# SPANISH HOUSE
# TRAFFIC MANAGEMENT PLAN
# JANUARY 2016
# Z156-118

## INTRODUCTION

The Spanish House Private School will be located to the west of the East Grand Avenue Service Road and Shadyside Lane intersection with a physical address of 7159 East Grand Avenue, Dallas, Texas 75223. This school is proposed to open in August 2016 with an enrollment of 80 students in Kindergarten to 5th grade. At full enrollment, which is projected to be reached in 2020, the school will have a maximum capacity of 200 students.

## OVERVIEW

Spanish House will be located to the west of the East Grand Avenue Service Road and Shadyside Lane intersection as shown in **Figure 1**.

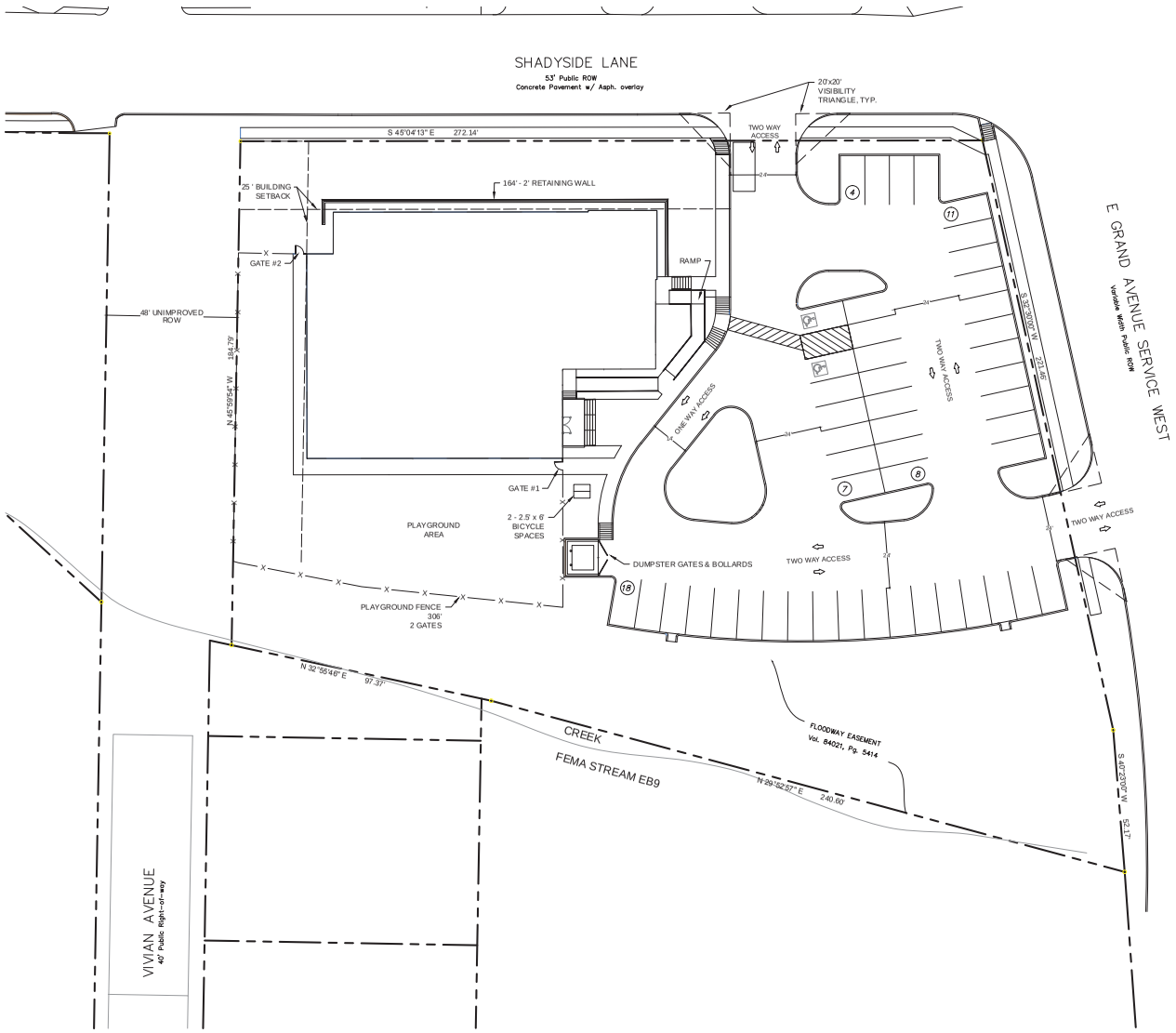
**East Grand Avenue Service Road** – Bordering the school to the east, this segment of East Grand Avenue serves as the service road for East Grand Avenue (SH 78) and is a one-way (southwest-bound only) roadway. The East Grand Avenue Service Road is not identified in the City of Dallas Thoroughfare Plan. The assumed speed limit on this section of the East Grand Avenue Service Road is 30 mph.

