TDOT
Department of Transportation

Road Diet Guidance Manual

Tennessee Department of Transportation | March 2023

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Foreword

This Road Diet Guidance Manual has been developed to provide a more streamlined approach for local municipalities to request road diets on state facilities. Prior Road Reconfiguration and Road Diet guidance was included in the Geometric Design Criteria (Chapter 2) of the TDOT Roadway Design Guidelines, which focused heavily on traffic volumes and level of service analysis as the parameters by which a road reconfiguration or road diet was considered appropriate. This new guidance is intended to be less heavily centered around traffic analysis and more focused on allowing local agencies to provide contextual evidence of how a road diet will improve the safety and enhance the infrastructure to accommodate all transportation modes. Road Reconfiguration requests that do not reduce the traffic capacity of the roadway will no longer be subject to the analysis requirements laid out in this Road Diet Guidance Manual and should refer to the TDOT Roadway Design Guidelines.

1.0 Introduction

The Federal Highway Administration (FHWA) has designated road diets as proven safety countermeasures to improve safety, calm traffic, provide better mobility and access for all road users, and enhance overall quality of life. This Road Diet Guidance Manual outlines TDOT's road diet request process, which encourages working with local agencies to implement successful road diet projects either as independent projects or during resurfacing projects. Applying striping and marking changes in conjunction with resurfacing projects is a cost-effective approach for implementing road diets; however, due to the limited scope of resurfacing projects, more complicated road diet projects should be constructed as independent projects.

1.1 Relationship to TDOT Roadway Design Guidelines

Until this Road Diet Guidance Manual was created, Road Diet guidelines were contained in Section 2-1101.00 of the TDOT Roadway Design Guidelines, which is a subsection of Section 2-1100.00: Road Reconfiguration. This Road Diet Guidance Manual is now a standalone document which is referenced in the TDOT Roadway Design Guidelines. It should be noted that a Road Diet project must adhere to the standards and guidelines in the TDOT Roadway Design Guidelines and Standard Drawings, particularly **Chapter 3: Multimodal Design**. Note also that all Road Reconfigurations must meet TDOT's roadway typical section design standards (Roadway Standard Drawing RD11-TS-Series) or require completion of a Design Exception request or a Design Waiver request justifying the reason for the deviation. Approval of design exceptions will be dependent on the context and purpose of the roadway. For example, 10-foot travel lanes are allowed per the Roadway Design Guidelines; however, the minimum lane width for a transit lane is 11 feet.

Design Guidelines to Remember:

- *11-foot lanes on transit routes*
- *Sidewalk Lateral Offsets*
- *Bike Lane Widths (including buffer)*

All Design Exception requests will be addressed by the Roadway Design Division as outlined in Chapter 2-105.00 Design Exception Requests. Design Waiver requests will be addressed by the Roadway Design Division as outlined in Chapter 2-201.00 Design Waiver Requests.

1.2 Terminology

There are many terms used by Departments of Transportation (DOTs) to describe when the layout of a roadway is altered within the existing right-of-way limits: Road Diet, Lane Repurposing, Right-Sizing, Reallocating Street Space, Retrofits, and Road Reallocation. Road Diet is still the most common term used in the transportation industry, so it is used as the title of this manual and throughout this guidance.

Road Reconfiguration

Road Reconfiguration is a broad term used to describe any repurposing of the existing available pavement width by modifying roadway geometric design elements (lane width, shoulder width, and speed). Road Reconfigurations use striping and reduced travel lane widths to slow operational speeds or use the available pavement width to improve safety and to accommodate multimodal facilities. As shown in Figure 1 below, Annadale Road was restriped from two overly wide 16-foot travel lanes and parking lanes to a new configuration that includes narrow travel lanes, bike lanes, and parking lanes.

Figure 1 – Road Reconfiguration Example

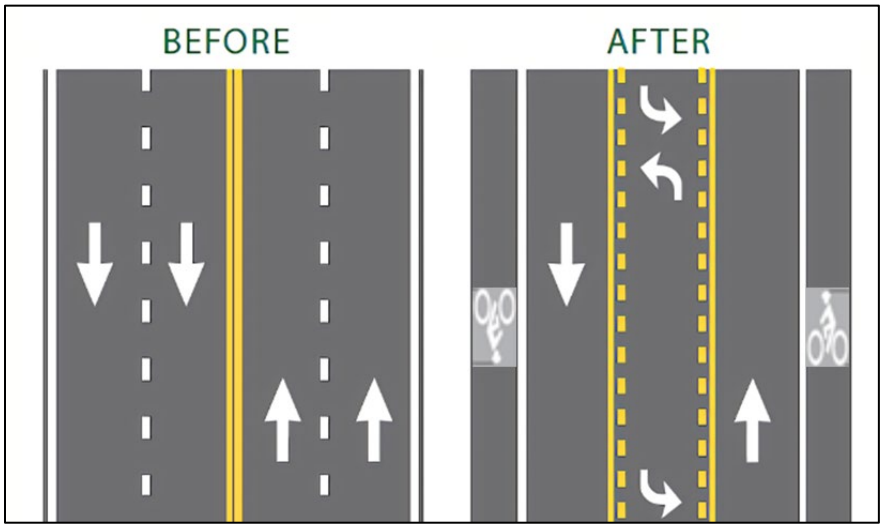
Source: Virginia Department of Transportation Roadway Reconfiguration Guidance

Road Reconfigurations provide the opportunity to address existing safety issues or accommodate multimodal facilities in an expedited and cost-effective manner by using pavement markings only. When planned in conjunction with a resurfacing project, a Road Reconfiguration can be implemented at virtually no extra cost. Once the Resurfacing Plan is received by a local municipality, they are encouraged to review the resurfacing list for facilities they intend to reconfigure and then submit potential candidates to a TDOT Office of Community Transportation (OCT) representative and/or the Region's Traffic Engineering office. While it is more economical to combine a road reconfiguration with a resurfacing project, the fact that a roadway is not slated for resurfacing should not preclude the local municipality from submitting a request for a road reconfiguration. Other funding mechanisms may be available to offset the cost to locals.

Road Diet

A Road Diet is generally described as removing one or more travel lanes from a roadway to enhance safety or utilize the space for other uses or travel modes. Typically, these involve converting an existing four-lane, undivided roadway to a three-lane roadway consisting of two through lanes, a two-way left turn lane, and either bike lanes, a paved shoulder, or parking (shown in Figure 2). Other, less common, road diet scenarios include five lanes to three lanes and six or seven lanes to five lanes.

Figure 2 – Typical Road Diet Conversion from 4 to 3 Lanes



A Road Diet can be, and often is, part of a Road Reconfiguration project in that the number of vehicular lanes is reduced ***within the existing pavement width***. However, a Road Diet is not always a Road Reconfiguration because it can involve modifying existing curbs or pavement. For example, the additional width gained from reducing the number of vehicular lanes could be used to widen the sidewalks, which would not fall into the Road Reconfiguration definition. Road Diet projects involving changes to the curb line will likely require more robust design and right-of-way and utility coordination, so may not be appropriate for implementation in conjunction with a resurfacing project but would instead be more applicable as independent projects.

