

APPLEWHITE ROAD



Applewhite Rd Corridor Overview

CONTEXT

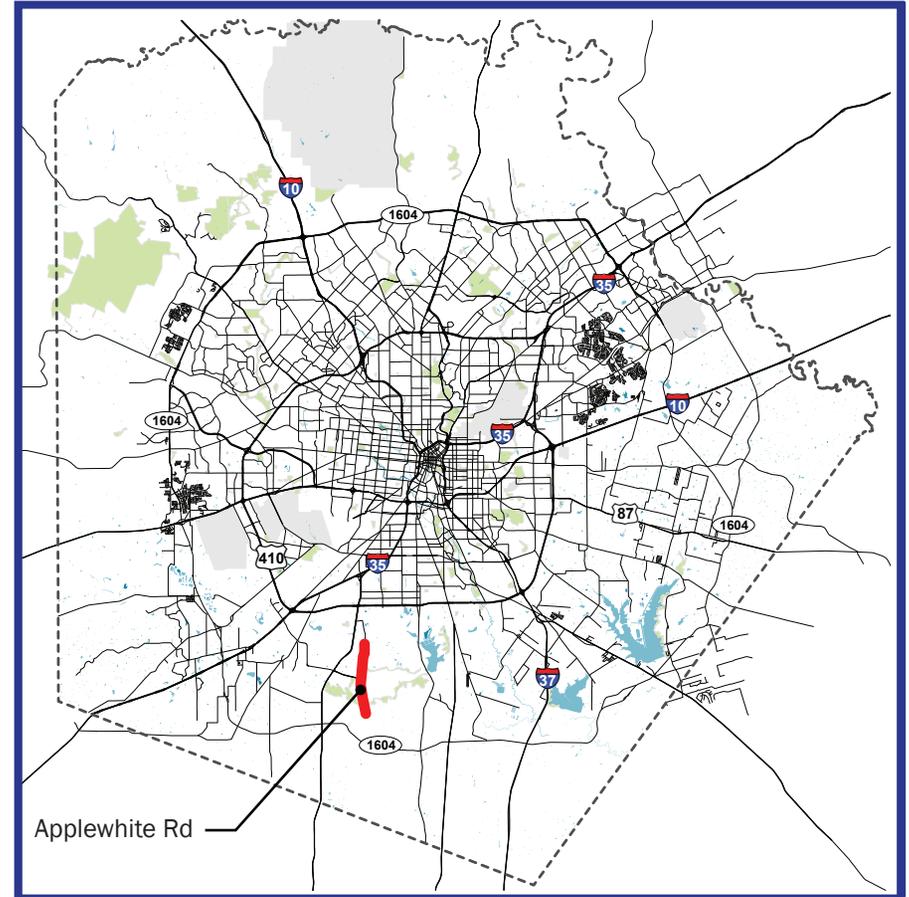
Applewhite Road is located in a predominantly rural area in south San Antonio. It provides the primary access for the Toyota Manufacturing Plant and the Texas A&M San Antonio campus, located just east of the corridor.

From Loop 1604 to Lonestar Pass, Applewhite is a five-lane road. It changes to a four-lane divided roadway north of Lonestar Pass. Sidewalks are virtually non-existent along the corridor. There are no marked bicycle facilities, but the corridor does provide direct access to the Medina River trail system just North of the Toyota Manufacturing Plant and bicyclists are known to use Applewhite Road.

Land uses are predominantly undeveloped farm land and rural residential. In addition to the Toyota plant, there are smaller residential, commercial, and industrial developments along Applewhite Road. Undeveloped land provides the opportunity to develop a multimodal corridor in advance of future development that will come with anticipated growth.

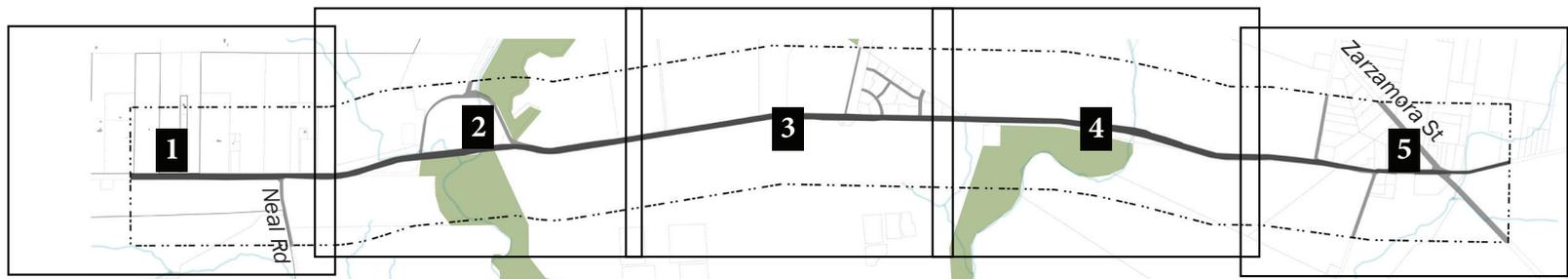
Applewhite's context as a primarily rural street with strong development potential is typical of many arterials in less developed areas of the City and Extra Territorial Jurisdiction (ETJ). These roads often become vehicle-centric corridors that are not designed to accommodate other modes. The construction of roads predominantly for vehicle traffic in the developing outer areas of the City requires a dependence on automobiles for people living and working in these new developments. This places further strain on the road network throughout the City as the number of vehicles on the roads increases.

