urban, Suburban, & Rural US 180:** Not Applicable	See Assumptions for details Option A: Scissors Platforms Options B: Offset Platforms
Clear Recovery Zone	**Urban:** 4' - 6' **Rural:** 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:

a. Minimum ADOT/FHWA standards are being met
b. If any variances or design exceptions would require FHWA approval
c. Once min standards are met, which FMPO/City/NAIPTA standard is preferred
d. Understanding that if max ADOT standards are exceeded, it would be the local agency's responsibility to fund such enhancements
e. Ensure that we do not recommend enhancements that exceed FMPO/City/NAIPTA policy/standards
f. 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:

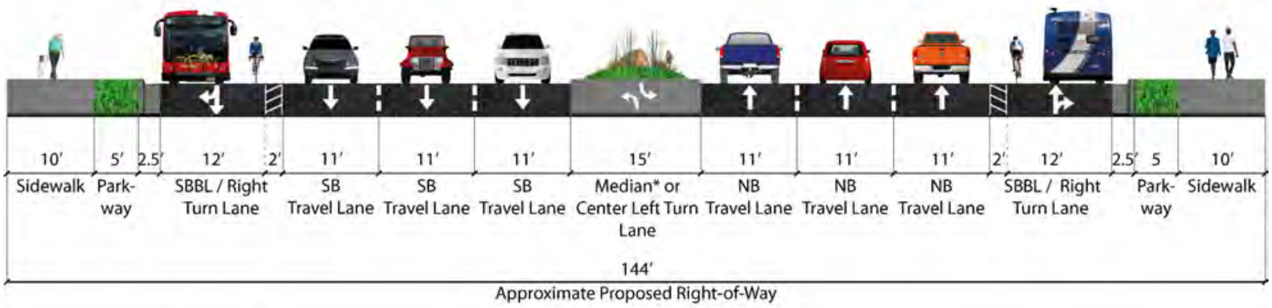
- Widths include the curb to its face
- Assumptions about widths of BRT center running features
- Center lane breakdown
- Side running lane
- Buffers could be added at for safety/landscape + beautification – approximate 2' each side (4' total)
- Some of the Preferred Minimum and Maximum Standards do 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 6 to hybrid Alternative 6a and Alternative 6b

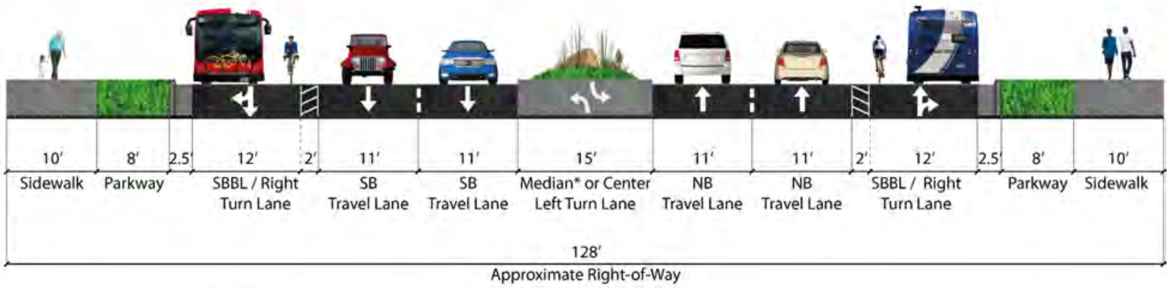
While the public sentiment obtained from public open house meeting #1 (and survey) generally did not support the higher capacity (expanded right-of-way) of System Alternative 6 (as presented at the public open house meeting #1), the Project Partners respected the public's feedback, yet also desired to maintain a diversity of higher capacity options in order to allow for a full range of options 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 6a and Alternative 6b, as shown in **Figure 4-1** and **Figure 4-2**:

Figure 4-1: System Alternative 6a Mid-Block Cross Section



*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

Figure 4-2: System Alternative 6b Mid-Block Cross Section



*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

4.2c Alternative 9 converts into the No-Build Alternative

Recognizing that the Lone Tree Overpass funding was now approved by Flagstaff voters via Proposition 419, 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.

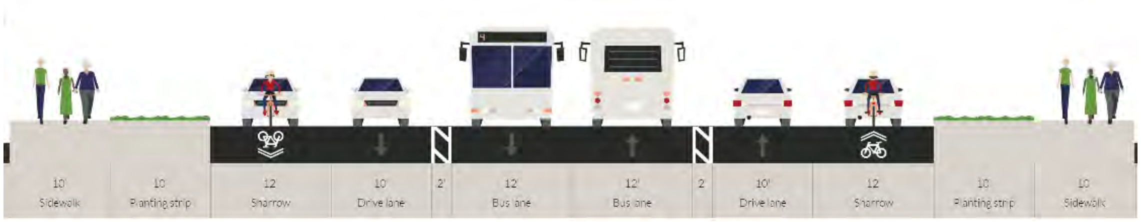
4.2d Modified BRT Alternatives

Though not presented at the Public Open House Meeting #1 or within *Working Paper #1 – Existing & Future Conditions*, Mountain Line expressed a desire to introduce additional BRT alternatives for Project Partner consideration into the Tier 2 analysis. These BRT alternatives were identified as Alternative 11, Alternative 12, and Alternative 13 as shown in **Figure 4-3**, **Figure 4-4**, and **Figure 4-5**. These three BRT alternatives included Alternative 11 with a shared bus-bike lane (SBBL) with two, 10-foot general purpose travel lanes, and Alternatives 12 and 13 that both featured a center running, dedicated BRT lane.

Figure 4-3: System Alternative 11 Mid-Block Cross Section

Figure 4-4: System Alternative 12 Mid-Block Cross Section

Figure 4-5: System Alternative 13 Mid-Block Cross Section



After Project Partner deliberation on the three newly introduced BRT alternatives, it was determined that Alternative 13 would move forward for Tier 2 consideration.

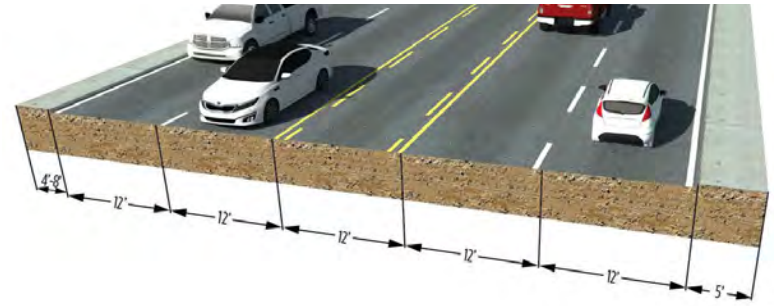
4.3 Final Tier 2 Alternatives Presented

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

4.3a No-Build

The No-Build option represents the existing roadway conditions of Milton Road, which includes two travel lanes in each direction with a center two-way left turn lane (TWTL), and (generally) six-foot sidewalks on both sides of the corridor, though the width of the sidewalk is narrower than six-foot in some locations. **Figure 4-7** shows the mid-block cross section of the No-Build. It should be noted that the No Build option does reflect existing right turn lanes and transit facilities, and incorporates future funded improvements in the City of Flagstaff TIP/CIP.

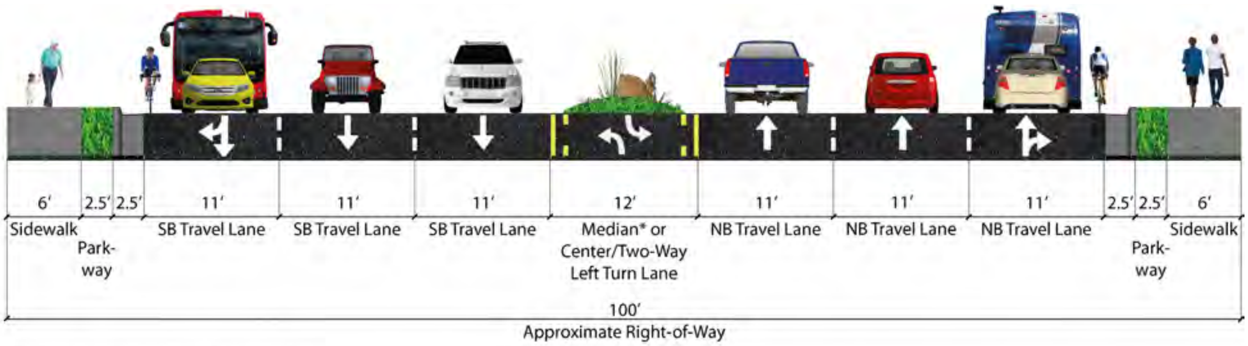
Figure 4-6: Existing Mid-Block Cross Section



4.3b System Alternative 3

System Alternative 3 includes six, 11-foot, general purpose travel lanes with center median/turn lane with 6-foot sidewalks. Alternative 3 offers increased capacity through the addition of two travel lanes – one in each direction. Alternative 3 also includes the introduction of a parkway between the curb and the sidewalk to provide a buffer between vehicular lanes and the sidewalk. **Figure 4-7** shows the mid-block cross section of System Alternative 3.

Figure 4-7: System Alternative 3 Mid-Block Cross Section

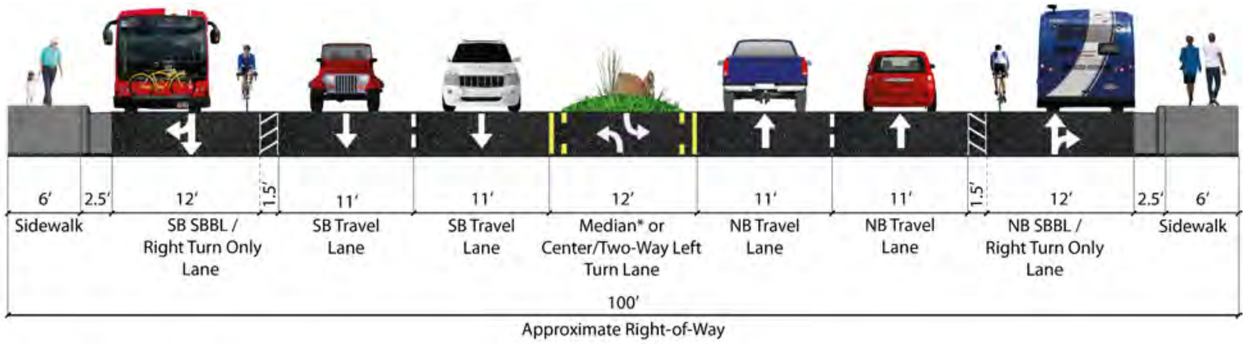


*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the appliation of 11' travel lanes.

4.3c System Alternative 4

System Alternative 4 includes four, 11-foot general purpose travel lanes with center median/left turn lane and two 13.5-foot shared bus bike lanes (SBBL) with 10-foot sidewalks. Alternative 4 offers increased opportunities for expanded mode choices through the introduction of a Shared Bus-Bike Lane (SBBL) in each direction while maintaining the existing configuration of vehicular lanes and the existing conditions for the facilities back of curb. **Figure 4-8** shows the mid-block cross section of System Alternative 4.

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

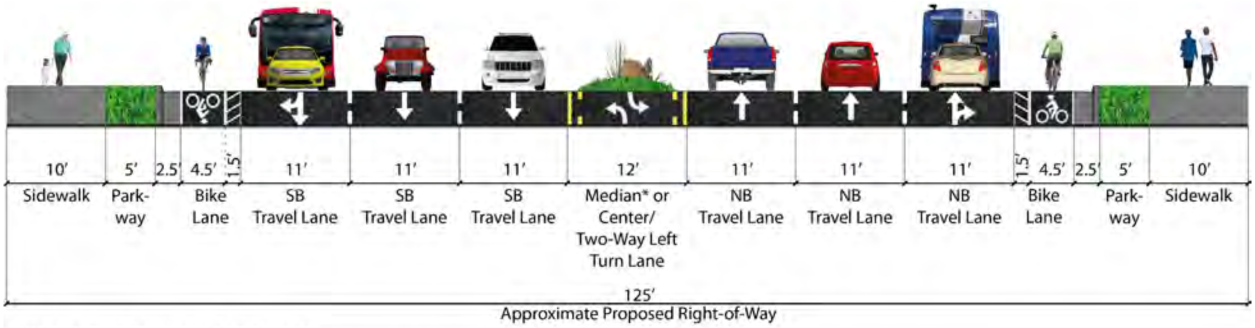


*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

4.3d System Alternative 5

System Alternative 5 includes six, 11-foot general purpose travel lanes with center median/left turn lane and 6-foot bicycle lanes and 10-foot sidewalks. Alternative 5 offers both increased capacity and opportunities for expanded mode choices through the introduction of two vehicular lanes – one in each direction – and the addition of buffered bike lanes on both sides of the road. Alternative 5 also includes enhanced facilities back of curb with a 10-foot sidewalk with a parkway on both sides of the road. **Figure 4-9** shows the mid-block cross section of System Alternative 5.

Figure 4-9: System Alternative 5 Mid-Block Cross Section

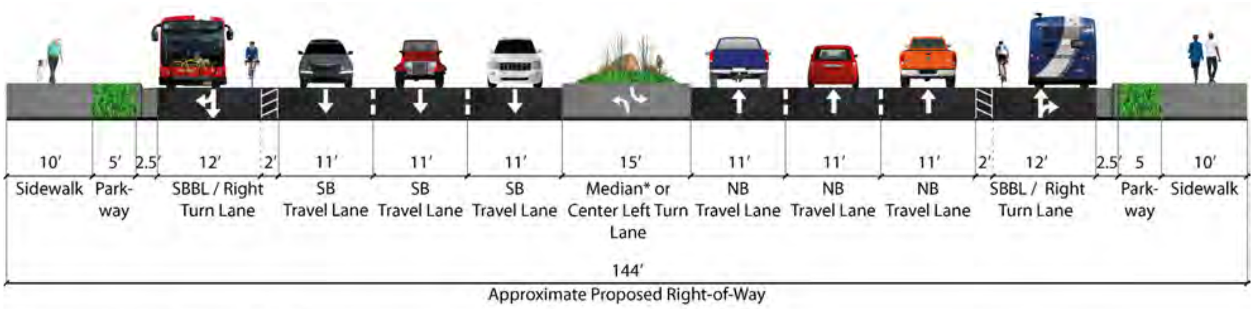


*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

4.3e System Alternative 6a

System Alternative 6a includes six, 11-foot general purpose lanes, Two 14-foot SBBLs, and center median/turn lane with 10-foot sidewalks. Alternative 6a offers a combination of both increased capacity and opportunities for expanded mode choices by adding both an additional vehicular lane and a SBBL in each direction. Alternative 6a also includes enhanced facilities back of curb with a 10-foot sidewalk with a parkway on both sides of the road. **Figure 4-10** shows the mid-block cross section of System Alternative 6a.

Figure 4-10: System Alternative 6a Mid-Block Cross Section



*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

4.3f System Alternative 6b

System Alternative 6b includes four, 11-foot General Purpose Lanes, Two 14-Foot SBBLs, 14-foot Center Median/Turn Lane with 10-foot Landscaped buffers and 10-foot sidewalks. Alternative 6b primarily provides increased opportunities for expanded mode choices by adding a SBBL in each direction while introducing a larger buffer between the vehicular lanes and the widened sidewalk. **Figure 4-11** shows the mid-block cross section of System Alternative 6a.

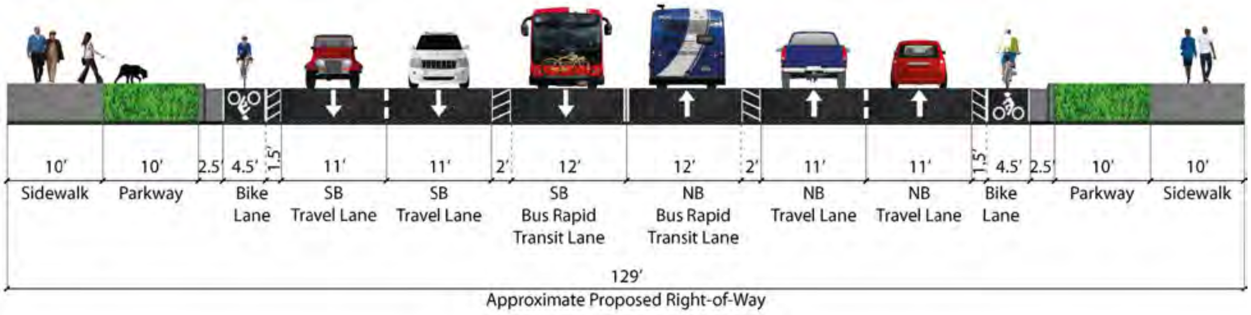
Figure 4-11: System Alternative 6b Mid-Block Cross Section

*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11' travel lanes.

4.3g System Alternative 13

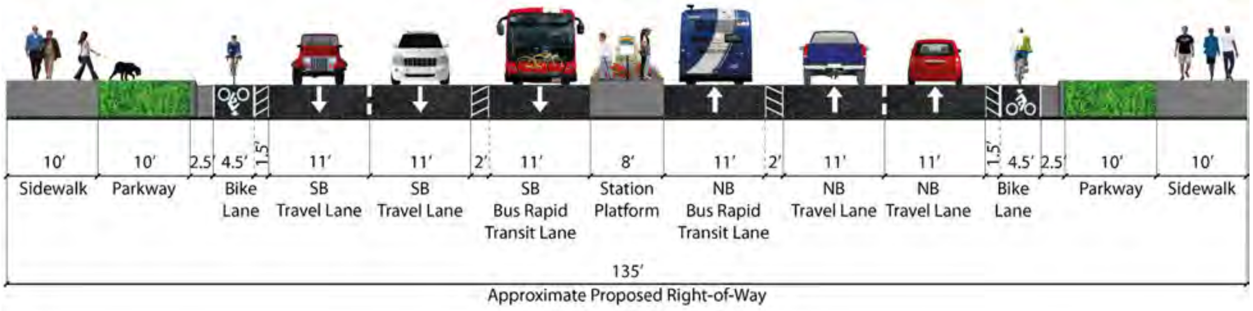
System Alternative 13 maintains the existing vehicular capacity with two 11-foot general purpose lanes with the introduction of a six-foot buffered bike lane. Alternative 13 primarily provides increased opportunities for expanded mode choices by introducing center running BRT lanes and a buffered bike lane in each direction. Alternative 13 also offers an even larger buffer between the vehicular lanes and the widened sidewalk. **Figure 4-12** shows the mid-block cross section of System 13, while **Figure 4-13** shows the cross section of Alternative 13 with BRT platforms at specific signalized intersections.

Figure 4-12: System Alternative 13 Mid-Block Cross Section



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

Figure 4-13: System Alternative 13 Cross Section at Platform Locations



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

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 publics 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 Congetion criterion that essentially rates the prefomance of an alterative 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.
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).

Initial Tier 2 Evaluation Criteria		
Category	**Evaluation Criteria**	**Description**
	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.
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.

100	**/**	**14**	**=**	**7.14**
Weighted total		*# of Criterion*		*Value of Equilibrium*

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
	TOTAL VALUE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

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$^{\# + -}$	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$^{+ -}$ (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%
			Aggregate Score	**83.88%**
				Rank

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

*Technical Score = ((Alternative Result / Best Result) * 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 shorter amount of travel time 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

*Technical Score = ((Best Result / Alternative Result) * 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:

*Technical Score = (Best Result / Alternative Result) * 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 alterative 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 4-7were 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
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*				

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 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 4.8* - Tier 2 Evaluation Criteria Detailed Results includes more detailed results and a systematic synopsis for each of the Tier 2 Evaluation Criteria.

The Milton Road 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 59.02 points while the lowest performing alternative received a score of 29.20 points – nearly a 30-point difference. **Table 4-8** ranks the alternatives from highest scoring to lowest scoring alternative.

Table 4-8: Tier 2 Alternative Rankings Based on Tier 2 Evaluation Criteria Results

Rank	Tier 2 Alternative	Score
1	Alternative 5 (six travel lanes)	59.02
2	Alternative 6a (six travel lanes + 2 SBBLs)	51.51
3	No-Build (leave road as is)	46.39
4	Alternative 13 (center-running bus lanes)	43.44
5	Alternative 3 (six travel lanes)	39.08
6	Alternative 6b (four travel lanes + 2 SBBLs)	34.87
7	Alternative 4 (four travel lanes + 2 SBBLs)	29.20

As demonstrated in **Table 4-8**, Alternative 5 received the highest score of 59.02 points followed by Alternative 6a with 51.51 points, No-Build with 46.39 points, Alternative 13 with 43.44 points, Alternative 3 with 39.08 points, Alternative 6b with 34.87 points, and Alternative 4 with 29.20 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 5 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, improving the corridor for bicyclists by introducing a buffered bike lane, and enhancing back-of-curb facilities with a parkway and a widened sidewalk improving the pedestrian environment; all while not having the highest project cost or the largest right-of-way footprint compared to come of the other alternatives.

Conversely, Alternative 4 and Alternative 6b both could be expected to not perform as well as the other alternatives because these two alternatives do not add vehicular capacity and do not sufficiently address other modes of transportation. These two alternatives differ from each other in their back-of-curb facility types, where Alternative 3 may maintain a narrower right-of-way footprint and thus a less expensive cost, but does not have sufficient sidewalks; while on the other hand, Alternative 6b may have much wider sidewalks and a parkway, consequently resulting in a much larger right-of-way impact and a much higher project cost.

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 high enough level 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.

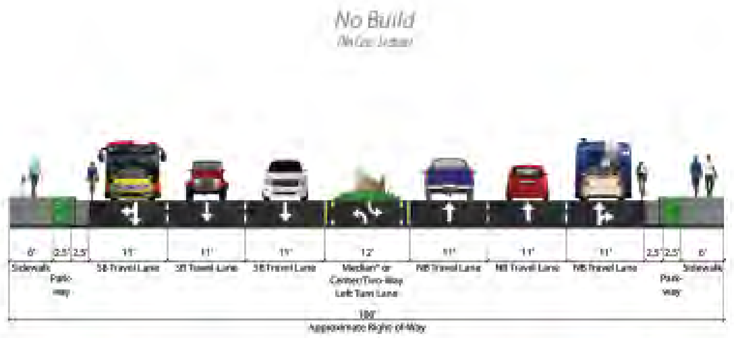
Figure 4-14 illustrates a graphical summary of the results for Tier 2 Alternative Evaluation process and the detailed results are provided in **Table 4-9.**

Figure 4-14: Tier 2 Alternative Rankings Summary by Tier 2 Evaluation Criteria Categories

No Build

- Project Cost: N/A
- Required ROW: 0 ft²
- Potential Buildings Impacted: 0

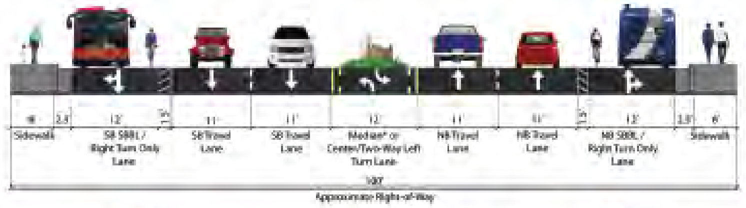
No Build Alternative Evaluation Criteria Results								Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Project Economics (9.91 Possible Points)	Environmental Impacts (6.21 Possible Points)	Total Score (100 Possible Points)	3rd
17.12	0.00	3.51	0.00	9.64	9.91	6.21	**46.39**	



Alternative 3

- Project Cost: $40,514,000
- Required ROW: 26,326 ft²
- Potential Buildings Impacted: 9

Alternative 3 Evaluation Criteria Results								Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Project Economics (9.91 Possible Points)	Environmental Impacts (6.21 Possible Points)	Total Score (100 Possible Points)	5th
18.73	12.92	4.16	0.00	3.04	0.23	0.00	**39.08**	



Alternative 4

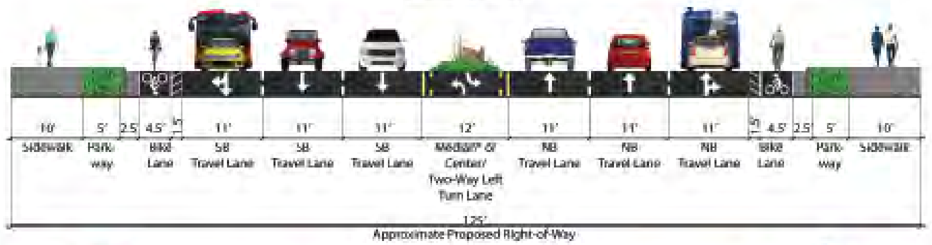
- Project Cost: $40,542,000
- Required ROW: 26,326 ft²
- Potential Buildings Impacted: 9

Alternative 4 Evaluation Criteria Results								Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Project Economics (9.91 Possible Points)	Environmental Impacts (6.21 Possible Points)	Total Score (100 Possible Points)	7th
16.48	4.77	4.92	0.00	3.04	0.00	0.00	**29.20**	

Alternative 5

- Project Cost: $60,994,000
- Required ROW: 203,517 ft²
- Potential Buildings Impacted: 21

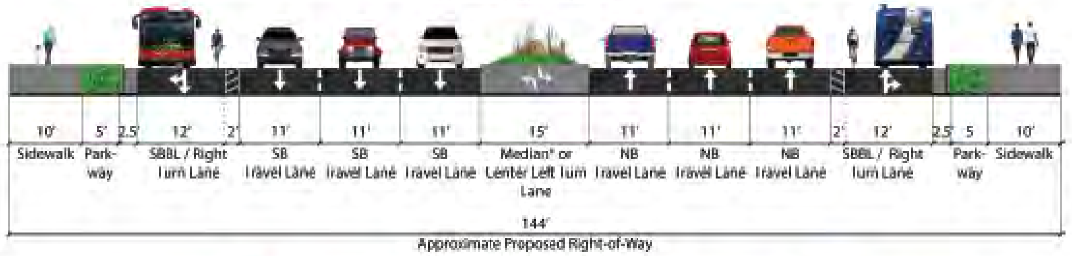
Alternative 5 Evaluation Criteria Results								Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Project Economics (9.91 Possible Points)	Environmental Impacts (6.21 Possible Points)	Total Score (100 Possible Points)	1st
21.31	17.42	18.56	0.00	1.01	0.71	0.00	**59.02**	



Alternative 6a

- Project Cost: $73,667,000
- Required ROW: 362,398 ft²
- Potential Buildings Impacted: 32

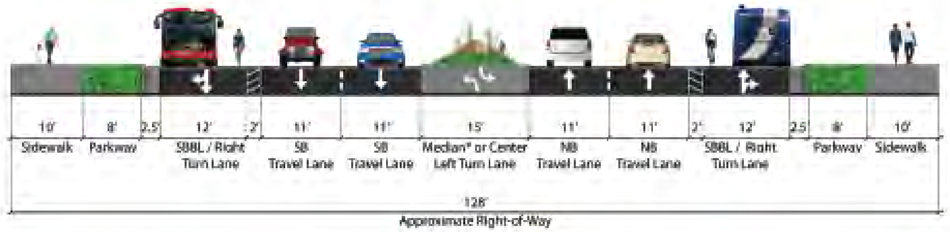
Alternative 6a Evaluation Criteria Results								Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Project Economics (9.91 Possible Points)	Environmental Impacts (6.21 Possible Points)	Total Score (100 Possible Points)	2nd
21.79	15.30	13.39	0.00	0.77	0.26	0.00	**51.51**	



Alternative 6b

- Project Cost: $55,137,000
- Required ROW: 237,564 ft²
- Potential Buildings Impacted: 23

Alternative 6b Evaluation Criteria Results								Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Project Economics (9.91 Possible Points)	Environmental Impacts (6.21 Possible Points)	Total Score (100 Possible Points)	6th
17.00	4.77	12.04	0.00	1.06	0.00	0.00	**34.87**	



Alternative 13

- Project Cost: $57,695,000
- Required ROW: 245,096 ft²
- Potential Buildings Impacted: 23

Alternative 13 Evaluation Criteria Results								Rank
Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Project Economics (9.91 Possible Points)	Environmental Impacts (6.21 Possible Points)	Total Score (100 Possible Points)	4th
16.31	7.28	18.83	0.00	1.01	0.00	0.00	**43.44**	

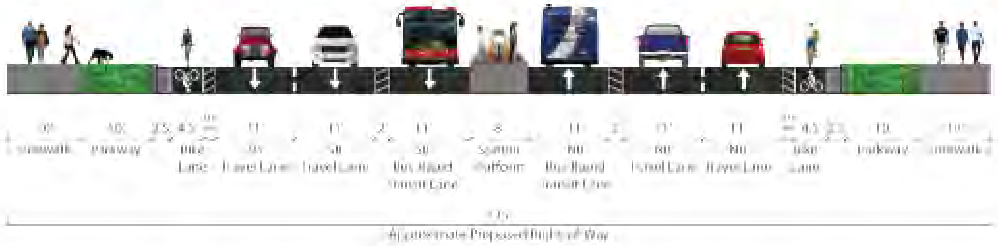


Table 4-9: Detailed Results of the Tier 2 Evaluation Criteria

Evaluation Criteria				Weight	No Build		Alternative 3		Alternative 4		Alternative 5		Alternative 6a		Alternative 6b		Alternative 13	
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	Formula = (Best Result / Alternative Result) * Weight * 100 Ex - Alt 4: (6.25/11.03) * 5.25% * 100 = 2.97	N/A	5.25%	11.03	2.97	7.36	4.46	11.03	2.97	7.36	4.46	6.25	5.25	9.38	3.50	10.81	3.04
	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%)	52.7%	1.41	54.6%	1.46	46.1%	1.24	62.0%	1.66	57.9%	1.55	46.1%	1.24	47.7%	1.28
	PM			(1.66%)	52.6%	1.63	52.4%	1.62	49.7%	1.54	53.6%	1.66	51.2%	1.58	49.7%	1.54	39.8%	1.23
	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%)	2	3.02	3	2.01	2	3.02	2	3.02	2	3.02	2	3.02	2	3.02
	PM			(3.02%)	3	2.01	3	2.01	3	2.01	2	3.02	2	3.02	3	2.01	3	2.01
	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%)	104.8	0.71	45.1	1.65	86.3	0.86	70.4	1.05	58.5	1.27	86.3	0.86	57.3	1.30
	PM			(1.645%)	44.8	1.08	42.4	1.15	41.6	1.17	29.5	1.65	30.2	1.61	41.6	1.17	49.2	0.99
	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%)	420	1.93	400	2.03	560	1.45	339	2.40	370	2.20	560	1.45	479	1.70
	PM			(2.395%)	395	2.35	396	2.34	418	2.22	387	2.40	405	2.29	418	2.22	530	1.75
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%	0	0*	19.28	4.74	19.40	4.77	16.78	4.13	28.98	7.13	19.4	4.77	16.9	4.16
	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%	0	0*	28.78	8.18	0	0*	21.78	6.19	28.78	8.18	0	0*	-14	-3.98
	Reduced Bicycle Crashes	Formula = (Alternative Result / Best Result) * Weight * 100 Ex - Alt 5: (14/14) * 7.10% * 100 = 7.10	N/A	7.10%	0	0*	0	0*	0	0*	14	7.10	0	0*	0	0*	14	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%	Maintains Existing Conditions	0.00	Maintains Existing Conditions	0.00	Maintains Existing Conditions	0.00	Meets or Exceeds both	7.12	Meets or exceeds both	7.12	Meets or exceeds both	7.12	Meets or exceeds both	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%	Maintains Existing Conditions	0.00	Maintains Existing Conditions	0.00	Maintains Existing Conditions	0.00	Meets or Exceeds both	7.48	Maintains Existing Conditions	0.00	Maintains Existing Conditions	0.00	Meets or exceeds both	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%)	632	1.24	399	1.96	371	2.11	508	1.54	250	3.13	371	2.11	373	2.10
	PM			(3.135%)	353	2.27	365	2.20	286	2.80	332	2.42	256	3.13	286	2.80	377	2.13

Results continued on the following page

Evaluation Criteria				Weight	No Build		Alternative 3		Alternative 4		Alternative 5		Alternative 6a		Alternative 6b		Alternative 13	
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
Public Acceptance	Public Support	*TBD*	*TBD*	8.26%	*TBD*		*TBD*		*TBD*		*TBD*		*TBD*		*TBD*		*TBD*	
Construction/ Implementation	Project Cost$^{\# + -}$	Formula = (Best Result / (Alternative Result/10M)) * Weight * 100 Ex - Alt 4: (1/(40.542M/10M)) * 4.68% * 100 = 1.15	N/A	4.68%	$0.00	4.68	$40,514,000	1.15	$40,542,000	1.15	$60,994,000	0.77	$73,667,000	0.64	$55,137,000	0.85	$57,695,000	0.81
	ROW Impact$^{+ -}$ (Square Feet)	Formula = (Best Result / (Alternative Result/10K)) * Weight * 100 Ex - Alt 4: (1/(26,326/10K)) * 4.98% * 100 = 1.89	N/A	4.96%	0	4.96	26,326	1.89	26,326	1.89	203,517	0.24	362,398	0.14	237,564	0.21	245,096	0.20
			Aggregate Score	83.88%	30.27		38.85		29.20		58.30		51.25		34.87		43.44	
				Rank	6th		4th		7th		1st		2nd		5th		3rd	

Notes:

*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. # Project Costs for Alternative 13 do not include necessary costs for accessible boarding platforms, pedestrian refuge islands or other center-lane transit appurtenances.

+A common denominator has been added to the formula the 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.

4.8 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 4-9** for the results presented in the following sub-sections.

4.8a 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 4-10**.

Table 4-10: Improves Congestion Criterion Results

ID #	Future AADT (2040)	Capacity Threshold (2040)	Percent of Threshold (2040)	Future Congestion Need Score*	Fnctl Class
No-Build	42,366	76,800	55.2%	11.03	4-lanes, Urban, Principal Arterial
Alt 3	42,366	115,200	36.8%	7.36	6-lanes, Urban, Principal Arterial
Alt 4	36,011	76,800	46.9%	9.38	4-lanes, Urban, Principal Arterial
Alt 5	42,366	115,200	36.8%	7.36	6-lanes, Urban, Principal Arterial
Alt 6a	36,011	115,200	31.3%	6.25	6-lanes, Urban, Principal Arterial
Alt 6b	36,011	76,800	46.9%	9.38	4-lanes, Urban, Principal Arterial
Alt 13	41,519	76,800	54.1%	10.81	4-lanes, Urban, Principal Arterial

The CNS results are "reversed ranked" whereby the lowest numbers represent the higher performing alternatives. Thus, Alternative 6a is the highest performing alterntive with a CNS of 6.25, where the No-Build is the lowest performing alternative with a CNS of 11.03. The Tier 2 Alternatives are ranked below from highest to lowest in regards to CNS – the Improves Congestion criterion.

1. Alternative 6a – 6.25 CNS

2, 3. Alternative 3 and Alternative 5 (tied) – 7.36 CNS

4, 5. Alternative 4 and Alternative 6b (tied) – 9.38 CNS
6. Alternative 13 – 10.81 CNS
7. No-Build – 11.03 CNS

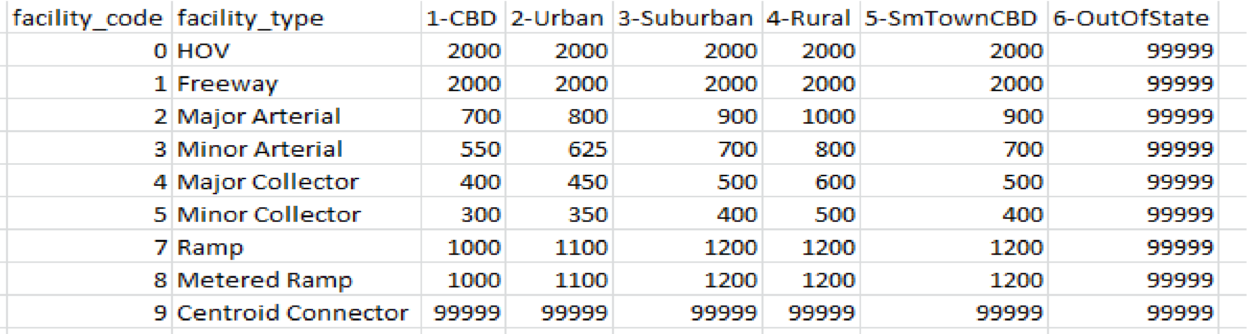
The results of the CNS appear to parallel the visual test as the alternatives with the most number of vehicular lanes are the lower scoring (higher performing) options where the alternatives with fewer vehicular lanes are higher scoring (lower performing).

The CNS was calculated with the followng 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 4-11**. Milton Road is

identfied 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 4-11: 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**
*Hourly lane capacity for an urban arterial**		*Number of vehicular lanes*		*Hours of roadway operation*	*Calculated Capacity Threshold*

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

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

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

Two assumptions were used in the calculation of the CNS:

- Assumed 15% reduction in traffic volumes for alternatives with dedicated bus/right-turn lane to account for reduction in bus/right-turn volume
- Assumed 2% reduction in traffic volumes for alternatives with center bus lane to account for reduction in bus volume

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:

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

Table 4-12 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 4-12: Improves Congestion Criterion Results in the Calculation of the Technical Score

Alternative	Improves Congestion Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 6a	6.25 CNS	((6.25/6.25)	* 5.25%) * 100	5.25
Alternative 3	7.36 CNS	((6.25/7.36)	* 5.25%) * 100	4.46
Alternative 5	7.36 CNS	((6.25/7.36)	* 5.25%) * 100	4.46
Alternative 4	9.38 CNS	((6.25/9.38)	* 5.25%) * 100	3.50
Alternative 6b	9.38 CNS	((6.25/9.38)	* 5.25%) * 100	3.50
Alternative 13	10.81 CNS	((6.25/10.81)	* 5.25%) * 100	3.04
No-Build	11.03 CNS	((6.25/11.03)	* 5.25%) * 100	2.97

4.8b Reduction in Vehicular Congestion - *Travel Speed as a % 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 30 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 Milton Road – northbound and southbound – 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 4-13** for the No-Build option and other six Tier 2 Alternatives.

Table 4-13: AM and PM Travel Speed as a % of Base Free Flow Speed Criterion Results*

				No-Build	Alt 3	Alt 5	Alt 6a	Alt 4/6b	Alt 13
Corridor	Begin	End	Distance (mi)	AM Average Speed (MPH)					
Milton Rd NB	Forest Meadows St	Beaver St	1.7	11.7	12.6	16.0	14.0	7.6	9.8
Milton Rd SB	Beaver St	Forest Meadows St	1.7	19.9	20.2	21.2	20.7	20.0	18.8
		Average of Milton Rd NB & SB - AM		15.8	16.4	18.6	17.4	13.8	14.3
		Travel Speed as Percent of Base Free Flow Speed		52.7%	54.6%	62.0%	57.9%	46.1%	47.7%
Corridor	Begin	End	Distance (mi)	PM Average Speed (MPH)					
Milton Rd NB	Forest Meadows St	Beaver St	1.7	16.3	15.5	16.4	15.5	15.1	10.4
Milton Rd SB	Beaver St	Forest Meadows St	1.7	15.2	16.0	15.8	15.2	14.7	13.5
		Average of Milton Rd NB & SB - PM		15.8	15.7	16.1	15.3	14.9	11.9
		Travel Speed as Percent of Base Free Flow Speed		52.6%	52.4%	53.6%	51.2%	49.7%	39.8%

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective.*

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 5 has the fastest average travel speed in both time periods with an average travel speed of 18.6 MPH in the AM and an average travel speed of 16.1 MPH in the PM. As a result, Alternative 5 will also have the highest travel speed as a percent of base free flow speed in both the AM and PM time periods – receiving 62.0% and 53.6% respectively.

Conversely, Alternative 13 has the slowest average travel speed in the PM period at 11.9 MPH and has the second slowest travel speed by small margin in the AM time period at 14.3 MPH. As a result, Alternative 13 has the lowest percent of base flow speed in the PM at 39.8% and the second lowest in the AM at 47.7%.

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 5 – 62.0% of base free flow speed (18.6 MPH)
2. Alternative 6a – 57.9% of base free flow speed (17.4 MPH)
3. Alternative 3 – 54.6% of base free flow speed (16.4 MPH)
4. No-Build – 52.7% of base free flow speed (15.8 MPH)
5. Alternative 13 – 47.7% of base free flow speed (14.3 MPH)
6. Alternative 4/6b – 46.1% of base free flow speed (13.8 MPH)

PM

1. Alternative 5 – 53.6% of base free flow speed (16.1 MPH)
2. No-Build – 52.6% of base free flow speed (15.8 MPH)
3. Alternative 3 – 52.4% of base free flow speed (15.7 MPH)
4. Alternative 6a – 51.2% of base free flow speed (15.3 MPH)
5. Alternative 4/6b – 49.7% of base free flow speed (14.9 MPH)
6. Alternative 13 – 39.8% of base free flow speed (11.9 MPH)

Application of the Travel Speed as a % 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:

*Technical Score = (Alternative Result / Best Result) * 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 4-14 and **Table 4-15** 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 creation in order of highest to lowest scoring.

Table 4-14: 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	
Alternative 5	62.0%	((62.0/62.0)	* 1.66%) * 100	1.66
Alternative 6a	57.9%	((57.9/62.0)	* 1.66%) * 100	1.55
Alternative 3	54.6%	((54.6/62.0)	* 1.66%) * 100	1.46
No-Build	52.7%	((52.7/62.0)	* 1.66%) * 100	1.41
Alternative 13	47.7%	((47.7/62.0)	* 1.66%) * 100	1.28
Alternative 4/6b*	46.1%	((46.1/62.0)	* 1.66%) * 100	1.24

**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 4-15: 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	
Alternative 5	53.6%	((53.6/53.6)	* 1.66%) * 100	1.66
No-Build	52.6%	((52.6/53.6)	* 1.66%) * 100	1.63
Alternative 3	52.4%	((52.4/53.6)	* 1.66%) * 100	1.62
Alternative 6a	51.2%	((51.2/53.6)	* 1.66%) * 100	1.58
Alternative 4/6b*	49.7%	((49.7/53.6)	* 1.66%) * 100	1.54
Alternative 13	39.8%	((39.8/53.6)	* 1.66%) * 100	1.23

**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*

4.8c 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 Milton Road study corridor has 11 intersections that were evaluated under this LOS criterion, including:

- Milton Road / Forest Meadows Street (signalized);
- Milton Road & University Drive (signalized);
- Milton Road & Plaza Way (signalized);
- Milton Road & Riordan Road (signalized);
- Milton Road & Route 66 (signalized);
- Milton Road & Clay Avenue/Butler Avenue (signalized);
- Milton Road & Mikes Pike (two-way stop-controlled);

- Milton Road & Phoenix Avenue (two-way stop-controlled);
- Santa Fe Avenue & Sitgreaves Street (two-way stop-controlled);
- Humphreys St & Route 66 (signalized); and
- Beaver St & Route 66 (signalized).

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 4-16** shows the number of intersections within each LOS grade for the No-Build option and each of the Tier 2 Alternatives.

Table 4-16: AM and PM Intersection Level-of-Service (LOS) Criterion Results*

	AM							PM						
	A	B	C	D	E	F	**Failing Intersections**	A	B	C	D	E	F	**Failing Intersections**
2040 No-Build	0	2	5	2	0	2	**2**	0	2	5	1	1	2	**3**
2040 Alternative 3	1	4	2	1	0	3	**3**	0	2	5	1	1	2	**3**
2040 Alt 5	1	5	1	2	0	2	**2**	0	3	5	1	1	1	**2**
2040 Alt 6a	1	4	3	1	0	2	**2**	0	2	5	2	1	1	**2**
2040 Alt 4/6b	0	1	5	3	0	2	**2**	0	2	5	1	1	2	**3**
2040 Alt 13	0	1	5	3	0	2	**2**	0	1	4	3	1	2	**3**

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective.*

As noted in **Table 4-16**, 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 two or three failing intersections are constant among the No-Build option and the Tier 2 Alternatives, where the two-way stop-controlled intersections 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 4-17 and **Table 4-18** 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 Travel Speed as a Percentage of Base Free Flow Speed creation in order of highest to lowest scoring.

Table 4-17: AM Intersection LOS Criterion Results in the Calculation of the Technical Score

Alternative	AM LOS Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 5	2	((2/2)	* 3.02%) * 100	3.02
Alternative 6a	2	((2/2)	* 3.02%) * 100	3.02
Alternative 4a	2	((2/2)	* 3.02%) * 100	3.02
Alternative 4/6b*	2	((2/2)	* 3.02%) * 100	3.02
No-Build	2	((2/2)	* 3.02%) * 100	3.02
Alternative 3	3	((2/3))	* 3.02%) * 100	2.01

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

Alternative	PM LOS Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 5	2	((2/2)	* 3.02%) * 100	3.02
Alternative 6a	2	((2/2)	* 3.02%) * 100	3.02
Alternative 4a	3	((2/3))	* 3.02%) * 100	2.01
Alternative 4/6b*	3	((2/3))	* 3.02%) * 100	2.01
No-Build	3	((2/3))	* 3.02%) * 100	2.01
Alternative 3	3	((2/3))	* 3.02%) * 100	2.01

**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*

4.8d Reduction in Vehicular Congestion – *Intersection Delay* Criterion *Results*

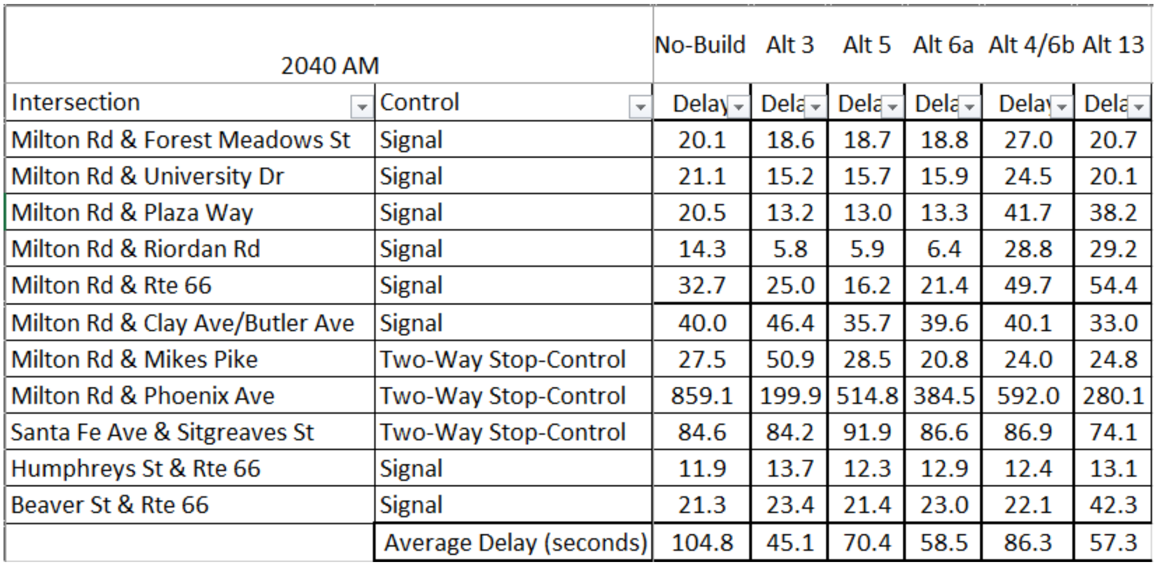
The Intersection Delay criterion measures reduction in vehicular congestion by evaluating the duration of delay at intersections under the year 2040 condition for the No-Build option as compared to the six other Tier 2 Alternatives. The intersection delay is calculated under seconds and is an output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

The 11 intersections evaluated under this criterion include:

- Milton Road / Forest Meadows Street (signalized);
- Milton Road & University Drive (signalized);
- Milton Road & Plaza Way (signalized);
- Milton Road & Riordan Road (signalized);
- Milton Road & Route 66 (signalized);
- Milton Road & Clay Avenue/Butler Avenue (signalized);
- Milton Road & Mikes Pike (two-way stop-controlled);
- Milton Road & Phoenix Avenue (two-way stop-controlled);
- Santa Fe Avenue & Sitgreaves Street (two-way stop-controlled);
- Humphreys St & Route 66 (signalized); and
- Beaver St & Route 66 (signalized).

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 4-19** and **Table 4-20** 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.

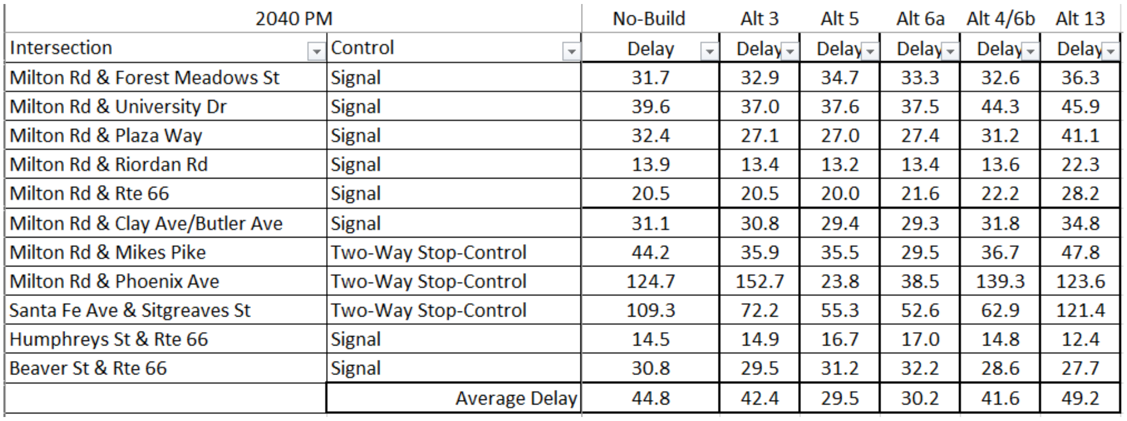
Table 4-19: AM Intersection Delay Criterion Results*



2040 AM		No-Build	Alt 3	Alt 5	Alt 6a	Alt 4/6b	Alt 13
Intersection	Control	Delay	Dela	Dela	Dela	Delay	Dela
Milton Rd & Forest Meadows St	Signal	20.1	18.6	18.7	18.8	27.0	20.7
Milton Rd & University Dr	Signal	21.1	15.2	15.7	15.9	24.5	20.1
Milton Rd & Plaza Way	Signal	20.5	13.2	13.0	13.3	41.7	38.2
Milton Rd & Riordan Rd	Signal	14.3	5.8	5.9	6.4	28.8	29.2
Milton Rd & Rte 66	Signal	32.7	25.0	16.2	21.4	49.7	54.4
Milton Rd & Clay Ave/Butler Ave	Signal	40.0	46.4	35.7	39.6	40.1	33.0
Milton Rd & Mikes Pike	Two-Way Stop-Control	27.5	50.9	28.5	20.8	24.0	24.8
Milton Rd & Phoenix Ave	Two-Way Stop-Control	859.1	199.9	514.8	384.5	592.0	280.1
Santa Fe Ave & Sitgreaves St	Two-Way Stop-Control	84.6	84.2	91.9	86.6	86.9	74.1
Humphreys St & Rte 66	Signal	11.9	13.7	12.3	12.9	12.4	13.1
Beaver St & Rte 66	Signal	21.3	23.4	21.4	23.0	22.1	42.3
	Average Delay (seconds)	104.8	45.1	70.4	58.5	86.3	57.3

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective.*

Table 4-20: PM Intersection Delay Criterion Results*



2040 PM		No-Build	Alt 3	Alt 5	Alt 6a	Alt 4/6b	Alt 13
Intersection	Control	Delay	Delay	Delay	Delay	Delay	Delay
Milton Rd & Forest Meadows St	Signal	31.7	32.9	34.7	33.3	32.6	36.3
Milton Rd & University Dr	Signal	39.6	37.0	37.6	37.5	44.3	45.9
Milton Rd & Plaza Way	Signal	32.4	27.1	27.0	27.4	31.2	41.1
Milton Rd & Riordan Rd	Signal	13.9	13.4	13.2	13.4	13.6	22.3
Milton Rd & Rte 66	Signal	20.5	20.5	20.0	21.6	22.2	28.2
Milton Rd & Clay Ave/Butler Ave	Signal	31.1	30.8	29.4	29.3	31.8	34.8
Milton Rd & Mikes Pike	Two-Way Stop-Control	44.2	35.9	35.5	29.5	36.7	47.8
Milton Rd & Phoenix Ave	Two-Way Stop-Control	124.7	152.7	23.8	38.5	139.3	123.6
Santa Fe Ave & Sitgreaves St	Two-Way Stop-Control	109.3	72.2	55.3	52.6	62.9	121.4
Humphreys St & Rte 66	Signal	14.5	14.9	16.7	17.0	14.8	12.4
Beaver St & Rte 66	Signal	30.8	29.5	31.2	32.2	28.6	27.7
	Average Delay	44.8	42.4	29.5	30.2	41.6	49.2

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective.*

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 less than 20 seconds while the difference between the best and worst performing alternative in the AM is nearly 60 seconds. This is due to the fact that the No-Build option has an unusually long average delay of 104.8 second in the AM time period compared to the six Tier 2 Alternatives. The unusually large average delay is largely skewed by the delay at Milton & Phoenix intersection and is a result of vehicles from the side street being unable to access Milton due to no gaps being available from the bottleneck at Santa Fe and lack of intersection control.

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 3 – 45.1 seconds of average delay
2. Alternative 13 – 57.3 seconds of average delay
3. Alternative 6a – 58.5 seconds of average delay
4. Alternative 5 – 70.4 seconds of average delay
5. Alternative 4/6b – 86.3 seconds of average delay
6. No-Build – 104.8 seconds of average delay

PM

1. Alternative 5 – 29.5 seconds of average delay
2. Alternative 6a – 30.2 seconds of average delay
3. Alternative 4/6b – 41.6 seconds of average delay
4. Alternative 3 – 42.4 seconds of average delay
5. No-Build – 44.8 seconds of average delay
6. Alternative 13 – 49.2 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:

*Technical Score = (Best Result/ Alternative Result) * 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 4-21 and **Table 4-22** 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 creation in order of highest to lowest scoring.

Table 4-21: AM Intersection Delay Criterion Results in the Calculation of the Technical Score

Alternative	AM Delay Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 3	45.1 seconds	((45.1/45.1)	* 1.645%) * 100	1.65
Alternative 13	57.3 seconds	((45.1/57.3)	* 1.645%) * 100	1.30
Alternative 6a	58.5 seconds	((45.1/58.5)	* 1.645%) * 100	1.27
Alternative 5	70.4 seconds	((45.1/70.4)	* 1.645%) * 100	1.05
Alternative 4/6b*	86.3 seconds	((45.1/86.3)	* 1.645%) * 100	0.86
No-Build	104.8 seconds	((45.1/104.8)	* 1.645%) * 100	0.71

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective*

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

Alternative	PM Delay Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 5	29.5 seconds	((29.5/29.5)	* 1.645%) * 100	1.65
Alternative 6a	30.2 seconds	((29.5/30.2)	* 1.645%) * 100	1.61
Alternative 4/6b*	41.6 seconds	((29.5/41.6)	* 1.645%) * 100	1.17
Alternative 3	42.4 seconds	((29.5/42.4)	* 1.645%) * 100	1.15
No-Build	44.8 seconds	((29.5/44.8)	* 1.645%) * 100	1.08
Alternative 13	49.2 seconds	((29.5/49.2)	* 1.645%) * 100	0.99

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective*

4.8e 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 Milton Road – northbound and southbound – 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 4-23** and **Table 4-24** for the No-Build option and the six Tier 2 Alternatives.

Table 4-23: AM Travel Time Criterion Results*

	No-Build	Alt 3		Alt 5		Alt 6a		Alt 4/6b		Alt 13	
AM Travel Time	Travel Time (sec)	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change
NB Travel Time	528	492	6.8%	387	26.7%	442	16.3%	811	-53.5%	629	-19.2%
SB Travel Time	311	307	1.4%	292	6.2%	298	4.1%	309	0.8%	329	-5.8%
Average Travel Time	420	400	4.1%	339	16.5%	370	10.2%	560	-26.3%	479	-12.5%

Table 4-24: PM Travel Time Criterion Results*

	No-Build	Alt 3		Alt 5		Alt 6a		Alt 4/6b		Alt 13	
PM Travel Time	Travel Time (sec)	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change
NB Travel Time	382	403	-5.5%	382	0.1%	403	-5.5%	414	-8.4%	601	-57.3%
SB Travel Time	407	388	4.6%	392	3.6%	408	-0.2%	421	-3.4%	460	-12.9%
Average PM Travel Time	395	396	-0.5%	387	1.9%	405	-2.8%	418	-5.9%	530	-35.1%

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective.*

The average travel time between the northbound and southbound direction for the No-Build option is 420 seconds (seven minutes) in the AM and 395 seconds (six minutes and 34 seconds) in the PM – a fairly equal or negligible 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.

Alternate 5 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. Alternative 3 has a small difference in travel time compared to the No-Build option in the AM and PM, but the AM has a positive change for both directions while the PM is positive SB but negative NB. Alternative 6a has a shorter travel time than the No-Build in the AM and a slightly longer travel time in the PM. Both Alternative 4/6b and Alternative 13 have longer travel times compared to the No-Build option in both the AM and PM time periods.

With the exception of the northbound bottleneck at Santa Fe/Sitgreaves, movement through the corridor in the southbound direction is primarily determined by intersection control and traffic signal timing. Alternatives like 6b and 13, which do not add lane capacity do not affect travel times. In the case of alternative 6b, the extra bus lane and transit signal priority does improve bus flow and reliability. In the case of alternative 13, in many cases, the protected only left turn phase required for vehicles reduces the efficacy of left turn movements and the intersection in general.

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 5 – 339 seconds of average travel time
2. Alternative 6a – 370 seconds of average travel time
3. Alternative 3– 400 seconds of average travel time
4. No-Build – 420 seconds of average travel time
5. Alternative 13 – 479 seconds of average travel time
6. Alternative 4/6b – 560 seconds of average travel time

PM

1. Alternative 5 – 387 seconds of average travel time
2. No-Build – 395 seconds of average travel time
3. Alternative 3– 396 seconds of average travel time
4. Alternative 6a – 405 seconds of average travel time
5. Alternative 4/6b – 418 seconds of average travel time
6. Alternative 13– 530 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:

*Technical Score = (Best Result / Alternative Result) * 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 creation 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	
Alternative 5	339 seconds	((339/339)	* 2.395%) * 100	2.40
Alternative 6a	370 seconds	((339/370)	* 2.395%) * 100	2.20
Alternative 3	400 seconds	((339/400)	* 2.395%) * 100	2.03
No-Build	420 seconds	((339/420)	* 2.395%) * 100	1.93
Alternative 13	479 seconds	((339/479)	* 2.395%) * 100	1.70
Alternative 4/6b*	560 seconds	((339/560)	* 2.395%) * 100	1.45
**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective*				

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	
Alternative 5	387 seconds	((387/387)	* 2.395%) * 100	2.40
No-Build	395 seconds	((387/395)	* 2.395%) * 100	2.35
Alternative 3	396 seconds	((387/396)	* 2.395%) * 100	2.34
Alternative 6a	405 seconds	((387/405)	* 2.395%) * 100	2.29
Alternative4/6b*	418 seconds	((387/418)	* 2.395%) * 100	2.22
Alternative 13	530 seconds	((387/530)	* 2.395%) * 100	1.75

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective*

4.8f 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 3	19.28% CRF for all crashes
Alternative 4	19.40% CRF for all crashes
Alternative 5	16.78% CRF for all crashes
Alternative 6a	28.98% CRF for all crashes
Alternative 6b	19.40% CRF for all crashes
Alternative 13	16.90% for all crashes

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:

*Technical Score = (Alternative Result / Best Result) * 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	
Alternative 6a	28.98%	((28.98/28.98)	* 7.13%) * 100	7.13
Alternative 6b	19.40%	((19.40/28.98)	* 7.13%) * 100	4.77
Alternative 4	19.40%	((19.40/28.98)	* 7.13%) * 100	4.77
Alternative 3	19.28%	((19.28/28.98)	* 7.13%) * 100	4.74
Alternative 13	16.90%	((16.90/28.98)	* 7.13%) * 100	4.16
Alternative 5	16.78%	((16.78/28.98)	* 7.13%) * 100	4.13
No-Build	No CRF and no formula used – automatically received a score of 0			0

4.8g 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:

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 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 3	28.78% CRF for injury crashes
Alternative 4	0% CRF for injury crashes*
Alternative 5	21.78% CRF for injury crashes
Alternative 6a	28.78%% CRF for injury crashes
Alternative 6b	0% CRF for injury crashes*
Alternative 13	-14% CRF for injury crashes

**No CMF's are available for injury severity for SBBLs, so alternatives with only the addition of a SBBL (Alternatives 4 and 6b) result with a zero percent 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:

*Technical Score = (Alternative Result / Best Result) * 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	
Alternative 3	28.78%	((28.78/28.78)	* 8.18%) * 100	8.18
Alternative 6a	28.78%	((28.78/28.78)	* 8.18%) * 100	8.18
Alternative 5	21.78%	((21.78/28.78)	* 8.18%) * 100	6.19
Alternative 3	0%*	((0/28.78)	* 8.18%) * 100	0
Alternative 5	0%*	((0/28.78)	* 8.18%) * 100	0
No-Build	No CRF and no formula used – automatically received a score of 0			0
Alternative 13	-14%	((-14/28.78)	* 8.18%) * 100	-3.28

**No CMF's are available for injury severity for SBBLs, so alternatives with only the addition of a SBBL (Alternatives 4 and 6b) result with a zero percent CRF.*

4.8h 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). 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 Bicycle-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 bicycle-related crashes only - were the alternatives that scored higher within this criterion. The combined CRF for this criterion includes bicycle-related crashes only. **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 3	0% CRF for bicycle crashes
Alternative 4	0% CRF for bicycle crashes
Alternative 5	14% CRF for bicycle crashes
Alternative 6a	0% CRF for bicycle crashes
Alternative 6b	0% CRF for bicycle crashes
Alternative 13	14% CRF for bicycle crashes

**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.*

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:

*Technical Score = (Alternative Result / Best Result) * 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	
Alternative 5	14%	((14/14)	* 7.10%) * 100	7.10
Alternative 13	14%	((14/14)	* 7.10%) * 100	7.10
Alternative 3	0%	((0/14)	* 7.10%) * 100	0
Alternative 4	0%	((014)	* 7.10%) * 100	0
Alternative 6a	0%	((0/14)	* 7.10%) * 100	0
Alternative 6b	0%	((0/14)	* 7.10%) * 100	0
No-Build	0%	((014)	* 7.10%) * 100	0

**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.*

4.8i 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*

For example, the No-Build option reflects the existing Milton Rd. roadway conditions, so the No-Build option would receive zero points since it is the baseline condition for this criterion. Conversely, Alternative 5 received the full 7.12 points because the proposed width of the sidewalk exceeds the preferred standards for both ADOT and the Project Partners.

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	Sidewalk Width	Result/Threshold
No-Build	6'	Maintains existing condition/does not meet any standards*
Alternative 3	6'	Maintains existing condition/does not meet any standards*
Alternative 4	10'	Maintains existing condition/does not meet any standards*
Alternative 5	10'	Meets or exceeds both ADOT and Project Partner Standards*
Alternative 6a	10'	Meets or exceeds both ADOT and Project Partner Standards*
Alternative 6b	10'	Meets or exceeds both ADOT and Project Partner Standards*
Alternative 13	10'	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 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 3	Maintains existing condition/does not meet any standards*	0
Alternative 4	Maintains existing condition/does not meet any standards*	0
Alternative 5	Meets or exceeds both ADOT and Project Partner Standards*	7.12

Alternative 6a	Meets or exceeds both ADOT and Project Partner Standards*	7.12
Alternative 6b	Meets or exceeds both ADOT and Project Partner Standards*	7.12
Alternative 13	Meets or exceeds both ADOT and Project Partner Standards*	7.12
**Per the minimum and preferred standards outlined in the Controlling Design Criteria*		

4.8j 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
1	Meets or exceeds both ADOT's minimum standard and the Project Partner preferred standards*	1	7.48	7..48
2	Meets or exceeds ADOT's minimum standard OR the Project Partners preferred standards, but not both*	0.5		3.74
3	Maintains existing condition/does not meet any standards*	0		0
**Per the minimum and preferred standards outlined in the Controlling Design Criteria*				

For example, the No-Build option maintains the existing roadway conditions, so the No-Build option would receive zero points for this criterion. Conversely, Alternative 5 received a full 7.12 points because the width of the proposed bike facility exceeds the preferred standards for both ADOT and the City/MetroPlan/Mountain Line/Project Partners.

The various bicycle facility widths excerpted from the Controlling Design Criteria are shown in **Table 4-37**.

Table 4-37: Improved Bicycle Facilities Criterion Results

Alternative	Facility Width	Result/Threshold
No-Build	n/a	Maintains existing condition/does not meet any standards*
Alternative 3	n/a	Maintains existing condition/does not meet any standards*
Alternative 4	13.5' (SBBL)	Maintains existing condition/does not meet any standards*
Alternative 5	6' (bike lane)	Meets or exceeds both ADOT and Project Partner Standards*
Alternative 6a	14' (SBBL)	Maintains existing condition/does not meet any standards*
Alternative 6b	14' (SBBL)	Maintains existing condition/does not meet any standards*
Alternative 13	6' (bike lane)	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 Faculties Criterion Technical Score

Alternative	Result/Threshold	Score
No-Build	Maintains existing condition/does not meet any standards*	0
Alternative 3	Maintains existing condition/does not meet any standards*	0
Alternative 4	Maintains existing condition/does not meet any standards*	0
Alternative 5	Meets or exceeds both ADOT and Project Partner Standards*	7.12
Alternative 6a	Maintains existing condition/does not meet any standards*	0
Alternative 6b	Maintains existing condition/does not meet any standards*	0
Alternative 13	Meets or exceeds both ADOT and Project Partner Standards*	7.12

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

4.8k 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 Milton Road – northbound and southbound – 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** and **Table 4-40** for the No-Build option and six other Tier 2 Alternatives.

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

	No-Build	Alt 3		Alt 5		Alt 6a		Alt 4/6b		Alt 13	
AM Transit Travel Time	Travel Time (sec)	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change
NB Transit Travel Time	501	501	0.1%	355	29.2%	230	54.0%	257	48.8%	298	40.5%
SB Transt Travel Time	764	297	61.2%	662	13.3%	269	64.7%	484	36.6%	448	41.3%
Average Transit Travel Time	**632**	**399**	**30.6%**	**508**	**21.3%**	**250**	**59.4%**	**371**	**42.7%**	**373**	**40.9%**

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective*

Table 4-40: PM Improved Transit Travel Time Criterion Results*

	No-Build	Alt 3		Alt 5		Alt 6a		Alt 4/6b		Alt 13	
PM Transit Travel Time	Travel Time (sec)	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change	Travel Time (sec)	Travel Time Percent Change
NB Transit Travel Time	282	317	-12.4%	312	-10.8%	223	21.0%	221	21.6%	252	10.5%
SB Transit Travel Time	424	413	2.7%	352	17.0%	288	32.0%	352	17.1%	501	-18.1%
Average Transit Travel Time	353	365	-4.9%	332	3.1%	256	26.5%	286	19.4%	377	-3.8%

**Alternative 4 and Alternative 6a share results because only one Vissim model was constructed to represent both alternatives because they are identical from an operational perspective.*

The average transit travel time between the northbound and southbound direction for the No-Build option is 632 seconds (10 minutes and 31 seconds) in the AM and 353 seconds (five minutes and 53 seconds) in the PM – a significantly shorter average transit travel time in the PM time period. The No-Build travel time results is the baseline condition for calculating the travel time percent change for each of the Tier 2 Alternatives.

All Alternatives have an improved transit travel time compared to the No-Build option in the AM; while Alternate 4, Alternative 6a, and Alternative 6b are the only alternatives that have an improved transit travel time in both the AM and PM time periods. Alternative 13 interestingly has a reduced transit travel time in the PM time period with the center-running dedicated transit facility, and then conversely, Alternative 5 with no dedicated transit facility, has a positive regression in transit travel time in the PM compared to the No-Build option. 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.

Transit travel times in the AM peak are significantly impacted in the bottleneck at Santa Fe/Sitgreaves. Since all build alternatives utilize signal control at Santa Fe/Sitgreaves, thus allowing the northbound lefts to clear the through lanes, this bottleneck is eliminated and provides significant benefit to all build alternatives. PM peak travel times are largely controlled by intersection control. The transit signal priority does provide benefit, such as with Alternative 5 even though it has no dedicated bus lane. Other factors affect transit travel times, such as the addition of bus stops, presence of HAWK signals, and signal phasing.

AM

1. Alternative 6a – 250 seconds of average transit travel time
2. Alternative 4/6b – 371 seconds of average transit travel time
3. Alternative 13– 373 seconds of average transit travel time
4. Alternative 3 – 399 seconds of average transit travel time
5. Alternative 5 – 508 seconds of average transit travel time
6. No-Build – 632 seconds of average transit travel time

PM

1. Alternative 6a – 256 seconds of average transit travel time
2. Alternative 4/6b – 286 seconds of average transit travel time

3. Alternative 5 – 332 seconds of average transit travel time
4. No-Build – 353 seconds of average transit travel time
5. Alternative 3 – 365 seconds of average transit travel time
6. Alternative 13 – 377 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:

*Technical Score = (Best Result/ Alternative Result) * 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 4-41 and **Table 4-42** 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 creation in order of highest to lowest scoring.

Table 4-41: 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	
Alternative 6a	250 seconds	((250/250)	* 3.135%) * 100	3.13
Alternative 4/6b	371 seconds	((250/371)	* 3.135%) * 100	2.11
Alternative 13	373 seconds	((250/373)	* 3.135%) * 100	2.10
Alternative 3	399 seconds	((250/399)	* 3.135%) * 100	1.96
Alternative 5	508 seconds	((250/508)	* 3.135%) * 100	1.54
No-Build	632 seconds	((250/632)	* 3.135%) * 100	1.24

Table 4-42: 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	
Alternative 6a	256 seconds	((256/256)	* 3.135%) * 100	3.13
Alternative 4/6b	286 seconds	((256/286)	* 3.135%) * 100	2.80
Alternative 5	332 seconds	((256/332)	* 3.135%) * 100	2.42
No-Build	353 seconds	((256/353)	* 3.135%) * 100	2.27
Alternative 3	365 seconds	((256/365)	* 3.135%) * 100	2.20
Alternative 13	377 seconds	((256/377)	* 3.135%) * 100	2.13

4.8l 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 cost estimate was developed for each of the other Tier 2 Alternatives. **Table 4-43** below shows the total project cost for implementation of each Alternative.

Table 4-43: Project Cost Criterion Results

Alternative	Project Cost Estimate[1]
No-Build	No Cost
Alternative 3	$40,514,000
Alternative 4	$40,542,000
Alternative 5	$60,994,000
Alternative 6a	$73,667,000
Alternative 6b	$55,137,000
Alternative 13[2]	$57,695,000

1 ROW impact/cost does not include any costs that may be associated with a potential impact to an existing building.
2 Project Costs for Alternative 13 do not include necessary costs for accessible boarding platforms, pedestrian refuge islands or other center-lane transit appurtenances.

As anticipated, the more expansive build alternatives have higher project costs than the narrower build alternatives. Alternative 6a has the highest project cost estimate of $73,667,000 while Alternative 3 and Alternative 4 have the two lowest project cost estimates at $40,514,000 and $40,542,000 respectively. 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:

*Technical Score = (Best Result / (Alternative Result/10M)) * Weight * 100*

Table 4-44 below shows how the scores were calculated for each alternative relative to the results of the Cost of Implementation creation in order of highest scoring alternative to the lowest scoring alternative.

Table 4-44: Project Cost Criterion Results in the Calculation of the Technical Score

Alternative	Project Cost[1]	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	No Cost	No formula used, automatically received full weighted points		4.68
Alternative 3	$40,514,000	(1/40.514M(/10M))	* 4.68% * 100))	1.15
Alternative 4	$40,542,000	(1/40.542M(/10M))	* 4.68% * 100))	1.15
Alternative 6b	$55,137,000	(1/55.137M(/10M))	* 4.68%) * 100))	0.85
Alternative 13[2]	$57,695,000	(1/57.695M(/10M))	* 4.68% * 100))	0.81
Alternative 5	$60,994,000	(1/60.994M(/10M))	*4.68% * 100))	0.77
Alternative 6a	$73,667,000	(1/73.667M(/10M))	* 4.68% * 100))	0.64

1 ROW impact/cost does not include any costs that may be associated with a potential impact to an existing building.
2 Project Costs for Alternative 13 do not include necessary costs for accessible boarding platforms, pedestrian refuge islands or other center-lane transit appurtenances.

4.8m 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 4-45** below shows the total right-of-way impact for the implementation of each Tier 2 Alternative.

Table 4-45: Right-of-Way Impact Criterion Results

Alternative	Mid-Block ROW Width	Right-of-Way Impact*
No-Build	Existing	*No Impact*
Alternative 3	100 ft	26,326 ft^2
Alternative 4	100 ft	26,326 ft^2
Alternative 5	125 ft	203,517 ft^2
Alternative 6a	144 ft	362,398 ft^2
Alternative 6b	128 ft	237,564 ft^2
Alternative 13[2]	129 – 134 ft	245,096 ft^2

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

The more expansive build alternatives will naturally have a larger right-of-way footprint than the narrower alternatives. The majority of the right-of-way from alternatives that do not increase the number of lanes is primarily for pedestrian, bicycle and parkway (landscape) features. However, Alternative 3 and Alternative 4 have the same right-of-way width of 100 feet and have a substantially smaller right-of-way footprint than the other alternatives. In fact, Alternative 5 has nearly eight-times more of a right-of-way impact than Alternative 3 and Alternative 4; while Alternative 6b and Alternative 13 have approximately nine-times the right-of-way impact and Alternative 6b has nearly fourteen-times more of a right-of-way impact than Alternative 3 and Alternative 4.

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 (square feet) 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^2 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:

Formula = (Best Result / (Alternative Result/10K)) * Weight * 100

Table 4-46 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 4-46: Right-of-Way Impact Criterion Results in the Calculation of the Technical Score

Alternative	ROW Width	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
Alternative 3	100 ft	26,326 ft^2	(1/(26,326/10K))	* 4.96% * 100))	1.89
Alternative 4	100 ft	26,326 ft^2	(1/(26,326/10K))	* 4.96% * 100))	1.89
Alternative 5	125 ft	203,517 ft^2	(1/(203,517/10K))	* 4.96% * 100))	0.24
Alternative 6b	144 ft	237,564 ft^2	(1/(237,564/10K))	* 4.96% * 100))	0.21
Alternative 13[2]	128 ft	245,096 ft^2	(1/(245,096/10K))	* 4.96% * 100))	0.20
Alternative 6a	129 ft	362,398 ft^2	(1/9362,398/10K))	* 4.96% * 100))	0.14

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

4.9 Tier 2 Alternatives Recommended for Tier 3 Analysis

The Project Partners were presented with the modeling findings and Tier 2 Evaluation Criteria matrix results. Over the course of a couple Project Partner meetings, the Project Partners discussed which of the Tier 2 alternatives they would prefer to move forward for final Tier 3 analysis.

As **Figure 4-15** illustrates, the Project Partners ultimately eliminated Alternative 3 and Alternative 4. Simply put, Alternative 4 was the lowest performing alternative in total, ranking last in 7th place. With a total sum of approximately one-half of the top ranked alternative, Alternative 4 performed poorly across almost all criteria, but especially poor in the Safety, Expand Travel Mode Choices and Congestion Reduction criteria. From a model results perspective, Alternative 4 did not demonstrate significantly improved travel time or travel speed results, LOS at signalized intersections, and all non-signalized intersections experiencing a LOS of F.

The Project Partners also agreed to eliminate Alternative 3 from further study. Receiving a rank of 4th in the Tier 2 analysis, Alternative 3 was eliminated from further consideration due to its marginal performance in the Tier 2 modeling and moderate to below average scoring in the Tier 2 evaluation criteria, particularly in the Expand Travel Mode Choice criteria. Also, as the Project Partners desired to pair-down Tier 2 alternatives for the Tier 3 analysis, it was generally felt that the roadway features of Alternative 3 (six general purpose travel lanes) were already captured in Alternative 5 (which ranked 1st). Moreover, the bicycle, pedestrian and landscape elements of Alternative 3 were felt to be less desirable/sufficient than Alternative 5, so the Project Partners felt that Alternative 3 became duplicative and substandard to the functionality and character of Alternative 5, so Alternative 3 was eliminated for further consideration. The Project Partners also discussed and agreed that Alternative 6a and 6b would move forward to Tier 3 analysis. The No Build was recommended for Tier 3 in part to be compliant with NEPA requirements to maintain a No Build alternative in the analysis and the No Build Plus was created to recognize that select spot improvements to the existing corridor was desired by the Project Partners.

Accordingly, the Project Partners selected the following Alternatives to move forward for Tier 3 analysis:

- No-Build;
- No-Build Plus;
- Alternative 5;
- Alternative 6a;
- Alternative 6b; and
- Alternative 13.

Please refer to Section 5.2 for a description of the No Build Plus alternative.

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Figure 4-15: Tier 2 Alternatives Recommended for Tier 3 Analysis

Recommended for Tier 3 Analysis

No Build / No Build +

- Project Cost: N/A
- Required ROW: 0 ft²
- Potential Buildings Impacted: 0

No Build Evaluation Criteria Results

Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	Rank
17.12	0.00	3.51	0.00	9.64	30.27	6th

No Build
(No Cross Section)

Eliminated from Tier 3 Analysis

Alternative 3

- Project Cost: [illegible]
- Required ROW: [illegible] ft²
- Potential Buildings Impacted: [illegible]

Alternative 3 Evaluation Criteria Results

Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	Rank
18.71	12.11	2.15	7.96	1.14	38.85	4th

Eliminated from Tier 3 Analysis

Alternative 4

- Project Cost: [illegible]
- Required ROW: [illegible] ft²
- Potential Buildings Impacted: [illegible]

Alternative 4 Evaluation Criteria Results

Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	Rank
16.58	4.71	3.93	0.00	3.98	29.20	7th

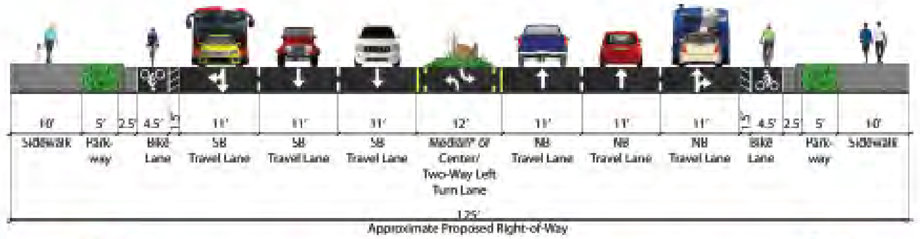
Recommended for Tier 3 Analysis

Alternative 5

- Project Cost: $60,994,000
- Required ROW: 203,517 ft²
- Potential Buildings Impacted: 21

Alternative 5 Evaluation Criteria Results

Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	Rank
21.31	17.42	18.56	0.00	1.01	58.30	1st



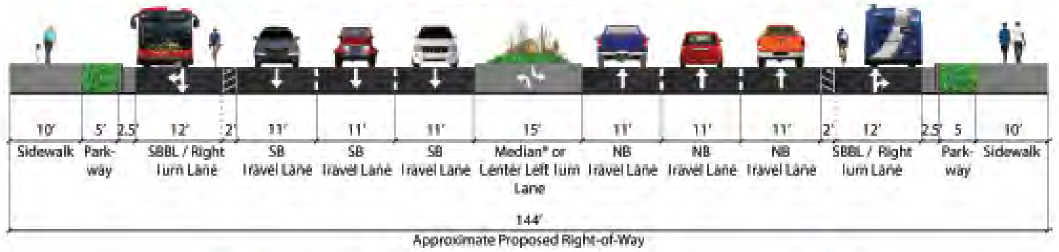
Recommended for Tier 3 Analysis

Alternative 6a

- Project Cost: $73,667,000
- Required ROW: 362,398 ft²
- Potential Buildings Impacted: 32

Alternative 6a Evaluation Criteria Results

Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	Rank
21.79	15.30	13.39	0.00	0.77	51.25	2nd



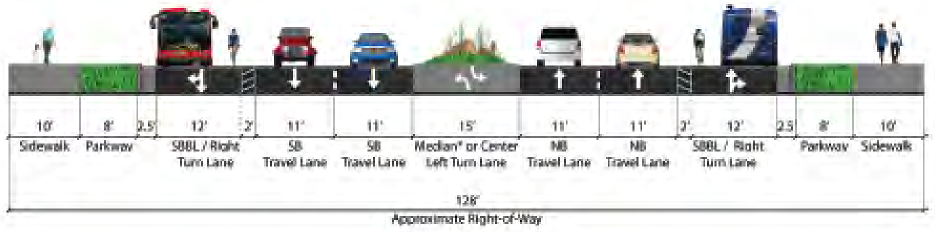
Recommended for Tier 3 Analysis

Alternative 6b

- Project Cost: $55,137,000
- Required ROW: 237,564 ft²
- Potential Buildings Impacted: 23

Alternative 6b Evaluation Criteria Results

Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	Rank
17.00	4.77	12.04	0.00	1.06	34.87	5th



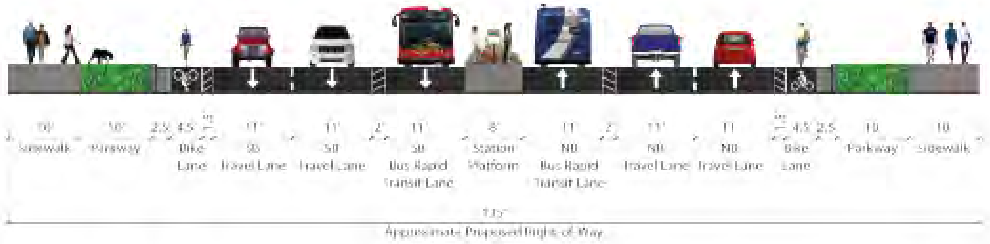
Recommended for Tier 3 Analysis

Alternative 13

- Project Cost: $57,695,000
- Required ROW: 245,096 ft²
- Potential Buildings Impacted: 23

Alternative 13 Evaluation Criteria Results

Reduction in Vehicular Congestion (22.69 Possible Points)	Safety (22.41 Possible Points)	Expand Travel Mode Choices (20.87 Possible Points)	Public Acceptance (8.62 Possible Points)	Construction/ Implementation (9.64 Possible Points)	Total Score (83.88 Possible Points)	Rank
16.31	7.28	18.83	0.00	1.01	43.44	3rd



Updated 10/28/19

5.0 TIER 3 ALTERNATIVE EVALUATION

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 5;
- Alternative 6a;
- Alternative 6b; and
- Alternative 13.

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 Milton Road 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;
- Roadway Operations;
- Vehicular Safety;
- Access Management;
- Pedestrian;
- Bicycle; and
- Transit.

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;
- Build Alternatives Only; or
- All Alternatives.

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
[1] No Build + Alternative Only
[2] Build Alternatives Only
[3] All Alternatives

Corridor Intersections	Spot Improvement Categories					
	Roadway Geometry	Roadway Operations	Vehicular Safety	Access Management	Pedestrian	Bicycle	Transit
Forest Meadows Street (signalized)		• Add NB left turn lane to make dual left (NB Milton to WB Forest Meadows)[3] • Adaptive Traffic Signal[3] • Extend NB right turn lane through intersection and to McConnel Dr bridge[2]		• Restrict U-Turns[3] • 4-foot finger island/median[2]	• Ladder/High-Visibility Crosswalks[3] • North leg crosswalk[2] • ADA-compliant curb ramps[3] • Pedestrian staging area improvement[3]	• Bicycle signal detection and actuation[3] • Combined Bike Lane/Right Turn Lane[2]	
Saunders Drive (stop controlled)	• Reduction is west leg radii[3]			• 4-foot finger island/median[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3] • At-grade pedestrian crossing/signal near Auto Zone[3]		
University Drive (signalized)				• Restrict U-Turns[3] • Right turn restrictions[3] • 4-foot finger island/median[3]	• Ladder/High-Visibility Cross walks (Only apply if grade-separated crossing isn't implemented)[3] • ADA-compliant curb ramps[3]	• Bicycle signal detection and actuation[3]	• Transit signal prioritization[3]
University Avenue (stop controlled)	• Right-in, right-out (impacted by the introduction of the University Dr. intersection and roundabout with Beulah Blvd)[3] • Tighten the SB to WB turn radius to improve pedestrian condition[3]			• Restrict U-Turns[3] • Restrict left turns[3] • 4 foot finger island (my notes say that Nate said the new MillTown site plan calls for a 4 ft finger island from University Dr. to University Ave.)	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3] • Pedestrian refuge on west leg[3]		
Chambers Drive (stop controlled)				• Restrict U-Turns[3] • Construct medians[3] • Restrict SB and WB left turns[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3]	• Combined Bike Lane/Right Turn Lane[2]	• future transit stops are proposed at the NB and SB downstream sides of this intersection.[3] • (BRT station footprints will 100' x 12' to accommodate a 60' long platform with ramps on each end. The sidewalk could go behind the platform

							or this would be wide enough to be a pass-through station)
Plaza Way (signalized)	• Improve the roadway geometry of the west leg,– including improving the radius and application of directional ramps[1] • Full west leg/ intersection redesign[2] • Lengthen the storage for NB left turn lane[3]	• Dedicated right and left turn phase for vehicles[3] • Dual left turn lanes[2]		• Restrict U-Turns[3] • Medians[3] • Restrict right turns on red[3]	• Ladder/High-Visibility Cross walks[3] • Shorten south leg crosswalk[3] • ADA-compliant curb ramps[3] • Mid-block crossing south of Plaza[3]	• Bicycle signal detection and actuation[3] • Combined Bike Lane/Right Turn Lane[2]	
Riordan Road (signalized)		• Dual left turn lane on Milton Rd to EB/WB Riordan Rd. • (requires additional receiving lanes)[2] • Dual left turn lane on Riordan Rd to SB Milton Rd. • (requires additional receiving lanes)[2] • Dedicated right and left turn phase for vehicles[3]		• Restrict U-Turns[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3]	• Bicycle signal detection and actuation[3] • Combined Bike Lane/Right Turn Lane[2]	
Historic Route 66 (signalized)		• Dual left turn lane on Milton Rd to WB Rt 66[2] • Dedicated right and left turn phase for vehicles[3]		• Restrict U-Turns[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3] • Pedestrian staging area improvement[2]	• Bicycle signal detection and actuation[3] • Combined Bike Lane/Right Turn Lane[2]	• Transit signal prioritization[3] • future transit stops are proposed at the NB and SB downstream sides of this intersection.[3]
Malpais Lane (stop controlled)		• SB Right turn deceleration lane[2]		• Restrict U-Turns[3] • Restrict left turns in and out (one of top intersections in districts for crashes, left turns)[3] • Right in, right out only (eliminate NB Milton Rd. left turns to WB Malpais per crash reports at this location)[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3] • Grade separated crossing over the north leg, near mid-block (Not an ADOT funded project and not part of the CMP Master Plan funding process.)[2]	• Combined Bike Lane/Right Turn Lane[2]	

Butler/Clay Avenue (signalized)	• Add a pork chop with the NB right turn movement[3]	• SB right turn deceleration lane on Milton Rd[2] • Add EB right turn lane to make left through lane[2]	• Move south leg stop bar closer to the existing intersection curb returns[3]	• Restrict U-Turns[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3] • Increase the pedestrian staging areas at all legs[2] • Introduce a crosswalk on the south leg[3]	• Bicycle signal detection and actuation[3] • Combined SB Bike Lane/Right Turn Lane[2]	• Transit signal prioritization[3] • Transit queue jumping (Alt 13 only)[2] (Needs to show justification of a performance benefit for all users)
Mikes Pike Street (stop controlled)	• Reconfigure the intersection, or shift the intersection north to increase the gap between Butler Ave[2]	• Continue right turn only lane through the intersection[2]		• Right in, right out only[3]	• Ladder/High-Visibility Cross walk to east leg[3] • ADA-compliant curb ramps[3]		
Tucson Avenue (stop controlled)				• Restrict U-Turns[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3]		
Phoenix Avenue (stop controlled)		• Traffic Signal[3]		• Restrict U-Turns[3]	• Ladder/High-Visibility Cross walks (across Phoenix Ave only on both the east and west legs)[3] • ADA-compliant curb ramps[3] • Grade separated crossing (north leg)[2]		• Transit signal prioritization[3] (if signal is implemented) • future transit stops are proposed at the NB and SB downstream sides of this intersection.[3] • (BRT station footprints will 100’ x 12’ to accommodate a 60’ long platform with ramps on each end. The sidewalk could go behind the platform or this would be wide enough to be a pass-through station)
Santa Fe Avenue (stop controlled)	• Reconfigure intersection layout[2]	• Increase NB left turn lane storage in conjunction with BNSF widening[2] • Make NB dual left[2] • NB Milton left turn restrictions[3] • Florida T Concept[2]		• Restrict U-Turns[3] • Restrict NB left turns[3] • Alternative access through new crossing west of Milton Rd (i.e. turn left onto Tucson Ave or Phoenix Ave to new underpass)[2]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3]		
Humphrey’s Street (signalized)		• Dual Left turn on SB Humphrey’s St to EB Milton Rd.[2] • Dual Left Turn on Milton Rd to NB Humphrey’s St (requires two NB travel lanes on Humphrey’s St)[2] • Florida T Concept, in conjunction with the		• Restrict U-Turns[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3] • Pedestrian crossing improvements[3]	• Bicycle signal detection and actuation[3] • Combined Bike Lane/Right Turn Lane[2]	• Transit signal prioritization[3]

		appropriate signal phasing adjustments2					
Beaver Street (signalized)				• Restrict U-Turns[3]	• Ladder/High-Visibility Cross walks[3] • ADA-compliant curb ramps[3]	• Bicycle signal detection and actuation[3] • Combined Bike Lane/Right Turn Lane[2]	• Transit signal prioritization[3]

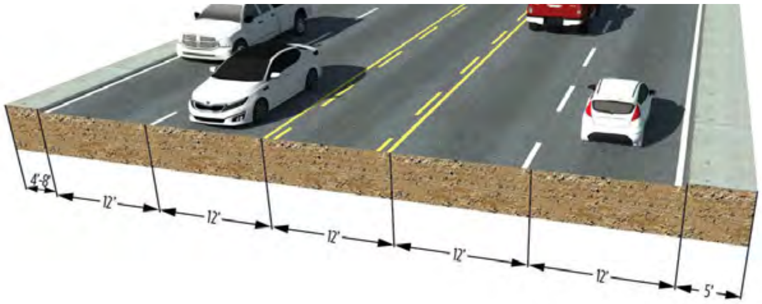
5.2 Tier 3 Milton Road Alternatives

The Project Partners reached consensus on the five Tier 3 Alternatives with the No-Build as described in the following sub-sections.

5.2a No-Build / No-Build Plus

The No-Build option represents the existing roadway conditions of Milton Road, which includes two travel lanes in each direction with a center two-way left turn lane (TWTL), and (generally) six-foot sidewalks on both sides of the corridor; However, the width of the sidewalk is narrower than six-foot in some locations. The No-Build Plus maintains the existing condition with the inclusion of the spot improvements as discussed in *Section 5.1a - Spot Improvements*. **Figure 5-1** shows the mid-block cross section of No-Build and the No-Build Plus without any spot improvements.

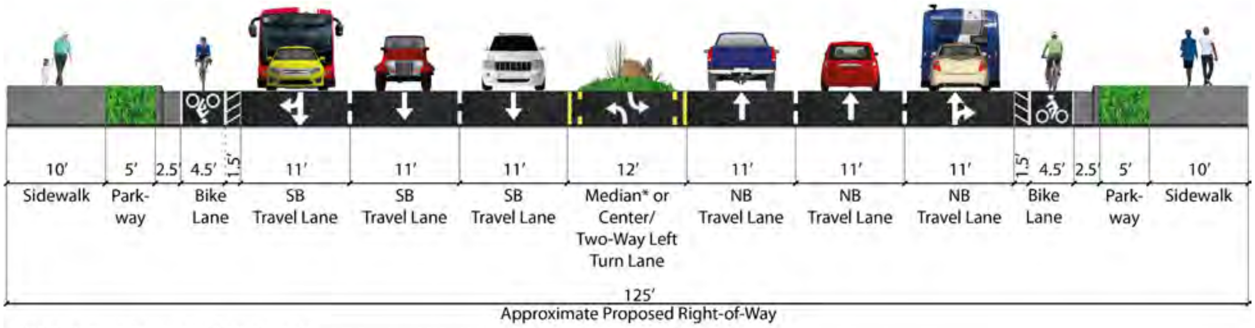
Figure 5-1: Existing Mid-Block Cross Section



5.2b System Alternative 5

System Alternative 5 includes six, 11-foot general purpose travel lanes with center median/left turn lane and 6-foot bicycle lanes and 10-foot sidewalks. Alternative 5 offers both increased capacity and opportunities for expanded mode choices through the introduction of two vehicular lanes – one in each direction – and the addition of buffered bike lanes on both sides of the road. Alternative 5 also includes enhanced facilities back of curb with a 10-foot sidewalk with a parkway on both sides of the road. **Figure 5-2** below shows the mid-block cross section of System Alternative 5.

Figure 5-2: System Alternative 5 Mid-Block Cross Section



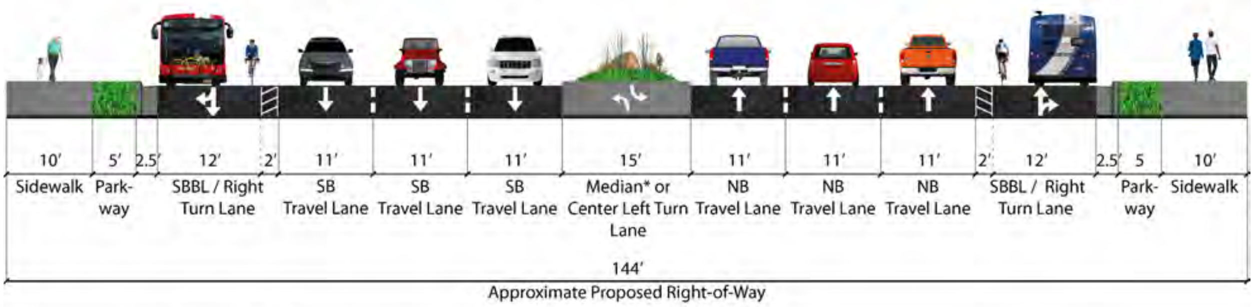
*Median treatment may vary along the study corridor.

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

5.2c System Alternative 6a

System Alternative 6a includes six, 11-foot general purpose lanes, Two 14-foot SBBLs, and center median/turn lane with 10-foot sidewalks. Alternative 6a offers a combination of both increased capacity and opportunities for expanded mode choices by adding both an additional vehicular lane and a SBBL in each direction. Alternative 6a also includes enhanced facilities back of curb with a 10-foot sidewalk with a parkway on both sides of the road. **Figure 5-3** shows the mid-block cross section of System Alternative 6a.

Figure 5-3: System Alternative 6a Mid-Block Cross Section



*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11′ travel lanes.

5.2d System Alternative 6b

System Alternative 6b includes four, 11-foot General Purpose Lanes, Two 14-Foot SBBLs, 14-foot Center Median/Turn Lane with 10-foot Landscaped buffers and 10-foot Sidewalks. Alternative 6b primarily provides increased opportunities for expanded mode choices by adding a SBBL in each direction while introducing a larger buffer between the vehicular lanes and the widened sidewalk. **Figure 5-4** below shows the mid-block cross section of System Alternative 6a:

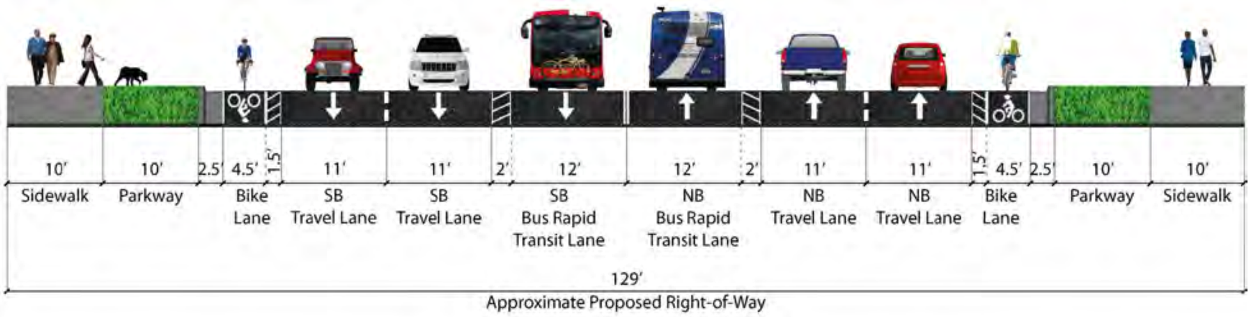
Figure 5-4: System Alternative 6b Mid-Block Cross Section

*Median treatment may vary along the study corridor.
**An ADOT design exception and FHWA approval would be required for the application of 11′ travel lanes.

5.2e System Alternative 13

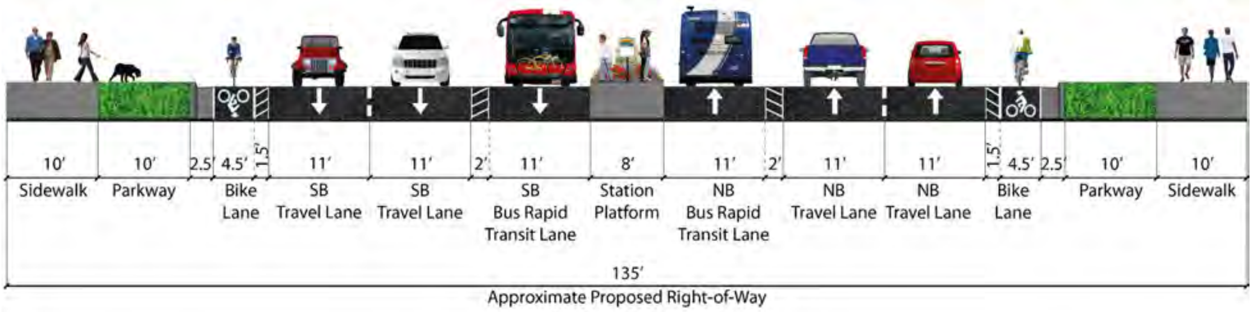
System Alternative 13 maintains the existing vehicular capacity with two 11-foot general purpose lanes with the introduction of a six-foot buffered bike lane. Alternative 13 primarily provides increased opportunities for expanded mode choices by introducing center running BRT lanes and a buffered bike lane in each direction. Alternative 13 also offers an even larger buffer between the vehicular lanes and the widened sidewalk. **Figure 5-5** below shows the mid-block cross section of System 13, while **Figure 5-6** shows the cross section of Alternative 13 with BRT platforms at specific signalized intersections.

Figure 5-5: System Alternative 13 Mid-Block Cross Section



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

Figure 5-6: System Alternative 13 Cross Section at Platform Locations



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

5.3 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 to 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, 16 different evaluation criteria were developed to apply in Tier 3 Alternative Evaluation process, 10 of which were newly introduced evaluation criteria. The newly introduced alternative evaluation criteria include:

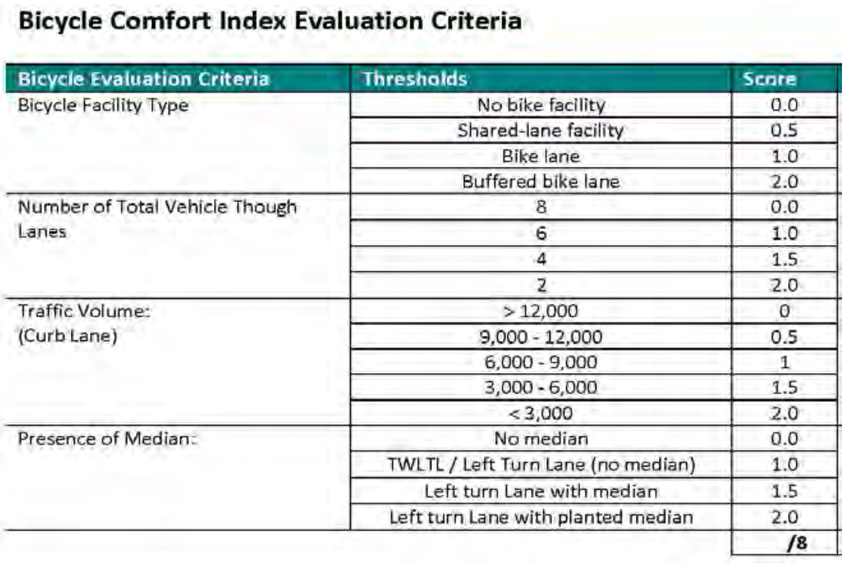
- Network Delay;
- Conflict Points;
- Bicycle Comfort Index;
- Pedestrian Comfort Index;
- Transit Ridership;
- Title VI Impacts;
- Neighborhood Impacts;
- Air Quality; and
- Community Character.

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

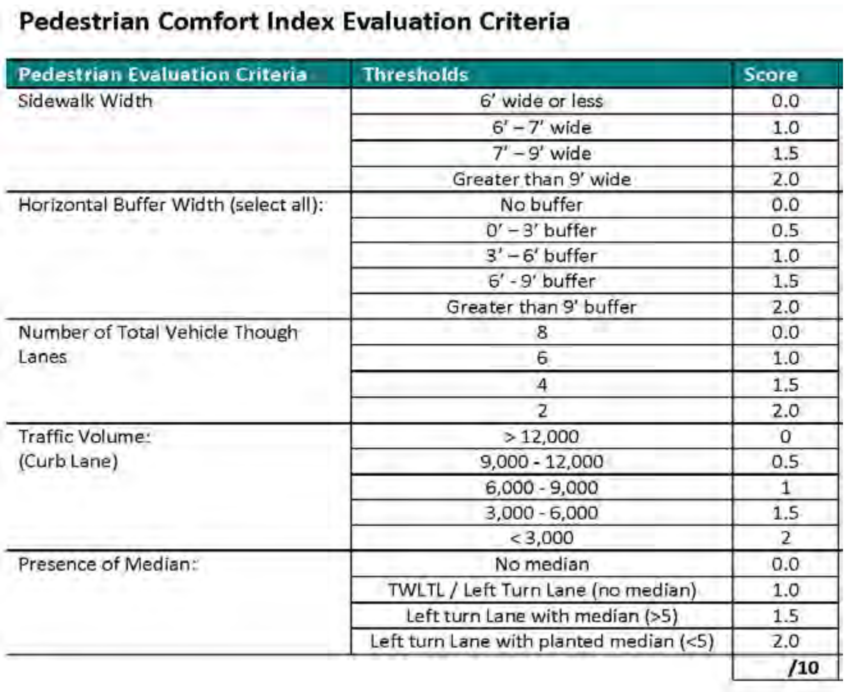
Final T3 Evaluation Criteria					**Criteria Considerations:** 1) Is it duplicative? 2) Is it objective (data-driven)? 3) Feasible/reasonable to evaluate?	**Result**
Category	Criteria / Measure	Scoring Formula	Acceptance Threshold	Weight (TBD)	Notes	Notes
Traffic Operations	Level of Service (Volume / 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)~~ ~~Travel Speed as % of Base Free-Flow Speed (PM)~~	~~Formula = ((Alternative Result * 100) / Best Result) * Weight * 100 / 2~~ ~~Ex - Alt 4: ((46.1%*100)/62)* 3.32% * 100 /2 = 1.24~~	~~N/A~~	~~TBD~~	See meeting notes for details.	Remove
	~~Improved Intersection LOS (AM)~~ ~~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)~~ ~~Signal/Stop Control Delay (PM)~~	~~Formula = (Best Result / Alternative Result) * Weight * 100 / 2~~ ~~Ex - Alt 4: (29.5/41.6) * 3.29% * 100 /2 = 1.17~~	~~N/A~~	~~TBD~~ ~~TBD~~	Model output to be documented in final report, but Project Partners agred 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: HSM 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/NAIPTA's (PP) preferred standards~~ ~~Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIPTA'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/NAIPTA's preferred standards~~ ~~Meets or Exceeds ADOT's minimum standard OR the City/FMPO/NAIPTA'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.	
	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 Though 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
	TWLTL / Left Turn Lane (no median)	1.0
	Left turn Lane with median	1.5
	Left turn Lane with planted median	2.0
		/8



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 Though 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
	TWLTL / Left Turn Lane (no median)	1.0
	Left turn Lane with median (>5)	1.5
	Left turn Lane with planted median (<5)	2.0
		/10

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

5.4 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.

5.4a 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.

5.4b 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 12, 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.

5.4c 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 used 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	13.9	Level of Service	14.9%	2.1%
		Travel Time	58.0%	8.1%
		Network Delay	27.1%	3.8%
Safety	16.6	Conflict Points	N/A	16.6%
Expand Travel Mode	19.3	Bicycle Comfort Index	25.6%	4.9%
		Pedestrian Comfort Index	36.1%	7.0%
		Transit Travel Time	19.0%	3.7%
		Transit Ridership	19.3%	3.72%
Public Acceptance	12.0	Public Acceptance	N/A	12.0%
Cost / Implementation	10.6	Construction Cost	29.2%	3.1%
		ROW Impact	42.9%	4.5%
		Implementation Opportunities	27.9%	3.0%
Environmental Impacts	13.6	Neighborhood Impacts	32.6%	4.4%
		Title VI Impacts	39.4%	5.4%
		Air Quality	27.9%	3.8%
Community Character	14.0	Great Street	N/A	14.0%

5.5 Summary of Tier 3 Evaluation Criteria Results and Analysis Findings

This section provides a brief summary of the results for the Tier 3 Alternative Evaluation process of the six Tier 3 Alternatives through the application of the Tier 3 Evaluation Criteria. Immediately following this summary, *Section 5.6 - Tier 3 Evaluation Criteria Detailed Results* includes more detailed results and a systematic synopsis for each of the Tier 3 Evaluation Criteria.

Unlike the Tier 2 Alternative Evaluation process, the Milton Road CMP Tier 3 Alternatives have a very small range in performance rating based on the score of the Tier 3 Alternative Evaluation Criteria. The highest performing alternative received a score of 60.10 points while the lowest performing alternative received a score of 50.75 points – only a difference of 9.35 points when the difference in points between the best and worst scoring alternatives in Tier 2 was nearly 30 points. In other words, there appears to be little variation in the final results of each of the Tier 3 Alternatives.

Table 5-5 ranks the alternatives from highest scoring to lowest scoring alternative.

Table 5-5: Tier 3 Alternative Rankings Based on Tier 3 Evaluation Criteria Results

Rank	Tier 3 Alternative	Score
1	No-Build	60.10
2	No-Build Plus	56.38
3	Alternative 6a	56.22
4	Alternative 6b	55.35
5	Alternative 5	54.53
6	Alternative 13	50.75

As demonstrated in **Table 5-5**, the No-Build has the highest score of 60.10 points followed by the No-Build Plus with 56.38 points, Alternative 6a with 56.22 points, Alternative 6b with 55.35 points, Alternative 5 with 54.53 points, and Alternative 13 with 50.75 points.

The final results of the Tier 3 Alternative Evaluation process represent the fact that there is a diverse set of evaluation criteria and assigned weightings that yield an array of findings. A couple observations on these findings include:

- The introduction of spot improvements has disproportionally increased the gap in the results for the Project Cost and the Right-of-Way Impact Criteria between the No-Build and the other alternatives.
- According to the Vissim model results, the traffic operations are generally performing worse in Tier 3 than the traffic operations results in Tier 2. Although difficult to pinpoint, the degradation in traffic operations is likely a result of some of the spot improvements which were deemed necessary for safety or connectivity. Items such as dual left turn lanes, the addition of two new traffic signals, and the inclusion of two HAWK signals have a negative consequence on traffic operations, but assist other modes. In addition, Transit Signal Priority (TSP) was also added at select signalized intersections to address deficient transit operations and further decreased traffic operations. However, multimodal improvements were two of the six project goals and the Project Partners agreed that the vehicle delay was a potential for possible tradeoff for the inclusion of multimodal improvements.
- Regarding the effects of the HAWKs - Any inclusion of a stop will increase delay. This is not necessarily negative as this provides benefit to pedestrians as these trade-offs were generally considered by the Project Partners when developing the spot improvement inventory. Although the delay encumbered in minimal, the aggregate of all trade-offs made throughout the corridor contribute to the total vehicular travel time through the corridor.
- The inclusion of dual lefts reduces the amount of green light time for through traffic, particularly noticeable in the southbound operation results. Dual lefts, particularly on the side streets did help left turning traffic. This results in a proportional reduction in time for side street through movements and mainline time as well.
- A Project Partner small working group and the Consultant Team identified to determine and apply an increased set of volumes for the Build Alternatives. Further, it should be

noted that added volumes as a result of rerouted traffic due to widening and increased capacity were not analyzed in the Vissim model and as such, the model results cannot readily attest to the specific effects this would have. Rather, this evaluation was captured in the congestion needs score spreadsheet that was modified according to the Project Team.

In evaluating the results for the higher ranking No-Build and No-Build Plus alternatives, this is likely correlated with the fact that the No-Build and No-Build Plus conditions perform moderately well (that is, not disproportionately worse) when compared to the other alternatives across most of the evaluation criteria. The No-Build and No-Build Plus rankings also reflect the favorable cost-benefit ratio, suggesting that the lower costs of the No Build and No Build Plus generally outweigh the perceived operational benefits (and higher construction costs/right-of-way impacts) of the other build Alternatives. Please see Section 5.7a and 5.7b for reference to Public Support and Community Character (Great Streets).

Table 5-6 illustrates a summary of the detailed final results for Tier Alternative Evaluation process and each of the Tier 3 Evaluation Criteria.

Table 5-6: Detailed Results of the Tier 3 Evaluation Criteria

Final T3 Evaluation Criteria				No-Build		No-Build+		Alternative 5		Alternative 6a		Alternative 6b		Alternative 13		
Category	Criteria	Scoring Formula	Weight	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Best Result
Traffic Operations (13.9% Weight)	Level of Service (Volume / Capacity Ratio)	Result = (Alternative Result/ Best Result) * Weight * 100	2.07%	77.41	1.60	77.41	1.60	92.26	1.91	100.00	2.07	84.44	1.75	80.42	1.67	100.00
	Travel Time (AM) - minutes	Result = (Best Result / Alternative Result) * Weight * 100	4.0310%	7.58	2.90	5.75	3.83	5.46	4.03	5.64	3.90	6.59	3.34	6.49	3.39	5.46
	Travel Time (PM) - minutes		4.0310%	6.58	4.03	7.50	3.53	7.17	3.70	7.13	3.72	7.59	3.49	7.44	3.56	6.58
	Network Delay (AM) - hours	Result = (Best Result / Alternative Result) * Weight * 100	1.88%	1,424.73	1.57	1369.00	1.63	1221.00	1.83	1186.90	1.88	1229.86	1.82	1217.48	1.84	1187
	Network Delay (PM) - hours		1.88%	2,170.18	1.74	2224.00	1.70	2111.09	1.79	2008.35	1.88	2146.28	1.76	2318.74	1.63	2008
Vehicular Safety (16.6% Weight)	Reduction in Conflict Points	Result = (Best Result / Alternative Result) * Weight * 100	16.60%	505.00	16.60	531.00	15.79	687.00	12.20	751.00	11.16	666.00	12.59	694.00	12.08	505
Expand Travel Mode Choices (19.3% Weight)	Bicycle Comfort Quality Index	Result = (Alternative Result/ Best Result) * Weight * 100	4.94%	3.00	2.47	4.00	3.29	5.50	4.53	5.50	4.53	6.00	4.94	4.00	3.29	6
	Pedestrian Comfort Index	Result = (Alternative Result/ Best Result) * Weight * 100	6.97%	3.00	2.32	4.00	3.10	6.50	5.03	8.00	6.19	9.00	6.97	6.00	4.64	9
	Transit Travel Time (AM) - minutes	Result = (Best Result / Alternative Result) * Weight * 100	1.83%	7.92	1.02	4.70	1.71	5.28	1.53	4.91	1.64	4.40	1.83	5.36	1.50	4.40
	Transit Travel Time (PM) - minutes		1.83%	5.83	1.60	6.10	1.53	5.90	1.58	5.08	1.83	5.67	1.64	6.31	1.48	5.08
	Transit Ridership	Result = (Alternative Result/ Best Result) * Weight * 100	3.72%	1,347	2.26	1,347	2.26	1,347	2.26	1,930	3.24	1,930	3.24	2,219	3.72	2219.00

Results continued on the following page

Final T3 Evaluation Criteria				No-Build		No-Build+		Alternative 5		Alternative 6a		Alternative 6b		Alternative 13		
Category	**Criteria**	**Scoring Formula**	**Weight**	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Result	Weighted Score	Best Result
Public Acceptance (12.0% Weight)	Public Support	# of Public Support Result = (Best Result / Alternative Result) * Weight * 100	12.00%													
Cost / Implementation (10.6% Weight)	Construction Cost	Result = (Best Result / (Alternative Result/10M)) * Weight * 100	3.10%	0.0	3.10	9,804,000	3.10	85,417,000	0.36	95,463,000	0.32	74,504,000	0.42	77,334,000	0.40	1.00
	ROW Impact (Square Feet)	Result= (Best Result / (Alternative Result/10K)) * Weight * 100	4.55%	0.0	4.55	53,884	0.84	253,662	0.18	398,689	0.11	271,345	0.17	286,207	0.16	1.00
	Implementation Opportunities	Result = (Alternative Result/ Best Result) * Weight * 100	2.96%	100.00	2.96	33.4	0.99	4.1	0.12	10.4	0.31	11.9	0.35	15.4	0.46	100.00
Environmental Impacts (13.6% Weight)	Neighborhood Impacts	Result = (Best Result/Alternative Result) * Weight * 100	4.43%	185,353	4.38	185,353	4.38	183,149	4.43	183,149	4.43	195,552	4.15	195,552	4.15	183149
	Title VI Impacts	Result = (Best Result/Alternative Result) * Weight * 100	5.36%	9,867	3.29	9,867	3.29	6,065	5.36	6,065	5.36	10,171	3.20	10,171	3.20	6065
	Air Quality	Result = (Best Result/Alternative Result) * Weight * 100	3.79%	22,304.92	3.69	21,702.54	3.79	22,377.27	3.68	22,726.43	3.62	22,265.08	3.70	22,991.71	3.58	21703
Community Character (14.0% Weight)	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	14.00%													0.00
		Aggregate Score	**100.0%**		**60.10**		**56.38**		**54.53**		**56.22**		**55.35**		**50.75**	
			Rank		**1**		**2**		**5**		**3**		**4**		**6**	

5.6 Tier 3 Evaluation Criteria Detailed Results

This section describes the detailed results for the Tier 3 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 5-6** for the results presented in the following sub-sections.

5.6a Traffic Operations – *Level-of-Service (LOS) (Volume / Capacity Ratio) Criterion Results*

Similar to Tier 2, ADOT's CNS Tool is the source that calculates the results for the Level-of-Service criterion. However, some adjustments were made to refine the embedded formulas. The results of the CNS for each Tier 3 Alternative are displayed below in **Table 5-7**. Refer to Appendix K for the detailed breakdown of Tier 3 CNS calculations.

Table 5-7: Level-of-Service (Volume / Capacity Ratio) Criterion Results

ID #	Length	Future AADT (2040)	Adjusted Future AADT - Mode Shift (2040)	Capacity Threshold (2040)	Percent of Threshold (2040)	Tier 3 V/C Score (out of 100)	Fnctl Class
No-Build / No Build +					0.89	77.41	4-lanes, Urban, Principal Arterial
No-Build - Segment A	0.10	38,395	38,395	46,400	82.7%		*Butler to Phoenix*
No-Build - Segment B	0.24	51,339	51,339	46,400	110.6%		*Butler to Rte 66*
No-Build - Segment C	1.00	39,323	39,323	46,400	84.7%		*Rte 66 to Forest Meadows*
Alt 5					0.75	92.26	6-lanes, Urban, Principal Arterial
Alt 5 - Segment A	0.10	50,552	50,552	69,600	72.6%		*Butler to Phoenix*
Alt 5 - Segment B	0.24	67,047	67,047	69,600	96.3%		*Butler to Rte 66*
Alt 5 - Segment C	1.00	48,677	48,677	69,600	69.9%		*Rte 66 to Forest Meadows*
Alt 6a					0.69	100.00	6-lanes, Urban, Principal Arterial
Alt 6a - Segment A	0.10	50,552	48,924	73,080	66.9%		*Butler to Phoenix*
Alt 6a - Segment B	0.24	67,047	65,419	73,080	89.5%		*Butler to Rte 66*
Alt 6a - Segment C	1.00	48,677	47,049	73,080	64.4%		*Rte 66 to Forest Meadows*
Alt 6b					0.82	84.44	4-lanes, Urban, Principal Arterial
Alt 6b - Segment A	0.10	39,198	37,570	48,720	77.1%		*Butler to Phoenix*
Alt 6b - Segment B	0.24	50,035	48,407	48,720	99.4%		*Butler to Rte 66*
Alt 6b - Segment C	1.00	39,659	38,031	48,720	78.1%		*Rte 66 to Forest Meadows*
Alt 13					0.86	80.42	4-lanes, Urban, Principal Arterial
Alt 13 - Segment A	0.10	39,198	37,570	46,400	81.0%		*Butler to Phoenix*
Alt 13 - Segment B	0.24	50,035	48,407	46,400	104.3%		*Butler to Rte 66*
Alt 13 - Segment C	1.00	39,659	38,031	46,400	82.0%		*Rte 66 to Forest Meadows*

Notes

a) Future AADT (2040): Projected traffic volumes provided from FMPO Model Based on mode shift projections from FMPO model, AADT's for BRT alternatives were adjusted to account for reduction in anticipated vehicles.

b) Capacity Threshold (2040) Formula: Capacity X Number of Lanes X 14.5 Hours of Traffic Multiply the # of lanes within the corridor by the corresponding figure in Table 1, then Multiply by 14.5 (hours) to calculate the facility's capacity threshold. Increase capacity 5% for alternatives with dedicated bus/right-turn lane - per FDOT tables (https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/planning/systems/programs/sm/los/pdfs/fdot_2012_generalized_service_volume_tables.pdf?sfvrsn=cf17ad0a_0

c) V/C Score Formula: Lowest % Threshold receives maximum score; any % above 100% represents Level of Service F and receives a Score of 0.

The CNS results in Tier 3 are not "reversed ranked" as they are in Tier 2 whereby the lowest numbers represent the higher performing alternatives. In other words, the CNS results in Tier 3 are ranked with the highest score resulting in the highest performing alternative. Thus, Alternative 6a is the highest performing alterntive with a CNS of 100.00, where the No-Build and the No-Build Plus are the lowest performing alternives with a CNS of 77.41. The restructuring of the formula did not impact the ranking of the Alternatives when comparing Tier 2 results to Tier 3 results – just how the final scores are displayed.

The Tier 3 Alternatives are ranked for the CNS-LOS criterion below from highest scoring to lowest scoring.

1. Alternative 6a – 100.00 CNS
2. Alternative 5 – 92.26 CNS
3. Alternative 6b – 84.44 CNS
4. Alternative 13 – 80.42 CNS
5. No-Build and No-Build Plus – 77.41 CNS

Three assumptions were discussed and agreed to by the Project Partners for the calculation of the Tier 3 CNS:

- The hours of operations were reduced to 14.5 from 24 in Tier 2 to reflect a more accurate representation of the typical hours of roadway operatations in a typical day;
- Volumes were decreased by 1,628 for alternatives with dedicated transit to capture approximate mode shift by 1,628. The mode shift value was derived from the 2040 MetroPlan Regional TDM Model; and
- Capacity was increased by 5% for alternatives with an outside bus lane/right turn lane in order to approximate and capture the traffic volumes of right-turning vehicles and busses traveling through the SBBL.

Application of the Level-of-Service (Volume / Capacity Ratio) 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 also used to calculate the score for the Level-of-Service Criterion. The following formula was used to calculate the scores:

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

Table 5-8 below shows how the CNS/LOS scores, from highest to lowest, were calculated for the No-Build and five other Tier 3 Alternatives.

Table 5-8: Level-of-Service Criterion Results in the Calculation of the Technical Score

Alternative	LOS Result	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 6a	100.00 CNS	((100.00/100.00)	* 2.07%) * 100	2.07
Alternative 5	92.26 CNS	((92.26/100.00)	* 2.07%) * 100	1.91
Alternative 6b	84.44 CNS	((84.44/100.00)	* 2.07%) * 100	1.75
Alternative 13	80.42 CNS	((80.42/100.00)	* 2.07%) * 100	1.67
No-Build and No-Build Plus	77.41 CNS	((77.41/100.00)	* 2.07%) * 100	1.60

5.6b Traffic Operations – *Travel Time Criterion Results*

The Travel Time criterion is a metric that measures traffic operations by calculating the amount of time it takes to travel the study corridor from one end to the other. The results of the year 2040 Travel Time for the No-Build option and the five other Tier 3 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 8.1% weight assigned to this criterion. The travel times in each direction of Milton Road – northbound and southbound – 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 5-9** for the No-Build option and the five Tier 3 Alternatives.

Table 5-9: Travel Time Criterion Results

Alternative	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	9.9	-	5.2	-	6.6	-	6.6	-
No Build Plus	5.9	40.7%	5.6	-7.6%	6.9	-4.8%	8.1	-23.3%
5	5.5	44.5%	5.4	-3.7%	6.8	-2.7%	7.6	-15.3%
6a	5.5	44.3%	5.7	-10.1%	6.9	-4.8%	7.4	-11.9%
6b	6.9	30.5%	6.3	-20.4%	7.3	-11.2%	7.9	-19.7%
13	6.5	34.6%	6.5	-24.5%	7.6	-15.1%	7.3	-11.3%

Alternative	Avgerage AM Travel Time		Average PM Travel Time	
No Build	7.6		6.6	
No Build Plus	5.8	24.1%	7.5	-14.0%
5	5.5	27.9%	7.2	-9.0%
6a	5.6	25.6%	7.1	-8.4%
6b	6.6	13.0%	7.6	-15.4%
13	6.5	14.3%	7.4	-13.2%

The average travel time between the northbound and southbound direction for the No-Build option is 7.6 minutes in the AM and 6.6 minutes in the PM – a one-minute decrease in average travel time between the AM and PM time periods. The No-Build travel time result is the baseline condition for calculating the travel time percent change for each of the other Tier 3 Alternatives.

Interestingly all the Alternatives have an improved travel time compared to the No-Build in the AM time period, while none of the Alternatives have an improved travel time compared to the No-Build option in the PM time period. It is also worth noting that all AM and PM southbound travel movements for all alternatives perform worse compared to the No Build. The southbound PM peak movements continue (from the Tier 2 findings) to be problematic, experiencing anywhere from 10% to 25% increases (which represents 30 seconds to 1 minute difference between alternatives) in travel times for all Tier 3 alternatives (when compared to the No Build alternative).

It should be noted that; 1) the PM travel time period experiences an approximate 25% increase in vehicles than the AM period; 2) PM directionality is more pronounced (approx. 8%) in the PM; and, 3) the PM results are more pronounced since the PM peak is being compared to an off-peak time period (mid-day) versus the traditional AM peak. The primary reason for the AM peak improvement is the removal of the bottleneck by signalizing Santa Fe/Sitgreaves.

The No-Build option and the Tier 3 Alternatives are ranked below for each time frame based on the results of the Travel Time criterion.

AM

1. Alternative 5 – 5.5 minutes of average travel time
2. Alternative 6a – 5.6 minutes of average travel time
3. No-Build Plus – 5.8 minutes of average travel time
4. Alternative 13 – 6.5 minutes of average travel time
5. Alternative 6b – 6.6 minutes of average travel time
6. No-Build – 7.6 minutes of average travel time

PM

1. No-Build – 6.6 minutes of average travel time
2. Alternative 6a – 7.1 minutes of average travel time
3. Alternative 5 – 7.2 minutes of average travel time
4. Alternative 13 – 7.4 minutes of average travel time
5. No-Build Plus – 7.5 minutes of average travel time
6. Alternative 6b – 7.6 minutes of average travel time

Application of the 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 also used in Tier 3 to calculate the score for the Travel Time Criterion. The following formula was used to calculate the scores:

*Technical Score = (Best Result/ Alternative Result) * 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 8.10% weight, or 4.031%.

Table 5-10 and **Table 5-11** below show how the AM and PM scores were calculated for the No-Build option and the five other Tier 3 Alternatives relative to the results of the Travel Time creation in order of highest to lowest scoring.

Table 5-10: AM Travel Time Criterion Results in the Calculation of the Technical Score

Alternative	AM Travel Time Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 5	5.5 minutes	((5.5/5.5)	* 4.031%) * 100	4.03
Alternative 6a	5.6 minutes	((5.5/5.6)	* 4.031%) * 100	3.90
No-Build Plus	5.8 minutes	((5.5/5.8)	* 4.031%) * 100	3.83
Alternative 13	6.5 minutes	((5.5/6.5)	* 4.031%) * 100	3.39
Alternative 6b	6.6 minutes	((5.5/6.6)	* 4.031%) * 100	3.34
No-Build	7.6 minutes	((5.5/7.6)	* 4.031%) * 100	2.90

Table 5-11: PM Travel Time Criterion Results in the Calculation of the Technical Score

Alternative	PM Travel Time Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	6.6 minutes	((6.6/6.6)	* 4.031%) * 100	4.03
Alternative 6a	7.1 minutes	((6.6/7.1)	* 4.031%) * 100	3.72
Alternative 5	7.2 minutes	((6.6/7.2)	* 4.031%) * 100	3.70
Alternative 13	7.4 minutes	((6.6/7.4)	* 4.031%) * 100	3.56
No-Build Plus	7.5minutes	((6.6/7.5)	* 4.031%) * 100	3.53
Alternative 6b	7.6 minutes	((6.6/7.6)	* 4.031%) * 100	3.49

5.6c Traffic Operations – *Network Delay Criterion Results*

The Network Delay criterion is a metric that measures traffic operations by total hours of traffic delay in the model (study area). The results of the year 2040 network delay for the No-Build option and the five other Tier 3 Alternatives is an output from the Vissim Model.

The Vissim Model has two outputs under the delay category – Network Delay and Latent Delay. The network delay output is the delay experienced by traffic within the model and latent delay is the amount of delay experienced by traffic trying to enter the model. The Total Delay – sum of network delay and latent delay – was used as the performance metric of traffic operations for each of the Tier 3 Alternatives and the No-Build option. In addition, network delay was measured during both the AM and PM time periods to measure the overall performance of this criterion – each receiving half of the 3.8% weight assigned to this criterion.

The results of the of the Network Delay Criterion are shown below in **Table 5-12** for the No-Build option and five other Tier 3 Alternatives.

Table 5-12: Network Delay Criterion Results

Alternative	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	645	-	780	-	1,425	-	824	-	1,346	-	2,170	-
No Build Plus	525	18.6%	844	-8.2%	1,369	3.9%	800	3.0%	1,424	-5.8%	2,224	-2.5%
5	526	18.4%	695	10.9%	1,221	14.3%	769	6.7%	1,342	0.3%	2,111	2.7%
6a	528	18.2%	659	15.5%	1,187	16.7%	779	5.5%	1,229	8.7%	2,008	7.5%
6b	604	6.3%	626	19.8%	1,230	13.7%	826	-0.2%	1,320	1.9%	2,146	1.1%
13	601	6.7%	616	21.0%	1,217	14.5%	954	-15.7%	1,365	-1.4%	2,319	-6.8%

The total delay for the No-Build option is 1,425 hours in the AM and 2,170 hours in the PM – nearly a 50% increase in delay time between the AM and PM time periods. The No-Build total delay result is the baseline condition for calculating the percent change for each of the Tier 3 Alternatives.

All the Alternatives have an improved total delay over the No-Build in the AM time period. Alternative 6a is the only alternative that has a substantial improvement in total delay compared to the No-Build in the PM, while Alternative 5 and Alternative 6b have marginal improvement. Conversely, Alternative 13 and the No-Build Plus actually have an increase in total delay compared to the No-Build option. This is noteworthy because Alternative 13 has the second shortest amount of total delay in the AM while having the longest delay in the PM.

The No-Build option and the Tier 3 Alternatives are ranked below for each time frame based on the results of the Network Delay criterion.

AM

1. Alternative 6a – 1,187 hours of total delay
2. Alternative 13 – 1,217 hours of total delay
3. Alternative 5 – 1,221 hours of total delay
4. Alternative 6b – 1,230 hours of total delay
5. No-Build Plus – 1,369 hours of total delay
6. No-Build – 1,425 hours of total delay

PM

1. Alternative 6a – 2,008 hours of total delay
2. Alternative 5 – 2,111 hours of total delay
3. Alternative 6b – 2,146 hours of total delay
4. No-Build – 2,170 hours of total delay
5. No-Build Plus – 2,224 hours of total delay
6. Alternative 13 – 2,319 hours of total delay

Application of the Network Delay Criterion Results in the Application 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:

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

Since Network Delay criterion was measured in both the AM and PM time periods, two values were produced - each receiving half the value of the 3.77% weight, or 1.88%.

Table 5-13 and **Table 5-14** below show how the AM and PM scores were calculated for the No-Build option and the five other Tier 3 Alternatives relative to the results of the Network Delay creation in order of highest to lowest scoring.

Table 5-13: AM Network Delay Criterion Results in the Application of the Technical Score

Alternative	AM Network Delay Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 6a	1,187 hours	((1,187/1,187)	* 1.88%) * 100	1.88
Alternative 13	1,217 hours	((1,187/1,217)	* 1.88%) * 100	1.84
Alternative 5	1,221 hours	((1,187/1,221)	* 1.88%) * 100	1.83
Alternative 6b	1,230 hours	((1,187/1,230)	* 1.88%) * 100	1.82
No-Build Plus	1,369 hours	((1,187/1,369)	* 1.88%) * 100	1.63
No-Build	1,425 hours	((1,187/1,425)	* 1.88%) * 100	1.57

Table 5-14: PM Network Delay Criterion Results in the Application of the Technical Score

Alternative	PM Network Delay Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 6a	2,008 hours	((2,008/2,008)	* 1.88%) * 100	1.88
Alternative 5	2,111 hours	((2,008/2,111)	* 1.88%) * 100	1.79
Alternative 6b	2,146 hours	((2,008/2,146)	* 1.88%) * 100	1.76
No-Build	2,170 hours	((2,008/2,170)	* 1.88%) * 100	1.74
No-Build Plus	2,224 hours	((2,008/2,224)	* 1.88%) * 100	1.70
Alternative 13	2,319 hours	((2,008/2,319)	* 1.88%) * 100	1.63

5.6d Safety – *Conflict Points Criterion Results*

The Conflict Points Criterion is the sole safety-related criteria in the Tier 3 Alternative analysis. This criterion compares the relative measures of safety of each alternative by evaluating the number of total number of potential conflict points at intersections between the No-Build option and the five other Tier 3 Alternatives. This analysis was conducted at the signalized intersections only. A conflict point is defined by the opportunity for potential crashes between various road users. The conflict points were calculated in the three following categories:

- Vehicle-to-pedestrian conflicts;
- Vehicle-to-bicyclist conflicts; and
- Vehicle-to-vehicle conflicts.

Table 5-15 below shows the total number of conflict points for the No-Build option and the five other Tier 3 Alternatives. An alternative with a higher number of total conflict points is only used for comparison and does not necessarily reflect the overall safety of an alternative. Given the same roadway conditions, alternatives with lower potential conflict points may have other safety and operational issues, such as congestion or driver frustration, and the potential for increases in number of crashes. Alternatives with higher number of conflict points, may have less congestion or less driver frustration, and the potential for a decrease in the number of some crashes. This criterion does not infer that one alternative is more or less safe than another, rather documents the potential for conflicts between all vehicles and pedestrians or bicycles. Refer to Appendix K and Appendix L for a detailed breakdown and graphic representation of the conflict points analysis.

Table 5-15: Conflict Points Criterion Results

Alternative	Number of Conflict Points			Total Conflict Points
	Vehicle-Pedestrian Conflicts	Vehicle-Bicyclist Conflicts	Vehicle-Vehicle Conflicts	
No-Build	151	89	265	505
No-Build Plus	169	90	272	531
Alternative 5	223	88	376	687
Alternative 6a	236	88	427	751
Alternative 6b	214	87	365	666
Alternative 13	217	90	387	694

As anticipated, the alternatives with the greatest number of lanes present the higher number of potential conflict points. As a result, Alternative 6a has the highest number of conflict points by a fairly large margin, while Alternatives 13, Alternative 6b, and Alternative 5 have a lower number of conflict points. However, these three alternatives have a much higher number of potential conflict points in comparison to the No-Build option and the No-Build Plus.

Application of the Conflict Points 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 Conflict Points Criterion. The following formula was used to calculate the scores:

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

Table 5-16 below shows how the score was calculated for the No-Build option and five other Tier 3 Alternatives relative to the results of the Conflict Points, in order of highest scoring to lowest scoring.

Table 5-16: Conflict Points Criterion Results in the Calculation of the Technical Score

Alternative	Total Conflict Points Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	505	((505/505)	* 16.60%) * 100	16.60
No-Build Plus	531	((505/531)	* 16.60%) * 100	15.79
Alternative 6b	666	((505/666)	* 16.60%) * 100	12.59
Alternative 5	687	((505/687)	* 16.60%) * 100	12.20
Alternative 13	694	((505/694)	* 16.60%) * 100	12.08
Alternative 6a	751	((505/751)	* 16.60%) * 100	11.16

5.6e Expand Travel Modes Choices – *Bicycle Comfort Index Criterion Results*

The Bicycle Comfort Index (BCI) criterion is one of the newly introduced criteria into the Tier 3 Alternative analysis. The BCI was created to consolidate multiple bicycle-related performance indicators into one overall performance measure. This criterion measures improved travel mode choices by evaluating the overall comfort of a bicyclist navigating the corridor. Developed primarily using the MetroPlan Bicycle Comfort Evaluation methodology combined with some industry best practices, the following sub-criteria displayed in **Table 5-17** were used to score the overall BCI for the No-Build option and five other Tier 3 Alternatives.

Table 5-17: Qualitative Scoring Measures of the Bicycle Comfort Index Criterion

Bicycle Comfort Index	Scoring 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 Though Lanes	8	0.0
	6	1.0
	4	1.5
	2	2.0
Traffic Volume: (Curb Lane)	> 12,000	0.0
	9,000 - 12,000	0.5
	6,000 - 9,000	1.0
	3,000 - 6,000	1.5
	< 3,000	2.0
Presence of Median	No median	0.0
	TWLTL / Left Turn Lane (no median)	1.0
	Left turn Lane with median (<5')	1.5
	Left turn Lane with planted median (>5')	2.0

The BCI calculates a score by using a range of thresholds for each BCI indicator, with the thresholds that result in a higher comfort receiving a higher score. The BCI has a maximum score of eight points. **Table 5-18** below shows the final BCI score for the No-Build option and five other Tier 3 Alternatives from highest scoring to lowest scoring. Appendix K has the detailed results for the BCI sub-criteria and how the scores were calculated for the No-Build and the Tier 3 Alternatives.

Table 5-18: Bicycle Comfort Index Criterion Results

Alternative	Bicycle Comfort Index Sub-Criteria				BCI Score
	Bicycle Facility Type	Number of Vehicle Through Lanes	Traffic Volume: (Curb Lane)	Presence of Median	
Alternative 6b	0.5	1.5	2.0	2.0	6.0
Alternative 5	2.0	1.0	0.5	2.0	5.5
Alternative 6a	0.5	1.0	2.0	2.0	5.5
Alternative 13	2.0	1.5	0.5	0.0	4.0
No-Build Plus	0.0	1.5	0.5	2.0	4.0
No-Build	0.0	1.5	0.5	1.0	3.0

The highest scoring Tier 3 Alternatives for the BCI criterion are Alternative 6b, Alternative 5, and Alternative 6a with six and five-and-half points respectively. Alternative 5 has the one of the most comfortable bicycle facilities with a dedicated buffered bike lane and Alternative 6a and Alternative 6b have a shared facility with the SBBL. The SBBL account for a reduction in curb lane volumes compared to the other alternatives with vehicular through lanes as the curb lanes.

Application of the Bicycle Comfort Index 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 BCI Criterion. The following formula was used to calculate the scores:

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

Table 5-19 below shows how the score was calculated for the No-Build option and five other Tier 3 Alternatives relative to the results of the BCI, in order of highest scoring to lowest scoring.

Table 5-19: Bicycle Comfort Index Criterion Results in the Calculation of the Technical Score

Alternative	BCI Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 6b	6.0	((6.0/6.0)	* 4.94%) * 100	4.94
Alternative 5	5.5	((5.5/6.0)	* 4.94%) * 100	4.53
Alternative 6a	5.5	((5.5/6.0)	* 4.94%) * 100	4.53
Alternative 13	4.0	((4.0/6.0)	* 4.94%) * 100	3.56
No-Build Plus	4.0	((4.0/6.0)	* 4.94%) * 100	3.29
No-Build	3.0	((3.0/6.0)	* 4.94%) * 100	2.47

5.6f Expand Travel Modes Choices – *Pedestrian Comfort Index Criterion Results*

The Pedestrian Comfort Index (PCI) Criterion is another one of the newly introduced criteria into the Tier 3 Alternative analysis. The PCI was created to consolidate multiple pedestrian-related performance indicators into one overall performance measure. This criterion measures improved travel mode choices by evaluating the overall comfort of a pedestrian navigating the corridor. Constructed primarily using the MetroPlan Bicycle Comfort Evaluation methodology combined with some industry best practices, the following sub-criteria displayed in **Table 5-20** were used to score the overall PCI for the No-Build option and five other Tier 3 Alternatives.

