



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 and Bicycle and Pedestrian System Plan Map, in order to make a decision.

Overview of Proposed Apex Transportation Plan Amendments

The proposed amendments to the Transportation Plan are associated with the proposed 23CZ13 Seymour Mixed Use Planned Unit Development (Seymour PUD) rezoning case and are shown in Figure 1 and Figure 2. A memorandum from the Seymour PUD applicant that explains and substantiates the requested amendments is provided as Attachment 1.

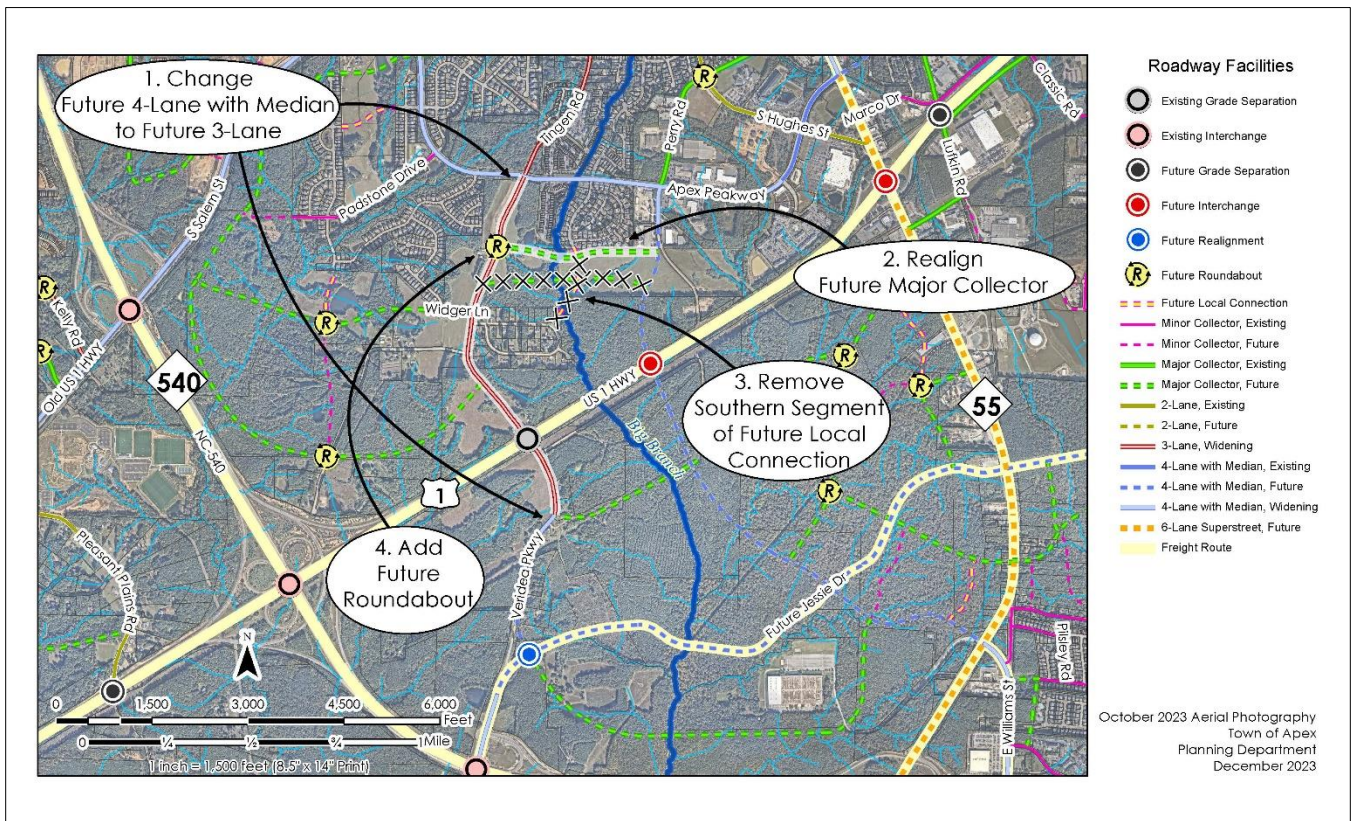


Figure 1. Proposed Thoroughfare and Collector Street Plan Map amendments

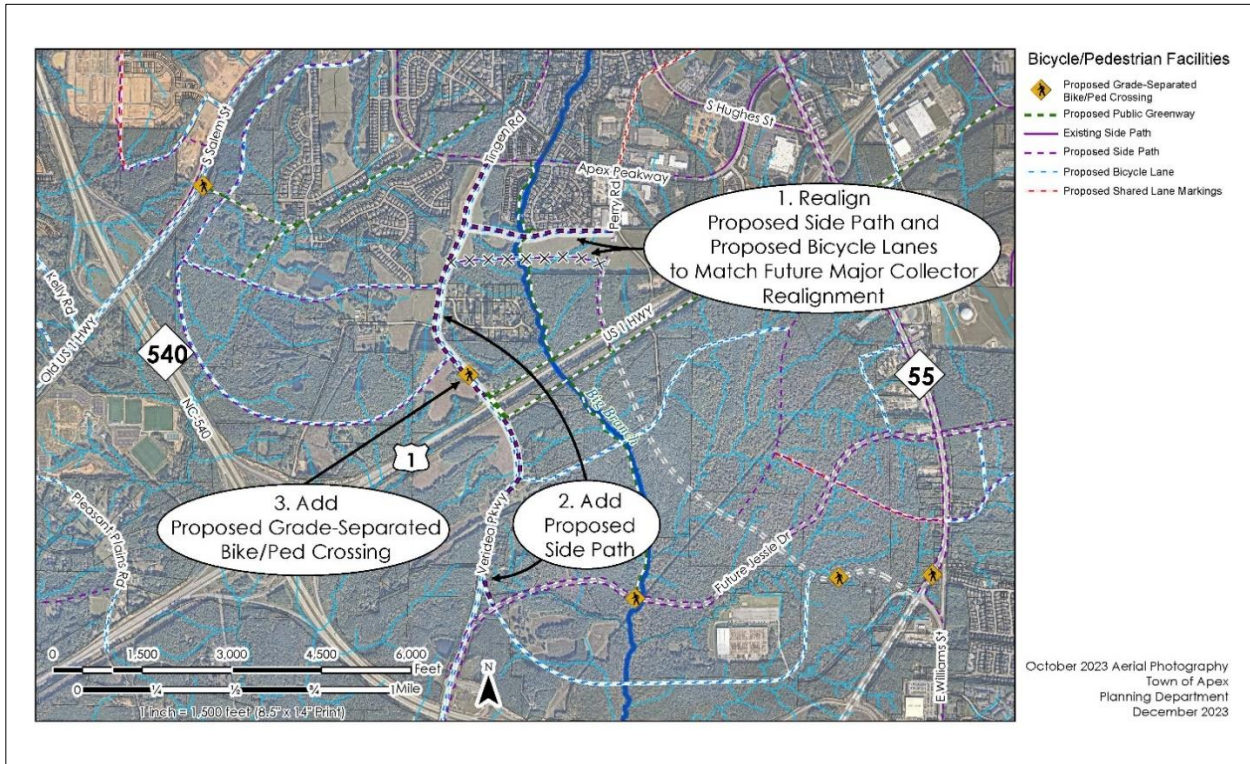


Figure 2. Proposed Bicycle and Pedestrian System Plan Map amendments

Anticipated Development Context of Proposed Amendments

The proposed amendments are shown with both the Seymour PUD and anticipated surrounding development, including the Hopson Gateway project (to the east) and Grace Christian School (to the south), in Figure 3. Proposed plans for the Hopson Gateway project and Grace Christian School had not yet been submitted during the preparation of this staff report, but initial pre-application meetings with Town staff have been held. Staff considered these possible future developments to the extent possible in reviewing the amendments to the Transportation Plan. It is anticipated that additional amendments to the Transportation Plan will be requested with Grace Christian School in the near future.

