

TECHNICAL MEMORANDUM

TO: Craig Drone, AIA

FROM: Dean Stuller, P.E.

EMAIL: dstuller@halff.com



DATE: August 12, 2020

AVO: 37055

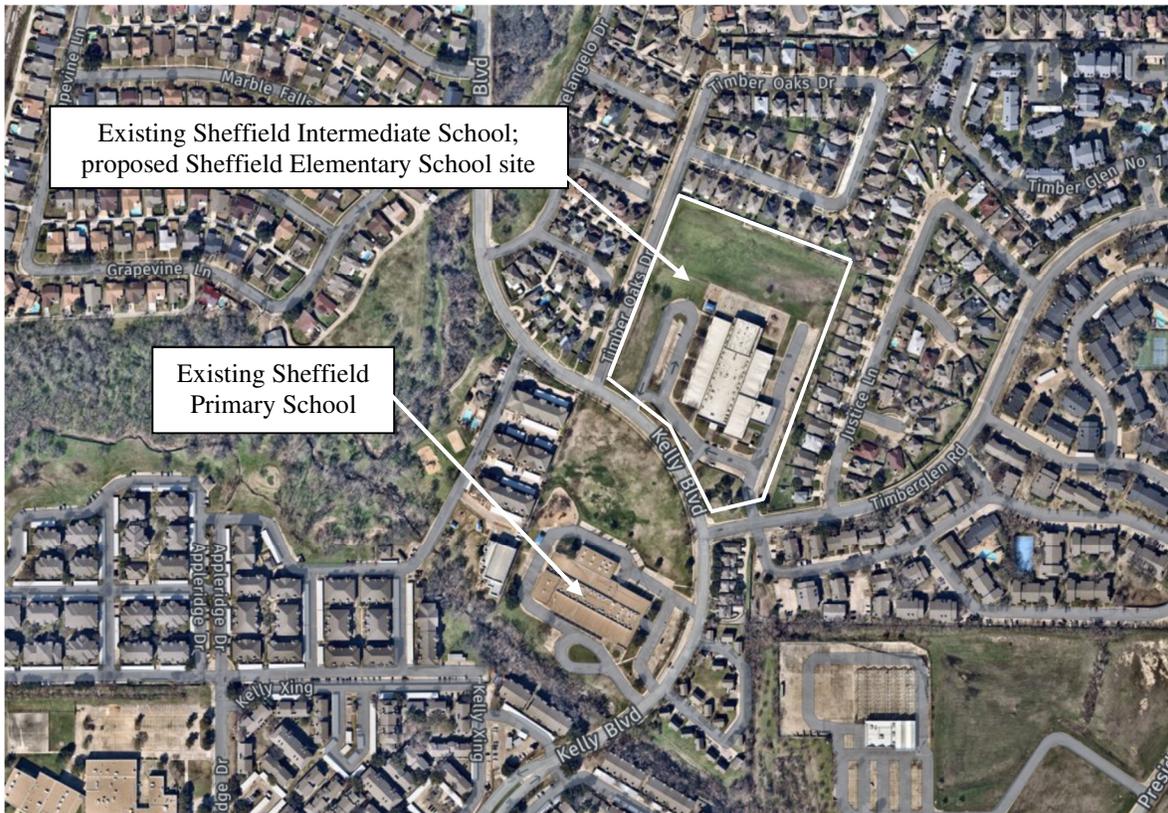
Dean S. Stuller 08/12/2020

SUBJECT: New Sheffield Elementary School Traffic Management Plan (TMP)

I. INTRODUCTION

Halff Associates, Inc. (Halff) is a full service architectural / engineering firm based in Richardson, Texas with licensed engineers specializing in traffic and transportation. Halff was retained by LPA Design Studios (Client) to prepare a Traffic Management Plan (TMP) for the Carrollton-Farmers Branch Independent School District's (CFBISD) new Sheffield Elementary School, to be located at the northeast corner of Kelly Boulevard and Timberglen Road in Dallas, Texas. The new elementary school will replace the existing Sheffield Primary School (Kindergarten – 2nd grade) and Sheffield Intermediate School (3rd – 5th grades) campuses, which have a combined enrollment of 667 students. The new school is projected to have a maximum enrollment of 750 students and is scheduled to open in the fall of 2022. As part the construction approvals process for the new school, a TMP is required by the City of Dallas.

