April 2022

Bachman Area Planning Study

North Central Texas Council of Governments

Executive Summary

The North Central Texas Council of Governments (NCTCOG) began planning for transportation needs in the Bachman/Love Field area of Northwest Dallas following a request from the City of Dallas, in June of 2020. The Regional Transportation Council allocated funds for NCTCOG staff in August of 2020 to facilitate a context-sensitive planning study, advance multi-modal transportation efforts, and address community needs. Public input, reinforced with data and technical coordination among agencies, was used to develop NCTCOG's recommended transportation improvements for the area. This executive summary provides a high-level overview of the work completed along with the recommendations and next step actions.

Process

The planning process for this project consisted of public engagement, combined with transportation, demographic, and economic data analysis. NCTCOG staff utilized several methods of virtual engagement including an online survey, an interactive mapping tool, and virtual meetings coupled with online feedback forms to collect over 1,000 comments. Additionally, NCTCOG staff coordinated with City, County, Texas Department of Transportation (TxDOT) and Dallas Area Rapid Transit (DART) staff to better understand the details surrounding past and on-going public investment in the study area. More information on this planning process is included in the technical memorandums developed for the project.

Findings

Past plans and funding have addressed some of the area's needs but many recommendations remain to be implemented. Most of the area's 2012 and 2017 bond projects have been completed except for a few such as the skatepark. However, the area has significantly more infrastructure needs than the past bonds addressed. Funding awarded through Dallas County's Major Capital Improvement Program (MCIP) 7th call for projects provided matching funds for several needed improvements, but the City of Dallas still must identify funding for its required 50 percent funding match and/or complete design for several of those projects identified in the study area.

Transportation safety improvements remain a critical need. Reported vehicle crash data from 2015 – 2019 indicates there are a high number of incidents along Northwest Highway/Loop 12 for all road users including pedestrians and bicyclists. Northwest Highway is owned by TxDOT and is on-system. Signals within the corridor are maintained and operated by the City of Dallas. The area of highest crash concentration along Northwest Highway is from Harry Hines Blvd to Lakefield Drive, including the intersection with Webb Chapel Extension. A map highlighting crash areas is available in the Study Area Refinement section. Discussions with the Dallas District office of TxDOT indicate there is interest in advancing efforts to address safety improvements on this stretch of road it owns.

Engaging the public to understand their concerns was a key priority for this effort. Among the many comments three general themes emerged:

1. Construction of a second entry to Dallas Love Field airport in its current form is generally opposed by residents of the surrounding areas. Neighborhood residents are interested in a more comprehensive evaluation of its location, travel mode-orientation, and necessity.
2. Bachman Lake Park is highly valued by the community and residents are concerned with possible roadway changes like a four-lane Shorecrest Drive, which is currently identified in the City's throughfare plan, may negatively impact recreation.
3. There is significant need and community support for bicycle and pedestrian infrastructure (sidewalk, crosswalks, safe bike facilities) to be added and enhanced throughout the study area.

Recommendations and Next Steps

The summary included here outlines recommended next steps for the Bachman Lake area based around the original ten planning ideas. Each next step was presented at the final public meeting on November 4, 2021 and identifies the responsible level of government. Further details supporting the recommendations in this document including full details of public engagement can be found in the following series of memorandums and sections of the final report which combines them all:

- Study Area Refinement
- Past Plans, Funding, and Ongoing Local Government Coordination
- Public Engagement
- Transit Service Coordination
- Economic Development Opportunities

Many detailed needs and proposed improvements from community comments are not fully captured above but can be found on the project website which provides summaries and reports of all public comments received along with recordings of public meetings.

NCTCOG will rely on local government partners (City of Dallas, Dallas County, and TxDOT) to advance recommendations that complement their own agency's priorities and plans. Specific requests can be made to NCTCOG for assistance as projects advance. NCTCOG will also support requests from local partners to follow up on specific items brought up through the public comment process but were not explicitly identified in this study's recommendations.

TEN IDEAS

1. City of Dallas Coordination
2. TxDOT Coordination
3. Love Field Access
4. Study Area
5. Public Involvement
6. Economic Development
7. Bicycle/Pedestrian Trails
8. Northwest Highway Redesign/ Pedestrian Cap
9. Harry Hines Boulevard
10. DART Coordination

Recommendations

1) City of Dallas Coordination

NCTCOG staff reviewed past, ongoing, and future transportation plans and projects such as bond funded projects by the City of Dallas in the study area. The City of Dallas is responsible for implementing most transportation elements such as sidewalks, trails, and roadways as well as managing Dallas Love Field airport. Coordination with City of Dallas on their efforts was important to understand funding options and status as well as projects for further collaboration between the City and other entities, such as Dallas County who has provided MCIP funds for several projects in the study area. The following next step is recommended:

Next Steps	*Responsible Agency*
City to meet frequently with Dallas County to advance MCIP bond projects	City

2) TxDOT Coordination

The Texas Department of Transportation is responsible for the state highway network which currently includes Northwest Highway, also known as Loop 12. The Bachman Area Study also identified possible improvement to TxDOT's Interstate 35 East to support traffic flow. Staff conversations with TxDOT Dallas have indicated an additional next step may be extending the current Northwest Highway Feasibility Study (east of Inwood Road) to the west including the section from Inwood Road to IH 35. The following next steps are recommended:

