FLORIDA DEPARTMENT OF TRANSPORTATION

Lane Repurposing

VIRTUAL TRAINING

SIO
SYSTEMS IMPLEMENTATION OFFICE

Lane Repurposing Training

Module 1:
Introduction to Lane Repurposing

- Lane Repurposing Guidebook
- Background
- Configurations and Considerations
- Benefits
- Project Description
  - Purpose, Location, Area of Influence, and Existing Conditions

Module 2:
Lane Repurposing Analysis

- Proposed Modifications
- Design Variations and Exceptions
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- Median Improvements
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- Conflict and Non-motorized Users
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- Proposed Modifications
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- On-Street Parking and Delivery Zones
- Safety Analysis
- Public Involvement

Module 3:
Application Process, Best Practices, and Resources

- FDOT Application Process
  - Best Practices
  - Examples
  - Resources

FDOT

OUR VALUES

One FDOT
We are one agency, one team.

INTEGRITY
We always do what is right.

RESPECT
We value diversity, talent and ideas.

COMMITMENT
We do what we say we are going to do.

TRUST
We are open and fair.

CUSTOMER DRIVEN
We listen to our customers.

OUR MISSION

The department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity, and preserves the quality of our environment and communities.

OUR VISION

As one FDOT team, we serve the people of Florida by providing a transportation network that is well planned, supports economic growth, and has the goal of being congestion and fatality free.

VITAL FEW

- Improve Safety
- Enhance Mobility
- Inspire Innovation

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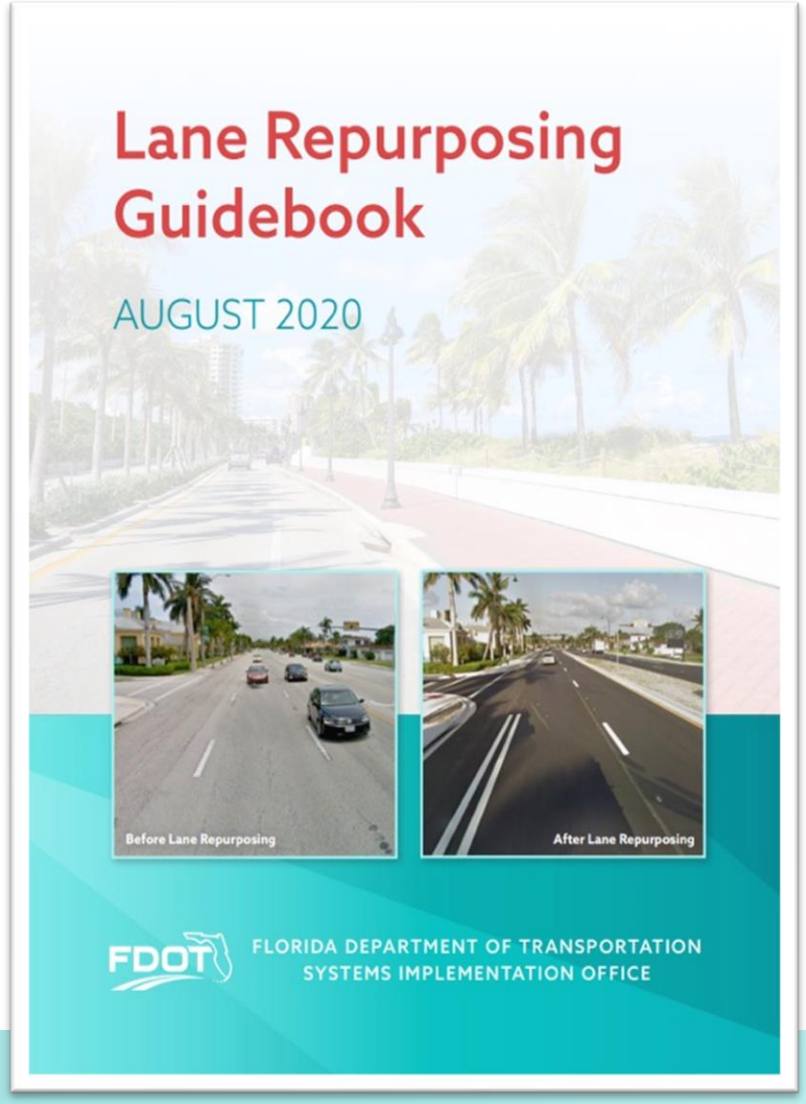
Module 1

Introduction to Lane Repurposing

Lane Repurposing Guidebook

- **Released in August 2020**
  - Lane Repurposing Background
  - FDOT Application Process
  - Concept Report
    - Considerations and Analysis
  - Public Involvement
  - Florida Lane Repurposing Examples
  - Forms and Templates
- **This document replaced FDOT's Lane Elimination Phase 1 and 2**



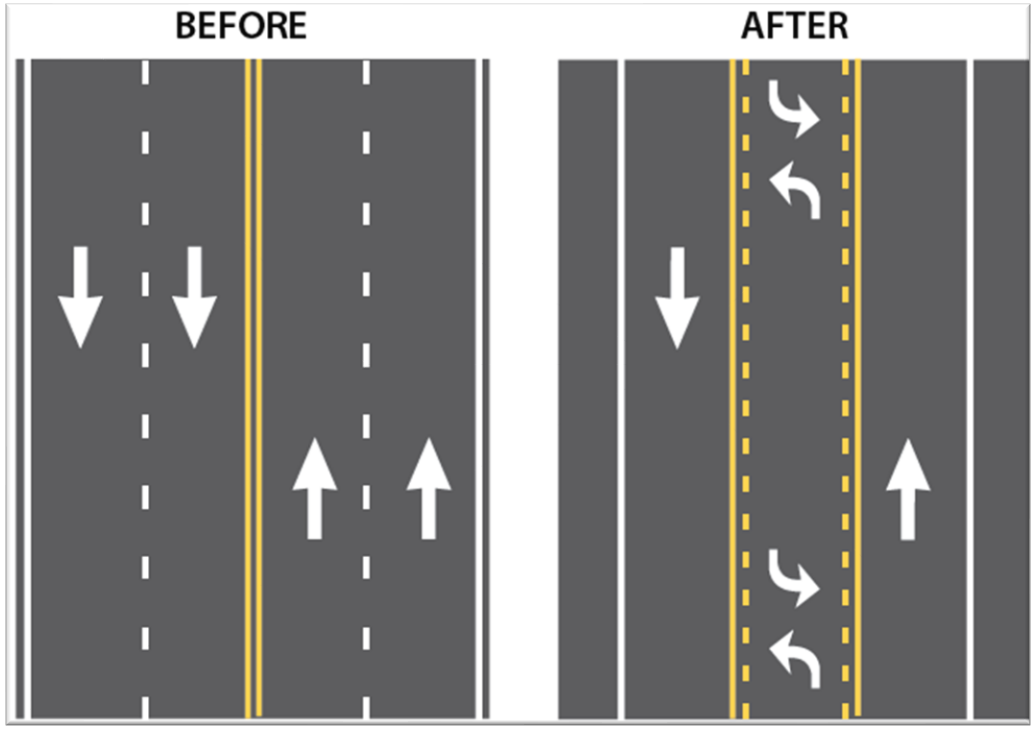
Background

- Previously referred to as a Road Diets, Lane Reduction, or Lane Elimination.
- Lane Repurposing is a way to reassign roadway space to achieve other purposes such as economic development, safety and mobility for all users.

Configurations

- Reconfiguring the use of road space by reducing the number of travel lanes to provide space for other purposes such as:
  - Continues Raised Median
  - Two-Way Left Turn Lane (TWLTL)
  - Median Islands
  - Bicycle Lanes
  - On-street Parking
  - Bus Pull-outs
  - Delivery Zones
  - Wider sidewalks

Configurations

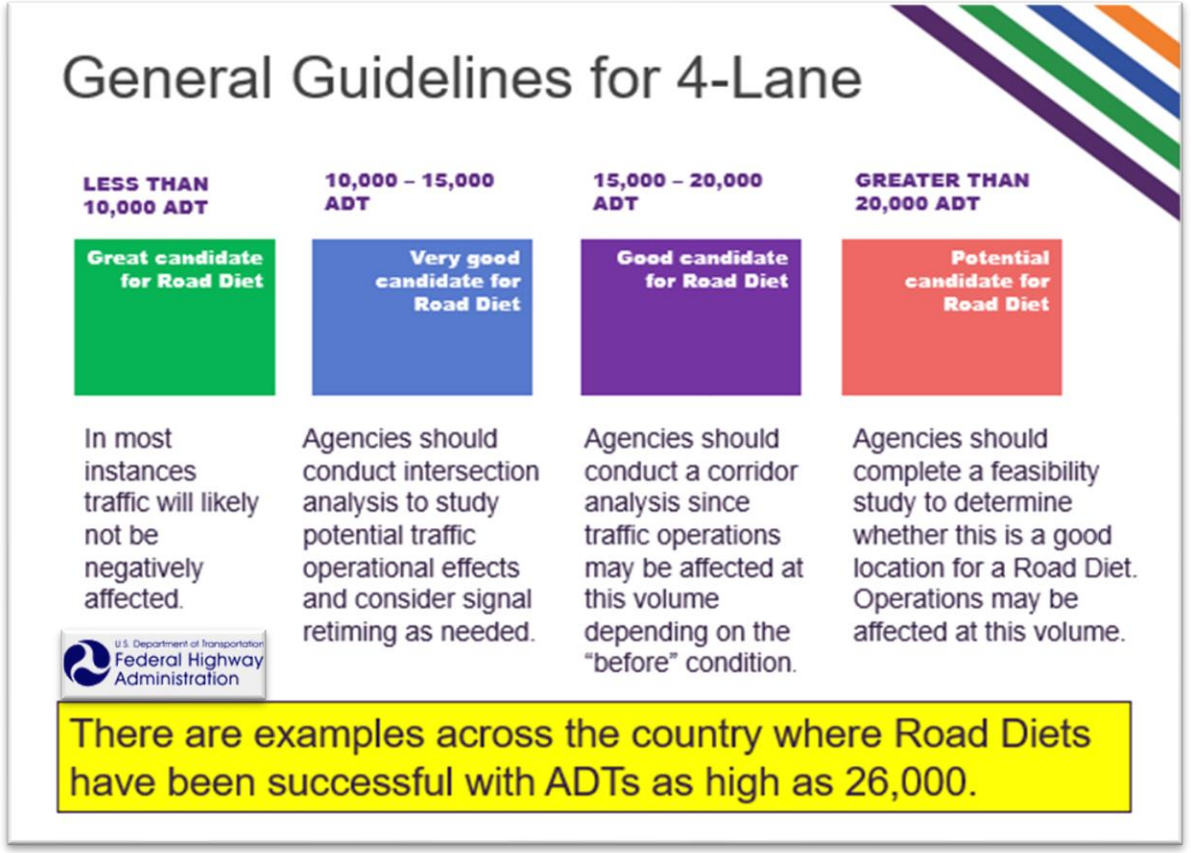


Benefits

- Speed reductions
- Impacts total crashes
- Provide facilities for all modes
- Economic Development

Considerations

Four-lane undivided roadways with AADT ≤ 20,000 are typically good candidates for a lane repurposing (e.g., converting to a two-lane, two-way road with a center-left-turn lane). However, projects are evaluated for lane repurposing feasibility on a case-by-case basis.



Project Description

Purpose

Project Location

Area of Influence

Existing Conditions

Project Description

PURPOSE

Typically, the purpose of the projects involves:

- Safety Improvements
- Reconfigure existing cross section to enhance other uses and travel modes
- Traffic Operations Improvements
- Complete Streets
- Community needs

Lane repurposing projects often contribute to the economic development, livability, and vitality of a community.

Project Description

PURPOSE

Other characteristics to be considered when providing justification that a candidate project should be advanced for future consideration:

- Access Management
- Functional Classification
- Right-of-way
- Safety

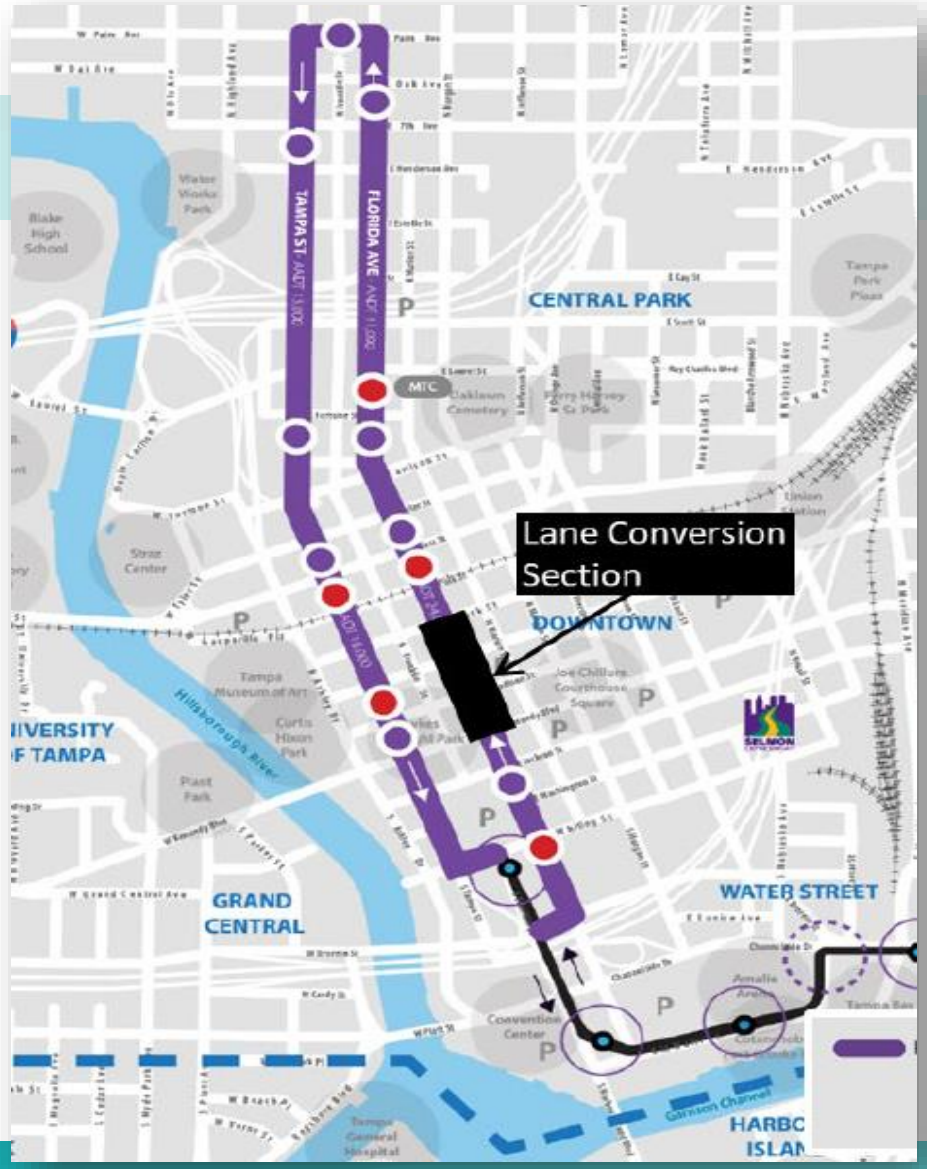
Why Repurpose?

- Reduce crashes
- Rebalance the service among travel modes
- Support economic enhancement goals
- Support community goals to improve quality and health

Project Description

LOCATION

- Four-lane undivided roadways with AADT of ≤ 20,000.
- Areas with a robust local roadway network which can absorb some of the diverted traffic from the repurposing project.
- Nearby roads, land uses and other relevant information to aid reviewers in understanding the context of the proposed project.
- Regional connectivity needs for traffic circulation.
- Evacuation and Freight Routes



Project Description

LOCATION

Context Classification and Complete Streets

Project Description

AREA OF INFLUENCE

- The area of influence defines how the lane repurposing project may impact surrounding roadways and features during and after its construction.

Project Description

EXISTING CONDITIONS

- Roadway Functional Classification
- FDOT Context Classification
- Evacuation Route
- SIS Designation
- Posted Speed Limits and Average Speeds
- Traffic Data Collection
- Signalized Intersections
- Existing Levels of Service (LOS)

Project Description

EXISTING CONDITIONS

Methods to collect Data

- Field Visits
- Access Management Plans, Transit Development Plans, Parks and Recreation Plans, Local Agency Parking/Downtown Circulation Plans.

Project Description

EXISTING CONDITIONS

Typical Sections-provide detailed cross section depictions of the principal roadway elements that are standard between certain station or milepost limits.

Review as-built plans, design documents, and field investigations for:

- Signage
- Pavement Markings
- On-Street Parking
- Signals
- Project Limits

Project Description

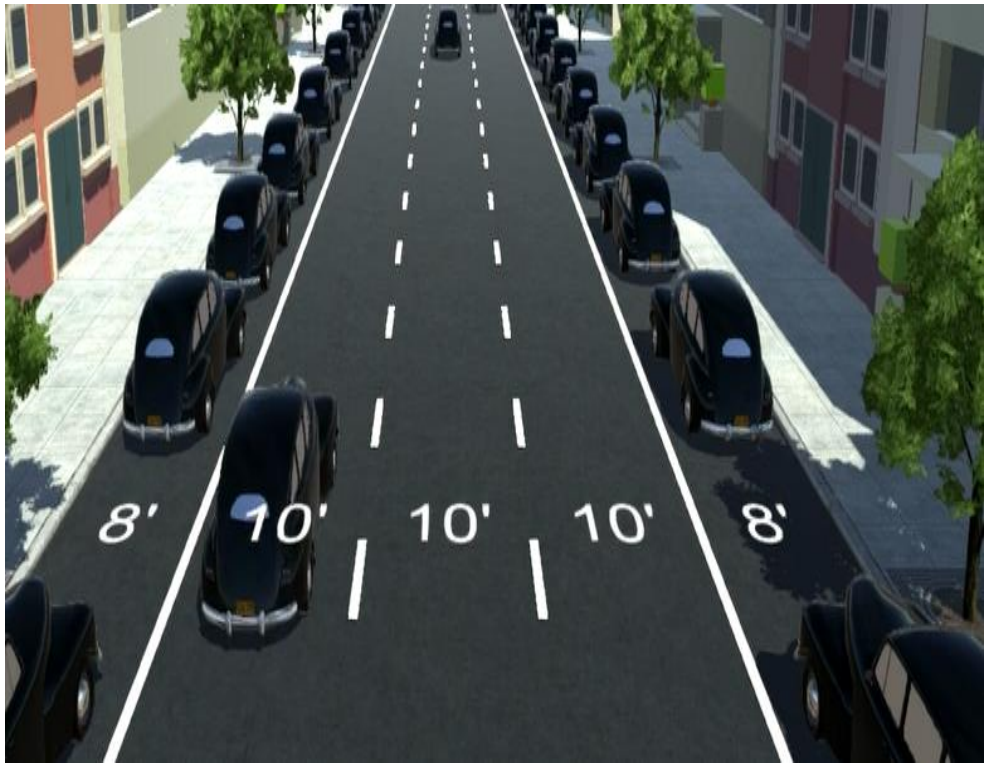
EXISTING CONDITIONS

Roadway Functional Classification

- Changes could affect continuity, connectivity planning, funding, traffic analysis, project prioritizations, and state and federal reporting requirements.