Planning for streets that accommodate all modes in advance of development can help provide alternate travel options in newly developing areas. A street that has bicycle and pedestrian facilities is also more supportive of more dense, mixed use developments that can further support additional modes of travel. However, once a street has been built out to primarily accommodate vehicles, retrofitting bike and pedestrian accommodations can be problematic.



Applewhite Road Sheet Set Key

4.3 Miles



Observations, Challenges & Vision Policy & Guidance Continued

Vision

Applewhite Road can serve as template for other rural corridors in the City. Identifying the needs and space requirements to accommodate all users in advance of the land development can better facilitate the development of a fully multimodal corridor that meets future needs.

Future

2040 Volumes – Daily volumes on Applewhite Road will increase by 800% from 2015 to 2040. Daily volumes will increase from around 1,500 vehicles per day to 14,000.

Growth Rate – The annual growth rate along Applewhite Road is projected to be about 6% per year based on data in the Alamo Area MPO model. This higher than average growth rate is reflective of the area's current low level of development.

Future LOS – The results of the traffic analysis performed from Zarzamora to Lonestar Pass shows that the intersection at Zarzamora will function at LOS F during both peak hours in year 2040 and the intersection at Lonestar Pass will function at LOS F in the PM peak hour and LOS D in the AM peak hour. Today (2015) both intersections operate at LOS C or better during both peak hours.

Policy & Guidance

Cross Section & ROW – Develop right of way requirements and street sections that can accommodate all modes. Identifying the requirements prior to a corridor being developed allows the right of way to be acquired during the platting process. Current AM /PM Level of Services are level A throughout the corridor; additional trips from manufacturing uses can be accommodated within the current transportation infrastructure.

Typical Facility Condition



Toyota Truck Manufacturing Plant



Fire Station On Corridor



Intersection



Generous Shoulders



Side Road Intersection with Merge

Access Management – Strive to minimize driveway density and median openings for future developments to provide better access management along the corridor.

Vision Zero – Focus on safety for all modes of travel in this corridor, choosing improvements that incorporate design features that protect people biking and walking from vehicular traffic.

Issues

Roadway – Applewhite experiences spikes in traffic during shift changes at the Toyota plant, creating some congestion at the major intersections. As the area develops the functionality of the roadway will diminish.

Transit – Currently, there are no bus routes along Applewhite. Increased development near the Toyota plant as well as a potential Lone Star Rail station near the A&M campus may make the corridor a candidate for a future transit route. In order for transit to be effective, sidewalks and crossings need to be incorporated.

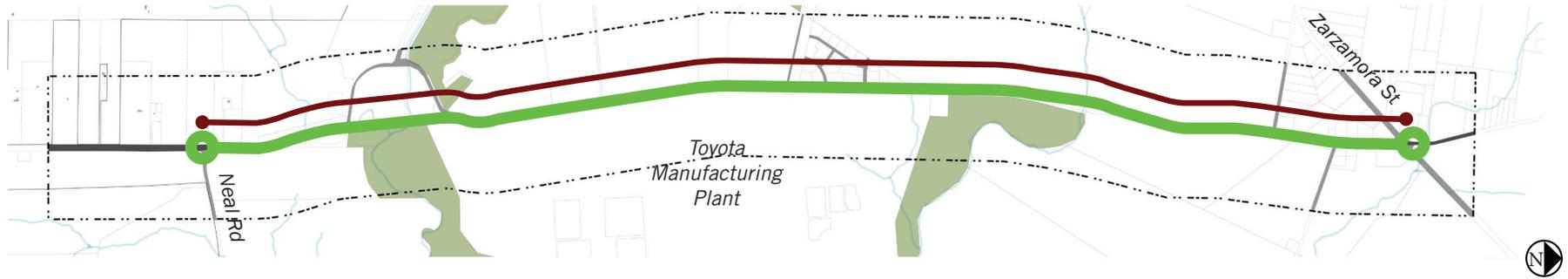
Bicycles – There are no bike facilities along Applewhite. However, the eastern trailhead for the Medina River greenway trail is located on Applewhite Road. A lack of bike facilities on Applewhite reduces connectivity and the ability of the greenway trails to provide mobility options in the area.

Pedestrian – There are no sidewalks along most of Applewhite Road. Since the area is largely undeveloped, there is currently little pedestrian demand. However, pedestrian facilities will be necessary as the corridor develops. Even if new developments install sidewalk along their property, there will still be a large number of sidewalk gaps.

Land Use – The area is primarily rural agricultural with some large-lot residential uses. As the area develops, land uses that are compatible with other modes of transportation can help transition the corridor away from vehicle-dependence.

