

January 19, 2018

PK# 2415-17.387

Z178-150

TRAFFIC IMPACT ANALYSIS:

SCHOOL TRAFFIC ASSESSMENT

Project:

DISD Thomas Jefferson High School

In Dallas, Texas

Prepared for:

City of Dallas

On behalf of:

Dallas Independent School District

Prepared by:



Hunter W. Lemley, P.E.



EXECUTIVE SUMMARY

The services of **Pacheco Koch** were retained on behalf of the **Dallas Independent School District** to prepare a City of Dallas School Traffic Assessment for *DISD Thomas Jefferson High School* (the "School") located at 4001 Walnut Hill Road in Dallas, Texas. The school currently consists of 1,714 students in grades 9th-12th. Upon completion of the proposed site improvements, the enrollment is not expected to increase. Site improvements are anticipated to be complete by the 2020-2021 school year.

To facilitate implementation of the site improvements, DISD is seeking to amend the Planned Development District for the property. The purpose of this report is to address specific traffic-related concerns of the City Staff regarding the School. The parameters used in this study are specifically related to schools that have been requested by City Staff.

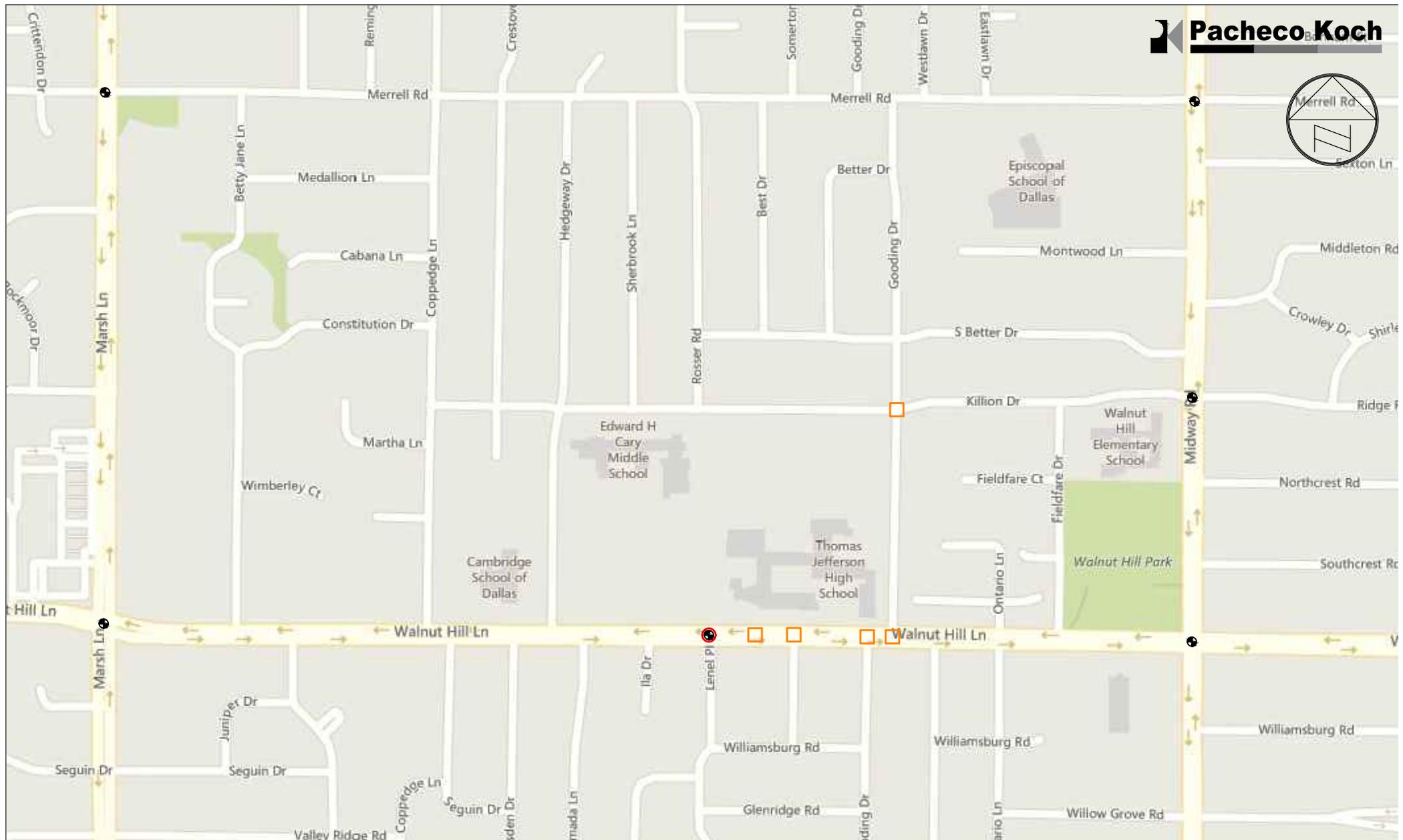
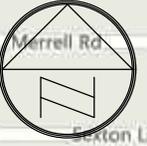
Based upon the analyses performed herein, Pacheco Koch developed the following recommendations.

