

**Context**

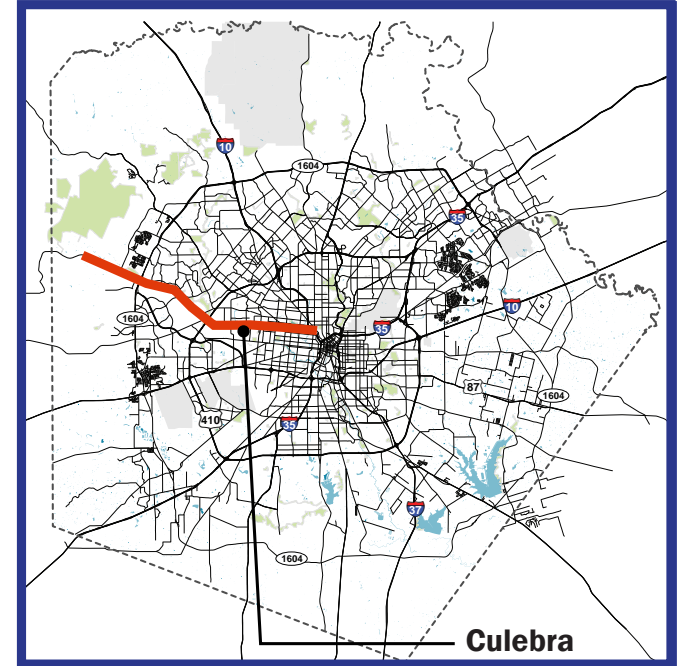
Culebra Road is located on the west side of San Antonio. It extends west from downtown outside Loop 1604. Due to its length, the corridor crosses several land use context types which affect the general character of the corridor. Culebra can most easily be evaluated by splitting it into three sections: IH 10 to Loop 410, Loop 410 to Loop 1604, and Loop 1604 to Talley Road. Much of the development along the corridor is residential, with both small and large pockets of commercial/institutional development (such as St. Mary's University), though the roadway cross section varies in each segment.

A large number of VIA Metropolitan Transit stops are located along Culebra from IH 10 to Loop 1604. There are no transit stops located outside Loop 1604, west of Westwood Loop.

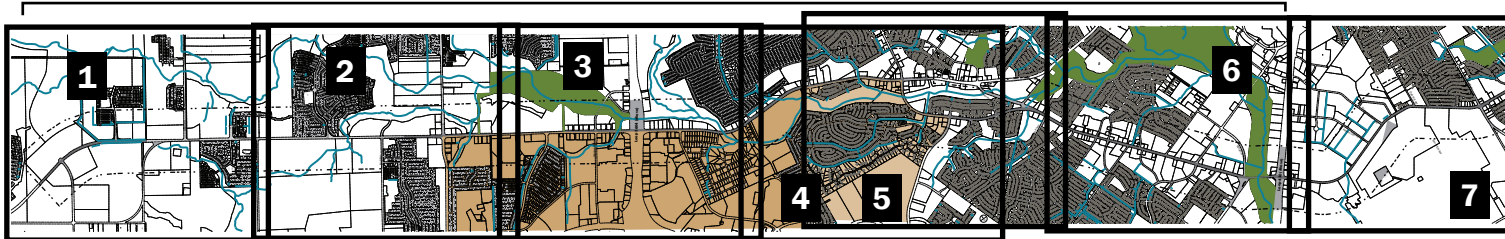
An on-street bike facility is present from Alamo Pkwy to Loop 1604 and from Grissom Rd to Loop 410. There are also facilities on streets parallel to Culebra. The Leon Creek Greenway is located along the corridor, providing a trail connection to users.

Sidewalks are generally available along the corridor (inside Loop 1604), though a few gaps exist. Outside Loop 1604 the roadway is not built out and numerous sidewalk gaps exist. TxDOT, in partnership with CoSA, is working on adding pedestrian z-crossings at Hamilton, Navidad, and Williams.

Buildings located along Culebra are generally set back far from the roadway. This limits the interaction of pedestrians with businesses. Several areas along the corridor have the potential for redevelopment.



*Culebra Road Sheet Set Key*



# Culebra Road Observations, Challenges and Stakeholder Input

## Vision

**Culebra Road** will continue to function as a major arterial connecting far west San Antonio to downtown. Far west San Antonio is continuing to experience rapid growth and traffic demand is anticipated to continue to increase. Though construction is underway on the corridor, Loop 1604 will provide some congestion relief in the western portion of the corridor. However, growth will likely outpace any added capacity. In the future, transit options will be key to absorbing additional growth.

## Future

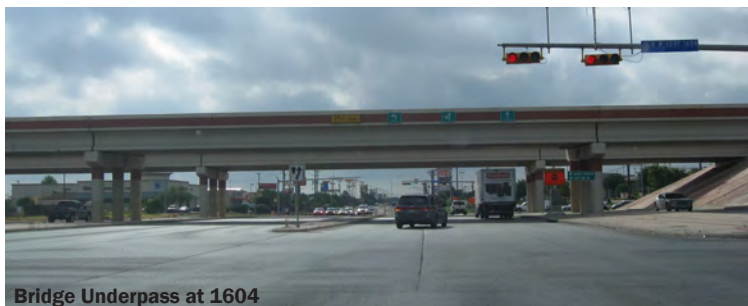
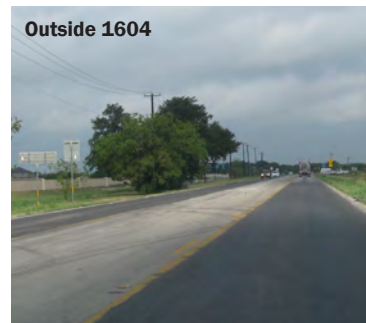
- Access Management - Continue pursuing projects to minimize driveways in the corridor will benefit all users.
- Thoroughfare construction - eventual construction of the MTP cross section outside Loop 1604 will provide increased mobility for local traffic.
- Transit Investment - continued transit investment in the area consistent with the VIA 2040 Plan will provide commuters with additional choices.

## Policy & Guidance

**Access Management** – Strategically consolidate driveways and install medians to limit locations where left turns are permissible to reduce pedestrian, cyclist, and vehicular conflicts.

**Utilities** – Relocate utilities underground to remove barriers to accessibility and improve aesthetics.

**Vision Zero** – Focus on pedestrian safety in this corridor, choosing improvements that enhance safety and support transit over those that increase vehicle throughput.



## Issues

**Roadway** – The variability of Culebra’s design as it travels from downtown out to a more rural context, is made even less consistent as the ROW changes. In the downtown context, the existing ROW limits future facility expansion. Whereas in the suburban context, the opportunity to acquire more ROW is still possible and has already been dedicated in many locations. Culebra is also under the authority of more than one government agency.

Culebra crosses both Loop 410 and Loop 1604 (as underpasses), which creates an unfriendly crossing environment for both pedestrians and bicyclists.

**Transit** – Transit stops are not present outside Loop 1604. Park and Ride locations and/or transit stops outside Loop 1604 would provide additional travel choices for commuters.

**Bicycles** – Although there is a bicycle lane present for sections of Culebra, it is quite narrow and is not buffered from vehicular traffic that frequently exceeds 40 mph. Residents that commented on this facility during public outreach expressed a feeling of being unsafe when using the lane.

**Pedestrian** – Although present along the corridor, many of the sidewalks are discontinuous. Intersections are wide and crossing them can be difficult.

**Land Use** – West of Loop 1604 Culebra Road has commercial development throughout. Development is set back from the ROW, creating a challenge for pedestrian use.



