

TRAFFIC IMPACT ANALYSIS SUMMARY
Scottsdale First Assembly Church
Private School Use Permit
31-UP-2007/685-PA-2007

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Existing Conditions:

The City of Scottsdale has received an application for a Use Permit to allow a private elementary school to be operated in an existing church facility. The site is located on the west side of Pima Road between Via Dona Road and Dynamite Boulevard. The parcel is currently zoned Single Family Residential (R1-190 ESL). There is an existing church sanctuary and classroom buildings with 339 parking spaces on the 26.2 acre project site.

There existing parcels north and south of the site between Via Dona Road and Dynamite Boulevard are also zoned for single family, but are currently undeveloped. The land on the east side of Pima Road is owned by the State Land Department, and is currently designated to be in the City's McDowell Sonoran Preserve boundary.

The section of Pima Road adjacent to the site is classified as a Regional System Street on the Community Mobility Element of the city's General Plan. It is classified as a minor arterial street on the City of Scottsdale's Street Classification Map. In the vicinity of the site, Pima Road currently has one lane in each direction. The cross section includes bike lanes in both directions. The daily traffic volume on this section of Pima Road collected in March of 2008 is 19,023 vehicles. The posted speed limit on Pima Road in the vicinity of the site is 50-MPH.

Dynamite Boulevard in the vicinity of Pima Road is classified as a Regional System Street on the Community Mobility Element of the city's General Plan. It is also classified as a minor arterial street on the City of Scottsdale's Street Classification Map. Dynamite Boulevard currently has one lane in each direction on the west side of Pima Road and two lanes in each direction on the east side. The daily traffic volume on this section of Dynamite Boulevard collected in March of 2008 is 10,290 vehicles. The posted speed limit on Dynamite Boulevard is 50-MPH.

Via Dona Road west of Pima Road is classified as a Neighborhood System Street on the Community Mobility Element of the city's General Plan. It is also classified as a local collector street on the City of Scottsdale's Street Classification Map. Via Dona Road currently has one lane in each direction and terminates at Pima Road. The daily traffic volume on this section of Via Dona Road collected in March of 2008 is 216 vehicles. The posted speed limit on Via Dona Road is 25-MPH.

The intersection of Pima Road and Dynamite Boulevard is signalized. There are separate left turn lanes and right turn lanes for all approaches. The intersection of Pima Road and Via Dona Road is currently unsignalized. There are no separate left turn or right turn lanes at the intersection. There are two existing site driveways along the Pima Road frontage. The southern driveway is located one-quarter mile north of Dynamite Boulevard, and is full access. The church has constructed a northbound left turn lane and southbound right turn lane at this driveway intersection. The northern site driveway is located approximately one-eight mile south of Via Dona Road. This driveway is

restricted to right-in, right-out only access. The church has constructed a southbound right turn lane at this driveway intersection.

Traffic collision data was reviewed from the years 2005 and 2006 for the intersection of Pima Road and Dynamite Boulevard. There were 14 collisions at the signalized intersection during 2005, and 13 collisions during 2006. The collision rate for the intersection was 1.31 and 1.22 collisions per million entering vehicles for the years 2005 and 2006 respectively. The citywide average rate for 2006 was 1.84. There have been no reported collisions at the intersection of Pima Road and Via Dona Road from 2005 to the present.

For the section of Pima Road from Dynamite Boulevard to Lone Mountain Road, there was only one reported collision during 2006, giving this segment a collision rate of 0.80 collisions per million vehicle miles. The citywide average rate for 2006 was 1.87. There was also one reported collision on Pima Road between Dynamite and Via Dona during 2007.

Proposed Development:

On the project site, there is an existing 21,385 square foot church building with a sanctuary, classroom space, and church offices and an existing paved parking lot with 339 parking spaces. The church is proposing to operate a private school with a maximum of 250 students on the site. The Trip Generation Table below summarizes the estimated number of trips that would be generated if the school use permit is approved.