Access Management Plans

- May need to include access management plans that eliminate, consolidate, and/ or relocate driveways to reduce conflict points

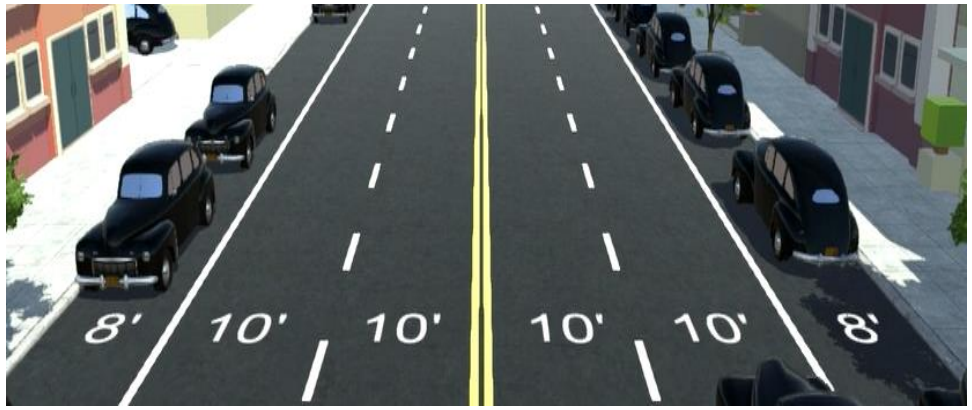


Project Description

EXISTING CONDITIONS

Regional Connectivity

- Any omission of regional network could potentially omit a critical stakeholder, the best methods for collecting this data are to review FDOT and local transportation plans.



Project Description

EXISTING CONDITIONS

Evacuation is a special transportation circumstance that can be planned for in areas especially prone to disasters, such as coastal areas during hurricanes and locations with specific security threats

Evacuation Route

SIS is a high priority network of facilities which are allocated a significant portion of FDOT resources. These facilities contribute to the economic growth and mobility of the State of Florida.

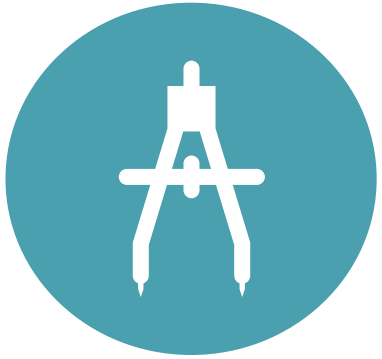
SIS Designation

SIS
Strategic Intermodal System

Module 2

Lane Repurposing Analysis

Proposed Modifications



Conceptual Design

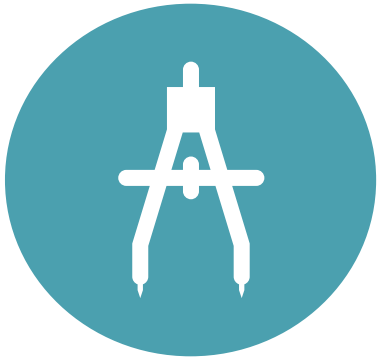
Changes in Design and Posted Speed Limits

Consistency with Local Plans

Design Variations and Exceptions

Proposed Modifications

CONCEPTUAL DESIGN



CONCEPTUAL DESIGN

- Proposed Typical Sections within the project limits based on the analyses that are conducted for the project.
- Changes such as, reduced widths, shorter crossing distances, improved sight distances, parking removal, Bike and Ped phasing, corner Clearance, or other Design elements should be included within the concept plans.

Proposed Modifications

DESIGN AND POSTED SPEED

CHANGES IN DESIGN AND POSTED SPEED LIMITS

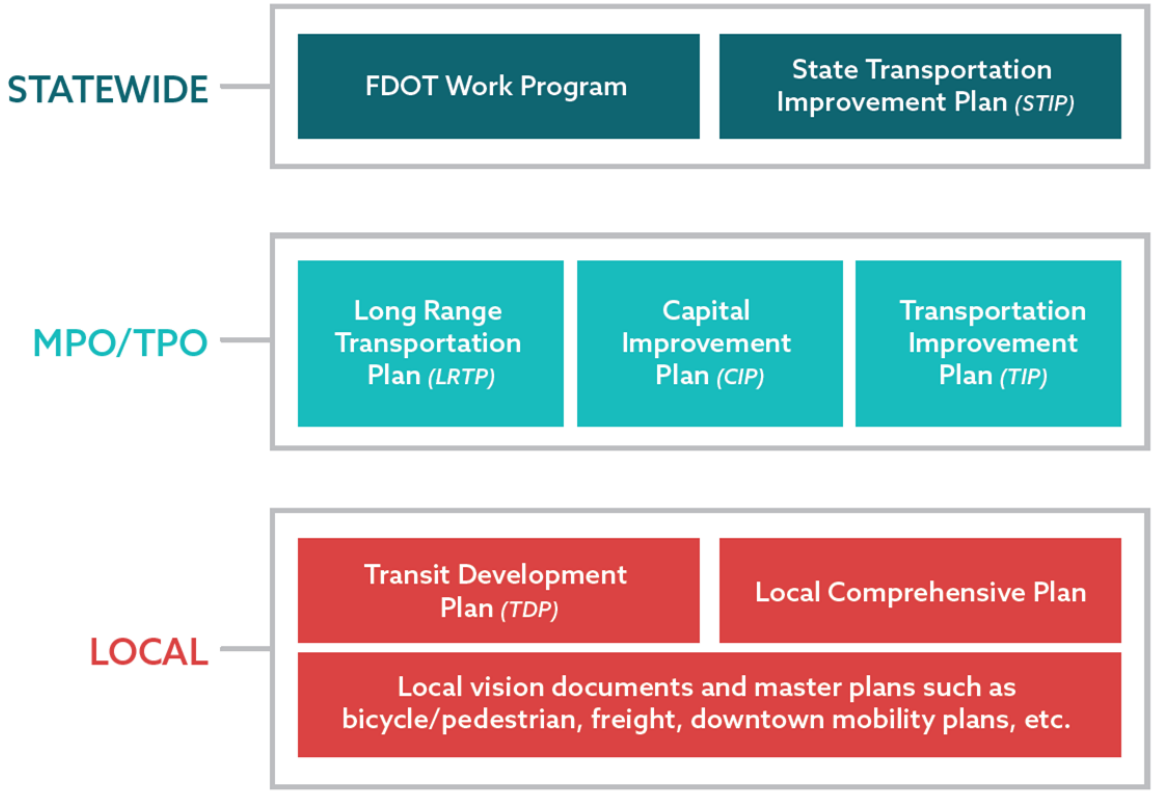
- Traffic and safety analysis can lead to design and posted changes.
- Reductions in speed should be noted within the Concept Report.
- There is also a potential need for spot-speed studies to justify these changes because of frequent violations of the posted speed.

Proposed Modifications

LOCAL PLANS

CONSISTENCY WITH LOCAL PLANS

- Relevant Programs and Plans for Lane Repurposing projects



Proposed Modifications

LOCAL PLANS

CONSISTENCY WITH LOCAL PLANS

Programmed funds

- Five Year Work Program, Capital Improvement Program (CIP), Transportation Improvement Program (TIP)
- Funding commitments – any established funding priorities

Proposed Modifications

Local Plans

CONSISTENCY WITH LOCAL PLANS

Lane repurposing projects can be incorporated into other programmed project types to achieve cost and time savings such as:

- Resurfacing, Restoration, and Rehabilitation (RRR)
- Reconstruction
- Restriping (signage and pavement markings)
- New or widened sidewalk
- Addition of transit accommodations

Proposed Modifications

Local Plans

CONSISTENCY WITH LOCAL PLANS

- Other potential funding sources for lane repurposing projects include Federal Transit Administration (FTA), other transit funding sources, grants, local option sales tax revenue, tax increment funding, etc.

Proposed Modifications

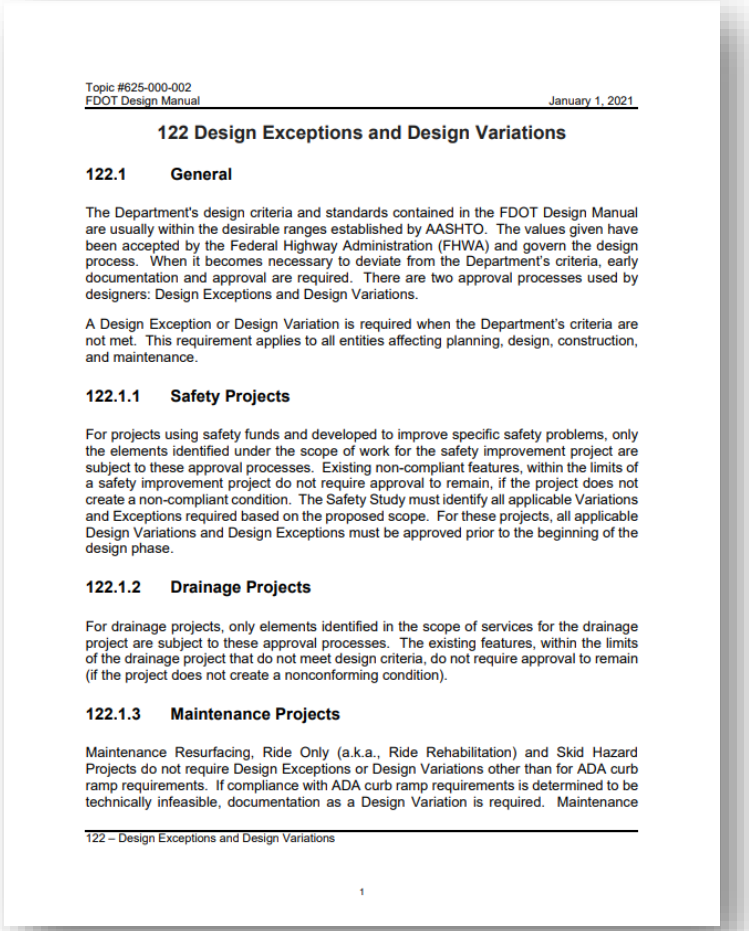
DESIGN VARIATIONS AND EXCEPTIONS

DESIGN VARIATIONS AND EXCEPTIONS

- Potential design exceptions and design variations will be required for cross-section elements that do not meet design criteria to ensure the safety of proposed improvements.
- There may also be a need to request a design variation or exception along the roadway(s) due to changes in standards over the years or roadway limitations.z

Design Variations and Exceptions

- The Department's design criteria and standards contained in the FDOT Design Manual are usually within the desirable ranges established by AASHTO.
- When it becomes necessary to deviate from the Department’s criteria, early documentation and approval are required. There are two approval processes used by designers: Design Exceptions and Design Variations.
- A Design Exception or Design Variation is required when the Department’s criteria are not met. This requirement applies to all entities affecting planning, design, construction, and maintenance.



Topic #625-000-002
FDOT Design Manual January 1, 2021

122 Design Exceptions and Design Variations

122.1 General

The Department's design criteria and standards contained in the FDOT Design Manual are usually within the desirable ranges established by AASHTO. The values given have been accepted by the Federal Highway Administration (FHWA) and govern the design process. When it becomes necessary to deviate from the Department's criteria, early documentation and approval are required. There are two approval processes used by designers: Design Exceptions and Design Variations.

A Design Exception or Design Variation is required when the Department's criteria are not met. This requirement applies to all entities affecting planning, design, construction, and maintenance.

122.1.1 Safety Projects

For projects using safety funds and developed to improve specific safety problems, only the elements identified under the scope of work for the safety improvement project are subject to these approval processes. Existing non-compliant features, within the limits of a safety improvement project do not require approval to remain, if the project does not create a non-compliant condition. The Safety Study must identify all applicable Variations and Exceptions required based on the proposed scope. For these projects, all applicable Design Variations and Design Exceptions must be approved prior to the beginning of the design phase.

122.1.2 Drainage Projects

For drainage projects, only elements identified in the scope of services for the drainage project are subject to these approval processes. The existing features, within the limits of the drainage project that do not meet design criteria, do not require approval to remain (if the project does not create a nonconforming condition).

122.1.3 Maintenance Projects

Maintenance Resurfacing, Ride Only (a.k.a., Ride Rehabilitation) and Skid Hazard Projects do not require Design Exceptions or Design Variations other than for ADA curb ramp requirements. If compliance with ADA curb ramp requirements is determined to be technically infeasible, documentation as a Design Variation is required. Maintenance

122 – Design Exceptions and Design Variations

1

Design Variations and Exceptions

Design Exceptions are required when existing or proposed design elements do not meet both the Department's governing criteria and AASHTO's new construction criteria for the Controlling Design Elements.

- Design Speed
- Lane Width
- Shoulder Width
- Horizontal Curve Radius
- Superelevation Rate
- Stopping Sight Distance
- Maximum Grade
- Cross Slope
- Vertical Clearance
- Design Loading Structural Capacity

Design Variations and Exceptions

Design Variations are required when existing or proposed design elements do not meet the Department's criteria.

- Clear Zone
- Sight Distance
- American with Disabilities Act (ADA)
- Design elements requiring signature by individual or office noted in FDM 122.7.4.

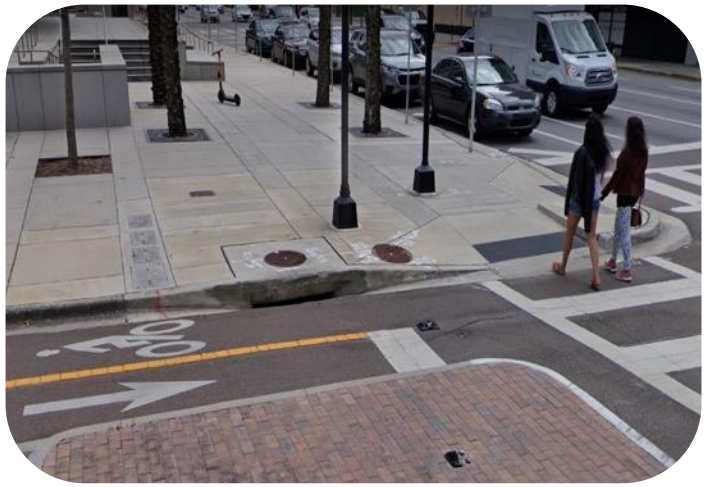
Access Management Considerations

DRIVEWAYS

- Add, remove, or consolidate

MEDIANS

- Improvements



PEDESTRIANS, BIKES, TRANSIT ACCOMMODATIONS

- Signs, Transition

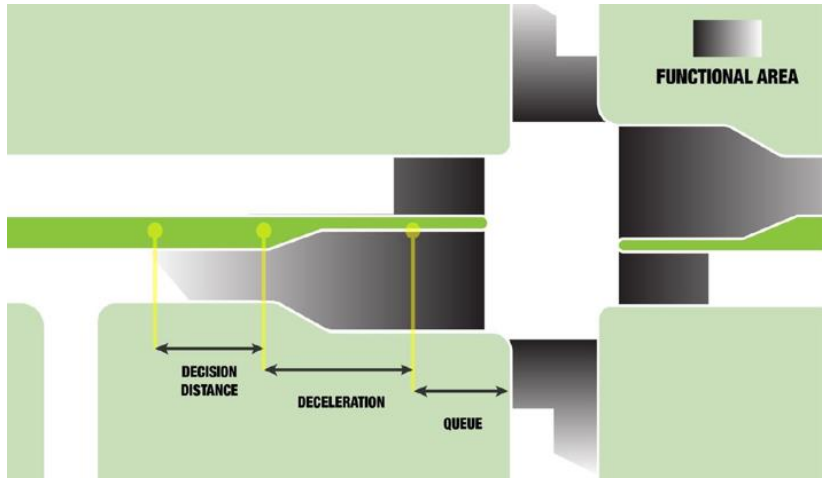
Driveways

ACCESS MANAGEMENT CONSIDERATIONS

It is critical to locate the driveways in areas where they will not interfere with other elements.

Some areas where driveways should be restricted are at

- Intersection functional area
- Signalized intersections
- Limited access interchange ramps
- Other driveways and median openings
- Roundabouts.



Example: Multiple Driveways, One Property

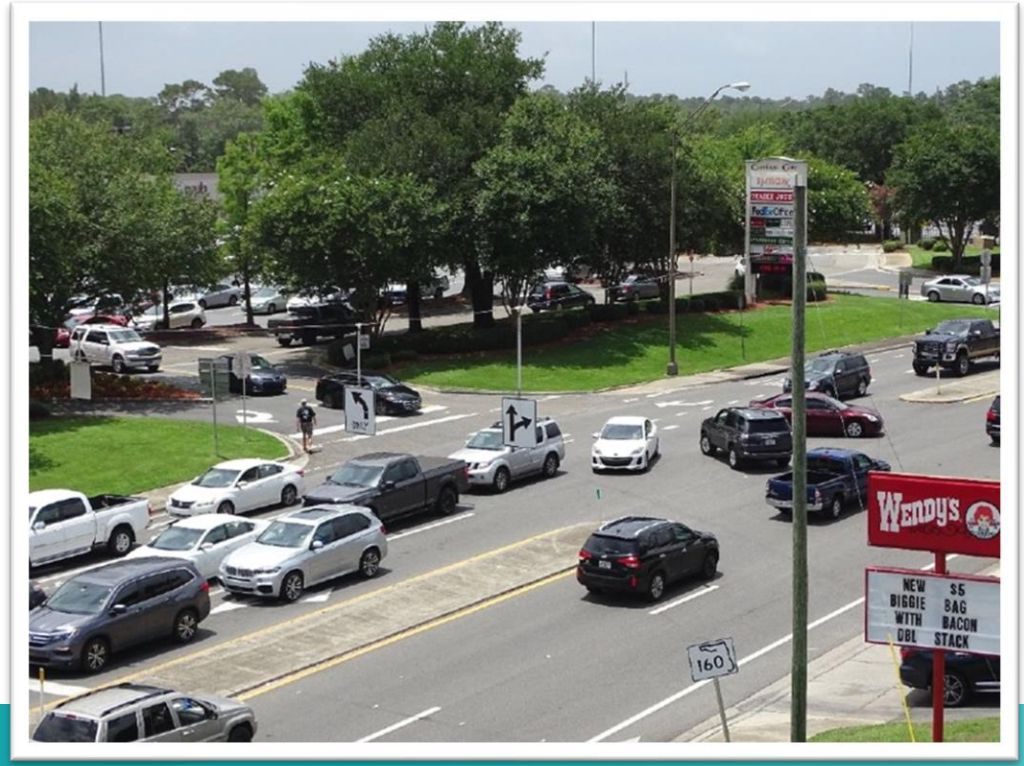
ACCESS MANAGEMENT CONSIDERATIONS

Median Improvements

ACCESS MANAGEMENT CONSIDERATIONS

Median opening length is governed by the:

- Turning or control radii
- Side street geometrics
- Median (traffic separator) width
- Intersection skews
- Intersection legs