Long Term Multimodal Options

Future Phase 1: 4 Lanes + Cycle Tracks, Sidewalk with Buffer and Median



Strategies

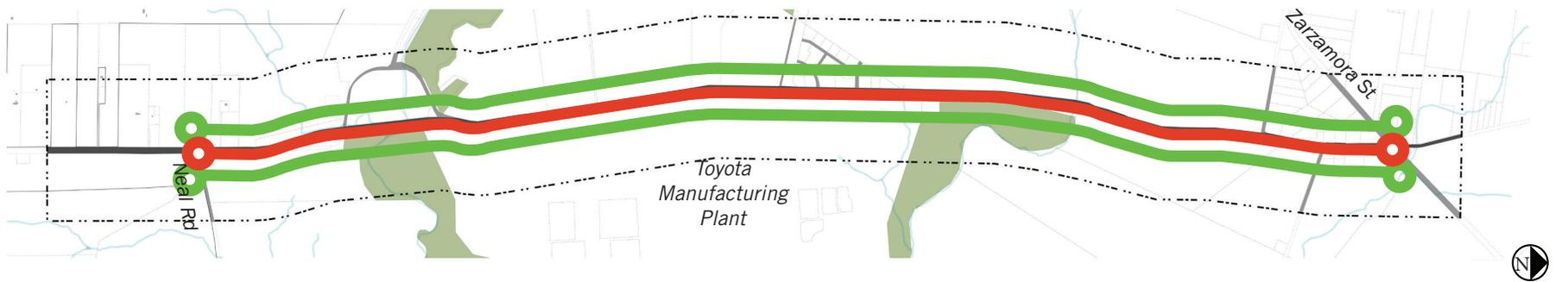


Widen to add cycle tracks, both sides.



Landscaped median with left-turns where needed.

Future Phase 2: 6 Lanes + Multiuse Path



Strategies



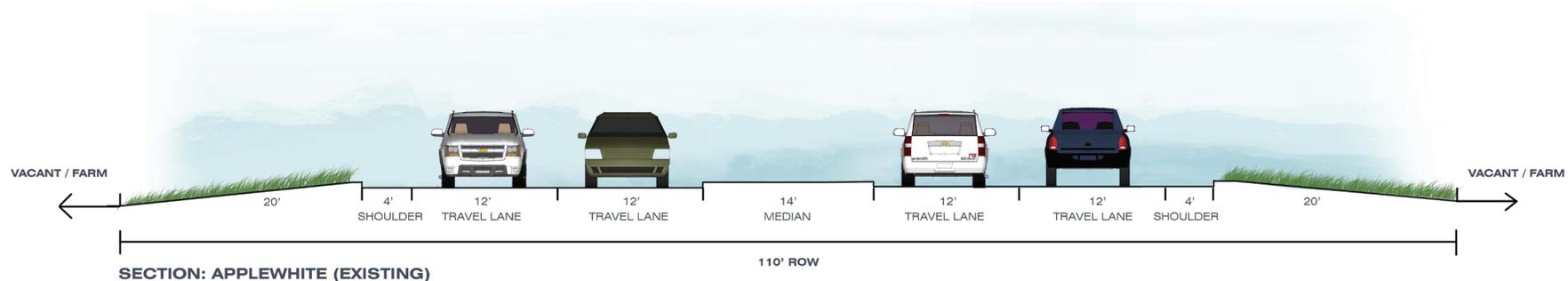
Widen to 6-Lanes where traffic volumes necessitate. Maintain center medians with left turn bays and openings provided where needed.



As traffic increases separate bike and vehicular traffic via multi-use path off roadway.

Long Term Multimodal Options: Existing Cross Section

110' Right Of Way

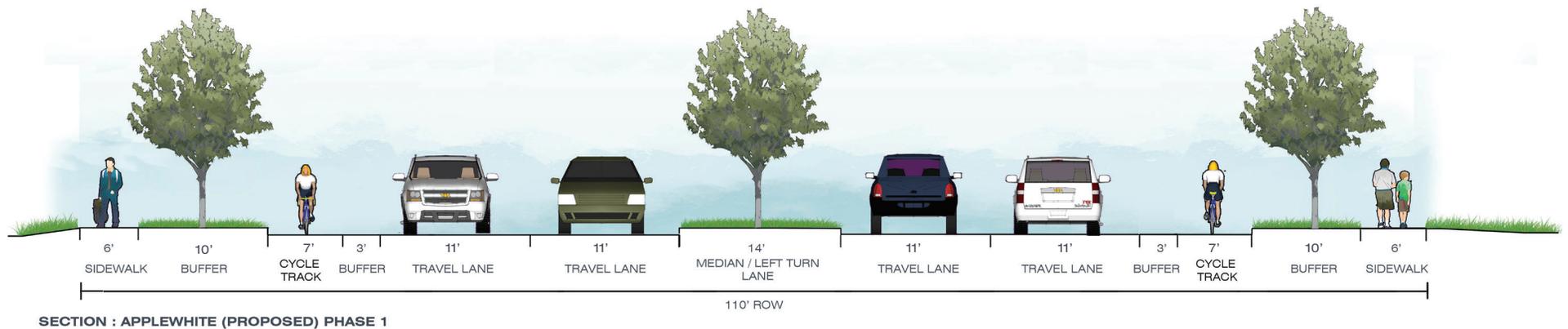


Long Term Multimodal Options

Multimodal Opportunities

The Applewhite Road concept demonstrates a potential phased approach to providing multimodal options. While Applewhite has a right of way width of 110 feet, many similar corridors may have less, and in order to provide multimodal facilities on these streets, it is important to identify desired widths that can accommodate multiple modes and acquire additional needed right of way as the corridor develops.