- ❖ **FINDING:** Parent pick-up activity currently occurs on Walnut Hill Lane and Gooding Drive.
- ❖ **RECOMMENDATION:** Eliminate parent pick-up on westbound curb lane of Walnut Hill Lane from Hedgeway Drive to Gooding Drive.
- ❖ **RECOMMENDATION:** Eliminate parent pick-up on northbound and southbound curbsides of Gooding Drive from Killion Drive to Walnut Hill Lane.
- ❖ **RECOMMENDATION:** Provide parent waiting/loading area in staff parking lot.
- ❖ **RECOMMENDATION:** Stripe southbound approach for Gooding Drive at Walnut Hill Lane to provide separate left-turn and right-turn only lanes.
- ❖ **RECOMMENDATION:** A request was made, however information on the school's current parking management protocols was not provided. It is recommended that the school engage in routine communication and enforcement of these protocols to school staff and students.
- ❖ **RECOMMENDATION:** Close Driveway Opening on Walnut Hill Lane, intersecting with Hurley Way, along drop-off/pick-up Lane in front of school building.
- ❖ **RECOMMENDATION:** Utilize drop-off/pick-up lane in front of the school building on Walnut Hill Lane for bus waiting/loading area. Bus loading is to use this area at all times, including for special events.

- ❖ FINDING: Parent drop-off activity in the morning peak occurs at the pick-up/drop-off lane in front of the school building. Generally, delays in the area were observed to be typical in this type of school environment.
- ❖ RECOMMENDATION: It is recommended that parent drop-off in the morning peak follows the afternoon pick-up recommendations.
- ❖ FINDING: Site traffic accesses the school via Walnut Hill Lane and Gooding Drive. It is not recommended that the school change the orientation of traffic patterns, however traffic is expected to increase on Gooding Drive/Killion Drive and decrease on Walnut Hill Lane. Parent pick-up activity is expected to reduce on both Gooding Drive and Walnut Hill Lane traffic.
- ❖ FINDING: Thomas Jefferson High School is located directly adjacent to Cary Middle School -- accessed by Killion Drive -- and The Cambridge School of Dallas -- accessed by Hedgeway Drive. Due to the 30-minute separation in start/end times, it was observed that traffic from both schools had minimal impact to the traffic operations of Thomas Jefferson High School.

NOTE: This traffic study complies with the recommendations of the latest Traffic Management Plan in a separate document for DISD Thomas Jefferson High School.