Retrofit Considerations

ACCESS MANAGEMENT CONSIDERATIONS

Assessing a Median Opening Guidance

Determination of Major Cross Streets and Major Driveway Locations

Data Collection

Analysis

Recommendations

- Closing a Median Opening
- Altering a Median Opening

Retrofit Considerations and RRR Projects

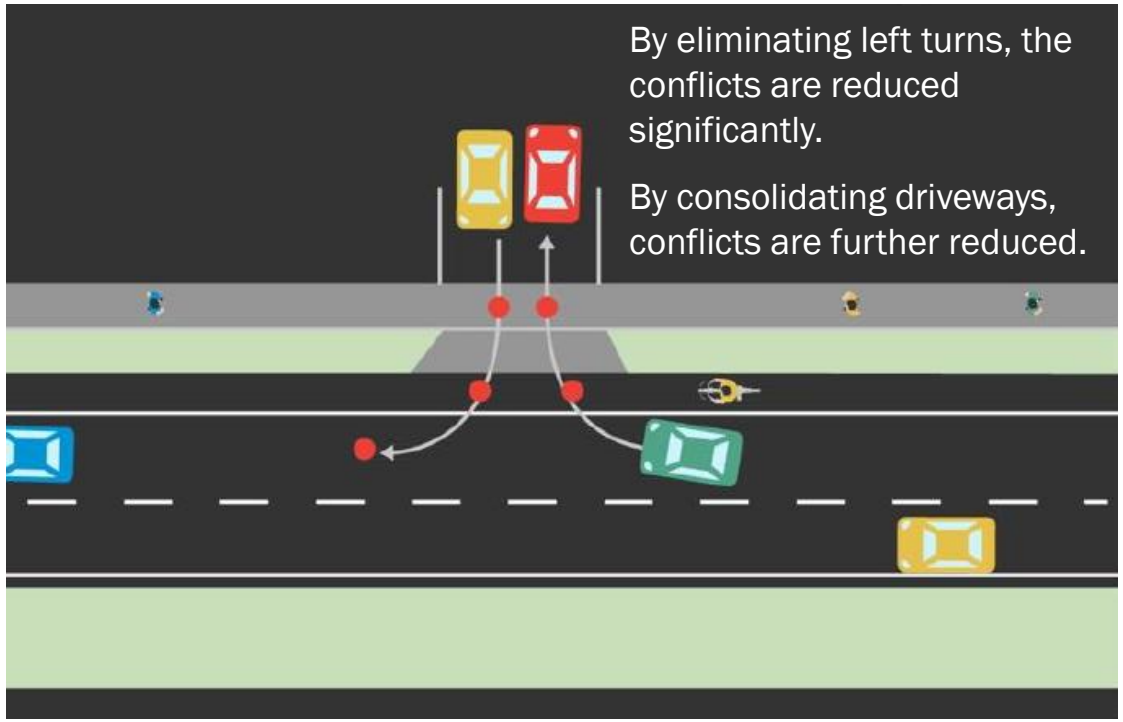
ACCESS MANAGEMENT CONSIDERATIONS

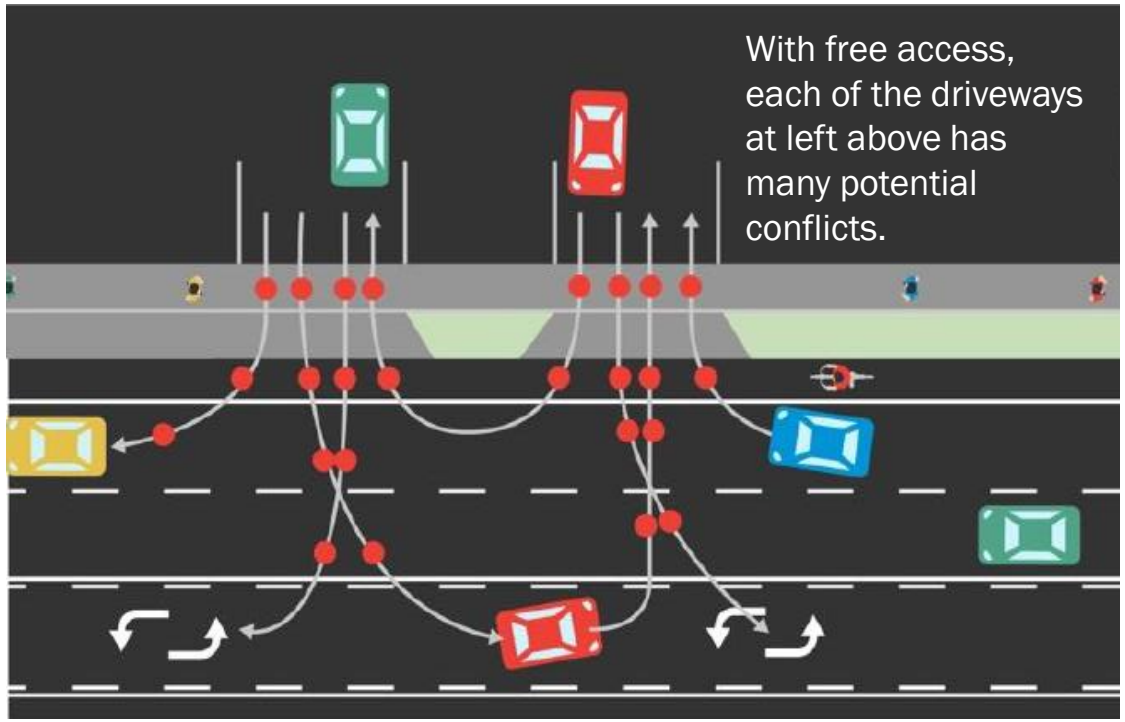
Considerations for Resurfacing, Restauration, and Rehabilitation (RRR):

- Radius improvements at side road driveways due to evidence of off-tracking
- Close abandoned driveway in urban/curb & gutter section to improve ADA accessibility/sidewalk
- Correct driveways that do not meet design standards
- Construct new transit/bus amenities
- Construct new turn lanes to meet projected need
- Lengthen/revise existing turn lanes at signalized intersections due to documented operational issues
  - Any intersection could be revised as needed based on verified crash history

Conflict Points and Non-motorized Users

ACCESS MANAGEMENT CONSIDERATIONS





Non-Motorized Connections

ACCESS MANAGEMENT CONSIDERATIONS

- For design purposes, bicyclists are considered vehicles when traveling within the roadway.
- All users of the roadway benefit from improved safety and operations when conflict points are well managed as part of a comprehensive approach Medians have benefits for vehicular operations and pedestrians.
- Pedestrians are permitted to travel along all non-limited access facilities.
- Installing raised medians or pedestrian crossing islands can help improve safety.

Proposed Modifications

ENVIRONMENTAL REQUIREMENTS

If the project has a PD&E phase, the requirements of the FDM 126 are followed during the PD&E study prior to the selection of a preferred alternative.

Coordination with District Office of Environmental Management is needed.

See Part 1, Chapter 2 of the PD&E Manual for additional information.

Traffic Analysis

Traffic Forecasting Methodology

LOS Analysis of Building Alternative Vs. No-build Alternative

Delays, Volumes, Queues Analysis

Transportation Network/ Corridor Impacts

Traffic Analysis

TRAFFIC FORECASTING

TRAFFIC FORECASTING METHODOLOGY

- Preparing a traffic forecast allows for a comparison between the Build and No-Build scenarios for existing and future conditions.
- Size of the area under study and the Level of accuracy needed should be considered to determine the intensity of the data collection and process.

Traffic Analysis

LOS ANALYSIS

LOS ANALYSIS OF BUILDING ALTERNATIVE VS. NO BUILD ALTERNATIVE

- The Level-of-service (LOS) analysis should be performed in accordance with the most recent versions of the FDOT Quality/Level-of-Service (QLOS) Handbook and Highway Capacity Manual (HCM) methodology
- Existing base year data and future year volumes are both important in decision-making processes

Traffic Analysis

LOS ANALYSIS

LOS ANALYSIS OF BUILDING ALTERNATIVE VS. NO BUILD ALTERNATIVE

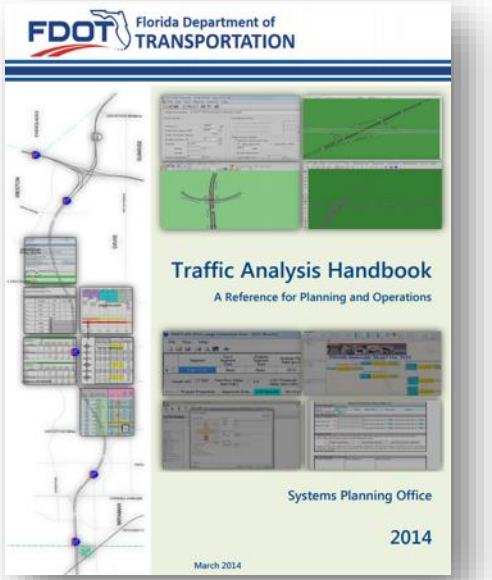
- Determinations should be made based not only on the Build Year of the project but may also consider long-range planning goals and objectives depending on the project.

Traffic Analysis

DELAYS, VOLUMES, QUEUES

DELAYS, VOLUMES, QUEUES ANALYSIS

- Volumes are used to measure congestion and estimate traffic flow
- Delay is the criteria used to categorize LOS and is oriented to the driver experience
- Queuing is the result of the interaction of traffic delay and volume and is another way to express the impact to the traffic system while also highlighting the secondary impact to connectivity



Traffic Analysis

TRANSPORTATION IMPACTS

TRANSPORTATION NETWORK/ CORRIDOR IMPACTS

- Lane repurposing projects may alter the capacity of a corridor by reducing the number of lanes.
- In some corridors, lane repurposing may have a minimal impact to adjacent roadways and alternative parallel routes may not exist.
- The effects of lane repurposing may also have an effect on the transportation network by rerouting traffic to parallel corridors where similar destinations are served.

Traffic Analysis

TRANSPORTATION IMPACTS

TRANSPORTATION NETWORK/ CORRIDOR IMPACTS

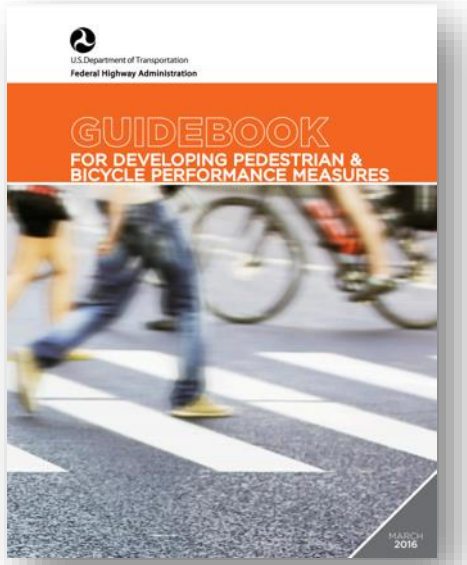
- In most cases the purpose of a proposed project includes reallocating roadway space for improvements to bicycle, pedestrian, and transit modes.
- The analysis should consider
- Existing and proposed pedestrian circulation,
- Mid-block and signalized intersection crossings
- Transit connectivity and crash data
- The need for dedicated bicycle facilities and/or shared use paths
- Data on existing, nearby and future on-street parking
- Service providers such as e-scooter, dockless bicycles and other modes that lend themselves to first/last mile service.

Traffic Analysis

TRANSPORTATION IMPACTS

TRANSPORTATION NETWORK/ CORRIDOR IMPACTS

- FHWA has published the Guidebook for Developing Pedestrian and Bicycle Performance Measures which includes a matrix of 30 measures which are tied to many potential project's goals such as:



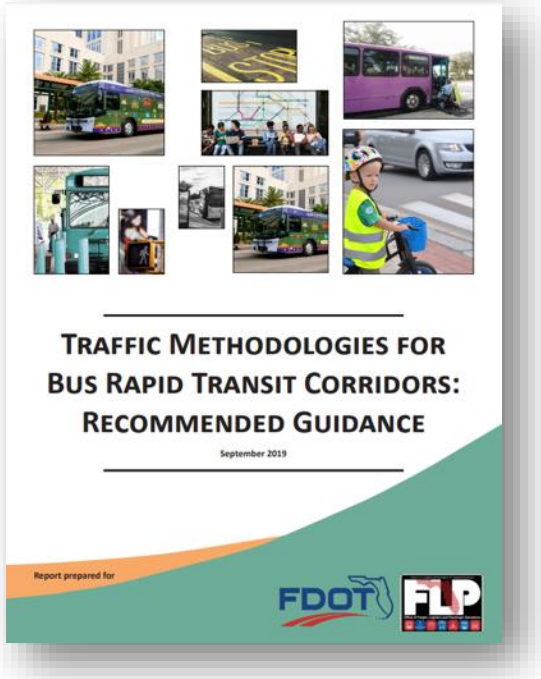
Connectivity | Economic | Environment | Equity | Health | Livability | Safety

Traffic Analysis

TRANSPORTATION IMPACTS

TRANSPORTATION NETWORK/ CORRIDOR IMPACTS

- If transit is present or proposed on a lane repurposing project, it is important to have the transit agency represented in the project planning process.
- If the lane repurposing is being championed by a transit agency to accommodate BRT or other premium transit service, then it is important for the lane repurposing process and the transit planning process to be connected.



Operational Considerations

- Number of access Points
- Intersection and Midblock capacity
- Turn Lane Reallocation
- Re-evaluate traffic signal phasing and timing
- Quantify and compare additional delays and queues

Transit Considerations

By going to a single-lane in each direction, frequent transit stops may cause additional delay

- Reassess bus stop location and spacing
- Consider bus pullouts

Photo Resource: Mark Doctor

On-street Parking

Consider:

- Impact on parking maneuvers
- Parking spot design (parallel vs diagonal)
- Interactions between bicyclist and parking vehicles

Photo Resource: Mark Doctor

Delivery Zones

Consider the current and future needs for delivery zones and loading areas. Removal or relocation of delivery zones may impact truck access to businesses. Where there is only one through lane per direction, trucks that stop for deliveries are likely to block auto traffic.

Photo Resource: Mark Doctor

Safety Analysis

- ✓ High crash numbers and rates
- ✓ High crash locations by type
- ✓ Rear-end crashes from left-turning vehicles
- ✓ Left-turning vehicles stopped in the inside travel lane
- ✓ Sideswipe and angle crashes due to lane changes
- ✓ Pedestrian and bicycle crashes
- ✓ Wide crossing distances for pedestrians and bicyclists
- ✓ High differential in speeds in travel lanes

SAFETY AND OPERATIONAL IMPACTS

CRASH DATA ANALYSIS

Safety Analysis

SAFETY AND OPERATIONAL

SAFETY AND OPERATIONAL IMPACTS

- Safety and operational considerations and evaluation metrics will be agreed upon between the district Review Team and the applicant in the Initial Meeting.
- These may be key considerations in identifying the goals for a lane repurposing project.

Safety Analysis

CRASH DATA

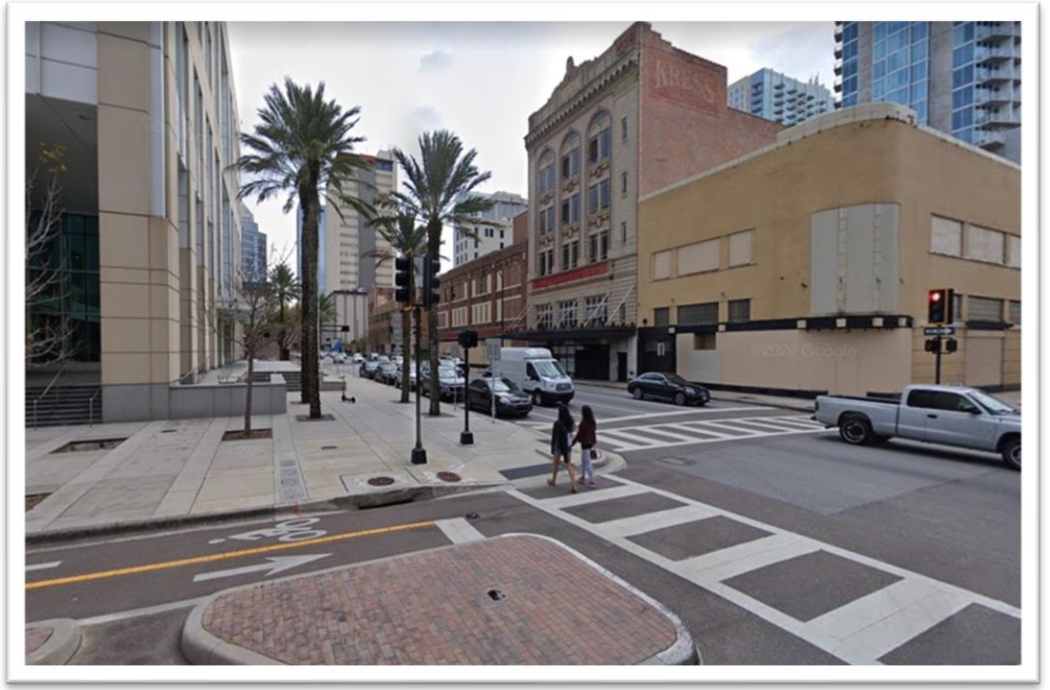
CRASH DATA ANALYSIS

- Applicants should conduct a 5-year crash analysis of the corridor to determine the specific types of crashes.
- The district will want the applicant to identify the high crash segment/intersection locations by crash type and check to see if the project is on or close to an identified high crash location. These are the segments and locations on the SHS with the highest number of crashes by district.

Non-Motorized Connections
Safety Countermeasures

ACCESS MANAGEMENT CONSIDERATIONS

- Medians and Pedestrian Refuge Islands Improve Pedestrian Midblock Crossings
- Nighttime Conditions
  - Raised medians and refuge islands provide a space to install improved lighting at pedestrian crossing locations.
  - Improved lighting has been shown to reduce the nighttime pedestrian fatalities at crossings by 78%.
- Delay Reduction
  - Raised medians and refuge also reduce the amount of delay incurred by pedestrians waiting for a gap in traffic to cross.