Figure 1 is an aerial image detailing the site location. The site is bordered by Timber Oaks Drive on the west, Kelly Boulevard and Timberglen Road on the south, and single-family residences on the east and north.



Aerial image reprinted with permission from Nearmap.

Figure 1 – Site Location Map

As mentioned above, the City of Dallas requires a TMP as part of the development process for the new school. With this TMP submittal, the school is agreeing to implement the management plan strategies as presented and will be self-accountable unless the City of Dallas deems further measures are appropriate or necessary.

II. TRAFFIC MANAGEMENT PLAN

The purpose of the TMP is to identify established procedures for traffic flow and circulation around the elementary school related to student drop-off and pick-up operations. Use of a TMP helps improve traffic / student safety and helps maximize the efficiency of drop-off and pick-up operations, reducing delays during those time periods. The analysis summarized in this report identifies critical elements of the TMP such as projected vehicle queue demand during the AM and school PM peak periods, available queuing space on and off-site and circulation patterns for the school facility. A successful TMP requires effort and compliance by school administration, staff, students, and parents.

Projected Peak Vehicle Queue Demand during Student Drop-Off and Pick-Up Operations

In order to project the peak vehicle queue demands for the new school during the AM and school PM peak periods, Halff conducted AM peak period and school PM peak period observations at both Sheffield Primary and Sheffield Intermediate on Tuesday February 4, 2020. Halff's observations identified vehicle queue demands and queuing tendencies at both existing campuses. Halff noted that during both the AM and school PM peak observations at the existing two schools the line of queued vehicles on each site was not tightly packed. There were many instances when a significant amount of space was left between vehicles. Halff also collected AM and school PM peak period traffic counts at the driveways serving both schools on Wednesday, January 29, 2020.

Based on the data collected at the two existing schools, during the AM peak period the maximum observed vehicle queue demand total was 35. In the school PM peak period, the maximum observed vehicle queue demand total was 72. When you consider the 20 vehicles that pulled onto the Intermediate school site to park in the back loop area, west parking lot, to pick up students, the total demand of vehicles entering the existing school sites to pick up students is 92 (72 vehicles in queues and 20 vehicles parking on Intermediate site).

Halff applied a 1.12 straight-line factor (750 students / 667 students) to estimate the maximum vehicle queues for the new school during the AM and school PM peak periods, with the school at its maximum enrollment. Based on the total vehicle queue demands at the existing two schools, 35 vehicles in the AM peak period and 92 vehicles in the school PM peak period, the projected vehicle queues at the new school are 39 vehicles in the AM peak period and 103 vehicles in the school PM peak period.

Based on the information above and a review of the site plan for the new school, Halff developed the attached TMP to serve the new Sheffield Elementary School.

III. RECOMMENDATIONS AND SUMMARY

Below are recommendations related to the procedures for the student drop-off and pick-up operations to provide a safe environment for the movement of pedestrians and vehicles on and around the new Sheffield Elementary School campus:

1. All student drop-offs and pick-ups should occur in the front loop.
2. All school bus and day care vehicle drop-offs and pick-ups should occur in the back loop.
3. For student drop-off in the morning, use the right lane closest to the building.
4. Identify five station locations, Station 1 – Station 5, in the front loop along the right lane closest to the building for the unloading and loading of students. Start Station 1 at the stop bar located 20 feet from the crosswalk adjacent to the building. (Space the stations 25 feet apart.)



Half Associates, Inc.
1201 North Bowser Road
Richardson, Texas 75081
(214) 346-6200
Fax (214) 739-0095