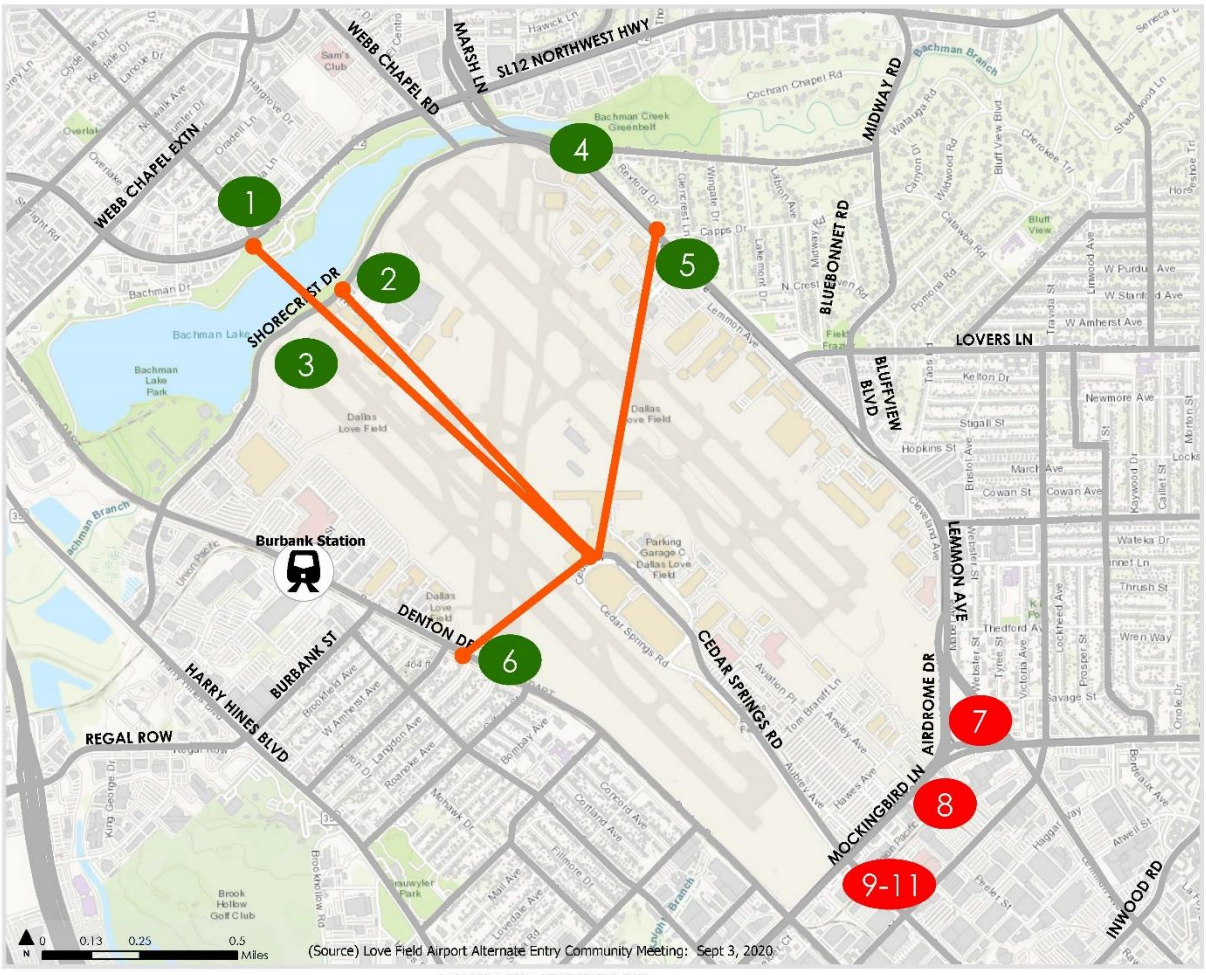
Next Steps	*Responsible Agency*
Complete NW Highway Feasibility Study – Inwood Road to Hillcrest Drive	TxDOT
Redesign of Loop 12/Spur 482/Harry Hines Boulevard interchange	TxDOT
Redesign of IH 35E/Raceway interchange to include on-/off-ramps to/from the north and improved Harry Hines Boulevard/Webb Chapel Extension connectivity	TxDOT
Consideration of NW Highway conversion from State ownership	City/TxDOT
Update Mobility 2045	NCTCOG

3) Love Field Access

A second entryway for Love Field airport has been one of the most important topics discussed throughout this study. Building on the airport's study, NCTCOG staff evaluated all alternative entry options and utilized the regional transportation model to determine the systematic improvements necessary to improve transportation conditions for all users.

Staff utilized the regional travel demand model, a series of complex computer programs that consider the roadways, transit, and demographics of the region to forecast the future impact of travel on our transportation network, to estimate future travel conditions in the Bachman Lake area in relation to a second entry to Love Field. Different scenarios provided by airport staff (Figure 1) were considered and run through the model.