Non-Motorized Connections
Safety Countermeasures

ACCESS MANAGEMENT CONSIDERATIONS

- Midblock Crossing Locations
- Consider medians or pedestrian crossing islands in curbed sections of urban and sub-urban multi-lane roadways.
  - Midblock areas
  - Approaches to multi-lane intersections
  - Areas near transit stops or other pedestrian focused sites
- Providing raised medians or pedestrian refuge areas at marked crosswalks has demonstrated a 46 and 56 percent reduction in pedestrian crashes, respectively

Non-motorized Connections | Safety

ACCESS MANAGEMENT CONSIDERATIONS

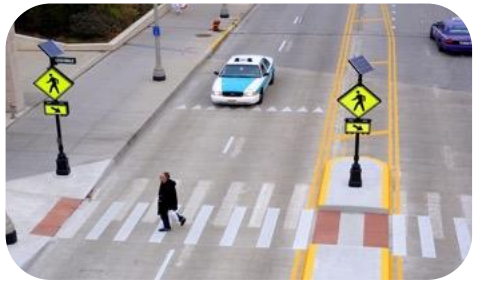
- Other important design considerations for pedestrian refuge islands:
- Include a vertical element (such as landscaping, bollard, or other) on pedestrian refuges to ensure visibility to motorists;
- Use the “z crossing” or angled crossing design for the pedestrian refuge to ensure that pedestrians are facing oncoming traffic

Source: FHWA

Safe Transportation for Every Pedestrian (STEP)- Spectacular 7

Crosswalk Visibility Enhancements

Raised Crosswalks



Pedestrian Refuge Islands

Rectangular Rapid Flashing Beacon

Pedestrian Hybrid Beacon (PHB)

Road Diets

Leading Pedestrian Interval (LPI)

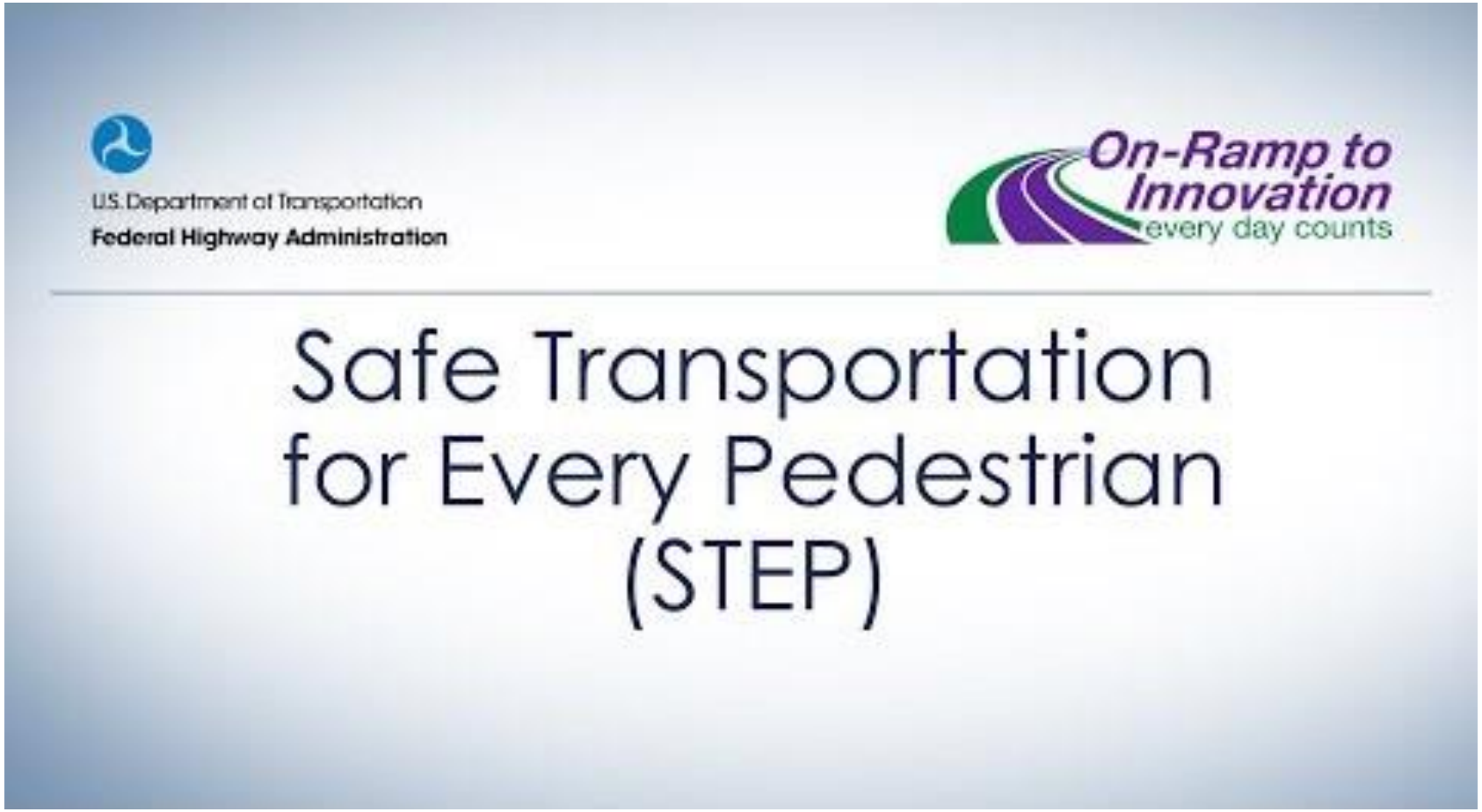
Source: FHWA

Safe Transportation for Every Pedestrian (STEP) | FHWA EDC-4

- Benefits
- Improved Safety. Countermeasures are available that offer proven solutions for reducing pedestrian fatalities at uncontrolled crossing locations.
- Targeted Investment. By focusing on uncontrolled locations, agencies can address a significant national pedestrian safety problem.
- Enhanced Quality of Life. Improving crossing opportunities boosts quality of life for pedestrians of all ages and abilities.

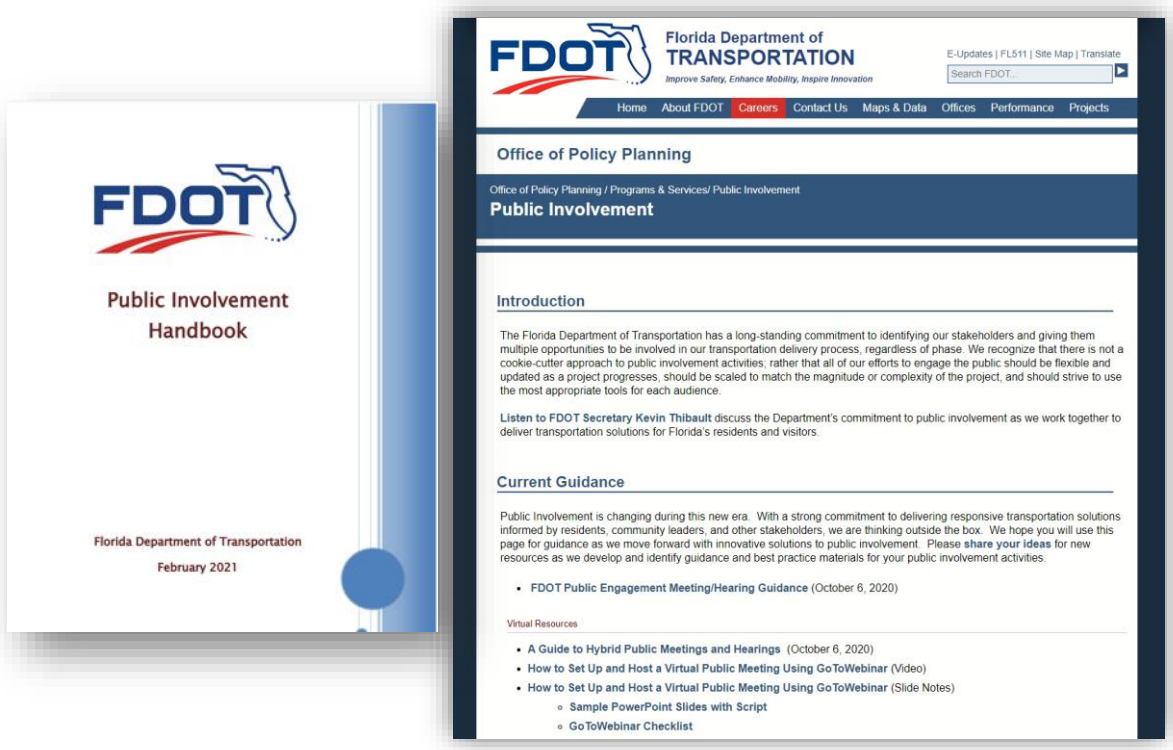
Source: FHWA

Safe Transportation for Every Pedestrian (STEP)



Public Involvement

- Support by the local community is crucial to the long-term success of a lane repurposing project.
- To assist with understanding the public involvement and decision-making process for FDOT projects on the SHS, the FDOT Public Involvement Handbook should be referenced throughout the project process.



https://www.fdot.gov/planning/policy/publicinvolvement/index

Public Involvement

- Public involvement is a key component of a successful lane repurposing project.
- It is important to balance the needs of the local residents of the project corridor, as well as those who utilize it for commuting or other purposes.
- Documenting public involvement for lane repurposing projects is not only a best practice but is required in the concept report.
- Applicants must lead all public involvement during the planning phases of a lane repurposing projects. Once a project involves design or construction, then FDOT will become involved.

Public Involvement

Requirements of F.S. 335.199 should be followed when the proposed project will divide a state highway, erect median barriers modifying currently available turning movements, or have the effect of closing or modifying an existing access to an abutting property owner. Such as:

- When FDOT is the applicant of the proposed project
- During resurfacing, restoration and rehabilitation (RRR) projects that include the Lane Repurposing with FDOT funding
- If the local government is proposing with FDOT funding or if FDOT participates financially in the funding of any Lane Repurposing project on a State Highway requested by the local Government

Public Involvement

- Any Lane Repurposing project on a State Highway funded solely by the local government, that does not: divide a state highway, erect median barriers modifying currently available turning movements, or have the effect of closing or modifying an existing access to an abutting property owner, the Department recommends that the local government provide notice and an opportunity for public meeting and public comment.
- More resources and information in FDM 104, Public Involvement as well as the FDOT Access Management Guidebook.

Public Involvement

- There are multiple tools available to assess and/or build community support for a lane repurposing project. These include the following:
- Polls
- Media
- Workshops
- Virtual Meetings

Module 3

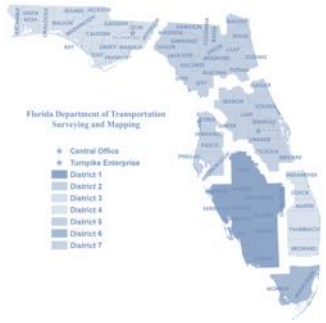
Application Process, Best Practices,
Project Examples, and Resources

FDOT Application Process

Who can be an Applicant?

- Local Government
- Department
- Private Entity

Review Teams



District Team

Planning Office

Environmental Management Office

Modal Development Office

Design Office

Traffic Operations Office

Central Office Team

Systems Implementation Office

Roadway Design Office

Traffic Engineering and Operations Office

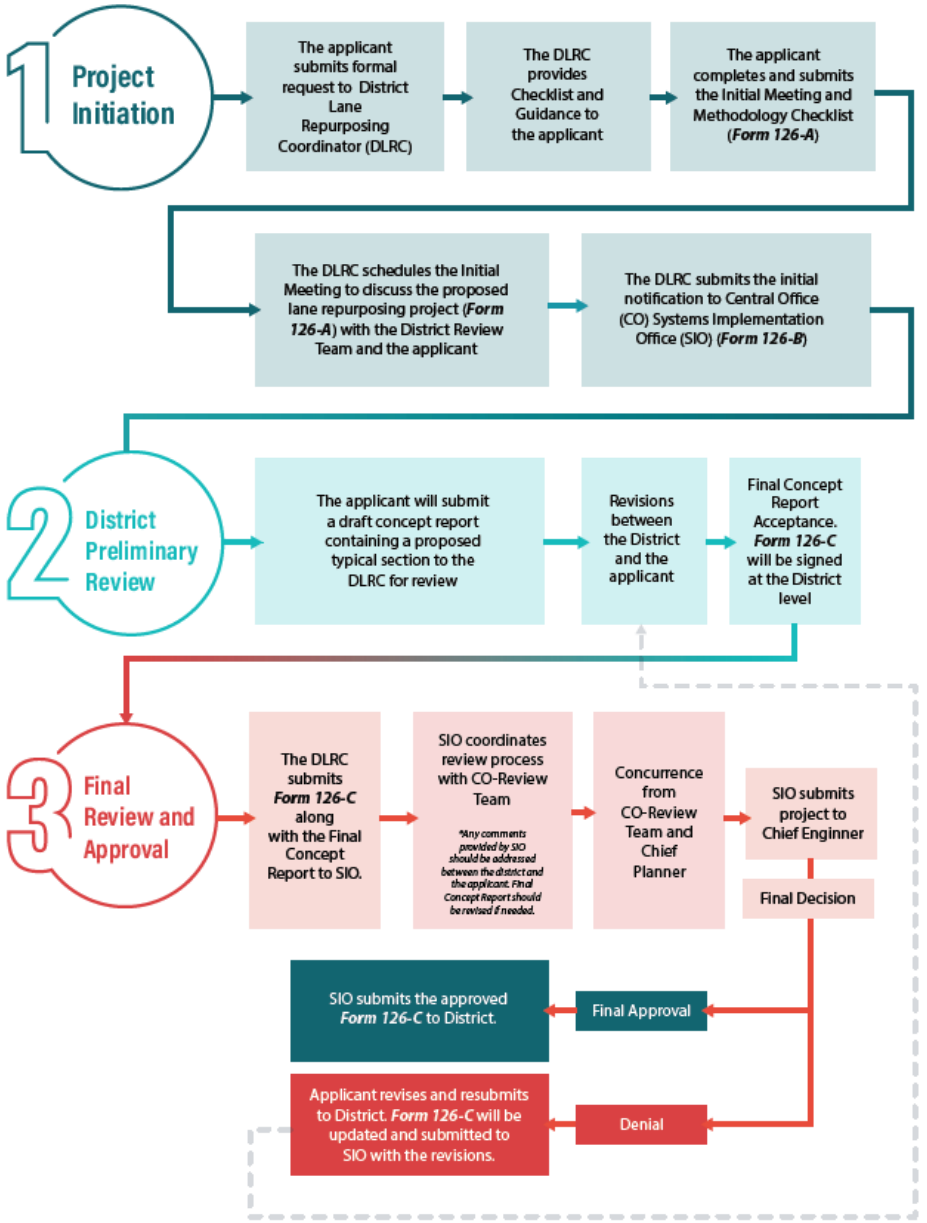
Chief Planner

Chief Engineer

Application Process

The application process consists of three main steps:

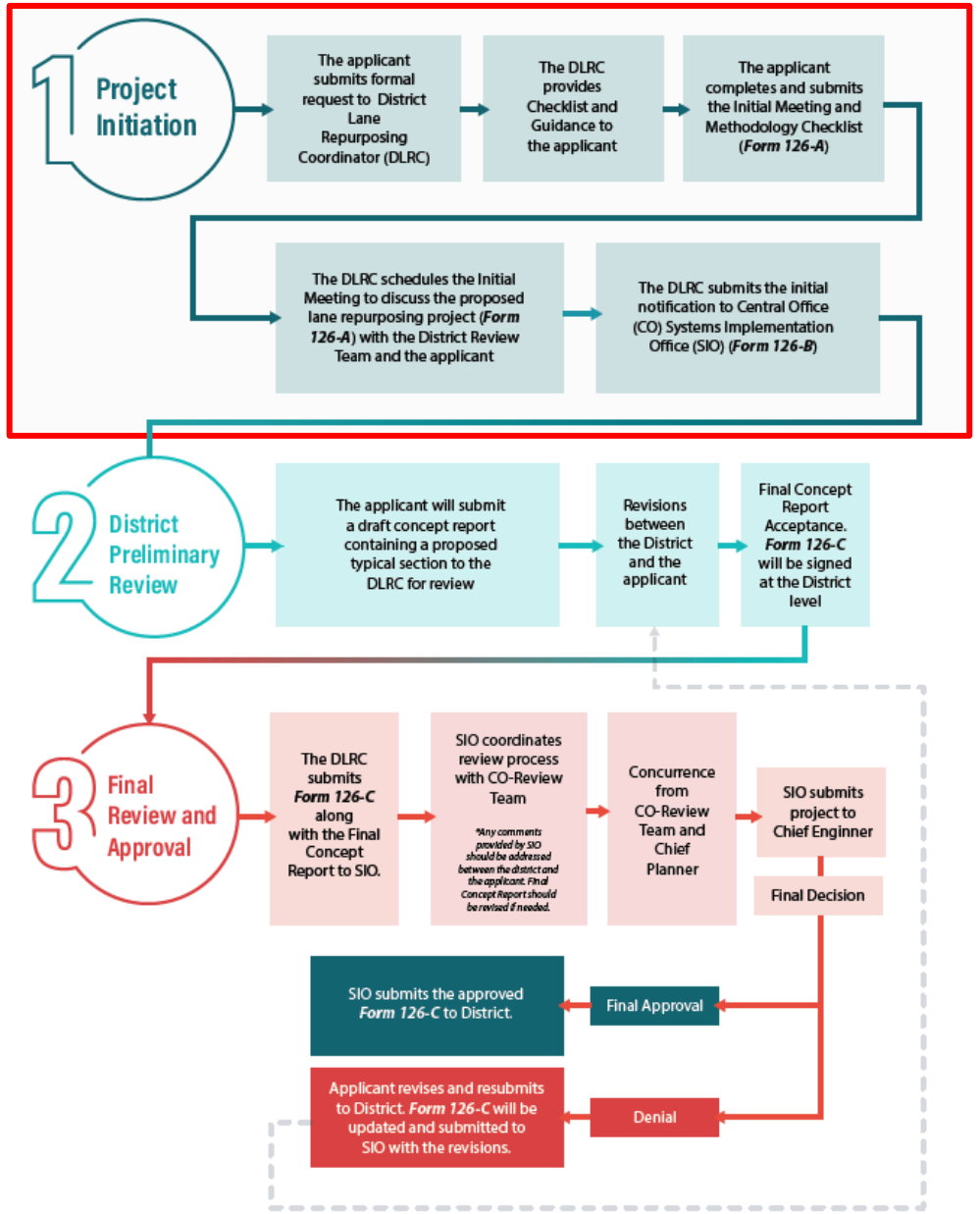
- Coordination between Applicant and the District
- A preliminary review and approval by District
- The final review and approval by Central Office (CO).