A Road Diet can be a Road Reconfiguration project, but it does not have to be.

This Road Diet Guidance Manual specifically addresses Road Diets and provides instructions for local agencies to follow when presenting a candidate project to TDOT.

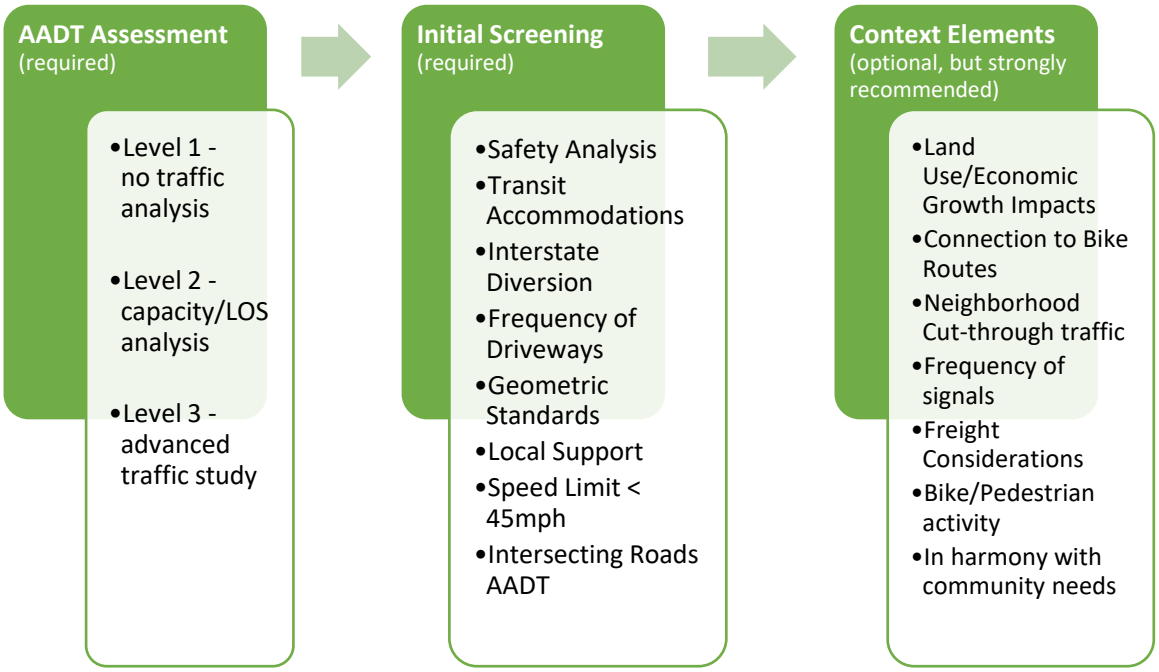
- Any Road Reconfiguration project that does not reduce the number of travel lanes and meets the current approved design standards does not need to be reviewed by the State Traffic Engineer.
- Any Road Reconfiguration project that does not reduce the number of travel lanes but does require design variances will be reviewed by the Roadway Design Division as outlined under Chapter 2-105.00 Design Exception Requests or Chapter 2-201.00 Design Waiver Requests in the TDOT Roadway Design Guidelines.
- Any Road Diet project that modifies the number of travel lanes shall follow the guidelines presented in this Road Diet Guidance Manual.

1.3 Road Diet Approval Components

The intent of this Road Diet Guidance Manual is to provide as much flexibility as possible to local communities so that their transportation and mobility goals can be accommodated. It begins with an Annual Average Daily Traffic (AADT) assessment, which categorizes the project as either Level 1, Level 2, or Level 3. These categories indicate the level of analysis required to advance to review by the State Traffic Engineer.

Regardless of the level of traffic analysis needed, the local agency will need to provide information for the items listed in the Initial Screening component. It is also recommended, but not required, that local agencies provide additional information to give TDOT a contextual background as to why a Road Diet would be beneficial for the area. Figure 3 provides a generalized overview of what is expected to be submitted with every Road Diet request. An in-depth review of each component is provided in the subsequent sections of this manual.

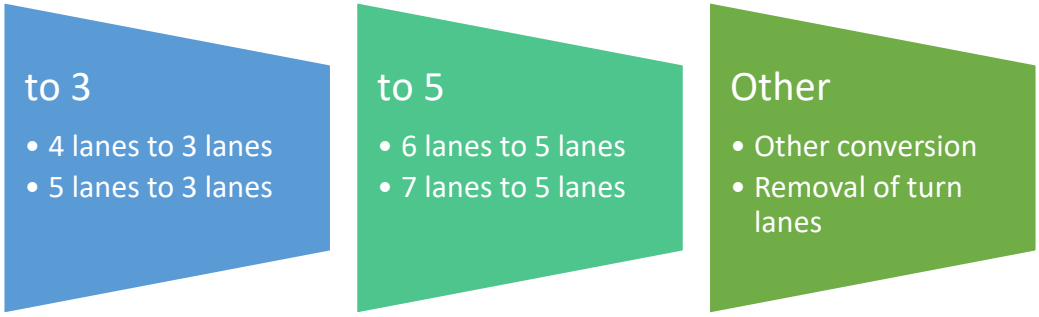
Figure 3 – Road Diet Approval Components Overview



2.0 Typical Lane Conversions

The most common road diet conversion has typically been from a four-lane undivided roadway to a three-lane section with a two-way left turn lane because four-lane roads without turn lanes have proven to be problematic relative to safety and operation. However, in the State of Tennessee other typical sections have had road diets applied, so it is important to provide guidance for all types of lane conversions. The AADT criteria in this Road Diet Guidance Manual is based on the **resulting** typical section, which is most often "to 3-lanes" or "to 5-lanes". In other words, the AADT of the road diet typical section is critical in evaluating whether the project is viable. The initial AADT assessment to determine the level of traffic analysis needed is grouped by lane conversions "to 3", "to 5", and "other" as shown in Figure 4. All Road Diet projects designated as "other" are required to undergo an advanced traffic study.

Figure 4 – Road Diet Typical Conversion Groupings



3.0 AADT Approval Process

Many other state DOTs use Annual Average Daily Traffic (AADT) as a criterion for considering whether a road is a feasible candidate for a road diet. The initial AADT component is intended to provide applicants with a quick assessment to determine the level of effort that will be needed to submit their Road Diet request. AADT is a widely used and understood transportation term that is readily available on TDOT's TN Times website; therefore, it should be simple for all local agencies to gauge the likelihood of their request being approved before expending valuable resources. For roads with more than one AADT, the largest AADT should be used.