Table 5-20: Qualitative Scoring Measures of the Pedestrian Comfort Index Criterion

Pedestrian Comfort Index	Scoring 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
Number of Total Vehicle Though Lanes	8	0.0
	6	1.0
	4	1.5
	2	2.0
Traffic Volume: (Curb Lane)	> 12,000	0.0
	9,000 - 12,000	0.5
	6,000 - 9,000	1.0
	3,000 - 6,000	1.5
	< 3,000	2.0
Presence of Median	No median	0.0
	TWLTL / Left Turn Lane (no median)	1.0
	Left turn Lane with median (<5')	1.5
	Left turn Lane with planted median (>5')	2.0

The PCI calculates a score by using a range of thresholds for each PCI indicator with the thresholds that result in a higher comfort receive a higher score. The BCI has a maximum score of ten points. **Table 5-21** below shows the final PCI score for the No-Build option and five other Tier 3 Alternatives from highest scoring to lowest scoring. Refer to Appendix K for the detailed results that further illustrate how the No-Build and the Tier 3 Alternatives score within each of the PCI sub-criteria.

Table 5-21: Qualitative Scoring Measures of the Pedestrian Comfort Index Criterion

Alternative	Pedestrian Comfort Index Sub-Criteria					PCI Score
	Sidewalk Width	Horizontal Buffer Width	Number of Vehicle Through Lanes	Traffic Volume: (Curb Lane)	Presence of Median	
Alternative 6b	2.0	1.5	1.5	2.0	2.0	9.0
Alternative 6a	2.0	1.0	1.0	2.0	2.0	8.0
Alternative 5	2.0	1.0	1.0	0.5	2.0	6.5
Alternative 13	2.0	2.0	1.5	0.5	0.0	6.0
No-Build Plus	0.0	0.0	1.5	0.5	2.0	4.0
No-Build	0.0	0.0	1.5	0.5	1.0	3.0

The highest scoring Tier 3 Alternatives for the BCI criterion are Alternative 6b, Alternative 5, and Alternative 6a with six and five-and-half points respectively. Alternative 5 has the one of the most comfortable bicycle facilities with a dedicated buffered bike lane and Alternative 6a and Alternative 6b have a shared facility with the SBBL. The SBBL account for a reduction in curb lane volumes compared to the other alternatives with vehicular through lanes as the curb lanes.

Application of the Pedestrian Comfort Index 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 PCI Criterion. The following formula was used to calculate the scores:

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

Table 5-22 below shows how the score was calculated for the No-Build option and five other Tier 3 Alternatives relative to the results of the PCI creation in order of highest to lowest scoring.

Table 5-22: Pedestrian Comfort Index Criterion Results in the Calculation of the Technical Score

Alternative	BCI Results	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 6b	9.0	((9.0/9.0)	* 6.97%) * 100	6.97
Alternative 6a	8.0	((9.0/9.0)	* 6.97%) * 100	6.19
Alternative 5	6.5	((9.0/9.0)	* 6.97%) * 100	5.03
Alternative 13	6.0	((9.0/9.0)	* 6.97%) * 100	4.64
No-Build Plus	4.0	((9.0/9.0)	* 6.97%) * 100	3.10
No-Build	3.0	((9.0/9.0)	* 6.97%) * 100	2.32

5.6g Expand Travel Modes Choices – *Transit Travel Time Criterion Results*

The Transit Travel Time criterion is a metric that measures impact upon transit performance 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 total transit travel time. The results of the Transit Travel Time Criterion for the No-Build option and five other Tier 3 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 of the value of 3.72% weight assigned to this criterion, or 1.83% per time duration. The transit travel speeds in each direction of Milton Road – northbound and southbound – were also averaged to reach a combined travel speed for each the AM and PM durations.

The results of the of the Transit Travel Time are shown below in **Table 5-23** for the No-Build option and the five other Tier 3 Alternatives.

Table 5-23: Transit Travel Time Criterion Results

Alternative	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	9.4	-	6.4	-	5.0	-	6.6	-
No Build Plus	5.0	46.8%	4.4	31.6%	5.5	-9.5%	6.7	-0.9%
5	5.7	39.8%	4.9	23.7%	5.8	-15.0%	6.0	9.2%
6a	4.7	50.2%	5.1	20.0%	4.6	8.7%	5.6	15.9%
6b	4.1	56.2%	4.7	27.3%	5.4	-6.8%	6.0	9.9%
13	5.0	46.4%	5.7	11.7%	6.0	-19.6%	6.6	0.4%

Alternative	Average AM Travel Time		Average PM Travel Time	
No Build	7.9		5.8	
No Build Plus	4.7	40.6%	6.1	-4.6%
5	5.3	33.3%	5.9	-1.2%
6a	4.9	37.9%	5.1	12.8%
6b	4.4	44.5%	5.7	2.7%
13	5.4	32.3%	6.3	-8.2%

The average transit travel time between the northbound and southbound direction for the No-Build option is 7.9 minutes in the AM and 5.8 minutes in the PM – over a two-minute decrease in average travel time between the AM and PM time periods. The No-Build travel time result is the baseline condition for calculating the travel time percent change for each of the Tier 3 Alternatives.

All the Tier 3 Alternatives have improved transit travel times compared to the No-Build in the AM time period, while only Alternative 6a and Alternative 6b have an improved travel time compared to the No-Build in the PM. The No-Build option and the Tier 3 Alternatives are ranked below for each time frame based on the results of the Transit Travel Time criterion.

AM

1. Alternative 6b – 4.4 minutes of average transit travel time
2. No-Build Plus – 4.7 minutes of average transit travel time
3. Alternative 6a – 4.9 minutes of average transit travel time
4. Alternative 5 – 5.3 minutes of average transit travel time
5. Alternative 13 – 5.4 minutes of average transit travel time
6. No-Build – 7.9 minutes of average transit travel time

PM

1. Alternative 6a – 5.1 minutes of average transit travel time
2. Alternative 6b – 5.7 minutes of average transit travel time

3. No-Build – 5.8 minutes of average transit travel time
4. Alternative 5 – 5.9 minutes of average transit travel time
5. No-Build Plus – 6.1 minutes of average transit travel time
6. Alternative 13 – 6.3 minutes of average transit travel time

Application of the Transit Travel Time 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* used to calculate the score for the Transit Travel Time Criterion. The following formula was used to calculate the scores:

*Technical Score = (Best Result/ Alternative Result) * 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 value of 3.72% weight assigned to this criterion, or 1.83% per time duration.

Table 5-24 and **Table 5-25** below show how the AM and PM scores were calculated for the No-Build option and five other Tier 3 Alternatives in order of highest scoring to lowest scoring.

Table 5-24: 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	
Alternative 6b	4.4 minutes	((4.4/4.4)	* 1.83%) * 100	1.83
No-Build Plus	4.7 minutes	((4.4/4.7)	* 1.83%) * 100	1.71
Alternative 6a	4.9 minutes	((4.4/4.9)	* 1.83%) * 100	1.64
Alternative 5	5.3 minutes	((4.4/5.3)	* 1.83%) * 100	1.53
Alternative 13	5.4 minutes	((4.4/5.4)	* 1.83%) * 100	1.50
No-Build	7.9 minutes	((4.4/7.9)	* 1.83%) * 100	1.02

Table 5-25: 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	
Alternative 6a	5.1 minutes	((5.1/5.1)	* 1.83%) * 100	1.83
Alternative 6b	5.7 minutes	((5.1/5.7)	* 1.83%) * 100	1.64
No-Build	5.8 minutes	((5.1/5.8)	* 1.83%) * 100	1.60
Alternative 5	5.9 minutes	((5.1/5.9)	* 1.83%) * 100	1.58
No-Build Plus	6.1 minutes	((5.1/6.1)	* 1.83%) * 100	1.53
Alternative 13	6.3 minutes	((5.1/6.3)	* 1.83%) * 100	1.48

5.6h Expand Travel Modes Choices – *Transit Ridership Criterion Results*

The Transit Ridership Criterion helps measure the performance of expanding travel mode choices by evaluating the trends in ridership numbers among the No-Build options and five other Tier3 Alternatives. Certain alternatives solicit higher ridership numbers than others resulting in an expanded travel mode choices. **Table 5-26** below shows the transit ridership estimates based on

FTA STOPs model guidance that was then applied to this study Milton Road. The numbers reflect average daily trips.

Table 5-26: Transit Ridership Criterion Results

Alternative	Transit Ridership Estimate
No-Build	1,347
No-Build Plus	1,347
Alternative 5	1,347
Alternative 6a	1,930
Alternative 6b	1,930
Alternative 13	2,219

Application of the Transit Ridership 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 Ridership Criterion.

The following formula below was used to calculate the scores:

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

Table 5-27 below shows how the transit ridership scores were calculated for each alternative, in order of highest scoring alternative to the lowest scoring alternative.

Table 5-27: Transit Ridership Criterion Results in the Calculation of the Technical Score

Alternative	Transit Ridership	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 13	2,219	((2,219/2,219)	* 3.72% * 100))	3.72
Alternative 6a	1,930	((1,930/2,219)	* 3.72% * 100))	3.24
Alternative 6b	1,930	((1,930/2,219)	* 3.72% * 100))	3.24
No-Build	1,347	((1,347/2,219)	* 3.72% * 100))	2.26
No-Build Plus	1,347	((1,347/2,219)	* 3.72% * 100))	2.26
Alternative 5	1,347	((1,347/2,219)	* 3.72% * 100))	2.26

5.6i Cost / Implementation – *Project Cost Criterion Results*

The Cost of Implementation criterion is a metric that measures the potential ease of construction/implementation by evaluating the total project cost to implement the No-Build option and five other Tier 3 Alternatives. This criterion is intended to reflect the fact that more expensive alternatives are generally more complex and difficult to implement than a less expensive alternative, and thus alternatives with lower projected costs would score higher than alternatives with more expensive cost estimates.

The No-Build option assumes no cost to construct while detailed, planning level cost estimates were developed for each of the five Tier 3 Alternatives. **Table 5-28** shows the total project planning-level cost for implementation of each Alternative.

Table 5-28: Project Cost Criterion Results

Alternative	Project Cost Estimate
No-Build	No Cost
No-Build Plus	$9,804,000
Alternative 5	$85,417,000
Alternative 6a	$95,463,000
Alternative 6b	$74,504,000
Alternative 13	$77,334,000

As anticipated, the more expansive build alternatives have higher project costs than the less expansive build alternatives. Alternative 6a has the highest project cost estimate of $95,463,000 while No-Build Plus has the lowest project cost estimate of $9,804,000 (sum of the spot improvements). Refer to Appendix K to see the detailed, planning-level cost estimates for each alternative. It should be noted that ROW costs at intersections are included in the cost estimates.

In evaluating the percentage of right-of-way cost compared to the total cost estimate for each alternative, the following is observed; No Build Plus = 20% of the total cost estimate, Alternative 5 = 11% of the total cost estimate, Alternative 6a = 17% of the total cost estimate, Alternative 6b = 13% of the total cost estimate and Alternative 13 = 13% of the total cost estimate.

Application of the Project Cost 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 the 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 five Tier 3 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 below was used to calculate the scores:

*Technical Score = (Best Result / (Alternative Result/10M)) * Weight * 100*

Table 5-29 shows how the scores were calculated for each alternative of the Cost of Implementation, in order of highest scoring alternative to the lowest scoring alternative.

Table 5-29: Project Cost Criterion Results in the Calculation of the Technical Score

Alternative	Project Cost	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	No Cost	No formula used, automatically received full weighted points		3.10
No-Build Plus	$9,804,000	(1/9.804M(/10M))	* 3.10% *100))	3.10
Alternative 6b	$74,504,000	(1/74.504M(/10M))	* 3.10% *100))	0.42
Alternative 13	$77,334,000	(1/77.334M(/10M))	* 3.10% *100))	0.40
Alternative 5	$85,417,000	(1/85.417M(/10M))	* 3.10% *100))	0.36
Alternative 6a	$95,463,000	(1/95.463M(/10M))	* 3.10% *100))	0.32

5.6j Cost / Implementation – *Right-of-Way Impact Criterion Results*

The Right-of-Way Impact criterion is a metric that measures the approximate 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 right-of-way - in square feet – that would be necessary to theoretically construct each of build the alternatives. The No-Build option assumes no right-of-way impact is necessary, while a detailed process to map and calculate the theoretical right-of-way needed was conducted for each of the other five Tier 3 Alternatives. **Table 5-30** shows the total right-of-way impact for the theoretical implementation of each Tier 3 Alternative.

Table 5-30: Right-of-Way Impact Criterion Results

Alternative	Mid-Block ROW Width	Approximate Right-of-Way Impact
No-Build	Existing	*No Impact*
No-Build Plus	100 ft	53,884 ft^2
Alternative 5	125 ft	253,662 ft^2
Alternative 6a	144 ft	398,689 ft^2
Alternative 6b	128 ft	271,345 ft2
Alternative 13	129 – 134 ft	286,207 ft^2

The more expansive build alternatives naturally have a larger right-of-way footprint than the less expansive alternatives. In fact, Alternative 6a has the largest ROW footprint and the No Build Plus having only 53,884 square feet of impact with the application of limited spot improvements. Alternatives 5, 6b and 13 have a roughly proportional ROW impact.

Application of the Right-of-Way Impact 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 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 was added to the formula to the 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 five Tier 3 Alternatives. In addition, the value of 1 ft^2 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 Right-of-Way Impact scores:

Formula = (Best Result / (Alternative Result/10K)) * Weight * 100

Table 5-31 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 5-31: Right-of-Way Impact Criterion Results in the Calculation of the Technical Score

Alternative	ROW Width	Right-of-Way Impact*	Scoring Formula		Score
			Results Ratio	Applying the Weight	
No-Build	Existing	*No Impact*	No formula used, automatically received full points		4.55
No-Build Plus	100 ft	53,884 ft²	(1/53,884 (/10K))	* 4.55% *100))	0.84
Alternative 5	125 ft	253,662 ft²	(1/253,662 (/10K))	* 4.55% *100))	0.18
Alternative 6b	128 ft	271,345 ft2	(1/271,345 (/10K))	* 4.55% *100))	0.17
Alternative 13	129 ft	286,207 ft²	(1/286,207 (/10K))	* 4.55% *100))	0.16
Alternative 6a	144 ft	398,689 ft²	(1/398,689 (/10K))	* 4.55% *100))	0.11

**The Right-of-Way Impact calculations are approximate*

5.6k Cost / Implementation – *Implementation Opportunities Criterion Results*

The Implementation Opportunities criterion is a metric that estimates the level of implementation possibility by the number of potential grants the No-Build option and the five other Tier 3 Alternatives could be eligible for. A secondary calculation was produced to arrive at a numeric value on a scale of zero to one hundred, with zero points having the least opportunity for implementation and one hundred having the highest likeliness for implementation. Refer to Appendix K for the detailed calculations for the Implementation Opportunities criterion. **Table 5-32** shows the result of the Implementation Opportunities Criterion calculations.

Table 5-32: Implementation Opportunities Criterion Results

Alternative	Implementation Opportunities Score
No-Build	100.0
No-Build Plus	33.4
Alternative 5	4.1
Alternative 6a	10.4
Alternative 6b	11.9
Alternative 13	15.4

Application of the Implementation Opportunities 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 Implementation Opportunities Criterion. The following formula below was used to calculate the scores:

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

Table 5-33 shows how the scores were calculated for the Implementation Opportunities in order of highest scoring alternative to the lowest scoring alternative.

Table 5-33: Implementation Opportunities Criterion Results in the Calculation of the Technical Score

Alternative	Implementation Score	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build	100.0	((100.0/100.0)	* 2.96% * 100))	2.96
No-Build Plus	33.4	((33.4/100.0)	* 2.96% * 100))	0.99
Alternative 13	15.4	((15.4/100.0)	* 2.96% * 100))	0.46
Alternative 6b	11.9	((11.9/100.0)	* 2.96% * 100))	0.35
Alternative 6a	10.4	((10.4/100.0)	* 2.96% * 100))	0.31
Alternative 5	4.1	((4.1/100.0)	* 2.96% * 100))	0.12

5.6l Environmental Impacts - *Neighborhood Impacts Criterion Results*

The Neighborhood Impacts Criterion measures the perceived impact on the environment for the No-Build and the other five Tier 3 Alternatives by calculating the approximate number vehicles traveling through adjacent neighborhoods to the Milton Road corridor in order to capture cut through traffic impacts. The resulting cut through traffic volumes are derived from an output of the MetroPlan 2040 Regional TDM Model. Refer to Appendix K for a detailed list of the streets used to calculate the total neighborhood cut through traffic volumes. **Table 5-34** below shows the total AADTs in the adjacent neighborhoods for the No-Build options and the five other Tier 3 Alternatives.

Table 5-34: Neighborhood Impacts Criterion Results

Alternative	Total 2040 AADTs in Adjacent Neighborhoods
No-Build	185,353 AADT
No-Build Plus	185,353 AADT
Alternative 5	183,149 AADT
Alternative 6a	183,149 AADT
Alternative 6b	195,552 AADT
Alternative 13	195,552 AADT

The results presented in **Table 5-34** show less cut through traffic for the alternatives with more lanes, suggesting that the alternatives with more capacity would experience less congestion resulting in less of a cut through traffic impact on the adjacent neighborhoods .

Application of the Neighborhood Impacts 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 Neighborhood Impacts Criterion. The following formula below was used to calculate the scores:

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

Table 5-35 shows how the scores were calculated for each alternative for the Neighborhood Impacts criterion in order of highest scoring alternative to the lowest scoring alternative.

Table 5-35: Neighborhood Impacts Criterion Results in the Calculation of the Technical Score

Alternative	Neighborhood Impact (AADT)	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 5	183,149	(183,149/183,149)	* 4.43% * 100))	4.43
Alternative 6a	183,149	(183,149/183,149)	* 4.43% * 100))	4.43
No-Build	185,353	(185,353/185,353)	* 4.43% * 100))	4.38
No-Build Plus	185,353	(185,353/185,353)	* 4.43% * 100))	4.38
Alternative 6b	195,552	(195,552/195,552)	* 4.43% * 100))	4.15
Alternative 13	195,552	(195,552/195,552)	* 4.43% * 100))	4.15

5.6m Environmental Impacts – *Title VI Impacts Criterion Results*

The Title VI Impacts Criterion measures the impact on any Title VI designated neighborhood for the No-Build and five other Tier 3 Alternatives by calculating the perceived number cut through vehicles traveling through the La Plaza Vieja neighborhood (Clay Avenue) adjacent to the Milton Road corridor. The results of the traffic volume are an output of the MetroPlan 2040 Regional TDM Model, and the only thoroughfare with AADTs in the 2040 TDM Model in the La Plaza Vieja to collect traffic volumes are on Clay Avenue between Florence Street and Blackbird Roost Street. **Table 5-36** shows the Clay Avenue AADTs for the No-Build options and five other Tier 3 Alternatives.

Table 5-36: Title VI Impacts Criterion Results

Alternative	2040 AADTs on Clay Avenue
No-Build	9,867 AADT
No-Build Plus	9,867 AADT
Alternative 5	6,065 AADT
Alternative 6a	6,065 AADT
Alternative 6b	10,171 AADT
Alternative 13	10,171 AADT

The results presented above show less perceived cut through traffic for the alternatives with more lanes, indicating the alternatives with more capacity would experience less congestion, resulting in less of a cut through traffic impact on the La Plaza Vieja neighborhood.

Application of the Title VI Impacts 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 Title VI Impacts Criterion. The following formula below was used to calculate the scores:

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

Table 5-37 shows how the scores were calculated for each alternative for the Title VI Criterion in order of highest scoring alternative to the lowest scoring alternative.

Table 5-37: Title VI Impacts Criterion Results in the Calculation of the Technical Score

Alternative	Title VI Impact (Clay Ave AADT)	Scoring Formula		Score
		Results Ratio	Applying the Weight	
Alternative 5	6,065	(6,065/6,065)	* 5.36% * 100))	5.36
Alternative 6a	6,065	(6,065/6,065)	* 5.36% * 100))	5.36
No-Build	9,867	(6,065/9,867)	* 5.36% * 100))	3.29
No-Build Plus	9,867	(6,065/9,867)	* 5.36% * 100))	3.29
Alternative 6b	10,171	(6,065/10,171)	* 5.36% * 100))	3.20
Alternative 13	10,171	(6,065/10,171)	* 5.36% * 100))	3.20

5.6n Environmental Impacts – *Air Quality Criterion Results*

The Air Quality Criterion measures the perceived impact on the environment for the No-Build and five other Tier 3 Alternatives by calculating the theoretical greenhouse gas (GHG) emissions by using the total vehicle miles travelled (VMT) output from the year 2040 Vissim Model. The GHG emissions is calculated with guidance from EPA MOVES model and is expressed in pounds of carbon dioxide equivalent per mile (lbs CO2e/mile). The GHG calculation also considers the approximate fleet distribution of 97% standard automobile and 3% semi-trucks which each have different GHG emission factors. **Table 5-38** displays the results of the 2040 GHG Emissions and Air Quality Criterion.

Table 5-38: Air Quality Criterion Results

2040 GHG Emissions		
Alternative	VMT	lbs CO2e
No Build	42,545	22,305
No Build Plus	41,396	21,703
Alternative 5	42,683	22,377
Alternative 6A	43,349	22,726
Alternative 6B	42,469	22,265
Alternative 13	43,855	22,992

Fleet Emission Factors		
Fleet	Percentage	lbs CO2e/mile (2040)
Standard automobile	97%	0.519417434
Semi truck	3%	0.681054574

Notes:

1. Emissions are presented in pounds (lbs) carbon dioxide equivalent (CO2e).
2. 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.

Since the GHG emissions calculations is correlated to VMT, the alternatives with the fewest VMT also have the least amount of GHG emissions. There is not a significant variation in VMTs between the alternatives – just a 2,459 VMT difference which is approximately just 6% of No-Build Plus which has the fewest VMT. Alternative 13 and Alternative 6a have the two highest VMT and GHG emissions. The list below ranks the Tier 3 Alternatives in order of lowest amount of GHG emissions to highest amount of GHG emissions.

GHG Emissions

1. No-Build – 21,703 lbs CO2e
2. Alternative 6b – 22,265 lbs CO2e
3. No-Build – 22,305 lbs CO2e
4. Alternative 5 – 22,377 lbs CO2e
5. Alternative 6a – 22,726 lbs CO2e
6. Alternative 13 – 22,992 lbs CO2e

Application of the Air Quality 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* used to calculate the score for the Air Quality Criterion. The following formula below was used to calculate the scores:

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

Table 5-39 shows how the scores were calculated for each alternative for the Air Quality Criterion in order of highest scoring alternative to the lowest scoring alternative.

Table 5-39: Air Quality Criterion Results in the Calculation of the Technical Score

Alternative	Air Quality (GHG Emissions)	Scoring Formula		Score
		Results Ratio	Applying the Weight	
No-Build Plus	21,703 lbs CO2e	(21,703 /21,703)	* 3.79% *100))	3.79
Alternative 6b	22,265 lbs CO2e	(21,703 /22,265)	* 3.79% *100))	3.70
No-Build	22,305 lbs CO2e	(21,703 /22,305)	* 3.79% *100))	3.69
Alternative 5	22,377 lbs CO2e	(21,703 /22,377)	* 3.79% *100))	3.68
Alternative 6a	22,726 lbs CO2e	(21,703 /22,726)	* 3.79% *100))	3.62
Alternative 13	22,992 lbs CO2e	(21,703 /22,992)	* 3.79% *100))	3.58

5.7 Tier 3 Evaluation Criteria Required to Finalize the Tier 3 Alternative Evaluation Process

Two of the Tier 3 Evaluation Criteria still need to be applied in order to finalize the Tier 3 Alternative Evaluation and screening process. the Public Support and the Community Character – Great Street Criterion require forthcoming public input to evaluate the performance of alternatives. The public input is anticipated to be collected in forthcoming engagement activities following the initial publication of this working paper. See the following sub-sections for more information on the methodology for how these two criteria measure alternative performance.

5.7a Public Support

The results of the Public Support Criterion will be calculated by the community inputs received in the upcoming second public open house and survey.

5.7b Community Character

The results of the Community Character Criterion will be calculated based on the community perception (from the upcoming second open house meeting and survey) of a great street and if each respective alternative meets the City of Flagstaff's 2030 Regional Plan Policy.

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
POSITIVE COMMUNICATION
TRUST IN EACH OTHER
COMMIT TO ATTEND MEETINGS
FOLLOW THROUGH ON ASSIGNMENTS

LISTENING WITH AN OPEN MIND
OPENNESS
LEAD BY EXAMPLE
WILLING TO COMPROMISE
VALUE INNOVATIVE IDEAS

HONESTY
TACT
PERSONAL INTEGRITY
HAVE FUN

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 2nd, 2017

R. M. Bowen

Audra E. Merrick

RaBarrett

Romare Truely

Debra Mollet

ADOT

FMPO

NAIPTA

NORTHERN ARIZONA UNIVERSITY

Appendix B – Working Paper #1 Existing & Future Conditions

ADOT

Milton Road Corridor Master Plan

Working Paper #1: Existing & Future Conditions

April 2018

Michael Baker
INTERNATIONAL

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EXECUTIVE SUMMARY

To be provided with future Work Task 8: Draft Final Report.

CHAPTER 1: STUDY INTRODUCTION & OVERVIEW

Milton Road Corridor Master Plan Purpose & Need

The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for the Milton Road 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 Milton Road right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the Milton Road 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-term and long-term System Alternatives. Chapter 9 of this report describes the System Alternatives and Base Build Spot Improvements in greater detail.

The Milton Road 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 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 Milton Road 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 Milton Road CMP which are not prioritized in any particular order:

1. **Address year-round congestion and safety on Milton Road**
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.**

Milton Road Corridor Overview

The nature and function of Milton Road has changed over the years with the evolution and growth of the City of Flagstaff. Historically, Milton Road primarily served residents and visitors as a connection between Interstate 17 (I-17) to downtown Flagstaff, Historic Route 66 and Interstate 40 (I-40), and US Highway 180 (US 180). Although Milton Road continues to serve in that capacity today, the roadway is now a formidable commercial corridor for NAU students and residents throughout Coconino County. Milton Road is home to a considerable portion of the destination commercial retail growth south of downtown. Illustrated in **Figure 1-1**, the Milton Road Corridor Master Plan study corridor consists of a 1.8-mile segment from West Forest Meadows Street (Mile Post 402.16) to Beaver Street (MP 180.20).

Milton Road is a multi-functional corridor serving residents as well as regional visitors as the gateway to the Grand Canyon and recreational sites in the Coconino National Forest. There is an extensive list of issues within the study corridor, including severe traffic congestion caused by the combination of local traffic and visitors, especially during the winter snow play season. The frequency and close proximity of driveways and intersections causes access management conflicts, and Milton Road's adjacency to Northern Arizona University brings multimodal challenges facing bicyclists, pedestrian and transit users.

Chapter 5: *Existing Roadway and Corridor Conditions,* offers a more comprehensive examination of the existing travel and operational characteristics of Milton Road.

Figure 1-1: Milton Road CMP Study Corridor

Study Process

The Milton Road CMP 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 Milton Road 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 Milton Road 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 Milton Road 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.

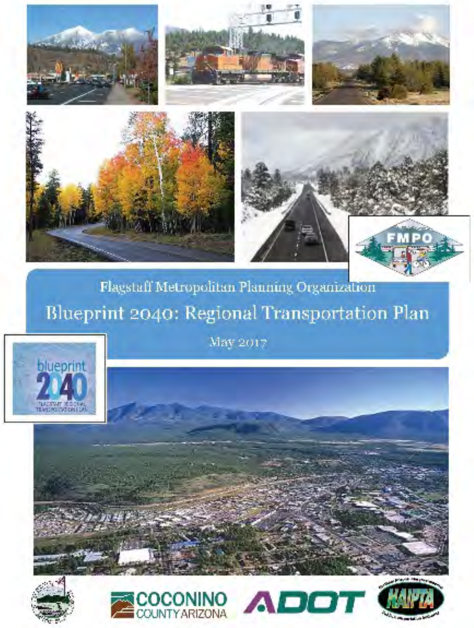
CHAPTER 2: PREVIOUS & ONGOING STUDIES, PLANS & REPORTS

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

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

This extensive plan and process 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.



Flagstaff Metropolitan Planning Organization
Blueprint 2040: Regional Transportation Plan
May 2017

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*
- 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

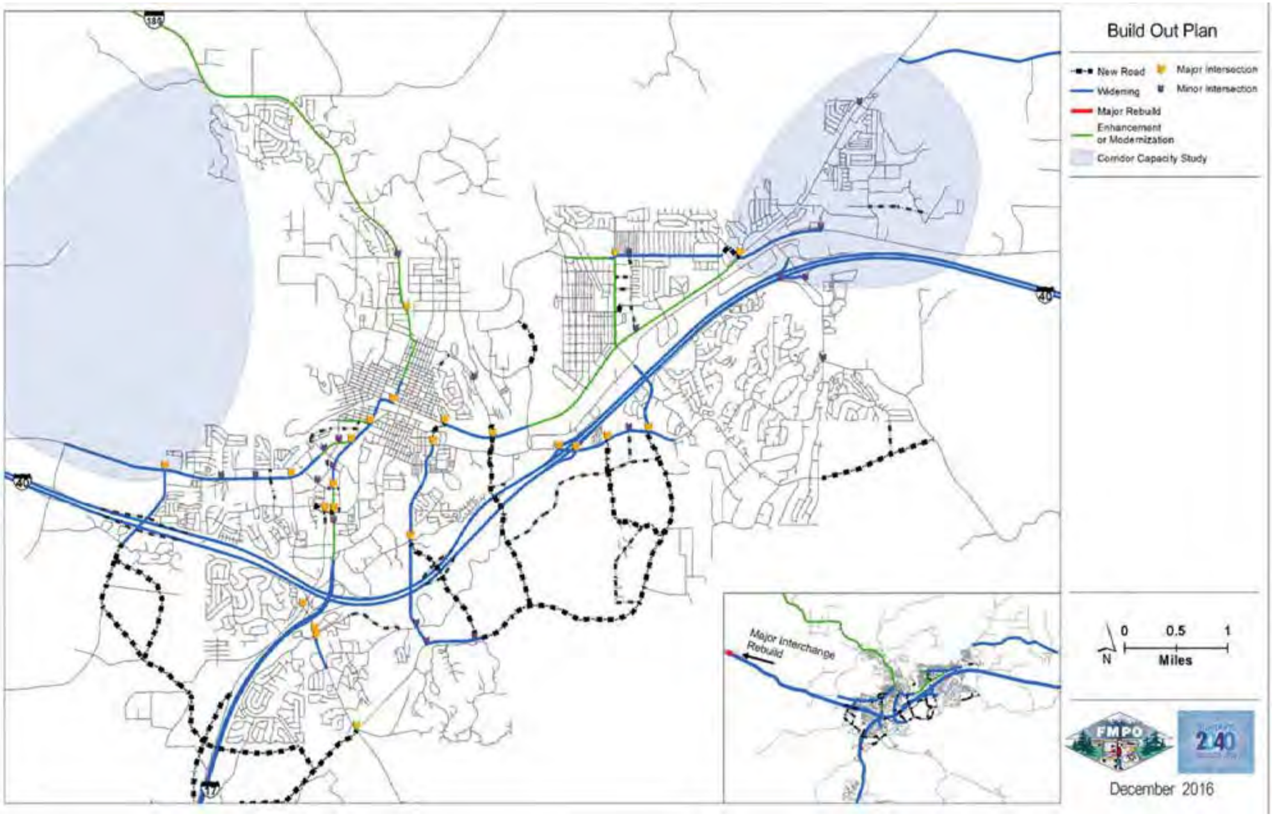
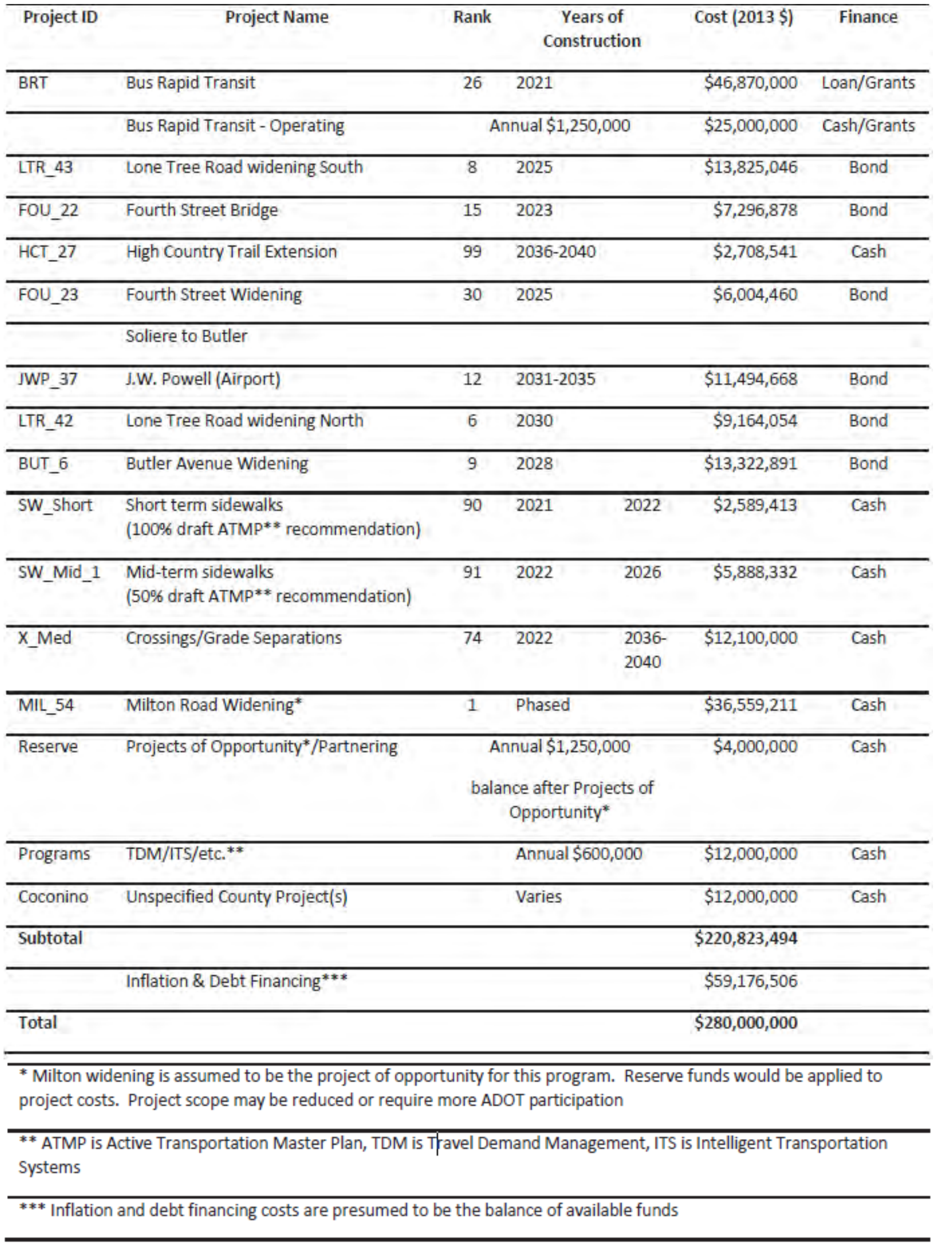


Figure 2-2 below provides a detailed listing of each project by type, project/community rank, estimated cost and funding source. What is noteworthy for this Milton Road CMP is that Milton Road widening

ranked #1 amongst all project types, and is noted to be a "project of opportunity" in that additional project partners such as ADOT or others would be needed to successfully fund and construct.

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 balance after Projects of Opportunity*		$4,000,000	Cash
Programs	TDM/ITS/etc.**		Annual $600,000		$12,000,000	Cash
Coconino	Unspecified County Project(s)		Varies		$12,000,000	Cash
Subtotal					**$220,823,494**	
	Inflation & Debt Financing***				$59,176,506	
Total					**$280,000,000**	

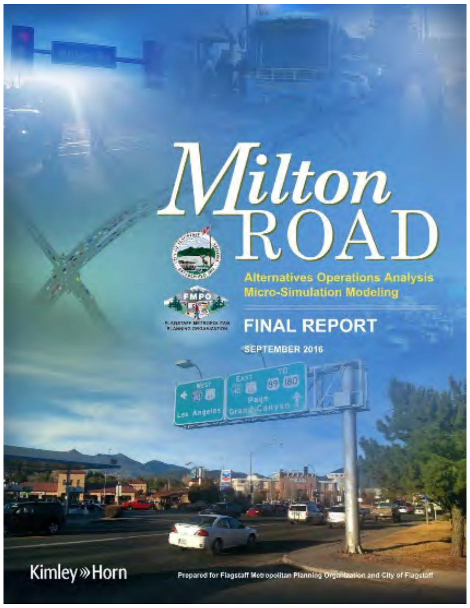
* Milton widening is assumed to be the project of opportunity for this program. Reserve funds would be applied to project costs. Project scope may be reduced or require more ADOT participation

** 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

Milton Road Alternatives Operations Analysis Micro-Simulation Modeling Final Report (FMPO and City of Flagstaff) 2016



Completed in September of 2016, the purpose of this study was to assess the operational effectiveness of alternative mobility treatments for the Milton Road/Route 66/Business Route 40 corridor (including cross-streets) between Forest Meadows Street and San Francisco Street.

As Milton Road's function and purpose has evolved over time, once serving as a state highway primarily serving regional transportation needs, urbanization of Flagstaff, continued growth of NAU's student population and general growth in the region, Milton Road has evolved into a roadway that is used by vehicles, transit, bicyclists, and pedestrians. Congestion is a significant community concern.

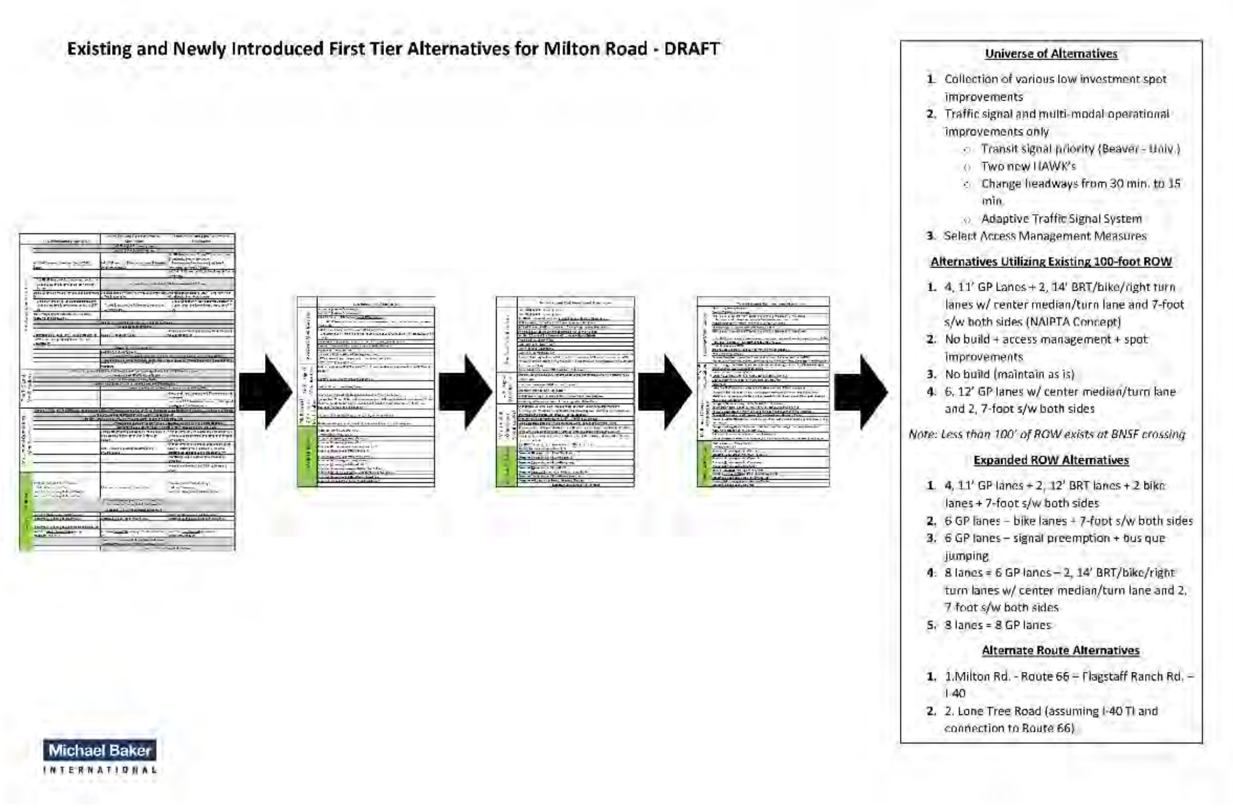
As the study notes, inherent in a multi-functional roadway are competing priorities, be it regional traffic mobility vs. local access or vehicular capacity vs. multimodal accommodations. These competing priorities, combined with existing corridor constraints, have resulted in operational and safety issues on Milton Road that were evaluated in this study. This study conducted a more technical evaluation using micro-simulation models. This project also did not include extensive stakeholder and public involvement as the goal is to determine the operational effectiveness of alternative mobility treatments for a technical audience.

The study performed analysis for existing baseline conditions and a future growth condition that consisted of an assumed 20 % growth rate in traffic volumes across three alternative types; "low investment alternatives", "auto focused high investment alternatives", and "transit-focused high investment alternatives".

Review of video output from the study suggests the model input did not have traffic utilize the Beulah Boulevard backage road as much as expected

The matrix in **Figure 2-3** provides a summary of the various projects evaluated across the three alternatives:

Figure 2-3: Matrix of Alternatives



Existing and Newly Introduced First Tier Alternatives for Milton Road - DRAFT

Universe of Alternatives

1. Collection of various low investment spot improvements
2. Traffic signal and multi-modal operational improvements only
    - Transit signal priority (Beaver - Univ.)
    - Two new HAWK's
    - Change headways from 30 min. to 15 min.
    - Adaptive Traffic Signal System
3. Select Access Management Measures

Alternatives Utilizing Existing 100-foot ROW

1. 4, 11' GP Lanes + 2, 14' BRT/bike/right turn lanes w/ center median/turn lane and 7-foot s/w both sides (NAIPTA Concept)
2. No build + access management + spot improvements
3. No build (maintain as is)
4. 6, 12' GP lanes w/ center median/turn lane and 2, 7-foot s/w both sides

Note: Less than 100' of ROW exists at BNSF crossing

Expanded ROW Alternatives

1. 4, 11' GP lanes + 2, 12' BRT lanes + 2 bike lanes + 7-foot s/w both sides
2. 6 GP lanes – bike lanes + 7-foot s/w both sides
3. 6 GP lanes – signal preemption + bus que jumping
4. 8 lanes = 6 GP lanes – 2, 14' BRT/bike/right turn lanes w/ center median/turn lane and 2, 7 foot s/w both sides
5. 8 lanes = 8 GP lanes

Alternate Route Alternatives

1. 1.Milton Rd. - Route 66 – Flagstaff Ranch Rd. – I-40
2. 2. Lone Tree Road (assuming I-40 TI and connection to Route 66)

Based on a review of the micro-simulation analysis findings, the following recommendations were recommended for the Milton Road CMP:

1. The findings from the micro-simulation analysis should be incorporated into the planned corridor study for Milton Road and other ongoing or planned studies that affect the Milton Road corridor.
2. The Low Investment Alternative proposed improvements should be considered for near term implementation (Base Build Spot Improvements) as funding and right-of-way availability allow because they are relatively low-cost/low-impact yet significantly improve travel conditions.
3. Improving multimodal (bus, bike, pedestrian) travel should be a priority for the corridor.
4. Future improvements should address not only typical daily traffic issues but also seasonal peak traffic conditions such as on holidays and snow play weekends.
5. Access management should be integrated with improvements, particularly any improvements that widen Milton Road.

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. In addition , the Lone Tree Road corridor was intendified as the most suitbale alternative route for Milton Road fore many destinations and longer trips. The report was to be used as an adopted plan for the preservation of the preferred Lone Tree Road alignment.

The study identifies a Preferred Alternative (**Figure 2-4**) that consists of a 4-lane collector roadway with raised median together 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.

Figure 2-4: 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.

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

City of Flagstaff, Arizona

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:

Sara Dechter, AICP
Comprehensive Planning
211 W. Aspen Ave.
Flagstaff, AZ 86001

Or email at:
sdechter@flagstaffaz.gov

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 offers 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 center and HOH sites are located along Milton Road
- 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

Figure 2-5: Modal Share of All Trips by Area of Residence (2012)

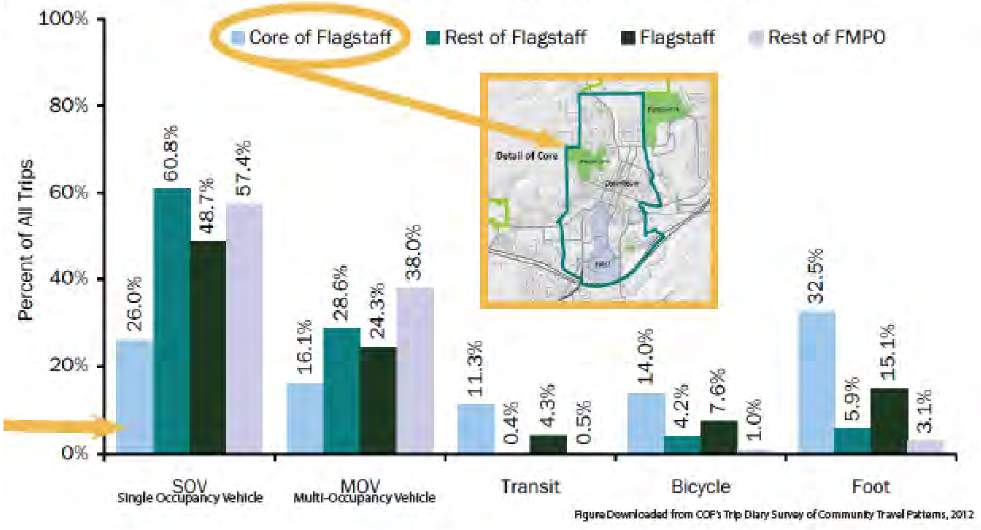
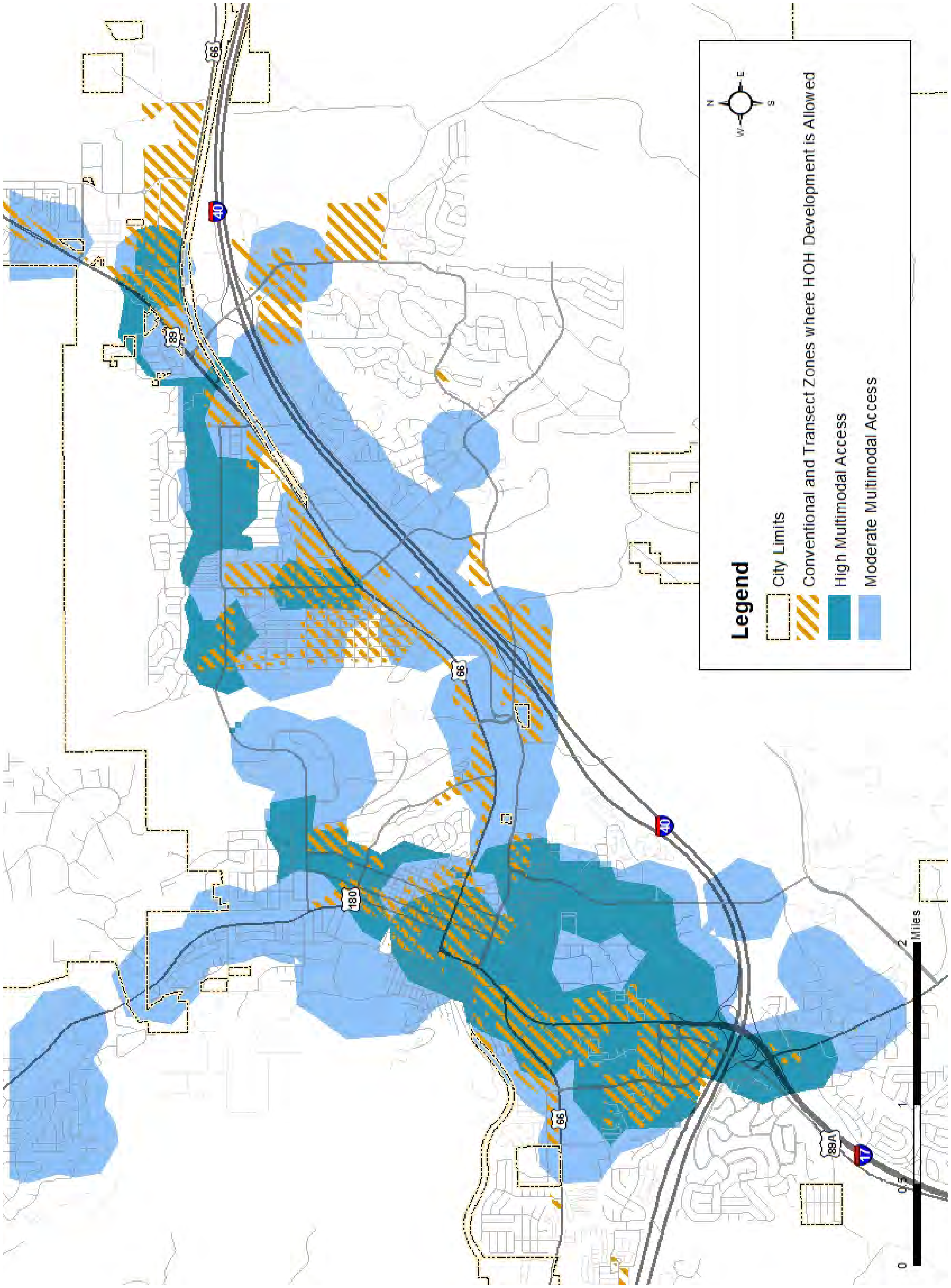


Figure Downloaded from COF's Trip Diary Survey of Community Travel Patterns, 2012

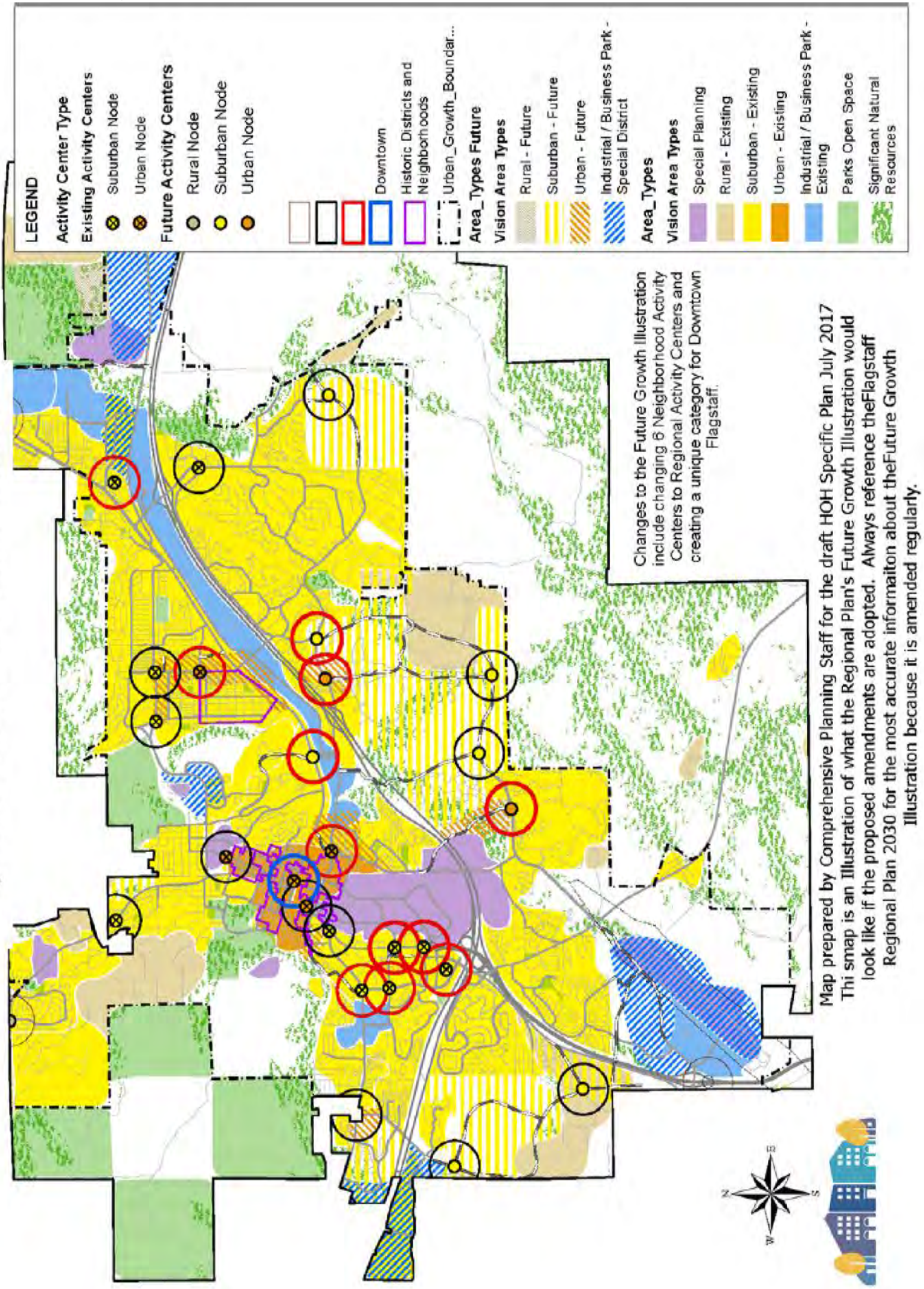
Source: City of Flagstaff High Occupancy Housing Draft Specific Plan

Figure 2-6: Potential HOH Development Zones



Source: City of Flagstaff High Occupancy Housing Draft Specific Plan

Figure 2-7: Proposed Future Growth Illustration

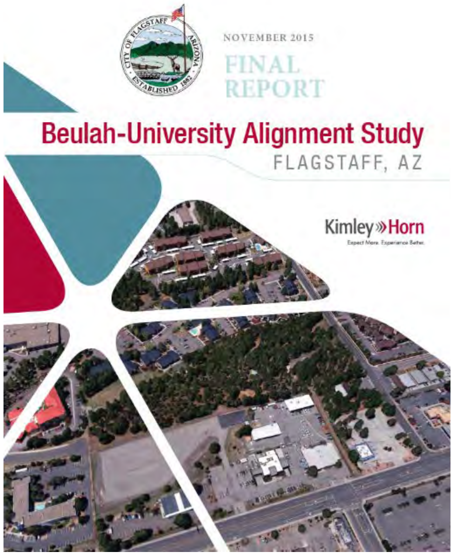


Changes to the Future Growth Illustration include changing 6 Neighborhood Activity Centers to Regional Activity Centers and creating a unique category for Downtown Flagstaff.

Map prepared by Comprehensive Planning Staff for the draft HOH Specific Plan July 2017
Thi smap is an Illustration of what the Regional Plan's Future Growth Illustration would look like if the proposed amendments are adopted. Always reference theFlagstaff Regional Plan 2030 for the most accurate informaiton about theFuture Growth Illustration because it is amended regularly.

Source: City of Flagstaff High Occupancy Housing Draft Specific Plan

Beulah-University Alignment Study (City of Flagstaff) 2015



NOVEMBER 2015
FINAL REPORT
Beulah-University Alignment Study
FLAGSTAFF, AZ
Kimley»Horn

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

Five-Year Transit Plan
ADOPTED DECEMBER 7, 2017
For the Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA), Mountain Line

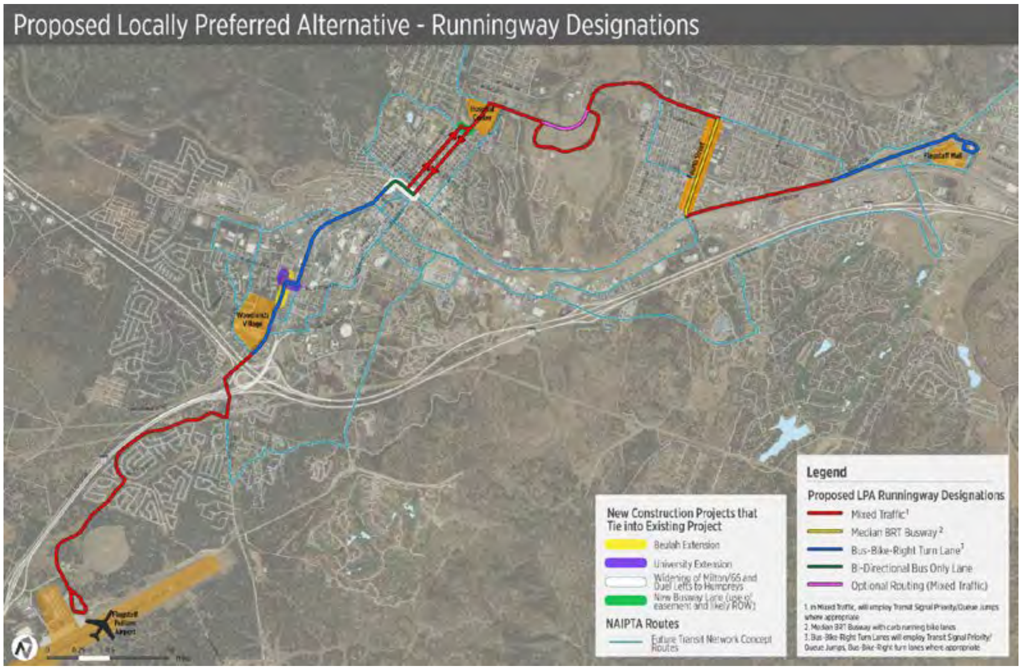
The Five-Year Transit Plan was adopted in December 2017 and was produced for NAIPTA's Mountain Line fixed bus service. The main focal point of the report is how NAIPTA should prioritize future service investments, specifically addressing the trade-offs between higher frequency service, longer spans of 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 permeant 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.

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

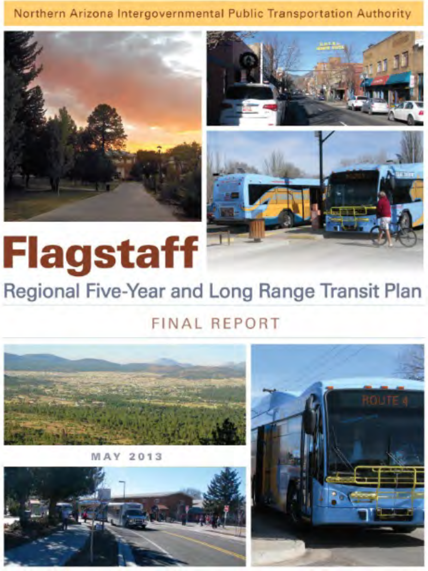
(BRT) service that connects key activity centers, including the airport, downtown and Flagstaff Mall. The Transit Spine will also provide enhanced transit service in Flagstaff, offering more convenient and attractive service than existing transit service and travel options in the area.

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. 4th 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.


Northern Arizona Intergovernmental Public Transportation Authority

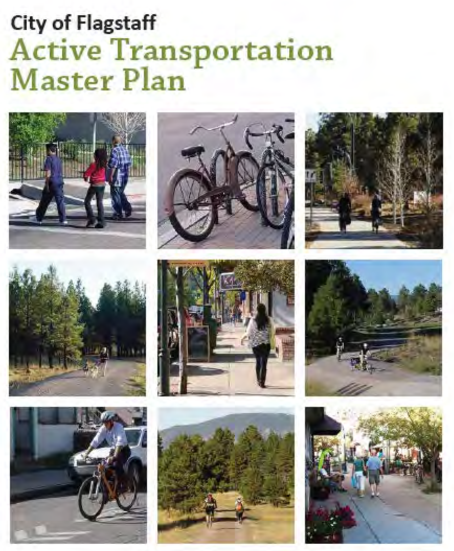
Flagstaff

Regional Five-Year and Long Range Transit Plan

FINAL REPORT

MAY 2013

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


City of Flagstaff
Active Transportation Master Plan

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 findings 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 53 miles of missing 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 are 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.
- Flagstaff has 21 existing grade separated crossings including 10 bridges/tunnels and 11 roadway overpasses/underpasses. An additional 44 locations for new grade-separated crossings have been identified, including locations on Milton Road.

CHAPTER 3: PUBLIC & STAKEHOLDER ENGAGEMENT

Public and Stakeholder engagement in the Milton Road 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 Milton Road 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 Milton 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 Milton Road. 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)

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 meets 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 it's Project Partners to develop, maintain and enhance the partnership for the Milton Road CMP process. The Charter helps create and maintain 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 be reminded of the project mission, values and goals in the event that future conflict may present themselves.

Figure 3-1: 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
POSITIVE COMMUNICATION
TRUST IN EACH OTHER
COMMIT TO ATTEND MEETINGS
FOLLOW THROUGH ON ASSIGNMENTS

LISTENING WITH AN OPEN MIND
OPENNESS
LEAD BY EXAMPLE
WILLING TO COMPROMISE
VALUE INNOVATIVE IDEAS

HONESTY
TACT
PERSONAL INTEGRITY
HAVE FUN

PARTNERSHIP CHARTER

Milton Road & US 180 Corridor Master Plans

August 2, 2017

2017 PARTNERSHIP GOALS

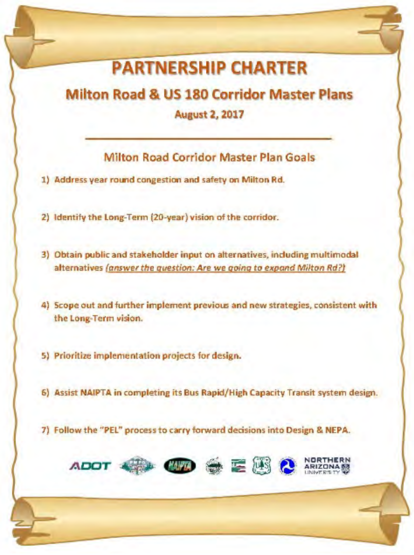
TEAMWORK
Develop and maintain a positive partnering relationship by encouraging the support and mutual respect of all project partners and the planning process.

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

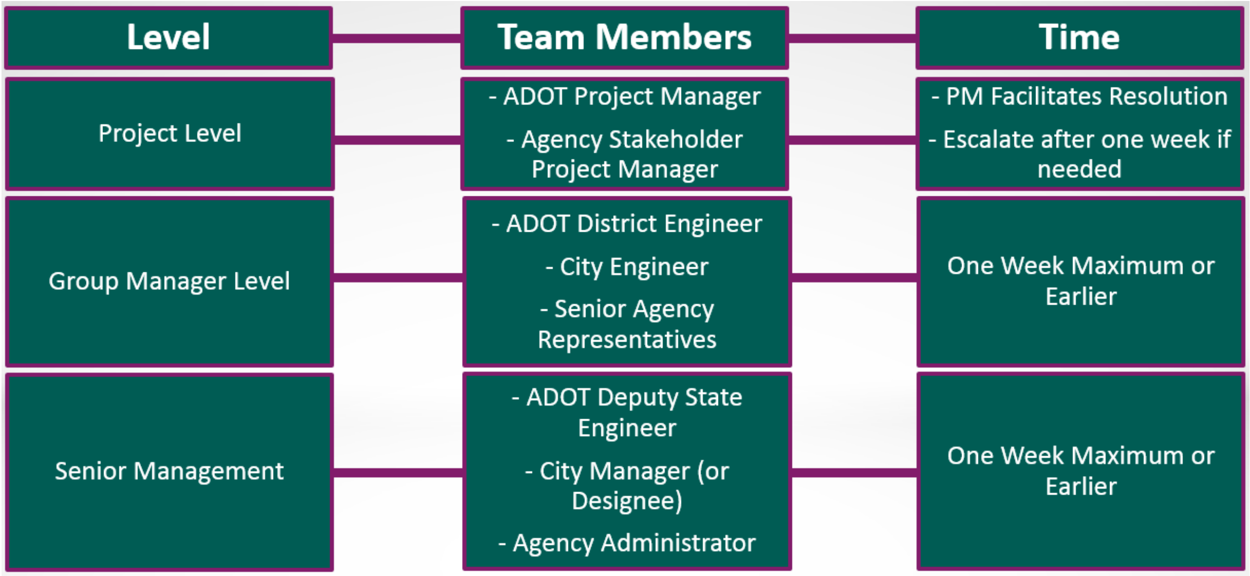
SIGNED, WEDNESDAY, AUGUST 2nd, 2017

Romare Truely
Debra Mollet

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 an “issue escalation ladder” that is intended to be utilized for resolving issues when and if they should arise (**Figure 3-2**). Originally developed for use on construction projects, a less rigid but constructive issue escalation ladder is established for the Milton Road CMP

Figure 3-2: Issue Escalation Ladder



Level	Team Members	Time
Project Level	- ADOT Project Manager - Agency Stakeholder Project Manager	- PM Facilitates Resolution - Escalate after one week if needed
Group Manager Level	- ADOT District Engineer - City Engineer - Senior Agency Representatives	One Week Maximum or Earlier
Senior Management	- ADOT Deputy State Engineer - City Manager (or Designee) - Agency Administrator	One Week Maximum or Earlier

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 Milton Road CMP process. The full Public Involvement Plan for the Milton Road 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 Milton Road 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 imperative 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
- www.azdot.gov/US180CorridorMasterPlan

These project websites 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 Milton Road CMP for a more complete description of the public and stakeholder outreach methods.

CHAPTER 4: EXISTING LAND USE, DEMOGRAPHIC & SOCIOECONOMIC CONDITIONS

Land Ownership

Simply put, ownership of land along the Milton Road corridor is almost exclusively held by private interests. As **Figure 4-1** shows, all parcels with frontage on Milton Road are all privately held for the 1.8-mile length of the study corridor. Arizona State parks maintains ownership of the 5-acre Riordan Mansion State Historic Park that borders the NAU campus east of Milton Road and south of Riordan Road. And finally, the State of Arizona/Board of regents maintain ownership of the NAU campus.

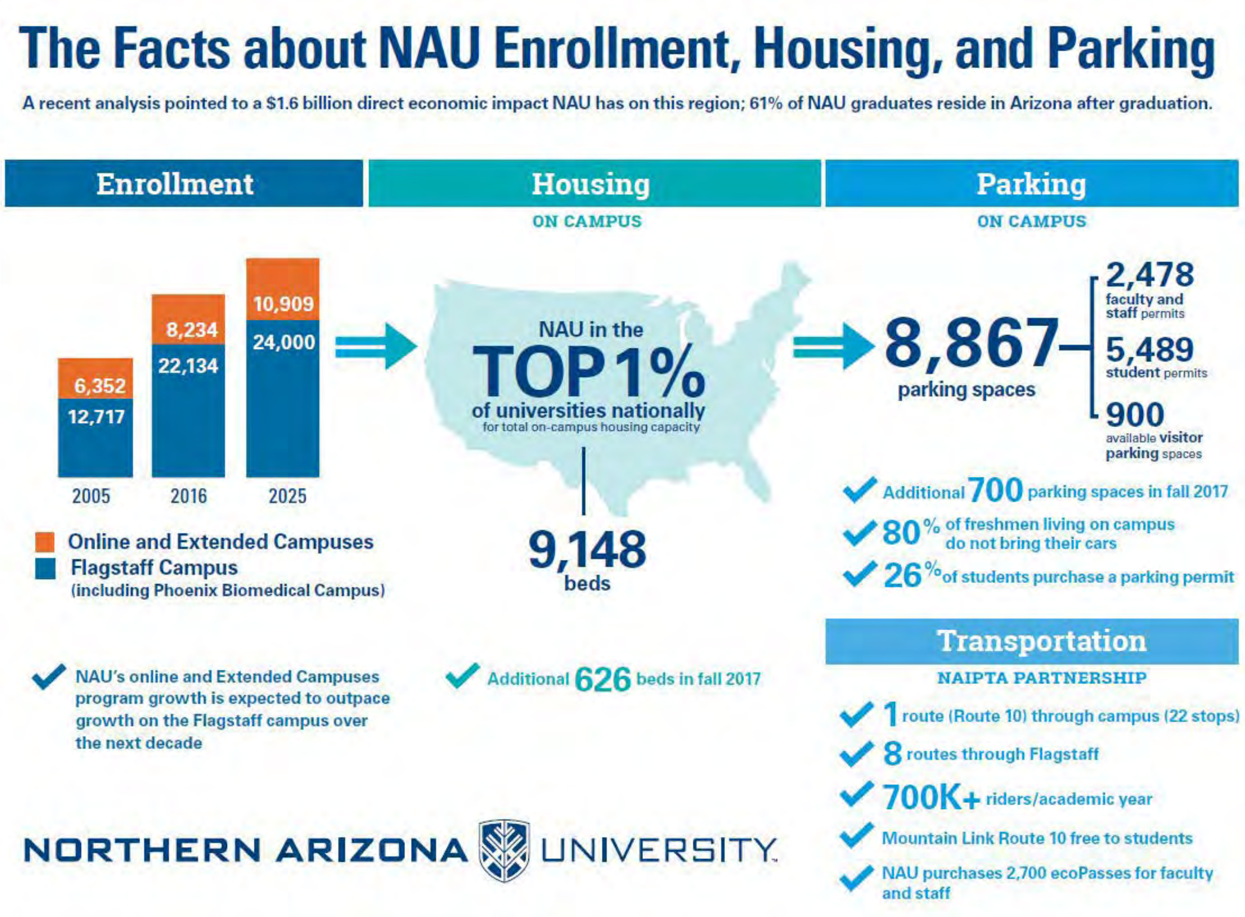
Existing Land Use & Activity Centers

Existing land uses along the Milton Road corridor pr predominantly consist of retail and service commercial land uses for parcels with frontage on Milton Road. The commercial-oriented land uses along Milton Road are generally automobile oriented uses that serve a combination of local, regional and tourist demands.

Describing the corridor from south to north, at Forest Meadows Street, 3 hotels and a variety of retail and convenience commercial services are located. The ADOT District Office is located at 1901 S Milton Drive. This is a strategically positioned parcel with extensive frontage on Milton Road in which ADOT has pursued a public private partnership to relocate their offices at no cost in exchange for additional private sector development on the parcel.

The Target shopping center is located at the northeast corner of Milton Road and University Drive and caters to both local and reginal users and is largely automobile dependent. Continuing north to Plaza Way is a litany of commercial shops and pads that house restaurants, banks and general retail users.

The NAU campus is situated just east of Milton Road and of course is a significant economic engine for the City of Flagstaff. Northern Arizona University's Flagstaff campus had over 22,000 students in 2016. NAU students therefore account for approximately 30 percent of Flagstaff's population. NAU has been experiencing rapid growth in recent years. NAU is planning for a Flagstaff campus population of 24,000 in 2025.



Source: City of Flagstaff High Occupancy Housing Draft Specific Plan, July 28, 2017

The NAU campus has over 740 acres and 9,000 beds and their on-campus housing stock continues to grow. NAU has 626 new beds available in Fall 2017 and another 630 opening in Fall 2018. 41% of NAU's Flagstaff campus students have the opportunity to live on campus.

With the current and future anticipated growth of on campus and off campus housing, and the close proximity to the retail, dining and entertainment opportunities along Milton Road corridor, an exciting and challenging opportunity for multi-modal transportation operations and safety consideration is an important influencing factor for the Milton Road CMP.

Existing Zoning

The entire Milton Road study corridor and parcels in proximity to Milton Road are located within the City of Flagstaff municipal limits. **Figure 4-2** illustrates the City of Flagstaff zoning districts in proximity to the Milton Road corridor.

"Highway Commercial" is the predominant zoning district that exists along the east and west sides of Milton Road for the majority of the 1.8 mile Milton Road CMP study corridor. With the exception of the ADOT Administrative Offices and a portion of the NAU campus (both zoned "Public Facility"), all parcels with frontage onto Milton Road from Forest Meadows Street, north to Butler Avenue are zoned "Highway Commercial".

Per Section 40.30.040 of the Flagstaff, the “Highway Commercial” zoning district is appropriate for a full range of automobile-oriented services. The development of commercial uses in addition to residential uses is encouraged in this zoning district. Diversity in housing choices is encouraged as long as the housing is located above or behind commercial buildings and buffered from Milton Road. The zone allows small setbacks, and a Floor Area Ratio (FAR), which is a measure of intensity of 3.0.

North of Butler Avenue, and west of Milton Road, Highway Commercial zoning exists for the frontage parcels with “single family residential neighborhood” zoning just west for and south of the BNSF rail line. North of Butler Avenue and east of Milton includes a mixture of “Commercial Service”, “High Density Residential” and “Community Commercial” zoning districts east to San Francisco Street. The “Commercial Service” zoned parcels are situated north of Phoenix Avenue and south of the railroad tracks. Uses permitted in this district include manufacturing and processing, wholesale and distribution as well as certain retail and residential uses. The Commercial Service zone allows small setbacks, and a Floor Area Ratio of 2.0.

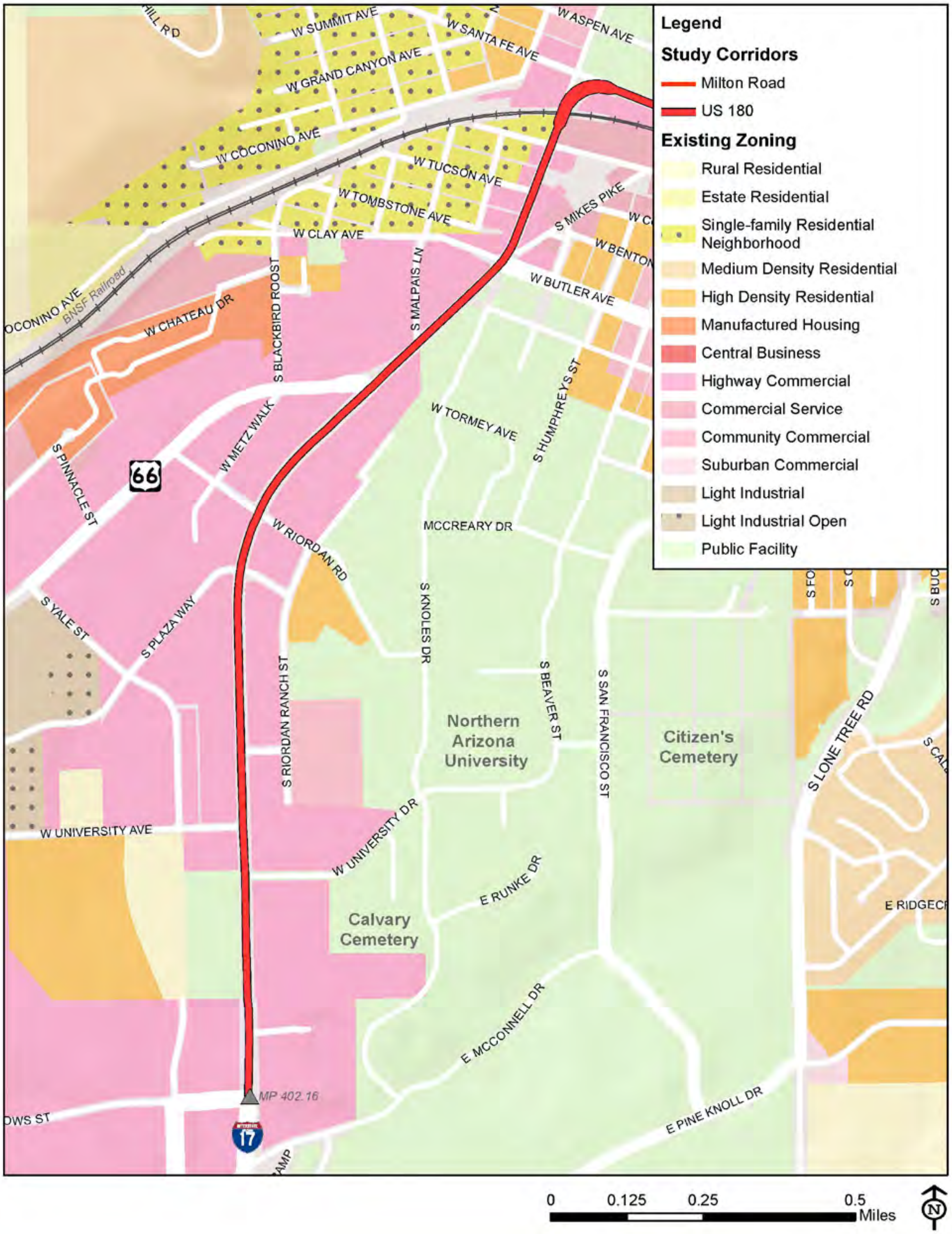
The “Commercial Service” and “High Density Residential” zoning districts east of Mike’s Pike include a mixture of single family homes, convenience commercial services and restaurants and higher density housing, primarily serving NAU.

Table 4-1: Existing Zoning of Parcels within 500 feet of the Milton Road Corridor

Zoning Districts	# of Parcels	Total Acreage
Highway Commercial	156	151.68
Community Commercial	5	9.58
Commercial Service	16	11.64
High Density Residential	5	8.53
Public Facility	19	72.34
Single Family Residential Neighborhood	23	4.71
Central Business District	16	4.18
Totals	**240**	**262.65**

Figure 4-1: Land Ownership

Figure 4-2: Existing Zoning



Existing, Future Growth & Activity Centers

The greater Flagstaff area is home to about 84,000 year round residents, with roughly 66,000 of those located within the Flagstaff City Limits. This number includes more than 17,000 NAU students. The annual growth rate from 2.2 percent in the 1990's and early 2000's to approximately 1.1 percent this decade. Assuming the continued 1.1 percent growth in the years to come, the population of the greater Flagstaff area is expected to grow to 92,500 by 2020 and nearly 103,000 by 2030 (**Figure 4-3**).

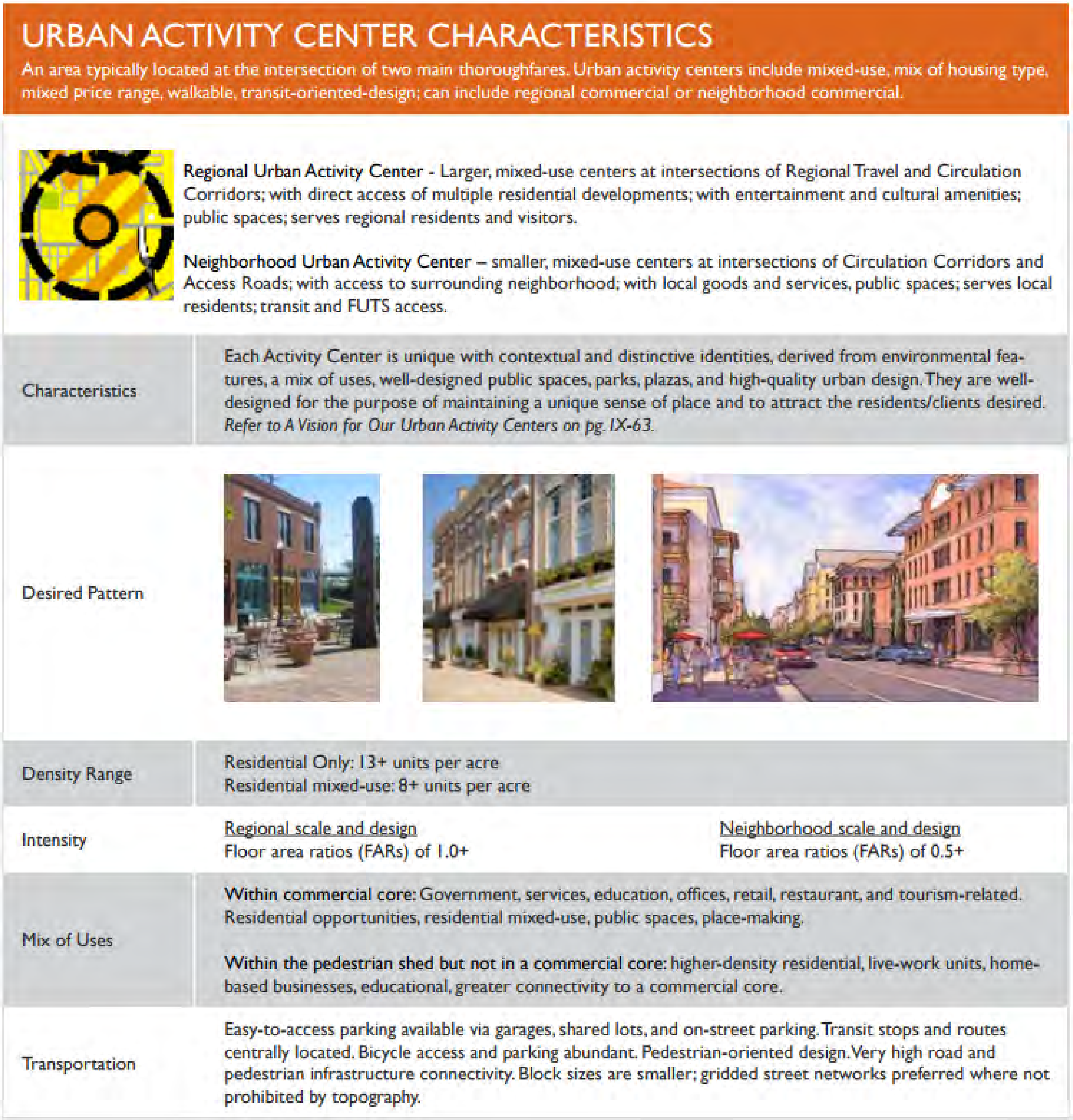
Figure 4-3: Future Population Projections

SOURCE: Arizona Department of Administration, Office of Employment and Population Statistics
**Flagstaff and FMPO projected populations based on slowly increasing percent of County population including NAU students*

Geography and the northern Arizona climate greatly influence development. Growth areas in the past 10 years have been primarily single-family subdivisions such as Boulder Pointe, Ponderosa Trails, and Anasazi Ridge. Mixed-use developments with a more compact, walkable urban form, continue to grow in Flagstaff 's historic downtown and more recently around the University campus.

As identified in the Flagstaff Regional Plan 2030 (ratified by voters on May 20, 2014), there currently exists six suburban activity centers and two urban activity centers within close proximity to the Milton Road corridor (**Figure 4-5**). These activity centers generally include the Woodlands Village, the Green Tree Village/Target Shopping Center, the commercial and redevelopment core at the intersection of Milton Road and Route 66 and, of course, historic downtown Flagstaff. **Figure 4-4** outlines the typical characteristics, development patterns, density, land uses types and transportation for regional and neighborhood urban activity centers. As growth policies outlined in the Regional Plan 2030 promote compact urban forms, the access and use of multiple modes of transportation will be increasingly important and is a fundamental aspect influencing the evaluation and recommendation of a preferred System Alternative(s) for this Milton Road CMP.

Figure 4-4: Urban Activity Center Characteristics



URBAN ACTIVITY CENTER CHARACTERISTICS

An area typically located at the intersection of two main thoroughfares. Urban activity centers include mixed-use, mix of housing type, mixed price range, walkable, transit-oriented-design; can include regional commercial or neighborhood commercial.

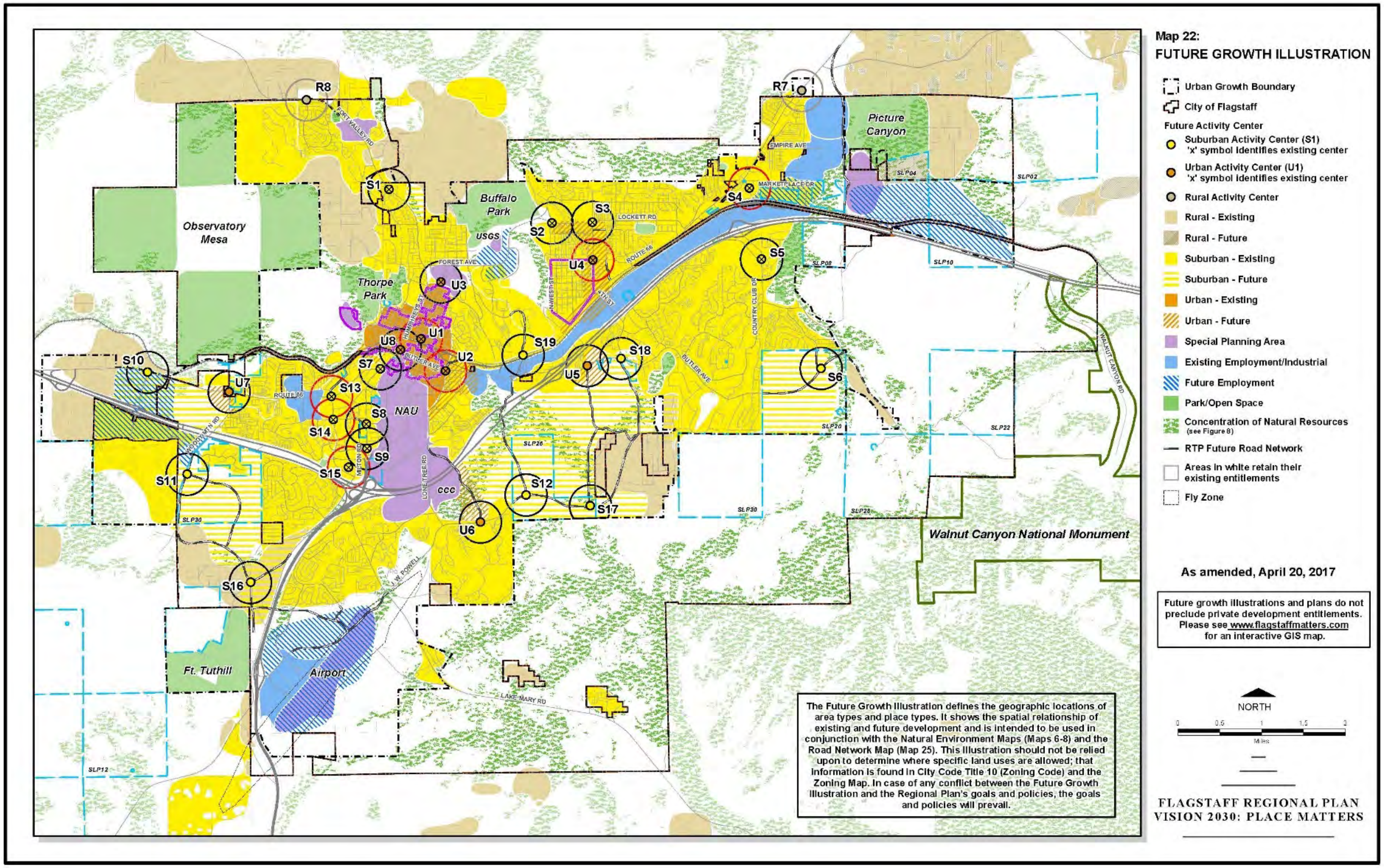
Regional Urban Activity Center - Larger, mixed-use centers at intersections of Regional Travel and Circulation Corridors; with direct access of multiple residential developments; with entertainment and cultural amenities; public spaces; serves regional residents and visitors.

Neighborhood Urban Activity Center – smaller, mixed-use centers at intersections of Circulation Corridors and Access Roads; with access to surrounding neighborhood; with local goods and services, public spaces; serves local residents; transit and FUTS access.

Characteristics	Each Activity Center is unique with contextual and distinctive identities, derived from environmental features, a mix of uses, well-designed public spaces, parks, plazas, and high-quality urban design. They are well-designed for the purpose of maintaining a unique sense of place and to attract the residents/clients desired. *Refer to A Vision for Our Urban Activity Centers on pg. IX-63.*
Desired Pattern	
Density Range	Residential Only: 13+ units per acre Residential mixed-use: 8+ units per acre
Intensity	Regional scale and design Floor area ratios (FARs) of 1.0+ Neighborhood scale and design Floor area ratios (FARs) of 0.5+
Mix of Uses	**Within commercial core:** Government, services, education, offices, retail, restaurant, and tourism-related. Residential opportunities, residential mixed-use, public spaces, place-making. **Within the pedestrian shed but not in a commercial core:** higher-density residential, live-work units, home-based businesses, educational, greater connectivity to a commercial core.
Transportation	Easy-to-access parking available via garages, shared lots, and on-street parking. Transit stops and routes centrally located. Bicycle access and parking abundant. Pedestrian-oriented design. Very high road and pedestrian infrastructure connectivity. Block sizes are smaller; gridded street networks preferred where not prohibited by topography.

Source: City of Flagstaff Regional Plan 2030, 2015

Figure 4-5: Future Growth Illustration



Future growth illustrations and plans do not preclude private development entitlements. Please see www.flagstaffmatters.com for an interactive GIS map.

The Future Growth Illustration defines the geographic locations of area types and place types. It shows the spatial relationship of existing and future development and is intended to be used in conjunction with the Natural Environment Maps (Maps 6-8) and the Road Network Map (Map 25). This Illustration should not be relied upon to determine where specific land uses are allowed; that information is found in City Code Title 10 (Zoning Code) and the Zoning Map. In case of any conflict between the Future Growth Illustration and the Regional Plan's goals and policies, the goals and policies will prevail.

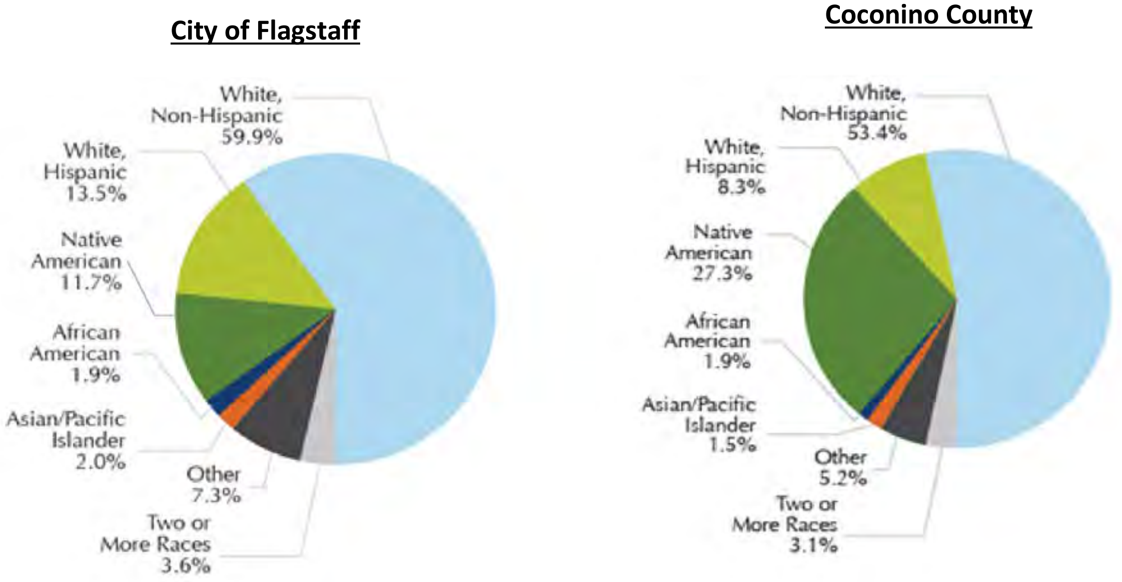
Source: City of Flagstaff Regional Plan 2030, 2015

Demographic & Socioeconomic Conditions

City of Flagstaff and Regional General Demographic & Socioeconomic Information

According to the US Census Bureau, the 2016 estimated population of Flagstaff was approximately 66,000 (US Census Bureau, Population Division, 2017). **Figure 4-6** shows that both the city (approximately 40%) as well as Coconino County (46%) are both ethnically diverse with prominent minority populations.

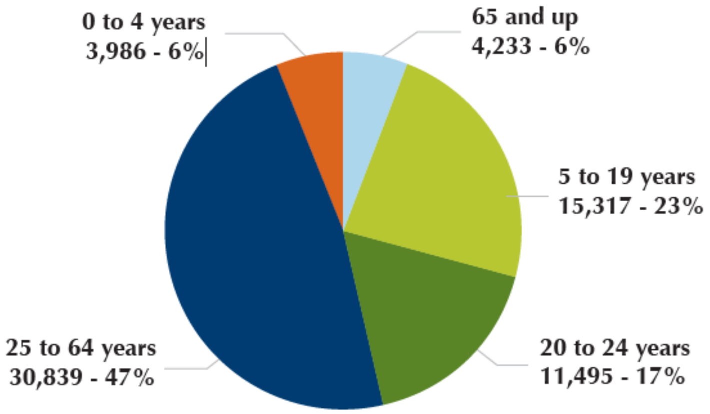
Figure 4-6: Flagstaff and Coconino County Ethnicity



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 4-7** 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 4-7: City of Flagstaff Population Age



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

The large student population and generally young community members also effects household size 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 units within the are non-family households because of the student population. Unlike other communities, the large student and young population is also related to why the majority of the residents have rental homes (55%) whereas only 45% of the homes are owner occupied. 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 Milton Road Corridor

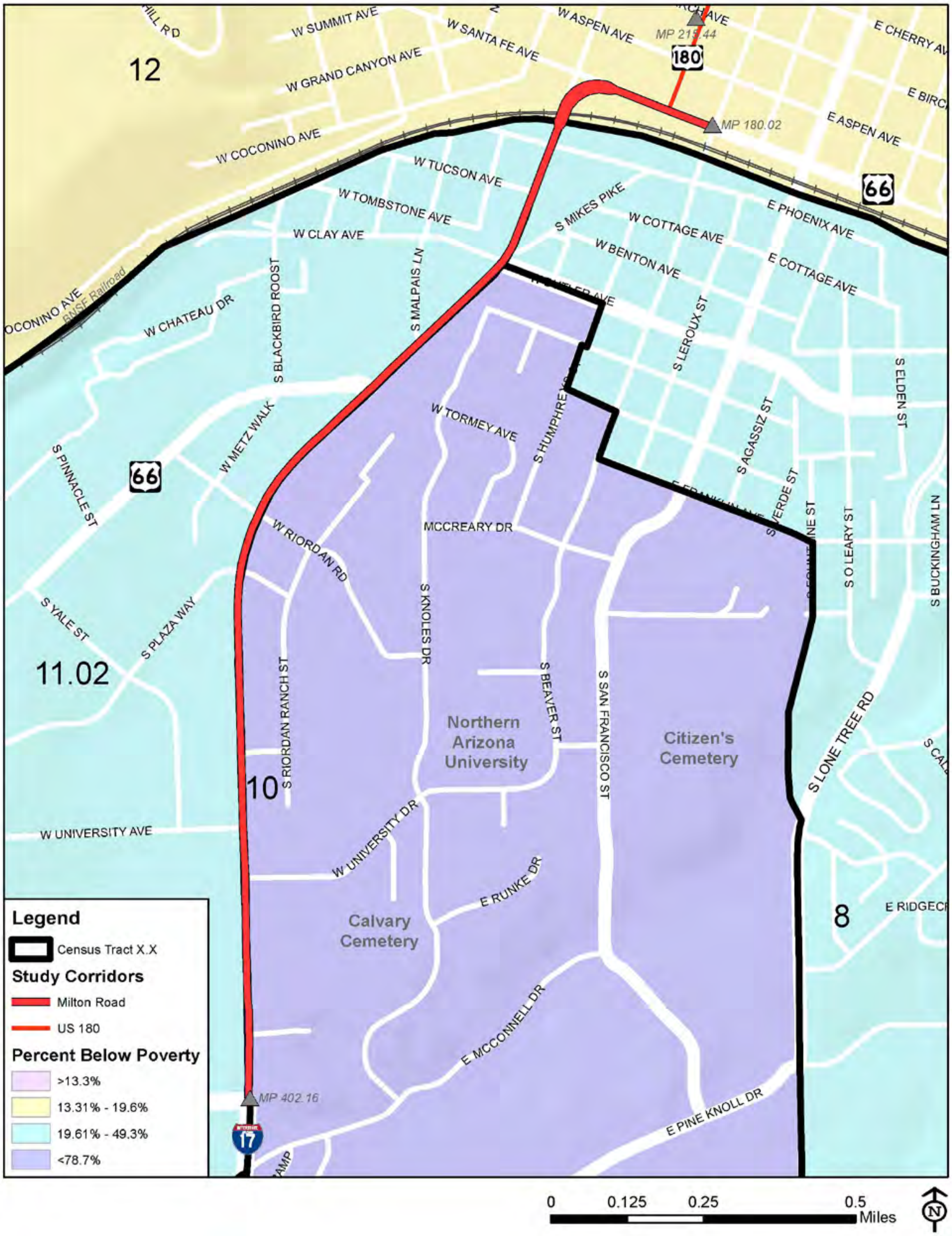
Depicted in **Figure 4-8**, the Milton Road corridor extends through four census tracts which include Census Tract 8, 10, 11.02, and 12. Utilizing data generated from the U.S. Census Bureau, some information connected to transportation issues were pulled to highlight socioeconomic and demographic conditions directly adjacent to the Milton Road Corridor in **Figure 4-9** through **Figure 4-11.**

There are a higher number of residents (8,463 to 9,913 residents) along Milton Road south of Butler Avenue within Census Tracts 10 and 11.02. The high number of residents within Census Tract 10 is largely due to NAU and the high-density student housing developments associated with the university. Census Tracts 11.02 and 10 also have a higher percentage of the people living below the poverty line, especially Census Tract 10 which has over 78% living below poverty. Similar to population density, the high number of people living below poverty Census Tract 10 is connected to large number of students living on campus. Also, the area surrounding the Milton Road corridor have a very young population with 0% of the residents living in Census Tract 10 at 65 years of age or older. Census Tracts 11.02 and 8 only have 0.01% to 4.6% and Census Tract 12 has 4.61% to 11.4% of the residents at the age of 65 and older. The high density of people, low income, and a generally young population is a recipe to generate a high volume of trips through alternative modes of transportation, however, the Milton Road Corridor currently does not have adequate infrastructure to support the high demand.

Figure 4-8: Milton Road Corridor Census Tracts

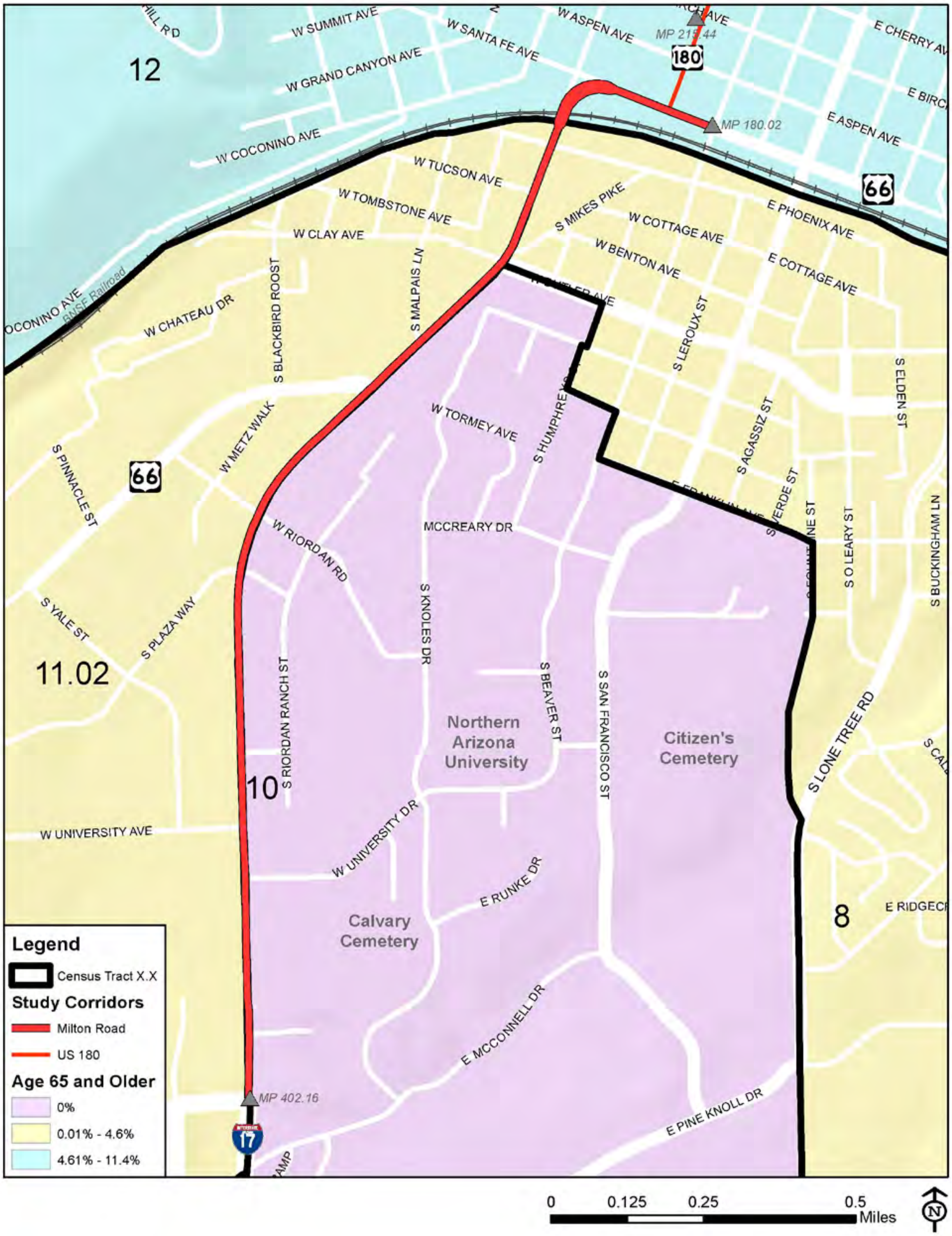
Source: U.S. Census Bureau, 2010

Figure 4-9: Percent Below Poverty



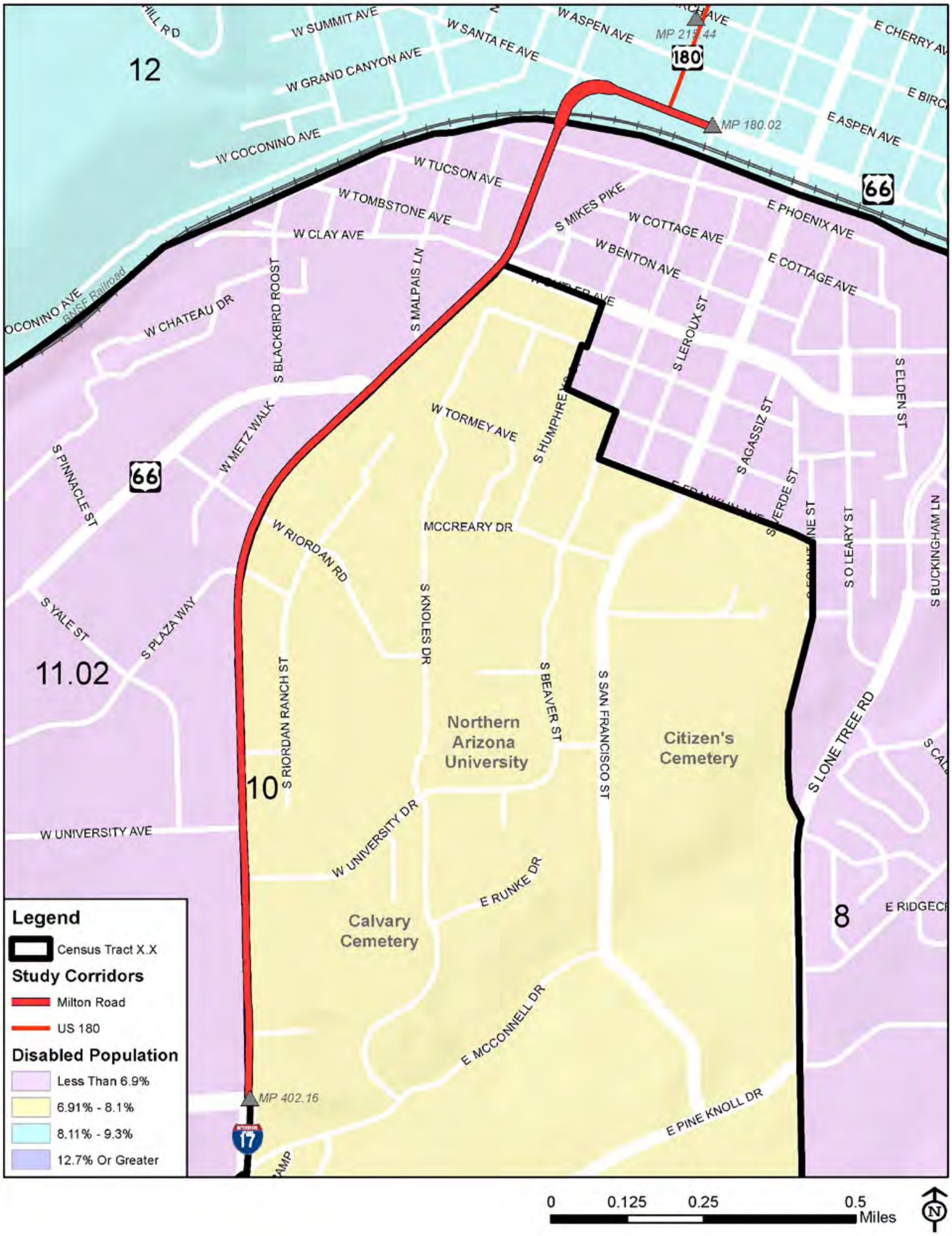
Source: U.S. Census Bureau, 2010

Figure 4-10: Percent 65 years of Age and Older



Source: U.S. Census Bureau, 2010

Figure 4-11: Percent of Disabled Population



Source: U.S. Census Bureau, 2010

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** depicts 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. As shown in **Figure 5-1**, Milton Road is classified as a Principal Arterial per the FHWA functional classification. The intersecting streets on Milton Road are classified as local roads, Minor Arterials (Historic Route 66, Butler Avenue and Humphreys Street), and Major Collectors (Forest Meadows Street, University Avenue, Plaza Way, Riordan Road, Malpais Lane and Beaver Street).

Per the City of Flagstaff functional classification, Milton Road along the study corridor is classified as a Major Arterial roadway.

Roadway & Lane Configuration

The Milton Road CMP study corridor is primarily a five-lane corridor with two through lanes in each direction and a center two-way left-turn lane. **Figure 5-2** illustrates the typical cross-section of the corridor. Dedicated left-turn and right-turn lanes exist at many intersecting streets. Curb, gutter and sidewalk exist through the entire corridor. Wider shoulder that can be used as bike lanes exists on both sides of Milton Road between Old Route 66 and Phoenix Avenue and from approximately 290 feet west of Humphreys Street to Beaver Street. **Figure 5-3** depicts the existing lane configurations and left/right-turn lane lengths at the following major intersections with Milton Road and at the intersection of Sitgreaves Street and Santa Fe Avenue and at the intersection of I-17 Off Ramp and McConnell Drive:

- Forest Meadows Street,
- University Drive,
- University Avenue,
- Chambers Drive,
- Plaza Way,
- Riordan Road,
- Old Route 66,
- Malpais Lane,
- Butler Avenue,
- Phoenix Avenue,
- Santa Fe left-turn bay,
- Humphreys Street, and
- Beaver Street.

Posted Speed Limits, Traffic Control and Lighting Conditions

Posted Speed Limit

The posted speed limit is 30 miles per hour throughout the corridor with the exception of the speed limit along the curvature approaching the railroad tracks, where the posted speed limit is 25 mph.

Traffic Control

Figure 5-4 depicts the traffic control for the study area intersections along the Milton Road study corridor. There are eight traffic signals along the study corridor. In addition to the traffic signals, there are several stop controlled intersections along the corridor.

Lighting Conditions

Adequate lighting is essential for the effective operations of a Principal Arterial roadway, particularly to improve intersection sight distance during the night time.

Between Forest Meadows Street and the existing Pizza Hut driveway north of Saunders Drive, roadway lighting exists on the east side of Milton Road. Between the Pizza Hut driveway and University Avenue, roadway lighting exists on the west side of Milton Road. Between University Avenue and Clay/Butler Avenue, roadway lighting exists on both sides of Milton Road. Between Clay/Butler Avenue and Phoenix Avenue, roadway lighting exists on the east side of Milton Road. Between Phoenix Avenue and Beaver Street, roadway lighting exists on both sides of Milton Road. Intersection lighting exists at all the signalized intersections within the Milton Road study corridor.

Figure 5-1: FHWA Functional Classification of Roadways

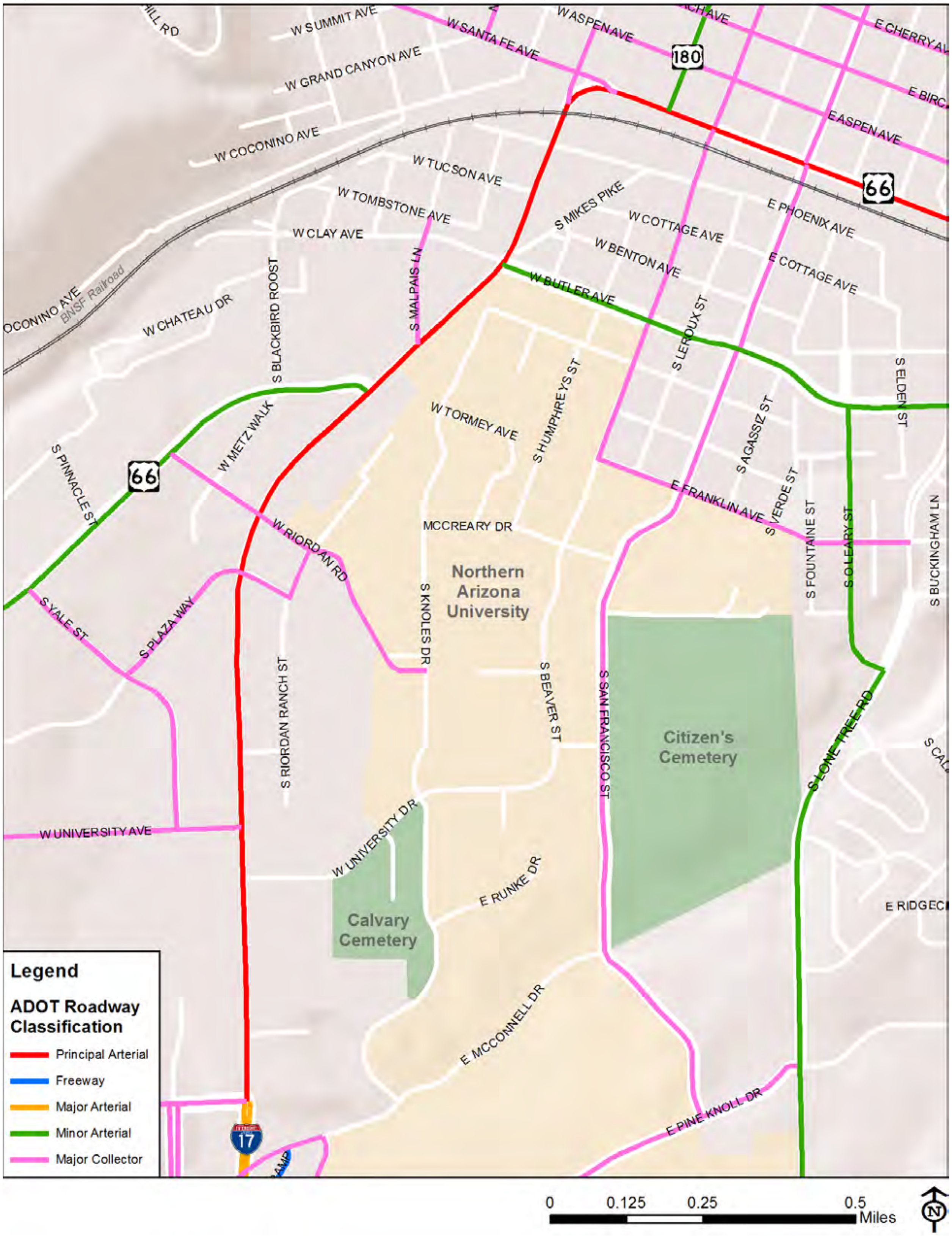


Figure 5-2: Existing Cross-Section of Milton Road

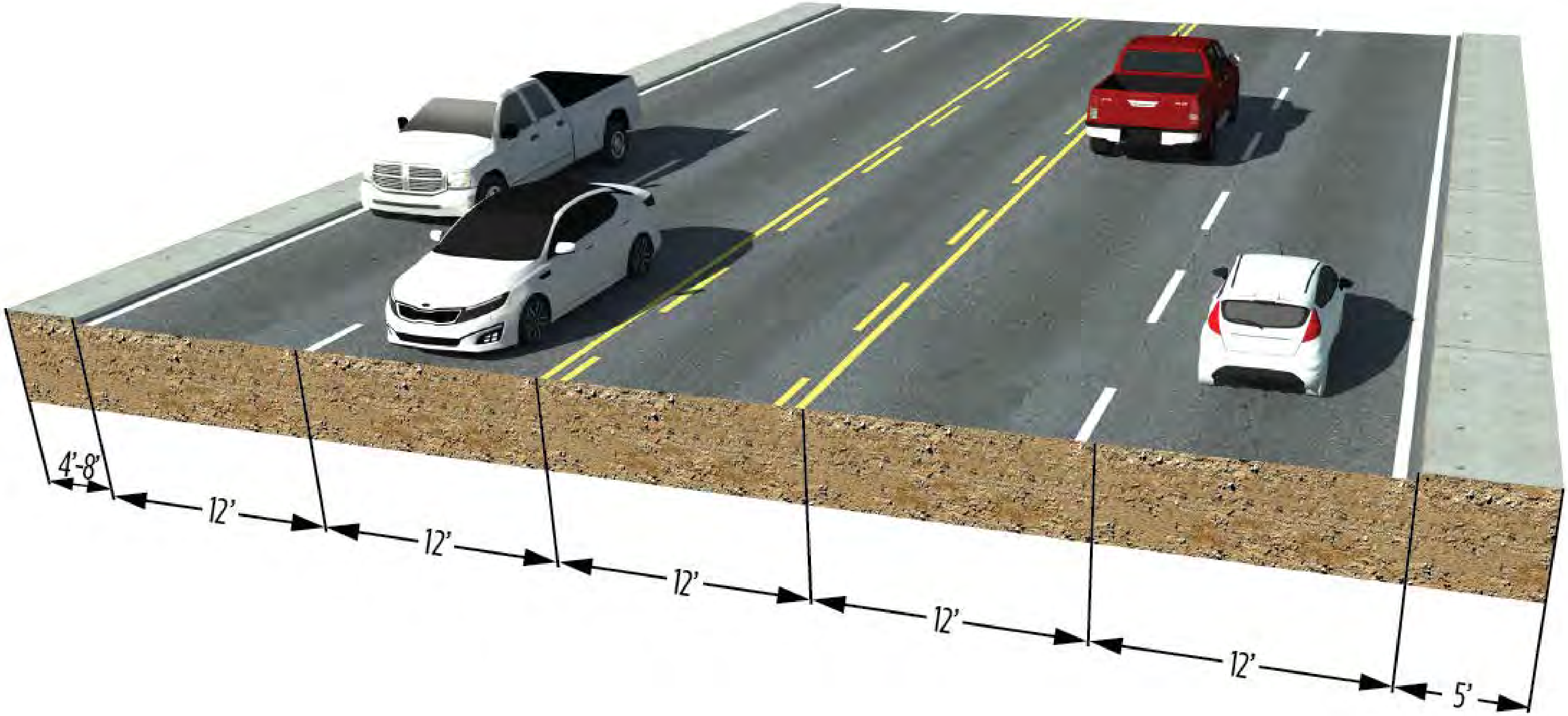


Figure 5-3: Existing 2017 Intersection Control & Lane Geometry

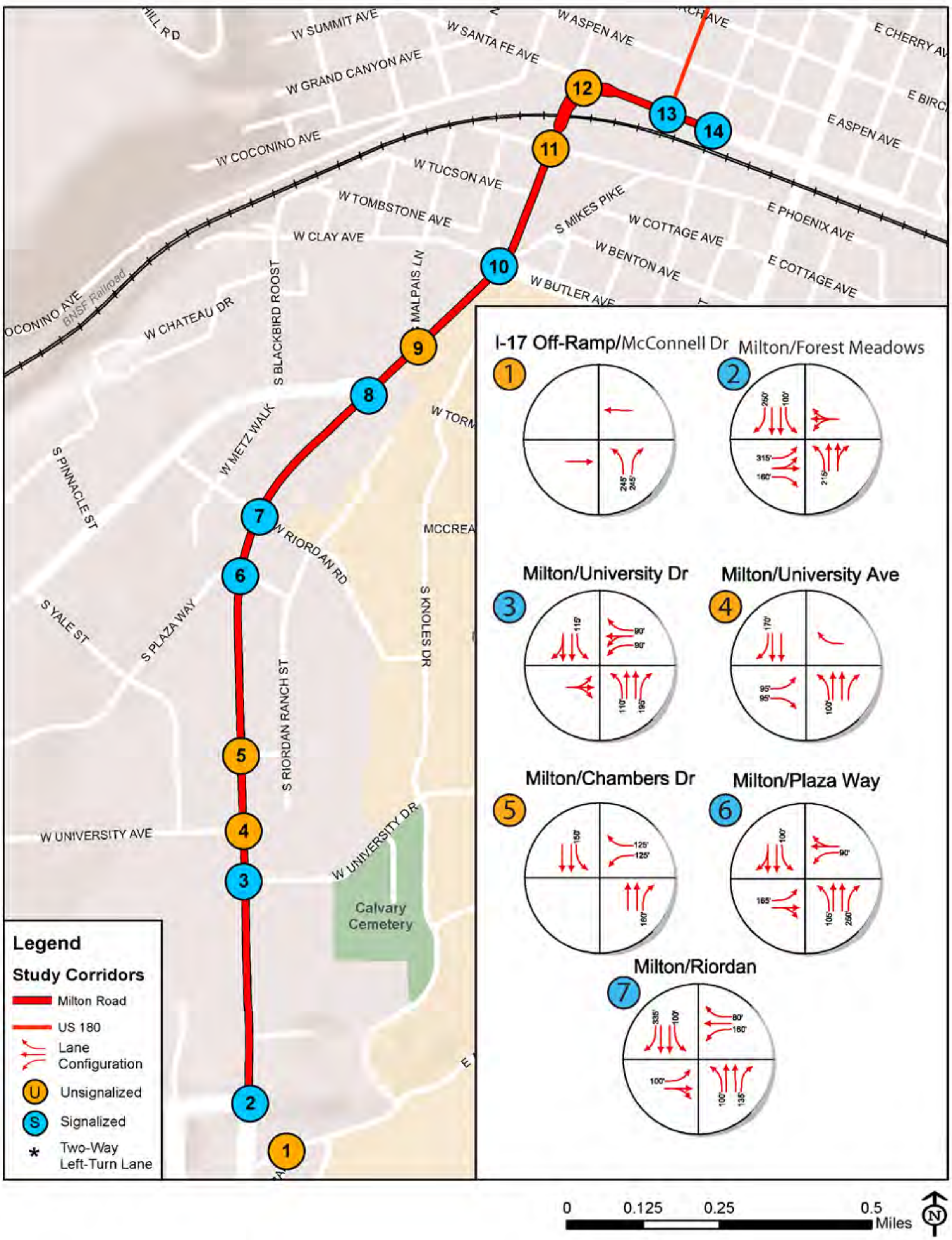


Figure 5-4: Existing 2017 Intersection Control & Lane Geometry (Continued)

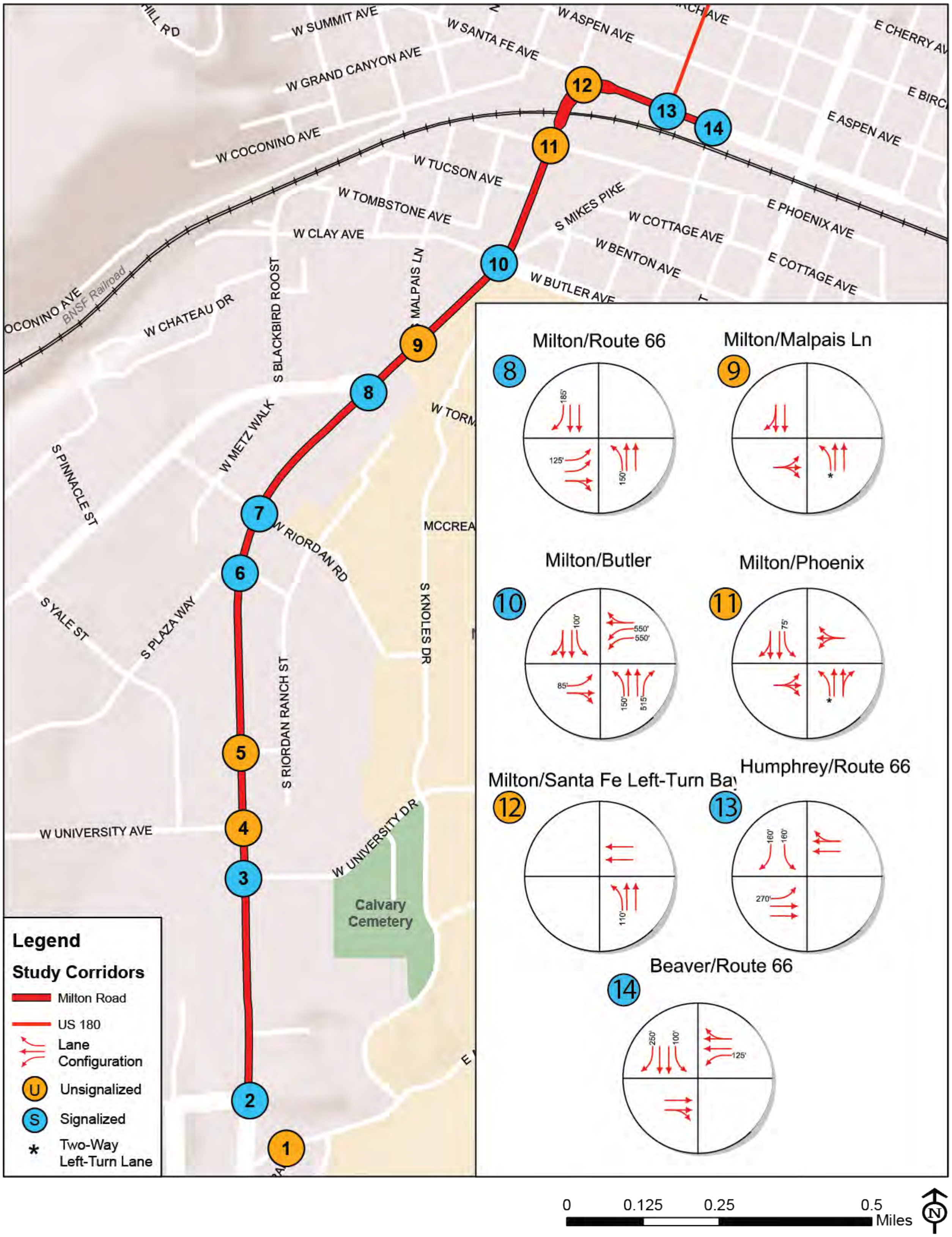


Figure 5-5: Existing Traffic Control at Study Intersections

Existing Travel Conditions, LOS & Congestion

Existing Traffic Volumes

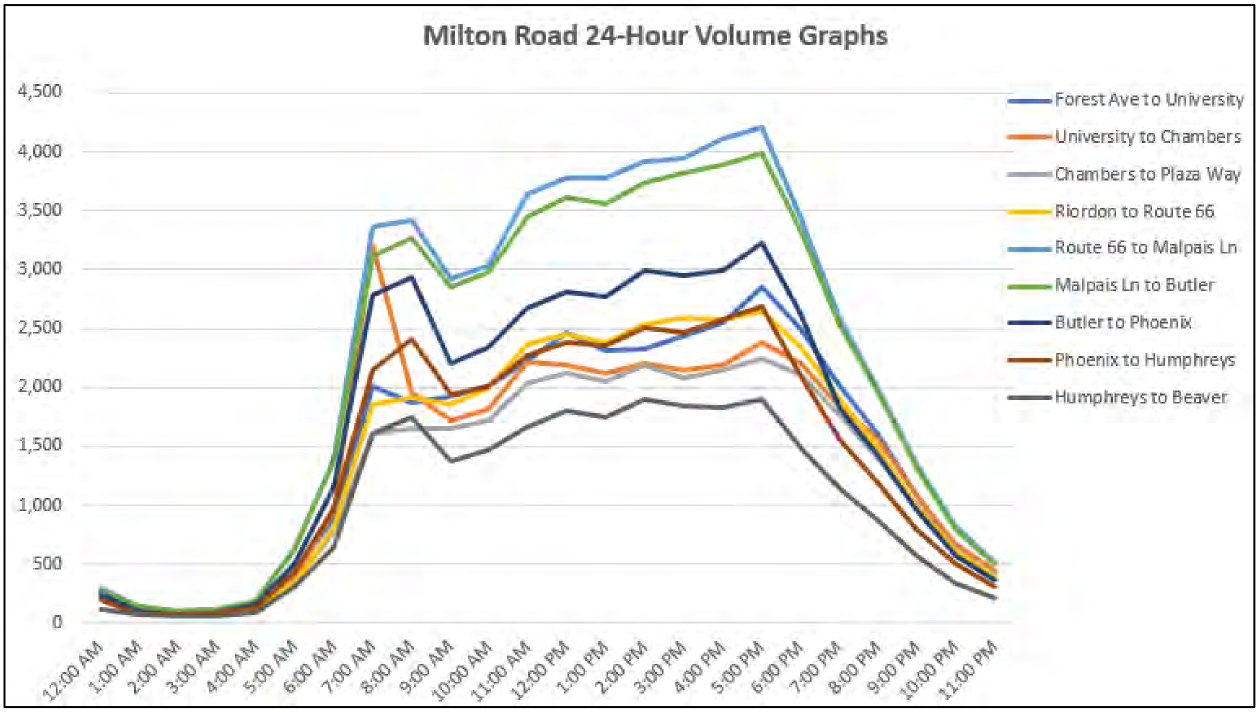
Twenty-four hour daily approach and departure traffic volumes in 15-minute intervals were collected at nine locations along the Milton Road study corridor on Tuesday, September 12, 2017. The collected traffic volumes included vehicular, pedestrian and bicycle counts. **Table 5-1** summarizes the existing daily traffic volumes along the study corridor.

Table 5-1: Existing Daily Traffic Volumes

Count Location	24-Hour Daily Traffic Volume	
	Northbound	Southbound
Between Forest Meadows St and University Dr	17,825	17,437
Between Forest University Dr and Chambers Dr	17,820	16,119
Between Forest University Dr and Plaza Way	14,584	15,891
Between Riordan Rd and Historic Route 66	17,422	17,199
Between Historic Route 66 and Malpais Ln	26,671	27,014
Between Malpais Ln and Butler Ave	25,125	26,367
Between Butler Ave and Phoenix Ave	20,175	20,614
Between Phoenix Ave and Humphreys St	15,863	18,323
Between Humphreys St and Beaver St	12,908	11,954

Figure 5-6 shows a graphical representation of the 24-hour daily traffic volumes along Milton Road corridor.

Figure 5-6: 24-Hour Daily Traffic Volumes



Bicycle and Pedestrian Counts

Table 5-2 and **Table 5-3** summarizes the number of pedestrians and bicyclists respectively at the study area intersections within the Milton Road study corridor during the Mid-Day (11:00 am to 1:00 pm) and PM peak hours (4:00 pm to 6:00 pm).

The highest number of pedestrians crossing Milton Road occurred at Beaver Street, Clay/Butler Avenue and at University Drive. Pedestrian volume is observed to be higher during the PM peak hour at the study intersections with the exception of Route 66, Plaza Way, Chambers Drive and Forest Meadows Street, where the pedestrian volume is higher during the Mid-Day peak hour.

The highest number of bicyclists crossing Milton Road occurred at Beaver Street, Clay/Butler Avenue and at University Drive. Bicycle volume is observed to be higher during the PM peak hour at the study intersections with the exception of Riordon Road, Plaza Way, Chambers Drive, University Avenue and Forest Meadows Street where the bicyclist volume is higher during the Mid-Day peak hour.

Table 5-2: 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
Beaver St	17	35	9	3	65	101	41	63
Humphreys St	6	20	0	0	0	0	0	0
Phoenix Ave	1	2	1	0	7	9	23	33
Clay/Butler Ave	93	116	0	0	73	71	29	35
Malpais Ln	0	0	0	0	0	0	6	14
Route 66	0	0	33	0	0	0	54	51
Riordon Rd	16	22	24	16	10	25	24	19
Plaza Way	14	8	43	34	9	12	29	16
Chambers Dr	0	0	6	0	7	8	0	0
University Ave	1	0	0	0	8	8	26	27
University Dr	80	106	0	0	16	10	25	23
Forest Meadows St	0	0	8	13	10	8	12	6

Table 5-3: 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
Beaver St	4	7	5	1	6	13	34	28
Humphreys St	2	6	0	0	1	1	0	1
Phoenix Ave	1	7	1	1	7	2	14	36
Clay/Butler Ave	17	29	4	7	11	36	3	6
Malpais Ln	0	0	0	0	0	3	4	5
Route 66	1	0	2	0	0	3	12	3
Riordon Rd	4	12	1	4	6	3	6	6
Plaza Way	9	6	6	4	3	3	2	2
Chambers Dr	0	0	1	0	2	0	0	0
University Ave	0	0	1	0	4	2	6	3
University Dr	36	32	0	0	2	4	9	12
Forest Meadows St	0	0	2	10	3	5	4	9

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 the major 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 5-7** depicts the Mid-Day and PM peak hour traffic volumes at the major signalized and unsignalized intersections along the study corridor.

In addition to the existing turning movement volumes at intersections on Milton Road, peak hour turning movements were also obtained at the intersection of Sitgreaves Street and Santa Fe Avenue and at the intersection of I-17 Off Ramp and McConnell Drive. Existing turning movement volumes at the intersection of Sitgreaves Street and Santa Fe Avenue and at the intersection of I-17 Off-Ramp and McConnell Drive are also shown in Figures 5-7 and 5-8.

Existing turning movement volumes at the intersection of Sitgreaves Street and Santa Fe Avenue shall be used to determine the northbound left-turn traffic volume from Milton Road onto Santa Fe Avenue at the left-turn bay located approximately 0.1 miles west of Humphreys Street.

Figure 5-7: Existing 2017 Peak Hour Traffic Volumes – (Mid-Day) PM Peak Hours

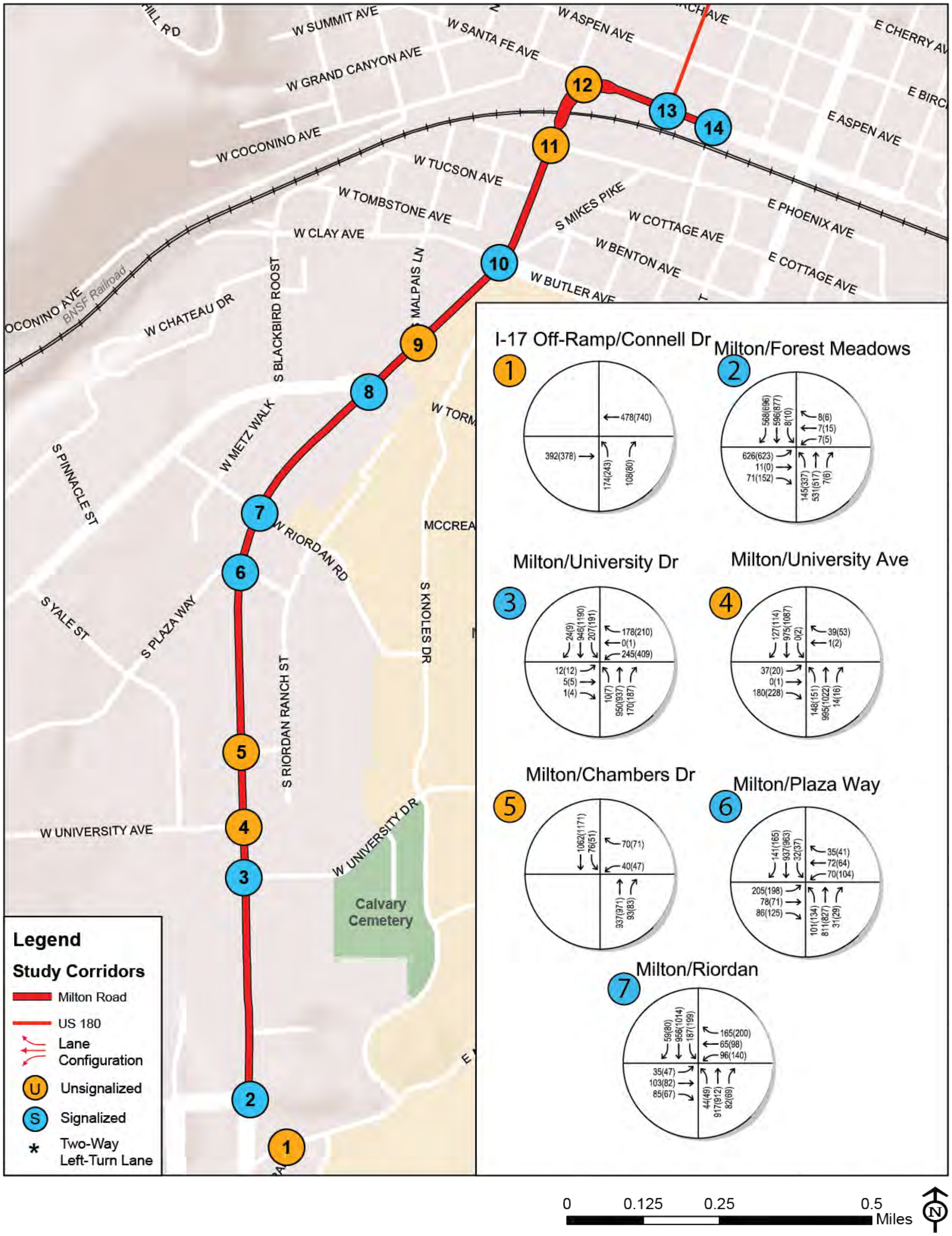
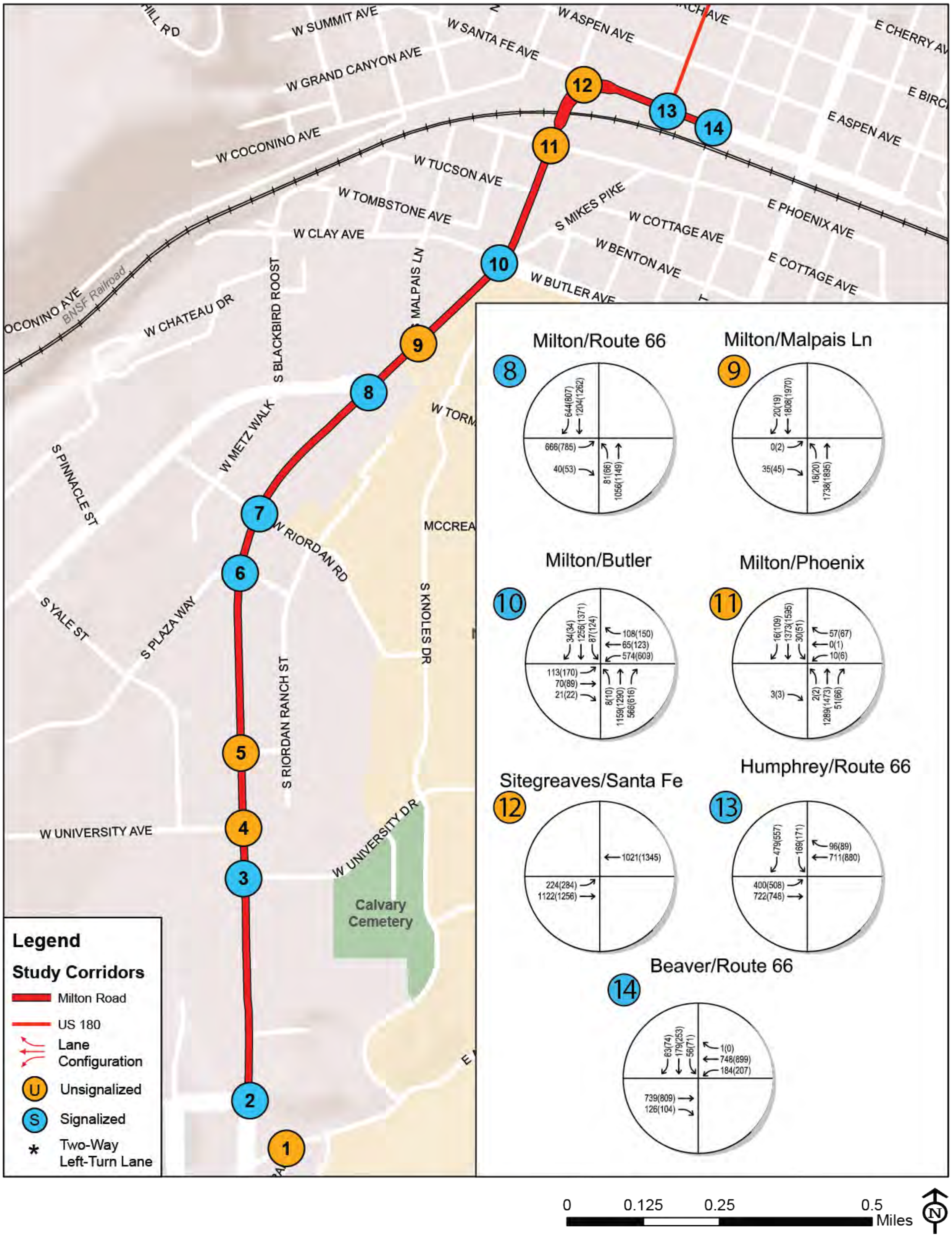


Figure 5-8: Existing 2017 Peak Hour Traffic Volumes – (Mid-Day) PM Peak Hours (Continued)



Existing Roadway 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 5-4** Urban Street facilities are described as having interrupted flow (signals, all-way stops, or roundabouts) at a spacing of two 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. Refer to **Table 5-4** for a more thorough description of each LOS category.

