

STAFF REPORT

Apex Transportation Plan Amendments

August 27, 2024 Town Council Meeting



Purpose of the Apex Transportation Plan

The Thoroughfare and Collector Street Plan Map, Transit Plan Map, and Bicycle and Pedestrian System Plan Map collectively represent a network of current and future facilities that provide guidance on what is likely to be suitable for long term growth, connectivity, recreation, and multimodal travel. The Transportation Plan does not provide a schedule for implementation, nor does it set aside funding for improvements. The purpose of the public hearing is to consider proposed amendments to the Thoroughfare and Collector Street Plan Map in order to make a decision.

Overview of Proposed Apex Transportation Plan Amendments

The proposed amendments to the Transportation Plan are shown in Figure 1 and are described below.

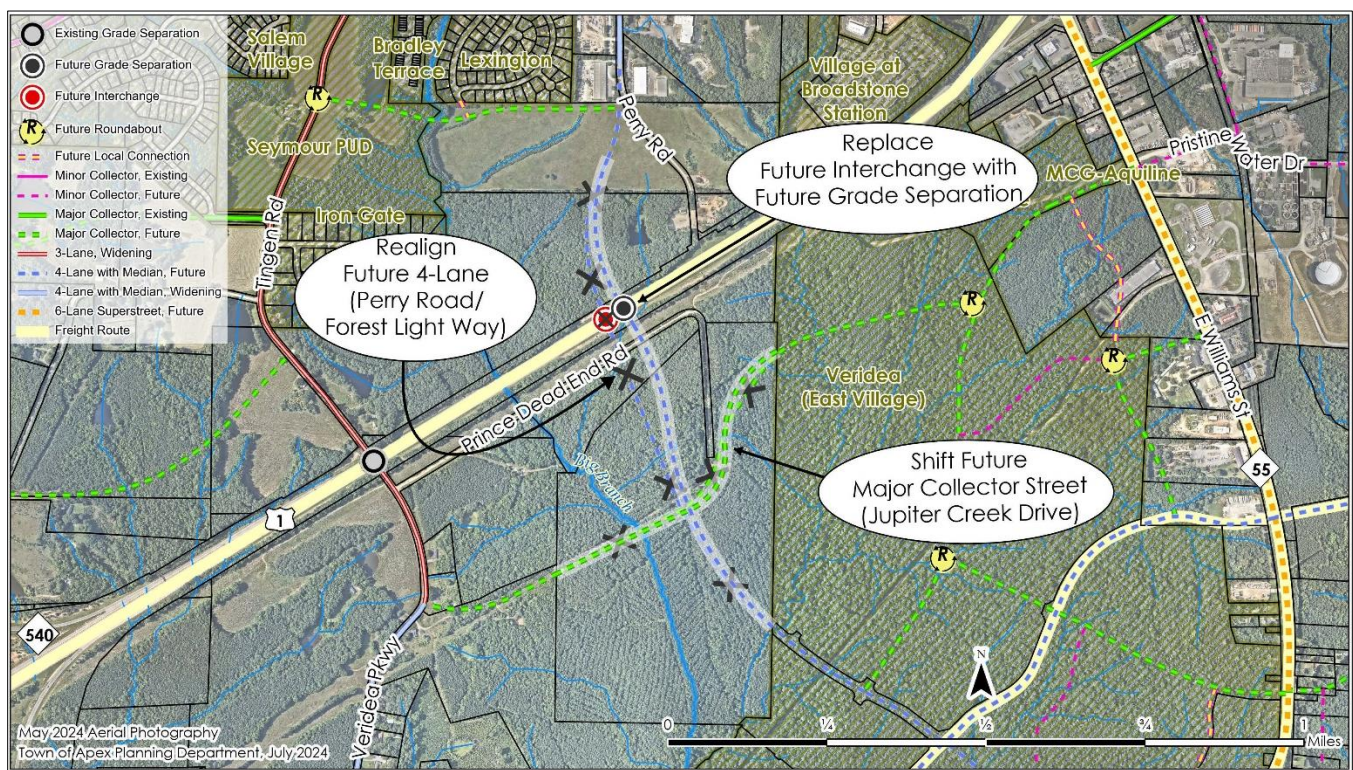


Figure 1. Proposed Thoroughfare and Collector Street Plan Map amendments

- (1) **Replace future interchange with future grade separation:** The main amendment is to replace the future interchange planned at the future extension of Perry Road and US 1 with a future grade separation. An interchange allows for vehicles to move between the two roads. An example is the interchange at NC 55 and US 1, just to the east of this location. A grade separation is a bridge or a tunnel and does not allow for vehicles to move between two roads. In this case, with the amendment, Perry Road would be bridged over US 1.

Traffic model runs performed by Kimley Horn for the Seymour PUD analysis show that there would be approximately 14,980 vehicles per day (vpd) on Tingen Road south of Apex Peakway if the Perry Road interchange was constructed by 2050 vs. 14,630 vpd if Perry Road was constructed as a bridge with no interchange. In both cases, the daily traffic on Tingen Road does not exceed capacity of a typical 2-lane

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thoroughfare with turn lanes where needed. In those same model runs, the traffic volumes on NC 55 south of US 1 increase from approximately 70,640 vpd to 76,320 vpd, representing an 8% increase in traffic on NC 55 due to removal of the Perry Road interchange. In both cases, the volumes on NC 55 in 2050 exceed capacity of a typical 6-lane thoroughfare. This indicates that there would be a benefit to operations along NC 55 if an interchange were to be constructed at US 1 and Perry Road. However, the realities of funding make it unlikely that an interchange in this location would be built in the foreseeable future, or beyond. In coordinating with the Capital Area Metropolitan Planning Organization (CAMPO), they estimated that an interchange in this location would cost in the range of \$50 million - \$70 million to construct due to the configuration of ramps in close proximity to the interchange at NC 55. The project is much too large to be constructed by private development. It also does not qualify for the largest “bucket” of funding available through NCDOT’s process of strategic prioritization of transportation projects. While also difficult to program, a grade separation is much more likely to be funded than an interchange. In addition, planning for an interchange at Perry Road constrains the design options for an improved interchange at US 1 and NC 55. NCDOT is working on express design alternatives for a new interchange in this location to inform cost estimates and future programming. Planning on a grade separation at Perry Road instead of an interchange will provide more flexibility, a smaller overall footprint, and likely a lower cost, for the interchange at NC 55; hopefully helping that project to be programmed.

This change led to two other amendments:

- (2) **Realign future 4-lane (Perry Road/Forest Light Way):** Without an interchange, there is additional flexibility in the possible location for the grade-separated crossing at US 1. Staff evaluated several alternative alignments for the extension of Perry Road. Ultimately, a relatively small shift in the planned alignment for the Perry Road extension was brought forward. This shift minimizes stream impacts, but also provides opportunities for development on both sides of the thoroughfare. It also crosses in a location that avoids the large transmission towers on the south side of US 1. The alignment options were reviewed with property owners north and south of US 1 along the future corridor.
- (3) **Shift major collector street (Jupiter Creek Drive):** A minor shift of the future major collector street, Jupiter Creek Drive, is proposed solely due to the realignment of Perry Road.

Staff Recommendation:

Planning Department staff and Transportation, Infrastructure, and Development (TID) staff recommend approval of the proposed amendments. Staff in Police, Fire and Parks and Recreation have no concerns with the proposed amendments.

Planning Board Recommendation:

The Planning Board unanimously recommended approval of this item at their August 12, 2024 meeting.