For roads that have more than one AADT, the largest should be used in going through the initial screening.

Planning for future traffic volumes is important to ensure that changes made now will still be effective in the future. As such, the AADT criteria for a potential road diet should be based not only on the future reduced lane configuration but should also reflect future traffic projections 10 years from the current year. The 10-year traffic projections will apply to the potential road diet facility as well as the intersecting streets. Once a growth rate factor has been developed, it can be applied to the existing AADT and peak hour volumes as needed for more detailed traffic analysis. The growth rate factor shall be developed using historical data from TN Times, which is detailed in Section 4.0 of this Road Diet Guidance Manual.

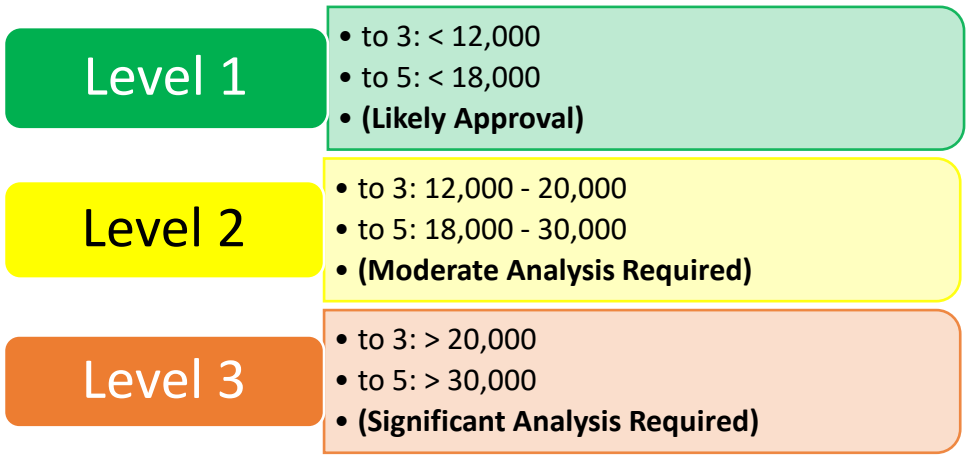
Figure 5 illustrates the AADT road diet approval criteria for converting any existing roadway to a road with 3 or 5-lanes. Roads that are proposed to be reduced to 3-lanes with a projected AADT of less than 12,000 and roads proposed to be reduced to 5-lanes with a projected AADT of less than 18,000 fall into the Level 1 category and are likely to be approved. The initial screening criteria also need to be assessed and it is recommended that the context elements are also included for review.

All potential road diet corridors need to be evaluated based on traffic projections 10-years in the future.

Roads with a projected AADT between 12,000 and 20,000 and between 18,000 and 30,000 for a 3-lane and 5-lane conversion, respectively, fall into the Level 2 category and will require additional capacity and level of service analysis along with the assessment of the initial screening criteria before a road diet will be approved.

Roads that are proposed to be reduced to 3-lanes with a projected future AADT of more than 20,000 and roads proposed to be reduced to 5-lanes with a projected AADT of greater than 30,000 fall into the Level 3 category and will require a comprehensive analysis. Approval for the Level 3 candidates will be more complex because additional analysis is required. For example, in order for a roadway with an AADT greater than 20,000 vehicles per day to be reduced to three lanes and effectively accommodate traffic, vehicles will need to divert to alternative routes or the bicycle, pedestrian, and transit facilities need to be robust enough to provide a significant modal shift. These scenarios need to be modeled and analyzed in the Road Diet application.

Figure 5 – AADT Approval Criteria



It is important to stress that TDOT does not want to discourage local governments from pursuing road diets for roads with an AADT greater than 20,000 or 30,000. Instead, it is TDOT's desire to work with local governments in such cases and provide a pathway to approval, if possible, based on community goals and the needs of all road users. TDOT wants to balance the needs of automobile drivers, transit users, bicyclists, pedestrians, and newer modes of travel like scooters and electric bikes.

4.0 10-Year Traffic Projections using TN-TIMES

The Tennessee Traffic Information Management and Evaluation System (TN-TIMES) is an analytical, data processing tool used by TDOT to maintain, analyze, and report traffic data. All Road Diet applicants must provide a 10-year AADT forecast to use in the AADT assessment and subsequent capacity and level of service analysis, if required. Use the spreadsheet provided to the calculate the 10-year traffic projection or follow the step-by-step process for determining the 10-year traffic projections:

Step 1: Access the TN-TIMES website and find the nearest count location to the project location. If there are multiple count stations along the project corridor, use the count station with the highest AADT. Document the recorded AADT for the previous 5 years.

Step 2: Calculate the growth rate between the most current year and the fifth previous year using the following equation: $Growth\ Rate = \left(\frac{Current\ Year\ AADT - Previous\ Year\ AADT}{Previous\ Year\ AADT}\right)$

Step 3: Multiply the Current Year AADT by 1 plus the Growth Rate calculated in Step 2 to get the 5-year traffic projection. If the Growth Rate calculated in Step 2 was negative, assume zero to be conservative instead of forecasting a lower AADT volume in the future.

Step 4: Assume an annual growth rate of 1% for the last 5 years. Multiply the value from Step 3 by 1.05 to calculate the 10-year traffic projection.

If it is determined that capacity and level of service analyses are required, calculate the 10-year projected AADT for all roadways that intersect the project corridor at a signalized location and all roadways with an AADT greater than 3,000 that intersect the project corridor at a stop-controlled location using the same methodology described above.

Example Calculation for SR 343 in Morristown, TN

Step 1:

- *Two count locations – STA 32000113 (12,117 AADT) and STA 32000047 (12,722 AADT)*
- *Use the higher of the two locations, which would be STA 32000047*
- *Document 5 years of AADT volumes:*
  - *2021 – 12,722* ***(Current Year)***
  - *2020 – 12,868*
  - *2019 – 12,916*
  - *2018 – 12,433*
  - *2017 – 13,405* ***(Previous Year)***

Step 2:

$Growth\ Rate = \left(\frac{12{,}722 - 13{,}405}{13{,}405}\right)$ = -0.05

Growth rate is negative, so assume 0% growth rate for 5-year projection.