END

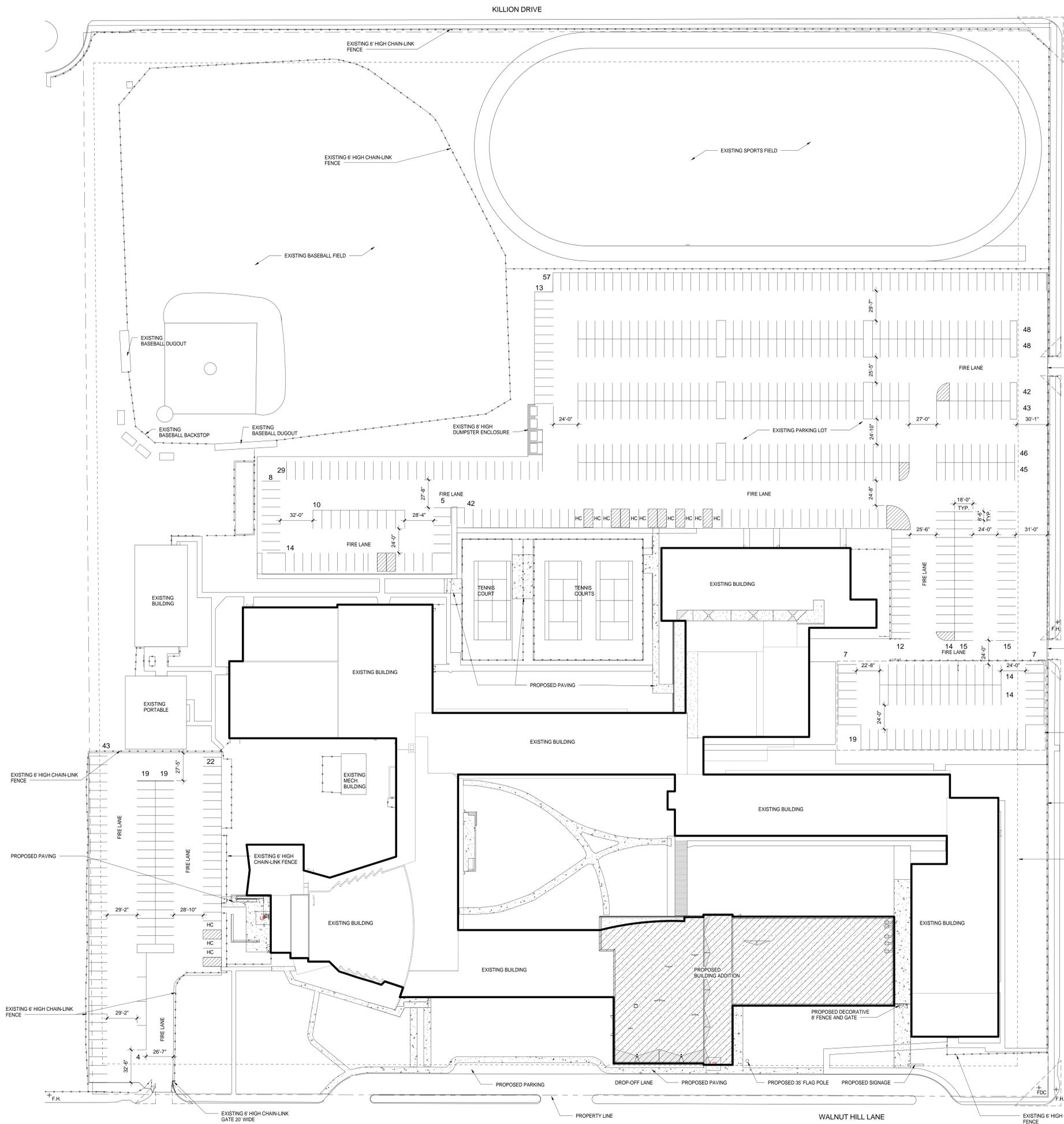


- Project Location
- Study Area Intersection (Signalized)
- Road-Tube Counts
- Traffic Signal
- Study Area Intersection (Unsignalized)

Site Location Map

DISD Thomas Jefferson High School, Dallas, Texas

PK #2415-17.387 (HWL: 12/11/17)



SITE SUMMARY

LOT AREA:	22.74 AC.
BUILDING FLOOR PLAN TOTAL AREA:	245,500 SF
EXISTING, MAIN BUILDING ADDITION	
WEIGHT ROOM	
WEST PORTABLE	
(10) EXISTING PORTABLES	
PERMANENT STRUCTURE FOOTPRINT AREA:	175,700 SF
EXISTING, MAIN BUILDING ADDITION	
WEIGHT ROOM	
LOT COVERAGE:	18.1%
PARKING, 8'-6" X 18'-0", TYP. TOTAL SPACES:	674 SPACES (627 SPACES)
PARKING COUNT WITH EXISTING PORTABLES TO REMAIN:	
BUILDING HEIGHT:	55'-0" MAX.
HOME CLASSROOMS (TOTAL):	64
MAIN BUILDING:	64
PORTABLES:	10

PARKING ANALYSIS

HOME CLASSROOMS: 64
 CITY OF DALLAS, 8.5 PARKING SPACES PER HOME CLASSROOM
 64 x 8.5 = 608 PARKING SPACES REQUIRED BY CITY OF DALLAS

EXISTING 6' HIGH CHAIN-LINK GATE 20' WIDE
 F.H.

EXISTING 6' HIGH CHAIN-LINK GATE 20' WIDE

AREA OF EXISTING PORTABLES

EXISTING 6' HIGH CHAIN-LINK FENCE

SETBACK (DASHED LINE)

01 DEVELOPMENT PLAN

SCALE: 1" = 40'-0"



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architect



16000 north dallas parkway, suite 200
 dallas, texas 75248
 972.304.8888
 www.vaiarchitects.com

consultant

seal / disclaimer

client / owner



DALLAS INDEPENDENT SCHOOL DISTRICT

9400 N. CENTRAL EXPWY
 DALLAS, TX 75231

project

THOMAS JEFFERSON H.S. CAMPUS IMPROVEMENTS

4001 WALNUT HILL LN.
 DALLAS, TX 75229

revision no: issue date:

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DEVELOPMENT PLAN

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DP-100

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SCHOOL TRAFFIC ASSESSMENT
DISD Thomas Jefferson High School
Dallas, Texas

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Exhibit 1. Site Location and Study Area Map

INTRODUCTION

The services of **Pacheco Koch** (PK) were retained by Baldwin Associates on behalf of **Dallas Independent School District** (DISD) to prepare a City of Dallas School Traffic Assessment for DISD Thomas Jefferson High School (“the School”) located at 4001 Walnut Hill Road in Dallas, Texas. A proposed site plan for the Project, prepared by VAI Architects, and a site location map (**Exhibit 1**) are provided following the **EXECUTIVE SUMMARY** section of this report.

To facilitate implementation of the site improvements, DISD is seeking to amend the Planned Development District for the property. As part of application process for this request, submittal of a Traffic Assessment by the Applicant to the Approving Agency is required.

This study was prepared by traffic engineers at Pacheco Koch (the “Engineer”). Pacheco Koch is a licensed engineering firm based in Dallas, Texas, that provides professional engineering and related services.

Purpose

The Approving Agency may require the Applicant to commission and submit a traffic study to assist the technical staff of that agency in the review of certain aspects of the Applicant’s request (for rezoning, site plan approval, etc.). A traffic study is an engineering study prepared for a specific project under the supervision of a licensed engineer skilled in the principles of traffic and transportation engineering and planning. The study is an objective presentation of analytical findings based upon an investigation of existing and future traffic operations in the immediate vicinity of a Project. Under certain circumstances, the Applicant may, within established legal parameters, be required to mitigate such undue impacts. While a traffic study may also identify pre-existing or anticipated problem areas that are unrelated to the project, the Applicant is not responsible for mitigation of such instances.

