

Ignacio Zaragoza Elementary

City of Dallas
Dallas Independent School District

Safe Routes to School Plan



2017



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Project Background

Over the past generation, student travel to school by walking and bicycling has declined dramatically across the United States: in 1969, nearly 50 percent of all children walked or biked to school, compared to 13 percent in 2009. Simultaneously, childhood obesity has more than tripled. There is a growing body of research that has linked these trends with fundamental infrastructure changes in our communities that discourage people from walking, including suburban sprawl, increasing speed and volume of motor vehicle traffic, and roads designed and maintained without consideration of pedestrian safety or comfort.

Safe Routes to School (SRTS) is a nationwide initiative dedicated to reversing these trends and encouraging more children to walk and bicycle to school. SRTS employs the “five Es” to meet these goals: Engineering, Education, Enforcement, Encouragement, and Evaluation.

Engineering: Engineering measures include the design, construction and maintenance of physical infrastructure that can improve the safety and comfort of students walking and bicycling in and around the school campus.

Education: Educational programs as part of SRTS efforts teach students bicycle, pedestrian, and traffic safety skills, and teach drivers how to drive safely around schools and share the road.

Enforcement: These are strategies to deter the unsafe behavior of drivers, bicyclists and pedestrians, and encourage all road users to obey traffic laws and share the road.

Encouragement: Encouragement programs serve to promote walking and biking as safe and healthy forms of transportation. Encouragement strategies are intended to be fun and generate excitement and enthusiasm about walking and bicycling.

Evaluation: Evaluation of the SRTS plan is important to understanding whether the plan is being implemented, the effectiveness of the recommended projects and activities, and to identify any needed adjustments. Evaluation could measure the number of infrastructure projects constructed, the before and after shift in travel mode share (number or percent of students walking and bicycling), and whether there was a change in attitudes toward walking and bicycling.

The North Central Texas Council of Governments (NCTCOG) was awarded a Transportation Infrastructure Generating Economic Recovery (TIGER) grant in 2014 to address a number of factors related to school siting and transportation to schools. As part of that effort, walking safety audits were conducted and SRTS plans have been developed for four schools in North Texas, including Ignacio Zaragoza Elementary School in Dallas. The purpose of this SRTS plan is to identify measures, including both infrastructure projects and programmatic activities that will make it safer for students to walk and bicycle to school. These recommended measures will serve as part of an action plan which, when carried out by the local government and school community, will encourage and enable more Zaragoza Elementary School students to walk and bicycle to school.

Throughout the development of the SRTS Plan, NCTCOG staff engaged the following community stakeholders:

- The Principal of Zaragoza Elementary
- A Teacher at Zaragoza Elementary
- The Zaragoza Elementary PTA President
- City of Dallas - Mobility and Street Services Department - Mobility Planning

- City of Dallas - Park and Recreation Department
- Dallas Independent School District - Transportation Department
- Dallas Independent School District - Project Management Office

In developing the Zaragoza Elementary SRTS Plan, the NCTCOG staff first began by mapping existing conditions and gathering information from local stakeholders through two meetings that were held at Zaragoza in February and March of 2017. In these stakeholder meetings, the major student walking and bicycling routes were confirmed, and existing barriers that limit walking and bicycling to school were identified. Subsequently, a walking safety audit was conducted in March 2017 by NCTCOG staff and community stakeholders to evaluate these routes and existing barriers, and identify potential opportunities. A survey was also distributed to parents to assess how students currently get to and from school, and what the greatest issues are affecting parents' decision to allow their child to walk or bike to school. The result of these activities is a list of recommended projects and activities (action items) intended to make walking and bicycling to Zaragoza a safer and more appealing option than driving. This SRTS Plan should be updated at regular intervals to reflect changes in priorities, leadership and conditions.

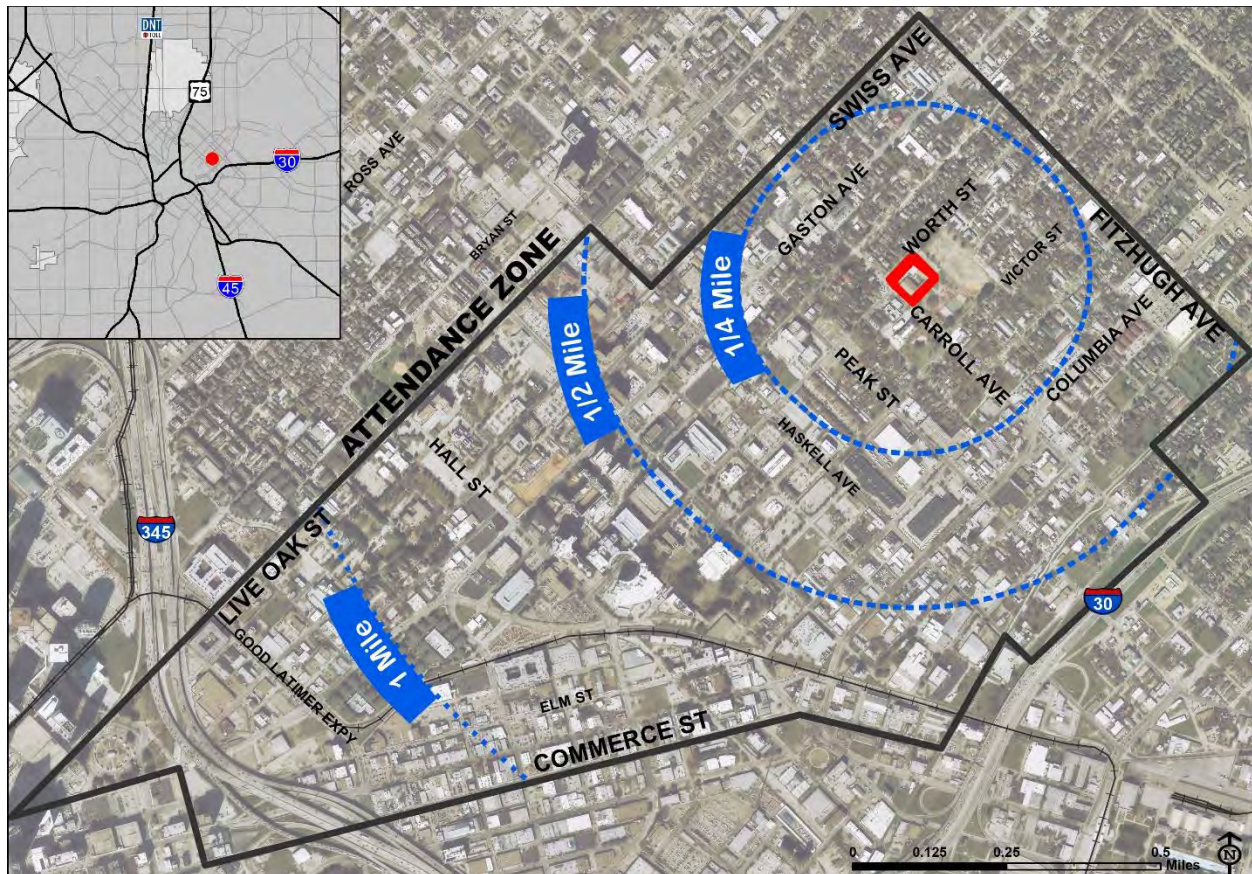
The Champion (primary) contact person for this SRTS Plan is:

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School Profile

Zaragoza Elementary School is located at 4550 Worth Street in the Old East Dallas neighborhood of the City of Dallas, less than two miles from the central business district. The school is bordered by Worth Street to the north, Buckner Park to the east and south, and Carroll Avenue to the west. Zaragoza is part of the Dallas Independent School District (ISD) and, as of the 2016-2017 school year, had an enrollment of 371 students in grades pre-kindergarten to fifth. **Exhibit 1** shows Zaragoza’s attendance zone and walk area.

EXHIBIT 1 - ATTENDANCE ZONE AND WALK AREA

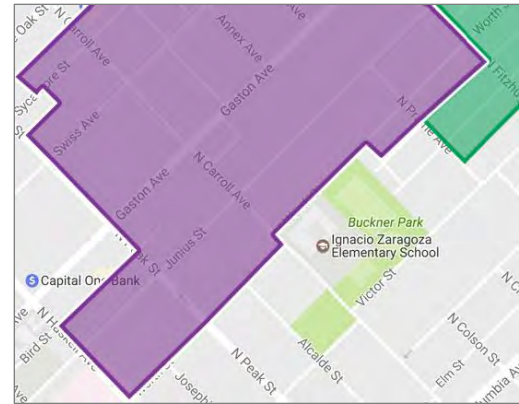


School Neighborhood

Old East Dallas has some of the oldest neighborhoods in the city, with development dating back to the 1870s. In 1903, a school was constructed for the area on Carroll Avenue called Davy Crockett School. In the midst of the housing shortage after World War II, many of the homes were subdivided or simply torn down to make way for garden apartments. By the 1970s, most of east Dallas was zoned multi-family. In an effort to protect the single-family character of the neighborhoods, residents successfully joined together and lobbied the City to create several historic districts in the area. The Zaragoza Elementary attendance boundary includes parts of two of those historic districts: Peak’s Suburban Addition Historic District (shown in purple in **Exhibit 2**) and Munger Place Historic District (shown in green). Peak’s Suburban Addition is the oldest residential neighborhood in East Dallas and is known for its architectural diversity, representing Dallas’ residential

architecture from the 1890s through the 1930s. Seventeen homes along Tremont Street between Prairie and Fitzhugh Avenue in Zaragoza’s attendance zone are part of the Munger Place Historic District—notable for having the largest collection of Prairie-style homes in America.^{1,2}

EXHIBIT 2 - NEARBY HISTORIC DISTRICTS

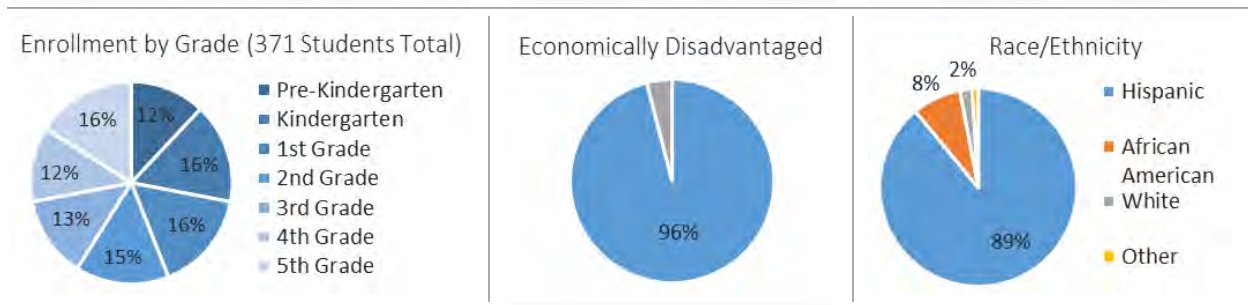


Also during the 1970s, there was a great migration of families out of Old East Dallas and other historic Dallas neighborhoods to the northern suburbs. Many of the homes fell into disrepair and were torn down to make way for multi-family apartments, or simply left vacant. In 1989, Dallas ISD moved Davy Crockett’s students to the new Ignacio Zaragoza Elementary School across Carroll Avenue, which sits on two acres of what was once part of Buckner Park. Davy Crockett School was declared an official Dallas landmark in 1993, and sat largely empty until 2011 when a developer purchased it from the school district. As of the fall of 2016, developers planned to convert the empty school into loft apartments.^{3,4}

School Demographics

As of the 2016-2017 school year, 96 percent of the school’s 371 students were considered economically disadvantaged by the Texas Education Agency (TEA)⁵, and 98 percent were of a racial or ethnic minority (non-white). A summary of student enrollment by grade and student demographics is shown in **Exhibit 3**.

EXHIBIT 3 - STUDENT DEMOGRAPHICS (2016-2017)



¹ <http://dallascityhall.com/departments/sustainabledevelopment/historicpreservation/Pages/historic-buildings.aspx>

² <http://www.friendsofbucknerpark.org/neighborhood-historic-districts/>

³ <https://www.dallasnews.com/business/real-estate/2016/09/23/landmark-dallas-school-will-get-new-life-apartments>

⁴ <http://lakewood.advocatemag.com/2016/06/07/113-year-old-school-old-east-dallas-may-residential-future/>

⁵ Students are considered “economically disadvantaged” in the Texas Education Agency’s Student Report Cards if they are eligible for free or reduced-price lunch or other public assistance (e.g., Temporary Assistance for Needy Families (TANF)). The U.S. Department of Agriculture is responsible for setting the income eligibility guidelines each year for free- and reduced-price lunches.

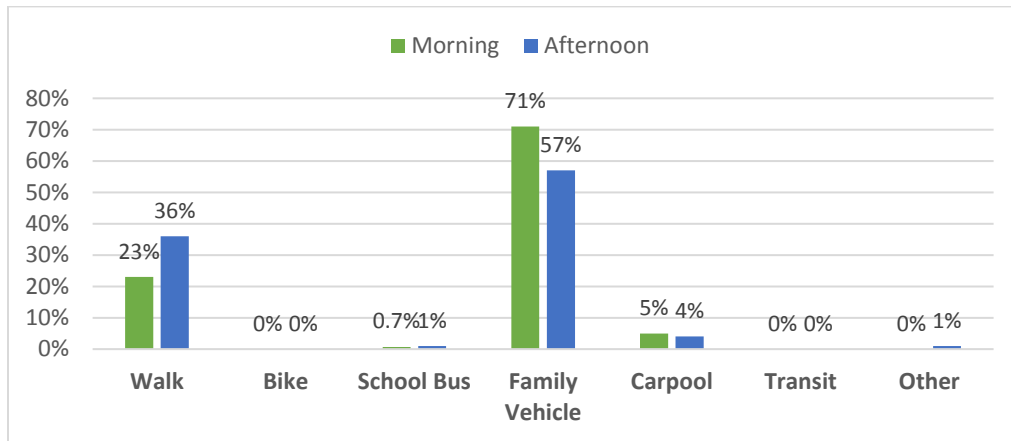
Current School Travel Environment

Student Travel Mode

As shown in **Exhibit 1** on page 3, the school’s 2016-2017 attendance boundaries do not extend farther than two miles from school; therefore, all students live within two miles of schools with the exception of some students in the pre-kindergarten program that are bussed to the school. Additionally, during the safety audit a school bus was observed picking up a student at the school in the morning.

Exhibit 4 displays the results from the parent survey of how students currently get to and from the school.

EXHIBIT 4 - TYPICAL MODE OF ARRIVAL TO AND DEPARTURE FROM SCHOOL



Arrival and Dismissal Procedures

Exhibit 5 identifies key features of the school neighborhood such as the location of crossing guards, the school zone, and primary walking routes. The front entrance and driveway is located off Worth Street, and is the main entrance during morning arrival. Students are currently dismissed from the exit on the side of the school along Carroll Avenue; however, the new parking lot and driveway off Carroll Avenue that is part of the reconstruction of Buckner Park (opening in the fall of 2017) is anticipated to change the school’s dismissal procedure. The door at the back of the school facing the park’s new driveway will likely become the main dismissal exit when the park re-opens.

School Hours

The official hours of instruction at the school are 7:55 am to 2:55 pm. The doors open at 7:05 am. After-school activities run until approximately 5:15 pm.

School Zone

There are school speed zones on three streets around Zaragoza Elementary: Worth Street between Carroll Avenue and the east side of Buckner Park, Carroll Avenue between Junius Street and Victor Street, and Victor Street between Carroll Avenue and Buckner Park. The school zone signs that do not have flashing beacons indicate the school zone speed limit is applicable from 7 to 9 am, and from 2:45 to 4:30 pm. The school zone signs with flashing beacons do not list times, and instead say “WHEN FLASHING.”

Crossing Guards

There are currently three crossing guards assigned to the school. The crossing guards are posted at the intersection of Carroll Avenue and Gaston Avenue, and at the east and south sides of the intersection of Carroll Avenue and Worth Street. The locations of crossing guards are shown in **Exhibit 5**.

Primary Walking Routes

The primary routes that students take to get to and from school were determined through a survey distributed to parents and during meetings with local stakeholders, which are described in greater detail in the following sections.