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

Highway Capacity Software (HCS) and the most recent traffic counts (September 12, 2017) were used to determine the roadway segment LOS for the Milton Road study corridor. depicts the roadway segment LOS for the Milton Road study corridor.

Table 5-4: Level of Service Criteria for Urban Street Facilities

Level-of-Service	Characterized by Highway Capacity Manual as:
A 	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.
B 	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.
C 	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.
D 	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.
E 	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.
F 	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.

Existing Intersection Level-of-Service (LOS)

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 the LOS for major intersections along the Milton Road corridor. 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 5-5** lists the LOS criteria for signalized and unsignalized intersections as stated in the HCM manual.

Table 5-5: 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

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 5-4** depicts the existing lane configuration and traffic control at the study intersections along the Milton Road corridor.

The existing signal timing and controller data for the signalized intersections along the Milton Road study corridor was obtained from the Arizona Department of Transportation (ADOT). The existing signal timing and controller data obtained from ADOT is included in **Appendix X** of this report and was utilized for the existing LOS analysis.

As mentioned in the *Existing Turning Movement Volumes* section of this report, 2017 peak hour turning movement counts were collected at all the key intersections along the Milton Road study corridor. Existing 2017 peak hour turning movement volumes at intersections along the Milton Road study corridor are shown in Error! Reference source not found..

LOS for the study intersections was analyzed using Synchro 9 software, which utilizes the criteria in **Table 5-5**. For unsignalized intersections, Synchro software only provides the Intersection Capacity Utilization (ICU) for the LOS, which was reported as part of this analysis at the unsignalized intersections.

The input and output of these analyses are provided as **Appendix X** to this report. **Table 5-6** presents the existing 2017 LOS summary for the study intersections along the Milton Road corridor.

Table 5-6: Existing 2017 LOS at Signalized and Unsignalized Intersections

Intersection	Approach	2017 MD Peak		2017 PM Peak	
		LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)
I-17 Exit Drive and McConnell Drive	Northbound	C	22.4	F	196.2
	Southbound	-	-	-	-
	Eastbound	A	0.0	A	0.0
	Westbound	A	0.0	A	0.0
	Overall	**A***	**5.5**	**B***	**44.0**
Milton Road and Forest Meadows Street	Northbound	B	13.8	C	26.0
	Southbound	B	16.4	C	31.4
	Eastbound	D	40.3	D	44.3
	Westbound	E	56.0	E	58.7
	Overall	**C**	**22.6**	**C**	**33.3**
Milton Road and University Drive	Northbound	B	16.7	B	16.3
	Southbound	B	11.7	A	9.1
	Eastbound	E	55.3	E	61.5
	Westbound	D	51.6	E	55.8
	Overall	**C**	**20.2**	**C**	**21.2**
Milton Road and University Avenue	Northbound	A	1.7	A	1.8
	Southbound	A	0.0	A	0.0
	Eastbound	C	18.1	C	22.2
	Westbound	-	-	-	-
	Overall	**A***	**2.4**	**A***	**2.9**
Milton Road and Chambers Drive	Northbound	A	0.0	A	0.0
	Southbound	A	0.7	A	0.4
	Eastbound	-	-	-	-
	Westbound	B	13.6	B	13.6
	Overall	**A***	**1.0**	**A***	**0.9**
Milton Road and Plaza Way	Northbound	A	8.4	A	8.2
	Southbound	B	14.2	B	14.2
	Eastbound	D	41.0	D	50.4
	Westbound	D	43.9	D	50.6
	Overall	**B**	**17.9**	**B**	**20.0**
Milton Road and Riordan Road	Northbound	A	8.1	B	10.1
	Southbound	A	2.8	A	2.8
	Eastbound	D	44.5	D	42.9
	Westbound	D	47.8	D	50.1
	Overall	**B**	**13.4**	**B**	**15.0**

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

Table 5-7: Existing 2017 LOS at Signalized and Unsignalized Intersections (Continued)

Intersection	Approach	2017 MD Peak		2017 PM Peak	
		LOS	Delay (Sec/Veh)	LOS	Delay (Sec/Veh)
Milton Road and Histirical Route 66	Northbound	A	9.2	B	18.0
	Southbound	C	20.4	C	23.0
	Eastbound	D	51.8	D	51.1
	Westbound	-	-	-	-
	Overall	**C**	**22.9**	**C**	**27.2**
Milton Road and Malpais Lane	Northbound	A	0.2	A	0.2
	Southbound	A	0.0	A	0.0
	Eastbound	B	10.7	B	12.2
	Westbound	-	-	-	-
	Overall	**A***	**0.2**	**A***	**0.2**
Milton Road and Clay/Butler Avenue	Northbound	C	22.3	C	32.9
	Southbound	C	24.9	C	33.5
	Eastbound	E	62.5	E	77.2
	Westbound	D	43.6	E	55.3
	Overall	**C**	**29.1**	**D**	**40.1**
Milton Rd and Phoenix Avenue	Northbound	A	0.0	A	0.0
	Southbound	A	0.2	A	0.4
	Eastbound	C	15.4	C	18.3
	Westbound	B	12.6	B	13.3
	Overall	**A***	**0.4**	**A***	**0.5**
Milton Rd and Santa Fe Left-Turn Bay	Northbound	-	-	-	-
	Southbound	-	-	-	-
	Eastbound	A	2.1	A	3.3
	Westbound	A	0.0	A	0.0
	Overall	**A***	**1.2**	**A***	**1.8**
Milton Rd and Humphreys St	Northbound	-	-	-	-
	Southbound	D	49.3	D	51.3
	Eastbound	B	11.0	C	20.3
	Westbound	A	10.0	C	25.3
	Overall	**C**	**20.3**	**C**	**29.6**
Milton Rd & Beaver St	Northbound	-	-	-	-
	Southbound	D	42.6	D	37.6
	Eastbound	A	7.2	B	10.1
	Westbound	A	4.8	A	6.2
	Overall	**B**	**11.2**	**B**	**12.9**

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 following exceptions:

1. Milton Road and Clay/Butler Avenue – LOS E in the eastbound direction during Mid-Day and PM peak hours, LOS E in the westbound direction during the PM peak hour,
2. Milton Road and University Drive – LOS E in the eastbound direction during Mid-Day and PM peak hours, LOS E in the westbound direction during the PM peak hour,
3. Milton Road and Forest Meadows Street – LOS E in the westbound direction during Mid-Day and PM peak hours, and
4. I-17 Exit Ramp and McConnell Drive – LOS F in the northbound direction during the PM peak hour.

Existing Non-Motorized Mobility

Existing Bike Facilities

Bike lanes do not exist along the Milton Road study corridor between Forest Meadows Street and Old Route 66. Bike lanes exists on both sides of Milton Road between Old Route 66 and Phoenix Avenue. Bike lanes also exists on both sides of Milton Road from approximately 290 feet west of Humphreys Street to Beaver Street. There are no existing bike lane signs posted in association with the existing bike lanes.

Existing Pedestrian Facilities

Continuous sidewalks exist on both sides of Milton Road throughout the study corridor. Crosswalks along the Milton Road study corridor only exist at the signalized intersections. At the signalized intersection of Milton Road and Humphreys Street, there is no existing crosswalk to cross Milton Road.

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 Milton Road study corridor. Bus stops for various routes of Mountain Line are located at the following locations along the Milton Road study corridor:

- North of Forest Meadows – Route 14 in the northbound direction and Route 4 in the southbound direction,
- North of University Drive – Route 14 in the northbound direction,
- North of University Avenue – Route 4 in the southbound direction,
- South of Plaza Way – Route 14 in the northbound direction and Route 4 in the southbound direction, and
- South of Butler Avenue – Route 7 and Route 14 in the northbound direction.

Mountain Line Route 2, Route 5 and Route 66 operate along the Milton Road corridor between Phoenix Avenue and Beaver Street originating at the Downtown Convention Center. However, bus stops for these routes does not exist along the corridor.

The bus stops located north of University Drive, north of University Avenue and south of Malpais Lane have covered structures 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. Mountain Lift service is available along the Milton Road study corridor.

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 summarized 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 5-8** below:

Table 5-8: 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. Each access point was then categorized into one of the following two access types:

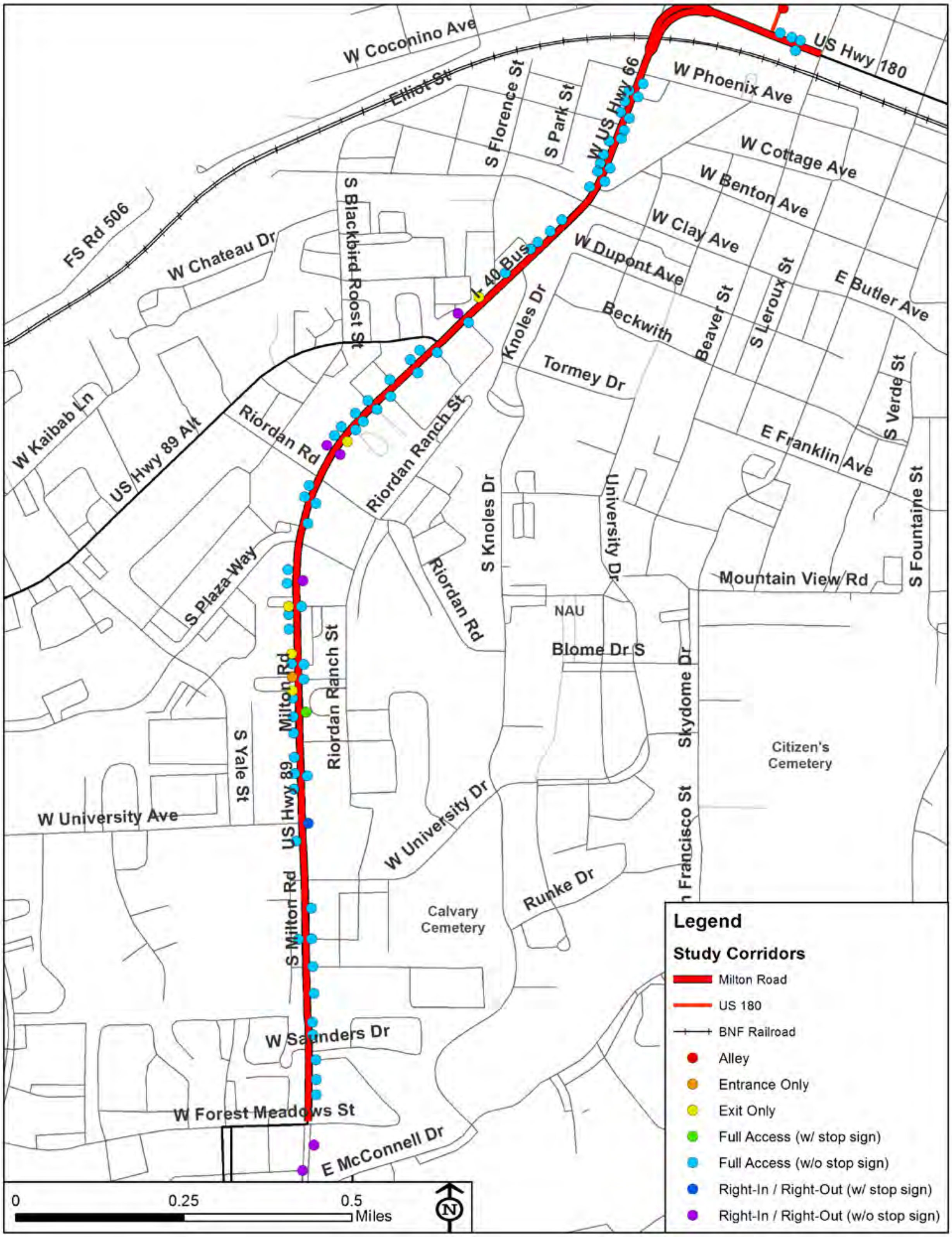
- **Right-in/Right-out (RIRO)** – only two traffic movements, right-in and right-out, are permitted into and out of a side street or a driveway. Intersections are typically controlled by a STOP sign on the side street. RIRO access points along the study corridor provide access to private commercial properties.
- **Full Access** – Full access driveways 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 illustrates the locations of existing driveways and intersections along the study corridor. Milton Road corridor has excessive number of driveways as well as varying types of driveways along the corridor. There is a total of 75 driveways along the Milton Road CMP corridor and the number of each type are listed below:

- 65 Full access (without stop sign),
- 1 full access (with stop sign),
- 1 right-in / right-out (with stop sign),
- 3 right-in / right-out (without stop sign),
- 1 Entrance Only,
- 4 Exit Only, and
- 0 Alleys.

Milton Road corridor has a two-way left-turn lane through the corridor. Due to the absence of a raised median along the corridor, access control at existing driveways and intersections is limited.

Figure 5-9:Existing Access Points



Existing Pavement Conditions

The pavement surface for the entire corridor is asphaltic concrete with the exception of a short segment near the BNSF underpass (between Phoenix Avenue and Humphreys Street) which is Portland Cement Concrete Pavement (PCCP). Pavement condition data was obtained from the street view of Google Earth and cursory field review of the corridor. Roadway conditions at the time of 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, Milton Road is experiencing longitudinal and traverse cracking through the Milton Road study corridor. North of University Drive, alligator cracking is observed on Milton Road. There are minor potholes along the corridor. Rutting is observed on Milton Road where the roadway surface changes from PCCP to asphalt concrete west of Humphreys Street. Based on the Google Earth and field review, the Milton Road appears to be in a good to fair condition throughout the study 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)

During the five-year analysis period, 1,489 crashes occurred within the Milton Road study corridor. The following sections discuss the crashes along the Milton Road study corridor within the five-year analysis period.

Injury Severity

There were two fatalities reported in the analysis period within the study area in the year 2015, one at Milton Road and University Avenue and the other at Milton Road and Humphreys Street. 338 of 1,489 crashes (23%) 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 that occurred within the five-year period for the Milton Road study corridor and the Statewide average is shown in **Table 6-1.**

Table 6-1: Crash Severity Comparison

Crash Severity	Number	Milton Road %	Statewide Average %*
Fatal	2	0.1%	1%
Injury	338	23%	31%
Property Damage Only	1,149	77%	68%

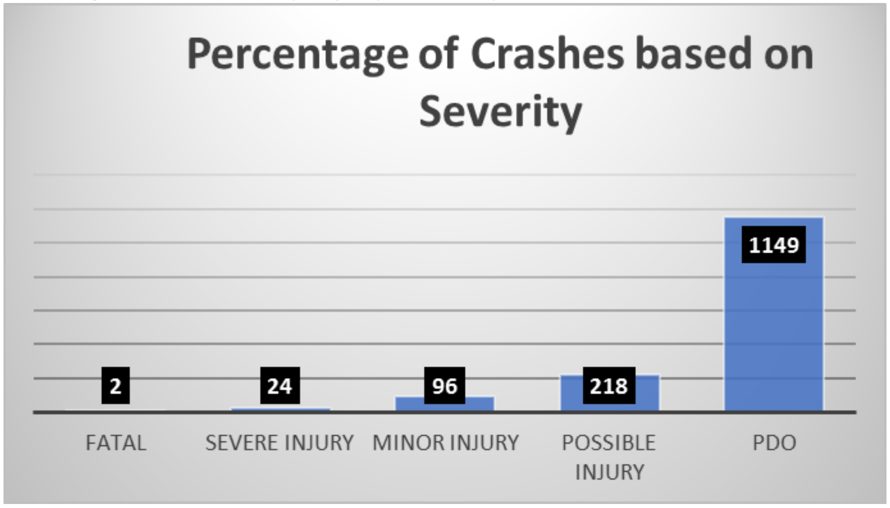
Average of all crashes from 2012-2016

Figure 6-1 shows the location of crashes along Milton Road on a map and categorizing them by the severity of the injury. There is the highest concentration of crashes on at the inter section of Milton Road and Butler Avenue. It is also important to note that the two fatalities occurred at the intersection of Route 66 and Humphrey’s Street, and the intersection of Milton Road and University Avenue.

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

Figure 6-1: Milton Road Crashes by Injury Severity Map

Figure 6-2: Percentage of Crashes by Injury Severity



Intersection Relation

Figure 6-3, 57% of the total crashes within the analysis period of five-year 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

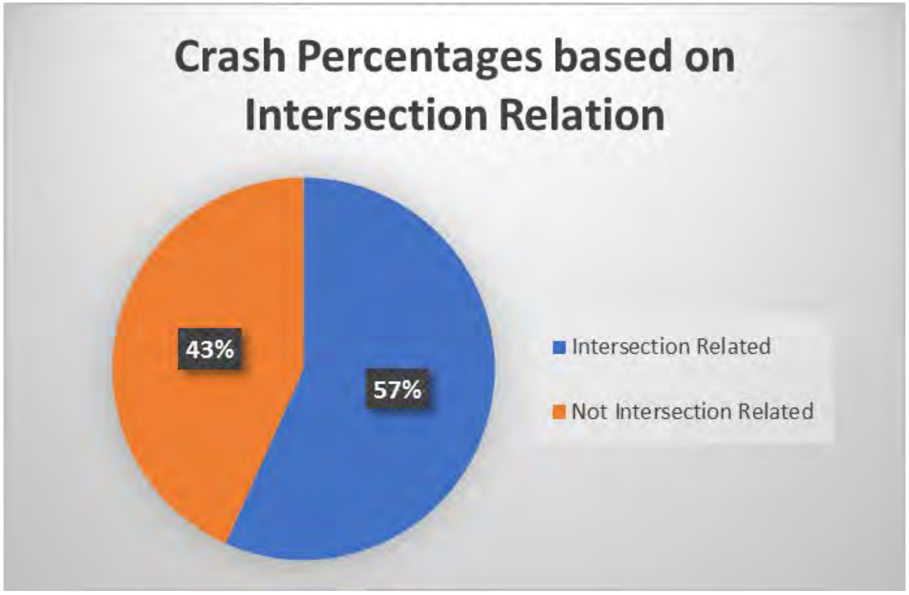


Table 6-2 depicts a summary of the intersection related crashes along the Milton Road study corridor. The crash data depicted in **Table 6-2** is based on the crashes that were within 300 feet of that particular intersection.

Table 6-2: Summary of Intersection Crashes

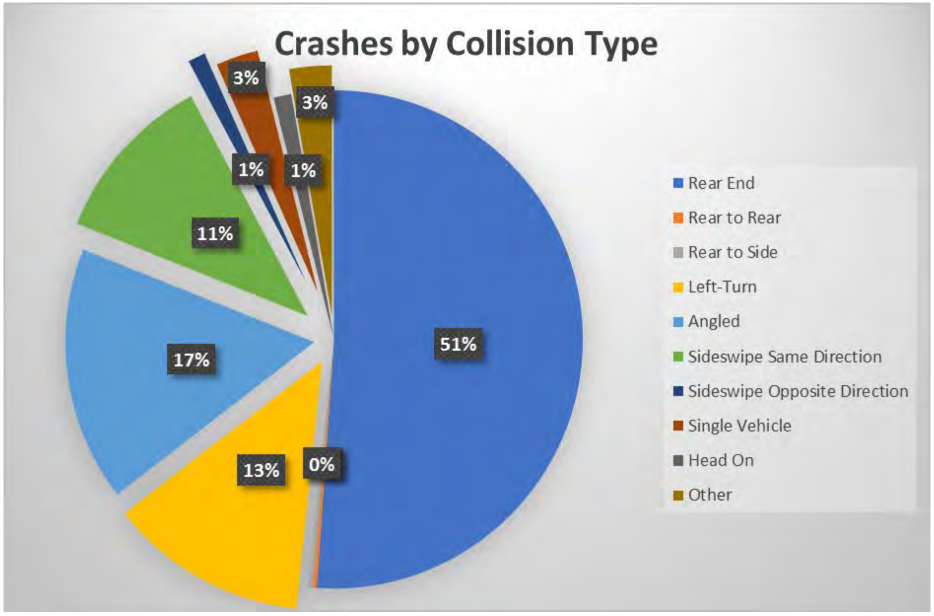
Intersection		Beaver St	Humphreys St	Phoenix Ave	Clay/Butler Ave	Malpais Ln	Route 66	Riordon Rd	Plaza Way	Chambers Dr	University Ave	University Dr	Forest Meadows St
Total Crashes		*57*	*77*	*69*	*118*	*98*	*135*	*82*	*68*	*29*	*64*	*69*	*59*
Severity	Fatality	0	1	0	0	0	0	0	0	0	1	0	0
	Severe Injury	0	3	0	1	3	0	2	2	0	1	3	1
	Minor Injury	2	2	4	7	10	11	5	5	3	4	2	2
	Possible Injury	8	17	9	17	20	17	9	4	2	11	6	7
	PDO	47	54	56	93	65	107	66	57	24	47	58	49
Type of Collision	Angle	12	5	7	13	3	18	21	12	7	21	16	17
	Head On	0	2	0	0	0	1	0	2	2	1	0	3
	Sideswipe	12	9	4	13	8	10	13	4	5	10	7	10
	Left-Turn	1	9	5	7	3	17	20	10	4	20	13	10
	Rear End	28	38	51	74	79	82	19	38	8	7	31	15
	Rear to Rear	0	0	0	1	0	0	0	0	0	1	0	0
	Rear to Side	2	0	1	0	0	0	0	0	0	0	0	0
	Pedestrian	0	1	1	1	2	0	2	1	0	2	0	0
	Bike	1	6	0	4	3	3	2	0	2	0	1	1
	Single Vehicle	0	4	0	5	0	4	2	0	1	1	1	2
	Other/Unknown	1	2	0	0	0	0	3	1	0	1	0	1
Light Conditions	Daylight	42	66	64	86	82	107	60	43	18	51	47	35
	Dawn	1	3	0	2	0	0	1	1	0	0	0	0
	Dusk	5	3	1	1	4	7	3	1	2	1	3	2
	Dark Lighted	9	4	4	27	10	19	18	22	8	9	18	20
	Dark not Lighted	0	1	0	2	2	2	0	1	1	3	1	2

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, 51% of the total crashes during the analysis year were rear end collisions, 17% were angled other than left-turns collisions and 13% were left-turn related crashes.

A further analysis revealed that 53% of the reported rear end collisions were intersection related crashes. The remaining 47% were non-intersection related crashes

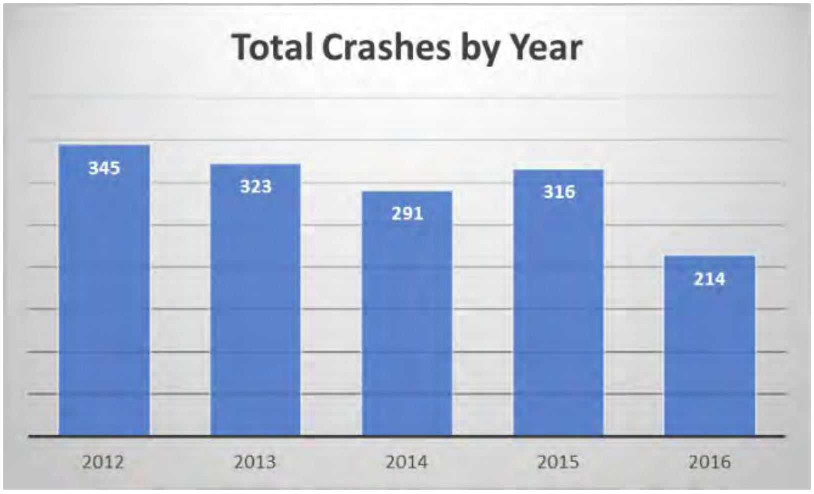
Figure 6-4: Percentage of Crashes by Collision Type



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 2012 (with total 345 crashes). This number is significantly higher than the number of crashes in the year 2016, 214 crashes.

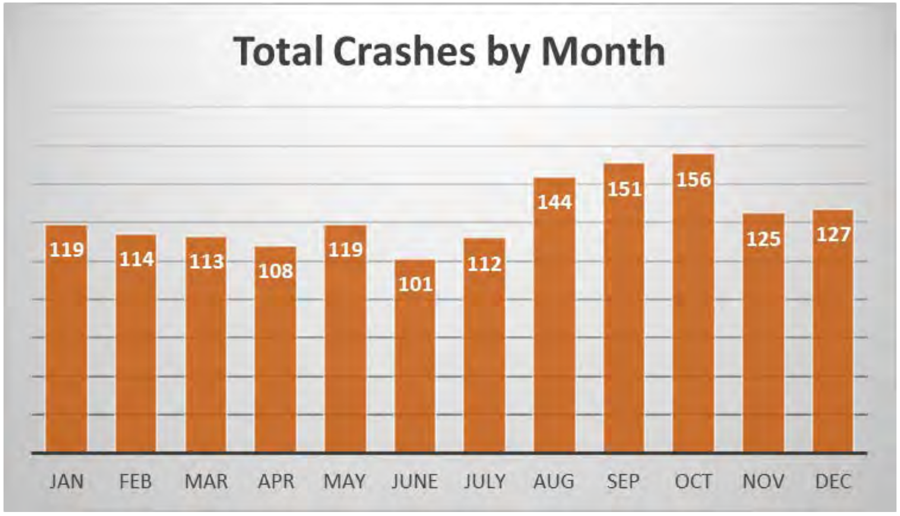
Figure 6-5: Total Crashes by Year



Crashes by the Time of the Year

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

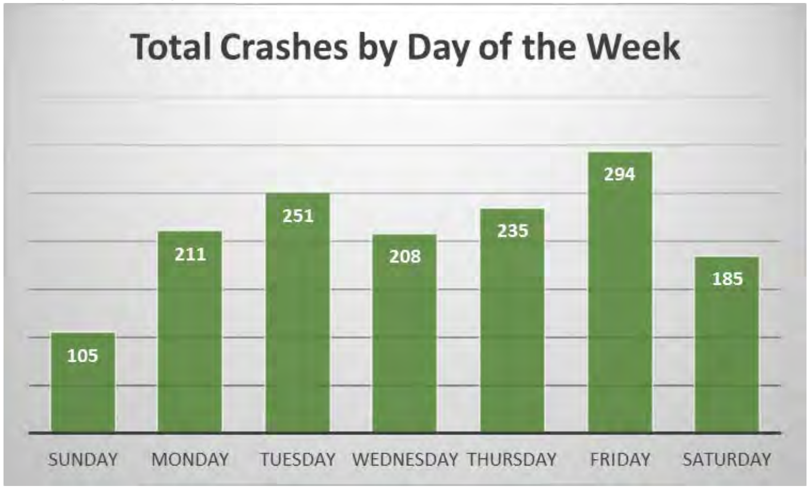
Figure 6-6: Total Crashes by Month



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, majority of crashes occurred during weekday, higher number occurring on Friday.

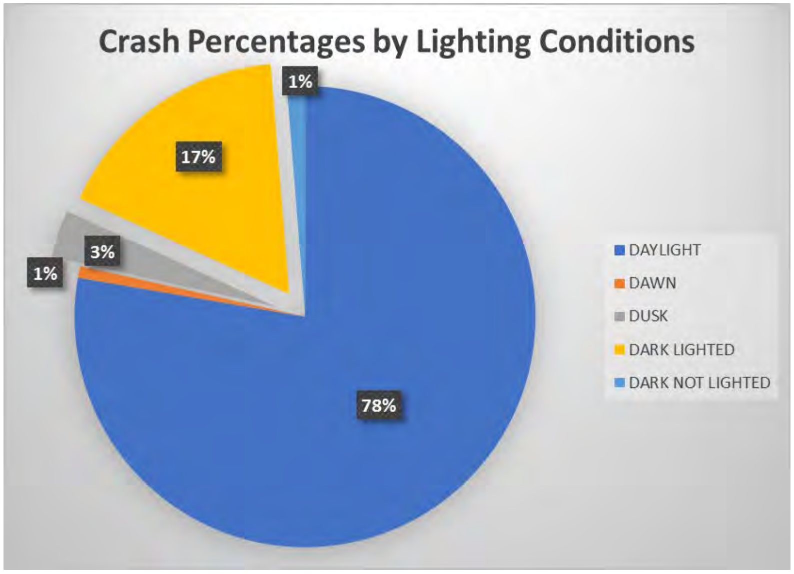
Figure 6-7: Crashes by the Day of Week



Lighting Conditions

Figure 6-8 illustrates the percentage of total crashes 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, 78% of the total crashes occurred during daylight and 17% of the crashes occurred during dark lighted conditions. Further analysis of crash data shows that 94% of injury crashes and 100% of fatalities occurred during daylight and dark lighted conditions.

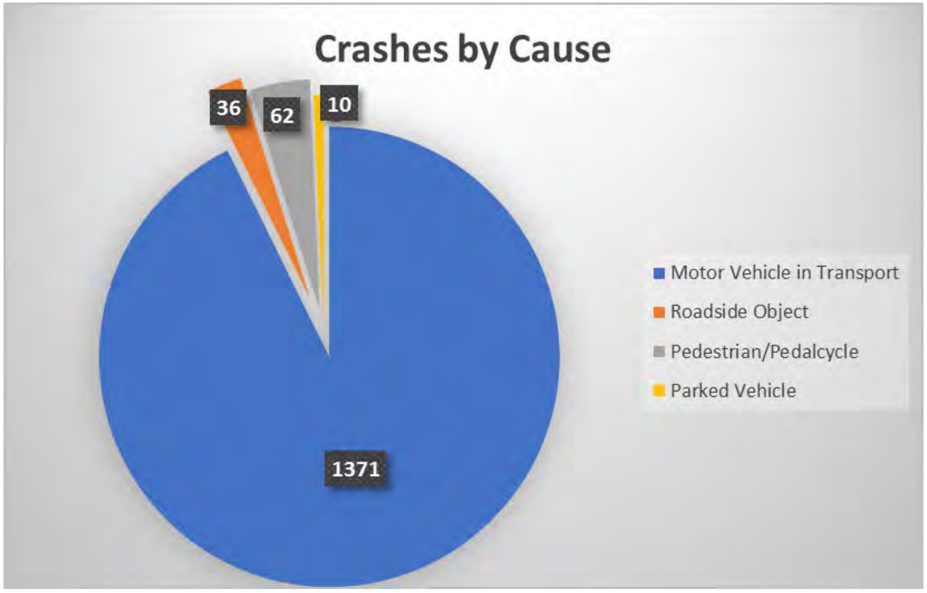
Figure 6-8: Crash Percentages by Lighting Conditions



Crashes by Cause

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 Milton Road study corridor, 1,371 of the total 1,489 crashes were cause due to a motor vehicle in transport. Of the remaining 118 crashes, 36 were due a roadside object, 62 were pedestrian/pedal cycle related and 10 were due to a parked vehicle. Overturn/rollover, animal related and other non-reported 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, 62 of the total 1,489 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.

Two of the 62 pedestrian related crashes resulted in fatalities, both in the year 2015, one at the intersection of Milton Road and University Avenue and the other at the intersection of Milton Road and Humphreys Street. Both the fatalities occurred because of the pedestrian not using the crosswalk. Both the pedestrian related fatalities occurred during dark lighted conditions. Alcohol was a factor in both the reported fatalities. Of the remaining pedestrian related crashes, 22 were no injury crashes and 38 were injury crashes.

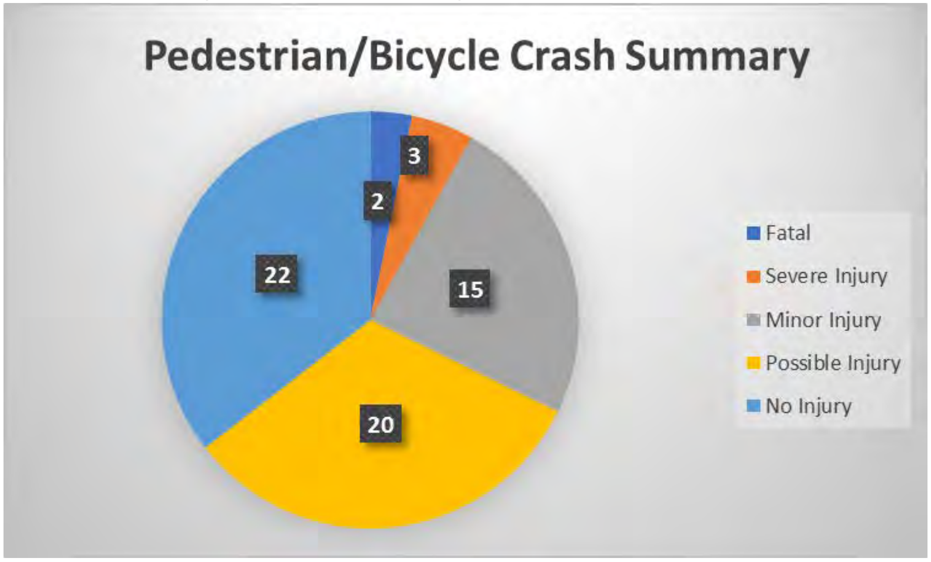
A comparison of pedestrian/bicycle crashes that occurred within the five-year period for the Milton Road study corridor and the Statewide average is shown in **Table 6-1.**

Table 6-3: Crash Severity Comparison

Crash Severity	Number	Milton Road %	Statewide Average %*
Fatal	2	0.03%	6%
Injury	38	61%	84%
Property Damage Only	22	35.5%	11%

Average of all pedestrian/bicycle related crashes from 2012-2016

Figure 6-10: Pedestrian/Bicycle Crash Summary



Mid-Block Crossings

As mentioned in the *Existing Pedestrian Facilities* section of this report, crosswalks along the Milton Road study corridor only exist at the signalized intersections. At the signalized intersection of Milton Road and Humphreys Street, there is no existing crosswalk to cross Milton Road. There are no existing mid-block crossings along the Milton Road study corridor.

Railroad Requirements and Restrictions

The BNSF Railway (BNSF) operates on two east-west transcontinental mainline tracks through the City of Flagstaff, Arizona. It is one of the busiest railroad corridors in the United States, carrying more than 100 freight and passenger trains daily and BNSF has considered potentially adding a third line.

Milton Road in Flagstaff intersects the rail corridor through a roadway underpass located west of Humphreys Street. Any proposed widening of Milton Road would require a substantial change to the railroad superstructure. To determine the viability of the proposed options for any potential widening of the roadway and designing the underpass structure, it is important to understand early in the project what the railroad requirements and restrictions are to decide the cost and viability of alternatives.

The following outline summarizes critical railroad requirements and restrictions. These should be considered when evaluating any proposed alternatives and while developing design plans.

Standards and References – Railway improvements shall be designed and constructed with the most current policies and standards, including the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, and the Association of State Highway and Transportation Officials (AASHTO), BNSF Railway Guidelines for Railroad Grade Separation Projects, as well as State railroad requirements.

General Design – For underpass structures, only simple spans with ballast decks are permitted. Cast-in-place concrete superstructures are unacceptable.

Track Closures – Due to the number of trains operating on the transcontinental mainline, a full closure of the tracks during the time needed for construction will more than likely not be approved for extended periods. As such, all construction activities that impact railroad operations must be coordinated with railroad officials early during the design and construction phases. The general rule of thumb is that the proposed design should not interrupt railroad operations during construction unless specifically approved by BNSF officials. It is important that agency representatives contact BNSF's Manager Public Projects during the concept phase to determine if additional railroad requirements must be met.

Track Alignment in the Railroad Right-of-Way – The preferred track alignment should be centered in the railroad right-of-way.

Shoofly Tracks – To maintain rail operations during any proposed construction phase, a project may require the temporary rerouting of train traffic through the implementation of a Shoofly track. It is important to note that two mainline tracks must be operational throughout any construction period. The following points outline additional requirements to consider when designing the Shoofly track:

- The track design speed shall be the maximum authorized timetable speed plus 10% for freight and passenger trains.
- Design plans shall meet BNSF track standards and operating requirements.
- Railroad tracks shall be fully operational at all times except during pre-approved periods for cut-over operations and other activities, as agreed upon by BNSF officials.

Access Roads – During the conceptual design phase of any proposed construction project, representatives from the City of Flagstaff, Arizona Department of Transportation, and BNSF will need to determine if an access road leading up to the structure is required. The access road will be used and controlled by railroad employees for maintenance, inspection and repair operations. At double-track locations, a single access road adjacent to one side of the track is recommended. If a third track is constructed, an access road may be required on both sides.

- The outside edge of the access road shall be located a minimum of 27 feet from the centerline of the nearest existing or planned future track.
- For an underpass structure, there are two preferred options for the required access road: a road on the bridge or a road on a separate bridge. See BNSF Railway Guidelines for Railroad Grade Separation Projects for additional details.

Temporary Horizontal Construction Clearances – All physical obstructions shall have a minimum temporary clearance of 15 feet during any proposed construction that is measured perpendicular from the centerline of the nearest track. For curved tracks, the temporary horizontal clearance shall increase by 6 inches or by 1.5 inches for every degree of curve, whichever is greater.

Permanent Horizontal Clearances – Permanent horizontal and vertical clearances must conform to the requirements outlined in the BNSF Railway Guidelines for Railroad Grade Separation Projects or AREMA Chapter 15, Part 1.

- For curved tracks, the permanent horizontal clearance shall increase by 6 inches or by 1.5 inches for every degree of curve, whichever is greater.
- A minimum of 20 feet (preference is 25 feet) spacing measured from centerline to centerline of the track shall be designed for proposed structures that accommodate multiple tracks. If 25 feet horizontal spacing is not met, then a "crash wall" or similar protective device will need to be designed.

Permanent Vertical Clearance (under the structure) – The existing vertical clearance for northbound and southbound Milton Road is 13'-9".

Figure 6-11: Existing Northbound and Southbound Milton Road Vertical

Unless specified by BNSF Railway officials, the vertical clearance of the underpass structure for any proposed widening of Milton Road should be increased to ensure that the structure will be protected by providing sufficient vertical clearance and protective devices.

- According to Guidelines for Railroad Grade Separation Projects, the minimum vertical clearance over the entire roadway width for all new or reconstructed structures are the following:
  - 16'-6" for steel superstructure with five or more beams or four or more deck plate girders per track.
  - 17'-6" for concrete superstructure or steel through plate girders with bolted bottom flanges.
  - 20'-0" for steel through plate girders without bolted bottom flanges.
- Railroad officials shall approve any variance from the vertical clearances noted above. To obtain a variance, the applicant must provide BNSF officials with written justification that include extensive details for review.
  - If the variance is approved, all structures shall be protected with a sacrificial device on each side of the structure. This protection may be in the form of a redundant steel or concrete fascia beam.

Skewed Structure – The preferred angle of intersection is 90 degrees between centerline of track and centerline of bridge supports transverse to the track. If this angle cannot be met, then an approach slab is required. For the maximum allowable skew, reference the most current BNSF Railway Guidelines for Railroad Grade Separation Projects and AREMA Manual.

Ballast Retainers – During construction and final implementation, ballast retainers must be designed to prevent ballast from inadvertently falling onto the roadway and sidewalk.

Fences and Handrails – At minimum, handrails shall be provided on both sides of the structure and shall meet Federal Railroad Administration (FRA) and Occupational Safety and Health Administration (OSHA) standards. Fencing may be considered by railroad or agency officials.

Walkways – The underpass structure requires a walkway ballast section or a walkway structure on both sides of the structure.

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

Based on the Beulah-University Alignment Study completed by Kimley-Horn in November 2015, the west leg of the existing University Avenue will be realigned south to intersect with University Drive, forming the west leg of the existing University Drive. Traffic volume patterns on the roadways surrounding Milton Road in the vicinity of University Avenue and University Drive are expected to change when the Beulah-University realignment is completed.

Design Year 2040 Traffic 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 Milton Road study corridor were developed based on the *Milton Road Alternatives Operations Analysis Micro-Simulation Modeling* Final Report completed by Kimley-Horn in September 2016 (Milton Road Micro-Simulation Study), and the calculated growth rate for the study area.

Growth Rate

Historical average daily traffic volume information on Milton Road south of Route 66 and on Milton Road north of Butler Road were obtained from the ADOT Transportation Data Management System (TDMS) website. Years 2012 and 2016 traffic volumes were available on Milton Road south of Route 66, and years 2013 and 2015 traffic volumes were available on Milton Road north of Butler Avenue. 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 traffic volume growth rate calculations for the study area.

Table 7-1: Growth Rate Calculations

Year	ADT	Yearly Growth %	Average Growth %
Milton. S of Route 66			**1.80%**
2012	37,333		
		1.56%	
2016	39,711		
Milton, N of Butler			
2013	35,881		
		2.05%	
2015	37,366		

Based on the historical daily traffic volumes obtained from the ADOT TDMS website, the average exponential growth rate was calculated to be 1.8% along the Milton Road study corridor.

Milton Road Micro-Simulation Study

The Milton Road Micro-Simulation study considers the Beulah-University Avenue realignment and the realigned University Drive lane configurations for the future conditions baseline analysis. The future design year traffic volumes included in the Milton Road Micro-Simulation study were developed by applying a 20% growth factor to the existing volumes after reflecting the Beulah-University realignment.

Peak Hour Traffic Volumes

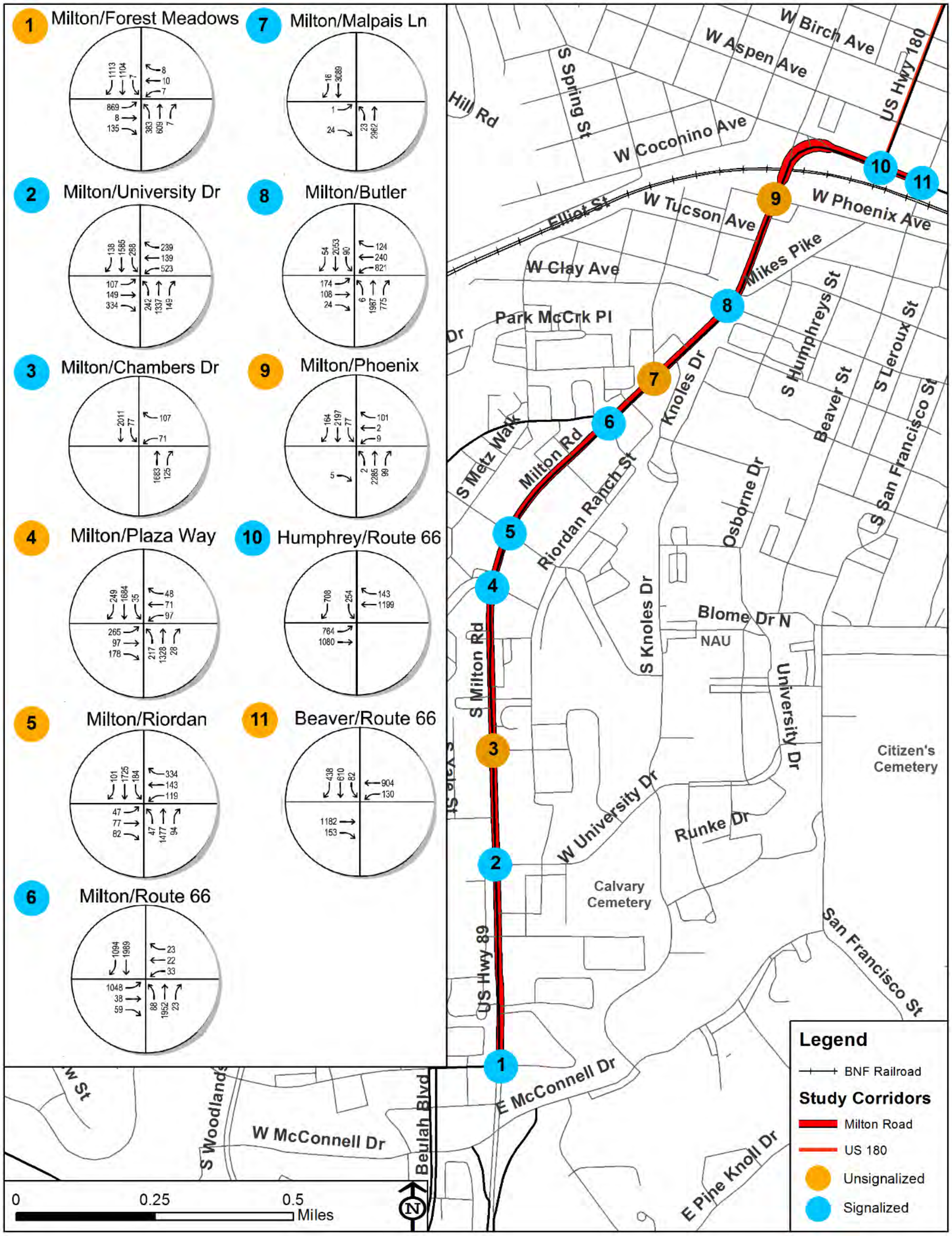
As mentioned in the *Growth Rate* section of this report, a 1.8% exponential growth rate was calculated along the Milton Road study corridor. Applying a 1.8% exponential growth rate to the existing 2017 traffic volumes for 23 years (from 2017 – 2040) will result in a 50% growth in the traffic volumes. However, the existing 2017 traffic volumes does not reflect the Beulah-University Drive realigned lane geometry. Therefore, for the purposes of this analysis, the difference in the calculated growth factor (50%) and the growth factor used in the Milton Road Micro-Simulation study (20%) was applied to the design year traffic volumes from the Milton Road Micro-Simulation study to obtain the year 2040 peak hour traffic volumes, with the following exceptions:

1. Intersections of Milton Road/Clay-Butler Avenue, Milton Road/Riordon Road and Milton Road/Malpais Lane – the east/west sides of these intersections lead to residential, commercial and/or office developments which are completely operational in the year 2017. Traffic volumes at these intersections were already increased based on the Milton Road Micro-Simulation study. Therefore, no additional growth rate was applied to the turning movements that are entering and exiting the east/west legs of these intersections.
2. Intersections of Milton Road/Plaza Way and Milton Road/Forest Meadows Street – the east legs of Plaza Way and Forest Meadows Street lead to an existing shopping center which are completely operational in the year 2017. Traffic volumes at these intersections were already increased based on the Milton Road Micro-Simulation study. Therefore, no additional growth rate was applied to the turning movements that are entering and exiting the east legs of these intersections.
3. Intersections of Milton Road/Chambers Drive and Milton Road/Phoenix Avenue – peak hour traffic volumes for the intersection of Milton Road and Chambers Drive and the intersection of Milton Road and Phoenix Avenue were not included in the Milton Road Micro-Simulation study. Side street approach traffic volumes and the turning movements on Milton Road at these intersections were obtained by applying the 1.8% exponential growth rate (50% growth factor) to the existing 2017 traffic volumes. The north/south through movements on Milton Road at Phoenix Avenue were calculated by balancing the traffic volumes on Milton Road between Phoenix Avenue and Clay/Butler Avenue. The north/south through movements on Milton Road at Chambers Drive were calculated by balancing the traffic volumes on Milton Road between Chambers Drive and University Drive.

The Milton Road Micro-Simulation study only included the PM peak hour traffic volumes for the design year reflecting the realigned Beulah-University intersection. Comparing the existing 2017 Mid-day and PM peak hour volumes, the PM peak hour volumes were higher and deemed appropriate for the peak hour analysis of the design year. Therefore, for the purposes of this analysis, only the PM peak hour was analyzed in the year 2040.

PM peak hour traffic volumes for the year 2040 at the intersections along the Milton Road study corridor are shown in **Figure 7-1**.

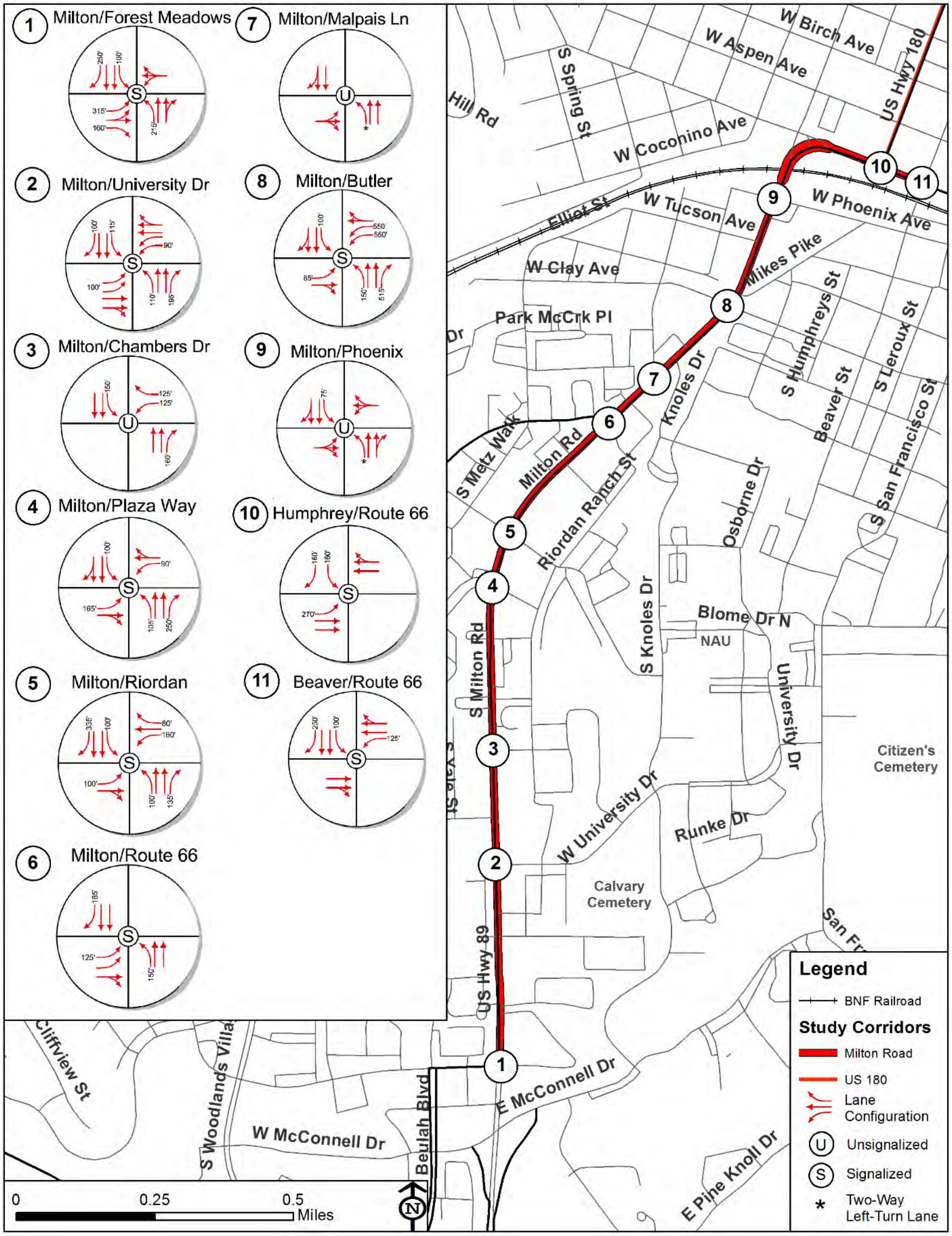
Figure 7-1: 2040 PM Peak Hour Traffic Volumes



Future Intersection Operational Analysis

The operational analysis for the future conditions was conducted utilizing the projected turning movement volumes with existing roadway geometry, existing traffic control and existing signal timing with the exception of the intersection of Milton Road and University Drive. Intersection control and lane geometry for the intersection of Milton Road and University Drive was based on Figure 4, Future Condition Baseline Lane Configuration from the Milton Road Micro-Simulation study. Signal phasing and timing for the intersection of Milton Road and University Drive was optimized for the 2040 peak hour traffic volumes. **Figure 7-2** shows the intersection control and lane geometry for the year 2040 along the Milton Road study corridor.

Figure 7-2: 2040 Intersection Control and Lane Geometry



Design Year 2040 LOS

Level-of-Service for the study area intersections along the Milton Road study corridor is analyzed for the year 2040 with the 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 PM 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 PM peak hour LOS at the study area intersections. **Table 7-2** presents the 2040 PM peak hour LOS summary for the intersections along the Milton Road study corridor. The input and output of these analyses are provided as **Appendix X** to this report.

Table 7-2: 2040 PM Peak Hour LOS at Signalized and Unsignalized Intersections

Intersection	Approach	2040 PM Peak	
		LOS	Delay (Sec/Veh)
Milton Rd & Beaver St	Northbound	-	-
	Southbound	D	40.7
	Eastbound	C	22.4
	Westbound	B	13.0
	Overall	**C**	**25.5**
Milton Rd and Humphreys St	Northbound	-	-
	Southbound	F	246.5
	Eastbound	F	331.8
	Westbound	F	128.2
	Overall	**F**	**246.1**
Milton Rd and Phoenix Avenue	Northbound	A	0.0
	Southbound	A	1.4
	Eastbound	D	27.5
	Westbound	E	44.8
	Overall	**A***	**1.8**
Milton Road and Clay/Butler Avenue	Northbound	F	682.4
	Southbound	F	526.6
	Eastbound	F	82.9
	Westbound	F	253.3
	Overall	**F**	**522.2**
Milton Road and Malpais Lane	Northbound	A	1.2
	Southbound	A	0.0
	Eastbound	E	36.7
	Westbound	-	-
	Overall	**A***	**0.7**
Milton Road and Route 66	Northbound	F	289.9
	Southbound	F	528.4
	Eastbound	F	243.6
	Westbound	-	-
	Overall	**F**	**399.7**
Milton Road and Riordan Road	Northbound	A	8.9
	Southbound	B	14.8
	Eastbound	D	44.4
	Westbound	D	49.9
	Overall	**B**	**18.8**
Milton Road and Plaza Way	Northbound	C	29.5
	Southbound	F	515.0
	Eastbound	E	62.7
	Westbound	D	51.1
	Overall	**F**	**257.1**
Milton Road and Chambers Drive	Northbound	A	0.0
	Southbound	A	0.6
	Eastbound	-	-
	Westbound	C	20.2
	Overall	**A***	**1.2**
Milton Road and University Drive	Northbound	F	125.9
	Southbound	F	392.6
	Eastbound	F	924.9
	Westbound	D	50.5
	Overall	**F**	**305.6**
Milton Road and Forest Meadows Street	Northbound	D	50.1
	Southbound	F	455.4
	Eastbound	E	58.9
	Westbound	E	58.4
	Overall	**F**	**263.8**

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

As shown in **Table 7-2,** the overall 2040 PM peak hour LOS at the intersections along the Milton Road study corridor is expected to be "F" at the signalized and unsignalized study area intersections with the exception of the following intersections:

- Milton Road and Beaver Street – LOS C,
- Milton Road and Riordan Road – LOS B, and
- Milton Road and Malpais Lane – LOS G.

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

Short-Term Projected Traffic Conditions &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 Milton Road 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 existing 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: MILTON ROAD CORRIDOR MASTER PLAN ENVIRONMENTAL OVERVIEW

The purpose of the environmental overview for the Milton Road 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 entire Milton Road Corridor as captured in the Flagstaff/Northern Arizona Intergovernmental Public Transportation Authority (NAIPTA) Transit Spine Route Study (Kimley-Horn, 2016).

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 principles have carried on into the Blueprint 2040 Regional Transportation 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.

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 Milton Road 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 December 2017. 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
Birds		
California Condor	*Gymnogyps californianus*	Experimental Population Non-Essential
California Condor	*Gymnogyps californianus*	Endangered
Mexican Spotted Owl	*Strix occidentalis lucida*	Threatened
Yellow-billed Cuckoo	*Coccyzus americanus*	Threatened
Reptiles		
Northern Mexican Gartersnake	*Thamnophis eques megalops*	Threatened
Fishes		
Roundtail Chub	*Gila robusta*	Proposed Threatened
Flowering Plants		
San Francisco Peaks Ragwort	*Packera franciscana*	Threatened*

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

There were no critical habitats identified in the project area.

In addition to the endangered species information, there are 15 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
Migratory Birds		
Bald Eagle	*Haliaeetus leucocephalus*	Not a BCC*; Concern due to Eagle Act
Bendire's Thrasher	*Toxostoma bendirei*	BCC
Black Throated Sparrow	*Amphispiza bilineata*	BCC
Black-chinned Sparrow	*Spizella atrogularis*	BCC
Chestnut-collared Longspur	*Calcarius ornatus*	BCC

Common Name	Scientific Name	Status
Migratory Birds		
Elf Owl	*Micrathene whitneyi*	BCC
Golden Eagle	*Aquila chrysaetos*	Not a BCC; Concern due to Eagle Act
Gray Vireo	*Vireo vicinior*	BCC
Lark Bunting	*Calamospiza melanocorys*	BCC
Lewis's Woodpecker	*Melanerpes lewis*	BCC
Mexican Whip-poor-will	*Antrostomus arizonae*	BCC
Phainopepla	*Phainopepla nitens*	BCC
Pinyon Jay	*Gymnorhinus cyanocephalus*	BCC
Red-faced Warbler	*Cardellina rubrifrons*	BCC
Rufous Hummingbird	*Selasphorus rufus*	BCC

*BCC = Bird of Conservation Concern

In the event of any significant future construction and/or reconstruction of Milton Road (or alternative alignment), it is recommended that the species listed above and the migratory birds should be evaluated for any project area. 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.

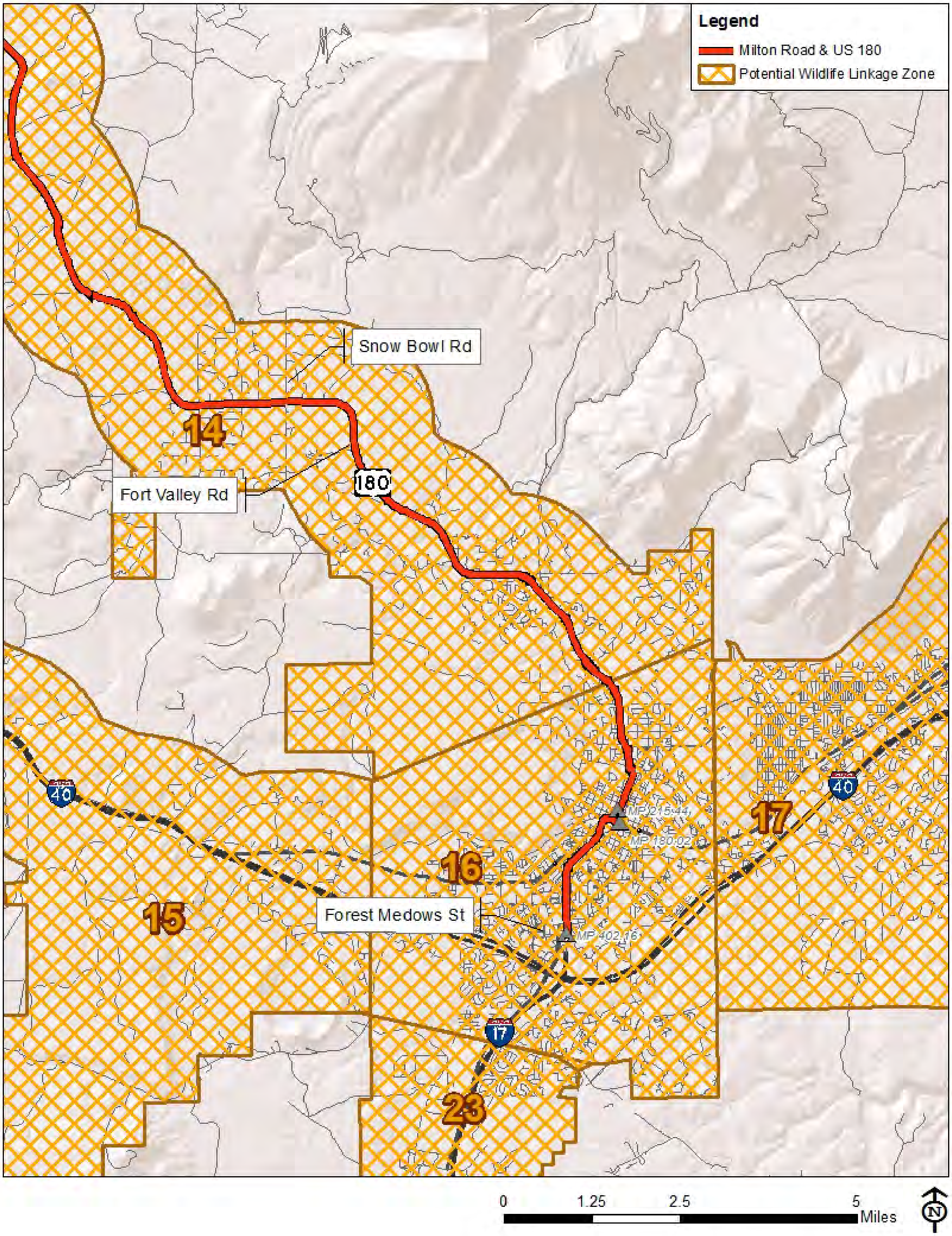
Wildlife Movement

Largely developed urbanized areas, such as along the Milton Road 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 Milton Road 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 one wildlife linkage is linkage 16 – Flagstaff (p. 50) which is shown in **Figure 8-1.**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 BNSF railroad, I-40 and urbanization. There are no wildlife corridors that intersect with Milton Road within Flagstaff.

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 NAIPTA study (Kimley Horn, 2016), no invasive/noxious weed species were noted during a windshield reconnaissance survey for the Milton Road 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 Milton Road 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:

- 04005C6816G
- 0405C6808G
- 04005C6809G

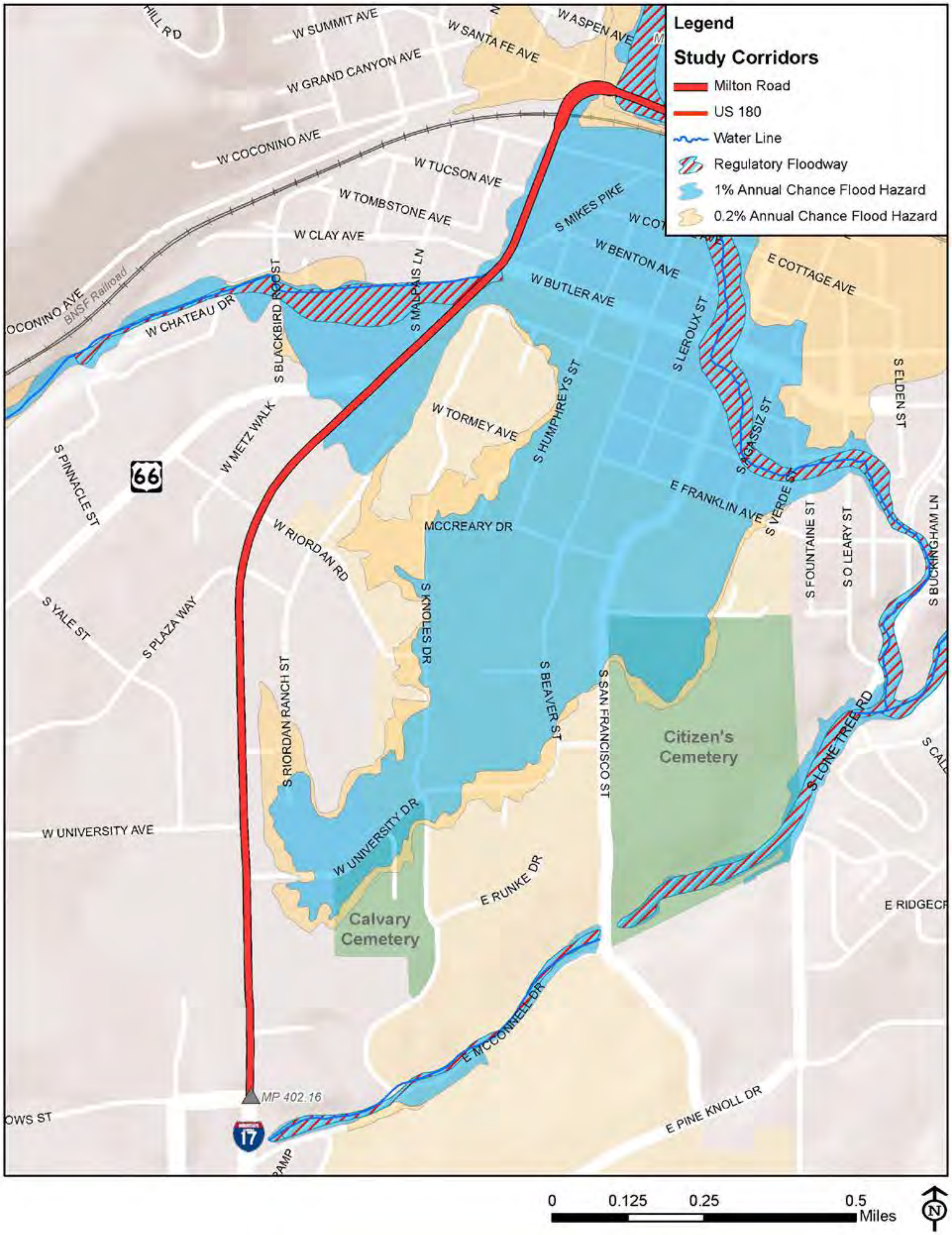
Figure 8-3 illustrates the floodways in proximity to the Study Area. There are two locations where the regulatory floodway intersects the corridor. At the intersection of Butler/Clay Avenue and along Historic Route 66 just west of Humphreys Street. There is currently infrastructure in place to mitigate flooding and it is imperative to incorporate stormwater infrastructure at these two locations when developing alternatives for the corridor. In addition, the northern half of the corridor lays within the 100-year flood plain, indicating a 1% chance that this area would experience flooding every year. There will likely be additional drainage needed on Milton Road between Riordan Road and Beaver Street.

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 Milton Road 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 Milton Road 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. Milton Road predominately has commercial and institutional (NAU) land uses adjacent to the 1.8 miles corridor. ADOT and FHWA will consider mitigation measures for homes, schools and churches for noise levels of 64 dBA or higher.

Noise should generally be evaluated in the review of viable alternatives to ensure there are no disproportionally 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 isfound 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.

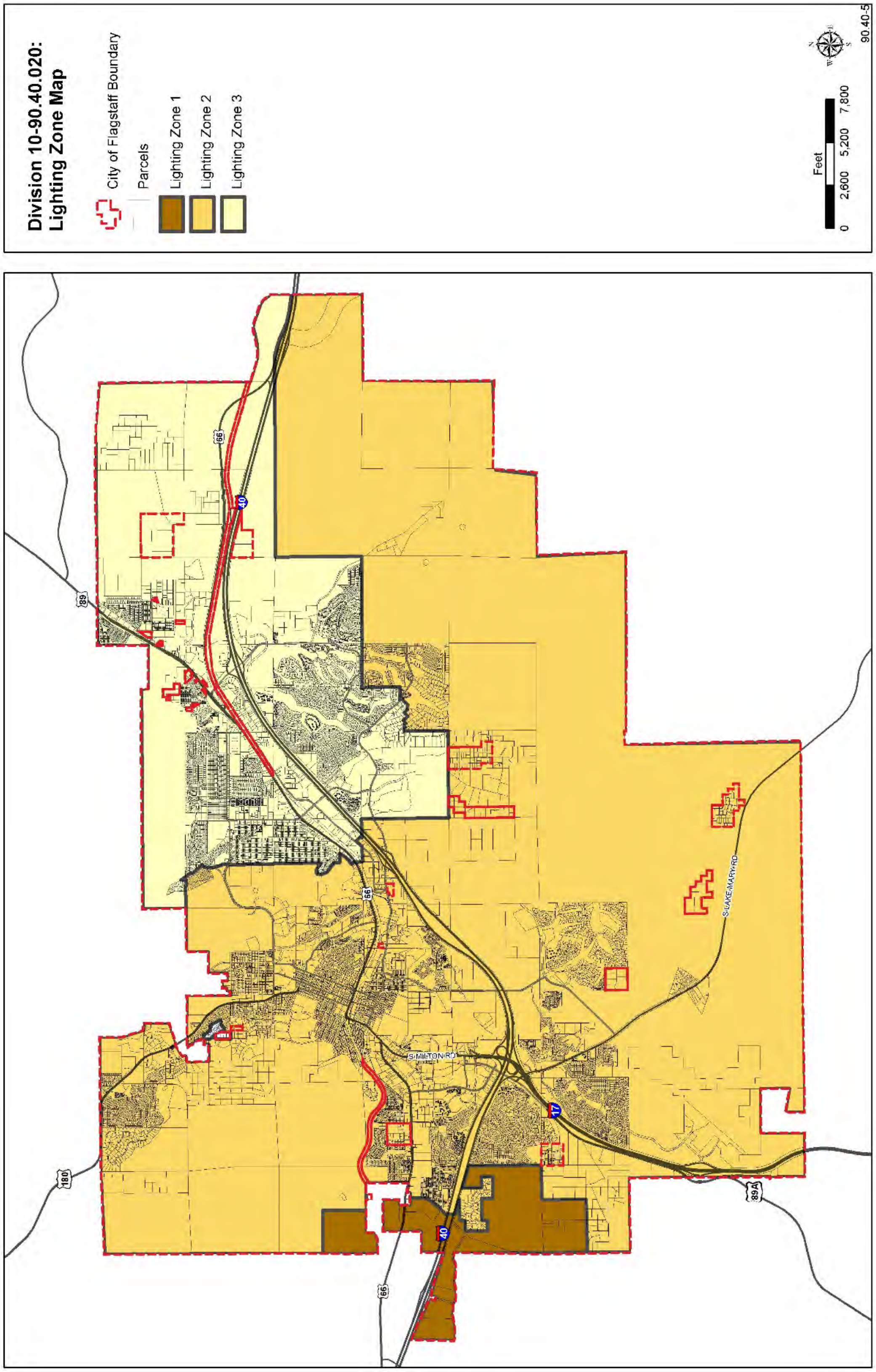
ADOT recently updated their noise policy in May 2017. It is called the "Arizona Department of Transportation Noise Abatement Requirements." All federal projects that require a new noise analysis or existing projects that have yet to begin a noise analysis are required to follow these new requirements.

Visual Resources

Visual resources in the area are described on pages 40-41 of the NAIPTA study (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 of the importance of maintaining dark skies in the area is highly valued. Measures should be taken to address these issues as further development in the corridor occurs.

Figure 8-4: City of Flagstaff Lighting Zone Map



Air Quality

Air quality in the Milton Road 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.

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 the Kimley Horn NAIPTA 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 Milton Road Corridor. There are a total of 16 underground storage tanks and six leaking underground storage tanks. Five of the six leaking underground storage tanks are closed. One of the Trailways underground storage tanks south of Plaza Way is the only leaking tank that has not been decommissioned. Refer to **Table 8-3** list the underground storage tanks adjacent to the Milton Road corridor.

Table 8-3: Underground Storage Tanks

Name/Location	Number of Tanks	Status
All Underground Storage Tanks		
5 Points Mobil	7	Closed: 4 Open: 3
Century 21 Associates	1	Closed
Economy Gas Station	1	Closed

Five Points Intersection	1	Closed
GASAMAT #804	3	Closed
Lube Shop	2	Closed
Trailways	2	Closed
Leaking Underground Storage Tanks		
5 Points Mobil	1	Closed
Century 21 Associates	1	Closed
Economy Gas Station	1	Closed
GASAMAT #804	2	Closed
Trailways	2	Closed

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 Milton Road between West Forest Meadows Street and South Beaver Street, a distance of about two miles. 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 (FHPO) 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 29 cultural resources within or immediately adjacent to the study area, including three in-use historical structures, two NRHP-listed historic districts, and 24 individual historic-age buildings, most of which have not been documented or evaluated for eligibility. 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.

A summary of cultural resources identified by the research is presented in the tables below (**Table 8-4** – **Table 8-5**). From this information, ACS identified areas of sensitivity along the Milton Road 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 (ASM)[1]	Site Type	Eligibility (Criterion)[2]	Section 4f Resource	Reference(s)
AZ I:15:156	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)
AZ I:3:10	Historic US Highway 89	Determined Eligible (D) (SHPO: 11/15/2002)		(Federal Highway Administration and Arizona State Historic Preservation Office 2002; Stone 1985)
AZ Q:7:74	US 180 and SR 61	Determined Eligible (D) (SHPO: 5/29/2007)		AZSITE Inventory No. 87256 (Bowler 2012)
AZ I:14:53	Railroad Addition Historic District and Boundary Expansion	Determined Eligible (A,C) (SHPO: 11/15/1982)	Yes	(Garrison et al. 1982)
	Northern Arizona Normal School Historic District	Determined Eligible (A,C) (SHPO: 4/21/1986)	Yes	(Chambers 1986)

[1] Italicized site numbers represent in-use structures or resources.

[2] Recommended=Archaeologist's opinion; Determined: SHPO concurrence with recommendation.

Table 8-5: Historical Buildings on South Milton Road (Constructed prior to 1968)

Parcel No.	Address	Property Name	Previously Inventoried/ Documented	Previous Project[1]	Eligibility Status [2,3]	Section 4f Resource	Comments
103-21-001	1801 S Milton Rd	ADOT facility and Motor Vehicle Division	Yes	Evaluated by FHPO staff	Not eligible[4]		Loss of integrity due to alterations
103-20-001	1313 S Milton Rd	Travel Inn Lodge	No		Unevaluated		
103-04-007	914 S Milton Rd	Econo Lodge	No		Unevaluated		
103-04-011	913 S Milton Rd	Budget Inn	No		Unevaluated		
103-04-005	910 S Milton Rd	America’s Best Inn (Arizonan Hotel)	Yes	Route 66 Survey (Inv. No. 296)	Recommended Eligible (A)	Yes	
103-02-014	901 S Milton Rd	Rent-A-Center / Bun Huggers	No		Unevaluated		Former Safeway grocery store[4]
103-05-001 103-05-002	307 W Dupont Ave	Blome Building (NAU property)	Yes	Northern Arizona Normal School Historic District (Inv. No. 5)	Contributor (A,C)[3]	Yes	
103-06-004	501 S Milton Rd	Motel Canyon Inn (Starlite Motel)	Yes	Route 66 Survey (Inv. No. 297)	Recommended Eligible (A)	Yes	
103-06-001	203 S Milton Rd	Matador Coffee Roasting Co.			Unevaluated		Former gas station
100-39-005D	204 S Milton Rd	VP Racing Fuels (C&M Garage)	Yes	Route 66 Survey (Inv. No. 301)	Recommended Not Eligible		Loss of integrity due to alterations
103-06-008A	224 S Mikes Pike	Knights Inn Flagstaff (Spur Motel)	Yes	Route 66 Survey (Inv. No. 302) / Evaluated by FHPO staff	Recommended not eligible[4]		Loss of integrity due to alterations
100-37-001	121 S Milton Rd	The L Motel	Yes	Route 66 Survey (Inv. No. 300)	Recommended Eligible (A)	Yes	
100-39-004C	218 S Milton Rd	Granny’s Closet			Unevaluated		Large lot with lumberman statue
100-37-004A	101, 103, 105 S Milton Rd	Commercial building (multiple businesses)	Yes	Route 66 Survey (Inv. No. 304)	Unevaluated		Additional research recommended
100-38-010 100-38-011	1 S Milton Rd	Floor Coverings International			Unevaluated		

Parcel No.	Address	Property Name	Previously Inventoried/ Documented	Previous Project[1]	Eligibility Status [2,3]	Section 4f Resource	Comments
100-39-020A	2 S Milton Rd	Ruff's Sporting Goods			Unevaluated		
100-43-003B	216 W Phoenix Ave.	Building (Municipal)			Unevaluated		Unknown function
100-43-002A	511 W Coconino Ave	BNSF Property (Walls, supports, etc.)			Unevaluated		Former street ROW
100-21-012A	211 W Aspen Avenue	Flagstaff City Hall (Hiway Diner No. 7)	Yes	Route 66 Survey (Inv. No. 309)	Recommended Not Eligible		Demolished
100-21-006	122 W Route 66	Rodeway Inn (Townhouse Motel)	Yes	Route 66 Survey (Inv. No. 310)	Recommended Eligible (A)	Yes	
100-21-005	118 W Route 66	Ponderosa Pawn and Trading Co			Unevaluated		Former Greyhound Station–likely significant[4]
100-21-003A	114 W Route 66	Fast Auto Loans, Inc.			Unevaluated		
100-44-006B	101 W Route 66	Greater Flagstaff Chamber of Commerce			Unevaluated		Possibly a former railroad building
100-20-023	24 W Route 66	Jimmy John's	Yes	Evaluated by FHPO staff	Recommended not eligible[4]		Loss of integrity due to alterations

[1] Route 66 Survey: (Motley Design Group 2012) | Northern Arizona Normal School District: (Chambers 1986)

[2, 3] With one exception, the previously documented buildings were evaluated individually. The exception is the Blome Building—a contributor to the Northern Arizona Normal School Historic District.

[4] Karl Eberhard personal communication, October 25, 2017

CHAPTER 9: CONSIDERATION OF EXISTING AND NEWLY DEVELOPED ALTERNATIVES

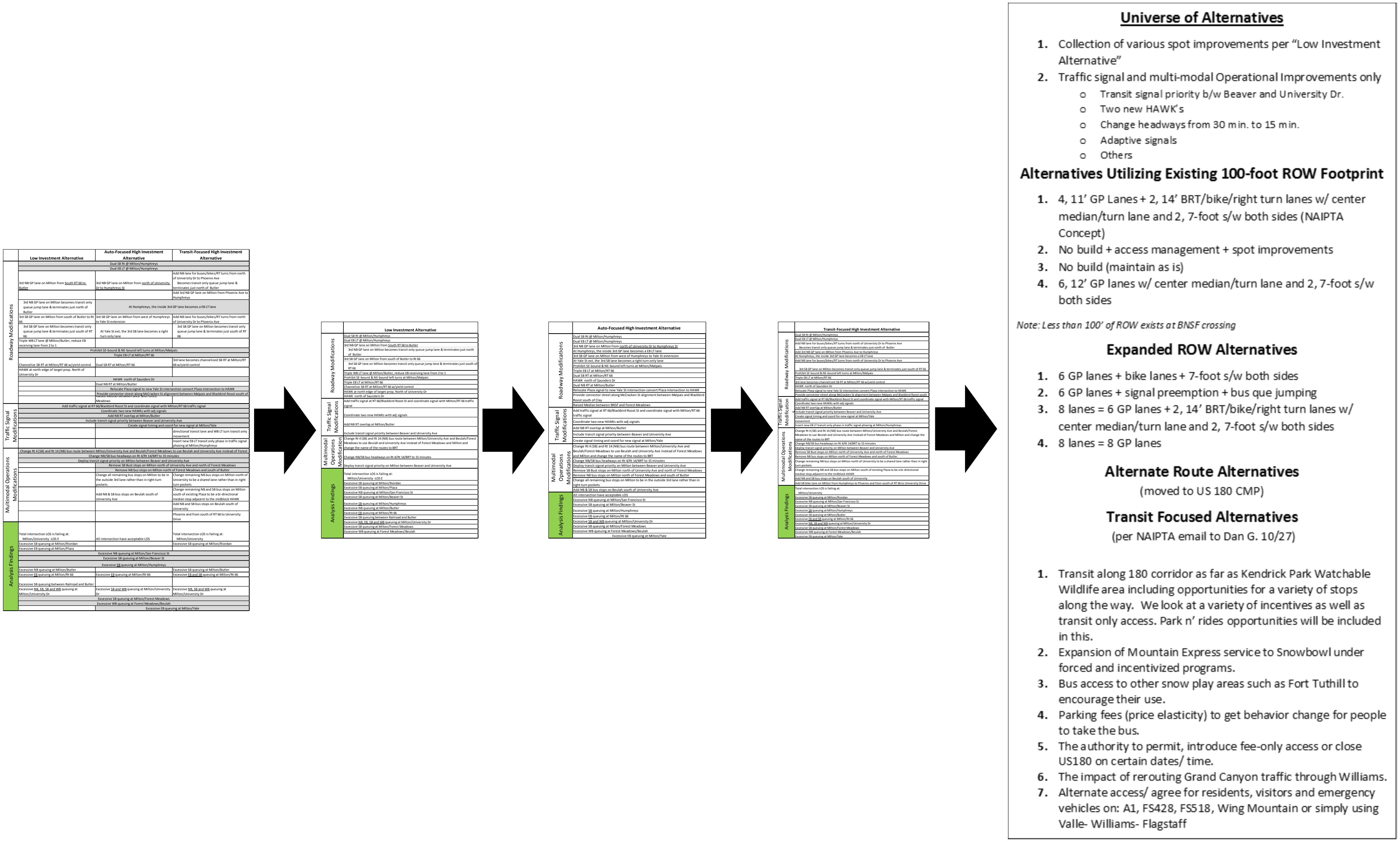
Identifying Existing Alternatives to Date

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 Milton Road CMP process.

The first step in evaluating and defining the existing alternatives was a thorough review of the 2016 *Milton Road Alternatives & Operations Analysis Study.* This report utilized a robust series of microsimulation models to assess the operational effectiveness of alternative mobility treatments for the Milton Road/Route 66/Business Route 40 corridor (including cross-streets) between Forest Meadows Street and San Francisco Street.

The *Milton Road Alternatives & Operations Analysis Study* identifies a series of possible modifications/improvements for: multimodal operations, traffic signal operations and roadway modifications. The Study outlines a range of investment choices across each of the three possible modification/improvement types. These are; low investment alternatives, auto-focused high investment alternatives, and transit focused high investment alternatives. **Figure 9-1** below illustrates the “Summary Matrix” that was developed by the Study Team to graph the various improvement types and their relationship to the three investment levels. This Summary Matrix began to adequately summarize and depict the various alternatives that the Project Partners felt was needed to bring clarity to understanding and conveying the existing alternatives that had been described to date.

Figure 9-1: Matrix of Alternatives



<table>
<tr><th></th><th>Low Investment Alternative</th><th>Auto-Focused High Investment Alternative</th><th>Transit-Focused High Investment Alternative</th></tr>
<tr><td rowspan="17">Roadway Modifications</td><td colspan="3">Dual SB Rt @ Milton/Humphreys</td></tr>
<tr><td colspan="3">Dual EB LT @ Milton/Humphreys</td></tr>
<tr><td>3rd NB GP lane on Milton from South RT 66 to Butler</td><td>3rd NB GP lane on Milton from north of University Dr to Humphreys St</td><td>Add NB lane for buses/bikes/RT turns from north of University Dr to Phoenix Ave
Becomes transit only queue jump lane & terminates just north of Butler</td></tr>
<tr><td></td><td></td><td>Add 3rd NB GP lane on Milton from Phoenix Ave to Humphreys</td></tr>
<tr><td>3rd NB GP lane on Milton becomes transit only queue jump lane & terminates just north of Butler</td><td colspan="2">At Humphreys, the inside 3rd GP lane becomes a EB LT lane</td></tr>
<tr><td>3rd SB GP lane on Milton from south of Butler to Rt 66</td><td>3rd SB GP lane on Milton from west of Humphreys to Yale St extension</td><td>Add NB lane for buses/bikes/RT turns from north of University Dr to Phoenix Ave</td></tr>
<tr><td>3rd SB GP lane on Milton becomes transit only queue jump lane & terminates just south of RT 66</td><td>At Yale St ext, the 3rd SB lane becomes a right turn only lane</td><td>3rd SB GP lane on Milton becomes transit only queue jump lane & terminates just south of RT 66</td></tr>
<tr><td>Triple WB LT lane @ Milton/Butler, reduce EB receiving lane from 2 to 1</td><td></td><td></td></tr>
<tr><td colspan="3">Prohibit SE-bound & NE-bound left turns at Milton/Malpais</td></tr>
<tr><td colspan="3">Triple EB LT at Milton/RT 66</td></tr>
<tr><td>Channelize SB RT at Milton/RT 66 w/yield control</td><td>Dual SB RT at Milton/RT 66</td><td>3rd lane becomes channelized SB RT at Milton/RT 66 w/yield control</td></tr>
<tr><td>HAWK at north edge of target prop. North of University Dr</td><td></td><td></td></tr>
<tr><td colspan="3">HAWK north of Saunders Dr</td></tr>
<tr><td></td><td>Dual NB RT at Milton/Butler</td><td></td></tr>
<tr><td></td><td colspan="2">Relocate Plaza signal to new Yale St intersection convert Plaza intersection to HAWK</td></tr>
<tr><td></td><td colspan="2">Provide connector street along McCracken St alignment between Malpais and Blackbird Roost south of</td></tr>
<tr><td></td><td>Raised Median between BNSF and Forest Meadows</td><td></td></tr>
<tr><td rowspan="7">Traffic Signal Modifications</td><td colspan="3">Add traffic signal at RT 66/Blackbird Roost St and coordinate signal with Milton/RT 66 traffic signal</td></tr>
<tr><td colspan="3">Coordinate two new HAWKs with adj signals</td></tr>
<tr><td colspan="3">Add NB RT overlap at Milton/Butler</td></tr>
<tr><td colspan="3">Include transit signal priority between Beaver and University Ave</td></tr>
<tr><td></td><td colspan="2">Create signal timing and coord for new signal at Milton/Yale</td></tr>
<tr><td></td><td></td><td>directional transit lane and WB LT turn transit only movement</td></tr>
<tr><td></td><td></td><td>Insert new EB LT transit only phase in traffic signal phasing at Milton/Humphreys</td></tr>
<tr><td rowspan="9">Multimodal Operations Modifications</td><td colspan="3">Change Rt 4 (SB) and Rt 14 (NB) bus route between Milton/University Ave and Beulah/Forest Meadows to use Beulah and University Ave instead of Forest</td></tr>
<tr><td colspan="3">Change NB/SB bus headways on Rt 4/Rt 14/BRT to 15 minutes</td></tr>
<tr><td colspan="3">Deploy transit signal priority on Milton between Beaver and University Ave</td></tr>
<tr><td></td><td colspan="2">Remove SB Bust stops on Milton north of University Ave and north of Forest Meadows</td></tr>
<tr><td></td><td colspan="2">Remove NB bus stops on Milton north of Forest Meadows and south of Butler</td></tr>
<tr><td></td><td>Change all remaining bus stops on Milton to be in the outside 3rd lane rather than in right turn pockets</td><td>Change remaining NB bus stops on Milton north of University to be a shared lane rather than in right turn pockets</td></tr>
<tr><td></td><td>Add NB & SB bus stops on Beulah south of University Ave</td><td>Change remaining NB and SB bus stops on Milton south of existing Plaza to be a bi-directional median stop adjacent to the midblock HAWK</td></tr>
<tr><td></td><td></td><td>Add NB and SB bus stops on Beulah south of University</td></tr>
<tr><td></td><td></td><td>Phoenix and from south of RT 66 to University Drive</td></tr>
<tr><td rowspan="13">Analysis Findings</td><td>Total intersection LOS is failing at:
Milton/University -LOS E</td><td>All intersection have acceptable LOS</td><td>Total intersection LOS is failing at:
Milton/University</td></tr>
<tr><td>Excessive SB queuing at Milton/Riordan</td><td></td><td>Excessive SB queuing at Milton/Riordan</td></tr>
<tr><td>Excessive EB queuing at Milton/Plaza</td><td></td><td></td></tr>
<tr><td colspan="3">Excessive NB queuing at Milton/San Francisco St</td></tr>
<tr><td colspan="3">Excessive SB queuing at Milton/Beaver St</td></tr>
<tr><td colspan="3">Excessive SB queuing at Milton/Humphreys</td></tr>
<tr><td>Excessive NB queuing at Milton/Butler</td><td></td><td>Excessive SB queuing at Milton/Butler</td></tr>
<tr><td>Excessive EB queuing at Milton/Rt 66</td><td>Excessive EB queuing at Milton/Rt 66</td><td>Excessive EB and SB queuing at Milton/Rt 66</td></tr>
<tr><td>Excessive SB queuing between Railroad and Bulter</td><td></td><td></td></tr>
<tr><td>Excessive NB, EB, SB and WB queuing at Milton/University Dr</td><td>Excessive SB and WB queuing at Milton/University Dr</td><td>Excessive NB, SB and WB queuing at Milton/University Dr</td></tr>
<tr><td colspan="3">Excessive SB queuing at Milton/Forest Meadows</td></tr>
<tr><td colspan="3">Excessive WB queuing at Forest Meadows/Beulah</td></tr>
<tr><td></td><td colspan="2">Excessive EB queuing at Milton/Yale</td></tr>
</table>

	Low Investment Alternative
Roadway Modifications	Dual SB Rt @ Milton/Humphreys
	Dual EB LT @ Milton/Humphreys
	3rd NB GP lane on Milton from South RT 66 to Butler
	3rd NB GP lane on Milton becomes transit only queue jump lane & terminates just north of Butler
	3rd SB GP lane on Milton from south of Butler to Rt 66
	3rd SB GP lane on Milton becomes transit only queue jump lane & terminates just south of RT 66
	Triple WB LT lane @ Milton/Butler, reduce EB receiving lane from 2 to 1
	Prohibit SE-bound & NE-bound left turns at Milton/Malpais
	Triple EB LT at Milton/RT 66
	Channelize SB RT at Milton/RT 66 w/yield control
	HAWK at north edge of target prop. North of University Dr
	HAWK north of Saunders Dr
Traffic Signal Modifications	Add traffic signal at RT 66/Blackbird Roost St and coordinate signal with Milton/RT 66 traffic signal
	Coordinate two new HAWKs with adj signals
	Add NB RT overlap at Milton/Butler
	Include transit signal priority between Beaver and University Ave
Multimodal Operations Modification	Change Rt 4 (SB) and Rt 14 (NB) bus route between Milton/University Ave and Beulah/Forest Meadows to use Beulah and University Ave instead of Forest Meadows and Milton and change the name of the routes to BRT
	Change NB/SB bus headways on Rt 4/Rt 14/BRT to 15 minutes
	Deploy transit signal priority on Milton between Beaver and University Ave
Analysis Findings	Total intersection LOS is failing at: Milton/University -LOS E
	Excessive SB queuing at Milton/Riordan
	Excessive EB queuing at Milton/Plaza
	Excessive NB queuing at Milton/San Francisco St
	Excessive SB queuing at Milton/Beaver St
	Excessive SB queuing at Milton/Humphreys
	Excessive NB queuing at Milton/Butler
	Excessive EB queuing at Milton/Rt 66
	Excessive SB queuing between Railroad and Bulter
	Excessive NB, EB, SB and WB queuing at Milton/University Dr
	Excessive SB queuing at Milton/Forest Meadows
	Excessive WB queuing at Forest Meadows/Beulah

	Auto-Focused High Investment Alternative
Roadway Modifications	Dual SB Rt @ Milton/Humphreys
	Dual EB LT @ Milton/Humphreys
	3rd NB GP lane on Milton from north of University Dr to Humphreys St
	At Humphreys, the inside 3rd GP lane becomes a EB LT lane
	3rd SB GP lane on Milton from west of Humphreys to Yale St extension
	At Yale St ext, the 3rd SB lane becomes a right turn only lane
	Prohibit SE-bound & NE-bound left turns at Milton/Malpais
	Triple EB LT at Milton/RT 66
	Dual SB RT at Milton/RT 66
	HAWK north of Saunders Dr
	Dual NB RT at Milton/Butler
	Relocate Plaza signal to new Yale St intersection convert Plaza intersection to HAWK
	Provide connector street along McCracken St alignment between Malpais and Blackbird Roost south of Clay
	Raised Median between BNSF and Forest Meadows
Traffic Signal Modifications	Add traffic signal at RT 66/Blackbird Roost St and coordinate signal with Milton/RT 66 traffic signal
	Coordinate two new HAWKs with adj signals
	Add NB RT overlap at Milton/Butler
	Include transit signal priority between Beaver and University Ave
	Create signal timing and coord for new signal at Milton/Yale
Multimodal Operations Modifications	Change Rt 4 (SB) and Rt 14 (NB) bus route between Milton/University Ave and Beulah/Forest Meadows to use Beulah and University Ave instead of Forest Meadows and Milton and change the name of the routes to BRT
	Change NB/SB bus headways on Rt 4/Rt 14/BRT to 15 minutes
	Deploy transit signal priority on Milton between Beaver and University Ave
	Remove SB Bust stops on Milton north of University Ave and north of Forest Meadows
	Remove NB bus stops on Milton north of Forest Meadows and south of Butler
	Change all remaining bus stops on Milton to be in the outside 3rd lane rather than in right turn pockets
	Add NB & SB bus stops on Beulah south of University Ave
Analysis Findings	All intersection have acceptable LOS
	Excessive NB queuing at Milton/San Francisco St
	Excessive SB queuing at Milton/Beaver St
	Excessive SB queuing at Milton/Humphreys
	Excessive EB queuing at Milton/Rt 66
	Excessive SB and WB queuing at Milton/University Dr
	Excessive SB queuing at Milton/Forest Meadows
	Excessive WB queuing at Forest Meadows/Beulah
	Excessive EB queuing at Milton/Yale

	Transit-Focused High Investment Alternative
Roadway Modifications	Dual SB Rt @ Milton/Humphreys
	Dual EB LT @ Milton/Humphreys
	Add NB lane for buses/bikes/RT turns from north of University Dr to Phoenix Ave Becomes transit only queue jump lane & terminates just north of Butler
	Add 3rd NB GP lane on Milton from Phoenix Ave to Humphreys
	At Humphreys, the inside 3rd GP lane becomes a EB LT lane
	Add NB lane for buses/bikes/RT turns from north of University Dr to Phoenix Ave
	3rd SB GP lane on Milton becomes transit only queue jump lane & terminates just south of RT 66
	Prohibit SE-bound & NE-bound left turns at Milton/Malpais
	Triple EB LT at Milton/RT 66
	3rd lane becomes channelized SB RT at Milton/RT 66 w/yield control
	HAWK north of Saunders Dr
	Relocate Plaza signal to new Yale St intersection convert Plaza intersection to HAWK
	Provide connector street along McCracken St alignment between Malpais and Blackbird Roost south
Traffic Signal Modifications	Add traffic signal at RT 66/Blackbird Roost St and coordinate signal with Milton/RT 66 traffic signal
	Coordinate two new HAWKs with adj signals
	Add NB RT overlap at Milton/Butler
	Include transit signal priority between Beaver and University Ave
	Create signal timing and coord for new signal at Milton/Yale
	movement
	Insert new EB LT transit only phase in traffic signal phasing at Milton/Humphreys
Multimodal Operations Modifications	Change Rt 4 (SB) and Rt 14 (NB) bus route between Milton/University Ave and Beulah/Forest Meadows to use Beulah and University Ave instead of Forest Meadows and Milton and change the name of the routes to BRT
	Change NB/SB bus headways on Rt 4/Rt 14/BRT to 15 minutes
	Deploy transit signal priority on Milton between Beaver and University Ave
	Remove SB Bust stops on Milton north of University Ave and north of Forest Meadows
	Remove NB bus stops on Milton north of Forest Meadows and south of Butler
	Change remaining NB bus stops on Milton north of University to be a shared lane rather than in right turn pockets
	Change remaining NB and SB bus stops on Milton south of existing Plaza to be a bi-directional median stop adjacent to the midblock HAWK
	Add NB and SB bus stops on Beulah south of University
	Add SB bike lane on Milton from Humphreys to Phoenix and from south of RT 66 to University Drive
Analysis Findings	Total intersection LOS is failing at: Milton/University
	Excessive SB queuing at Milton/Riordan
	Excessive NB queuing at Milton/San Francisco St
	Excessive SB queuing at Milton/Beaver St
	Excessive SB queuing at Milton/Humphreys
	Excessive SB queuing at Milton/Butler
	Excessive EB and SB queuing at Milton/Rt 66
	Excessive NB, SB and WB queuing at Milton/University Dr
	Excessive SB queuing at Milton/Forest Meadows
	Excessive WB queuing at Forest Meadows/Beulah
	Excessive EB queuing at Milton/Yale

Universe of Alternatives

1. Collection of various spot improvements per "Low Investment Alternative"
2. Traffic signal and multi-modal Operational Improvements only
   - Transit signal priority b/w Beaver and University Dr.
   - Two new HAWK's
   - Change headways from 30 min. to 15 min.
   - Adaptive signals
   - Others

Alternatives Utilizing Existing 100-foot ROW Footprint

1. 4, 11' GP Lanes + 2, 14' BRT/bike/right turn lanes w/ center median/turn lane and 2, 7-foot s/w both sides (NAIPTA Concept)
2. No build + access management + spot improvements
3. No build (maintain as is)
4. 6, 12' GP lanes w/ center median/turn lane and 2, 7-foot s/w both sides

Note: Less than 100' of ROW exists at BNSF crossing

Expanded ROW Alternatives

1. 6 GP lanes + bike lanes + 7-foot s/w both sides
2. 6 GP lanes + signal preemption + bus que jumping
3. 8 lanes = 6 GP lanes + 2, 14' BRT/bike/right turn lanes w/ center median/turn lane and 2, 7-foot s/w both sides
4. 8 lanes = 8 GP lanes

Alternate Route Alternatives

(moved to US 180 CMP)

Transit Focused Alternatives

(per NAIPTA email to Dan G. 10/27)

1. Transit along 180 corridor as far as Kendrick Park Watchable Wildlife area including opportunities for a variety of stops along the way. We look at a variety of incentives as well as transit only access. Park n' rides opportunities will be included in this.
2. Expansion of Mountain Express service to Snowbowl under forced and incentivized programs.
3. Bus access to other snow play areas such as Fort Tuthill to encourage their use.
4. Parking fees (price elasticity) to get behavior change for people to take the bus.
5. The authority to permit, introduce fee-only access or close US180 on certain dates/ time.
6. The impact of rerouting Grand Canyon traffic through Williams.
7. Alternate access/ agree for residents, visitors and emergency vehicles on: A1, FS428, FS518, Wing Mountain or simply using Valle- Williams- Flagstaff

This "Universe of Existing Alternatives" matrix as it became known as, was introduced and vetted with the Project Partners. Collectively, a total of 72 potential improvement/modification projects were identified. These 72 possible improvement/modification projects covered the gamut of low investment spot improvements such as mid-block HAWK's, adding dual turn lanes or extending storage depths for example. High investment alternatives such as relocation of signals, intersection improvements and adding a BRT lane were also included. Of the 72 total possible improvement types, 29 were high investment transit focused, 26 were high investment auto-focused and 17 were low investment alternatives.

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. In meeting with the Project Partners, they reviewed and added supplemental alternatives to complete an exhaustive list of existing and newly developed alternatives for consideration. These alternatives are described and depicted in greater detail below.

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 expressed their 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". The System Alternatives and Base Build Spot Improvements 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 continue to evolve as the System Alternatives becomes more refined as the process moves forward.

Preliminary System Alternatives

As **Table 9-1** shows, there are three categories of Preliminary System Alternatives for Milton Road 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 9-1: Milton Road Preliminary System Alternatives

MILTON ROAD PRELIMINARY SYSTEM ALTERNATIVES
Within Existing Right-of-Way
1. No Build (Maintain As Is)
2. Reversible Center Lane
3. Six, 11 Foot General Purpose Lanes with Center Median/Turn Lane with 6 Foot sidewalks on both sides of the street
4. Four, 11 Foot General Purpose Lanes with Center Median/Left Turn Lane, two 14 Foot Shared Bus/Bike Lane (SBBL), and two 7 Foot Sidewalks on both sides of the street
Requires Expanded Right-of-Way
5. Six, 11 Foot General Purpose Lanes, 12 Foot Center Median or Center/Two-Way Left Turn Lane, 6 Foot Bicycle Lanes, and 6 Foot Sidewalks on both sides of Street
6. Six, 11 Foot General Purpose Lanes, Two 13 Foot Shared Bus/Bike Lanes (SBBL), Center Median/Left Turn Lane, and 7 Foot Sidewalks on Both Sides of the Street
7. Eight General Purpose Lanes
8. Four, 11 Foot General Purpose Lanes, Two 14 Foot Shared Bus/Bike Lanes, 16 Foot Landscaped Median with access managed Turning Movements, 10-foot landscaped setbacks, and 10 foot sidewalks on Both Sides of the Street
Alternative Routes
9. No Build + Lone Tree Design Concept Report concept
10. “Backage” Roads improvements

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. 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. 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. In addition, these are preliminary alternatives which can be modified to include certain features.

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 Milton Road 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 5 of this report) for certain planning studies and promotes smoother environmental studies should future implementation projects present themselves for consideration.

2. Reversible Center Lane

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 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 Milton Road, especially at peak demands are placed on the roadway, it necessitates the efficient management of those facilities. This alternative is Illustrated in **Figure 9-2** and **Figure 9-3**. It is important to note that the access right-of-way displayed in **Figure 9-3** is consumed by at intersections where the roadway widens and at mid-block right turn decal lanes where applicable.

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 9-3: Milton Road System Alternative 2 Cross-Section: Reversible Center Lane*

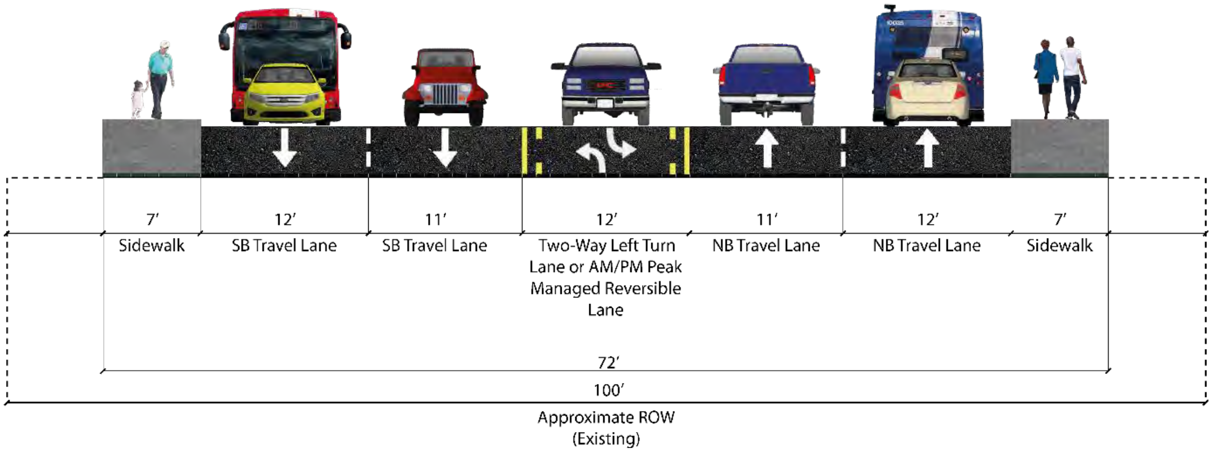
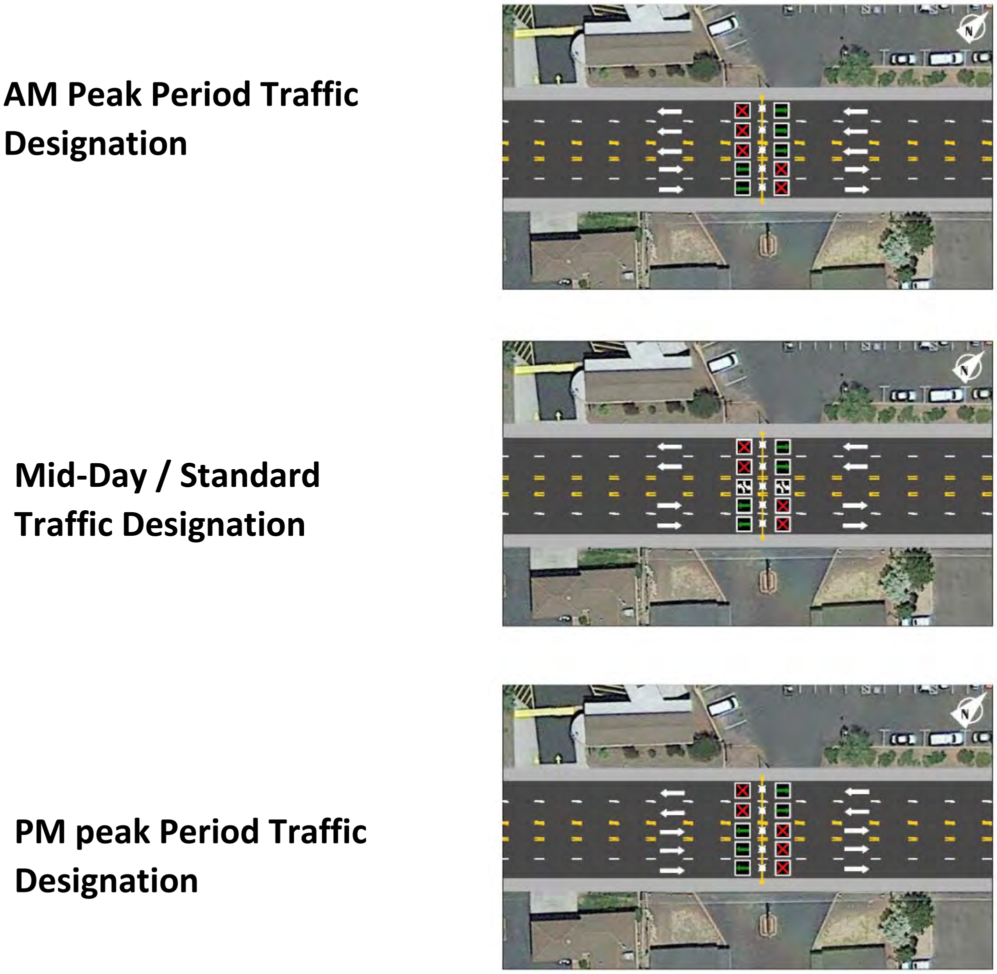


Figure 9-2: Milton Road System Alternative 2 Plan View: Reversible Center Lane*



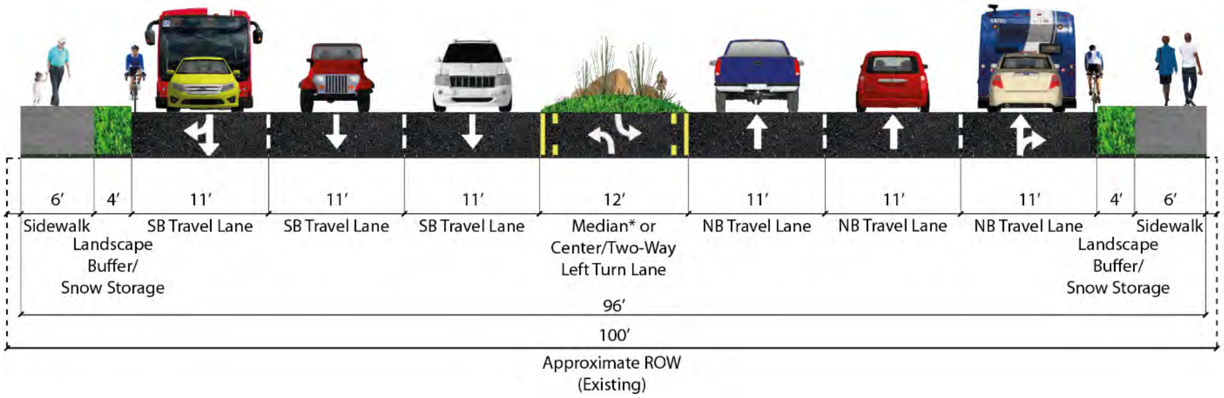
Detailed traffic studies are necessary to apply this concept to any arterial/highway such as Milton Road to address matters safety, access management and multimodal considerations.

3. Six, 11 Foot General Purpose Lanes with Center Median/Turn Lane with 6 Foot sidewalks on both sides of the street

As **Figure 9-4** illustrates, this alternative calls for three, 11 foot general purpose lanes in each direction with a 12 foot center median or a center/two-way left turn lane. The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on need and level of access management required. Additional investigation on access management for left turning movements will be necessary to decide the location of the three center lane functions. Each of the outside general purpose lanes would accommodate buses, vehicles and right turning movements. Bicycle facilities and landscaping setbacks are not included in this alternative,. This alternative adds vehicular capacity to existing Milton Road by adding two additional general purpose lanes (one south-bound, one north-bound) that do not currently exist.

This alternative could be constructed utilizing the existing 100-foot right of way, but would require reconstruction of the existing roadway that includes expansion of the existing pavement section and relocation of the sidewalks (both sides).

Figure 9-4: Milton Road System Alternative 3 Cross-Section



**Median treatment may change along the corridor*

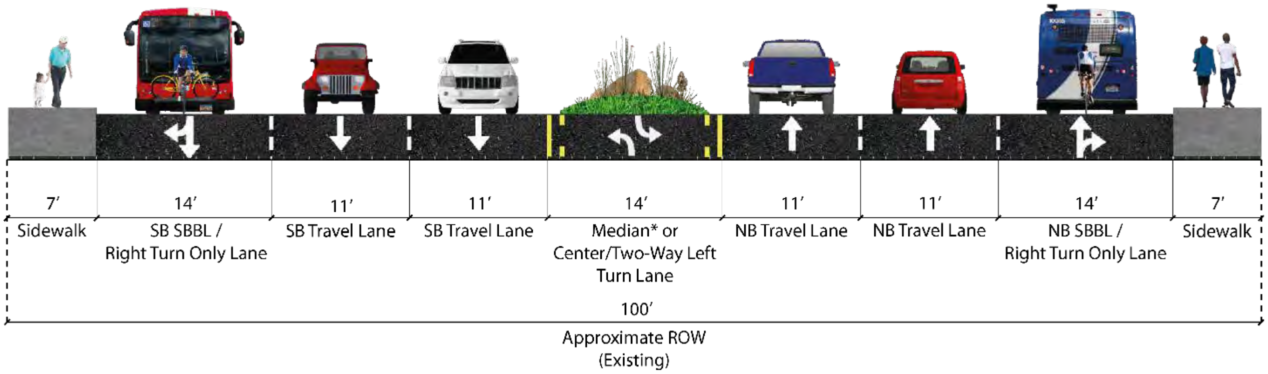
4. Four, 11 Foot General Purpose Lanes with Center Median/Left Turn Lane, two 14 Foot Shared Bus/Bike Lane (SBBL), and two 7 Foot Sidewalks on both sides of the street

As displayed in **Figure 9-5**, Preliminary System Alternative 4 illustrates a multimodal Milton Road by adding capacity for other modes of transportation through the introduction of a 14 foot shared bus/bike lane (SBBL) in each direction, while maintaining the same vehicular capacity as Milton Road exists today. This alternative was NAIPTA's Locally Preferred Alternative (LPA) resulting from NAIPTA's Transit Spine Study, which also considered center-lane transit running for analysis and consideration.

Although a third lane is added, this alternative can be accomplished within existing 100 foot right-of-way because the two general purpose lanes in each direction were reduced to 11 feet, and the SBBL would also function as right turn only lanes, eliminating the need for right turn deceleration lanes. The four total general purpose lanes would only accommodate the through movement of regular vehicular traffic. The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on the need and level of access management required. Additional investigation on access management for left turning movements will be necessary to decide the location of the three center lane functions. It is important to note that adequate signage, striping, pavement markings, and enforcement will be required in order for the SBBls to operate effectively, efficiently and safely.

As noted early, this alternative could be constructed utilizing the existing 100 foot right-of-way, but would require reconstruction of the existing roadway that includes expansion of the existing pavement section and relocation of the sidewalks (both sides).

Figure 9-5: Milton Road System Alternative 4 Cross-Section



Median treatment may change along the corridor

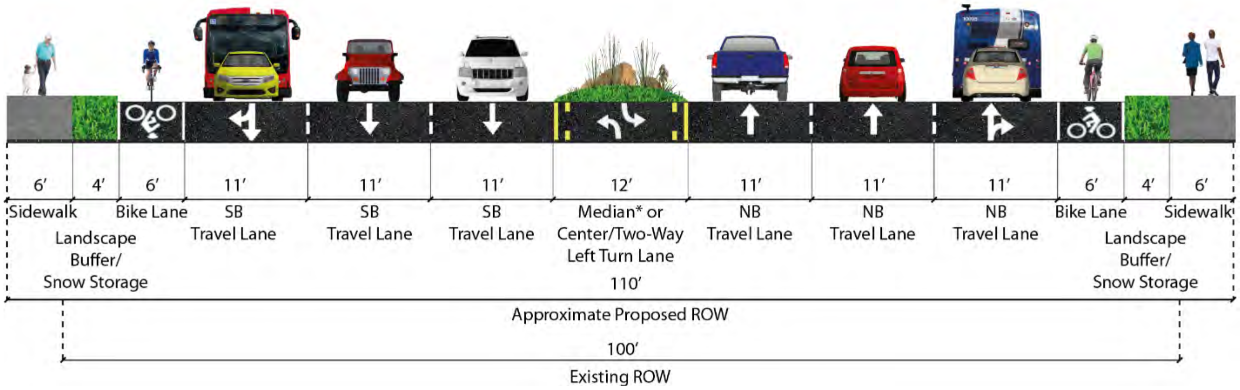
Preliminary System Alternatives *Requiring Expanded Right-of-Way*

5. Six, 11 Foot General Purpose Lanes, 12 Foot Center Median or Center/Two-Way Left Turn Lane, 6 Foot Bicycle Lanes, and 6 Foot Sidewalks on both sides of Street

As **Figure 9-6** illustrates, this alternative calls for three, 11 foot general purpose lanes in each direction, a 12 foot center median or center/two-way turn lane, and a 6 foot bicycle lane in each direction. 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 and bicycle mobility to the existing Milton Road by adding two additional general purpose lanes (one south-bound, one north-bound) and continuous bicycle lanes that currently do not exist. The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on the need and level of access management required. Additional investigation on access management for left turning movements will be necessary to decide the location of the three center lane functions.

This alternative would require an approximate 10 foot expansion of the existing 100 foot Milton Road right-of-way (a 100 foot right-of-way exists from Forest Meadows Street to Route 66 intersection), including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

Figure 9-6: Milton Road System Alternative 5 Cross Section



Median treatment may change along the corridor

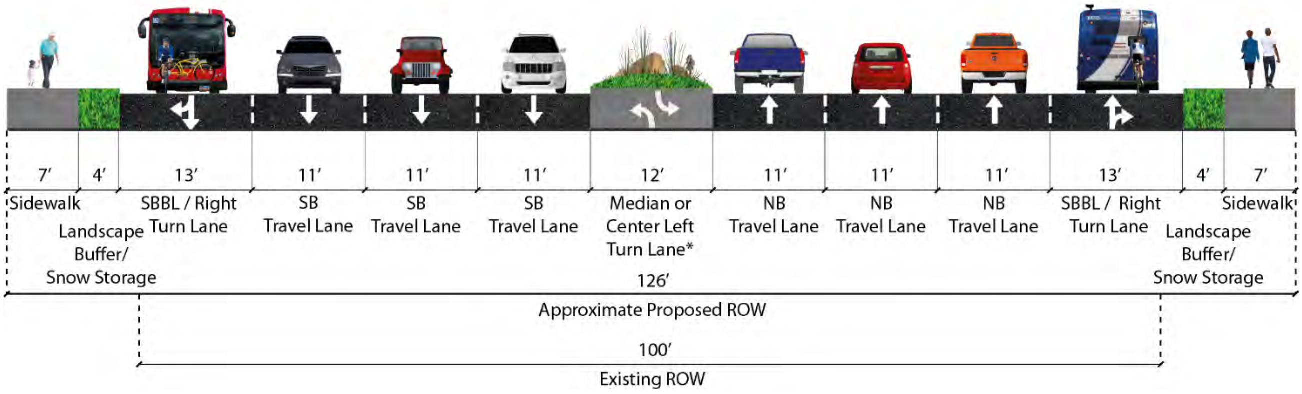
6. Six, 11 Foot General Purpose Lanes, Two 13 Foot Shared Bus/Bike Lanes (SBBL), Center Median/Left Turn Lane, and 7 Foot Sidewalks on Both Sides of the Street

Figure 9-7 shows how this alternative calls for three 11 foot general purpose lanes in each direction, a 12 foot center turn lane/median and two 13 foot SBBLs with 7 foot sidewalks on both sides. Landscape setbacks are not included with this alternative.

This proposed alternative adds four additional lanes of vehicular capacity (one lane south-bound and one lane north-bound) plus one dedicated bus/BRT lane (in each direction) that shares functionality as a bicycle lane and right turn lane.

This alternative would require an approximate 26 foot expansion of the existing 100-foot Milton Road right of way (a 100 foot right-of-way exists from Forest Meadows Street to Route 66 intersection), including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

Figure 9-7: Milton Road System Alternative 6 Cross-Section



Median treatment may change along the corridor

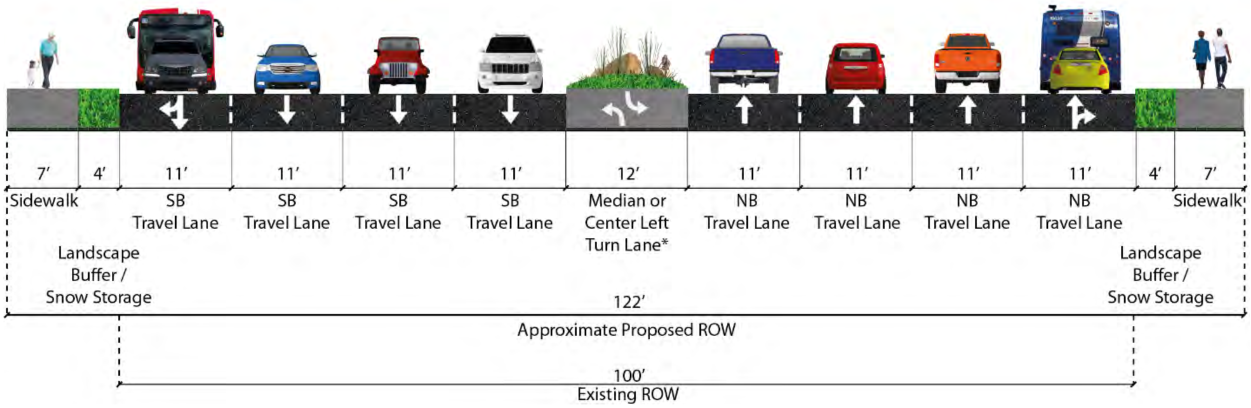
7. EIGHT GENERAL PURPOSE LANES

This alternative calls for eight 11 foot general purpose lanes (4 in each direction) with a 12 foot center turn lane/median and 7 foot sidewalks on both sides. Landscape setbacks are not included with this alternative in **Figure 9-8**.

This proposed alternative adds four additional lanes of vehicular capacity (two lanes south-bound and two lanes north-bound) which in effect doubles the roadway capacity of the existing Milton Road. The fourth (outside) general purpose lane would be shared by both automobiles and buses.

This alternative would require an approximate 22-foot expansion of the existing 100-foot Milton Road right of way (a 100-foot right-of-way exists from Forest Meadows Street to Route 66 intersection), including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

Figure 9-8: Milton Road System Alternative 7 Cross-Section



**Median treatment may change along the corridor*

8. Four, 11 Foot General Purpose Lanes, Two 14 Foot Shared Bus/Bike Lanes, 16 Foot Landscaped Median with access managed Turning Movements, 10 foot landscaped setbacks, and 10 foot sidewalks on Both Sides of the Street

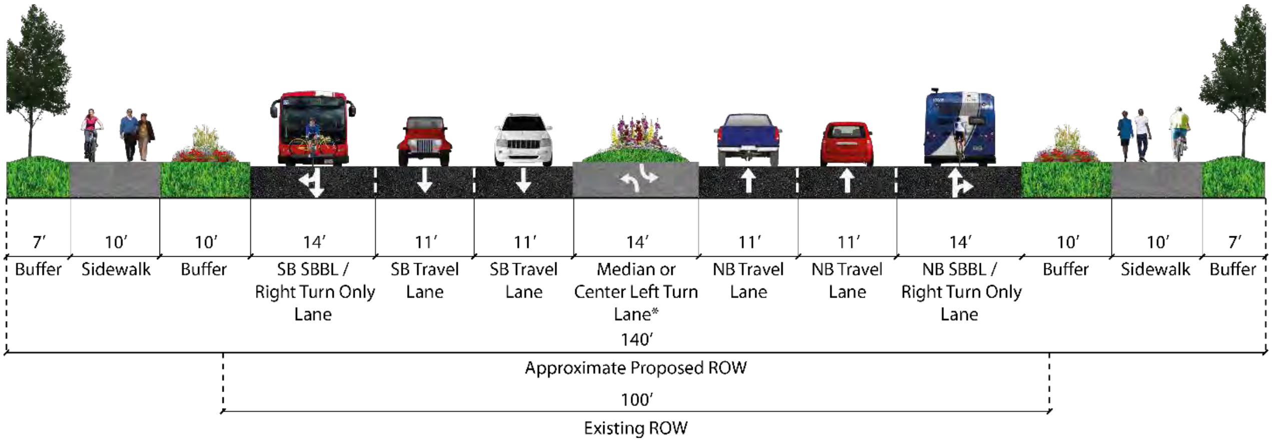
Illustrated in **Figure 9-9**, this alternative calls for four 11-foot general purpose lanes (same as existing condition), with the addition of two 14 foot SBBL, a 10 foot landscape setback behind curb and the introduction of a 10 foot sidewalks on both sides of the street. Bike lanes are not included in this alternative, however the SBBL and the sidewalk width of 10 feet is intended to accommodate both pedestrians and bicyclists, particularly in areas with a high concentration of pedestrians, such adjacent to NAU.

This alternative includes design and aesthetic attributes that yield a more “complete street” that facilitates all modes of transportation while also offering opportunities to enhance the character of Milton Road with landscaping treatments. In this regard, a 14 foot raised landscape median is proposed that would also facilitate one way left turning movements and possibly dual left turns at select signalized intersections. Two, 6-foot landscaping setbacks behind each curb can serve the dual function of landscape treatment and possible stormwater catchment and harvesting areas.

This alternative also promotes alternative modes of transportation by including two 14 foot SBBLs and 10 foot sidewalks on each side of the roadway. A 10 foot wide sidewalk can comfortably accommodate both bicycle and pedestrian modes and the landscape setback from the roadway offers a safety buffer for these users.

This alternative would require an approximate 40 foot expansion of the existing 100 foot Milton Road right-of-way (a 100 foot right-of-way exists from Forest Meadows Street to Route 66 intersection), including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

Figure 9-9: Milton Road System Alternative 8 Cross-Section



Median treatment may change along the corridor

ALTERNATIVE ROUTES TO MILTON ROAD

Alternative Route Preliminary System Alternatives are intended to explore other potential roadway corridor options besides Milton Road itself for potentially reducing traffic congestion on Milton Road. Milton Road of course serves as the primary “backbone” high capacity north-south roadway corridor through Flagstaff and there is a limited inventory of other north-south roadways that could be leveraged to complement and/or support traffic congestion on Milton Road. The two Alternative Routes include:

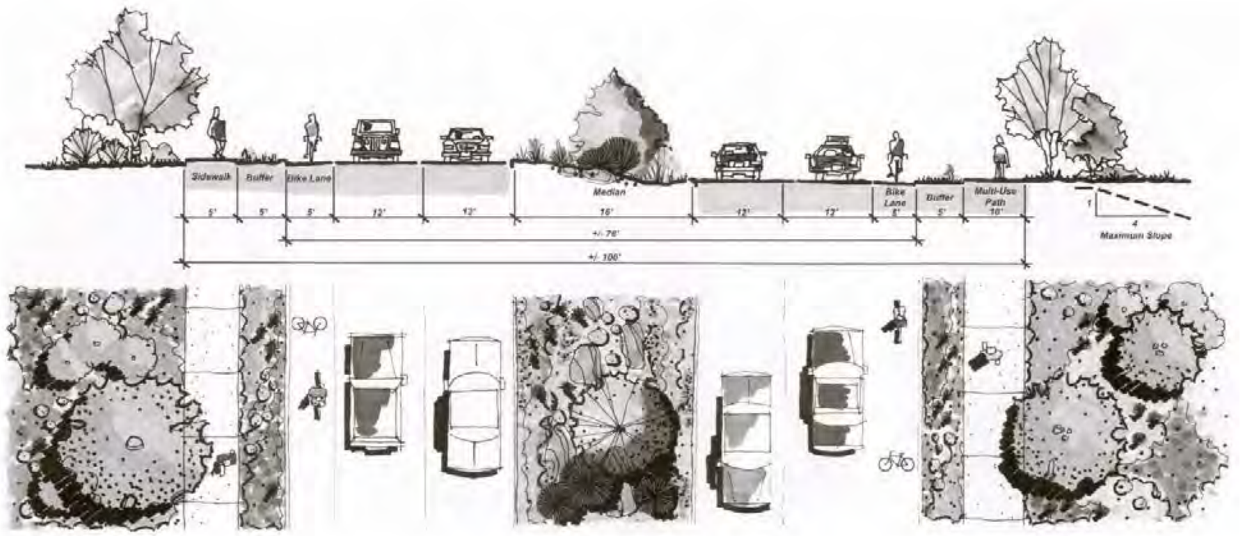
9. MILTON ROAD NO BUILD + LONE TREE DESIGN CONCEPT REPORT

This alternative 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 ¾ 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 a 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 illustrated in **Figure 9-10** from the Lone Tree Road Corridor Study recommends a 100-foot right-of-way whose typical roadway section consists of 4 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 9-10: Milton Road System Alternative 9 Cross-Section



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

10. BACKAGE ROAD IMPROVEMENTS

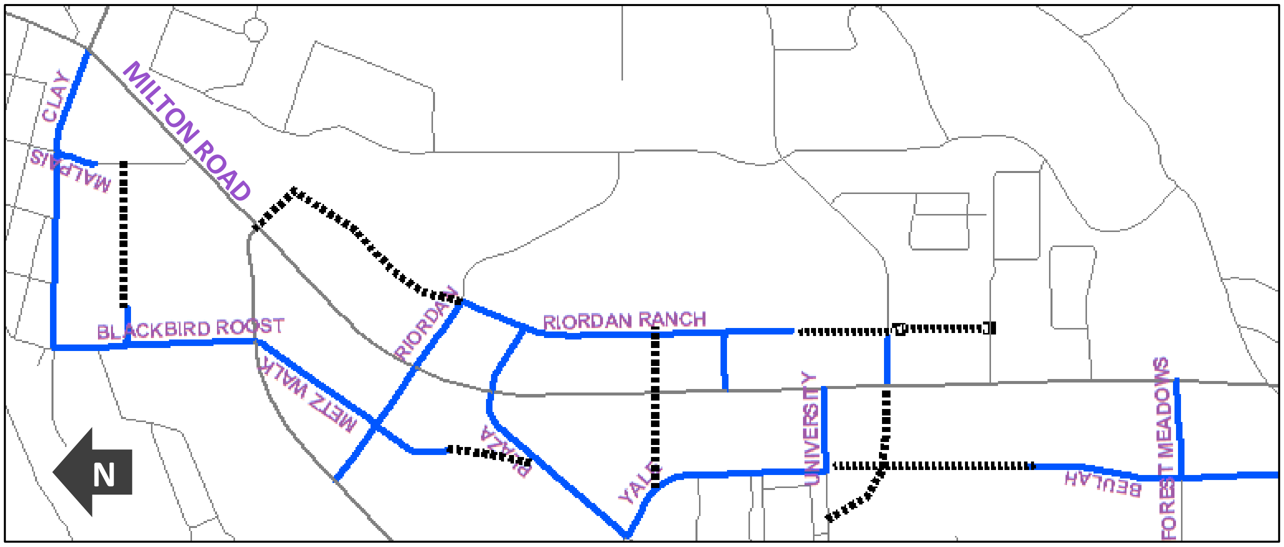
The concept of "backage roads" (aka reverse frontage roads) is a road that runs parallel to the arterial roadway (Milton Road) and behind developed land. Backage roads can be advantageous in reducing traffic congestion on the mainline (Milton Road), they can minimize visual distractions and headlight glare on both the mainline and backage road. However, backage roads can also create opportunities for delay, congestion and crashes if there is insufficient storage for entering and exiting vehicles.

There are a handful of backage road scenarios illustrated in **Figure 9-11** that together and/or separately could possibly support mitigate traffic congestion for northbound and southbound traffic on Milton Road. It should be noted that future traffic modeling analysis of any backage road scenario(s) is needed to adequately quantify the anticipated performance and level of service of backage roads.

The following backage road scenarios include:

- Clay Ave./Malpais Lane/McCracken/Blackbird Roost Street – though likely contributing to some neighborhood encroachment concerns, the McCracken option will also afford access to future commercial redevelopment opportunities and reduces neighborhood cut through traffic.
- West Route 66/Riordan Ranch Street – Riordan Ranch Street currently exists from Chambers Drive to its intersection with Riordan Road to the north. A northerly extension of Riordan Ranch Street (where is currently terminates into a parking lot near the Newman Center, NAU Art Museum and other NAU buildings) to the north to connect with the Milton Road /Route 66 intersection is needed. Additional investigations as to whether NAU would prefer to see a connection to Knoles Drive is also needed.
- Metz Walk extension to Plaza Drive – this conceptual backage road would require a right of way acquisition through the existing Safeway parking lot to connect to Plaza Way
- Plaza Way/Yale Street/University Avenue – utilizing the existing roadways, this potential backage road network afford a 1/3 mile backage road deviation from the Milton Road mainline. The 80-foot turning pocket on southbound Plaza Way and broad turning radius at the Yale Street may present operation and safety challenges.
- Route 66/Yale Street/Beulah Extension/Ft. Tuthill – Utilizing Route 66 to Yale Street, the southern leg of this proposed backage road network would require a ¼ mile extension of Beulah Boulevard from its current northern just north of Forest Meadows Drive to the intersection of University Avenue and Yale Street.

Figure 9-11: Milton Road System Alternative 10 Backage Road Network



Source: Flagstaff Metropolitan Planning Organization (FMPO)

PRELIMINARY BASE BUILD SPOT IMPROVEMENTS

As observed above, the intent of the "Base Build Spot Improvements" is that these suggested improvements, regardless of which Preliminary System Alternative is chosen for consideration as a Preferred System Alternative for further study, the spot improvement(s) will likely be necessary in the short term to support the longer-term System Alternative improvements.

As such, the preliminary listing of Base Build Spot Improvements listed in **Table 9-2** will evolve as the Preferred System Alternative(s) becomes more refined as this Milton Road CMP process moves forward. As transportation modeling and technical analysis is completed on Preferred System Alternatives, and a clearer picture of the specific design and performance needs/considerations are identified, the specific list of Base Build Spot Improvements associated with each Preferred System Alternative will be identified.

Table 9-2: Milton Road Preliminary Base Build Spot Improvements

PRELIMINARY BASE BUILD SPOT IMPROVEMENTS
1. Dual SB right turn lane at Milton Road and Humphreys Street
2. Dual EB left turn lane at Milton Road and Humphreys Street
3. 3rd NB general purpose (GP) lane on Milton Road from South RT 66 to Butler Avenue
4. 3rd NB GP lane on Milton Road becomes transit only queue jump lane & terminates just north of Butler Avenue
5. 3rd SB GP lane on Milton Road from south of Butler Avenue to Rt 66
6. 3rd SB GP lane on Milton Road becomes transit only queue jump lane & terminates just south of Rt 66
7. Triple WB left turn lane at Milton Road and Butler Avenue, reduce EB receiving lane from 2 to 1
8. Prohibit SE-bound & NE-bound left turns at Milton Road and Malpais Street
9. Triple EB left turn lane at Milton Road and RT 66
10. Channelize SB right turn lane at Milton Road and RT 66 with yield control
11. Install a HAWK at north edge of target property North of University Drive
12. Install a HAWK north of Saunders Drive
13. Transit Vehicle Signal Preemption at Strategic Intersections

CHAPTER 10: REFERENCES CITED

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Appendix C – Public Open House #1 Summary Report

ADOT

Milton Road Corridor Master Plan

Public Open House Meeting #1: Meeting Summary Report

June 2018

Michael Baker
INTERNATIONAL

Table of Contents

PURPOSE OF THE MILTON ROAD CORRIDOR MASTER PLAN

Introduction

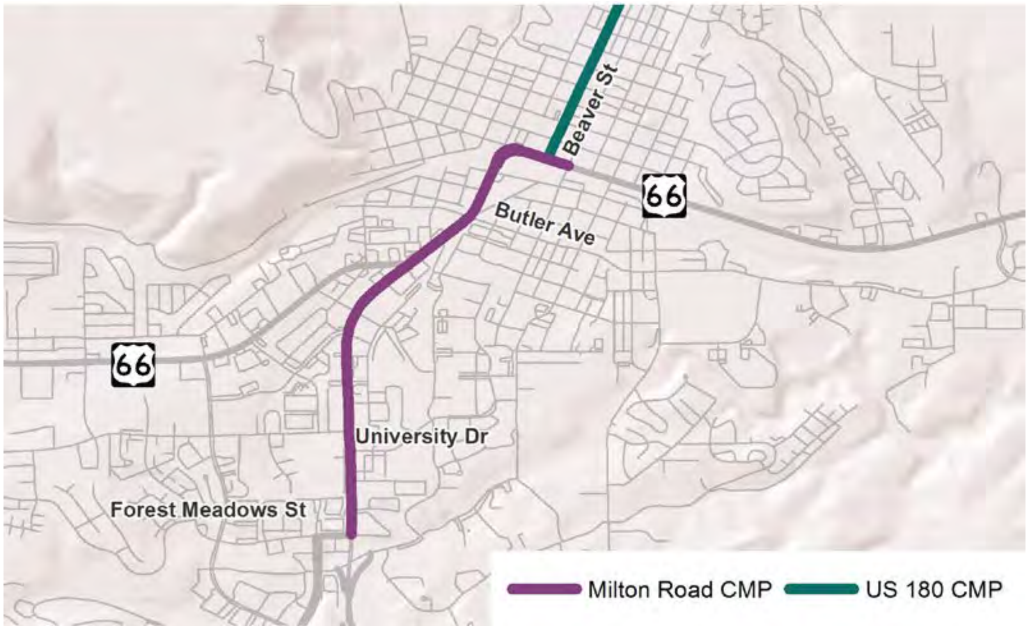
The Arizona Department of Transportation (ADOT) in conjunction with the Federal Highway Administration (FHWA), City of Flagstaff, Flagstaff Metropolitan Planning Organization (FMPO), and other project partners are studying potential improvements to Milton Road between Forest Meadow Street and Beaver Street (see **Figure 1** for map of study corridor).

The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for the Milton Road 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 Milton Road right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the Milton Road 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-term and long-term System Alternatives.

The Milton Road 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: Milton Road CMP Study Corridor



PUBLIC OPEN HOUSE MEETING #1 PURPOSE

As part of the project process, a public open house meeting 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 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 Milton Road 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 86 people attended the public open house.

PUBLIC OPEN HOUSE MEETING #1 NOTIFICATION PROCEDURES

ADOT held the Milton Road CMP Public Open House Meeting #1 on May 10, 2018. Public outreach methods included sending out mailers to residents adjacent to the Milton Road 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 Milton Road 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:

- Northern Arizona Gazette (www.northernarizonagazette.com)
- ADOT Media Center (www.azdot.gov/media/News/news-release.com)
- Flagstaff Biking (www.http://flagstaffbiking.org)
- Arizona Daily Sun (ww.azdailysun.com)
- Northern Arizona’s Locally Owned News Paper (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 Facebook

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/MiltonCorridorMasterPlan

PUBLIC OPEN HOUSE MEETING #1 FORMAT

Introduction

The Milton Road CMP Public Open House Meeting #1 was held on May 10, 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
- Milton Road CMP Study Corridor & Project Goals
- Milton Road 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 Milton Road CMP Public Open House. Mr. Kugler then presented the Milton Road Study Corridor, the Milton Road 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.

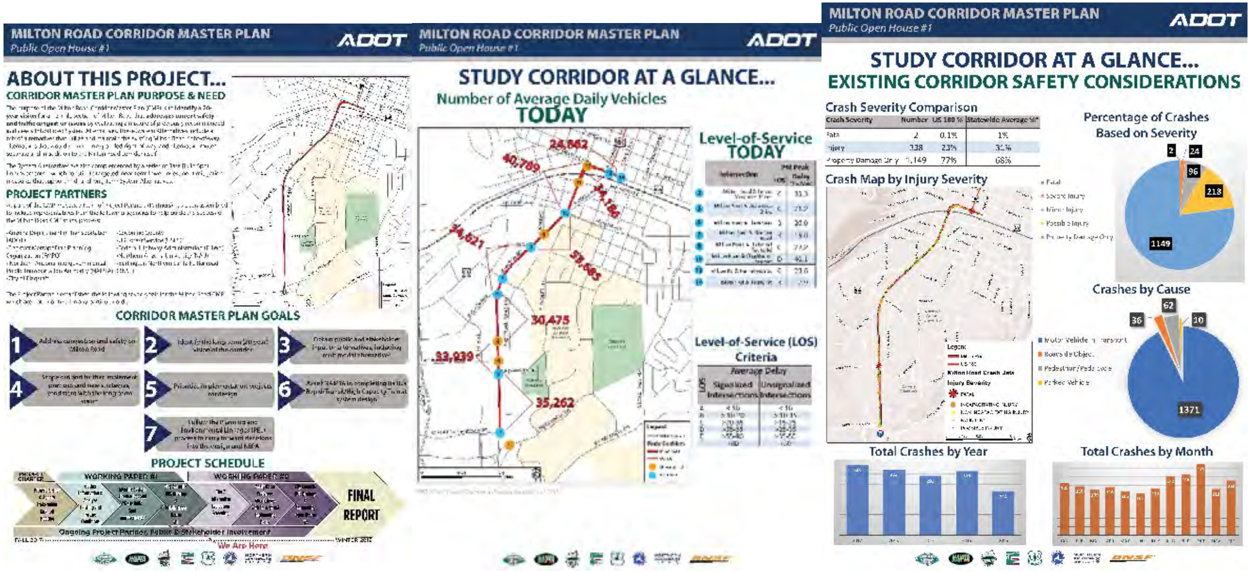
Open House

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 Milton Road 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



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

ABOUT THIS PROJECT...

CORRIDOR MASTER PLAN PURPOSE & NEED

PROJECT PARTNERS

CORRIDOR MASTER PLAN GOALS

PROJECT SCHEDULE

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STUDY CORRIDOR AT A GLANCE...