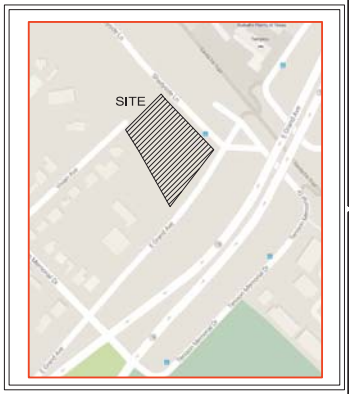
**Shadyside Lane** – Shadyside Lane borders Spanish House on the north side and is a two-lane, two-way roadway with a posted speed limit of 30 mph. Shadyside Lane is not identified on the City of Dallas Thoroughfare Plan. A DART bus stop is located along Shadyside Lane near the future school location.

**Figure 2** shows the proposed site plan. The campus will be served by one driveway along East Grand Avenue and one driveway on Shadyside Lane. However, access will only be allowed via the East Grand Avenue driveway location during drop off and pick-up times.

**Figure 1: Vicinity Map**

# Figure 2: Spanish House Site Plan




VICINITY MAP
NTS

NORTH

SITE INFORMATION:

LOT AREA: 1.539 ACRES
FLOOR AREA: 22,000 SF
HEIGHT: 36' - 2 STORIES
LOT COVERAGE: 18%
FAR: 0-32:1

PRIVATE SCHOOL:
15 ELEMENTARY CLASSROOMS
1.5 P/S PER CLASSROOM
23 SPACES REQUIRED

PARKING: 48 SPACES PROVIDED
2 HANDICAP SPACES
2 BICYCLE SPACES

10/29/2015
PROJECT NUMBER
CASE NUMBER

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E GRAND AVENUE
CITY OF DALLAS, TEXAS

At maximum enrollment, Spanish House will serve 200 students in Kindergarten to 5th grade. Students will arrive at 7:30 AM and 8:30 AM with four (4) release times between 3:00 and 6:00 PM (including after school programs) as identified in **Table 1**. This table assumes full enrollment of the private school.

**Table 1: Projected Student Dismissal Numbers**

| Dismissal Time | Percent of Enrollment Dismissed | # of Students |
|---|---|---|
| 3:00 PM | 30% | 60 |
| 3:15 PM | 30% | 60 |
| 4:30 PM | 20% | 40 |
| 5:00 – 6:00 PM | 20% | 40 |
| **Total** | **100%** | **200** |

## CITY OF DALLAS PARKING STANDARDS

Section 51.A-4.204 of the City of Dallas *Development Code* defines the parking requirements for institutional and community services. The City of Dallas code requires 1.5 parking spaces for each kindergarten/elementary school classroom. With 15 classrooms for Spanish House, 23 parking spaces would be required. Based on the site plan shown in Figure 2, the parking total of 48 spaces exceeds the City of Dallas requirements.

## TRIP GENERATION

To develop trip rates for the Spanish House, the number of vehicle trips generated by the private school and the directional splits were initially calculated based on information presented in ITE's *Trip Generation Manual, Ninth Edition*. The trip generation equations, directional splits and the number of trips generated by the proposed school at full enrollment using this information is provided in **Table 2**.