Application Process

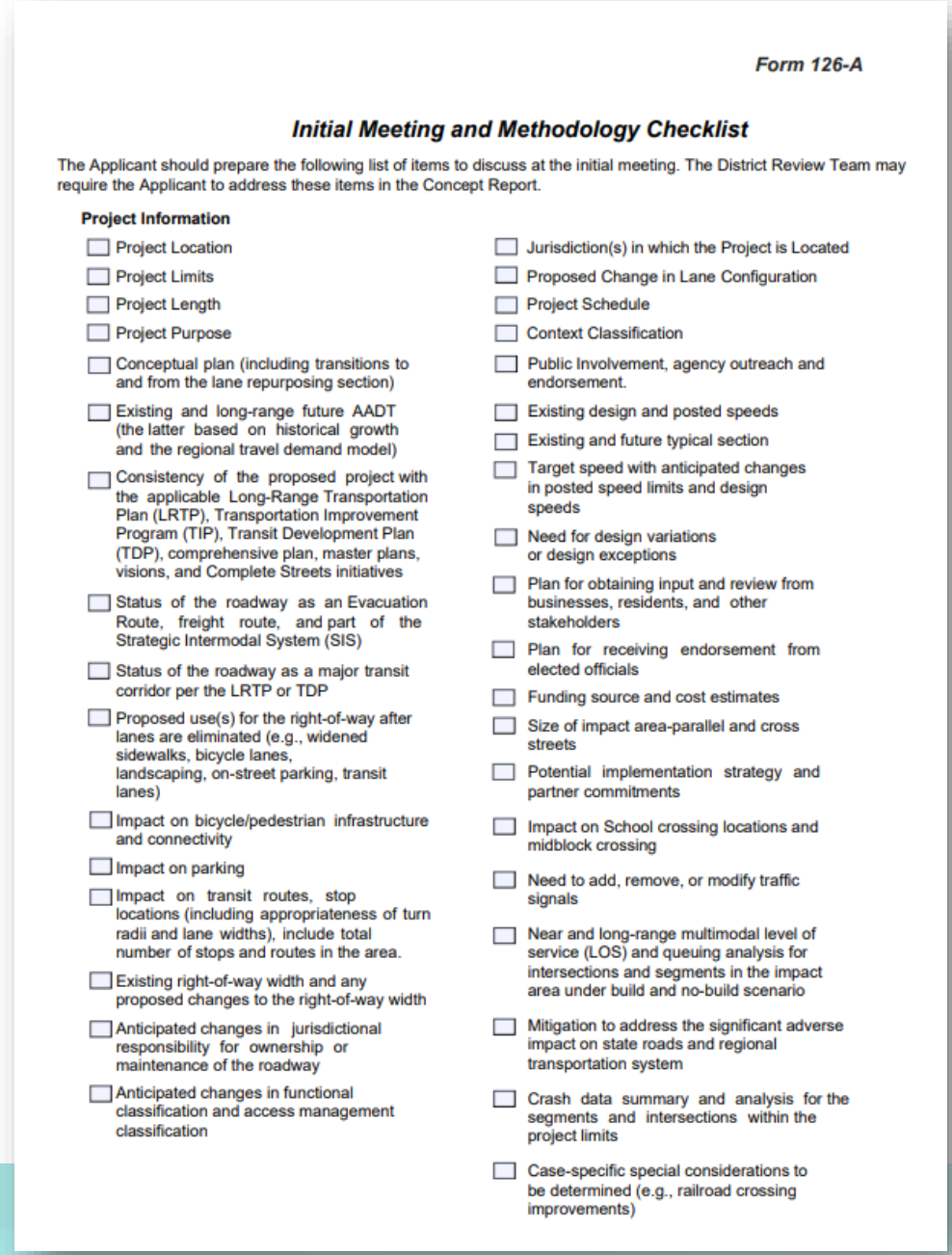
Step 1: Project Initiation

- First communication between the Applicant and the District
- Resources (Forms, Handbooks, Guidance)
- Initial Meeting (Form 126-A)
- Notification to Central Office (Form 126-B)



Application Process

- Initial Meeting
  - Scheduled by the District
  - Purpose: Discuss the proposed Project with the District Team
  - Applicant should provide a complete Form 126-A to the DLRC prior to the meeting



Form 126-A

Initial Meeting and Methodology Checklist

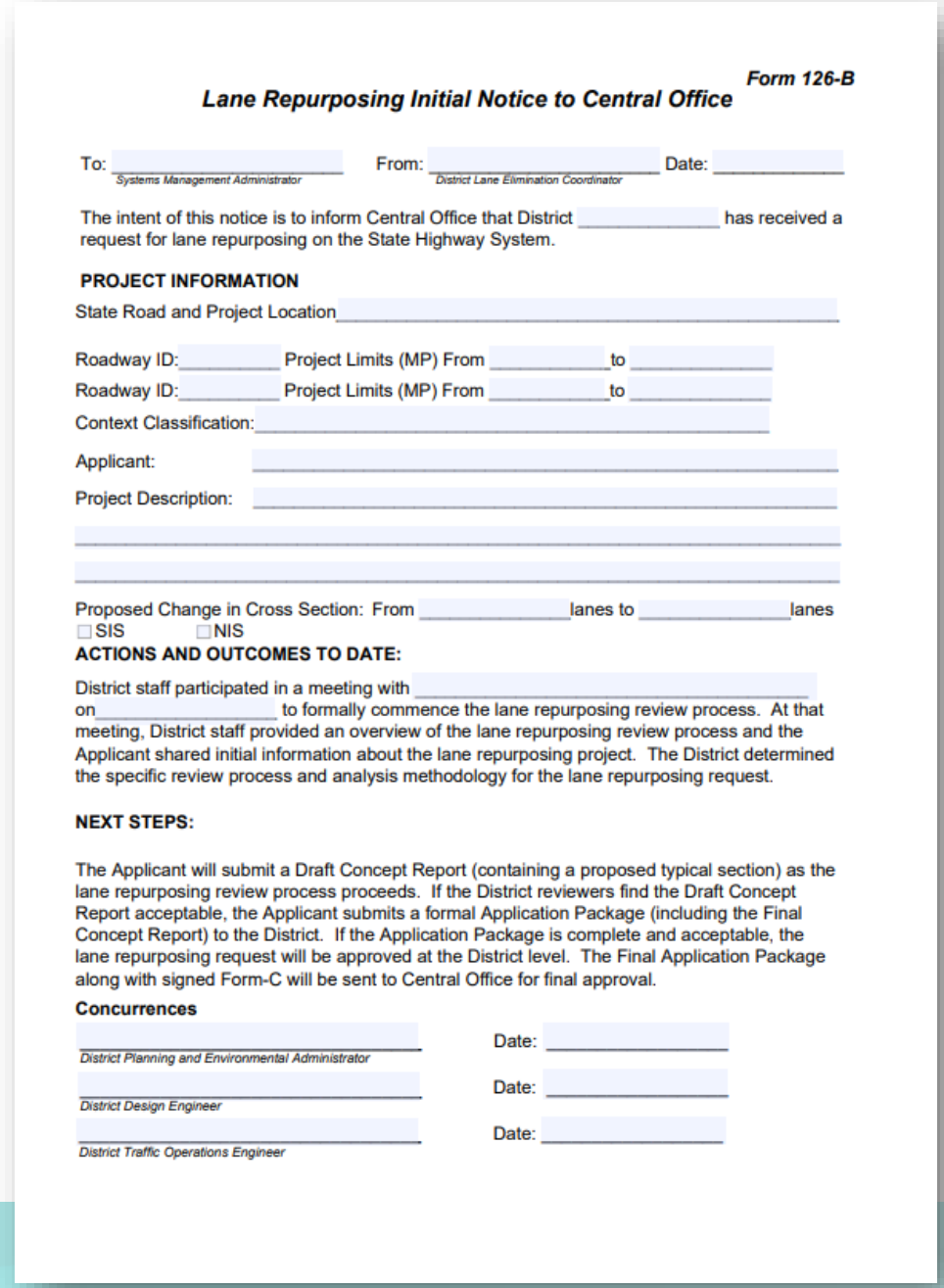
The Applicant should prepare the following list of items to discuss at the initial meeting. The District Review Team may require the Applicant to address these items in the Concept Report.

Project Information

- ☐ Project Location
- ☐ Project Limits
- ☐ Project Length
- ☐ Project Purpose
- ☐ Conceptual plan (including transitions to and from the lane repurposing section)
- ☐ Existing and long-range future AADT (the latter based on historical growth and the regional travel demand model)
- ☐ Consistency of the proposed project with the applicable Long-Range Transportation Plan (LRTP), Transportation Improvement Program (TIP), Transit Development Plan (TDP), comprehensive plan, master plans, visions, and Complete Streets initiatives
- ☐ Status of the roadway as an Evacuation Route, freight route, and part of the Strategic Intermodal System (SIS)
- ☐ Status of the roadway as a major transit corridor per the LRTP or TDP
- ☐ Proposed use(s) for the right-of-way after lanes are eliminated (e.g., widened sidewalks, bicycle lanes, landscaping, on-street parking, transit lanes)
- ☐ Impact on bicycle/pedestrian infrastructure and connectivity
- ☐ Impact on parking
- ☐ Impact on transit routes, stop locations (including appropriateness of turn radii and lane widths), include total number of stops and routes in the area.
- ☐ Existing right-of-way width and any proposed changes to the right-of-way width
- ☐ Anticipated changes in jurisdictional responsibility for ownership or maintenance of the roadway
- ☐ Anticipated changes in functional classification and access management classification
- ☐ Jurisdiction(s) in which the Project is Located
- ☐ Proposed Change in Lane Configuration
- ☐ Project Schedule
- ☐ Context Classification
- ☐ Public Involvement, agency outreach and endorsement.
- ☐ Existing design and posted speeds
- ☐ Existing and future typical section
- ☐ Target speed with anticipated changes in posted speed limits and design speeds
- ☐ Need for design variations or design exceptions
- ☐ Plan for obtaining input and review from businesses, residents, and other stakeholders
- ☐ Plan for receiving endorsement from elected officials
- ☐ Funding source and cost estimates
- ☐ Size of impact area-parallel and cross streets
- ☐ Potential implementation strategy and partner commitments
- ☐ Impact on School crossing locations and midblock crossing
- ☐ Need to add, remove, or modify traffic signals
- ☐ Near and long-range multimodal level of service (LOS) and queuing analysis for intersections and segments in the impact area under build and no-build scenario
- ☐ Mitigation to address the significant adverse impact on state roads and regional transportation system
- ☐ Crash data summary and analysis for the segments and intersections within the project limits
- ☐ Case-specific special considerations to be determined (e.g., railroad crossing improvements)

Application Process

- Form 126-B Initial Notice to Central Office
  - Project Description
  - District Concurrence
  - Notification to Central Office
    - Systems Implementation Office



Form 126-B

Lane Repurposing Initial Notice to Central Office

To: _____ From: _____ Date: _____
Systems Management Administrator *District Lane Elimination Coordinator*

The intent of this notice is to inform Central Office that District _____ has received a request for lane repurposing on the State Highway System.

PROJECT INFORMATION

State Road and Project Location_____

Roadway ID:_____ Project Limits (MP) From _____to _____
Roadway ID:_____ Project Limits (MP) From _____to _____
Context Classification:_____

Applicant: _____

Project Description: _____

_____

_____

Proposed Change in Cross Section: From _____lanes to _____lanes
☐SIS ☐NIS

ACTIONS AND OUTCOMES TO DATE:

District staff participated in a meeting with _____ on_____ to formally commence the lane repurposing review process. At that meeting, District staff provided an overview of the lane repurposing review process and the Applicant shared initial information about the lane repurposing project. The District determined the specific review process and analysis methodology for the lane repurposing request.

NEXT STEPS:

The Applicant will submit a Draft Concept Report (containing a proposed typical section) as the lane repurposing review process proceeds. If the District reviewers find the Draft Concept Report acceptable, the Applicant submits a formal Application Package (including the Final Concept Report) to the District. If the Application Package is complete and acceptable, the lane repurposing request will be approved at the District level. The Final Application Package along with signed Form-C will be sent to Central Office for final approval.

Concurrences

_____ Date: _____
District Planning and Environmental Administrator

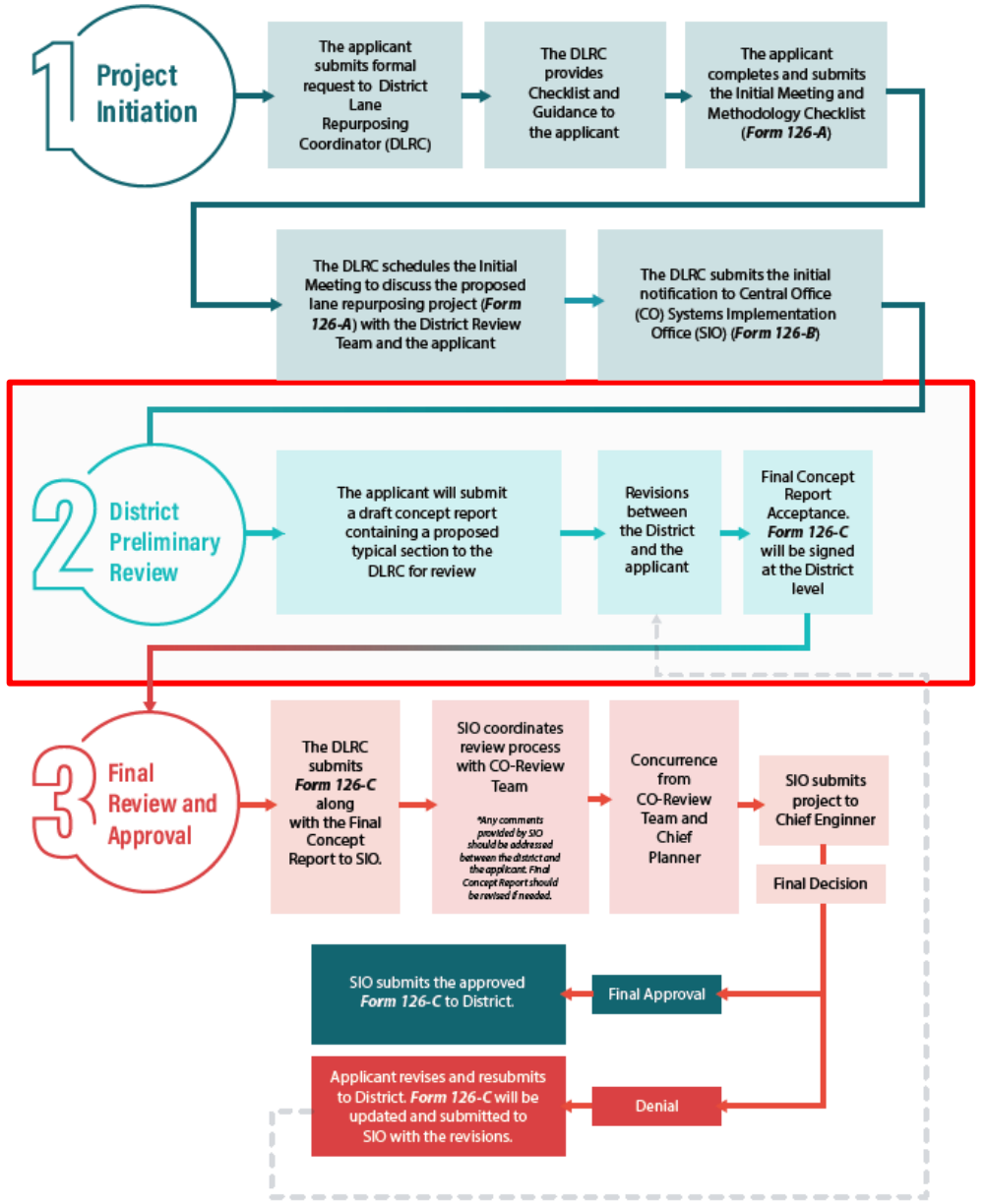
_____ Date: _____
District Design Engineer

_____ Date: _____
District Traffic Operations Engineer

Application Process

Step 2: District Preliminary Review

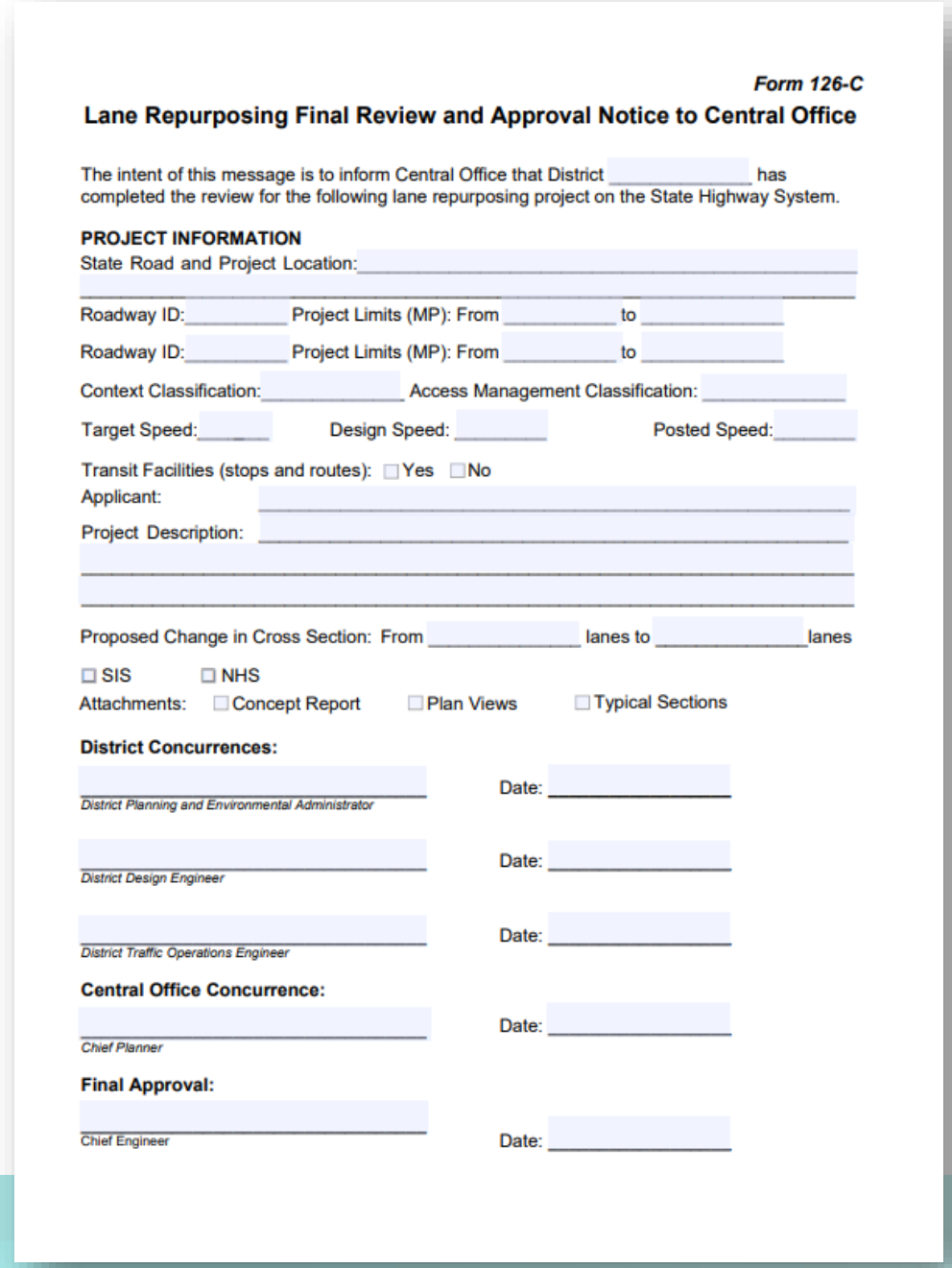
- Concept Report and typical sections are reviewed at the district level
- After District final approval, Form 126-C will be submitted to Central Office



Application Process

Form 126-C Final Review and Approval Notice to Centra Office

- Project Description
- District Concurrence
- Chief Planner Concurrence
- Chief Engineer Approval



Form 126-C

Lane Repurposing Final Review and Approval Notice to Central Office

The intent of this message is to inform Central Office that District _____ has completed the review for the following lane repurposing project on the State Highway System.