Where appropriate and feasible, the Engineer may recommend measures that are specifically intended to mitigate project-related impacts. The Engineer may also make general recommendations, either related or unrelated to the Project, to improve overall traffic operations, safety, site access, circulation, etc. All recommendations are the opinion of the Engineer and are subject to the acceptance and customary review/approval processes of the respective agency.

This traffic study is not a detailed site plan review nor a substitute for local or regional transportation planning.

School Description

The School consists of an existing high school with grades 9th through 12th. Proposed site improvements include new classrooms and a library addition along with removal of portable buildings. Site improvements are anticipated to be

completed for the 2020-2021 school year. After the proposed site improvement, DISD anticipates enrollment will not increase.

School starts at 9:15 AM and ends at 4:15 PM. Current enrollment is 1,714 students. A summary of the existing and future school enrollment is provided in **Table 1**.

Table 1. School Enrollment Summary

GRADES	EXISTING	FUTURE
9th Grade	534	550
10th Grade	457	450
11th Grade	373	375
12th Grade	350	330
TOTAL	1,714	1,705

NOTE: The enrollment data provided above is based upon the most current and complete information available at the time of this study publication.

Access to the campus is provided on Walnut Hill Lane and Gooding Drive. Walnut Hill Lane, a major arterial, intersects with Gooding Drive, a local street, at the southeast corner of the property. Land uses surrounding the site are exclusively single-family residential.

Existing school zones surrounding the school are located on Walnut Hill Lane, Gooding Drive, Killion Drive, and Hedgeway Drive. Traffic from surrounding schools were observed to not significantly impact the school during the hours of student pick-up/drop-off.

The 22.538-acre subject site is currently zoned PD 706. To facilitate implementation of the site improvements, DISD is seeking to amend the Planned Development District for the property.

SCHOOL TRAFFIC OPERATIONS

Study Area

The study area for this traffic assessment includes roadways in the immediate vicinity of the site. The specific locations included in the study area are listed below and depicted in **Exhibit 1**.

Intersections:

- (a) Walnut Hill Lane and Lenel Place: *traffic-signal-controlled*
- (b) Walnut Hill Lane and West School Driveway: *STOP-controlled on West School Driveway*
- (c) Walnut Hill Lane and Hurley Way: *STOP-controlled on Hurley Way*
- (d) Walnut Hill Lane and Gooding Drive (NB Approach): *STOP-controlled on Gooding Drive*

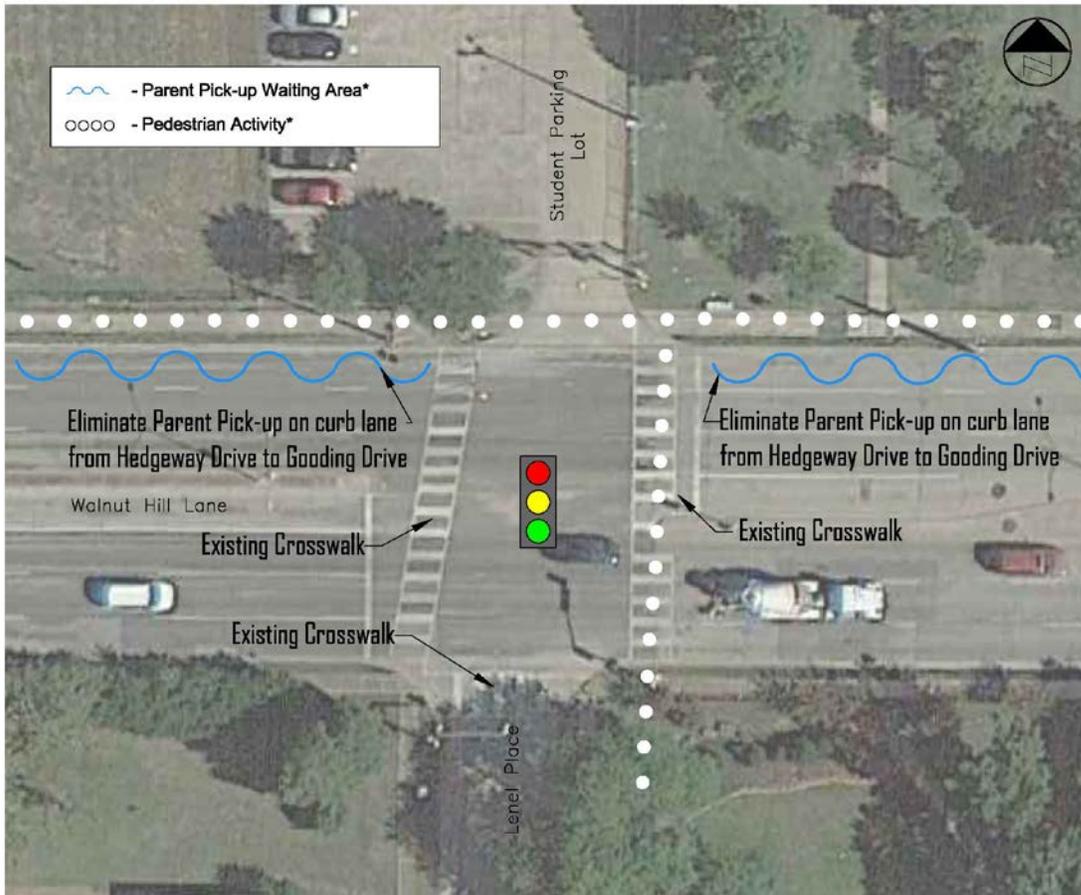
- (e) Walnut Hill Lane and Gooding Drive (SB Approach): *STOP-controlled on Gooding Drive*
- (f) Gooding Drive and Killion Drive: *all-way STOP-controlled*

The traffic assessment of these facilities relative to school traffic operations is summarized in the following pages.