Step 3:

*2026 AADT = 12,722 * (1+0) = 12,722*

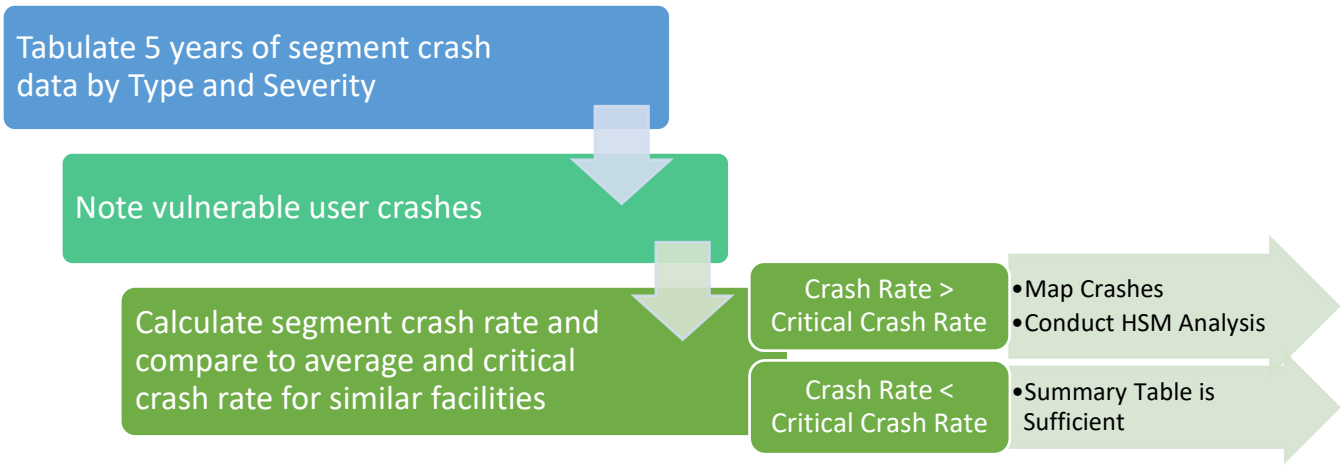
Step 4:

*2031 AADT = 2026 AADT * (1+(0.01*5)) = 12,722 * 1.05 = 13,358*

5.0 Safety Analysis Requirements

Safety analysis is a component of the Initial Screening that must be completed for all Road Diet requests because if the applicant can argue that the Road Diet will improve the safety of the roadway, then the TDOT is likely to take the project into consideration even if the traffic and operational analysis criteria is not met. Figure 6 provides the safety analysis requirements.

Figure 6 – Safety Analysis Flowchart



The applicant should obtain the most recent five-year period of crashes from the Enhanced Tennessee Roadway Information Management System (e-TRIMS) or from the Tennessee Integrated Traffic Analysis Network (TITAN) database. If the applicant does not have access to either source, they can request the data from TDOT.

The crash rate should then be calculated using the calculations for either crash rate by vehicle miles traveled or crash rate by segment length. The calculated crash rate should then be compared to the critical crash rate provided by TDOT.

If the calculated crash rate is lower than the critical crash rate, a summary table of the types and severity of crashes is sufficient information. If the calculated crash rate is higher than the critical crash rate, a map of the crashes should be provided and Highway Safety Manual analysis should be performed. The purpose of the safety analysis is to show how the proposed changes to the cross-section will provide a safety benefit to the facility.

Crash Rate by Vehicle Miles Traveled

$$R = \frac{C * 100{,}000{,}000}{V * 365 * N * L}$$

where:
***R** = crash rate expressed as crashes per 100 million vehicle miles of travel*
***C** = total crashes in the study period (5 years)*
***V** = traffic volume using Annual Average Daily Volumes*
***N** = number of years of data (5 years)*
***L** = length of the roadway segment (in miles)*

Crash Rate by Segment Length

$$R = \frac{C}{N * L}$$

where:
***R** = crash rate expressed as crashes mile of segment*
***C** = total crashes in the study period (5 years)*
***N** = number of years of data (5 years)*
***L** = length of the roadway segment (in miles)*

According to FHWA, safety benefits of Road Diet installations may include:

- Reduction of rear-end and left-turn crashes due to the dedicated left-turn lane
- Reduced right-angle crashes as side street motorists cross three versus four travel lanes
- Fewer lanes for pedestrians to cross
- Opportunity to install pedestrian refuge islands, bicycle lanes, on-street parking, or transit stops
- Traffic calming and more consistent speeds
- A more community-focused, Complete Streets environment that better accommodates the needs of all road users

If the applicant can provide evidence that a Road Diet will help to mitigate rear-end and angle crashes or improve vulnerable users' safety, the result will be a favorable safety analysis.

6.0 Approval Guidelines

This section presents a detailed description of the Road Diet approval guidelines.

6.1 Summary of Data and Information Required by Level

A summary of the road diet AADT thresholds and other assessment requirements are shown in Figure 7. Note this report's terminology: 'to 3' means converting any typical section to 3 lanes and 'to 5' means converting any typical section to 5-lanes. Each assessment level lists the AADT limits for converting to 3-lanes and converting to 5-lanes. In all cases, an initial screening is required. Levels 2 and 3 require capacity and level of service (LOS) analysis. Level 3 also requires a traffic study to be performed. The basis of the criteria is that, as the AADT increases, the complexity of the evaluation criteria also increases. Hence, roads with high AADTs require more studies, but approval by TDOT of a road diet is still possible.

The 'Context Elements' category includes community-based elements and criteria that are mostly unrelated to traffic operations. One of the most important criteria in this category is bike and pedestrian activity because the goal of many road diets is to improve safety and mobility for non-motorized travel. Regardless of whether the candidate road diet facility meets the criteria set forth for the initial screening, capacity and LOS analysis, or traffic study analysis, the context elements will be considered with significant emphasis placed on bike and pedestrian mobility and safety. For example, if a road has an AADT in the middle range of 12,000 to 20,000 for a 4 to 3 lane conversion but it fails to meet the capacity/LOS criteria, the road diet will still be considered if a compelling argument is made that bike and pedestrian mobility and safety are improved.

FEATURES OF ROAD DIET GUIDANCE MANUAL

- *Clear path to TDOT approval*
- *3 levels of assessment based on AADT*
- *10-year traffic volume forecasts*
- *Safety analysis is always required*
- *Traffic studies with turning movement counts often required*
- *Considers other criteria including community goals and context*
- *Must have local support*
- *Local municipalities work with TDOT Region OCT and/or Traffic Division*

Likewise, all of the 'Context Elements' criteria will be considered even if the AADT and initial screening criteria are not met, even a roadway that falls into the Level 3 category. For example, the road has an AADT of over 20,000 for a 'to 3-lane' conversion or over 30,000 for a 'to-5-lane' conversion and it fails the capacity/LOS and/or the Traffic Study evaluation. Although more difficult to attain approval, the road diet will still be considered if a compelling argument is made within the 'Context Elements' criteria.