TRIP GENERATION TABLE

Proposed Facilities	Daily Total	AM Peak Hour			Midday Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Private Elementary School 250 students	620	158	155	313	103	108	211	19	24	43

The a.m. peak hour represents the highest hourly volume between 7 a.m. and 9 a.m. when the school opens. The midday peak hour represents the highest hourly volume between 2 p.m. and 4 p.m. when the school closes. The p.m. peak hour represents the highest hourly volume between 4 p.m. and 6 p.m. when the school staff will leave. The Trip Generation Table shows that if the school were operated on the site it will generate an additional estimated 620 trips per average weekday. The current traffic generated by the church use during the weekday morning, midday, and afternoon peak hours was observed to generate approximately five trips.

A traffic impact study was prepared for the site under the City of Scottsdale Traffic Impact Mitigation Analysis (TIMA) Program by United Civil Group. The result of their analysis is presented below.

Site Access:

The site currently has two driveway accesses to Pima Road; one full access at the southern property line and a restricted right-in, right-out driveway 165 feet south of the northern property line. There is an existing private driveway on the east side of Pima Road across from the main site driveway.

On-Site Circulation:

On-site circulation was reviewed to evaluate school drop off and pick up activities. There is adequate room on site to accommodate vehicle queuing and parking for the school.

Future Conditions:

The traffic study prepared by United Civil Group analyzed the background traffic conditions and the estimated traffic generated by the proposed project for the proposed horizon year of 2010. Capacity calculations for signalized intersections reflect the performance of the overall intersection. Capacity calculations for stop-controlled intersections are evaluated for each stop controlled approach to the intersection. The overall Level of Service (LOS) for the intersection is reported as the poorest LOS from the approaches.

For the horizon year 2010, the signalized intersection of Pima Road and Dynamite Boulevard will operate at an acceptable level of service (LOS C or better) with the proposed school traffic during the morning, midday, and evening peak hours.

For the horizon year 2010, the unsignalized intersection of Pima Road and Via Dona Road will operate at an acceptable level of service (LOS D or better) with the proposed school traffic during the morning, midday, and evening peak hours.

During the horizon year 2010, the right-turn movements at the two site driveways will operate at acceptable levels of service (LOS D or better). The left turn movements out of the southern driveway will operate at a poor level of service (LOS F) during the morning and midday peak hours, and (LOS E) during the afternoon peak hour. With the addition of the private school, the estimated number of left turns is 56 during the a.m. peak hour, 42 during the midday peak hour, and 11 during the p.m. peak hour. The poor level of service is a function of the driveway being an uncontrolled intersection (lack of a traffic signal or stop sign on Pima Road at the driveway), and the lack of sufficient gaps in the Pima Road peak hour traffic. This is typical for a stop-controlled driveway on an arterial street during peak hours.

The additional daily 620 trips on Scottsdale Road represent a 3.3 percent increase of existing traffic volumes, which will not adversely impact travel on Pima Road.

Additional Information:

The section of Pima Road adjacent to this site is included as a project in the Maricopa County Regional Transportation Plan. This project would receive funding in the Phase II portion of the plan with construction planned between 2011 and 2015. The project would widen Pima Road to two lanes in each direction with a raised median.

Summary:

The approval of the use permit for the proposed private elementary school will result in and estimated 620 trips generated per day to and from the project site. The school is estimated to generate an additional 313 morning peak hour trips, 211 midday peak hour trips, and 43 afternoon peak hour trips.

With the addition of the proposed school traffic right turn movements at the site driveways will operate at acceptable levels of service (LOS D or better). The intersections of Pima Road at Dynamite Boulevard and Via Dona will continue to operate at acceptable levels with the addition of the school traffic. The left turn movement at the main site driveway will operate at poor levels of service (LOS E and F) during the peak

hours. Left turns movements out of the site will be difficult because the site only has uncontrolled access on an arterial street, Pima Road. This is typical for a stop-controlled driveway on an arterial street during peak hours.

The additional daily 620 trips on Scottsdale Road represent a 3.3 percent increase of existing traffic volumes, which will not adversely impact travel on Pima Road.

Comments/Concerns:

- Staggering the school start times for different grade levels in the school will help mitigate the traffic impacts of the school drop-off and pick-up activity.