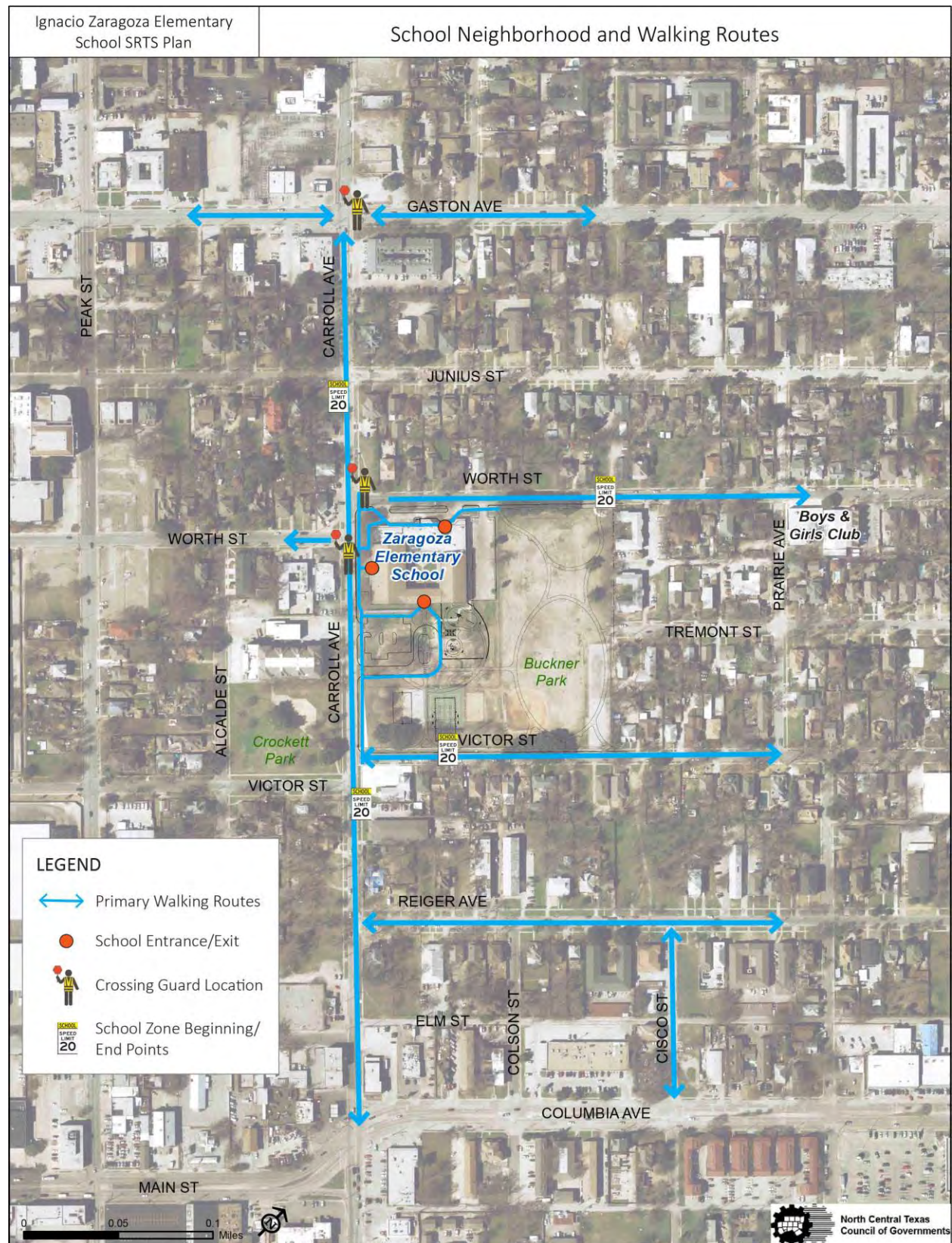
In the parent surveys, the most frequently cited street intersections nearest home among respondents were as follows:

- Carroll and Columbia (21)
- Carroll and Victor (9)
- Carroll and Worth (8)
- Carroll and Reiger (7)

Next to the question about how their child gets home from school, four parents left a comment that their child walks to Boys and Girls Club after school. The Boys and Girls Club is located down the street from the school at Worth Street and Prairie Avenue.

Major student origin (home) locations were identified by stakeholders during meetings at the school. These included apartment complexes on Swiss Avenue between Peak and Carroll, on Reiger Avenue between Carroll and Cisco, and on Columbia Avenue near the intersection with Cisco Street. The stakeholders also mentioned that many students walk to the Boys and Girls Club after school.

EXHIBIT 5 - EXISTING TRAVEL CONDITIONS



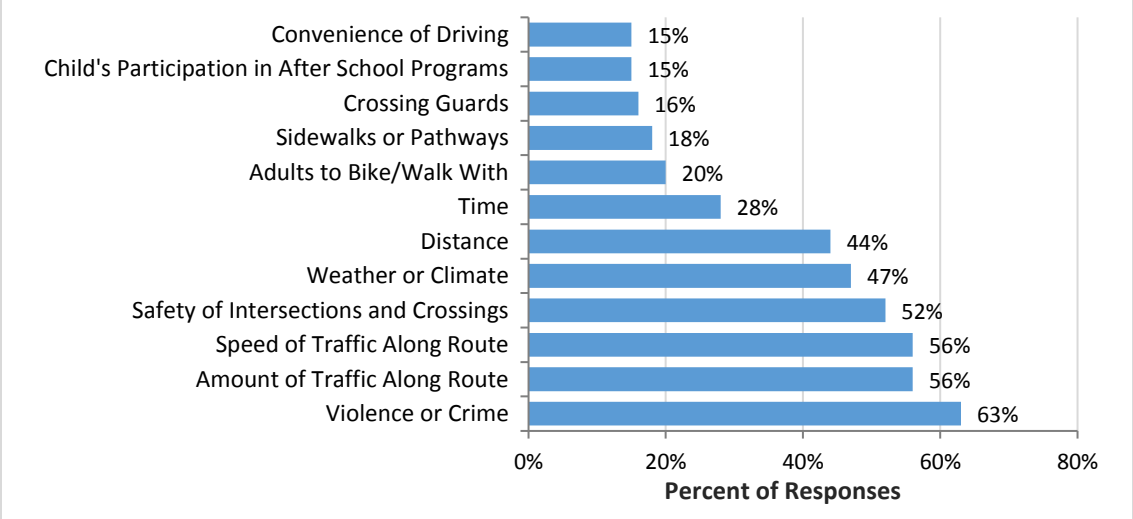
Evaluating Issues and Opportunities

Issues and opportunities are things that, when addressed, may encourage and enable more students to walk and bicycle to school safely. Existing issues and opportunities for Zaragoza Elementary were identified through a survey distributed to parents, meetings with school and community stakeholders, an analysis of crash data and traffic counts, and a walking safety audit. The following sections detail the findings of each of these activities.

Parent Survey Results

Nearly 400 copies of the National Center for Safe Routes to School’s Parent Survey—in both English and Spanish—were sent home with students in April 2017, and 153 completed surveys were returned. The survey asks for information about how students currently get to school, what factors affect parents’ decision to allow their children to walk or bike to school, and related background information. The four most-reported issues that affect parents’ decision to let their child walk or bike were *violence or crime*, *amount of traffic along route*, *speed of traffic along route*, and *safety of intersections or crossings*. A summary of those issues is shown in **Exhibit 6**. It should be noted that “violence and crime” includes parents’ perception of violence and crime, and is not necessarily indicative of actual crime that occurs in the area.

EXHIBIT 6 - ISSUES AFFECTING PARENTS' DECISION TO LET THEIR CHILD WALK OR BICYCLE TO SCHOOL



Nearly a dozen parents, mostly living near Carroll Avenue between IH 30 and Reiger Avenue, indicated that they would allow their child to walk or bicycle to school if they had an adult with whom to walk or bicycle. Additional results of the parent survey, including specific comments left by parents, can be found in **Appendix B**. Additional Findings from the Parent Survey. The following is a sample of those comments.

- *I do not feel safe sending my daughter biking or walking due to the high rate of crime in the area.*
- *I really don't think it's safe enough for them to walk. But the school is only 2 streets over.*
- *I think walking and bicycling is healthy for everyone.*
- *I would like my children to enjoy their trip to school by bicycle but my insecurity does not allow me. I am not sure if the school supports bicycling to school, but if they did I would take advantage of it.*
- *Motorists do not respect the school zones.*
- *People do not respect parking areas.*

- *The truth is I feel insecure about letting my children bike to school because motorists do not respect the stops and crosswalks.*
- *Well, the reason for not letting them bike is the insecurity of the traffic speeds of some intersections even though it would be fun for them to ride a bike.*

Current Community Concerns

The following were existing transportation issues identified during meetings with school stakeholders on February 9 and March 8, 2017:

- The school has called the police multiple times because of speed issues near the school.
- There are no crossing guards on Columbia.
- Many students cross the street at Victor and Carroll, but there is no crossing guard at that location.
- Parents queue in the right lane on Carroll Avenue, which reduces visibility.
- Parents and students do not always use the crosswalk on Carroll Avenue.
- Parents park on both sides of Worth Street.
- The school zone may be too short on Worth Street, since students take this route to get to the Boys and Girls Club at Prairie and Worth.
- There are left-turn lanes without protected turn arrows at the intersections of Gaston and Carroll and Gaston and Fitzhugh, creating significant safety issues.

Crash Data and Traffic Counts

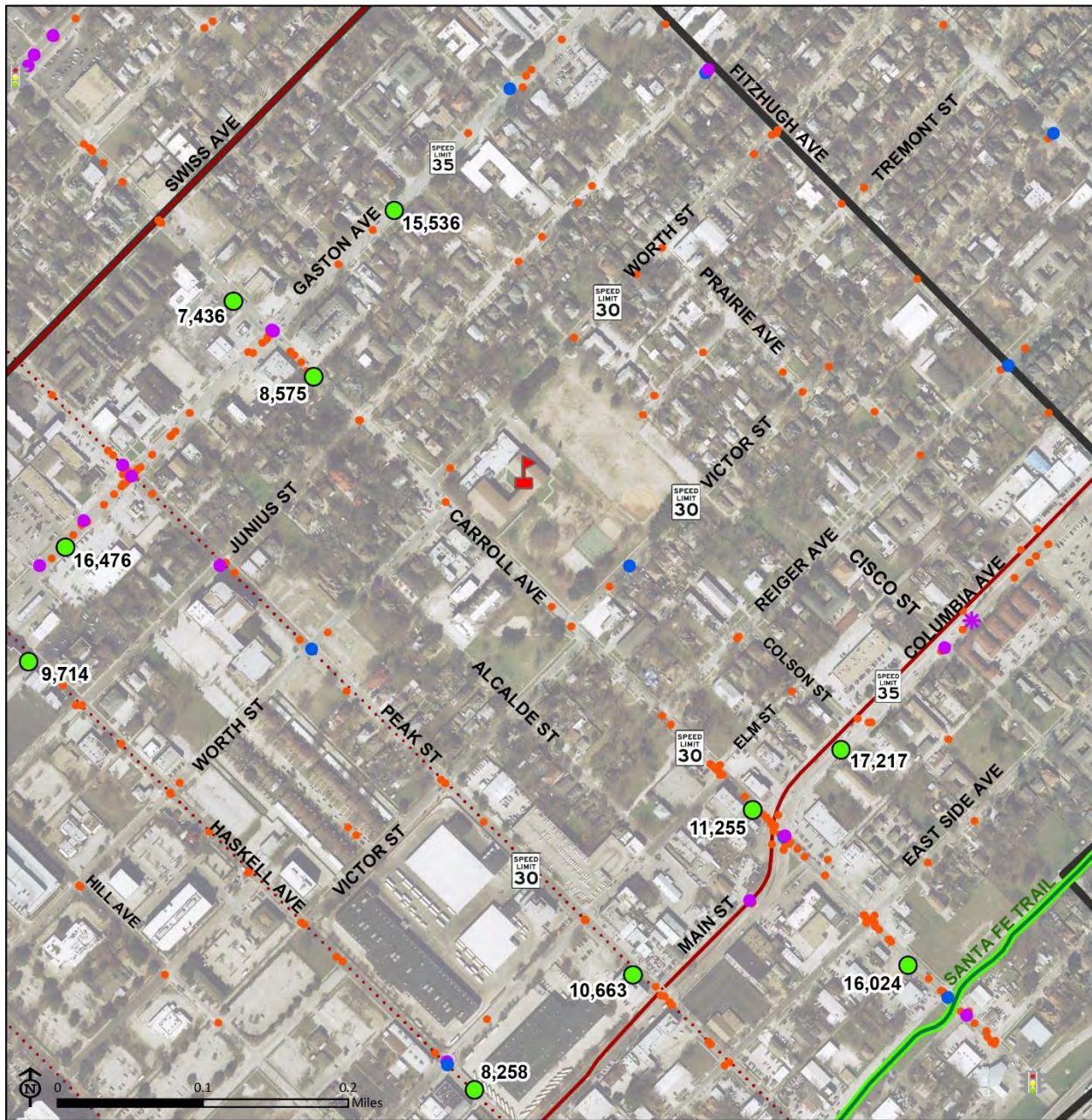
Based on crash data for 2011-2015 from the Texas Department of Transportation (TxDOT), the highest crash locations for both drivers and pedestrians are the intersections of Gaston and Carroll, Gaston and Peak, and Columbia and Carroll. The only pedestrian fatality in the area occurred near the intersection of Columbia and Cisco. The location of traffic crashes is shown in **Exhibit 8**.

In the City of Dallas Thoroughfare Plan, Peak and Haskell are classified as principal arterials, Columbia Avenue/Main Street as a minor arterial, and Gaston Avenue as a community collector. Definitions of these roadway classifications from the Thoroughfare Plan are shown in **Exhibit 7**. Carroll Avenue is not in the Thoroughfare Plan; however, as the 2014 traffic counts shown in **Exhibit 8** indicate, Carroll Avenue (a two-lane road) carries 11,000 average vehicles per day, or approximately as many cars as Peak or Haskell (three lanes each, or six lanes as a one-way couplet). Combined as a six-lane couplet, Peak and Haskell carry significantly fewer cars than the capacity identified in the Thoroughfare Plan of 42,000 vehicles per day. Main Street/Columbia Avenue, also a six-lane divided roadway, carries only 17,000 vehicles per day.

EXHIBIT 7 - FUNCTIONAL CLASSIFICATIONS IN THE CITY OF DALLAS 1993 THOROUGHFARE PLAN

	Principal Arterials	Minor Arterials	Community Collectors
Function	Backbone of the street system; Mobility function is primary; Access function is minor; Serves long trip lengths	Provides route and spacing continuity with principal arterials; Mobility function	Collects/distributes traffic between local streets and arterials system; Mobility and access functions are balanced.
Traffic Volume	8 lanes: >28,000 vpd 6 lanes: >21,000 vpd 4 lanes: >14,000 vpd	6 lanes: 15,000 - 30,000 vpd 4 lanes: 10,000 - 20,000 vpd 2 lanes: 5,000 - 10,000 pvd	4 lanes: 5,000 - 14,000 vpd 2 lanes: 2,500 - 7,000 vpd
Direct Land Access	Restricted; some movements may be prohibited; Driveway spacing and number strictly controlled.	Restricted; Some movements may be prohibited; Design controls are used to ensure safety.	Design controls are used to ensure safety.

EXHIBIT 8 - CRASH DATA AND TRAFFIC COUNTS



EXISTING TRAFFIC CONDITIONS

- | | | |
|--|-----------------------|----------------------------|
| Attendance Zone | Bicycle Routes | Crashes (2011-2015) |
| Latest Traffic Counts (2014)
Source: TxDOT (AADT) | Off-Street, Existing | Bicycle - Fatality |
| | On-Street, Existing | Bicycle - Other |
| | On-Street, Planned | Pedestrian - Fatality |
| | Regional Veloweb | Pedestrian - Other |



Crash Data Source: TxDOT's Crash Records Information System - 2015 data is current as of January 2016. All TxDOT disclaimers apply. Data displayed contains reportable crashes with latitude and longitude information. Additional crashes may have occurred. This data is composed of TxDOT "Reportable Crashes" that occurs or originates on a traffic way, results in injury to or death of any person, or damage to the property of any person to the apparent extent of \$1,000.

Walking Safety Audit

Overview and Route

A walking safety audit was conducted by NCTCOG staff, City of Dallas staff, and school stakeholders on March 23, 2017 at and around Zaragoza Elementary during arrival and dismissal times. The purpose was to observe and identify barriers and opportunities for walking and bicycling to and from school. A map of the safety audit walking routes and observation locations can be found in **Appendix C**. Afternoon Walking Audit Map, and the checklist used in **Appendix D**. Audit Tool (Checklist). The safety audit was featured in a segment of the 6 pm news on NBC 5 DFW.⁶



Key Observations

Several common themes were identified from the assessment findings:

1. Most of the crosswalks in the area are very faded, making it difficult for motorists to see where to expect pedestrians.
2. Sidewalks are crumbling in many locations, creating an obstacle for disabled students and parents traveling to the school.
3. Sidewalks adjacent to the school are not wide enough to accommodate peak demand, causing students and parents to spill out into the grass close to moving vehicles.
4. There are several sidewalk obstructions affecting pedestrian mobility, including overgrown trees and shrubs, utility poles, a fire hydrant, dirt mound, and garbage bin.
5. Parents disregard NO PARKING signs and park in through traffic lanes on Carroll and Worth. As a result, parents park too close to crosswalks, driveways, and intersections, reducing pedestrian and vehicular visibility and making it difficult for other motorists to get around them.
6. School zone and school crossing signs need to be updated to current MUTCD standards (bright yellow-green) to make it more apparent to motorists to expect pedestrians in the area.
7. There is a need for intersection improvements at several locations with regards to the curb ramps, the landing areas, and pedestrian signalization. For example, utility poles obstruct curb ramps, landing areas are too small and not well-defined, curb ramps seem to blend with the roadway curb, and major intersections lack pedestrian countdown signals. Combined, these conditions make the pedestrian environment uninviting and less safe.
8. The commercial driveways on Carroll and Gaston pose safety issues—there are too many, they are too close to intersections, and they blend too much with sidewalks. This causes turning conflicts, as well as reduced safety and comfort for pedestrians.