Figure 7 – Road Diet Approval Requirements for AADT Ranges

AADT		Initial Screening	Capacity/LOS Analysis	Traffic Study	CONTEXT ELEMENTS
Level 1	to 3: <12,000 to 5: <18,000 *(Likely Approval)*	✓			+
Level 2	to 3: >12,000 or <20,000 to 5: >18,000 or <30,000 ***(Moderate Analysis Required)***	✓	✓		+
Level 3	to 3: >20,000 to 5: >30,000 ***(Significant Analysis Required)***	✓	✓	✓	+

✓ Must be included

\+ Optional, but must be included if Initial Screening criteria are not met for Level 1; Initial Screening and Capacity Analysis criteria are not met for Level 2; or Initial Screening, Capacity Analysis, and Traffic Study criteria are not met for Level 3

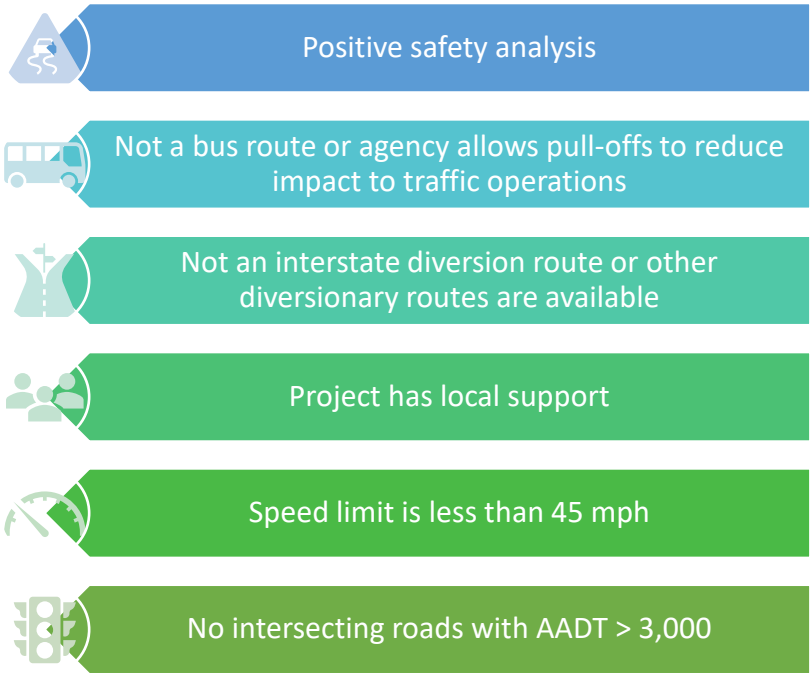
NOTE: Any other conversion besides to 3 lanes or to 5 lanes will require a Level 3 assessment

6.2 Initial Screening

All road diet proposals must be evaluated on the initial screening criteria listed in Figure 8. It is highly desirable for the road diet candidate facility to meet the Initial Screening criteria but not meeting all of the criteria does not remove the project from consideration. As explained in Section 6.1, projects will be evaluated based on context and may move forward in evaluation if there are community goals that merit the implementation of the road diet. The main purpose of the Initial Screening is to assess, on a very broad level, whether the existing environment and conditions would be conducive to a road diet. An example of the Initial Screening Form is provided in the Appendix.

In addition to the AADT requirements, it is highly desirable that the Road Diet candidate facility meet the initial screening criteria.

Figure 8 – Initial Screening Criteria



6.3 Capacity/LOS Analysis

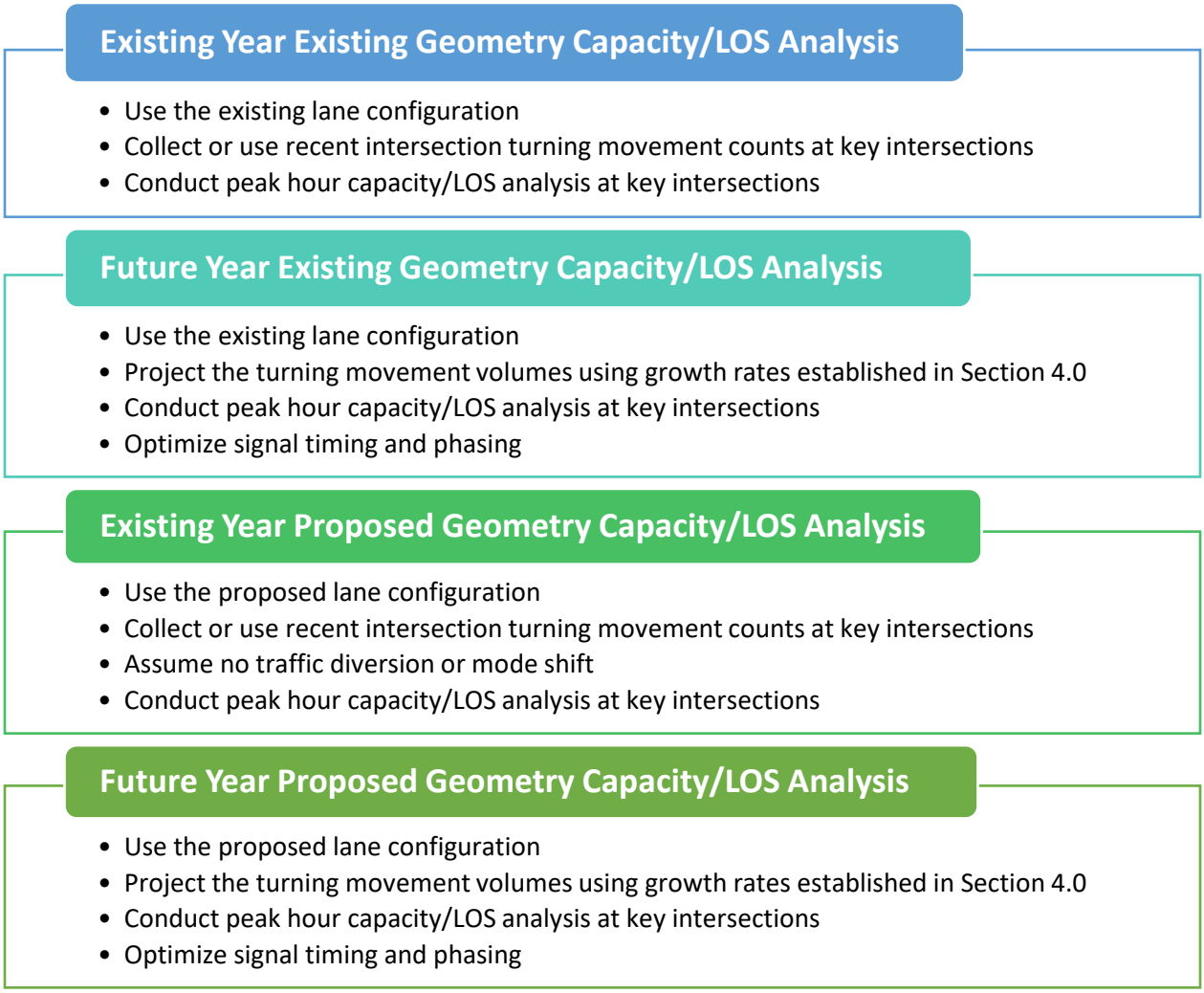
If a road diet candidate falls within the Level 2 or Level 3 categories, a capacity and LOS analysis must be performed. Other less conventional roadway reconfigurations such as removing a left- or right-turn lane or reducing the number of one-way lanes are also required to submit a capacity/LOS analysis in addition to the Initial Screening criteria and safety analysis. These conversions do not have AADT thresholds, rather they automatically fall into the Level 2 category.

