

Tucson's Street Network: 2019 and 2045

TODAY

Traffic volumes in Tucson have been decreasing, even with a growing population (up 6.6% since 2005) and a growing number of jobs (up 4.2% since 2005).

- The PAG maintains a database of more than 1,800 historic traffic counts around the region (spanning from 2005-2018), though not every location has a recorded count for every year.
- 65% of these locations have seen volumes decrease, with an average 5% drop in traffic volumes

Even during the busiest times of day, Tucson's major streets carry much less traffic than they were designed to accommodate.

- 47% of total major street network capacity is used during the AM peak.
- 48% of total major street network capacity is used during the PM peak.
- 7% of major streets (36 miles) experience > 0.8 max V/C (approximately LOS D) at daily peak.
- 74% of major streets experience < 0.6 max V/C (approximately LOS A) at daily peak.

On many streets, the daily maximum traffic volume is so low, that entire lanes could be removed with minimal impact on users.

- At a max V/C ratio of 1.0: nearly a quarter (23%) of all lane miles are excess (401 miles total).
- At a max V/C ratio of 0.8: 16% of all lane miles are excess (267 miles total).

Tucson's Major Streets and Routes Plan designates a total right-of-way width that must be reserved along corridors for potential future expansion, meaning that many major streets not only have excess lanes, but they also have additional space on the edges that is typically unused.

- In the Downtown place type, the average reserved right-of-way is 100 feet. In the Urban place type, it's 111 feet, and in the Suburban place type, it's 123 feet.
- The average right-of-way set aside in the Rural place type is 168 feet—enough space for a six-lane road with a center turn lane, a pair of 12-foot shared used paths with a 10-foot landscape buffer... and 40 feet to spare.

2045- NO ADDITIONAL ROADWAY EXPANSION (NO-BUILD SCENARIO)

Over the next 25 years, Tucson’s population is projected to grow by 13%, and jobs are projected to grow by 31%. But even considering this growth, in 2045, if no roadway expansion occurs, the current street network is still projected to operate smoothly and largely below maximum capacity.

- Traffic volumes are projected to increase 19% from 2019-2045.
- VMT is projected to increase 21% from 2019-2045 (to 11 million VMT/day).
- 57% of total major street network capacity is projected to be used during AM peak.
- 58% of total major street network capacity is expected to be used during PM peak.
- 62% of streets are projected to have a max V/C < 0.6 (approximately LOS A).
- 83% of streets are projected to have a max V/C < 0.8 (approximately LOS C).
- It’s projected there will still be enough excess capacity to remove scores of lane miles:
 - At max V/C ratio of 1.0: 17% of all lane miles are excess (300 miles total).
 - At max V/C ratio of 0.8: 10% of all lane miles are excess (170 miles total).

2045- FULL BUILD-OUT OF PLANNED ROADWAY EXPANSION (BUILD SCENARIO)

A series of roadway expansions and new roadways are planned for construction in Tucson by 2045. This plan is costly and would result in only modest reductions in congestion (compared to the no-build scenario). Further, the expansions would increase VMT and potentially encourage further residential sprawl.

- The full plan would add 180 new lane miles (expansion + new roadways) between 2019-2045 (10.5% increase).
 - ~\$700 million in construction costs
 - ~\$4 million in additional annual maintenance
- Compared to the no-build scenario, the 2045 build scenario is projected to induce an additional 500,000 VMT each day (4% increase over 2045 no-build and 26% increase over 2019).
- 53% of total major street network capacity is projected to be used during AM peak.
- 54% of total major street network capacity is projected to be used during PM peak.
- 68% of streets are projected to have a max V/C < 0.6 (approximately LOS A).
- 89% of streets are projected to have a max V/C < 0.8 (approximately LOS C).
- 27 fewer miles of streets (5.5% reduction) are projected have a max V/C > 0.8 (approximately LOS D) vs. the 2045 no-build scenario.
- The 2045 build scenario is projected to have even more excess lane miles compared to 2019.
 - At max V/C ratio of 1.0: 22% of all lane miles are excess (434 miles total)
 - At max V/C ratio of 0.8: 15% of all lane miles are excess (287 miles total)
- The location of roadway expansion may encourage residential sprawl.
 - 57% of new lane miles are planned within the existing Rural place type
 - 64% of new lane miles are planned in residential areas that currently have less than 1,000 residents-per-square-mile