⁶ <http://www.nbcdfw.com/news/local/Safe-routes-to-school-promotes-walking-and-cycling-416983833.html>

9. Pedestrians were observed crossing mid-block on Carroll Avenue at various locations between Gaston and Worth, indicating a need for more marked crosswalks across Carroll Avenue.
10. Many students chose to cross mid-block on Gaston Avenue between Peak and Carroll rather than cross at the intersection of Gaston and Carroll, which may be an indication of the poor pedestrian environment along the street and at the intersection.



1. Faded Crosswalk



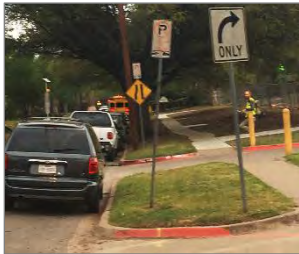
2. Crumbling Sidewalk



3. Narrow Sidewalk



4. Obstructed Sidewalk



5. Parking in Travel Lane (AM)



5. Parking in Travel Lane (PM)



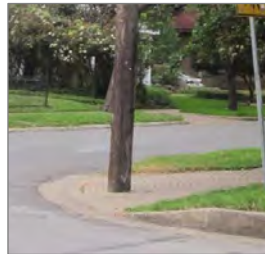
6. Outdated Sign



7. Curb Ramp Not Contained in Crosswalk



7. Lack of Landing Pad



7. Obstructed Curb Ramp



8. Commercial Driveway Conflicts at Intersection of Carroll and Worth



Key Issues

Based on the findings from the parent surveys, stakeholder meetings, crash data and traffic count assessment, and the walking safety audit, the following eight key issues were identified as obstacles to encouraging and enabling more students to safely and comfortably walk and bicycle to Zaragoza Elementary.

Issue 1: Safety of intersections and crossings, particularly those on Carroll Avenue, Gaston Avenue, and Columbia Avenue.

- When asked what issues affect their decision to allow their child to walk or bicycle to school, 52 percent of parents reported that “Safety of Intersections and Crossings” was a factor influencing their decision.
- Most of the crosswalks in the area are very faded, making it difficult for motorists to see where to expect pedestrians.
- School crossing signs need to be updated to current MUTCD standards (bright yellow-green to make it more apparent to motorists to expect pedestrians in the area and where they are likely to cross.)
- There is a need for intersection improvements at several locations with regards to the curb ramps, the landing areas, and pedestrian signalization (e.g., utility poles obstruct curb ramps, landing areas are too small and not well-defined, curb ramps seem to blend with the roadway curb, and major intersections lack pedestrian countdown signals). Combined, these conditions make the pedestrian environment uninviting and less safe.
- Several commercial driveways are very close to intersections or school crosswalks—some only 5 to 10 feet away, creating turning conflicts with other vehicles and with pedestrians attempting to cross the street.

Issue 2: Students cross at mid-block locations or at un-marked crosswalks, where motorists do not expect them.

- The school stakeholders reported that many students walk to school from the apartments on to the south of Columbia Avenue near Cisco Street.
- Students were observed crossing mid-block or at uncontrolled locations on Carroll Avenue between Worth and Gaston.
- There is a need for additional marked crosswalks on Carroll Avenue between Worth and Gaston, and on Columbia Avenue near Cisco Street.

Issue 3: Amount and speed of traffic on Carroll Avenue, Gaston Avenue, and Columbia Avenue.

- The school principal identified speeding as a major issue on Carroll Avenue.
- Fifty-six percent of the parents that responded to the parent survey reported that the “Speed of Traffic Along the Route” and the “Amount of Traffic Along the Route” influenced their decision to allow their child to walk or bicycle to or from school.
- The amount of traffic on Carroll Avenue from parents picking up their children from school makes it uncomfortable and unsafe for students walking home from school and crossing the street.
- The school speed limit signs that are not accompanied by a flashing beacon (located on Worth Street and Carroll Avenue) should be updated to current MUTCD standards of bright yellow-green to help improve motorist awareness.
- The school zone flashing beacons need to correspond to school arrival and dismissal time. One flasher on Carroll Avenue was observed to be dark until an hour after the school had been dismissed for the day.
- The long duration that the school zone speed limit is in effect may lower motorist compliance.

Issue 4: Parents disregard NO PARKING signs on Carroll Avenue and Worth Street, and park on the street close to crosswalks, driveways, and intersections.

- Parents park too close to crosswalks, driveways, and intersections on Carroll Avenue and Worth Street, reducing pedestrian and vehicular visibility and making it difficult for other motorists to get around them.
- Several of the NO PARKING signs are very faded and nearly illegible, and need to be replaced to help improve motorist compliance.

Issue 5: Deteriorating or obstructed sidewalks.

- Sidewalks are crumbling in many locations on the route to the school, making the walk to school less inviting and creating an obstacle for disabled students or parents traveling to the school.
- There were several sidewalk obstructions including garbage bins, utility poles, and overgrown vegetation, which either forced pedestrians to walk out into the street or travel-way, or cross the street mid-block. At intersections, these obstructions reduced the visibility of pedestrians.

Issue 6: Narrow sidewalks.

- Sidewalks adjacent to the school were observed to not be wide enough to accommodate peak pedestrian demand during school arrival and dismissal times. (Sidewalks on Carroll and Worth are four feet wide.)

Issue 7: Lack of safe and secure bicycle parking for students that bicycle to school.

- Providing a safe and protected place for students and teachers to store their bicycles during the school day is important when encouraging bicycling through Safe Routes to School programs.

Issue 8: Real or perceived crime in the area.

- When asked what issues affect their decision to allow their child to walk or bicycle to school, 63 percent of parents reported that Crime or Violence was a factor impacting their decision. This could include real or perceived crime.
- On the day of the safety audit, many of the parents that spoke with a reporter from NBC 5 DFW said that crime was a concern for them.

Recommendations

Comprehensive SRTS plans seek to increase safety and encourage students to walk and bicycle as a means of transportation through the five Es: Engineering, Education, Enforcement, Encouragement, and Evaluation. The following sections outline the recommendations under each of these strategies.

Engineering Recommendations

Engineering measures for SRTS include the design, construction and maintenance of physical infrastructure that improves the safety and comfort of students walking and bicycling to school. For the purposes of describing the location of recommended improvements in this plan, Carroll Avenue and Peak Street run north to south, and Gaston, Junius, Worth, Victor, Reiger, and Columbia run east to west. Subsequent sections include information on funding and implementation strategies. See **Appendix E**. Glossary of Infrastructure Improvements for more information on the treatments.

\$ = <\$10,000 \$\$ = \$10,000 - \$50,000 \$\$\$ = >\$50,000

- 1. Crosswalks at Intersections:** Restripe fading crosswalks at the intersections of Carroll and Gaston, Carroll and Worth, and Carroll and Victor to improve the visibility of pedestrian crossing locations. Install new high-visibility crosswalks on the east side of Peak Street at Gaston Avenue, and the east and west sides of Carroll Avenue at Worth Street. Install new standard parallel, or transverse, crosswalks on the east and west sides of Carroll at Junius Street, and on the east side of Carroll at Reiger Avenue.

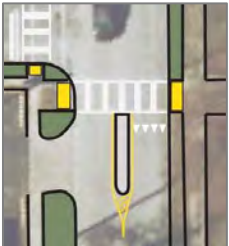
Issue Addressed: #1
Responsible Entity: City of Dallas
Timeframe: Short to Medium-Term
Cost: \$

- 2. Conduct studies for installing high-visibility crosswalks at two locations where pedestrians currently cross mid-block:** on the south side of Junius Street at Carroll Avenue, and on the east side of Cisco Street at Columbia Avenue. Because Columbia Avenue is a multi-lane, high-speed roadway, it is recommended that the crosswalk be accompanied by a new median refuge island and pedestrian crossing signage. By breaking the crossing into two phases, crossing islands reduce crossing distance and allow pedestrians to focus on one direction of traffic at a time. New curb ramps should be installed at the crosswalks where necessary, as identified in **Exhibit 9** on page 19.

Issue Addressed: #1 and #2
Responsible Entity: City of Dallas
Timeframe: Medium to Long-Term
Cost: \$\$

- 3. Install a 5-foot-wide concrete median refuge area south of the school crosswalk on Carroll** to discourage vehicles from turning left out of the Aca Las Tortas driveway on Carroll, provide a traffic calming effect as drivers approach the crosswalk, prevent motorists from “double-stacking” near the crosswalk, and create a refuge area for pedestrians crossing the street (see **Exhibit 11** for a visualization).

Issue Addressed: #1 and #4
Responsible Entity: City of Dallas
Timeframe: Medium-Term
Cost: \$



- 4. Narrow or close several driveways at the intersections of Carroll and Gaston and Carroll and Worth.** At all of these locations, there is at least one additional driveway that provides access to the site. Most of these driveways are within 20 feet of existing crosswalks, with some less than five feet from crosswalks. In general, the more conflict points (i.e., the number of locations where the travel paths of two different vehicles or person types cross), the greater the risk of a crash occurring. School walking routes should keep busy driveway crossings to a minimum. Fewer driveways and narrower driveway crossings will provide for improved pedestrian safety for children, especially for busy commercial zones.

Issue Addressed: #1
 Responsible Entity: City of Dallas
 Timeframe: Long-Term
 Cost: \$\$

- 5. Reduce the corner/curb return radii at several intersection corners on Carroll Avenue:** at the northeast and southeast corners at Junius Street, the northwest and southwest corners at Worth Street, the northeast and southeast corners at Victor Street, and the northeast corner at Reiger Avenue (see **Exhibit 9**). The reduction of a corner radius to produce a tighter turn results in decreases in turning speeds, improved motor vehicle and pedestrian sight distances, and a shortened pedestrian crossing distance. While no students are currently bussed to Zaragoza Elementary, the reduced curb radii should still accommodate occasional school bus movements.



Issue Addressed: #1 and #3
 Responsible Entity: City of Dallas
 Timeframe: Long-Term
 Cost: \$\$

- 6. Install curb extensions (also known as bulb-outs) on Worth Street between Carroll Avenue and Buckner Park** to reduce the distance that pedestrians are in the street at the school crosswalk and to prevent parents from parking too close to the crosswalk and school driveways, thereby improving sight distances (see **Exhibit 9** and **Exhibit 11**).



Issue Addressed: #1 and #4
 Responsible Entity: City of Dallas
 Timeframe: Long-Term
 Cost: \$\$

- 7. Where curb ramps have not already been updated to current ADA standards, install two curb ramps per corner along the route to school, as applicable** (see **Exhibit 9**). Curb ramps should be perpendicular whenever possible, where each corner has two ramps installed perpendicular to the face of the curb. An advantage of having two ramps at the corner is that the curb ramps can lead directly along the line of travel, guiding pedestrians into the crosswalk rather than into the middle of the intersection.



Issue Addressed: #1
 Responsible Entity: City of Dallas and Dallas ISD
 Timeframe: Long-Term
 Cost: \$\$\$

- 8. **Install pedestrian countdown signals** for all crossing directions at the intersections of Peak and Gaston, Carroll and Gaston, and Carroll and Columbia. Countdown signals help by giving pedestrians information about how much crossing time remains, and can be of particular benefit on wide streets. The 2009 MUTCD requires all new pedestrian signals to be countdown signals.

Issue Addressed: #1
 Responsible Entity: City of Dallas
 Timeframe: Medium-Term
 Cost: \$\$

- 9. **Install pedestrian push buttons** for all crossing directions at the intersections of Peak and Gaston, Carroll and Gaston, and Carroll and Columbia, as necessary when the pedestrian WALK signal is not displayed for every signal cycle. Where pedestrian volumes are high enough or for key time periods of the day such as school crossing times, signals should be put on pedestrian “recall” so that the pedestrian WALK signal is displayed every signal cycle.

Issue Addressed: #1
 Responsible Entity: City of Dallas
 Timeframe: Medium-Term
 Cost: \$



- 10. **Install street lights** just before the crosswalks at the northeast and northwest corners of the intersection of Carroll and Gaston, and at the southeast corner of Carroll and Columbia to improve pedestrian visibility in the early morning and evening hours. New street light poles will need to be installed for most locations.

Issue Addressed: #1
 Responsible Entity: City of Dallas
 Timeframe: Long-Term
 Cost: \$\$

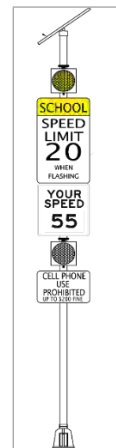


- 11. **Update existing school crossing signs and school speed limit signs to current MUTCD standards** (bright yellow-green). The increased visibility will improve motorist awareness of pedestrian crossing locations and school zone speed limits.

Issue Addressed: #1 and #3
 Responsible Entity: City of Dallas
 Timeframe: Short-Term
 Cost: \$\$

- 12. **School Speed Limit Signs:** Install new school speed limit signs on Carroll Avenue that incorporate a speed feedback display to help reduce motorist speeds through the school zone. Shorten the duration of the school zone speed limit, so that it is in effect from 7:15 to 8 am, and 2:50 to 3:30 pm, which follows the recommendations of the 2015 Texas Department of Transportation Manual, *Procedures for Establishing Speed Zones*. Verify that flashing beacons are active during these times.

Issue Addressed: #3
 Responsible Entity: City of Dallas
 Timeframe: Short- to Medium-Term
 Cost: \$\$



13. Replace faded NO PARKING signs on Carroll Avenue and Worth Street, and install new NO PARKING signs on the east side of Carroll Avenue adjacent to Buckner Park.

Issue Addressed: #4
Responsible Entity: City of Dallas
Timeframe: Short-Term
Cost: \$

14. Replace deteriorating sidewalks on Carroll Avenue, Gaston Avenue, Worth Street, and Cisco Street; also, remove sidewalk obstructions on the school campus and along Worth Street and Carroll Avenue.

Sidewalks that are deteriorating or have been damaged by tree roots or ground swelling present a tripping danger to pedestrians. A smooth sidewalk is also safer for wheelchairs, strollers, young bicyclists, and skateboarders. Ensuring that sidewalks are free of obstructions and having properly maintained landscaping helps maintain appropriate sight distances and makes it easier and safer for pedestrians to use the sidewalks. (See **Exhibit 10** on page 20 for specific locations.)



Issue Addressed: #5
Responsible Entity: City of Dallas (primary - initiating the process), Property Owners and Dallas ISD (funding and implementation support)
Timeframe: Short- to Long-Term
Cost: \$\$\$

15. Widen the existing sidewalks adjacent to Zaragoza Elementary along Carroll Avenue and Worth Street from 4 feet wide to 6 or more feet. This will help accommodate the high pedestrian volumes during school arrival and dismissal times, and ensure pedestrians and small children are not forced within unsafe distances of moving vehicles. The widened sidewalks on Carroll Avenue should align with the new 6-foot sidewalks being constructed as part of the Buckner Park improvements.

Issue Addressed: #6
Responsible Entity: City of Dallas and Dallas ISD
Timeframe: Long-Term
Cost: \$\$



16. Install bicycle parking racks with a concrete landing pad on the school campus. Providing a safe and protected place for students and teachers to store their bicycles during the school day is important when encouraging bicycling through SRTS programs. The bicycle parking should be in a location that is easy to locate, yet is in a safe and secure location (e.g., near the main entrance to the school where foot traffic would deter would-be thieves or vandals, but not in the way of normal pedestrian foot traffic). The bicycle rack should allow both the bicycle frame and wheel(s) to be locked to the rack.