Future Phase 1: Cycle Tracks + Landscaped Median, Buffered Sidewalks



Description:

Phase 1 transitions from a rural character with minimal development along the roadway to one where development and growth are beginning to take place. The installation of a landscaped median will improve access management by controlling left turn and median openings as intersecting streets and driveways from developments are added. In Phase 1, the roadway is widened from 70 feet to 76 feet. Cycle tracks are installed on each side of the road, providing a physical barrier between bicyclists and traffic. Sidewalks are located at the outside of the available ROW, allowing for a generous landscaped buffer area.

Opportunities:

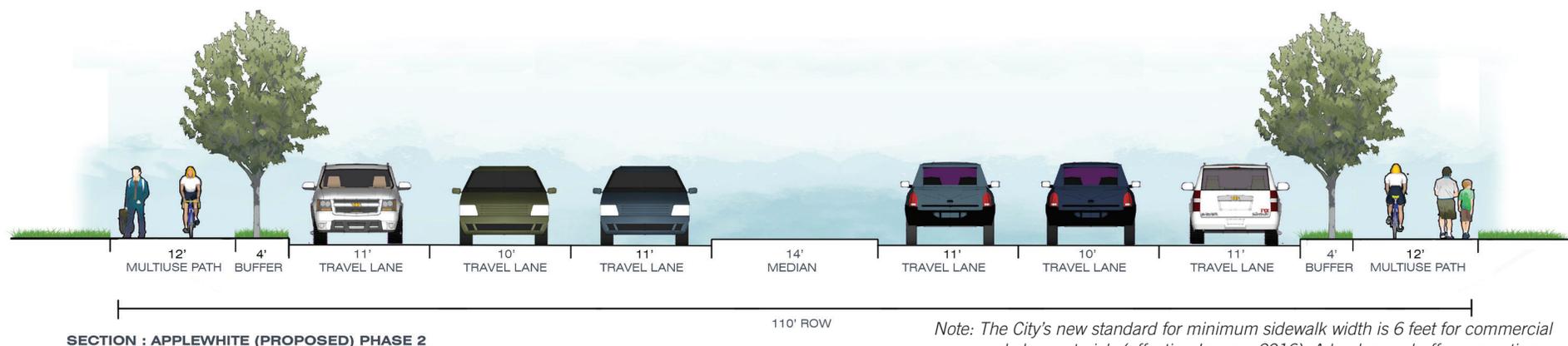
Starting with a blank slate on roadways with minimal development, the opportunities are endless. The objective is to plan early for the ultimate multimodal option that can be accommodated within the ROW and develop phasing plans that provide a roadmap for how to reach the ultimate solution.

Challenges:

- Implement features that calm traffic to reduce speeds as development takes place.
- Implement policy that will control access to and from developing parcels to limit median openings and left turn movements. Driveways should be kept to a minimum to reduce vehicle, pedestrian and bicycle conflicts.
- Coordinate with VIA and other agencies to maintain design vision as development occurs.

Long Term Multimodal Options

Future Phase 2: 6 Lanes + Shared Path + Landscaped Median



Note: The City's new standard for minimum sidewalk width is 6 feet for commercial areas and along arterials (effective January 2016). A landscape buffer separating sidewalks from traffic is desirable. However, what is shown is based on retrofitting an existing roadway within the available ROW

Description:

In Phase 2, Applewhite is experiencing increased development due to growth in the area. Properties along the frontage are being developed as well as areas beyond the corridor increasing the demand for pedestrian, bicycle and vehicular capacity. Phase 2 recognizes the increase in development and resulting traffic volumes along the roadway. As the corridor becomes more developed, the cycle tracks shown in Phase 1 can be removed to add an extra traffic lane in each direction without widening the roadway. The roadway is restriped to provide 3 lanes in each direction. The 2 inside lanes are 10 feet wide while the outside lane is 11 feet minimum in expectation that with growth, the area will see transit service. A multi-use path off the roadway is incorporated to physically separate the bikes from the travel lanes and the increased traffic on the road. Pedestrians are accommodated with a walkway adjacent to the bike facility. Both pedestrians and bicyclists are separated from traffic with a landscaped buffer. The median is retained to provide access management and control the proliferation of driveways along the corridor.

Opportunities:

Consider incorporating features that support multimodalism:

- Roundabouts as traffic control at intersections
- Pedestrian crossings at intersections and mid-block with warning measures and/or HAWK signals
- Lighting for pedestrian and bicyclists
- Treatments at intersections to promote safe crossings by bicyclists (bike boxes, bike signals, signs and pavement markings)
- Amenities at transit stops and nodes where modes connect

Challenges:

- Maintaining the policies that were put in place to control driveway access and median openings will be a challenge as development occurs.
- Coordination with VIA and other agencies will be needed to continue to maintain the design vision for the corridor as development occurs.

Corridor Recommendations

					Recommendations	Benefits
					Develop Phased Cross Sections that accommodate other modes of transportation	Allowing for other modes of transportation (active and motorized) will allow more people to safely use the facility. A phased approach will allow these changes to be made as growth begins to occur in the corridor.
					Reconfigure Intersection at Zarzamora	Realigning the roadway at the Zarzamora intersection will provide direct through movements from SB Zarzamora to Applewhite.
					Make Connections to Regional Trails	There are several trails near the Medina River that either intersect or come near the road. Connecting active transportation facilities on Applewhite to these trails will expand the active transportation network.
					Establish a transit connection to the Toyota Manufacturing Facility	As the primary employer along the corridor, the Toyota Manufacturing Facility is the largest traffic generator. Providing a regional or express transit line to the facility will help to alleviate some congestion.
					Encourage residential uses for those who work along the corridor	Another method to alleviate congestion is to promote residential uses near the Toyota Manufacturing Facility so people will have shorter commute to work.