NOTE: It is generally recommended that all applicable crosswalks comply with current ADA Accessibility requirements.

Walnut Hill Lane at Lenel Place

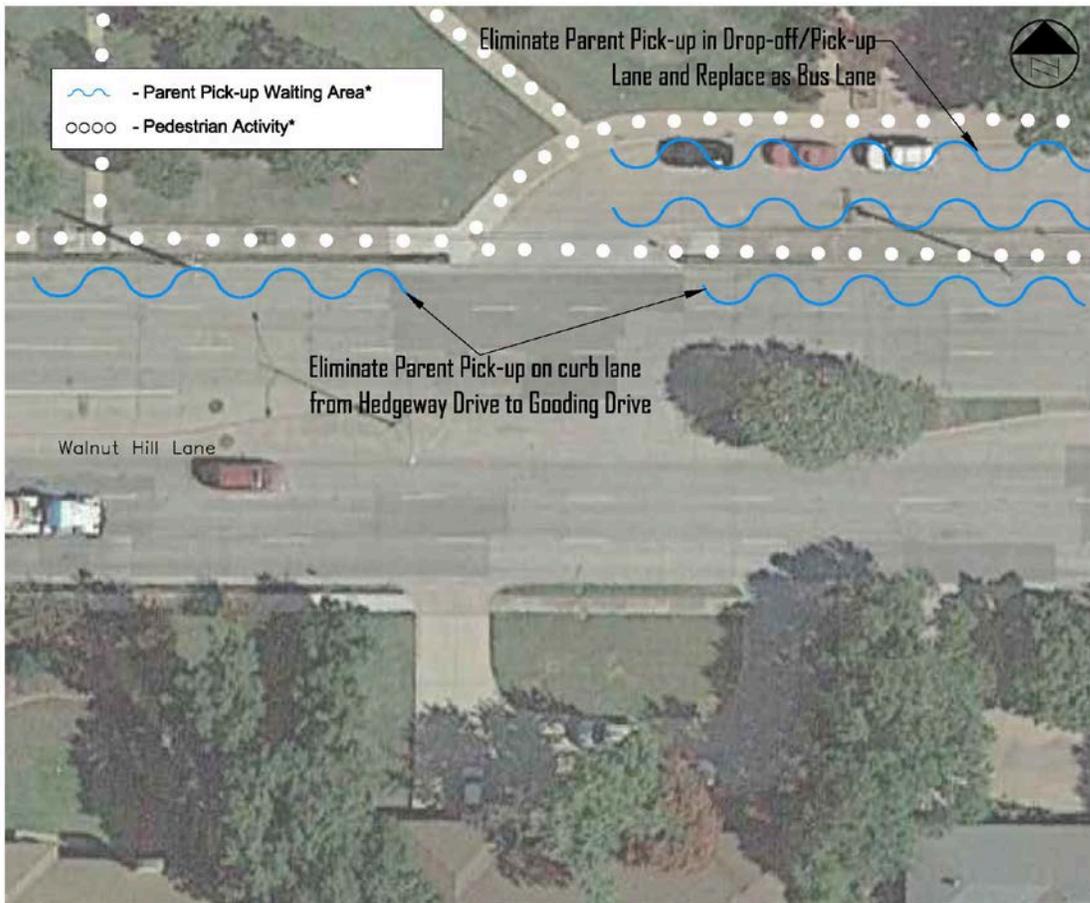
Description	Flow/Circulation	Pedestrian Access
<u>Existing Conditions</u>	Student parking lot on southbound approach	Crosswalks on NB/EB/WB Approaches
<u>Observations</u>	High congestion on Walnut Hill Lane and SB Approach	Heavy pedestrian activity on all approaches. Adequate green time
<u>Recommendations</u>	Eliminate Parent Pick-up on WB curb lane of Walnut Hill Lane from Hedgeway Drive to Gooding Drive	none