PROJECT INFORMATION

State Road and Project Location: _____

Roadway ID: _____ Project Limits (MP): From _____ to _____

Roadway ID: _____ Project Limits (MP): From _____ to _____

Context Classification: _____ Access Management Classification: _____

Target Speed: _____ Design Speed: _____ Posted Speed: _____

Transit Facilities (stops and routes): ☐ Yes ☐ No

Applicant: _____

Project Description: _____

Proposed Change in Cross Section: From _____ lanes to _____ lanes

☐ SIS ☐ NHS

Attachments: ☐ Concept Report ☐ Plan Views ☐ Typical Sections

District Concurrences:

_____ Date: _____

District Planning and Environmental Administrator

_____ Date: _____

District Design Engineer

_____ Date: _____

District Traffic Operations Engineer

Central Office Concurrence:

_____ Date: _____

Chief Planner

Final Approval:

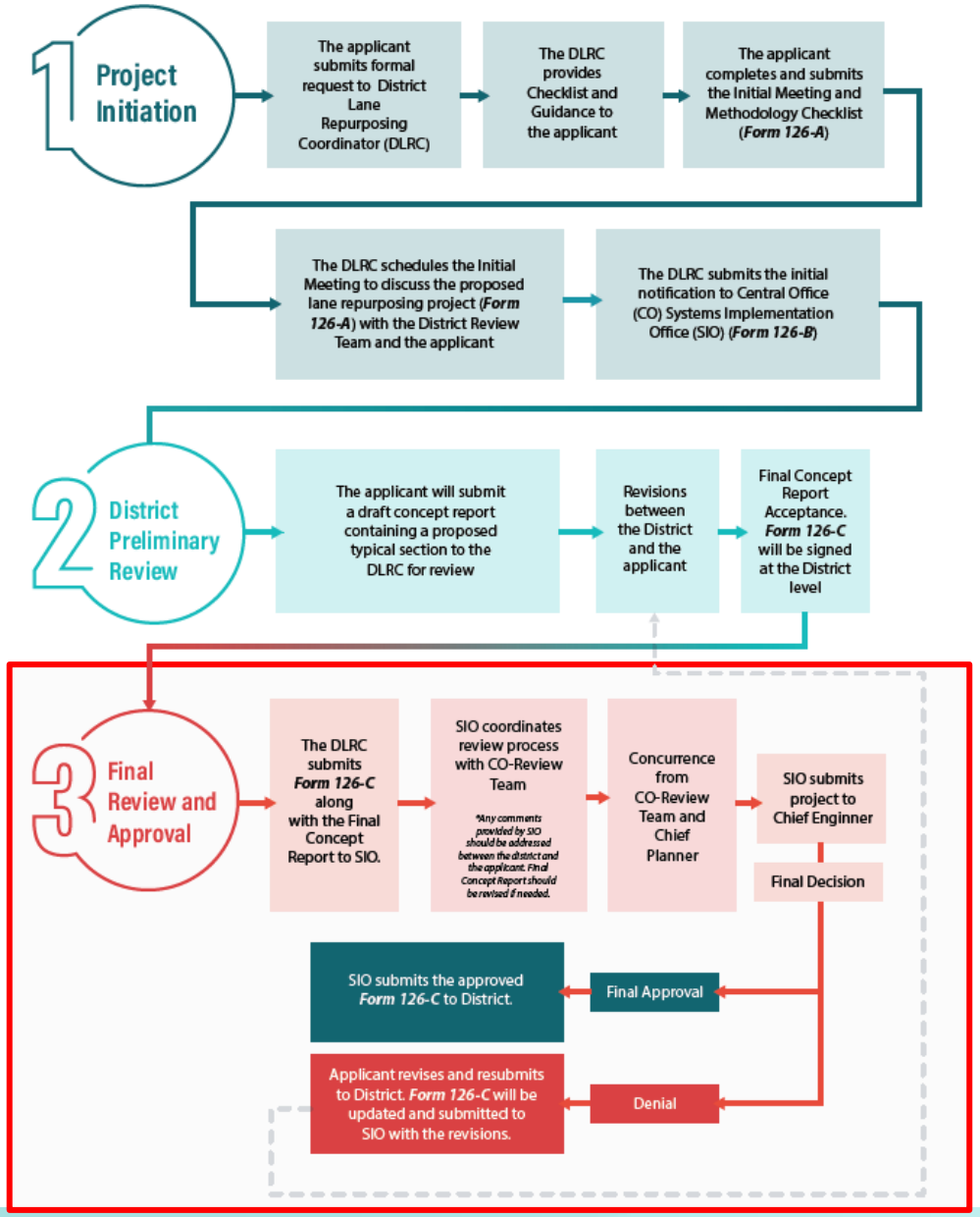
_____ Date: _____

Chief Engineer

Application Process

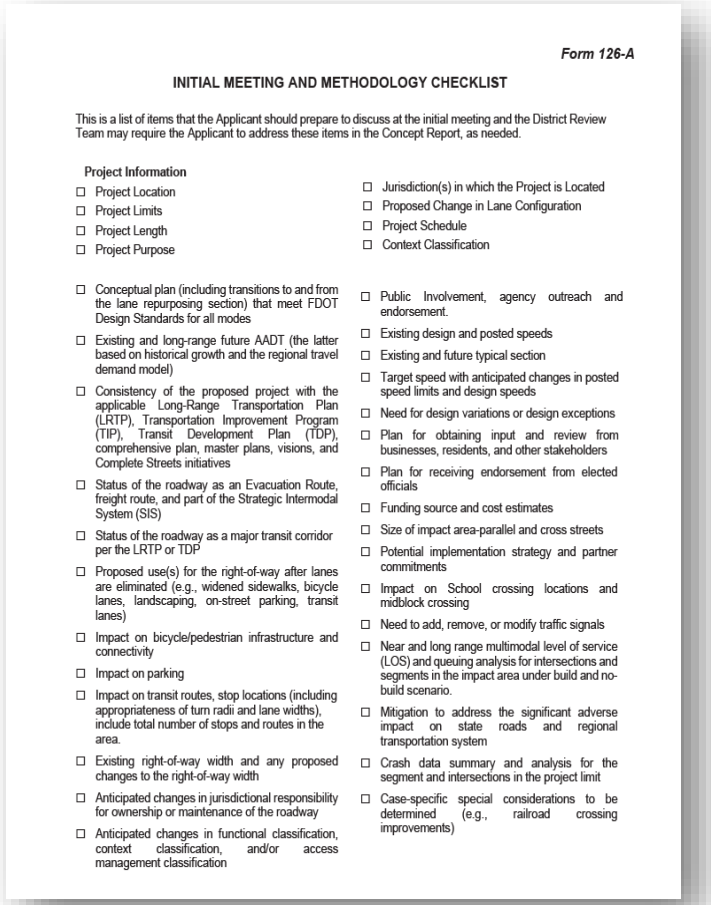
Step 3: Final Review and Approval

- Coordination between Applicant and the District
- A preliminary review and approval by District
- The final review and approval by Central Office (CO).



Required Forms FDM Chapter 103

Form 126 A: Initial Meeting and Methodology Checklist



Form 126-A

INITIAL MEETING AND METHODOLOGY CHECKLIST

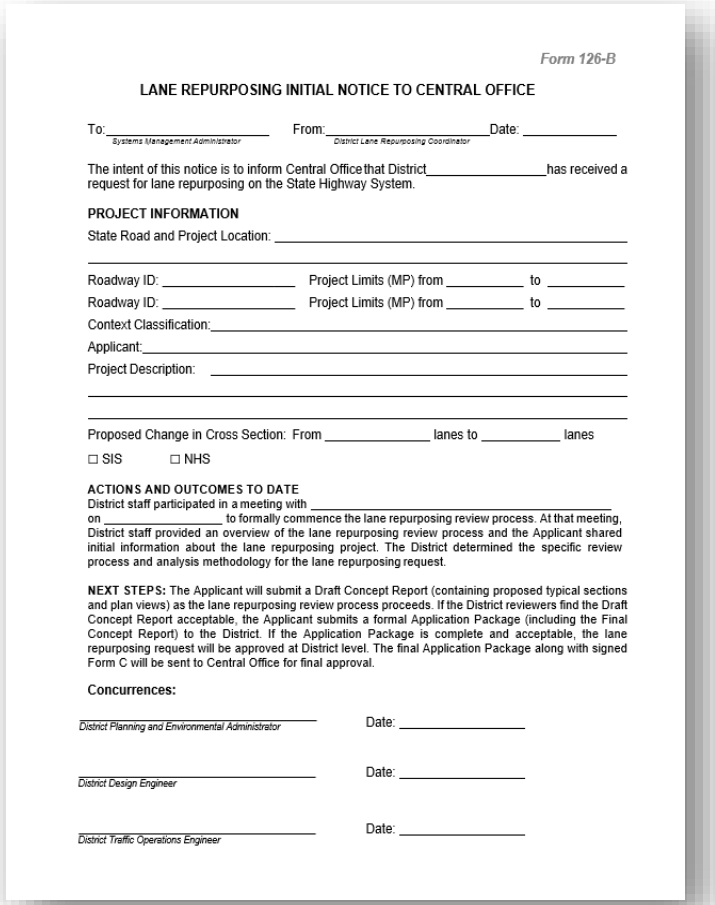
This is a list of items that the Applicant should prepare to discuss at the initial meeting and the District Review Team may require the Applicant to address these items in the Concept Report, as needed.

Project Information

- ☐ Project Location
- ☐ Project Limits
- ☐ Project Length
- ☐ Project Purpose
- ☐ Jurisdiction(s) in which the Project is Located
- ☐ Proposed Change in Lane Configuration
- ☐ Project Schedule
- ☐ Context Classification

- ☐ Conceptual plan (including transitions to and from the lane repurposing section) that meet FDOT Design Standards for all modes
- ☐ Existing and long-range future AADT (the latter based on historical growth and the regional travel demand model)
- ☐ Consistency of the proposed project with the applicable Long-Range Transportation Plan (LRTP), Transportation Improvement Program (TIP), Transit Development Plan (TDP), comprehensive plan, master plans, visions, and Complete Streets initiatives
- ☐ Status of the roadway as an Evacuation Route, freight route, and part of the Strategic Intermodal System (SIS)
- ☐ Status of the roadway as a major transit corridor per the LRTP or TDP
- ☐ Proposed use(s) for the right-of-way after lanes are eliminated (e.g., widened sidewalks, bicycle lanes, landscaping, on-street parking, transit lanes)
- ☐ Impact on bicycle/pedestrian infrastructure and connectivity
- ☐ Impact on parking
- ☐ Impact on transit routes, stop locations (including appropriateness of turn radii and lane widths), include total number of stops and routes in the area.
- ☐ Existing right-of-way width and any proposed changes to the right-of-way width
- ☐ Anticipated changes in jurisdictional responsibility for ownership or maintenance of the roadway
- ☐ Anticipated changes in functional classification, context classification, and/or access management classification
- ☐ Public Involvement, agency outreach and endorsement.
- ☐ Existing design and posted speeds
- ☐ Existing and future typical section
- ☐ Target speed with anticipated changes in posted speed limits and design speeds
- ☐ Need for design variations or design exceptions
- ☐ Plan for obtaining input and review from businesses, residents, and other stakeholders
- ☐ Plan for receiving endorsement from elected officials
- ☐ Funding source and cost estimates
- ☐ Size of impact area-parallel and cross streets
- ☐ Potential implementation strategy and partner commitments
- ☐ Impact on School crossing locations and midblock crossing
- ☐ Need to add, remove, or modify traffic signals
- ☐ Near and long range multimodal level of service (LOS) and queuing analysis for intersections and segments in the impact area under build and no-build scenario.
- ☐ Mitigation to address the significant adverse impact on state roads and regional transportation system
- ☐ Crash data summary and analysis for the segment and intersections in the project limit
- ☐ Case-specific special considerations to be determined (e.g., railroad crossing improvements)

Form 126 B: Lane Repurposing Initial Notice to Central Office



Form 126-B

LANE REPURPOSING INITIAL NOTICE TO CENTRAL OFFICE

To: _____ *Systems Management Administrator* From: _____ *District Lane Repurposing Coordinator* Date: _____

The intent of this notice is to inform Central Office that District _____ has received a request for lane repurposing on the State Highway System.

PROJECT INFORMATION

State Road and Project Location: _____

_____

Roadway ID: _____ Project Limits (MP) from _____ to _____

Roadway ID: _____ Project Limits (MP) from _____ to _____

Context Classification: _____

Applicant: _____

Project Description: _____

_____

_____

Proposed Change in Cross Section: From _____ lanes to _____ lanes

☐ SIS ☐ NHS

ACTIONS AND OUTCOMES TO DATE

District staff participated in a meeting with _____ on _____ to formally commence the lane repurposing review process. At that meeting, District staff provided an overview of the lane repurposing review process and the Applicant shared initial information about the lane repurposing project. The District determined the specific review process and analysis methodology for the lane repurposing request.

NEXT STEPS: The Applicant will submit a Draft Concept Report (containing proposed typical sections and plan views) as the lane repurposing review process proceeds. If the District reviewers find the Draft Concept Report acceptable, the Applicant submits a formal Application Package (including the Final Concept Report) to the District. If the Application Package is complete and acceptable, the lane repurposing request will be approved at District level. The final Application Package along with signed Form C will be sent to Central Office for final approval.

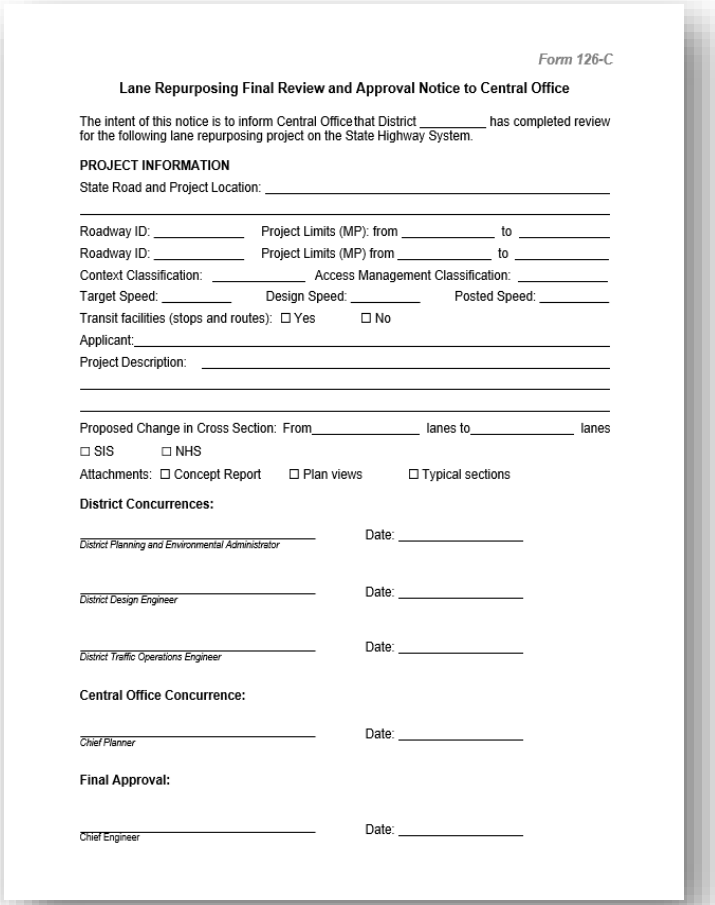
Concurrences:

_____ Date: _____
District Planning and Environmental Administrator

_____ Date: _____
District Design Engineer

_____ Date: _____
District Traffic Operations Engineer

Form 126 C: Lane Repurposing Final Approval Notice to Central Office



Form 126-C

Lane Repurposing Final Review and Approval Notice to Central Office

The intent of this notice is to inform Central Office that District _____ has completed review for the following lane repurposing project on the State Highway System.

PROJECT INFORMATION

State Road and Project Location: _____

_____

Roadway ID: _____ Project Limits (MP): from _____ to _____

Roadway ID: _____ Project Limits (MP) from _____ to _____

Context Classification: _____ Access Management Classification: _____

Target Speed: _____ Design Speed: _____ Posted Speed: _____

Transit facilities (stops and routes): ☐ Yes ☐ No

Applicant: _____

Project Description: _____

_____

_____

Proposed Change in Cross Section: From _____ lanes to _____ lanes

☐ SIS ☐ NHS

Attachments: ☐ Concept Report ☐ Plan views ☐ Typical sections

District Concurrences:

_____ Date: _____
District Planning and Environmental Administrator

_____ Date: _____
District Design Engineer

_____ Date: _____
District Traffic Operations Engineer

Central Office Concurrence:

_____ Date: _____
Chief Planner

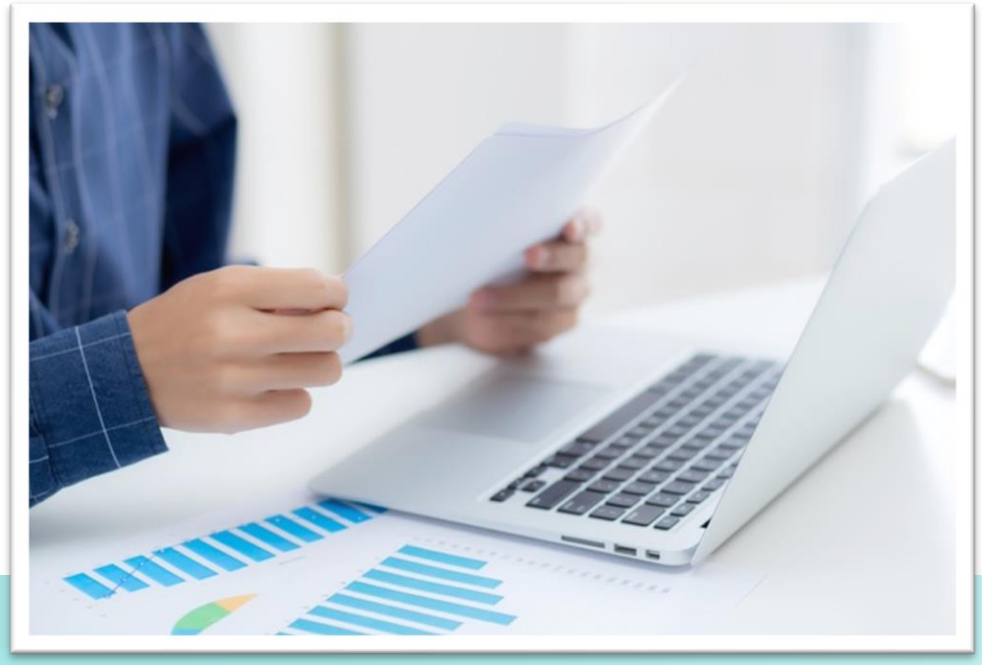
Final Approval:

_____ Date: _____
Chief Engineer

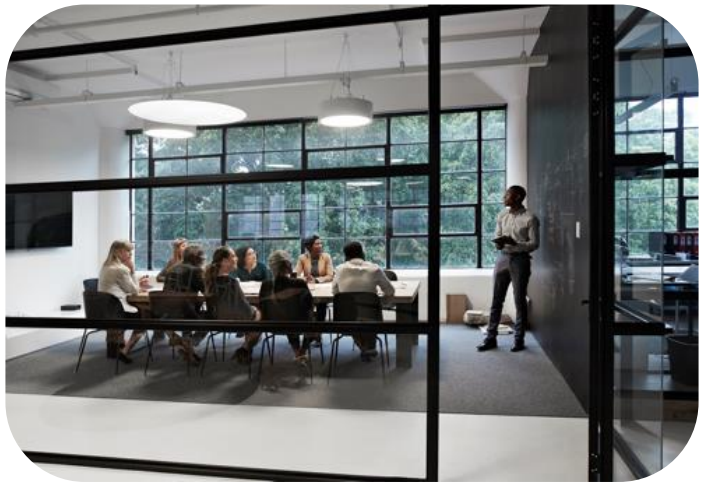
https://www.fdot.gov/roadway/fdm/default.shtm

Concept Reports

- Concept report is required by the applicants for a lane repurposing application
- Reviewed by the District Team and Central Office Team
- The Concept report consists in various parts required for the review like
  - Project description,
  - Proposed modifications,
  - Traffic analysis,
  - Safety analysis,
  - Supporting documentation
    - Public Involvement
    - Simulations files
    - Other



Best Practices



Local Project Champion Support

Early Coordination with FDOT

Traffic Monitoring Best Practices

Project Examples

Project 1 – SR A1A (North Fort Lauderdale Beach Boulevard)

- This corridor is extremely popular with beach visitors with on-street parking and access points to the beach.
- Purpose of the project was to create a safer environment for pedestrians and bicyclist by reducing the vehicular speeds and improving the roadway features.