Figure 1: Travel demand model second entry scenarios

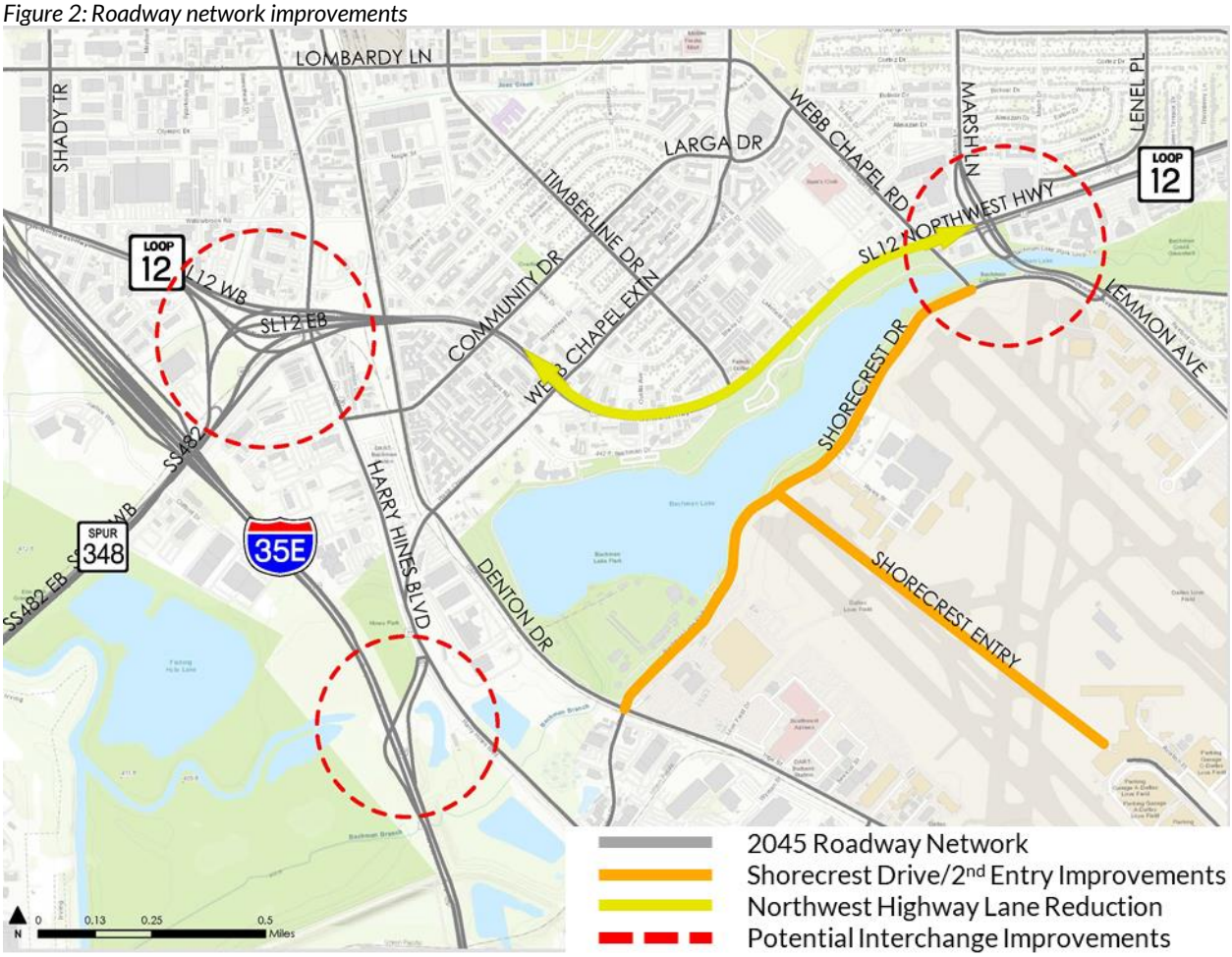


Modeled Entries
2045 Roadway Network
Tunnels
Spot Improvements

1. Lemmon Avenue/Shorecrest Drive
2. Northwest Highway – Central Airfield
3. Shorecrest Drive – Central Airfield
4. Shorecrest Drive – West of Runway 13r-31L
5. Lemmon Avenue/George Coker Circle Tunnel
6. Denton Drive
7. U-Turn at Airdrome
8. Mockingbird Lane/Waddel Avenue
9. Conventional Urban Diamond Interchange
10. Diverging Diamond Interchange
11. Direct Ramp Interchange

Through analysis of travel demand model data and existing conditions, Shorecrest Drive – Central Airfield (#3 on Figure 1) was identified as the most feasible alternative provided to NCTCOG staff. The model was run projecting Shorecrest Drive to its ultimate four lane section as it is identified in the City of Dallas Thoroughfare Plan. Under this scenario, staff considered several area transportation improvements that would potentially result in a more context sensitive transportation network and minimize disruption to the neighborhood. Figure 2 displays the location of these improvements.

Figure 2: Roadway network improvements



The following improvements were then modeled:

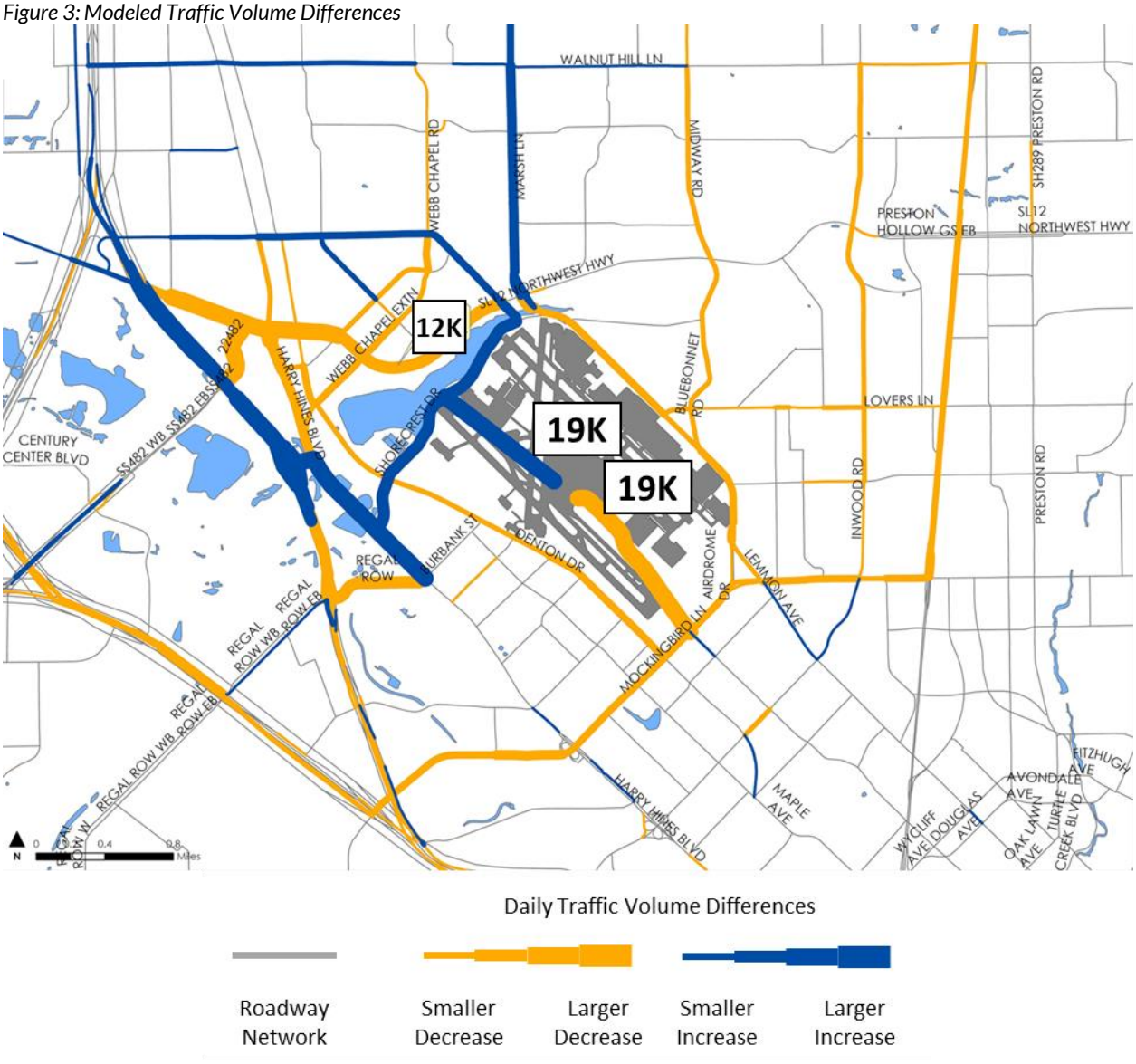
- Shorecrest Dr with airport entry
- Shorecrest Dr configured to four lanes
- Interchange improvements at IH 35E/Raceway/Harry Hines Blvd
- Interchange improvements at Northwest Hwy/Harry Hines Blvd/Storey Ln
- Northwest Hwy reduced to four lanes