**Table 2: ITE Trip Generation Rates**

| Land Use | ITE Code | Equations[1] | | | | | |
|---|---|---|---|---|---|---|---|
| | | AM Peak Hour | | | School PM Peak Hour | | |
| Private School (K-8) | 534 | T = 0.90(X) + 3.01 | | | T = 0.61(X) - 4.70 | | |
| | | Directional Splits[2] | | | | | |
| | | AM Peak Hour | | | School PM Peak Hour | | |
| | | 55 / 45 | | | 47 / 53 | | |
| | | Estimated Trip Generation (200 students) | | | | | |
| | | AM Peak Hour | | | School PM Peak Hour | | |
| | | Enter | Exit | Total | Enter | Exit | Total |
| | | 101 | 82 | 183 | 55 | 62 | 117 |

[1]T = Trip Ends; X = Number of Students
[2]XX / YY = % entering vehicles / % exiting vehicles

## QUEUING ANALYSIS

The primary goal of the evaluation of the traffic circulation for the school is to minimize the impact on the adjacent public streets and to avoid queues on public roadways. The proposed circulation plan will be the same for both the drop off in the morning and pick-up in the afternoon and there are proposed to be two (2) drop off periods and four (4) dismissal periods. **Figure 3** shows the proposed circulation during the drop off and pick-up periods with the anticipated queues during the primary pick-up time (3:00 PM) identified. To determine the projected length of queues on site, a maximum queue length of four (4) feet per student was assumed, based on previous studies at other private schools. A queued vehicle length of 20 feet was also assumed. Under these assumptions, **Table 3** summarizes the projected maximum queue for each dismissal period.

**Table 3: Projected Queue Lengths by Dismissal Time**

| Dismissal Time | Percent of Enrollment Dismissed | # of Students | Projected Max Queue | |
|---|---|---|---|---|
| | | | (Feet) | (vehicles) |
| 3:00 PM | 30% | 60 | 240 | 12 |
| 3:15 PM | 30% | 60 | 240 | 12 |
| 4:30 PM | 20% | 40 | 160 | 8 |
| 5:00 – 6:00 PM | 20% | 40 | 160 | 8 |
| **Total** | **100%** | **200** | **- - -** | **- - -** |

As shown by Figure 3 and Table 3, with 320 feet (16 vehicles) of on-site queuing provided, the site is predicted to be able to store the vehicles during each of the dismissal periods.

