

City of Peoria

School Traffic Impact Study Criteria

The purpose of these criteria is to improve consistency in school developments to provide safe and effective traffic controls both on- and off-site for all users accessing the school.

The ADOT ***Traffic Safety for School Areas Guidelines*** provide direction for site selection, on-site and off-site school safety, school crossings, school traffic controls, and other school safety issues. In addition to following the ADOT Guidelines, the school district or owner should provide a Traffic Impact Study that reviews and discusses the following key requirements:

1. Describe size of the school (number of students at build-out) and school boundary. A school boundary map may help with trip distribution analysis. The school boundary will also help determine busing and walking areas. Provide maps of busing and walking areas.
2. Describe site location. Elementary schools which are located away from arterial roadways and have street frontage on at least two, preferably three, roadways provide the best opportunities to design safe and efficient traffic circulation plans. Sites at collector-collector intersections are often ideal for elementary schools.

OFF-SITE TRAFFIC

3. Address traffic control signing and striping needs per the ADOT Guidelines and MUTCD.
4. Review turn-lane requirements per standard City of Peoria TIA guidelines.
5. Include signal warrant analysis of intersections per City of Peoria requirements.
6. Install, where appropriate, "NO PARKING" or "NO STOPPING, STANDING, OR PARKING" signs along one or both sides of roadways adjacent to the school and possibly on nearby local streets if problems may occur with parents parking in adjacent residential neighborhoods. All parking restrictions must be reviewed and approved by the City.
7. Install parking lanes on collector roadways adjacent to the school property, where possible, for additional parent vehicle queuing or parking on the street during peak traffic conditions.

ON-SITE TRAFFIC

8. Provide a traffic circulation diagram for pedestrians, bicycles, buses, and passenger vehicles that details circulation of each of these modes on-site, as well as ingress to and egress from the site.
9. If gates will be utilized, describe their location, operation, and how they will affect traffic circulation on- and off-site.
10. Discuss how the driveways will operate, including if they will be gated, one-way or two-way, number of lanes, divided, and throat length. Discuss minimum driveway storage lengths needed to accommodate both entering and exiting driveway queuing demand including back-ups during parent drop-off and pick-up periods or other peak periods, and conflicts with gates.

11. Ensure adequate sight distance is provided in both directions at all driveways per the City of Peoria Infrastructure Design Guidelines. Restrict fencing, walls, and landscaping that may block the view of all gate openings, pedestrian entrances and exits, and all crosswalk locations to ensure users are clearly visible.
12. Provide on-site circulation to eliminate the need for drivers to use the public roadway system to circulate through the school site, parking lot, and/or drop-off/pick-up areas.
13. Address on-site queuing length needed to accommodate student pick-up and drop-off. Provide adequate storage length onsite for buses and parent pick-up and drop-off queues to eliminate back-ups onto the right-of-way and in through lanes. Use the school's maximum enrollment to determine parent vehicle peak queue demand rate. For elementary schools with one dismissal, use 8 vehicles per 100 students. For elementary schools with staggered dismissals, use 16 vehicles per 100 students released in the lower grades, typically during the first dismissal. Use 25-feet per vehicle for this calculation. A greater distance is required for magnet, charter, and private schools that generate more parent vehicle trips than an average neighborhood school, depending on busing, staggering of arrival and dismissal times, and other factors.
14. Provide a sufficient paved waiting area for drop-off and pick-up students. Determine where school children will congregate, typically at or near a main building or campus entrance, and measure the effective length of the parent vehicle queue from the driveway entrance to this waiting area. This waiting area should not obstruct the route for walking students.
15. Determine additional parking lot design requirements to facilitate safe traffic circulation. Speed humps or bumps may be helpful, especially in advance of marked crosswalks. Speed tables installed at crossing locations create raised crosswalks that increase pedestrian visibility and safety.
16. Discuss shared parking options with nearby or adjacent parks, churches, or other community facilities. Include description of how shared parking will operate, pedestrians will circulate, and traffic will circulate for special events, sporting events, and recreation events.

BUSES

17. Separate bus movements from parent drop-off/pick-up areas, as well as pedestrian and bicycle routes. Identify number of buses, how many trips each will make, peak times, and length of queue needed for bus drop-off/pick-up lane. Include description of routes that buses will be using, how they will access site, and contribute to trip distribution analysis. Bus routes should minimize the use of local streets.
18. Address special needs buses, how many, what times, and where they will drop-off and pick-up students if different than other buses.
19. Provide designated waiting areas set back from the curb to safely accommodate large groups of congregated children. This area must be free of all other vehicular and pedestrian traffic per the **Arizona Department of Administration Minimum Standards for School Buses and School Bus Drivers**.
20. Provide stand-back lines to keep children away from edge of sidewalks and waiting areas where buses or large vehicles may overhang curbs.