Number of Average Daily Vehicles TODAY

Level-of-Service TODAY

Level-of-Service (LOS) Criteria

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STUDY CORRIDOR AT A GLANCE...
EXISTING CORRIDOR SAFETY CONSIDERATIONS

Crash Severity Comparison

Crash Severity	Number	US 180 %	Statewide Average %
Fatal	2	0.1%	1%
Injury	338	23%	31%
Property Damage Only	1,149	77%	68%

Crash Map by Injury Severity

Percentage of Crashes Based on Severity

Crashes by Cause

Total Crashes by Year

Total Crashes by Month

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 Milton Road CMP Study Corridor which include:

- Preliminary System Alternative 1: No Build (Maintain as Is)
- Base Build Spot Improvements
- Preliminary System Alternative 2: Milton Road Reversible Lane
- Preliminary System Alternative 3: Six, 11-Foot General Purpose Lanes with Center Median/Turn Lane with 6-foot Sidewalks
- Preliminary System Alternative 4: Four, 11-Foot General Purpose Lanes with Center Median/Left Turn Lane, and two 14-foot Shared Bus/Bike Lanes (SBBL) with 7-foot sidewalks

The five display boards in Station 2 are shown in **Figure 4** and can be found in Appendix G.

Figure 4: Station 2 Display Boards

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 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 Milton Road right-of-way** (ROW) and facilities **"As Is"**. The **"No Build"** alternative is required to be considered through the CMP process as a baseline comparison against other alternatives. The **"No Build"** option maintains the current level of taxation and fiscal support by including all currently funded capital improvement projects.

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

BASE BUILD SPOT IMPROVEMENTS

What is a Base Build Spot Improvement?

Mid-Block Pedestrian Crossings

Pedestrian/Bicycle Overpass

Pedestrian/Bicycle Underpass

Bike Lanes

Multi-Use Path

Bus Signal Queue Jumping

Would You Favor any of these Spot Improvement Facilities on Milton Road?

Tell Us Where on Milton Road!

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 2
Milton Road Reversible Center Lane

AM Peak Period Traffic Designation

Mid Day / Standard Traffic Designation

PM Peak Period Traffic Designation

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

•The concept is often referred to by FHWA and transportation professionals as "managed lanes" in that high demand on existing facilities, such as Milton Road, especially at peak demands are placed on the roadway. It necessitates the efficient management of those facilities.

•Optimal for roadways with limited right-of-way expansion opportunities or heavy traffic imbalance for short periods of time.

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

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 3
Six, 11-Foot General Purpose Lanes with Center Median/ Turn Lane with 6-Foot Sidewalks

**The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on need and level of access management required*

FEATURES:

•This alternative adds vehicular capacity to existing Milton Road by adding two additional general purpose lanes.

•The outside general purpose lanes would accommodate buses, vehicles, bicyclists and right turning movements.

•This alternative could be constructed utilizing the existing 100-foot right-of-way, but would require reconstruction of the existing roadway that includes expansion of the existing pavement section and relocation of the sidewalks (both sides).

•A landscaping buffer between the roadway and the sidewalks are included in this alternative to separate sidewalk users from roadway users. The buffer can also be used as snow storage during the winter months.

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

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 4
Four, 11-Foot General Purpose Lanes with Center Median/ Left Turn Lane, & two 14-Foot Shared Bus/Bike Lane (SBBL) with 7-Foot Sidewalks

**The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on need and level of access management required*

FEATURES:

•This alternative adds capacity for all modes through the introduction of a 14-foot SBBL and sidewalks in each direction while maintaining the same vehicular capacity.

•The four total general purpose lanes would only accommodate the through movement of regular vehicular traffic.

•This alternative can be accomplished within existing 100-foot right-of-way because the two general purpose lanes in each direction were reduced to 11 feet and the SBBL would also function as right turn lanes, eliminating the need for separate right turn deceleration lanes. However, this alternative would require reconstruction of the existing roadway that includes expansion of the existing pavement section and relocation of the sidewalks (both sides).

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

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 Milton Road CMP Study Corridor; which include:

- Preliminary System Alternative 5: Six, 11-Foot General Purpose Lanes with a Center Median/Center Turn Lane, and 6-Foot Bicycle Lanes with 6-Foot Sidewalks
- Preliminary System Alternative 6: Six, 11-Foot General Purpose Lanes, Two 13-Foot Shared Bus/Bike Lanes (SBBL), and Center Median/Turn Lane with 7-Foot Sidewalks
- Preliminary System Alternative 7: Eight, 11-Foot General Purpose Lanes
- Preliminary System Alternative 8: Four, 11-Foot General Purpose Lanes, Two 14-Foot Shared Bus/Bike Lanes (SBBL), 14-Foot Landscaped Median, 10-Foot Landscaped Setbacks, and 10-Foot Sidewalks

The four display boards in Station 3 are shown in **Figure 5** and can be found in Appendix H.

Figure 5: Station 3 Display Boards

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVE 5
Six, 11-Foot General Purpose Lanes with a Center Median/Turn Lane, & 6-Foot Bicycle Lanes with 6-Foot Sidewalks

**The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on need and level of access management required*

FEATURES:

- Increased vehicular capacity and bicycle mobility by adding two additional general purpose lanes (one southbound, one northbound) and continuous bicycle lanes.
- 11-foot general purpose lanes are proposed, but 12-foot general purpose lanes currently exist.
- The outside general purpose lanes would accommodate buses, vehicles, and right turning movements.
- Approximately 10-foot expansion of the existing 100' right-of-way is required.

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: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVE 6
Six, 11-Foot General Purpose Lanes, Two 13-Foot Shared Bus/Bike Lanes (SBBL), & Center Median/Turn Lane with 7-Foot Sidewalks

**The center lane would vary between a raised center median or a center left turn lane along the study corridor based on need and level of access management required*

FEATURES:

- This alternative adds capacity for all modes through the introduction of a 13-foot SBBL in each direction which would be a dedicated bus/BRT lane sharing functionality as a bicycle lane and right turn lane.
- Increased vehicular capacity through the by adding two general purpose lanes (one southbound, one northbound).
- This alternative would require an approximate 26-foot expansion of the existing 100' right-of-way, including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

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: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVE 7
Eight, 11-Foot General Purpose Lanes

**The center lane would vary between a raised center median or a center left turn lane along the study corridor based on need and level of access management required*

FEATURES:

- This proposed alternative adds four additional lanes of vehicular capacity (two lanes southbound and two lanes northbound).
- The fourth (outside) general purpose lane would be shared by both automobiles and buses.
- 11-foot general purpose lanes are proposed, but 12 foot general purpose lanes currently exist.
- This alternative would require an approximate 22-foot expansion of the existing 100' right-of-way, including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

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: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVE 8
Four, 11-Foot General Purpose Lanes, Two 14-Foot Shared Bus/Bike Lanes (SBBL), 14-Foot Landscaped Median, 10-Foot Landscaped Setbacks, & 10 Foot Sidewalks

**The center lane would vary between a raised center median or a center left turn lane along the study corridor based on need and level of access management required*

FEATURES:

- Includes design and aesthetic attributes that yield a "complete street" that facilitates all modes of transportation while also offering opportunities to enhance the character of Milton Road with landscaping treatments.
- The 8-foot landscaping setbacks behind each curb can serve the dual function of landscape treatment and possible stormwater catchment and harvesting areas.
- Promotes alternative modes of transportation by including 14-foot SBBLs and 10 foot sidewalks. A 10-foot wide sidewalk can comfortably accommodate both bicycle and pedestrian modes and the landscape setback from the roadway offers a safety buffer.
- This alternative would require an approximate 40-foot expansion of the existing 100' right-of-way, including the expansion and re-striping of the existing pavement section and relocation of the sidewalks.

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: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.

Station 4: Alternative Routes to Milton Road

Station 4 provided display boards for the two preliminary system alternative routes to the Milton Road CMP Study Corridor, which include:

- Preliminary System Alternative 9: Milton Road No Build and Lone Tree Design Concept Report
- Preliminary System Alternative 10: Backage Road Improvements, which included the following five different routes:
  - Clay Avenue/Malpais Lane/McCracken/Blackbird Roost Street
  - West Route 66/Riordan Ranch Street
  - Metz Walk Extension to Plaza Way
  - Plaza Way/Yale Street/University Avenue
  - Route 66/Yale Street/Beulah Blvd. Extension/Ft. Tuthill

The four display boards in Station 4 are shown in **Figure 6** and can be found in Appendix I

Figure 6: Station 4 Display Boards

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVE 9
Milton Road No Build + Lone Tree Design Concept Report

FEATURES:

•This alternative 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 ¾ mile due east of Milton Road and is generally a two-lane collector roadway that primarily provides access for localdestinations.

•Significant features such as a traffic interchange to connect with I-40 to the south, and a grade-separated crossing of the BNSF railway to the north are potenial instrumental facilities necessary to enhance the effectiveness of the Lone Tree Road Alternative Route.

•This alternative recommends 4, 12-foot general purpose lanes, a raised median, bicycle lanes, a sidewalk on one side and a F.U.T.S. trail on the other side.

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

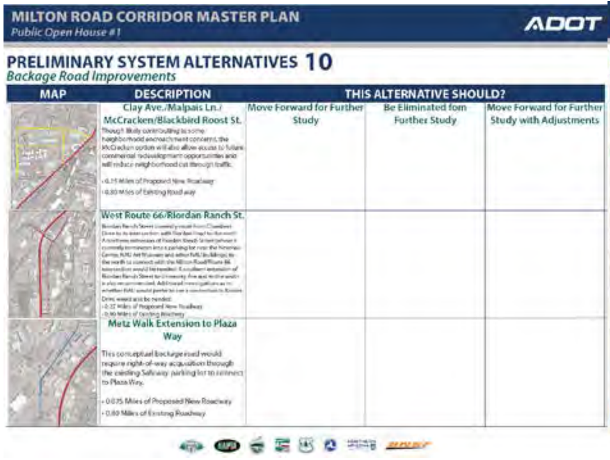
MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVE 10
Backage Road Improvements

What is a "Backage Road?"

The concept of a "backage road" (aka reverse frontage roads) is a road that runs parallel to the arterial roadway (Milton Road) and behind developed land. Backage roads can be advantageous in reducing traffic congestion on the mainline (Milton Road), as well a minimize visual distractions and headlight glare on the mainline. However, backage roads can also create opportunities for delay, congestion, and crashes if there is insufficient storage for entering and exiting vehicles.

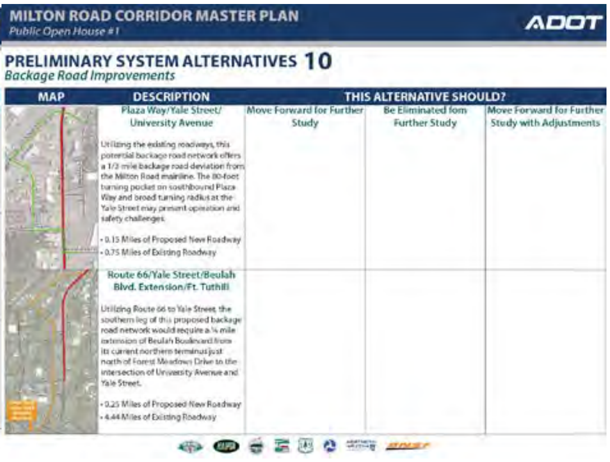
There are a handful of backage road scenarios illustrated that together and/or separately could possibly mitigate traffic congestion for northbound and southbound traffic on Milton Road. It should be noted that future traffic modeling analysis of any backage road scenario(s) would be needed to adequately quantify the anticipated performance and level-of-service of backage roads.



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVES 10
Backage Road Improvements

MAP	DESCRIPTION	THIS ALTERNATIVE SHOULD?		
	Clay Ave./Malpais Ln./ McCracken/Blackbird Roost St. Though likely contributing to some neighborhood encroachment concerns, the McCracken portion will also allow access to future commercial redevelopment opportunities and will reduce neighborhood cut through traffic.	Move Forward for Further Study	Be Eliminated fom Further Study	Move Forward for Further Study with Adjustments
	West Route 66/Riordan Ranch St.			
	Metz Walk Extension to Plaza Way This conceptual backage road would require right-of-way acquisition through the existing Safeway parking lot to connect to Plaza Way. • 0.075 Miles of Proposed New Roadway • 0.80 Miles of Existing Roadway			



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVES 10
Backage Road Improvements

MAP	DESCRIPTION	THIS ALTERNATIVE SHOULD?		
	Plaza Way/Yale Street/ University Avenue Utilizing the existing roadways, this potential backage road network offers a 1/3 mile backage road deviation from the Milton Road mainline. The 80-foot turning pocket on southbound Plaza Way and broad turning radius at the Yale Street may present operation and safety challenges. • 0.15 Miles of Proposed New Roadway • 0.75 Miles of Existing Roadway	Move Forward for Further Study	Be Eliminated fom Further Study	Move Forward for Further Study with Adjustments
	Route 66/Yale Street/Beulah Blvd. Extension/Ft. Tuthill Utilizing Route 66 to Yale Street, the southern leg of this proposed backage road network would require a ¼ mile extension of Beulah Boulevard from its current northern terminus just north of Forest Meadows Drive to the intersection of University Avenue and Yale Street. • 0.25 Miles of Proposed New Roadway • 4.44 Miles of Existing Roadway			

Mapping Exercise

In addition to Station 1 through Station 4, there was a separate station dedicated to a mapping exercise that consisted of a series of large roll plot aerial maps of the Milton Road 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 Milton Road 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 (MiltonProject@mbakerintl.com). A total of 78 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. No Question Cards were received.

Preliminary System Alternative Sticky-Dot Prioritization Exercise

The primary objective of Public Open House Meeting #1 was to present the Preliminary System Alternatives for the Milton Road 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 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 one dot stickers 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
Station 2: System Alternatives Utilizing Existing Right-of-Way			
Preliminary System Alternative 1: No Build (Maintain as Is)	Not Applicable		
Base Build Spot improvements	See **Table 2**		
Preliminary System Alternative 2: Milton Road Reversible Lane	2	**34**	4
Preliminary System Alternative 3: Six, 11-Foot General Purpose Lanes with Center Median/Turn Lane with 6-foot Sidewalks	17	**26**	2
Preliminary System Alternative 4: Four, 11-Foot General Purpose Lanes with Center Median/Left Turn Lane, and two 14-foot Shared Bus/Bike Lanes (SBBL) with 7-foot sidewalks	**34**	7	8
Station 3: System Alternatives that May Require Expanded Right-of-Way			
Preliminary System Alternative 5: Six, 11-Foot General Purpose Lanes with a Center Median/Center Turn Lane, and 6-Foot Bicycle Lanes with 6-Foot Sidewalks	**25**	20	3
Preliminary System Alternative 6: Six, 11-Foot General Purpose Lanes, Two 13-Foot Shared Bus/Bike Lanes (SBBL), and Center Median/Turn Lane with 7-Foot Sidewalks	4	**36**	0
Preliminary System Alternative 7: Eight, 11-Foot General Purpose Lanes	0	**42**	2
Preliminary System Alternative 8: Four, 11-Foot General Purpose Lanes, Two 14-Foot Shared Bus/Bike Lanes (SBBL), 14-Foot Landscaped Median, 10-Foot Landscaped Setbacks, and 10-Foot Sidewalks	17	**34**	0
Station 4: Alternative Routes to Milton Road			
Preliminary System Alternative 9: Milton Road No Build and Lone Tree Design Concept Report	**43**	3	1
Preliminary System Alternative 10: Backage Road Improvement: Clay Avenue/Malpais Lane/McCracken/Blackbird Roost Street	2	**17**	2
Preliminary System Alternative 10: Backage Road Improvement: West Route 66/Riordan Ranch Street	**22**	0	9
Preliminary System Alternative 10: Backage Road Improvement: Metz Walk Extension to Plaza Way	8	**10**	3
Preliminary System Alternative 10: Backage Road Improvement: Plaza Way/Yale Street/University Avenue	**14**	6	4
Preliminary System Alternative 10: Backage Road Improvement: Route 66/Yale Street/Beulah Blvd. Extension/Ft. Tuthill	**33**	7	1

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	9
Pedestrian/Bicycle Overpass	30
Pedestrian/Bicycle Underpass	28
Bike Lanes	16
Multi-Use Path	39
Bus Signal Queue Jumping	18

The additional comments received on the Base Build Spot Improvement Display Board included:

- One less overpass in Maricopa County can fund all of the non-motorized grade-separated crossings and other bike/pedestrian facilities we need in Flagstaff!
- Need to consider how to remove snow/ice from pedestrian/bicycle overpasses
- Any overpass needs to be protected from blowing snow
- Need a pedestrian/bicycle overpass at Humphrey’s Street and Route 66
- Need a pedestrian/bicycle overpass at Milton Road and Butler Avenue
- Need a pedestrian/bicycle overpass at Route 66 and Galaxy Diner
- Need a pedestrian/bicycle overpass at Milton Road and Chambers
- Need a pedestrian/bicycle overpass over Milton Road especially with new apartments being built for NAU students (west of Milton Road) and the University being east of Milton Road.
- Need protected bike lanes on Milton Road! (x3)
- Bike lanes serve a small portion/population. Must be protected bike lanes to serve ages 8-80.
- Every road needs bike lanes in an urban setting. Limiting driveway access to Milton Road is necessary as well.
- Eliminate bike lanes and install multi-use paths on both sides of Milton Road. Much safer!
- Bike lanes should not be on Milton Road, they need to be separated because there are too many driveways.
- Bike lanes with a divider strip might be the most feasible
- Need multi-use paths on both sides of Milton Road for the entire length (x2)
- Need Bus Signal Queue Jumping at all signalized intersections!

Preliminary System Alternative 2: *Milton Road Reversible Lane*

The additional comments received on the Preliminary System Alternative 2 Display Board included:

- No reversible lane
- Keep 2 way left turn lanes
- No Medians
- Widen sidewalks for bikes and pedestrians
- Too hard to make a left turn
- Best choice
- Widen sidewalks to make them multi-use paths to force bikes off the road onto the multi-use paths.
- This won't work! Traffic backs up in both directions at the railroad underpass. Which directions gets the reversible lane and what happens at the railroad underpass?

Preliminary System Alternative 3: *Six, 11-Foot General Purpose Lanes with Center Median/Turn Lane with 6-foot Sidewalks*

The additional comments received on the Preliminary System Alternative 3 Display Board included:

- Move forward without bike lanes and put bikes on multi-use paths
- Need bike lanes
- Need multi-use path
- Liability for the city if the bus hits the bicyclist
- Bikes need to be separated from the vehicles
- Don't waste money and space with gross. No bike lanes in the roadway to force bikes onto multi-use paths.

Preliminary System Alternative 4: *Four, 11-Foot General Purpose Lanes with Center Median/Left Turn Lane, and two 14-foot Shared Bus/Bike Lanes (SBBL) with 7-foot sidewalks*

The additional comments received on the Preliminary System Alternative 4 Display Board included:

- Needs wider/improved sidewalks
- Needs multi-use paths
- Separate sidewalk from the roadway with a buffer. Cinders will collect on the sidewalk and needs a buffer to remove them.
- This is a good alternative, but why not consider keeping the divider at 12' and adding a one extra foot to each SBBL/right turn lane?
- Eliminate one sidewalk if adequate overhead crosswalks merit foots traffic needs.
- Dependent on NAIPTA BRT moving forward to utilize lanes. Bus signal queue jumping may be sufficient.
- No bike lanes in the roadway! Force bikes onto multi-use paths.

Station 3: System Alternatives that May Require Expanded Right-of-Way

Preliminary System Alternative 5: *Six, 11-Foot General Purpose Lanes with a Center Median/Center Turn Lane, and 6-Foot Bicycle Lanes with 6-Foot Sidewalks*

The additional comments received on the Preliminary System Alternative 5 Display Board included:

- Use landscaped buffer to divide bike lane from the roadway/traffic (x3)
- Bike lanes should be OFF the roadways! (x4)
- Cinders will collect on the sidewalks so there needs to be a buffer between the roadway and the bike/pedestrian path!
- Bikes and pedestrians should share a path that is separate from the traffic lanes.
- Wider roads wouldn't keep the towns priorities (close community and Milton Road shouldn't be a highway). It would probably take a while to get the land needed for this.
- Wider roads do not solve congestion!
- Wider and faster roads are unsafe and ugly.
- It would be safer to keep bike lanes and right turn lanes separate.
- Separate bikes from traffic with a barrier.
- Add bike lane barriers to better protect bikes and sidewalks. (x2)
- Needs protected bike lanes!
- Please separate bikes from cars with a barrier.
- This alternative is okay if the bike lanes have barriers separating them from the vehicles, otherwise, this is unsafe.

Preliminary System Alternative 6: *Six, 11-Foot General Purpose Lanes, Two 13-Foot Shared Bus/Bike Lanes (SBBL), and Center Median/Turn Lane with 7-Foot Sidewalks*

The additional comments received on the Preliminary System Alternative 6 Display Board included:

- 7-foot sidewalks are always better than 6-foot sidewalks!
- 6-foot sidewalks would be adequate given that there is 4-foot buffer. Why not put the buffer between the traffic lanes and the bike lane?
- Wider and faster roads are unsafe for pedestrians and bicyclists.
- Way too much of an expansion! Major impact on private property owners!
- Scary ROW cost!
- Multi-use path is needed.
- Setbacks for business should be considered. Could lead to a negative issue.

Preliminary System Alternative 7: *Eight, 11-Foot General Purpose Lanes*

The additional comments received on the Preliminary System Alternative 7 Display Board included:

- Too large of an expansion. A threat to property owners! (x2)
- Wider/faster roads are unsafe and ugly. Milton Road should be a city boulevard, not a highway. (x2)
- This is too wide. I like Alternative #5.
- Scary ROW cost! (x2)
- Too wide. Needs a protected bike lane. (x2)
- Alternative 7 would be acceptable with grade separated crossings at all signalized intersections.

Preliminary System Alternative 8: *Four, 11-Foot General Purpose Lanes, Two 14-Foot Shared Bus/Bike Lanes (SBBL), 14-Foot Landscaped Median, 10-Foot Landscaped Setbacks, and 10-Foot Sidewalks*

The additional comments received on the Preliminary System Alternative 8 Display Board included:

- 10-foot sidewalks are better than 6- or 7-foot sidewalks.
- This is the best Alternative, but safe money by narrowing buffers.
- Don't like shared bus/bike lanes, otherwise, this alternative looks good. Keep bikes and vehicles separated. (x2)
- Way too much! Major impact on property owners.
- Wider and faster roads are unsafe and ugly.
- Too expensive!
- Too big and too expensive!
- Milton Road businesses front setback will be impacted.

Station 4: Alternative Routes to Milton Road

The additional comments received on the Preliminary System Alternative 9 and Preliminary System Alternative 10 Display Boards included:

Preliminary System Alternative 9

- Lone Tree Road expansion must accompany Milton expansion!
- Absolutely – Lets use Lone Tree Road. Completely underutilized!
- There needs to be alternative traffic interchange with I-40
- Where will money for the I-40 traffic interchange come from?
- This combined with a Milton Road parallel route for non-motorists
- Should be both a Milton Road build-out and Lone Tree Road connections at Route 66 and I-40.
- I-40 at Lone Tree Road to Route 66 – then what kind of traffic problems on Route 66 east and west? Overpass or underpass at Route 66? Overpass or underpass with the railroad? City voters did not want this when voted on approximately 20 years ago.
- Okay – I-40 to Lone Tree Road to Route 66. Then what?
- Alternative 9 should be combined with improvements to Milton Road; especially grade separated crossings for pedestrians and bicyclists.

Preliminary System Alternative 10

- Backage Roads would be better as bike/pedestrian focused corridors including full sidewalks, cycle tracks, FUTS, and bike lanes.
- In lieu of Clay Ave/Malpais/McCracken/Blackbird Roost:
    - Elliot Street to Milton Road right turn only from Blackbird Roost to Route 66 west with no straight and no left.
- In Lieu of Route 66/Riordan Street:
    - I'm okay with studying this further, but I'm not sure it accomplishes much.
    - Maybe for bikes instead?
    - Appropriate as a bike way
    - Riordan Ranch east on north edge of Target then east edge of Target to university

- In Lieu of Metz Walk Extension to Plaza Way:
    - Consider benefit of backage routes for only non-motorized users if it is not a “Go” for motorized users.
- In Lieu of Plaza Way/Yale Street/University Avenue:
    - No more left turns from W. University Avenue on to southbound Milton Road.
    - Left hand turns from eastbound University Avenue at Milton Road is problematic, however I do not support eliminating left turns. This will properly help for less than 20% of the day.
    - If new path moves forward, eliminating left hand turns at eastbound University Avenue is a good idea. If no new road is implemented do not eliminate left hand turn.

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 78 comment cards were received, with 18 comment cards collected at Station 1, 20 comments cards collected at Station 2, 24 comment cards collected at Station 3, and 16 comment cards collected at Station 4. The comment cards received for each station can be found in Appendix K through Appendix N

APPENDICES

Appendix A: Milton Road CMP Public Open House Meeting #1 Advertisement

Milton Road Corridor Master Plan

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 Milton Road in Flagstaff. The study corridor consists of a 1.8-mile segment from West Forest Meadows Street to Beaver Street.

The purpose of the Milton Road Corridor Master Plan (CMP) is to identify a 20-year vision for the Milton Road corridor that addresses current safety and 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 Milton Road right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the Milton Road corridor itself.

Thursday, May 10, 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/MiltonCorridorMasterPlan

Unable to attend the meeting?
Submit your questions or comments to
MiltonProject@mbakerintl.com

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 who 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)

Appendix B: Sign-In Sheets

Milton Road Corridor Master Plan
Public Open House #1

Flagstaff High School: The Commons
400 W. Elm Avenue Flagstaff, Arizona 86001

Thursday, May 10, 2018
6:00 pm – 8:00 pm

Sign-In Sheet

	Name	E-mail
1	Kathleen Noonan	
2	Patricia Rensink	
3	Marie Jones	[redacted]
4	Paul Dufek	[redacted]
5	BARRY KOEB	[redacted]
6	Joan Degenkolb	[redacted]
7	Rick Barrett	[redacted]
8	MARNA FITTING	[redacted]
9	Carlton Johnson	[redacted]
10	Corina Vanek	[redacted]
11	Irene Dominguez	[redacted]
12	Jesse Dominguez	[redacted]
13	Julie Leid	[redacted]
14	Tim DALEGOWSKI	[redacted]
15	McKenzie Jones	[redacted]
16	Joe [illegible]	[redacted]
17	Tom [illegible]	[redacted]
18	Emily Allen	[redacted]
19	SAT BEST	[redacted]
20	Daniel Folke	[redacted]
21	Reid Miller	[redacted]
22	Nat White	[redacted]
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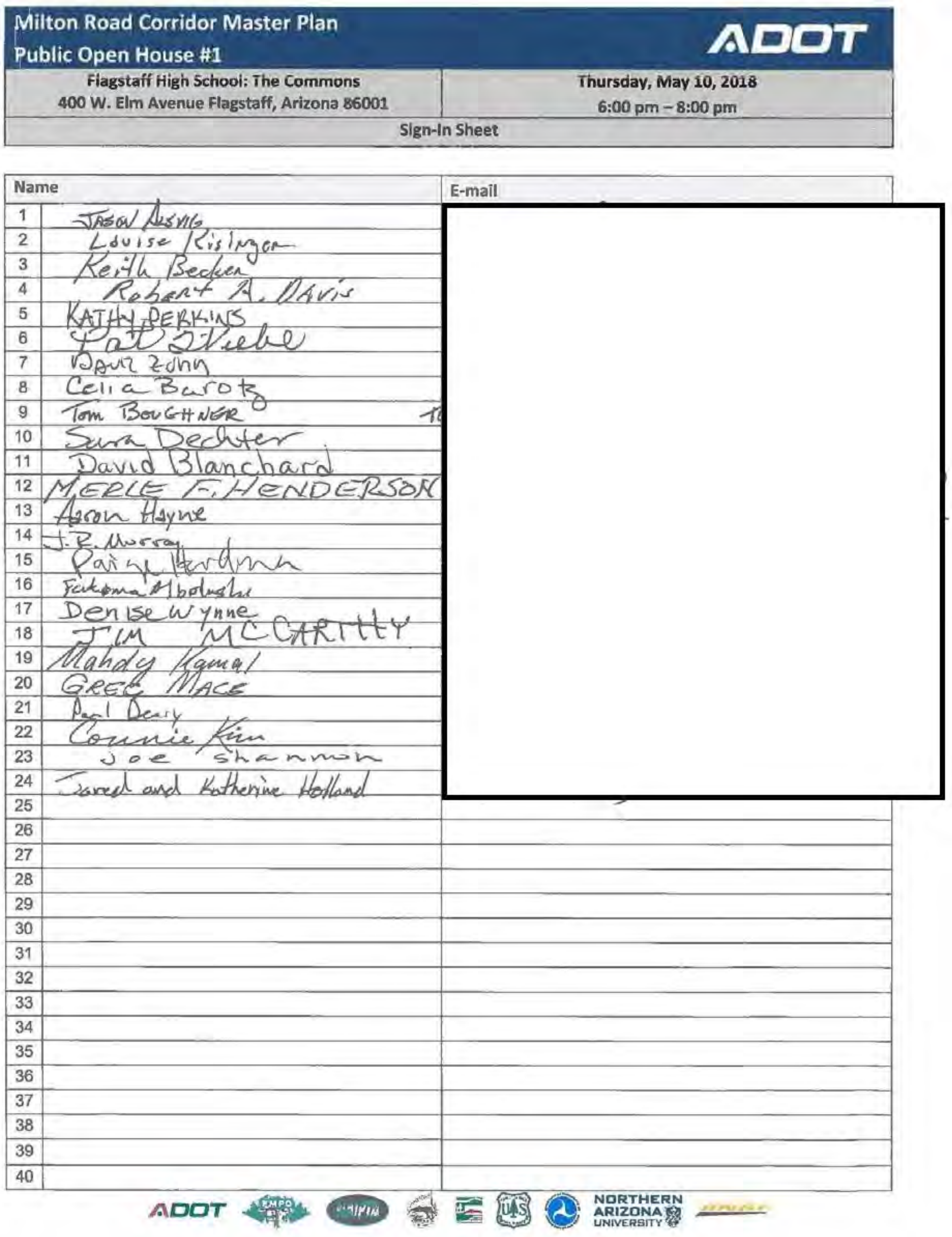

Milton Road Corridor Master Plan
Public Open House #1

Flagstaff High School: The Commons 400 W. Elm Avenue Flagstaff, Arizona 86001	Thursday, May 10, 2018 6:00 pm – 8:00 pm

Sign-In Sheet

Name		E-mail
1	JASON AASVIG	[redacted]
2	Louise Kisinger	[redacted]
3	Keith Becker	[redacted]
4	Robert A. Davis	[redacted]
5	KATHY PERKINS	[redacted]
6	Pat Ziebe	[redacted]
7	DAVE ZOHN	[redacted]
8	Celia Barotz	[redacted]
9	Tom BOUGHNER	[redacted]
10	Sara Dechter	[redacted]
11	David Blanchard	[redacted]
12	MERLE F. HENDERSON	[redacted]
13	Aaron Hayne	[redacted]
14	J.R. Murray	[redacted]
15	Paige Herdman	[redacted]
16	Fakoma Mbolushi	[redacted]
17	Denise Wynne	[redacted]
18	JIM MCCARTHY	[redacted]
19	Mahdy Kamal	[redacted]
20	GREG MACE	[redacted]
21	Paul Deary	[redacted]
22	Connie Kim	[redacted]
23	joe shannon	[redacted]
24	Jared and Katherine Holland	[redacted]
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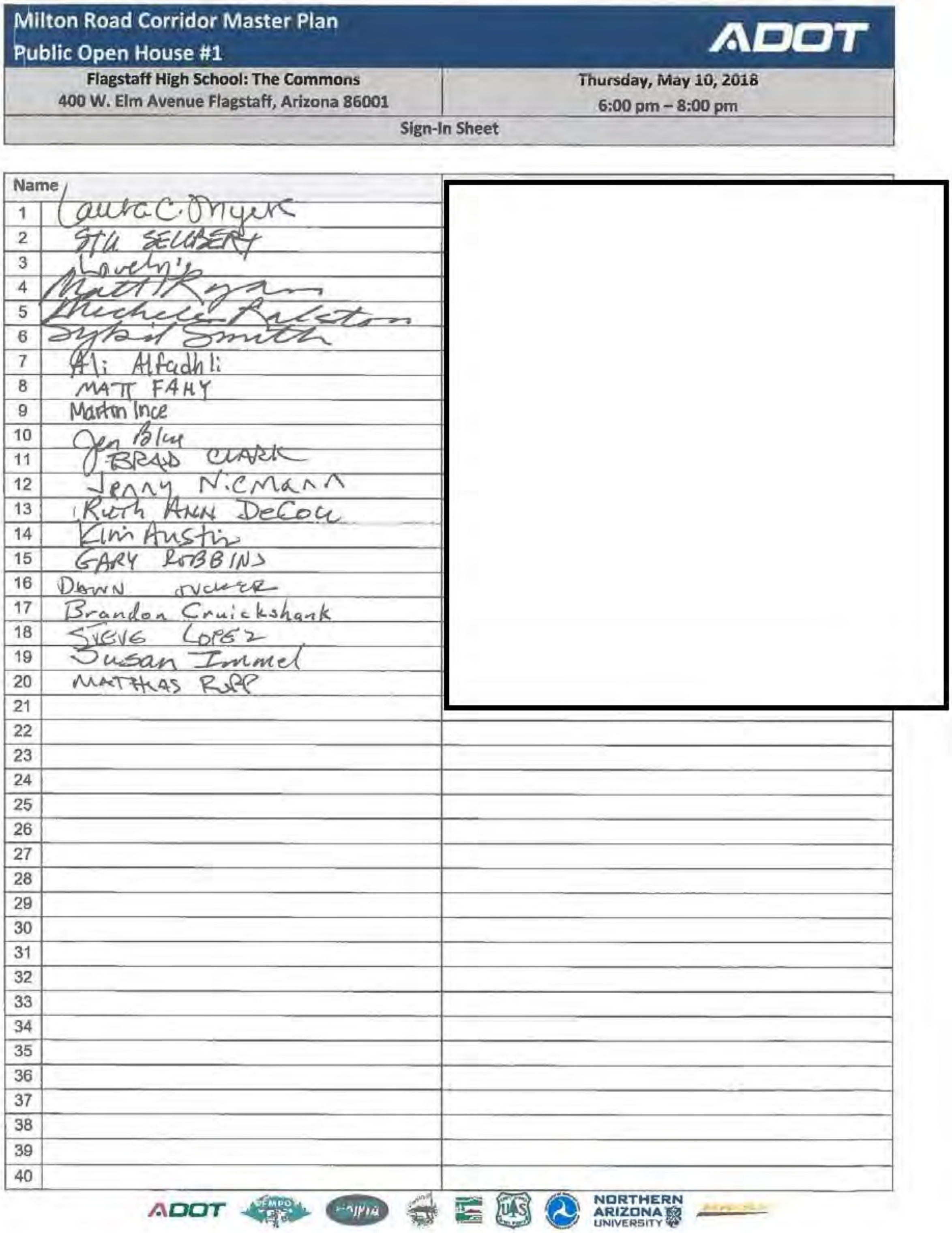

Milton Road Corridor Master Plan
Public Open House #1

Flagstaff High School: The Commons
400 W. Elm Avenue Flagstaff, Arizona 86001

Thursday, May 10, 2018
6:00 pm – 8:00 pm

Sign-In Sheet

	Name	[redacted]
1	Laura C. Myers	[redacted]
2	STU SEUBERT	[redacted]
3	Lovelyn's	[redacted]
4	Matt Ryan	[redacted]
5	Michele Ralston	[redacted]
6	Sybil Smith	[redacted]
7	Ali Alfadhli	[redacted]
8	MATT FAHY	[redacted]
9	Martin Ince	[redacted]
10	Jen Blue	[redacted]
11	BRAD CLARK	[redacted]
12	Jenny NicMann	[redacted]
13	Ruth Ann DeCou	[redacted]
14	Kim Austin	[redacted]
15	GARY ROBBINS	[redacted]
16	DAWN TUCKER	[redacted]
17	Brandon Cruickshank	[redacted]
18	STEVE LOPEZ	[redacted]
19	Susan Immel	[redacted]
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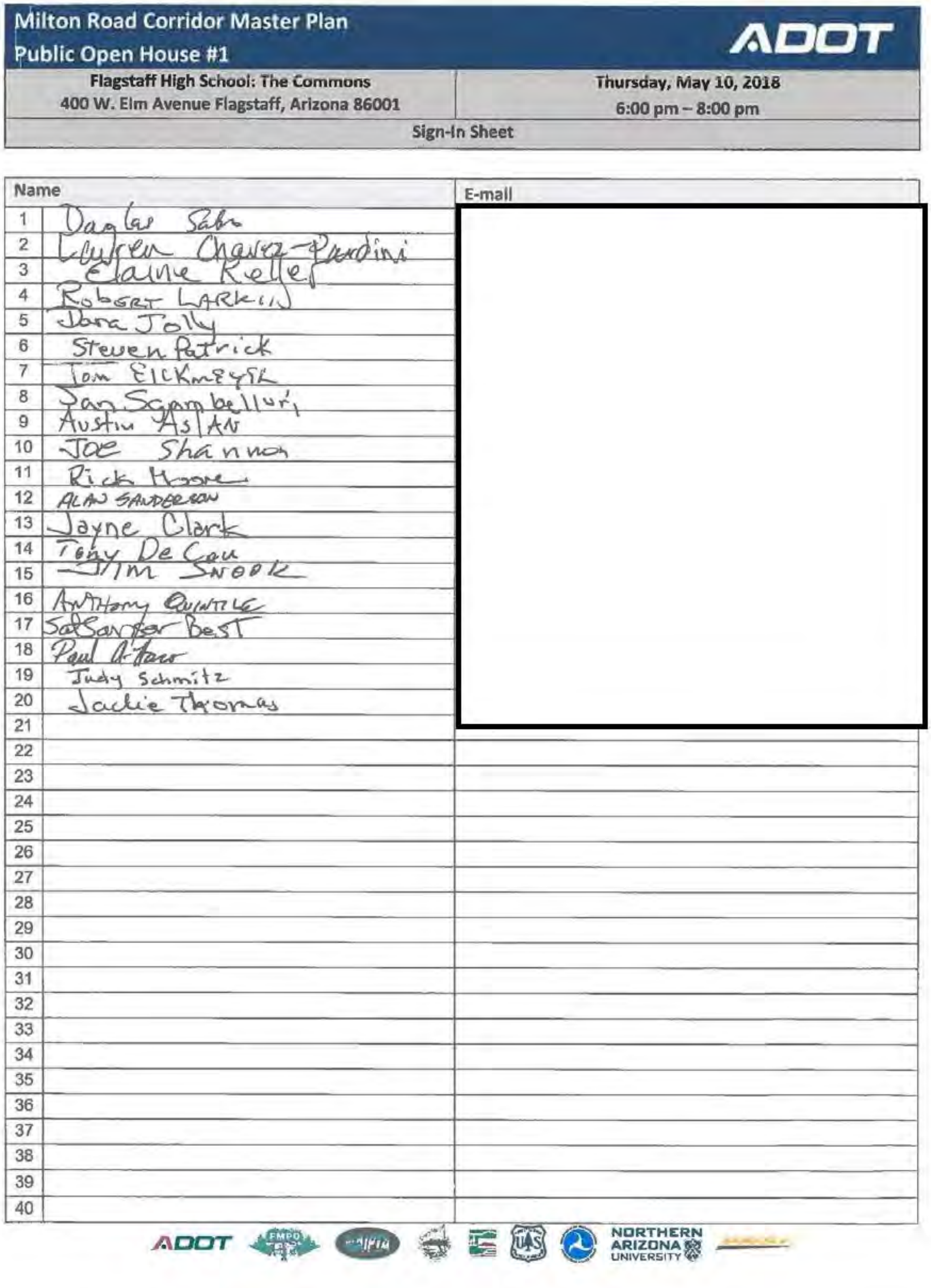

Milton Road Corridor Master Plan
Public Open House #1

Flagstaff High School: The Commons
400 W. Elm Avenue Flagstaff, Arizona 86001

Thursday, May 10, 2018
6:00 pm – 8:00 pm

Sign-In Sheet

	Name	E-mail
1	Douglas Sabo	[redacted]
2	Lauren Chavez-Pardini	[redacted]
3	Elaine Keller	[redacted]
4	Robert LARKIN	[redacted]
5	Dana Jolly	[redacted]
6	Steven Patrick	[redacted]
7	Tom EICKMEYER	[redacted]
8	Jan Scambelluri	[redacted]
9	Austin ASLAN	[redacted]
10	Joe Shannon	[redacted]
11	Rick Moore	[redacted]
12	ALAN SANDERSON	[redacted]
13	Jayne Clark	[redacted]
14	Tony De Cou	[redacted]
15	JIM SNOOK	[redacted]
16	ANTHONY QUINTILE	[redacted]
17	Sal Sanfer Best	[redacted]
18	Paul A'Faro	[redacted]
19	Judy Schmitz	[redacted]
20	Jackie Thomas	[redacted]
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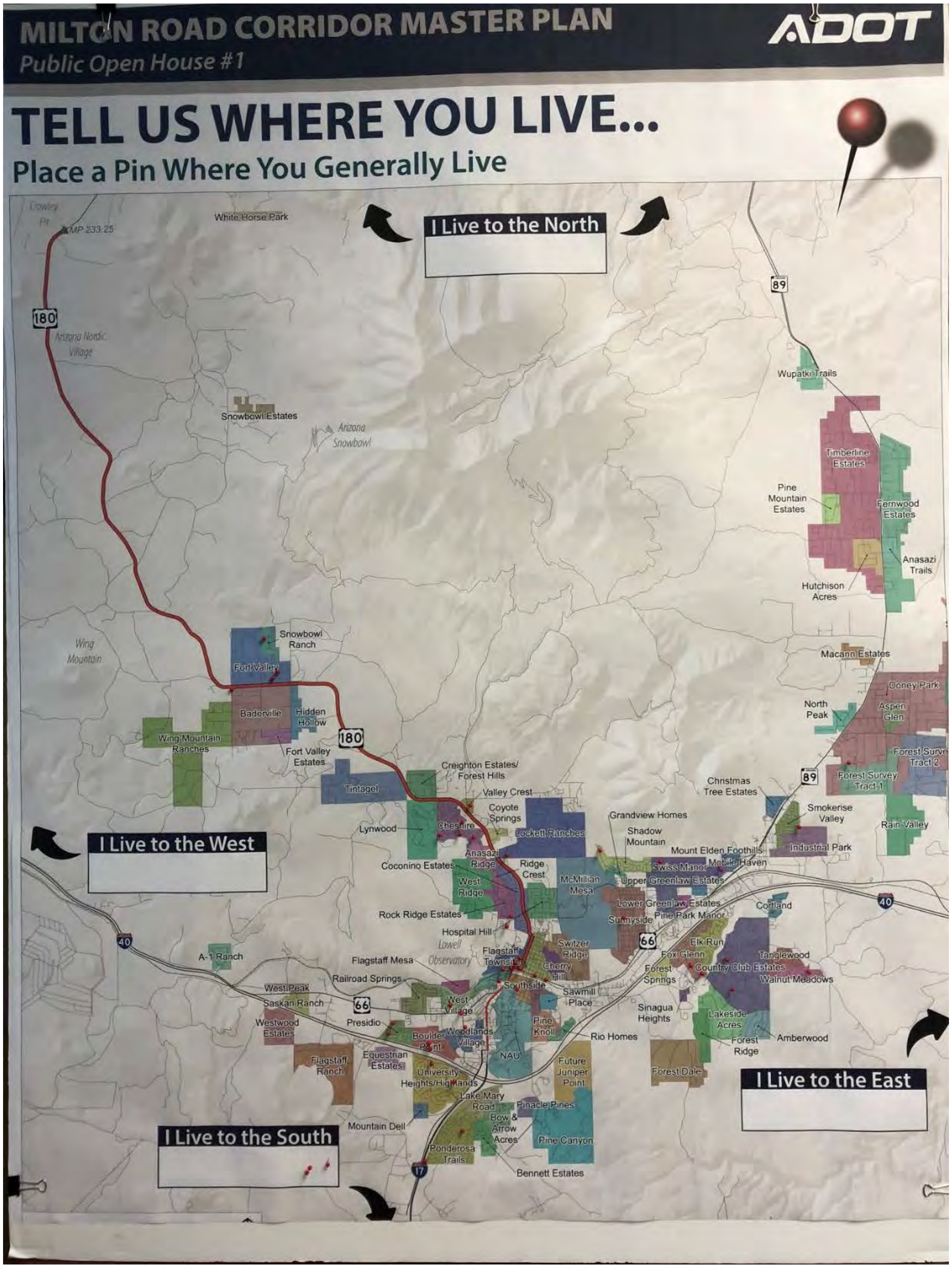
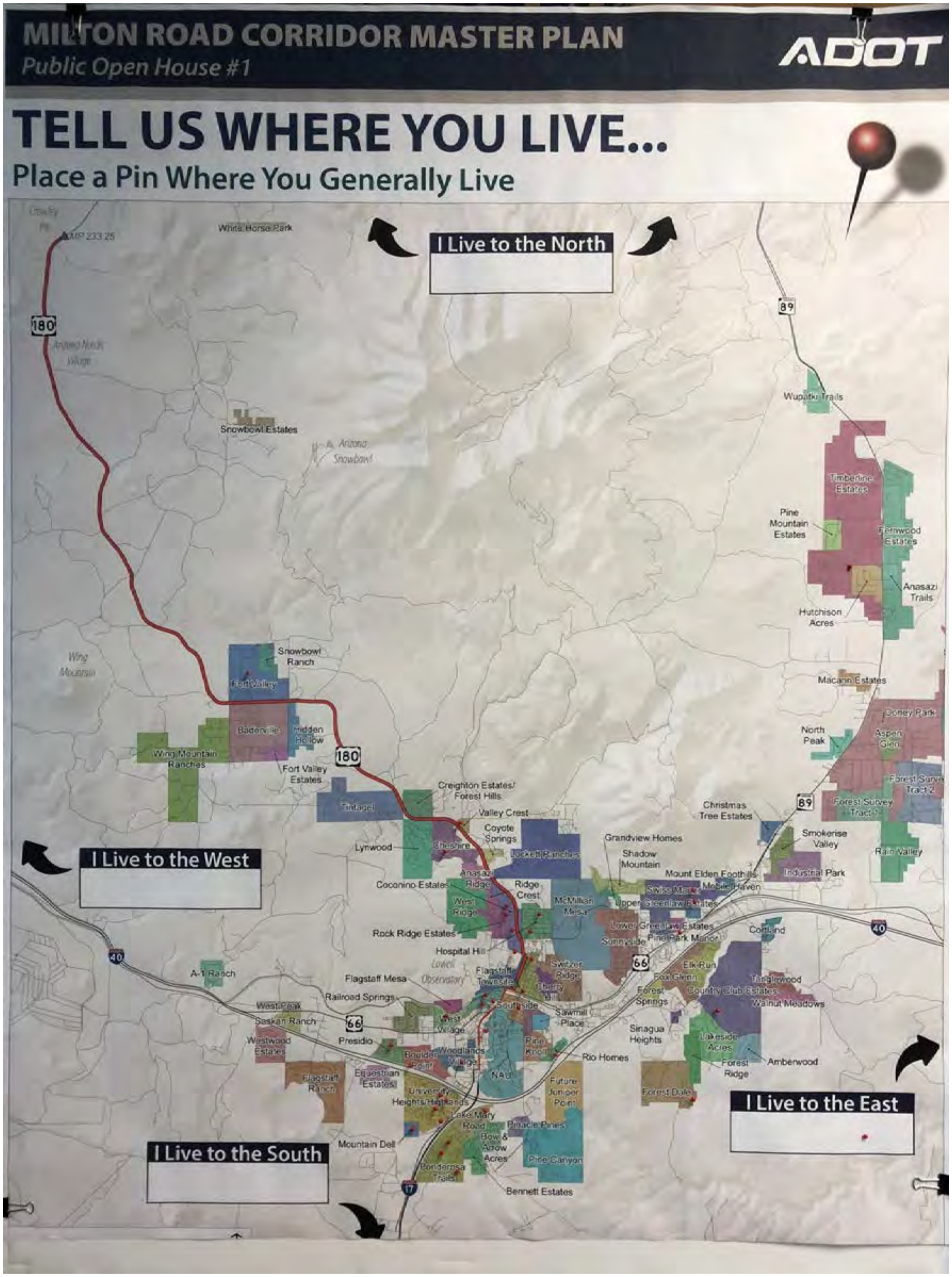
Appendix C: Map Pinning Exercise Results





MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

TELL US WHERE YOU LIVE...

Place a Pin Where You Generally Live

Appendix D: PowerPoint Presentation

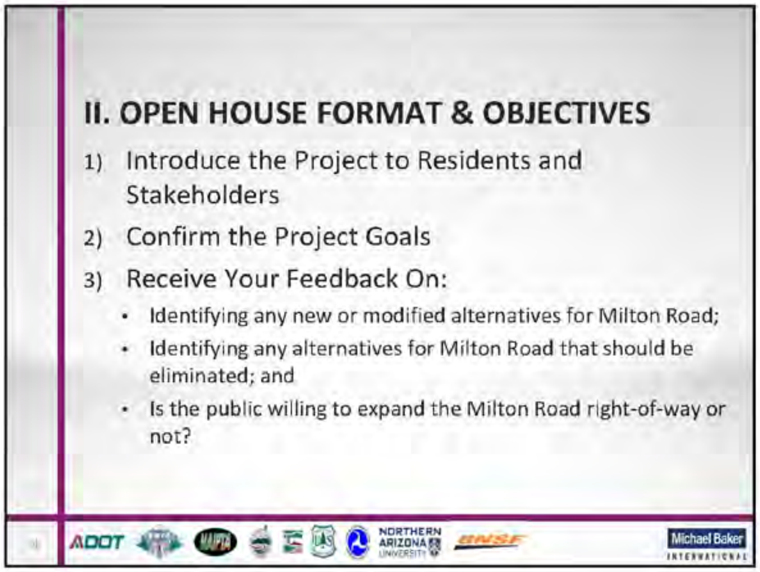
Milton Road Corridor Master Plan
Public Open House

May 10, 2018

WELCOME & INTRODUCTIONS

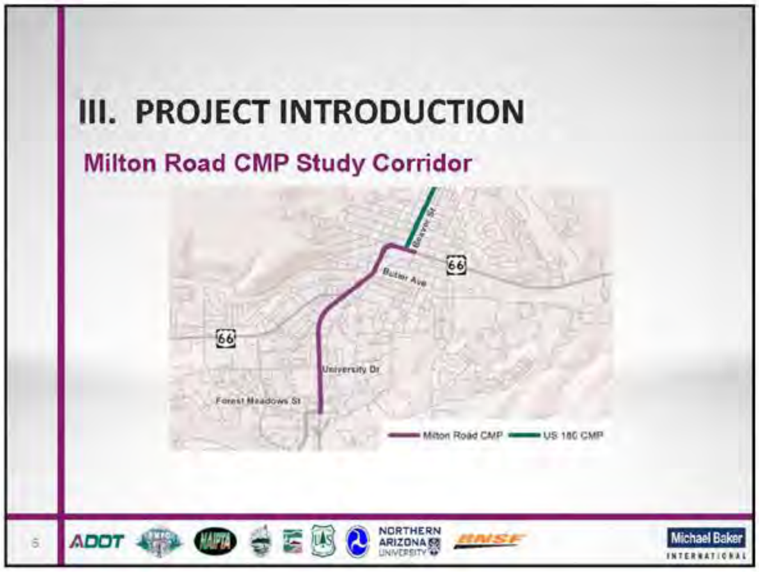
TONIGHT'S AGENDA

1. Welcome & Introductions
2. Open House Format & Objectives
3. Project Introduction
   - a) Study Corrior Limits
   - b) Project Partners
   - c) Project Goals
4. Project Work Plan & Project Schedule
5. Next Steps
6. 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 Milton Road;
   - Identifying any alternatives for Milton Road that should be eliminated; and
   - Is the public willing to expand the Milton Road right-of-way or not?



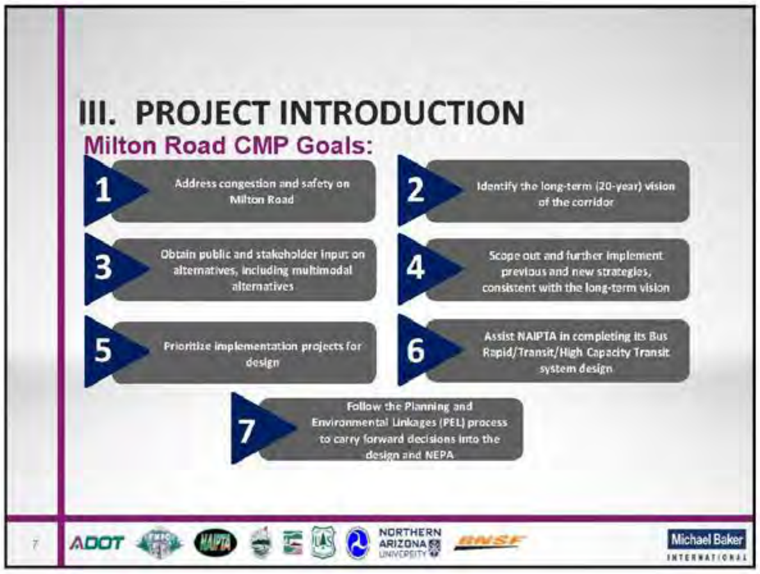
III. PROJECT INTRODUCTION

Milton Road CMP Study Corridor

III. PROJECT INTRODUCTION

Project Partners:

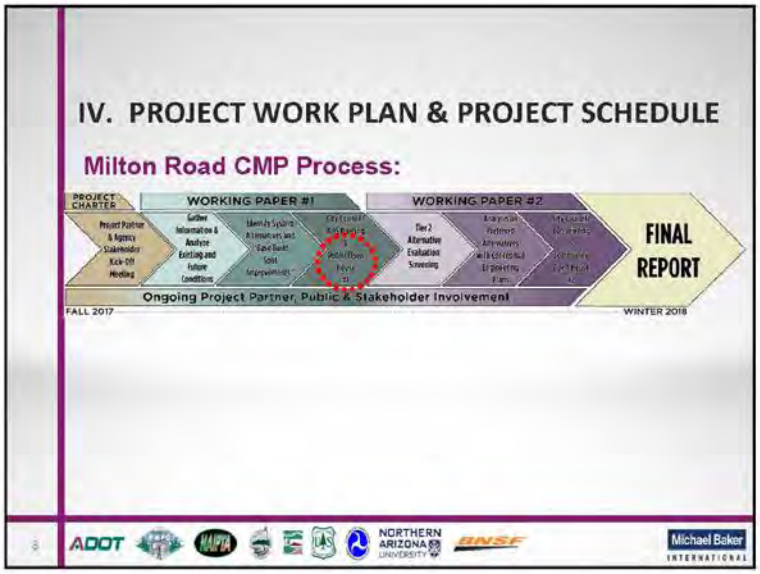
- Arizona Department of Transportation
- Flagstaff Metropolitan Planning Organization
- City of Flagstaff
- Coconino County
- US Forest Service
- Federal Highway Administration
- Northern Arizona University
- Northern Arizona Intergovernmental Public Transportation Authority
- Burlington Northern Santa Fe Railroad



III. PROJECT INTRODUCTION

Milton Road CMP Goals:

1. Address congestion and safety on Milton Road
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



IV. PROJECT WORK PLAN & PROJECT SCHEDULE

Milton Road CMP Process:

PROJECT CHARTER
WORKING PAPER #1
WORKING PAPER #2

Project Partner & Agency Stakeholder Kick-Off Meeting
Gather Information & Analyze Existing and Future Conditions
Identify System Alternatives and "Base Build Spot Improvements"
City Council Briefing & Public Open House #1
Tier 2 Alternative Evaluation Screening
Analyze the Preferred Alternatives with Conceptual Engineering Plans

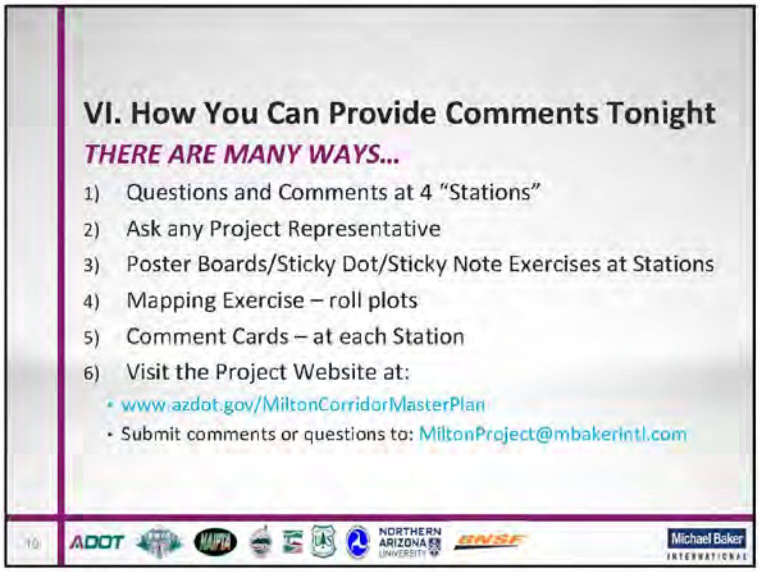
FINAL REPORT

Ongoing Project Partner, Public & Stakeholder Involvement

FALL 2017
WINTER 2018

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)

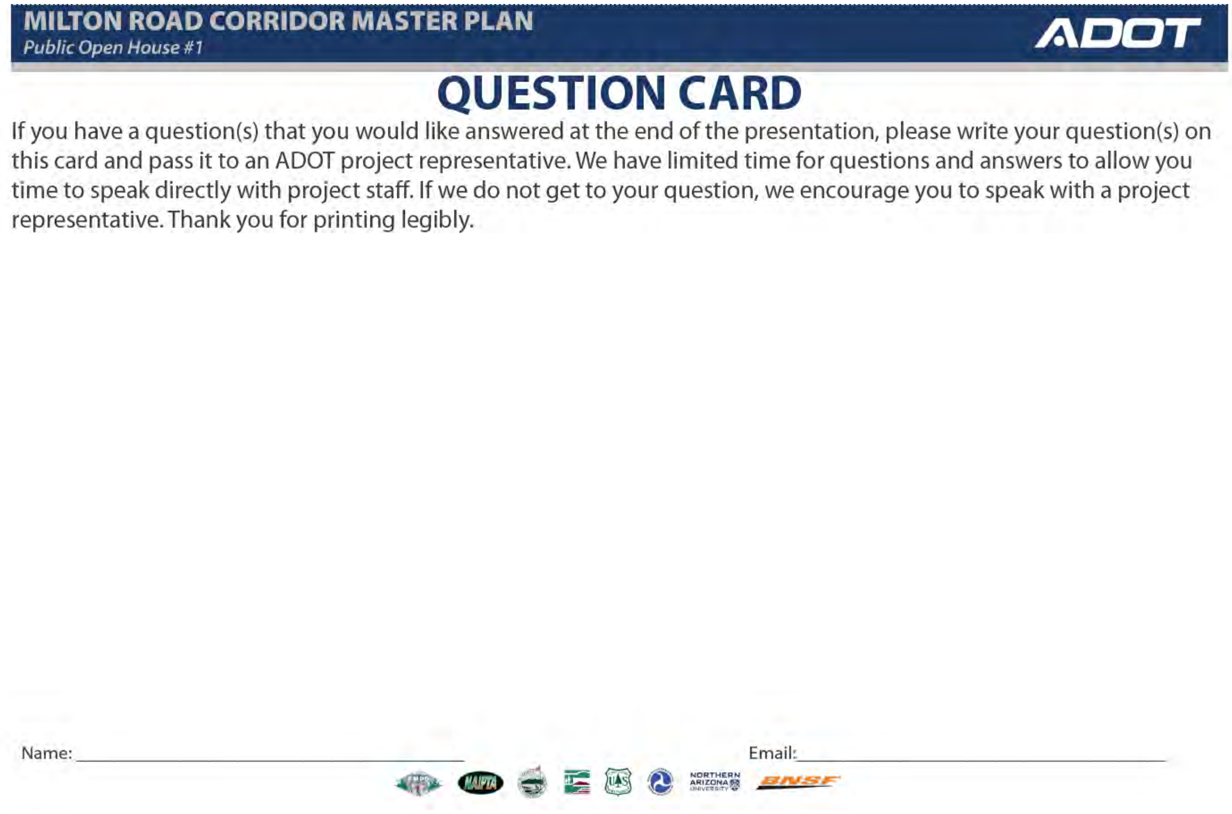


VI. How You Can Provide Comments Tonight

THERE ARE MANY WAYS…

1) Questions and Comments at 4 "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/MiltonCorridorMasterPlan
   - Submit comments or questions to: MiltonProject@mbakerintl.com

Appendix E: Question Card



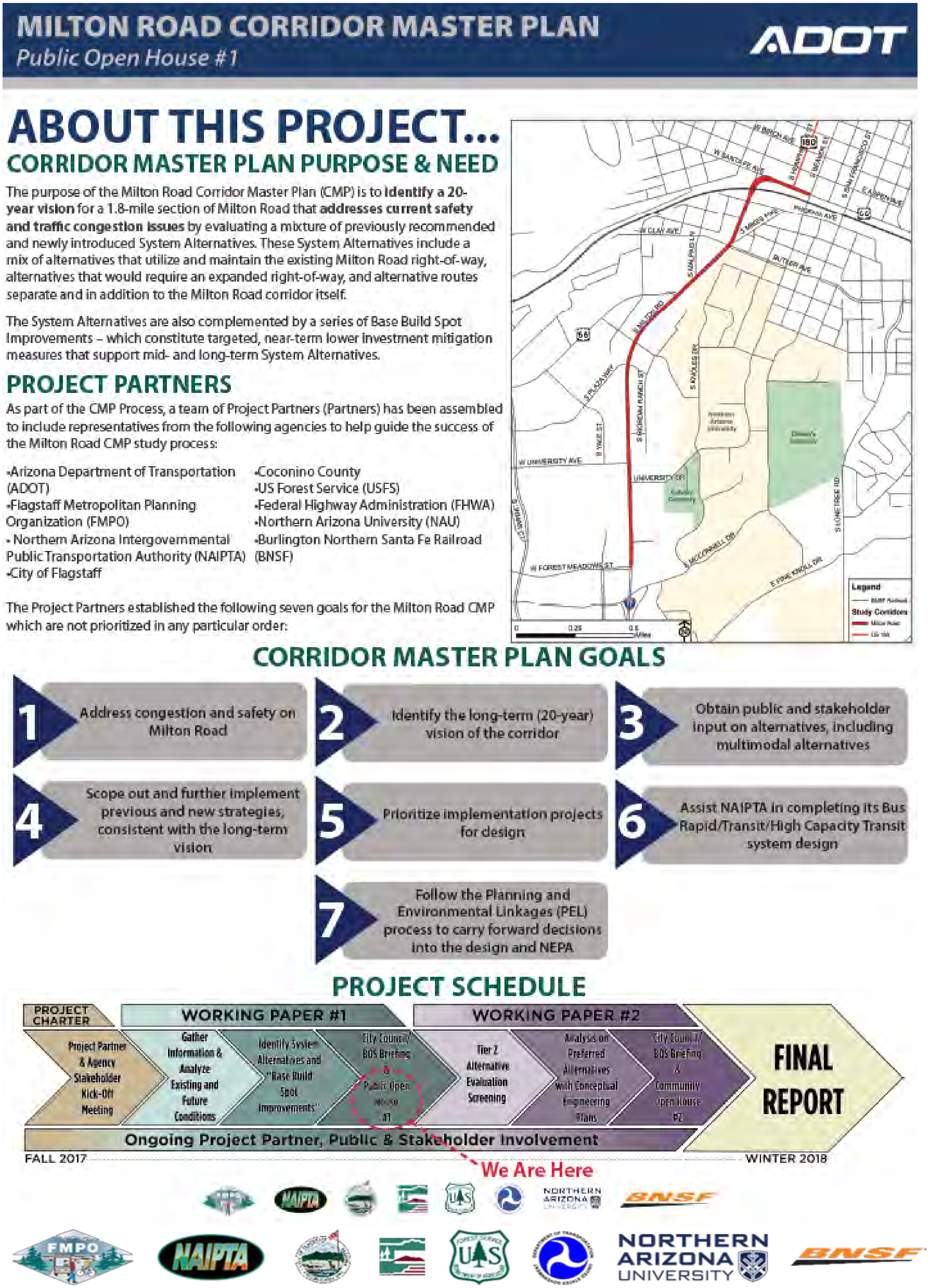
MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

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 Display Boards



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

ABOUT THIS PROJECT...

CORRIDOR MASTER PLAN PURPOSE & NEED

The purpose of the Milton Road Corridor Master Plan (CMP) is to **identify a 20-year vision** for a 1.8-mile section of Milton Road 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 Milton Road right-of-way, alternatives that would require an expanded right-of-way, and alternative routes separate and in addition to the Milton Road corridor itself.

The System Alternatives are also complemented by a series of Base Build Spot Improvements – which constitute targeted, near-term lower 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 Milton Road 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 Highway Administration (FHWA)
- Northern Arizona University (NAU)
- Burlington Northern Santa Fe Railroad (BNSF)

The Project Partners established the following seven goals for the Milton Road CMP which are not prioritized in any particular order:

CORRIDOR MASTER PLAN GOALS

1. Address congestion and safety on Milton Road
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

PROJECT SCHEDULE

PROJECT CHARTER
- Project Partner & Agency Stakeholder Kick-Off Meeting

WORKING PAPER #1
- Gather Information & Analyze Existing and Future Conditions
- Identify System Alternatives and "Base Build Spot Improvements"
- City Council/ BOS Briefing & Public Open House #1

WORKING PAPER #2
- Tier 2 Alternative Evaluation Screening
- Analysis on Preferred Alternatives with Conceptual Engineering Plans
- City Council/ BOS Briefing & Community Open House #2

FINAL REPORT

Ongoing Project Partner, Public & Stakeholder Involvement

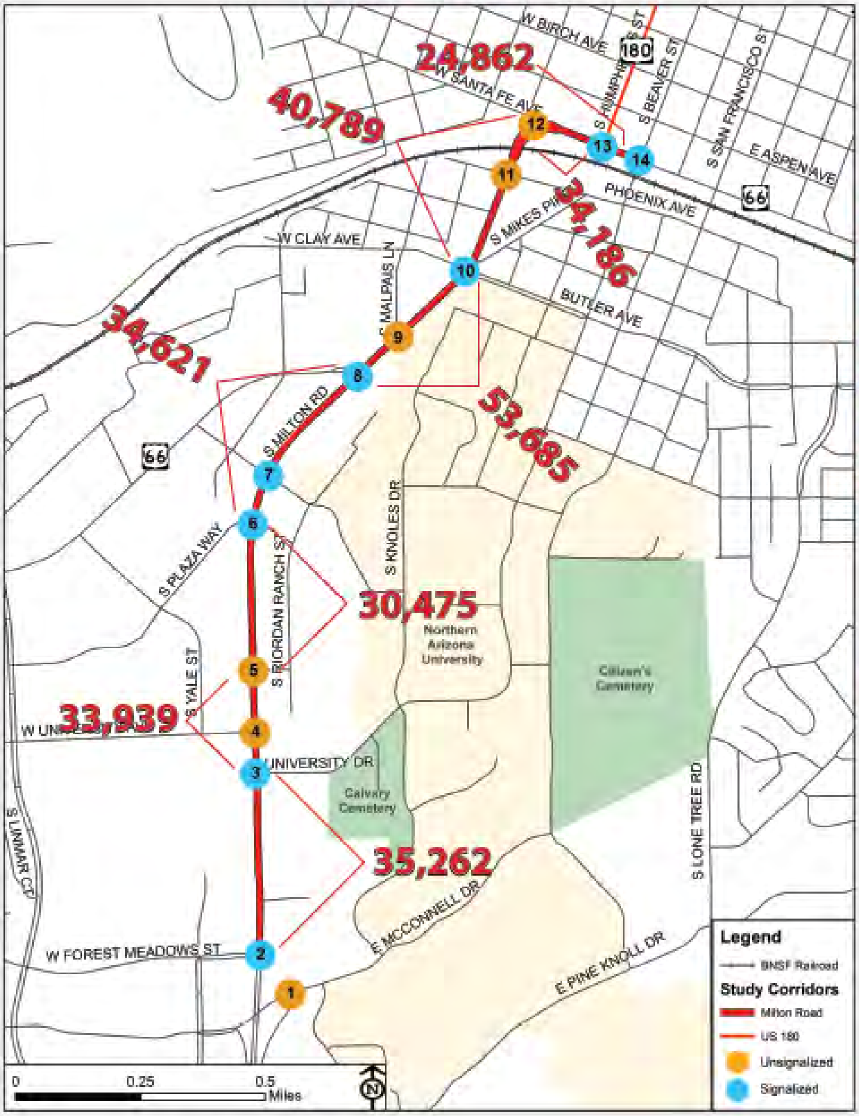
FALL 2017 ... WINTER 2018

We Are Here

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STUDY CORRIDOR AT A GLANCE...

Number of Average Daily Vehicles TODAY



NOTE: Vehicle Counts Observed on Tuesday, September 12, 2017

Level-of-Service TODAY

	Intersection	PM Peak	
		LOS	Delay (Sec/Veh)
2	Milton Road & Forest Meadows Street	C	33.3
3	Milton Road & University Drive	C	21.2
6	Milton Road & Plaza Way	B	20.0
7	Milton Road & Riordan Road	B	15.0
8	Milton Road & Historical Route 66	C	27.2
10	Milton Road & Clay/Butler Avenue	D	40.1
13	Milton Rd & Humphreys St	C	29.6
14	Milton Rd & Beaver St	B	12.9

Level-of-Service (LOS) Criteria

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

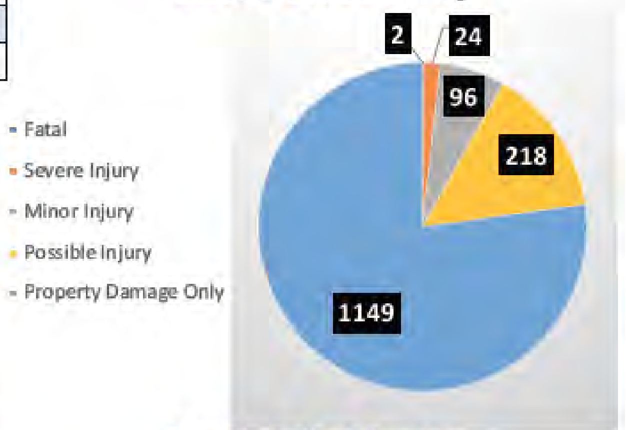
MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STUDY CORRIDOR AT A GLANCE...
EXISTING CORRIDOR SAFETY CONSIDERATIONS

Crash Severity Comparison

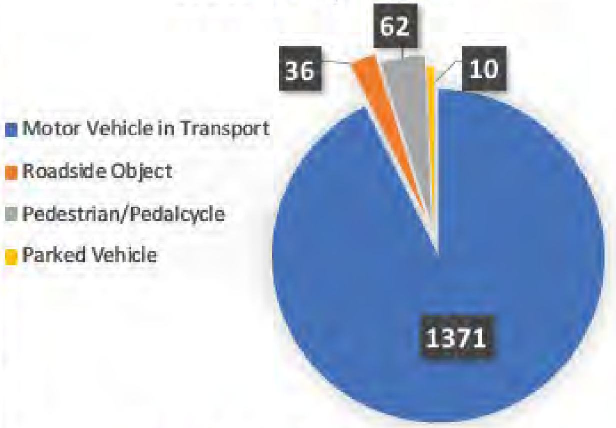
Crash Severity	Number	US 180 %	Statewide Average %*
Fatal	2	0.1%	1%
Injury	338	23%	31%
Property Damage Only	1,149	77%	68%

Percentage of Crashes Based on Severity



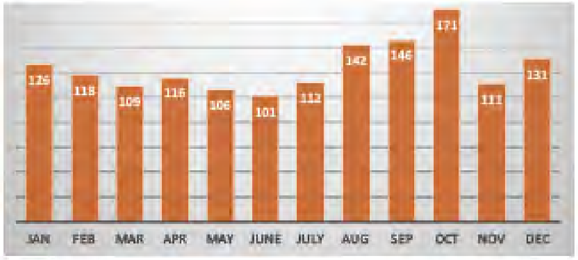
Crash Map by Injury Severity

Crashes by Cause

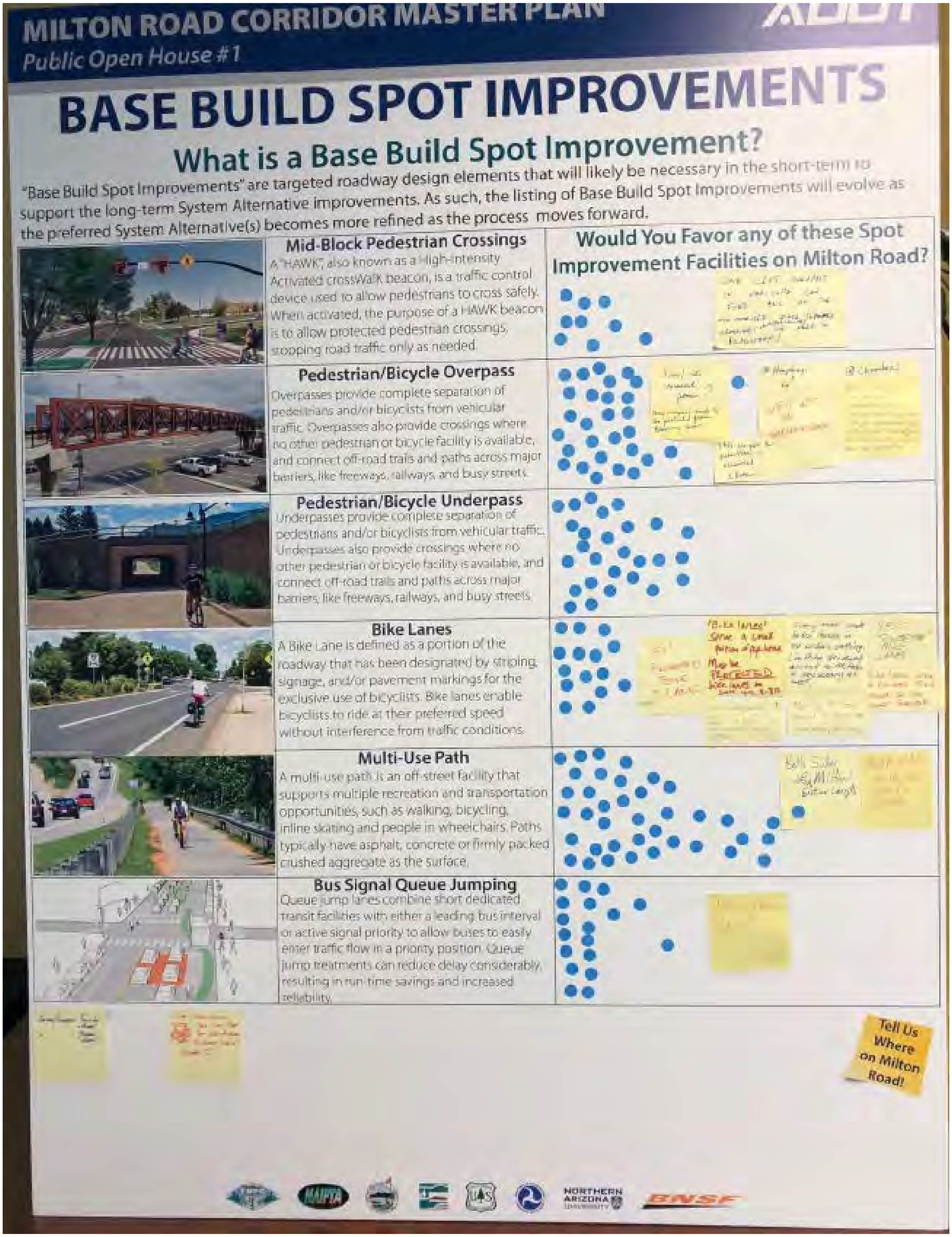


Total Crashes by Year

Total Crashes by Month



Appendix G: Station 2 Display Board Results



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

BASE BUILD SPOT IMPROVEMENTS

What is a Base Build Spot Improvement?

"Base Build Spot Improvements" are targeted roadway design elements that will likely be necessary in the short-term to support the long-term System Alternative improvements. As such, the listing of Base Build Spot Improvements will evolve as the preferred System Alternative(s) becomes more refined as the process moves forward.

Would You Favor any of these Spot Improvement Facilities on Milton Road?

Mid-Block Pedestrian Crossings

A "HAWK," also known as a High-intensity Activated crossWalK beacon, is a traffic control device used to allow pedestrians to cross safely. When activated, the purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed.

Pedestrian/Bicycle Overpass

Overpasses provide complete separation of pedestrians and/or bicyclists from vehicular traffic. Overpasses also provide crossings where no other pedestrian or bicycle facility is available, and connect off-road trails and paths across major barriers, like freeways, railways, and busy streets.

Pedestrian/Bicycle Underpass

Underpasses provide complete separation of pedestrians and/or bicyclists from vehicular traffic. Underpasses also provide crossings where no other pedestrian or bicycle facility is available, and connect off-road trails and paths across major barriers, like freeways, railways, and busy streets.

Bike Lanes

A Bike Lane is defined as a portion of the roadway that has been designated by striping, signage, and/or pavement markings for the exclusive use of bicyclists. Bike lanes enable bicyclists to ride at their preferred speed without interference from traffic conditions.

'Bike lanes' Serve a small portion of population
May be PROTECTED bike lanes [illegible]

Multi-Use Path

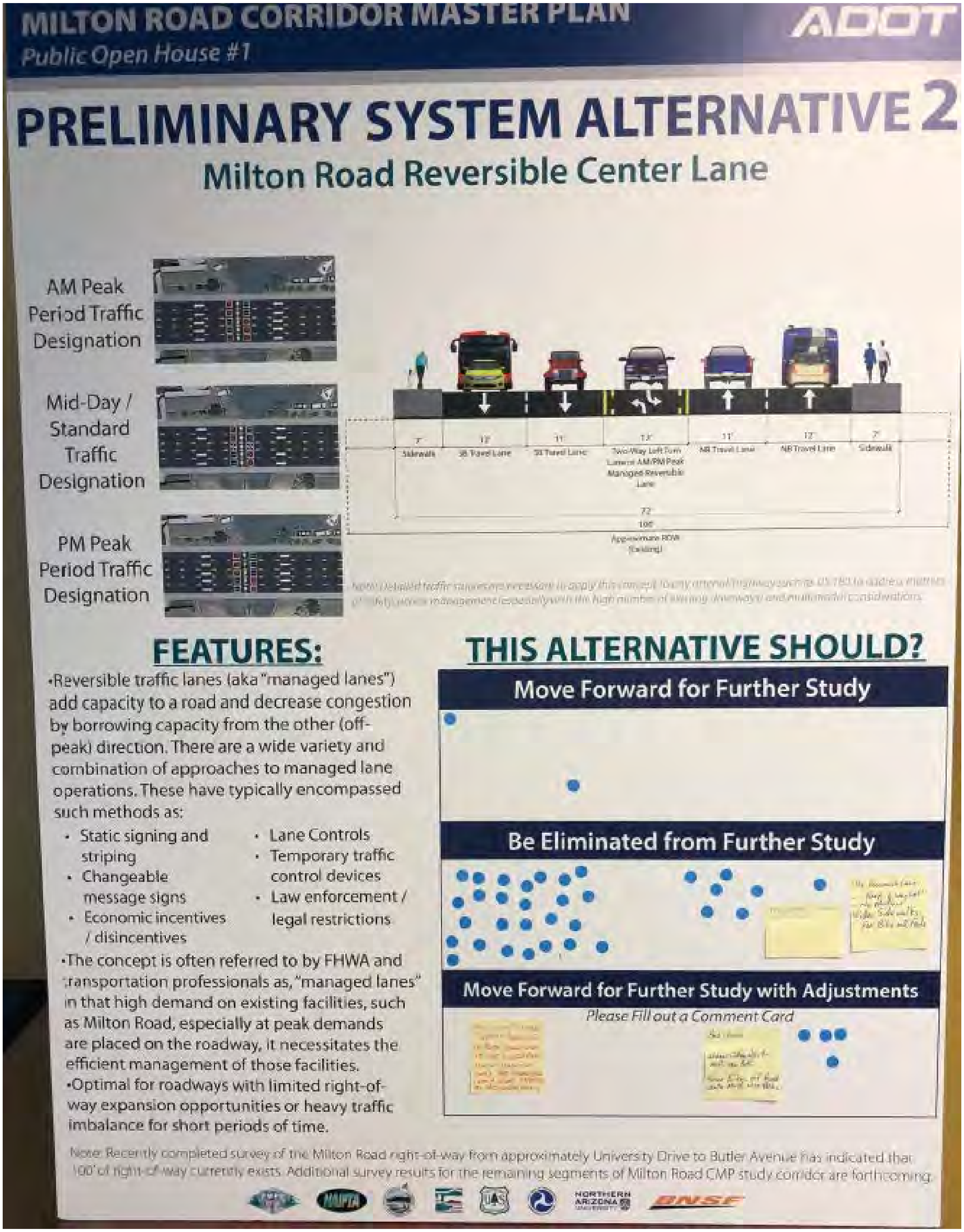
A multi-use path is an off-street facility that supports multiple recreation and transportation opportunities, such as walking, bicycling, inline skating and people in wheelchairs. Paths typically have asphalt, concrete or firmly packed crushed aggregate as the surface.

Both Sides of Milton Entire Length

Bus Signal Queue Jumping

Queue jump lanes combine short dedicated transit facilities with either a leading bus interval or active signal priority to allow buses to easily enter traffic flow in a priority position. Queue jump treatments can reduce delay considerably, resulting in run-time savings and increased reliability.

Tell Us Where on Milton Road!



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 2

Milton Road Reversible Center Lane

AM Peak Period Traffic Designation

Mid-Day / Standard Traffic Designation

PM Peak Period Traffic Designation

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
- The concept is often referred to by FHWA and transportation professionals as, "managed lanes" in that high demand on existing facilities, such as Milton Road, especially at peak demands are placed on the roadway, it necessitates the efficient management of those facilities.
- Optimal for roadways with limited right-of-way expansion opportunities or heavy traffic imbalance for short periods of time.

THIS ALTERNATIVE SHOULD?

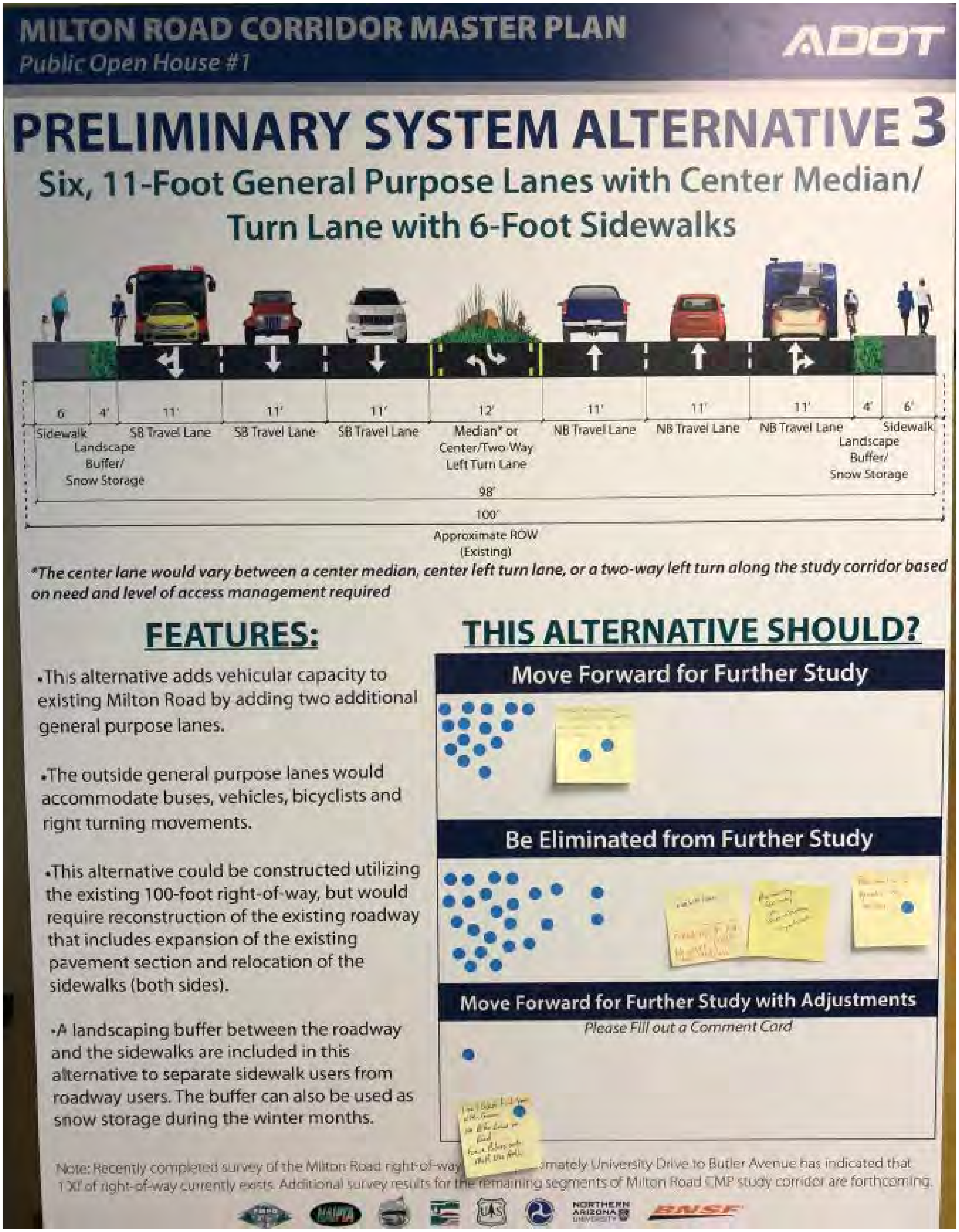
Move Forward for Further Study

Be Eliminated from Further Study

Move Forward for Further Study with Adjustments

Please Fill out a Comment Card

Note: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 3

Six, 11-Foot General Purpose Lanes with Center Median/ Turn Lane with 6-Foot Sidewalks

6'	4'	11'	11'	11'	12'	11'	11'	11'	4'	6'
Sidewalk	Landscape Buffer/ Snow Storage	SB Travel Lane	SB Travel Lane	SB Travel Lane	Median* or Center/Two Way Left Turn Lane	NB Travel Lane	NB Travel Lane	NB Travel Lane	Landscape Buffer/ Snow Storage	Sidewalk

98'

100'

Approximate ROW (Existing)

**The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on need and level of access management required*

FEATURES:

- This alternative adds vehicular capacity to existing Milton Road by adding two additional general purpose lanes.
- The outside general purpose lanes would accommodate buses, vehicles, bicyclists and right turning movements.
- This alternative could be constructed utilizing the existing 100-foot right-of-way, but would require reconstruction of the existing roadway that includes expansion of the existing pavement section and relocation of the sidewalks (both sides).
- A landscaping buffer between the roadway and the sidewalks are included in this alternative to separate sidewalk users from roadway users. The buffer can also be used as snow storage during the winter months.

THIS ALTERNATIVE SHOULD?

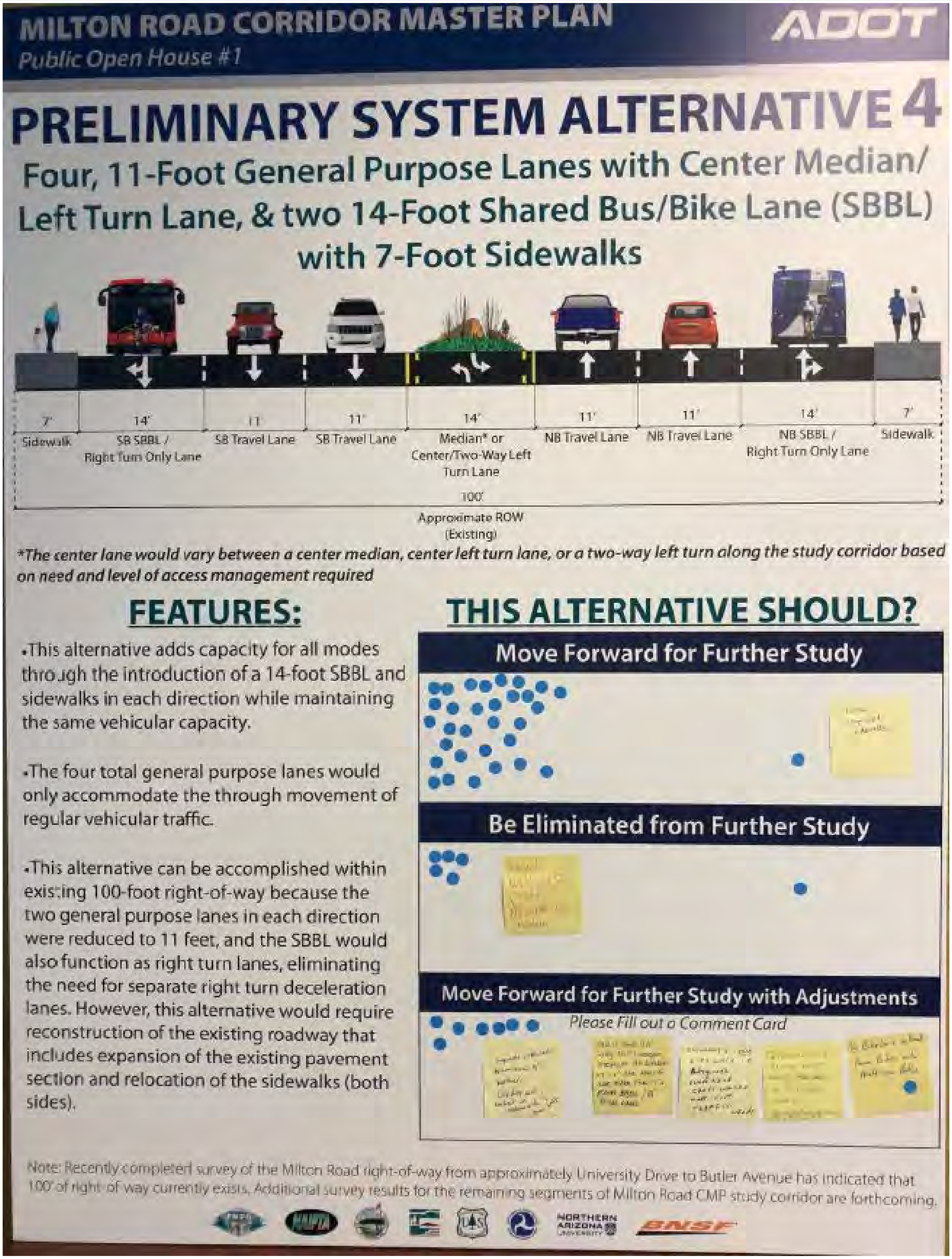
Move Forward for Further Study

Be Eliminated from Further Study

Move Forward for Further Study with Adjustments

Please Fill out a Comment Card

Note: Recently completed survey of the Milton Road right-of-way [illegible]imately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 4

Four, 11-Foot General Purpose Lanes with Center Median/ Left Turn Lane, & two 14-Foot Shared Bus/Bike Lane (SBBL) with 7-Foot Sidewalks

**The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on need and level of access management required*

FEATURES:

- This alternative adds capacity for all modes through the introduction of a 14-foot SBBL and sidewalks in each direction while maintaining the same vehicular capacity.
- The four total general purpose lanes would only accommodate the through movement of regular vehicular traffic.
- This alternative can be accomplished within existing 100-foot right-of-way because the two general purpose lanes in each direction were reduced to 11 feet, and the SBBL would also function as right turn lanes, eliminating the need for separate right turn deceleration lanes. However, this alternative would require reconstruction of the existing roadway that includes expansion of the existing pavement section and relocation of the sidewalks (both sides).

THIS ALTERNATIVE SHOULD?

Move Forward for Further Study

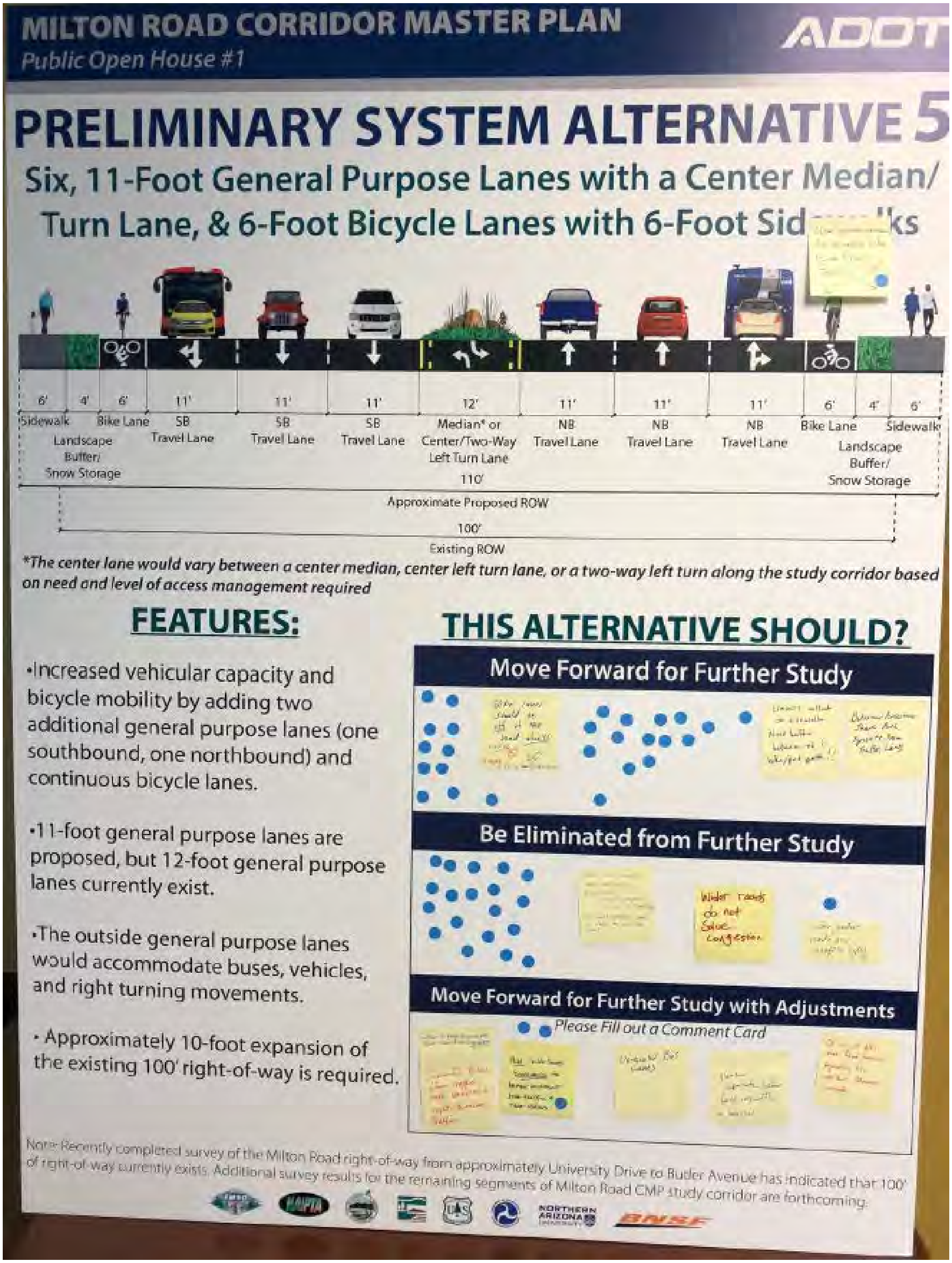
Be Eliminated from Further Study

Move Forward for Further Study with Adjustments

Please Fill out a Comment Card

Note: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.

Appendix H: Station 3 Display Boards Results



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 5

Six, 11-Foot General Purpose Lanes with a Center Median/ Turn Lane, & 6-Foot Bicycle Lanes with 6-Foot Sid[illegible]ks

6'	4'	6'	11'	11'	11'	12'	11'	11'	11'	6'	4'	6'
Sidewalk	Landscape Buffer/ Snow Storage	Bike Lane	SB Travel Lane	SB Travel Lane	SB Travel Lane	Median* or Center/Two-Way Left Turn Lane	NB Travel Lane	NB Travel Lane	NB Travel Lane	Bike Lane	Landscape Buffer/ Snow Storage	Sidewalk

110'
Approximate Proposed ROW

100'
Existing ROW

**The center lane would vary between a center median, center left turn lane, or a two-way left turn along the study corridor based on need and level of access management required*

FEATURES:

- Increased vehicular capacity and bicycle mobility by adding two additional general purpose lanes (one southbound, one northbound) and continuous bicycle lanes.
- 11-foot general purpose lanes are proposed, but 12-foot general purpose lanes currently exist.
- The outside general purpose lanes would accommodate buses, vehicles, and right turning movements.
- Approximately 10-foot expansion of the existing 100' right-of-way is required.

THIS ALTERNATIVE SHOULD?

Move Forward for Further Study

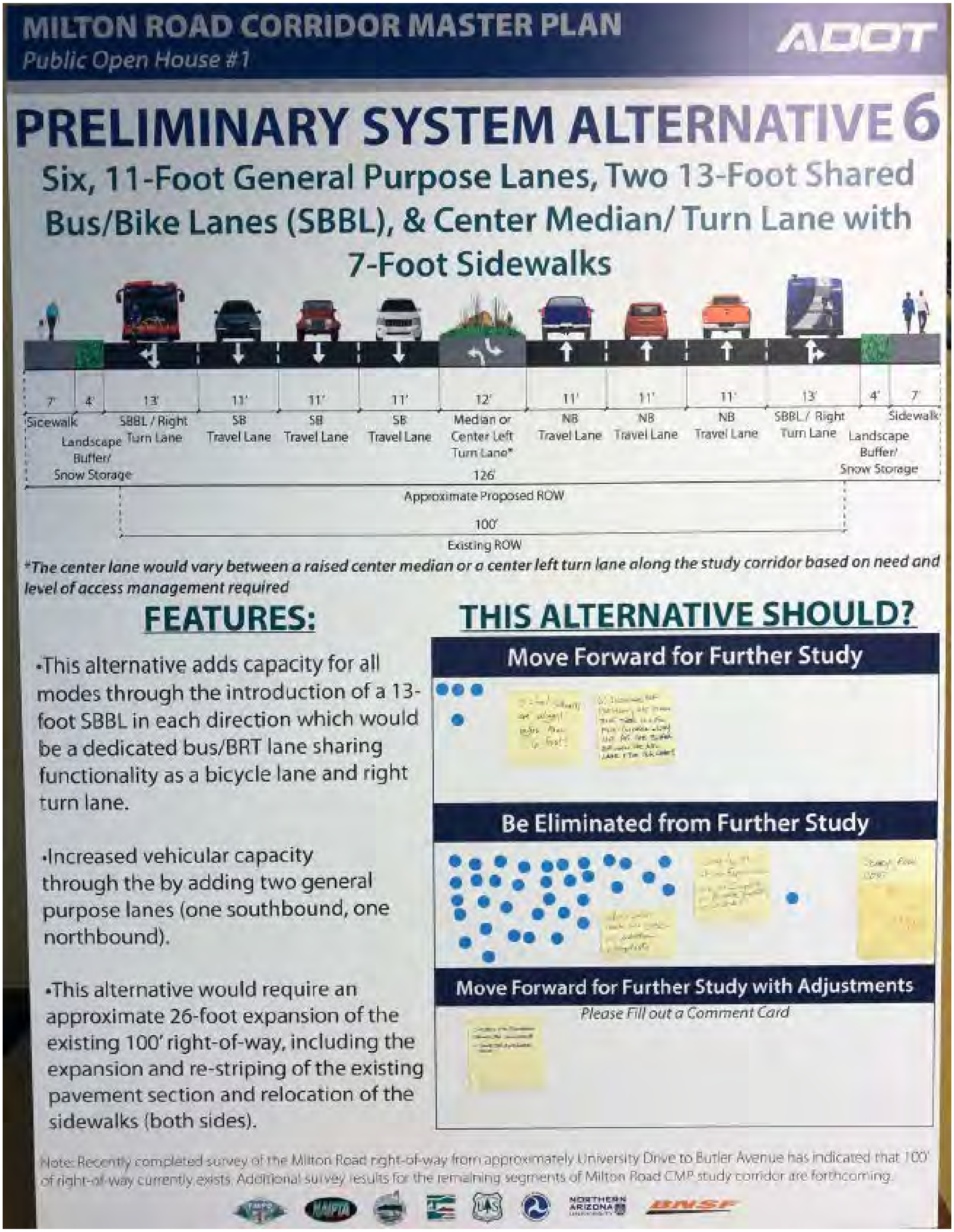
Be Eliminated from Further Study

Wider roads do not solve congestion

Move Forward for Further Study with Adjustments

Please Fill out a Comment Card

Note: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 6

Six, 11-Foot General Purpose Lanes, Two 13-Foot Shared Bus/Bike Lanes (SBBL), & Center Median/ Turn Lane with 7-Foot Sidewalks

7'	4'	13'	11'	11'	11'	12'	11'	11'	11'	13'	4'	7'
Sidewalk	Landscape Buffer/ Snow Storage	SBBL / Right Turn Lane	SB Travel Lane	SB Travel Lane	SB Travel Lane	Median or Center Left Turn Lane*	NB Travel Lane	NB Travel Lane	NB Travel Lane	SBBL / Right Turn Lane	Landscape Buffer/ Snow Storage	Sidewalk

126'
Approximate Proposed ROW

100'
Existing ROW

**The center lane would vary between a raised center median or a center left turn lane along the study corridor based on need and level of access management required*

FEATURES:

- This alternative adds capacity for all modes through the introduction of a 13-foot SBBL in each direction which would be a dedicated bus/BRT lane sharing functionality as a bicycle lane and right turn lane.
- Increased vehicular capacity through the by adding two general purpose lanes (one southbound, one northbound).
- This alternative would require an approximate 26-foot expansion of the existing 100' right-of-way, including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

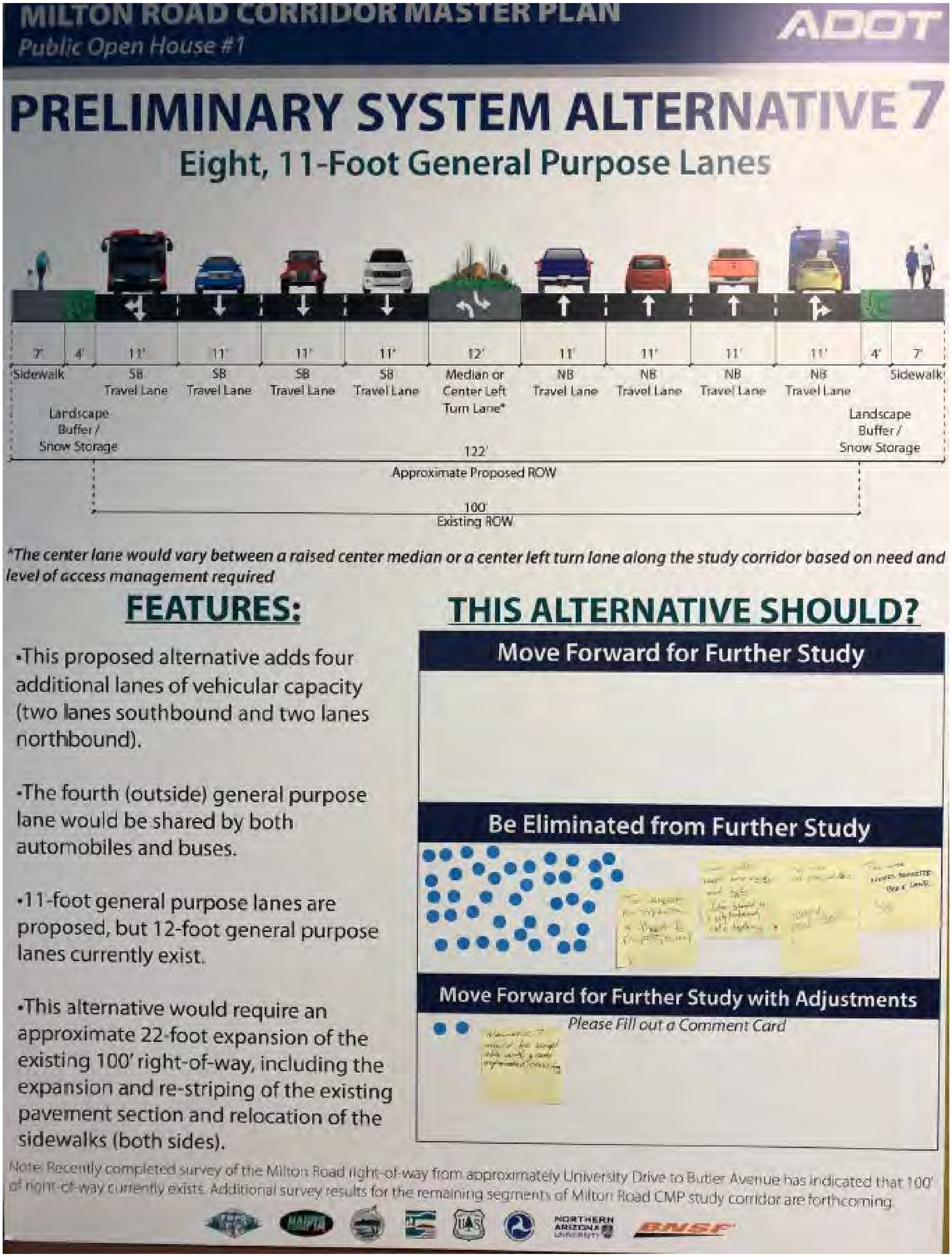
THIS ALTERNATIVE SHOULD?

Move Forward for Further Study

Be Eliminated from Further Study

Move Forward for Further Study with Adjustments
Please Fill out a Comment Card

Note: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

PRELIMINARY SYSTEM ALTERNATIVE 7

Eight, 11-Foot General Purpose Lanes

**The center lane would vary between a raised center median or a center left turn lane along the study corridor based on need and level of access management required*

FEATURES:

- This proposed alternative adds four additional lanes of vehicular capacity (two lanes southbound and two lanes northbound).
- The fourth (outside) general purpose lane would be shared by both automobiles and buses.
- 11-foot general purpose lanes are proposed, but 12-foot general purpose lanes currently exist.
- This alternative would require an approximate 22-foot expansion of the existing 100' right-of-way, including the expansion and re-striping of the existing pavement section and relocation of the sidewalks (both sides).

THIS ALTERNATIVE SHOULD?

Move Forward for Further Study

Be Eliminated from Further Study

[illegible]

[illegible]

[illegible]

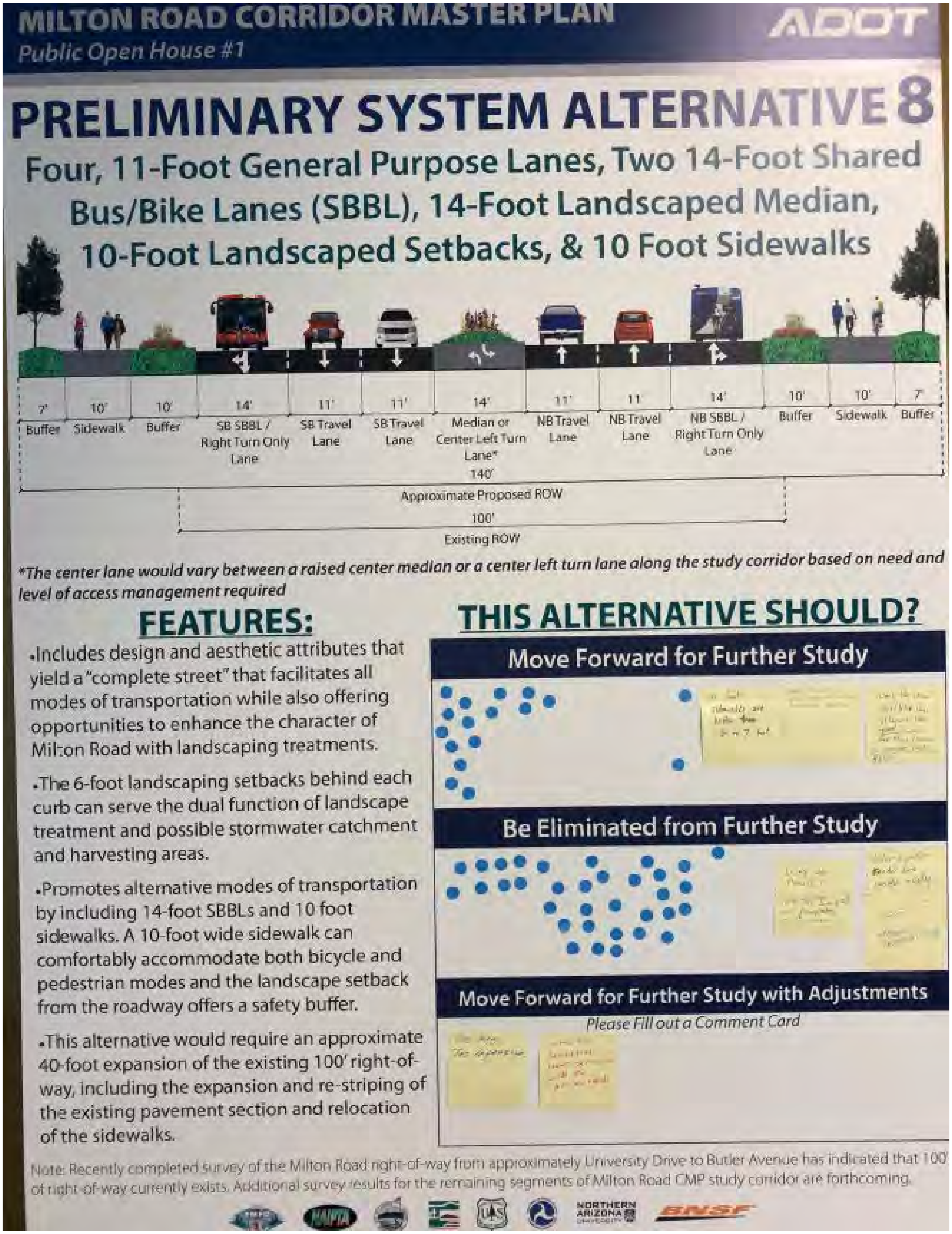
Too wide
Needs protected
Bike Lane

Move Forward for Further Study with Adjustments

Please Fill out a Comment Card

[illegible]

Note: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 8

Four, 11-Foot General Purpose Lanes, Two 14-Foot Shared Bus/Bike Lanes (SBBL), 14-Foot Landscaped Median, 10-Foot Landscaped Setbacks, & 10 Foot Sidewalks

7'	10'	10'	14'	11'	11'	14'	11'	11	14'	10'	10'	7'
Buffer	Sidewalk	Buffer	SB SBBL / Right Turn Only Lane	SB Travel Lane	SB Travel Lane	Median or Center Left Turn Lane*	NB Travel Lane	NB Travel Lane	NB SBBL / Right Turn Only Lane	Buffer	Sidewalk	Buffer

140'
Approximate Proposed ROW

100'
Existing ROW

**The center lane would vary between a raised center median or a center left turn lane along the study corridor based on need and level of access management required*

FEATURES:

- Includes design and aesthetic attributes that yield a "complete street" that facilitates all modes of transportation while also offering opportunities to enhance the character of Milton Road with landscaping treatments.
- The 6-foot landscaping setbacks behind each curb can serve the dual function of landscape treatment and possible stormwater catchment and harvesting areas.
- Promotes alternative modes of transportation by including 14-foot SBBLs and 10 foot sidewalks. A 10-foot wide sidewalk can comfortably accommodate both bicycle and pedestrian modes and the landscape setback from the roadway offers a safety buffer.
- This alternative would require an approximate 40-foot expansion of the existing 100' right-of-way, including the expansion and re-striping of the existing pavement section and relocation of the sidewalks.

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: Recently completed survey of the Milton Road right-of-way from approximately University Drive to Butler Avenue has indicated that 100' of right-of-way currently exists. Additional survey results for the remaining segments of Milton Road CMP study corridor are forthcoming.

Appendix I: Station 4 Display Boards Results

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 9

Milton Road No Build + Lone Tree Design Concept Report

FEATURES:

- This alternative 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 ¾ mile due east of Milton Road and is generally a two-lane collector roadway that primarily provides access for localdestinations.
- Significant features such as a traffic interchange to connect with I-40 to the south, and a grade-separated crossing of the BNSF railway to the north are potenial instrumental facilities necessary to enhance the effectiveness of the Lone Tree Road Alternative Route.
- This alternative recommends 4, 12-foot general purpose lanes, a raised median, bicycle lanes, a sidewalk on one side and a F.U.T.S. trail on the other side.

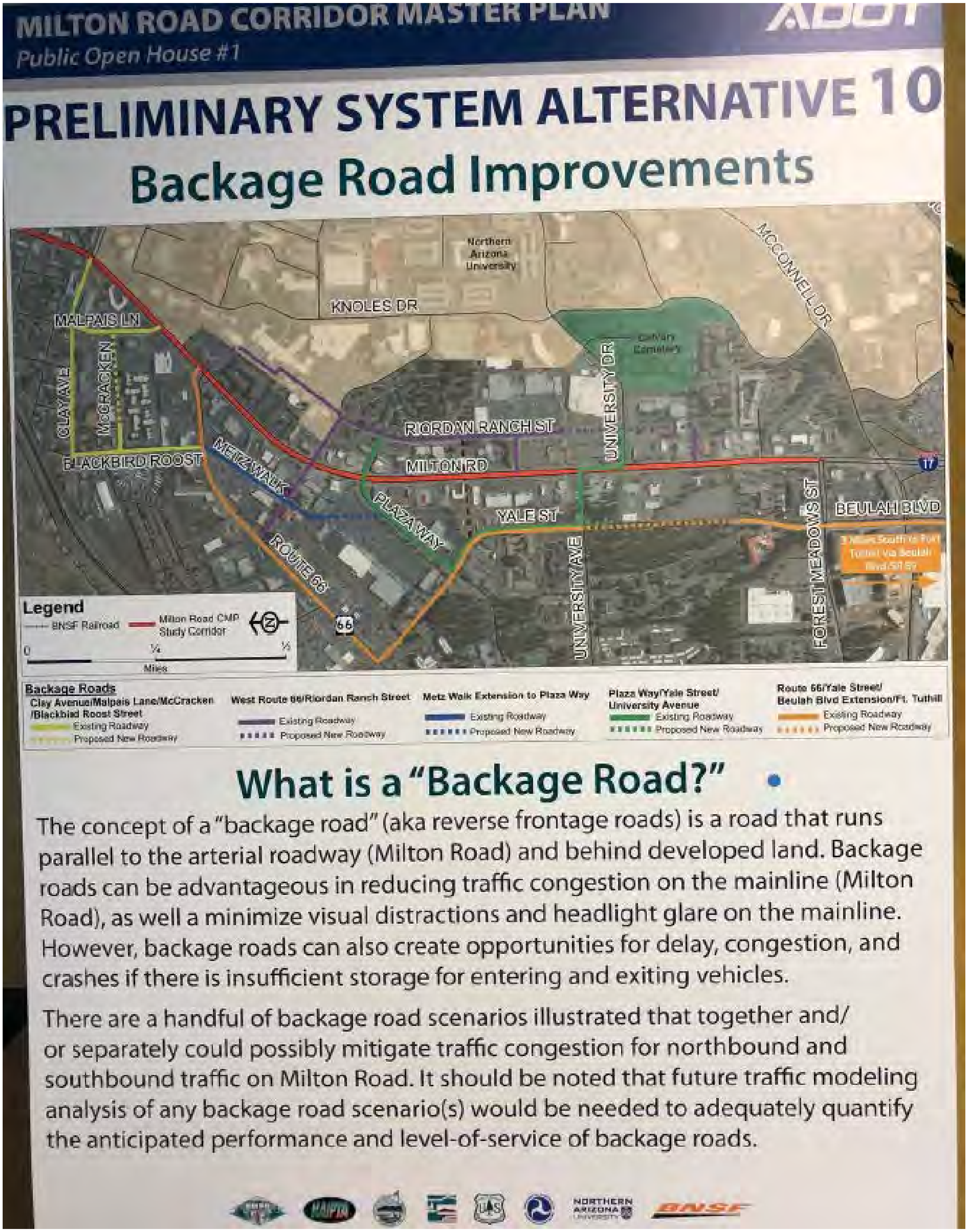
THIS ALTERNATIVE SHOULD?

Move Forward for Further Study

Be Eliminated from Further Study

Move Forward for Further Study with Adjustments

Please Fill out a Comment Card



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVE 10

Backage Road Improvements

Legend
BNSF Railroad
Milton Road CMP Study Corridor
0 ¼ ½ Miles

Backage Roads

Clay Avenue/Malpais Lane/McCracken /Blackbird Roost Street
- Existing Roadway
- Proposed New Roadway

West Route 66/Riordan Ranch Street
- Existing Roadway
- Proposed New Roadway

Metz Walk Extension to Plaza Way
- Existing Roadway
- Proposed New Roadway

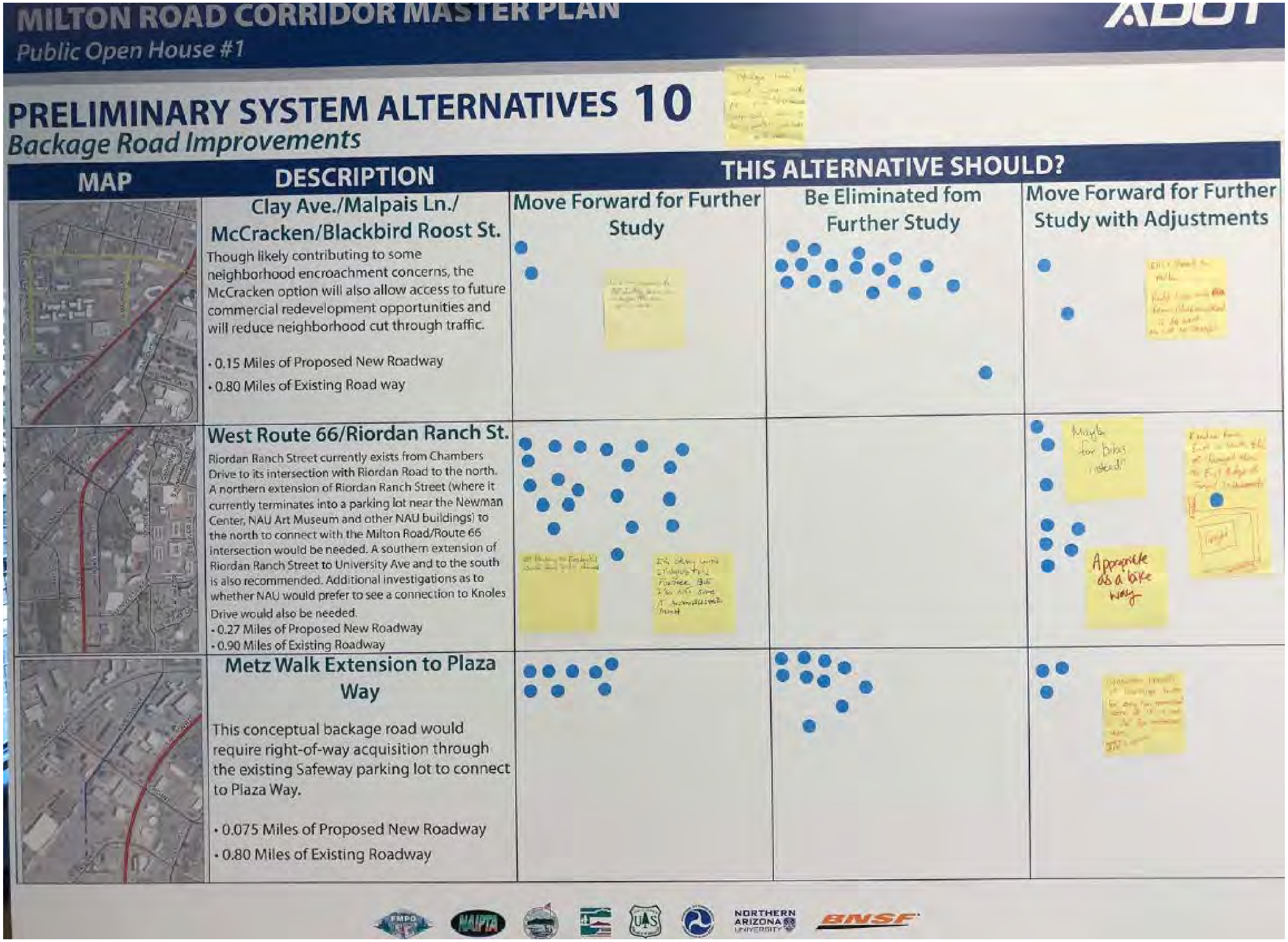
Plaza Way/Yale Street/ University Avenue
- Existing Roadway
- Proposed New Roadway

Route 66/Yale Street/ Beulah Blvd Extension/Ft. Tuthill
- Existing Roadway
- Proposed New Roadway

What is a "Backage Road?"

The concept of a "backage road" (aka reverse frontage roads) is a road that runs parallel to the arterial roadway (Milton Road) and behind developed land. Backage roads can be advantageous in reducing traffic congestion on the mainline (Milton Road), as well a minimize visual distractions and headlight glare on the mainline. However, backage roads can also create opportunities for delay, congestion, and crashes if there is insufficient storage for entering and exiting vehicles.

There are a handful of backage road scenarios illustrated that together and/or separately could possibly mitigate traffic congestion for northbound and southbound traffic on Milton Road. It should be noted that future traffic modeling analysis of any backage road scenario(s) would be needed to adequately quantify the anticipated performance and level-of-service of backage roads.

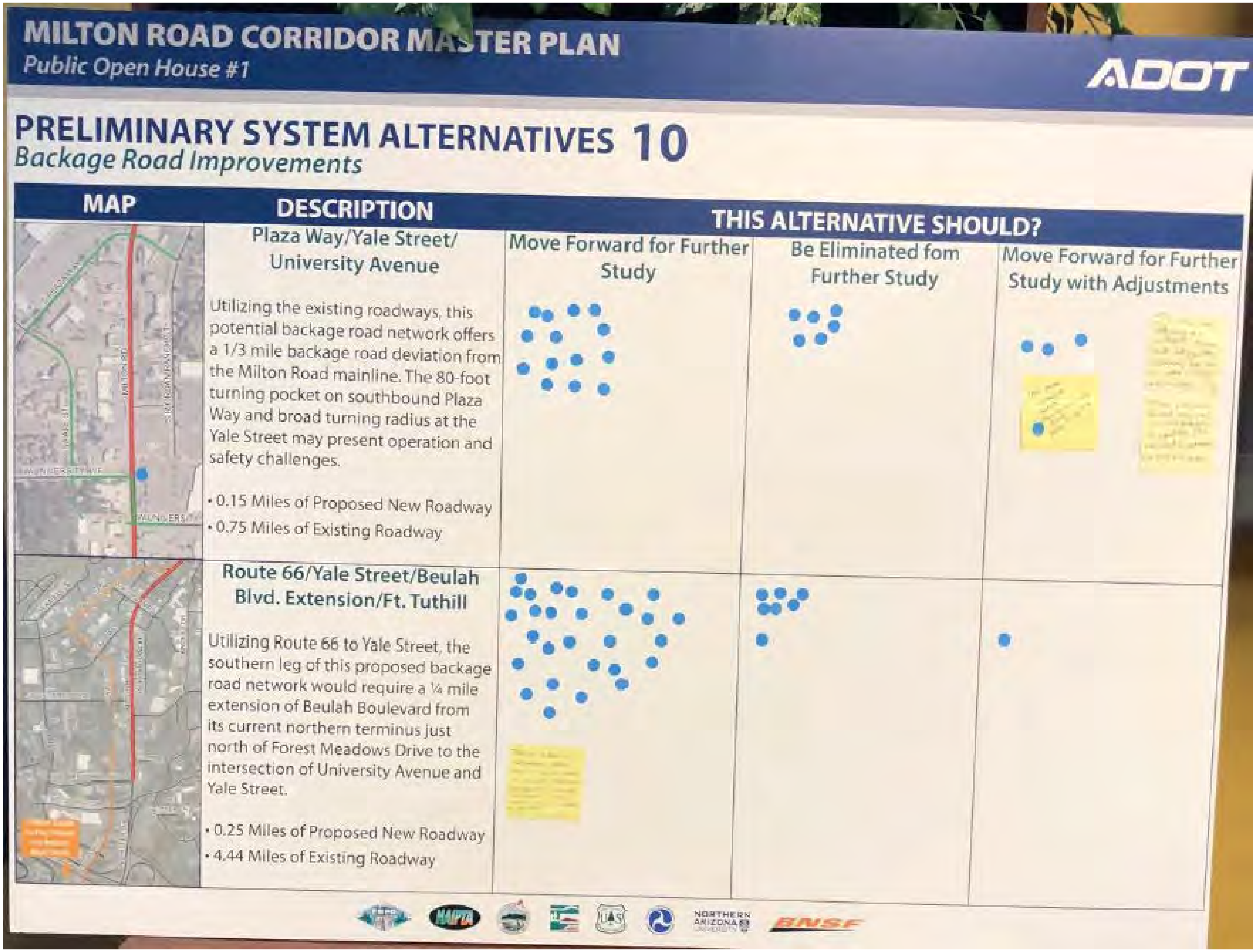


MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVES 10

Backage Road Improvements

MAP	DESCRIPTION	THIS ALTERNATIVE SHOULD? Move Forward for Further Study	Be Eliminated fom Further Study	Move Forward for Further Study with Adjustments
	Clay Ave./Malpais Ln./ McCracken/Blackbird Roost St. Though likely contributing to some neighborhood encroachment concerns, the McCracken option will also allow access to future commercial redevelopment opportunities and will reduce neighborhood cut through traffic. • 0.15 Miles of Proposed New Roadway • 0.80 Miles of Existing Road way			
	West Route 66/Riordan Ranch St. Riordan Ranch Street currently exists from Chambers Drive to its intersection with Riordan Road to the north. A northern extension of Riordan Ranch Street (where it currently terminates into a parking lot near the Newman Center, NAU Art Museum and other NAU buildings) to the north to connect with the Milton Road/Route 66 intersection would be needed. A southern extension of Riordan Ranch Street to University Ave and to the south is also recommended. Additional investigations as to whether NAU would prefer to see a connection to Knoles Drive would also be needed. • 0.27 Miles of Proposed New Roadway • 0.90 Miles of Existing Roadway			Maybe for bikes instead! Appropriate as a bike way
	Metz Walk Extension to Plaza Way This conceptual backage road would require right-of-way acquisition through the existing Safeway parking lot to connect to Plaza Way. • 0.075 Miles of Proposed New Roadway • 0.80 Miles of Existing Roadway			



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

PRELIMINARY SYSTEM ALTERNATIVES 10
Backage Road Improvements

MAP	DESCRIPTION	THIS ALTERNATIVE SHOULD? Move Forward for Further Study	THIS ALTERNATIVE SHOULD? Be Eliminated fom Further Study	THIS ALTERNATIVE SHOULD? Move Forward for Further Study with Adjustments
	Plaza Way/Yale Street/ University Avenue Utilizing the existing roadways, this potential backage road network offers a 1/3 mile backage road deviation from the Milton Road mainline. The 80-foot turning pocket on southbound Plaza Way and broad turning radius at the Yale Street may present operation and safety challenges. • 0.15 Miles of Proposed New Roadway • 0.75 Miles of Existing Roadway			
	Route 66/Yale Street/Beulah Blvd. Extension/Ft. Tuthill Utilizing Route 66 to Yale Street, the southern leg of this proposed backage road network would require a ¼ mile extension of Beulah Boulevard from its current northern terminus just north of Forest Meadows Drive to the intersection of University Avenue and Yale Street. • 0.25 Miles of Proposed New Roadway • 4.44 Miles of Existing Roadway			

Appendix J: Mapping Exercise

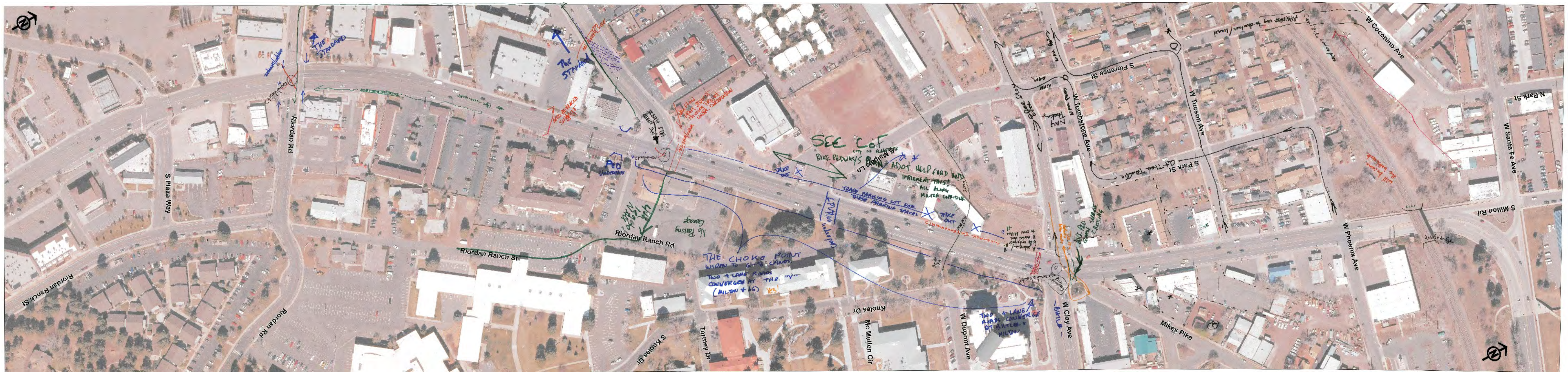
The entire roll plot cannot be included in this report due to their size, however, the files can be downloaded using the link provided below:

https://eftp.mbakerintl.com/message/oj03B7zjlGXJrAtlP968Ob

Contact brian.snider@mbakerintl.com if the link is not working or has expired.

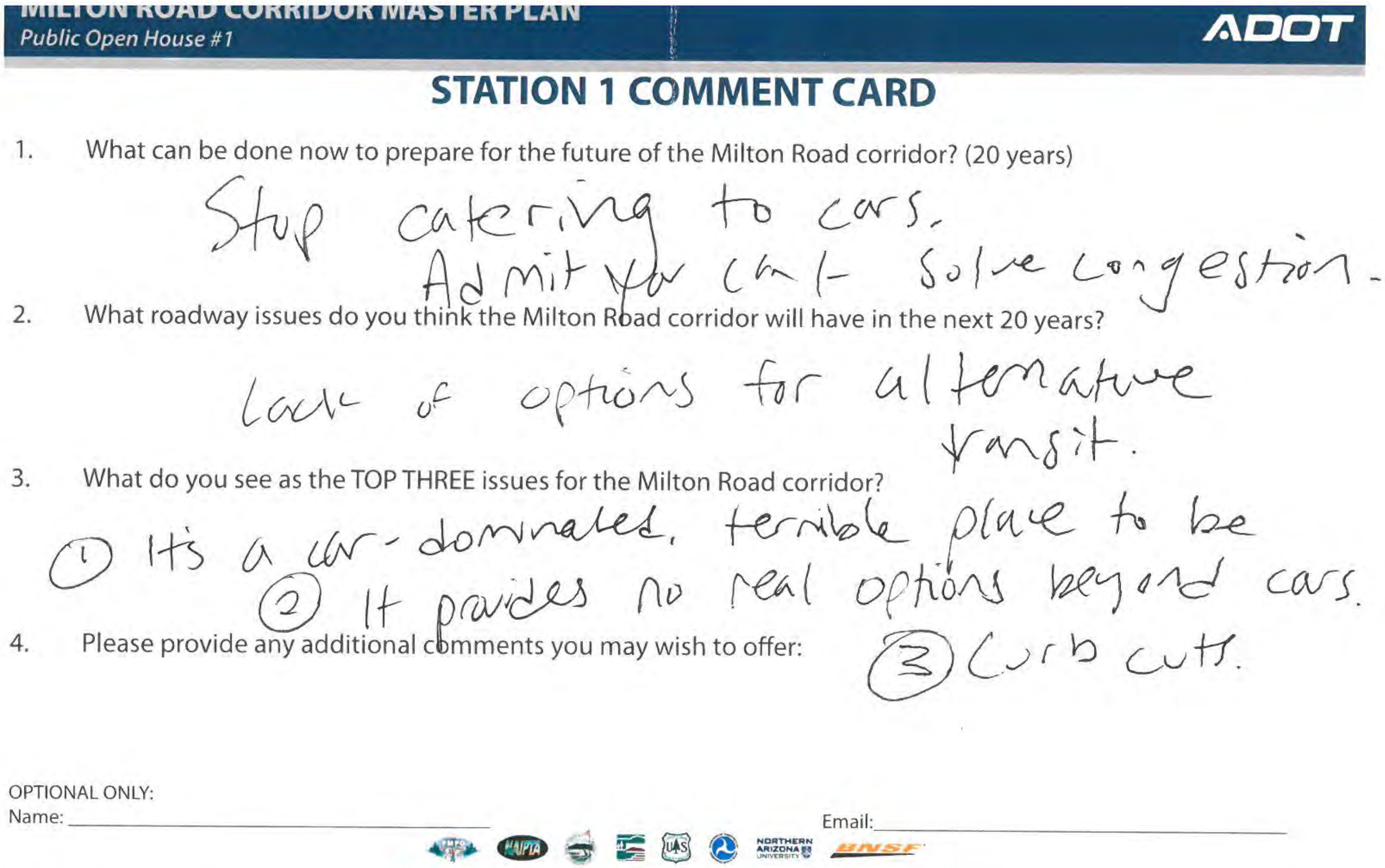
Segment 1: Forest Meadows Street to Plaza Way

Segment 2: Plaza Way to Santa Fe Avenue



Segment 3: Sitgrevas Street to Beaver Street

Appendix: K: Station 1 Comment Cards



MILTON ROAD 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 Milton Road corridor? (20 years)

Stop catering to cars.
Admit you can't solve congestion.

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

Lack of options for alternative transit.

3. What do you see as the TOP THREE issues for the Milton Road corridor?

① It's a car-dominated, terrible place to be
② It provides no real options beyond cars.
③ Curb cuts.

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: __________ Email: __________

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the Milton Road corridor? (20 years)

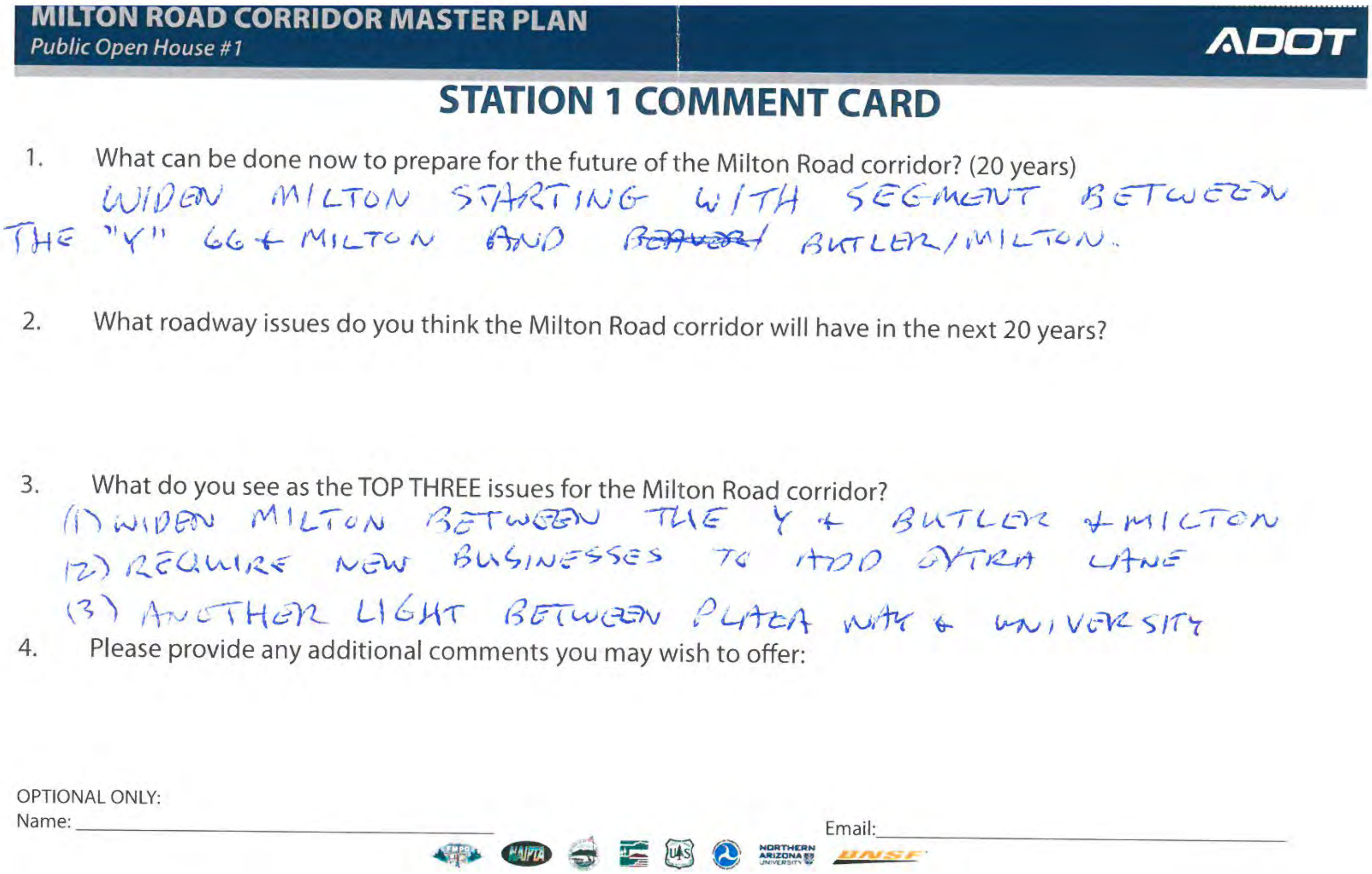
2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the Milton Road corridor?