Transit Improvements



Pedestrian Improvements



Bicycle Improvements



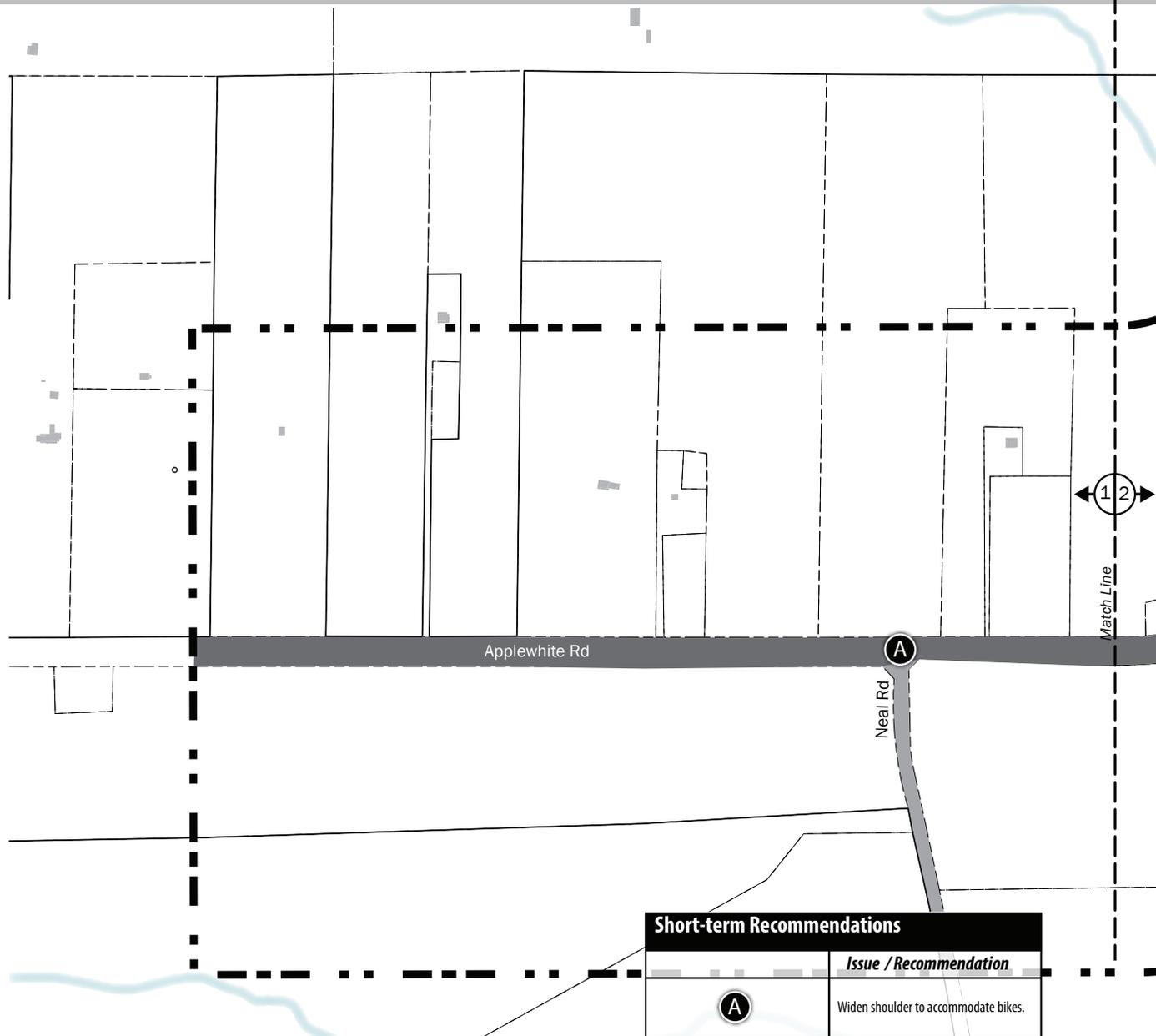
Vehicular Improvements



Land Use Improvements

Rural

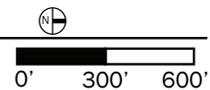
SHEET #1



Short-term Recommendations	
	Issue / Recommendation
A	Widen shoulder to accommodate bikes.