Issue Addressed: #7
Responsible Entity: Dallas ISD
Timeframe: Medium- to Long-Term
Cost: \$



EXHIBIT 9 - RECOMMENDED CROSSING IMPROVEMENTS

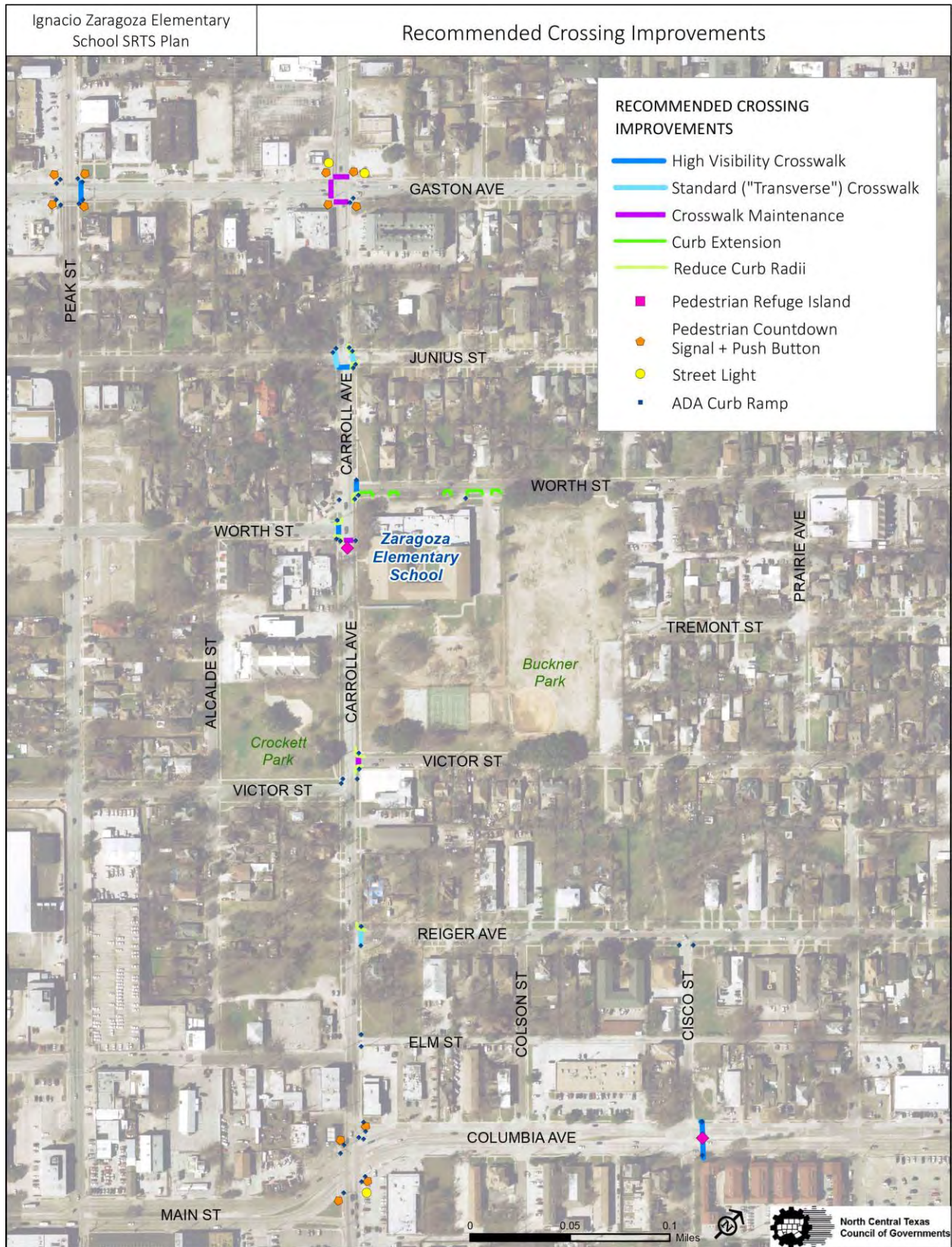


EXHIBIT 10 - RECOMMENDED SIDEWALK IMPROVEMENTS

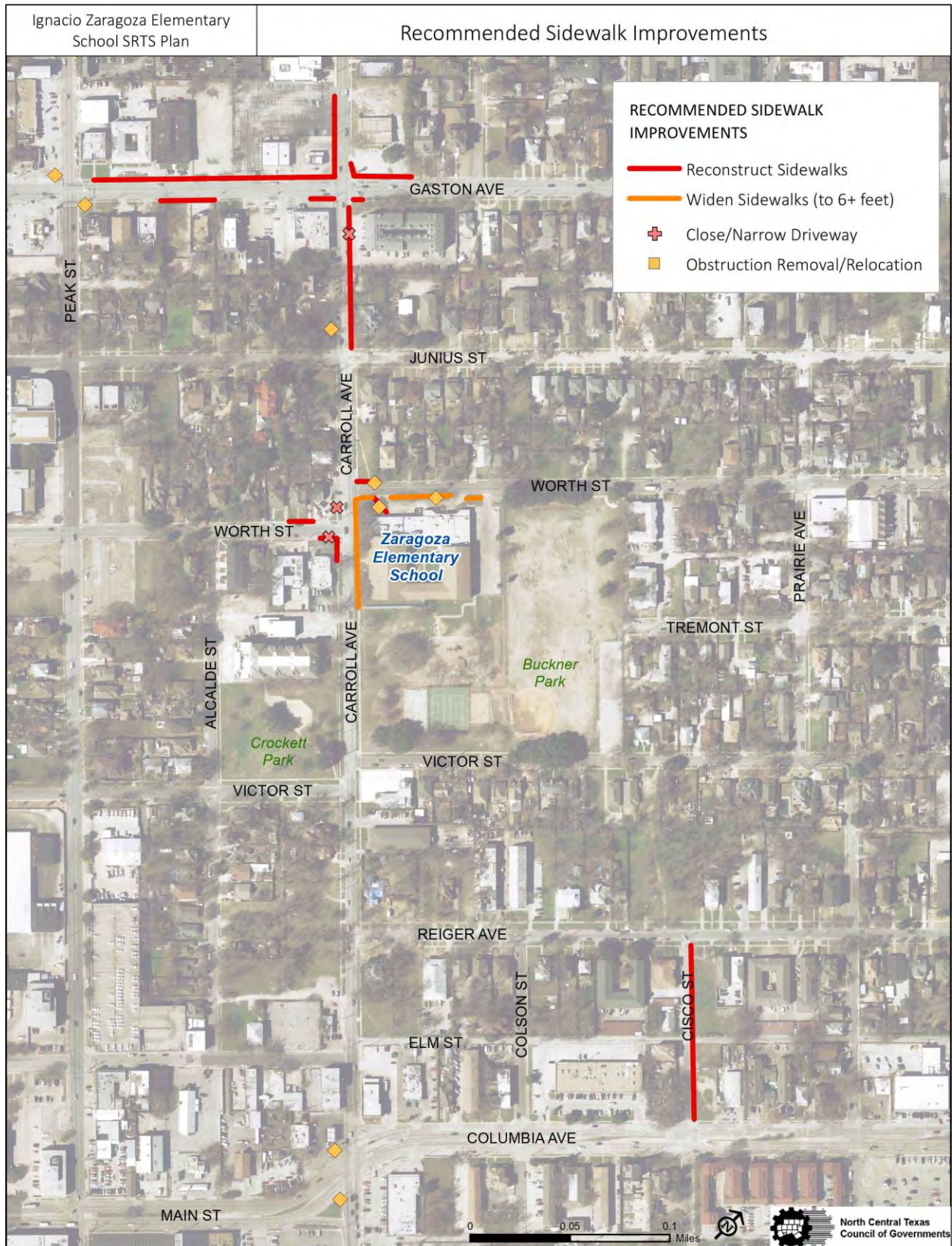


EXHIBIT 11 - VISUALIZING THE CAMPUS AREA IMPROVEMENTS

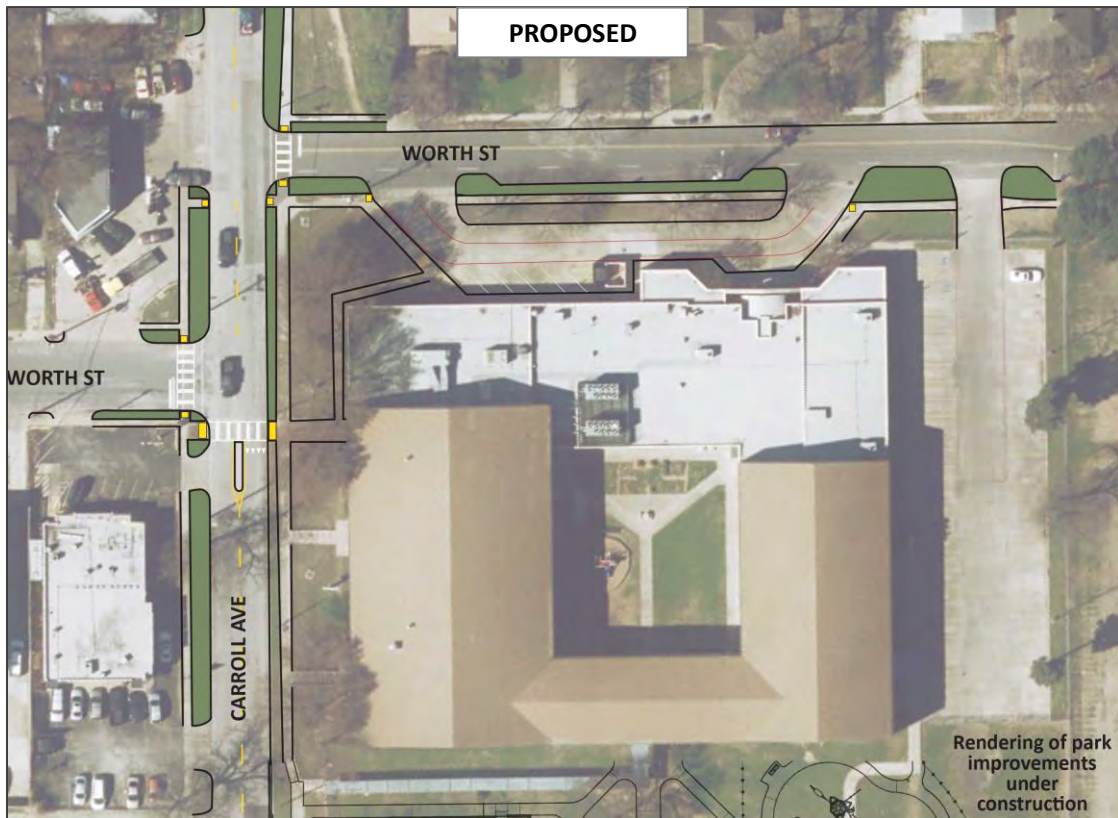


EXHIBIT 12 - RECOMMENDED INFRASTRUCTURE IMPROVEMENTS, BY RESPONSIBLE ENTITY, BY IMPLEMENTATION TIMEFRAME

Timeframe:
Short Term (0-2 years)
Medium Term (2-5 years)
Long Term (5+ years)

Responsible Entity	Infrastructure Type	Quantity	Approx. Length (linear ft)	Location(s)	Issue Addressed (p. 13)
City of Dallas	High Visibility Crosswalk (new)	1	50	Peak/Gaston intersection - east side	Issue 1
City of Dallas	High Visibility Crosswalk (new)	2	60	Carroll/Worth intersection - east and west sides	Issue 1
City of Dallas	High Visibility Crosswalk (maintenance)	1	30	Carroll/Worth intersection - south side	Issue 1
City of Dallas	Advance Stop Line	1	12	Carroll/Worth intersection - south side	Issue 1 & 4
City of Dallas	Standard/"Transverse" Crosswalk (new)	3	100	Carroll/Junius intersection - east side Carroll/Junius intersection - west side Carroll/Reiger intersection - east side	Issue 1
City of Dallas	Standard/"Transverse" Crosswalk (maintenance)	4	140	Carroll/Gaston intersection - north side Carroll/Gaston intersection - south side Carroll/Gaston intersection - west side Carroll/Victor intersection - east side	Issue 1
City of Dallas	School Crossing Signs (maintenance)	4	-	All existing school crossing signs on Carroll Ave. around Zaragoza Elementary should be updated to meet current MUTCD standards (bright yellow/green): - Carroll/Worth intersection (2) - Carroll/Junius intersection (1) - Victor St adjacent to park (1)	Issue 1
City of Dallas	School Zone Speed Limit Signs (maintenance)	2	-	The school zone speed limit signs not accompanied by a flashing beacon should be updated to meet current MUTCD standards (bright yellow/green), and their times adjusted to 7:15 to 8 am, and 2:50 to 3:30 pm.	Issue 3
City of Dallas	School Zone Speed Limit Signs and Flashing Beacons	6	-	Modify the times listed on the school zone speed limit signs and the times that the flashing beacons are active, so that the school zones are in effect from 7:15 to 8 am, and 2:50 to 3:30 pm.	Issue 3
City of Dallas	School Zone Flashing Beacon (maintenance)	4	-	Verify and adjust, if necessary, the timing of the school zone flashing beacons on Carroll, Worth and Victor at the beginning of each school year and after daylight savings	Issue 3
City of Dallas	Pedestrian Crossing Signs (new)	4	-	Columbia/Cisco intersection - east side at proposed crosswalk	Issue 1 & 2
City of Dallas	No Parking Signs (new)	TBD	-	Along the east side of Carroll Ave adjacent to Buckner Park	Issue 4

Responsible Entity	Infrastructure Type	Quantity	Approx. Length (linear ft)	Location(s)	Issue Addressed (p. 13)
City of Dallas	No Parking Signs (maintenance)	4	-	Carroll Ave and Worth St: replace the faded signs adjacent to the school	Issue 4
City of Dallas & Property Owners	Landscaping Maintenance (obstruction)	-	-	Vegetation obstructing the sidewalk along the west side of Carroll between Gaston and Junius	Issue 5
City of Dallas & Property Owners	Landscaping Maintenance (obstruction)	-	-	Vegetation encroaching on the sidewalk on the north side of Worth St across from Zaragoza Elementary	Issue 5
City of Dallas	Landscaping Maintenance (obstruction)	-	-	Dirt obstructing the sidewalk in front of Zaragoza Elementary on Worth St, caused by work on a utility pole	Issue 5
City of Dallas	High Visibility Crosswalk (new)	1	30	Carroll/Junius intersection: south side	Issue 1 & 2
City of Dallas	High Visibility Crosswalk (new)	1	100	Columbia/Cisco intersection: east side	Issue 1 & 2
City of Dallas	Concrete Median (5 ft. wide)	1	20	Carroll Ave: to the south of the school crosswalk at Worth St	Issue 1 & 4
City of Dallas	Pedestrian Countdown Signal	24	-	All crossing directions at the intersections of: Peak/Gaston, Carroll/Gaston, and Carroll/Columbia	Issue 1
City of Dallas	Pedestrian Push Button	8	-	Peak/Gaston intersection: all crossing directions	Issue 1
City of Dallas	Pedestrian Push Button	4	-	Carroll/Gaston intersection: the crossing of Carroll on the north and south sides of Gaston	Issue 1
City of Dallas	Pedestrian Push Button	4	-	Carroll/Columbia intersection: the crossing of Carroll on the north and south sides of Columbia	Issue 1
City of Dallas	Speed Feedback Displays	2	-	Install on the school speed limit flashing beacon signs on Carroll Ave	Issue 3
City of Dallas & Property Owners	Sidewalks - Repair to Existing	-	1,020	Gaston Ave: Various locations between Peak St and Moreland Ave	Issue 5
City of Dallas & Property Owners	Sidewalks - Repair to Existing	-	700	Carroll Ave: Various locations between Swiss Ave and Victor St	Issue 5
City of Dallas, Dallas ISD, & Property Owners	Sidewalks - Repair to Existing	-	90	Worth St: Various locations between Alcalde St and Buckner Park	Issue 5
City of Dallas & Property Owners	Sidewalks - Repair to Existing	-	460	Cisco St	Issue 5
City of Dallas	Street Lights	3	-	On the approach just before the crosswalks at the northeast and northwest corners of Carroll and Gaston, and the southeast corner of Carroll and Columbia	Issue 1
City of Dallas	Curb Ramps	8	-	Peak/Gaston intersection: all corners	Issue 1
City of Dallas	Curb Ramps	2	-	Carroll/Gaston intersection: southeast corner	Issue 1

Responsible Entity	Infrastructure Type	Quantity	Approx. Length (linear ft)	Location(s)	Issue Addressed (p. 13)
City of Dallas	Curb Ramps	6	-	Carroll/Junius intersection: northwest, northeast, and southeast corner	Issue 1
City of Dallas	Curb Ramps	8	-	Carroll/Worth intersection: various locations	Issue 1
City of Dallas	Curb Ramps	5	-	Carroll/Victor intersection: various locations	Issue 1
City of Dallas	Curb Ramps	2	-	Carroll/Reiger intersection: northeast and southeast corners	Issue 1
City of Dallas	Curb Ramps	2	-	Carroll/Elm intersection: northeast and southeast corners	Issue 1
City of Dallas	Curb Ramps	2	-	Reiger/Cisco intersection: southeast and southwest corners	Issue 1
City of Dallas	Curb Ramps	2	-	Cisco/Columbia intersection: northeast and northwest corners	Issue 1
City of Dallas	Curb Ramps	9	-	Carroll/Columbia intersection: northwest corner (2) northeast corner (4), southeast corner (2), and southwest corner(1)	Issue 1
City of Dallas	Landing Pads for Pedestrian Push Buttons	6	-	Peak/Gaston intersection: all corners Carroll/Gaston intersection: southeast corner Carroll/Columbia: southwest corner	Issue 1
City of Dallas	Pedestrian Refuge Island	1	TBD	At the proposed crosswalk on the east side of the Columbia/Cisco intersection	Issue 1 & 2
City of Dallas	Curb Extensions ("Bulb Outs")	5	-	Worth St - south side between Carroll and Buckner Park	Issue 1 & 4
City of Dallas	Curb Extensions to Narrow Curb Radii	7	-	Carroll/Junius intersection - east side (2) West side of Carroll at Worth (2) East side of Carroll at Victor (2) East side of Carroll and the north side of Reiger (1)	Issue 1
City of Dallas	Relocate Utility	4	-	Peak/Gaston intersection: northwest and southeast corners Carroll/Columbia intersection: northwest and southwest corners	Issue 5
City of Dallas	Relocate Fire Hydrant	1	-	Currently located in the sidewalk on the east side of Carroll Ave at Worth St	Issue 5
City of Dallas	Driveway Closure or Narrowing	3	TBD	Various locations along Gaston, Carroll, and Worth	Issue 1
City of Dallas & Dallas ISD	High Visibility Crosswalk (new)	2	40	At the entrances off of Carroll to Buckner Park's new parking lot and driveway	Issue 1
City of Dallas & Dallas ISD	Sidewalks - Widen to 6+ ft.	-	530	The sidewalks that run parallel to Zaragoza Elementary on Carroll and Worth	Issue 6
Dallas ISD	Relocate Dumpster	-	-	Currently obstructing the sidewalk on the west side of the school's driveway off Worth	Issue 5
Dallas ISD	Bicycle Parking and Landing Pad	8 parking spots	-	In a protected but still visible location (e.g., in the teacher parking lot)	Issue 7
Dallas ISD	Sidewalks - Repair to Existing	-	50	West side of school driveway off of Worth St	Issue 5
Dallas ISD	Curb Ramp	1	-	East side of school driveway off of Worth St	Issue 5