5. Identify three station locations, Station 6 – Station 8, in the front loop along the left lane adjacent to the parking lot for the loading of students. Start Station 6 at the stop bar located 20 feet from the crosswalk adjacent to the building. Space the stations 25 feet apart.
6. Assign one staff member to each of the Stations 1 - 3 in the AM peak period to assist with the unloading of students.
7. Assign one staff member to each of the Stations 1 - 8 in the school PM peak period to assist with loading students into the vehicles. Grades K - 2 and older siblings should load at Stations 1 - 5 and grades 3 - 5 should load at Stations 6 - 8.
8. Develop a hanging tag identification system in the front loop for calling students as part of the pick-up operations. Position a staff member upstream of the pick-up area to identify vehicles entering the pick-up lanes, direct the vehicles to a designated loading space and call for the associated student to move to the designated space to load into their vehicle.
9. Assign one staff member to oversee the crosswalk operations at the front loop entrance at Timberglen Road during the AM and school PM peak periods.
10. Assign one staff member to oversee the crosswalk operations at the front loop exit at Timber Oaks Drive during the AM and school PM peak periods.
11. Assign one staff member in the front loop at the crosswalk to access the second vehicle loading lane in the school PM peak period.
12. School staff should encourage parents to use only the designated areas located on-site for pick-up and drop-off activity. Pick-up and drop-off activity on public right-of-way should be discouraged.
13. Restrict parking on both sides of Kelly Boulevard, Timberglen Road and Timber Oaks Drive as shown on the TMP exhibit.
14. The school administration should train school staff on their duties associated with pick-up and drop-off procedures as outlined in the TMP.
15. The school administration should communicate to parents and students regarding expectations and responsibilities related to the TMP throughout the school year as needed. It is particularly important to communicate to parents of new students, who may not be familiar with pick-up / drop-off procedures.

A visual representation of the TMP is provided as Exhibit 1 in the Appendix.



Half Associates, Inc.
1201 North Bowser Road
Richardson, Texas 75081
(214) 346-6200
Fax (214) 739-0095

The purpose of the TMP is to identify established procedures for traffic flow circulation and student drop off / pick up operations for the new Sheffield Elementary campus. Using a TMP helps improve student and driver safety and maximize the efficiency of drop-off and pick-up operations, reducing delays during those time periods. This report identifies critical elements of the TMP such as existing available queuing space on- and off-site, projected queuing during the drop-off and pick-up periods and vehicular and pedestrian circulation patterns for the school facility. A successful TMP requires effort and compliance by school administration, staff, students, and parents. The TMP procedures should be distributed to parents in advance of school starting each semester and posted on the school's website to be available at all times.

With this TMP submittal, the school is agreeing to implement the management plan strategies as presented and will be self-accountable unless the City of Dallas deems further measures are appropriate or necessary.

SCHOOL TMP REVIEW AND COMMITMENT

The school traffic management plan (TMP) for Sheffield Elementary School was developed with the intent of optimizing safety and efficiently accommodating vehicular traffic generated during the school's typical student drop-off and pick-up periods. It is important to note that a concerted and ongoing effort by and the full participation of the school administration are essential to accomplish these goals.

By the endorsement provided below, the school administration hereby agrees to implement, adhere to, and support the strategies presented in this TMP for which the school is held responsible until or unless the City of Dallas deems those strategies are no longer necessary or that other measures are more appropriate.