*As observed in the Afternoon

Walnut Hill Lane at School Driveway

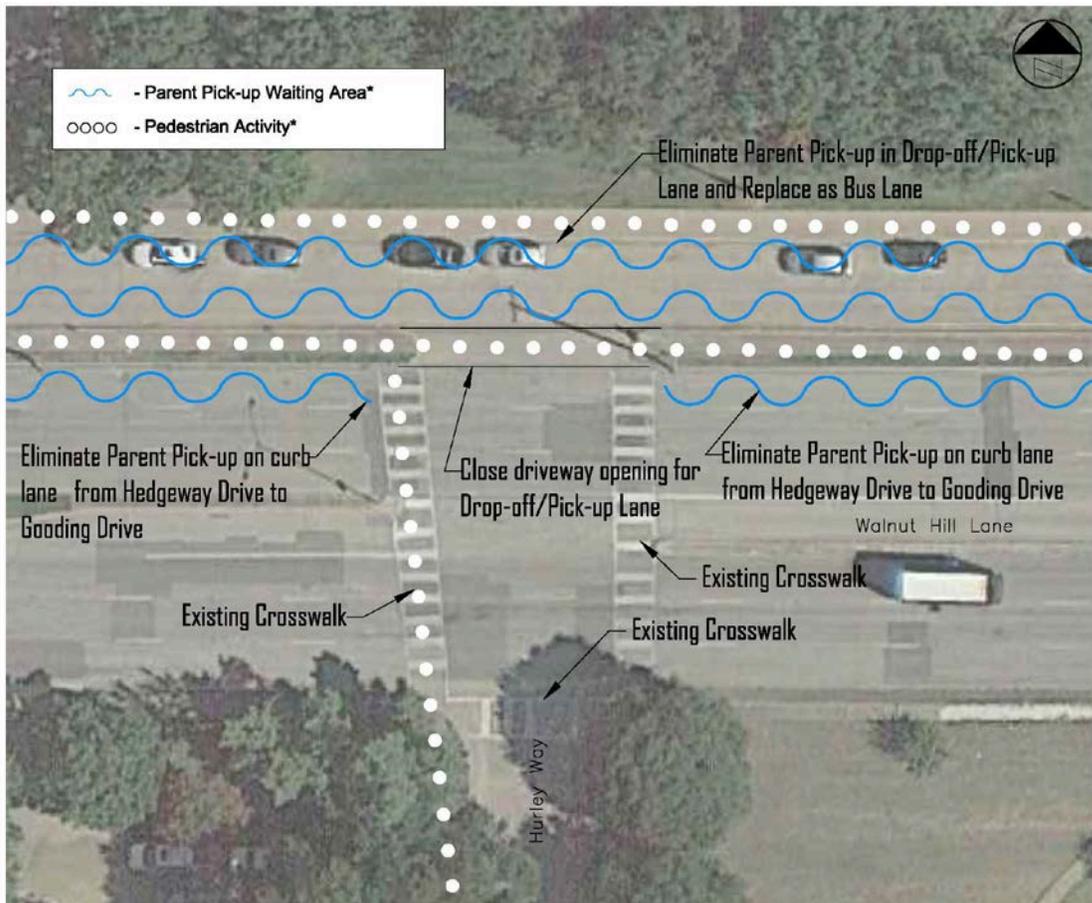
Description	Flow/Circulation	Pedestrian Access
<u>Existing Conditions</u>	Parent Pick-up Lane one-way operational on school property.	No Crosswalks
<u>Observations</u>	Double queuing lanes at Drop-off/Pick-up Lane. High congestion on Walnut Hill Lane, parent pick-up activity. Signal at Lenel Place provides enough gaps to allow delay exiting site to be minimized	Light pedestrian activity on SB Approach
<u>Recommendations</u>	Eliminate Parent Pick-up on WB curb lane of Walnut Hill Lane from Hedgeway Drive to Gooding Drive Road (Provide Parent Pick-up in queuing area on school property)	none