4. Please provide any additional comments you may wish to offer:

and the bill to NAU!

OPTIONAL ONLY:
Name: ________________________ Email: ________________________



MILTON ROAD 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 Milton Road corridor? (20 years)

WIDEN MILTON STARTING WITH SEGMENT BETWEEN THE "Y" 66 + MILTON AND ~~BEAVER/~~ BUTLER/MILTON.

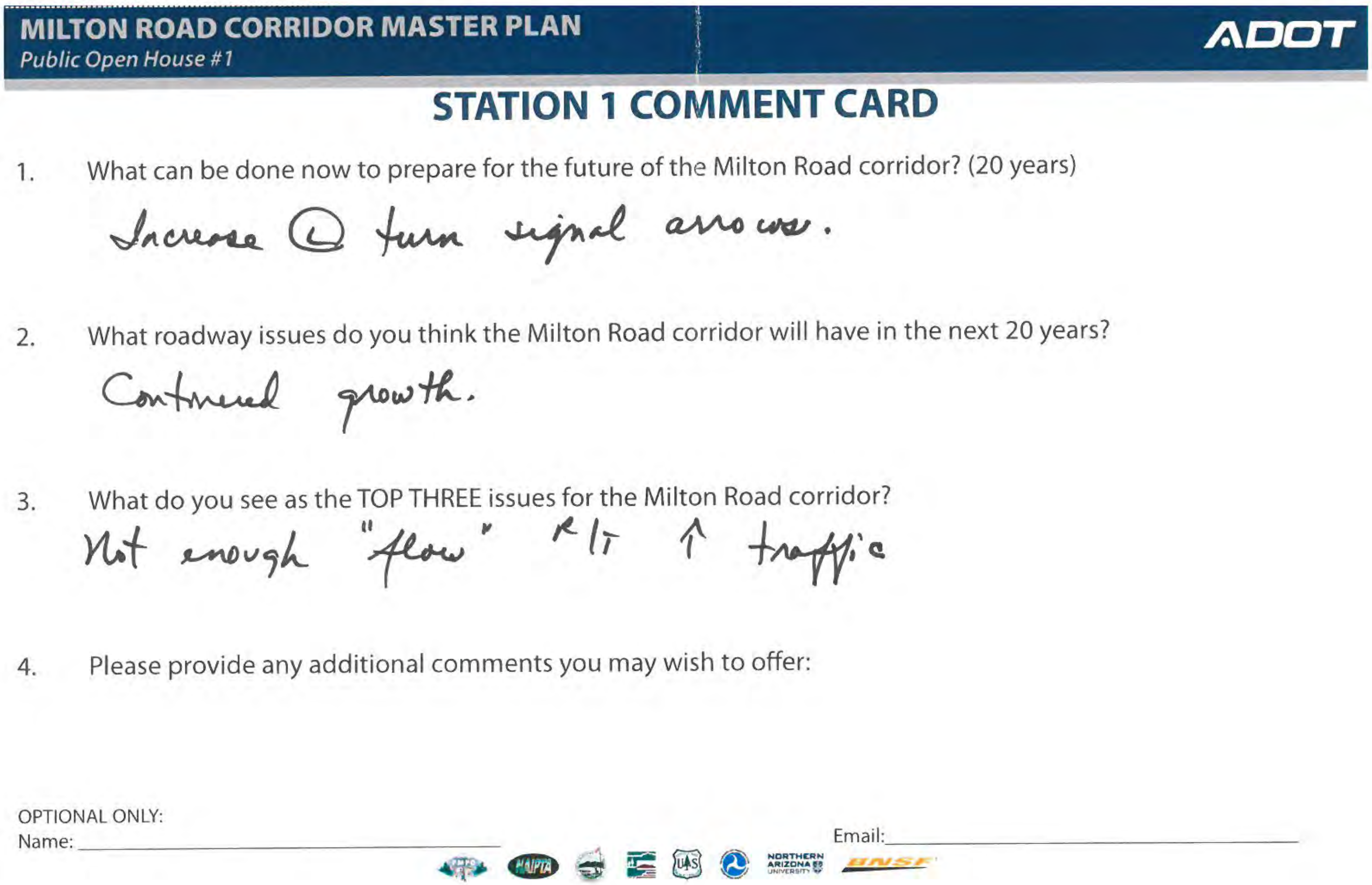
2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the Milton Road corridor?

(1) WIDEN MILTON BETWEEN THE Y + BUTLER + MILTON
(2) REQUIRE NEW BUSINESSES TO ADD EXTRA LANE
(3) ANOTHER LIGHT BETWEEN PLAZA WAY & UNIVERSITY

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ____________________ Email: ____________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the Milton Road corridor? (20 years)

Increase Ⓛ turn signal arrows.

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

Continued growth.

3. What do you see as the TOP THREE issues for the Milton Road corridor?

Not enough "flow" r/t ↑ traffic

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________
Email: ______________________

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 1 COMMENT CARD

1. What can be done now to prepare for the futu 0 years)

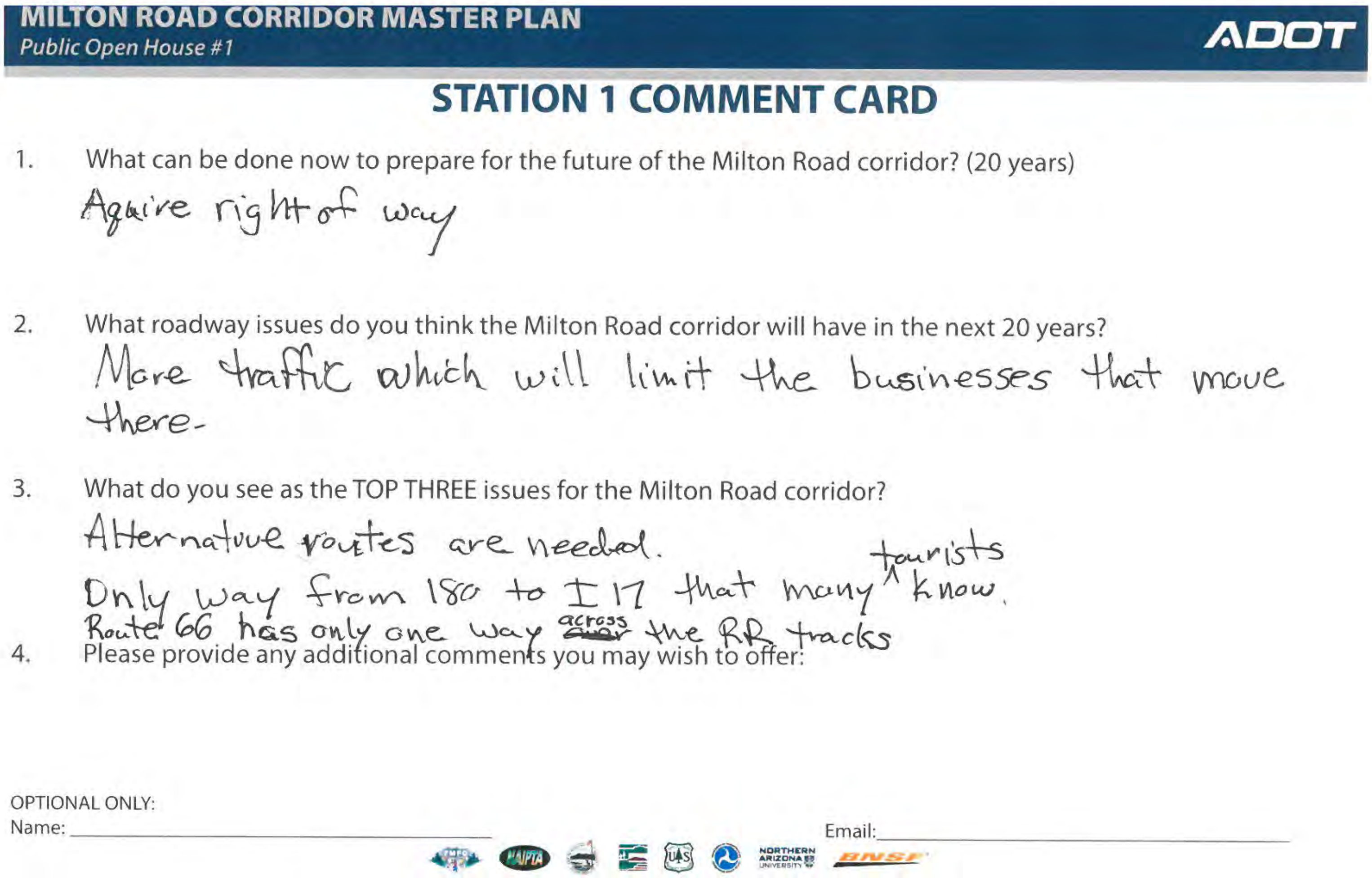
2. What roadway issues do you think t 20 years?

3. What do you see as the TOP THREE

4. Please provide any additional com

Make Milton
a place
people want
to be.

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the Milton Road corridor? (20 years)

Aquire right of way

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

More traffic which will limit the businesses that move there.

3. What do you see as the TOP THREE issues for the Milton Road corridor?

Alternative routes are needed.

Only way from 180 to I 17 that many tourists know.

Route 66 has only one way ~~over~~ across the RR tracks

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________

MILTON ROAD 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 Milton Road corridor? (20 years)

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the Milton Road corridor?

– ugly
– splits Flagstaff in 2
– unsafe to cross / not enough crossings

4. Please provide any additional comments you may wish to offer:

An option not shown is for COF to take ownership of Milton, and to create a beautiful entry boulevard through the heart of the city

OPTIONAL ONLY:
Name: ______________________
Email: [redacted]

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the Milton Road corridor? (20 years)

THE BEST ANSWER IS TO STOP GROWTH, BUT THAT IS NOT GOING TO HAPPEN –

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

MORE TRAFFIC + SAFETY ISSUES, JUST LIKE WE HAVE HAD DURING THE PAST 20 YRS.

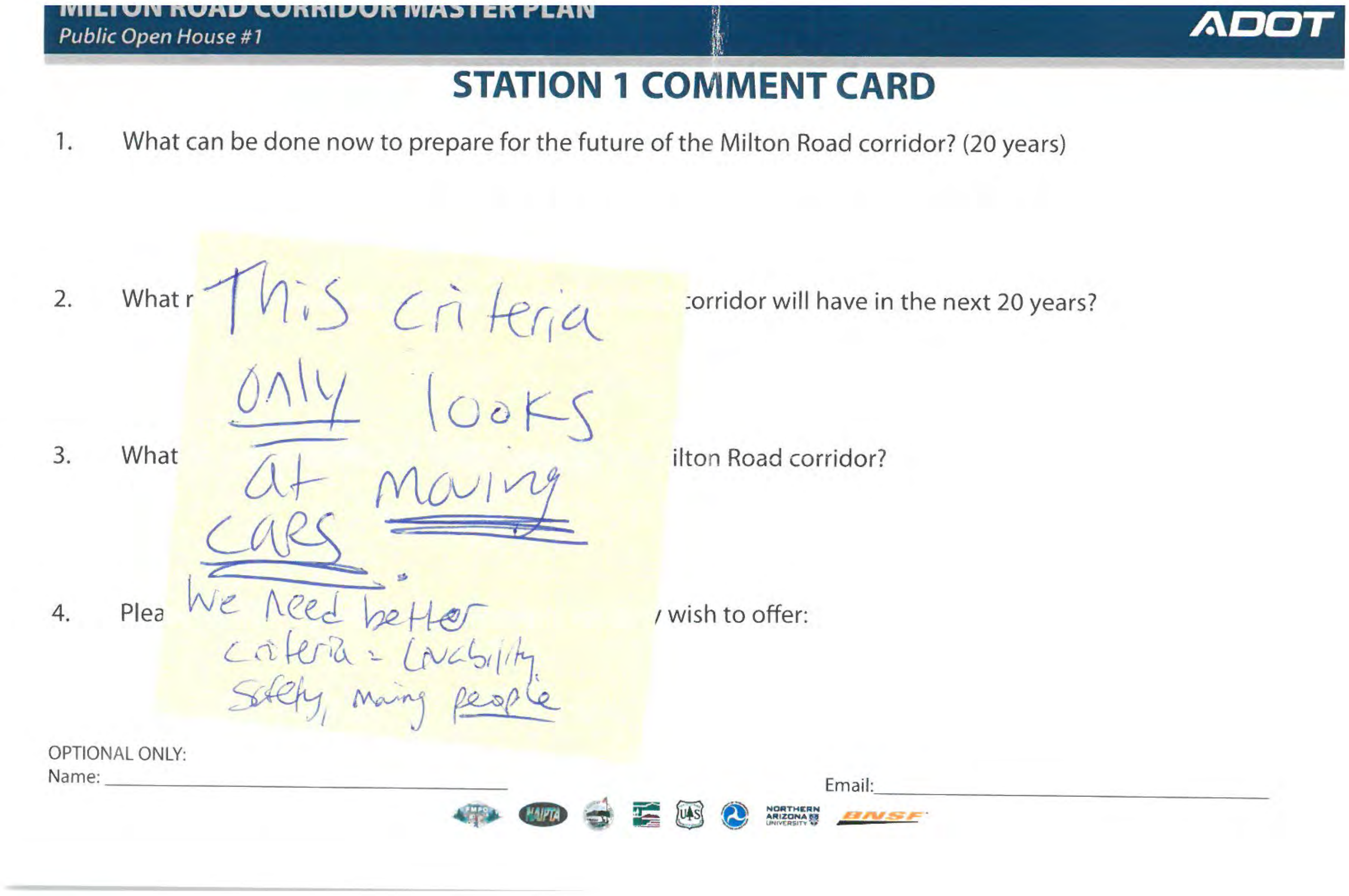
3. What do you see as the TOP THREE issues for the Milton Road corridor?

TRAFFIC, SAFETY, + TURNS INTO + OUT BUSINESS

4. Please provide any additional comments you may wish to offer:

GOOD LUCK!

OPTIONAL ONLY:
Name: ________________ Email: ________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the Milton Road corridor? (20 years)

2. What r corridor will have in the next 20 years?

3. What ilton Road corridor?

4. Plea / wish to offer:

This criteria only looks at moving cars.

We need better criteria = Livability Safety, moving people

OPTIONAL ONLY:
Name: ______________________ Email: ______________________

MILTON ROAD 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 Milton Road corridor? (20 years)

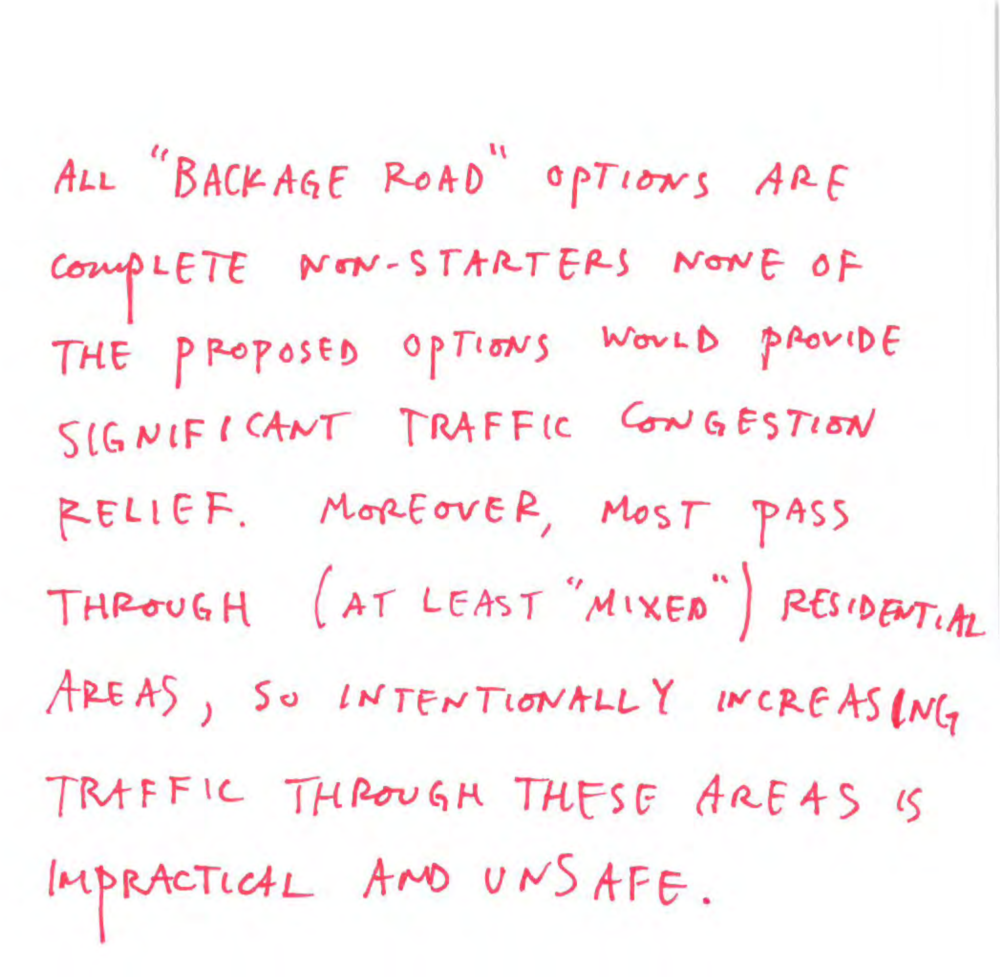
2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the Milton Road corridor?

COMMENTS ON BACK →

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: MATT FAHY
Email: [redacted]



ALL "BACKAGE ROAD" OPTIONS ARE COMPLETE NON-STARTERS NONE OF THE PROPOSED OPTIONS WOULD PROVIDE SIGNIFICANT TRAFFIC CONGESTION RELIEF. MOREOVER, MOST PASS THROUGH (AT LEAST "MIXED") RESIDENTIAL AREAS, SO INTENTIONALLY INCREASING TRAFFIC THROUGH THESE AREAS IS IMPRACTICAL AND UNSAFE.

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 1 COMMENT CARD

1. What can be done now to prepare for the future of the Milton Road corridor? (20 years)

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

Electric cars - need charging stations
Robocars

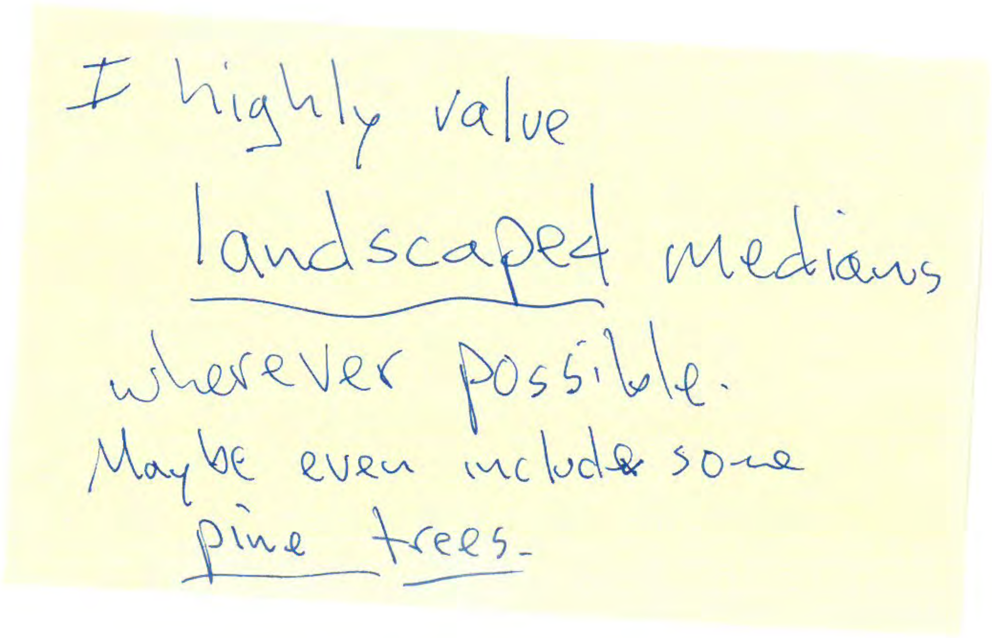
↑ Sharing community - ride, bike, etc

3. What do you see as the TOP THREE issues for the Milton Road corridor?

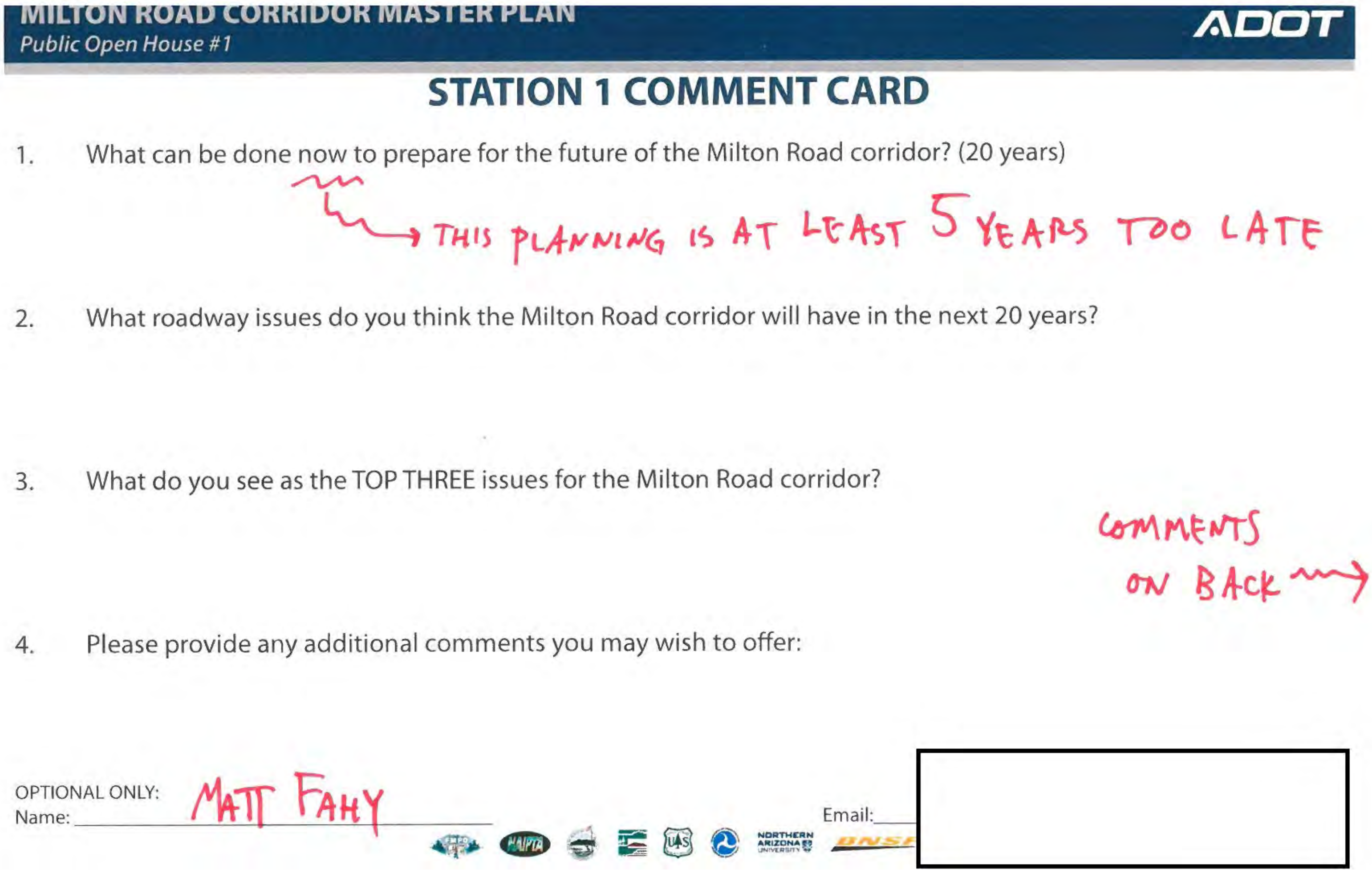
- w Rte 66 / Milton, Clay, Butler congestion
- L turn onto Humphries
- crosswalks / bridges for Pedestrians + Bikes

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



I highly value landscaped medians wherever possible.
Maybe even include some pine trees.



MILTON ROAD 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 Milton Road corridor? (20 years)

THIS PLANNING IS AT LEAST 5 YEARS TOO LATE

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

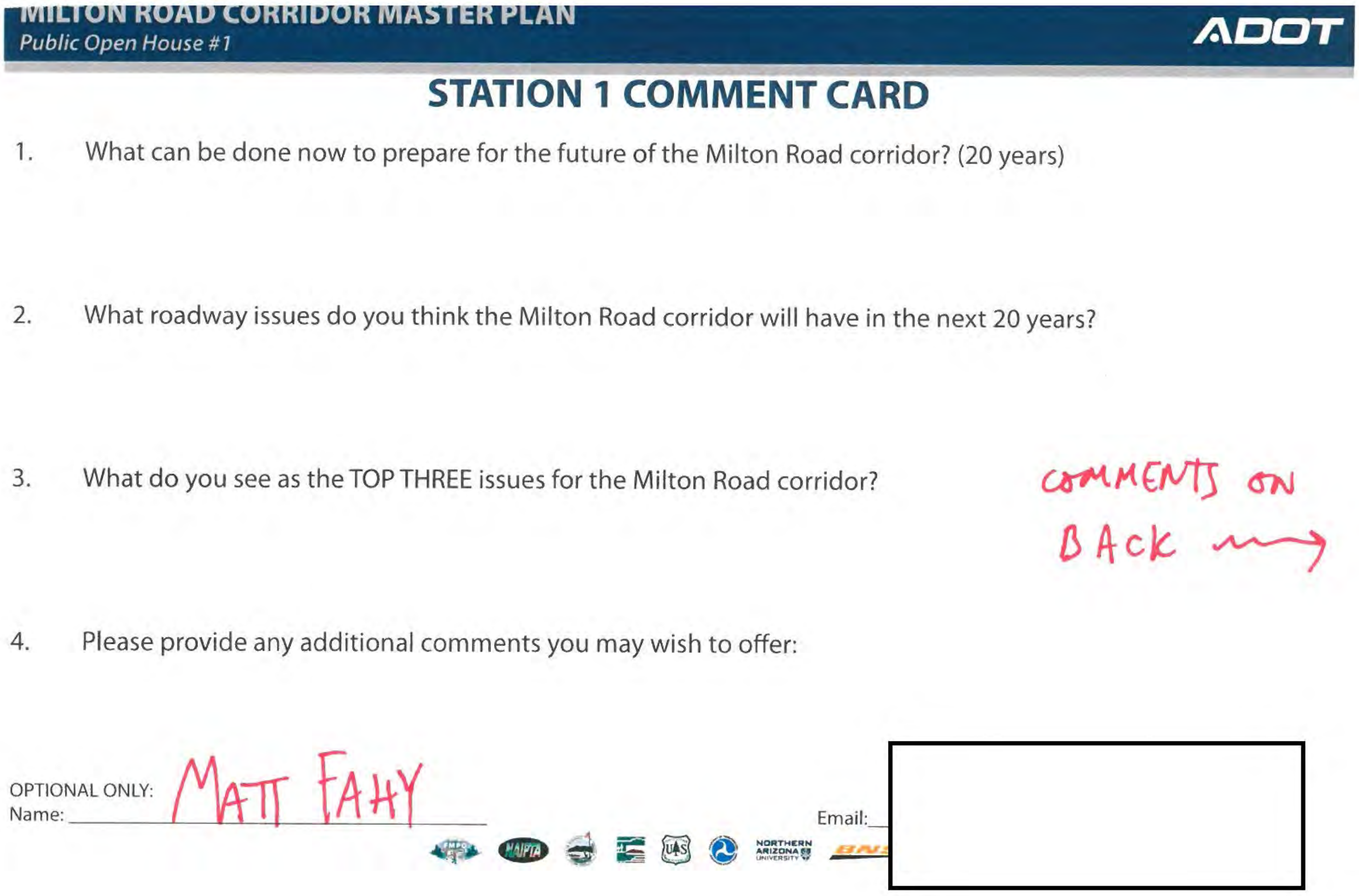
3. What do you see as the TOP THREE issues for the Milton Road corridor?

COMMENTS ON BACK

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: MATT FAHY
Email: [redacted]

- HAWKS ARE INEFFECTIVE (UNSAFE) WHEN DRIVERS ARE UNFAMILIAR WITH THEM. AS MENTIONED SEVERAL TIMES THROUGHOUT THE CMP DOCUMENT, A MAJOR COMPONENT OF TRAFFIC CONGESTION IS DUE TO TOURISTS/VISITORS. SUCH DRIVERS WOULD NOT BE AWARE WITH THE EXPECTATIONS/REQUIREMENTS OF HAWKS. IN FACT, I HAVE SEEN SEVERAL INSTANCES OF UNKNOWING (OR FRUSTRATED) DRIVERS IGNORING HAWKS (EVEN WHEN LIGHTS ARE FLASHING). AS A CYCLIST, I WOULD INTENTIONALLY AVOID HAWKS FOR SAFETY REASONS.



MILTON ROAD 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 Milton Road corridor? (20 years)

2. What roadway issues do you think the Milton Road corridor will have in the next 20 years?

3. What do you see as the TOP THREE issues for the Milton Road corridor?

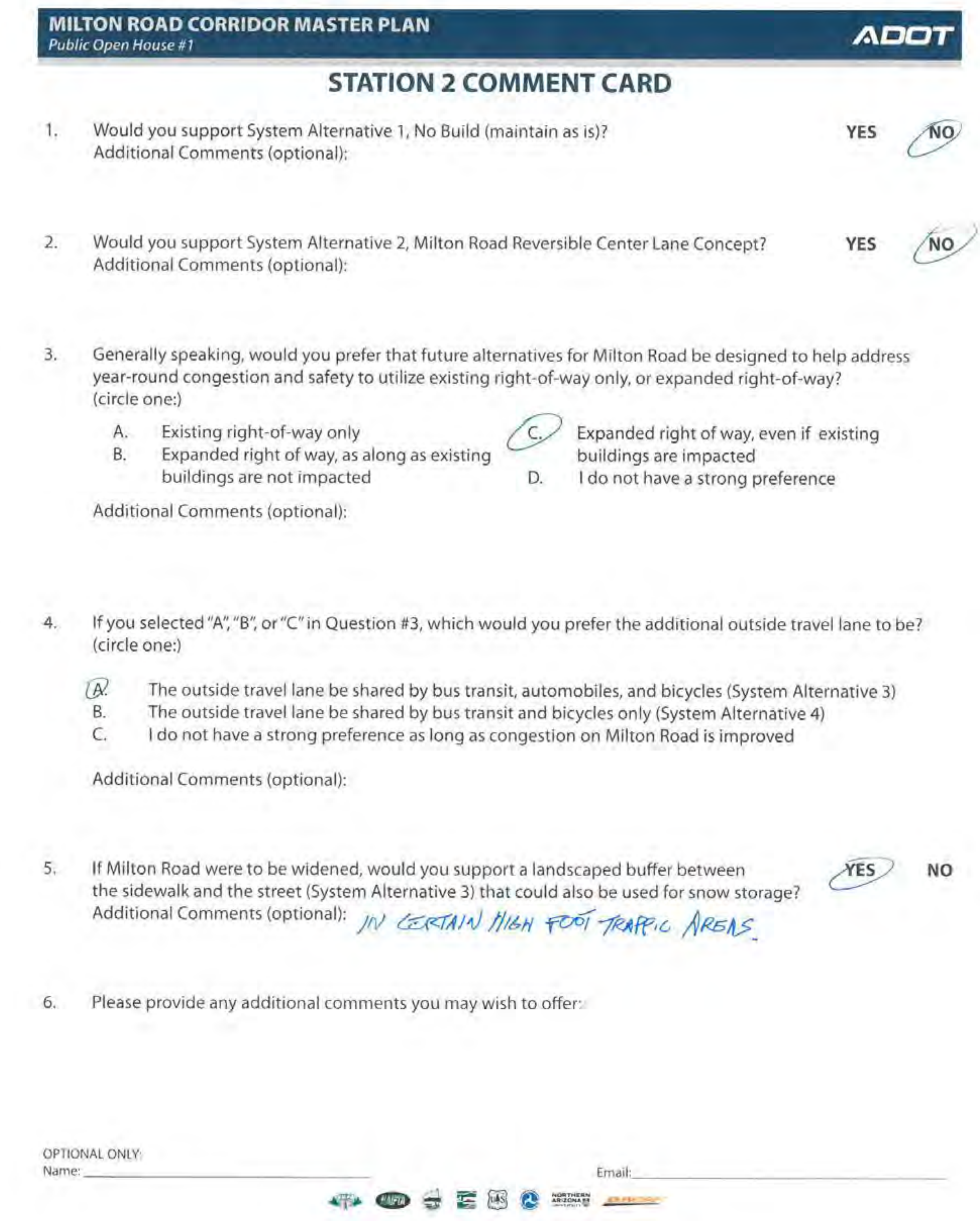
COMMENTS ON BACK →

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: MATT FAHY
Email: [redacted]

- MY COMMENTS ABOUT HAWKS ALSO HOLD TRUE FOR SSBLs. AS A CYCLIST, I WOULD NOT EXPECT DRIVERS (ESPECIALLY OUT-OF-TOWN VISITORS AND TOURISTS) TO UNDERSTAND THE REQUIREMENTS (IN PARTICULAR WHEN/HOW/WHERE THEY BECOME RIGHT-TURN-ONLY LANES). I WOULD, PERSONALLY, AVOID SSBLS FOR SAFETY REASONS.

Appendix L: Station 2 Comment Cards



MILTON ROAD 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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - [✓ C.] Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

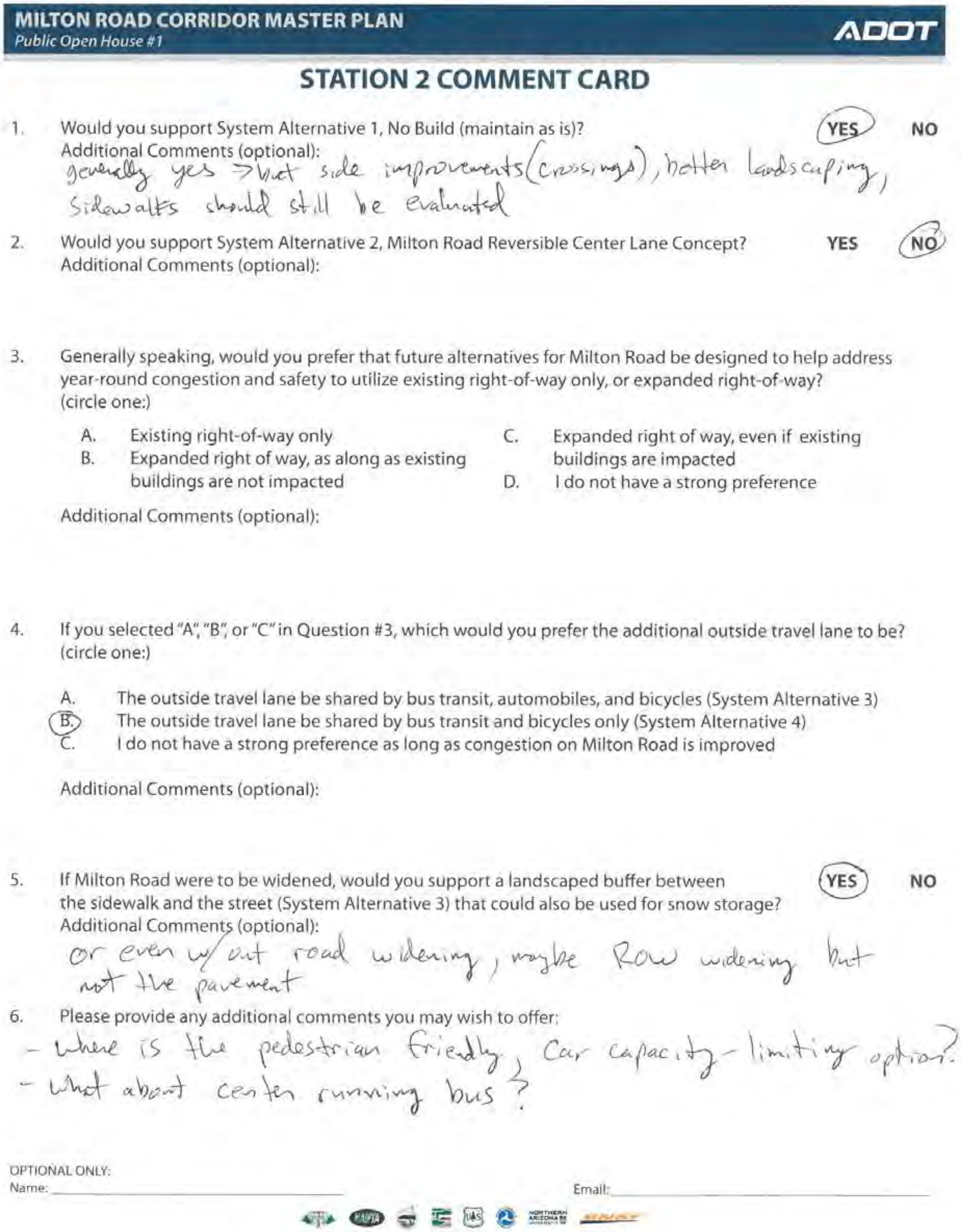
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - [✓ A.] The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - B. The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
Additional Comments (optional): IN CERTAIN HIGH FOOT TRAFFIC AREAS.

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD 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):
generally yes → but side improvements (crossings), better landscaping, sidewalks should still be evaluated

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - C. Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

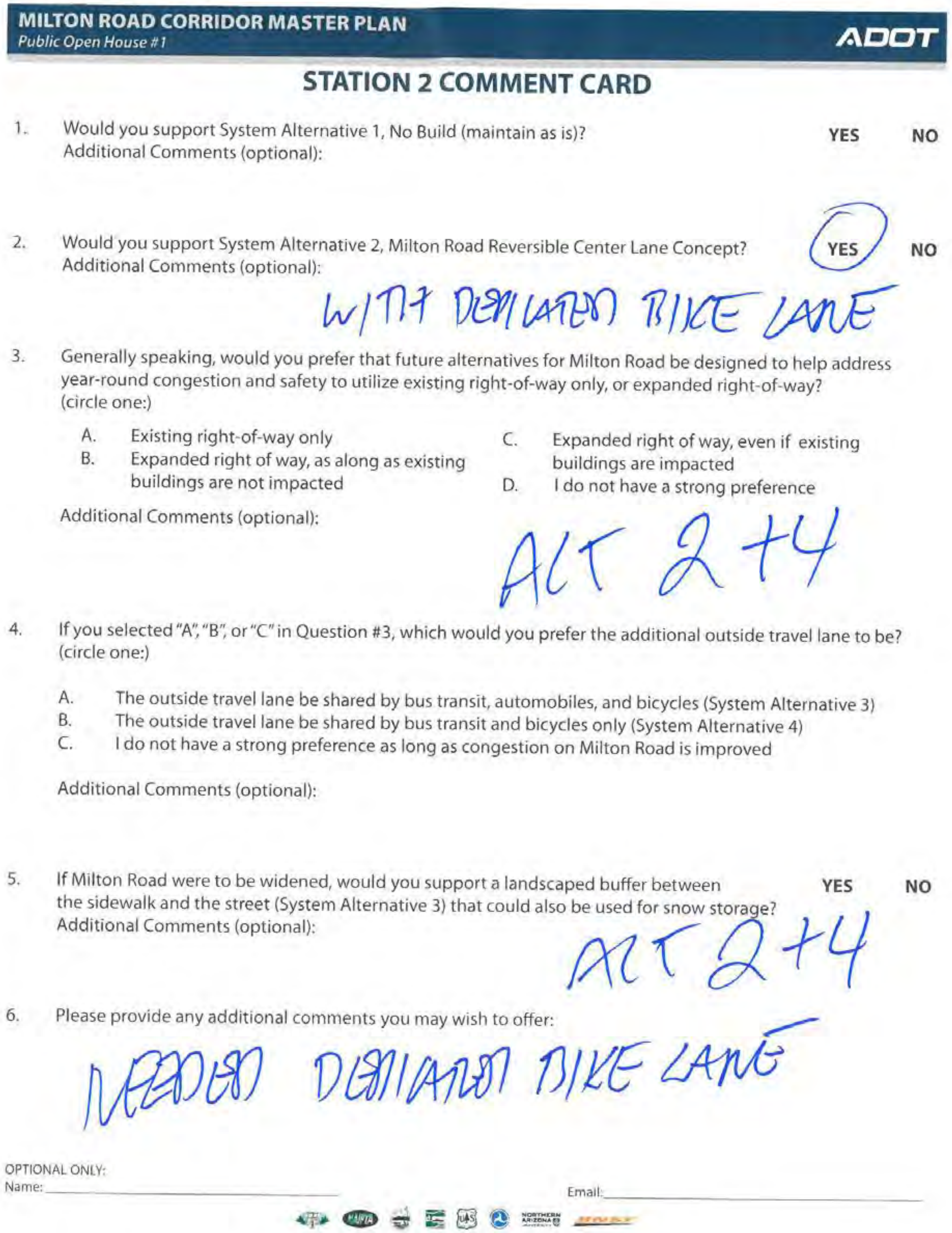
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - [✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
Additional Comments (optional):
or even w/out road widening, maybe ROW widening but not the pavement

6. Please provide any additional comments you may wish to offer:
- where is the pedestrian friendly, car capacity-limiting option?
- what about center running bus?

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD 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, Milton Road Reversible Center Lane Concept? [✓ YES] NO
Additional Comments (optional):
W/ITH DEDICATED BIKE LANE

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference

   Additional Comments (optional):
   ALT 2+4

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)

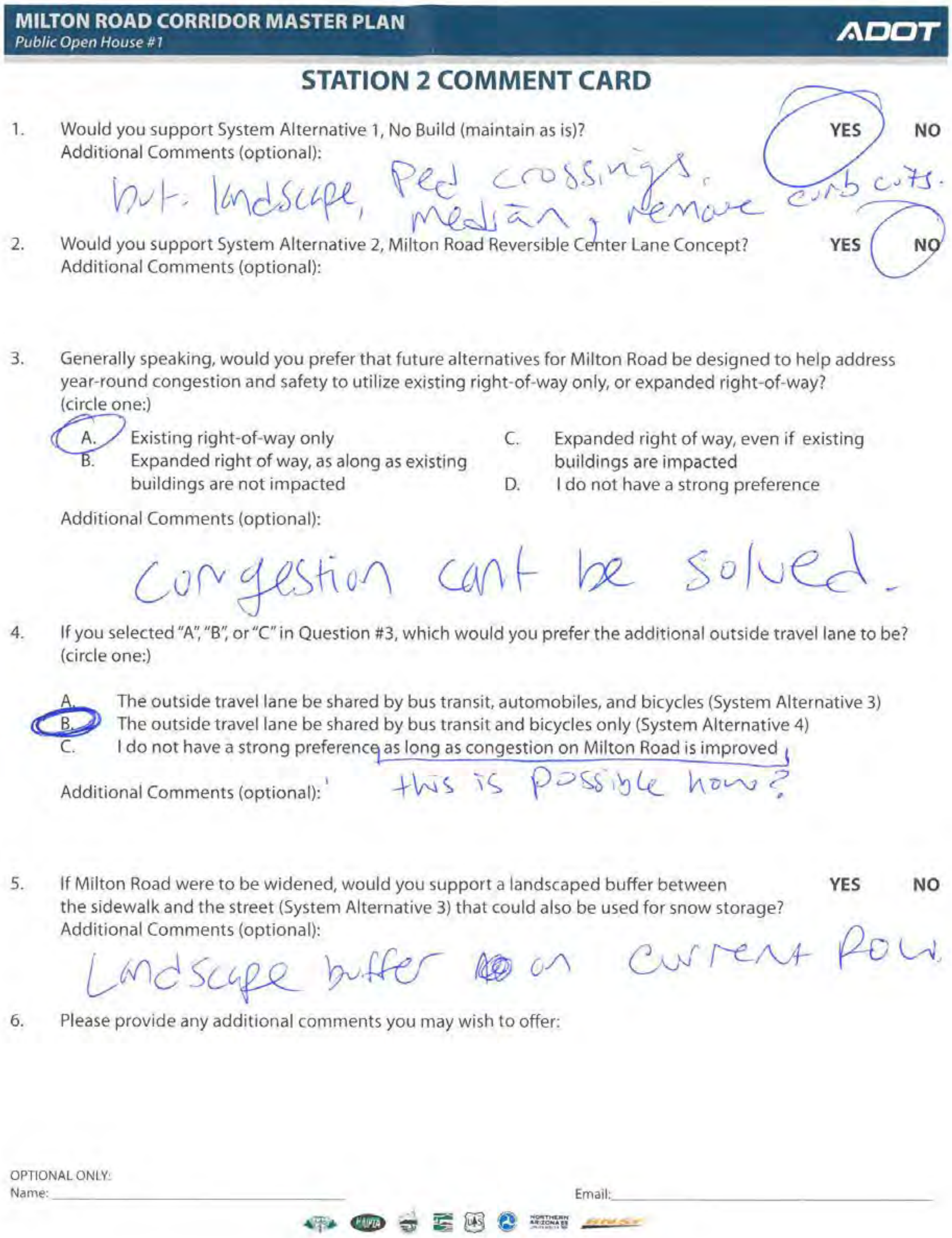
   A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   B. The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES NO
Additional Comments (optional):
ALT 2+4

6. Please provide any additional comments you may wish to offer:
NEEDED DEDICATED BIKE LANE

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 2 COMMENT CARD

1. Would you support System Alternative 1, No Build (maintain as is)? [✓ YES] NO
Additional Comments (optional):
but. landscape, Ped crossings. curb cuts.
median, remove

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):

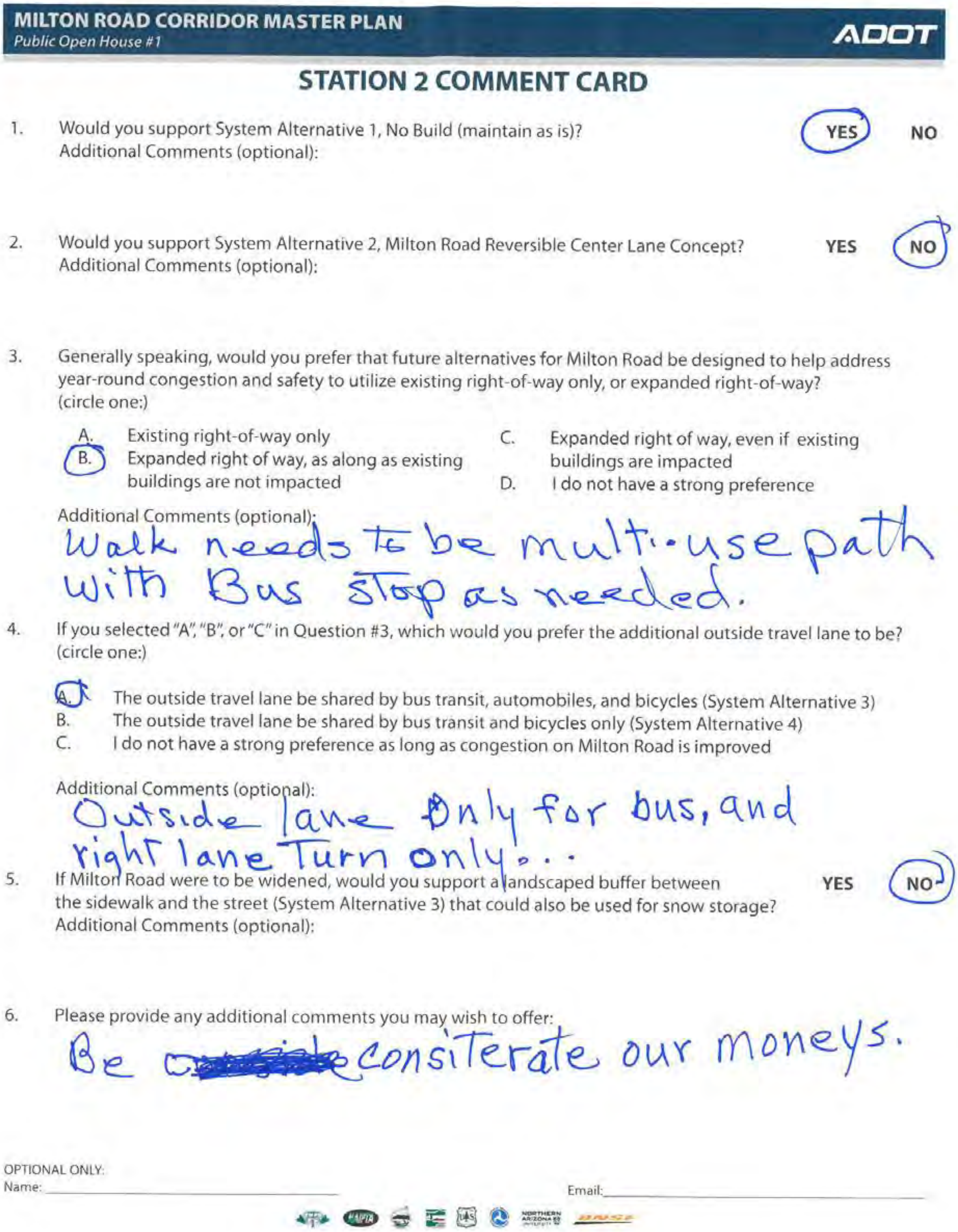
3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
[✓ A.] Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
C. Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference
Additional Comments (optional):
congestion cant be solved.

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
[✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
C. I do not have a strong preference as long as congestion on Milton Road is improved
Additional Comments (optional): this is possible how?

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES NO
Additional Comments (optional):
Landscape buffer on current ROW.

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD 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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   [✓ B.] Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference

   Additional Comments (optional):
   Walk needs to be multi-use path with Bus stop as needed.

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)

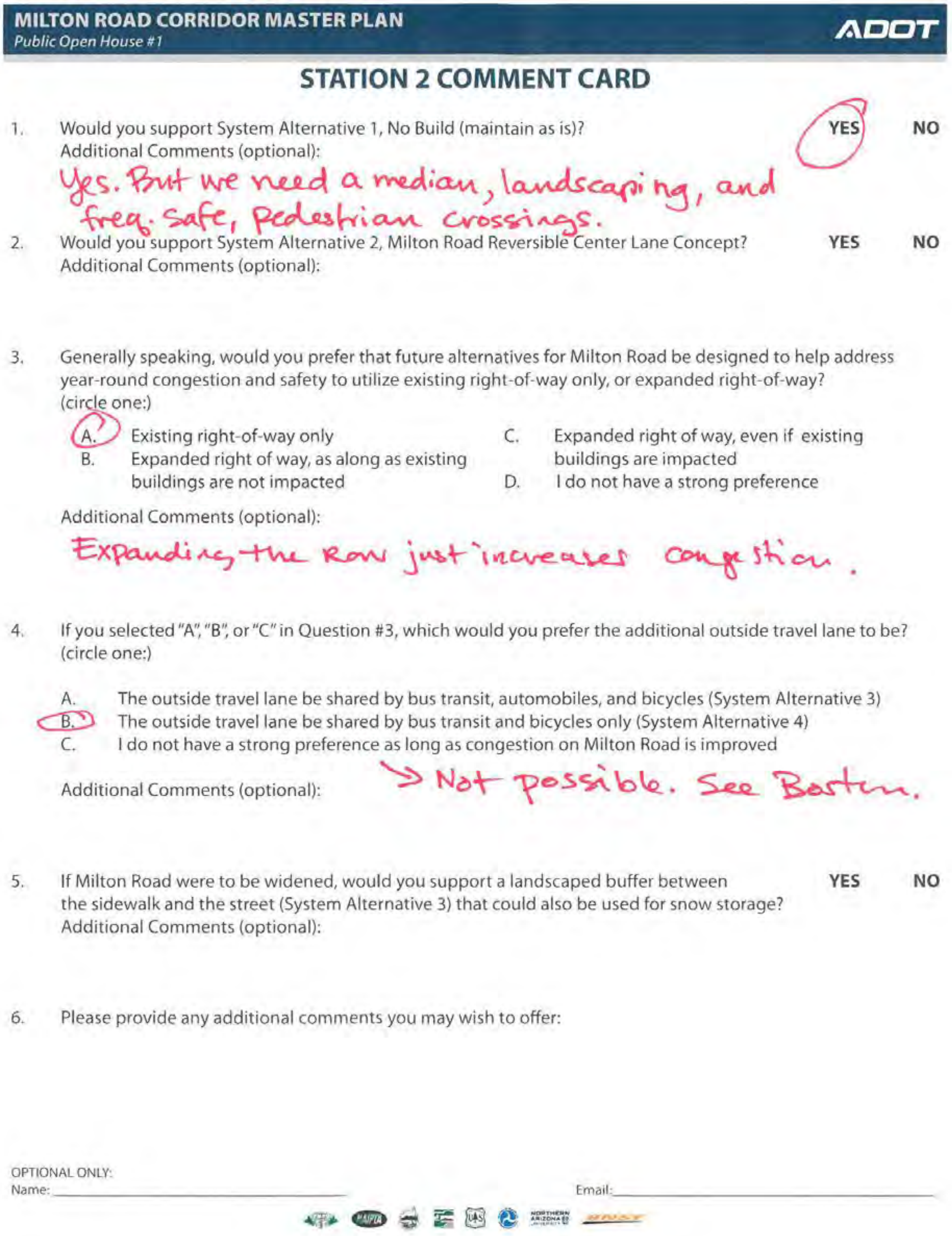
   [✓ A.] The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   B. The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):
   Outside lane Only for bus, and right lane Turn only...

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES [✓ NO]
Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:
Be ~~[illegible]~~ consiterate our moneys.

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD 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):
Yes. But we need a median, landscaping, and freq. safe, pedestrian crossings.

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? **YES** **NO**
Additional Comments (optional):

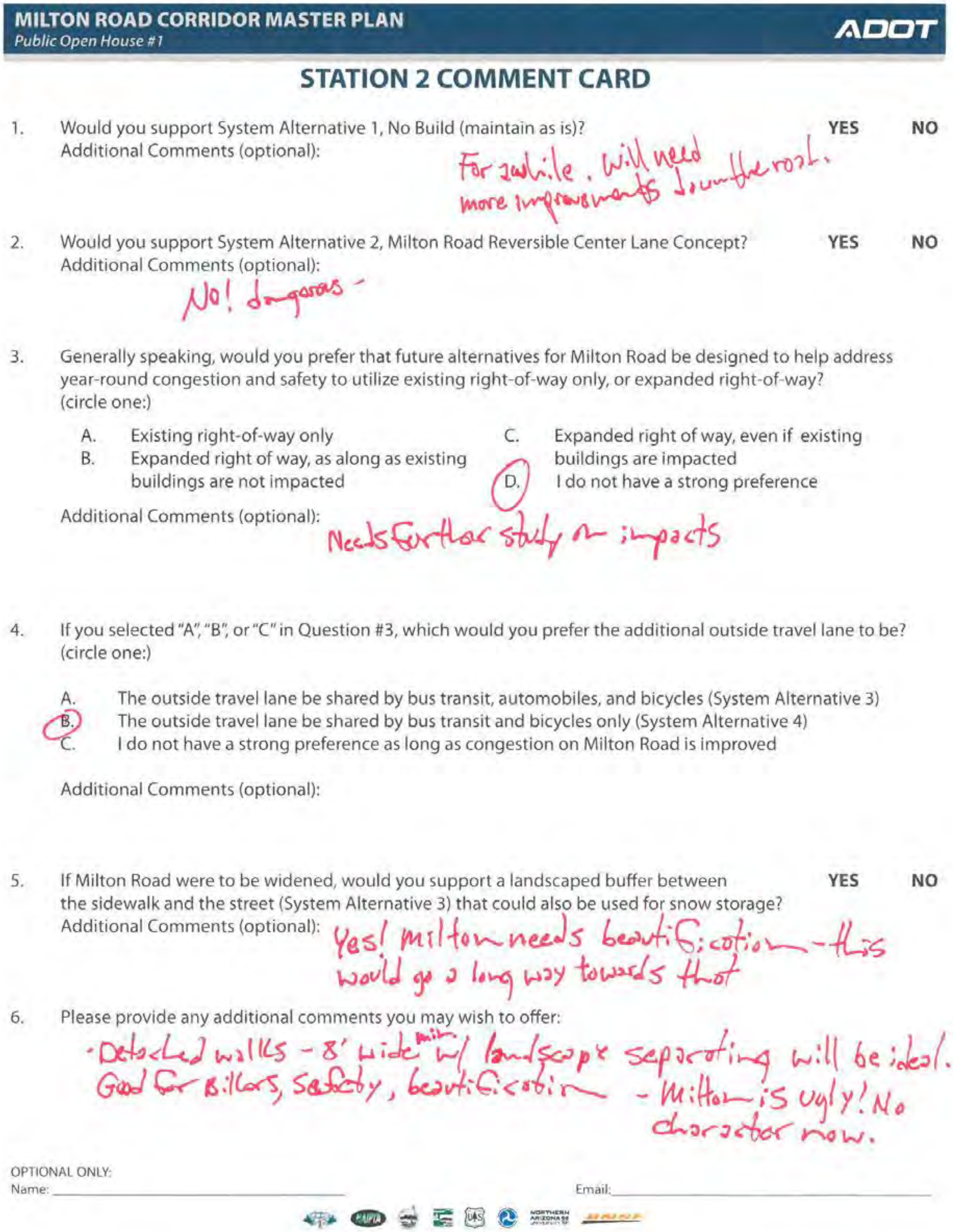
3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
[✓ A.] Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
C. Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference
Additional Comments (optional):
Expanding the ROW just increases congestion.

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
[✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
C. I do not have a strong preference as long as congestion on Milton Road is improved
Additional Comments (optional): > Not possible. See Boston.

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? **YES** **NO**
Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD 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):
   For awhile. Will need more improvements down the road.

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? **YES** **NO**
   Additional Comments (optional):
   No! dangerous -

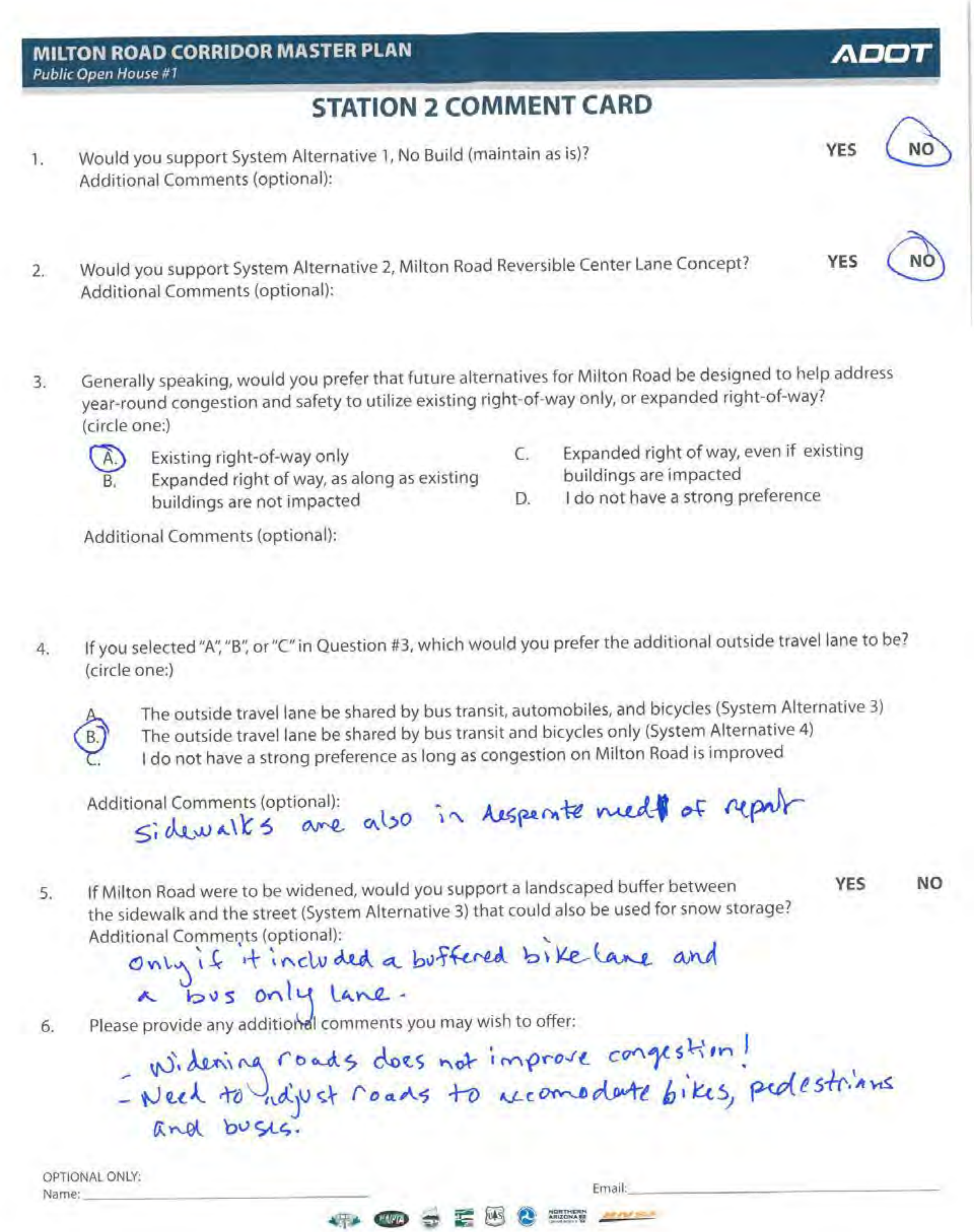
3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   [✓ D.] I do not have a strong preference
   Additional Comments (optional):
   Needs further study on impacts

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   [✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   C. I do not have a strong preference as long as congestion on Milton Road is improved
   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? **YES** **NO**
   Additional Comments (optional):
   Yes! Milton needs beautification - this would go a long way towards that

6. Please provide any additional comments you may wish to offer:
   • Detached walks - 8' wide min. w/ landscape separating will be ideal. Good for Bikers, safety, beautification - Milton is ugly! No character now.

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD 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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

[✓ A.] Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
C. Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference

Additional Comments (optional):

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)

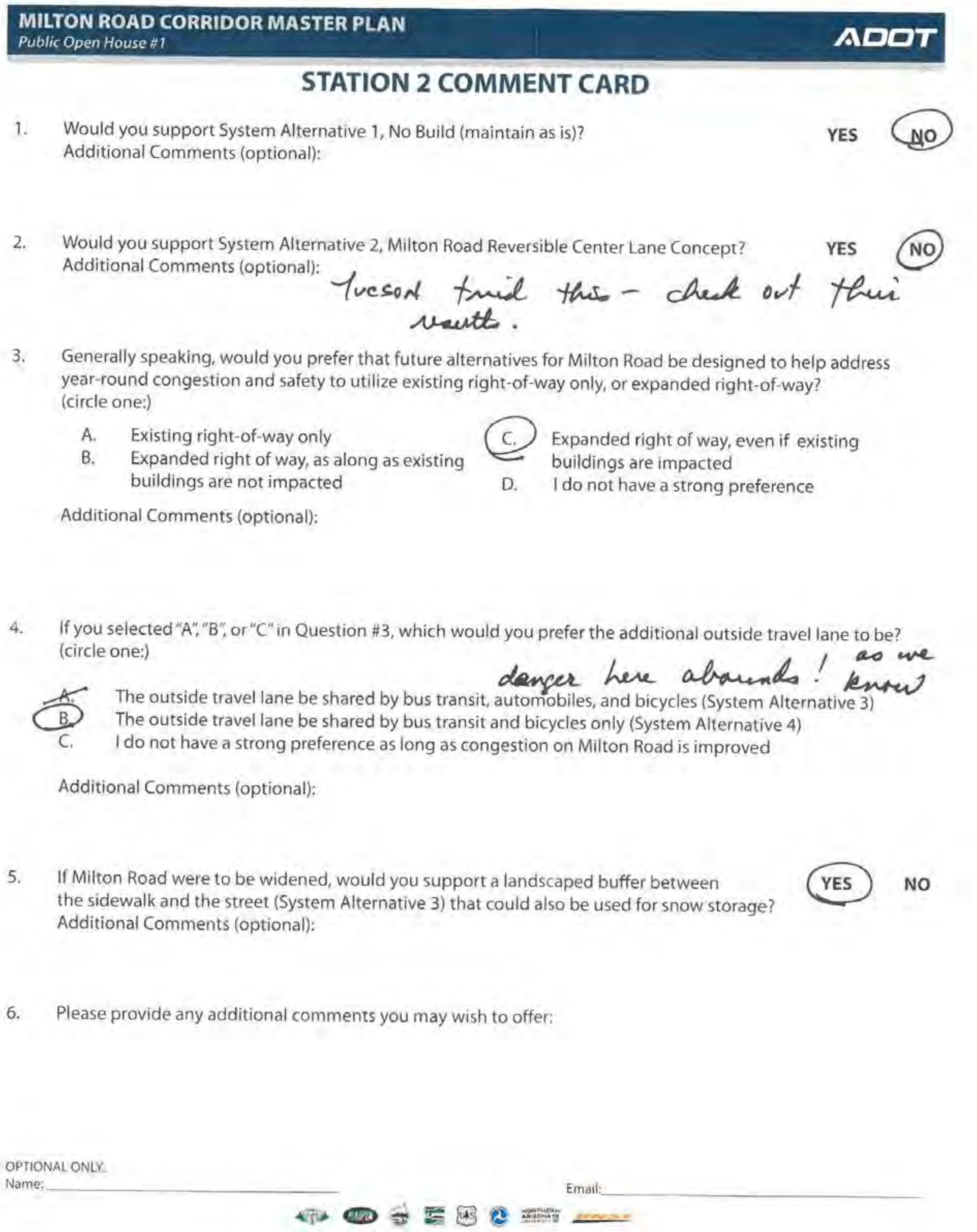
A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
[✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
C. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):
sidewalks are also in desperate need of repair

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES NO
Additional Comments (optional):
only if it included a buffered bike lane and
a bus only lane.

6. Please provide any additional comments you may wish to offer:
- Widening roads does not improve congestion!
- Need to adjust roads to accomodate bikes, pedestrians and buses.

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional): Tucson tried this - check out their results.

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - [✓ C.] Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

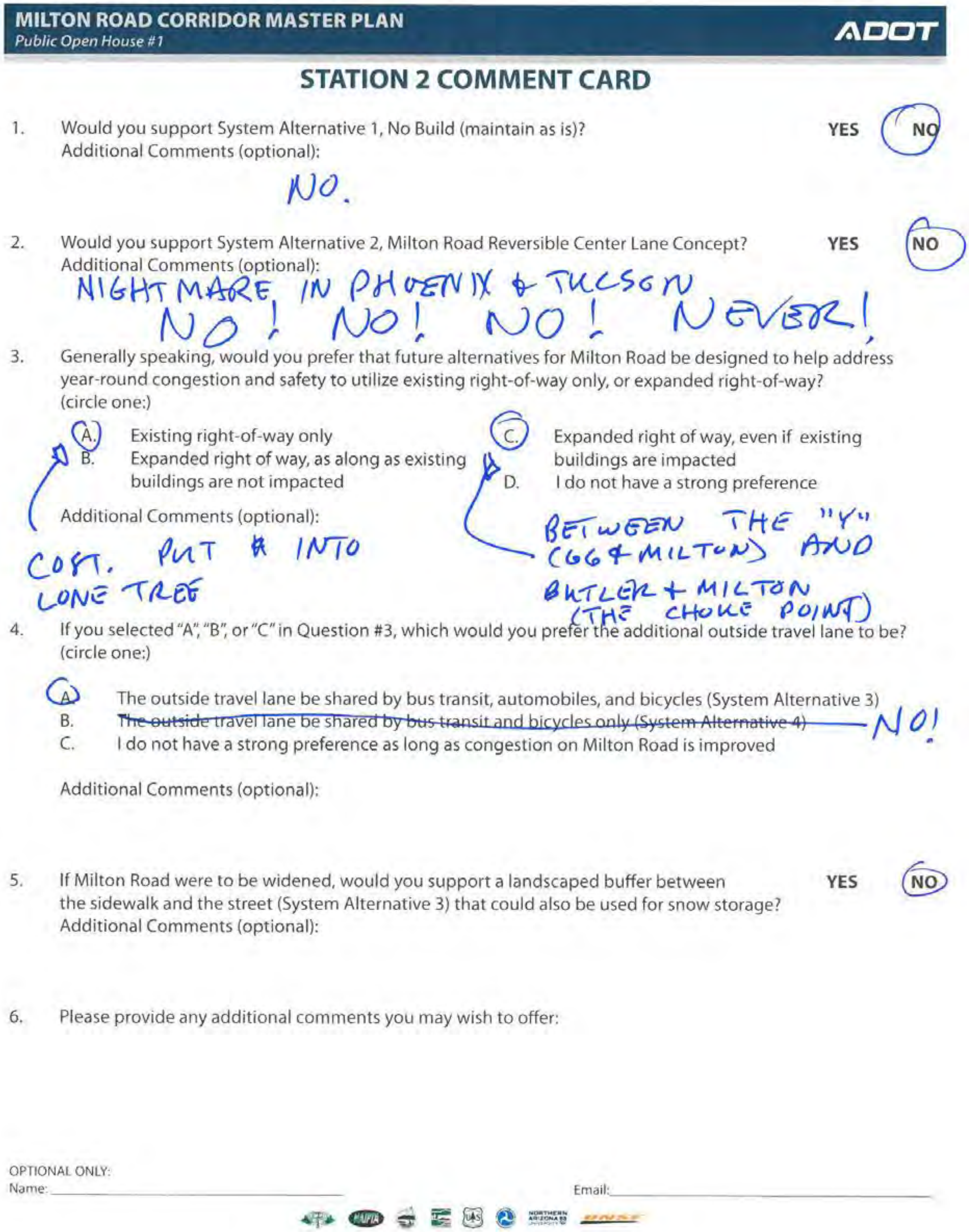
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   danger here abounds! as we know
   - ~~A.~~ The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - [✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ____________________ Email: ____________________



MILTON ROAD 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):
NO.

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):
NIGHTMARE IN PHOENIX & TUCSON
NO! NO! NO! NEVER!

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

- [✓ A.] Existing right-of-way only
- B. Expanded right of way, as along as existing buildings are not impacted
- [✓ C.] Expanded right of way, even if existing buildings are impacted
- D. I do not have a strong preference

Additional Comments (optional):
COST. PUT $ INTO LONE TREE
BETWEEN THE "Y" (66 & MILTON) AND BUTLER + MILTON (THE CHOKE POINT)

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)

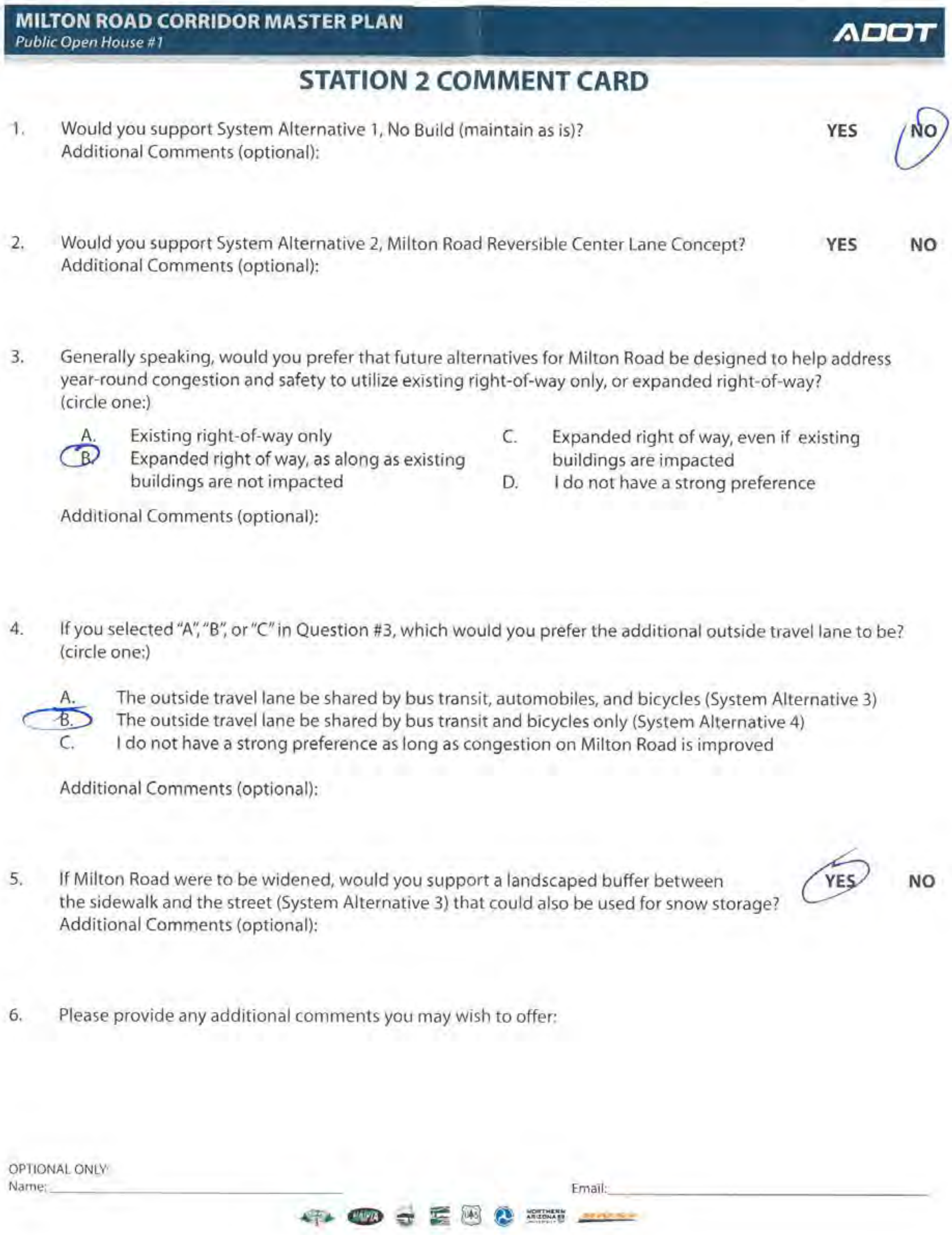
- [✓ A.] The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
- B. ~~The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)~~ NO!
- C. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES [✓ NO]
Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD 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, Milton Road Reversible Center Lane Concept? YES NO
   Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - [✓ B.] Expanded right of way, as along as existing buildings are not impacted
   - C. Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

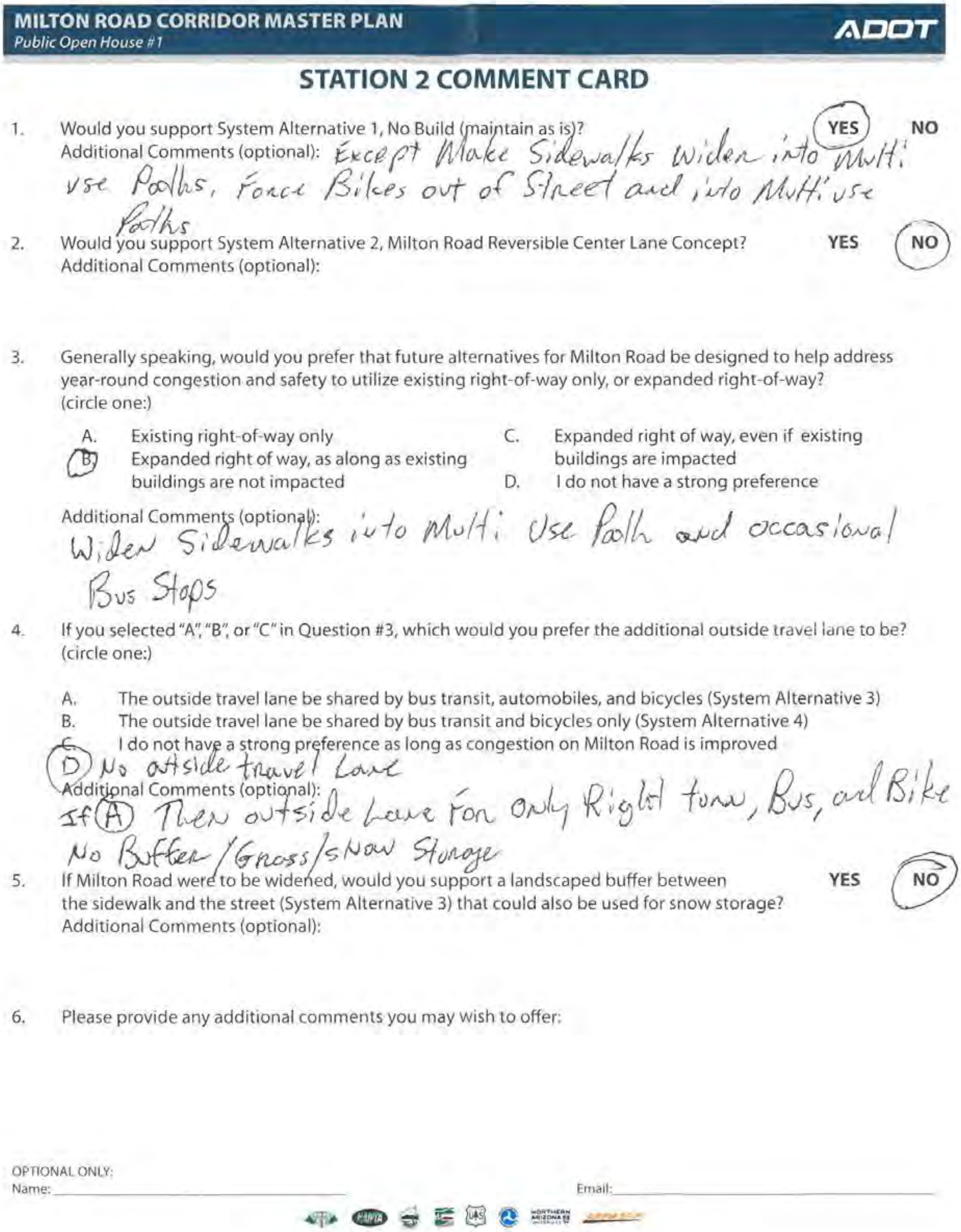
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - [✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
   Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 2 COMMENT CARD

1. Would you support System Alternative 1, No Build (maintain as is)? [✓ YES] NO
Additional Comments (optional): Except Make Sidewalks Widen into Multi use Paths, Force Bikes out of Street and into Multi use Paths

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

A. Existing right-of-way only
[✓ B.] Expanded right of way, as along as existing buildings are not impacted
C. Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference

Additional Comments (optional): Widen Sidewalks into Multi Use Path and occasional Bus Stops

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)

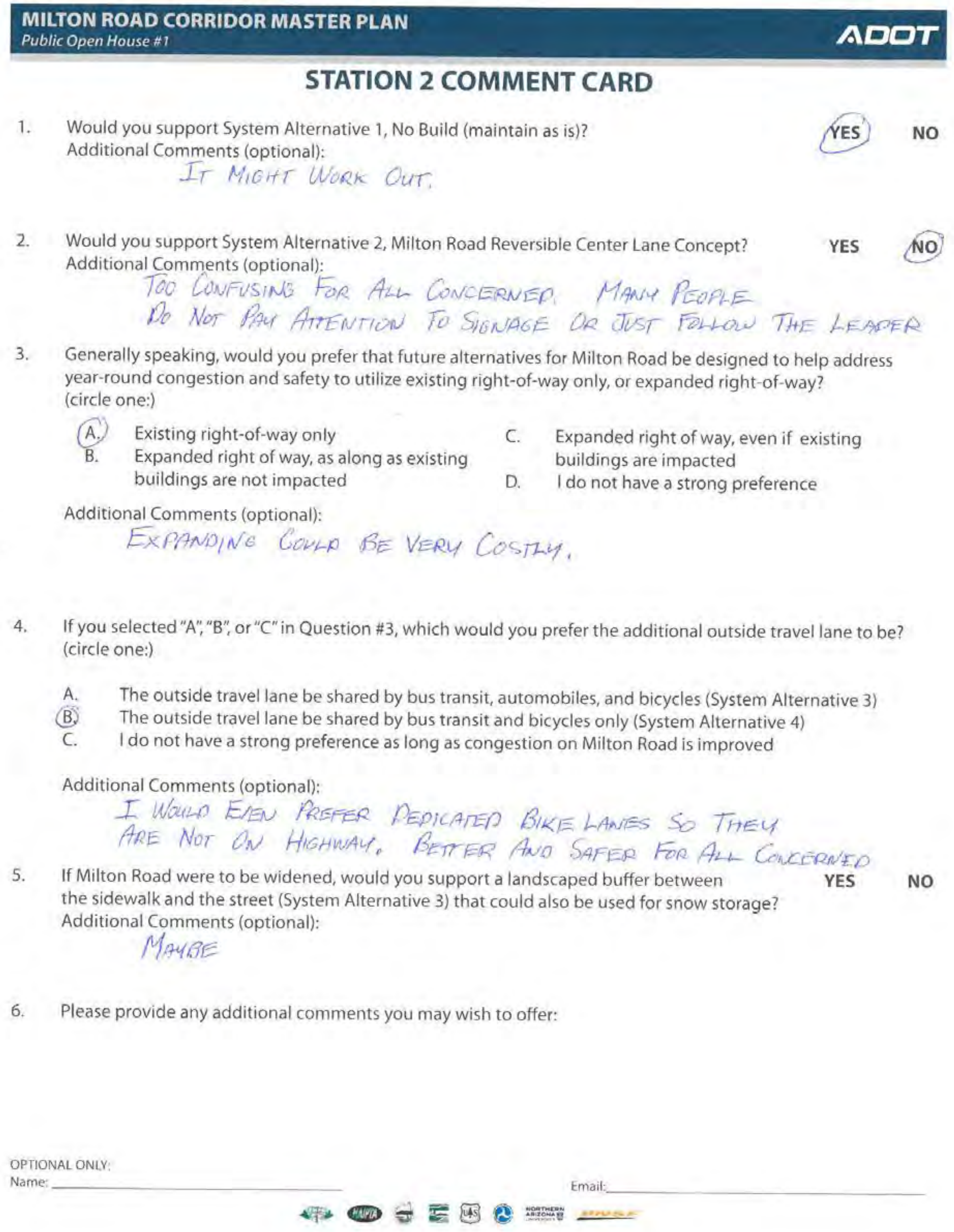
A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
B. The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
C. I do not have a strong preference as long as congestion on Milton Road is improved
[✓ D] No outside travel Lane

Additional Comments (optional): If [✓ A] Then outside Lane For only Right turn, Bus, and Bike
No Buffer / Grass / sNow Storage

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES [✓ NO]
Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD 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):
It Might Work Out.

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):
Too Confusing For All Concerned. Many People Do Not Pay Attention To Signage Or Just Follow The Leader

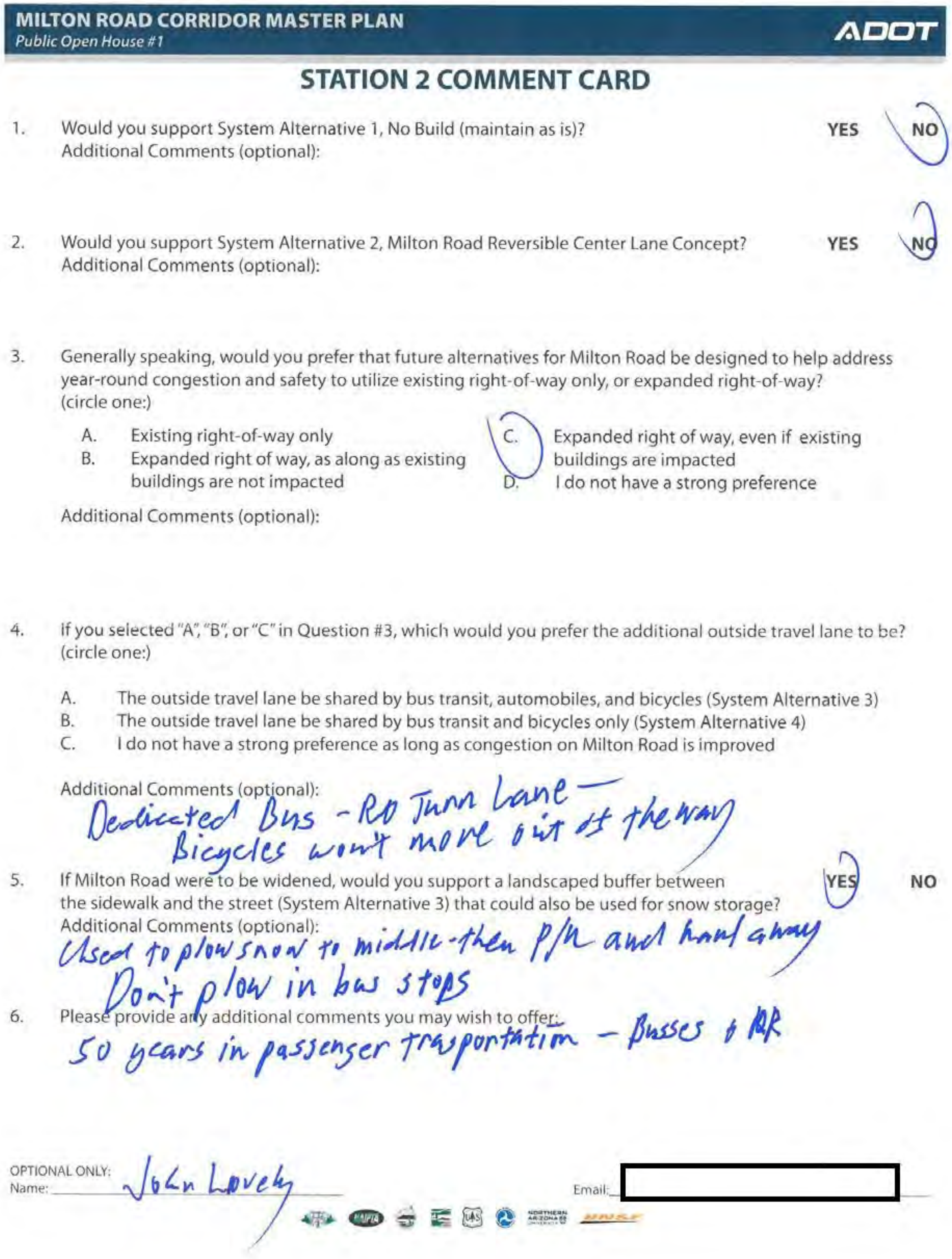
3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
[✓ A.] Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
C. Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference
Additional Comments (optional):
Expanding Could Be Very Costly.

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
[✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
C. I do not have a strong preference as long as congestion on Milton Road is improved
Additional Comments (optional):
I Would Even Prefer Dedicated Bike Lanes So They Are Not On Highway. Better And Safer For All Concerned

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES NO
Additional Comments (optional):
Maybe

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________
Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - [✓ C.] Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

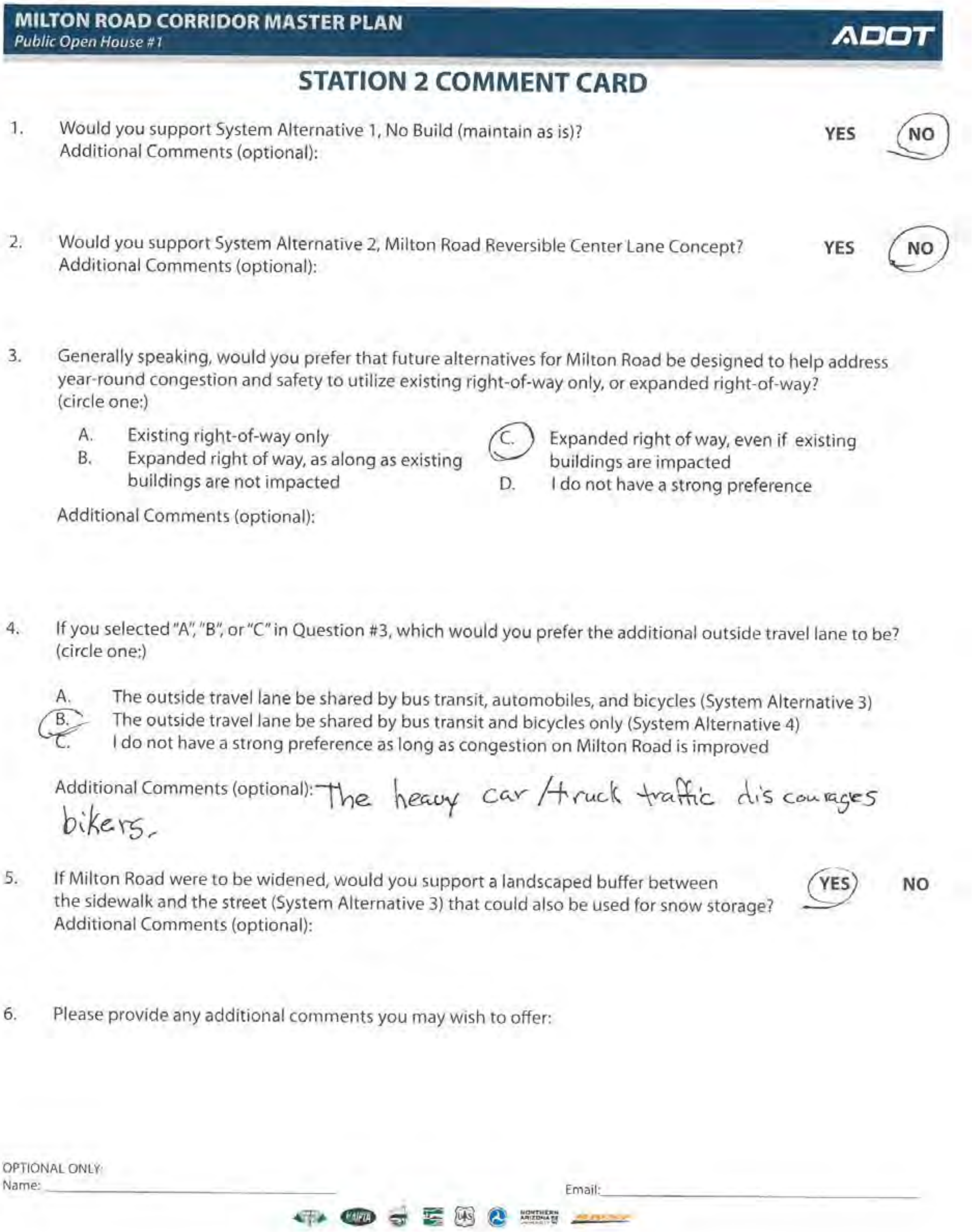
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - B. The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):
   Dedicated Bus - Rt Turn Lane —
   Bicycles won't move out of the way

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
Additional Comments (optional):
Used to plow snow to middle - then P/U and haul away
Don't plow in bus stops

6. Please provide any additional comments you may wish to offer:
50 years in passenger trasportation - Busses & RR

OPTIONAL ONLY:
Name: John Lovely
Email: [redacted]



MILTON ROAD 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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
   Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - [✓ C.] Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

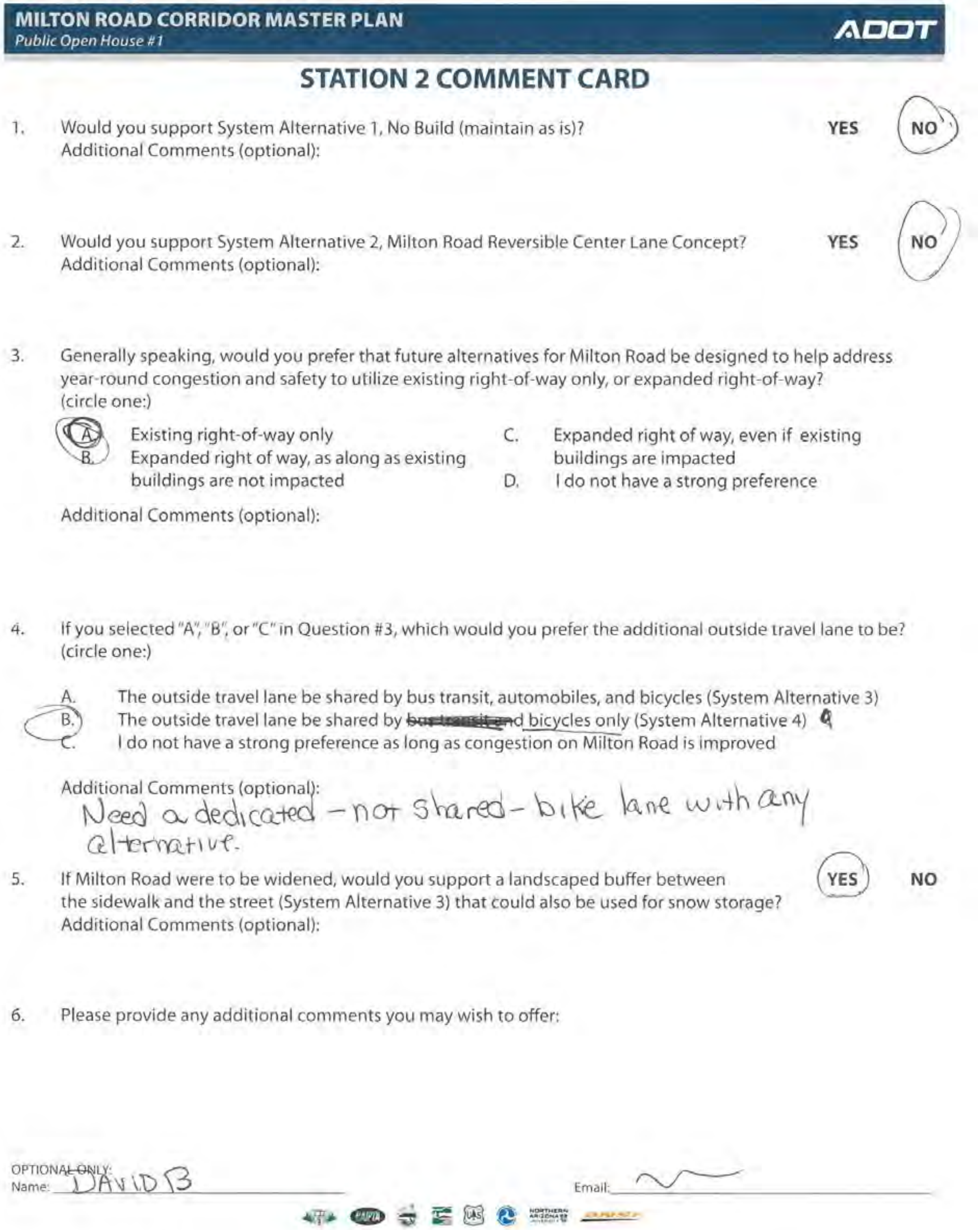
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - [✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional): The heavy car/truck traffic discourages bikers.

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
   Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
   Additional Comments (optional):

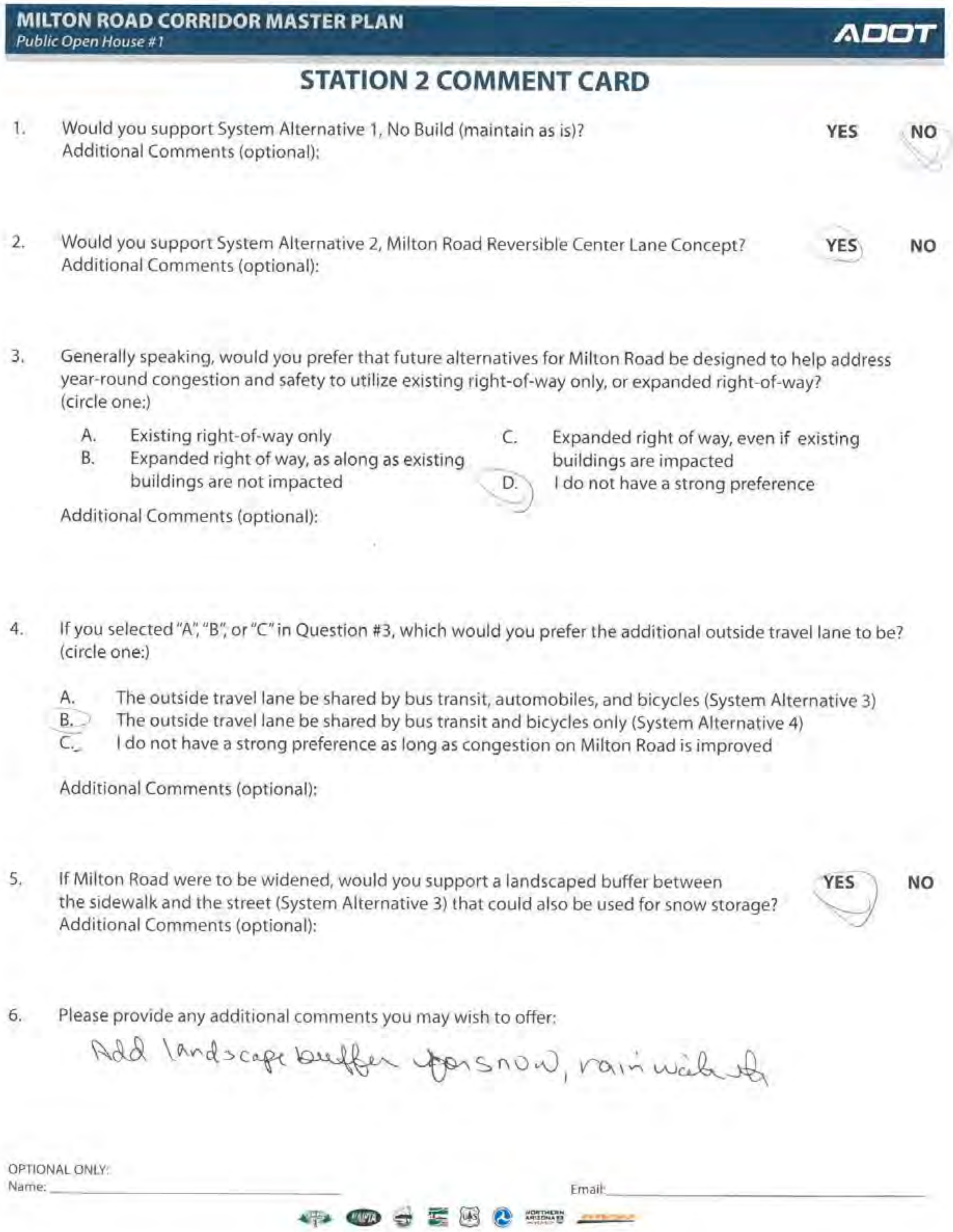
3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference
   Additional Comments (optional):

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   [✓ B.] The outside travel lane be shared by ~~bus transit and~~ bicycles only (System Alternative 4)
   C. I do not have a strong preference as long as congestion on Milton Road is improved
   Additional Comments (optional):
   Need a dedicated – not shared – bike lane with any alternative.

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
   Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: DAVID B
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

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, Milton Road Reversible Center Lane Concept? [✓ YES] NO
Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - C. Expanded right of way, even if existing buildings are impacted
   - [✓ D.] I do not have a strong preference

   Additional Comments (optional):

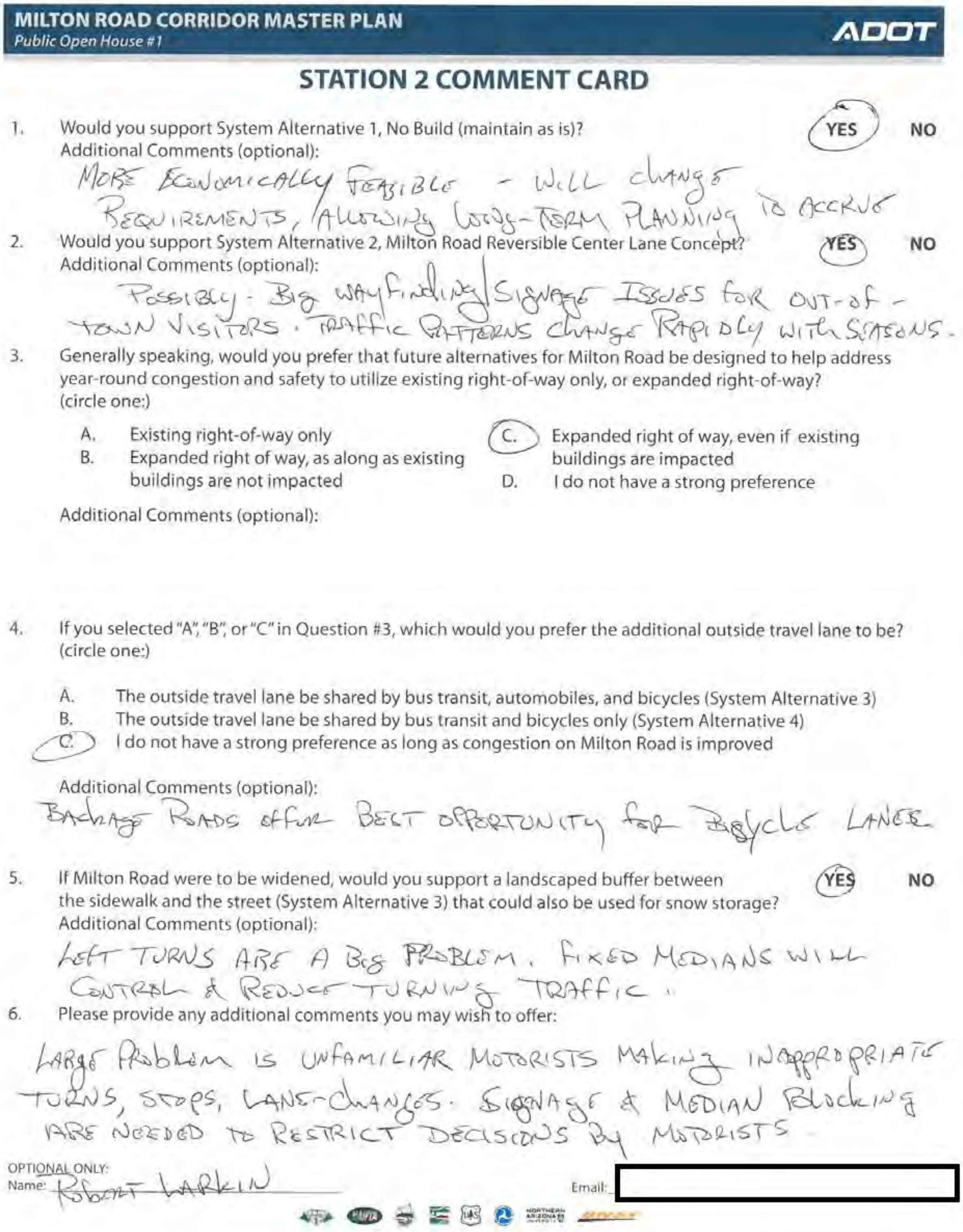
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - [✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:
Add landscape buffer for snow, rain water

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD 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):
   MORE ECONOMICALLY FEASIBLE - WILL CHANGE REQUIREMENTS, ALLOWING LONG-TERM PLANNING TO ACCRUE

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? [✓ YES] NO
   Additional Comments (optional):
   POSSIBLY - BIG WAYFINDING/SIGNAGE ISSUES FOR OUT-OF-TOWN VISITORS. TRAFFIC PATTERNS CHANGE RAPIDLY WITH SEASONS.

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - A. Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - [✓ C.] Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

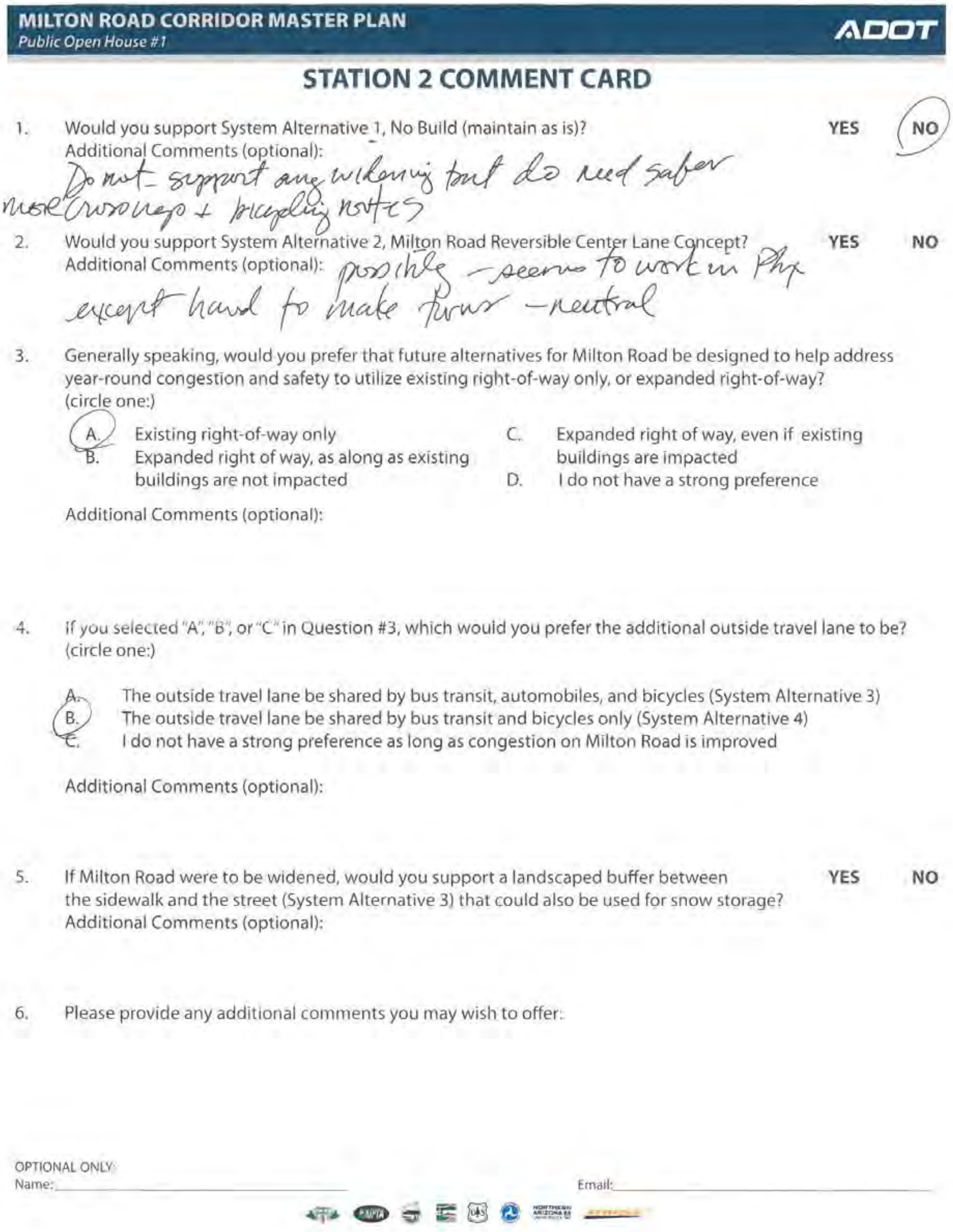
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - B. The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - [✓ C.] I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):
   BACKAGE ROADS OFFER BEST OPPORTUNITY FOR BICYCLE LANES

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
   Additional Comments (optional):
   LEFT TURNS ARE A BIG PROBLEM. FIXED MEDIANS WILL CONTROL & REDUCE TURNING TRAFFIC.

6. Please provide any additional comments you may wish to offer:
   LARGE PROBLEM IS UNFAMILIAR MOTORISTS MAKING INAPPROPRIATE TURNS, STOPS, LANE-CHANGES. SIGNAGE & MEDIAN BLOCKING ARE NEEDED TO RESTRICT DECISIONS BY MOTORISTS.

OPTIONAL ONLY:
Name: ROBERT LARKIN
Email: [redacted]



MILTON ROAD 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): Do not support any widening but do need safer + more crossings + bicycling routes

2. Would you support System Alternative 2, Milton Road Reversible Center Lane Concept? YES NO
Additional Comments (optional): possible – seems to work in Phx except hard to make turns – neutral

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - [✓ A.] Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - C. Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

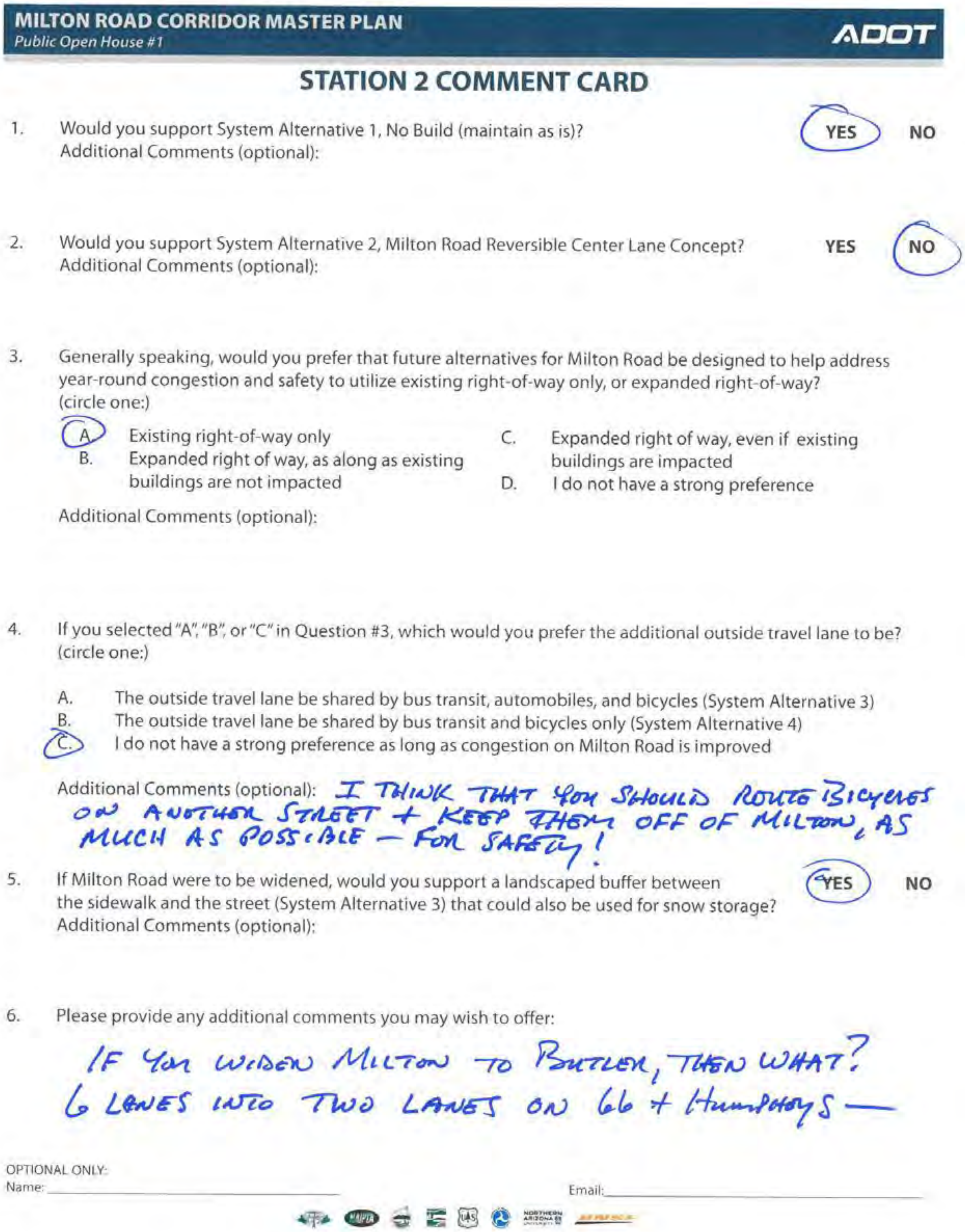
4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - [✓ B.] The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - C. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? YES NO
Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

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, Milton Road Reversible Center Lane Concept? YES [✓ NO]
   Additional Comments (optional):

3. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - [✓ A.] Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - C. Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference

   Additional Comments (optional):

4. If you selected "A", "B", or "C" in Question #3, which would you prefer the additional outside travel lane to be? (circle one:)
   - A. The outside travel lane be shared by bus transit, automobiles, and bicycles (System Alternative 3)
   - B. The outside travel lane be shared by bus transit and bicycles only (System Alternative 4)
   - [✓ C.] I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional): I THINK THAT YOU SHOULD ROUTE BICYCLES ON ANOTHER STREET + KEEP THEM OFF OF MILTON, AS MUCH AS POSSIBLE — FOR SAFETY!

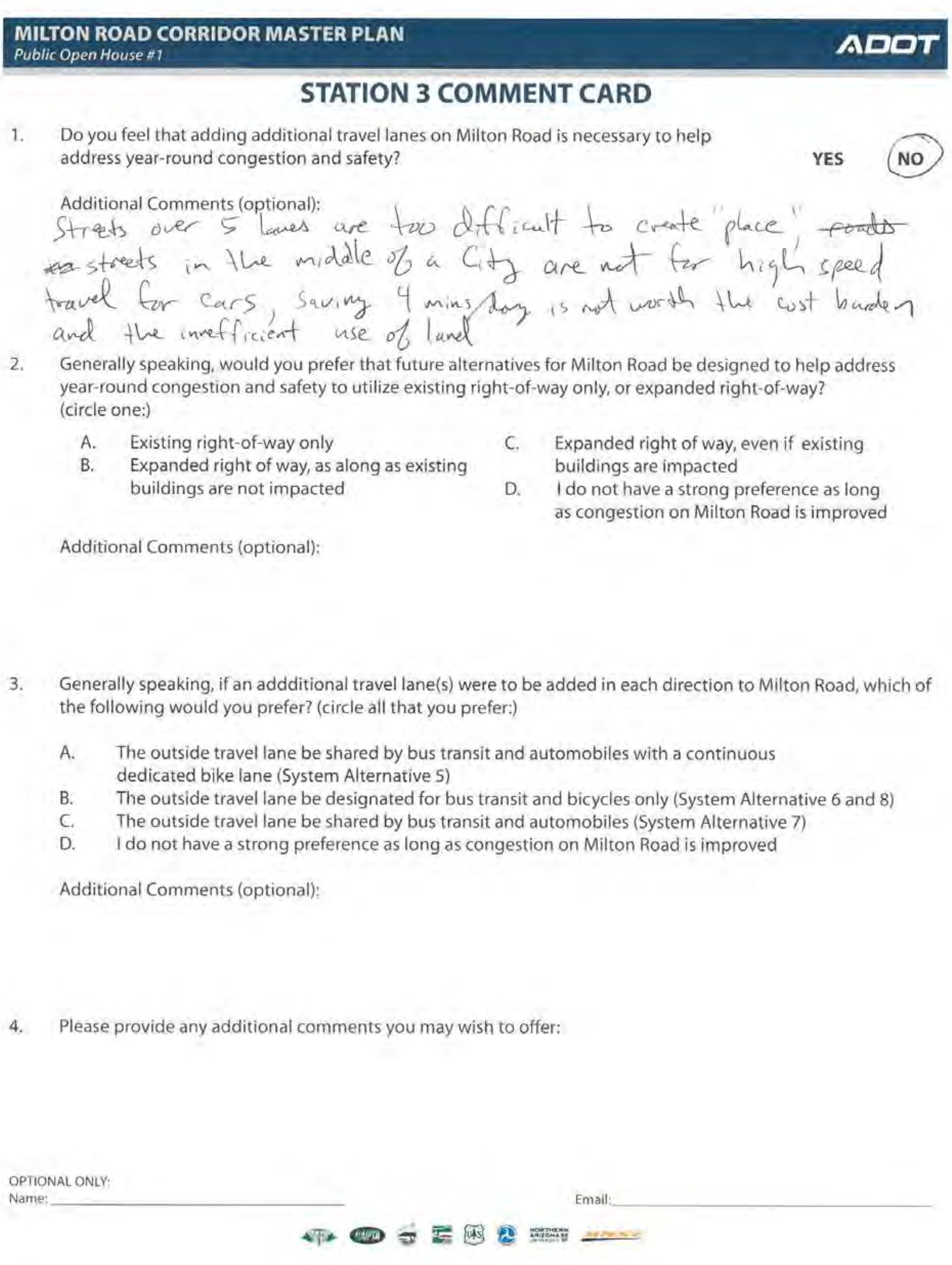
5. If Milton Road were to be widened, would you support a landscaped buffer between the sidewalk and the street (System Alternative 3) that could also be used for snow storage? [✓ YES] NO
   Additional Comments (optional):

6. Please provide any additional comments you may wish to offer:

   IF YOU WIDEN MILTON TO BUTLER, THEN WHAT? 6 LANES INTO TWO LANES ON 66 + Humphreys —

OPTIONAL ONLY:
Name:
Email:

Appendix M: Station 3 Comment Cards



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

Additional Comments (optional):
Streets over 5 lanes are too difficult to create "place" ~~roads~~ ~~#a~~ streets in the middle of a City are not for high speed travel for cars, saving 4 mins/day is not worth the cost burden and the inefficient use of land

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

A. Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
C. Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

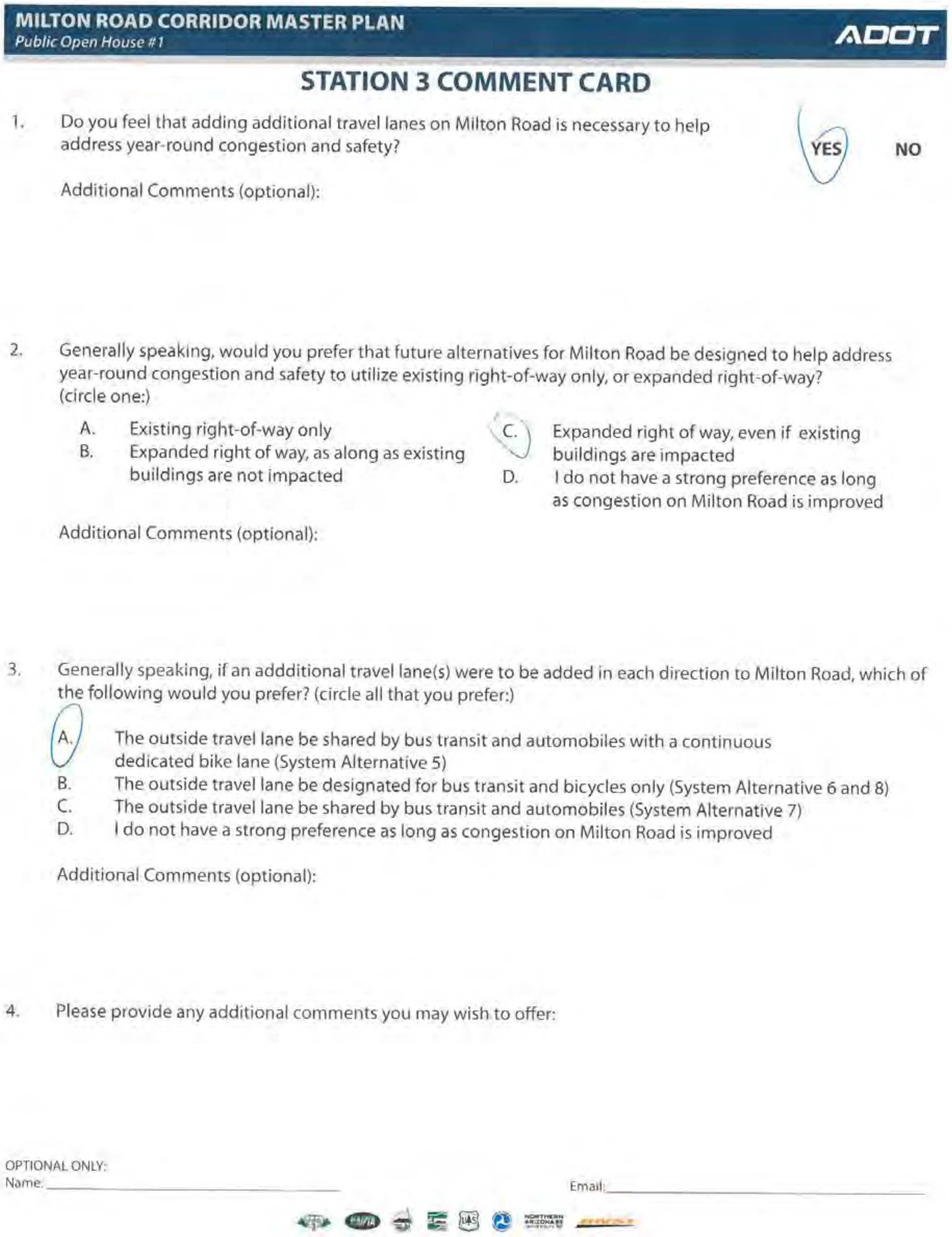
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ____________________
Email: ____________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   [✓ C.] Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

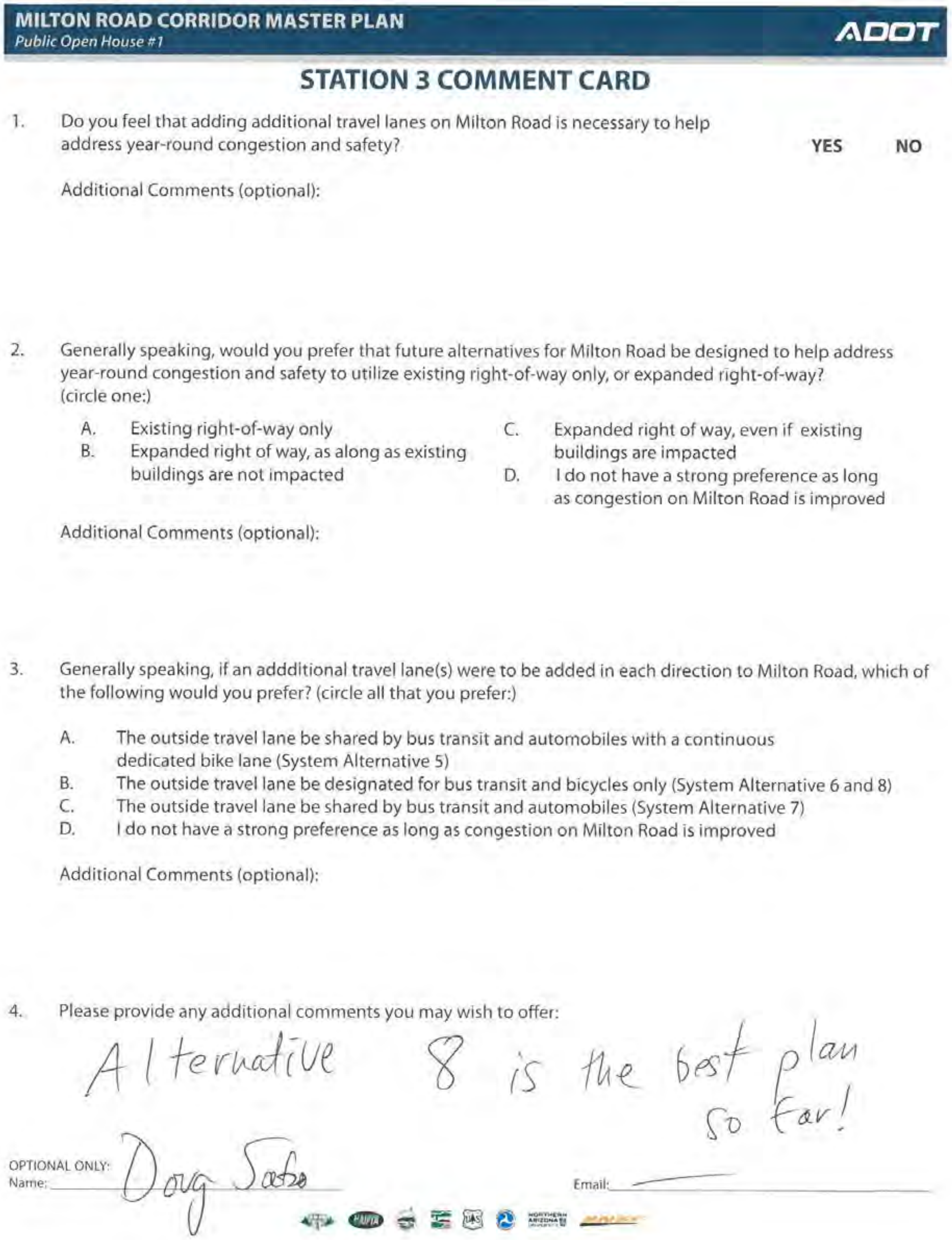
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   [✓ A.] The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:____________________ Email:____________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES NO

Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

- A. Existing right-of-way only
- B. Expanded right of way, as along as existing buildings are not impacted
- C. Expanded right of way, even if existing buildings are impacted
- D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

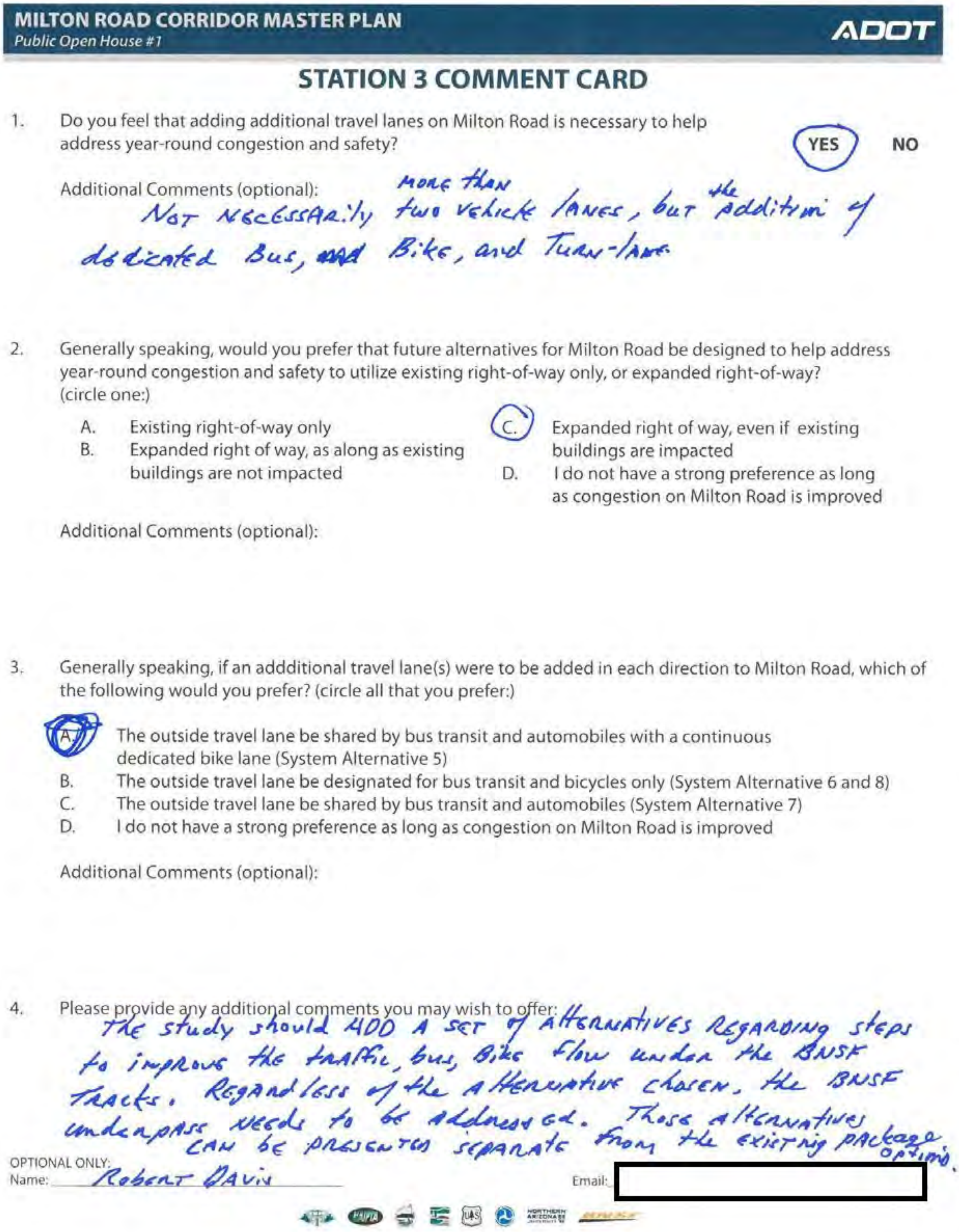
- A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
- B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
- C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
- D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

Alternative 8 is the best plan so far!

OPTIONAL ONLY:
Name: Doug Sato
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

Additional Comments (optional): Not necessarily more than two vehicle lanes, but the addition of dedicated bus, ~~and~~ Bike, and Turn-lane.

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

A. Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
[✓ C.] Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

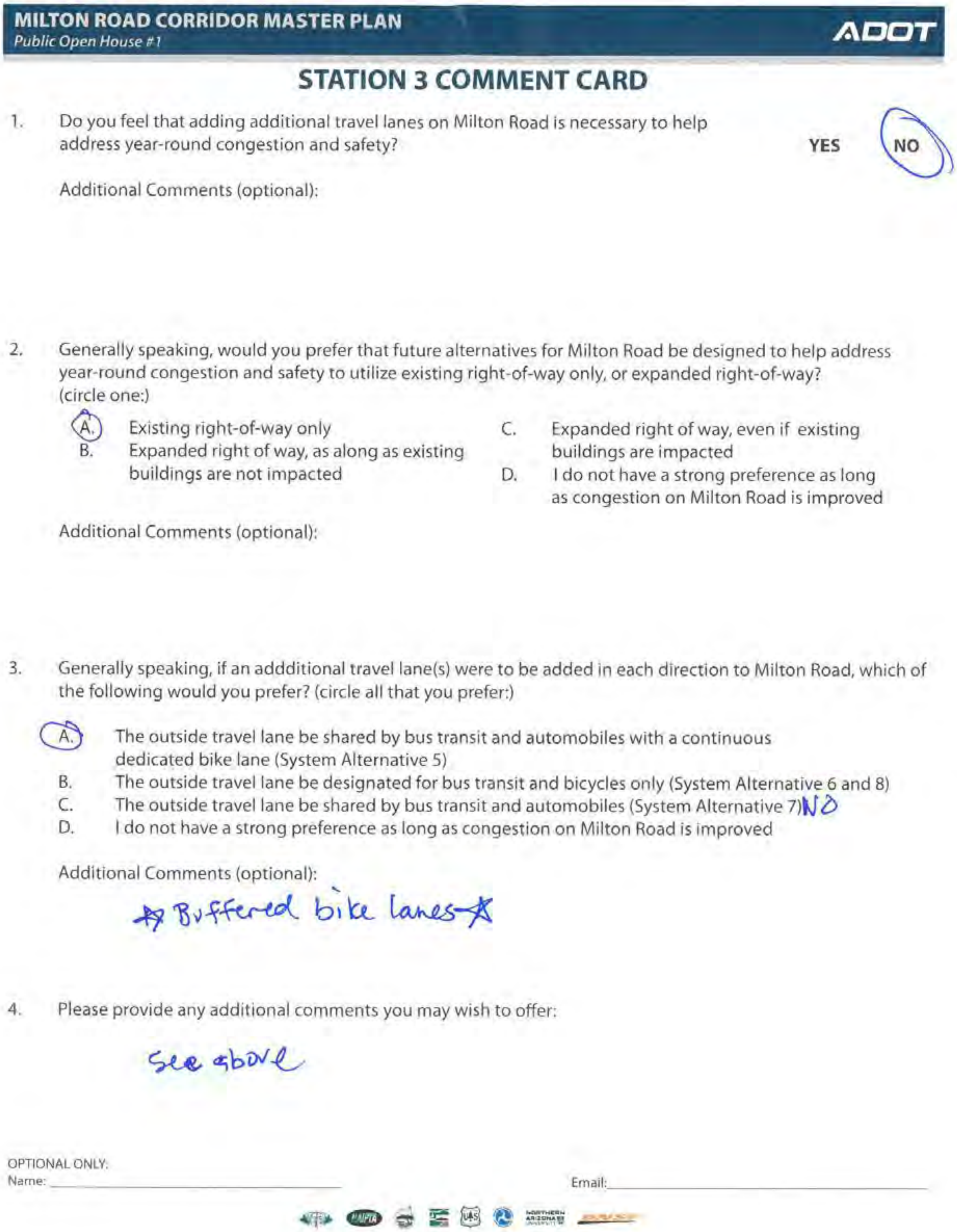
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

[✓ A.] The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer: The study should add a set of alternatives regarding steps to improve the traffic, bus, Bike flow under the BNSF Tracks. Regardless of the alternative chosen, the BNSF underpass needs to be addressed. Those alternatives can be presented separate from the existing package options.