Signature

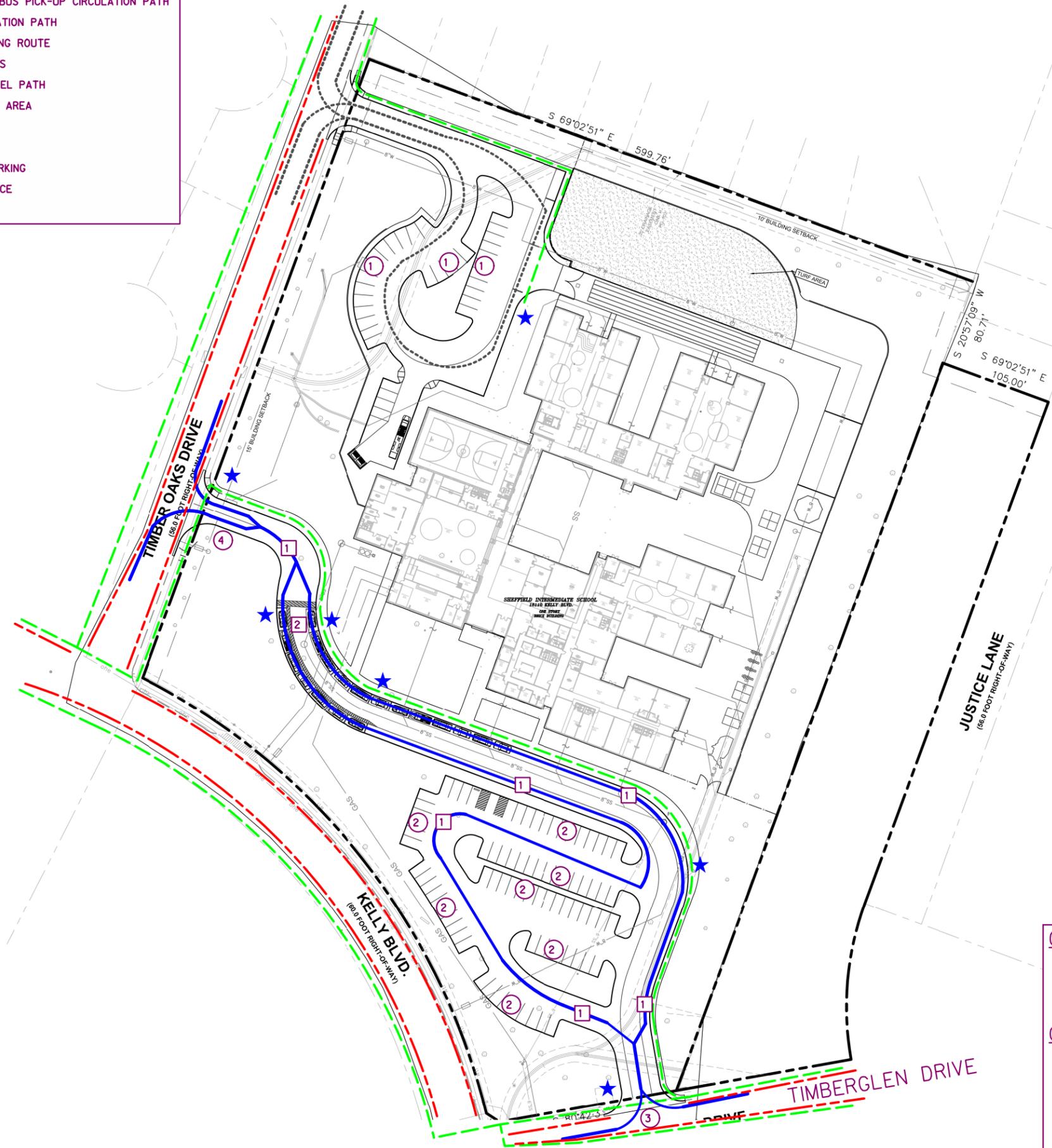
Date

Name: _____

Title: _____

LEGEND

- DAY CARE / SP ED BUS PICK-UP CIRCULATION PATH
- FRONT LOOP CIRCULATION PATH
- PEDESTRIAN / WALKING ROUTE
- PARKING RESTRICTIONS
- 1 PICK-UP QUEUE TRAVEL PATH
- 2 DROP-OFF / PICK-UP AREA
- ★ STAFF ASSISTANT
- 1 STAFF PARKING
- 2 VISITOR / STAFF PARKING
- 3 FRONT LOOP ENTRANCE
- 4 FRONT LOOP EXIT



CAMPUS INFORMATION

PROJECTED ENROLLMENT: 750 STUDENTS
 ACADEMIC: GRADES K - 5
 SCHOOL HOURS: 7:30 AM - 3:05 PM

QUEUING (PASSENGER VEHICLES)

PROJECTED DEMAND: 2,265 FEET (103 VEH.)
 AVAILABLE CAPACITY:
 FRONT LOOP: 1,725 FEET (78 VEH.)
 NET DEFICIT: 540 FEET (24 VEH.)



1201 NORTH BOWSER ROAD
 RICHARDSON, TX 75081-2275
 (214) 346-6200
 TBPELS ENGINEERING FIRM #312

SHEFFIELD ELEMENTARY SCHOOL
 18111 KELLY BOULEVARD
 DALLAS, TEXAS

Project No.:	37055.001
Issued:	AUGUST 2020
Drawn By:	TMM
Checked By:	SM
Scale:	NTS

Sheet Title
TRAFFIC MANAGEMENT PLAN

EXHIBIT 1
 Sheet Number