

KBP CONSULTING, INC.

MEMORANDUM

To: Rod A. Feiner, Esq.
From: Karl Peterson, P.E.
Date: June 16, 2022
Subject: School & Academy at First Baptist Church of Cooper City
Traffic Statement

First Baptist Church of Cooper City owns an existing private school located on its campus at 8950 Stirling Road. The location of the property is shown in Attachment A to this memorandum.

The subject school has received a prior approval for a maximum enrollment of 200 students in grades one (1) through twelve (12). The school wishes to add Pre-Kindergarten (Pre-K) and Kindergarten (K) classes to their program. The maximum student enrollment will remain at 200 with up to 50 of those students enrolled in the Pre-K program. The purpose of this technical memorandum is to document the impacts to the trip generation characteristics for this site as a result of the proposed action.

Trip Generation Analysis

Kindergarten is a common element of most elementary school programs. Their start times and release times are generally consistent with other lower grades (i.e. 1st and 2nd grade) and, as such, the trip generation characteristics are the same. This is reflected in the trip generation data published by the Institute of Transportation Engineers (ITE) in their *Trip Generation Manual (11th Edition)*. Specific to this school, the most appropriate land use code (LUC) is #532 – Private School (K-12). The trip generation rates and equations for this land use are presented below:

ITE Land Use #532 – Private School (K-12)

- Weekday: $T = 2.48 (X)$
where T = number of trips and X = number of students
- AM Peak Hour: $T = 0.77 (X) + 13.81$ (63% in / 37% out)
- PM Peak Hour: $T = 0.17 (X)$ (43% in / 57% out)

A Pre-Kindergarten program, on the other hand, tends to operate differently from that of an elementary school program. The start times and end times for the day are flexible to accommodate the schedules of the parents. As such, the ITE Land Use Code (LUC) that is most appropriate for this analysis is #565 – Day Care Center. The trip generation rates for this land use are presented on the following page.

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ITE Land Use #565 – Day Care Center

- Weekday: $T = 4.09 (X)$
where $T = \text{number of trips}$ and $X = \text{number of students}$
- AM Peak Hour: $T = 0.78 (X)$ (53% in / 47% out)
- PM Peak Hour: $T = 0.79 (X)$ (47% in / 53% out)

The resulting trip generation comparison between the existing school program (Grades 1-12) and the proposed school program (Pre-K and K-12) is presented in Table 1 below.

| Land Use | Size | Daily Trips | AM Peak Hour Trips | | | PM Peak Hour Trips | | |
|---|---------------------|-------------|--------------------|-----------|------------|--------------------|-----------|-----------|
| | | | In | Out | Total | In | Out | Total |
| <i>Existing</i> | | | | | | | | |
| Private School (Grades 1-12) | 200 Students | 496 | 106 | 62 | 168 | 15 | 19 | 34 |
| Sub-Total | 200 Students | 496 | 106 | 62 | 168 | 15 | 19 | 34 |
| <i>Proposed</i> | | | | | | | | |
| Private School (Grades K-12) | 150 Students | 372 | 81 | 48 | 129 | 11 | 15 | 26 |
| Pre-School (Pre-K) | 50 Students | 205 | 21 | 18 | 39 | 19 | 21 | 40 |
| Sub-Total | 200 Students | 577 | 102 | 66 | 168 | 30 | 36 | 66 |
| Difference (Proposed - Existing) | | 81 | (4) | 4 | 0 | 15 | 17 | 32 |