*As observed in the Afternoon

Walnut Hill Lane at Hurley Way

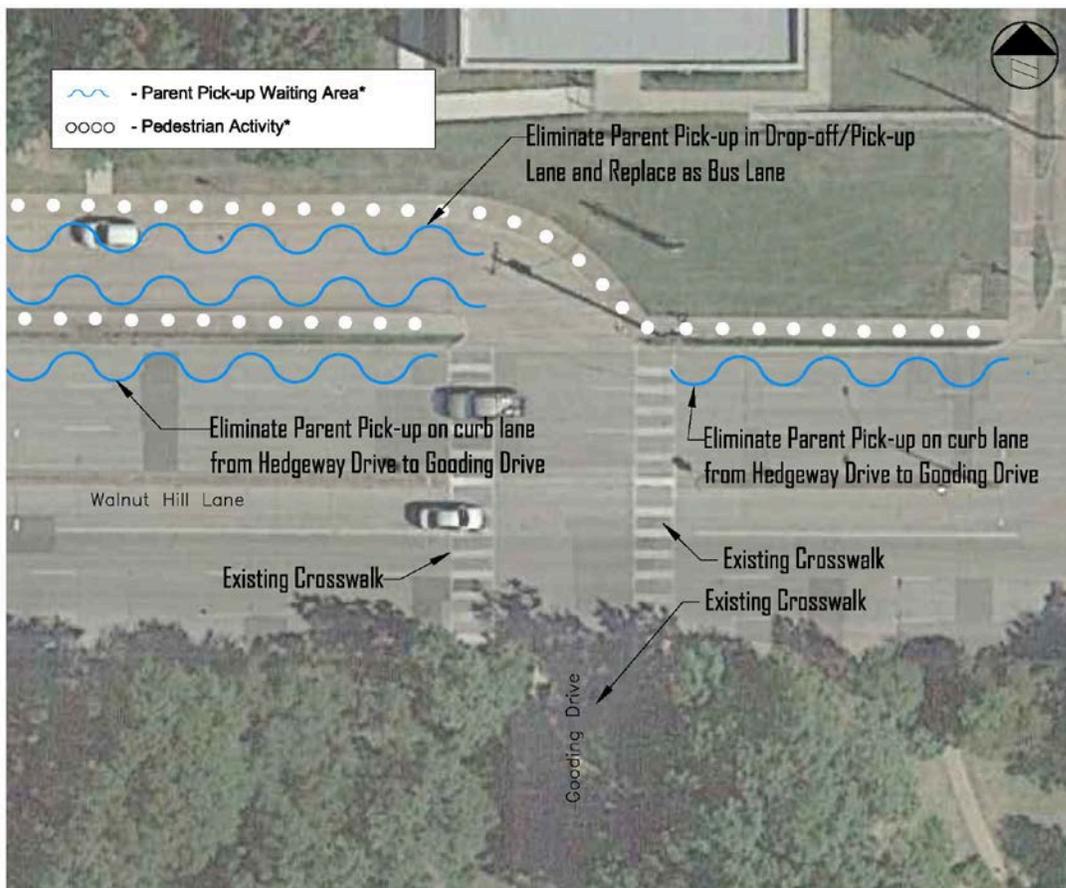
Description	Flow/Circulation	Pedestrian Access
<u>Existing Conditions</u>	Inbound and outbound parent pick-up activity	Crosswalks on NB/EB/WB Approaches
<u>Observations</u>	Double queuing lanes at Drop-off/Pick-up Lane. High congestion on Walnut Hill Lane, parent pick-up activity	Pedestrian activity crossing Walnut Hill Lane
<u>Recommendations</u>	Eliminate Parent Pick-up on WB curb lane of Walnut Hill Lane from Hedgeway Drive to Gooding Drive (Provide Parent Pick-up in queuing area on school property); Close Driveway Opening for Drop-off/Pick-up lane	none



*As observed in the Afternoon

Walnut Hill Lane at Gooding Drive (Northbound Approach)

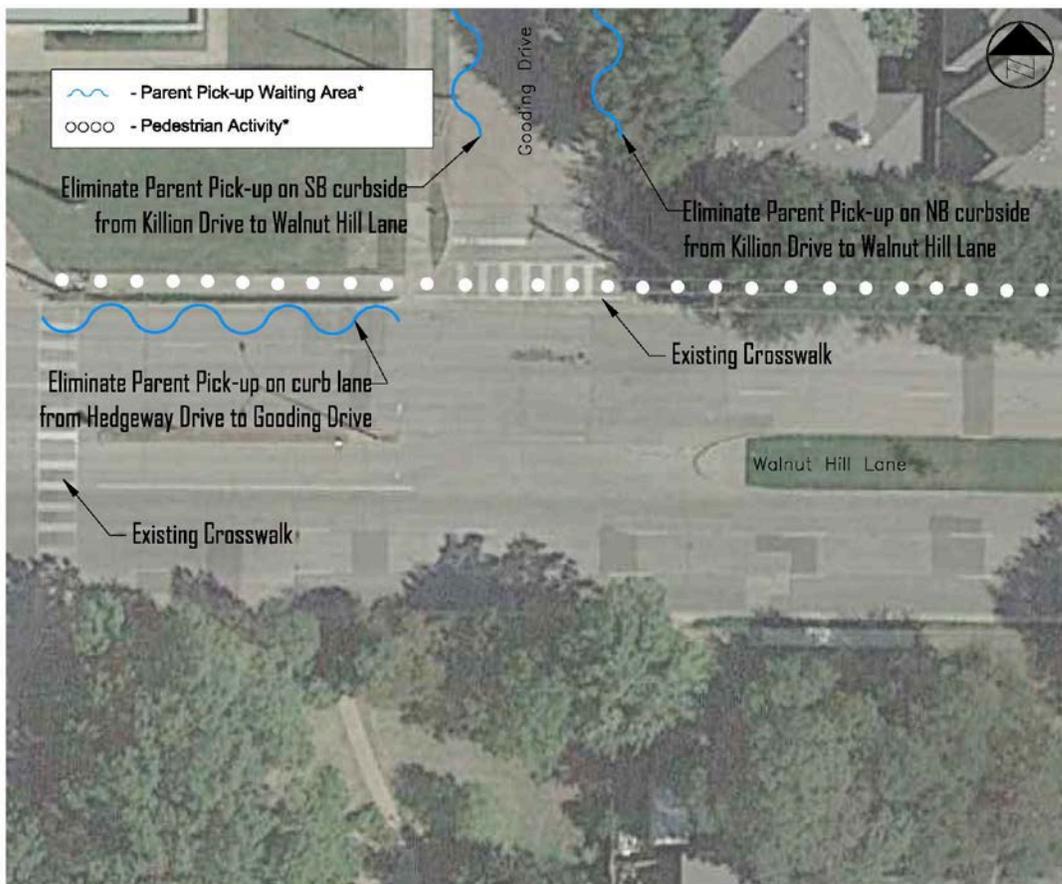
Description	Flow/Circulation	Pedestrian Access
<u>Existing Conditions</u>	Parent Pick-up Lane one-way operational on school property	Crosswalks on EB/WB Approaches
<u>Observations</u>	Double queuing lanes at Drop-off/Pick-up Lane. High congestion on Walnut Hill Lane, parent pick-up activity	Pedestrian activity crossing Walnut Hill Lane
<u>Recommendations</u>	Eliminate Parent Pick-up on WB curb lane of Walnut Hill Lane from Hedgeway Drive to Gooding Drive (Provide Parent Pick-up in queuing area on school property)	none