Figure 9 depicts the capacity and LOS evaluation guidelines. A standard software package like Synchro or Highway Capacity Software (HCS) is required to perform the analysis. It is very important to have recent AM and PM peak hour turning movement counts to input into the capacity/LOS software. The primary intent of the existing capacity/LOS analysis is to determine a baseline of how key intersections perform now and in the future without the road diet. This baseline analysis is then compared to how the key intersections will perform with fewer lanes now and in the future, assuming 10 years of traffic growth. Some road diets may result in vehicular traffic diverting to alternative routes or in mode shift to non-motorized or transit trips, but no traffic diversion should be considered in order to be conservative with the capacity/LOS analysis.

It is important to have recent intersection turning movement counts.

All signalized intersections within the limits of the road diet should be analyzed; however, judgment is required in determining which unsignalized intersections need to be included in the capacity/LOS analysis. In general, classified roads and major commercial driveways should be considered as significant unsignalized junctions. It is important to analyze unsignalized intersections because a road diet could improve the safety and operation of a stop-controlled intersection by providing a refuge area for two-stage left turns within the two-way-left-turn-lane.

Figure 9 – Existing and Proposed Capacity/LOS Guidelines

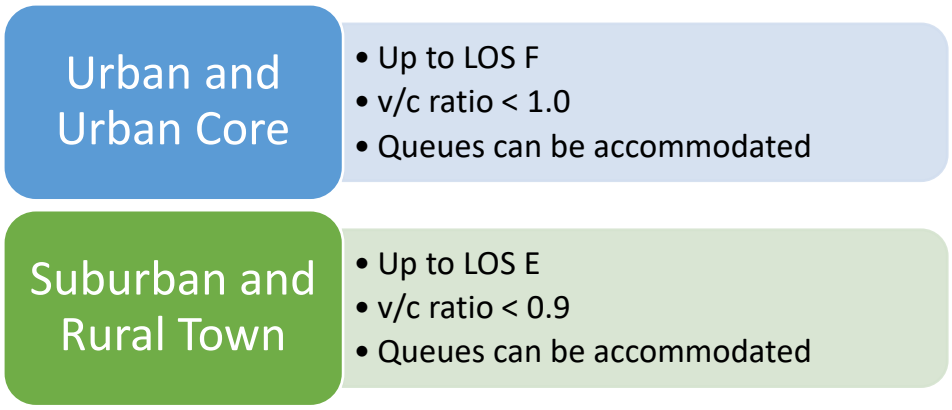


TDOT will review the capacity/LOS analysis based on the standards shown in Figure 10. Urban and Urban Core areas are defined as areas with high density, mixed land uses and prominent destinations that often provide on-street parking and sidewalks. Suburban areas are defined as areas with medium density, mixed land uses within and among structures (including mixed-use town centers, commercial corridors, and residentials areas). Rural Towns are defined as areas with low density, but diverse land uses with commercial main street character, potential for on-street parking and sidewalks.

Urban and Urban Core areas often experience some traffic congestion. Because these areas are constrained, congestion and lower levels of service are often viewed as acceptable. For this reason, the Urban and Urban Core criteria is less stringent than the Suburban/Rural Town criteria. Traditionally, volume-to-capacity (v/c) ratios of 0.85 and above indicate poor traffic signal operation; however, the main objective of road diets is not to optimize traffic throughput. The goal of a road diet is to balance acceptable traffic operations and opportunities to implement safe multimodal options. The most important factor to take into consideration regarding vehicular operations is that the queues do not

extend back through an upstream intersection, causing delays and unsafe conditions. If the queues can be accommodated, the road diet should operate sufficiently.

Figure 10 – Acceptable Traffic Signal Operation



6.4 Traffic Study

Roads being considered for a road diet that have AADTs of over 20,000 (to 3-lanes) or over 30,000 (to 5-lanes) must undergo a comprehensive traffic study in addition to the Initial Screening and capacity/LOS analysis required for the Level 1 and Level 2 categories. Components that are part of a comprehensive traffic study are described below.

Driveway Spacing – Multi-lane roads with frequent driveways but no left-turn lanes may be good candidates for a road diet because the inside lane often becomes a de facto left-turn lane. The traffic study should include the number and location of driveways in the road diet candidate corridor. When implementing a road diet, the spacing of driveways is an important factor to consider. Driveways spaced too closely together could be negative in terms of road diet approval because vehicles turning right into driveways will impede through traffic and increase the risk of rear-end crashes. However, the introduction of the two-way-left-turn-lane could be positive because this allows vehicles turning left a safe refuge from the through lane, potentially reducing the number of rear-end crashes.

Driveway Usage – This criterion directly relates to the driveway spacing criterion. The road diet candidate does not necessarily need frequent driveways to impact traffic flow. On a corridor with less frequent, but heavily used driveways, the introduction of the two-way-left-turn-lane provides a refuge for vehicles turning left into driveways instead of using the inside lane as a de facto left-turn lane. This criterion is data-intensive but very useful in making a case for implementing a road diet along a corridor. A corridor with fewer occurrences of driveways that experience heavy usage is likely to bode well in terms of a road diet approval.

Quantify Travel Time Increase using Microsimulation – Microsimulation software packages like SimTraffic and Vissim have the capability of estimating before and after travel times within a corridor. For a comprehensive traffic study, AM and PM peak hour microsimulation must be run to estimate corridor travel times before and after the proposed road diet. Some increase in future projected travel times is expected and may be tolerated.

Quantify Diversion to Other Routes – For the Level 3 traffic analysis, the local agency is required to quantify the diversion of traffic to parallel routes and perhaps some perpendicular routes (as traffic

seeks a parallel route), usually using a Travel Demand Model (TDM). Alternatively, techniques that use Probe Data to estimate Origin-Destinations is acceptable. This analysis will allow TDOT to determine if other routes are significantly negatively impacted. In most cases the diversion can be estimated for daily traffic, although TDOT reserves the right to request peak hour traffic diversion estimates. In some circumstances, it may be necessary to also provide capacity/LOS analysis and travel time estimates for the diversion routes.

6.5 Context Elements

This Road Diet Manual is structured to provide a clear and easy path to approval if AADT's are modest and the candidate road meets the Level 1 screening criteria. AADT's in the middle range require a Level 2 screening and AADT's in the high range require a Level 3 screening. Hence, the higher the AADT, the more investigation and analysis is required. The final column in the Road Diet Criteria Graph shown in Figure 7 is the 'Context Elements' category, which includes any supplemental information that the requesting agency would like to include to provide reviewers a better understanding of why the Road Diet is desired. Figure 12 presents a list of potential criteria that could be included.