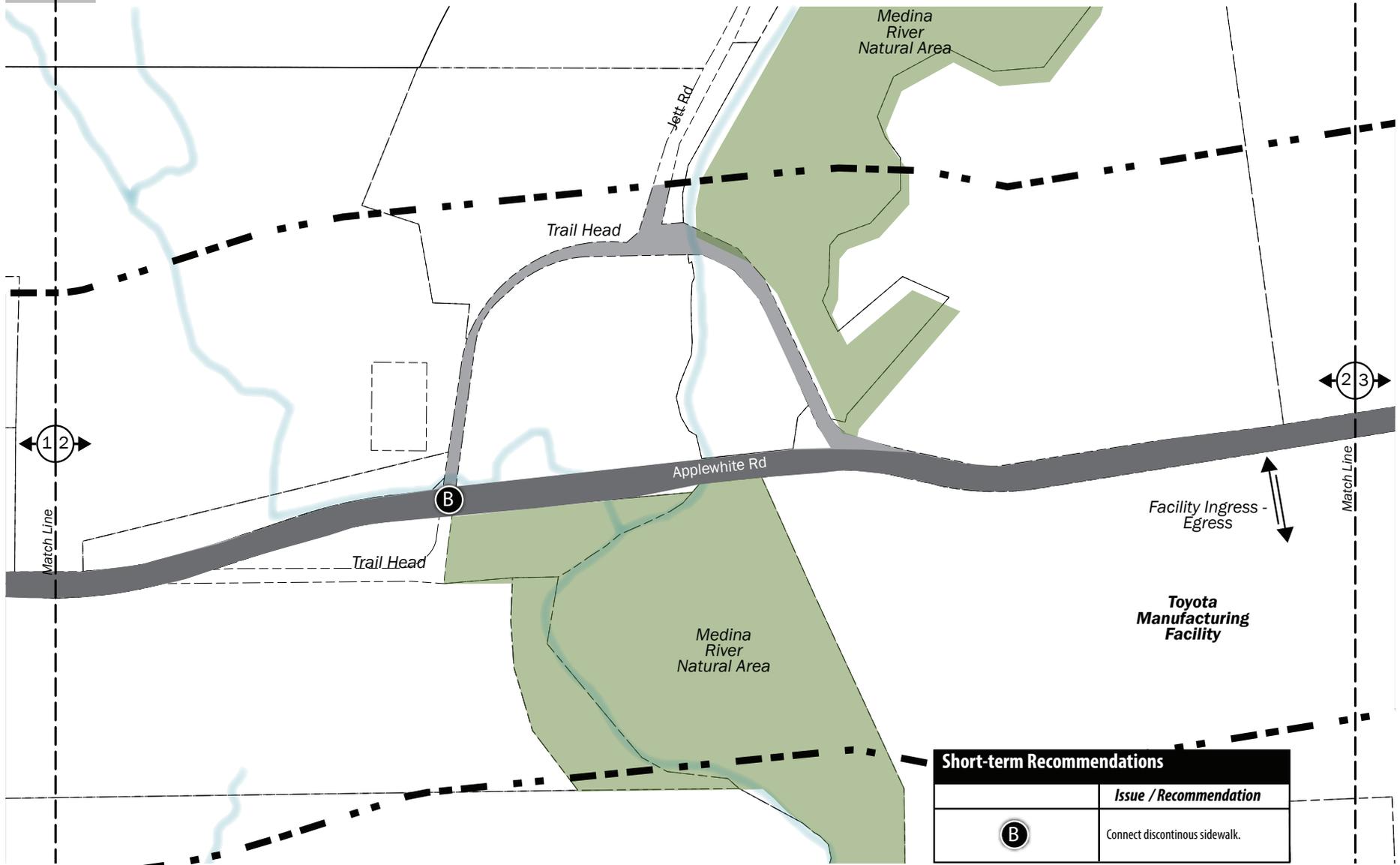
Applewhite Corridor Analysis: Sheet 1 Short Term Recommendations

- Open Space
- Study Area



Rural

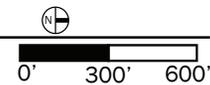
SHEET #2



Short-term Recommendations	
	Issue / Recommendation
B	Connect discontinuous sidewalk.