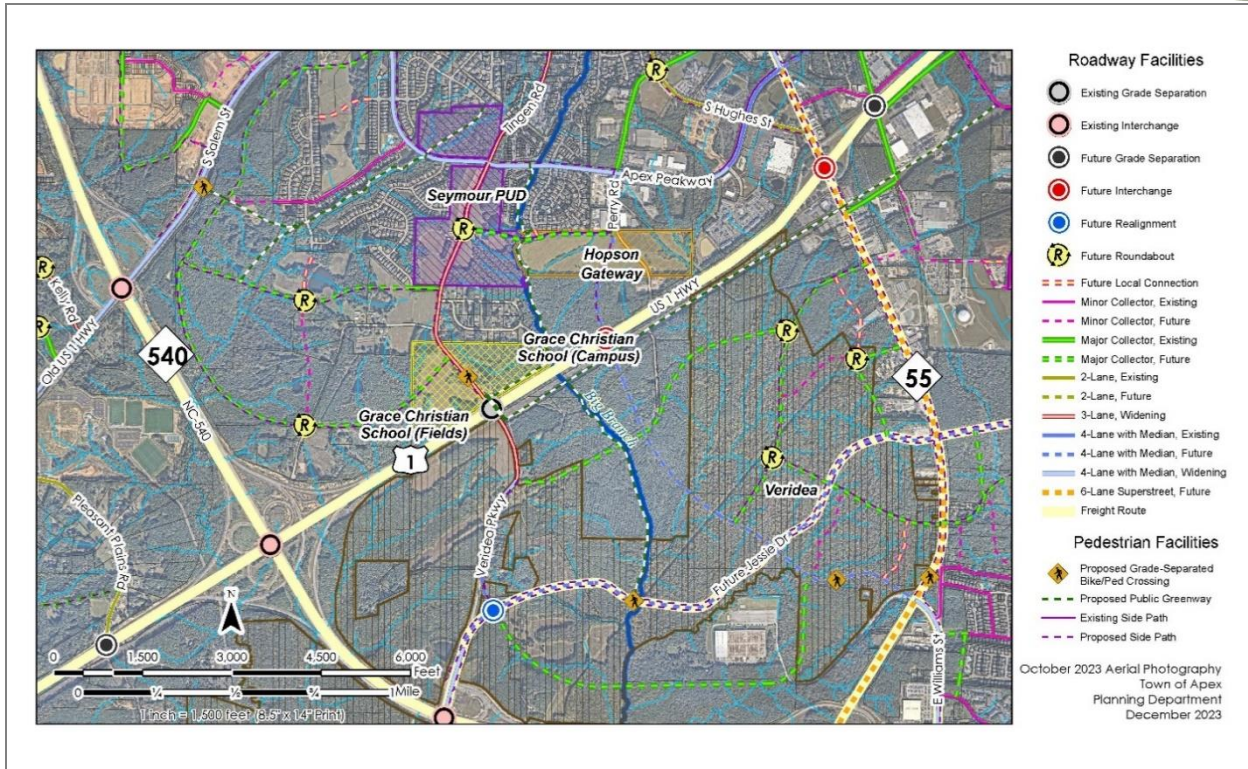


Figure 3. Anticipated development context of proposed amendments

Explanation of Proposed Amendments

Tingen Road Corridor Amendments

The most substantial proposed amendments are along the Tingen Road corridor and include:

- Changing Tingen Road/Veridea Parkway from a Future 4-Lane Thoroughfare with Median to a Future 3-Lane Thoroughfare between Apex Peakway and the major collector street south of US 1,
- Adding a proposed roundabout along Tingen Road,
- Adding proposed side path along Tingen Road, and
- Adding a future bicycle and pedestrian grade-separated crossing along Tingen Road.

The grade-separated crossing is a staff recommendation, separate from the requests associated with Seymour PUD.