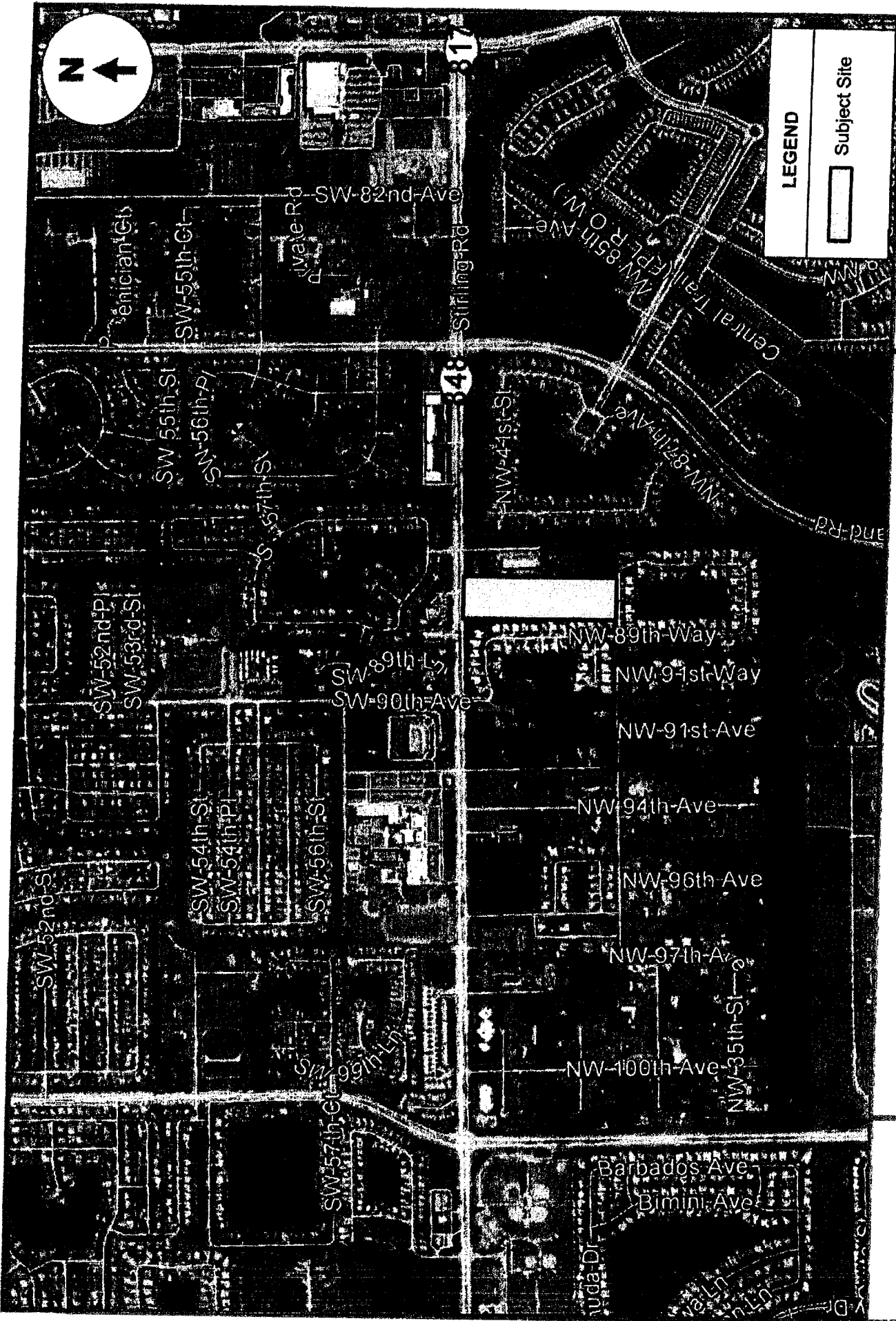
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As indicated in Table 1 above, the proposed school program (200 students in a Pre-K and K-12 program) is projected to generate 577 daily vehicle trips, 168 AM peak hour vehicle trips (102 inbound and 66 outbound) and 66 PM peak hour vehicle trips (30 inbound and 36 outbound). When compared with the existing school program (200 students in grades 1-12) this results in an increase of 81 daily vehicle trips, no change in the number of AM peak hour trips, and an increase of 32 PM peak hour vehicle trips.

The resulting increase in trips is considered to be minimal (i.e. 1 additional trip per 2 minutes in the PM peak hour) and will have little impact on the surrounding roadway network. Additionally, the K-12 students are dropped off and picked up in a car line while the parents of Pre-K students will be required to park in a designated parking space in order to drop off and pick up their children. Based upon field reviews of the site, the number of available parking spaces are more than adequate to accommodate this activity.

Attachment A

Project Location Map



LEGEND

Subject Site

FIGURE 1
 School & Academy at
 First Baptist Church
 Cooper City, Florida

Project Location Map

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