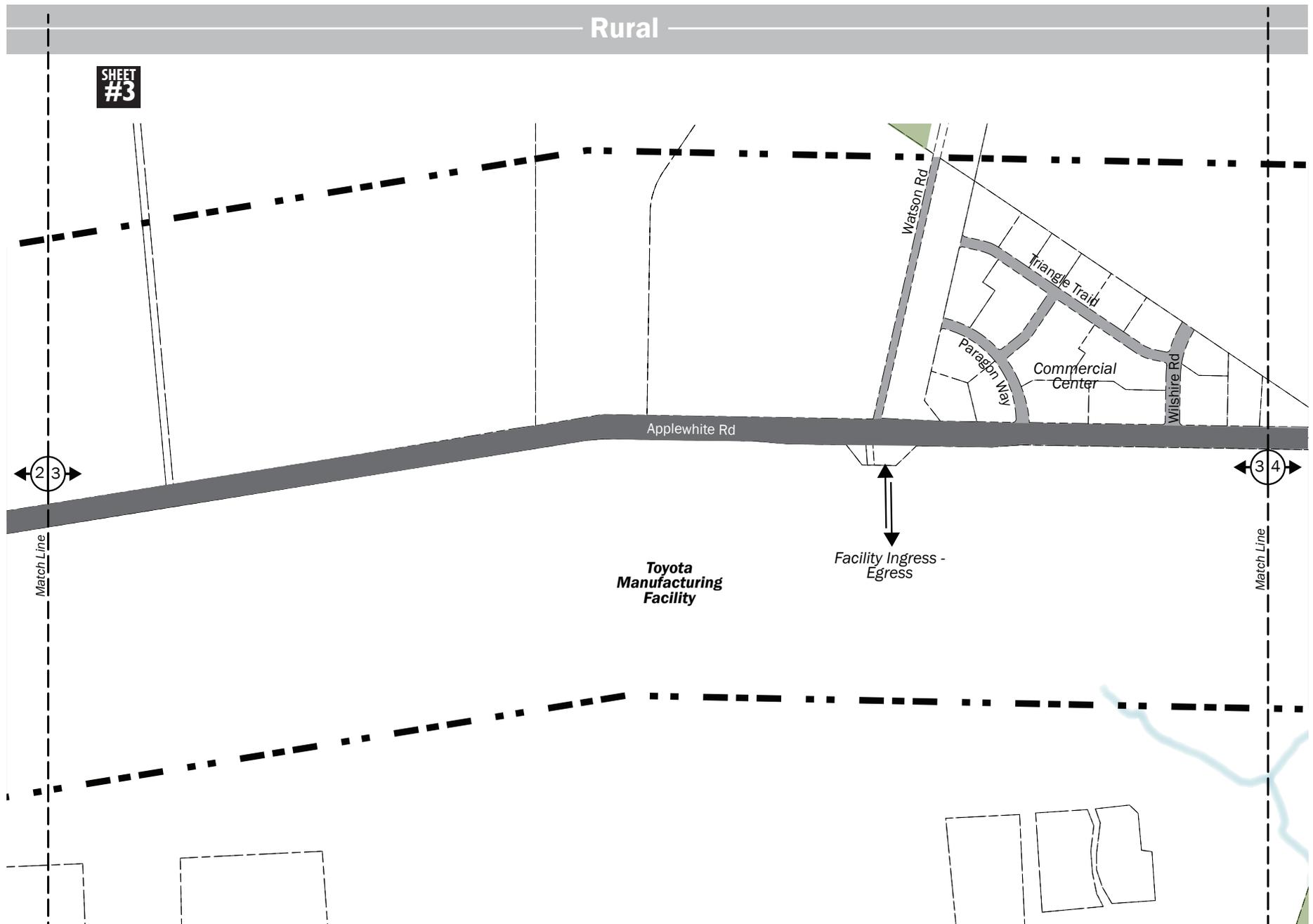
Applewhite Corridor Analysis: Sheet 2 Short Term Recommendations

- Open Space
- Study Area



Rural

SHEET #3



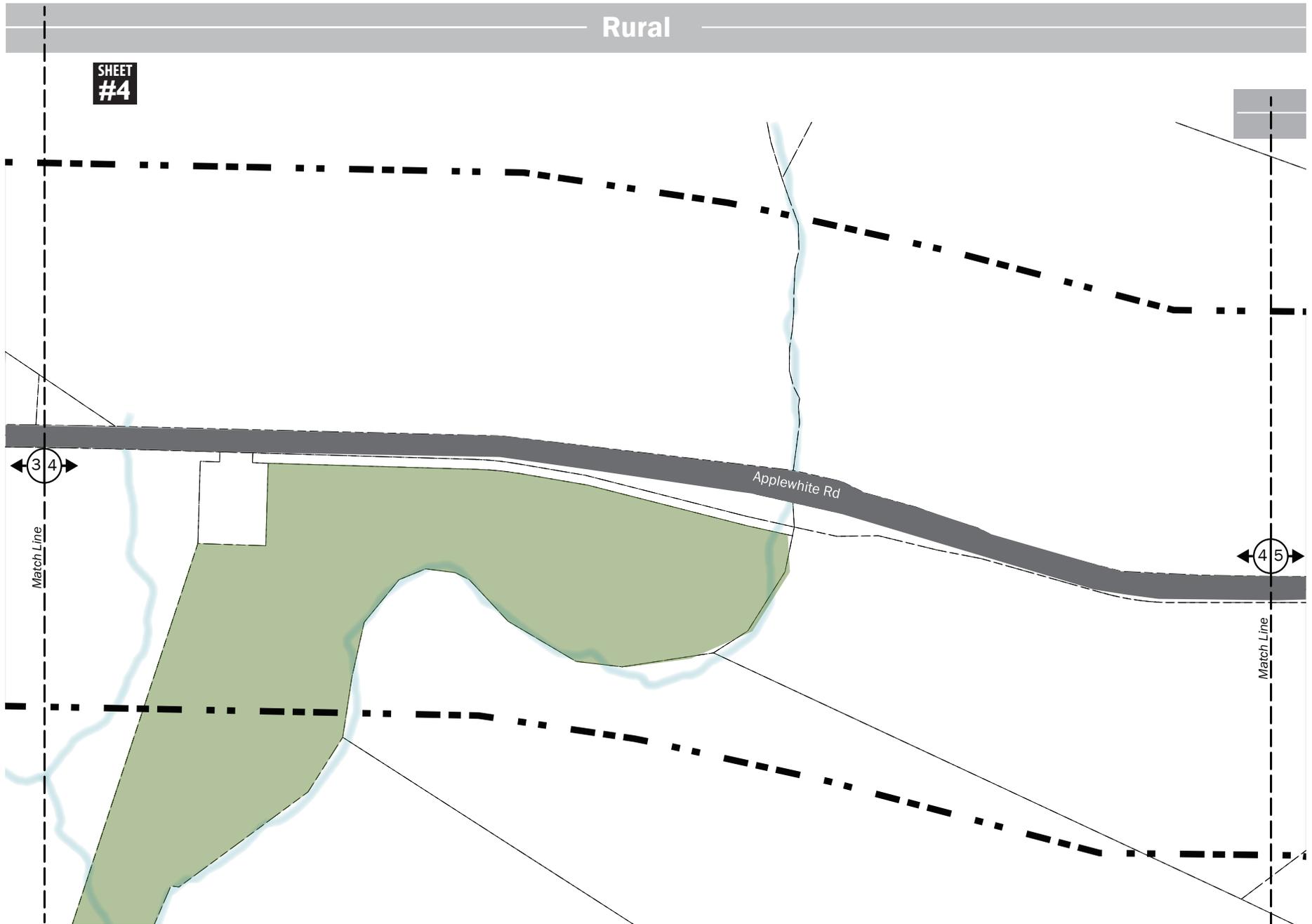
Applewhite Corridor Analysis: Sheet 3 Short Term Recommendations