The amendments along Tingen Road are based on:

- A desire to improve biking and walking conditions along the corridor and to provide safe opportunities for crossing, also in anticipation of a future school (Grace Christian School) south of Seymour PUD;
- Incorporation of proven safety countermeasures including a roundabout and center median;
- A review of anticipated future traffic capacity needed along Tingen Road, using the most recent version of the Triangle Regional Model and a Traffic Impact Analysis completed for the proposed PUD; and,
- Acknowledgement that the existing two-lane bridge crossing US 1 is not programmed for widening and would be a much lower priority than the future crossing planned at Perry Road.

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While the proposed amendment would designate Tingen Road as a future three-lane thoroughfare on the Thoroughfare and Collector Street Plan Map, it is important to note that the applicant is proposing an alternate section for future Tingen Road to include two travel lanes, a center median with turn lanes, buffered bicycle lanes, and a 10' side path. This roadway configuration would be comparable to Apex Peakway between Center Street and Old Raleigh Road in Apex, or Lochmere Drive east of Kildaire Farm Road, in Cary. The proposed section is included in the PUD document and shown in this staff report as Figure 4. The proposed 18' median would provide opportunities for turn lanes, refuge islands for pedestrian crossings, and access control. In addition, research completed by Transportation Infrastructure and Development staff shows that replacing two-way left turn lanes with raised medians has reduced crashes in multiple case studies. Bicycle lanes already shown on the adopted Bicycle and Pedestrian System Plan Map would be retained, but improved with a two-foot buffer planned between the bicycle lane and travel lane. The additional buffer, wide bicycle lane, and gutter adjacent to the center median and outside curb would provide additional width desired for the movement of emergency vehicles or for traffic management in emergency situations.