Strategies



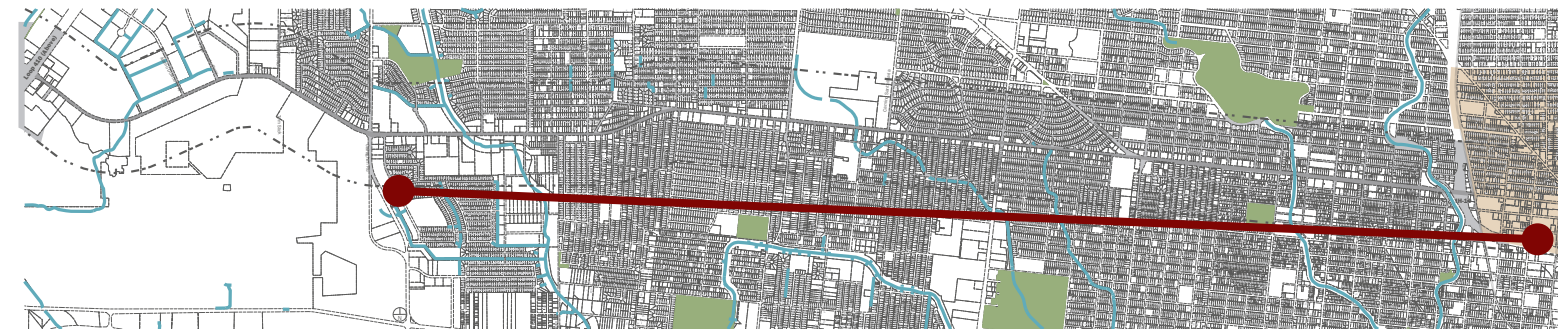
Expand Right-of-Way to 130' to accommodate 8 foot bike lanes and 11 foot sidewalks.



Provide improved access to transit.



Continued access management and pedestrian crossing improvements.



Strategies

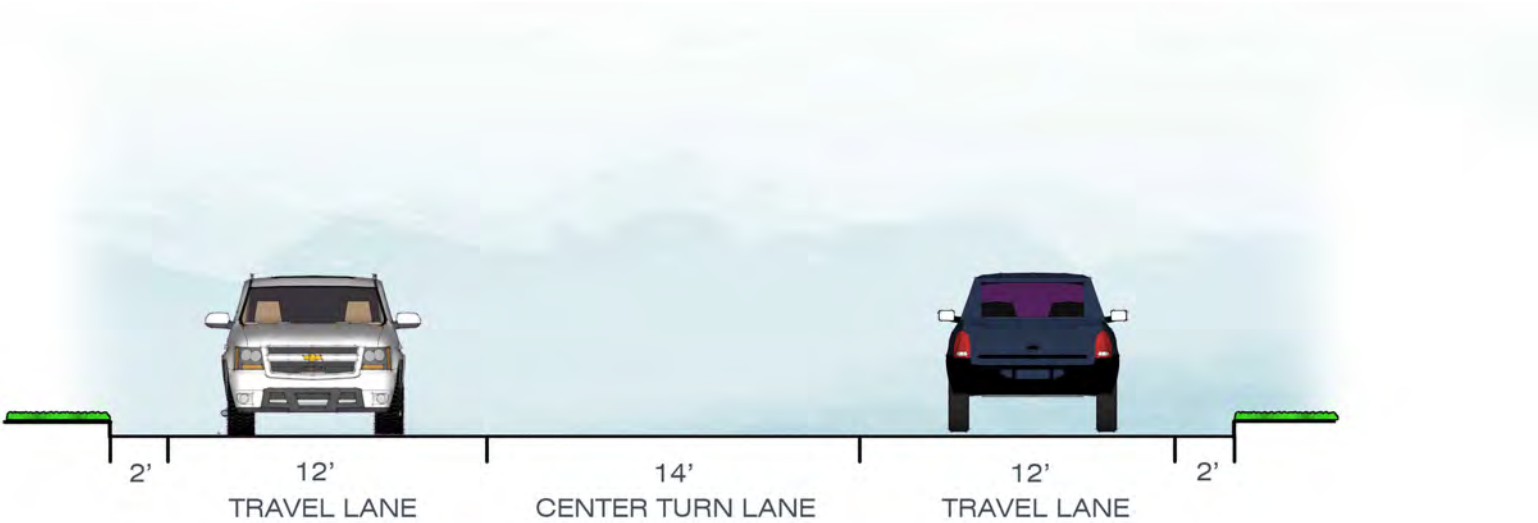


Continued focus on pedestrian safety improvements.

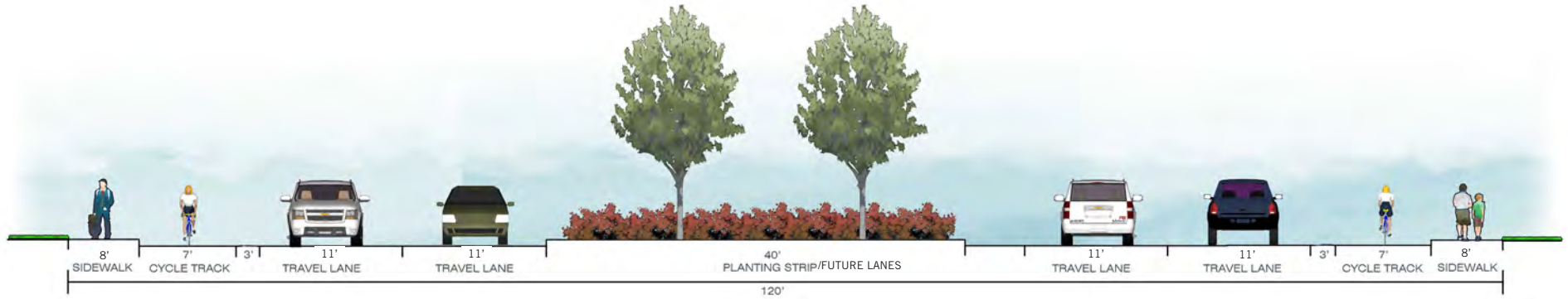
# Culebra Road Long Term Multimodal Options: Existing Cross Sections



Cross Section: Culebra West of Alamo Ranch



**Future Option 1: Median 120'**



**Description:** The existing cross-section on Culebra Road, west of Alamo Ranch is a two lane undivided roadway with a center two-way left-turn lane. Residential development borders the corridor with commercial development existing or under construction fronting Culebra in many areas.

**Opportunities:**

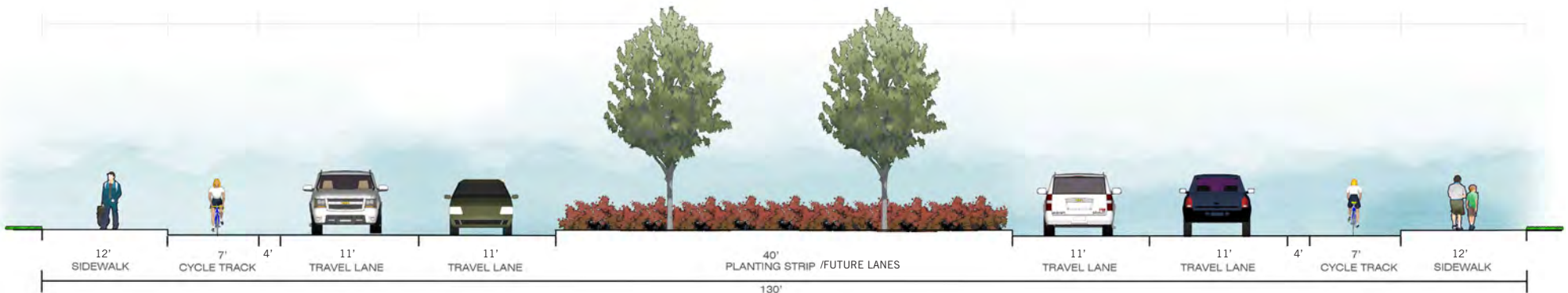
- 130' Section provides additional comfort for bicyclists and pedestrians.
- Enhanced aesthetics.

