



Date: December 17, 2013

From: Paul Guzek, PE

RE: Regional Gateway Commerce Center, Phase 1 Roadway Improvements and Traffic Impacts

Phase 1 roadway improvements to access the Regional Gateway Commerce Center property is to consist of the following:

- A new 2-lane arterial roadway constructed between the site's west property line to Peart Road.
- Improvements to Cox Road from a two-lane collector roadway to a 4-lane roadway between the site's north property line to the Jimmie Kerr/I-10 intersections.

The above improvements will also require additional improvements to the at-grade railroad crossings at Cox Road and may also require improvements to the rail crossing at Peart Road. Additional improvements to existing roadway infrastructure will also be needed at the Jimmie Kerr/I-10 intersections and at or near the intersection of Jimmie Kerr and Peart Road. Specific identification of needed roadway improvements will be determined through a Traffic Impact Analysis report once specific land uses and building sizes are known.

To approximate the amount of building construction that can be accommodated in the first phase of site development, a worksheet has been created that is based on daily and peak hour capacity assumptions of the proposed roadway access improvements leading to and from the site. Calculations identify that peak hour capacity (2,138 peak hour directional vehicles) is the limiting agent to site development. Depending upon the mix of land uses that are being considered for this phase of construction, a range of 879K to 3.16M SF of enclosed building area can be constructed on-site. Assuming a near equal distribution of Corporate Headquarter, General Office, and General Light Industrial land uses, approximately 1.82 million square feet of building space can be constructed and occupied prior to additional site capacity improvements being required.

Development Potential Assuming Daily/Hourly Roadway Capacities Leading to/from Site

Roadway Capacities (from Casa Grande Small Area Transportation Study)

	Arterial	Collector	
Daily Capacity (veh/day/ln) =	8,750	7,500	
Conversion Factor to LOS D =	0.90	0.90	
Daily Capacity at LOS D =	7,875	6,750	
2-lane roadway daily capacity at LOS D =	15,750	-	West Access
4-lane roadway daily capacity at LOS D =	-	27,000	North Access
Total Phase 1 daily capacity (vehicles/day) =	42,750		
Total Phase 1 Daily Directional Capacity =	21,375		Daily vehicles in or out of site
Approx. Directional Peak Hour Capacity =	2,138		10% of Daily

Based on data from ITE Trip Generation Manual (9th Edition)

	ITE Land Uses		
	Corporate Headquarters	General Office	General Light Industrial
Building Area (SF) to generate 1000 daily trips	124,000	70,000	147,000
Building Area (SF) to generate 100 directional peak hour trips	63,470	41,120	147,840

Conclusion:

1. Peak hour conditions dictate the amount of building development that can be placed on this site.
2. The **maximum** Phase 1 building development potential that can be accommodated by the proposed site roadways is based on peak hour capacity of the roadways to and from the site, equal to 21.375 times any combination of the above land uses.

Example 1

A total of 1.356M SF (21.375 * 63,470) of Corporate Headquarter building may be constructed to equal a total of 2,138 peak hour inbound or outbound trips

Example 2

A mix of land uses equal to 21.375 could be constructed to meet capacity thresholds. In this scenario, 1.82M SF of building area could be constructed with the identified land use split.

Corporate Headquarters	General Office	General Light Industrial	Total
63,470	41,120	147,840	
7	7	7.375	21.375
444,290	287,840	1,090,320	1,822,450

NOTE: Roadway facilities outside of the subject property may further limit development potential