PEDESTRIANS AND BICYCLES

21. Address pedestrian and bicycle circulation on-site and off-site. Identify where students will be accessing the school, such as at gate openings and main entrances. Parent and bus drop-off/pick-up driveways should not cross pedestrian routes into the school site. A school walking map is an essential tool to review pedestrian circulation.
22. Review traffic control on the surrounding street system that would affect all modes of transportation traveling to and from the school site. Discuss proposed walking routes based on walking distances and busing boundaries. Address potential crosswalk and crossing guard locations. All 15-mph School Crossings must be approved by the Traffic Engineering Division and installed per the ADOT ***Traffic Safety for School Areas Guidelines***.
23. Include recommendations for a school walking plan. A school walking map will be prepared by the City based on the TIA recommendations, the walking boundary, and direct participation with the school and district. The school walking map will be provided to the school district or school administrator for their review and approval. The school walking map will be approved by the School District and the City of Peoria. Distribution of the map to parents is a valuable tool for the school to use as part of the Safe Routes to School program to help promote safe ways for parents and school children to walk to school.
24. Identify potential conflicts and mitigation solutions. Create walking paths that eliminate the need for students to cross busy school driveways. Provide fencing or landscaping to discourage pedestrians from crossing at undesirable locations.
25. Provide secure bicycle parking racks in visible locations, preferably one bike lot at each main approach to the school site to minimize bicyclists crossing school driveways or parking lots.
26. Provide continuous bike lanes on collector roadway approaches to schools and continuous bike path connections from nearby parks and trails.
27. Provide wheelchair ramps at all crosswalk locations, marked or unmarked, including T-intersections.
28. Provide 8-foot minimum sidewalks, preferably 10-feet, along the school property. Sidewalks that are separated from the curb and straight are preferable.
29. Provide continuous sidewalks from adjacent residential areas. In addition, provide continuous access to school from adjacent trail paths and park sites.
30. Provide larger paved standing areas on corners or at mid-block crossing locations where large groups of students may gather.
31. Reduce pedestrian roadway crossing distances and provide improved/increased sight distances along school walking routes.
32. Provide countdown pedestrian signal heads at all traffic signal locations along the walking routes to and from school.

33. Locate pedestrian gate entrances to maximize the effective length of parent drop-off/pick-up and reduce back-up queuing. To reduce conflicts between children and motor vehicles when waiting for school gates to open in the morning or to be picked up in the afternoon, provide wider sidewalk areas, stand-back lines, and/or buffer zones separating designated waiting areas from vehicle travel ways.

RECOMMENDATIONS

- It is recommended that the school stagger start and dismissal times to address traffic congestion, student population overcrowding, and saturated drop-off and pick-up operations. Typically, dismissals should not be staggered by fewer than 15 minutes to avoid overlapping parent vehicle queues between dismissals. It may also be helpful if parents are not allowed to enter the parking lot for student pick-up prior to a set time to avoid excessive back-up.
- It is recommended that parent and visitor parking is located in spaces closest to the main building entrance to discourage illegal parking or unsafe parent drop-off/pick-up behaviors. Such parking spaces should be marked as VISITOR. Require staff to park in separate lot or in designated spaces.
- It is recommended that the school implement an education program to address safety concerns with school children and parents and promote school traffic safety. Such a program could instruct parents on safe driving behaviors in school areas, school parking lots and pick-up/drop-off areas. Additional safety messages should target "Walking School Bus" programs (groups of children walking to school with an adult supervisor), pedestrian and bicycle safety, bus riding safety, bicycle and skating helmet usage, carpool and trip reduction programs, etc. A community awareness campaign may include incentive and reward programs, special signs on school campus, special safety days or assemblies to promote safety messages, class contests, guest speakers, etc.
- It is recommended that the school implement an organized traffic circulation plan on-site that utilizes staff attendants to direct traffic during drop-off/pick-up times. Parents may be educated on drop-off/pick-up procedures by distributing maps and instruction handout materials. The school should instruct parents and have staff present to direct them to pull forward and make effective use of the pick-up/drop-off lane in order to utilize the full length of the area and not congregate near the parking lot entrance. For more information on drop-off and pick-up procedures, contact the Traffic Engineering Division at 623-773-7394.