Figure 11 – Road Diet Context Elements

Local agencies are encouraged to provide contextual evidence that a Road Diet will be beneficial for their community but also present information and data on how the negative implications of the road diet can be mitigated or are not relevant to the project. Below are some examples of information that will be useful to the reviewer in determining whether the benefits outweigh any unmet criteria in the required assessments:

- Increased economic activity due to more frequent trips made by active transportation users
- Increase in market value of the land surrounding new active transportation infrastructure
- Local plans for bike and pedestrian facilities that will tie into the roadway
- Evidence of existing bike and pedestrian activity

- More equitable facilities for historically disadvantaged communities or areas of persistent poverty

In addition to the required safety analysis presented in Section 5.0, local agencies may also utilize the Multimodal Priority Ranking Tool to help justify the safety benefits of the Road Diet. The tool takes into consideration pedestrian demand, existing roadway characteristics, equity, and crash history to provide a proactive risk assessment for the corridor. The only information the local agency needs to provide is the location of the project. If the local agency would like to use this tool, email tdot.multimodalplanning@tn.gov to request the Multimodal Priority Ranking Tool.

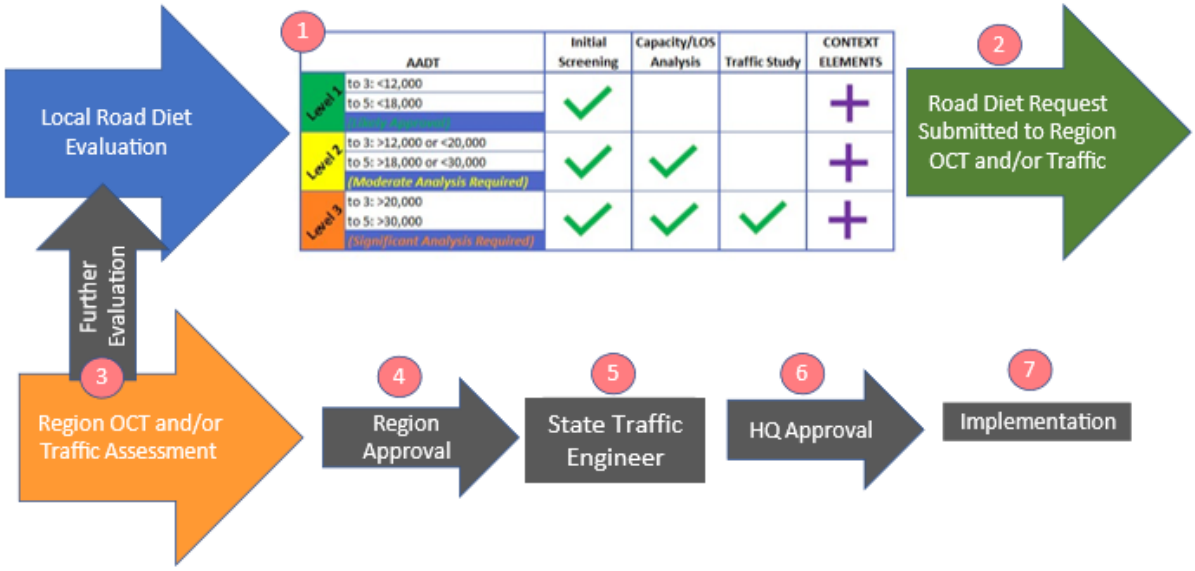
7.0 TDOT Approval Process

Figure 14 outlines the approval process for Road Diet requests. The Road Diet approval process begins with the local agency, who must follow the guidelines laid out in this Road Diet Guidance Manual. After the local agency has performed all the necessary analysis, the Road Diet request is submitted to the Regional Traffic office either directly by the applicant or via the regional Office of Community Transportation (OCT) representative. Once the application has been reviewed by the Regional Traffic division, they can either request further evaluation from the local agency or submit to the Region Director for approval.

It should be noted that the Road Diet request must be approved at the Region-level before advancing to the State Traffic Engineer. The State Traffic Engineer will evaluate the overall impact (positive and negative) of the project to determine if the tradeoffs are appropriate and support TDOT's mission:

"To provide a safe and reliable transportation system that supports economic growth and quality of life."

Figure 12 – TDOT Approval Process



8.0 Using Resurfacing Project to Implement Road Diet

If TDOT determines the Road Diet can be implemented during a resurfacing project, OCT will work with Multimodal, the Region Resurfacing Coordinator, and Region Design to coordinate the development of road diet plans to be included with the resurfacing plans. The requesting agency may be required to provide these plans. It should be noted that with the realignment of travel lanes, the realignment of signal heads needs to also be taken into consideration. The requesting agency may be responsible for the relocation of signal heads.

Due to the volume of resurfacing projects, there are tight deadlines for development and delivery of resurfacing plans. If the Road Diet can be included in a project listed in the published 3-year resurfacing plan, local agencies should communicate their Road Diet request and work with the regional TDOT OCT representatives and/or regional traffic division to ensure plans are submitted before the scheduled letting date of the resurfacing project. Otherwise, local agencies should work with OCT, Multimodal, and their respective Region to determine if it is feasible to include the Road Diet in a future resurfacing project. The entire resurfacing delivery schedule is available on the TDOT Asset Management – Pavement Office webpage.