EXHIBIT 13 - RECOMMENDED INFRASTRUCTURE IMPROVEMENTS, BY IMPROVEMENT TYPE

Sidewalk Improvements				
Improvement Type and Quantity	Location	Approx. Length (linear ft)	Responsible Entity	Issue Addressed (p. 13)
Sidewalks - Repair to Existing	Gaston Ave: various locations between Peak St and Moreland Ave	1,020	City of Dallas & Property Owners	Issue 5
Sidewalks - Repair to Existing	Carroll Ave: various locations between Swiss Ave and Victor St	700	City of Dallas & Property Owners	Issue 5
Sidewalks - Repair to Existing	Worth St: various locations between Alcalde St and Buckner Park	90	City of Dallas, Dallas ISD & Property Owners	Issue 5
Sidewalks - Repair to Existing	Cisco St	460	City of Dallas & Property Owners	Issue 5
Sidewalks - Repair to Existing	West side of school driveway off of Worth St	50	Dallas ISD	Issue 5
Sidewalks - Widen Existing to 6+ ft.	The sidewalks that run parallel to Zaragoza Elementary on Carroll and Worth	530	City of Dallas & Dallas ISD	Issue 6
Driveway Narrowing or Closure (3)	Various locations along Gaston, Carroll, and Worth: Work with property owners to close duplicate driveways or narrow driveways that are so close to the intersections as to endanger pedestrians from vehicle turning movements	TBD	City of Dallas	Issue 1
Curb Ramp (1)	East side of Zaragoza's driveway at the sidewalk	-	Dallas ISD	Issue 5
Landscaping Maintenance	Vegetation obstructing the sidewalk along the west side of Carroll Ave between Gaston and Junius	-	City of Dallas & Property Owners	Issue 5
Landscaping Maintenance	Vegetation encroaching on the sidewalk on the north side of Worth, east of Carroll	-	City of Dallas & Property Owners	Issue 5
Landscaping Maintenance	Dirt obstructing the sidewalk in front of Zaragoza Elementary on Worth St, at the utility pole	-	City of Dallas	Issue 5
Relocate Utility (4)	Peak/Gaston intersection: northwest corner Peak/Gaston intersection: southeast corner Carroll/Columbia intersection: northwest and southwest corners	-	City of Dallas	Issue 5
Relocate Fire Hydrant	Currently located in the sidewalk on the east side of Carroll Ave at Worth St	-	City of Dallas	Issue 5
Relocate Dumpster (obstruction)	Currently located on the sidewalk on the west side of the school's driveway off of Worth St	-	Dallas ISD	Issue 5

Crossing Improvements				
Improvement Type and Quantity	Location	Approx. Length (linear ft)	Responsible Entity	Issue Addressed (p. 13)
High Visibility Crosswalk (new) (1)	Peak/Gaston intersection: east side	50	City of Dallas	Issue 1
High Visibility Crosswalk (new) (1)	Carroll/Junius intersection: south side	30	City of Dallas	Issue 1 & 2

High Visibility Crosswalk (new) (2)	Carroll/Worth intersection: east and west sides	60	City of Dallas	Issue 1
High Visibility Crosswalk (new) (1)	Columbia/Cisco intersection: east side	100	City of Dallas	Issue 1 & 2
High Visibility Crosswalk (new) (2)	At the entrances off of Carroll to Buckner Park's new parking lot and driveway/turn-around lane	40	City of Dallas & Dallas ISD	Issue 1
High Visibility Crosswalk (maintenance) (1)	Carroll/Worth intersection: south side	30	City of Dallas	Issue 1
Standard/"Transverse" Crosswalk (new) (3)	Carroll/Junius intersection: east and west sides Carroll/Reiger intersection: east side	100	City of Dallas	Issue 1
Standard/"Transverse" Crosswalk (maintenance) (4)	Carroll/Gaston intersection: north side Carroll/Gaston intersection: south side Carroll/Gaston intersection: west side Carroll/Victor intersection: east side	140	City of Dallas	Issue 1
Advance Stop Line (1)	Carroll/Worth intersection: south side	12	City of Dallas	Issue 1 & 4
Concrete Median (5 ft. wide) (1)	Carroll Ave: South of the school crosswalk at Worth St	20	City of Dallas	Issue 1 & 4
Median Pedestrian Refuge Island (1)	At the proposed crosswalk on the east side of the Columbia/Cisco intersection	TBD	City of Dallas	Issue 1 & 2
Pedestrian Crossing Signs (new) (4)	Columbia/Cisco intersection: east side at proposed crosswalk	-	City of Dallas	Issue 1 & 2
School Crossing Signs (maintenance) (4)	All existing school crossing signs on Carroll Ave. around Zaragoza Elementary should be updated to meet current MUTCD standards (bright yellow/green): - Carroll/Worth intersection (2) - Carroll/Junius intersection (1) - Victor St adjacent to park (1)	1	City of Dallas	Issue 1
Pedestrian Countdown Signal (24)	All crossing directions at the intersections of: Peak/Gaston Carroll/Gaston Carroll/Columbia	-	City of Dallas	Issue 1
Pedestrian Push Button (8)	Peak/Gaston intersection: all crossing directions	-	City of Dallas	Issue 1
Pedestrian Push Button (4)	Carroll/Gaston intersection: the crossing of Carroll on the north and south sides of Gaston	-	City of Dallas	Issue 1
Pedestrian Push Button (4)	Carroll/Columbia intersection: the crossing of Carroll on the north and south sides of Columbia	-	City of Dallas	Issue 1
Landing Pads for Pedestrian Push Buttons (6)	Peak/Gaston intersection: all corners Carroll/Gaston intersection: southeast corner Carroll/Columbia intersection: southwest corner	-	City of Dallas	Issue 1
Street Lights (3)	On the approach just before the crosswalks at the northeast and northwest corners of the intersection of Carroll and Gaston, and at the southeast corner of Carroll and Columbia	-	City of Dallas	Issue 1
Curb Extensions to Narrow Curb Radii (7)	Carroll/Junius intersection: east side (2) West side of Carroll at Worth (2) East side of Carroll at Victor (2) East side of Carroll and the north side of Reiger (1)	-	City of Dallas	Issue 1
Curb Ramps (8)	Peak/Gaston intersection: all corners	-	City of Dallas	Issue 1
Curb Ramps (2)	Carroll/Gaston intersection: southeast corner	-	City of Dallas	Issue 1

Curb Ramps (6)	Carroll/Junius intersection: northwest, northeast, and southeast corner	-	City of Dallas	Issue 1
Curb Ramps (8)	Carroll/Worth intersection: various locations	-	City of Dallas	Issue 1
Curb Ramps (5)	Carroll/Victor intersection: various locations	-	City of Dallas	Issue 1
Curb Ramps (2)	Carroll/Reiger intersection: northeast and southeast corners	-	City of Dallas	Issue 1
Curb Ramps (2)	Carroll/Elm intersection: northeast and southeast corners	-	City of Dallas	Issue 1
Curb Ramps (2)	Reiger/Cisco intersection: southeast and southwest corners	-	City of Dallas	Issue 1
Curb Ramps (2)	Cisco/Columbia intersection: northeast and northwest corners	-	City of Dallas	Issue 1
Curb Ramps (9)	Carroll/Columbia intersection: northwest corner (2), northeast corner (4), southeast corner (2), southwest corner (1)	-	City of Dallas	Issue 1

Traffic Calming and Control Improvements				
Improvement Type and Quantity	Location	Approx. Length (linear ft)	Responsible Entity	Issue Addressed (p. 13)
School Zone Speed Limit Signs (maintenance) (2)	The school zone speed limit signs not accompanied by a flashing beacon should be updated to meet current MUTCD standards (bright yellow/green): - Carroll between Worth and Victor - Worth St in front of Zaragoza Elementary	-	City of Dallas	Issue 3
School Zone Speed Limit Signs and Flashing Beacons (modify times) (6)	All school zone speed limit signs and school zone flashing beacons on Carroll Ave, Worth St, and Victor St around Zaragoza Elementary	-	City of Dallas	Issue 3
School Zone Flashing Beacon (maintenance) (4)	Verify and adjust, if necessary, the timing of the school zone flashing beacons on Carroll, Worth and Victor at the beginning of each school year and after daylight savings	-	City of Dallas	Issue 3
Speed Feedback Displays (2)	Install on the school speed limit signs on Carroll Ave	-	City of Dallas	Issue 3
No Parking Signs (new) (TBD)	Along the east side of Carroll Ave adjacent to Buckner Park	-	City of Dallas	Issue 4
No Parking Signs (maintenance) (4)	Carroll Ave and Worth St: replace the faded signs adjacent to the school, and adjust their location to improve their visibility. When the proposed curb extensions are installed on Worth St, replace with "10 Min Loading" signs	-	City of Dallas	Issue 4
Curb Extensions ("Bulb Outs") (5)	Worth St: south side between Carroll and Buckner Park	-	City of Dallas	Issue 1 & 4

Other				
Improvement Type and Quantity	Location	Approx. Length (linear ft)	Responsible Entity	Issue Addressed (p. 13)
Bicycle Parking & Concrete Pad (8+ spots)	Along the school building in the teacher parking lot, or in another protected but visible location	-	Dallas ISD	Issue 7

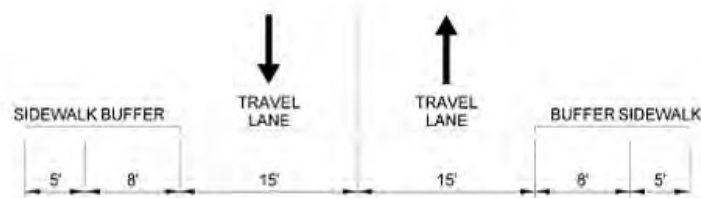
Future Engineering Studies

There are several additional recommendations intended to calm traffic and improve pedestrian safety and comfort, but which would require further study. The recommendations discussed below should be considered in the event that significant modifications are made to these streets in the future.

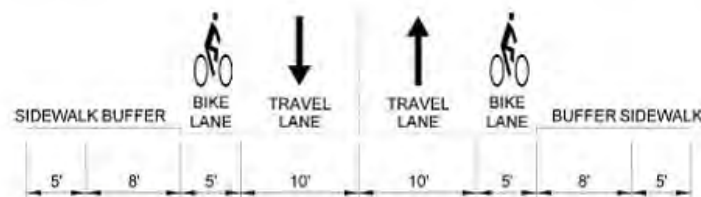
Narrow the Travel Lanes on Carroll Avenue

It is recommended that the City implement the roadway reconfiguration for Carroll Avenue proposed in CityMap: narrowing the existing 15-foot-wide lanes to 10 feet, and installing dedicated bicycle facilities in the excess right-of-way (see **Exhibit 14**), thereby slowing down traffic and creating a dedicated bicycle facility. Should a bicycle lane be installed, it is recommended that it be a protected lane, buffered from traffic by a physical barrier such as a concrete curb to best accommodate users of all ages and abilities.

EXHIBIT 14 - PROPOSED CARROLL AVENUE ROADWAY RECONFIGURATION



Existing Carroll Avenue Cross-Section from Main Street to Reiger Avenue



Proposed Carroll Avenue Cross-Section from Main Street to Reiger Avenue

Narrow Columbia Avenue from Six to Four Lanes

Columbia Avenue/Main Street carries only 17,000 average daily vehicles in the area east of Carroll Avenue (see **Exhibit 8** on page 10), which is on the lower end of the average 15,000 - 30,000 vehicles per day for six-lane Minor Arterials in the City's Thoroughfare Plan. The Federal Highway Administration advises that roadways with an average of 20,000 vehicles per day or less may be good candidates for a road diet and should be evaluated for feasibility.⁷ It is recommended that a feasibility study be conducted for narrowing the street to four lanes, divided. This would not only slow traffic and improve safety for pedestrians crossing the street, it would also create an opportunity for enhanced pedestrian and/or bicycle facilities along this corridor. The cost of the road diet conversion may be minimal if it only consists of changes in pavement markings (e.g., narrowing travel lanes and installing buffered bike lanes).

Remove the Parking Lane on Peak Street

Peak Street between Ross and Main Street is a three-lane roadway (each lane is 10 feet wide), with an outside 8-foot-wide parking lane. Peak Street was not a particular focus on this study because it was not identified as

⁷ https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/ch3.cfm

a major route that students use to walk to school. Nevertheless, to provide improved pedestrian accommodations along Peak Street for students that may walk in the future, and improve the overall quality of life in the area, it is recommended that the outside parking lane be removed to create space for wider sidewalks and a vegetative buffer between the sidewalks and the street. This would enhance the comfort of pedestrians walking along the street, and shorten the distance that pedestrians are exposed to traffic as they cross Peak Street.

Future City-Wide Considerations

Through this planning process, several common themes were observed that may apply city-wide and require policy-level changes. The following are policy recommendations to improve Safe Routes to School city-wide.

1. Assess how infrastructure improvements that benefit people walking and bicycling (e.g., sidewalks, crosswalks, signs, etc.) are prioritized for implementation. The presence of a school within one-quarter mile—particularly schools in low-income areas of the city—should be a significant factor when prioritizing where in the city to fund pedestrian-related improvements.
2. As schools and streets around schools are constructed or reconstructed, ensure that there is sufficient pedestrian queuing space at the school entrances and exits, and at all street crossing locations adjacent to the school campus.
3. Sidewalk Width: The standard City of Dallas sidewalk is four feet in width, or five feet wide when located adjacent to the street curb, as defined by the City's Paving Design Manual (1998). The preferred minimum sidewalk width recommended for safe routes to school is five to six feet. The 6-foot width allows for two people to walk comfortably side by side and provides sufficient space for pedestrians crossing in the opposite direction.⁸
4. Curb radii: Minimizing turning speeds is crucial to pedestrian safety, particularly minimizing turning speeds from major to minor streets. Where there is on-street parking on local streets, the City may consider reducing the curb radii for local streets intersecting with local streets from 20 feet to 15 feet.
5. ADA Curb Ramps: A single diagonal curb ramp should only be used after all other curb ramp types have been evaluated and deemed impractical. U.S. Access Board guidance on compliance with the Americans with Disabilities Act (ADA) recommends two curb ramps at each corner of an intersection on new construction, and reasonable efforts should be made to install two on retrofit projects. Two curb ramps enable people in wheelchairs and other mobility aids to enter a crosswalk directly, without having to turn 45 degrees in the roadway. An additional advantage to using two curb ramps is that they better line up between the crosswalk and the adjacent sidewalk than a single curb ramp does. However, on corners with larger radii (generally radii greater than 30 feet), placing two curb ramps may make it difficult to align everything correctly. In these situations, after other mitigation has been tried, placing one diagonal ramp may work better.

⁸ <http://guide.saferoutesinfo.org/engineering/sidewalks.cfm>

Education, Enforcement, Encouragement, and Evaluation Recommendations

Not all of the barriers to enabling and encouraging more students to walk and bicycle to school can be addressed through engineering measures alone. The following are steps that can be taken to implement Safe Routes to School through education, enforcement, encouragement, and evaluation.

Education

Educational programs that teach students bicycle, pedestrian, and traffic safety skills, and teach drivers how to drive safely in school zones and share the road. Curriculum programs implemented in schools can teach children the basics regarding pedestrian and bicycle safety, which may also help them eventually become better drivers. Available curriculums that schools can use include the Look Out Texans school kits.⁹ A resource with a cycling focus is the BikeTexas SafeCyclist curriculum. Educational materials should also be provided to parents on proper school drop-off procedures, obeying speed limits near school, and yielding to bicyclists and pedestrians. An example of this type of educational material is NCTCOG's *School Zone Safety Tips* flyer.⁹



Enforcement

Enforcement includes strategies to deter the unsafe behavior of drivers, bicyclists and pedestrians, and encourage all road users to obey traffic laws and share the road. Deterrents to unsafe behavior may include education on the unsafe behavior, developing a community-based enforcement program, increasing police presence, or installing warning signage and striping. For Zaragoza Elementary, enforcement efforts should specifically target speeding in the school zone, encouraging motorists to yield to pedestrians at crosswalks, reducing illegal parking on streets or unsafe school parking lot behavior, and ensuring that bicyclists and pedestrians are also obeying traffic laws. To ensure that parents and students feel comfortable walking and bicycling to school, there should also be enforcement of the homeless population to ensure they do not hang out near the school during the day.