Figure 3 displays the results of the travel demand model.

Blue lines indicate increases in daily traffic and orange lines indicate decreases in daily traffic. Thick lines indicate higher magnitudes of increases or decreases while thin lines indicate lower magnitudes of increases or decreases.

Through this analysis, staff has determined that constructing the improvements listed above may result in 38,000 daily trips on Northwest Highway between Marsh Ln and IH 35E, a reduction of 12,000. Additionally, 19,000 daily trips were taken off the current airport entrance. However, other streets saw increases in daily traffic. Notably, Shorecrest Dr and the modeled second airport entry drew an additional 19,000 daily trips.

Figure 3: Modeled Traffic Volume Differences



More analysis and public engagement are necessary before Love Field Access can be improved; therefore, the following next steps are recommended:

Next Steps	*Responsible Agency*
Refine alternative entry analysis and design	City
Create phasing plan for airport and on-system roadway improvement integration	City/TxDOT
Continue public engagement for second entry	City
Develop cost estimate, design, phasing to advance Shorecrest Drive to four lanes	City
Feasibility study for northeast airport corner interchange redesign	City/TxDOT

4) Study Area Refinement

This idea was introduced only for the purpose of refining the area presented to NCTCOG in the initial stakeholder request for this study. The existing trail network, DART rail stations, environmental justice factors, safety data, and other ongoing projects were the primary factors considered when refining the study area boundary.

Next Steps	*Responsible Agency*
No actions – See Study Area Refinement Memo	

5) Public Involvement

Multiple methods of public engagement were used throughout this study including surveys, meeting feedback forms, and an interactive mapping tool. A detailed memorandum documenting the public engagement efforts of this study is available. Due to the importance of public involvement at various stages of transportation project development the recommended next step is to continue as needed as specific recommendations advance:

Next Steps	*Responsible Agency*
Continue as needed for implementation	Various

6) Economic Development

Along with transportation improvements, NCTCOG would like to encourage development in the area to create economic opportunity. Project staff reviewed the policy background, assets and activity, and transportation-centered opportunities regarding economic development in the study area. Findings and recommendations are found in the Economic Development Memo. The complex nature of economic development requires further detailed study as reflected in the recommended next step:

Next Steps	*Responsible Agency*
Commission a more detailed economic development plan/study for these areas including anti-displacement strategies	City

7) Trails and Parks Access

Existing study area bicycle/pedestrian facilities were examined to identify needs and locations that can be improved to advance safety and mobility in the study area. Connecting local parks, residents, trails, rail stations, and other local amenities with bicycle/pedestrian infrastructure was a priority in facility identification as a result of public input received on bicyclist and pedestrian needs.