OPTIONAL ONLY:
Name: Robert Davis
Email: [redacted]



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   [✓ A.] The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7) NO
   D. I do not have a strong preference as long as congestion on Milton Road is improved

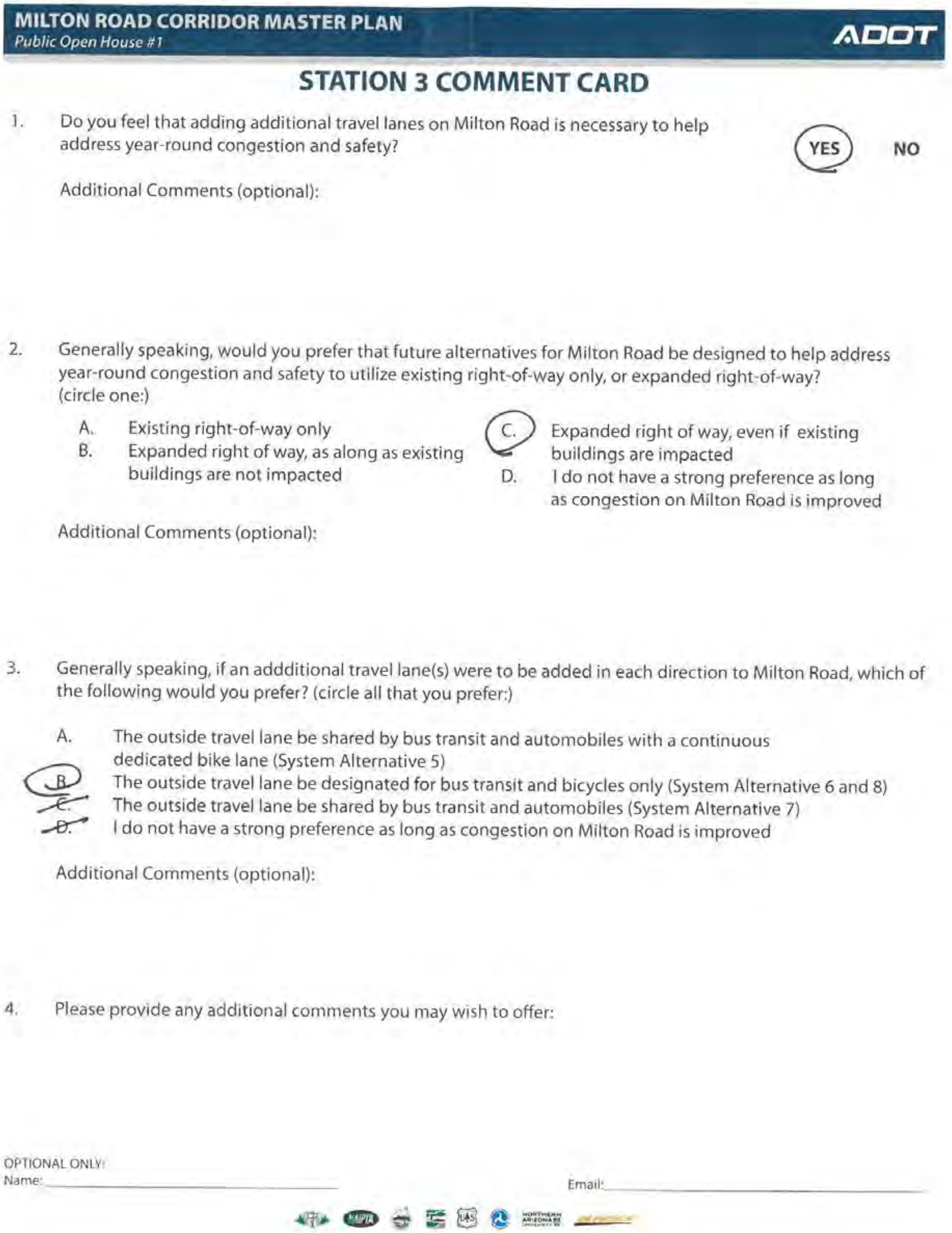
   Additional Comments (optional):

   ★ Buffered bike lanes ★

4. Please provide any additional comments you may wish to offer:

   See above

OPTIONAL ONLY:
Name: __________ Email: __________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   [✓ C.] Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

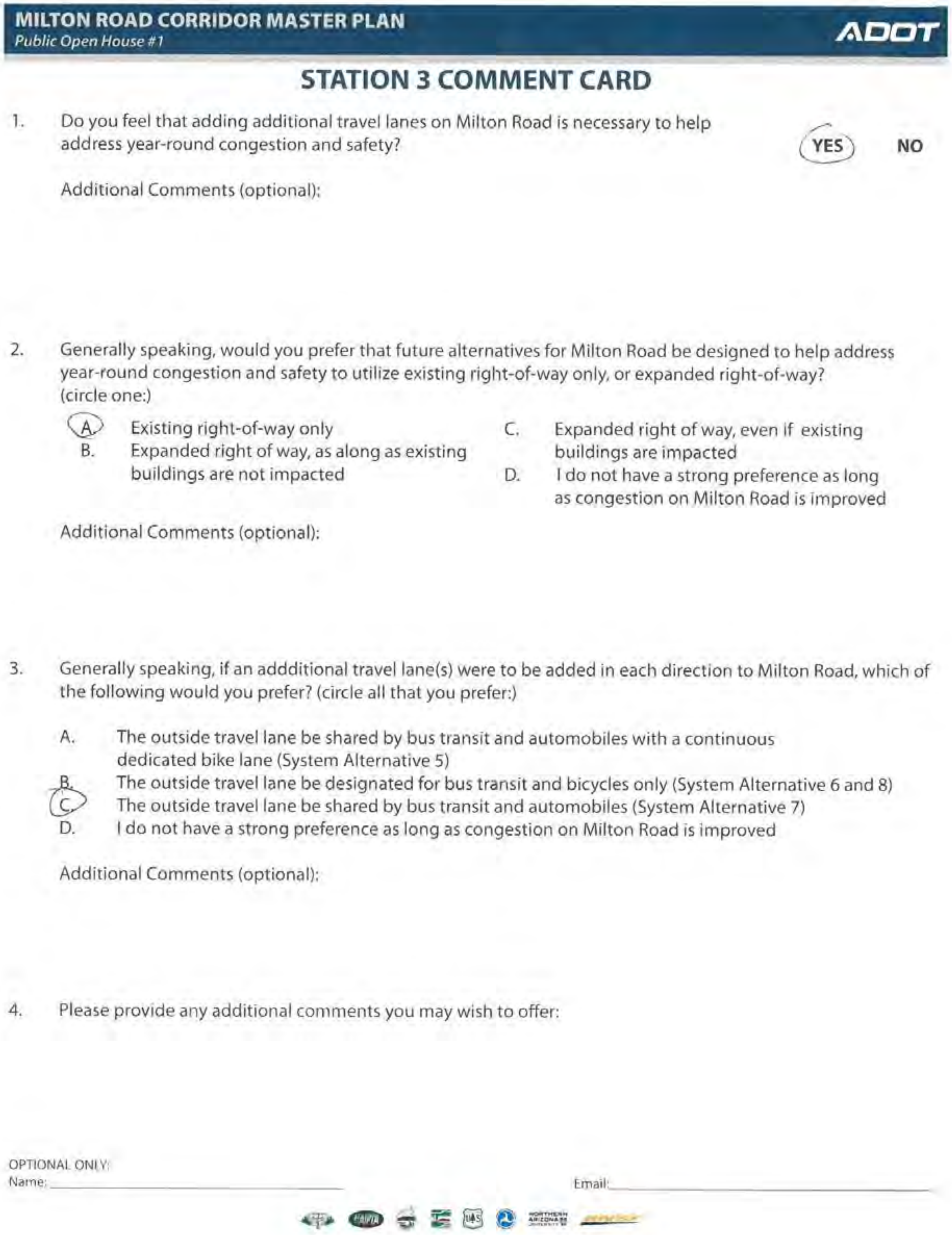
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   [✓ B.] The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   ~~C.~~ The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   ~~D.~~ I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

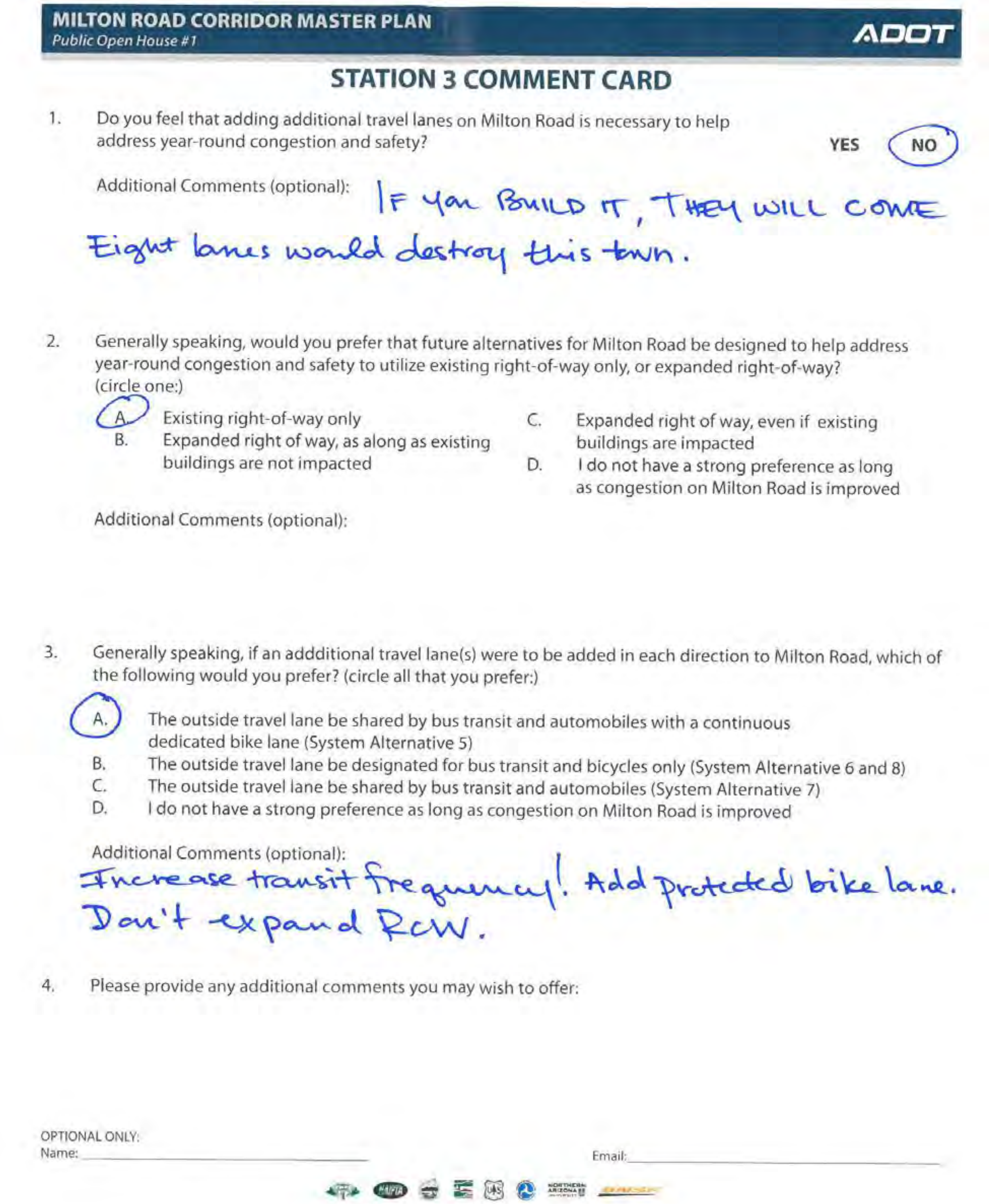
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   [✓ C.] The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

   Additional Comments (optional): IF You BUILD IT, THEY WILL COME
   Eight lanes would destroy this town.

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

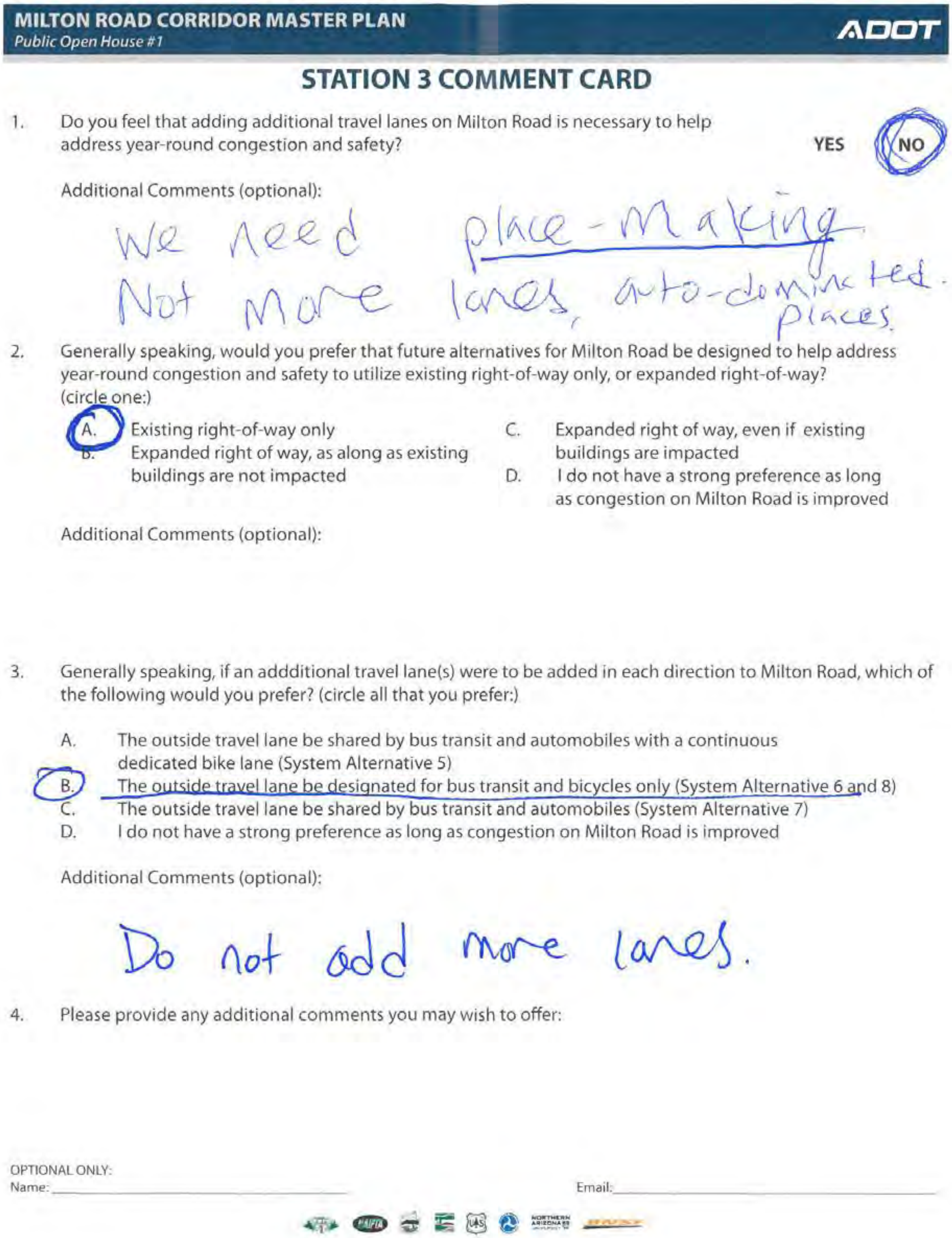
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   [✓ A.] The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):
   Increase transit frequency! Add protected bike lane.
   Don't expand ROW.

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

   Additional Comments (optional):

   We need place-making
   Not more lanes, auto-dominated places.

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

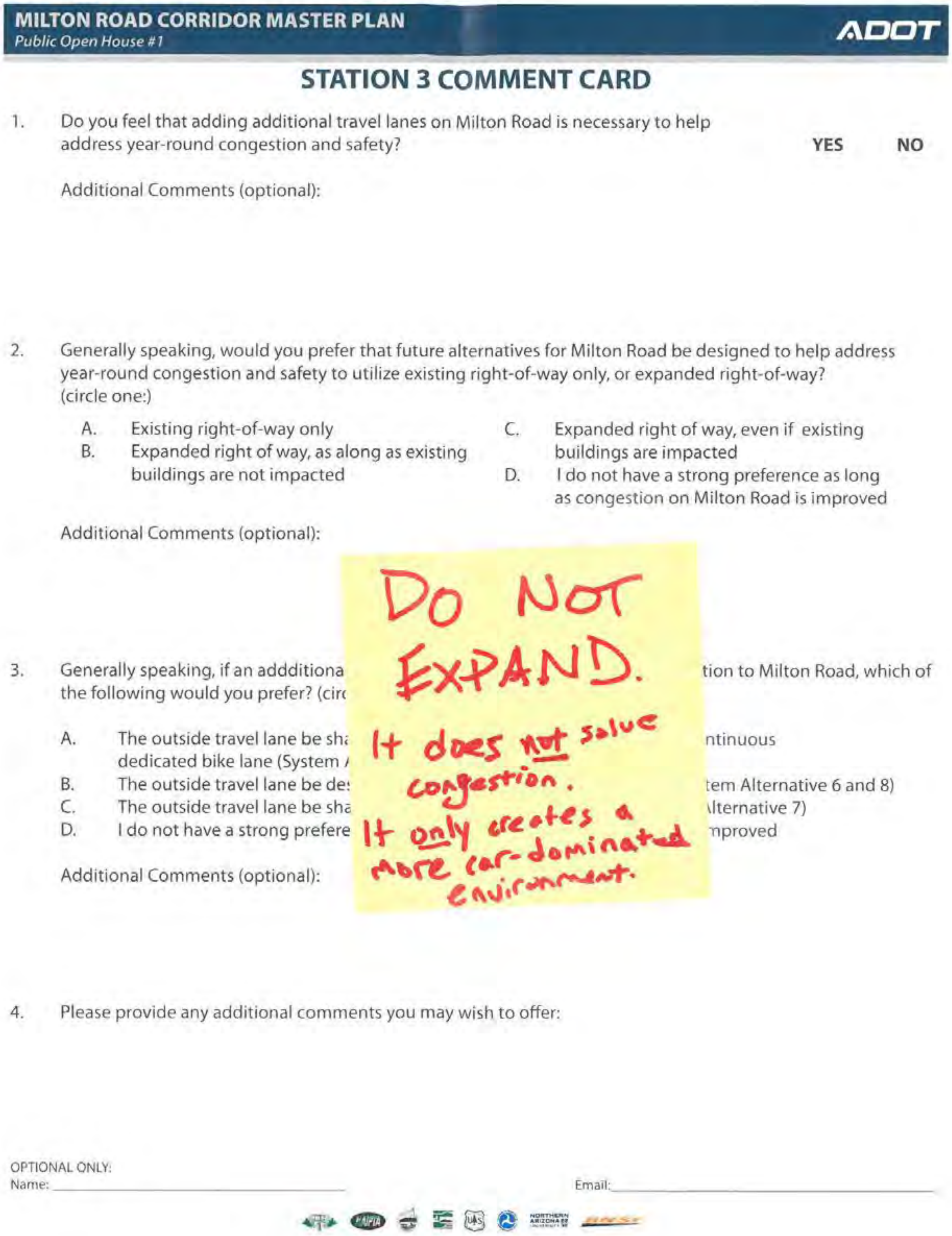
   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   [✓ B.] The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

   Do not add more lanes.

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ____________________
Email: ____________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? **YES** **NO**

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

Do Not EXPAND.

It does not solve congestion.
It only creates a more car-dominated environment.

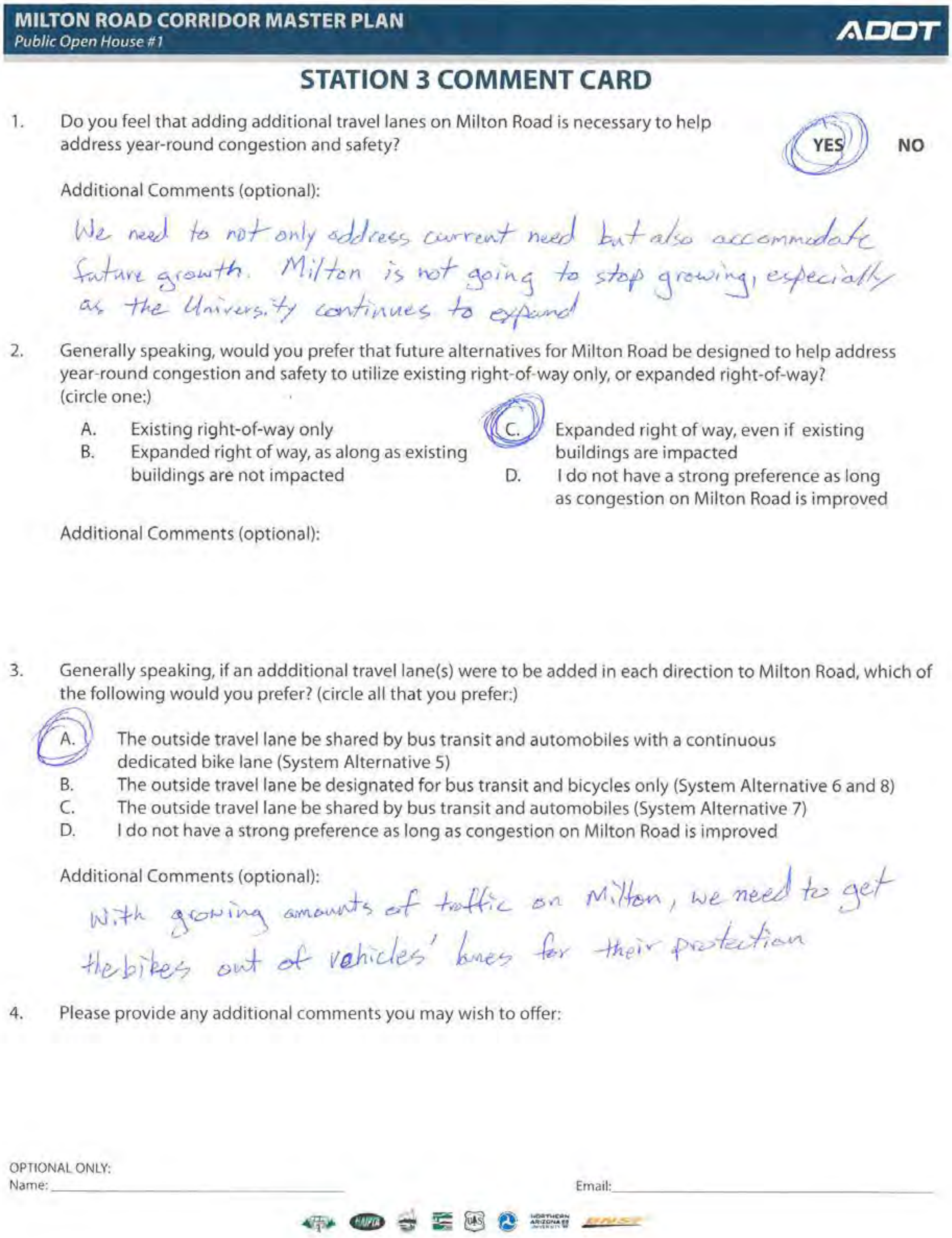
3. Generally speaking, if an addditiona tion to Milton Road, which of
   the following would you prefer? (circ

   A. The outside travel lane be sha ntinuous
   dedicated bike lane (System /
   B. The outside travel lane be de: tem Alternative 6 and 8)
   C. The outside travel lane be sha lternative 7)
   D. I do not have a strong prefere nproved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

Additional Comments (optional):

We need to not only address current need but also accommodate future growth. Milton is not going to stop growing, especially as the University continues to expand

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

- A. Existing right-of-way only
- B. Expanded right of way, as along as existing buildings are not impacted
- [✓ C.] Expanded right of way, even if existing buildings are impacted
- D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

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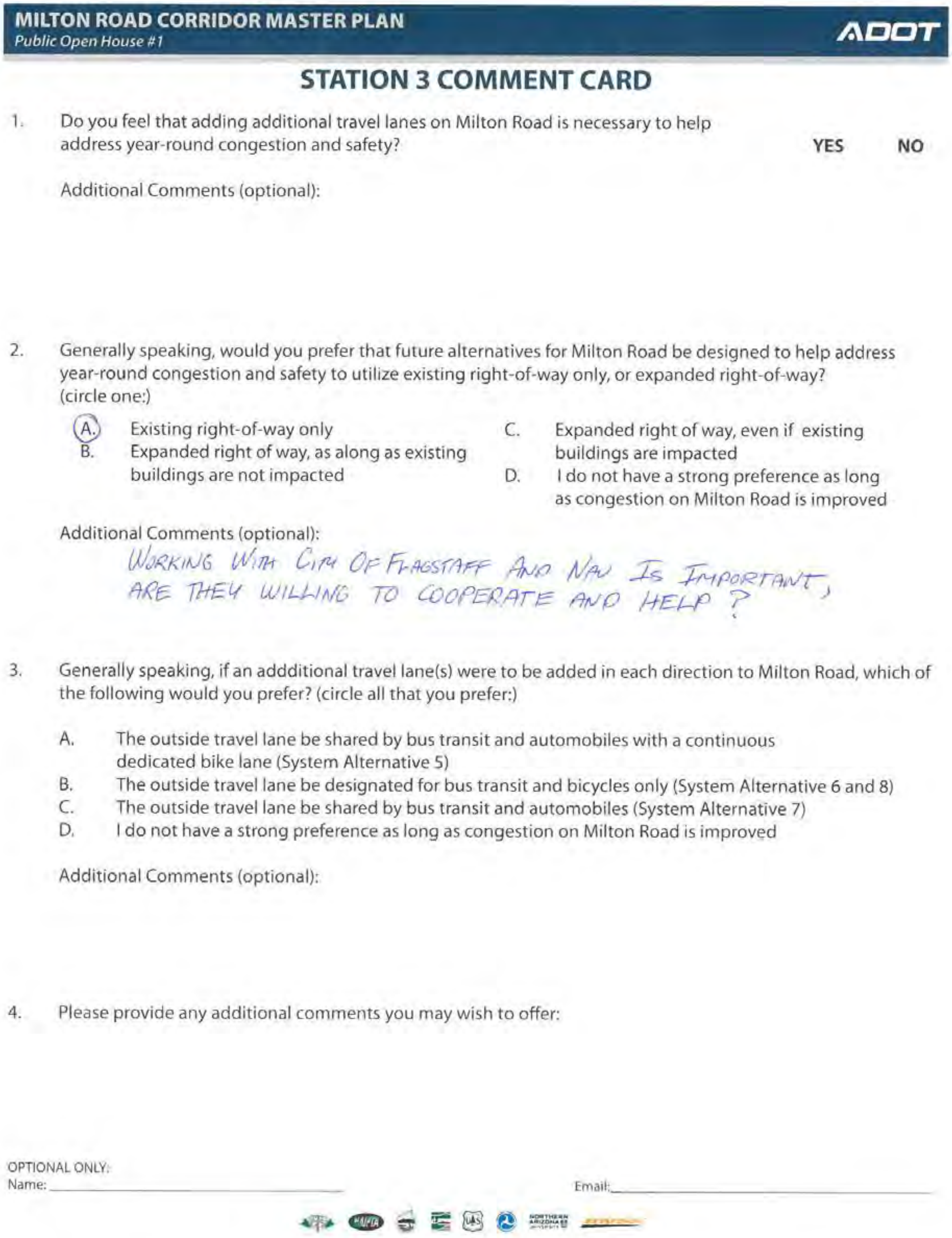
- B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
- C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
- D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

With growing amounts of traffic on Milton, we need to get the bikes out of vehicles' lanes for their protection

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? **YES** **NO**

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):
   WORKING WITH CITY OF FLAGSTAFF AND NAU IS IMPORTANT, ARE THEY WILLING TO COOPERATE AND HELP ?

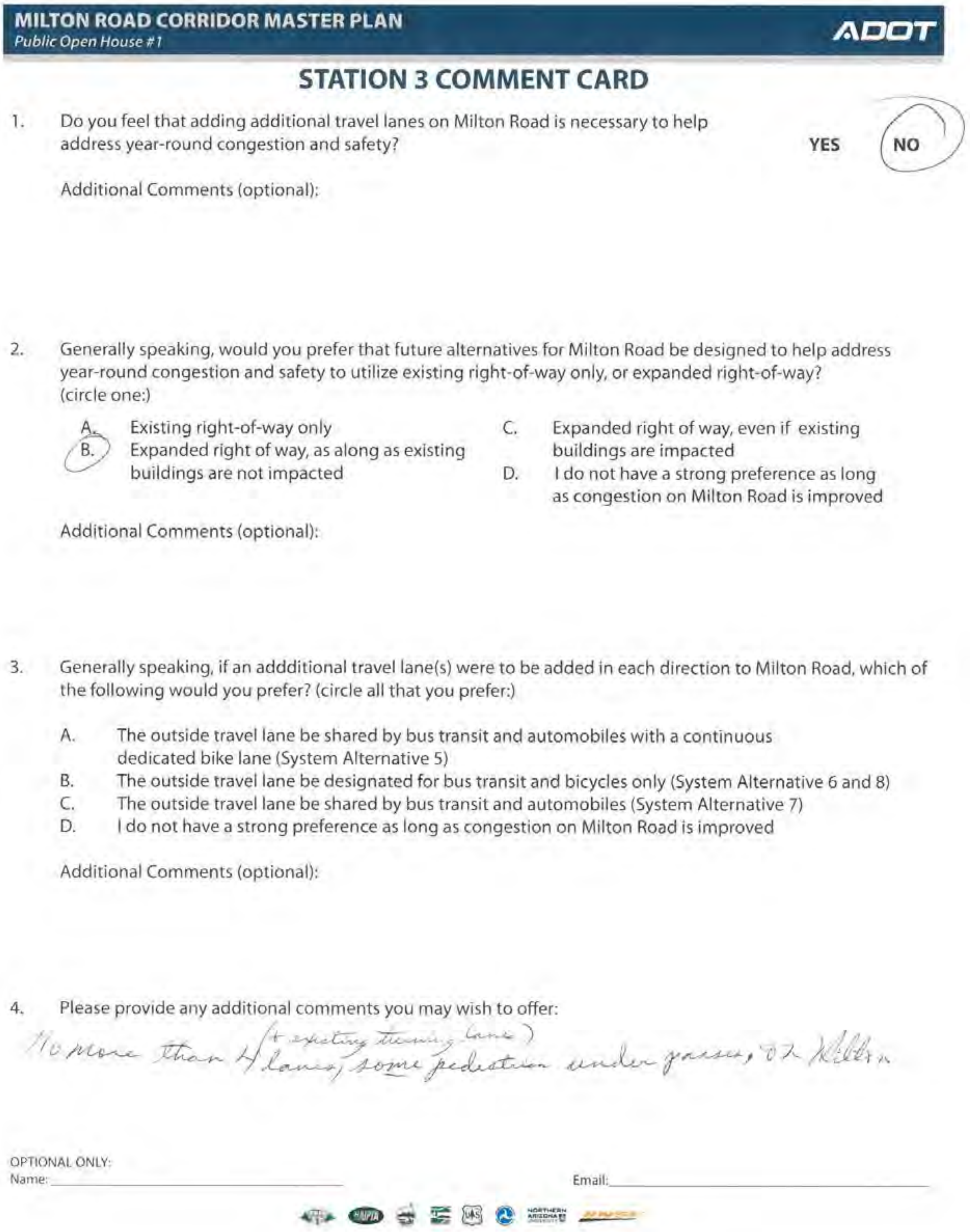
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________
Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   [✓ B.] Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

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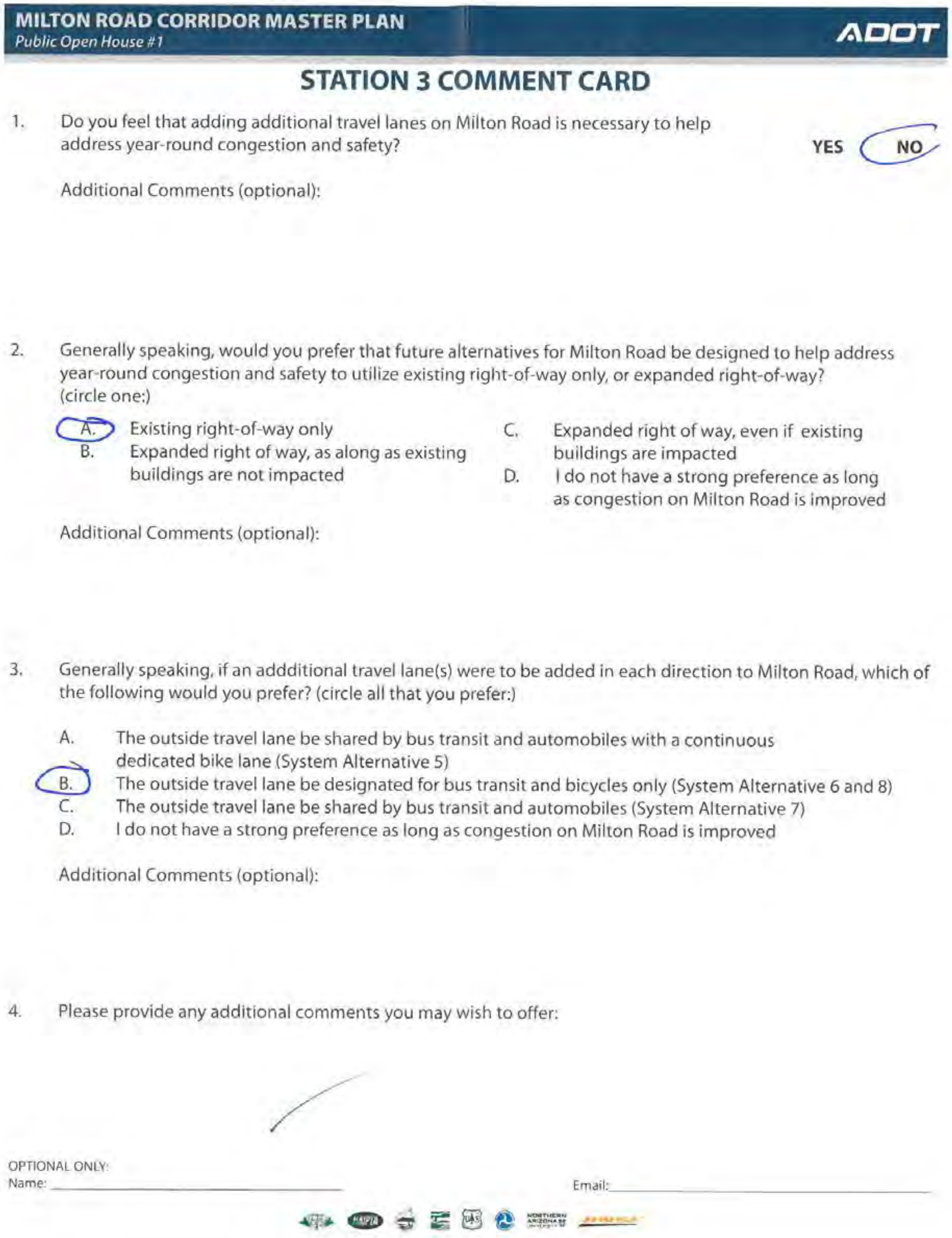
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

No more than 4 (+ existing turning lane) lanes, some pedestrian underpasses, on Milton

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? **YES** [✓ **NO**]

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

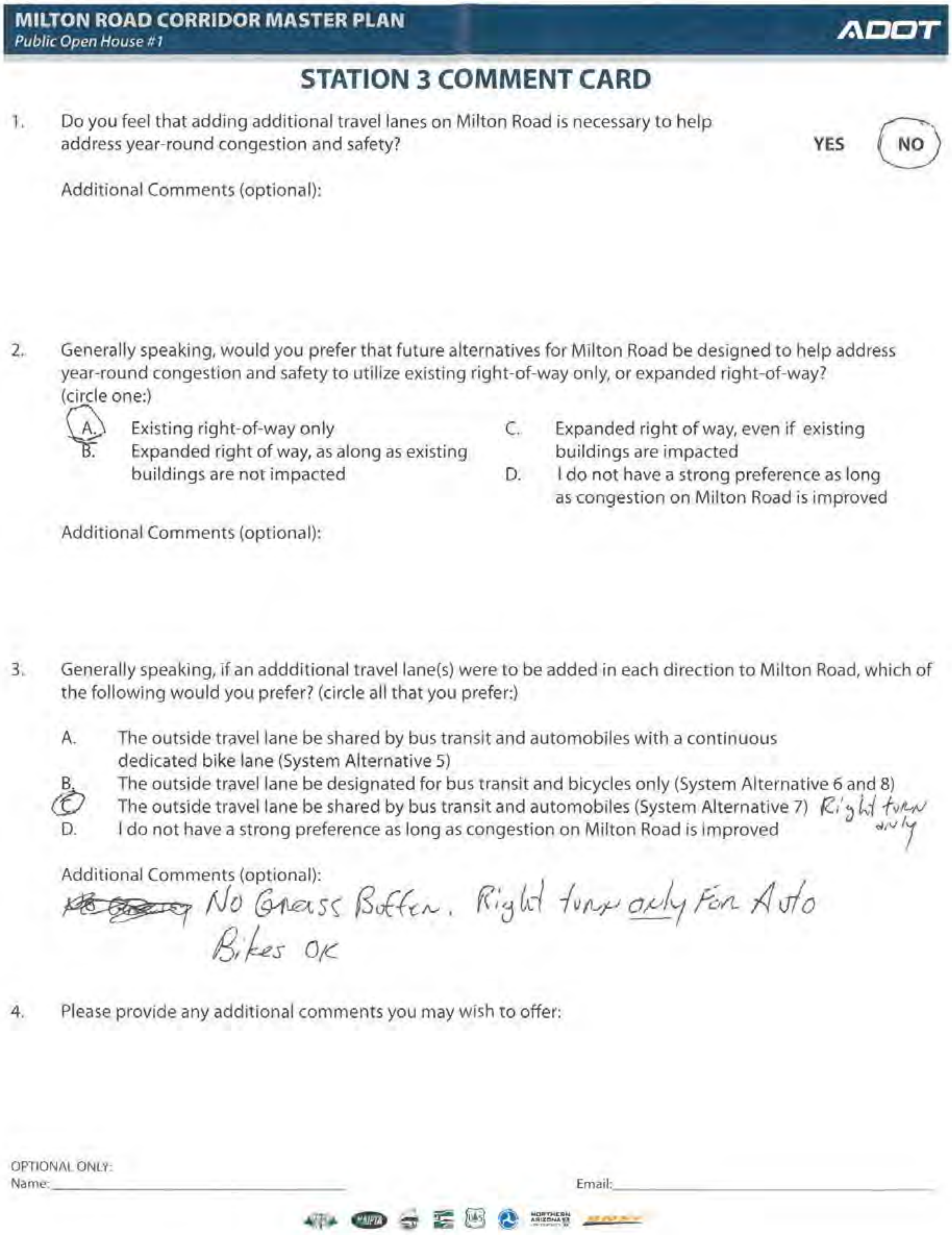
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   [✓ B.] The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________
Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

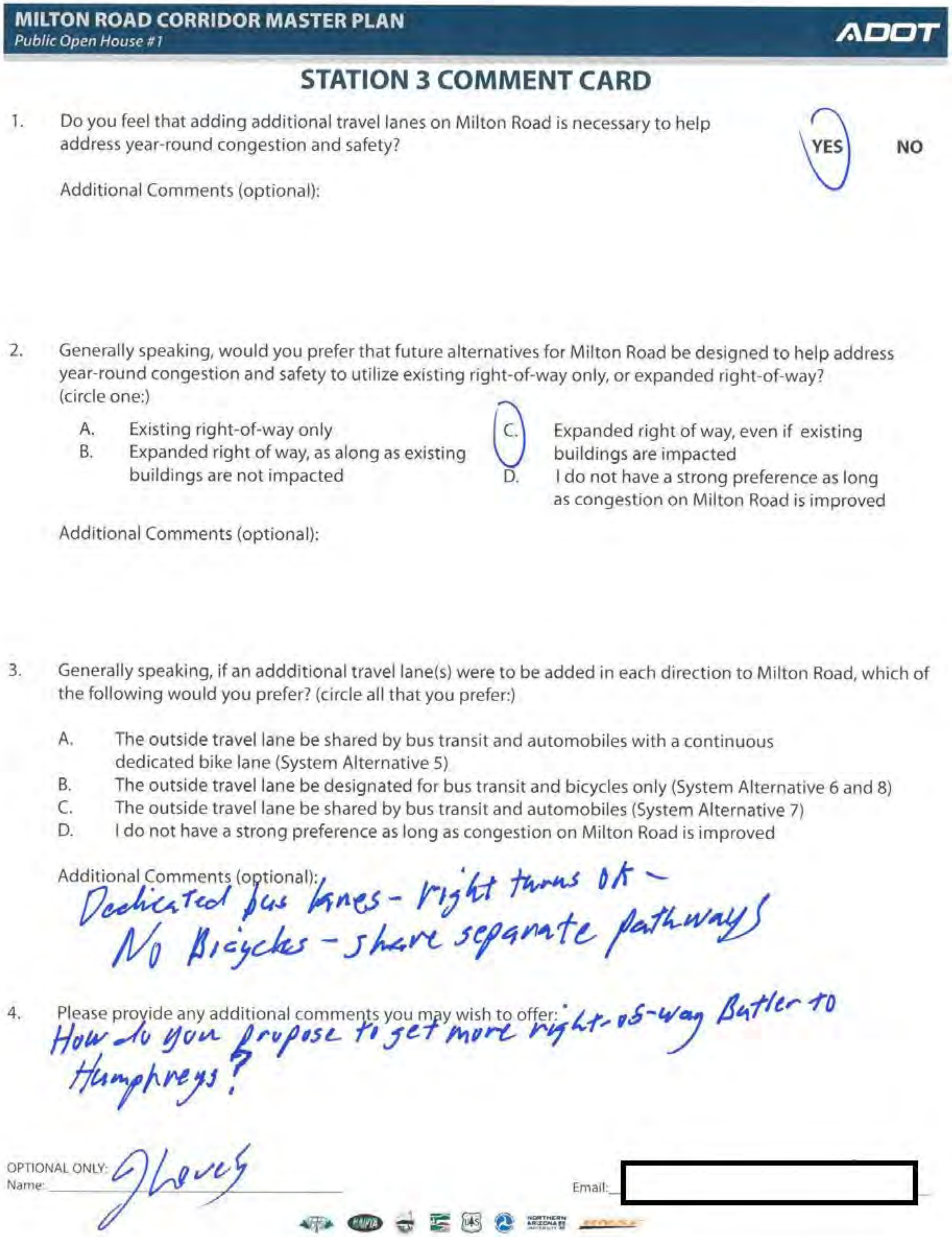
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   [✓ C.] The outside travel lane be shared by bus transit and automobiles (System Alternative 7) Right turn only
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):
   No Grass Buffer. Right turn only For Auto
   Bikes OK

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:________________ Email:________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   [✓ C.] Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

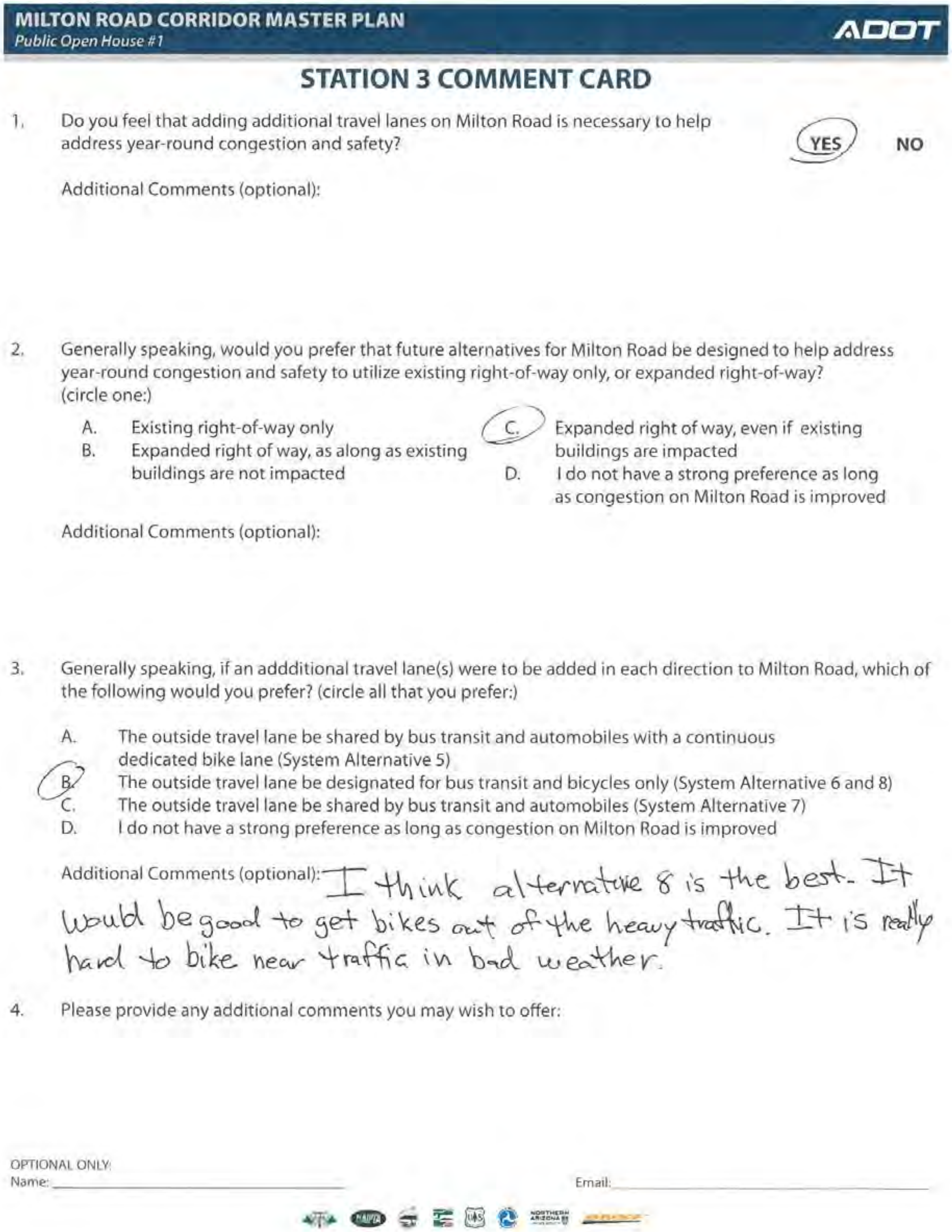
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional): Dedicated bus lanes - right turns OK -
   No Bicycles - share separate pathways

4. Please provide any additional comments you may wish to offer: How do you propose to get more right-of-way Butler to Humphreys?

OPTIONAL ONLY:
Name: JLovely
Email: [redacted]



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   [✓ C.] Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

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   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   [✓ B.] The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional): I think alternative 8 is the best. It would be good to get bikes out of the heavy traffic. It is really hard to bike near traffic in bad weather.

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

   Additional Comments (optional):

   Additional lanes invites additional traffic.
   Four lanes plus dedicated - not shared - bike lane.

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

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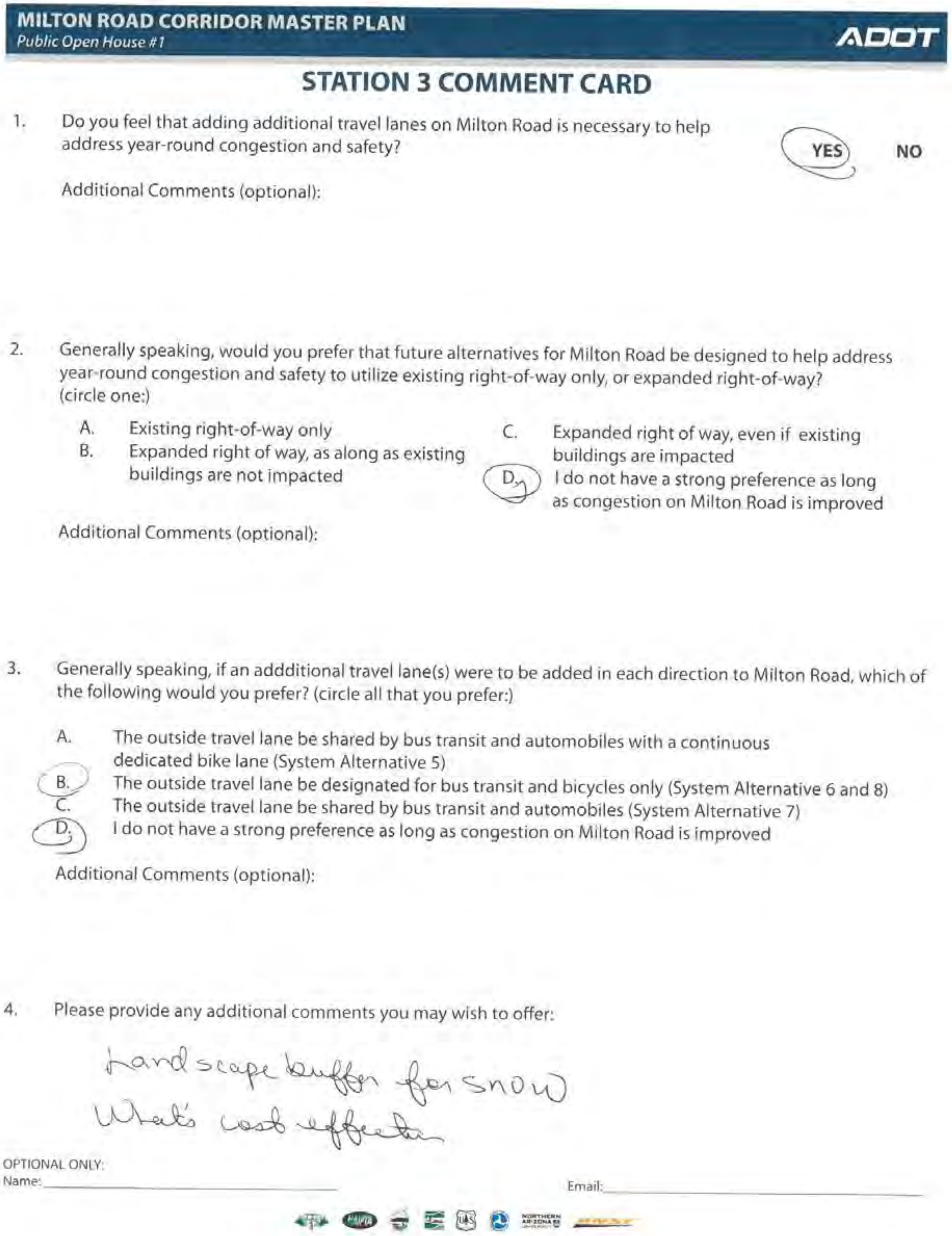
   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   [✓ B.] The outside travel lane be designated for ~~bus tran~~sit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: David B
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   [✓ D.] I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

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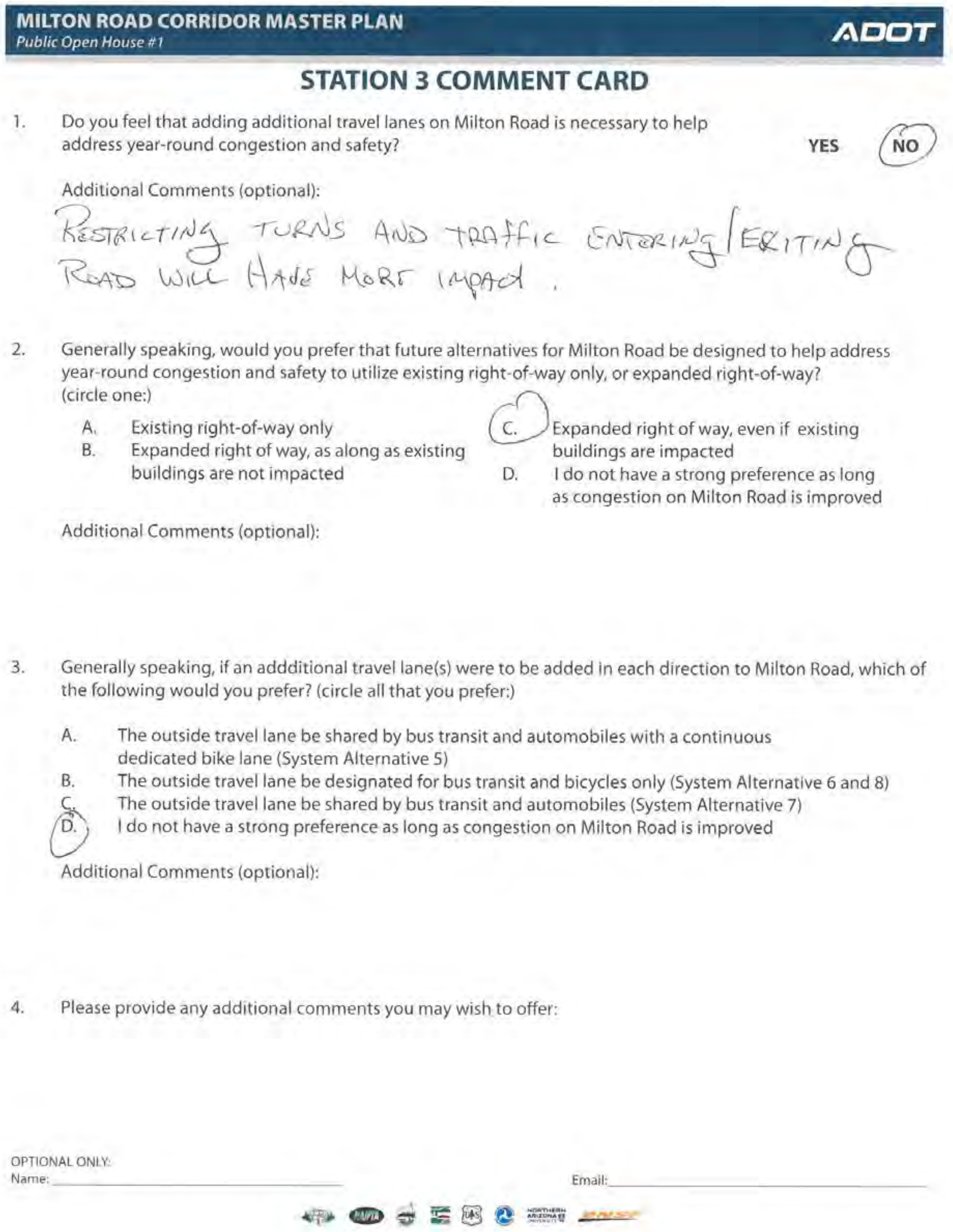
   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   [✓ B.] The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   [✓ D.] I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

   Landscape buffer for snow
   What's cost effective

OPTIONAL ONLY:
Name: ________________ Email: ________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

Additional Comments (optional):

RESTRICTING TURNS AND TRAFFIC ENTERING/EXITING ROAD WILL HAVE MORE IMPACT.

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

A. Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
[✓ C.] Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

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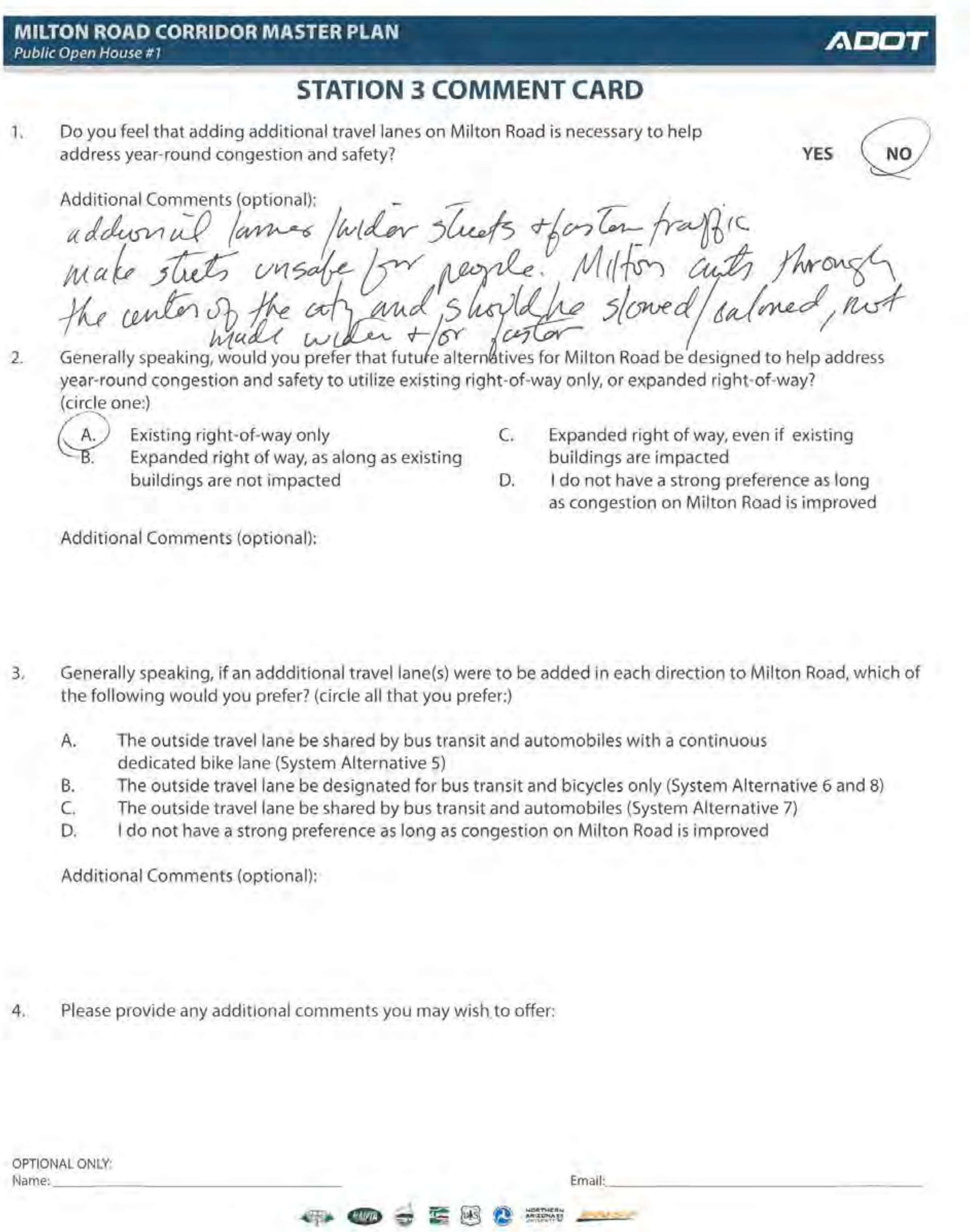
B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
[✓ D.] I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:________________ Email:________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? **YES** [✓ **NO**]

Additional Comments (optional):
additional lanes /wider streets + faster traffic make streets unsafe for people. Milton cuts through the center of the city and should be slowed/calmed, not made wider +/or faster

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)
   - [✓ A.] Existing right-of-way only
   - B. Expanded right of way, as along as existing buildings are not impacted
   - C. Expanded right of way, even if existing buildings are impacted
   - D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)
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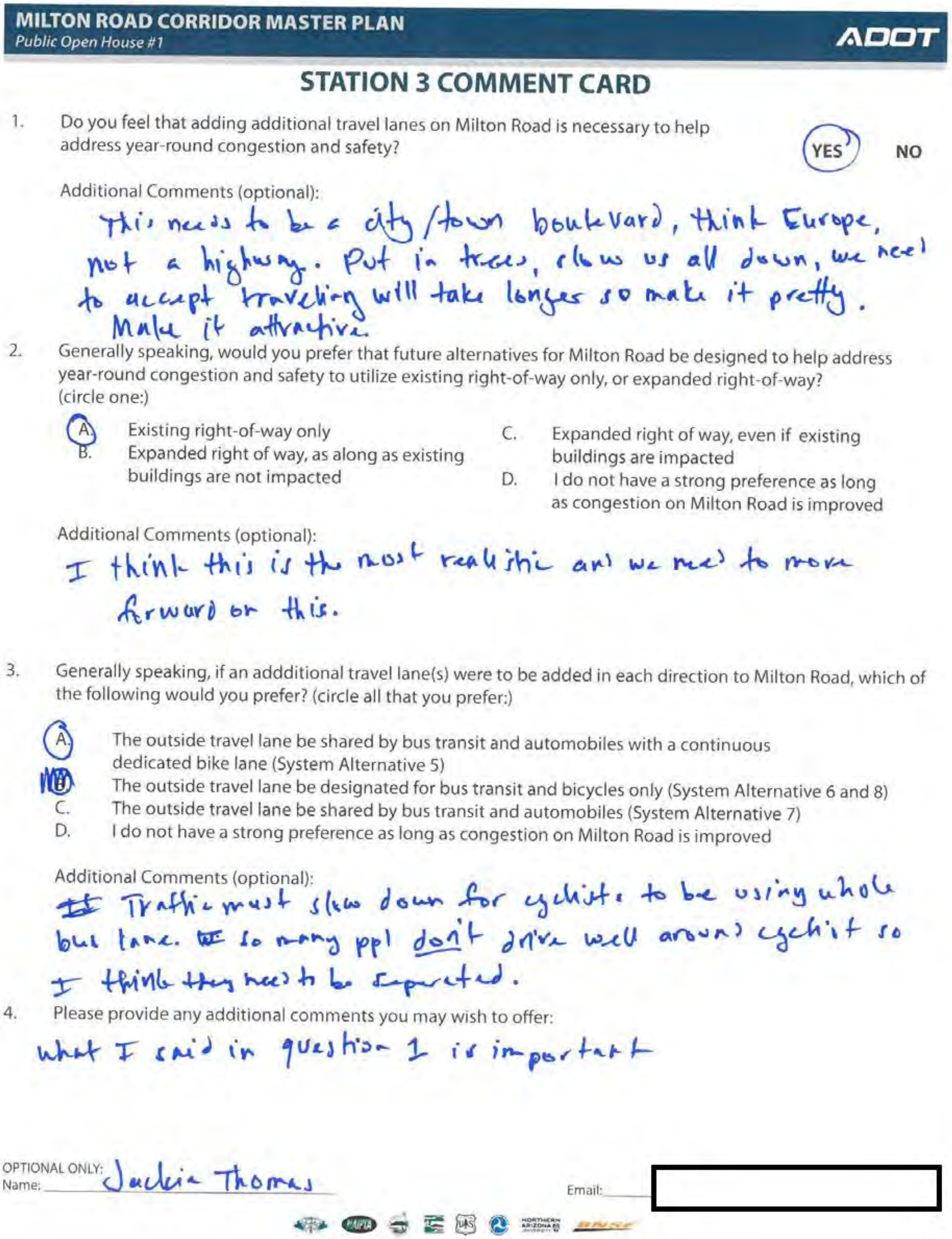
   - B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   - C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   - D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:____________________ Email:____________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

Additional Comments (optional):
This needs to be a city/town boulevard, think Europe, not a highway. Put in trees, slow us all down, we need to accept traveling will take longer so make it pretty. Make it attractive.

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

[✓ A.] Existing right-of-way only
B. Expanded right of way, as along as existing buildings are not impacted
C. Expanded right of way, even if existing buildings are impacted
D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):
I think this is the most realistic and we need to move forward on this.

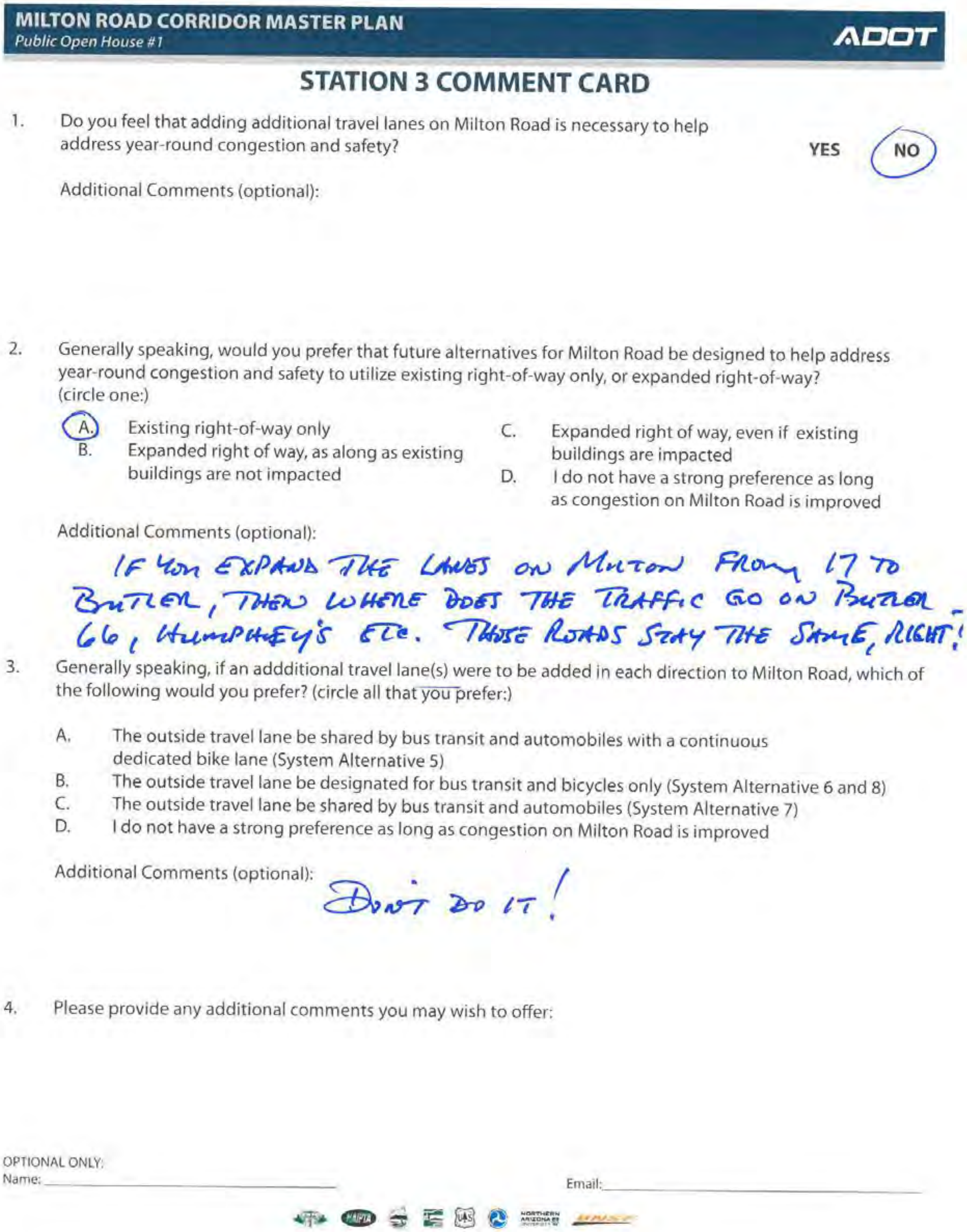
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

[✓ A.] The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
[✓ B.] The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
D. I do not have a strong preference as long as congestion on Milton Road is improved

Additional Comments (optional):
~~It~~ Traffic must slow down for cyclists to be using whole bus lane. ~~We~~ So many ppl don't drive well around cyclist so I think they need to be separated.

4. Please provide any additional comments you may wish to offer:
What I said in question 1 is important

OPTIONAL ONLY:
Name: Jackie Thomas
Email: [redacted]



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? YES [✓ NO]

   Additional Comments (optional):

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   [✓ A.] Existing right-of-way only
   B. Expanded right of way, as along as existing buildings are not impacted
   C. Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

   IF YOU EXPAND THE LANES ON MILTON FROM 17 TO BUTLER, THEN WHERE DOES THE TRAFFIC GO ON BUTLER, 66, HUMPHEY'S ETC. THESE ROADS STAY THE SAME, RIGHT!

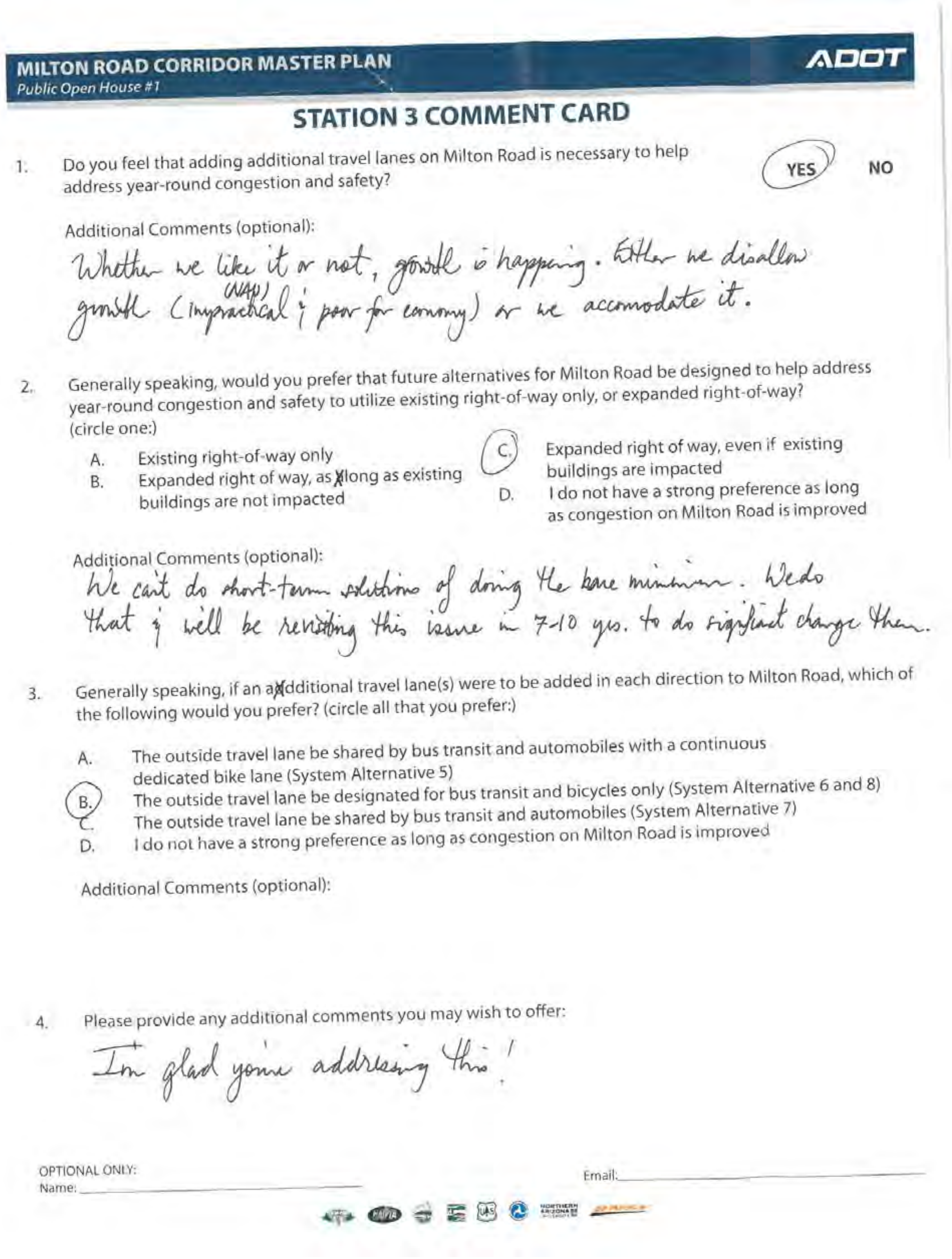
3. Generally speaking, if an addditional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   B. The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional): DON'T DO IT!

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________
Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 3 COMMENT CARD

1. Do you feel that adding additional travel lanes on Milton Road is necessary to help address year-round congestion and safety? [✓ YES] NO

   Additional Comments (optional):
   Whether we like it or not, growth is happening. Either we disallow growth ((way) impractical & poor for economy) or we accomodate it.

2. Generally speaking, would you prefer that future alternatives for Milton Road be designed to help address year-round congestion and safety to utilize existing right-of-way only, or expanded right-of-way? (circle one:)

   A. Existing right-of-way only
   B. Expanded right of way, as long as existing buildings are not impacted
   [✓ C.] Expanded right of way, even if existing buildings are impacted
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):
   We can't do short-term solutions of doing the bare minimum. We do that & will be revisiting this issue in 7-10 yrs. to do significant change then.

3. Generally speaking, if an additional travel lane(s) were to be added in each direction to Milton Road, which of the following would you prefer? (circle all that you prefer:)

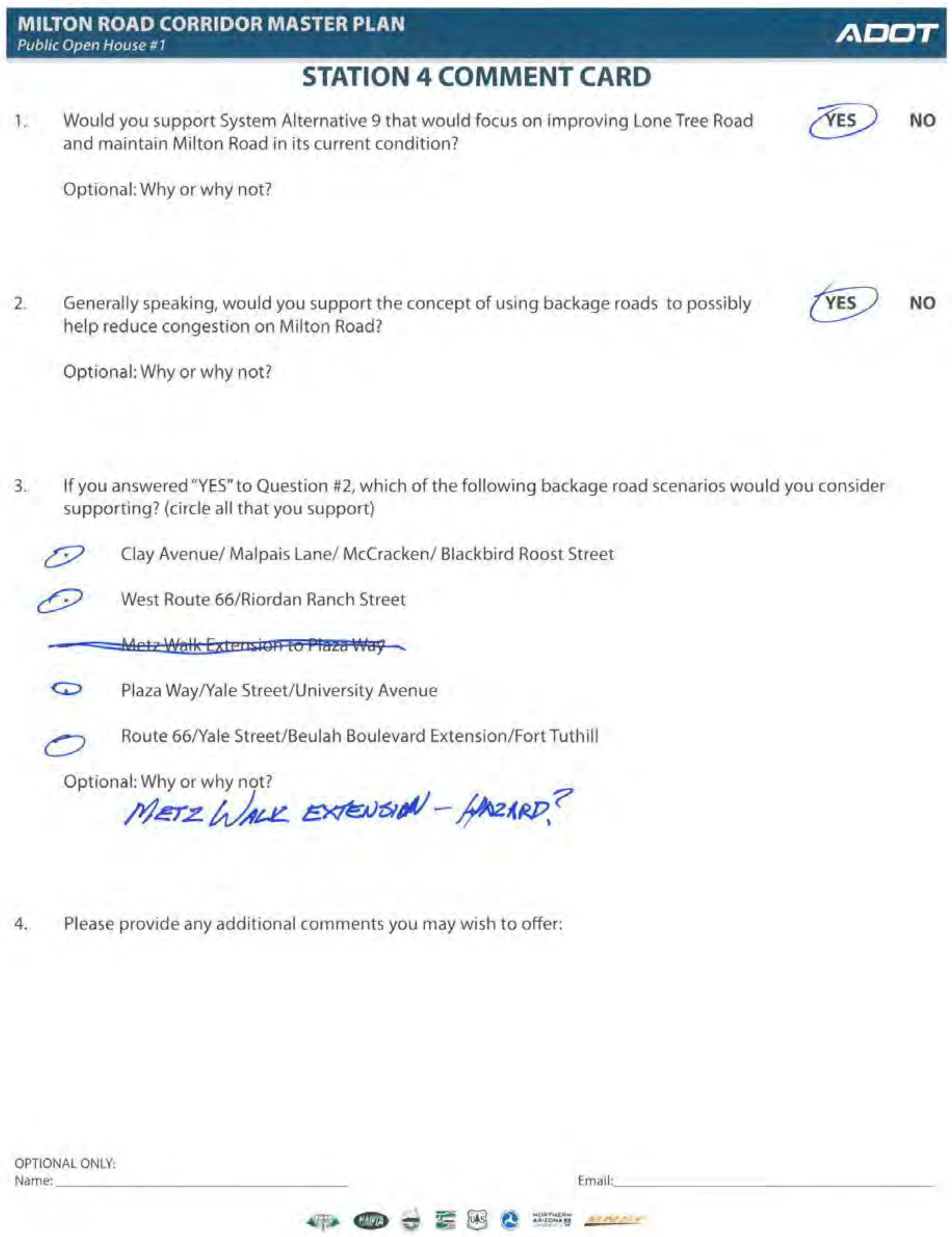
   A. The outside travel lane be shared by bus transit and automobiles with a continuous dedicated bike lane (System Alternative 5)
   [✓ B.] The outside travel lane be designated for bus transit and bicycles only (System Alternative 6 and 8)
   C. The outside travel lane be shared by bus transit and automobiles (System Alternative 7)
   D. I do not have a strong preference as long as congestion on Milton Road is improved

   Additional Comments (optional):

4. Please provide any additional comments you may wish to offer:
   I'm glad you're addressing this!

OPTIONAL ONLY:
Name:
Email:

Appendix N: Station 4 Comment Cards



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ **YES**] **NO**

   Optional: Why or why not?

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ **YES**] **NO**

   Optional: Why or why not?

3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   [✓ Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street]

   [✓ West Route 66/Riordan Ranch Street]

   ~~Metz Walk Extension to Plaza Way~~

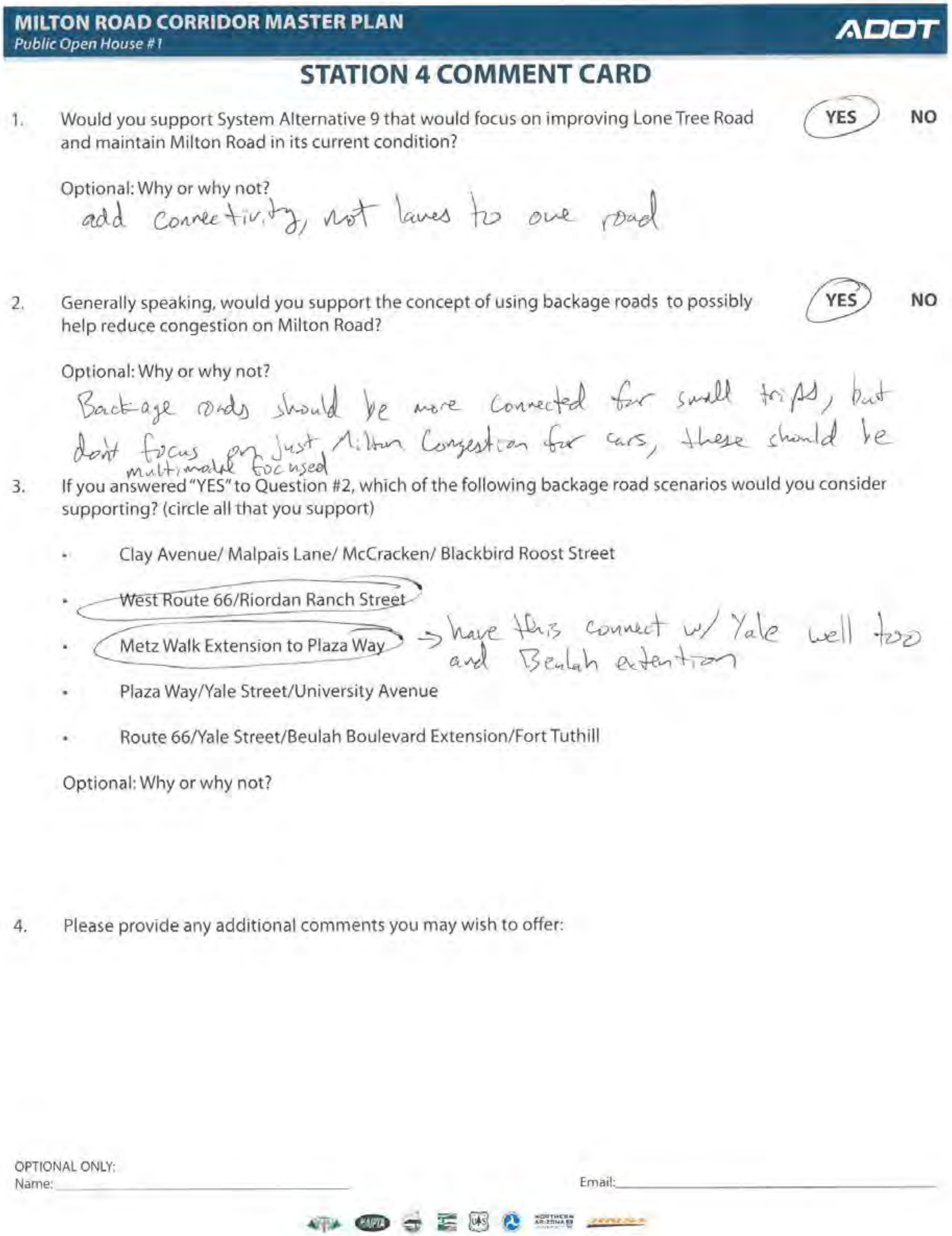
   [✓ Plaza Way/Yale Street/University Avenue]

   [✓ Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill]

   Optional: Why or why not?
   METZ WALK EXTENSION – HAZARD?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ________________ Email: ________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not?
   add connectivity, not lanes to one road

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?
   Backage roads should be more connected for small trips, but don't focus on just Milton Congestion for cars, these should be multimodal focused

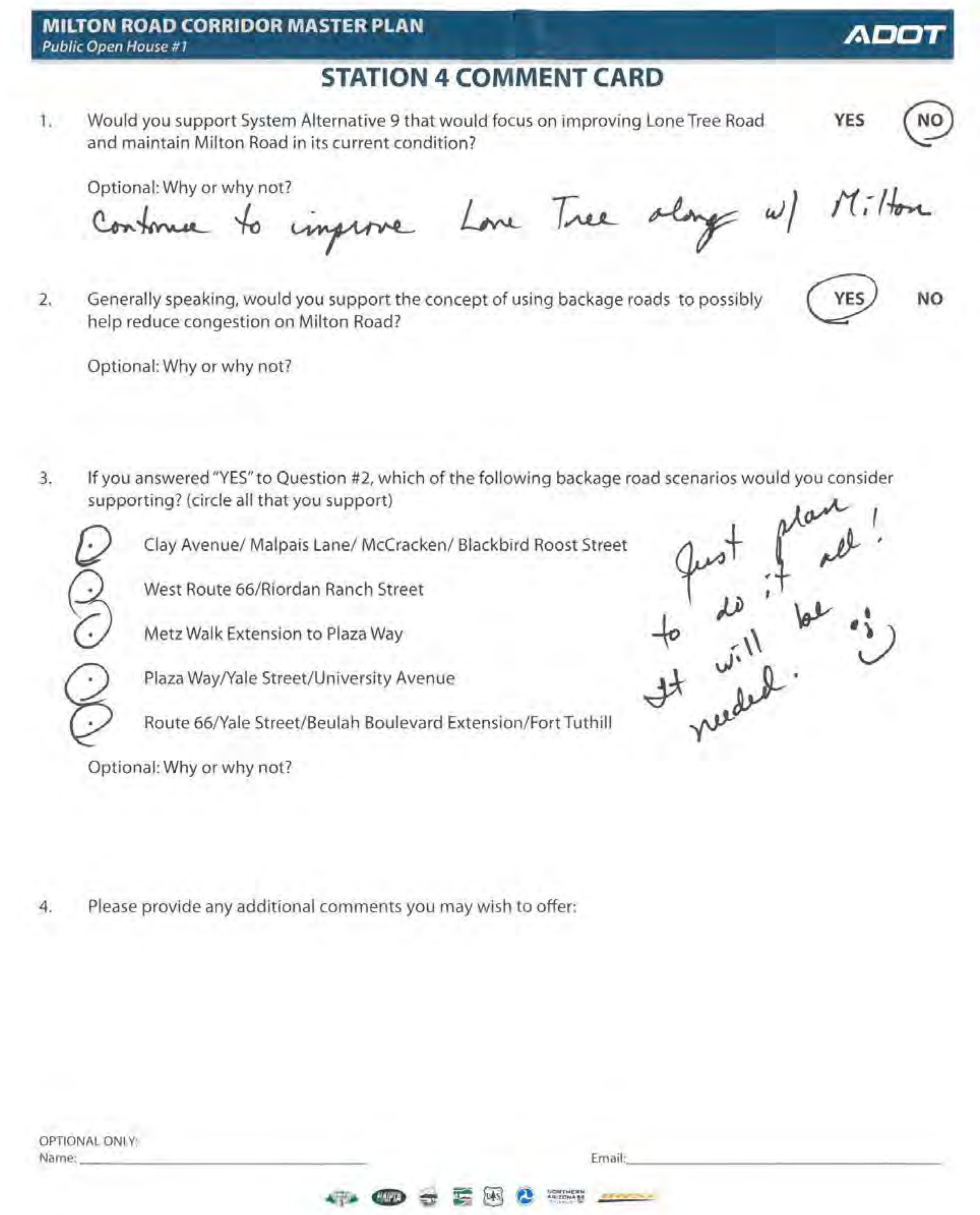
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - [✓ West Route 66/Riordan Ranch Street]
   - [✓ Metz Walk Extension to Plaza Way] → have this connect w/ Yale well too and Beulah extention
   - Plaza Way/Yale Street/University Avenue
   - Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? YES [✓ NO]

   Optional: Why or why not?
   Continue to improve Lone Tree along w/ Milton

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?

3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

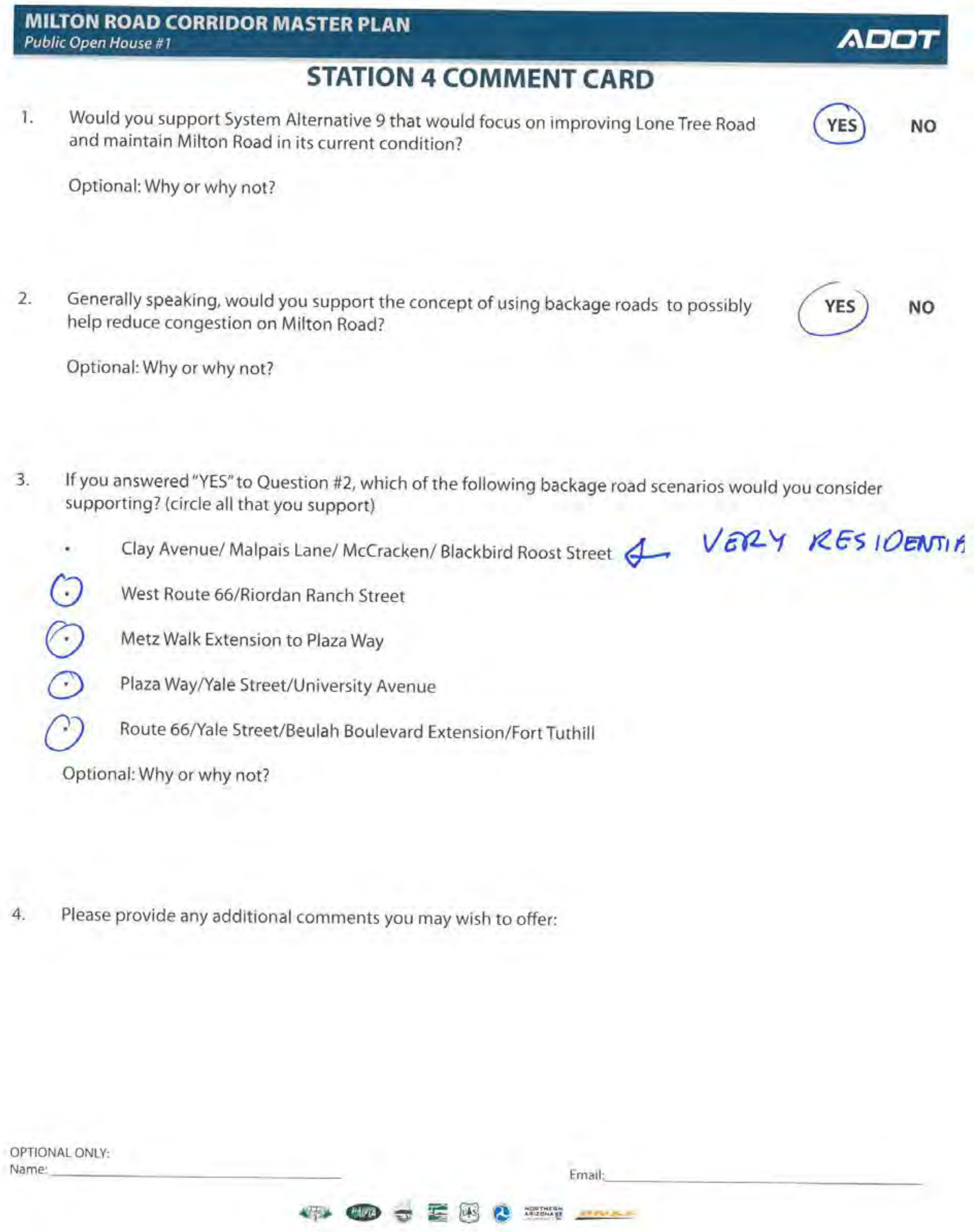
   - [✓ Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street]
   - [✓ West Route 66/Riordan Ranch Street]
   - [✓ Metz Walk Extension to Plaza Way]
   - [✓ Plaza Way/Yale Street/University Avenue]
   - [✓ Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill]

   Just plan to do it all! It will be needed. ☺

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not?

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?

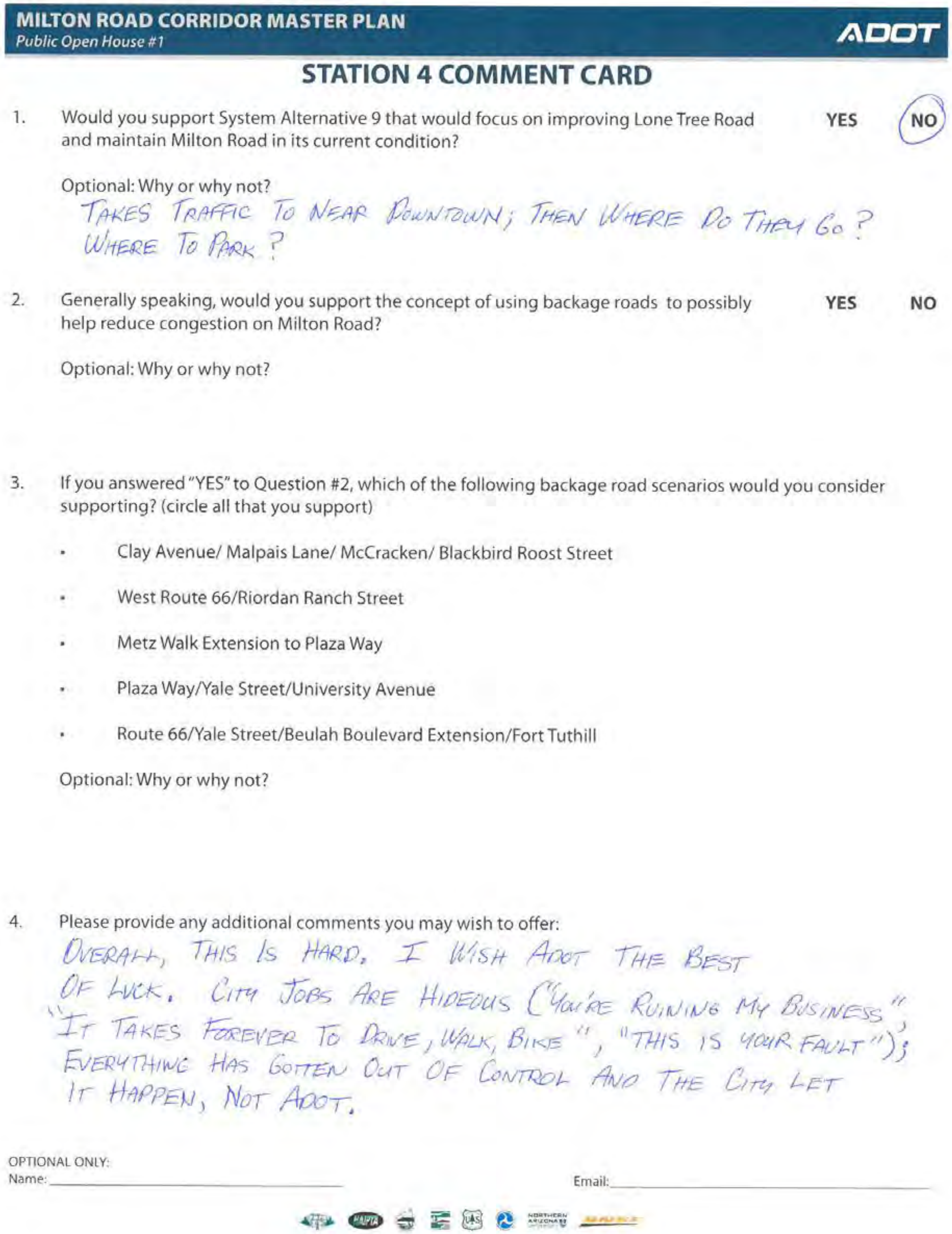
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street ← VERY RESIDENTIA
   - [✓ West Route 66/Riordan Ranch Street]
   - [✓ Metz Walk Extension to Plaza Way]
   - [✓ Plaza Way/Yale Street/University Avenue]
   - [✓ Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill]

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:______________________ Email:______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? YES [✓ NO]

   Optional: Why or why not?
   Takes Traffic To Near Downtown; Then Where Do They Go? Where To Park?

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? YES NO

   Optional: Why or why not?

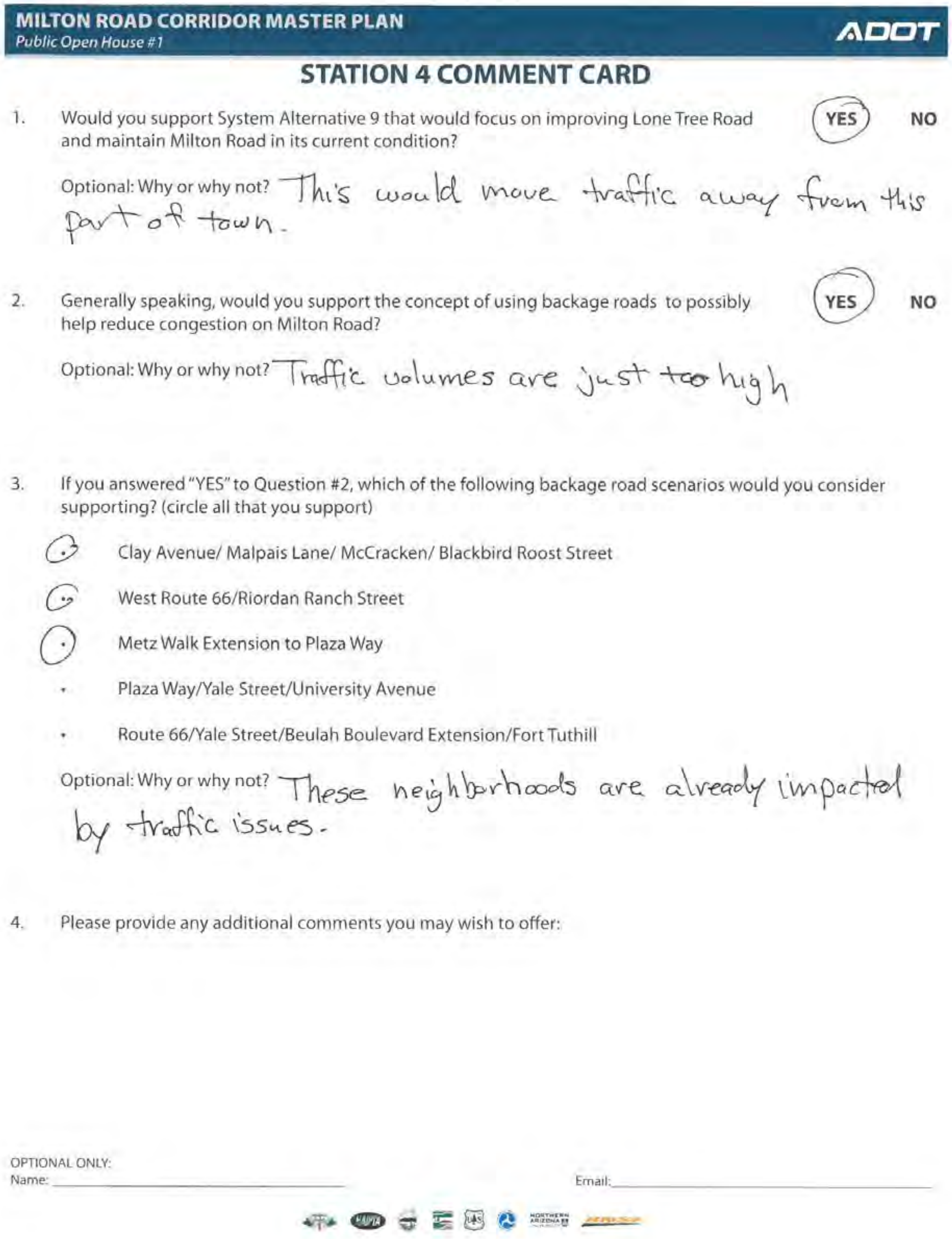
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - West Route 66/Riordan Ranch Street
   - Metz Walk Extension to Plaza Way
   - Plaza Way/Yale Street/University Avenue
   - Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:
   Overall, This Is Hard. I Wish Adot The Best Of Luck. City Jobs Are Hideous ("You're Ruining My Business", "It Takes Forever To Drive, Walk, Bike", "This Is Your Fault"); Everything Has Gotten Out Of Control And The City Let It Happen, Not Adot.

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not? This would move traffic away from this part of town.

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not? Traffic volumes are just ~~too~~ high

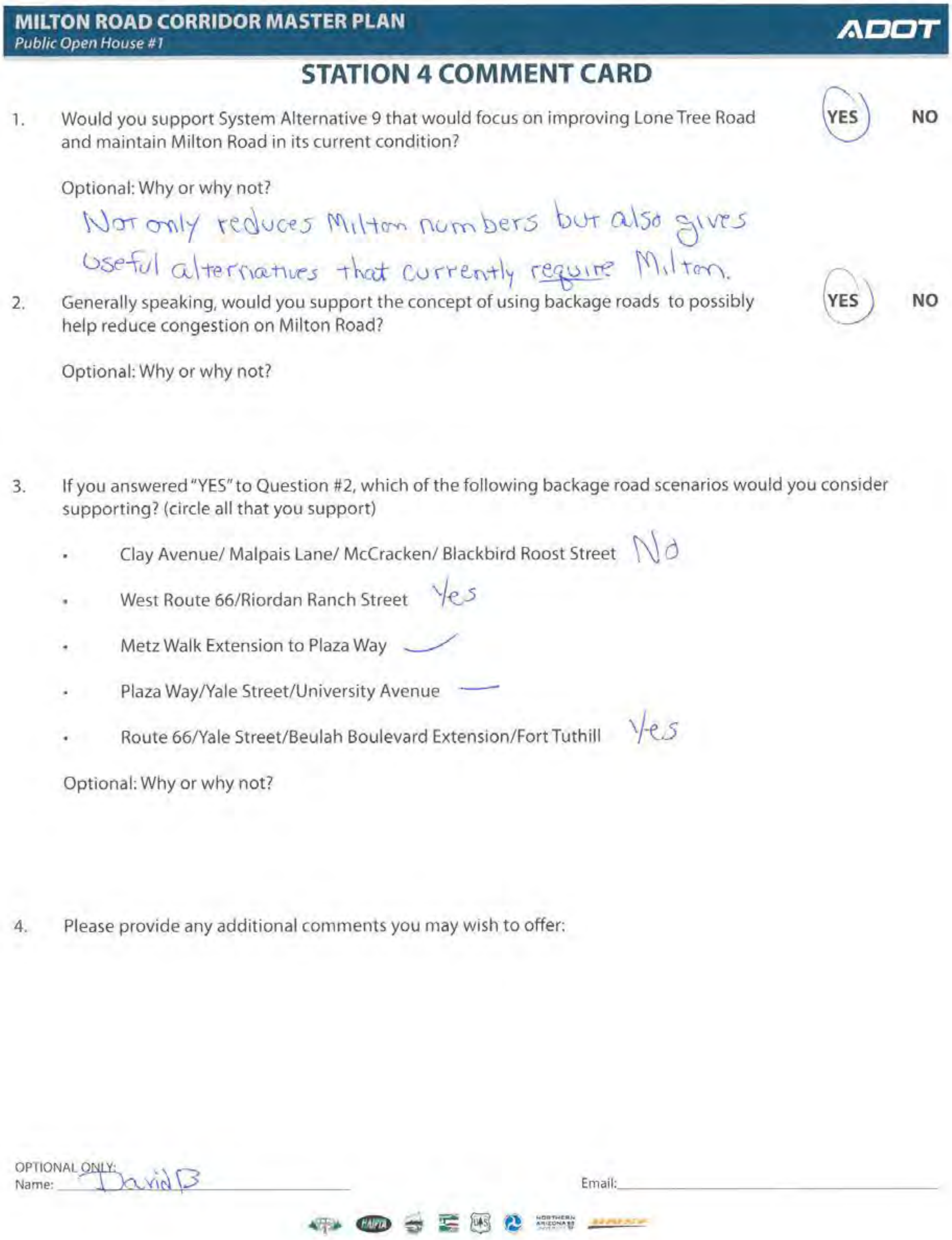
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - [✓ Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street]
   - [✓ West Route 66/Riordan Ranch Street]
   - [✓ Metz Walk Extension to Plaza Way]
   - Plaza Way/Yale Street/University Avenue
   - Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not? These neighborhoods are already impacted by traffic issues.

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not?

   Not only reduces Milton numbers but also gives useful alternatives that currently require Milton.

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?

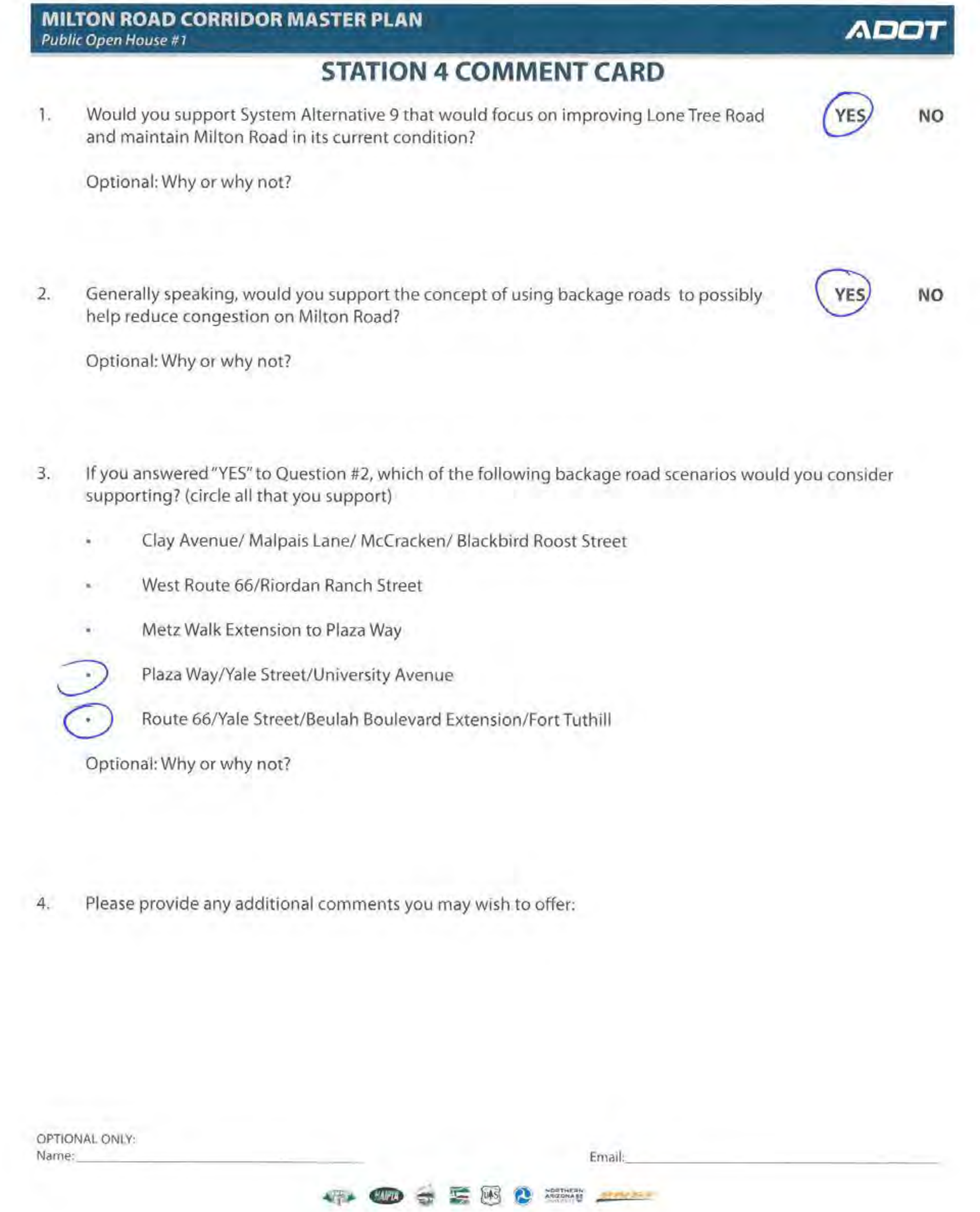
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street No
   - West Route 66/Riordan Ranch Street Yes
   - Metz Walk Extension to Plaza Way ✓
   - Plaza Way/Yale Street/University Avenue —
   - Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill Yes

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: David B
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not?

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?

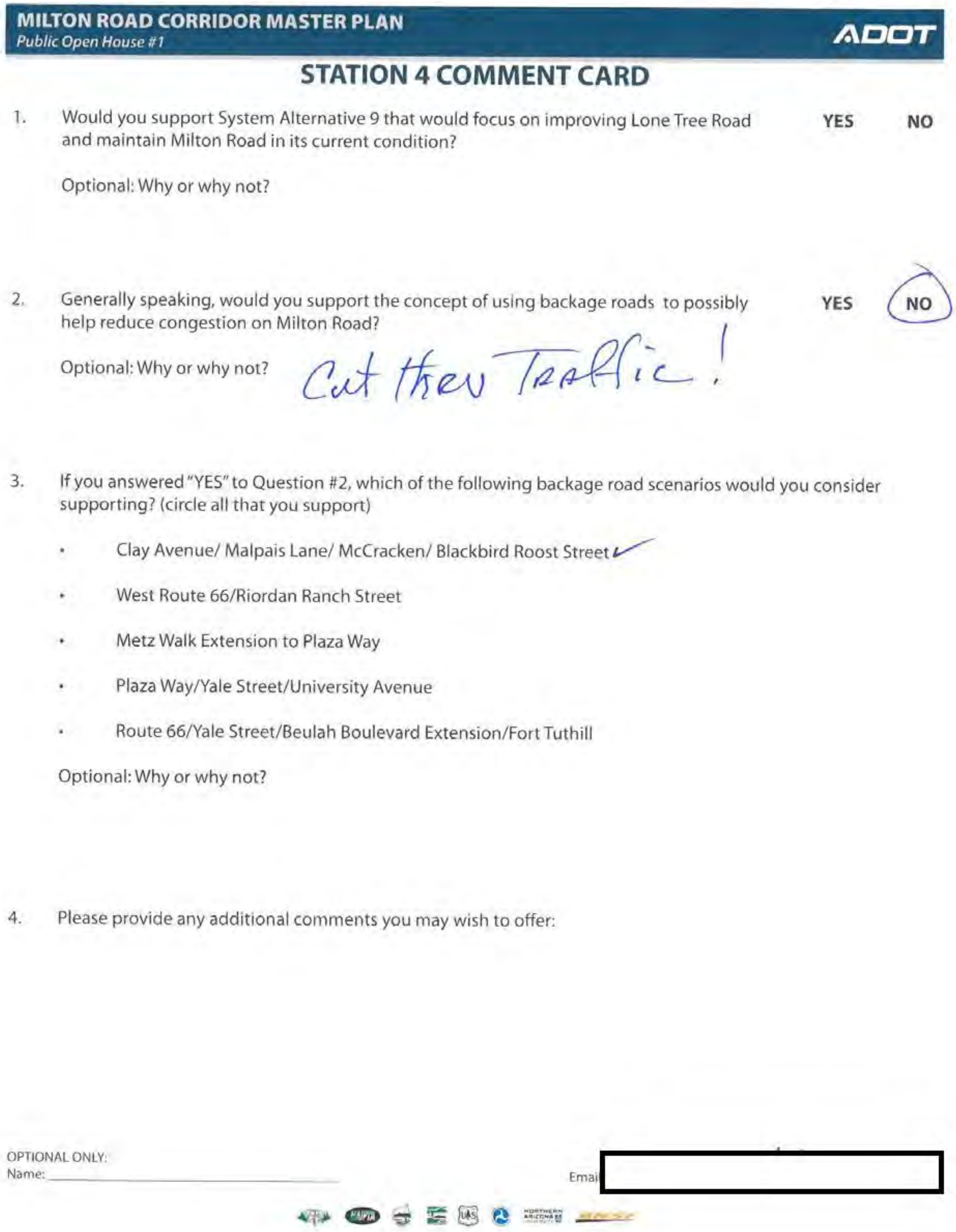
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - West Route 66/Riordan Ranch Street
   - Metz Walk Extension to Plaza Way
   - [✓ Plaza Way/Yale Street/University Avenue]
   - [✓ Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill]

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:____________________ Email:____________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? YES NO

   Optional: Why or why not?

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? YES [✓ NO]

   Optional: Why or why not? Cut their Traffic!

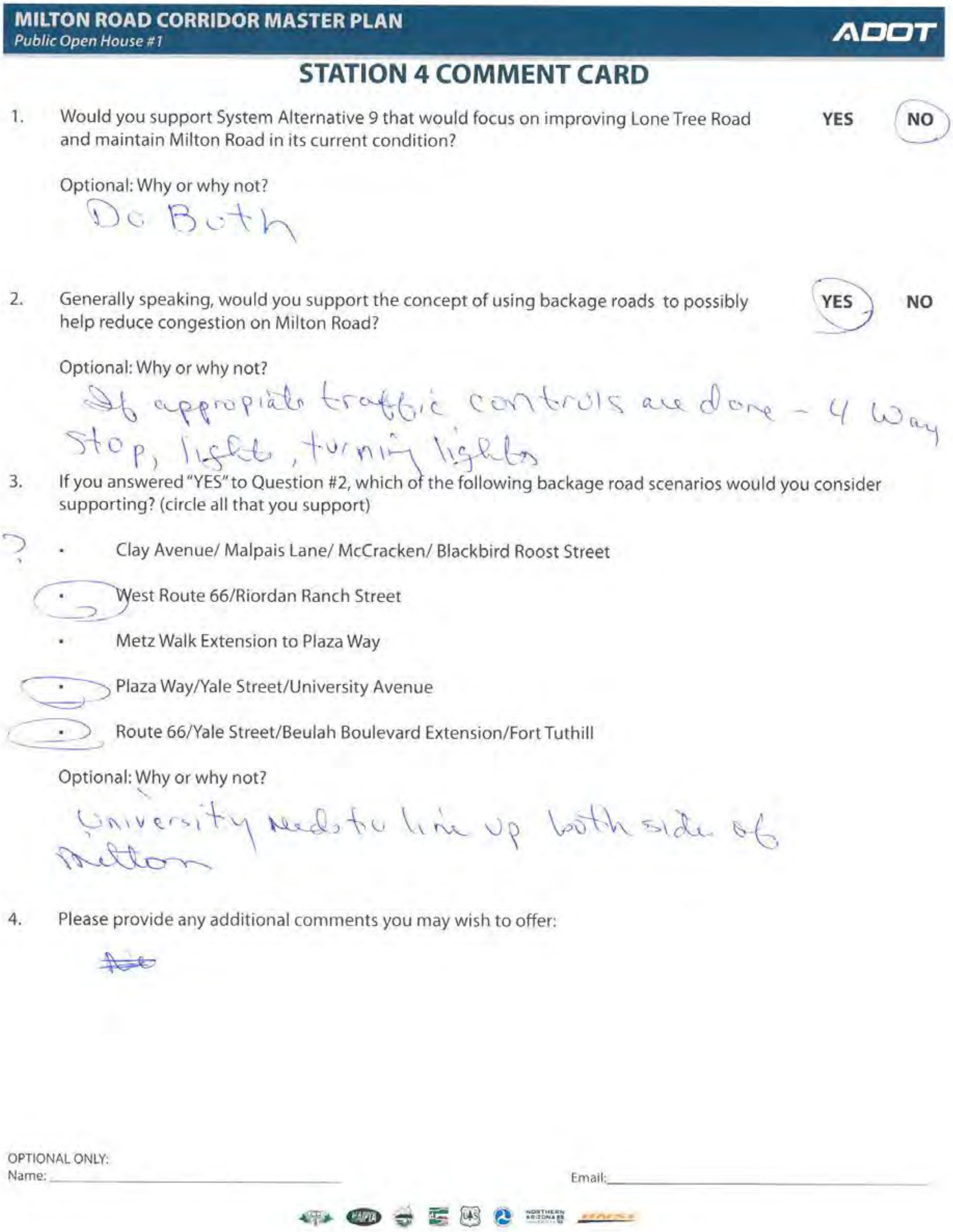
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street ✓
   - West Route 66/Riordan Ranch Street
   - Metz Walk Extension to Plaza Way
   - Plaza Way/Yale Street/University Avenue
   - Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________
Email [redacted]



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? YES [✓ NO]

   Optional: Why or why not?

   Do Both

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?

   If appropiate traffic controls are done - 4 way stop, light, turning lights

3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - ? Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - [✓ West Route 66/Riordan Ranch Street]
   - Metz Walk Extension to Plaza Way
   - [✓ Plaza Way/Yale Street/University Avenue]
   - [✓ Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill]

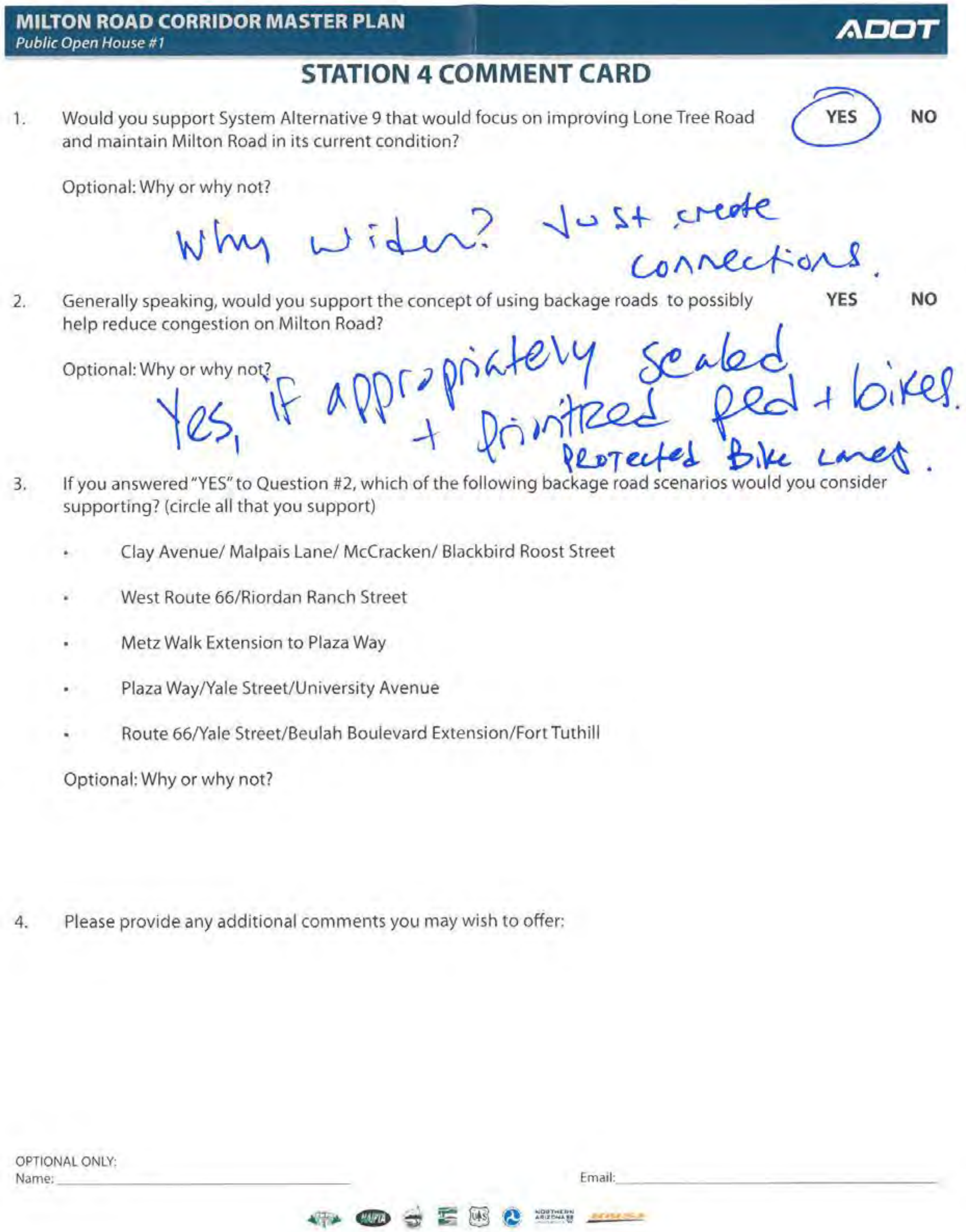
   Optional: Why or why not?

   University needs to line up both side of Milton

4. Please provide any additional comments you may wish to offer:

   ~~No~~

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not?

   Why widen? Just create connections.

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? YES NO

   Optional: Why or why not?

   Yes, if appropriately scaled + prioritized ped + bikes. Protected Bike Lanes.

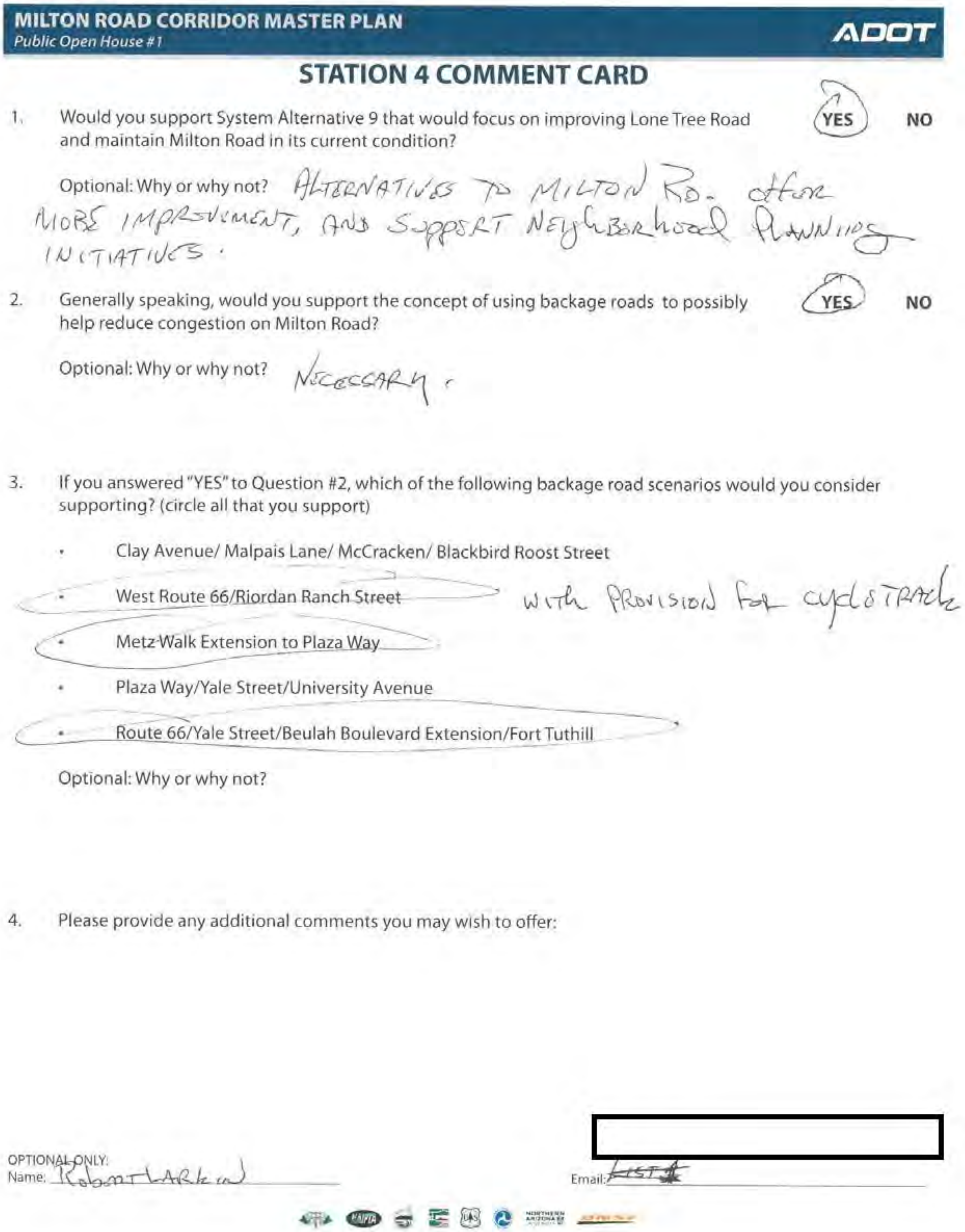
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - West Route 66/Riordan Ranch Street
   - Metz Walk Extension to Plaza Way
   - Plaza Way/Yale Street/University Avenue
   - Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ____________________
Email: ____________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not? ALTERNATIVES TO MILTON RD. offer MORE IMPROVEMENT, AND SUPPORT NEIGHBORHOOD PLANNING INITIATIVES.

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not? NECESSARY.

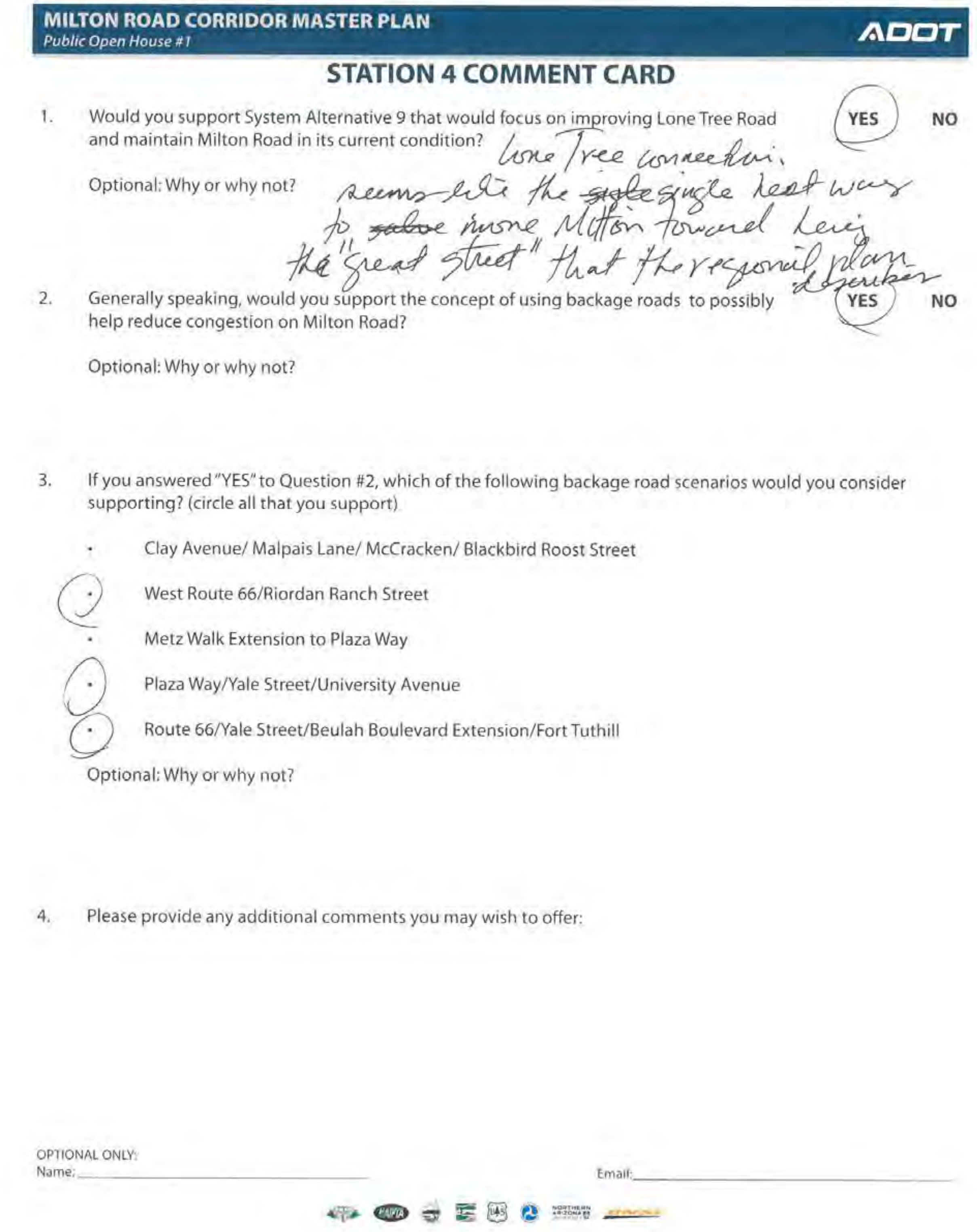
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - [✓ West Route 66/Riordan Ranch Street] with PROVISION FOR cyclotrack
   - [✓ Metz Walk Extension to Plaza Way]
   - Plaza Way/Yale Street/University Avenue
   - [✓ Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill]

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: Robert LARKIN
[redacted]
Email: ~~LIST~~



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? [✓ YES] NO

   Optional: Why or why not? Lone Tree connection. seems like the ~~sigle~~ single best way to ~~solve~~ move Milton toward being the "great street" that the regional plan describes

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?

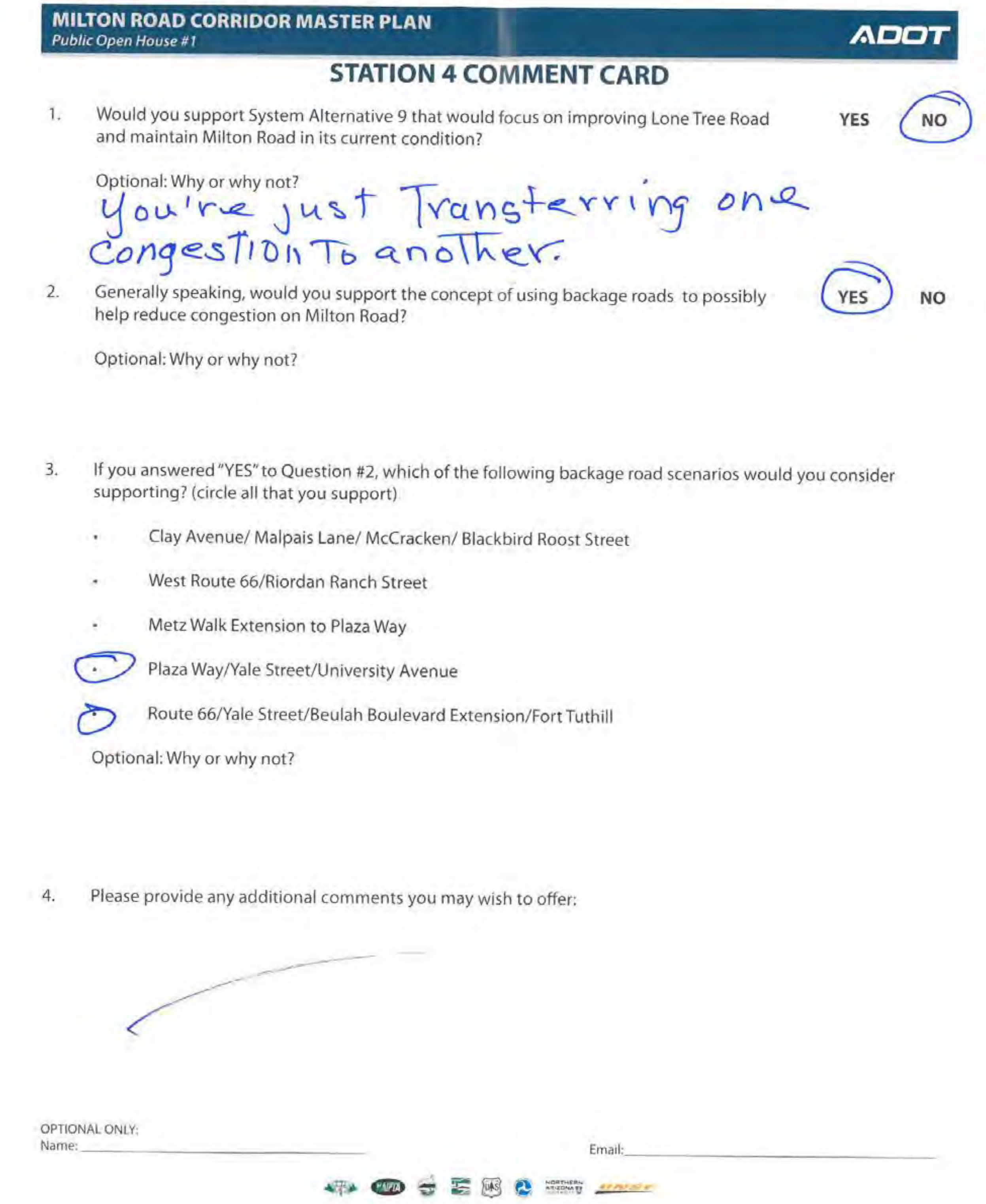
3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - [✓] West Route 66/Riordan Ranch Street
   - Metz Walk Extension to Plaza Way
   - [✓] Plaza Way/Yale Street/University Avenue
   - [✓] Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________ Email: ______________________



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? YES [✓ NO]

   Optional: Why or why not?
   You're just Transferring one Congestion To another.

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

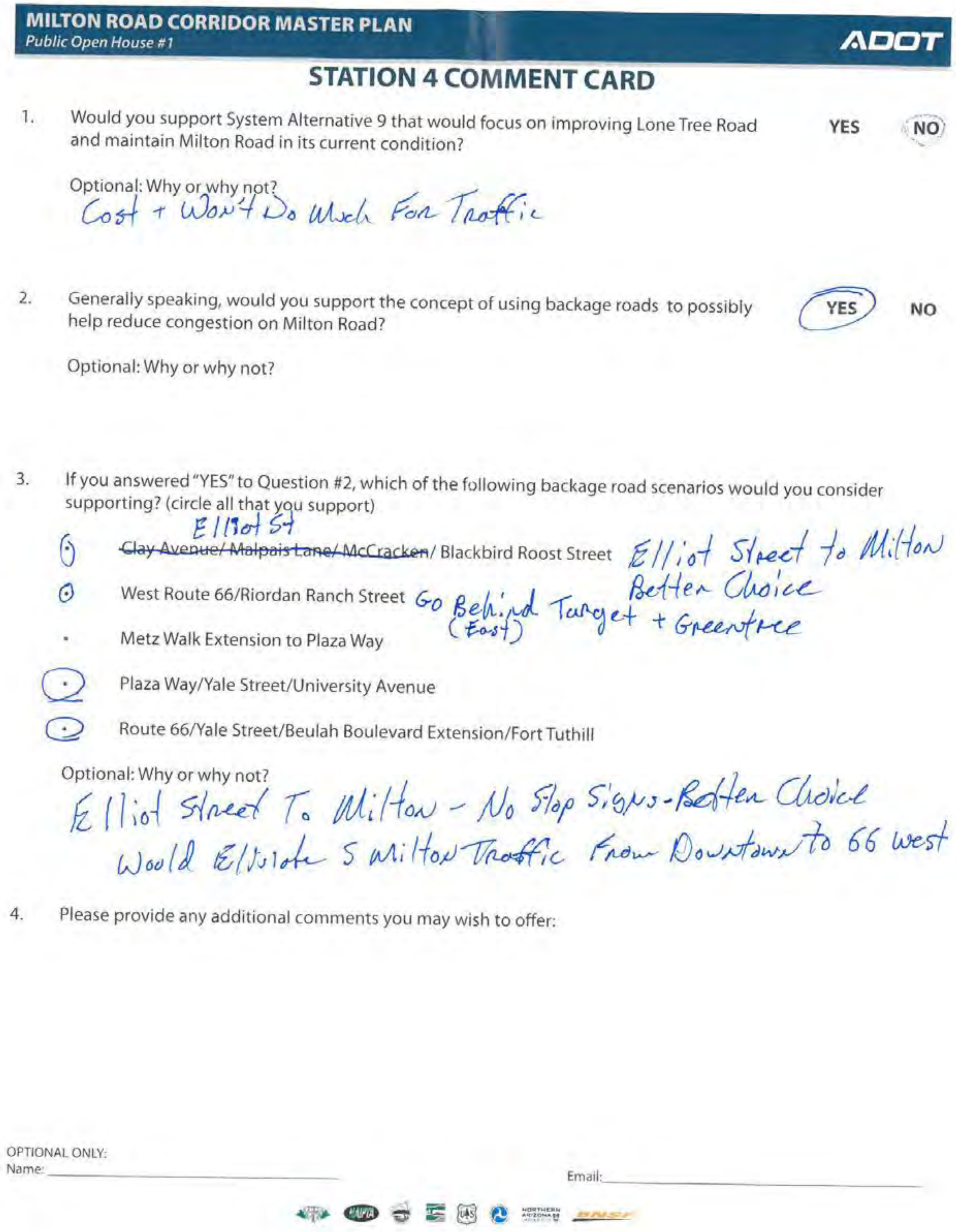
   Optional: Why or why not?

3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)
   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - West Route 66/Riordan Ranch Street
   - Metz Walk Extension to Plaza Way
   - [✓ Plaza Way/Yale Street/University Avenue]
   - [✓ Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill]

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name:
Email:



MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1
ADOT

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? YES [✓ NO]

   Optional: Why or why not?
   Cost + Won't Do Much For Traffic

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? [✓ YES] NO

   Optional: Why or why not?

3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - [✓] ~~Clay Avenue/ Malpais Lane/ McCracken~~ Elliot St / Blackbird Roost Street Elliot Street to Milton Better Choice
   - [✓] West Route 66/Riordan Ranch Street Go Behind Target (East) + Greentree
   - Metz Walk Extension to Plaza Way
   - [✓] Plaza Way/Yale Street/University Avenue
   - [✓] Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not?
   Elliot Street To Milton - No Stop Signs - Better Choice
   Would Elliminate S Milton Traffic From Downtown to 66 West

4. Please provide any additional comments you may wish to offer:

OPTIONAL ONLY:
Name: ______________________
Email: ______________________

MILTON ROAD CORRIDOR MASTER PLAN
Public Open House #1

STATION 4 COMMENT CARD

1. Would you support System Alternative 9 that would focus on improving Lone Tree Road and maintain Milton Road in its current condition? **YES** **NO**

   Optional: Why or why not?

2. Generally speaking, would you support the concept of using backage roads to possibly help reduce congestion on Milton Road? **YES** **NO**

   Optional: Why or why not?

3. If you answered "YES" to Question #2, which of the following backage road scenarios would you consider supporting? (circle all that you support)

   - Clay Avenue/ Malpais Lane/ McCracken/ Blackbird Roost Street
   - West Route 66/Riordan Ranch Street
   - Metz Walk Extension to Plaza Way
   - Plaza Way/Yale Street/University Avenue
   - Route 66/Yale Street/Beulah Boulevard Extension/Fort Tuthill

   Optional: Why or why not?

4. Please provide any additional comments you may wish to offer:

Beulah extension (dotted orange line) and University realignment (green) are a real, programmed project that is moving ahead. But ~~[illegible]~~ they are labeled as "Proposed" like all the others that are not programmed projects, ~~They are too different statuses.~~ They're not in same category as others.