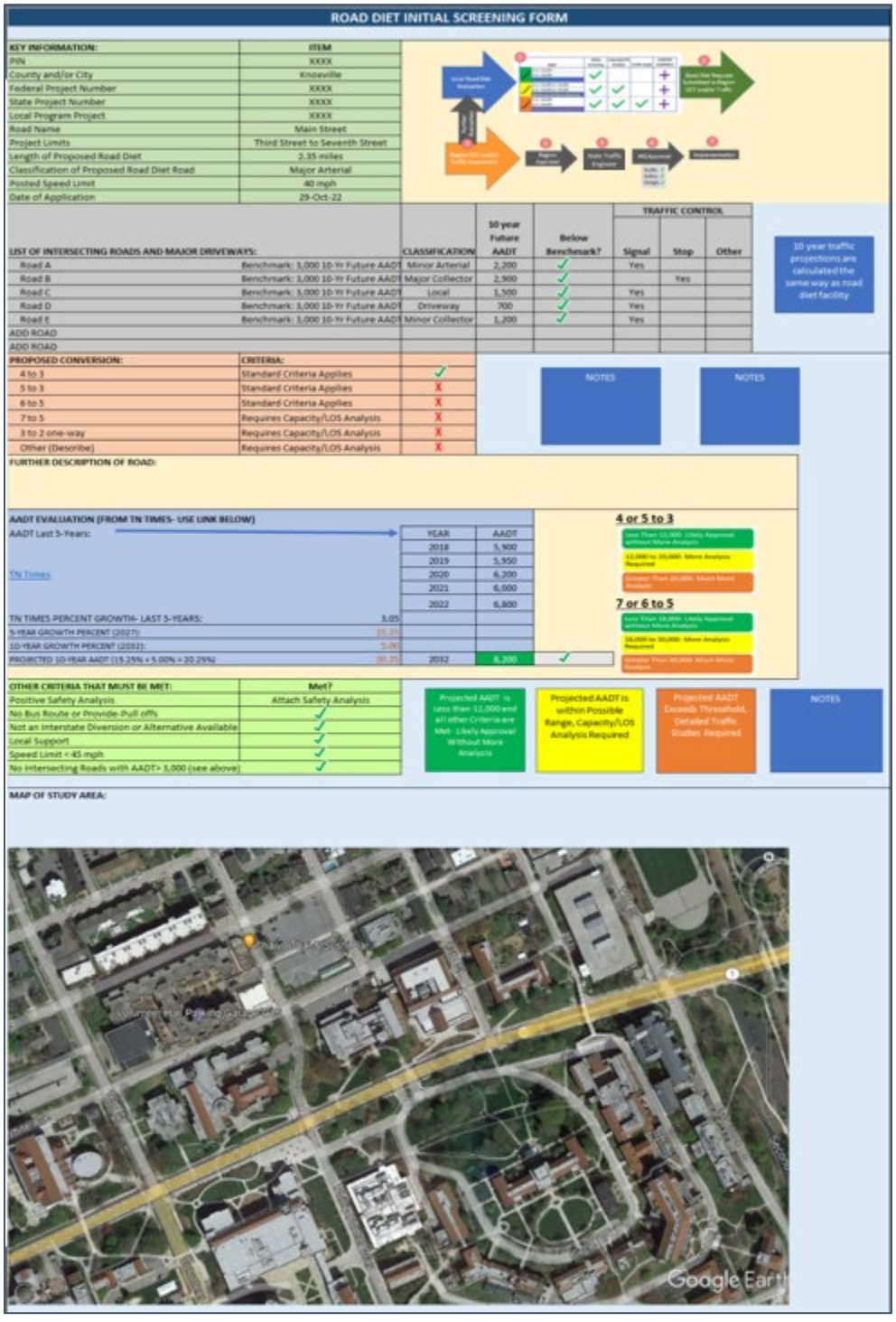
If TDOT determines the Road Diet project should be implemented as an independent project, OCT will work with the locals on approvals to perform the work or with other TDOT Divisions to determine which eligible TDOT programs could potentially assist with funding for the Road Diet project. Additional information on some of the TDOT programs available to local agencies can be found on the TDOT Local Programs website and in the TDOT Local Government Guide.

9.0 Additional Resources

Additional guidance from national resources is available to assist in the development of Road Diet plans and are listed below:

- Functional Classification Guidelines and Updated Guidance for the Functional Classification of Highways (FHWA)
- A Guide for Achieving Flexibility in Highway Design (AASHTO)
- Flexibility in Highway Design (FHWA)
- A User's Guide to Positive Guidance (FHWA)
- Handbook for Designing Roadways for the Aging Population (FHWA)
- Guide for the Planning, Design, and Operation of Pedestrian Facilities (AASHTO)
- Guide for the Development of Bicycle Facilities (AASHTO)
- Urban Bikeway Design Guide (NACTO)
- Designing Walkable Urban Thoroughfares (ITE)
- TCRP Report 19 Guidelines for the Location and Design of Bus Stops

10.0 Appendix



ROAD DIET INITIAL SCREENING FORM

KEY INFORMATION:	ITEM
PIN	XXXX
County and/or City	Knoxville
Federal Project Number	XXXX
State Project Number	XXXX
Local Program Project	XXXX
Road Name	Main Street
Project Limits	Third Street to Seventh Street
Length of Proposed Road Diet	2.35 miles
Classification of Proposed Road Diet Road	Major Arterial
Posted Speed Limit	40 mph
Date of Application	29-Oct-22

LIST OF INTERSECTING ROADS AND MAJOR DRIVEWAYS:		CLASSIFICATION	10 year Future AADT	Below Benchmark?	TRAFFIC CONTROL: Signal	Stop	Other
Road A	Benchmark: 3,000 10-Yr Future AADT	Minor Arterial	2,200	✓	Yes		
Road B	Benchmark: 3,000 10-Yr Future AADT	Major Collector	2,900	✓		Yes	
Road C	Benchmark: 3,000 10-Yr Future AADT	Local	1,500	✓	Yes		
Road D	Benchmark: 3,000 10-Yr Future AADT	Driveway	700	✓	Yes		
Road E	Benchmark: 3,000 10-Yr Future AADT	Minor Collector	1,200	✓	Yes		
ADD ROAD							
ADD ROAD							

10 year traffic projections are calculated the same way as road diet facility

PROPOSED CONVERSION:	CRITERIA:	
4 to 3	Standard Criteria Applies	✓
5 to 3	Standard Criteria Applies	X
6 to 5	Standard Criteria Applies	X
7 to 5	Requires Capacity/LOS Analysis	X
3 to 2 one-way	Requires Capacity/LOS Analysis	X
Other (Describe)	Requires Capacity/LOS Analysis	X

NOTES

NOTES

FURTHER DESCRIPTION OF ROAD:

AADT EVALUATION (FROM TN TIMES- USE LINK BELOW)

AADT Last 5-Years:

TN Times

YEAR	AADT
2018	5,900
2019	5,950
2020	6,200
2021	6,000
2022	6,800

TN TIMES PERCENT GROWTH- LAST 5-YEARS: 3.05

5-YEAR GROWTH PERCENT (2027):

10-YEAR GROWTH PERCENT (2032):

PROJECTED 10-YEAR AADT (15.25% + 5.00% = 20.25%)

2032	8,200	✓

4 or 5 to 3

Less Than 12,000: Likely Approval without More Analysis

12,000 to 20,000: More Analysis Required

Greater Than 20,000: Much More Analysis

7 or 6 to 5

Less Than 18,000: Likely Approval without More Analysis

18,000 to 30,000: More Analysis Required

Greater Than 30,000: Much More Analysis

OTHER CRITERIA THAT MUST BE MET:	Met?
Positive Safety Analysis	Attach Safety Analysis
No Bus Route or Provide Pull offs	✓
Not an Interstate Diversion or Alternative Available	✓
Local Support	✓
Speed Limit < 45 mph	✓
No Intersecting Roads with AADT> 3,000 (see above)	✓

Projected AADT is less than 12,000 and all other Criteria are Met - Likely Approval Without More Analysis

Projected AADT is within Possible Range, Capacity/LOS Analysis Required

Projected AADT Exceeds Threshold, Detailed Traffic Studies Required

NOTES

MAP OF STUDY AREA: