## **MEMORANDUM**

- To: Michelle McCullough, P.E., CFM Deputy Director/City Engineer City of Burleson
- From: Brandon Forsythe, P.E. Kimley-Horn and Associates, Inc. TBPE Firm Number F-928

Date: March 24, 2025

Re: Southeast Old Town Safety Study Burleson, Texas

### **PURPOSE**

The City of Burleson is evaluating the pedestrian safety and emergency vehicle access for the area in southeast Old Town, bounded by Ellison Street to the north, Commerce Street/Dobson Street to the west, Scott Street to the east, and Town Creek to the south. The study area is provided in **Exhibit 1**.

Existing observations were made within the study area considering parking, access, and pedestrian activity. This memorandum provides the observations and resulting considerations to improve safety and access conditions within the study area.

### **EXISTING OBSERVATIONS**

Within the study area, the primary vehicular and pedestrian traffic generators are the Academy at Nola Dunn elementary school and the OpenDoor church. The Academy at Nola Dunn elementary school is generally bounded by Ellison Street to the north, Dobson Street to the west, Lawson Street to the east, and Miller Street to the south. The OpenDoor church is located south of the elementary school, generally bounded by Miller Street to the north, Dobson Street to the west, Clark Street to the east, and Town Creek to the south.

Site visits were conducted during times of high utilization of on-street parking in the area in order to record general observations, pedestrian activity patterns, and assess emergency vehicle access. Based on the school and church schedules and coordination with the City, site visits were conducted on a weekday from 2-8:30 PM to observe school dismissal (Monday, September 16, 2024) and Wednesday church operations (Wednesday, September 11, 2024) and on a Sunday from 8 AM-12 PM to observe typical church operations (Sunday, September 15, 2024). Based on the site visits, the peak utilization of parking and pedestrian activity in the area were observed during school dismissal and Sunday church operations. The following sections summarize the observations regarding parking, access conditions, and pedestrian activity during the peak conditions. School peak observations are provided in **Exhibit 2** and church peak observations are provided in **Exhibit 3**.







Exhibit 2

School Peak Observations (9/16/2024, 2:00 PM - 5:00 PM) Southeast Old Town Safety Study





North
Not To Scale

Exhibit 3

Church Peak Observations (9/15/2024, 9:00 AM - 12:00 PM) Southeast Old Town Safety Study



### Parking

The study area parking supply is composed of both on-street parking and surface lots. An inventory of the supply of the primary parking locations is provided in **Exhibit 4**.

Parking occupancy counts were performed during the school and church peak conditions to determine parking demand by location and for the overall study area. **Table 1** provides a summary of the parking supply and parking demand within the study area. Note that the parking observed in locations deemed "other" accounts for overflow parking, including prohibited (striped off) and unconventional or unmarked locations (in roadway frontage parkways or along narrow residential roadways with no formal on-street parking), all to be discussed further in the following sections.

|                          | Parking | Parking Demand     |               |                       |                    |               |                       |
|--------------------------|---------|--------------------|---------------|-----------------------|--------------------|---------------|-----------------------|
| Location                 | Supply  | School Peak        |               |                       | Church Peak        |               |                       |
|                          | Spaces  | Occupied<br>Spaces | %<br>Occupied | Surplus/<br>Deficient | Occupied<br>Spaces | %<br>Occupied | Surplus/<br>Deficient |
| Dobson St                | 55      | 55                 | 100%          | 0                     | 22                 | 40%           | 33                    |
| School North Surface Lot | 93      | 20                 | 22%           | 73                    | 21                 | 23%           | 72                    |
| School South Surface Lot | 57      | 37                 | 65%           | 20                    | 57                 | 100%          | 0                     |
| Church Surface Lot       | 39      | 22                 | 56%           | 17                    | 39                 | 100%          | 0                     |
| Church East Surface Lot  | 134     | 12                 | 9%            | 122                   | 134                | 100%          | 0                     |
| Other*                   | 0       | 12                 | N/A           | -12                   | 64                 | N/A           | -64                   |
| Total                    | 378     | 158                | 42%           | 220                   | 337                | 89%           | 41                    |

| Table 1. Parking | Supply and | Demand |
|------------------|------------|--------|
|------------------|------------|--------|



North
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Exhibit 4 Parking Supply Map Southeast Old Town Safety Study



#### School Peak

During the weekday school peak observations, the primary parking location for traffic attributable to the school is the on-street parking provided along Dobson Street. All on-street parking spaces were occupied in peak conditions, resulting in an overflow of parking. Overflow parking was noted to occur along Dobson Street, in areas that are striped off to prohibit parking, and along Eldred Street, along which residents display private "no parking" signage. The overflow parking along Dobson Street obstructs sight triangles for the large volume of pedestrian traffic, including the area surrounding the rectangular rapid flashing beacon (RRFB). The parking along Eldred Street provides for conditions that limit sight distance for minor street traffic turning onto Dobson Street with vehicles parking in the parkway since there are no curbs. Additional overflow parking was observed along Miller Street, east of Dobson Street, within the westbound right-turn lane which provides access to the school south surface lot.

Church parking locations were noted to be undercapacity, as anticipated.

#### **Church Peak**

During the Sunday church peak observations, the primary parking utilized within the study area is in the church surface lot (39 spaces), church east surface lot (134 spaces), and the school south surface lot (57 spaces). All three of these locations were observed at, or over, capacity, resulting in varying instances and locations of overflow parking. The church utilizes additional parking in the school north surface lot, for which shuttle services are provided. The parking was observed at less than 25% capacity, likely attributable to the walking distance to the church and/or wait time for shuttle transportation.

For the church surface lot, overflow parking was noted along Dobson Street, south of Miller Street. While Dobson Street, north of Miller Street provides striped on-street parking, the southern section has a narrowed typical section. Nearly 20 vehicles were observed parking in unmarked areas not intended for parking use south of Miller Street, with approximately half of those parking in the parkway provided along the east side of Dobson Street and the other half on the bridge section over Town Creek. Additionally, overflow parking for the church surface lot was observed along Miller Street, west of Dobson Street, along which residents display private "no parking" signage. The parking along Miller Street provides for conditions that limit sight distance for minor street traffic turning onto Dobson Street with vehicles parking in the parkway since there are no curbs.

For the church east surface lot, overflow parking was observed along the southern frontage of Rigney Way. With the narrow typical section of Rigney Way, two-way operations are impacted with the additional friction of on-street parking and requires caution. For the school south surface lot, overflow parking was noted along the fire lane. On-street parking was noted along Lawson Street, between Eldred Street and Miller Street.

#### **Parking Considerations**

When considering the study area wholistically, the overall parking supply is shown to serve the demand with 42% utilization noted during the school peak, while the church peak demand approaches capacity with 89% utilization. The primary component resulting in parking in prohibited or unconventional locations is due to the walking distance from the study area's points of interest. **Table 2** summarizes the considerations for parking based on the aforementioned observations within the study area.

### Table 2. Parking Considerations

| Primary Peak<br>Condition<br>Impacted | Observation                                                                                                                  | Consideration                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| School Peak                           | On-street parking in areas<br>along Dobson and Eldred<br>near RRFB impact sight<br>distance for pedestrians and<br>vehicles. | Consider curb extensions/bulb-outs to physically restrict parking along Dobson. Alternatively, City may consider<br>utilization of raised pavement markers (RPMs)/delineators.                                                                                                                                                                  |
|                                       |                                                                                                                              | Consider formalized "no parking" City signage along Eldred. To avoid permanent removal of parking, City may<br>consider restricting parking during school and church peaks exclusively. Alternatively, City may consider<br>implementing sidewalk project identified in the Mobility Plan to restrict parking.                                  |
| Church Peak                           | Church lots and school south<br>surface lot operating at<br>capacity.                                                        | Consider further encouragement of motorists to utilize shuttle parking provided in school north surface lot.                                                                                                                                                                                                                                    |
|                                       |                                                                                                                              | Consider additional surface lot parking in field south of Rigney & Scott to facilitate overflow parking. At a minimum,<br>provide 64 spaces to account for existing parking deficiencies.                                                                                                                                                       |
|                                       | On-street parking in areas<br>along Dobson and Miller<br>impact sight distance for<br>pedestrians and vehicles.              | Consider prohibiting parking along Dobson, within bridge section over Booger Creek, through utilization of curb,<br>hand rails, or another permanent barrier. Alternatively, City may consider utilization of formalized "no parking" City<br>signage as an interim solution.                                                                   |
|                                       |                                                                                                                              | Consider installing painted curb to prevent parking in the parkway on the east side of Dobson, south of Miller.                                                                                                                                                                                                                                 |
|                                       |                                                                                                                              | Consider formalized "no parking" City signage along Miller, west of Dobson. To avoid a permanent removal of<br>parking, City may consider restricting parking during the school and church peaks exclusively. Alternatively, City may<br>consider implementing the shared-use-path project identified in the Mobility Plan to restrict parking. |

### **Access Conditions**

The accessibility of emergency vehicles within the study area considers roadway typical sections, parking conditions, and traffic circulation.

#### School Peak

During the weekday school peak, students may be dismissed to parent walk-ups or car lines accessing the school north surface lot and school south surface lot.

Parent walk-ups are primarily facilitated by on-street parking on Dobson Street. Because these operations are primarily accommodated by parallel on-street parking concentrated during an approximately 20-minute period, there are frequent instances of vehicles reversing on Dobson Street, briefly obstructing traffic. However, these operations were not observed to significantly affect operations on Dobson Street, with vehicles observed complying with the 20-mph school speed zone.

There are car lines accessing the school north surface lot and school south surface lot. A discussion to the observed queues, or the stacking lines of vehicles attempting to navigate to the pick-up areas, and the operational impacts is provided below.

#### School North Surface Lot

The car line accessing the school north surface lot begins at the southern end of the lot, double stacking along Clark Street and Bufford Street. The car line narrows to a single file line at the Bufford Street & Lawson Street intersection, at which a northbound queue of approximately 10 vehicles was observed. **Exhibit 5** provides an overview of the observed school north surface lot traffic operations.



Exhibit 5. School North Surface Lot Traffic Operations

While Bufford Street is non-navigable during the school dismissal operations for the school north surface lot, Lawson Street is signed with northbound one-way signage during the school peak and through traffic has sufficient pavement width to traverse around the northbound queue. Do not enter signage during school peaks is installed for southbound vehicles along Lawson Street, approximately 200 feet south of Ellison Street. The signage is not easily visible for motorists unfamiliar with the operations.

#### School South Surface Lot

The car line accessing the school south surface lot begins at the northern end of the lot, and queueing continues with double stacking to the southern end of the lot. The car line narrows to a northbound single file line at the Miller Street & Clark Street intersection, from which the single file car line extends along Clark Street, Rigney Way, and Scott Street. The queue was observed extending to the Scott Street & Eldred Street intersection at its peak. **Exhibit 6** provides an overview of the observed school south surface lot traffic operations.



Exhibit 6. School South Surface Lot Traffic Operations

For the school south surface lot operations, the pavement width of Clark Street and Rigney Way is not sufficient to facilitate two-way operations during the school dismissal queue, however Miller Street remains free of stacking vehicles throughout the school peak and provides an alternative east-west connection during school peak conditions. Scott Street has sufficient pavement width for two-way operations when the queue is present as noted during the site visits. While not observed on the site visits, the presence of on-street parking may disrupt two-way operations and prohibit emergency vehicle access during the approximately 20-minute period of queues observed.

#### **Church Peak**

During the Sunday church peak, the overflow parking conditions along Rigney Way and on-street parking along Lawson Street outlined in the *Parking* section directly influence access conditions within the study area.

Both Rigney Way and Lawson Street are currently +/- 18-foot typical sections. With vehicles parking along Rigney Way and Lawson Street, two-way operations are impacted and requires caution when navigating. Miller Street runs parallel to Rigney Way and provides an alternative east-west connection, while Scott Street runs parallel to Lawson Street and provides an alternative north-south connection.

The existing layout of the Scott Street & Rigney Way intersection is difficult to maneuver when twoway traffic is present. Scott Street narrows to a +/- 20-foot section at the Rigney Way intersection and the turning radius for southbound right-turning vehicles is tight. Additionally, the pavement conditions along Scott Street provide for additional complications with vehicles observed attempting to avoid potholes when navigating.

The fire lane in the school south surface lot was observed occupied during church peak conditions.

### Access Conditions Considerations

During the school peak dismissal operations and church overflow parking conditions, there are several situations preventing clear access for passenger and emergency vehicle access. **Table 3** summarizes the considerations for access conditions based on the aforementioned observations within the study area.

| Primary Peak<br>Condition<br>Impacted | Observation                                                                | Consideration                                                                                                                                                                                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Both School<br>and Church<br>Peaks    | Two-way operations on<br>Rigney impacted.                                  | Consider formalizing on-street parking along Rigney.                                                                                                                                                                                                                 |
|                                       |                                                                            | Consider converting Rigney to one-way operations, allowing for on-street parking. Coordination needed between<br>school and church to determine feasibility in relation to school traffic management, church parking accommodations,<br>and pedestrian connectivity. |
| School Peak                           | Southbound do not enter<br>signage on Lawson Street<br>not easily visible. | Consider installing additional signage along Ellison near its intersection with Lawson to better communicate the<br>Lawson one-way operations during school peaks.                                                                                                   |
|                                       | Two-way operations on<br>Lawson impacted.                                  | Consider widening Lawson to cross section similar to Scott to adequately facilitate on-street parking.                                                                                                                                                               |
| Church Peak                           | Scott & Rigney narrow<br>turning radii and poor<br>pavement condition.     | Consider reconstructing Scott & Rigney to improve maneuverability.                                                                                                                                                                                                   |

#### Table 3. Access Conditions Considerations

### **Pedestrian Activity**

With the school and church generating significant pedestrian traffic, an evaluation of existing pedestrian traffic patterns, infrastructure, and safety was conducted within the study area during peak conditions.

### School Peak

There are generally sidewalks along the perimeter of the school, however the adjacent infrastructure is not cohesive to a walkable environment.

The primary pedestrian-generating consideration during the school peak is the parent walk-up procedure. Typically, parents park along Dobson Street and navigate to the northern end of the school south surface lot. To facilitate these operations, there are sidewalks along the eastern frontage of Dobson Street, north of Miller Street. There is also an RRFB located approximately 150 feet north of Eldred Street to facilitate pedestrians crossing Dobson Street.

There is no continuous sidewalk on the western frontage of Dobson Street, with pedestrian accommodations only provided immediately south of Ellison Street and at the head in parking near the RRFB. Due to the lack of infrastructure, pedestrians were observed crossing the street along the full span of Dobson Street with a large concentration at Eldred Street.

The RRFB provides a formalized crossing with ramps and a striped crosswalks along Dobson Street. There is a diagonal ramp on the northeast corner of Dobson Street & Miller Street, but no receiving ramps or sidewalks on any of the other intersection corners.

### **Church Peak**

There are generally no sidewalks or ramps along the perimeter of the church, despite the variety of parking locations utilized by attendees. Pedestrians were observed walking along roadways and in grass to navigate to the church from their parking locations.

For those parked in the church east surface lot, a striped cross walk is provided. Additionally, staff is present to facilitate crossings with the interaction of pedestrians and vehicles at the striped Clark Street crossing.

For those parking in the school south surface lot, an existing diagonal ramp is provided to facilitate the Miller Street crossing. However, there is no striped crosswalk and no receiving ramp. Two staff members are present along Miller Street to facilitate crossings.

For those parking in the school north surface lot, the shuttle transports attendees directly to the church doors. No pedestrian connectivity concerns are encountered with the shuttle transportation.

For the overflow parking observed along Dobson Street, within the bridge section, there is increased safety concerns. Drivers would not anticipate parked vehicles to be present in this area along with the resulting pedestrian traffic. Additionally, there is no pedestrian infrastructure to accommodate pedestrians south of Miller Street.

The limited pedestrian facilities on Dobson Street previously noted for the school peak north of Miller Street apply for the pedestrians navigating to/from on-street parking during the church peak as well. Vehicles observed parking along Eldred Street and Miller Street, west of Dobson Street have no pedestrian accommodations.

Examples of compliant and non-complaint crossings within the study area are provided below:



**Compliant Pedestrian Crossing Example** Dobson Street, north of Eldred Street, provides a marked pedestrian crossings operated with an RRFB for the heavy pedestrian traffic crossing Dobson Street to promote pedestrian safety and driver attentiveness.



Noncompliant Pedestrian Crossing Example Dobson Street & Miller Street does not provide marked pedestrian crossings or accessible ramps for the major or minor roads, despite having existing pedestrian infrastructure on the northeast corner.

#### **Pedestrian Activity Considerations**

The school and church generate significant pedestrian traffic with varying levels of pedestrian infrastructure and traffic patterns. **Table 4** summarizes the considerations for pedestrian activity based on the aforementioned observations within the study area.

| Primary Peak<br>Condition<br>Impacted | Observation                                                                           | Considerations                                                                                                                                                                                                                                                                              |
|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Both School<br>and Church<br>Peaks    | Diagonal Ramp on NE corner of<br>Dobson & Miller with no receiving<br>infrastructure. | Consider pedestrian improvements at intersection. Recommend replacing diagonal ramp with directional on NE<br>corner, constructing receiving directional ramps on NW and SE corners, and striped crossings across the north<br>and east legs. Could consider additional RRFB.               |
| School Peak                           | Little to no pedestrian<br>infrastructure along west side of<br>Dobson.               | Consider constructing a continuous sidewalk along western frontage of Dobson from Ellison to Miller.                                                                                                                                                                                        |
|                                       | Pedestrian crossings of Dobson not utilizing RRFB.                                    | Consider directing school staff to encourage pedestrians to cross at RRFB along Dobson.                                                                                                                                                                                                     |
| Church Peak                           | On-street parking in bridge section along Dobson.                                     | Bridge section parking recommended to be prohibited due to major safety concerns. In conjunction with<br>permanent barriers, the additional pavement within bridge section could be utilized as a pedestrian path with<br>future project to add sidewalks along southern section of Dobson. |
|                                       | Church staff facilitates pedestrian<br>crossings along Miller.                        | Consider implementing an RRFB between the school south surface lot and the church to facilitate pedestrian crossings.                                                                                                                                                                       |

#### Table 4. Pedestrian Activity Considerations

## MOBILITY PLAN CONSIDERATIONS

The City adopted the Mobility Plan in November 2023. Pedestrian projects were classified as short (0-3 years), mid (4-7 years), and long-term (7+ years) projects based on priority. There are three projects identified within the study area:

- Short-term pedestrian project Construct sidewalk along Ellison Street from Clark Street to Scott Street to fill gap in network.
- Long-term pedestrian project Construct sidewalk along Eldred Street from Main Street to Dobson Street.
- No priority listed Commerce Street and Miller Street are identified with a proposed shareduse path within the study area to connect the existing trail system southeast of the study area to the existing shared-use path northwest of the study area.

## STUDY AREA CONSIDERATIONS

Based on the existing observations outlined, **Exhibit 7** presents the study area considerations to improve parking, access conditions, and pedestrian activity. Considerations are provided in **bold text** with further considerations for implementation provided in the *italicized text*. The following considerations are grouped based on priority following the same categories used in the Mobility Plan:

#### Short-Term (0-3 Years)

- Deter on-street parking on Eldred Street and Miller Street, west of Dobson Street
  - Parking obstructs sight distance for both pedestrians and vehicles. Residents currently display private "no parking" signage that is ineffective in deterring school and church motorists.
  - Consideration to furnishing and installing formalized "no parking" City signage on the residential minor street approaches.
    - To avoid a permanent removal of parking, City may consider restricting parking during the school and church peaks exclusively.
    - Considering the pedestrian projects identified along Eldred Street and Miller Street in the Mobility Plan, City may consider implementing the sidewalk projects to restrict parking.
- Deter parking along Dobson Street near intersection approaches and adjacent to the RRFB.
  - $\circ$   $\;$  Parking near intersections obstructs sight distance for both pedestrians and vehicles.
  - Motorists parking adjacent to the RRFB obstruct sight triangles for the heavy pedestrian volumes along Dobson Street.
  - Consideration to striping, curb extensions, bulb-outs, delineators, or raised pavement markers (RPMs) in areas along Dobson Street where parking is prohibited to physically prevent sight distance obstructions.
    - The school should encourage pedestrians to cross at the RRFB and should direct staff to facilitate those crossings.
  - Prohibit parking along Dobson Street, south of Miller Street
    - Motorists parking within the bridge section provide for undesirable pedestrian-vehicle interactions against driver expectancy with no pedestrian infrastructure.
    - It is recommended that the bridge section parking be made inaccessible through the implementation of permanent barriers.
      - Alternatively, City may consider utilization of formalized "no parking" City signage as an interim solution.
      - In conjunction with the permanent barriers, the additional pavement within the bridge section may be utilized as a pedestrian path in a future project to add sidewalks along the southern section of Dobson Street.
    - Motorists parking within the parkway along Dobson Street obstruct sight distance.
    - The church should consider installing painted curb to prevent parking in the parkway along Dobson Street.
- Improve church parking conditions
  - Motorists in current conditions are parking in prohibited areas to avoid walking increased distances. With the enforcement of parking restrictions, the displacement of parking can be adequately accommodated through the on-street parking along Dobson Street and the school north surface lot.
  - The church should further encourage utilization of the shuttle parking in the school north surface lot.
  - The church may consider constructing an additional surface lot in the vacant field between Rigney Way and Booger Creek to accommodate overflow parking.

- Improve signage visibility
  - Based on field observations, the one-way signage on Lawson Street is located approximately 200 feet south of Ellison Street and is not easily visible for motorists unfamiliar with the operations.
  - Consider additional signage to be installed along Ellison Street near its intersection with Lawson Street to better communicate the Lawson Street oneway operations during school peaks.

#### Mid-Term (4-7 Years)

- Improve pedestrian conditions along Dobson Street and Miller Street
  - With striped on-street parking provided along the western side of Dobson Street, pedestrian facilities should be installed to accommodate those motorists, provide a route for pedestrians to navigate to the RRFB, and enhance crossing capabilities for southern Dobson Street.
  - Consider a continuous sidewalk to be constructed along western Dobson Street from Ellison Street to Miller Street.
  - While an existing diagonal ramp is provided on the northeast corner of Dobson Street & Miller Street, there are no striped crosswalks or receiving ramps.
  - Consider the Dobson Street & Miller Street intersection to provide formal crossings of the north and east legs only. The existing diagonal ramp on the northeast corner should be considered for replacement with directional ramps, receiving directional ramps on the northwest and southeast corners should be considered, and consideration for striped crosswalks on the north and east legs.
    - Considering the pedestrian project identified along Miller Street and Commerce Street in the Mobility Plan, City may consider implementing the shared-use path project with pedestrian improvements.
    - An RRFB may be considered for implementation along Miller Street, south of the school south surface lot, to provide a concentrated, enhanced crossing location between the church and the parking location.

### Long-Term (7+ Years)

- Future roadway considerations
  - During field observations, there were no noted instances where two-way operations were completely prohibited. However, if on-street parking were to occur on both sides for any study area roadway other than Dobson Street, two-way operations would not be maintained.
  - Both the Lawson Street and Rigney Way cross-sections should be considered due to the existing +/-18-foot typical sections. For Lawson Street, a cross section similar to that provided along Scott Street should be considered while the on-street parking provided along Rigney Way should be considered to be formalized.
  - Rigney Way may be considered for conversion to a one-way roadway through coordination between the school and church regarding school traffic management, church parking accommodations, and pedestrian connectivity. One-way operations would allow for on-street parking along Rigney Way.
  - The Scott Street & Rigney Way intersection may be considered for reconstruction to improve maneuverability regarding the narrow turning radii and poor pavement condition.



Not To Scale

Study Area Considerations Southeast Old Town Safety Study

Kimley **»Horn**