The existing cross-section of Culebra, west of Alamo Ranch is an existing two lane undivided roadway. By expanding Culebra, west of Alamo Ranch, to a 130 foot right-of-way (rather than a 120 foot right of way as shown in the existing MTP), a four lane divided cross-section with 8 foot bike lanes and 11 foot sidewalks could be incorporated. This slight increase in right-of-way width supports a strong multi-modal corridor.

**Challenges:**

- Requires Right-of-Way.






**Future Option 2: Median 130'**



# Culebra Road Short-term Corridor Recommendations



## Short - Term Multimodal Options

					<b>Recommendations</b>	<b>Benefits</b>
					Widen Westover Hills approach at Culebra to add right turn bay. Re-design existing three lanes as two lefts and a turn lane.	This change will increase vehicular corridor progression by eliminating the split phase signal operation.
					Access management starting at Tezel and Grissom, going east throughout the corridor needs to be considered.	Increasing access management will improve vehicular mobility and reduce vehicular accidents.
					Bicycle lanes need to be added from Village Park to the greater Northwest Area.	Provides additional options and could encourage more people to bike.
					Consolidate VIA Metropolitan Transit Stops.	Ridership rates will increase at consolidated areas and maintenance costs will decrease due to the lower number of stops to maintain. Shelters can be installed in additional locations where ridership increases.
					Install raised medians from Loop 410 to IH 10.	Will facilitate access management, improve traffic progression, and provide refuges for pedestrians.
					Widen Northbound and Westbound approaches to provide dual left turn bays.	Will increase progression and decrease the intersection level of service (delay).
					Install a pedestrian Z-crossing at Culebra and 19th Street.	This improvement will increase pedestrian safety.
					Install a pedestrian Z-Crossing at Culebra and Hamilton.	This improvement will increase pedestrian safety.
					At Westwood Loop, adjust lane assignments on Southbound approach to a shared left turn and through and a single right turn lane, add a right turn overlap on the following approaches (WBR, NBR, SBR).	This intersection improvement will increase progression and improve the level of service (reduce intersection delay).