OPTIONAL ONLY:
Name: ______________________ Email: ______________________

Appendix D – Tier 2 Detailed Traffic Model Results

Tier 2 Travel Speed

AM - Average Speed				2040 AM No Build				2040 Alt 3 AM								2040 Alt 5e - Humphrey St AM							
Corridor	Begin	End	Distance (mi)	Vehicles	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)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change
Milton Rd NB	Forest Meadows St	Beaver St	1.7	7380	528	8.8	11.7	7570	492	35.9	8.2	6.8%	12.6	0.9	7.3%	7783	387	141.2	6.4	26.7%	16.0	4.3	36.5%
Milton Rd SB	Beaver St	Forest Meadows St	1.7	5158	311	5.2	19.9	5095	307	4.4	5.1	1.4%	20.2	0.3	1.4%	5148	292	19.4	4.9	6.2%	21.2	1.3	6.6%
Average of Milton Rd NB & SB - AM		Upper Lim.	Low. Lim.				15.8						16.4								18.6		
Travel Speed as Percent of Base Free Flow Speed		56.3%	50.8%				52.7%						54.6%								62.0%		
							Neutral						Neutral								Positive		

AM - Average Speed				2040 Alt 6a - AM								2040 Alt 4/6b - AM								2040 Alt 13 - AM							
Corridor	Begin	End	Distance (mi)	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 (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change
Milton Rd NB	Forest Meadows St	Beaver St	1.7	7857	442	86.3	7.4	16.3%	14.0	2.3	19.5%	6394	811	-282.4	13.5	-53.5%	7.6	-4.1	-34.8%	6210	629	-101.3	10.5	-19.2%	9.8	-1.9	-16.1%
Milton Rd SB	Beaver St	Forest Meadows St	1.7	5188	298	12.8	5.0	4.1%	20.7	0.9	4.3%	5195	309	2.4	5.1	0.8%	20.0	0.2	0.8%	5148	329	-17.9	5.5	-5.8%	18.8	-1.1	-5.4%
Average of Milton Rd NB & SB - AM		Upper Lim.	Low. Lim.						17.4								13.8								14.3		
Travel Speed as Percent of Base Free Flow Speed		56.3%	50.8%						57.9%								46.1%								47.7%		
									Positive								Negative								Negative		

PM - Average Speed				2040 PM No Build				2040 Alt 3 PM								2040 Alt 5e - Humphrey St PM							
Corridor	Begin	End	Distance (mi)	Vehicles	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)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change
Milton Rd NB	Forest Meadows St	Beaver St	1.7	6516	382	6.4	16.3	6688	403	-21.1	6.7	-5.5%	15.5	-0.9	-5.2%	6757	382	0.6	6.4	0.1%	16.4	0.0	0.1%
Milton Rd SB	Beaver St	Forest Meadows St	1.7	6517	407	6.8	15.2	6536	388	18.8	6.5	4.6%	16.0	0.7	4.8%	6638	392	14.7	6.5	3.6%	15.8	0.6	3.8%
Average of Milton Rd NB & SB - PM		Upper Lim.	Low. Lim.				15.8						15.7								16.1		
Travel Speed as Percent of Base Free Flow Speed		52.2%	47.5%				52.6%						52.4%								53.6%		
							Positive						Positive								Positive		

PM - Average Speed				2040 Alt 6a - PM								2040 Alt 4/6b - PM								2040 Alt 13 - PM							
Corridor	Begin	End	Distance (mi)	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 (min)	Travel Time Percent Change	Average Speed (mph)	Difference (mph)	Average Speed Percent Change
Milton Rd NB	Forest Meadows St	Beaver St	1.7	6990	403	-21.0	6.7	-5.5%	15.5	-0.9	-5.2%	6675	414	-31.9	6.9	-8.4%	15.1	-1.3	-7.7%	6104	601	-219.0	10.0	-57.3%	10.4	-6.0	-36.4%
Milton Rd SB	Beaver St	Forest Meadows St	1.7	6738	408	-0.7	6.8	-0.2%	15.2	0.0	-0.2%	6562	421	-14.0	7.0	-3.4%	14.7	-0.5	-3.3%	6443	460	-52.7	7.7	-12.9%	13.5	-1.7	-11.5%
Average of Milton Rd NB & SB - PM		Upper Lim.	Low. Lim.						15.3								14.9								11.9		
Travel Speed as Percent of Base Free Flow Speed		52.2%	47.5%						51.2%								49.7%								39.8%		
									Neutral								Neutral								Negative		

Milton Tier 2 2040 AM Intersection Volume, Delay, & LOS

Intersection Volume, Delay, & LOS				2040 NO Build - AM			2040 Alt 3 - AM					2040 Alt 5e - Humphrey St AM					2040 Alt 6a - AM					2040 Alt 4/6b - AM					2040 Alt 13 - AM				
Node ID	Intersection	Control	Working Paper	Volume	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
105	Milton Rd & Forest Meadows St	Signal	Milton Rd	3036	20.1	C	3035	0.0%	18.6	7.2%	B	3042	0.2%	18.7	6.5%	B	3044	0.3%	18.8	6.0%	B	2839	-6.5%	27.0	-34.5%	C	2943	-3.1%	20.7	-3.0%	C
106	Milton Rd & University Dr	Signal	Milton Rd	3238	21.1	C	3244	0.2%	15.2	28.0%	B	3261	0.7%	15.7	25.7%	B	3272	1.1%	15.9	24.7%	B	3047	-5.9%	24.5	-15.9%	C	3103	-4.2%	20.1	4.8%	C
107	Milton Rd & Plaza Way	Signal	Milton Rd	2382	20.5	C	2423	1.7%	13.2	35.8%	B	2444	2.6%	13.0	36.5%	B	2448	2.8%	13.3	35.0%	B	2118	-11.1%	41.7	-103.5%	D	2134	-10.4%	38.2	-86.2%	D
108	Milton Rd & Riordan Rd	Signal	Milton Rd	2359	14.3	B	2401	1.8%	5.8	59.5%	A	2428	2.9%	5.9	58.6%	A	2433	3.1%	6.4	55.5%	A	2137	-9.4%	28.8	-101.5%	C	2133	-9.6%	29.2	-104.2%	C
109	Milton Rd & Rte 66	Signal	Milton Rd	3460	32.7	C	3497	1.1%	25.0	23.8%	C	3562	2.9%	16.2	50.4%	B	3570	3.2%	21.4	34.7%	C	3252	-6.0%	49.7	-51.8%	D	3080	-11.0%	54.4	-66.1%	D
111	Milton Rd & Clay Ave/Butler Ave	Signal	Milton Rd	4143	40.0	D	4224	2.0%	46.4	-15.8%	D	4425	6.8%	35.7	10.9%	D	4577	10.5%	39.6	1.1%	D	4207	1.5%	40.1	-0.2%	D	4008	-3.3%	33.0	17.5%	C
112	Milton Rd & Mikes Pike	Two-Way Stop-Control	Milton Rd	3013	27.5	D	3045	1.1%	50.9	-84.8%	F	3185	5.7%	28.5	-3.4%	D	3274	8.7%	20.8	24.5%	C	2986	-0.9%	24.0	13.0%	C	2841	-5.7%	24.8	9.8%	C
113	Milton Rd & Phoenix Ave	Two-Way Stop-Control	Milton Rd	2999	859.1	F	3005	0.2%	199.9	76.7%	F	3164	5.5%	514.8	40.1%	F	3243	8.1%	384.5	55.2%	F	2983	-0.5%	592.0	31.1%	F	2876	-4.1%	280.1	67.4%	F
114	Santa Fe Ave & Sitgreaves St	Two-Way Stop-Control	Milton Rd	3086	84.6	F	2625	-14.9%	84.2	0.5%	F	3249	5.3%	91.9	-8.6%	F	3312	7.3%	86.6	-2.4%	F	3054	-1.0%	86.9	-2.7%	F	2966	-3.9%	74.1	12.4%	F
115	Humphreys St & Rte 66	Signal	Milton Rd	2560	11.9	B	2565	0.2%	13.7	-15.3%	B	2684	4.8%	12.3	-3.3%	B	2721	6.3%	12.9	-8.9%	B	2520	-1.6%	12.4	-4.2%	B	2472	-3.4%	13.1	-10.5%	B
116	Beaver St & Rte 66	Signal	Milton Rd	2301	21.3	C	2267	-1.5%	23.4	-9.9%	C	2370	3.0%	21.4	-0.7%	C	2359	2.5%	23.0	-8.0%	C	2206	-4.1%	22.1	-3.9%	C	2165	-5.9%	42.3	-98.9%	D
					104.8				45.1					70.4					58.5					86.3					57.3		
					neg				neutral					neg					neg					neg					neg		

Milton Tier 2 2040 PM Intersection Volume, Delay, & LOS

Intersection Volume, Delay, & LOS			2040 NO Build PM			2040 Alt 3 PM					2040 Alt 5e - Humphrey St PM					2040 Alt 6a - PM					2040 Alt 4/6b - PM					2040 Alt 13 - PM				
Node ID	Intersection	Control	Volume	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
105	Milton Rd & Forest Meadows St	Signal	3952	31.7	C	4067	2.9%	32.87	-3.8%	C	4027	1.9%	34.66	-9.4%	C	4171	5.5%	33.3	-5.3%	C	4086	3.4%	32.6	-3.0%	C	3986	0.9%	36.3	-14.5%	D
106	Milton Rd & University Dr	Signal	4068	39.6	D	4231	4.0%	36.95	6.8%	D	4217	3.7%	37.56	5.2%	D	4295	5.6%	37.5	5.3%	D	4211	3.5%	44.3	-11.7%	D	4113	1.1%	45.9	-15.7%	D
107	Milton Rd & Plaza Way	Signal	3435	32.4	C	3462	0.8%	27.13	16.3%	C	3458	0.7%	26.97	16.8%	C	3520	2.5%	27.4	15.6%	C	3471	1.0%	31.2	3.8%	C	3287	-4.3%	41.1	-26.7%	D
108	Milton Rd & Riordan Rd	Signal	3200	13.9	B	3244	1.4%	13.39	3.5%	B	3242	1.3%	13.22	4.8%	B	3299	3.1%	13.4	3.2%	B	3239	1.2%	13.6	2.2%	B	3075	-3.9%	22.3	-60.7%	C
109	Milton Rd & Rte 66	Signal	4122	20.5	C	4162	1.0%	20.45	0.4%	C	4168	1.1%	19.98	2.7%	B	4237	2.8%	21.6	-5.0%	C	4170	1.2%	22.2	-8.2%	C	4021	-2.5%	28.2	-37.2%	C
111	Milton Rd & Clay Ave/Butler Ave	Signal	5025	31.1	C	5135	2.2%	30.84	0.9%	C	5159	2.7%	29.38	5.6%	C	5395	7.4%	29.3	5.9%	C	5098	1.5%	31.8	-2.1%	C	4908	-2.3%	34.8	-11.8%	C
112	Milton Rd & Mikes Pike	Two-Way Stop-Control	3094	44.2	E	3187	3.0%	35.91	18.7%	E	3199	3.4%	35.48	19.7%	E	3351	8.3%	29.5	33.2%	D	3169	2.4%	36.7	17.0%	E	3030	-2.1%	47.8	-8.1%	E
113	Milton Rd & Phoenix Ave	Two-Way Stop-Control	3135	124.7	F	3218	2.6%	152.69	-22.4%	F	3220	2.7%	23.83	80.9%	C	3353	7.0%	38.5	69.1%	E	3215	2.6%	139.3	-11.7%	F	3084	-1.6%	123.6	0.9%	F
114	Santa Fe Ave & Sitgreaves St	Two-Way Stop-Control	3178	109.3	F	2760	-13.2%	72.24	33.9%	F	3246	2.1%	55.29	49.4%	F	3361	5.8%	52.6	51.8%	F	3238	1.9%	62.9	42.4%	F	3131	-1.5%	121.4	-11.1%	F
115	Humphreys St & Rte 66	Signal	2772	14.5	B	2805	1.2%	14.86	-2.8%	B	2796	0.9%	16.72	-15.6%	B	2891	4.3%	17.0	-17.4%	B	2801	1.0%	14.8	-2.4%	B	2732	-1.4%	12.4	14.0%	B
116	Beaver St & Rte 66	Signal	2470	30.8	C	2497	1.1%	29.52	4.2%	C	2487	0.7%	31.16	-1.2%	C	2528	2.3%	32.2	-4.6%	C	2496	1.1%	28.6	7.3%	C	2455	-0.6%	27.7	9.9%	C
				44.8				42.4					29.5					30.2					41.6					49.2		
				neutral				neutral					positive					positive					neutral					neutral		

Tier 2 Travel Time

AM - Travel Time				2040 AM No Build				2040 Alt 3 AM							
Corridor	Begin	End	Distance (mi)	Vehicles	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
Milton Rd NB	Forest Meadows St	Beaver St	1.7	7380	528	8.8	11.7	7570	492	35.9	8.2	6.8%	12.6	0.9	7.3%
Milton Rd SB	Beaver St	Forest Meadows St	1.7	5158	311	5.2	19.9	5095	307	4.4	5.1	1.4%	20.2	0.3	1.4%

AM - Travel Time	2040 Alt 5e - Humphrey St AM								2040 Alt 6a - AM							
Corridor	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
Milton Rd NB	7783	387	141.2	6.4	26.7%	16.0	4.3	36.5%	7857	442	86.3	7.4	16.3%	14.0	2.3	19.5%
Milton Rd SB	5148	292	19.4	4.9	6.2%	21.2	1.3	6.6%	5188	298	12.8	5.0	4.1%	20.7	0.9	4.3%

AM - Travel Time	2040 Alt 4/6b - AM								2040 Alt 13 - AM							
Corridor	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
Milton Rd NB	6394	811	-282.4	13.5	-53.5%	7.6	-4.1	-34.8%	6210	629	-101.3	10.5	-19.2%	9.8	-1.9	-16.1%
Milton Rd SB	5195	309	2.4	5.1	0.8%	20.0	0.2	0.8%	5148	329	-17.9	5.5	-5.8%	18.8	-1.1	-5.4%

Average of Milton Rd NB & SB - AM	Upper Lim.	Low. Lim.	420	400	339	370	560	479
Travel Time	464	391	Neutral	Neutral	Positive	Positive	Negative	Negative

PM - Travel Time				2040 PM No Build				2040 Alt 3 PM							
Corridor	Begin	End	Distance (mi)	Vehicles	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
Milton Rd NB	Forest Meadows St	Beaver St	1.7	6516	382	6.4	16.3	6688	403	-21.1	6.7	-5.5%	15.5	-0.9	-5.2%
Milton Rd SB	Beaver St	Forest Meadows St	1.7	6517	407	6.8	15.2	6536	388	18.8	6.5	4.6%	16.0	0.7	4.8%

PM - Travel Time	2040 Alt 5e - Humphrey St PM								2040 Alt 6a - PM							
Corridor	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
Milton Rd NB	6757	382	0.6	6.4	0.1%	16.4	0.0	0.1%	6990	403	-21.0	6.7	-5.5%	15.5	-0.9	-5.2%
Milton Rd SB	6638	392	14.7	6.5	3.6%	15.8	0.6	3.8%	6738	408	-0.7	6.8	-0.2%	15.2	0.0	-0.2%

PM - Travel Time	2040 Alt 4/6b - PM								2040 Alt 13 - PM							
Corridor	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
Milton Rd NB	6675	414	-31.9	6.9	-8.4%	15.1	-1.3	-7.7%	6104	601	-219.0	10.0	-57.3%	10.4	-6.0	-36.4%
Milton Rd SB	6562	421	-14.0	7.0	-3.4%	14.7	-0.5	-3.3%	6443	460	-52.7	7.7	-12.9%	13.5	-1.7	-11.5%

Average of Milton Rd NB & SB - PM	Upper Lim.	Low. Lim.	395	396	387	405	418	530
Travel Time	446	397	Positive	Positive	Positive	Neutral	Neutral	Negative

	Upper Lim.	Low. Lim.
AM	464	391
PM	446	397

< 391 (< 397)
390 - 463 (396 - 445)
> 464 (> 446)

Tier 2 Transit Travel Time

AM - Travel Time				2040 AM No Build				2040 Alt 3 AM							
Corridor	Begin	End	Distance (mi)	Vehicles	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
Milton Rd NB	University Dr	Phoenix Ave	1.1	10	501	8.4	8.2	10	501	0.4	8.3	0.1%	8.2	0.0	0.1%
Milton Rd SB	Phoenix Ave	University Dr	1.1	6	764	12.7	5.4	6	297	467.2	4.9	61.2%	13.8	8.4	157.6%

AM - Travel Time	2040 Alt 5e - Humphrey St AM							2040 Alt 6a - AM							
Corridor	Vehicles	Travel Time (sec)	Difference (sec)	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
Milton Rd NB	10	355	146.4	29.2%	11.6	3.4	41.3%	20	230	270.6	3.8	54.0%	17.8	9.6	117.5%
Milton Rd SB	8	662	101.6	13.3%	6.2	0.8	15.3%	10	269	494.3	4.5	64.7%	15.2	9.8	183.4%

AM - Travel Time	2040 Alt 6b - AM								2040 Alt 13 - AM							
Corridor	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
Milton Rd NB	20	257	244.4	4.3	48.8%	16.0	7.8	95.2%	20	298	203.0	5.0	40.5%	9.8	-1.9	-16.1%
Milton Rd SB	10	484	279.4	8.1	36.6%	8.5	3.1	57.7%	20	448	315.8	7.5	41.3%	18.8	-1.1	-5.4%

Average of Milton Rd NB & SB - AM	Upper Lim.	Low. Lim.	632	399	508	250	371	373
Travel Time	482	362	Negative	Neutral	Negative	Positive	Neutral	Neutral

PM - Travel Time				2040 PM No Build				2040 Alt 3 PM							
Corridor	Begin	End	Distance (mi)	Vehicles	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
Milton Rd NB	University Dr	Phoenix Ave	1.1	10	282	4.7	14.6	10	317	-35.0	5.3	-12.4%	13.0	-1.6	-11.0%
Milton Rd SB	Phoenix Ave	University Dr	1.1	15	424	7.1	9.6	15	413	11.5	6.9	2.7%	9.9	0.3	2.8%

PM - Travel Time	2040 Alt 5e - Humphrey St PM							2040 Alt 6a - PM							
Corridor	Vehicles	Travel Time (sec)	Difference (sec)	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
Milton Rd NB	10	312	-30.6	-10.8%	13.1	-1.4	-9.8%	20	223	59.2	3.7	21.0%	18.4	3.9	26.6%
Milton Rd SB	16	352	72.3	17.0%	11.6	2.0	20.5%	20	288	135.9	4.8	32.0%	14.1	4.5	47.1%

PM - Travel Time	2040 Alt 6b - PM								2040 Alt 13 - PM							
Corridor	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
Milton Rd NB	20	221	60.9	3.7	21.6%	18.6	4.0	27.6%	20	252	29.7	4.2	10.5%	10.4	-6.0	-36.4%
Milton Rd SB	20	352	72.8	5.9	17.1%	11.6	2.0	20.7%	20	501	-76.7	8.4	-18.1%	13.5	-1.7	-11.5%

Average of Milton Rd NB & SB - PM	Upper Lim.	Low. Lim.	353	365	332	256	286	377
Travel Time	350	306	Negative	Negative	Neutral	Positive	Positive	Negative

	Upper Lim.	Low. Lim.
AM	482	362
PM	350	306

< 362 (< 306)
361 - 481 (305 - 349)
> 482 (> 350)

Appendix E – Tier 2 Safety Calculations

Alternative 3

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Add one additional thru lane in each direction (*increase from 4 lanes to 6 lanes)	K,A,B,C	4	0.761	23.9	0.712	All
	K,A,B,C	4	0.755	24.5		All
	K,A,B,C	4	0.696	30.4		All
	K,A,B,C	4	0.702	29.8		All
	K,A,B,C	4	0.657	34.3		All
	K,A,B,C	4	0.702	29.8		All
	All	4	0.850	15	0.807	All
	All	4	0.847	15.3		All
	All	4	0.798	20.2		All
	All	4	0.802	19.8		All
	All	4	0.809	19.1		All
	All	4	0.737	26.3		All
Provide raised median	All	4	0.610	39	0.610	All
	K,A	4	0.560	44	0.708	All
	A,B	5	0.780	22		All
	A,B	5	0.880	12		All
	K,A,B,C	4	0.610	39		All

Countermeasude exists for "add thru lane in both directions and raised median. Only 2 star quality rating

Average of CMF's

multiplying CMF's	Severity	CMF's	CRF's
with raised median	All	0.4923717	50.763
	Injury	0.5038579	49.614
without raised median	All	0.807	19.283
	Injury	0.712	28.783

(1) CMF=CMF1-(1-CMF2/2)-(1-CMF3/3)...

	Severity	**CMF's**	**CRF's**
with raised median	**All**	**0.6121667**	**38.783**
	Injury	**0.5659167**	**43.408**
without raised median	**All**	**0.807**	**19.283**
	Injury	**0.712**	**28.783**

Individual of CMF's

multiplying CMF's	Severity	CMF's	CRF's
with raised median	All	0.167581256	83.242
	Injury	0.030358169	96.964
without raised median	All	0.275	72.528
	Injury	0.129473367	87.053

CMF=CMF1-(1-CMF2/2)-(1-CMF3/3)...

	Severity	CMF's	CRF's
with raised median	All	0.518919048	48.108
	Injury	0.201709524	79.829
without raised median	All	0.574633333	42.537
	Injury	0.3444	65.560

(1) Source: Final Technival Content, Investigation of existing alternative methods for combining multiple CMF's, June 30 2011

K	Fatal
A	Incapacitating
B	Non-Incapacitating
C	Not visible but complains pain
O	no injury
U	unknown

Alternative 4

Countermeasure	Crash Type	Rating	CMF	CRF (%)	Average CMF's	Crash Severity
Bus Lane (*Implement transit lane priority)	All	4	0.806	19.4	0.806	All
Provide raised median	All	4	0.610	39	0.610	All
	K,A	4	0.560	44	0.708	All
	A,B	5	0.780	22		All
	A,B	5	0.880	12		All
	K,A,B,C	4	0.610	39		All

K	Fatal
A	Incapacitating
B	Non-Incapacitating
C	Not visible but complains pain
O	no injury
U	unknown

CMF=CMF1-(1-CMF2/2)-(1-CMF3/3)...

	Severity	**CMF's**	**CRF's**
with raised median	**All**	**0.611**	**38.900**
	Injury	**0.708**	**29.250**
without raised median	**All**	**0.806**	**19.400**
	Injury		

No CMF's are available for injury severity

Alternative 5

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Add one additional thru lane in each direction (*increase from 4 lanes to 6 lanes)	K,A,B,C	4	0.761	23.9	0.712	All
	K,A,B,C	4	0.755	24.5		All
	K,A,B,C	4	0.696	30.4		All
	K,A,B,C	4	0.702	29.8		All
	K,A,B,C	4	0.657	34.3		All
	K,A,B,C	4	0.702	29.8		All
	All	4	0.850	15	0.807	All
	All	4	0.847	15.3		All
	All	4	0.798	20.2		All
	All	4	0.802	19.8		All
	All	4	0.809	19.1		All
	All	4	0.737	26.3		All
Provide raised median	All	4	0.610	39	0.610	All
	K,A	4	0.560	44	0.708	All
	A,B,C	5	0.780	22		All
	A,B,C	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)...

	Severity	CMF's	CRF's
with raised median and Bike Lanes	**All**	**0.628833**	**37.117**
	Injury	**0.612583**	**38.742**
without raised median and Bike Lanes	**All**	**0.832**	**16.783**
	Injury	**0.782**	**21.783**

Bicycle Crashes	Severity	CMF's	CRF's
	All	**0.860**	**14.000**

K	Fatal	19.30	0.807
A	Incapacitating		
B	Non-Incapacitating	19.3	
C	Not visible but complains pain		
O	no injury		
U	unknown		

Alternative 6a

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Add one additional thru lane in each direction (*increase from 4 lanes to 6 lanes)	K,A,B,C	4	0.761	23.9	0.712	All
	K,A,B,C	4	0.755	24.5		All
	K,A,B,C	4	0.696	30.4		All
	K,A,B,C	4	0.702	29.8		All
	K,A,B,C	4	0.657	34.3		All
	K,A,B,C	4	0.702	29.8		All
	All	4	0.850	15	0.807	All
	All	4	0.847	15.3		All
	All	4	0.798	20.2		All
	All	4	0.802	19.8		All
	All	4	0.809	19.1		All
	All	4	0.737	26.3		All
Provide raised median	All	4	0.610	39	0.610	All
	K,A	4	0.560	44	0.708	All
	A,B	5	0.780	22		All
	A,B	5	0.880	12		All
	K,A,B,C	4	0.610	39		All
Bus Lane (*Implement transit lane priority)	All	4	0.806	19.4	0.806	All

CMF=CMF1-(1-CMF2/2)-(1-CMF3/3)...

	Severity	CMF's	CRF's
with raised median and bus lane	**All**	**0.5475**	**45.250**
	Injury	**0.565916667**	**43.408**
without raised median and bus lane	**All**	**0.710**	**28.983**
	Injury	**0.712**	**28.783**

No CMF's are available for injury severity for bus lane

K	Fatal
A	Incapacitating
B	Non-Incapacitating
C	Not visible but complains pain
O	no injury
U	unknown

Alternative 6b

Countermeasure	Crash Type	Rating	CMF	CRF (%)	Average CMF's	Crash Severity
Bus Lane (*Implement transit lane priority)	All	4	0.806	19.4	0.806	All
Provide raised median	All	4	0.610	39	0.610	All
	K,A	4	0.560	44	0.708	All
	A,B	5	0.780	22		All
	A,B	5	0.880	12		All
	K,A,B,C	4	0.610	39		All

K	Fatal
A	Incapacitating
B	Non-Incapacitating
C	Not visible but complains pain
O	no injury
U	unknown

CMF=CMF1-(1-CMF2/2)-(1-CMF3/3)...

	Severity	CMF's	CRF's
with raised median	**All**	**0.611**	**38.900**
	Injury	**0.708**	**29.250**
without raised median	**All**	**0.806**	**19.400**
	Injury		

No CMF's are available for injury severity for bus lane

Alternative 13

Countermeasure	Crash Severity	Rating	CMF	CRF (%)	Average CMF's	Crash Type
Center 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

K	Fatal
A	Incapacitating
B	Non-Incapacitating
C	Not visible but complains pain
O	no injury
U	unknown

CMF=CMF1-(1-CMF2/2)-(1-CMF3/3)…

All Crashes (with Bus lane and Bike Lane)

Severity	**CMF's**	**CRF's**
All	**0.831**	**16.900**
Injury	**1.140**	**-14.000**

Bicycle Crashes

Severity	**CMF's**	**CRF's**
All	**0.860**	**14.000**

No CMF's are available for injury severity for bus lane

Appendix F – Tier 2 Planning-Level Cost Estimates

ESTIMATE OF PROBABLE COSTS
MILTON ROAD CORRIDOR MASTER PLAN

ALTERNATIVE 3 - (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.	10,871	$150	$1,630,650
ASPHALTIC CONCRETE PAVEMENT	TON	28,045	$250	$7,011,250
CONCRETE CURB AND GUTTER	L.FT.	18,062	$25	$451,550
CONCRETE SIDEWALK	SQ.FT.	108,372	$15	$1,625,580
CONCRETE SIDEWALK RAMP	EACH	60	$7,500	$450,000
CONCRETE DRIVEWAYS	EACH	80	$5,000	$400,000
LANDSCAPE (PARKWAY)	SQ.FT.	45,155	$12	$541,860
TRAFFIC SIGNALS	EACH	8	$400,000	$3,200,000
DCR DETAILED ESTIMATE SUBTOTAL				**$17,285,023**
MISCELLANEOUS WORK (20%)	COST	20%		$3,457,005
Subtotal				**$20,742,028**
DUST PALLIATIVE (1%)	COST	1%		$207,420
FURNISH WATER (1%)	COST	1%		$207,420
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		$2,489,043
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		$207,420
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		$414,841
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		$414,841
Subtotal				**$24,683,013**
MOBILIZATION (10%)	COST	10%		$2,468,301
Subtotal				**$27,151,314**
CONTIGENCIES (5%)	COST	5%		$1,357,566
CONSTRUCTION ENGINEERING (9%)	COST	9%		$2,443,618
Subtotal				**$30,952,498**
DETAILED ESTIMATE				**$30,952,498**
ENGINEERING DESIGN (8%)	COST	8%		$2,476,200
RIGHT OF WAY	SQ. FT.			$895,084
UTILITIES (20%)	COST	20%		$6,190,500
Subtotal				**$9,561,783**
OTHER COST TOTAL				**$9,561,783**

SUMMARY

DETAILED ESTIMATE	**$30,952,000**
OTHER COST TOTAL	**$9,562,000**
TOTAL PROJECT CONSTRUCTION COST	**$40,514,000**

ESTIMATE OF PROBABLE COSTS
MILTON ROAD CORRIDOR MASTER PLAN

ALTERNATIVE 4 - (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.	11,568	$150	$1,735,200
ASPHALTIC CONCRETE PAVEMENT	TON	29,842	$250	$7,460,500
CONCRETE CURB AND GUTTER	L.FT.	18,062	$25	$451,550
CONCRETE SIDEWALK	SQ.FT.	108,372	$15	$1,625,580
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
DCR DETAILED ESTIMATE SUBTOTAL				**$17,296,963**
MISCELLANEOUS WORK (20%)	COST	20%		$3,459,393
Subtotal				**$20,756,356**
DUST PALLIATIVE (1%)	COST	1%		$207,564
FURNISH WATER (1%)	COST	1%		$207,564
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		$2,490,763
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		$207,564
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		$415,127
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		$415,127
Subtotal				**$24,700,063**
MOBILIZATION (10%)	COST	10%		$2,470,006
Subtotal				**$27,170,069**
CONTIGENCIES (5%)	COST	5%		$1,358,503
CONSTRUCTION ENGINEERING (9%)	COST	9%		$2,445,306
Subtotal				**$30,973,879**
DETAILED ESTIMATE				**$30,973,879**
ENGINEERING DESIGN (8%)	COST	8%		$2,477,910
RIGHT OF WAY	SQ. FT.			$895,084
UTILITIES (20%)	COST	20%		$6,194,776
Subtotal				**$9,567,770**
OTHER COST TOTAL				**$9,567,770**

SUMMARY

DETAILED ESTIMATE	**$30,974,000**
OTHER COST TOTAL	**$9,568,000**
TOTAL PROJECT CONSTRUCTION COST	**$40,542,000**

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	
DCR DETAILED ESTIMATE SUBTOTAL				**$19,156,183**
MISCELLANEOUS WORK (20%)	COST	20%		$3,831,237
Subtotal				**$22,987,420**
DUST PALLIATIVE (1%)	COST	1%		$229,874
FURNISH WATER (1%)	COST	1%		$229,874
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		$2,758,490
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		$229,874
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		$459,748
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		$459,748
Subtotal				**$27,355,029**
MOBILIZATION (10%)	COST	10%		$2,735,503
Subtotal				**$30,090,532**
CONTIGENCIES (5%)	COST	5%		$1,504,527
CONSTRUCTION ENGINEERING (9%)	COST	9%		$2,708,148
Subtotal				**$34,303,207**
DETAILED ESTIMATE				**$34,303,207**
ENGINEERING DESIGN (8%)	COST	8%		$2,744,257
RIGHT OF WAY	SQ. FT.			$6,919,033
UTILITIES (20%)	COST	20%		$6,860,641
Subtotal				**$16,523,931**
OTHER COST TOTAL				**$16,523,931**

SUMMARY

DETAILED ESTIMATE	**$34,303,000**
OTHER COST TOTAL	**$16,524,000**
TOTAL PROJECT CONSTRUCTION COST	**$50,827,000**

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
DCR DETAILED ESTIMATE SUBTOTAL				**$22,345,103**
MISCELLANEOUS WORK (20%)	COST	20%		$4,469,021
Subtotal				**$26,814,124**
DUST PALLIATIVE (1%)	COST	1%		$268,141
FURNISH WATER (1%)	COST	1%		$268,141
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		$3,217,695
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		$268,141
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		$536,282
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		$536,282
Subtotal				**$31,908,807**
MOBILIZATION (10%)	COST	10%		$3,190,881
Subtotal				**$35,099,688**
CONTIGENCIES (5%)	COST	5%		$1,754,984
CONSTRUCTION ENGINEERING (9%)	COST	9%		$3,158,972
Subtotal				**$40,013,644**
DETAILED ESTIMATE				**$40,013,644**
ENGINEERING DESIGN (8%)	COST	8%		$3,201,092
RIGHT OF WAY	SQ. FT.			$12,282,472
UTILITIES (20%)	COST	20%		$8,002,729
Subtotal				**$23,486,292**
OTHER COST TOTAL				**$23,486,292**

SUMMARY

DETAILED ESTIMATE	**$40,014,000**
OTHER COST TOTAL	**$23,486,000**
TOTAL PROJECT CONSTRUCTION COST	**$63,500,000**

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
DCR DETAILED ESTIMATE SUBTOTAL				**$20,557,935**
MISCELLANEOUS WORK (20%)	COST	20%		$4,111,587
Subtotal				**$24,669,522**
DUST PALLIATIVE (1%)	COST	1%		$246,695
FURNISH WATER (1%)	COST	1%		$246,695
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		$2,960,343
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		$246,695
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		$493,390
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		$493,390
Subtotal				**$29,356,731**
MOBILIZATION (10%)	COST	10%		$2,935,673
Subtotal				**$32,292,404**
CONTIGENCIES (5%)	COST	5%		$1,614,620
CONSTRUCTION ENGINEERING (9%)	COST	9%		$2,906,316
Subtotal				**$36,813,341**
DETAILED ESTIMATE				**$36,813,341**
ENGINEERING DESIGN (8%)	COST	8%		$2,945,067
RIGHT OF WAY	SQ. FT.			$8,016,050
UTILITIES (20%)	COST	20%		$7,362,668
Subtotal				**$18,323,785**
OTHER COST TOTAL				**$18,323,785**

SUMMARY

DETAILED ESTIMATE	**$36,813,000**
OTHER COST TOTAL	**$18,324,000**
TOTAL PROJECT CONSTRUCTION COST	**$55,137,000**

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
DCR DETAILED ESTIMATE SUBTOTAL				**$20,658,973**
MISCELLANEOUS WORK (20%)	COST	20%		$4,131,795
Subtotal				**$24,790,768**
DUST PALLIATIVE (1%)	COST	1%		$247,908
FURNISH WATER (1%)	COST	1%		$247,908
MAINTENANCE AND PROTECTION OF TRAFFIC (12%)	COST	12%		$2,974,892
EROSION CONTROL AND POLLUTION PREVENTION (1%)	COST	1%		$247,908
CONTRACTOR QUALITY CONTROL (2%)	COST	2%		$495,815
CONSTRUCTION SURVEYING AND LAYOUT (2%)	COST	2%		$495,815
Subtotal				**$29,501,013**
MOBILIZATION (10%)	COST	10%		$2,950,101
Subtotal				**$32,451,115**
CONTIGENCIES (5%)	COST	5%		$1,622,556
CONSTRUCTION ENGINEERING (9%)	COST	9%		$2,920,600
Subtotal				**$36,994,271**
DETAILED ESTIMATE				**$36,994,271**
ENGINEERING DESIGN (8%)	COST	8%		$2,959,542
RIGHT OF WAY	SQ. FT.			$0
UTILITIES (20%)	COST	20%		$7,398,854
Subtotal				**$10,358,396**
OTHER COST TOTAL				**$10,358,396**

SUMMARY

DETAILED ESTIMATE	**$36,994,000**
OTHER COST TOTAL	**$10,358,000**
TOTAL PROJECT CONSTRUCTION COST	**$47,352,000**

Appendix G – Tier 3 Evaluation Criteria Project Partner Comment Log

Project Partner	Date	Comment
Dave Wessel, City of Flagstaff, NAIPTA, & Jenny Niemann	3/10	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) 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. 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. **1. Applies to All** a. How do we determine which spot improvements we should do regardless of cross section? ***RESPONSE:*** *Addressed with the color-coding and the footnotes in the Potential Spot Improvements Matrix (Separate File).* b. Need to spend time ranking between categories for weighting, discussing them and reaching consensus. ***RESPONSE:*** *This should be addressed though upcoming Project Partner discussion and the development of the acceptance thresholds.* 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?). ***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.* 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. ***RESPONSE****: The final Spot Improvement list, Tier 3 Evaluation Criteria (bike/ped index), and criteria weighting should address this.* 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. ***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*

Project Partner	Date	Comment
		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. 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. ***RESPONSE***: See response to 1e. ii. Backage roads, cross-access easements, and internal circulation requirements and successful mode shift could reduce the demand and need for some improvements ***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 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.* iii. The City cannot guarantee these improvements will happen, but can make commitments to trying. ***RESPONSE**: Noted. Will review implementation strategies with the Project Partners as part of the Draft/Final Report (after Working Paper 2: Alternatives Analysis).* 1. Master plans, regulatory changes and proposition 419 partnering funds are all within the immediate realm of possibility. ***RESPONSE**: Noted. See previous responses.* 2. New funding based on the plan outcomes is another, yet lower, potentiality. ***RESPONSE**: Noted. See previous responses.* **2. Traffic Operations** a. General ***RESPONSE**: 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.* i. Overall throughput (or utility) is not addressed. 1. # vehicles * occupancy

Project Partner	Date	Comment
		a. For alternatives with additional general purpose lanes, the increased volume should be addressed here. ***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.* 2. # buses * occupancy, # pedestrians, and # bicycles 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. ***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.* 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). ***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.* **b. Level of Service** 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. ***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 9th meeting.* 1. Options: a. Increase the volume for these alternatives based on FMPO regional model b. Transparency dictates this overestimation of benefits is clearly stated ***RESPONSE****: Likely to rely on FMPO and use Regional TDM or reach concurrence on a standard growth factor. More to discuss on April 9th.*

Project Partner	Date	Comment
		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 ***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.* 1. Reporting by segment may be useful as volumes changes over the length of the corridor ***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 9th meeting.* or urban areas we might consider LOS E or F. For suburban areas we might consider LOS ***RESPONSE:*** *Noted* c. **Travel Time** i. Reporting this on a per vehicle basis may be helpful, especially if volumes are changed. ***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.* ii. Threshold should be some base level of utility. Perhaps exceeding +/- 30 seconds or even 1 minute before leaving a neutral value. ***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.* 1. Holding to threshold should not prevent another mode from meeting a minimum level of performance ***RESPONSE:*** *Agreed, the goal is for all modes to operate smoothly across the corridor.* 2. The acceptance threshold detail, that 'no direction/timeframe may exceed 5% of existing' seems to be quite limiting. ***RESPONSE:*** *Understood – see above response to cii.* 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?

Project Partner	Date	Comment
		RESPONSE: *“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.* 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?? ***RESPONSE****: The intention was to equitably develop acceptance thresholds for other criterion as well.* iii. Report out minimum and maximum times from the 10 +/- travel time runs for each alternative. This provides some sense of reliability. ***RESPONSE:*** *Agreed, the intention is to report this level of detail through the model results and discuss the results in Working Paper #2.* 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. ***RESPONSE:*** *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.* d. Network Delay ***RESPONSE:*** *Jessica to provide a more detailed overview and response at out April 9th meeting as it is difficult to articulate in depth here.* 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? ***RESPONSE:*** *See response to 2d.* ii. If DTA is not in effect, explain how network delay would change with each alternative ***RESPONSE:*** *See response to 2d*

Project Partner	Date	Comment
		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? ***RESPONSE:*** *See response to 2d* **3. Safety** ***ADOT COMMENT:*** *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.* *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.* a. Crash Mitigation Factors may be the best option available. ***RESPONSE:*** *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.* b. Review all previous comments to assure a more thorough analysis ***RESPONSE:*** *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.* i. Look at CMF's for all modes across all or most types of improvements ***RESPONSE****: Agreed– see the general response to safety.* 1. i.e., widening helps automobiles but hurts pedestrians ***RESPONSE:*** *This is evaluated and measured in the PEQI-specific criteria.* 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?

Project Partner	Date	Comment
		RESPONSE: *This is evaluated and measured in the BEQI- and PEQI-specific criteria.* c. Apply CMF to heat map of crash types to assure better alignment between factors and crashes ***RESPONSE:*** *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. May need to apply this at a segment level and then aggregate to a corridor score to adequately evaluate spot improvements ***RESPONSE:*** *Agreed, this topic should be discussed with Project Partners on the April 9th meeting.* d. Reduction in conflict points – may need to apply by segment and have a hypothetical median treatment to estimate changes to driveway turns ***RESPONSE:*** *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 9th meeting.* **4. Expand Mode Choice** a. PEQI: The thresholds for several need to go into the negative range as they are detrimental to walking and biking (see recommended changes) ***RESPONSE:*** *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. Buffer width – "No buffer" should be negative 1. A vehicular turn lane should not count in the calculation ***RESPONSE:*** *Agreed, this was NOT the intention under the PEQI criteria.* 2. A bike lane might count in the calculation. ***RESPONSE:*** *This was the intention under the original PEQI criteria.* ii. Number of lanes – 8 lanes should be negative ***RESPONSE:*** *See response to 4a. Moreover, ADOT TSS feels that if signal timing is appropriately established additional lanes would not reduce safety.* iii. Median – "no median" should be negative

Project Partner	Date	Comment
		RESPONSE: *See response to 4a.* 1. Since medians serve as an impromptu refuge, scaling this to length of median of a certain width is appropriate. ***RESPONSE:*** 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). a. Requires some hypothetical or assumed median application ***RESPONSE:*** *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 9th meeting.* b. The frequency of these medians, as long as they meet a minimum length, should also receive credit. ***RESPONSE:*** *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 9th meeting.* iv. Traffic volumes should be scaled to Milton (or 180) and factored to curb lane ***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.* 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. ***RESPONSE:*** *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.*

Project Partner	Date	Comment
		vi. 3.5 or less is a floor -Sara's initial take on the 10 point scale. ***RESPONSE:*** *Issue to be further vetted as a group.* 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. ***RESPONSE:*** *Please see response to comment 4a.* 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. ***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. Traffic volumes should be scaled to Milton (or 180) and factored to curb lane ***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.* 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. ***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).* 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 ***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 9th meeting. In addition, the definition of "enhanced" crossings needs to be clarified at the meeting.*

Project Partner	Date	Comment
		i. Based on the RTP and other literature, scaling up at 330’ increments up to 1650’ seems to make sense. ii. Enhancements range from striping at low end to grade separation at the high end ***RESPONSE:*** *This needs to be discussed as a group.* 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. ***RESPONSE:*** *Noted – see above responses.* 1. The City’s regional traffic model has included density of crossings in a given area, which could be helpful here. ***RESPONSE:*** *Noted* 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 ***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.* 5. **Public Involvement** – represents notes from meetings with select City staff. May not reflect all partner participants from City and MPO. ***RESPONSE****: Noted – we are looking for inclusive comments and need to vet these with all representation of the Project Partners.* 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. ***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*

Project Partner	Date	Comment
		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. i. The plan would address cross-section, backage roads, internal block circulation, basis for future regulation ***RESPONSE:*** *Please see response to comment 5/5a.* ii. The plan would be adopted by resolution, not ordinance. ***RESPONSE:*** *This would be preferred, but needs discussion.* iii. The plan will require at a minimum a hearing before the Council and the Planning & Zoning Commission. Each of these bodies will benefit from at least one work session. ***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.* iv. Presentations before all City Commissions is advised. ***RESPONSE:*** *The plan will follow the process of the Project Partner-accepted Public Involvement Plan.* v. A public charrette process, similar in nature to that conducted by FMPO, is recommended. ***RESPONSE:*** *The plan will follow the process of the Project Partner-accepted Public Involvement Plan.* On-line survey support is recommended to expand participation. 1. **NOTE: the City's on line forum is a subject of budget discussions. It may not be available past October when the subscription expires.** ***RESPONSE:*** *The plan will follow the process of the Project Partner-accepted Public Involvement Plan.* b. The City MP process will gain credibility if alternatives are presented to the public for consideration without a recommendation entering the process. ***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. Alternatives are more fairly presented or more easily produced if they include the alternative road cross-sections

Project Partner	Date	Comment
		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.* 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. ***RESPONSE:*** *Noted* 1. The public involvement process advocated by ADOT for the Milton CMP at this time does not bode well for strong public consensus ***RESPONSE:*** *The plan will follow the process of the Project Partner-accepted Public Involvement Plan.* 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 ***RESPONSE:*** *The plan will follow the process of the Project Partner-accepted Public Involvement Plan.* 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.’ ***RESPONSE:*** *With Project Partner input, we will revise the language to ensure that we don’t falsely convey that message.* 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. ***RESPONSE:*** *The plan will follow the process of the Project Partner-accepted Public Involvement Plan.* **6. Cost** a. Attractiveness for grants i. Suggest that the be scored 0-1-2: Not eligible, applicable, competitive ii. Other criteria might be applied 1. HSIP: CMF scores and injuries and fatalities 2. BUILD: a. State of Good Repair = neutral b. Safety = HSIP (CMF, etc.)

Project Partner	Date	Comment
		c. Economic Competitiveness = travel time, size of investment d. Quality of Life = mode choice, great street e. Partners = maybe no differentiation. May speculate on District formation possibilities f. BCA = if FMPO tool works, use it 3. ATCMTD (technology): Feel that it applies to all 4. INFRA = don't believe it applies, tends to be highway freight focused 5. FLAP = US 180 only. Could be differences between alternatives 6. CIG = Transit. Should be differences between alternatives 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. ***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.* **7. Environmental Impact** 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? ***RESPONSE:*** *Noted – refer to the response to 7b.* 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. b. Air quality: Add VMT to Network Delay ***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 9th meeting.* i. Just to reiterate this important – delay is not the only contributor to air quality issues; traffic volumes should be included here.

Project Partner	Date	Comment
		RESPONSE: *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.* 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? ***RESPONSE:*** *Stormwater impacts are peripheral to the goals and objectives of this project and would require assumptions that would lessen the inherit value of such an analysis. We do not recommend this be included in the Tier 3 analysis.* 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. ***RESPONSE:*** *Noted - Air quality is already addressed in a previous criterion/response to 7b.* **8. Community Character** a. Wide sidewalk should start at 8' minimum as 6' is the standard. ***RESPONSE:*** *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.* b. Accommodation of street trees in the right-of-way is preferred. It appears that two alternatives will do this (6b and 13). ***RESPONSE:*** *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.* c. Accommodation of street furniture and vertical elements like breakaway banner poles between the curb and sidewalk should get some credit. ***RESPONSE:*** *This level of detail will not be measured in the Tier 3 alternative evaluation.* d. Buffer area between sidewalk and curb should be credited here and in mode choice category as it serves two purposes. ***RESPONSE:*** *the evaluation of sidewalk width is captured in the PEQI criteria* 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.

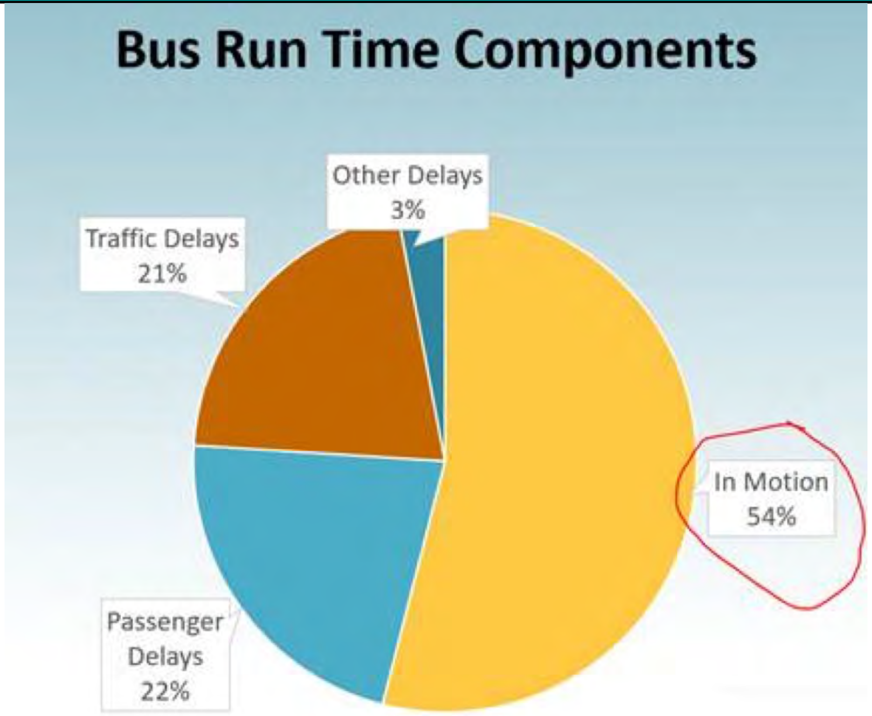
Project Partner	Date	Comment
		RESPONSE: *This will be a discussion during the final design and elements outside of the proposed ROW will not impact the evaluation of alternative within this CMP process. Also note that all additional landscaping will be the City's/FMPO's responsibility if requested above and beyond ADOT standard details and specifications.* 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.
Nate Reisner	3/10	1. **Traffic Operations:** 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. ***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. 2. **Traffic Operations - LOS Criteria Note**: 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. ***RSPONSE****: Before any decision is made, we need to better understand how transit capacity is measured - NAIPTA/AECOM to provide measurable thresholds.* 3. **Traffic Operations:** Recommend changing this to highway operations. **RESPONSE:** *We feel the intent is the same, perhaps just semantics in terminology. Consider the term, "Transportation System Operations" as alternate language.* 4. **Traffic Operations:** NCD & NRT agree that the Network Delays should be in the final report, but explain the difference/benefit of measuring Network Delay verses Travel Time. ***RESPONSE:*** Per previous response, Jessica to provide additional explanation on network delay at our upcoming April 9th meeting. 5. **Safety:** 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.

Project Partner	Date	Comment
		RESPONSE: *Agreed – this will be discussed further at the April 9th 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.* 6. **Safety - Reduction in Conflict Points:** NCD/NRT would like more information on how this criteria could be a beneficial tool to compare alternatives. ***RESPONSE:*** 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.* 7. **Expand Travel Modes:** This is the section where transit capacity, identified in the traffic operations, should be addressed. ***RESPONSE:*** *Will seek input from NAIPTA regarding how transit capacity could be evaluated and discuss with Partners.* 8. **Expand Travel Modes - Transit Ridership Criteria:** 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. ***RESPONSE:*** *NAIPTA provided ADOT with ridership projections for each alternative. NAIPTA could explain how the data was derived as needed.* 9. **Public Acceptance:** 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. ***RESPONSE:*** *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.* 10. **Cost/Implementation:** NCD/NRT suggest that the intersection and/or spot improvements be detailed for a better construction cost estimate. ***RESPONSE:*** *Agreed – Tier 3 construction cost estimates will be more detailed capturing spot improvements and intersections.*

Project Partner	Date	Comment
		11. **Cost/Implementation:** NCD feels that the maintenance cost criteria is not significant for these alternatives. ***RESPONSE:*** *Agreed – ADOT's preference is to remove the criterion as variances between alternatives are anticipated to be negligible at this stage.* 12. **Cost/Implementation – Implementation Opportunities:** 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. ***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.* 13. **Cost/Implementation - Cost / Benefit Analysis:** 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. ***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.* 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. ***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.*
Bizzy Collins	3/10	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. ***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 & 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 9th meeting. The weighting of the Tier 3 Evaluation Criteria will be determined collectively by the Project Partners once consensus is reached on the criteria.*

<table>
<tr><th>Project Partner</th><th>Date</th><th>Comment</th></tr>
<tr><td></td><td></td><td>
Second, for the transit travel time criterion, we'd like to propose a two-part assessment that gets combined into one score:

Part One
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.
<table>
<tr><th>Alternative</th><th>NB</th><th>SB</th><th>Frequency</th><th># buses</th></tr>
<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>
</table>
Part Two
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.
</td></tr>
</table>

Project Partner	Date	Comment
		 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.

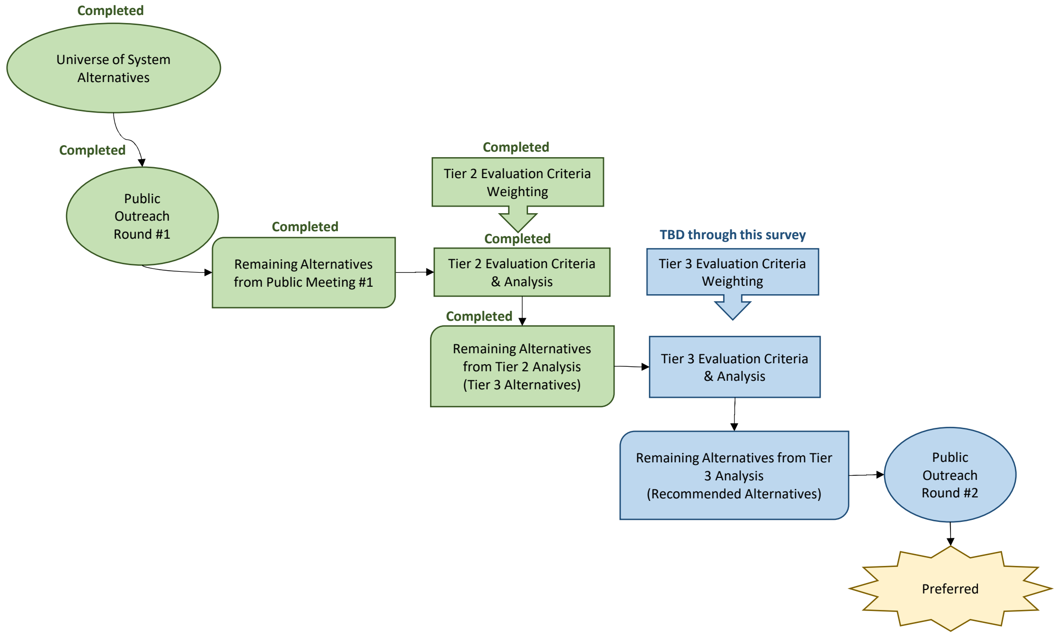
Appendix H – Tier 3 Evaluation Criteria Project Partner Weighting Survey

ADOT

Milton Road Corridor Master Plan

Tier 3 Alternative Evaluation

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 CriteriaCategories:

- 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"

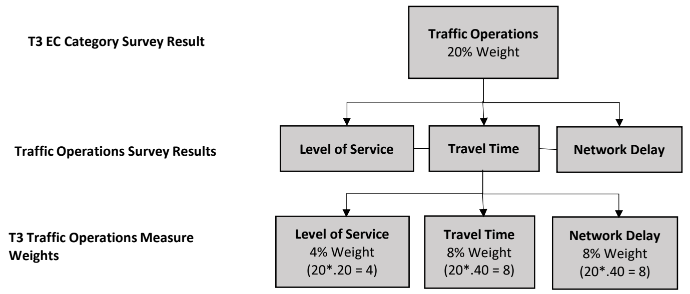
The second portion of the survey is to develop weights for the criteria for each of the T3 Evaluation Criteria Categories. However, the weighting survey is only necessary for the categories with more than one criterion. Those categories include:
- Traffic Operations - Expand Travel Mode Choices - Cost / 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:

Author: Klaus D. Goepel, BPMSG

https://bpmsg.com/contact-form/

Milton Road Corridor Master Plan

Tier 3 Alternative Evaluation

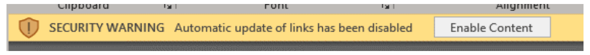
Instructions for using this Survey

Quick Start:

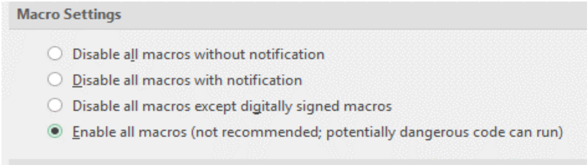
Setup

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.



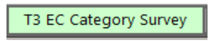
Enable Macros: The survey relies on macros to auto populate calculations, be sure to enable macros (File --> Options --> Trust Center --> Trust Center Settings --> Macro Settings --> Enable macros


Macro Settings

○ Disable all macros without notification
○ Disable all macros with notification
○ Disable all macros except digitally signed macros
● Enable all macros (not recommended; potentially dangerous code can run)

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

18	INSERT Agency Name	1	INSERT DATE	α: 0.1	CR: 0%	1
19	Name	Weight	Date		Consistency Ratio	

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, pleas take note of the table in Rows 6 - 13.

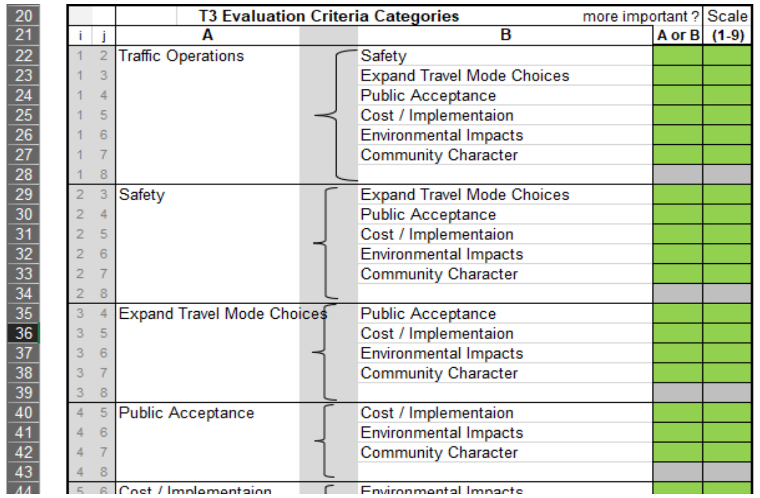
6	n	T3 Evaluation Criteria Categories	RGMM	+/-
7	1	Traffic Operations	14.3%	
8	2	Safety	14.3%	
9	3	Expand Travel Mode Choices	14.3%	
10	4	Public Acceptance	14.3%	
11	5	Cost / Implementaion	14.3%	
12	6	Environmental Impacts	14.3%	
13	7	Community Character	14.3%	

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.

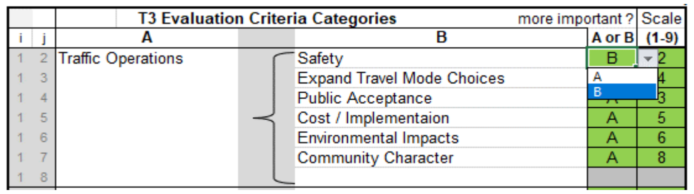
Step 2: In Rows 20 - 48, you will see a four-column table that lists all seven on the Tier 3 Evaluation Criteria Categories. The table is constructed to allow you to compare each Tier 3 Evaluation Criteria Category against teach other on a numerical scale of importance, or preference. This is where you will be conducting the pairwise comparison survey for each of the T3 Evaluation Criteria Categories.



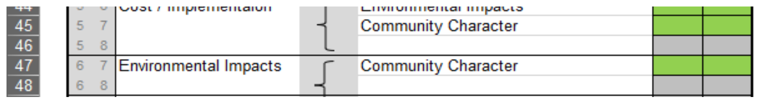
20			T3 Evaluation Criteria Categories		more important ?	Scale
21	i	j	A	B	A or B	(1-9)
22	1	2	Traffic Operations	Safety		
23	1	3		Expand Travel Mode Choices		
24	1	4		Public Acceptance		
25	1	5		Cost / Implementaion		
26	1	6		Environmental Impacts		
27	1	7		Community Character		
28	1	8				
29	2	3	Safety	Expand Travel Mode Choices		
30	2	4		Public Acceptance		
31	2	5		Cost / Implementaion		
32	2	6		Environmental Impacts		
33	2	7		Community Character		
34	2	8				
35	3	4	Expand Travel Mode Choices	Public Acceptance		
36	3	5		Cost / Implementaion		
37	3	6		Environmental Impacts		
38	3	7		Community Character		
39	3	8				
40	4	5	Public Acceptance	Cost / Implementaion		
41	4	6		Environmental Impacts		
42	4	7		Community Character		
43	4	8				
44	5	6	Cost / Implementaion	Environmental Impacts		

In this table, you will use the two columns most further to the righ,t 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

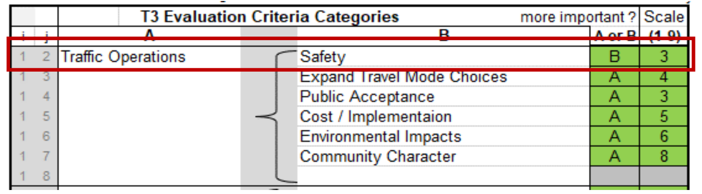


		T3 Evaluation Criteria Categories		more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety	B	2
1	3		Expand Travel Mode Choices	A B	4
1	4		Public Acceptance	A	3
1	5		Cost / Implementaion	A	5
1	6		Environmental Impacts	A	6
1	7		Community Character	A	8
1	8				



	i	j	A	B		
45	5	7		Community Character		
46	5	8				
47	6	7	Environmental Impacts	Community Character		
48	6	8				

Then, in the next column, reading "Scale", type a number 1 - 9 in that call that determines the level of importance between the two categories using the scale listed below:

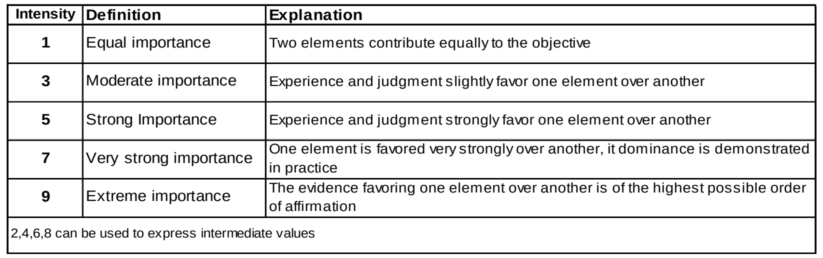


T3 Evaluation Criteria Categories				more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety	B	3
1	3		Expand Travel Mode Choices	A	4
1	4		Public Acceptance	A	3
1	5		Cost / Implementaion	A	5
1	6		Environmental Impacts	A	6
1	7		Community Character	A	8
1	8				

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.

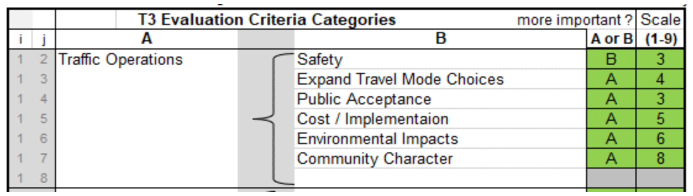
This determination is based on the Pairwise Comparison Preference Numerical scale listed below:

Pairwise Comparison Preference Numerical Scale (1 - 9)



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		

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

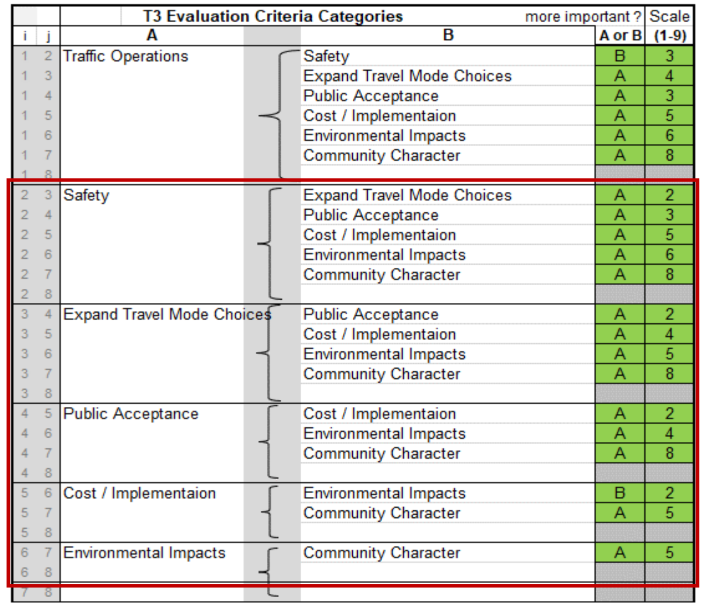


T3 Evaluation Criteria Categories				more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety	B	3
1	3		Expand Travel Mode Choices	A	4
1	4		Public Acceptance	A	3
1	5		Cost / Implementaion	A	5
1	6		Environmental Impacts	A	6
1	7		Community Character	A	8
1	8				

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.

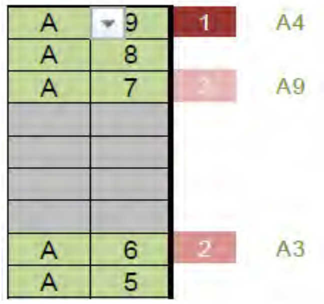


T3 Evaluation Criteria Categories				more important ?	Scale
i	j	A	B	A or B	(1-9)
1	2	Traffic Operations	Safety	B	3
1	3		Expand Travel Mode Choices	A	4
1	4		Public Acceptance	A	3
1	5		Cost / Implementaion	A	5
1	6		Environmental Impacts	A	6
1	7		Community Character	A	8
1	8				
2	3	Safety	Expand Travel Mode Choices	A	2
2	4		Public Acceptance	A	3
2	5		Cost / Implementaion	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 / Implementaion	A	4
3	6		Environmental Impacts	A	5
3	7		Community Character	A	8
3	8				
4	5	Public Acceptance	Cost / Implementaion	A	2
4	6		Environmental Impacts	A	4
4	7		Community Character	A	8
4	8				
5	6	Cost / Implementaion	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:

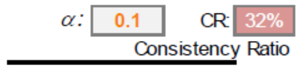
Once completed, you may, at your discretion, adjust highlighted comparisons 1 to 3 to improve consistency.

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



α: 0.1 CR: 32%

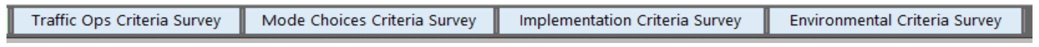
Consistency Ratio

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.

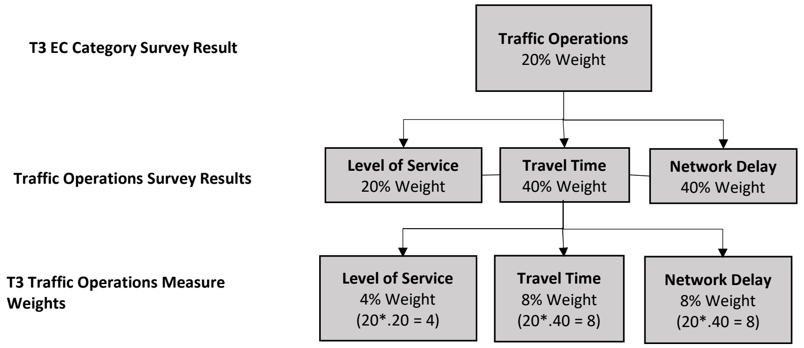
n	T3 Evaluation Criteria Categories	RGMM	+/-
1	Traffic Operations	30.0%	15.7%
2	Safety	29.8%	11.6%
3	Expand Travel Mode Choices	16.4%	7.8%
4	Public Acceptance	11.1%	3.5%
5	Cost / Implementaion	5.3%	2.1%
6	Environmental Impacts	5.6%	2.6%
7	Community Character	1.9%	1.0%

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.



Milton Road 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	1	INSERT DATE
Name	Weight	Date

α: 0.1 CR: 0%

Consistency Ratio

1

		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				

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, 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		

Milton Road 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 Crieria**		RGMM	+/-
1	Level of Service (V/C)		33.3%	
2	Travel Time		33.3%	
3	Network Delay		33.3%	

INSERT Agency Name	1	INSERT DATE
Name	Weight	Date

α: 0.1 CR: 0%

Consistency Ratio

1

		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				

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, 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

Milton Road 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%	

INSERT Agency Name	1	INSERT DATE
Name	Weight	Date

α: 0.1 CR: 0%

Consistency Ratio

1

		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, 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		

Milton Road Corridor Master Plan

n= 3

Objective: The purpose of the Milton Road & US 180 Corridor Master Plans (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	**Cost / Implementation**	**Comment**	RGMM	+/-
1	Construction Cost		33.3%	
2	ROW Impact		33.3%	
3	Implementation Opportunities		33.3%	

INSERT Agency Name	1	INSERT DATE	α:	0.1	CR:	0%	1
Name	Weight	Date			Consistency Ratio		

		Criteria		more important ?	Scale	
i	j	**A**	**B**	**A or B**	**(1-9)**	
1	2	Construction Cost	ROW Impact			A
1	3		Implementation Opportunities			B
1	4					
1	5					
1	6					
1	7					
1	8					
2	3	ROW Impact	Implementation Opportunities			
2	4					
2	5					
2	6					
2	7					
2	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		

Milton Road 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	**Environmental Impacts**	**Comment**	RGMM	+/-
1	Neighborhood Impacts		33.3%	
2	Title VI Impacts		33.3%	
3	Air Quality		33.3%	

INSERT Agency Name	1	INSERT DATE	α: 0.1	CR: 0%
Name	Weight	Date		Consistency Ratio

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				
1	5				
1	6				
1	7				
1	8				
2	3	Title VI Impacts	Air Quality		
2	4				
2	5				
2	6				
2	7				
2	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, 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		

Appendix I – Tier 3 Evaluation Criteria Public Weighting Survey

CITY OF FLAGSTAFF · ARIZONA · ESTABLISHED 1882

Milton Rd & US 180 Master Plans - Corridor Improvement Qualities Survey

August 24, 2020, 3:34 PM

Contents

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

	%	**Count**
1	8.1%	15
2	8.1%	15
3	26.3%	49
4	22.0%	41
5	34.4%	64

Enhance Community Character

	%	**Count**
1	5.4%	10
2	11.8%	22
3	21.5%	40
4	25.3%	47

	%	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

	%	Count
4	16.7%	31
5	11.8%	22

Limit Social & Environmental Impacts

	%	Count
1	8.1%	15
2	9.7%	18
3	17.7%	33
4	23.7%	44
5	39.2%	73

Public Support

	%	Count
1	7.0%	13
2	10.8%	20
3	30.6%	57
4	28.5%	53
5	21.0%	39

QUESTION 2

What is currently your primary transportation option on Milton Road?

	%	Count
Bicycle	22.0%	41
Bus	5.4%	10
Car/vehicle	86.0%	160
Walk/Electric Scooter/Wheelchair	4.3%	8
Other	1.6%	3
Choose Not to Answer	0.5%	1

QUESTION 3

Do you live within walking distance of Milton Road?

	%	Count
Yes	31.4%	58
No	67.6%	125
Choose Not to Answer	1.1%	2

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

	%	Count
1	7.5%	14
2	7.0%	13

	%	Count
3	27.4%	51
4	24.2%	45
5	32.8%	61

Enhance Community Character

	%	Count
1	2.7%	5
2	10.8%	20
3	27.4%	51
4	18.3%	34
5	38.7%	72

Improve Traffic Movement

	%	Count
1	8.1%	15
2	6.5%	12
3	12.4%	23
4	15.6%	29
5	55.9%	104

Expand Travel Choices

	%	Count
1	2.2%	4

	%	Count
2	13.4%	25
3	14.0%	26
4	18.3%	34
5	50.0%	93

Limit Property Impacts & Project Costs

	%	Count
1	11.8%	22
2	15.6%	29
3	33.3%	62
4	16.1%	30
5	21.0%	39

Limit Social & Environmental Impacts

	%	Count
1	5.4%	10
2	7.0%	13
3	16.7%	31
4	20.4%	38
5	48.4%	90

Public Support

	%	Count
1	9.1%	17
2	7.5%	14
3	28.0%	52
4	29.0%	54
5	22.6%	42

QUESTION 5

What is currently your primary transportation option on Humphreys Street?

	%	Count
Bicycle	26.1%	48
Bus	3.3%	6
Car/vehicle	84.2%	155
Walk/Electric Scooter/Wheelchair	9.8%	18
Other	1.6%	3

QUESTION 6

What is currently your primary transportation option on US 180 (Fort Valley Rd)?

	%	Count
Bicycle	29.2%	54
Bus	3.2%	6

	%	**Count**
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)?

	%	**Count**
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

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

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 3

Do you live within walking distance of Milton Road?

- Yes
- No
- Don't Know
- Choose Not to Answer

QUESTION 4

How important are these qualities for the future Humphreys Street and US 180 (Fort Valley Rd) (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

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 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 7

Do you live within walking distance of Humphreys Street or 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)

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

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

- 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.

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, Humpreys 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

---

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

- 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

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

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

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.

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
- 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, 7:09 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

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

Question 6

- Bicycle
- Car/vehicle

Question 7

- Yes

Question 8

No response

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

- 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

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

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: 5
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

- 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

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

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, 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

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

Question 5

- Car/vehicle

Question 6

- Car/vehicle

Question 7

- Yes

Question 8

No response

Name not shown
inside City Limits
August 11, 2020, 8:34 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/

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

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.

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
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

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

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.

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

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

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

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

- 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

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

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 1-17 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.

Thank you.

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 Valley Rd. Access to Fort Valley and 180 should occur west of town possibly via I-40 to remove traffic through town.

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

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.

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 that "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

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

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

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

- 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

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

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

- 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

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

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

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

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 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.

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

- Yes

Question 8

No response

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

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

- 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

- 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

- 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

- 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

See above

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 would also be helpful.

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 highways and ski hill and the backup starts DT anyway, so get creative with lane usage at peak hour.

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 has left turn arrow to US180 install right hand turn arrow for traffic to turn south on Humphreys from US180.

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

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

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 skiiers, 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

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

- 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

- 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

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

- 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 being 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

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

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

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

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

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

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

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

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

- 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

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

- 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

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

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

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

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

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

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

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

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
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 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

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

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

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

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

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

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

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

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

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 foe 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

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

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

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

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

- 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 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

- 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

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

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

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

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

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

Question 6

- Bicycle
- Bus
- 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

- 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, 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

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

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

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

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

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

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

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

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

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.

Name not available
inside City Limits
August 23, 2020, 4:30 PM

Question 1

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: 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.

Name not available
inside City Limits

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.

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

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 todays 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 an 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, felling 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 receive 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 Reponses - 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

Tier 3 Volume to Capacity Score Calculations

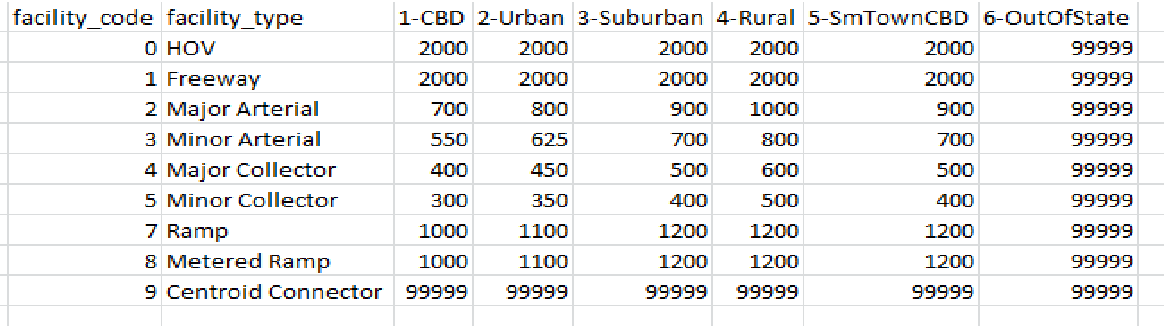
ID #	Length	Future AADT (2040)	Adjusted Future AADT - Mode Shift (2040)	Capacity Threshold (2040)	Percent of Threshold (2040)	Tier 3 V/C Score (out of 100)	Fnctl Class	Notes
No-Build / No Build +					**0.89**	**77.41**	4-lanes, Urban, Principal Arterial	
No-Build - Segment A	0.10	38,395	38,395	46,400	82.7%		*Butler to Phoenix*	
No-Build - Segment B	0.24	51,339	51,339	46,400	110.6%		*Butler to Rte 66*	
No-Build - Segment C	1.00	39,323	39,323	46,400	84.7%		*Rte 66 to Forest Meadows*	
Alt 5					**0.75**	**92.26**	6-lanes, Urban, Principal Arterial	
Alt 5 - Segment A	0.10	50,552	50,552	69,600	72.6%		*Butler to Phoenix*	
Alt 5 - Segment B	0.24	67,047	67,047	69,600	96.3%		*Butler to Rte 66*	
Alt 5 - Segment C	1.00	48,677	48,677	69,600	69.9%		*Rte 66 to Forest Meadows*	
Alt 6a					**0.69**	**100.00**	6-lanes, Urban, Principal Arterial	
Alt 6a - Segment A	0.10	50,552	48,924	73,080	66.9%		*Butler to Phoenix*	decreased volume based on mode shift by 1,628
Alt 6a - Segment B	0.24	67,047	65,419	73,080	89.5%		*Butler to Rte 66*	increased capacity 5% for outside bus lane/right turn lane
Alt 6a - Segment C	1.00	48,677	47,049	73,080	64.4%		*Rte 66 to Forest Meadows*	
Alt 6b					**0.82**	**84.44**	4-lanes, Urban, Principal Arterial	decreased volume based on mode shift by 1,628
Alt 6b - Segment A	0.10	39,198	37,570	48,720	77.1%		*Butler to Phoenix*	increased capacity 5% for outside bus lane/right turn lane
Alt 6b - Segment B	0.24	50,035	48,407	48,720	99.4%		*Butler to Rte 66*	
Alt 6b - Segment C	1.00	39,659	38,031	48,720	78.1%		*Rte 66 to Forest Meadows*	
Alt 13					**0.86**	**80.42**	4-lanes, Urban, Principal Arterial	
Alt 13 - Segment A	0.10	39,198	37,570	46,400	81.0%		*Butler to Phoenix*	decreased volume based on mode shift by 1,628
Alt 13 - Segment B	0.24	50,035	48,407	46,400	104.3%		*Butler to Rte 66*	
Alt 13 - Segment C	1.00	39,659	38,031	46,400	82.0%		*Rte 66 to Forest Meadows*	

	From	To
Segment A	Sitgreaves	Phoenix
Segment B	Butler	Rte 66
Segment C	Rte 66	Forest Meadows

Notes
a) Future AADT (2040): Projected traffic volumes provided from FMPO Model
Based on mode shift projections from FMPO model, AADT's for BRT alternatives were adjusted to account for reduction in anticipated vehicles.
b) Capacity Threshold (2040) Formula: Capacity X Number of Lanes X 14.5 Hours of Traffic
Multiply the # of lanes within the corridor by the corresponding figure in Table 1, then Multiply by 14.5 (hours) to calculate the facility's capacity threshold.
Increase capacity 5% for alternatives with dedicated bus/right-turn lane - per FDOT tables (https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/planning/systems/programs/sm/los/pdfs/fdot_2012_generalized_service_volume_tables.pdf?sfvrsn=cf17ad0a_0)
c) V/C Score Formula: Lowest % Threshold receives maximum score; any % above 100% represents Level of Service F and receives a Score of 0.

(http://adot.ms2soft.com/tcds/tsearch.asp?loc=Adot&mod=)

Table 1: ADOT Hourly Roadway Capacity Threshold Table



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

Milton Road Tier 3 Travel Time Summary Table

Alternative	T3 Rank	AM Peak Hour				PM Peak Hour				Total	Total
		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	-	28.3	-
No Build Plus	**3**	5.9	40.7%	5.6	-7.6%	6.9	-4.8%	8.1	-23.3%	26.5	6.4%
5	**1**	5.5	44.5%	5.4	-3.7%	6.8	-2.7%	7.6	-15.3%	25.3	10.8%
6a	**2**	5.5	44.3%	5.7	-10.1%	6.9	-4.8%	7.4	-11.9%	25.5	9.8%
6b	**6**	6.9	30.5%	6.3	-20.4%	7.3	-11.2%	7.9	-19.7%	28.4	-0.2%
13	**4**	6.5	34.6%	6.5	-24.5%	7.6	-15.1%	7.3	-11.3%	27.9	1.5%

Alternative	Avgerage AM Travel Time		Average PM Travel Time	
No Build	7.6		6.6	
No Build Plus	5.8	24.1%	7.5	-14.0%
5	5.5	27.9%	7.2	-9.0%
6a	5.6	25.6%	7.1	-8.4%
6b	6.6	13.0%	7.6	-15.4%
13	6.5	14.3%	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	-	3,595	-
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%	3,593	0.0%
5	**3**	526	18.4%	695	10.9%	1,221	14.3%	769	6.7%	1,342	0.3%	2,111	2.7%	3,332	7.3%
6a	**1**	528	18.2%	659	15.5%	1,187	16.7%	779	5.5%	1,229	8.7%	2,008	7.5%	3,195	11.1%
6b	**4**	604	6.3%	626	19.8%	1,230	13.7%	826	-0.2%	1,320	1.9%	2,146	1.1%	3,376	6.0%
13	**2**	601	6.7%	616	21.0%	1,217	14.5%	954	-15.7%	1,365	-1.4%	2,319	-6.8%	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 / Historic Rt 66	Milton Rd / Butler Ave & Clay Ave	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	169
	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	223
	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	236
	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	214
	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	217
	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
	Greater than 9’ buffer	2
Number of Total Vehicle Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		3

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 Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		3

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
	Greater than 9’ buffer	2
Number of Total Vehicle Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		4

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 Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		4

Pedestrian Comfort Index Evaluation Criteria

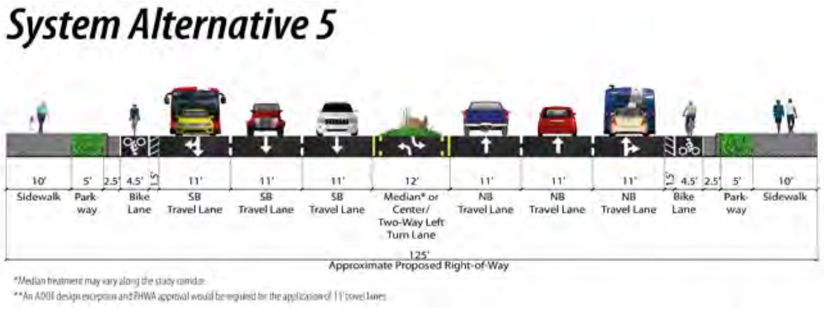
Alternative 5

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
	Greater than 9’ buffer	2
Number of Total Vehicle Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		6.5

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 Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		5.5



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
	Greater than 9’ buffer	2
Number of Total Vehicle Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		8

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 Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		5.5

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
	Greater than 9’ buffer	2
Number of Total Vehicle Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		9

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 Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		6

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
	Greater than 9’ buffer	2
Number of Total Vehicle Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		6

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 Though 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
	< 3,000	2
Presence of Median:	No median	0
	TWLTL / Left Turn Lane (no median)	1
	Left turn Lane with median (<5)	1.5
	Left turn Lane with planted median (>5)	2
		4

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	-	27.5	-
No Build Plus	**2**	5.0	46.8%	4.4	31.6%	5.5	-9.5%	6.7	-0.9%	21.6	21.4%
5	**4**	5.7	39.8%	4.9	23.7%	5.8	-15.0%	6.0	9.2%	22.4	18.6%
6a	**3**	4.7	50.2%	5.1	20.0%	4.6	8.7%	5.6	15.9%	20.0	27.3%
6b	**1**	4.1	56.2%	4.7	27.3%	5.4	-6.8%	6.0	9.9%	20.1	26.8%
13	**5**	5.0	46.4%	5.7	11.7%	6.0	-19.6%	6.6	0.4%	23.3	15.1%

Alternative	Average AM Travel Time		Average PM Travel Time	
No Build	7.9		5.8	
No Build Plus	4.7	40.6%	6.1	-4.6%
5	5.3	33.3%	5.9	-1.2%
6a	4.9	37.9%	5.1	12.8%
6b	4.4	44.5%	5.7	2.7%
13	5.4	32.3%	6.3	-8.2%

ESTIMATE OF PROBABLE COSTS

MILTON ROAD CORRIDOR MASTER PLAN

No-Build+ - (Forest Meadows to Beaver)

DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
Spot Improvements	**L.S.**	**1**	**$3,430,950**	**$3,430,950**
DCR DETAILED ESTIMATE SUBTOTAL				**$3,430,950**
MISCELLANEOUS WORK (20%)	COST	20%		$686,190
Subtotal				**$4,117,140**
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
Subtotal				**$4,899,397**
MOBILIZATION (10%)	COST	10%		$489,940
Subtotal				**$5,389,336**
CONTIGENCIES (5%)	COST	5%		$269,467
CONSTRUCTION ENGINEERING (9%)	COST	9%		$485,040
Subtotal				**$6,143,843**
DETAILED ESTIMATE				**$6,143,843**
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
Subtotal				**$3,660,115**
OTHER COST TOTAL				**$3,660,115**

SUMMARY

DETAILED ESTIMATE	**$6,144,000**
OTHER COST TOTAL	**$3,660,000**
TOTAL PROJECT CONSTRUCTION COST	**$9,804,000**

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
DCR DETAILED ESTIMATE SUBTOTAL				**$27,925,003**
MISCELLANEOUS WORK (20%)	COST	20%		$5,585,001
Subtotal				**$33,510,004**
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
Subtotal				**$39,876,904**
MOBILIZATION (10%)	COST	10%		$3,987,690
Subtotal				**$43,864,595**
CONTIGENCIES (5%)	COST	5%		$2,193,230
CONSTRUCTION ENGINEERING (9%)	COST	9%		$3,947,814
Subtotal				**$50,005,638**
DETAILED ESTIMATE				**$50,005,638**
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
Subtotal				**$23,133,413**
OTHER COST TOTAL				**$23,133,413**

SUMMARY

DETAILED ESTIMATE	**$50,006,000**
OTHER COST TOTAL	**$23,133,000**
TOTAL PROJECT CONSTRUCTION COST	**$73,139,000**

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
DCR DETAILED ESTIMATE SUBTOTAL				**$30,030,203**
MISCELLANEOUS WORK (20%)	COST	20%		$6,006,041
Subtotal				**$36,036,244**
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
Subtotal				**$42,883,130**
MOBILIZATION (10%)	COST	10%		$4,288,313
Subtotal				**$47,171,443**
CONTIGENCIES (5%)	COST	5%		$2,358,572
CONSTRUCTION ENGINEERING (9%)	COST	9%		$4,245,430
Subtotal				**$53,775,445**
DETAILED ESTIMATE				**$53,775,445**
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
Subtotal				**$29,409,929**
OTHER COST TOTAL				**$29,409,929**

SUMMARY

DETAILED ESTIMATE	**$53,775,000**
OTHER COST TOTAL	**$29,410,000**
TOTAL PROJECT CONSTRUCTION COST	**$83,185,000**

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
DCR DETAILED ESTIMATE SUBTOTAL				**$28,243,035**
MISCELLANEOUS WORK (20%)	COST	20%		$5,648,607
Subtotal				**$33,891,642**
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
Subtotal				**$40,331,054**
MOBILIZATION (10%)	COST	10%		$4,033,105
Subtotal				**$44,364,159**
CONTIGENCIES (5%)	COST	5%		$2,218,208
CONSTRUCTION ENGINEERING (9%)	COST	9%		$3,992,774
Subtotal				**$50,575,142**
DETAILED ESTIMATE				**$50,575,142**
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
Subtotal				**$23,929,456**
OTHER COST TOTAL				**$23,929,456**

SUMMARY

DETAILED ESTIMATE	**$50,575,000**
OTHER COST TOTAL	**$23,929,000**
TOTAL PROJECT CONSTRUCTION COST	**$74,504,000**

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
DCR DETAILED ESTIMATE SUBTOTAL				**$29,244,073**
MISCELLANEOUS WORK (20%)	COST	20%		$5,848,815
Subtotal				**$35,092,888**
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
Subtotal				**$41,760,536**
MOBILIZATION (10%)	COST	10%		$4,176,054
Subtotal				**$45,936,590**
CONTIGENCIES (5%)	COST	5%		$2,296,829
CONSTRUCTION ENGINEERING (9%)	COST	9%		$4,134,293
Subtotal				**$52,367,712**
DETAILED ESTIMATE				**$52,367,712**
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
Subtotal				**$24,966,400**
OTHER COST TOTAL				**$24,966,400**

SUMMARY

DETAILED ESTIMATE	**$52,368,000**
OTHER COST TOTAL	**$24,966,000**
TOTAL PROJECT CONSTRUCTION COST	**$77,334,000**

Milton CMP Implementation Evaluation Criteria Proposal
Prepared by MetroPlan in cooperation with Mountain Line
May-20

NOTE: All Agency Funding Sources Max Available limits are hypothetical with the exception of Mountain Line.

		Alternative: No Build			Alternative: No Build Plus			Alternative 5 - 6GP			Alternative 6a - 6GP, bbtl			Alternative 6b - 4GP, bbtl			Alternative 13 - 4GP, CRL		
Funding Source	**Max Available**	Size (mills)	Odds	Raw S*O	Size **	Odds	Raw	Size	Odds	Raw	Size	Odds	Raw	Size	Odds	Raw	Size	Odds	Raw
[redacted]																			
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

		Alternative: No Build			Alternative: No Build Plus			Alternative 5 - 6GP			Alternative 6a - 6GP, bbtl			Alternative 6b - 4GP, bbtl			Alternative 13 - 4GP, CRL		
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
Normalized (highest = 100)				**100.0**			**33.4**			**4.1**			**10.4**			**11.9**			**15.4**
BRT costs* (if Baker has better breakdown, please provide)							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
Match Test																			
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 N(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 eligiblity. 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 eligble 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

	VMT	lbs CO2e
No Build	42,545	22,305
No Build Plus	41,396	21,703
Altenative 5	42,683	22,377
Alternative 6A	43,349	22,726
Alternative 6B	42,469	22,265
Alternative 13	43,855	22,992

Emission Factors

	Percentage	lbs CO2e/mile (2040)
Standard US automobile	97%	0.519417434
Commercial semi truck	3%	0.681054574

Notes:

1. Emissions are presented in pounds (lbs) carbon dioxide equipvalent (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.

Appendix L – Tier 3 Conflict Points Analysis

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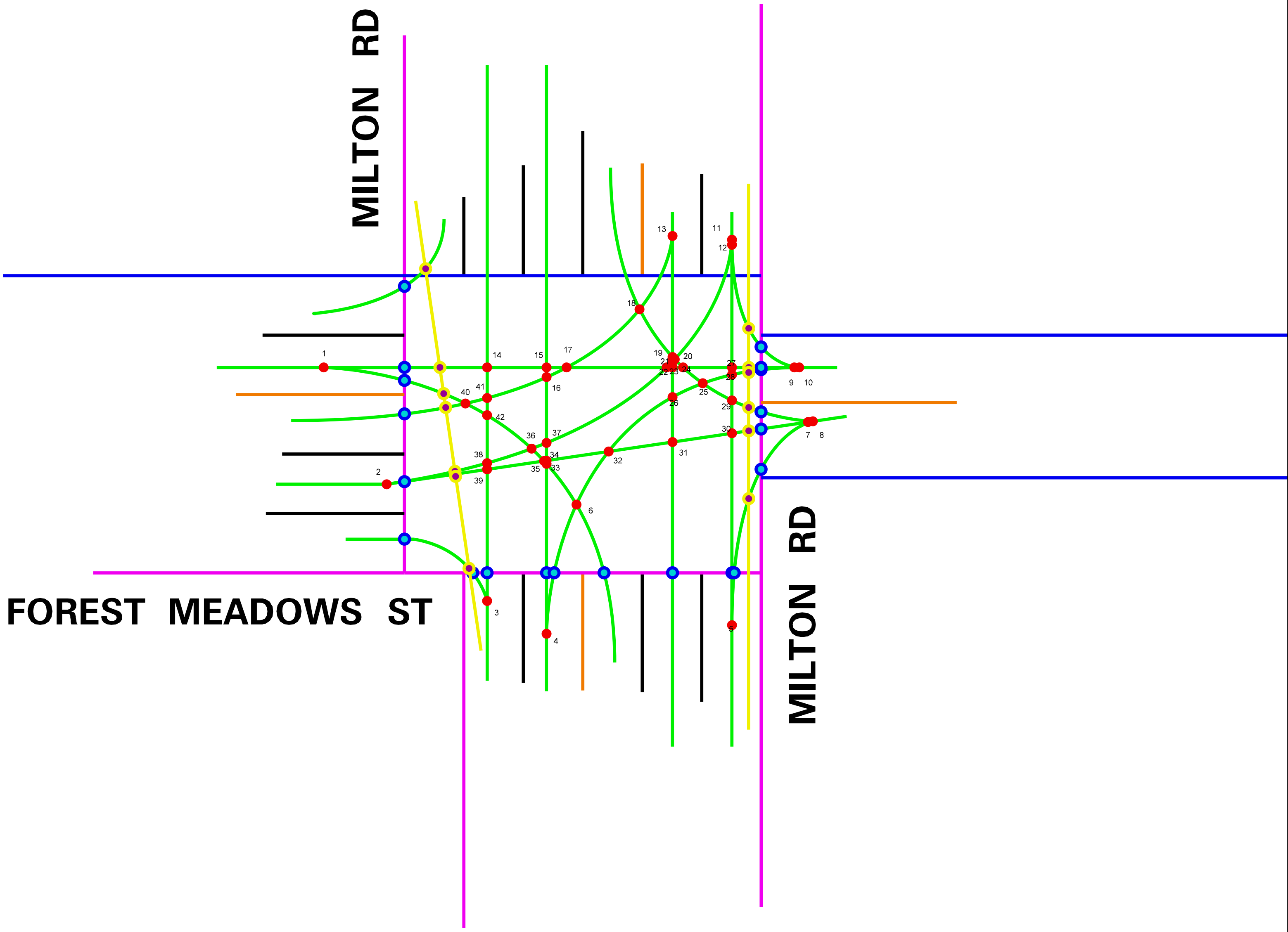

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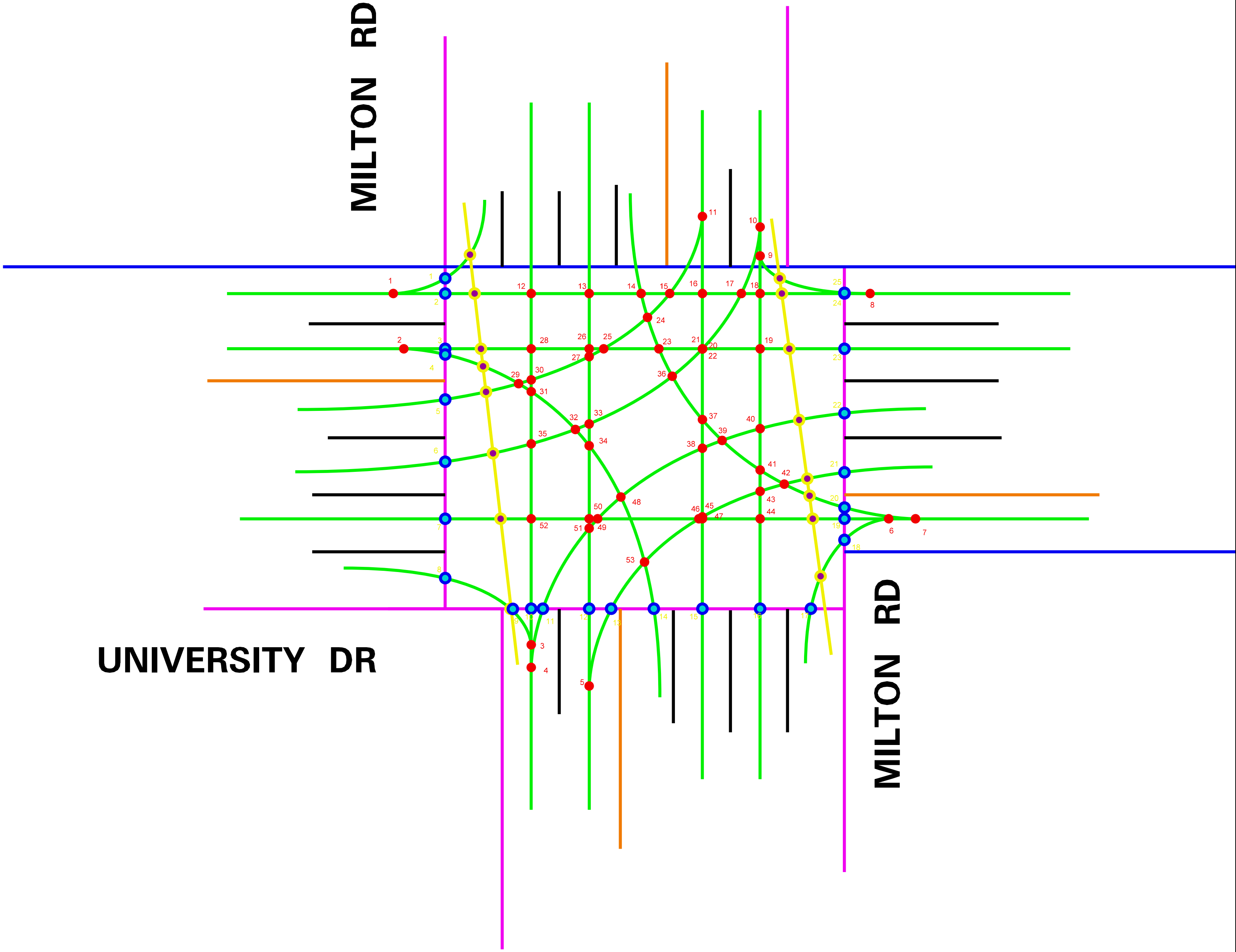
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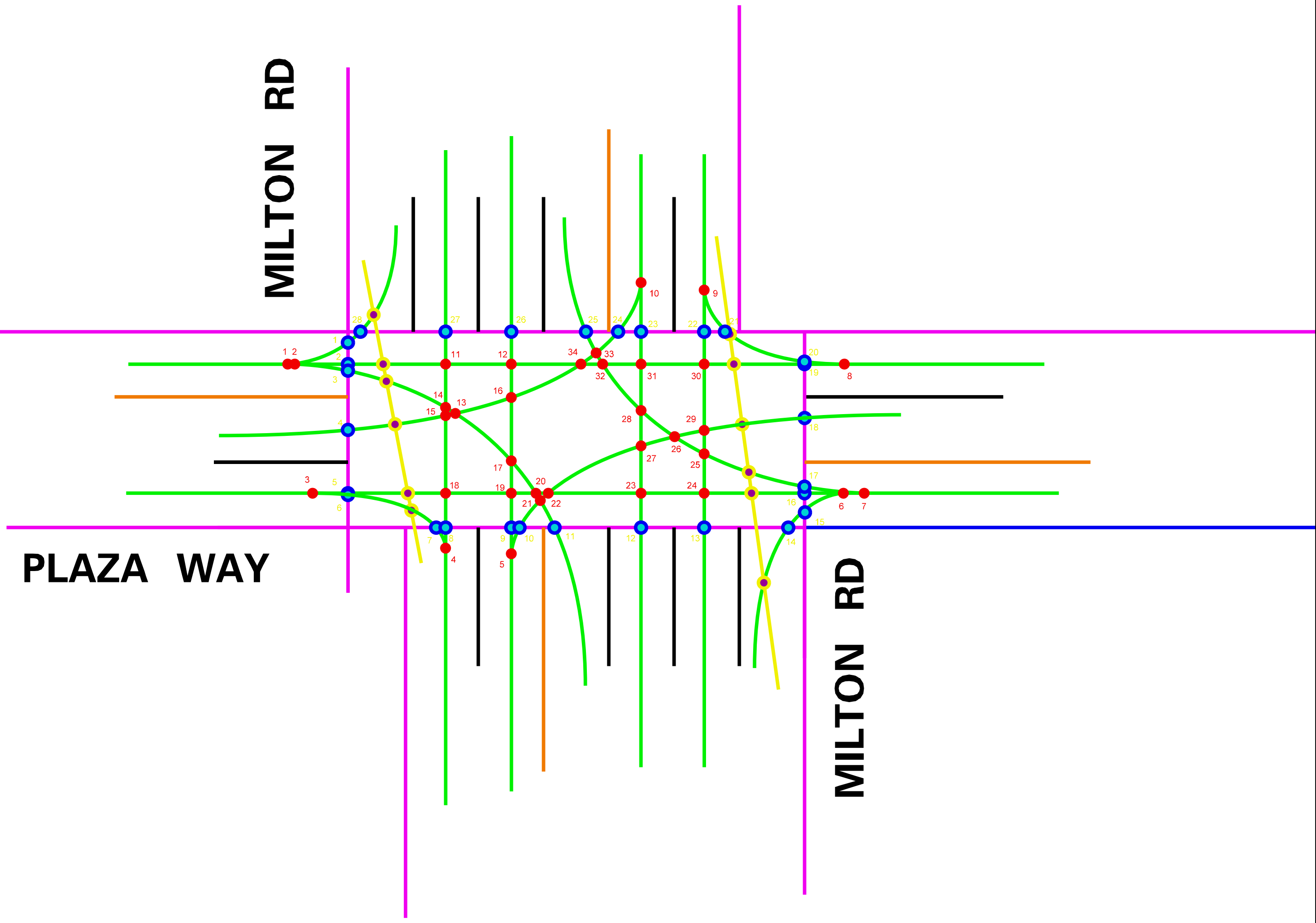

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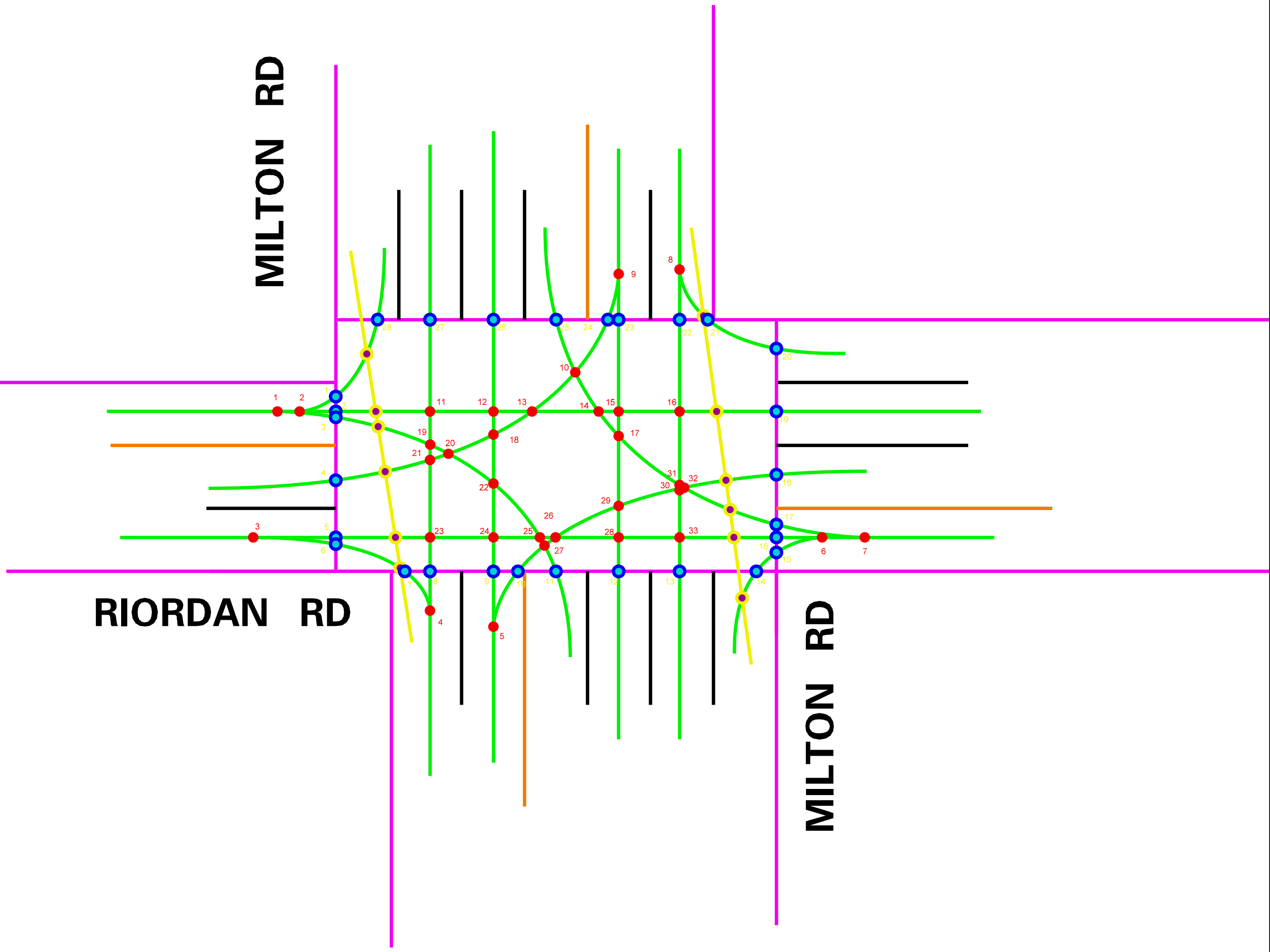
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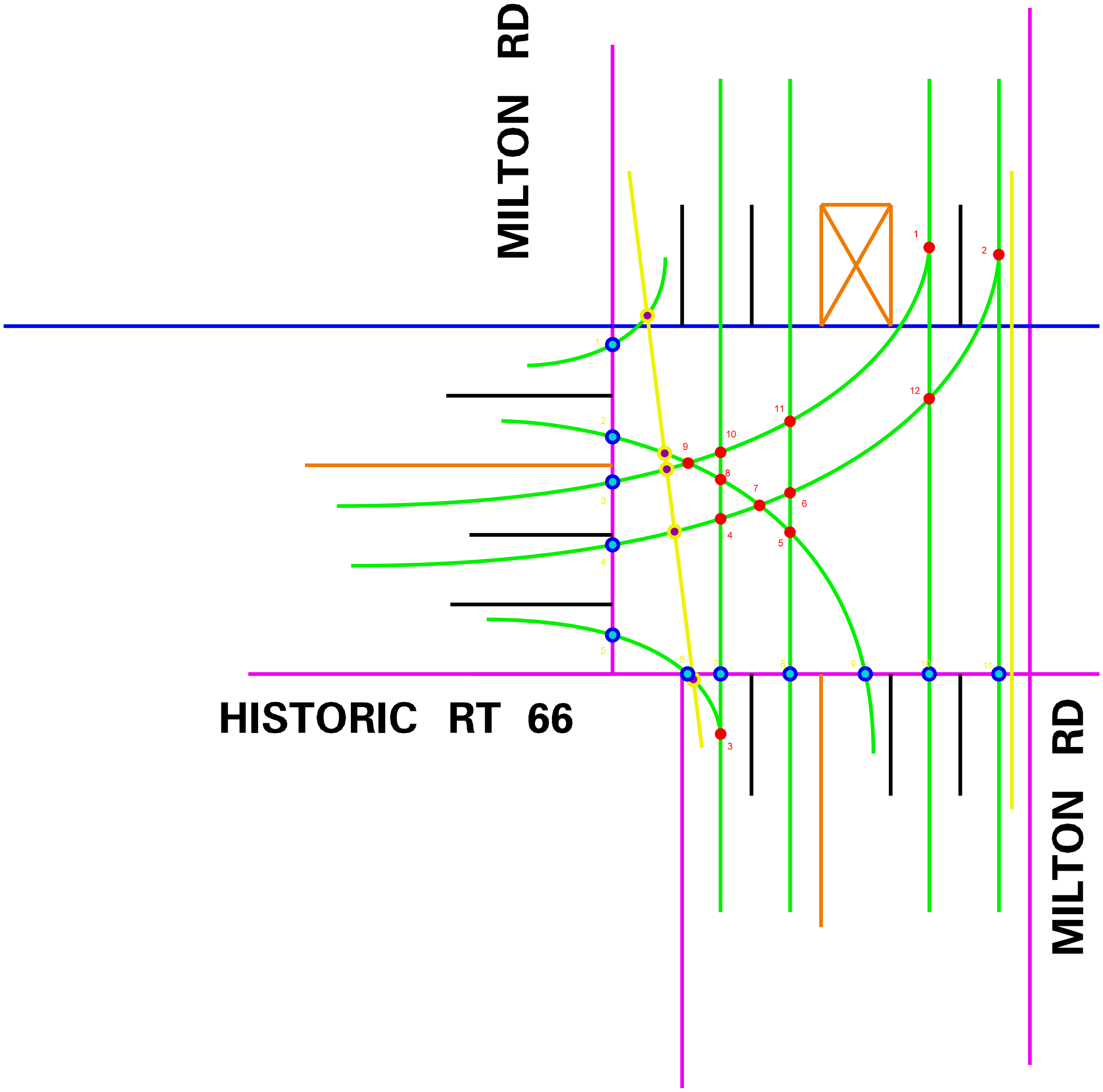

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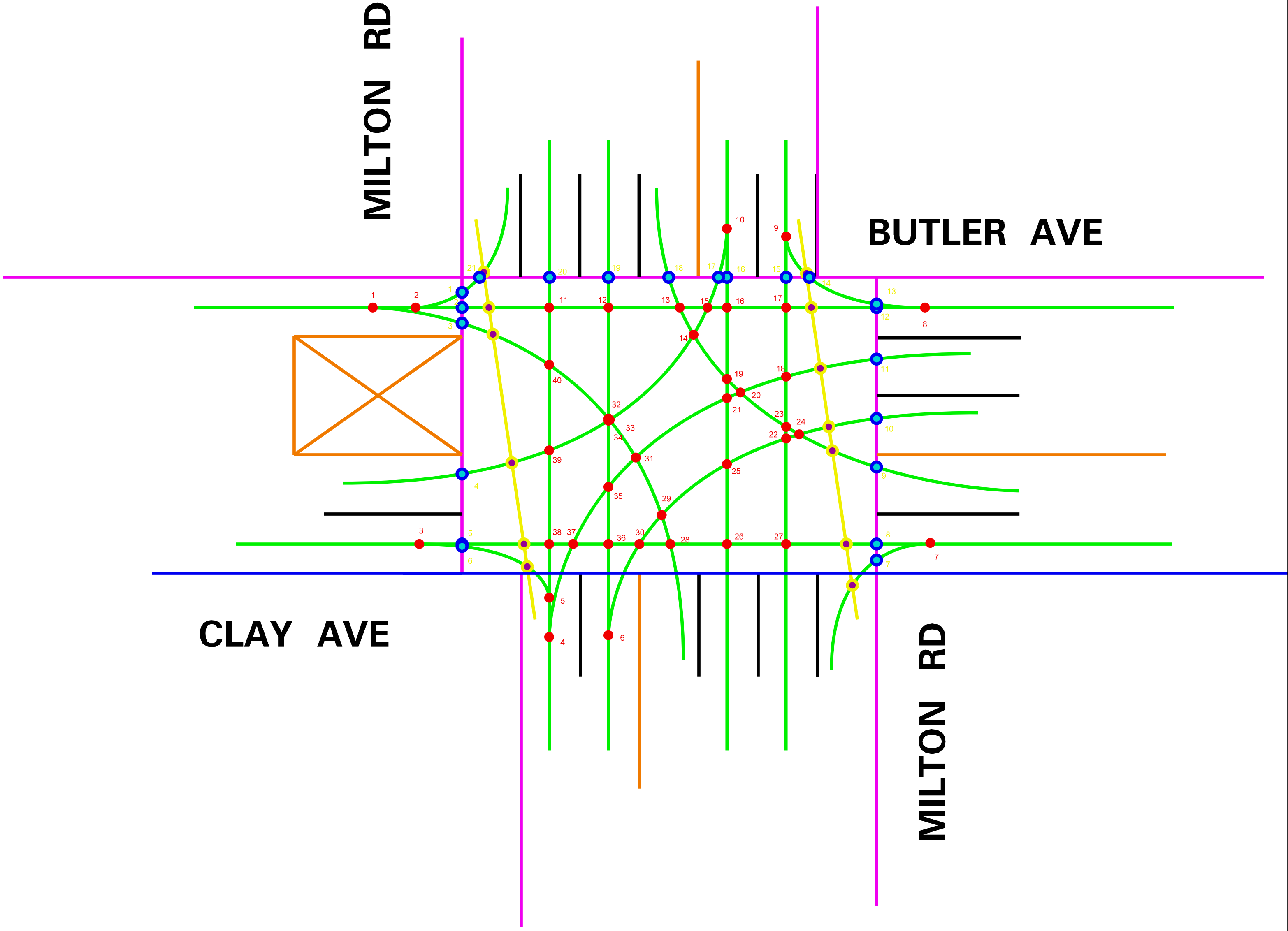
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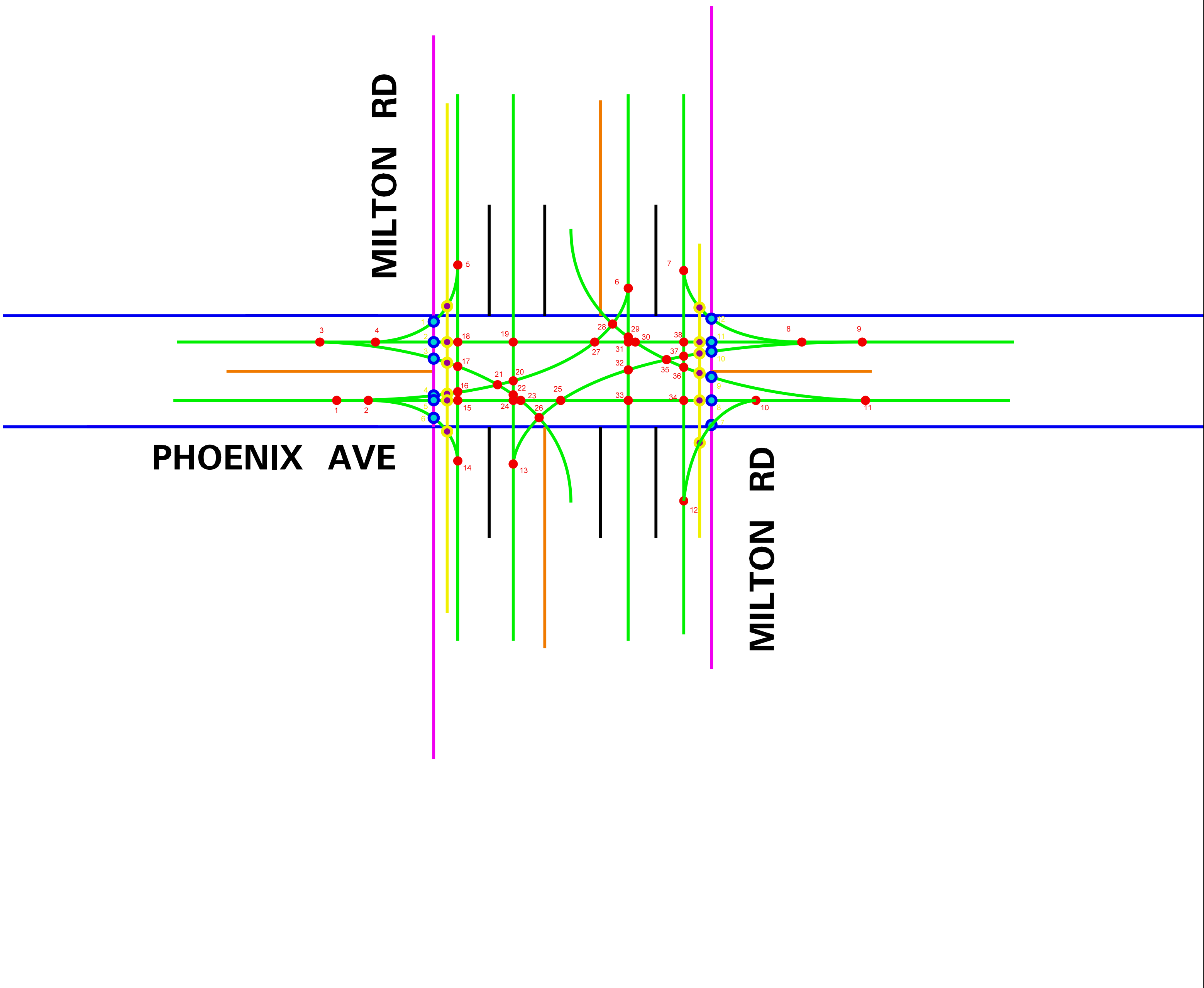
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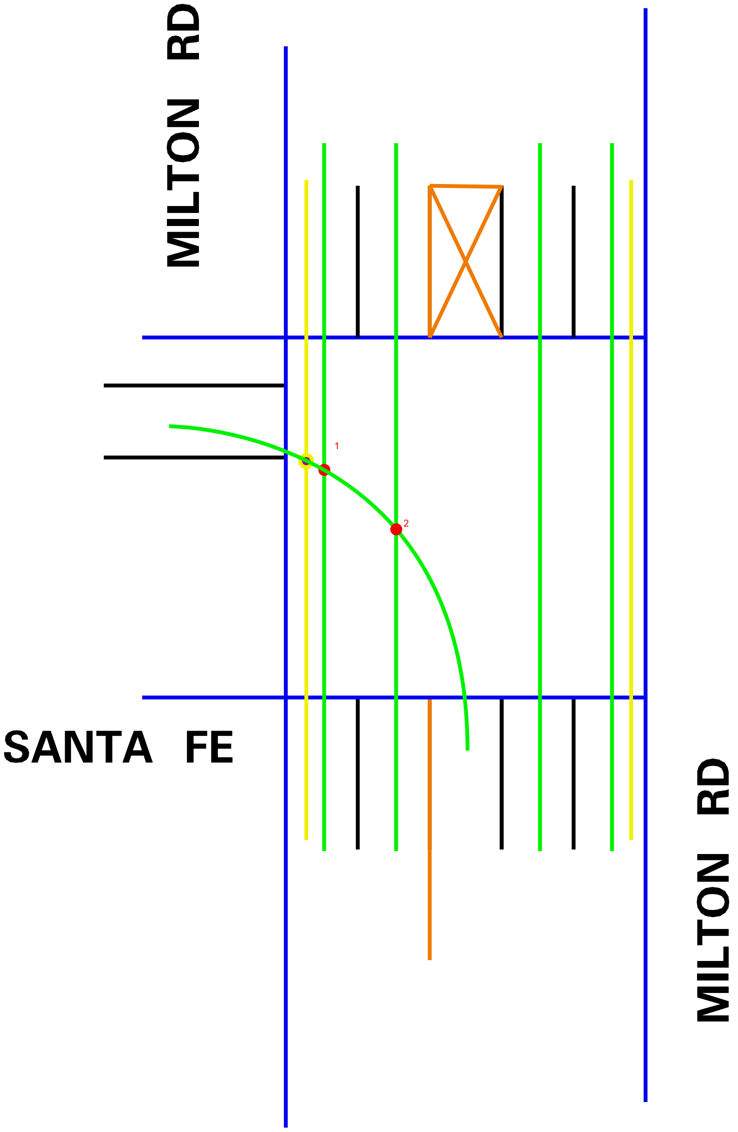

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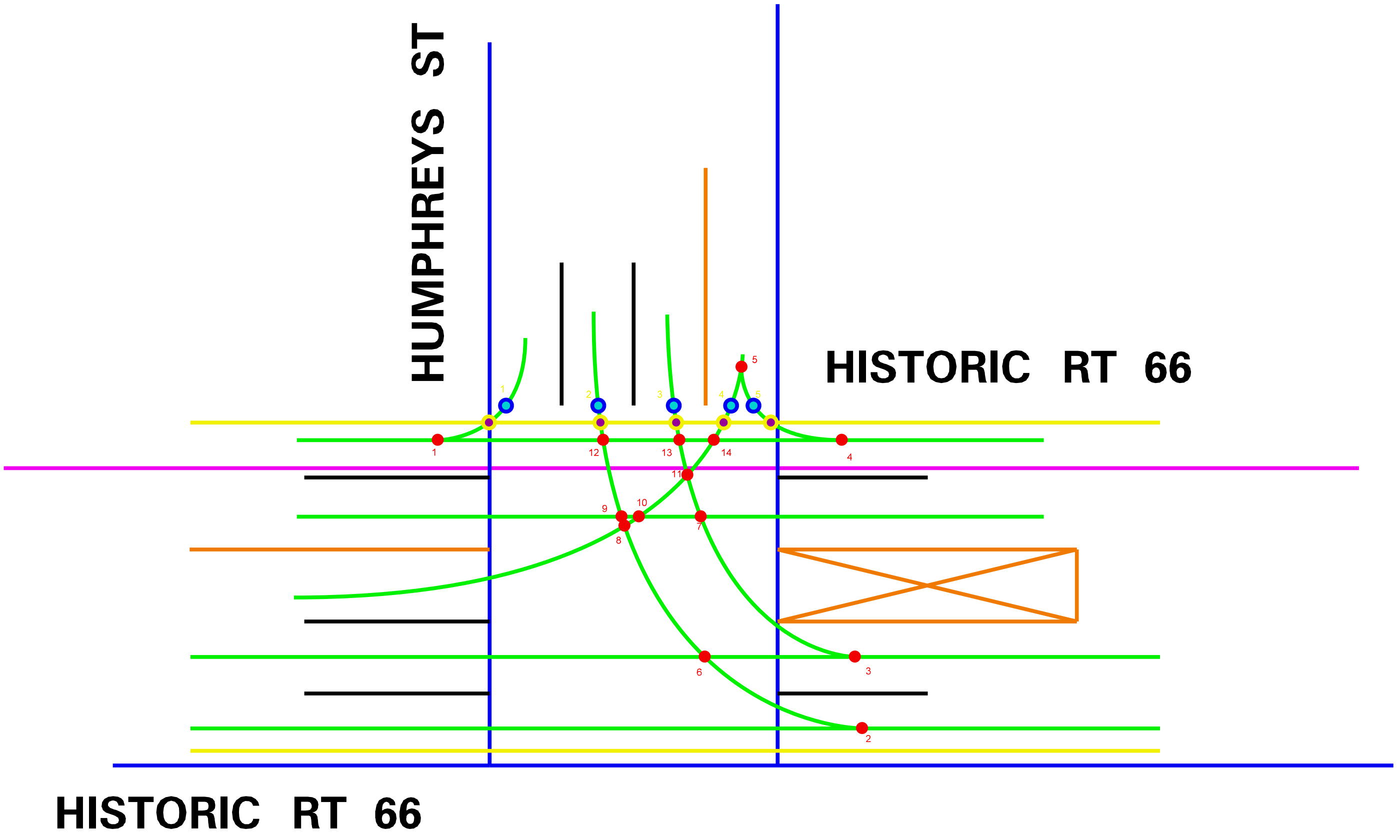
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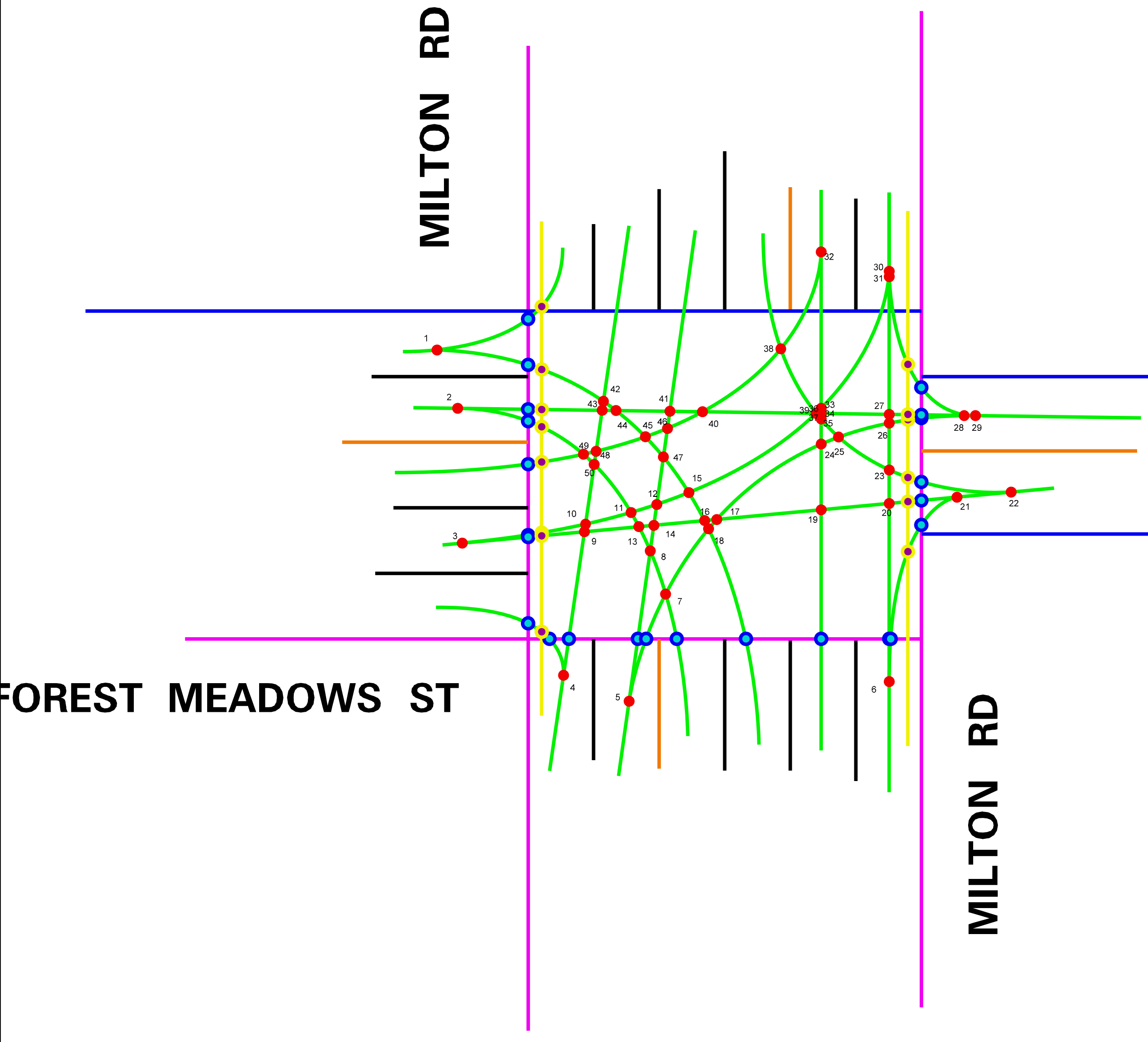
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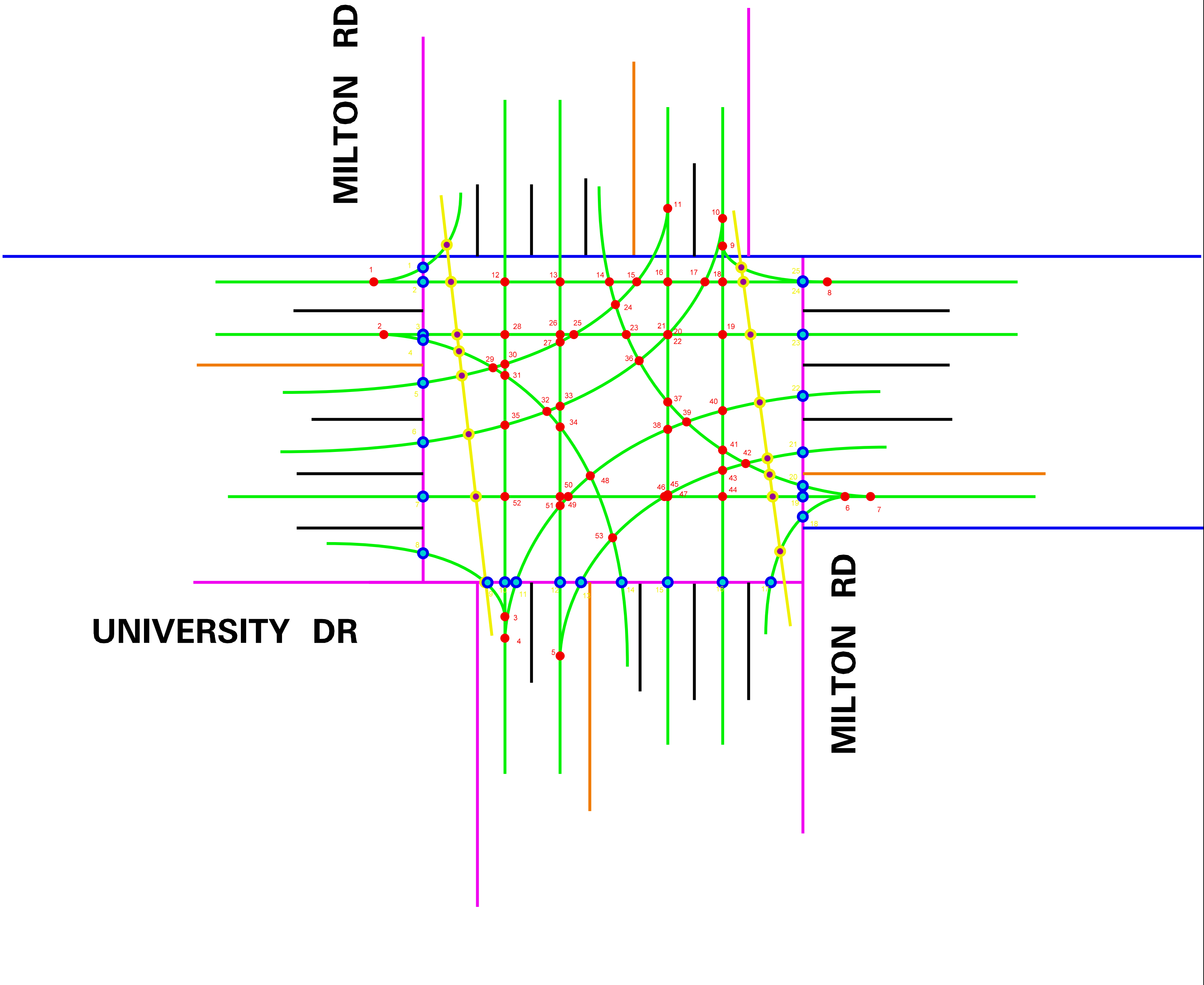

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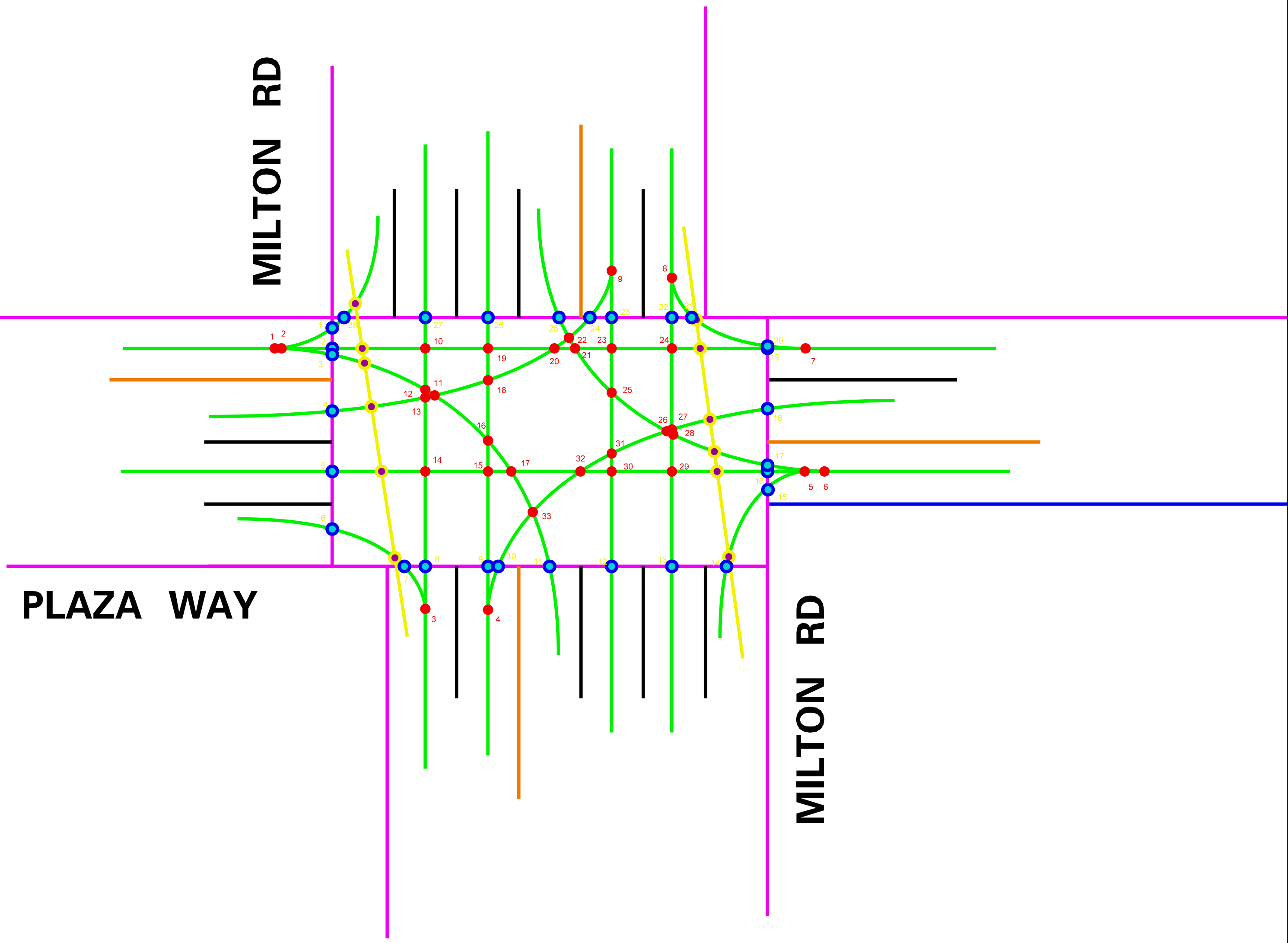

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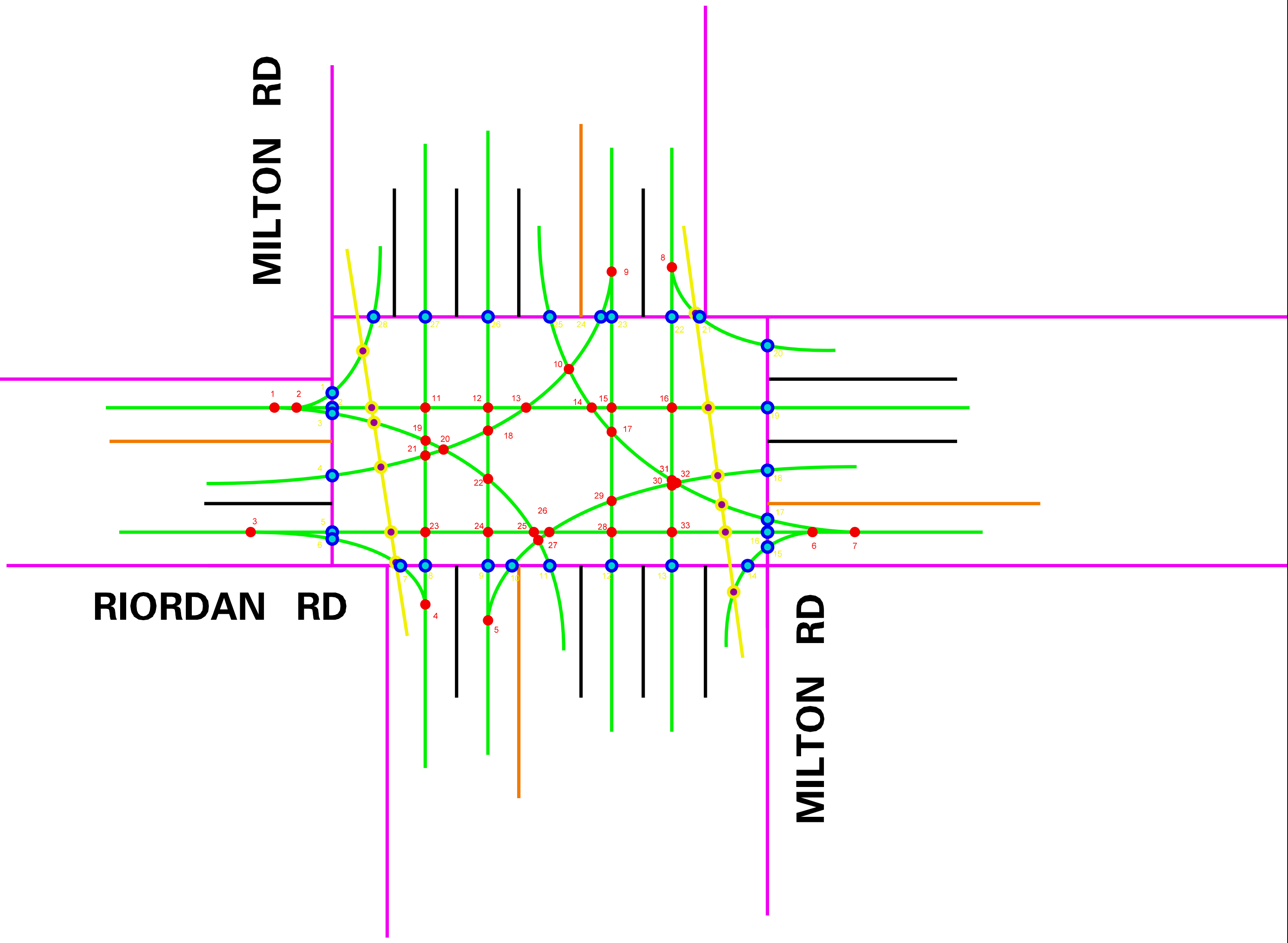

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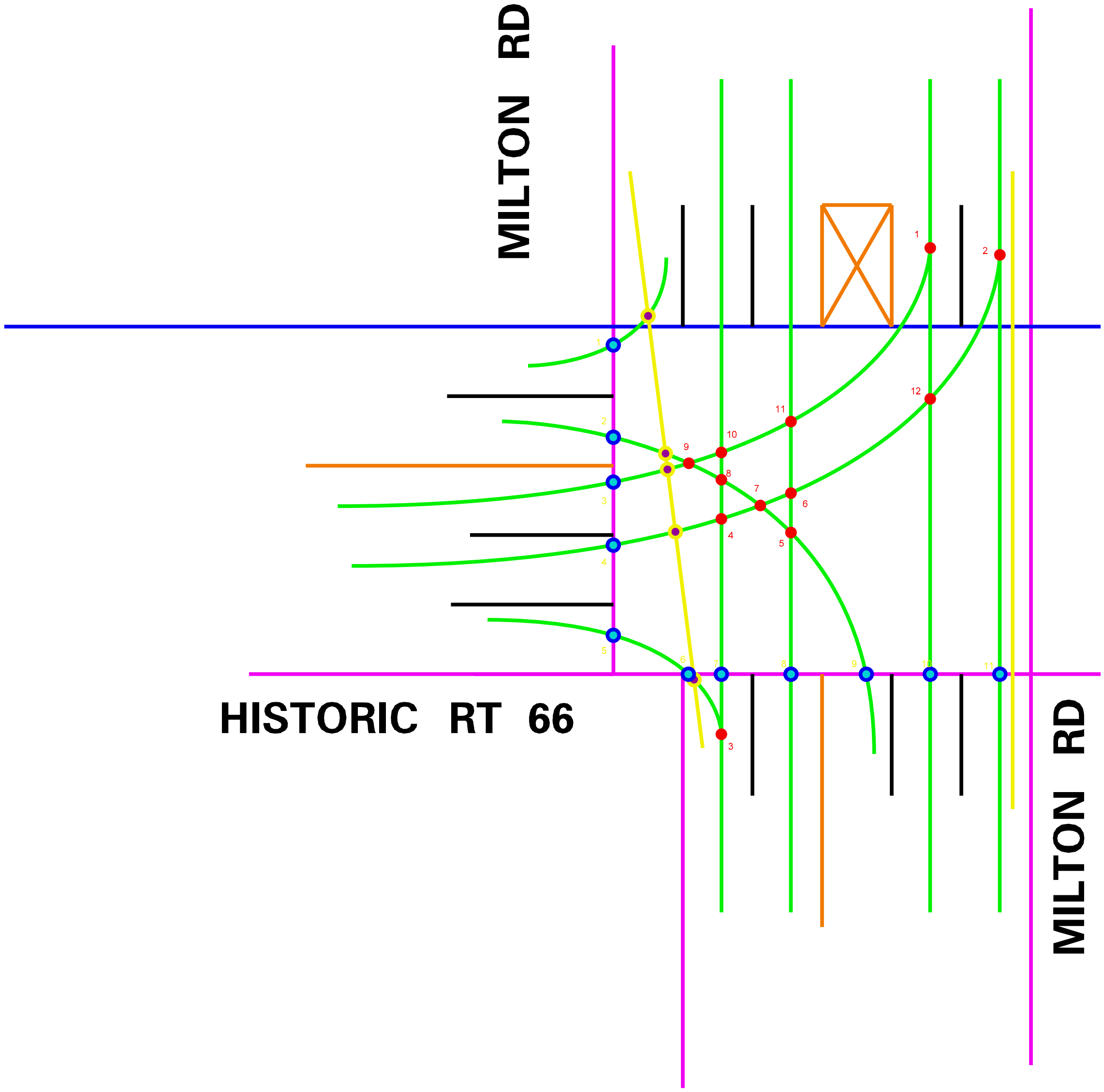
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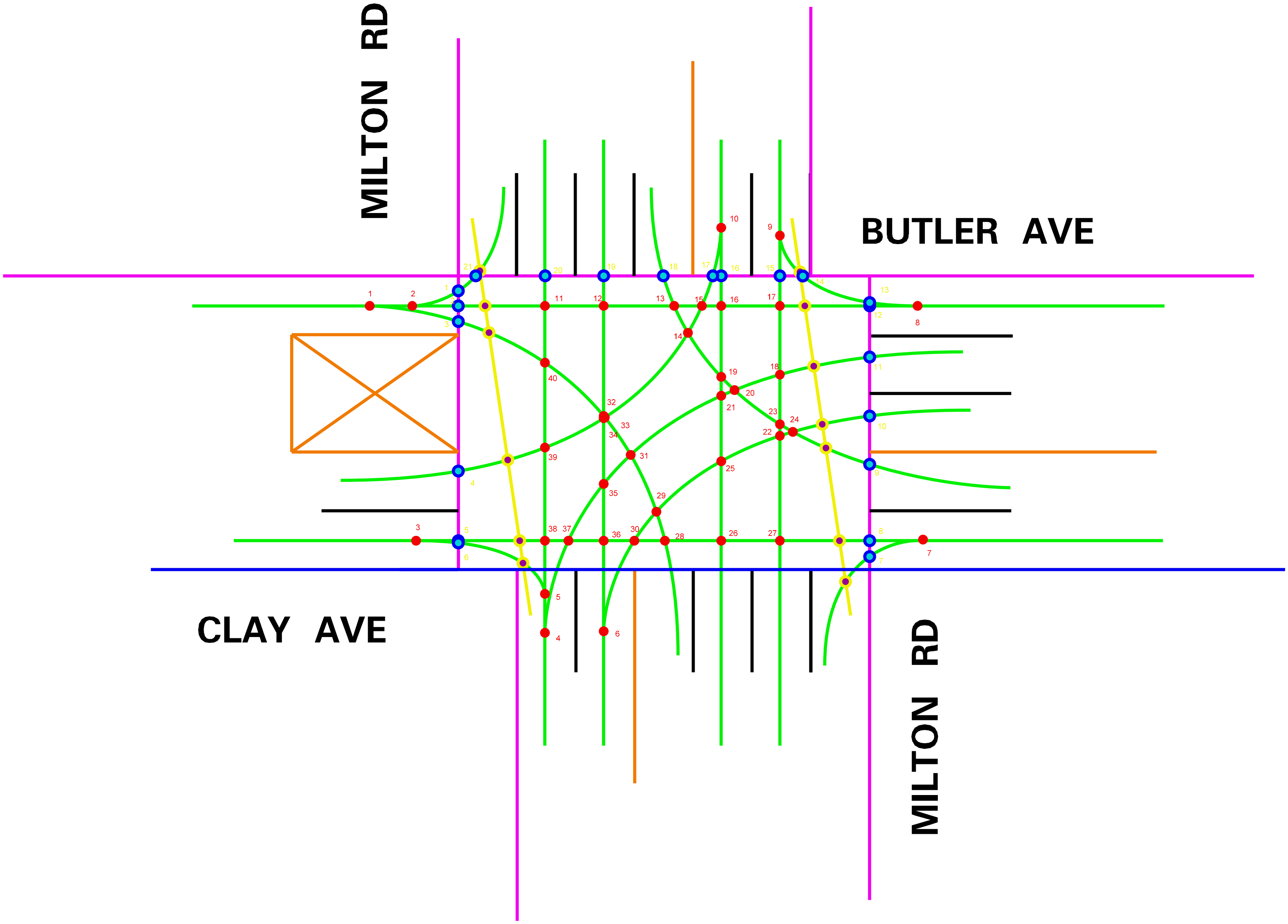
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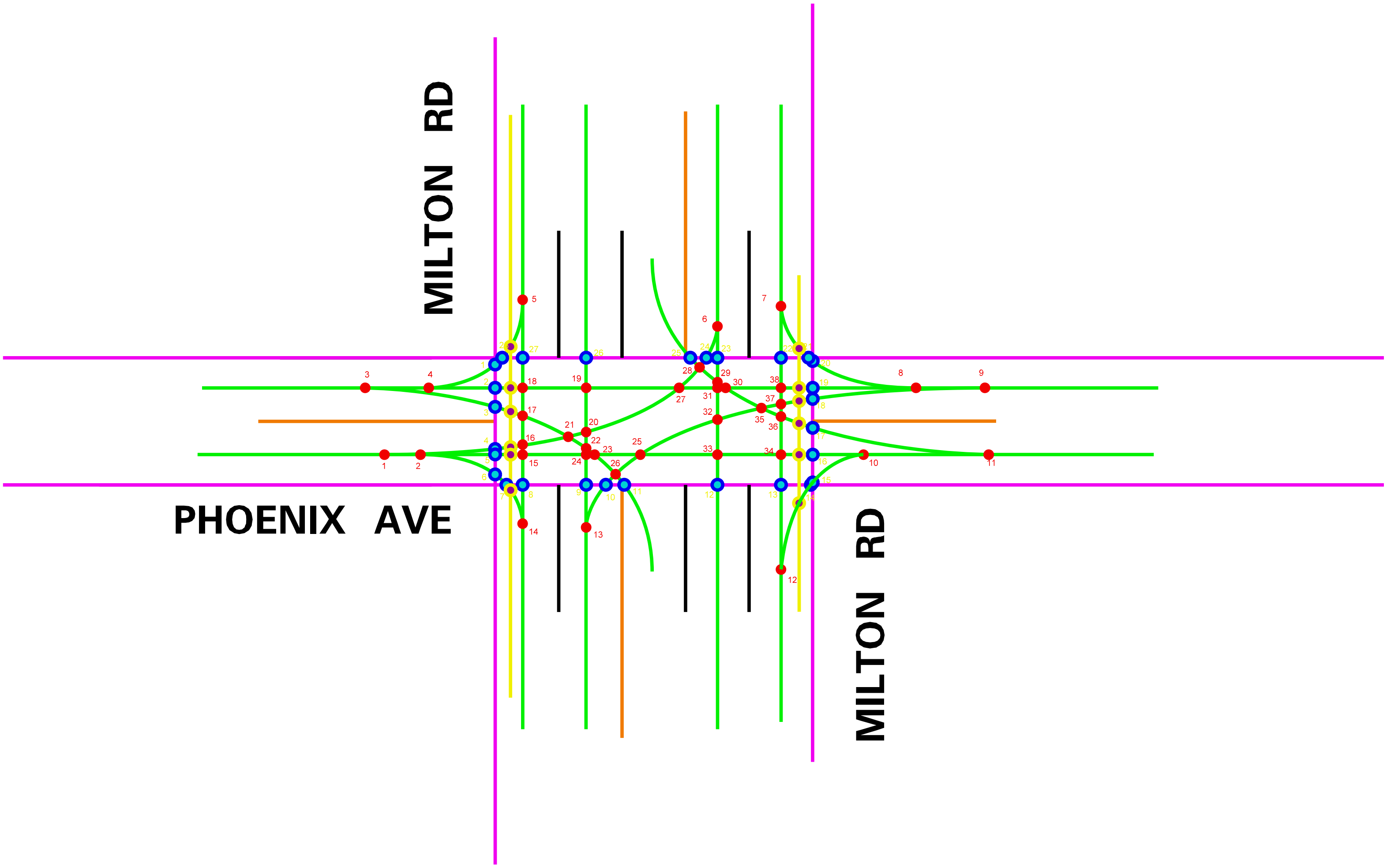
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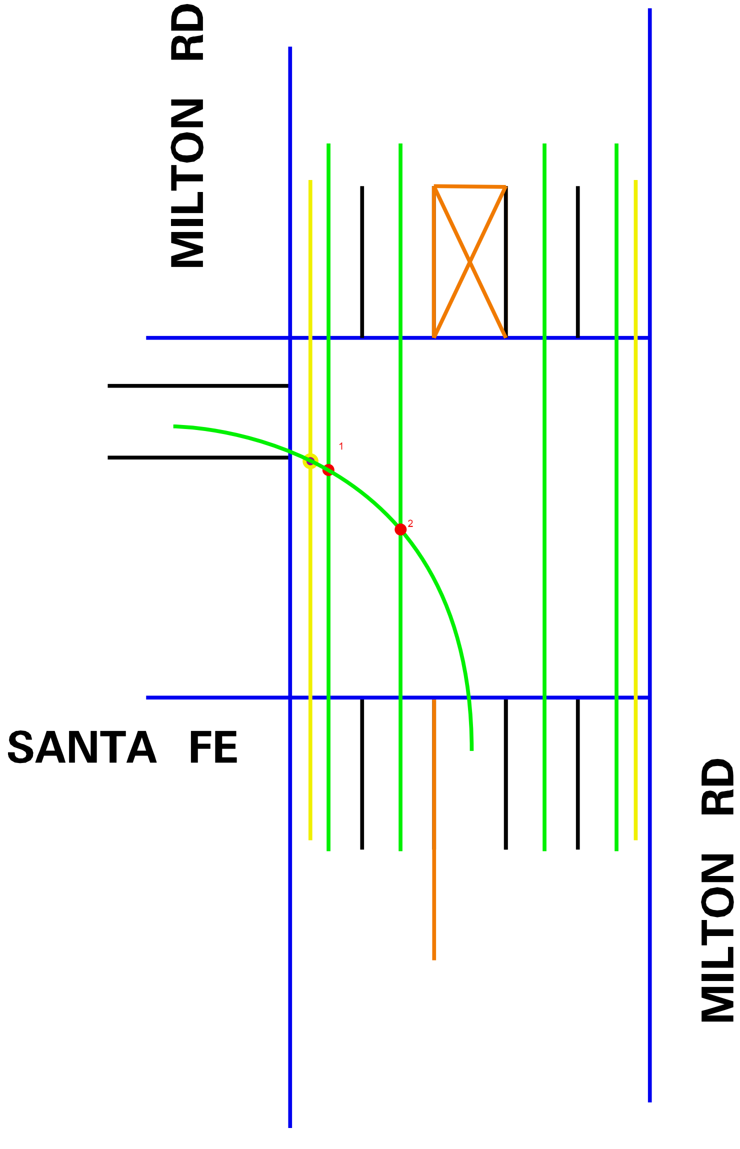