Project 1 – SR A1A (North Fort Lauderdale Beach Boulevard)

- SR A1A is an example of a four-lane facility being reduced to two lanes
- Wider sidewalks were created, bike lanes were added, the median was landscaped, pedestrian lighting was installed, and two signalized mid-block pedestrian crossings were added.

FDOT

SR 693 | Pasadena Avenue

- This corridor is a part of a larger BRT Design Project that extends from Downtown St. Petersburg to St. Pete Beach.
  - This BRT project will use transit signal prioritization if the buses fall behind in schedule over 5 minutes and other transit related priority strategies.
- The Purpose of adding BAT lanes is to allow transit priority treatments for buses using the corridor.

SR 693 | Pasadena Avenue

Figure 4.1: Proposed Typical Section from Matthews Road/Shore Drive to Park Street

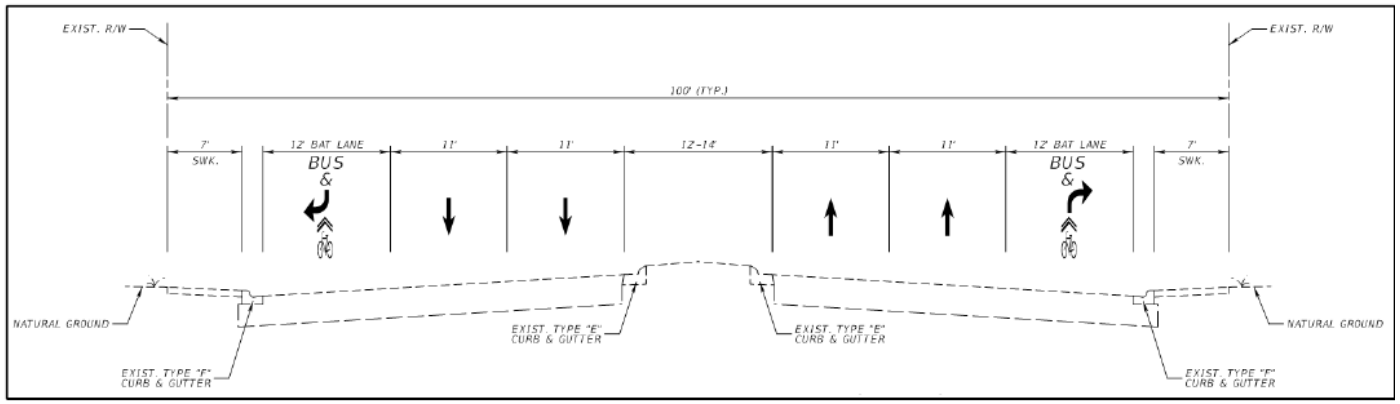
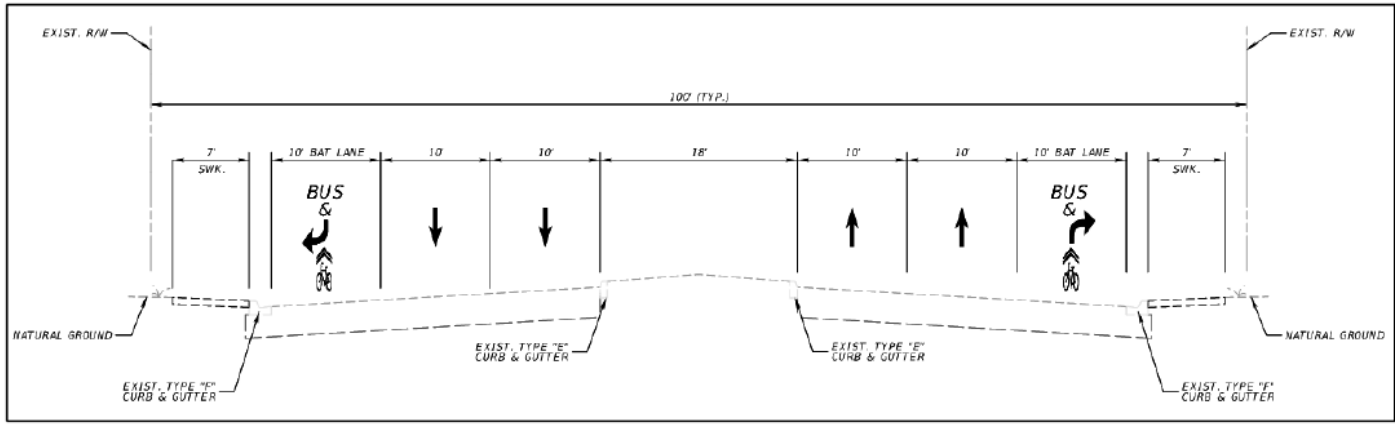


Figure 4.2: Proposed Typical Section from Park Street to Central Avenue



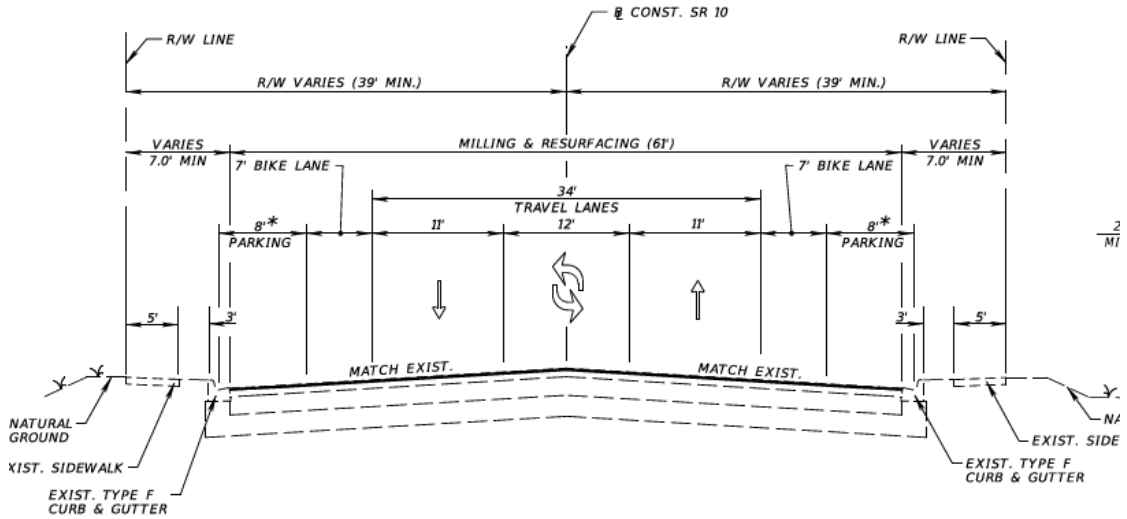
- While the overall intersection delays did increase, the intersections maintained a LOS D operation.
- To address the bicyclists infrastructure concerns, the outermost lanes will be used to allow bicyclist to share the roadway with buses and right turning vehicles only.

FDOT

US 90 | SR 10
Monticello

- The purpose of this project is to increase safety by providing a refuge for vehicles making left turns, as well as separating bicyclists from vehicular traffic.
- The existing typical section is a four-lane corridor with sidewalks on each side with curb and gutter. The proposed typical section will be three lanes with one travel lane in each direction and a two-way center left turn lane and include bicycle lanes and on street parking in both directions.

FDOT



* ON-STREET PARKING AND EXIST. CURB & GUTTER PRESENT FROM STA. 1082+95.77 TO STA. 1115+02.09. EXIST. PAVED SHOULDER PRESENT FROM STA. 1115+02.09 TO STA. 1117+33.97.

** SEE TYPICAL SECTION DETAILS: CROSS SLOPE CORRECTION FOR LIMITS OF CROSS SLOPE CORRECTION.

*** BASE MATERIAL MAY BE ENCOUNTERED DURING MILLING OPERATIONS.

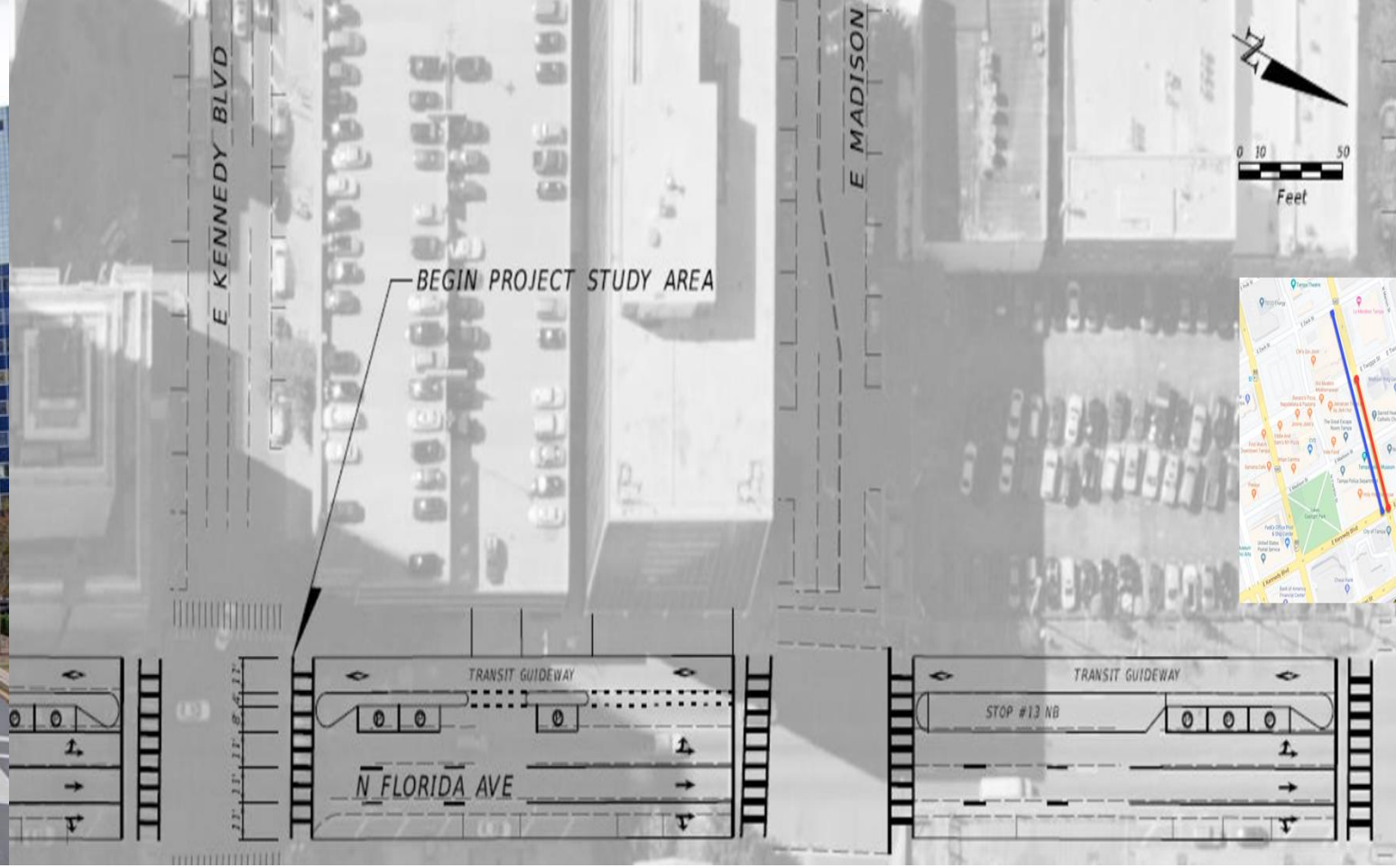
TYPICAL SECTION 4
MILLING & RESURFACIN
SR 10 (US 90)
STA. 1082+95.77 TO STA. 1117

US 90 | SR 10 Monticello

- It was concluded that “while the repurposing of lanes in this area will slightly reduce level of service for the roadway segment, this reduction is still within an acceptable range for this sort of facility.”
- The results of the Level of Service analysis using Highway Capacity Software (HCS) determined US 90 is experiencing LOS A with the existing typical section and would experience LOS B after the lane repurposing is implemented.

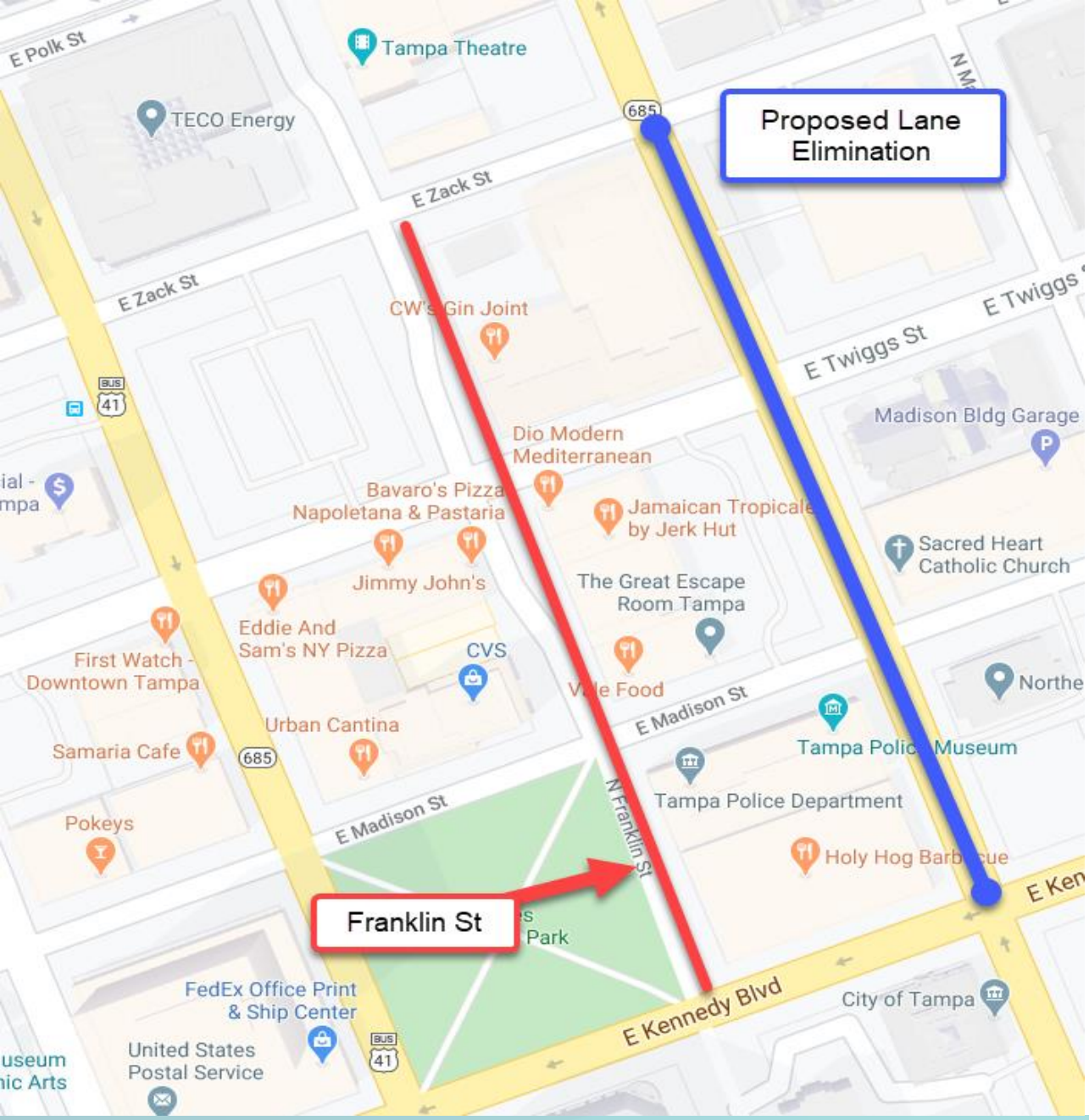
US 41B (SR 685) N. Florida Ave

- The alignment is proposed to be a dedicated transit lane.
- This segment is classified as C6 Urban Core with a posted speed of 35mph.
- Florida Ave is listed as truck route on the Hillsborough County Truck Route Plan.



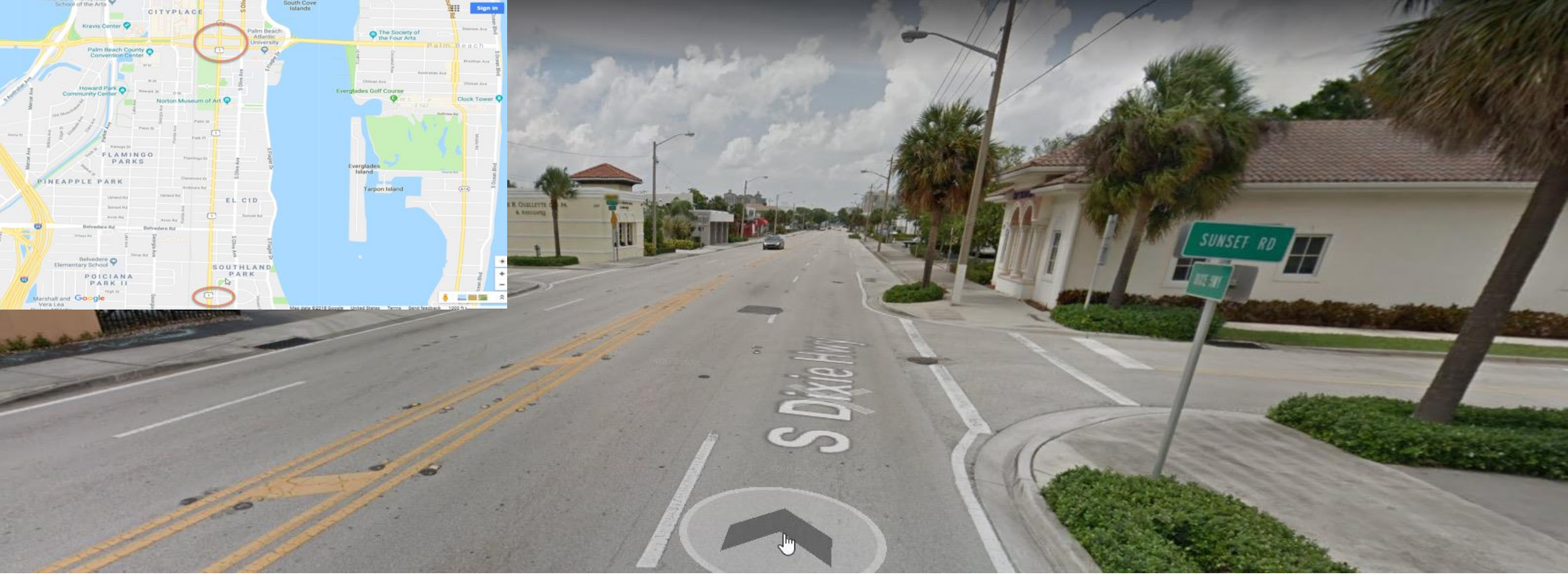
US 41B (SR 685) N. Florida Ave

- The concept plan incorporates a transit stop area, relocated parking, and transit only lane.
- Design Phase will also incorporate speed management strategies and techniques to achieve the target speed.