Transit Improvements



Pedestrian Improvements



Bicycle Improvements

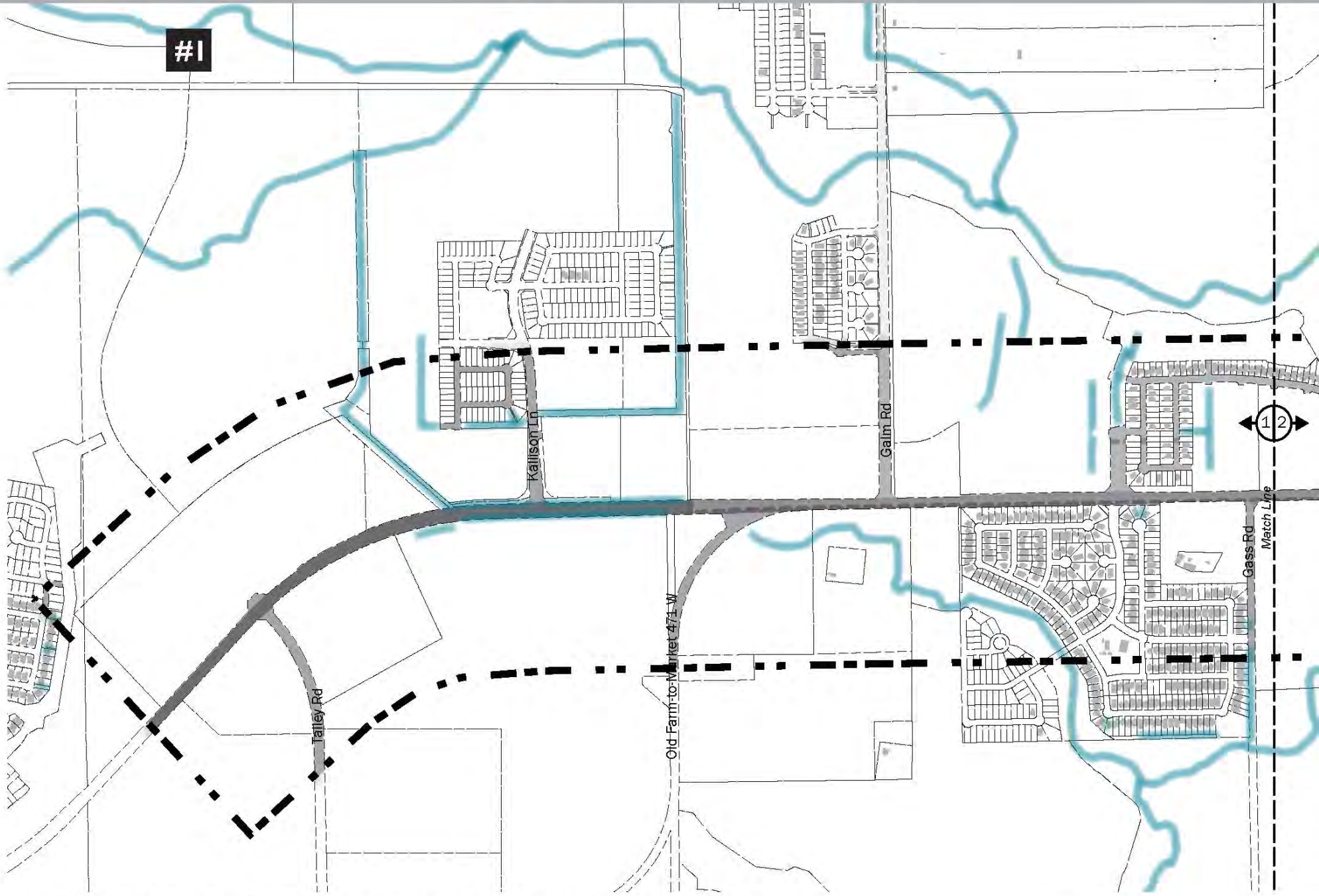


Vehicular Improvements



Land Use Improvements

#1



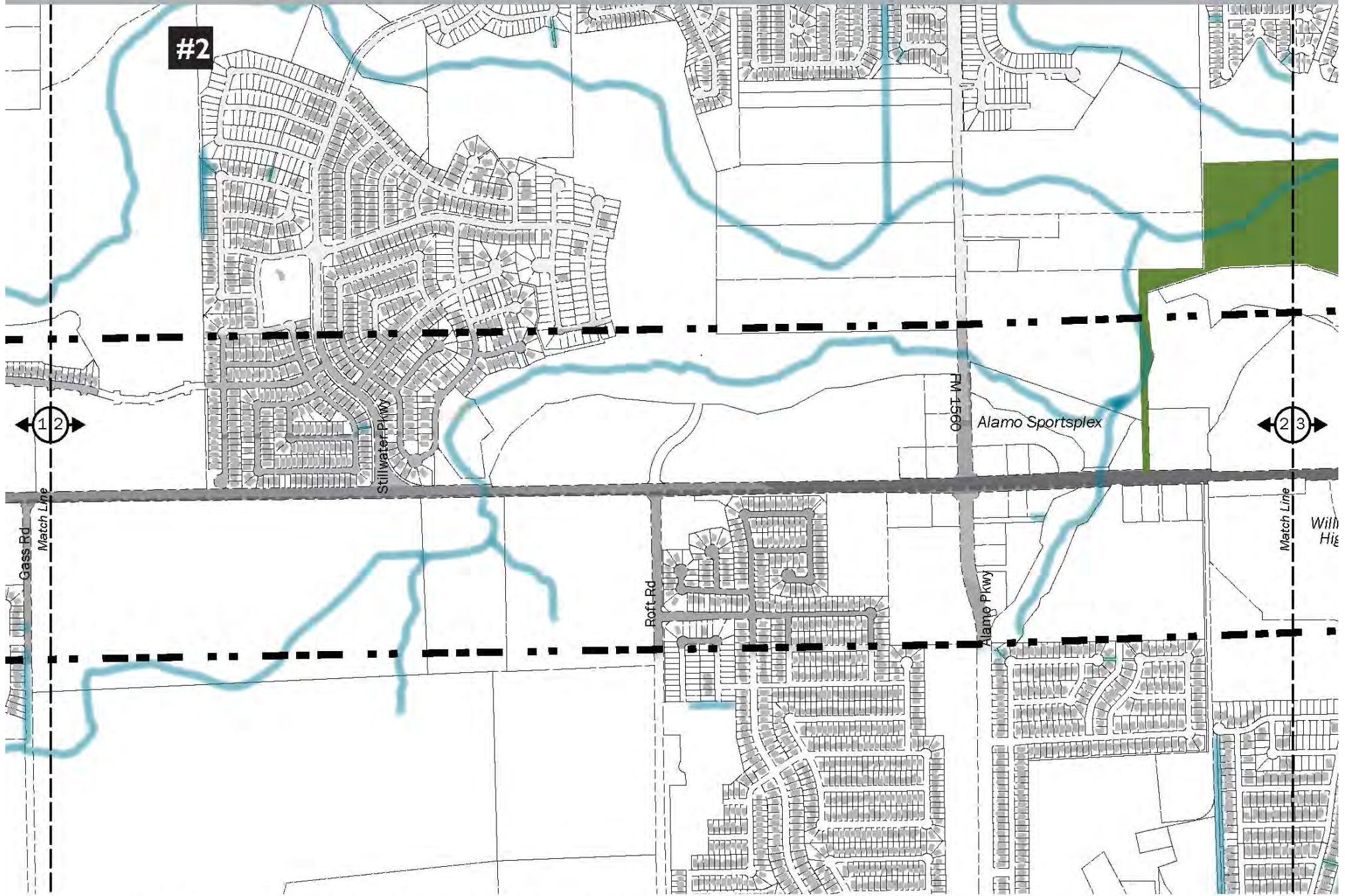
Culebra (Page 1) Corridor Analysis: Sheet 1 Short Term Recommendations

12.05.2015

- Open Space
- Study Area



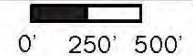
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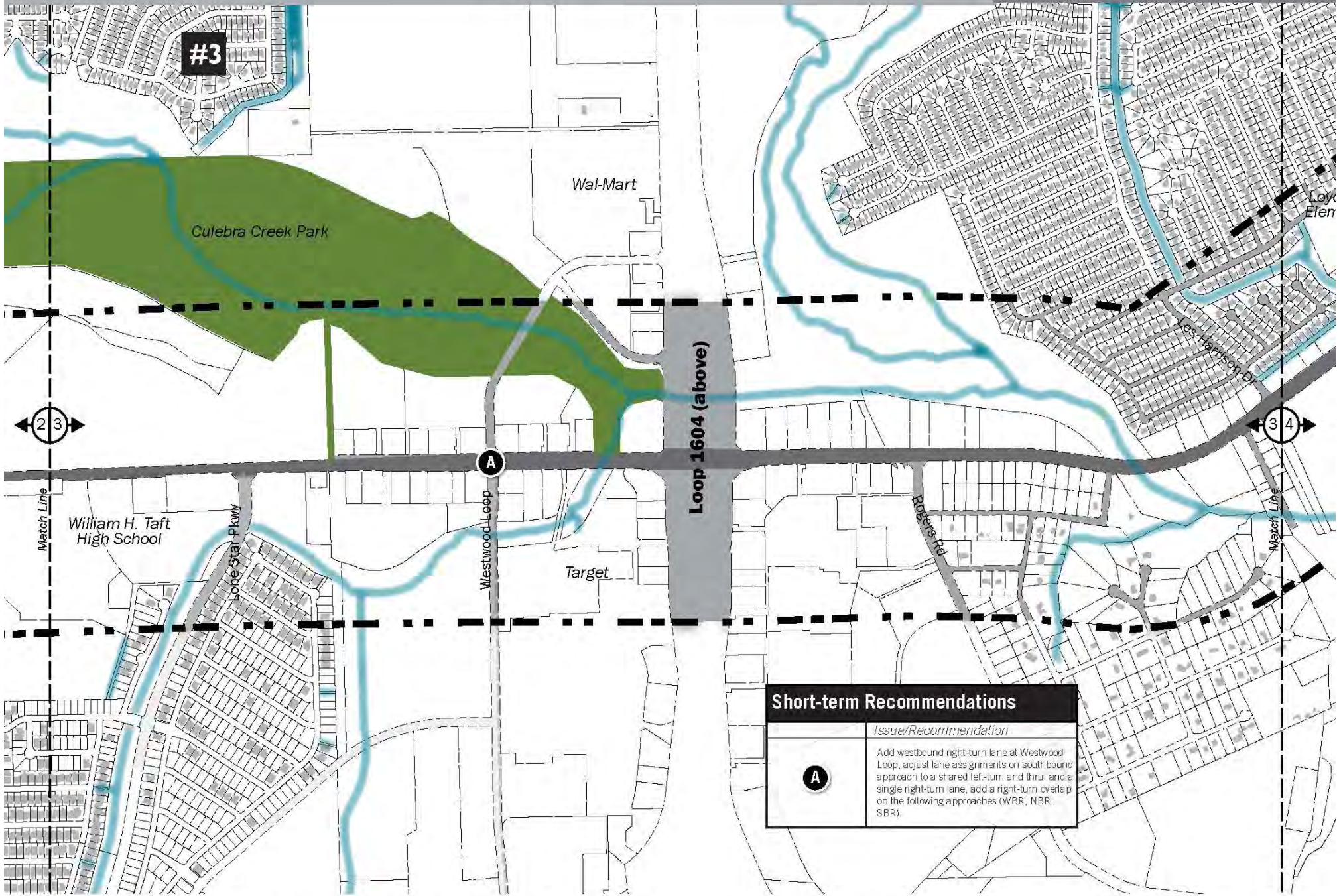
Culebra (Page 1) Corridor Analysis: Sheet 2 Short Term Recommendations