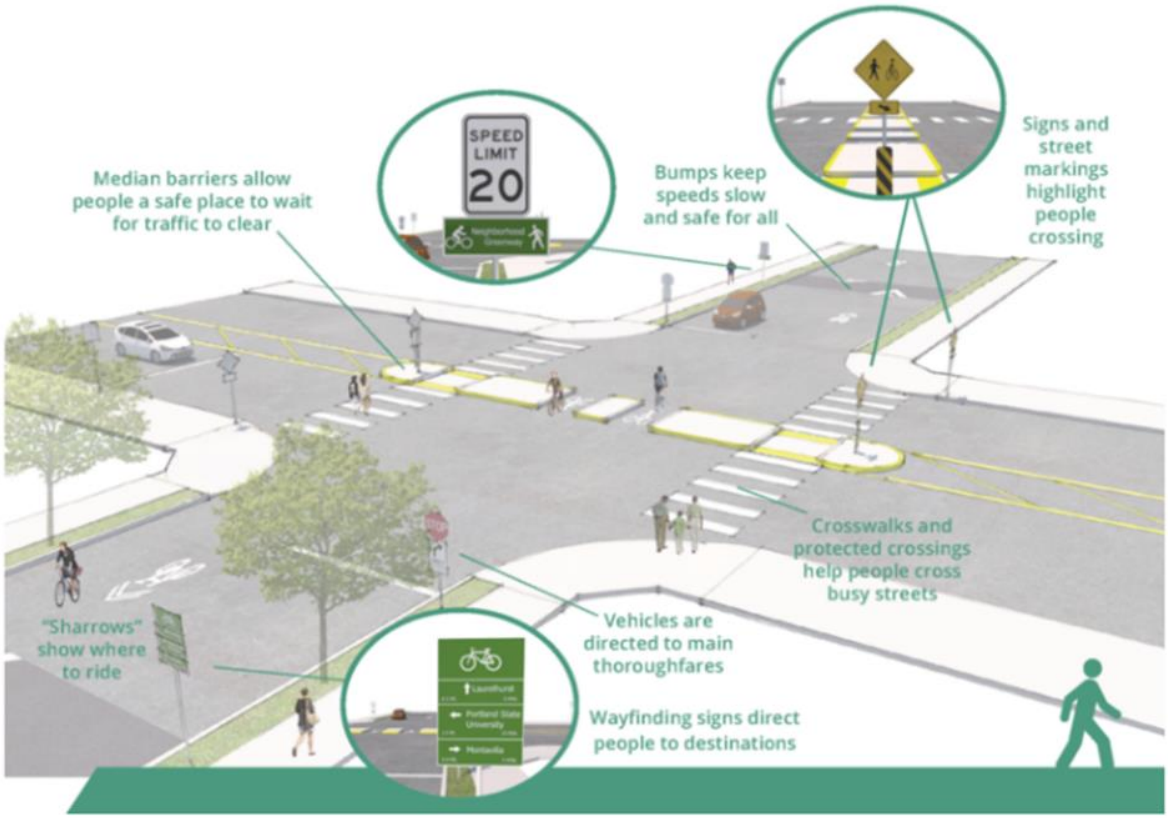
Development of the Love Field Loop Trail was of high interest to airport staff and stakeholders at the study outset. Currently, the trail is either constructed or nearing construction on three sides of the airport, however, right-of-way and land on the final, western side of the airport along Denton Dr is limited. One alternative to a Love Field Loop Trail on Denton Drive south of Burbank Dr, may be a bicycle boulevard, a low-traffic, low-speed street that is designed to give bicycle travel priority, on Thurston Dr in the Love Field West neighborhood.[1] Figure 4 display an example of a bicycle boulevard configuration. Improving Thurston Dr and potentially Maple Ave offer the advantage of direct neighborhood connections. Connecting the Love Field Loop Trail south and north from Thurston Dr, will require further study.

BICYCLE BOULEVARDS

Possible Features:

- Median barriers
- Speed bumps
- Protected crossings
- Traffic diversions
- Wayfinding signs
- Shared lanes

Figure 4: Example bicycle boulevard configuration



Source: Portland Bureau of Transportation

1: NACTO Urban Bikeway Design Guide & Portland Bureau of Transportation

Public input, City and county staff input, and existing facilities with the consideration of other ongoing projects in the area were also primary factors in creating these recommendations. The recommendations are broken down into three categories: bicycle facilities, sidewalks, and crossing. Figures 5, 6, and 7 display the recommendations and Figure 8 displays all three categories together. Even more targeted areas for further study were recommended by community members as part of the public feedback process. The City should evaluate those recommendations and advance those that compliment or enhance current park planning or areas of high demand. The following next steps were provided to advance the recommendations:

Next Steps	*Responsible Agency*
Advance sidewalk and bike recommendations to design/ fund improvements for city streets	City
Bike facility feasibility studies – Denton Drive and Walnut Hill Lane	City
Develop cost estimate and advance design for signal upgrades and intersection improvements	City