When the new driveway and parking lot open on Carroll Avenue as part of the improvements to Buckner Park, an adult or adults should be assigned to monitor or direct the students at the driveways.

Encouragement

Encouragement activities include special events, clubs, contests, and ongoing activities that encourage more walking, bicycling or carpooling through fun activities and incentives. Fear of violence and other threats to personal safety were found through the parent survey and discussions with parents to be the greatest deterrent to walking and bicycling to school.

Ongoing programs such as walking school buses have been shown to improve safety by walking in organized groups



⁹ www.lookouttexans.org/school-resources

under adult supervision, whereby alternating parent volunteers and students meet in a central location and walk to and from school together. Through the parent survey, it was also found that many families live near the intersections of Carroll and Victor, Carroll and Reiger, and Carroll and Columbia, making Carroll south of the school a good route for a walking school bus. The SRTS National Partnership has an easy to follow guide to getting started called [Step by Step: How to Start a Walking School Bus Program at Your School](#).¹⁰

Another technique used to abate crime is corner captains, in which adult volunteers are stationed on key street corners to increase the presence of responsible adults and watch over children as they walk and bicycle to school. The school's administrative staff can be instrumental in connecting parents and recruiting volunteers.

The school can also designate additional days or weeks during the school year as special encouragement days, such as the national walk and bike to school days held in October and May each year (www.walkbiketoschool.org). As part of these events, mileage clubs and contests can be established to encourage children to increase their levels of activity in general, and to walk and bike to school specifically. These events should also be accompanied by educational activities such as bicycle rodeos, which are events that teach bicycle safety skills.

Evaluation

Evaluation of the Safe Routes to School plan is important to understand the effectiveness of the projects, identify improvements that are needed, and ensure the activities can continue in the long term. Evaluation activities include measuring the number of infrastructure projects that have been constructed or programs that have been implemented. Evaluation activities can also measure the change in mode shares (the percentage that drive, bike, walk, bus), and attitudes towards walking and bicycling after the implementation of the SRTS plan. Specific evaluation metrics might include the following:

- Number and percentage of children walking and biking safely to school
- Parental and student attitudes toward biking and walking to school
- Number of educational and encouragement programs and special events
- Dollar amount of grants received and Capital Improvement Plan funding
- Number of Safe Routes to School projects in the Capital Improvement Plan
- Number of Safe Routes to School projects constructed

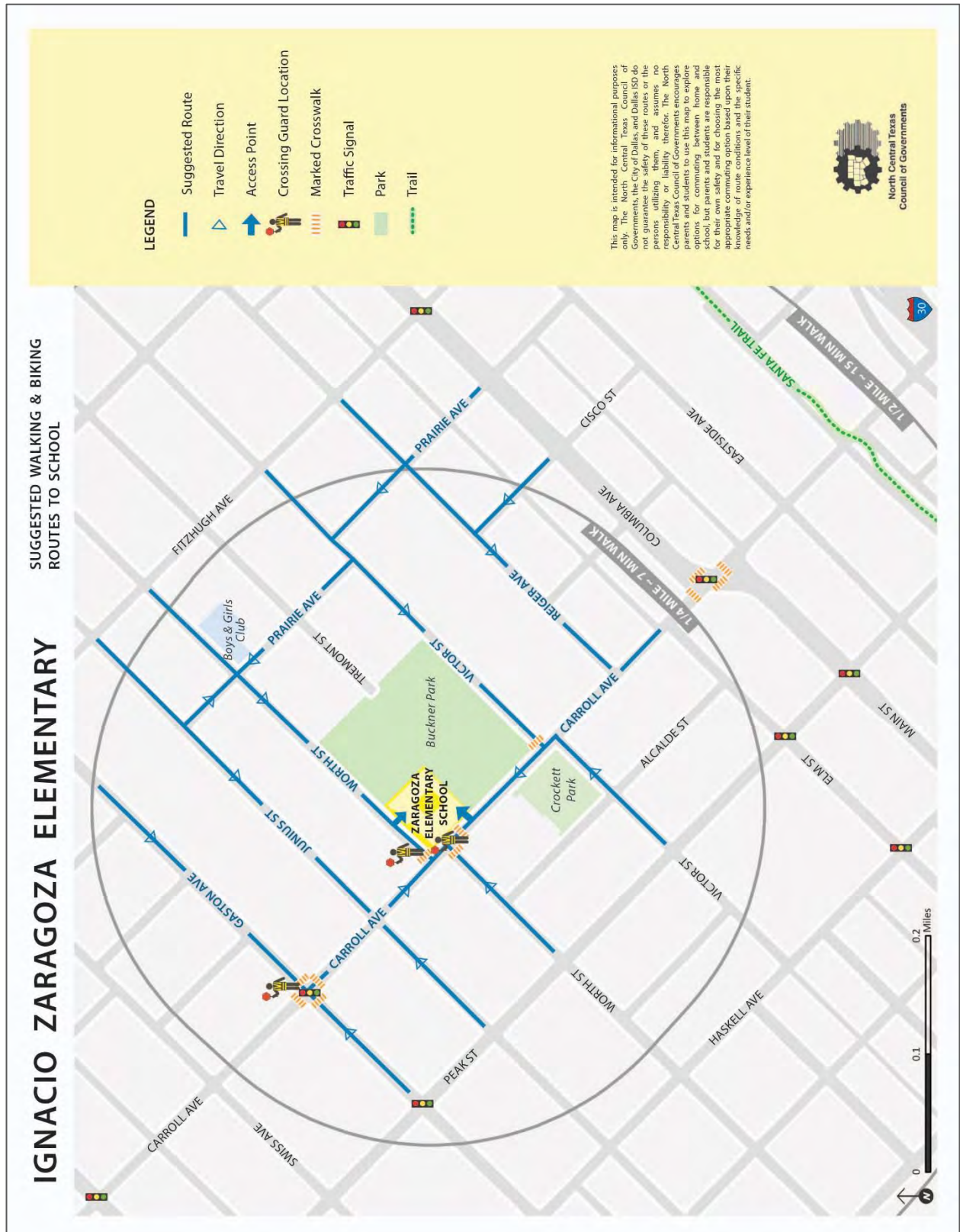
It is recommended that the City of Dallas track the implementation of the projects and programs that are recommended in this plan in a five-year follow-up report.

Parent Map Development

As part of this planning effort, a school route map was developed for parents that identifies optimal routes for walking and bicycling to school. The map identifies the locations of crossing guards and existing marked crosswalks. Only those routes in which students are assisted by crossing guards with crossing busy roadways are shown. As areas around the school receive engineering improvements, this map should be modified as necessary to include any newly created safe routes.

¹⁰ <http://www.saferoutespartnership.org/resources/toolkit/step-step>

EXHIBIT 15 - PARENT MAP: SUGGESTED WALKING AND BIKING ROUTES TO SCHOOL



Next Steps

Engineering Project Implementation

To assist with implementation, the recommended engineering improvements have been broken out into quick fixes for immediate implementation, short-term priority projects that can be completed in the short-term but require some additional funding, and longer-term priority projects that will require a longer timeframe to complete or more significant funding. While all of the improvements recommended in this plan should ultimately be implemented, the projects identified in the following section should be prioritized as opportunities arise and funding becomes available. Priority improvements were selected based on the number of students they will impact and/or the anticipated safety improvement they will provide.

Quick Fixes

These are improvements that can be completed in the immediate short-term (less than six months), with minimal funding.

City of Dallas, working with property owners where necessary:

1. Clear dirt caused by work on a utility pole that is obstructing the sidewalk on the south side of Worth Street between the driveway entrance and exit to Zaragoza Elementary.
2. Trim the vegetation (bush) that is encroaching on the sidewalk on the north side of Worth Street across from Zaragoza Elementary.
3. Clear the vegetation (trees and shrubs) that is obstructing the sidewalk along the west side of Carroll Avenue between Gaston and Junius.
4. Modify the times listed on the school zone speed limit signs and the times that the flashing beacons are active so that the school zones on Carroll, Worth, and Victor are in effect from 7:15 am to 8 am, and 2:50 pm to 3:30 pm. Verify that the school zone flashing beacons on Carroll, Worth, and Victor are active during arrival and dismissal times, and adjust if necessary.
5. Replace the faded NO PARKING signs adjacent to the school on Carroll Avenue and Worth Street.
6. Adjust the traffic signals at the intersection of Carroll and Gaston so that signals are in pedestrian "recall" during school crossing times (7 am to 8 am, and 3 pm to 4 pm), so that the pedestrian WALK signal is displayed every signal cycle.

Dallas ISD and Zaragoza Elementary:

1. Relocate the dumpster that is currently encroaching on the sidewalk along the west side of the school's driveway off of Worth Street.

Short-Term Priorities

These are priority improvements that can be completed in the short-term, but require some additional funding.

City of Dallas:

1. Restripe the faded high-visibility crosswalk and install an advance stop line on the south side of the Carroll/Worth intersection.
2. Stripe new high-visibility crosswalks on the east and west sides of the Carroll/Worth intersection.
3. Restripe the faded transverse crosswalks at the intersections of Carroll and Gaston, and Carroll and Victor.

4. Update all school crossing signs on Carroll Avenue to current MUTCD standards (bright yellow-green).

Long-Term Priorities

These are priority improvements that will require a longer timeframe to complete due to planning and design requirements, and acquiring adequate funding to implement.

City of Dallas, working with property owners, including Dallas ISD, where necessary:

1. Repair crumbling sidewalks along Carroll Avenue between Swiss Avenue and Junius Street, along Worth Street between Alcalde Street and Carroll Avenue, and along Gaston Avenue between Peak Street and Moreland Avenue.
2. Widen the existing 4-foot-wide sidewalk along Carroll Avenue adjacent to the school to at least 6 feet wide.
3. Install a concrete median to the south of the school crosswalk on Carroll Avenue.
4. Close or narrow identified driveways at the intersection of Carroll Avenue and Worth Street.
5. Install a curb extensions on the south side of Worth Street between Carroll Avenue and Buckner Park to tighten the corner radii at the intersection of Worth and Carroll, reduce crossing distance, and improve visibility.
6. Install two ADA curb ramps at the southeast corner of Carroll Avenue and Gaston Avenue, one for each crossing direction.
7. Install an ADA curb ramp on the east side of Carroll Avenue at the crosswalk adjacent to the school.
8. Conduct a warrant study and install a high-visibility crosswalk, median pedestrian refuge island, and pedestrian crossing signs across Columbia Avenue at Cisco Street.
9. Install speed feedback displays on the school zone flashing beacons located on Carroll Avenue, and update all school zone speed limit signs to current MUTCD standards (bright yellow-green).
10. Conduct preliminary planning and design to narrow the existing 15-foot-wide travel lanes on Carroll Avenue to 10 or 11-foot-wide lanes, and install protected bicycle lanes or wider sidewalk buffers (landscaped area) in the excess right-of-way.

Dallas ISD and Zaragoza Elementary:

1. Stripe high-visibility crosswalks at the entrance and exit to the new school driveway and parking lot off of Carroll Avenue.
2. Install secure bicycle parking for use by teachers and students along the building in the teacher parking lot, or in another protected but still visible location.
3. Install a curb ramp at the east side of the school driveway along Worth Street to connect the sidewalk along the street to the sidewalk in front of the school.

Funding Strategies

Funding is needed to plan and implement physical improvements, hold events, purchase incentives, and develop and implement educational programs and materials. Possible funding sources include, but are not limited to:

Federal Funds: Federal programs eligible for reimbursement

Federal transportation funds are available through the Transportation Alternatives program and Congestion Mitigation and Air Quality (CMAQ) program, administered by NCTCOG for urbanized areas with populations over 200,000. The Transportation Alternatives program is a reimbursement and local match program, whereby the community pays 100 percent of the costs of the project that is selected for funding, and is reimbursed for 80 percent of those costs. The last Transportation Alternatives Call for Projects was in 2017, during which the Regional Transportation Council allocated \$12.2 million to 22 SRTS projects in North Texas. The next Call for Projects is not anticipated until 2019 or 2020; however, it would benefit the community to begin preparing now, as applications typically score higher if they are implementing adopted SRTS plans, demonstrate community support, and have some amount of engineering and design completed. For more information on available funding and future Calls for Projects, go to www.nctcog.org/tap.

State Funding Sources

The Highway Safety Improvement Program (HSIP) is for highway safety projects that eliminate or reduce the number of fatalities and serious injuries on all public roads. Submitted project proposals are evaluated within several categories of work, including Intersections and Pedestrians. Safety lighting at intersections is an eligible improvement under the Intersections category. Improvements to prevent pedestrian crashes, such as pedestrian signals, pedestrian hybrid beacon, pedestrian crosswalk, and sidewalks are eligible under the Pedestrian category. Projects are evaluated using a Safety Improvement Index (SII) and three years of crash data, and are selected and managed by TxDOT's Traffic Operations Division.¹¹ For more information, go to <http://www.txdot.gov/inside-txdot/forms-publications/publications/highway-safety.html>.

Local Funding Sources

The City of Dallas pays for sidewalks through the following programs and funding sources:

Sidewalk Replacement Program: City ordinance requires property owners to replace sidewalks, drive approaches or any other associated element when they become defective, unsafe or hazardous. Through the cost share program administered by the City's Public Works Department, the City partners with citizens to share the cost 50/50 for existing residential sidewalk removal and replacement. Sidewalk replacements are prioritized by the date of the validated request.

General Fund: There is funding in the City's FY 2017-18 budget to install and replace 25,000 traffic signs, and restripe 518 crosswalks.

2017 Capital Bond Program: An election will be held on November 7, 2017 to approve a bond package of \$1.05 billion, more than \$500 million of which will go towards transportation improvements. If approved by Dallas voters, projects identified for construction as part of the bond program should be completed in five years. The following are relevant projects included in the list of projects to be funded through the bond program, as well as the budgeted amount. These projects may be an opportunity to address several of the long-term recommendations in this plan.

¹¹ <http://ftp.dot.state.tx.us/pub/txdot-info/tpp/utp/2017/utp-2017.pdf>

- Columbia Avenue/Main Street (Complete Street): \$4,250,000. The following relevant needs were identified in the 2017 Needs Inventory, as well as the estimated cost to implement them:
 - Columbia Avenue between Carroll and Beacon: Complete Street project, redesign six lane roadway to include dedicated bicycle facilities, will require a Thoroughfare Plan amendment; \$8,233,318 estimated cost
 - Columbia Avenue between Carroll and Munger: streetscape/urban design (landscape/streetscape crosswalks at major intersections), \$3,544,904 estimated cost
- \$6,240,000 for the installation of ADA-compliant barrier-free ramps and the City's 50/50 cost-share sidewalk replacement program.

Several relevant projects were identified in the Needs Inventory that was created in preparation of the 2017 Bond Program, but are not included in the final list of projects to be funded:

- Carroll Avenue between Gaston and Columbia: street reconstruction and resurfacing, \$1,779,177 estimated cost
- Junius between Carroll and Prairie: street reconstruction, \$1,118,340 estimated cost

Health Organizations

Physical activity is an important contributor to health. Engaging in regular physical activity can improve cardiorespiratory and muscular fitness, and reduce the risk for diabetes and heart disease. Walking or bicycling for transportation increases physical activity. This is why many health organizations are partnering to promote Safe Routes to School. By improving the environment for walking and bicycling, SRTS can also contribute to reductions in injuries involving pedestrian and bicyclist collisions.

American Heart Association – Dallas

The American Heart Association partners with schools to address obesity and combat heart disease. For more information on potential partnership or funding opportunities, go to www.heart.org.

Safe Kids Greater Dallas

Safe Kids Greater Dallas is led by Children's Medical Center of Dallas, which provides dedicated and caring staff, operation support and other resources to assist in achieving a common goal: keeping your kids safe. Based on the needs of the community, this coalition implements evidence-based programs, such as car-seat checkups, safety workshops and sports clinics, that help parents and caregivers prevent childhood injuries. For more information: <https://www.safekids.org/coalition/safe-kids-greater-dallas>.

Businesses and Corporations

Local corporations and businesses may be able to provide cash, prizes, and/or donations, such as printing services, through community giving or other donation programs. Parents or other members of stakeholder teams may be a good personal source for contacting companies.