12.05.2015

- Open Space
- Study Area








Culobra (Page 1) Corridor Analysis: Sheet 3 Short Term Recommendations

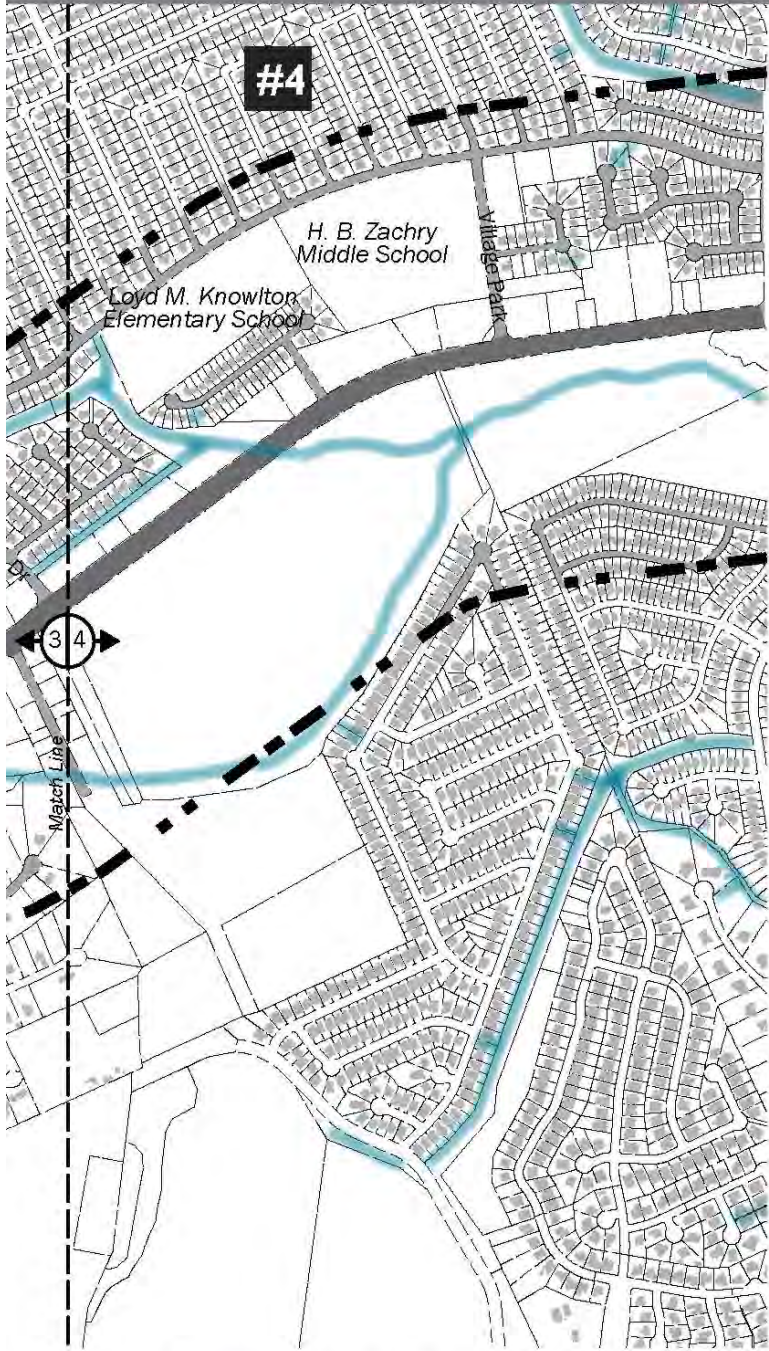
12.05.2015

 Open Space  
 Study Area





 0' 250' 500'


# SUBURBAN




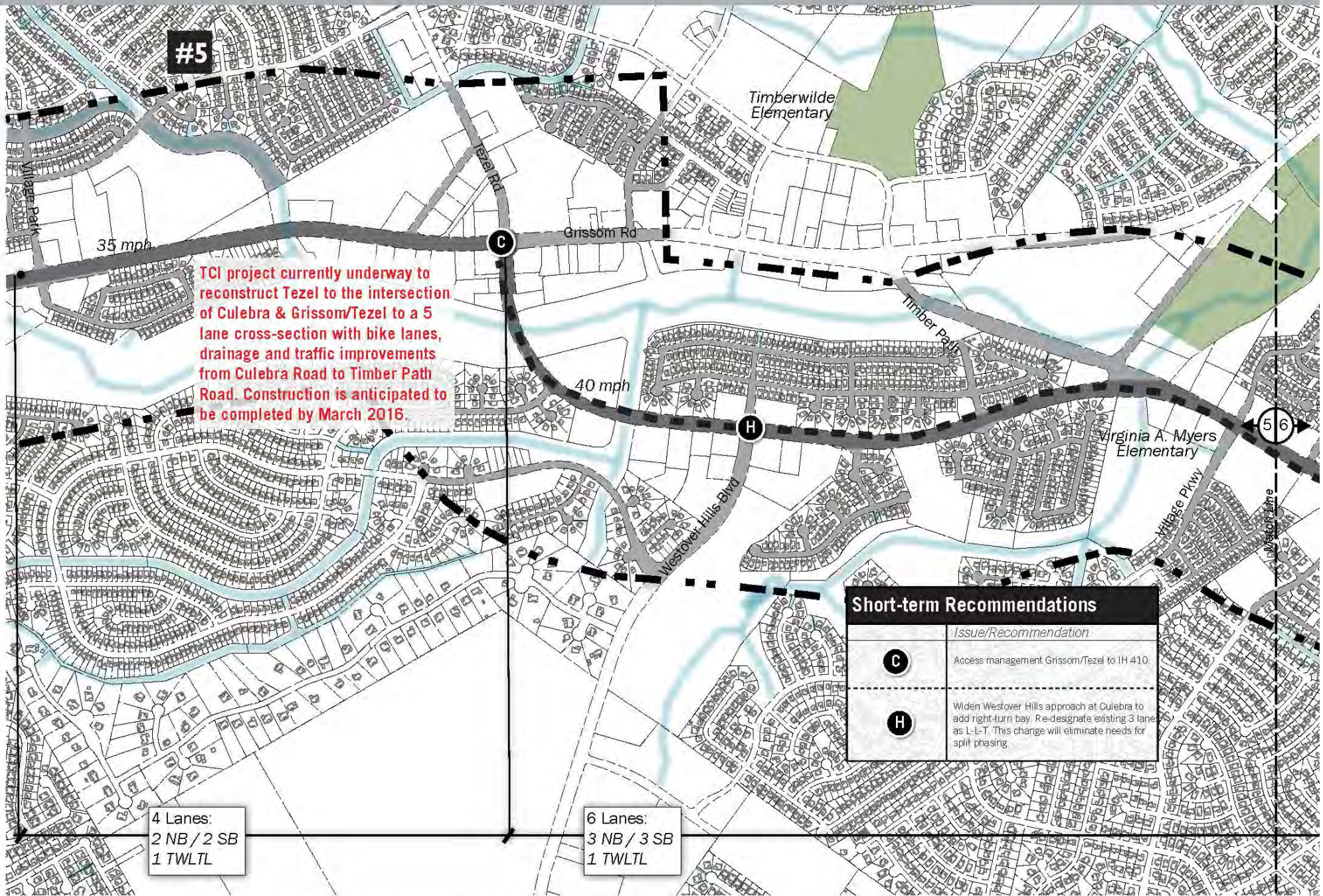
Culebra (Page 1) Corridor Analysis: Sheet 4 Short Term Recommendations