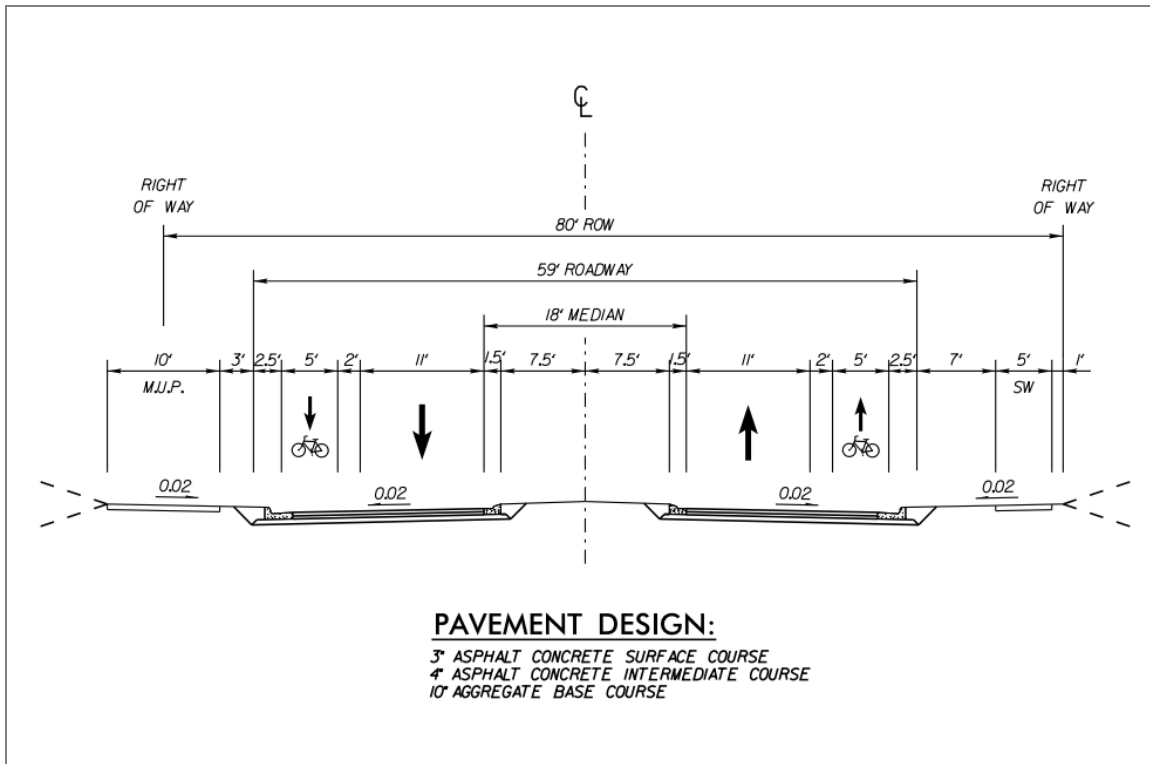


Figure 4. Proposed section for Tingen Road

A disadvantage of the proposed downgrade of Tingen Road from a four-lane median-divided thoroughfare to a three-lane thoroughfare is traffic capacity. The applicant provided modeled traffic data for multiple scenarios, as shown in Attachment 1 and summarized in Table 1. In the Road Diet Informational Guide, Federal Highway Administration recommends consideration of road diets (narrowing a roadway to prioritize safe bicycle and pedestrian travel) for roadways up to 20,000 average daily traffic. For reference, the most recent traffic volume data (released November 2023) from NCDOT shows annual average daily traffic of 16,500 for the comparable section of Apex Peakway between Center Street and Old Raleigh Road. The modeled data for Tingen Road show that the section between Apex Peakway and Widger Lane would be reaching capacity in Scenario 1, which

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assumes an interchange is constructed at Perry Road and US 1, and Scenario 2, which assumes a bridge is constructed at Perry Road and US 1. As shown under Scenario 3, without a connection across US 1 at Perry Road, traffic along a three-lane Tingen Road south of Apex Peakway would exceed capacity and congestion would be likely.

Table 1. Tingen Road 2050 Daily Traffic Forecast (vehicles per day) Provided by Kimley Horn, with reference figure

System Links	Scenario 1: With Perry Rd interchange	Scenario 2: With Perry Rd Bridge	Scenario 3: Without Perry Rd Connection
James Street to Apex Peakway	2,400	2,100	2,100
Apex Peakway to Widger Lane	15,000	14,600	19,874
Widger Lane to Prince Dead End Road	10,600	11,700	20,200



While capacity is an important consideration, there are also practical limitations on the ability to widen Tingen Road in the future to provide a four-lane section and tradeoffs in the desired function of Tingen Road. These include:

- The need to construct a second bridge at the US 1 crossing to avoid a chokepoint in this location;
- Understanding that Grace Christian School, if it moves forward, would not be required to widen to four lanes along their frontage due to the limited infrastructure improvements that can be required of schools and since a rezoning is not required;
- Anticipated right-of-way impacts to the Irongate neighborhood associated with widening;
- Concerns about a multi-lane section promoting higher speeds through a residential area and school zone;
- Longer crossings for pedestrians and bicyclists; and
- Either eliminating the proposed roundabout or requiring a wider roundabout at the collector street within Seymour PUD.

Major Collector Street and Local Connector Street Amendments

The amendments also include shifting the future major collector street between Tingen Road and Perry Road north, by approximately 630 feet. This change is proposed to improve intersection spacing along Tingen Road and to align with development plans for the proposed Seymour PUD. This alignment has been coordinated with the anticipated development of the Hopson Gateway project to the east.

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Finally, the amendments include removal of the southern portion of the future local connector shown from the east-west major collector to Shackleton Road. This section is proposed for removal due to environmental and residential impacts associated with the future connection. The section north of the east-west major collector street would remain on the Transportation Plan.

Staff Recommendation:

Planning Department staff and Transportation, Infrastructure, and Development (TID) staff recommend approval of the proposed amendments. Staff in Police and Fire noted concerns about possible future congestion along the Tingen Road corridor and a desire to be responsive to general community feedback about providing adequate transportation facilities with development in Apex. Ultimately, staff representing Police and Fire deferred to Planning and TID for a recommendation.

Planning Board Recommendation:

The Planning Board considered the requested amendments to the Transportation Plan at their January 8, 2024 meeting and recommended approval in a vote of seven in favor and two opposed.