*As observed in the Afternoon

Walnut Hill Lane at Gooding Drive (Southbound Approach)

Description	Flow/Circulation	Pedestrian Access
<u>Existing Conditions</u>	Stop-controlled on Gooding Drive	Crosswalk on SB Approach
<u>Observations</u>	High congestion and parent pick-up activity on Walnut Hill Lane and Gooding Drive, Delay/Queuing on SB Approach	Pedestrian activity crossing Gooding Drive
<u>Recommendations</u>	Eliminate Parent Pick-up on NB curb lane of Gooding Drive from Killion Drive to Walnut Hill Lane (Provide Parent Pick-up on SB curb lane of Gooding Drive)	none



*As observed in the Afternoon

Killion Drive at Gooding Drive

Description	Flow/Circulation	Pedestrian Access
<u>Existing Conditions</u>	all-way STOP-controlled	Crosswalks on all approaches
<u>Observations</u>	High parent pick-up activity on Gooding Drive, minimal queueing at intersection	Light pedestrian activity crossing all approaches
<u>Recommendations</u>	Eliminate Parent Pick-up on NB curb lane of Gooding Drive from Killion Drive to Walnut Hill Lane (Provide Parent Pick-up on SB curb lane of Gooding Drive)	none



*As observed in the Afternoon

Roadway Links:

- (A) Walnut Hill Lane, adjacent to site
- ❑ Existing operation and cross-section: *six lanes, two-way operation, median-divided*
 - ❑ City of Dallas Thoroughfare Plan Designation: *PA /Existing, M-6-D(A)*
 - ❑ School Zone: *from Hedgeway Drive to Midway Road**
 - ❑ Parent Drop-off/Pick-up Activity:
 - Pedestrian Observations: *Heavy pedestrian crossing at Lenel Place*
 - Vehicular Observations: *Vehicular standing on WB right-most lane*
 - ❑ Recommendations:
 - *Eliminate Parent Pick-up on WB curb lane of Walnut Hill Lane from Hedgeway Drive to Gooding Drive (Provide Parent Pick-up on SB curb lane of Gooding Drive)*
 - *Close Driveway Opening, intersecting with Hurley Way, along Drop-off/Pick-up Lane on school property*
- (B) Gooding Drive, adjacent to site
- ❑ Existing operation and cross-section: *two lanes, two-way operation, no median*
 - ❑ City of Dallas Thoroughfare Plan Designation: *none (local street)*
 - ❑ School Zone: *from Killion Drive to Walnut Hill Lane**
 - ❑ Parent Drop-off/Pick-up Activity:
 - Pedestrian Observations: *Moderate pedestrian crossing at Killion Drive.*
 - Vehicular Observations: *Vehicular standing on NB and SB shoulders*
 - ❑ Recommendations:
 - *Eliminate Parent Pick-up on NB curbside of Gooding Drive from Killion Drive to Walnut Hill Lane (Provide Parent Pick-up on SB curbside of Gooding Drive)*
- (C) Killion Drive, adjacent to site
- ❑ Existing operation and cross-section: *two lanes, two-way operation, no median*
 - ❑ City of Dallas Thoroughfare Plan Designation: *none (local street)*
 - ❑ School Zone: *from Hedgeway Drive to Midway Road**
 - ❑ Parent Drop-off/Pick-up Activity:
 - Pedestrian Observations: *Light pedestrian crossing at Gooding Drive.*
 - Vehicular Observations: *minimal impact*
 - ❑ Recommendations:
 - *None*

*All city approved school zones are recommended to provide hardware that meets city's current standards

SUMMARY OF FINDINGS AND RECOMMENDATIONS

NOTE: Recommendations presented in this report reflect the opinion of Pacheco Koch based solely upon technical analysis and professional judgment but are not intended to infer mandates or funding responsibility. Any proposed improvements in the public right-of-way are subject to approval of the responsible agency(-ies). Should the approving agency determine that any off-site improvements are required for approval of the Project, legal precedents apply with regard to jurisdiction and funding allocation.

The following findings and recommendations are based upon buildout of the subject property in accordance with the hypothetical development scenario outlined in the School Description section of this report. Observations of existing conditions and graphical summaries of recommendations are contained in this report.

- ❖ FINDING: Parent pick-up activity currently occurs on Walnut Hill Lane and Gooding Drive.
- ❖ RECOMMENDATION: Eliminate parent pick-up on westbound curb lane of Walnut Hill Lane from Hedgeway Drive to Gooding Drive.
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END OF MEMO