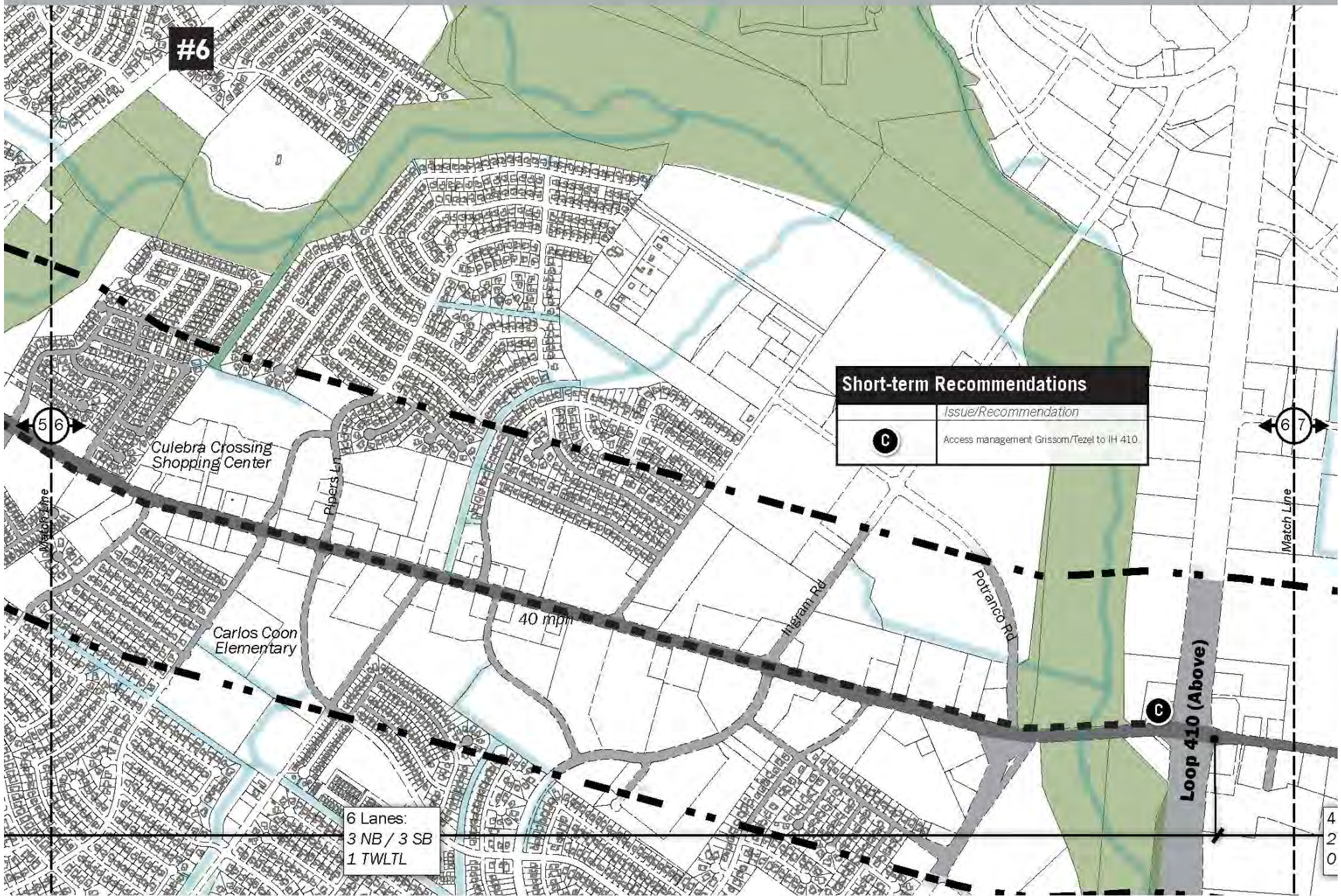
-  Open Space
-  Study Area



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0' 250' 500'





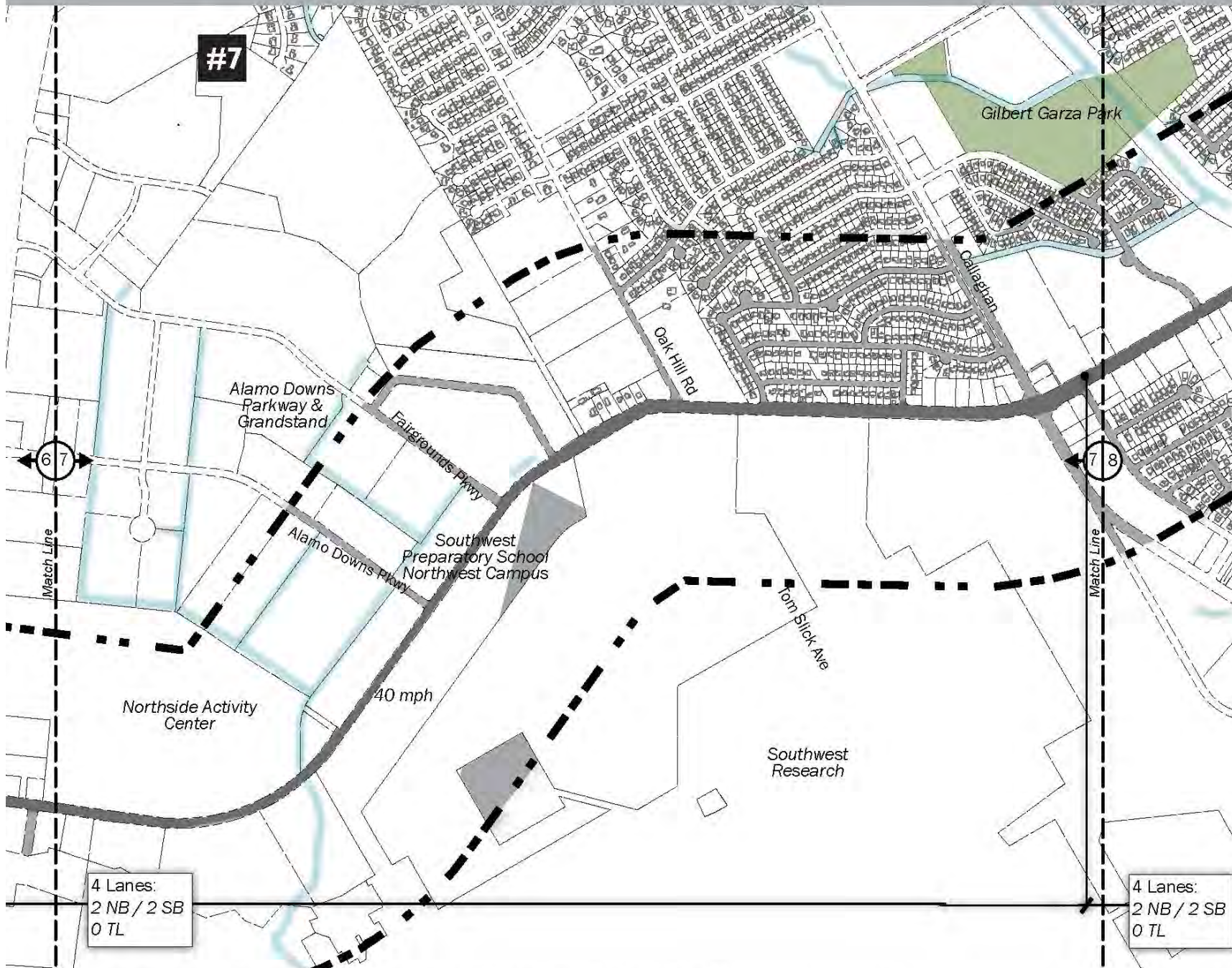
Culebra (Page 2) Corridor Analysis: Sheet 6 Short Term Recommendations

12.05.2015

Open Space  
Study Area



0' 200' 400'