Appendices

- A. Meeting Agendas and Minutes
- B. Additional Findings from the Parent Survey
- C. Afternoon Walking Audit Map
- D. Audit Tool/Checklist
- E. Glossary of Infrastructure Improvements

Appendix A. Meeting Minutes

Meeting Minutes

Subject	Dallas Zaragoza Elementary SRTS Kick-Off Meeting	Date	Thursday – February 9, 2017
Facilitator	NCTCOG	Time	4:00 pm – 4:30 pm
Location	Ignacio Zaragoza Elementary School	Recorded by	Kathryn Rush
Attendees	Carlotta Hooks (Principal, Zaragoza Elementary), Ray Gonzales (Dallas ISD – Transportation), Entuane Tyson (Dallas ISD – Project Management), Karla Weaver (NCTCOG), Shawn Conrad (NCTCOG), and Kathryn Rush (NCTCOG)		

Meeting Purpose	The purpose of this meeting was to provide an introduction to the Safe Routes to School technical assistance that NCTCOG staff would be providing to the Zaragoza Elementary School in Dallas, as well as bring together the major stakeholders including staff from the school, city, and school district.
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Discussion Items	
<p>Karla Weaver gave an introduction to the Safe Routes to School (SRTS) technical assistance project, including the scope of work and timeline. Attendees subsequently discussed the following topics.</p> <p>Existing Transportation Issues and Information: Principal Hooks mentioned that the school has called the police multiple times because of speed issues near the school, and that there is a need for speed bumps. She said that no school buses serve the school, since all students live within two miles of the campus.</p> <p>Should NCTCOG present to the PTA? Principal Hooks thought that would be beneficial.</p> <p>Would it be Possible to Survey Students or Parents? As part of SRTS planning, it is beneficial to survey students or parents about how students currently get to school and what the major barriers to walking and bicycling are. This can be done by either surveying students in class through a hand-raising tally, or by sending a survey home with students for parents to fill out. Principal Hooks said it would be best to send surveys home with students. To increase the likelihood that students would return them, she said she could make it a requirement or offer an incentive. NCTCOG staff will send her the link to the parent survey created by the National Center for SRTS.</p> <p>Should NCTCOG Staff Provide Safety Education and Outreach to Students? Education on walking and bicycling safety is one of the 5 Es of SRTS (engineering, education, enforcement, encouragement, and evaluation). NCTCOG created a curriculum targeting 3rd-5th grade students and 6th-8th grade students, and could also arrange for a bicycle rodeo at the school this spring to teach students bicycle safety skills. Principal Hooks said that the school currently gives away 50 bicycles a year to award students, and still has three bicycles left to give away. She said that a bicycle rodeo would be beneficial.</p> <p>Are there any relevant existing or future transportation studies or projects? Attendees mentioned the following plans or projects that may be relevant to this project:</p> <ul style="list-style-type: none"> • Columbia Ave. reconstruction • ISD bond program • Plans for Buckner Park <p>NCTCOG staff requested that Principal Hooks fill out a questionnaire on existing conditions related to school operations and transportation, and bring it to the next SRTS meeting.</p> <p>NCTCOG staff went over potential dates for the next meeting, which would include a more in-depth discussion of existing conditions. Attendees mentioned that February 24th or 27th would likely work best. NCTCOG staff said they would send out a follow-up email requesting everyone's preferred meeting dates.</p>	

Action Item(s)			
	Item	Responsibility	Target Completion Date

1	Schedule date of next SRTS Team Meeting	Kathryn Rush	
2	Return completed school questionnaire to Kathryn Rush	Principal Hooks	By next team meeting
4	Send Principal Hooks links to SRTS parent survey forms	Kathryn Rush	
5	Send parent survey form home with students	Principal Hooks	By next team meeting

Meeting Minutes

Subject	Dallas Zaragoza Elementary SRTS Team Meeting	Date	Wednesday – March 8, 2017
Facilitator	NCTCOG	Time	4:00 pm – 5:00pm
Location	Ignacio Zaragoza Elementary School	Recorded by	Shawn Conrad
Attendees	Chelsea St. Louis (City of Dallas), Entaune Tyson (Dallas ISD), Darren Rome (Zaragoza Elementary), Nathan Goldsmith (Zaragoza PTSA), Ramon Gonzalez (Dallas ISD), Karla Weaver (NCTCOG), Shawn Conrad (NCTCOG), Kathryn Rush (NCTCOG).		

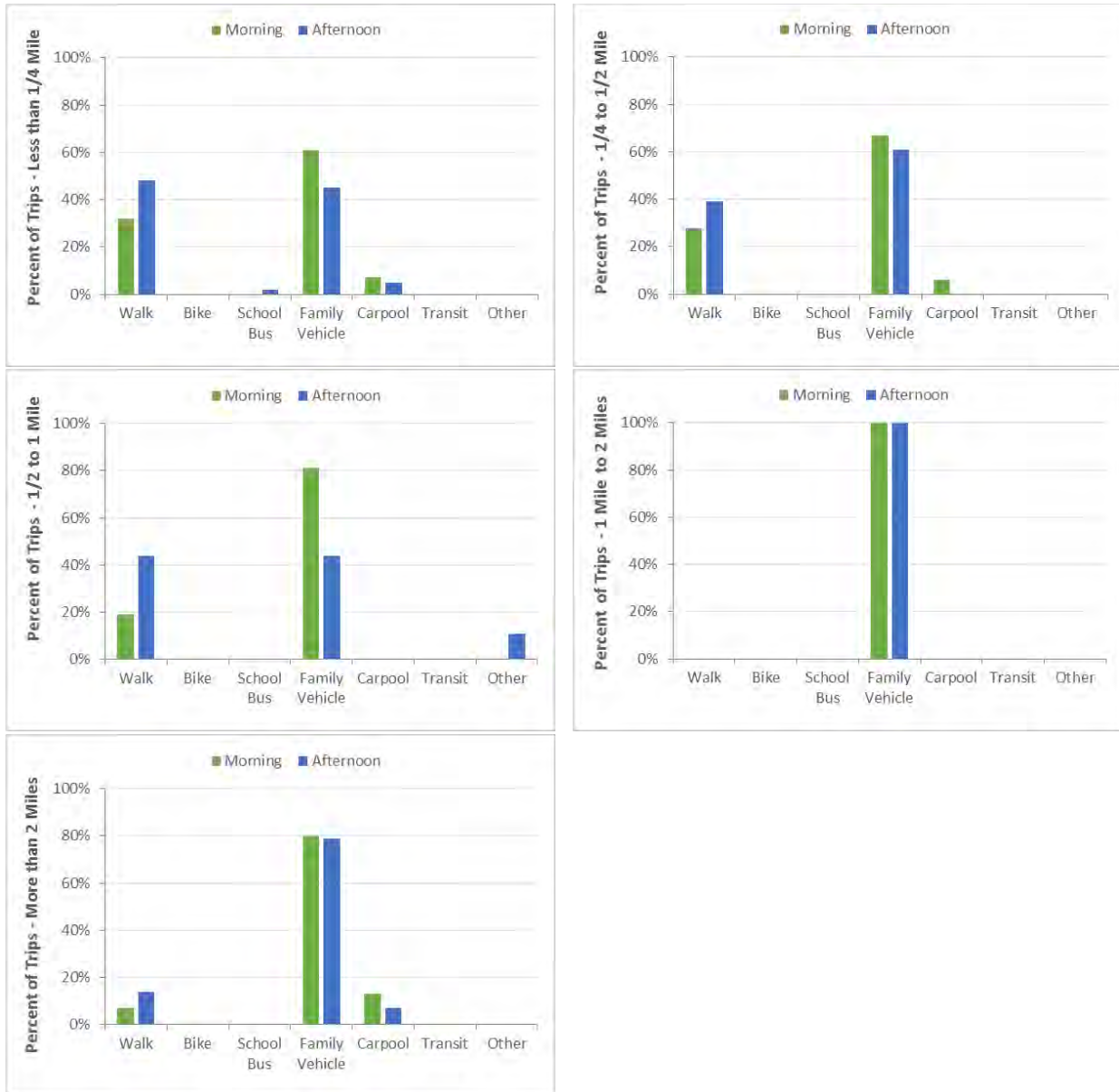
Meeting Purpose	The purpose of this meeting was to review existing conditions that impact the safety and comfort of walking and bicycling to and around the Applied Learning Academy/International Newcomers Academy, in order to prioritize the areas to observe as part of the safety audit.
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Discussion Items	
<p>Kathryn Rush and Shawn Conrad facilitated a discussion about current issues around the schools affecting students' ability to bicycle and walk to school.</p> <p>Major student origins and destinations that were identified included:</p> <ul style="list-style-type: none"> Boys and Girls Club Apartment complexes on Gaston Ave., Reiger Ave., and Columbia Ave. Dollar Store at Gaston and Carroll <p>Issues that were identified included:</p> <ul style="list-style-type: none"> No crossing guards on Gaston or Columbia. Students cross Gaston where it intersects with Carroll Ave. and Peak St. On Carroll, cars queue in the right lane and drivers jump the queue and race each other to the front of the line The on-street parking on Carroll Ave. reduces visibility Parents/students don't always use the crosswalk on Carroll Ave. Signal timing for the park needs to be adjusted Parents park on both sides of Worth St. There are left turn lanes without protected turn arrows at the intersections of Gaston & Carroll and Gaston & Fitzhugh The school zone may be too short on Worth St. Students take this route to Boys and Girls Club Many students cross the street at Victor St. and Carroll Ave., but there is no crossing guard at that location Significant flooding occurs along Victor St. when it rains <p>The group discussed a new turnaround that that is being built as part of the park reconstruction, which will reconfigure pick-up/drop-off. The park opening is delayed until early fall.</p> <p>School arrival: 7:15, school starts 8:00. School dismissal: cars begin queuing about 2:30; students gone by 3:15</p> <p>The group identified a staff person at the Dallas ISD Transportation Department as a person who might be a key person to attend the safety audit and agreed to share the safety audit invite with him.</p>	

Action Item(s)			
	Item	Responsibility	Target Completion Date
1	Send out invitation to participate in the safety audit	Kathryn Rush	
2	Conduct safety audit on March 23 rd	Safe Routes to School Team	

Appendix B. Additional Findings from the Parent Survey

Typical mode of student arrival and departure by (self-reported) distance child lives from school:



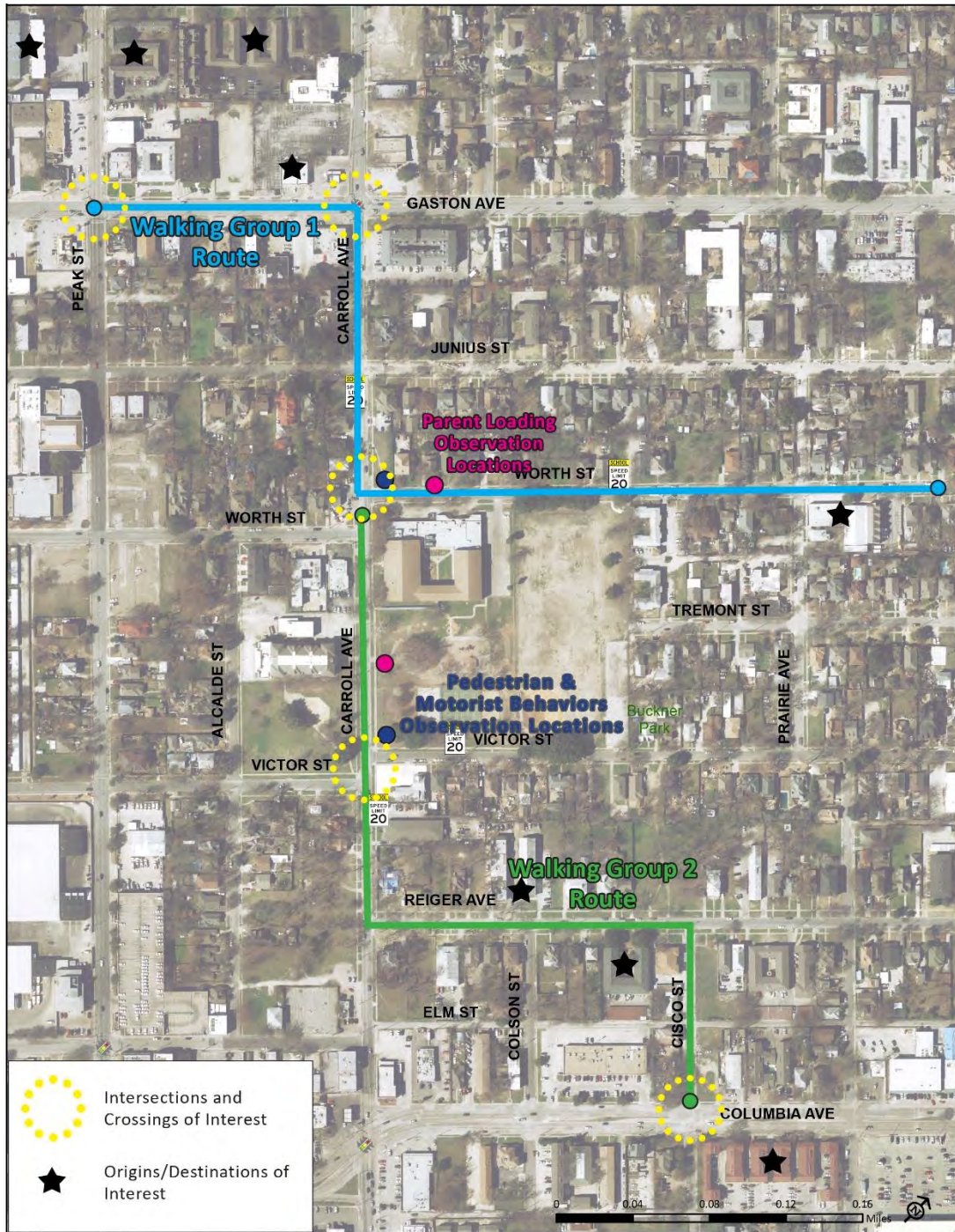
Comments from the parent surveys are as follows. These include the English translations of some of the comments written in Spanish.

- Biking to school is a good thing and I would like my daughters to enjoy it but there are a lot of insecurities on the streets.
- Both of my children walk together. My son and daughter sometimes walk home but majority of the time I'll pick them up by car or meet half way. They will never walk alone.
- For me I do not want my son to walk to and from school by himself because I am a mother who doesn't work therefore I dedicate myself to my son because I want what's best for him.

- He lives far from the school area therefore he cannot walk or bike.
- I do not allow my kids to bike on the street because of the area I live in.
- I do not feel safe for my daughter to walk by herself.
- I do not feel safe if my daughter was to walk to and from school by herself.
- I do not feel safe sending my daughter biking or walking due to the high rate of crime in the area.
- I really don't think it's safe enough for them to walk. But the school is only 2 streets over
- I think walking and bicycling is healthy for everyone.
- I would like my children to enjoy their trip to school by bicycle but my insecurity does not allow me. I am not sure if the school supports bicycling to school but if they did I would take advantage of it.
- In my opinion I would not allow them to walk and bike by themselves for safety reasons and others.
- It would be good for them to walk and bike but there is too much insecurity on the streets.
- It's a dangerous world now I feel more safe bringing our son to school ourselves.
- It's good for kids to walk and bike but run the risk of being run over or violence.
- Live out of school district child cannot ride bike or walk home.
- Motorists do not respect the school zones.
- My kids prefer to walk but I don't allow them for safety reasons and the distance. Even if this was to change I would not feel comfortable.
- My kids would definitely not be able to walk or bike to school because of how far we live.
- People do not respect parking areas.
- Police guards around the school. Crossing guards near 7 eleven and Egg Roll Hut.
- The motorists do not respect the school zones.
- The reason is I want to be sure they make it to school safely every day and for that I give myself the time to be next to them.
- The truth is I feel insecure about letting my children bike to school because motorists do not respect the stops and crosswalks.
- The vicinity where we live is dangerous and I do not feel comfortable leaving my son by himself biking to and from school.
- There is also a lot of traffic.
- This is not my daughter's home school. We live more than 20 min away therefore walking is not an option. I have always driven her to and back from school.
- We walk after school only unless weather changes.
- Well the reason for not letting them bike is the insecurity of the traffic speeds of some intersections even though it would be fun for them to ride a bike.

Next to the question about how their child gets home from school, four parents left a comment that their child walks to Boys and Girls Club.

Appendix C. Afternoon Walking Audit Map



Appendix D. Audit Tool (Checklist)

WALKING AND BICYCLING SCHOOL SAFETY AUDIT

Name: _____ Date: _____ Time: _____

Traffic Signs and Speed Control	Yes	No	N/A	Comment
a. Is there a designated school speed zone?				If Yes, what is the speed limit? _____
b. Is the school zone marked properly and the speed limit adequately posted? <i>(Identify the location(s) on your map)</i>				
c. Are there School Crossing signs, flashing beacons, or 'No Parking' signs around the school? <i>(Identify on your map)</i>				
d. Are there currently other speed/traffic control measures used around the school, such as different pavement surfaces, speed bumps, or speed tables?				
e. Are the traffic signs and speed control measures around the school adequate and effective?				

COMMENTS:

WALKING AND BICYCLING SCHOOL SAFETY AUDIT

Name: _____ Date: _____ Time: _____

Identify on your map the flow of vehicular and bus drop-off/pick-up traffic.