Figure 5: Bicycle Facility Recommendations

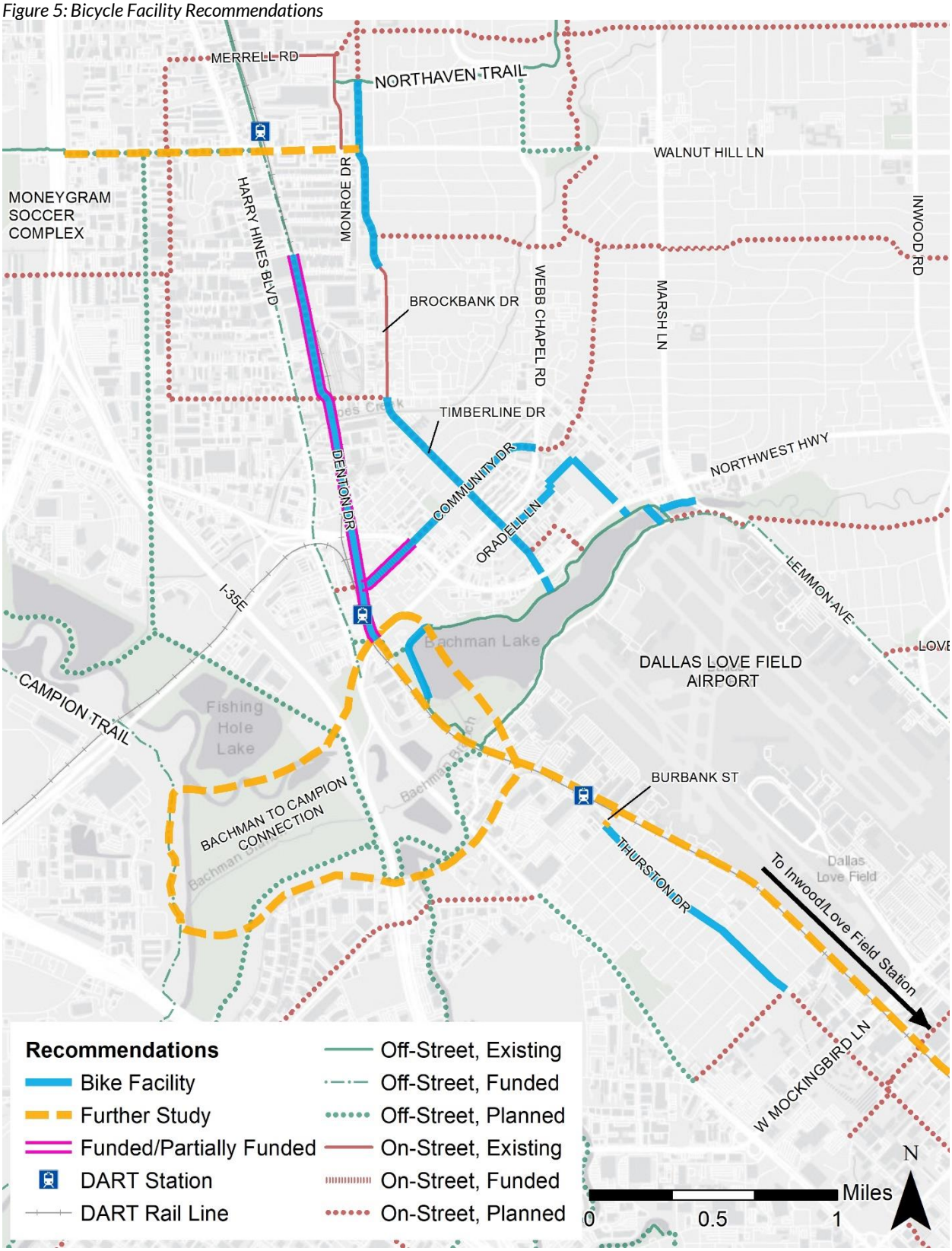


Figure 6: Sidewalk Recommendations

