

DOCUMENTATION OF IMPACTS OF POTENTIAL LAND USE CHANGES TO US HIGHWAY 19

Overview

MPO staff was asked by Pinellas County Planning to assist in the review of the potential impacts created by altering the density/intensity standards of the Residential/Office/Retail (ROR) category on the Pinellas County Future Land Use Map. Below is a description of the assumptions and methodology used to evaluate the impacts of proposed changes.

Assumptions

The current maximum Floor Area Ratio (FAR) for the ROR category is 0.2. MPO staff was asked to evaluate traffic impacts to US 19 in northern Pinellas County if this ratio was increased to 0.3. To evaluate worst case scenario impacts, MPO staff assumed that each parcel would develop to the maximum allowable FAR by 2040.

Methodology

To estimate the number of new trips that could be generated by changes to the ROR category, MPO staff utilized nationally accepted International Traffic Engineer (ITE) rates. General commercial/shopping center rates are the highest of any use that would be allowed in the ROR category, and were utilized for this review, in order to evaluate a 'worst-case-scenario' for the proposed changes. The rates used are as listed below.

Building Floor Area	Trip Rate	%New Trips
Under 100,000 SF	94.7	.49
100,000 – 199,999 SF	74.3	.63
200,000 – 299,999 SF	58.9	.75
300,000 – 399,999	48.3	.79
400,000 – 499,999	43.0	.80
500,000 – 1,000,000	37.7	.81
Over 1,000,000	33.4	.81

To apply the rates, MPO staff used an inventory of all parcels with the ROR land use category in Planning Sectors 3 and 4, provided by Pinellas County Planning staff. It should be noted that there are a few ROR parcels that are not located along the US 19 corridor that are included in the analysis, but these parcels are very small and the impact of their inclusion is not considered significant. For each parcel, the maximum building floor area was calculated, trip rates applied, and maximum number of trips were determined. This was done for 0.2 FAR (existing potential), 0.3 FAR. The table below shows the resulting maximum number of trips generated by development, based on the various FAR thresholds.

Maximum Number of Trips Generated in the Study Area Based on FAR	
Total Maximum Trips with Existing 0.2 FAR	244,623.90
Total Maximum Trips with 0.3 FAR	342,644.27

Based on these calculations, the *existing* potential of the ROR parcels in this area is over 240,000 trips. The segment of US 19 in this area has a 2014 Average Annual Daily Volume of only 65,000 trips. Again, these calculations assumed that every property would develop to the maximum amount allowable, consist of all general commercial uses, and all traffic would utilize US 19. In reality, few parcels outside of the urban core develop to their maximum potential, it is very unlikely that every parcel in this area would be a general commercial use, and many trips may be diverted to cross streets and local roads.

Based on the current rate of utilization, about 27% of the maximum potential of a 0.2 FAR is being realized along this stretch of US 19. Given this reality, MPO staff calculated 27% of the maximum potential for the 0.3 FAR scenario to determine the potential impacts of adjusting the land use category thresholds, which resulted in 92,513.95 trips, an additional 27,514 trip over the current traffic there.

In 2040, this area of US 19 is planned to be partially controlled with frontage roads. MPO staff evaluated the distribution of trips on the existing partially controlled segments of US 19, determining that an average of 8% of the total trips along the corridor is diverted to the frontage roads. Applying this assumption to the study area, it is assumed that 25,313 additional trips could be added to the mainline of US 19 in the year 2040.

Results

MPO staff conducted a Level of Service (LOS) analysis, adding these additional trips to US Highway 19 to determine the potential impacts of this proposed change in 2040. The software utilized divides US Highway 19 into segments, so the mid-point of the study area was selected to add these trips to in order to determine LOS impacts (Tampa Rd. to Alderman Rd.). Traffic volumes projected out to 2040 by the Tampa Bay Regional Travel Demand Model were utilized for this exercise, assuming 100% build out of these parcels by year 2040.

In 2040, this segment of US 19 was projected to have an LOS rating of D, and a volume to capacity (V/C) ratio of 0.827. Adding the trips that could be generated by the change to the ROR category, the LOS rating deteriorates to F and the V/C ratio increases to 1.061.

While any roadway with a V/C ratio over 1 is considered to be overcapacity, this analysis is assuming that all trips generated by the proposed change will be utilizing US 19. In reality, some of these trips will be utilizing cross streets, local roads, or even transit services. In addition, not all parcels will generate the same amount of traffic, and this analysis assumed a worst case scenario. Because of these factors, it is not anticipated that increasing the FAR in the ROR category will create a substantial impact on traffic in the US 19 corridor.