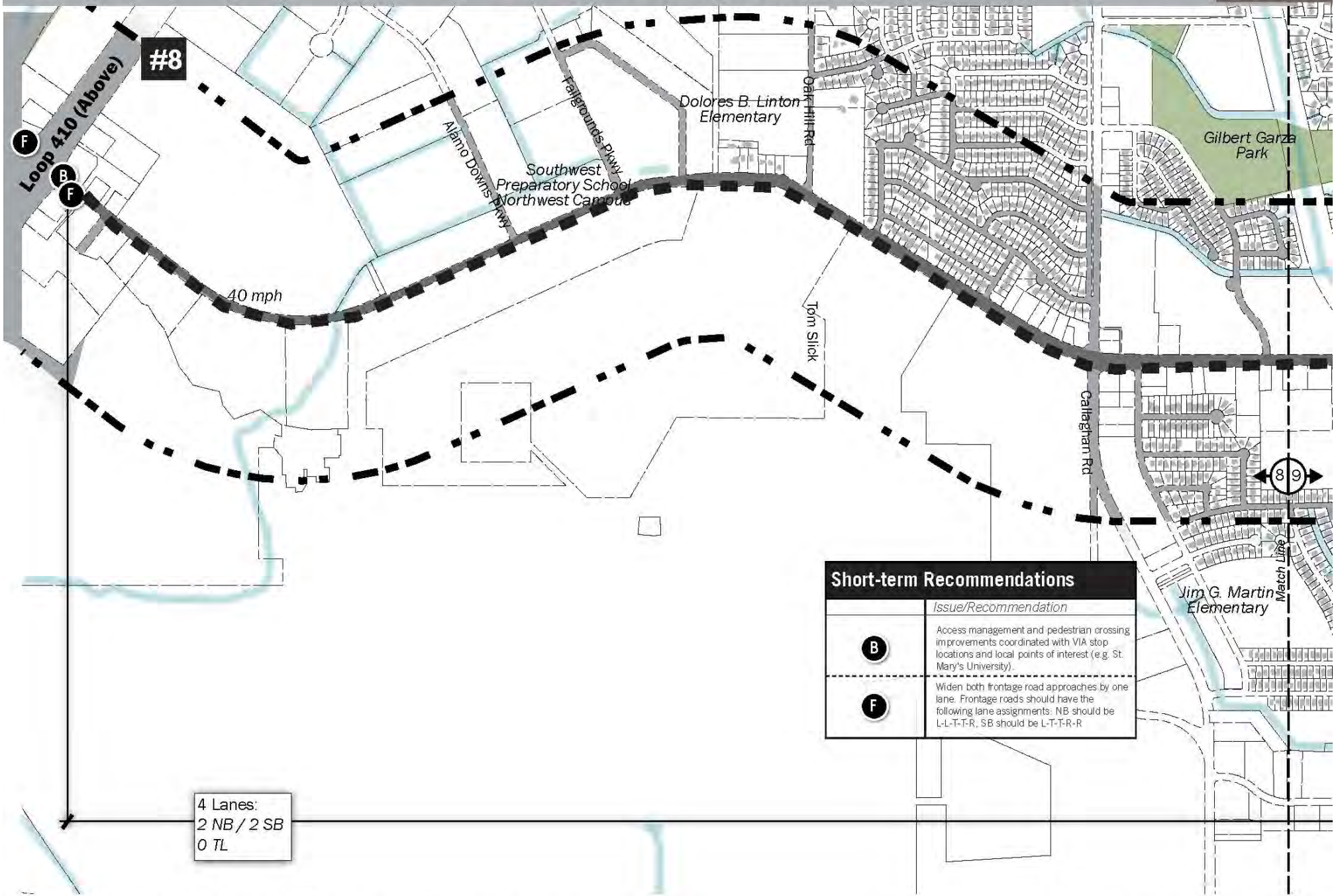
Culebra (Page 2) Corridor Analysis: Sheet 7 Short Term Recommendations

12.05.2015

Open Space  
Study Area



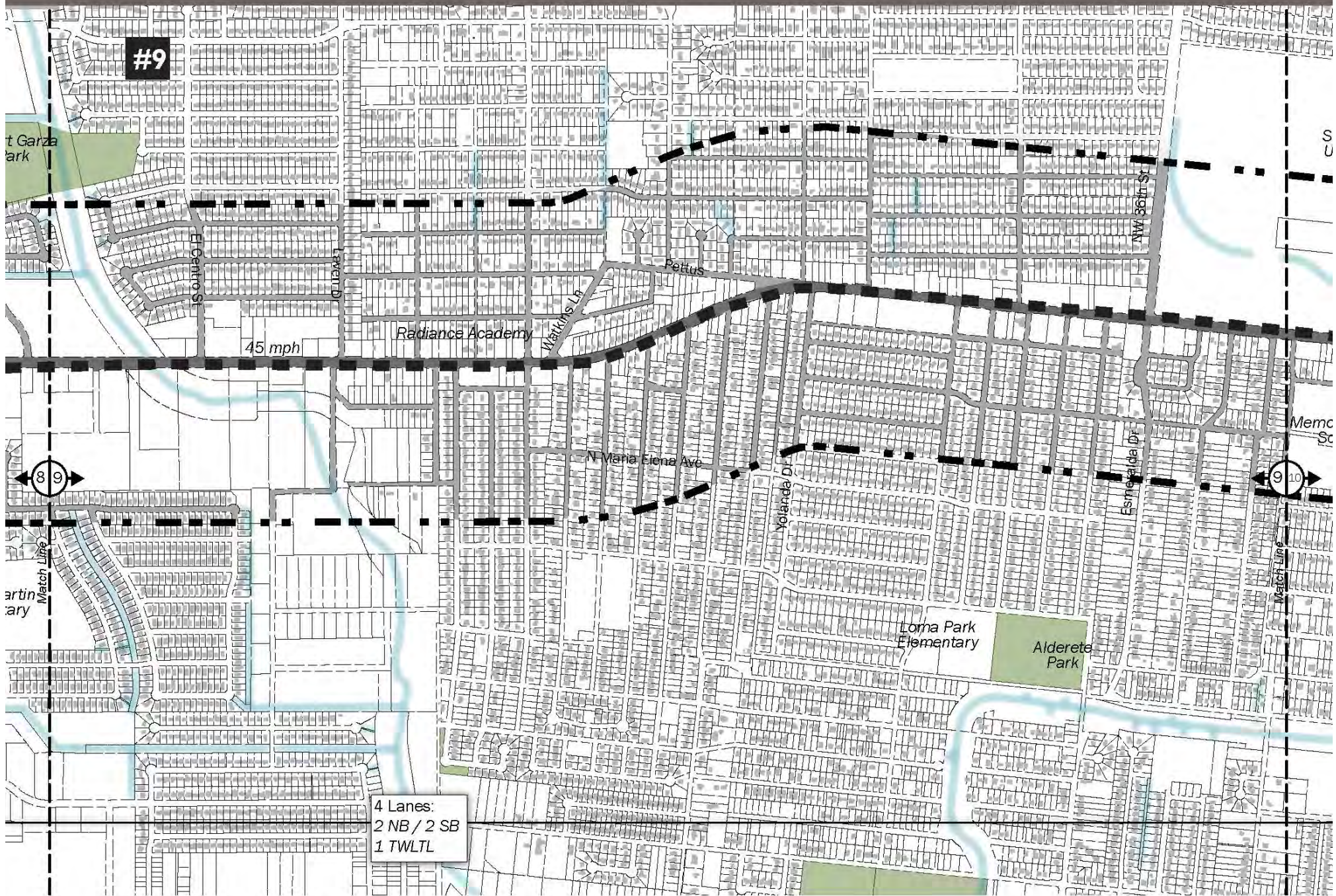
0' 200' 400'



Short-term Recommendations	
	Issue/Recommendation
<b>B</b>	Access management and pedestrian crossing improvements coordinated with VIA stop locations and local points of interest (e.g. St. Mary's University).
<b>F</b>	Widen both frontage road approaches by one lane. Frontage roads should have the following lane assignments: NB should be L-L-T-T-R, SB should be L-T-T-R-R