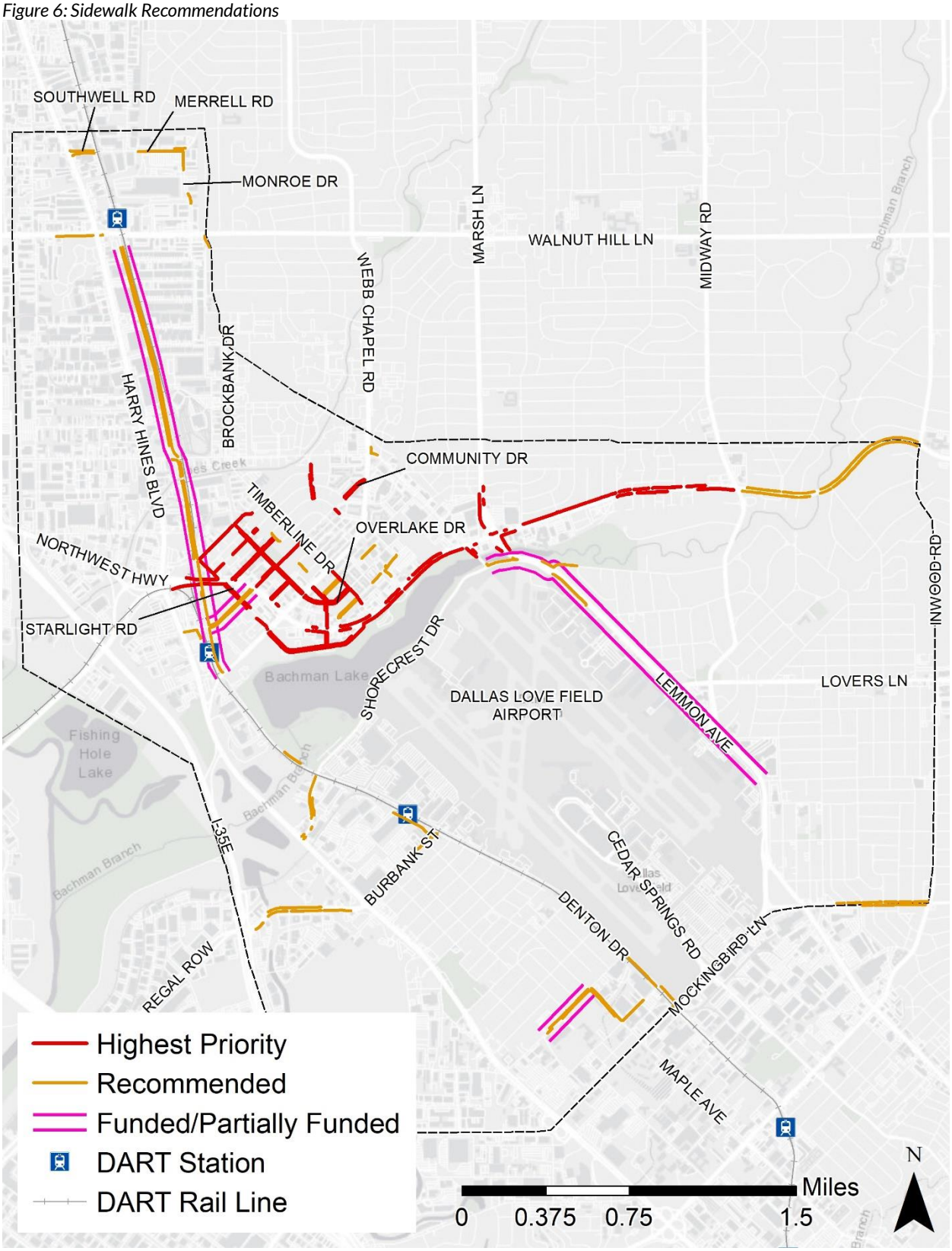


Figure 7: Crossing Recommendations

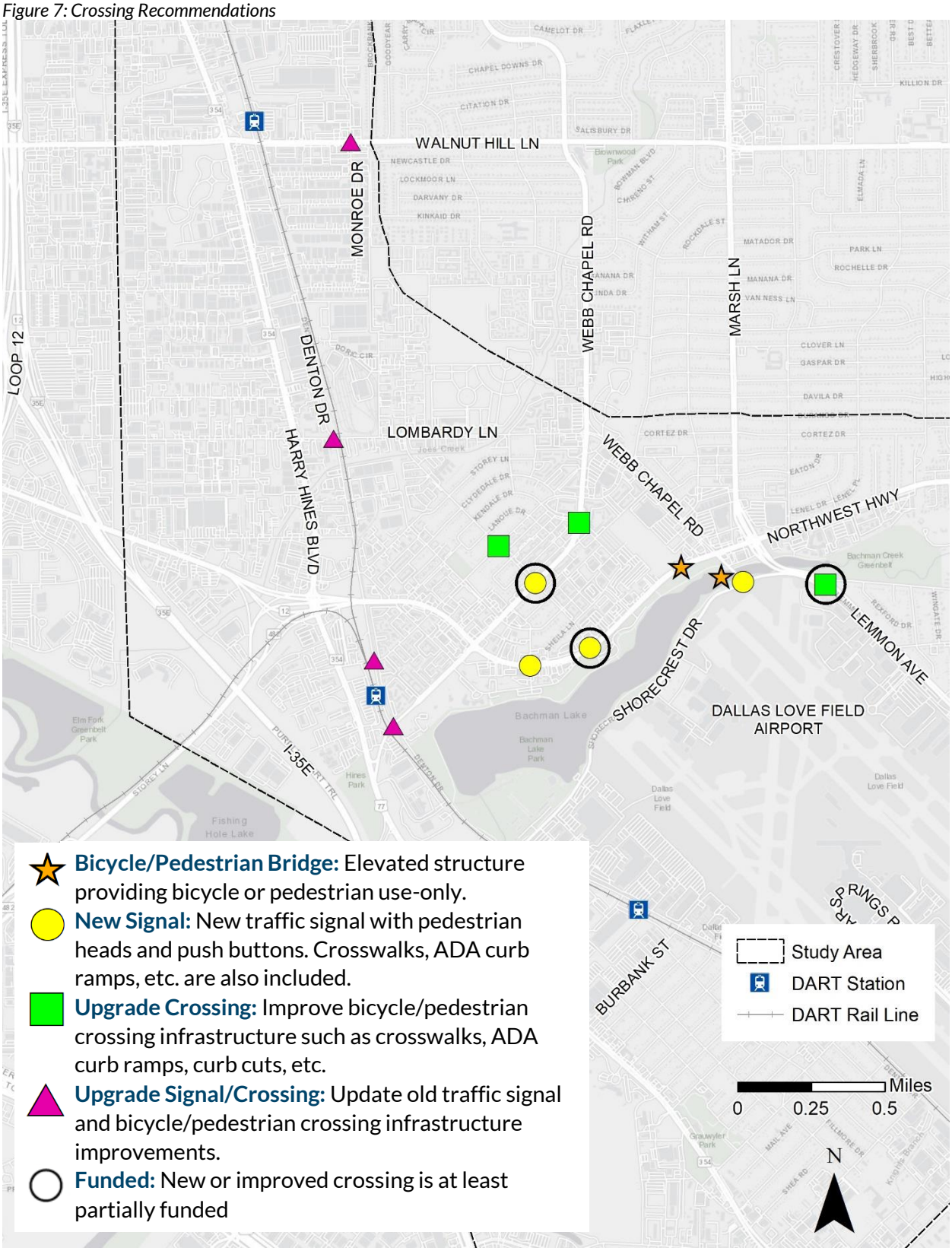
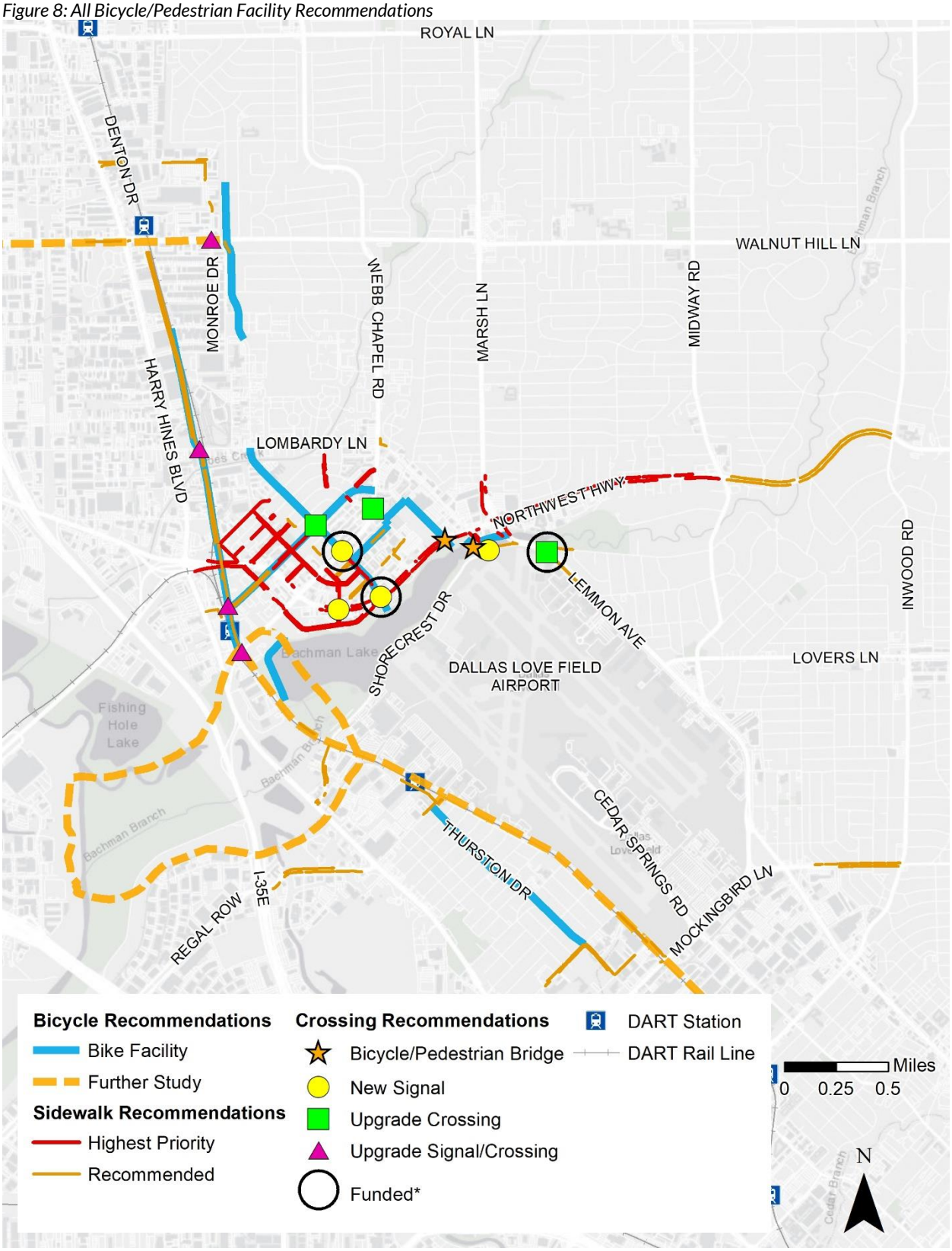