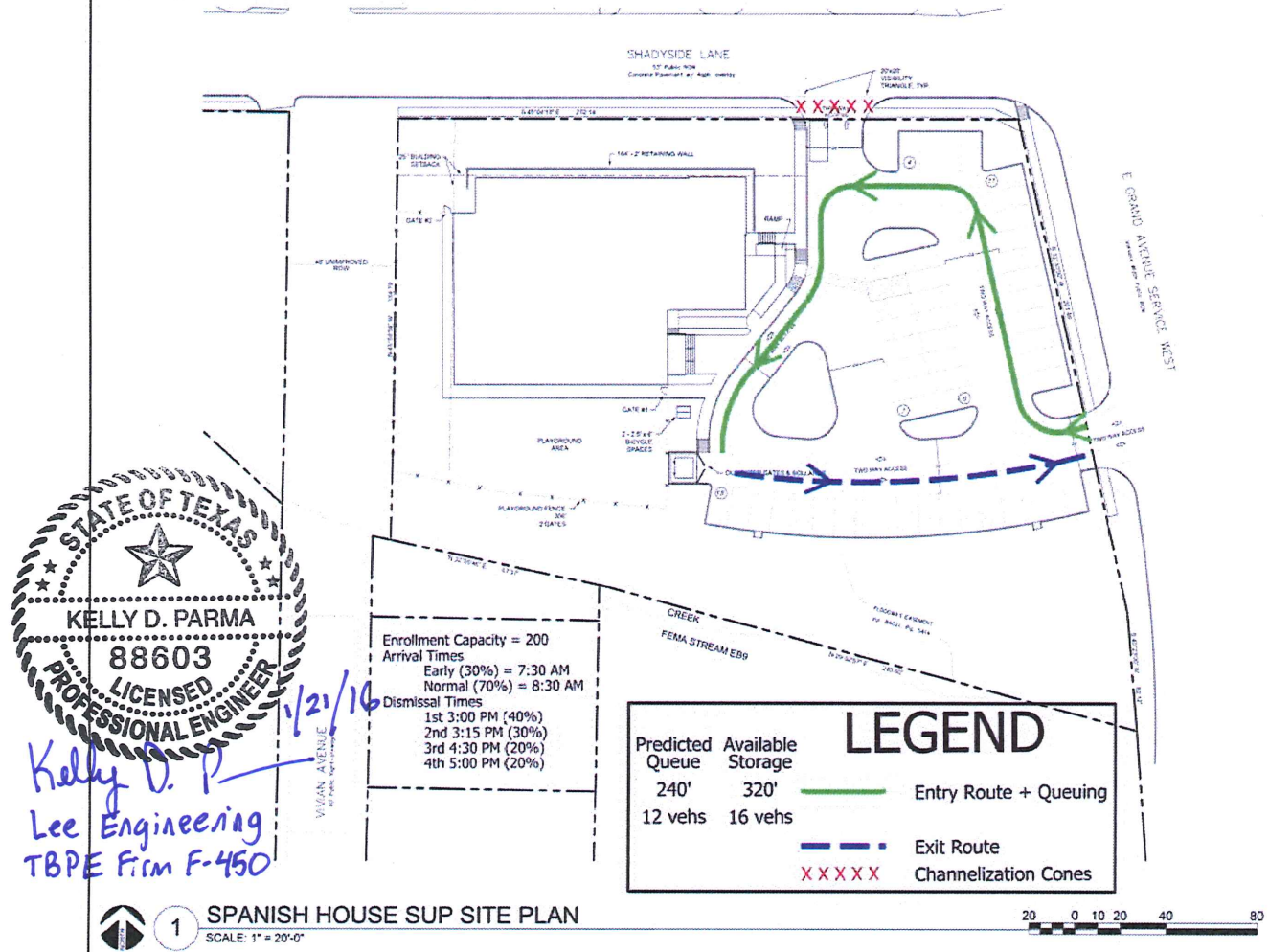
## 2015-2016 PROPOSED OPERATION

The arrival and dismissal traffic flow is expected to proceed as follows:

- Arrival Procedures
  - Shadyside Lane driveway closed. All traffic will enter using the East Grand Avenue driveway.
  - A counterclockwise movement is recommended. Parents will enter the school using the East Grand Avenue driveway and turn right into the school parking lot.
  - Staff members will be present to assist students out of vehicles.
- Dismissal Procedures
  - Shadyside Lane driveway closed. All traffic will enter using the East Grand Avenue driveway.
  - A counterclockwise movement is recommended. Parents will enter the school and the queue line using the East Grand Avenue driveway and turn right into the school parking lot.
  - Staff members will assist students in to vehicles and to direct parents in queue lines as necessary.
  - Parents to remain in vehicles while in queue line.

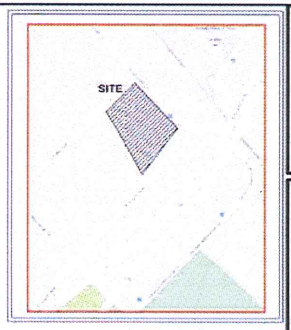
# SPANISH HOUSE

## ZONING CASE: Z156-118




1 SPANISH HOUSE SUP SITE PLAN
SCALE: 1" = 20'-0"

20 0 10 20 40 80

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STATE OF TEXAS
KELLY D. PARMA
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LICENSED
PROFESSIONAL ENGINEER
1/21/16
Kelly D. P
Lee Engineering
TBPE Firm F-450

Based on the vehicle queuing analysis conducted and the resulting Traffic Management Plan, I, Kelly D. Parma, P.E. 88603, certify that the results indicate that no queuing of vehicles dropping off or picking up students at Spanish House will extend onto City of Dallas rights-of-way as a result of internal queuing constraints. In order to ensure that all queuing of vehicles is completely accommodated on school property, Spanish House administrative officials should implement the proposed Traffic Management Plan, monitor the operation on a continuing basis, and if any vehicle queuing should begin to occur on public right-of-way, take the necessary action to mitigate it. Only uniformed police officers should be allowed to direct and control traffic operating within the public right-of-way.

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TBPE FIRM F-450
LEE ENGINEERING

Spanish House School Stacking and Circulation Plan

Figure 3

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