4 Lanes:  
2 NB / 2 SB  
0 TL

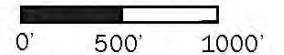
# URBAN/SUBURBAN TRANSITION



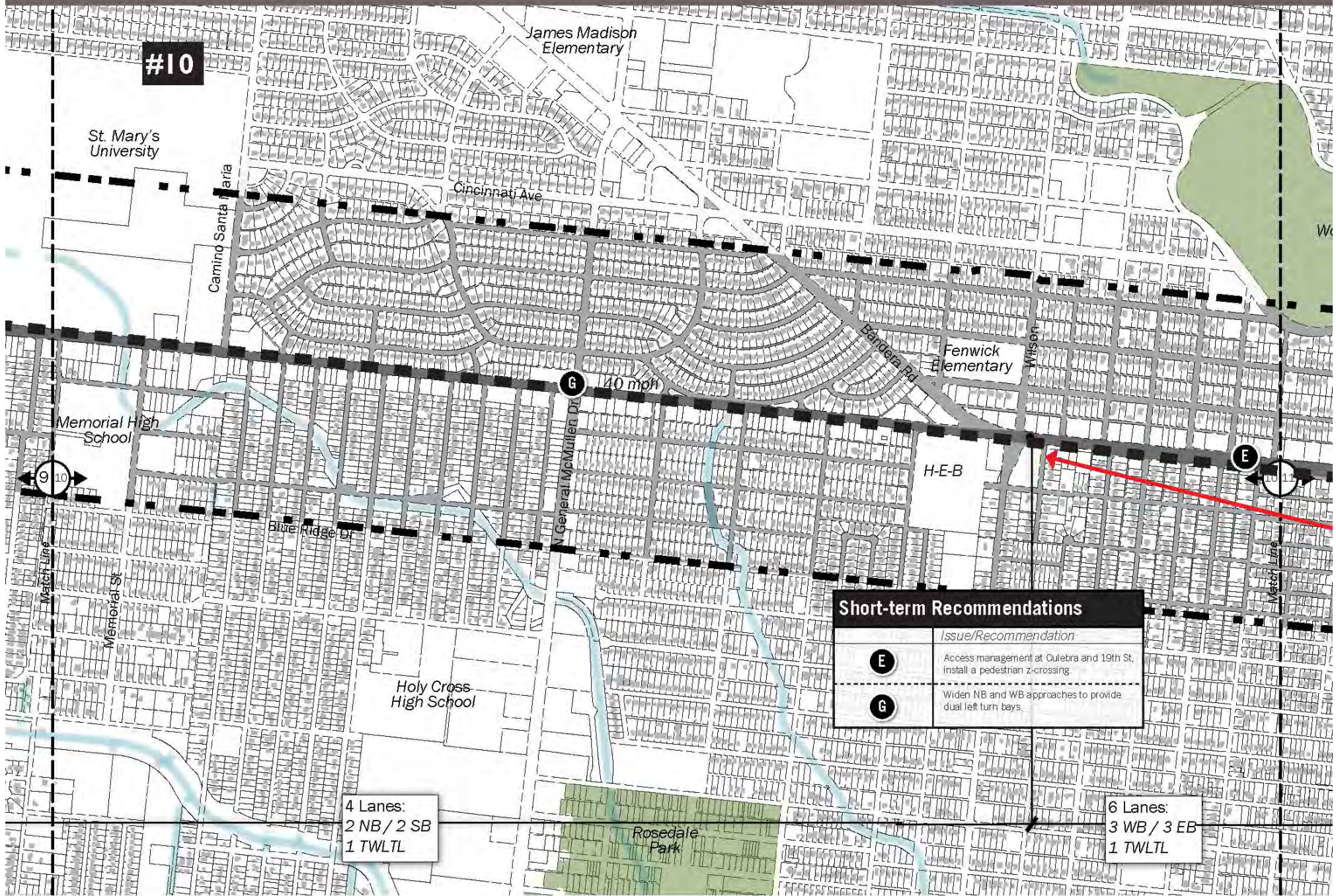
Culebra (Page 3) Corridor Analysis: Sheet 9 Short Term Recommendations

12.05.2015

- Open Space
- Study Area



# URBAN/SUBURBAN TRANSITION



Culebra (Page 3) Corridor Analysis: Sheet 10 Short Term Recommendations

12.05.2015

100'

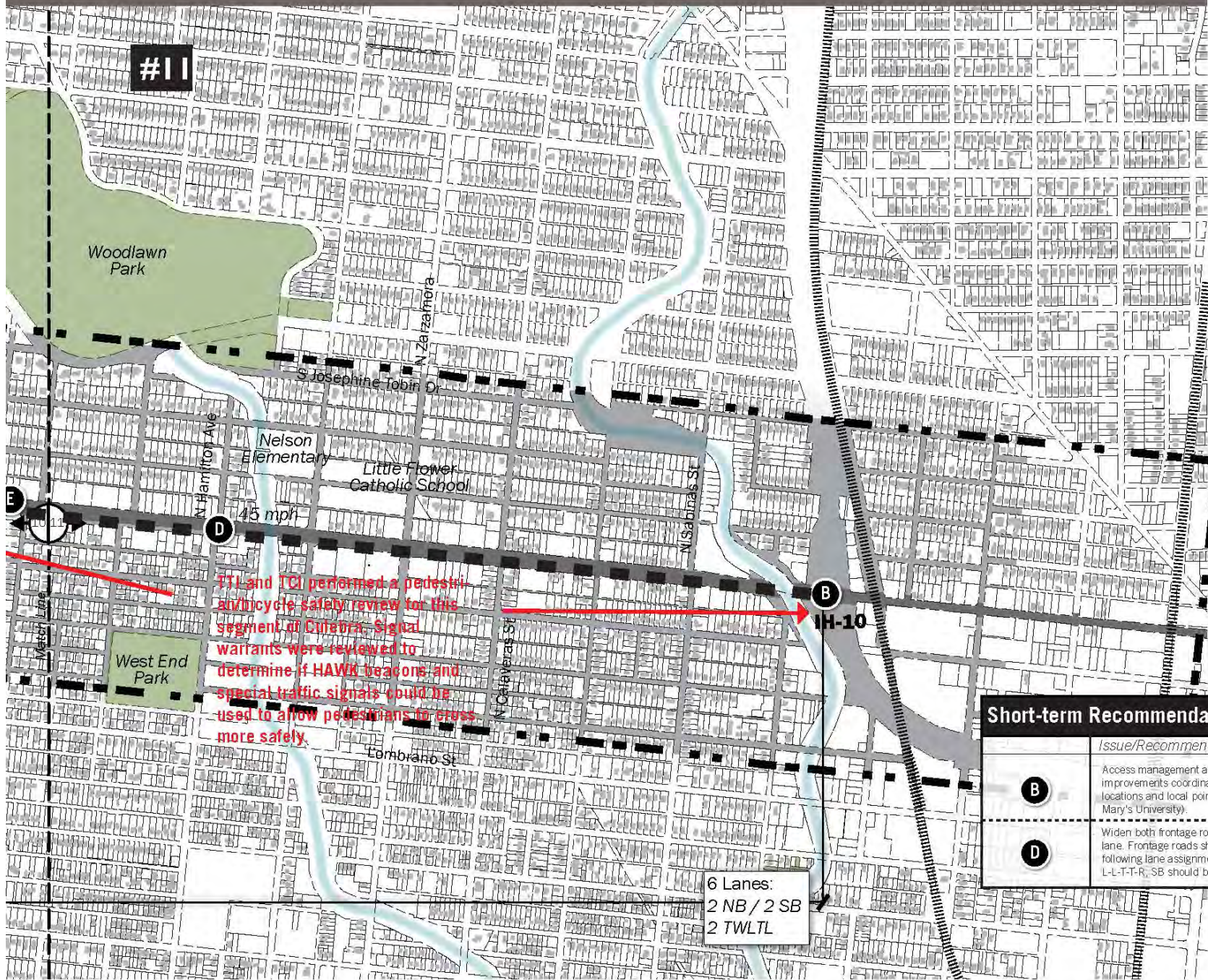
Open Space  
Study Area

SR

0' 500' 1000'



# URBAN/SUBURBAN TRANSITION



TTL and TCI performed a pedestrian/bicycle safety review for this segment of Cullebra. Signal warrants were reviewed to determine if HAWK beacons and special traffic signals could be used to allow pedestrians to cross more safely.

6 Lanes:  
2 NB / 2 SB  
2 TWLTL

Short-term Recommendations	
	Issue/Recommendation
<b>B</b>	Access management and pedestrian crossing improvements coordinated with VIA stop locations and local points of interest (e.g. St. Mary's University).
<b>D</b>	Widen both frontage road approaches by one lane. Frontage roads should have the following lane assignments: NB should be L-L-T-T-R; SB should be L-T-T-R-R.

Cullebra (Page 3) Corridor Analysis: Sheet 11 Short Term Recommendations

12.05.2015