Figure 8: All Bicycle/Pedestrian Facility Recommendations



8) Depress Northwest Highway/Pedestrian Cap

Depressing Northwest Highway and constructing a pedestrian cap (land bridge) has been an innovative idea of this project since its inception. It would serve as a safe and efficient way to cross Northwest Highway and provide bicycle/pedestrian connections between the Bachman neighborhood, a future pocket park, and Bachman Lake Park. Through this study, the following next step recommendations have been identified:

Next Steps	*Responsible Agency*
Initiate design of intersection and sidewalk improvements west of Lemmon Ave	TxDOT
Lane reduction for safety and pedestrian friendly design from Webb Chapel Ext. to Lemmon Ave	TxDOT
Coordination on enhanced crossing/land bridge at airport light way	City/TxDOT/ NCTCOG
Feasibility study for increasing bike/pedestrian access on Webb Chapel Road bridge	City

9) Harry Hines Boulevard

Harry Hines Boulevard is a key corridor on the western side of the study area. It is also the subject of a separate NCTCOG-led study to address the issues with the corridor and promote context-sensitive design of the roadway. The anticipated result will be a corridor plan to guide future transportation investments and redevelopment of the corridor. Next steps recommendations include the following:

Next Steps	*Responsible Agency*
Complete the corridor study and coordinate on intersection design as needed	NCTCOG
Coordinate on bike/pedestrian crossings as needed	City

10) DART Coordination

Dallas Area Rapid Transit (DART) owns and operates three light rail stations and several bus routes in the study area. Transit access to the airport is provided through the Love Link (route 524) shuttle that runs from Inwood/Love Field DART Station to the airport terminal. For more information on this topic, please see the Transit Service Coordination Memo. After coordination with both DART and City of Dallas the following next step is recommended:

Next Steps	*Responsible Agency*
Continue coordination on transit access options to Love Field that present the least conflict for other modes	City/DART

Summary Table of Recommendations – Next Steps

A table of all recommendations and next steps with responsible agencies can be seen in Figure 9, below.

Figure 9: Summary Table of Recommendations

Next Steps	*Responsible Agency*
City of Dallas Coordination	
City to meet frequently with Dallas County to advance MCIP bond projects	City
TxDOT Coordination	
Complete NW Highway Feasibility Study – Inwood Road to Hillcrest Drive	TxDOT
Redesign of Loop 12/Spur 482/Harry Hines Boulevard interchange	TxDOT
Redesign of IH 35E/Raceway interchange to include on-/off-ramps to/from the north and improved Harry Hines Boulevard/Webb Chapel Extension connectivity	TxDOT
Consideration of NW Highway conversion from State ownership	City/TxDOT
Update Mobility 2045	NCTCOG
Love Field Access	
Refine alternative entry analysis and design	City
Create phasing plan for airport and roadway improvement integration	City/TxDOT
Continue public engagement for second entry	City
Develop cost estimate, design, phasing to advance Shorecrest Drive to four lanes	City
Feasibility study for northeast airport corner interchange redesign	City/TxDOT
Study Area	
No actions – See Study Area Refinement Memo	
Public Involvement	
Continue as needed for implementation	Various
Economic Development	
Commission a more detailed economic development plan/study for these areas including anti-displacement strategies	City
Bicycle/Pedestrian Trails	
Advance sidewalk and bike recommendations to design/ fund improvements for city streets	City
Bike facility feasibility studies – Denton Drive and Walnut Hill Lane	City
Develop cost estimate and advance design for signal upgrades and intersection improvements	City
Northwest Highway Redesign/ Pedestrian Cap	
Initiate design of intersection and sidewalk improvements west of Lemmon Ave	TxDOT
Lane reduction for safety and pedestrian friendly design from Webb Chapel Ext. to Lemmon Ave	TxDOT
Coordination on enhanced crossing/land bridge at airport light way	City/TxDOT/ NCTCOG
Feasibility study for increasing bike/pedestrian access on Webb Chapel Road bridge	City
Harry Hines Boulevard	
Complete the corridor study and coordinate on intersection design as needed	NCTCOG
Coordinate on bike/pedestrian crossings as needed	City
DART Coordination	
Continue coordination on transit access options to Love Field that present the least conflict for other modes	City/DART