- Open Space
- Study Area



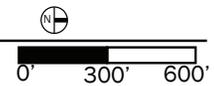
Rural

SHEET #4

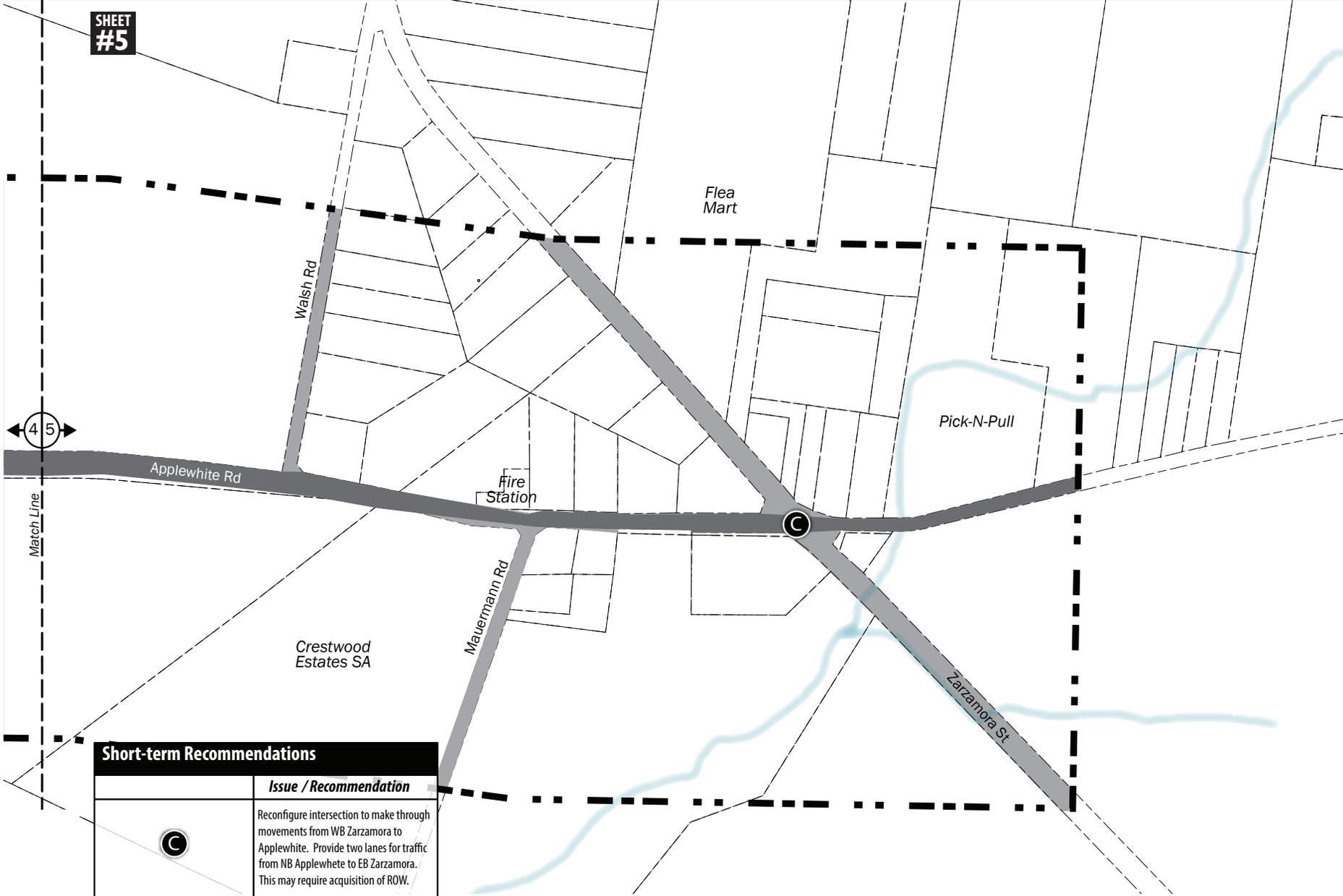


Applewhite Corridor Analysis: Sheet 4 Short Term Recommendations

- Open Space
- Study Area



SHEET #5



Short-term Recommendations

	<i>Issue / Recommendation</i>
	Reconfigure intersection to make through movements from WB Zanzamora to Applewhite. Provide two lanes for traffic from NB Applewhite to EB Zanzamora. This may require acquisition of ROW.

Applewhite Corridor Analysis: Sheet 5 Short Term Recommendations

-  Open Space
-  Study Area



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