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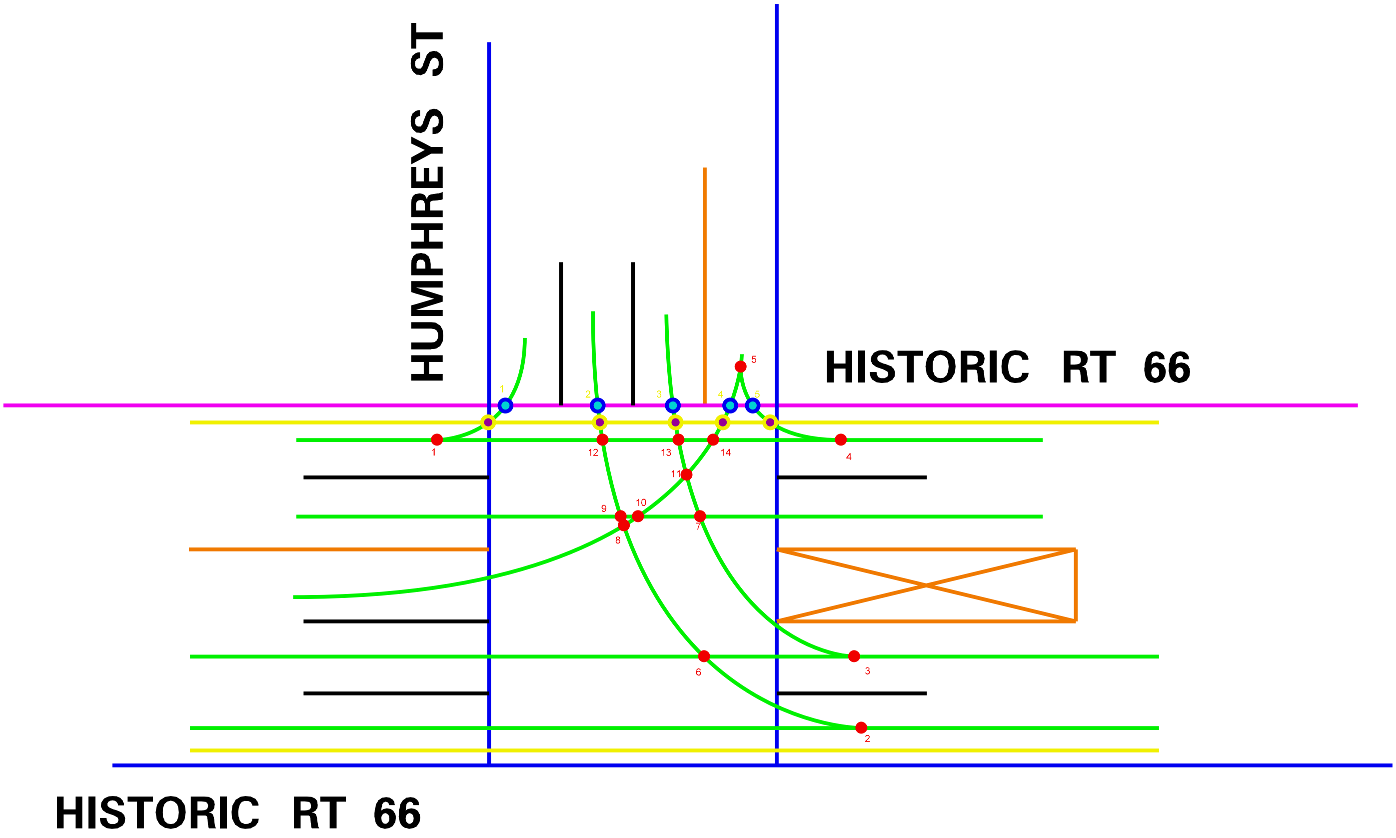
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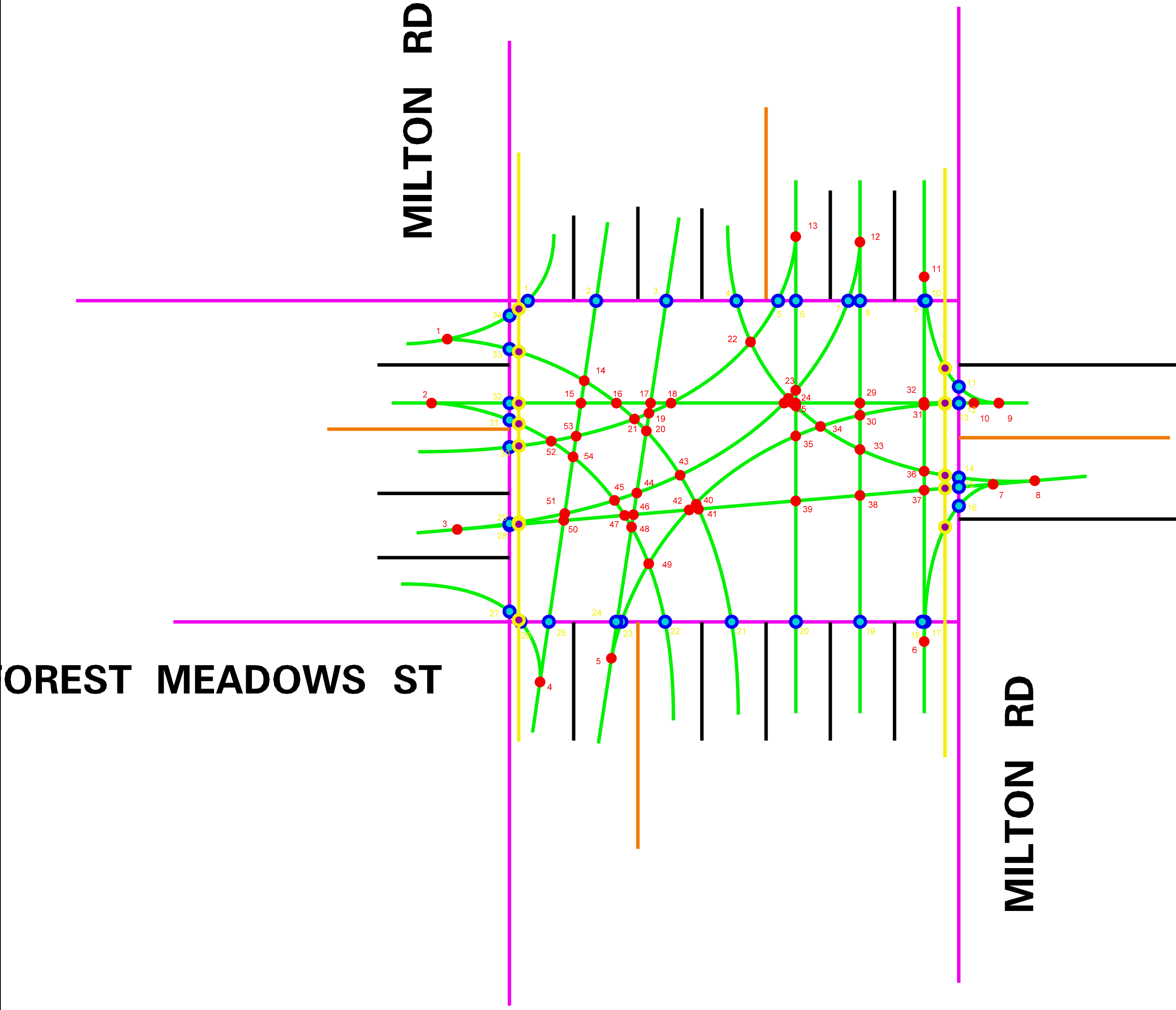

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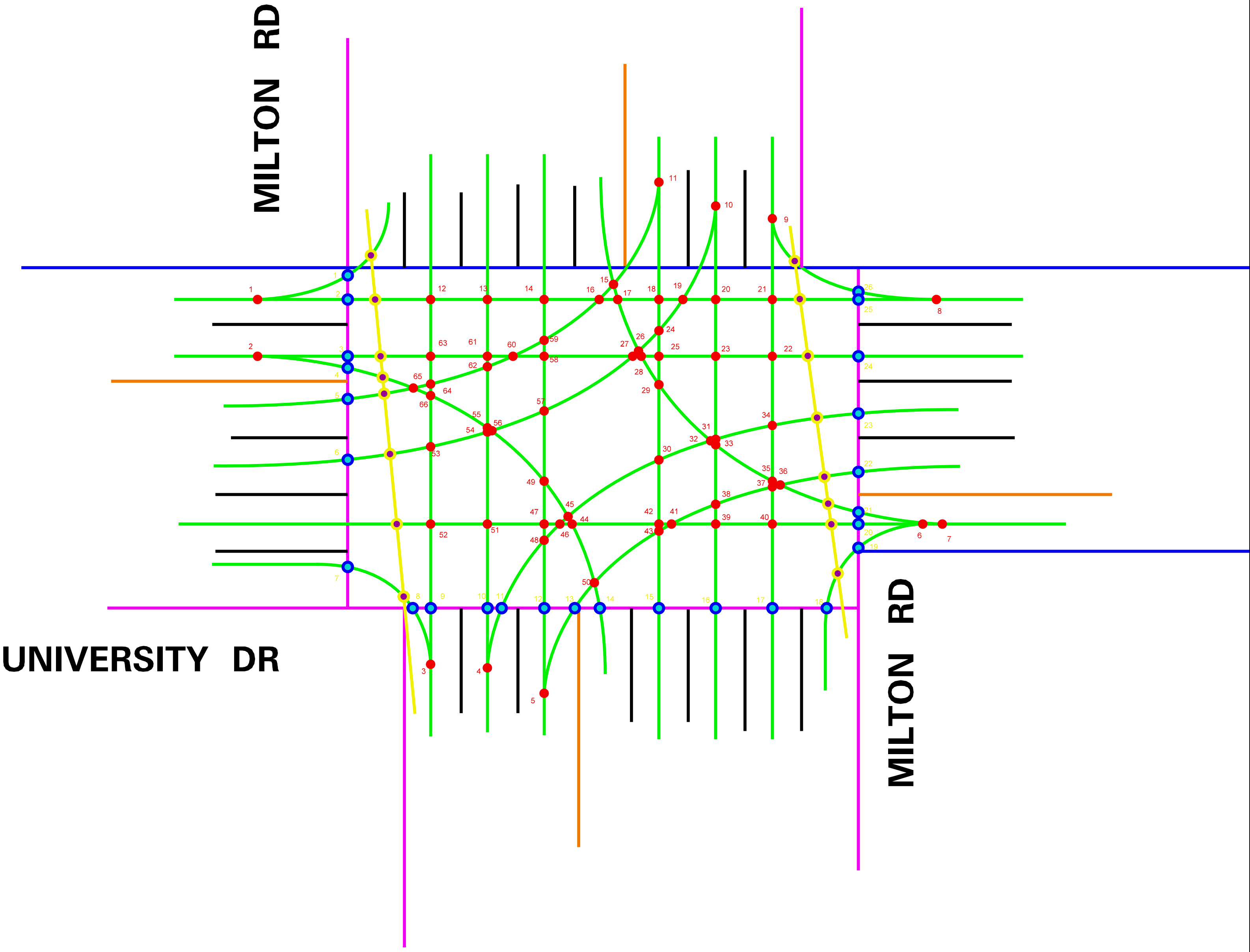

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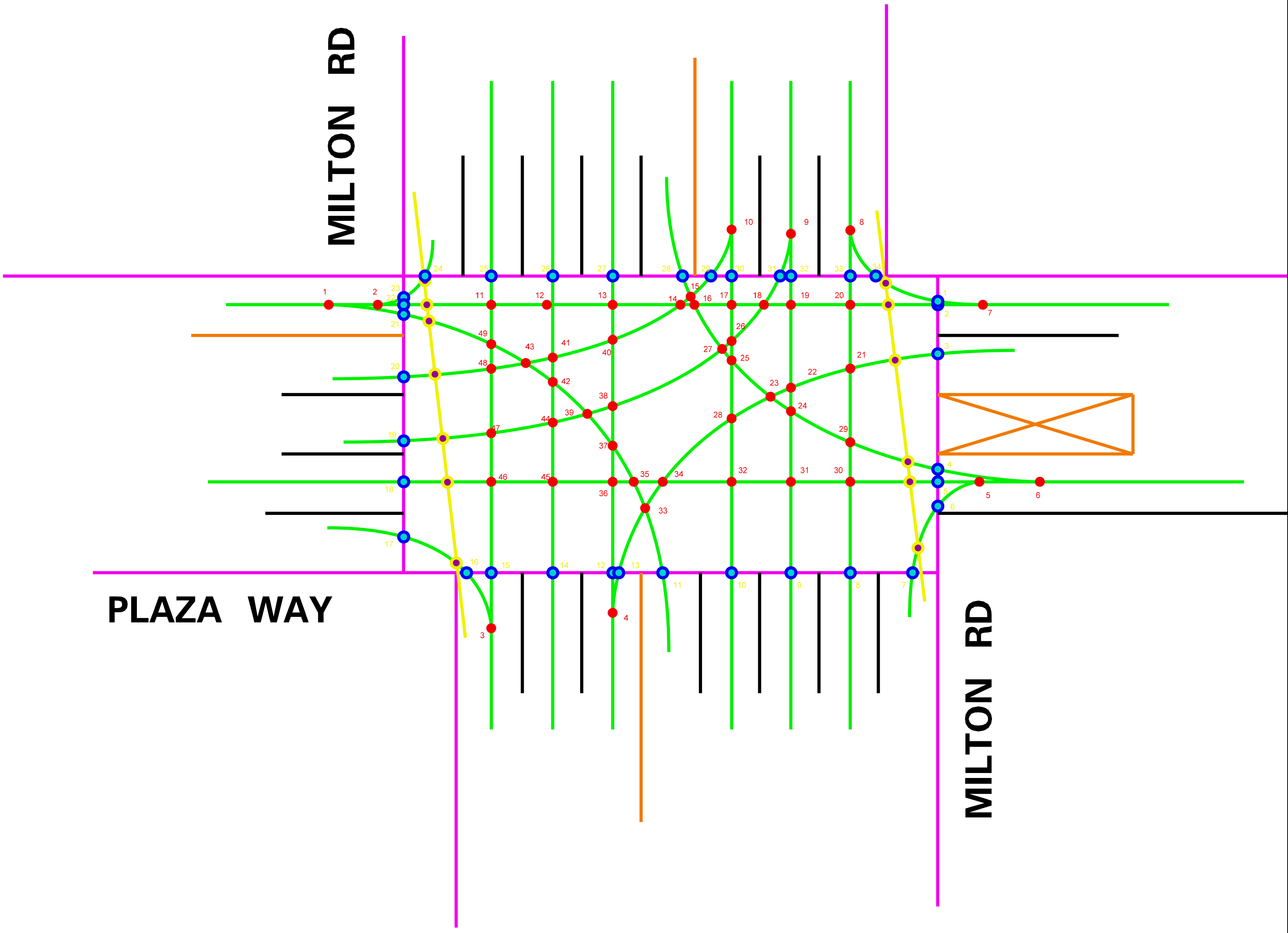

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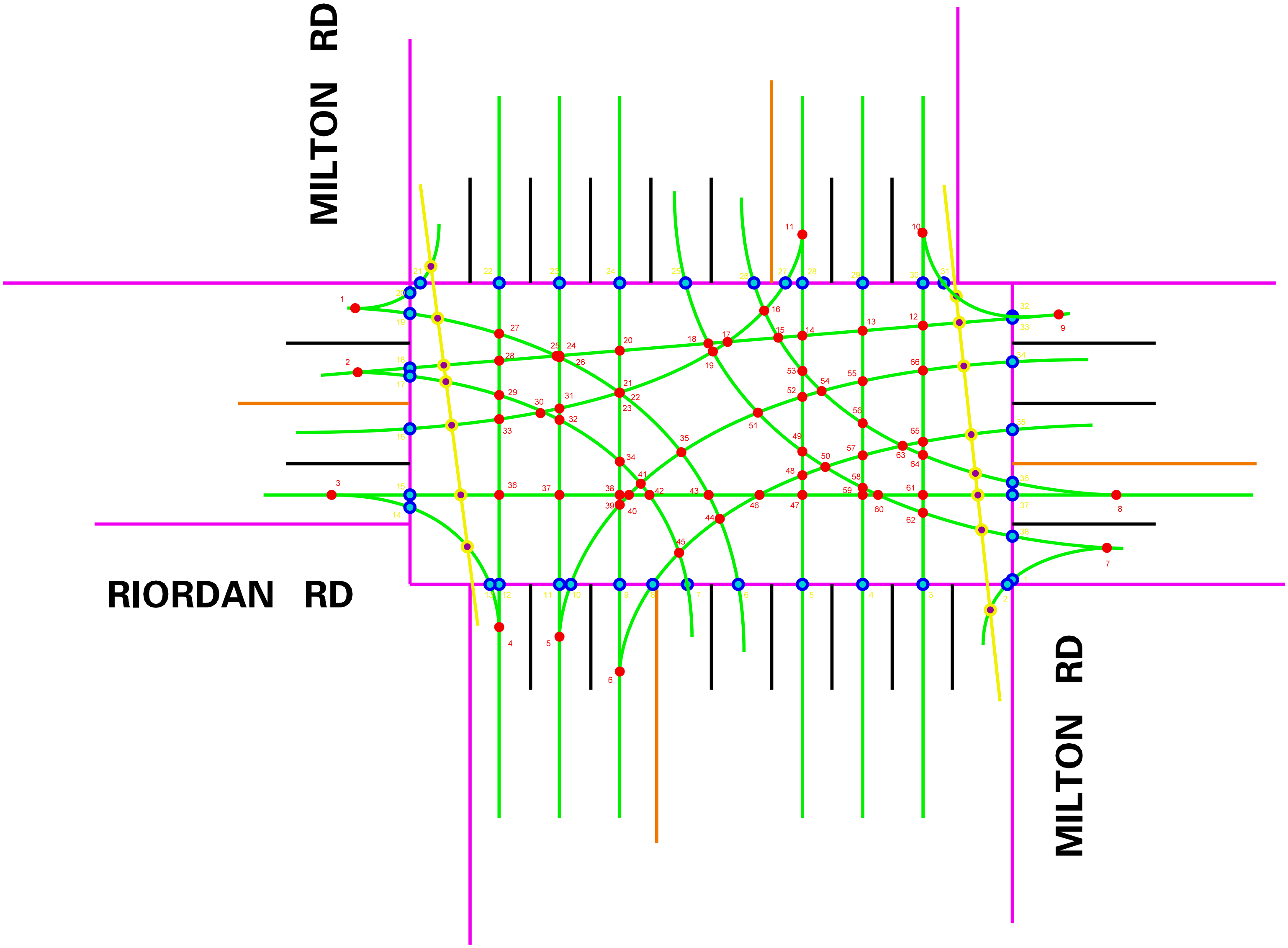

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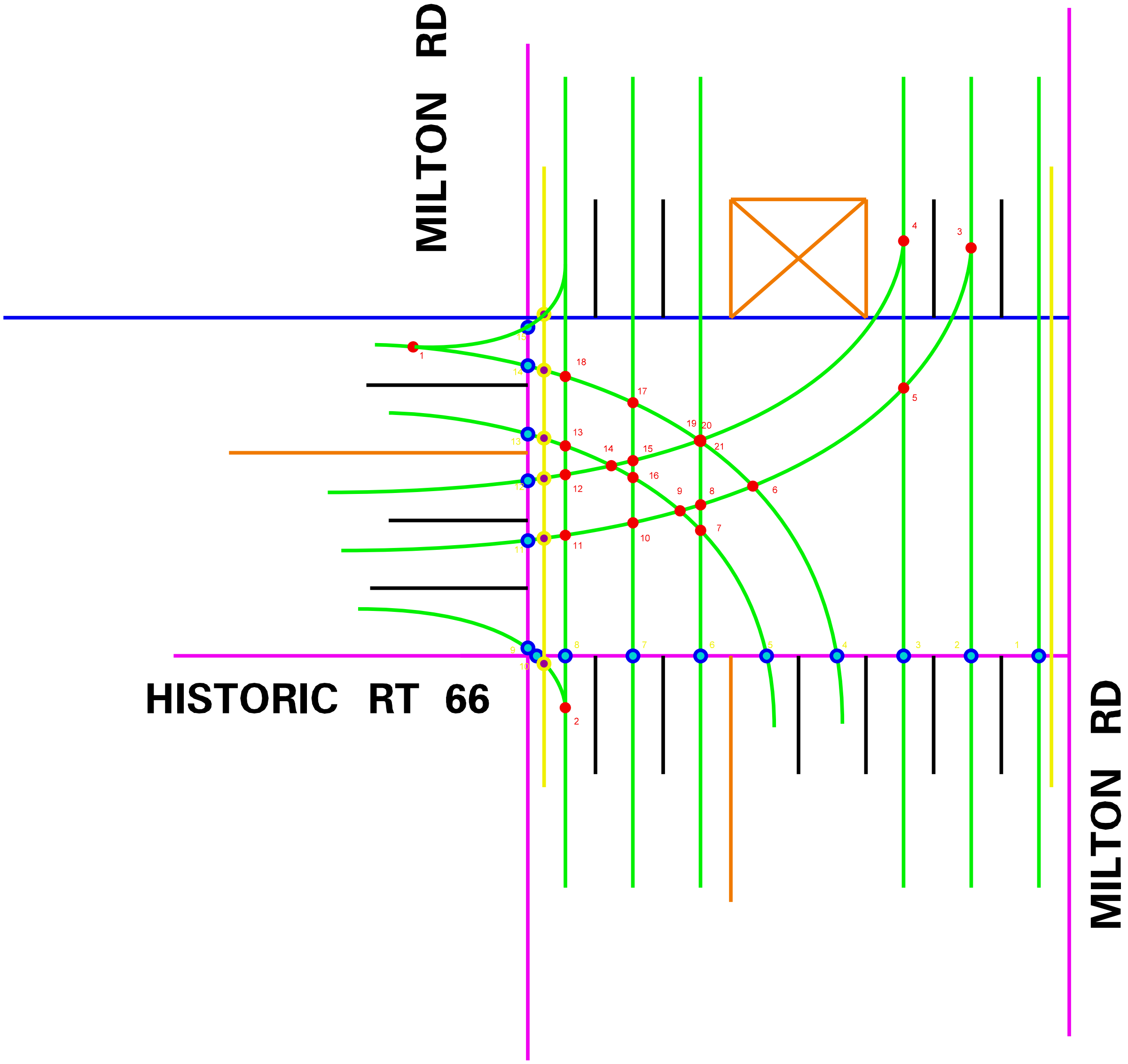

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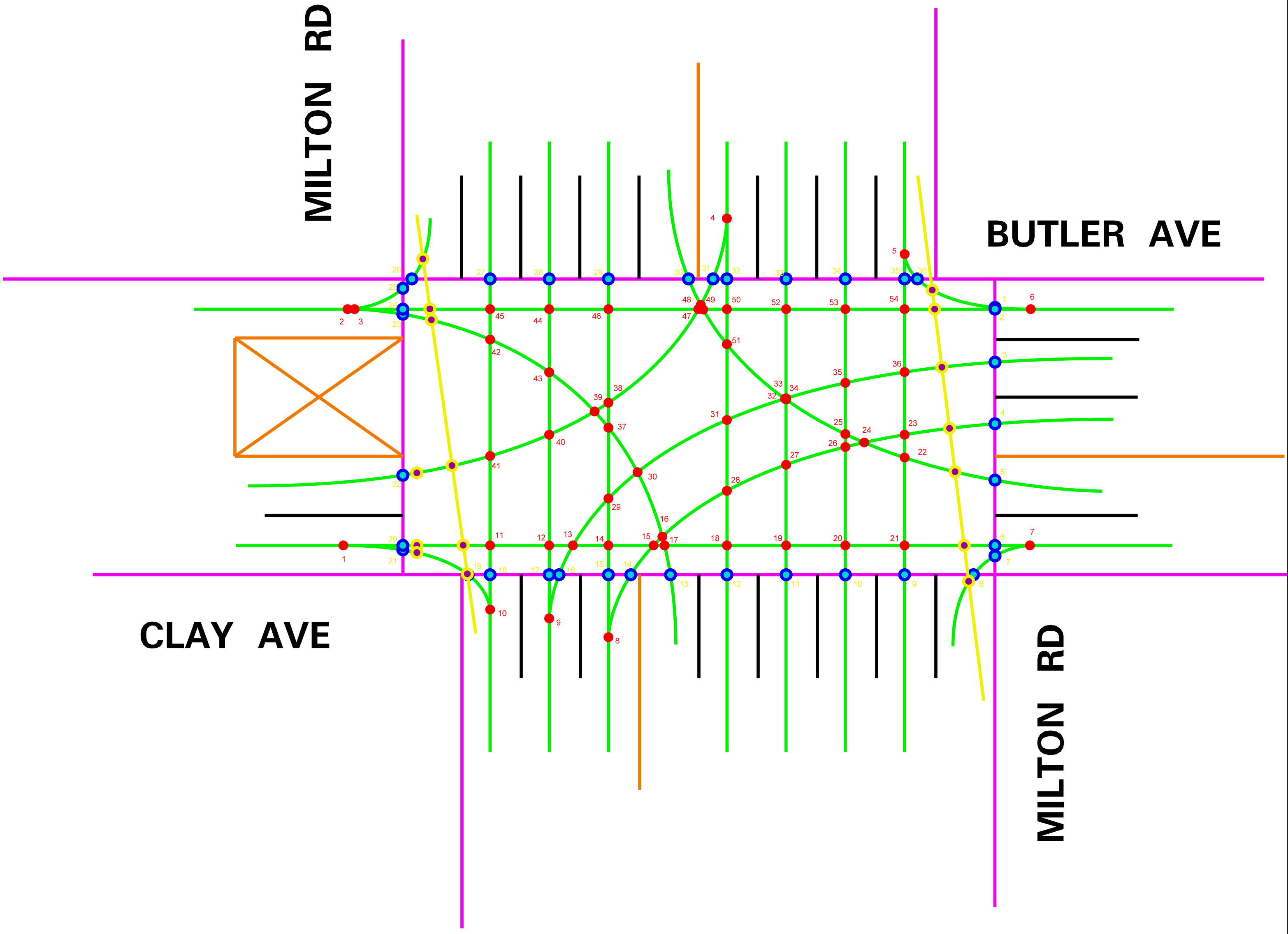

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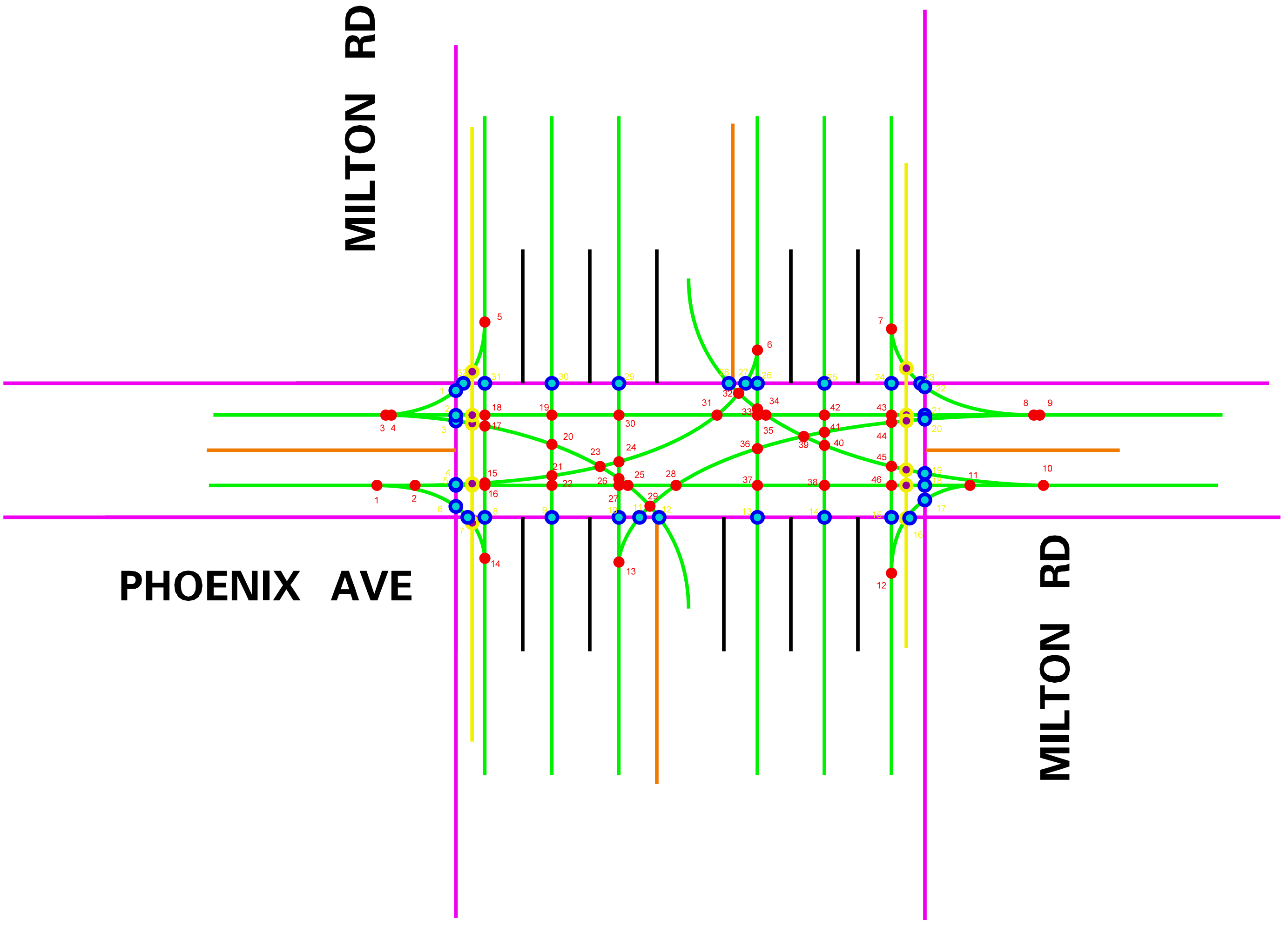

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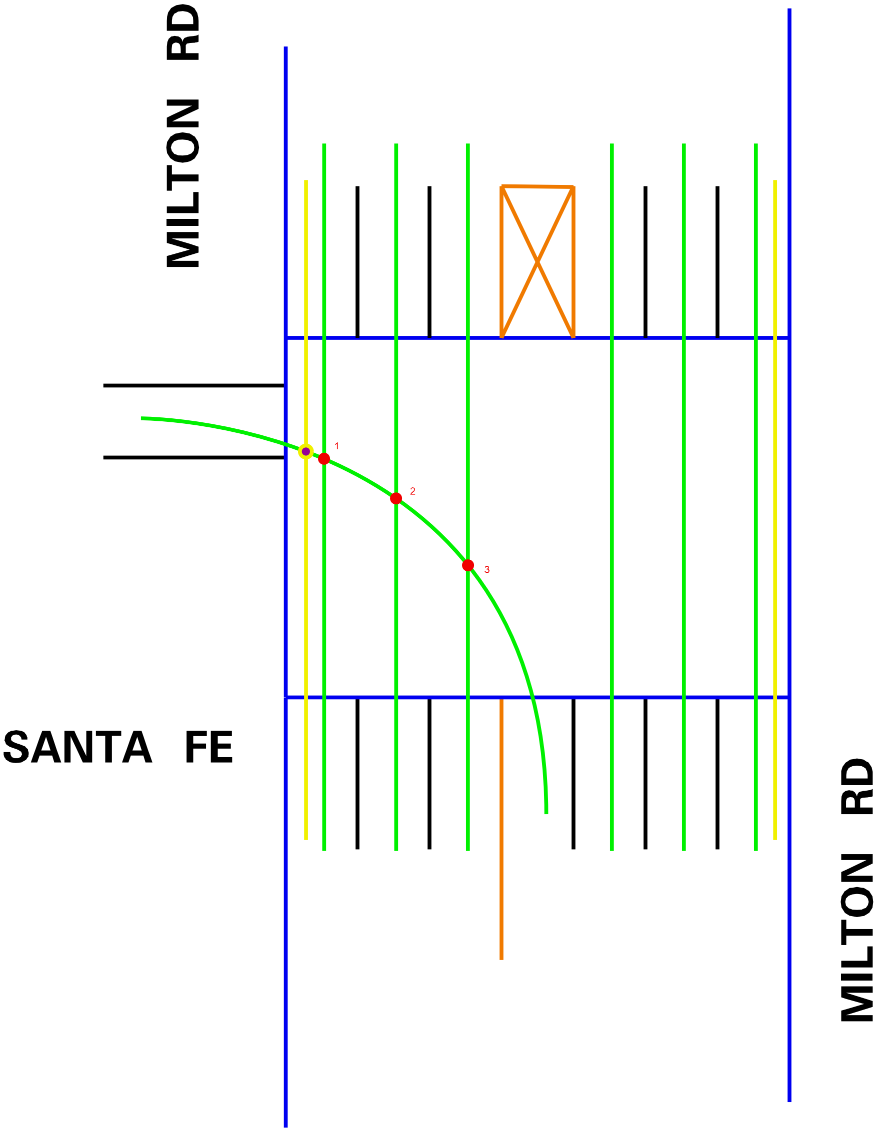

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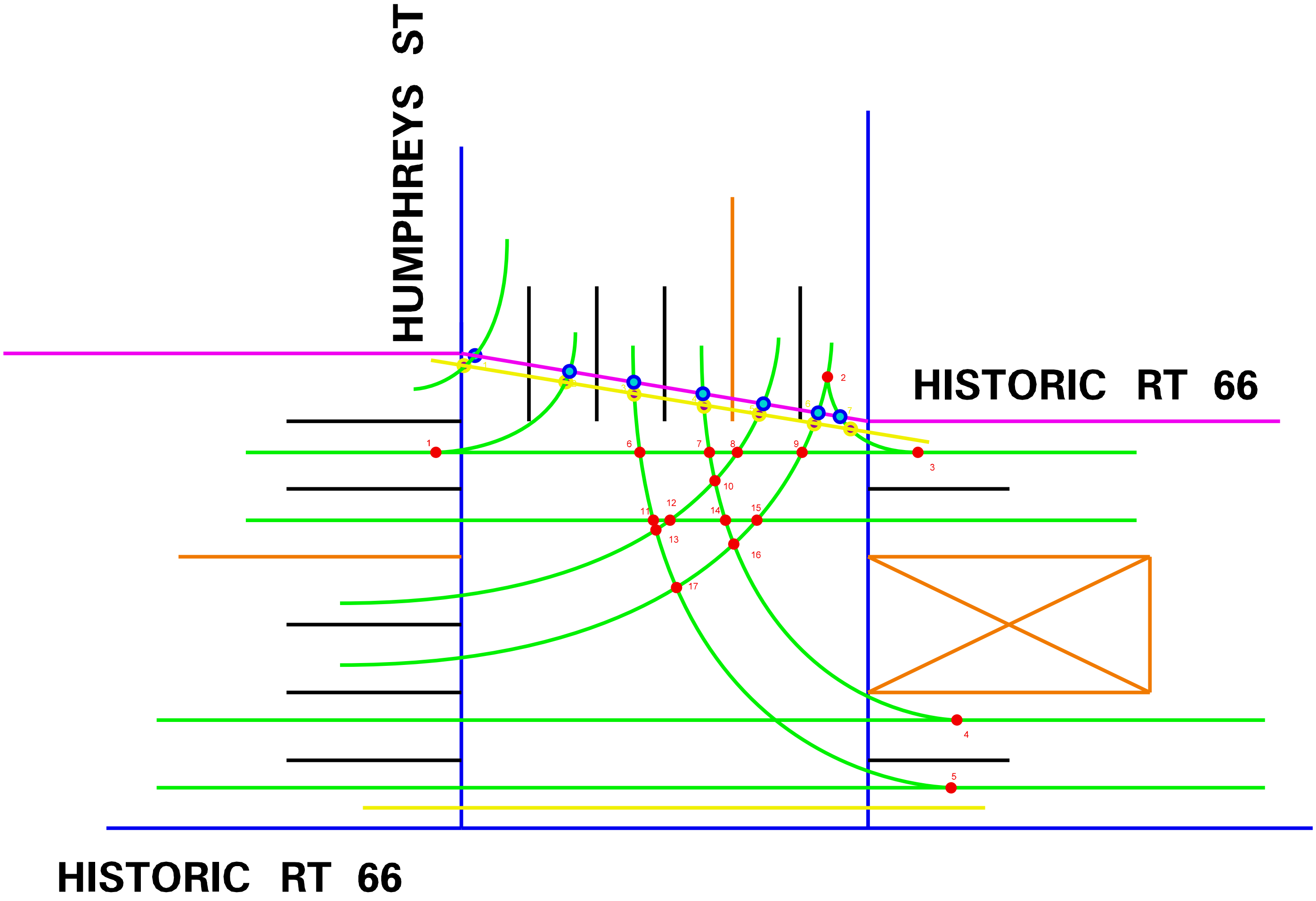

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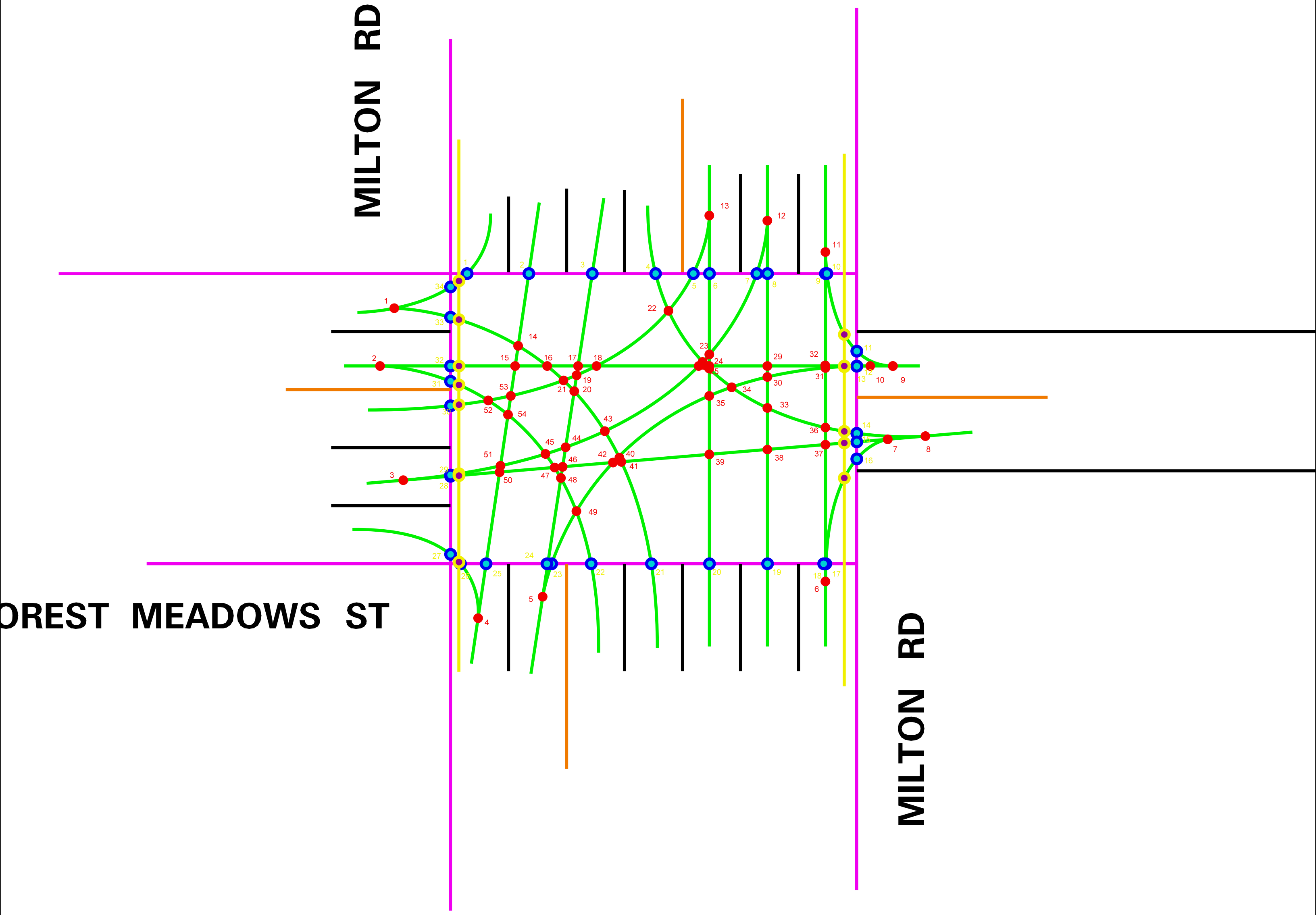

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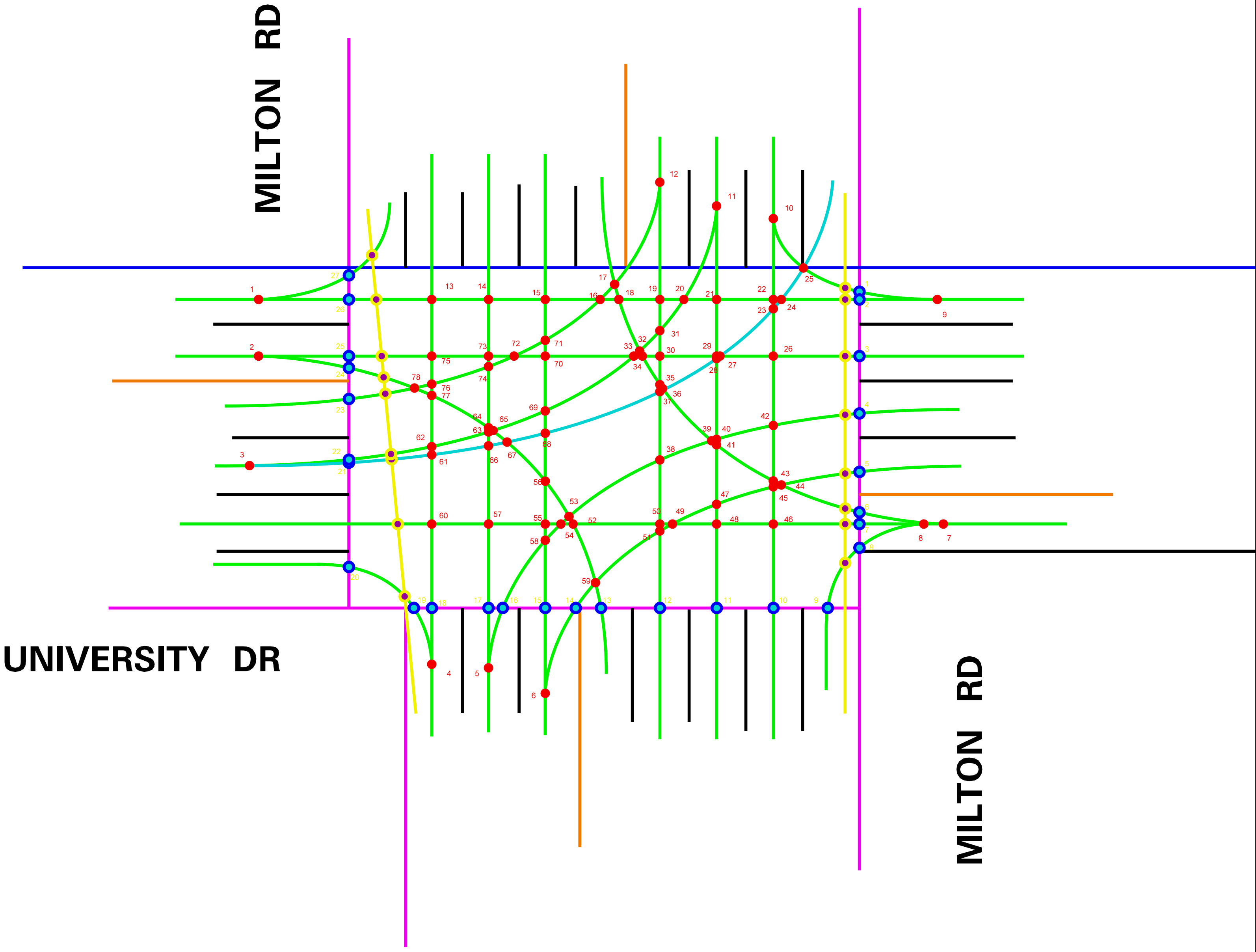

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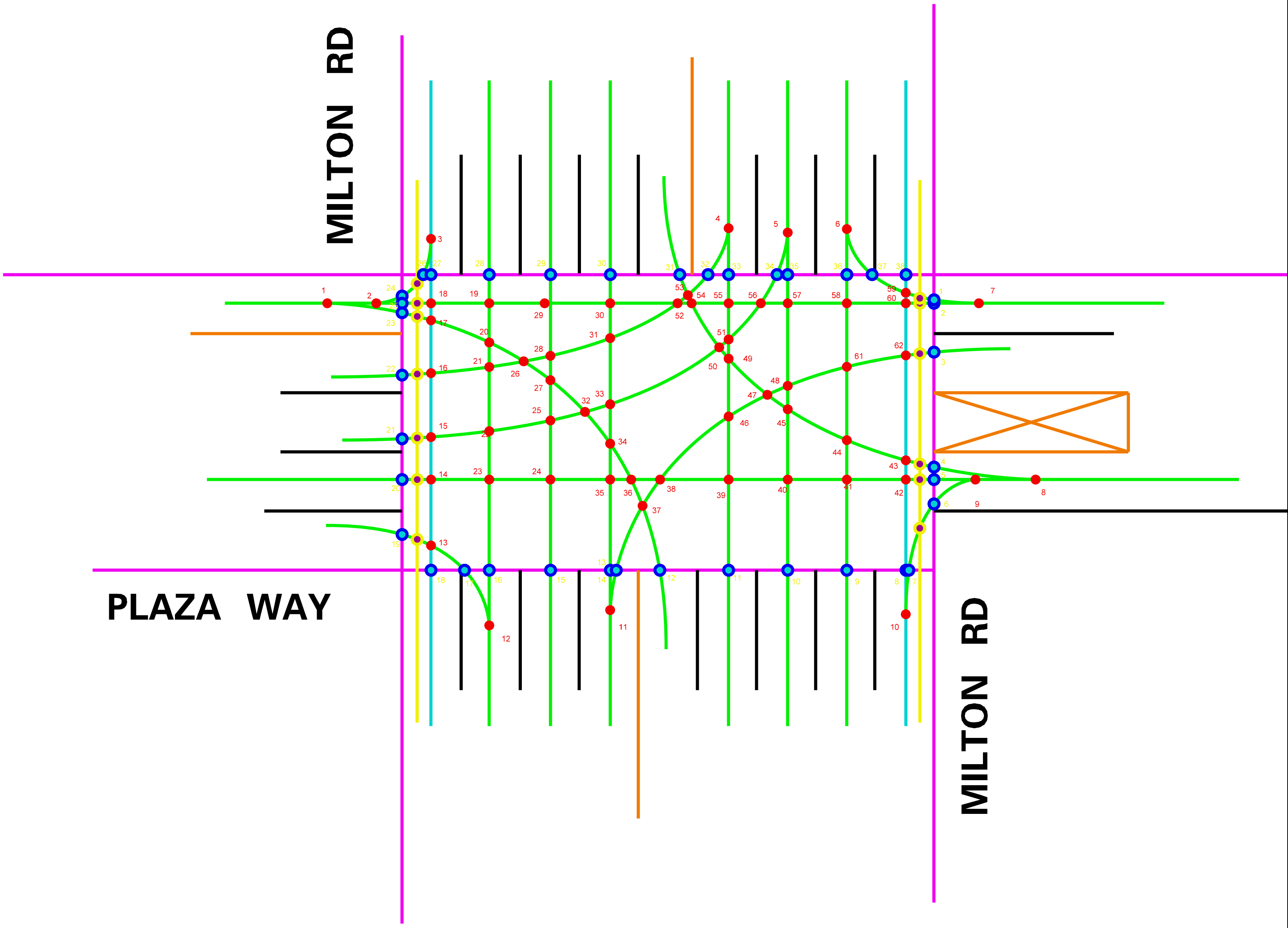

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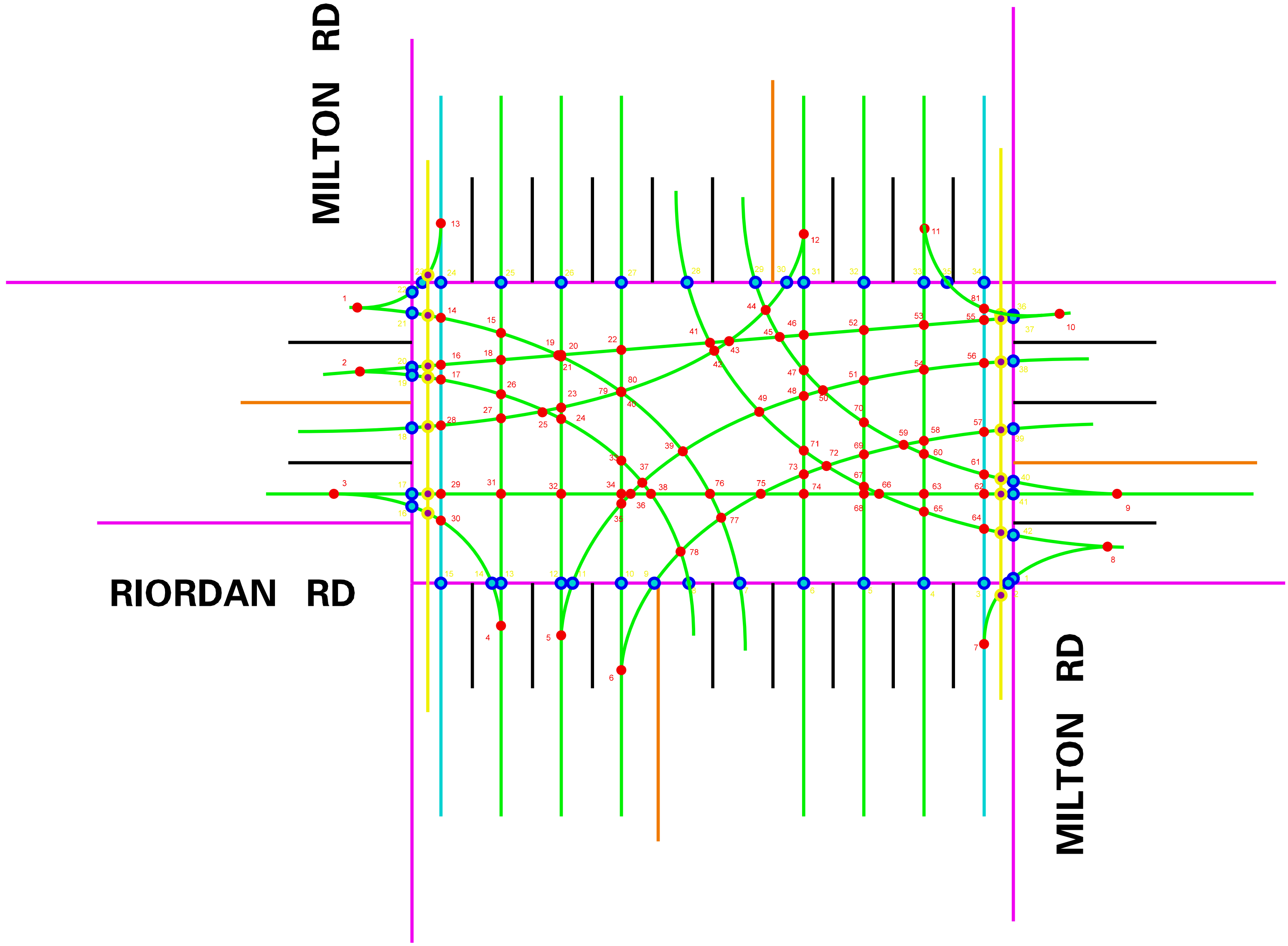

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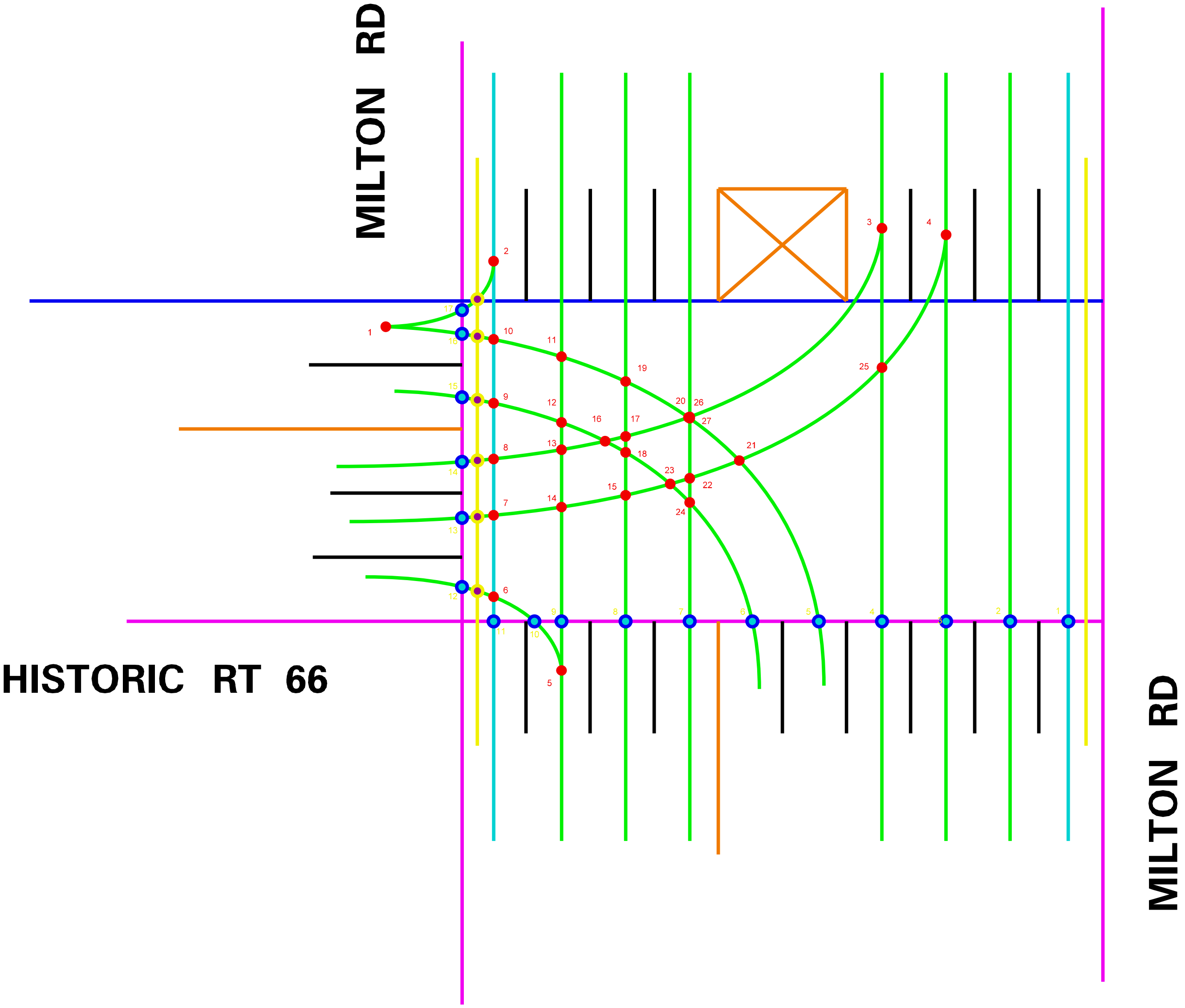

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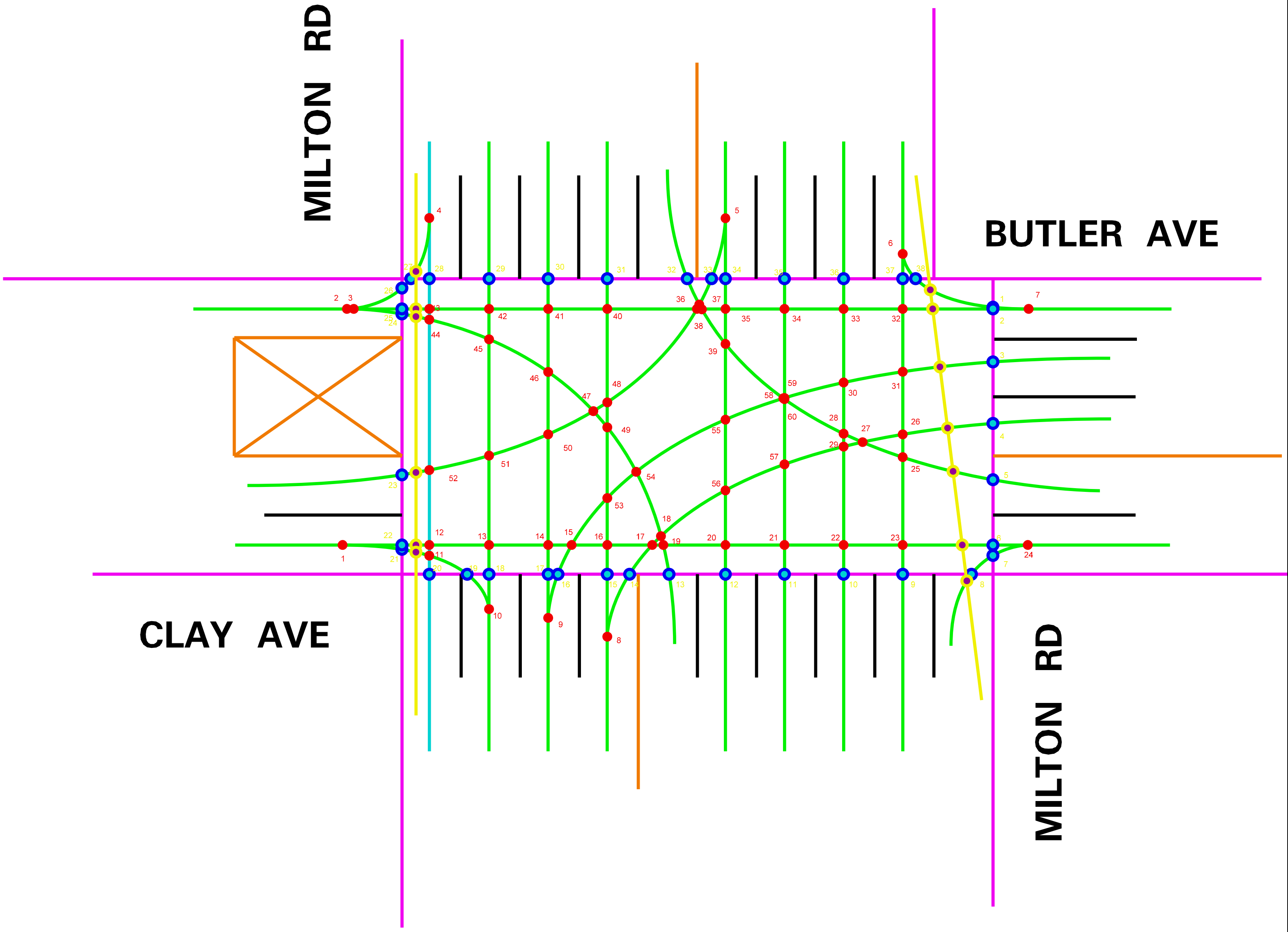

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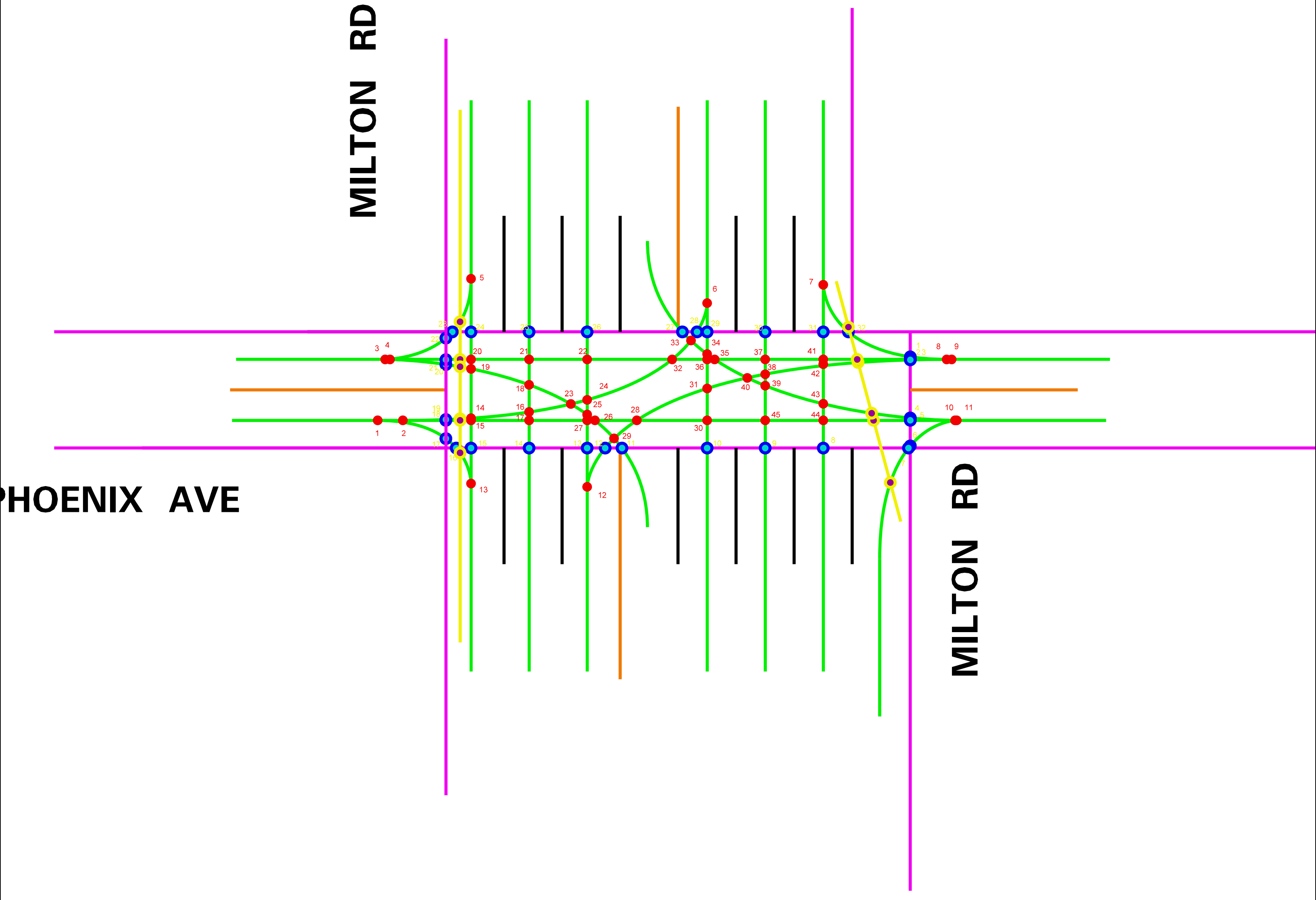

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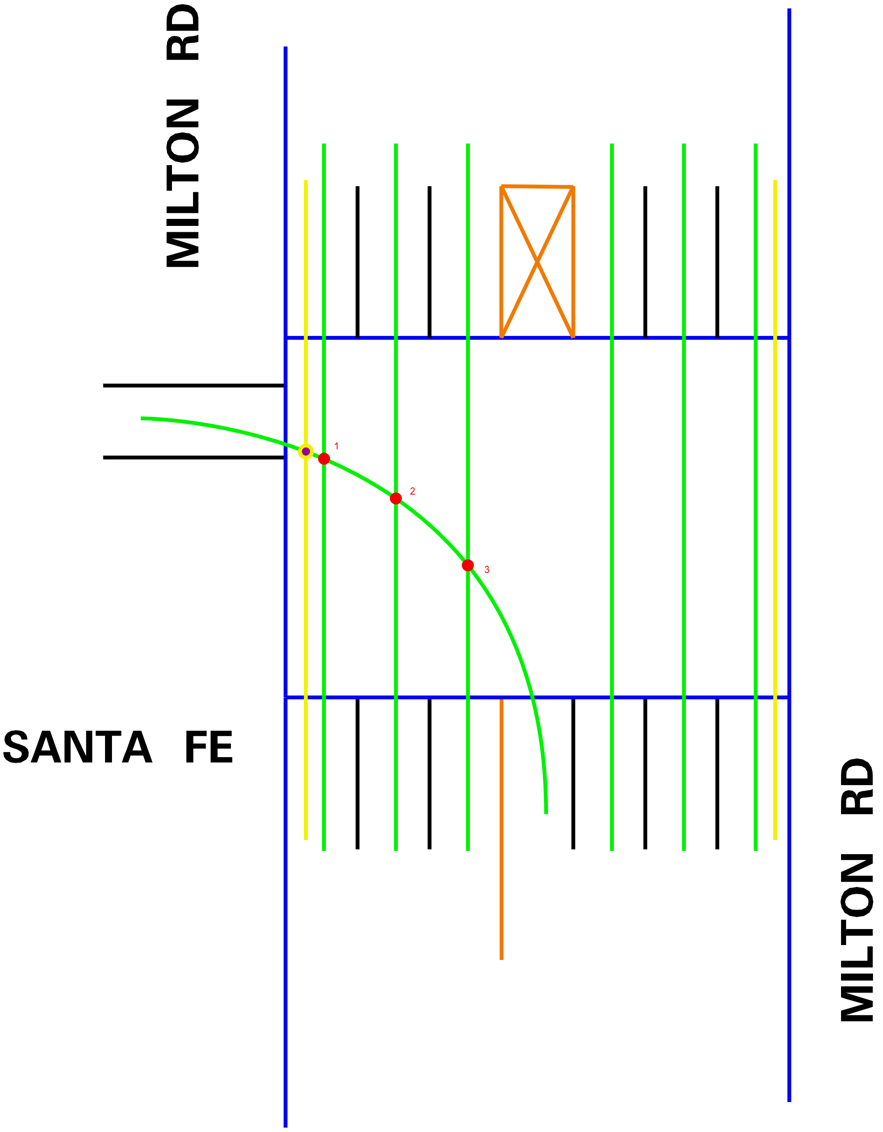

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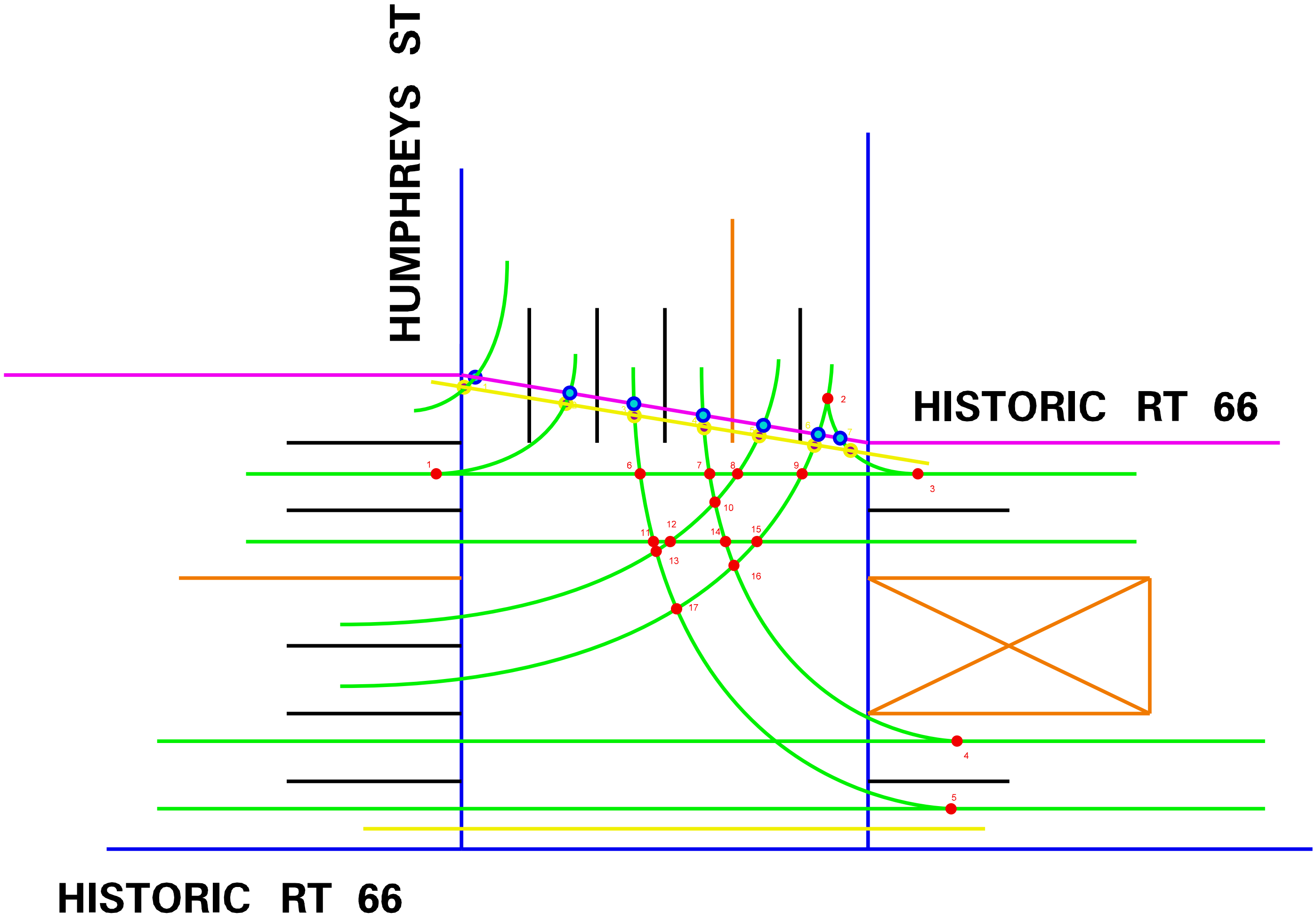

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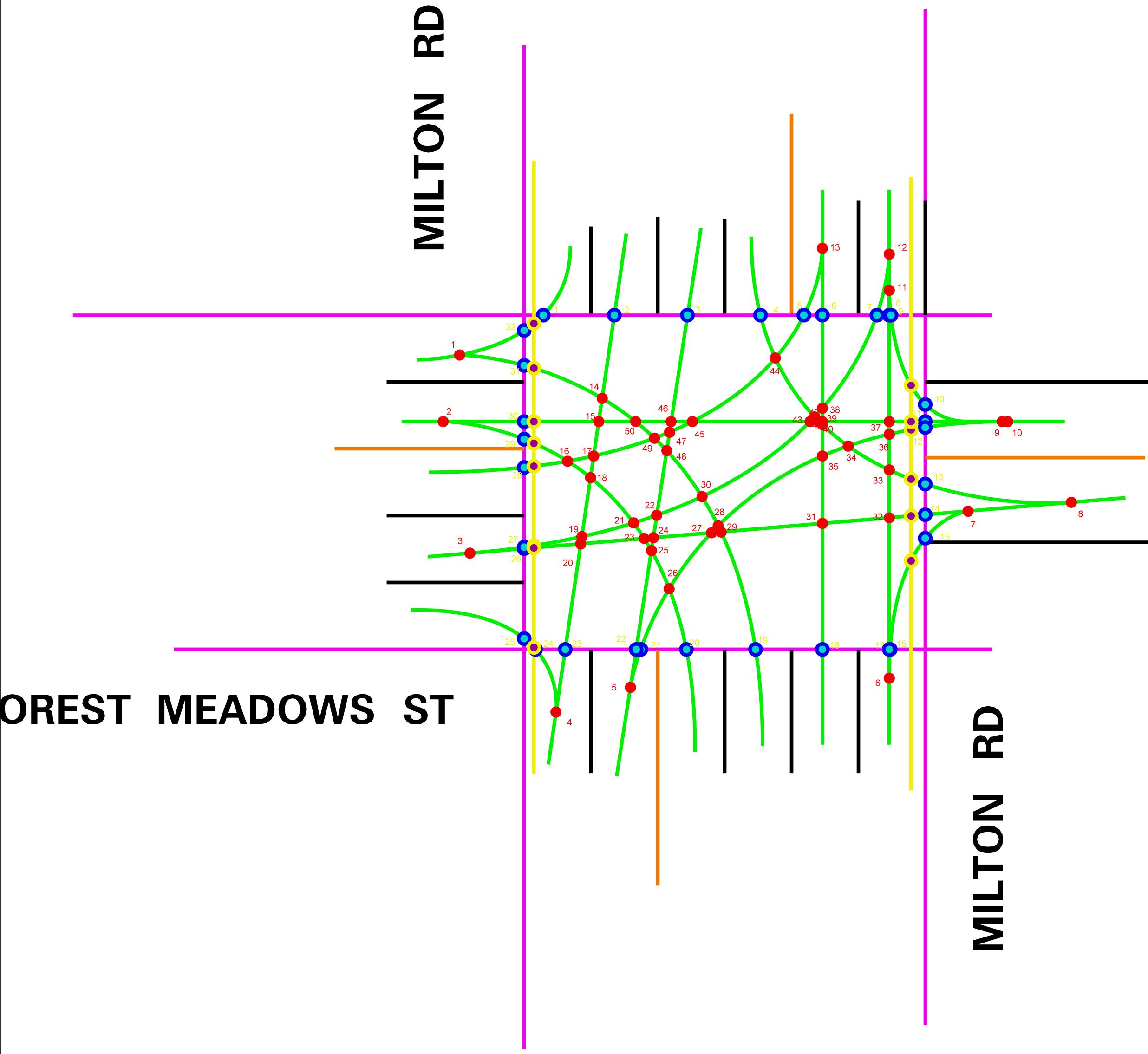

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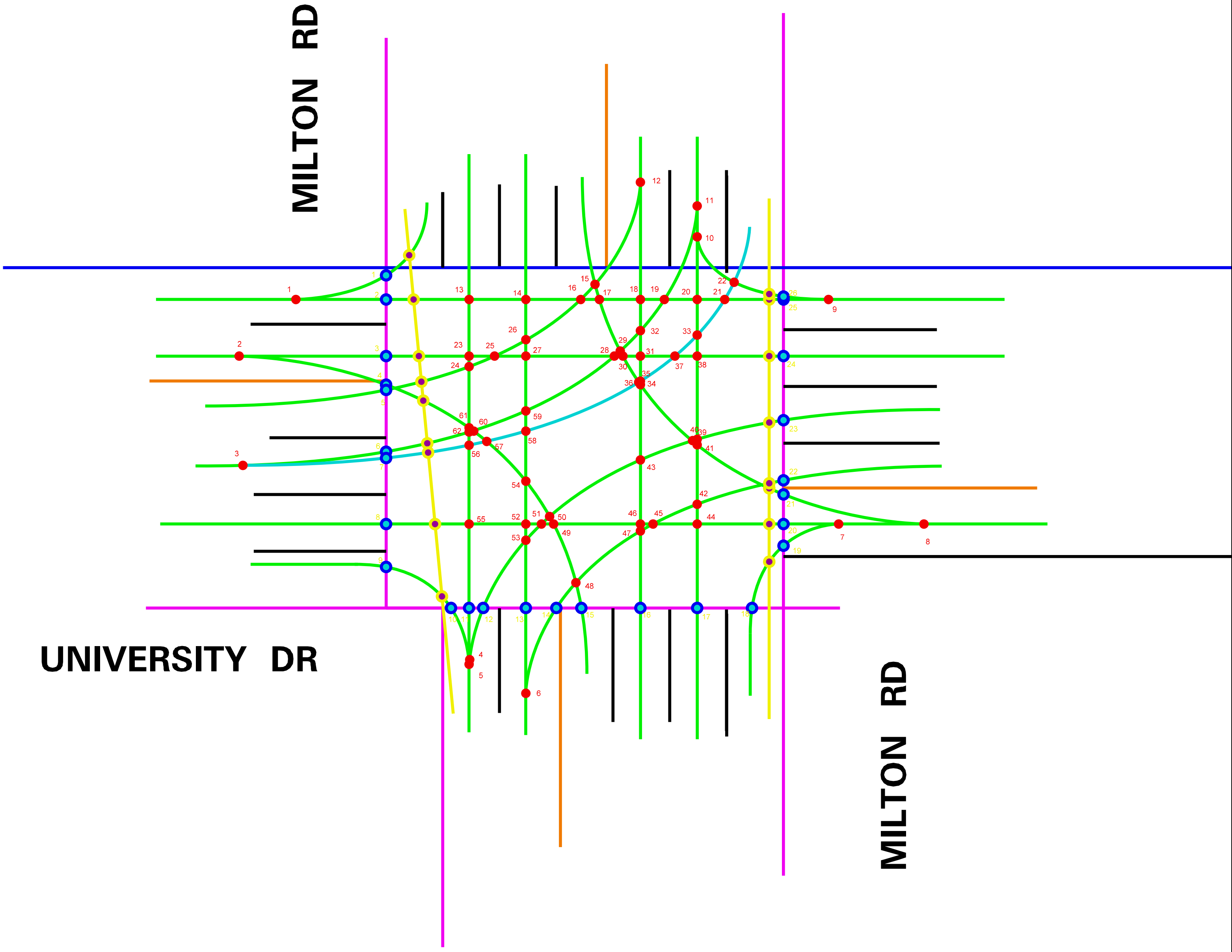

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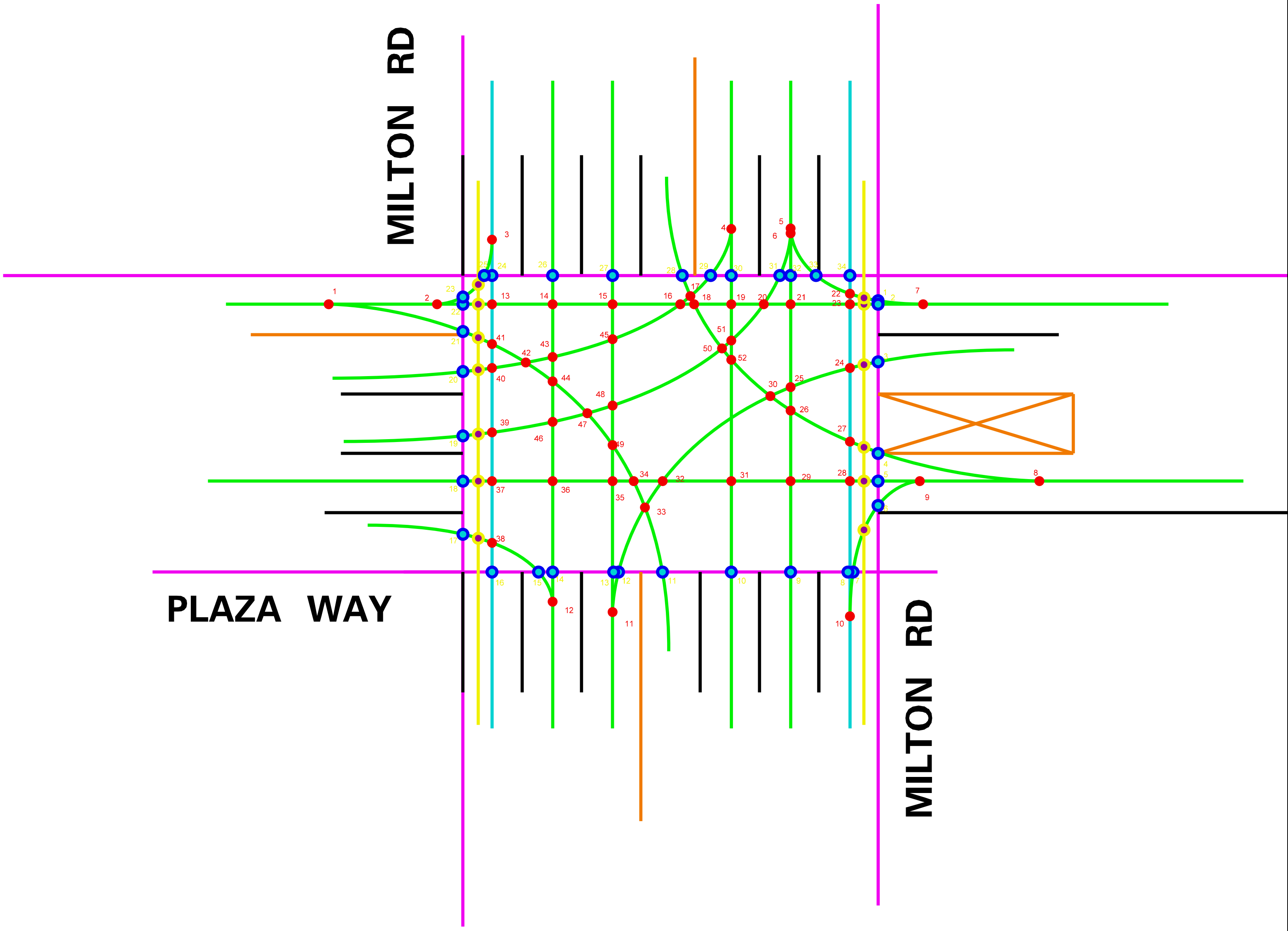

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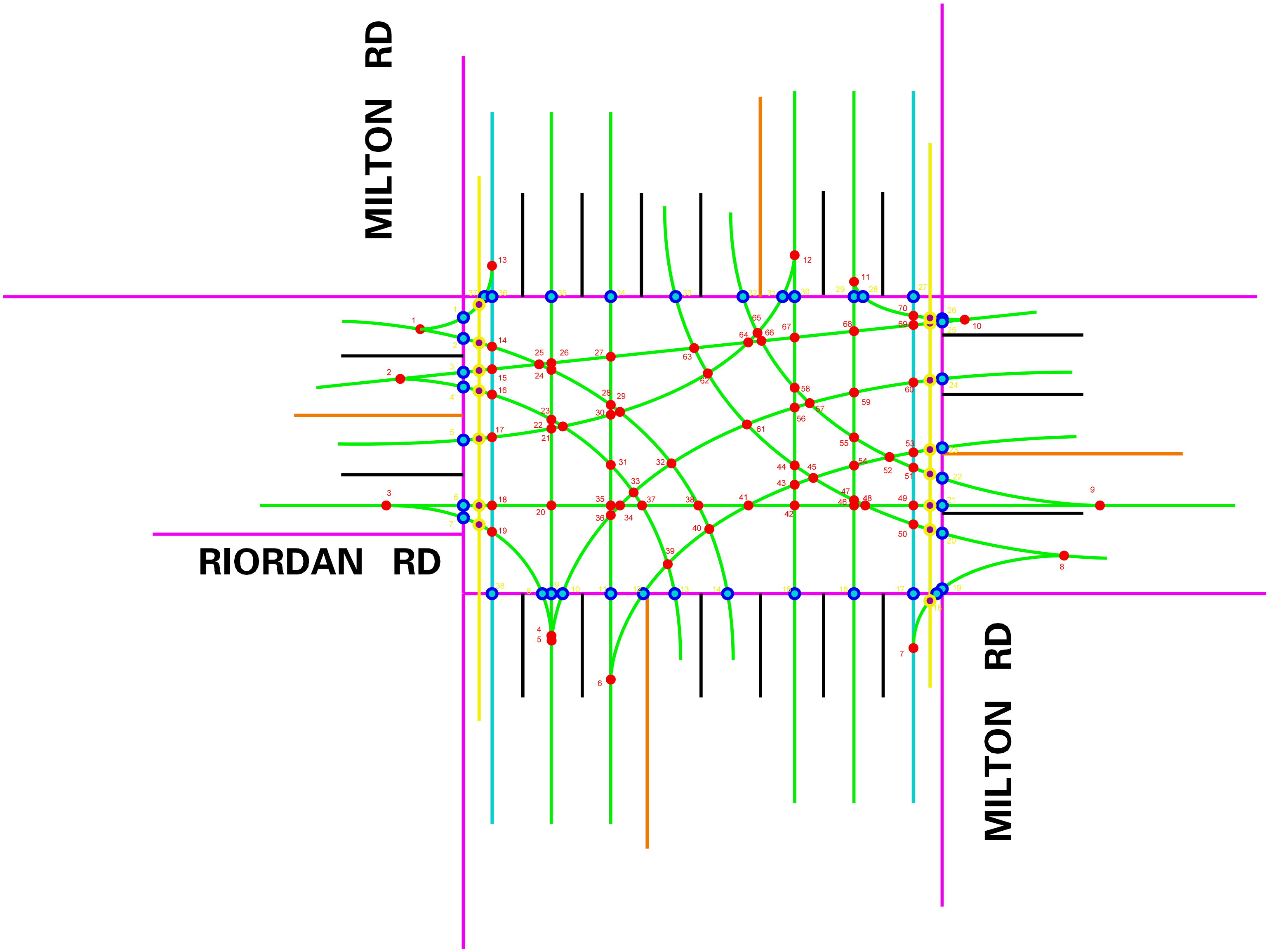

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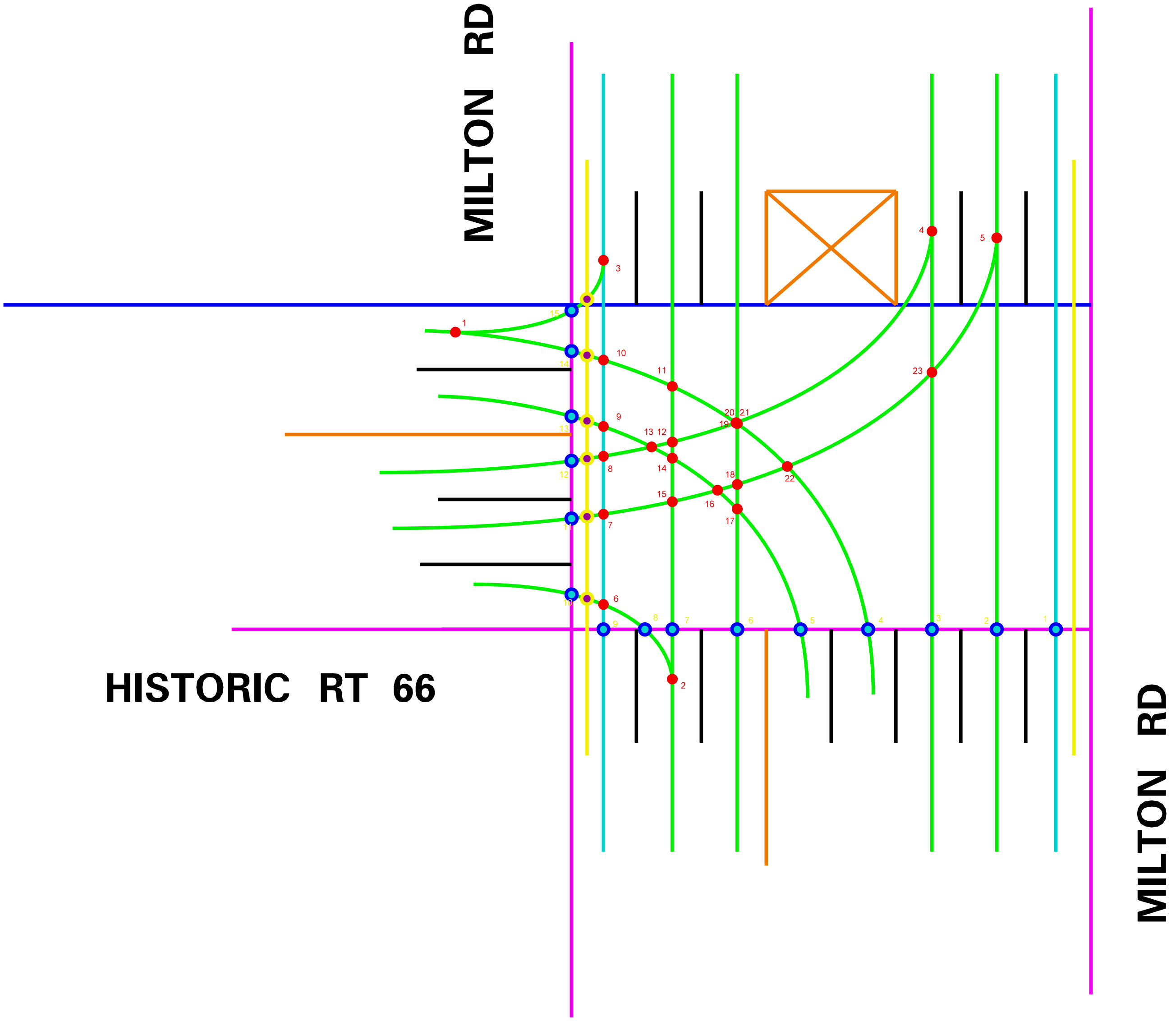

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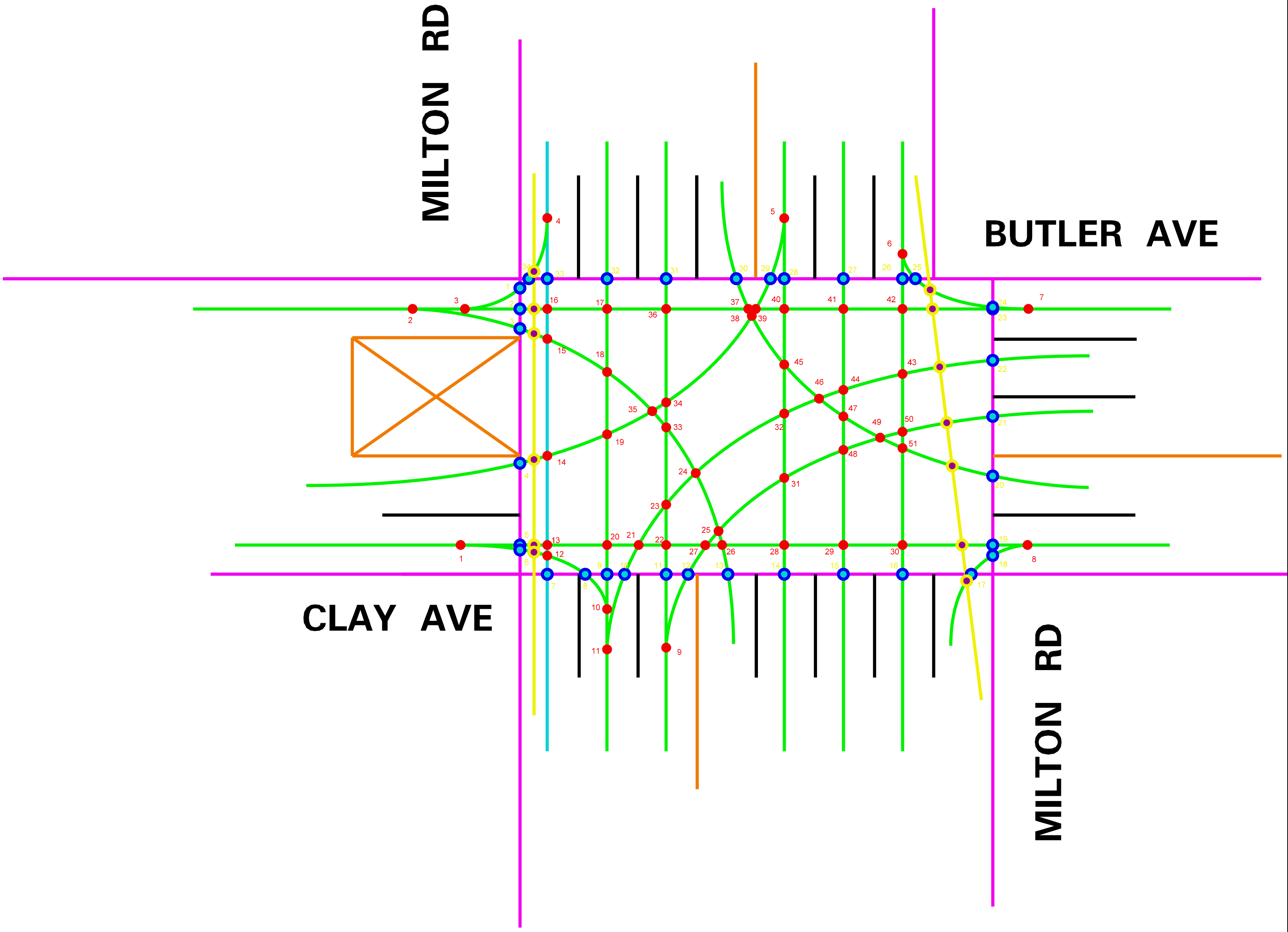

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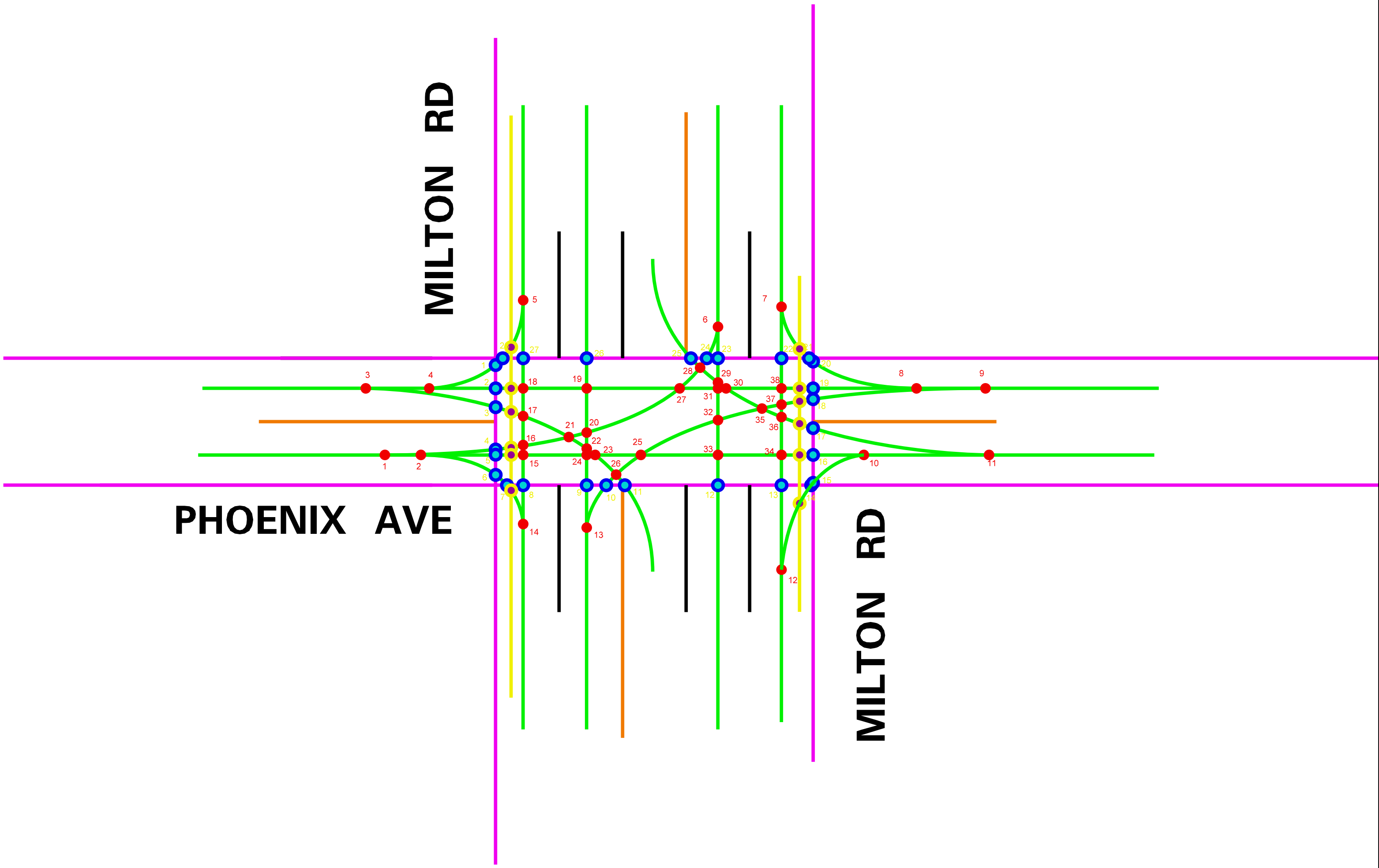

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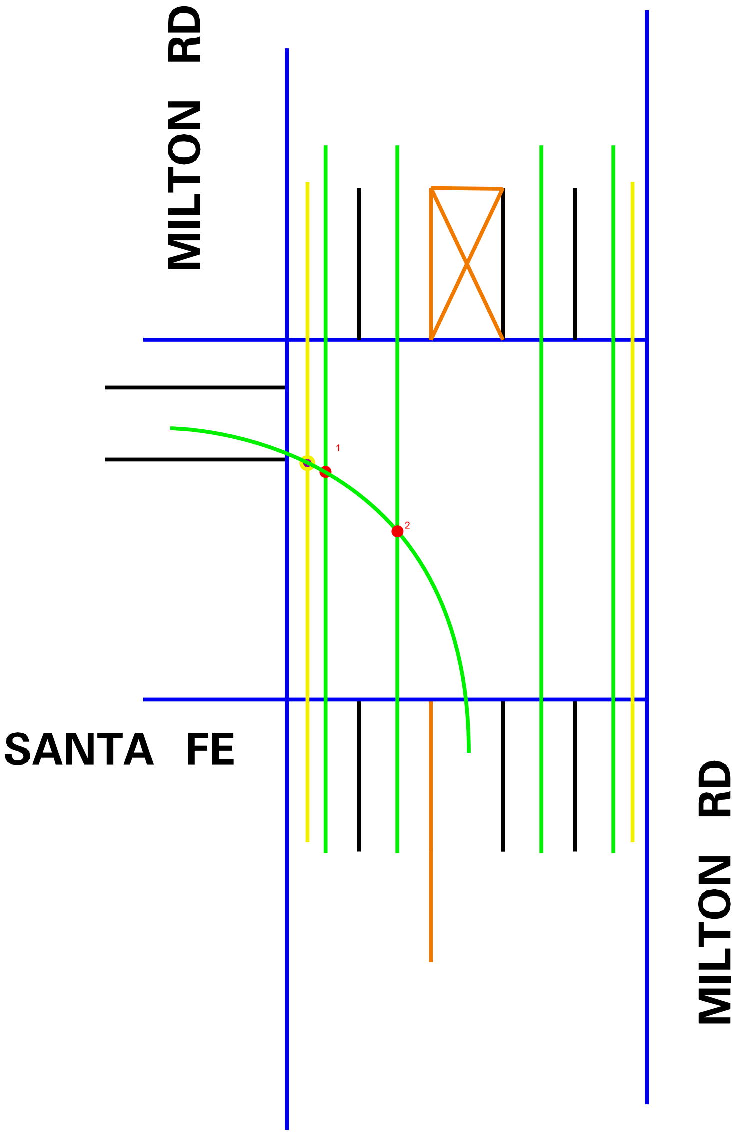

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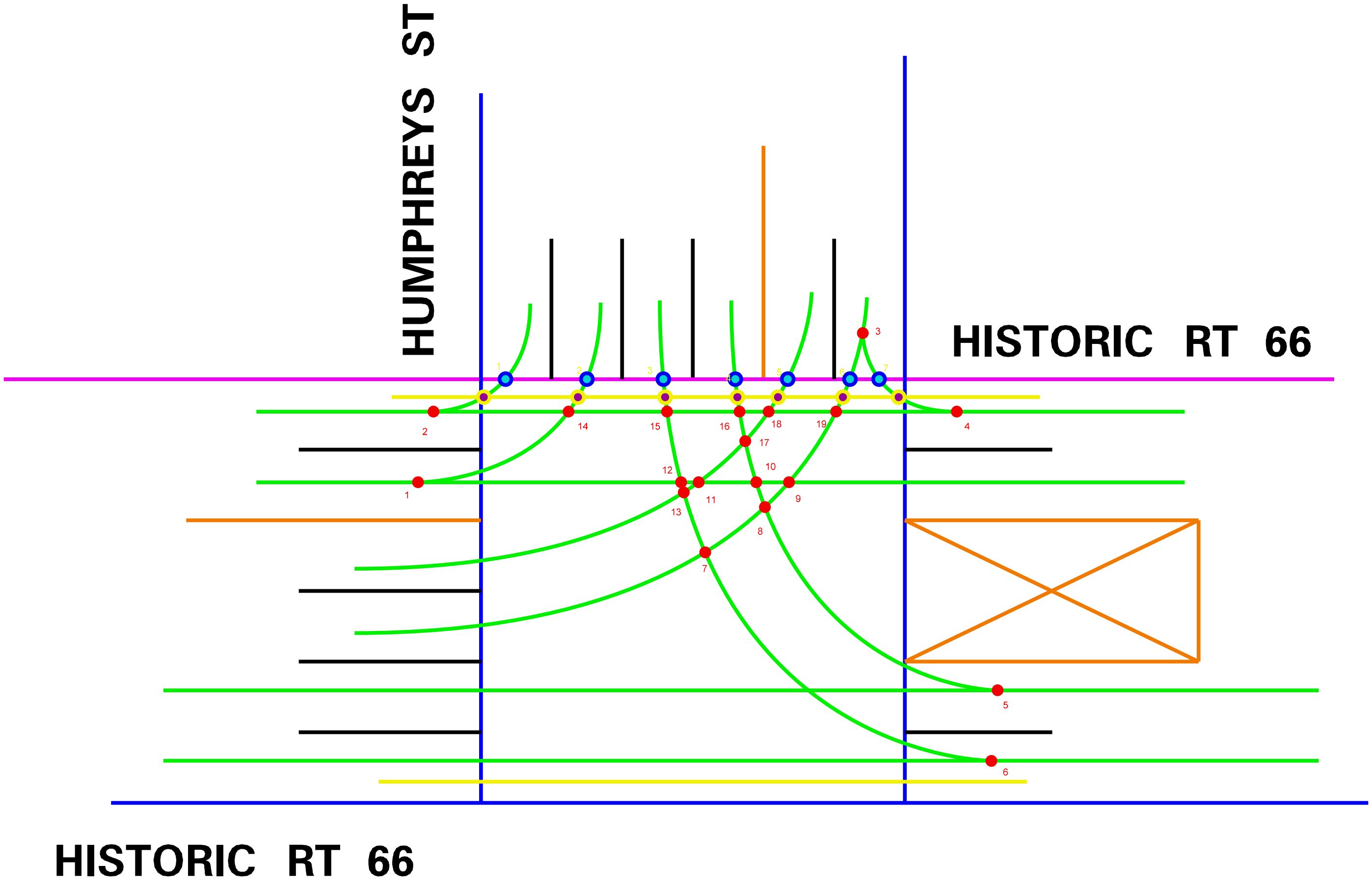

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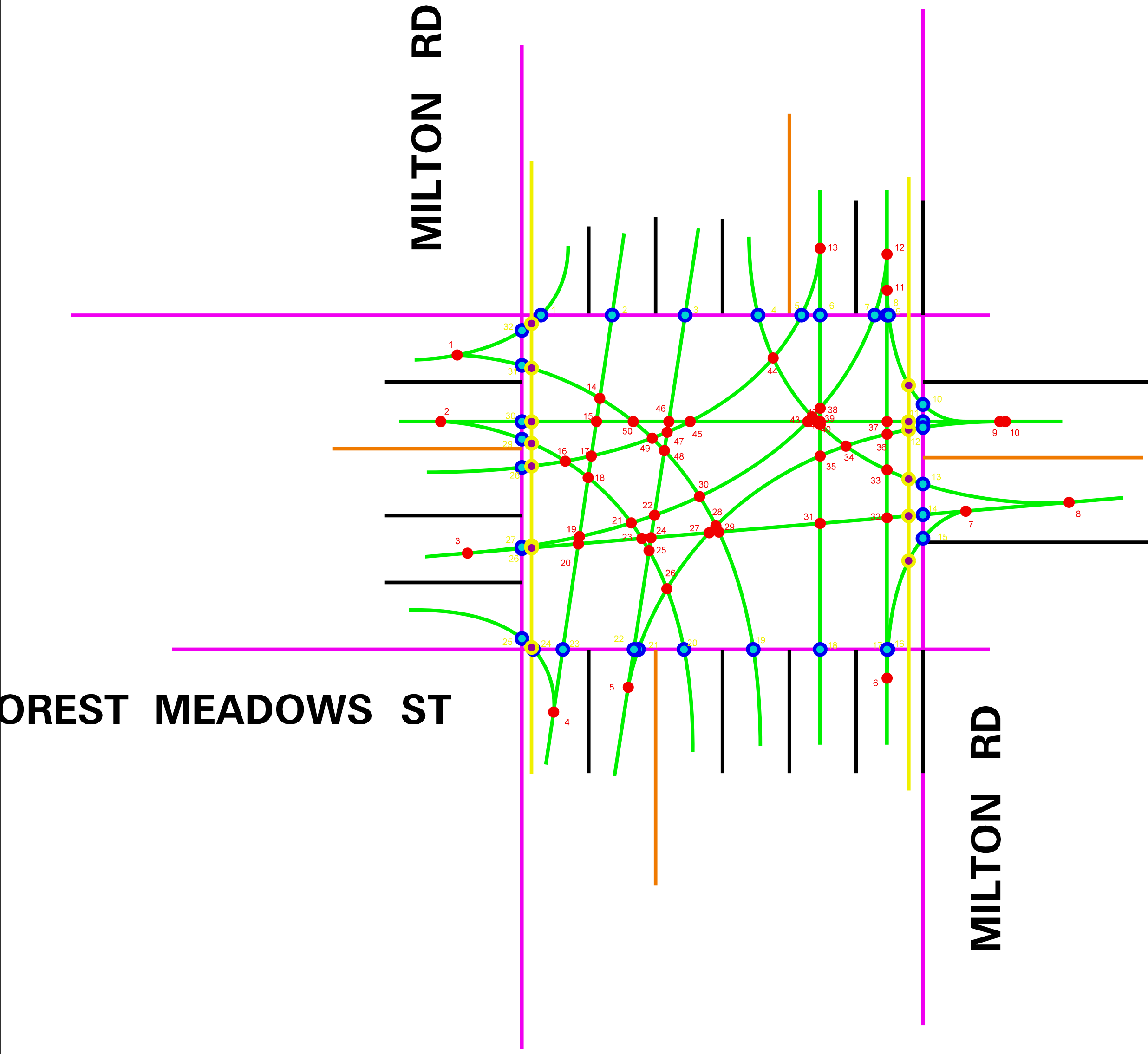

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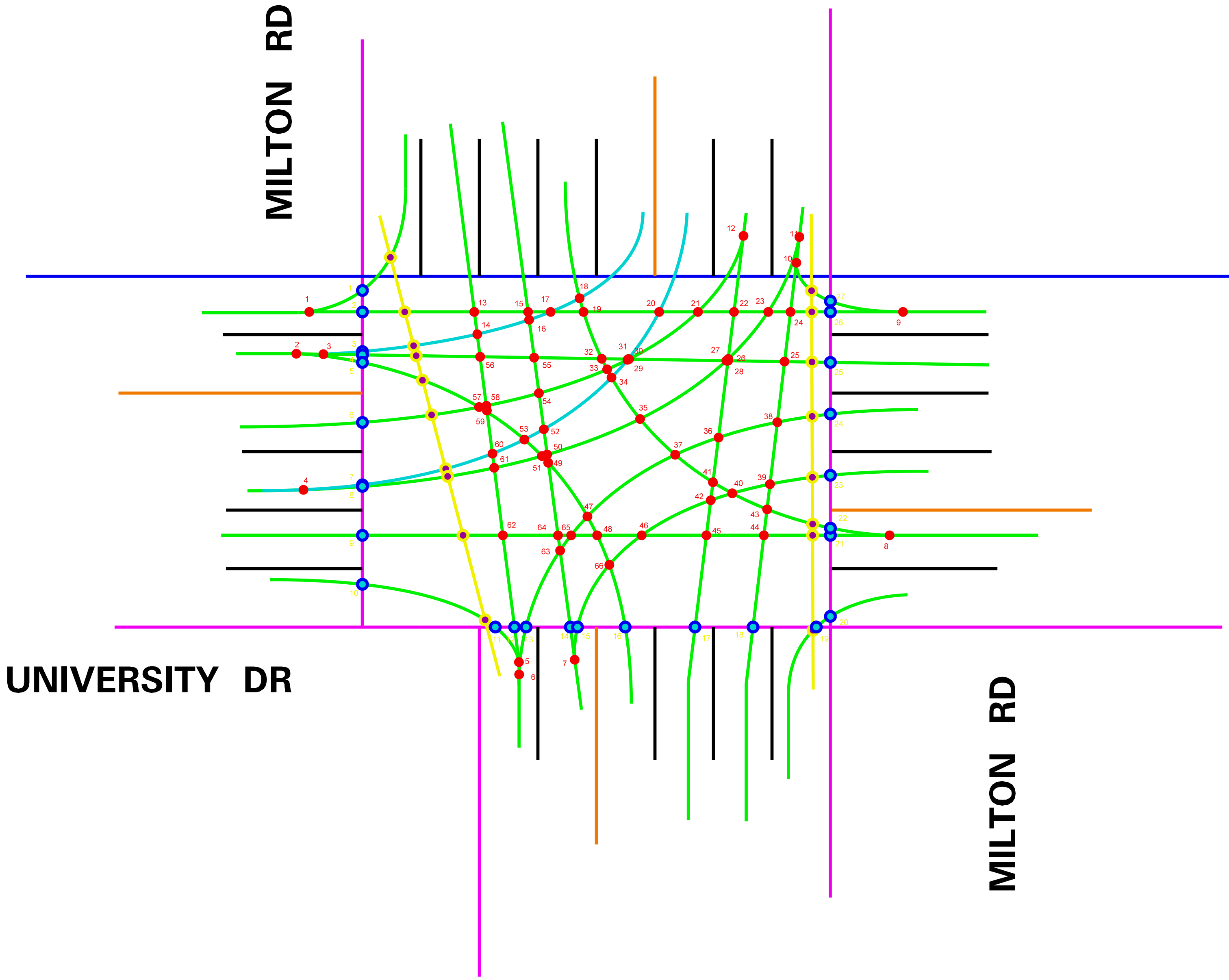

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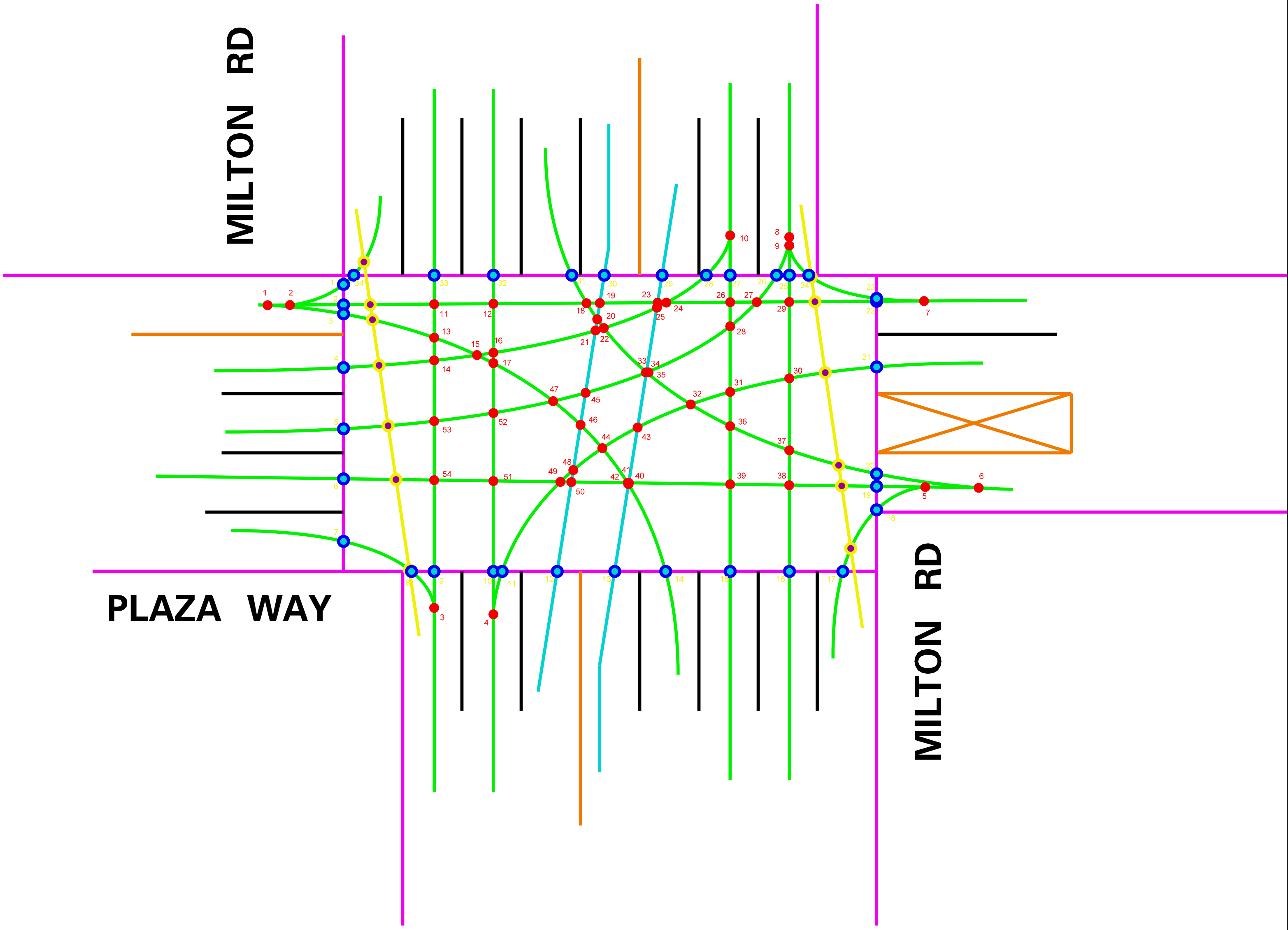

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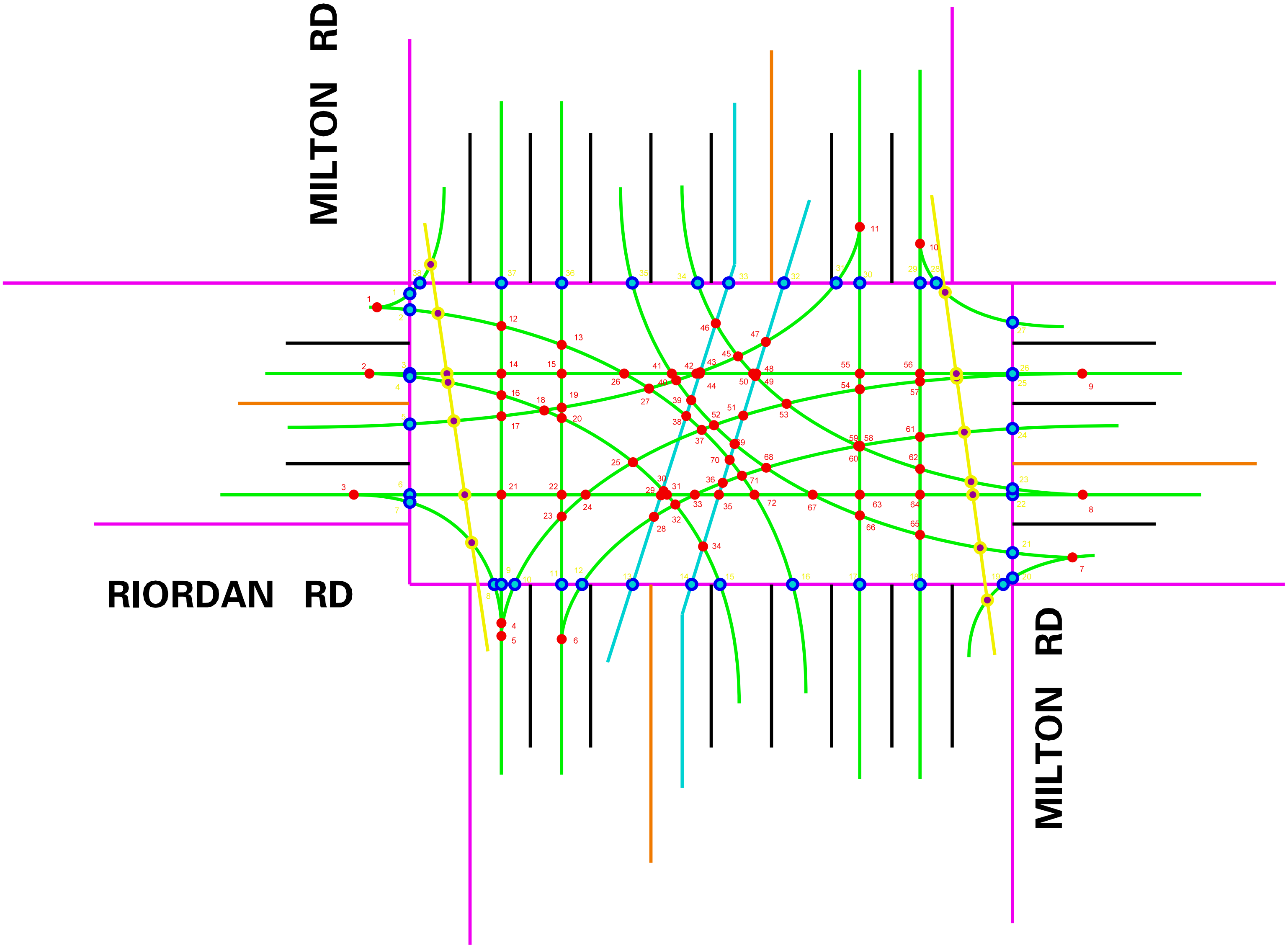

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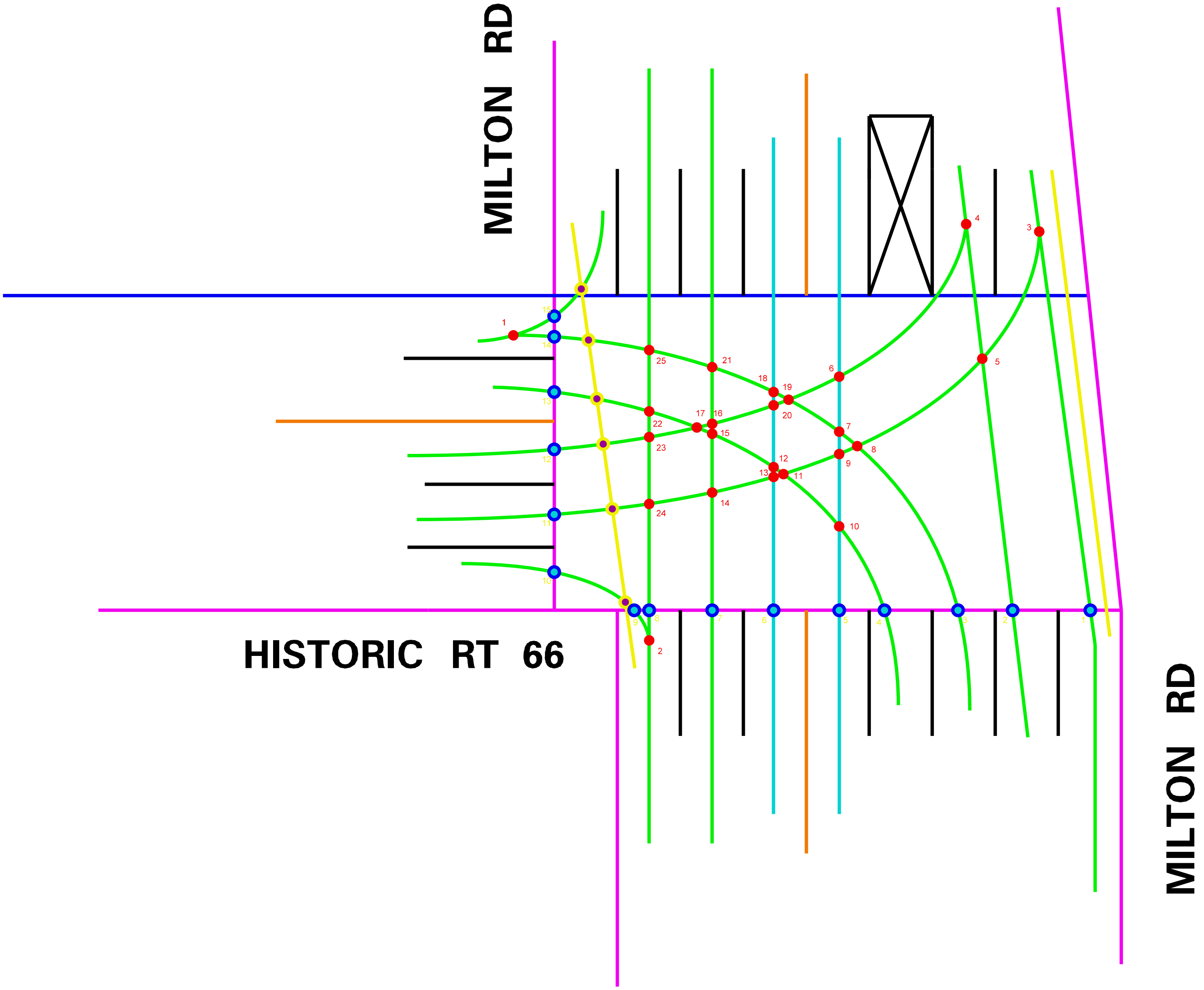

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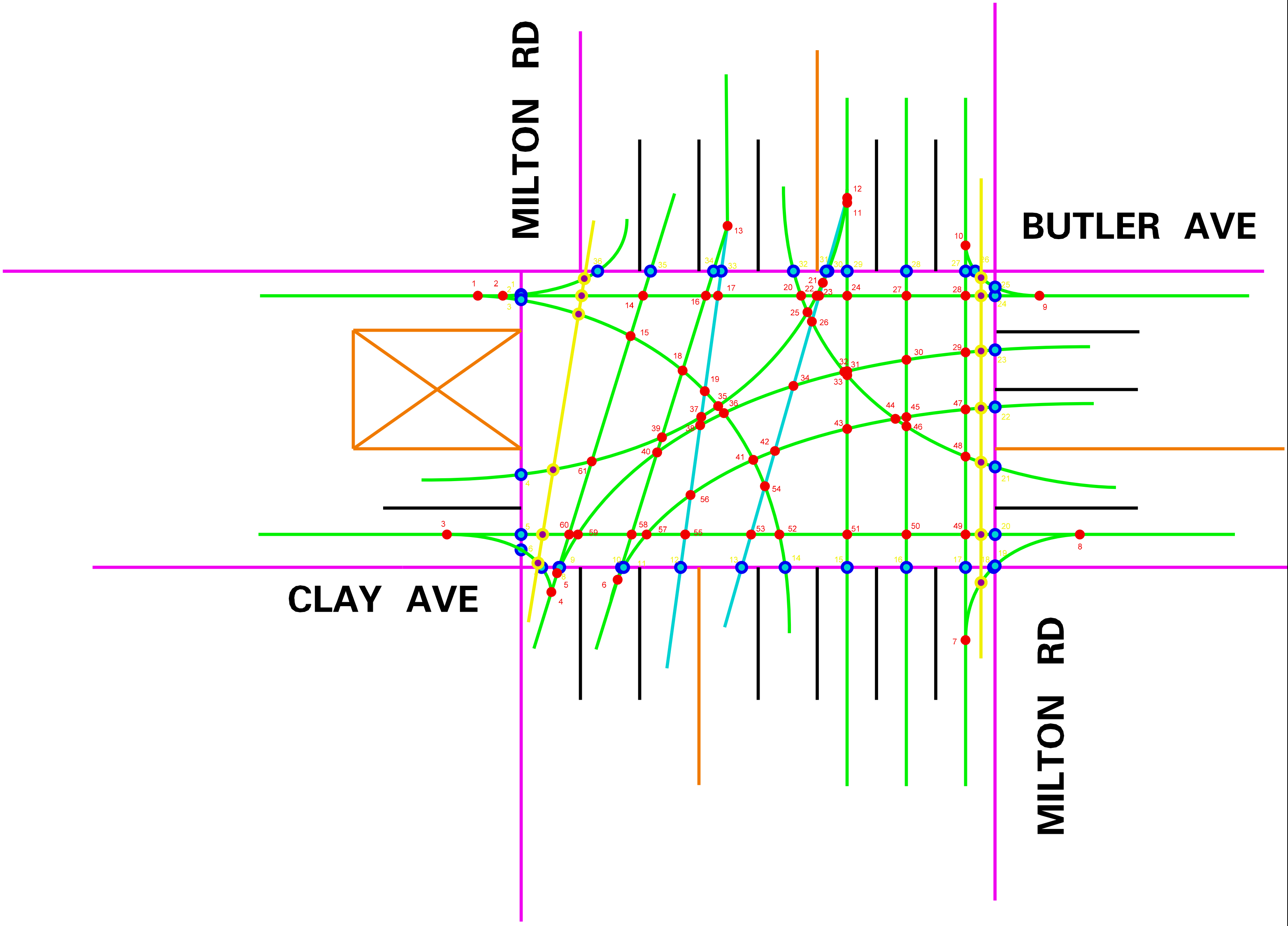

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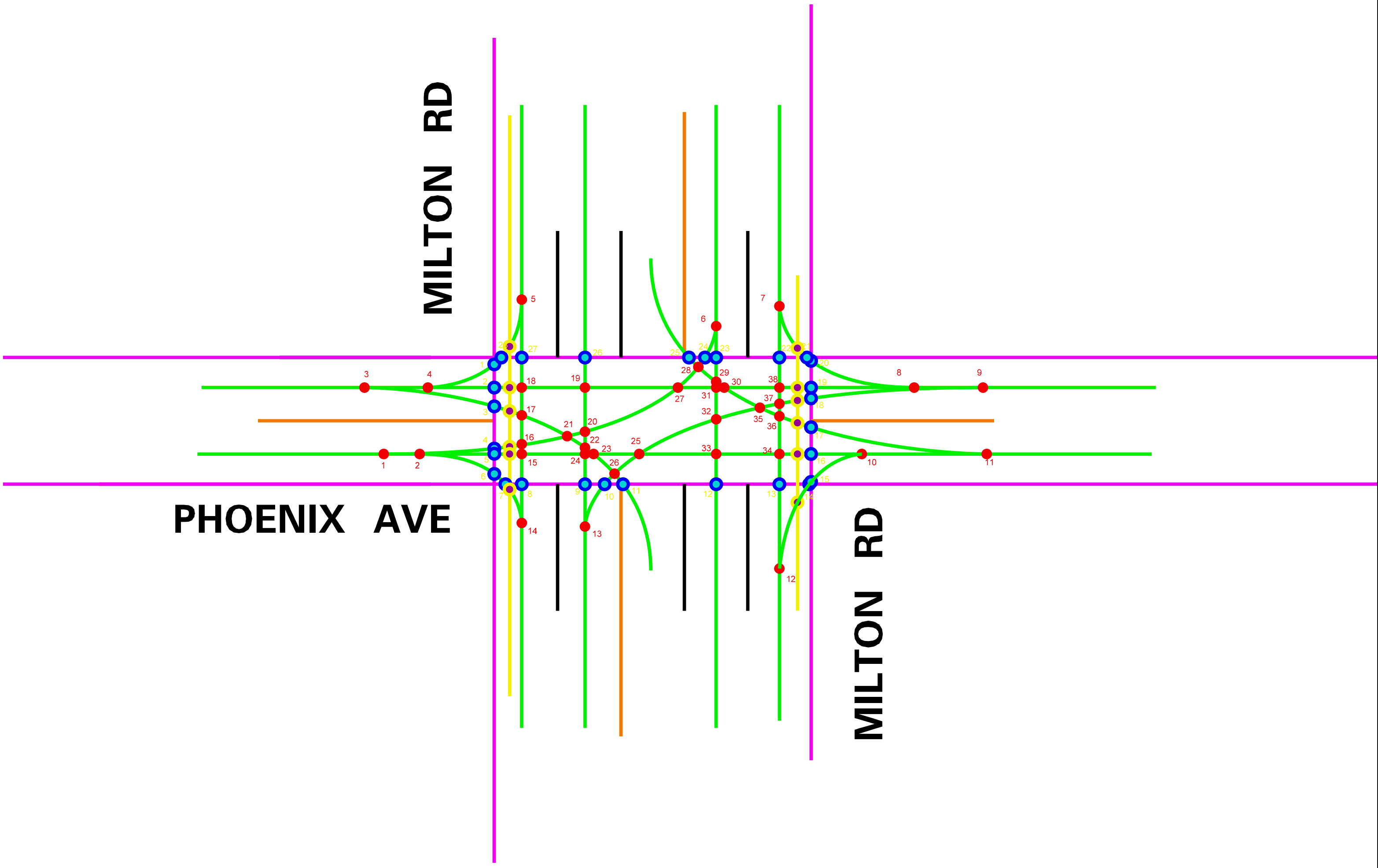

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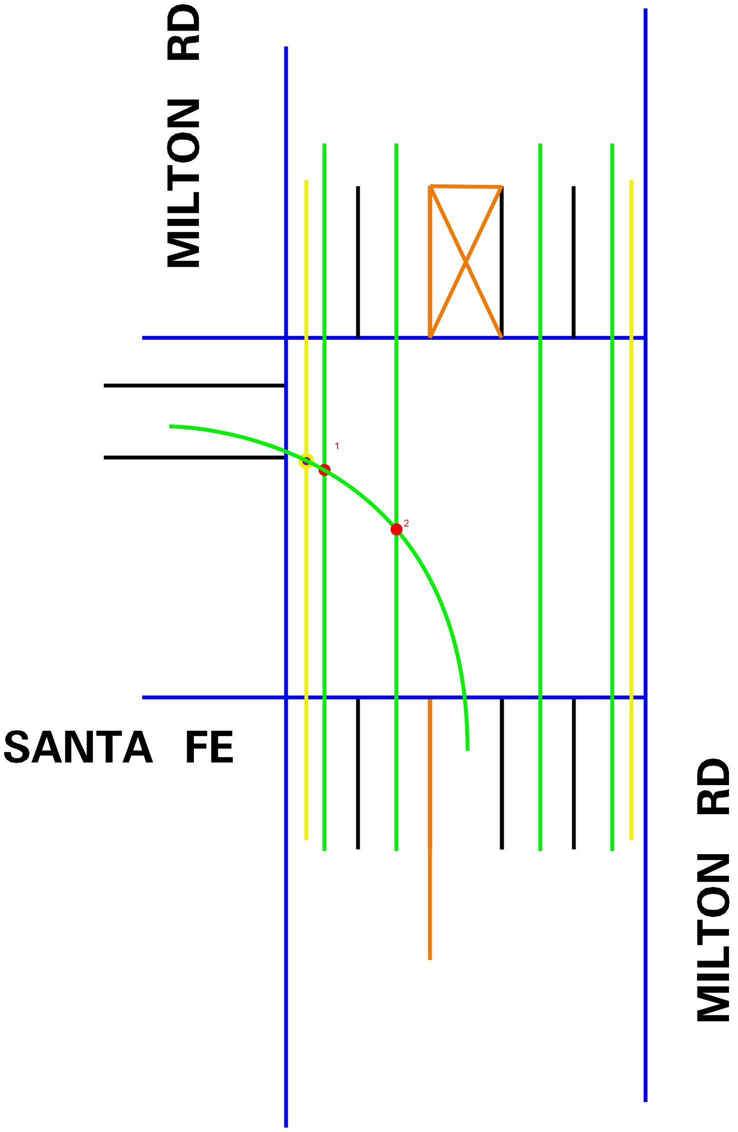

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