Parent and Bus Loading Areas	Yes	No	N/A	Comment
a. Are there signs indicating parent pick-up/drop-off areas?				
b. Are bus driveways physically separated from parent pick-up/drop-off areas?				
c. Is there a continuous sidewalk adjacent to the loading area(s) leading to the school entrance?				
d. Are sidewalks acceptable (e.g., are they wide enough to accommodate peak periods of pedestrian traffic, is the surface smooth, etc.)?				
e. Are there accessible ramps for wheelchairs, with a detectable warning surface?				
f. Do students have to cross parking lots or traffic lanes to get to the school from the loading area(s)?				
g. Do teachers or a safety patrol assist with the drop-off/pick-up process? Is this effective?				
h. Are loading areas well lit?				
i. Is parent loading occurring only in designated areas? If not, note the non-designated areas.				
j. *Does the designated parent loading area have an organized/moving queue? Or do parents seem to be stuck until the entire line moves?				
k. Does the parent loading/pick-up queue wrap out of the designated area, and impact adjacent streets?				
l. Are school buses staged single-file?				
m. If buses are "double-stacked" for loading areas, are measures taken for the safety of students needing to cross in front of or behind buses?				

**Questions as part of NCTCOG's Idle-Free School Zone Program.*

OTHER OBSERVATIONS:

WALKING AND BICYCLING SCHOOL SAFETY AUDIT

Name: _____ Date: _____ Time: _____

From sidewalks in the public right-of-way, how do students walking and bicycling get to the school entrance from all directions? (Only evaluate those pedestrian and bicycle facilities on school property.)

Campus Sidewalks & Bicycle Facilities	Yes	No	N/A	Comment
a. Are school gates or fences appropriately located to provide direct and convenient access for pedestrians to and from the school grounds?				
b. Are pedestrians clearly directed to crossing points?				
c. Are crossing points for pedestrians properly signed and/or marked?				
d. Where it is necessary for pedestrians to cross motor vehicle paths on the school grounds, are they assisted by such safety measures as crossing guards, safety patrols, raised or striped pedestrian walkways, etc?				
e. Are sidewalks acceptable (are they wide enough to accommodate peak periods of pedestrian traffic, is the surface smooth, etc.)?				
f. Are there any formal or informal off-street paths or cut-throughs?				
g. Is there bicycle parking on the school site?				If Yes, how many spaces are there? _____
h. Is the location of bicycle parking in reasonable proximity to the school entrance and along a sidewalk or bike path to the school?				
i. Is the bicycle parking well lit?				

OTHER OBSERVATIONS:

WALKING AND BICYCLING SCHOOL SAFETY AUDIT

Name: _____ Date: _____ Time: _____

Intersections

Intersection Cross Streets: _____

Issue	Yes	No	N/A	Comment
a. What is the traffic control device? (2-way stop, 4-way stop, traffic light, etc.)				
b. Are there pedestrian walk signals for all crossing directions?				
c. Does the push button work and is it reachable by a person in a wheelchair?				
d. Is there sufficient crossing time, and a countdown feature?				
e. Is there a crossing guard present to assist students with crossing the street?				
f. Are there accessible curb ramps for wheelchair access on all corners?				Number of curb ramps per corner: _____
g. Do the ramps have detectable warning strips?				
h. Presence and condition of the pedestrian landing area (5x5-ft. flat section at the top of the ramp).				
i. Are there painted crosswalks for all crossing directions?				
j. Are the curb ramps contained within the crosswalk markings?				
k. Are crosswalks wide enough to accommodate peak pedestrian traffic?				
l. Is the visibility of the crosswalks adequate during the day and night?				
m. Are there barriers present that could prevent a driver from seeing a child preparing to cross the street (e.g., utility boxes, vegetation, parked vehicles, signage, or fences)?				
n. Do cars park or wait, blocking the vision of other motorists, bicyclists, and pedestrians?				
o. Is the pedestrian crossing adequately lit?				
p. Do wide curb radii lengthen pedestrian crossing distances and encourage high-speed right turns?				
q. Do turning vehicles pose a hazard to pedestrians crossing the street?				

WALKING AND BICYCLING SCHOOL SAFETY AUDIT

Name: _____ Date: _____ Time: _____

Streets

Street Name: _____

Posted Speed Limit: _____ School Zone Speed Limit (if applicable): _____

Number of Travel Lanes: _____

Relative Traffic Volume Level (*High, Medium, or Low): _____

**High* would refer to busy arterials, *Medium* to collectors or high volume residential streets, *Low* to quiet residential streets.

Issue	Yes	No	N/A	Comment
a. Are sidewalks present and continuous without gaps?				
b. Are sidewalks well maintained (free of cracks and holes, standing water, debris)?				
c. Are sidewalks obstructed (poles, vegetation, etc.)?				
d. Are sidewalks wide enough to accommodate peak periods of pedestrian traffic?				
e. Are there accessible ramps for wheelchairs?				
f. Are there any conflicts between bicycles and pedestrians on the sidewalks?				
g. Are the sidewalks adequately lit for pedestrians to see, be seen, and feel safe?				
h. Does the number of driveways intersecting sidewalks make the route dangerous or undesirable for pedestrian travel?				
i. Is there a buffer between the sidewalk and adjacent travel lane?				
j. What is the landscaping like? Is it conducive to promoting walking and biking? Does it block sidewalks or ability to see traffic?				
k. Is traffic speed or volume a problem for pedestrians? Please describe.				
l. Are there abandoned buildings or cars along the route to school?				
m. Does (actual or suspected) crime take place in the area?				
n. Do any homes have scary or loose dogs?				

OTHER OBSERVATIONS:

WALKING AND BICYCLING SCHOOL SAFETY AUDIT

Name: _____ Date: _____ Time: _____

Pedestrian and Motorist Observed Behaviors

Location of Observation: _____

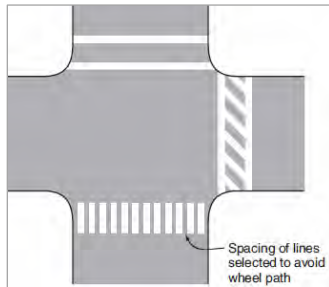
Issue	Yes	No	Location / Comment
a. Number of pedestrians observed:			Students: Other:
b. Number of bicyclists observed:			Students: Other:
c. Are pedestrians walking in the street?			
d. Are students running across the street?			
e. Are children obeying crossing guards (if available)?			
f. Are children entering the street or travel lanes from between parked cars?			
g. Do students or other pedestrians cross the street at places other than marked crosswalks? If so, where?			
h. Are there any informal off-street paths or cut-throughs (i.e., "goat trails")?			
i. Are bicyclists following proper traffic laws (e.g., stopping at traffic signals and stop signs)?			
j. Are crossing guards well trained? Describe crossing guard behavior.			
k. Are drivers blocking crosswalks?			
l. Do motorists yield to pedestrians in crosswalks?			
m. Are drivers obeying crossing guards (if available)?			
n. Do drivers obey the posted speed limit?			
o. Did you witness any conflicts, collisions or near-collisions between motorists and pedestrians?			

OTHER OBSERVATIONS:

Appendix E. Glossary of Infrastructure Improvements

Crosswalks

Marked crosswalks alert drivers approaching and traveling through the intersection of the potential presence of pedestrians. Marked crosswalks also direct legal pedestrian movements to desirable crossing points (Texas MUTCD, Section 3B.18). Shown below clockwise from the top are the three primary types of crosswalk markings: transverse, diagonal, and longitudinal (also known as continental or ladder).

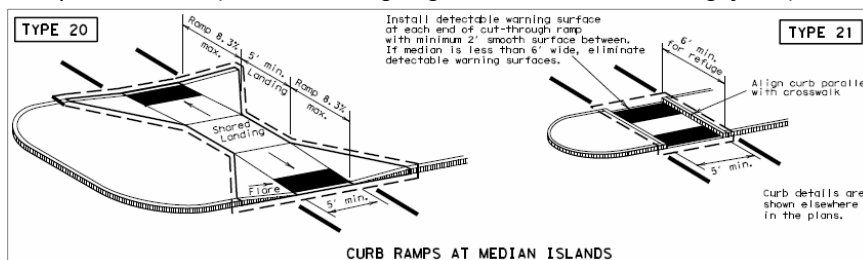


Source: Texas MUTCD

The types of crosswalk markings can be classified as basic or high visibility. Basic crosswalks consist of two transverse lines. High visibility markings consist of diagonal or longitudinal lines parallel to traffic flow with or without transverse lines. An FHWA study found that continental markings were detected at about twice the distance upstream as transverse markings during daytime conditions, which meant that drivers traveling at 30 mph had eight additional seconds of awareness of crossing pedestrians.¹² High-visibility crosswalk markings (such as longitudinal or continental markings) should be installed for all crosswalks at non-intersection locations, areas with lots of pedestrian traffic, and intersections with conflicts between vehicular and pedestrian movements.

Median Pedestrian Refuge Island

Refuge Islands provide pedestrians and bicyclists a refuge area within intersection and midblock crossings, and on wide thoroughfares, provide a location for pedestrians or bicyclists to wait partially through their crossing. They also break up crosswalks at complex multilane intersections into shorter and easier sections for pedestrians to cross. By reducing the crosswalk distance, refuge islands reduce pedestrian exposure to vehicle traffic, thereby improving safety and comfort (ITE, 2010, *Designing Walkable Urban Thoroughfares*).



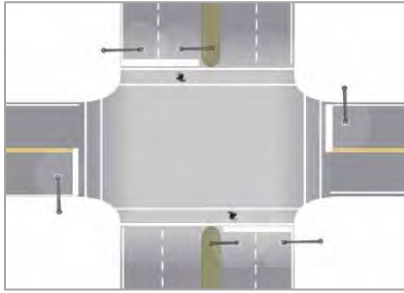
Source: TxDOT Design Division Standards: Pedestrian Facilities Curb Ramps (PED-12A), 2012

Street Lights

Driving or walking on, or across, a roadway is less safe in darkness than in a lighted area, due to the reduced visibility of hazards and pedestrians. Studies have shown a reduction in nighttime fatal crashes of up to 60 percent, and a 45 percent reduction of pedestrian injury crashes with the use of roadway lighting. At intersections, 30 vertical lux is considered a conservative estimate of the lighting level for adequate visibility. In order to provide for positive

¹² Fitzpatrick, Kay; Chrysler, Susan T.; Iragavarapu, Vichika; & Sug Park, Eun. (2010). Crosswalk marking field visibility study. FHWA-HRT-10-068. Federal Highway Administration, McLean, VA.

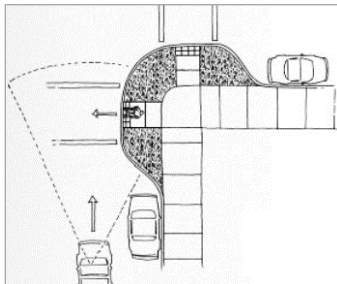
contrast of the pedestrian, the luminaires should be located away from the intersection to provide light on the approach side of the pedestrian.



Source: *Informational Report on Lighting Design for Midblock Crosswalks (FHWA-HRT-08-053)*

Curb Extensions

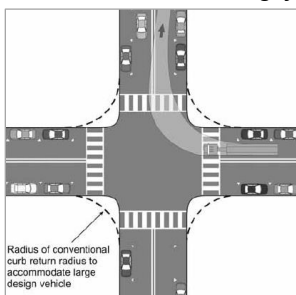
Also known as “bulb-outs”, curb extensions extend the line of the curb into the traveled way, reducing the width of the street. Curb extensions not only shorten crossing distance and improve driver and pedestrian visibility, they also prevent parking at intersection corners and near mid-block crosswalks (ITE, 2010, *Designing Walkable Urban Thoroughfares*).



Source: FHWA, 2017

Curb Return/Corner Radii

The curb return is the curved connection where the curbs of two streets intersect. The radius of the curve varies, with larger radii used to facilitate the turning of large trucks and buses. Larger radius corners increase the length of pedestrian crosswalks, and increase vehicular turning speeds. In designing the curb extensions at street and driveway intersections, the smallest practical curb-return radii should be used to increase motorist visibility of pedestrians waiting to cross the street, reduce pedestrian crossing distance, and reduce the speed of turning vehicles and severity of crashes if they occur. With smaller curb radii, the occasional turn made by large trucks can be accommodated with slower speeds and some encroachment into the opposing traffic lanes (ITE, 2010, *Designing Walkable Urban Thoroughfares*). The selection of curb radii ranging from 15 to 20 feet is preferable.



Source: *Kimley-Horn and Associates, Inc.*

Relevant standards from the City of Dallas Pavement Design Manual:

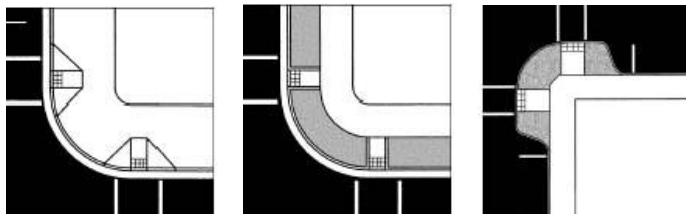
- Passenger Car Design Vehicle Minimum Turning Radius: 24 feet (path of right rear wheel = 15.3 foot minimum radius)
 - Passenger Vehicles are the design vehicle to be used in Local with Local intersection designs.
 - Single Unit Truck (SU) are to be used in Local with Minor Arterial, and Collector with Minor Arterial intersection designs

ADA Curb Ramp and Landing Areas

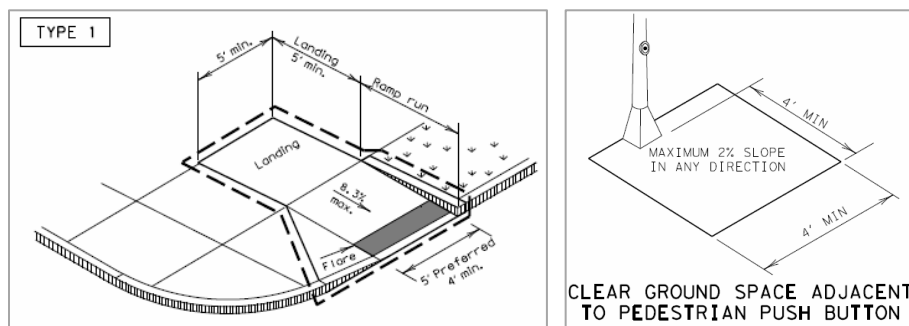
Two curb ramps should be installed at intersection corners whenever possible. Best practices for curb ramp design are as follows:¹³

- The ramp, or ramp run, must be at least 36 inches wide, not including flared sides.
- Ramp runs shall have a running slope not steeper than 1:12.
- There must be landings provided at the top of curb ramps. The length of the landing area must be 36 inches minimum, and the width at least as wide as the curb ramp, excluding flared sides.
- The ramp run must have detectable warnings (i.e., dome-shaped bumps) that extend the full width of the ramp and a minimum depth of 24 inches.
- Ramps must have flared sides if people are required to walk across them. Curb ramp flares shall not be steeper than 1:10.
- The curb ramp should be placed within the marked crosswalk.
- The curb ramp should be aligned with the crosswalk, so there is a straight path of travel from the top of the ramp to the center of the roadway to the curb ramp on the other side.

The following images from FHWA are examples of good design for perpendicular curb ramps—ramps that are generally perpendicular to the curb.



Source: FHWA (2001), Designing Sidewalks and Trails for Access.



Source: TxDOT Design Division Standards: Pedestrian Facilities Curb Ramps (PED-12A), 2012

Narrowing or Closing Driveways

Relevant driveway provisions in the City of Dallas Pavement Design Manual are as follows:

¹³ Texas Department of Licensing and Regulation. (2012, March 15). 2012 TAS (Texas Accessibility Standards). Texas Government Code, Chapter 469.

Civil Rights Division of the United States Department of Justice. (2007). The ADA Best Practices Tool Kit for State and Local Governments: Chapter 6, Curb Ramps and Pedestrian Crossings Under Title II of the ADA.

- Minimum distance of angle or one-way driveway approaches from intersections of arterial thoroughfares with arterial and collector thoroughfares: 45 feet
- Minimum distance of driveways from intersections of a local street and a collector street: 40 feet
- Minimum distance of driveways from intersections of two local streets: 30 feet

Speed Feedback Sign

Speed feedback signs (or radar speed signs) have been shown to be effective at reducing vehicular speed.



Source: City of Fort Worth

School Signs that Meet Current MUTCD Standards (bright yellow-green)

Under the 2011 Texas Manual on Uniform Traffic Control Devices (MUTCD) all school warning signs, including any supplemental plaques, shall have a fluorescent yellow-green background with a black legend and border.

Existing Signs:



Fluorescent Yellow-Green Signs:



Fluorescent yellow-green signs are more conspicuous than standard yellow signs. As a result, drivers detect them from greater distances than standard yellow signs, enabling them to respond to situations earlier (i.e., slowing down or yielding to pedestrians). By alerting drivers sooner that special caution is needed, fluorescent yellow-green signs significantly improve the safety of students who walk and bicycle to school.¹⁴

¹⁴ American Traffic Safety Services Association. (2006). Putting safety in the Safe Routes to School Program: A school administrator's guide. Fredericksburg, VA.