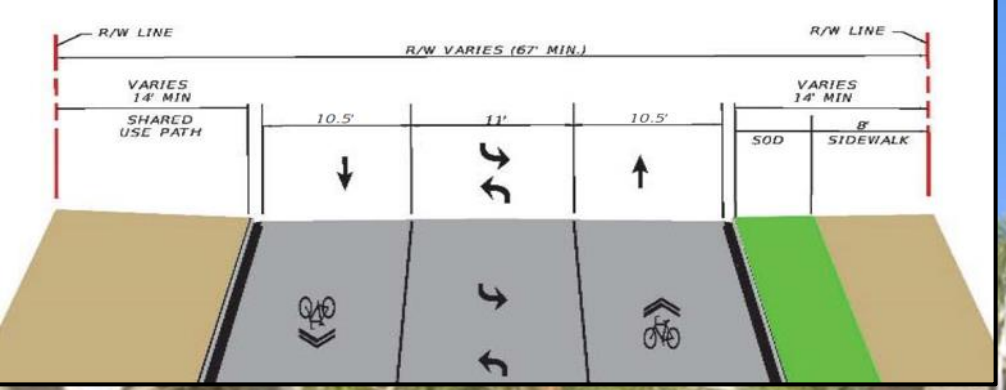
US 41B (SR 685) N. Florida Ave

- Lane repurposing will not impact the existing transit routes
- Bike lane
  - Relocated on the adjacent roadway, Franklin St.
  - On Franklin Street, vehicles travel at a lower speed and in small scale context which provides bicycles safe, direct access to the adjacent business and commercial uses.



SR 5 South Dixie Highway

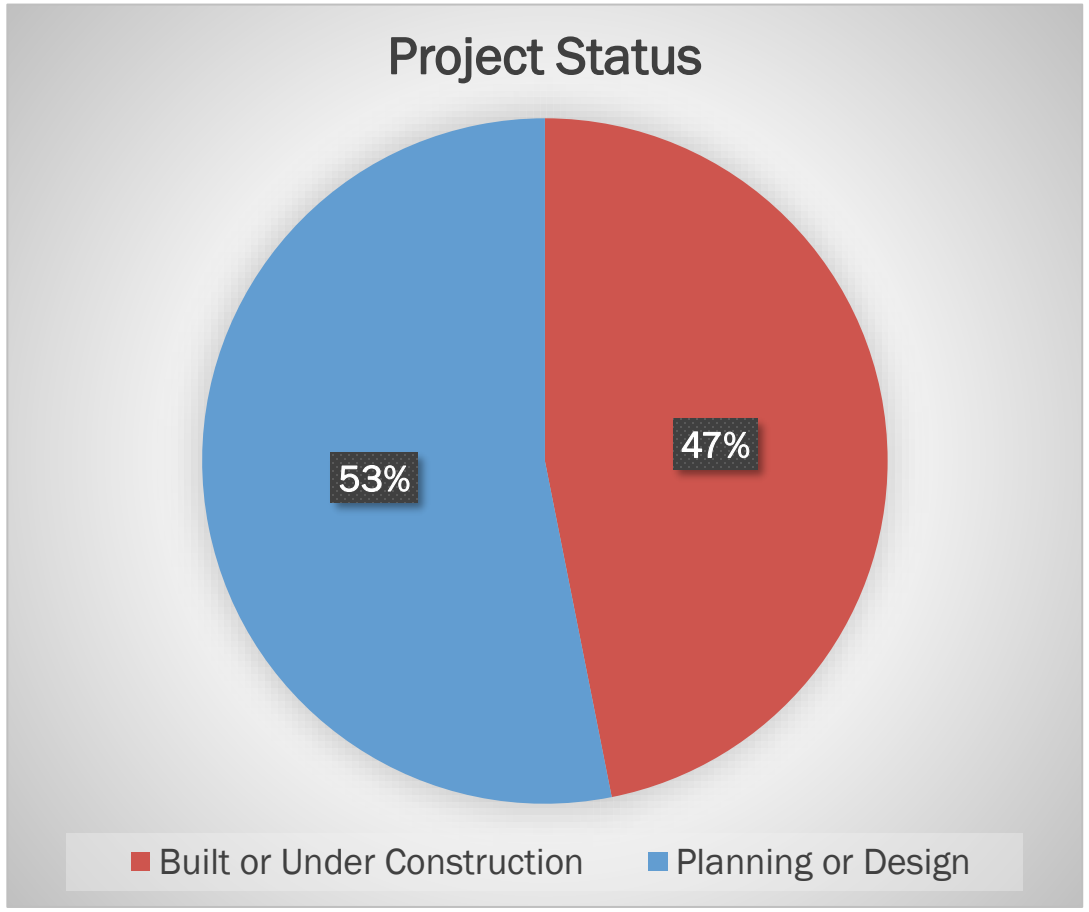
- The purpose is to improve safety, multi-modal function and aesthetic appeal of the corridor.
- Project supported by locals.
- This road segment is classified as C4.
- No adverse impact to adjacent corridors, transit, trucks and emergency vehicles

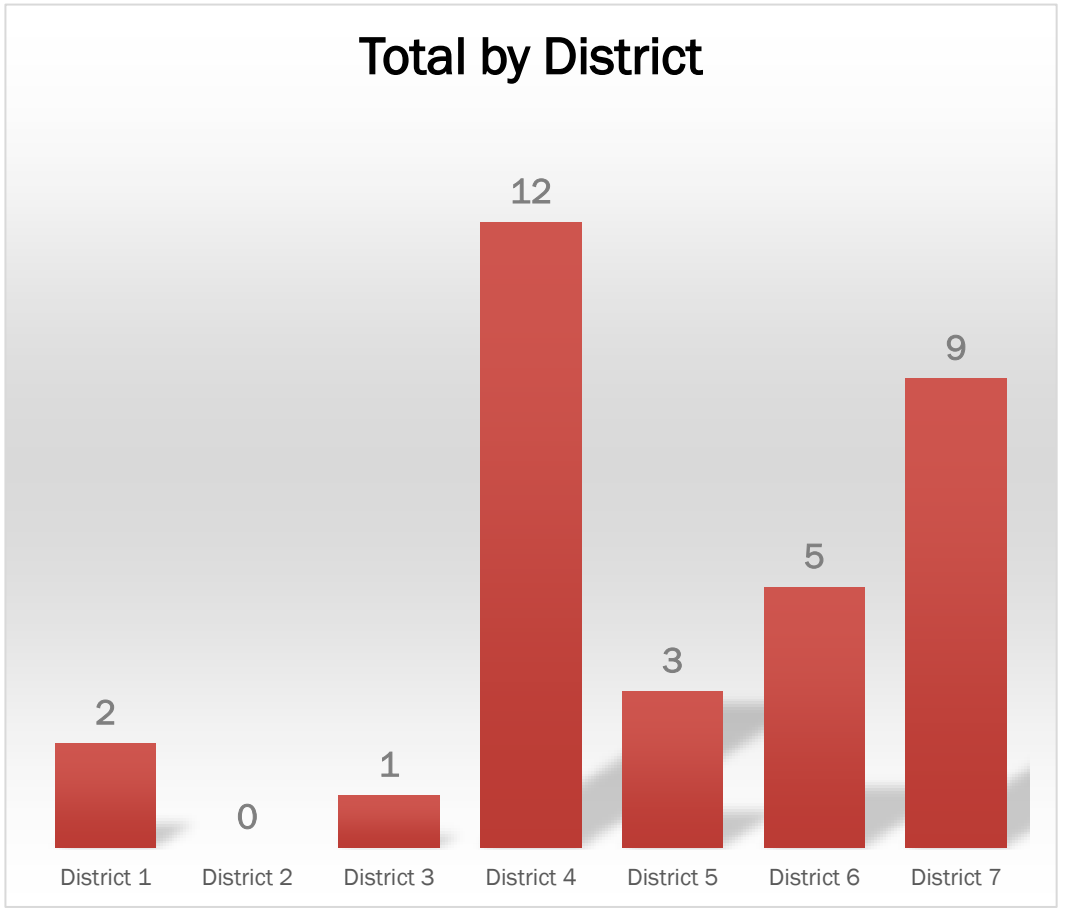


SR 5 South Dixie Highway

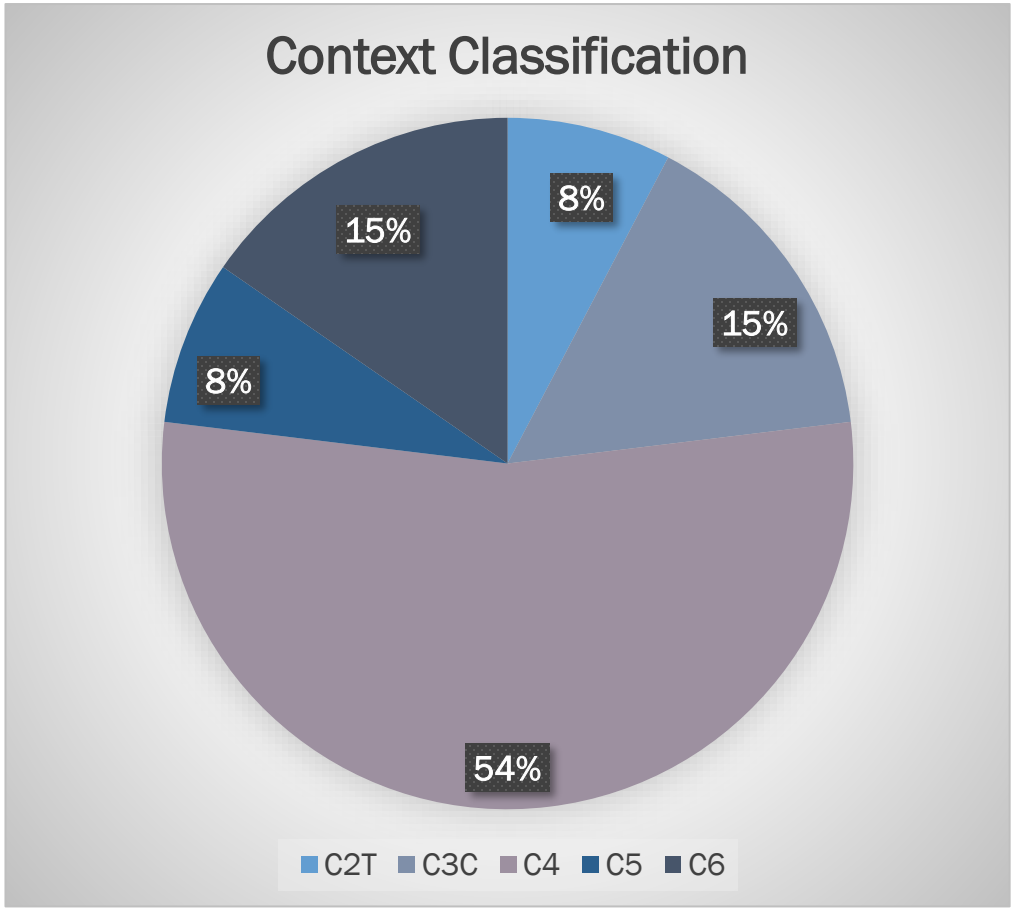
- The benefits of this project are to provided a safer access to walking and biking, improve crossing the street easier and safer.
- Also, will improve both aesthetic and economic benefits to the corridor, reduce vehicular travel speeds, and add on-street parking opportunities

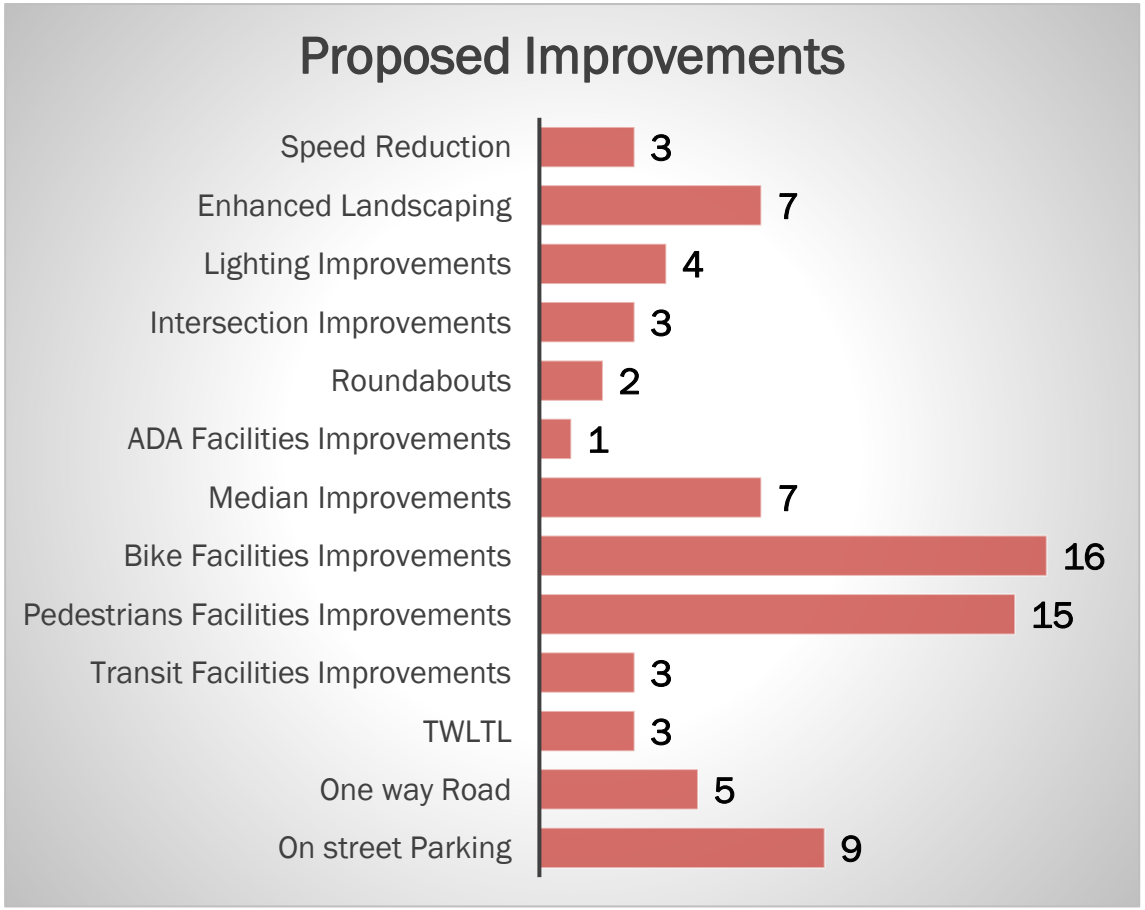
Projects between 2014-2020





Projects between 2014-2020





What does not constitute a LR Project

Narrowing Lanes

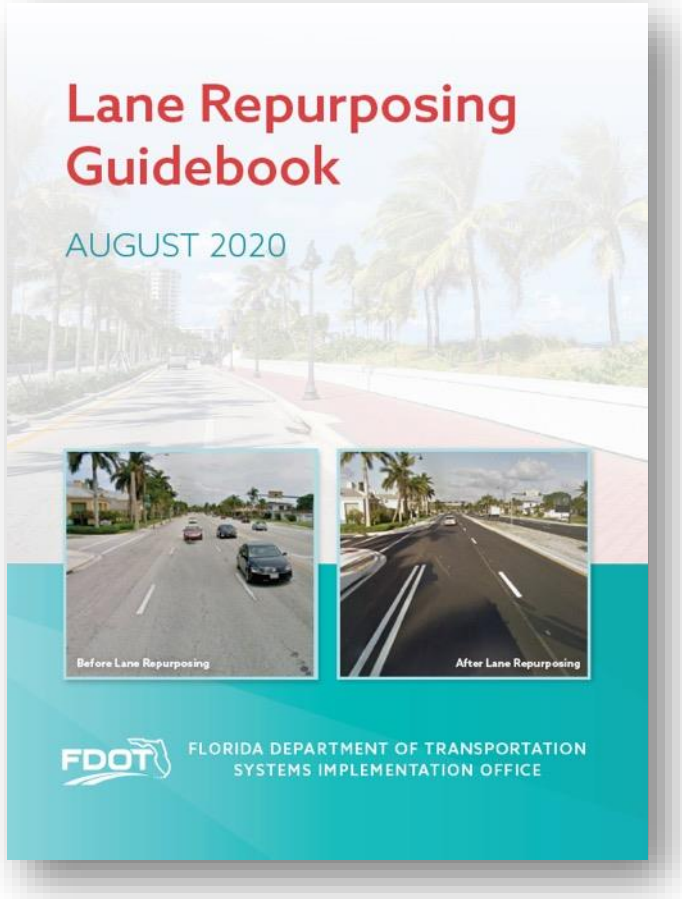
Add Exclusive Left/Right Turns lanes

Drop off Lanes

Operational Improvements

Resources

Lane Repurposing Guidebook

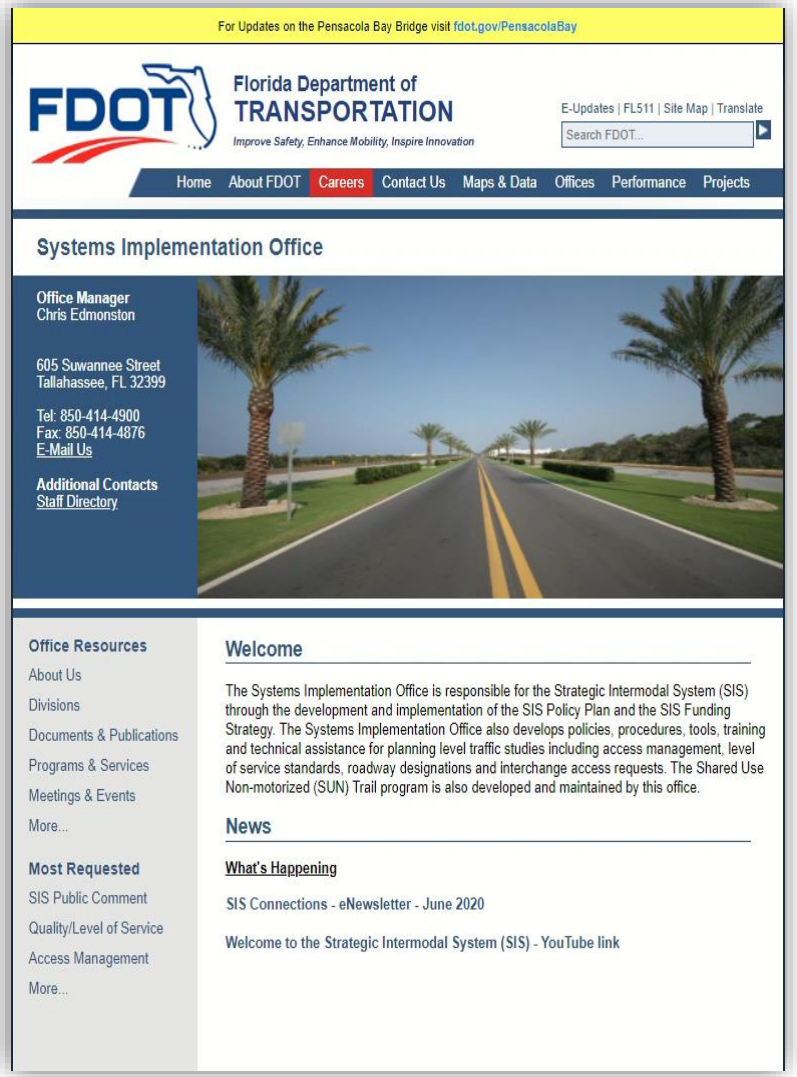


- Resources
- Process
- Forms and Templates
- Examples

https://www.fdot.gov/planning/systems/programs/sm/lanerepurposing/

SIO Website

- Contacts
- Guidebook
- Other Resources
- Training and Webinars

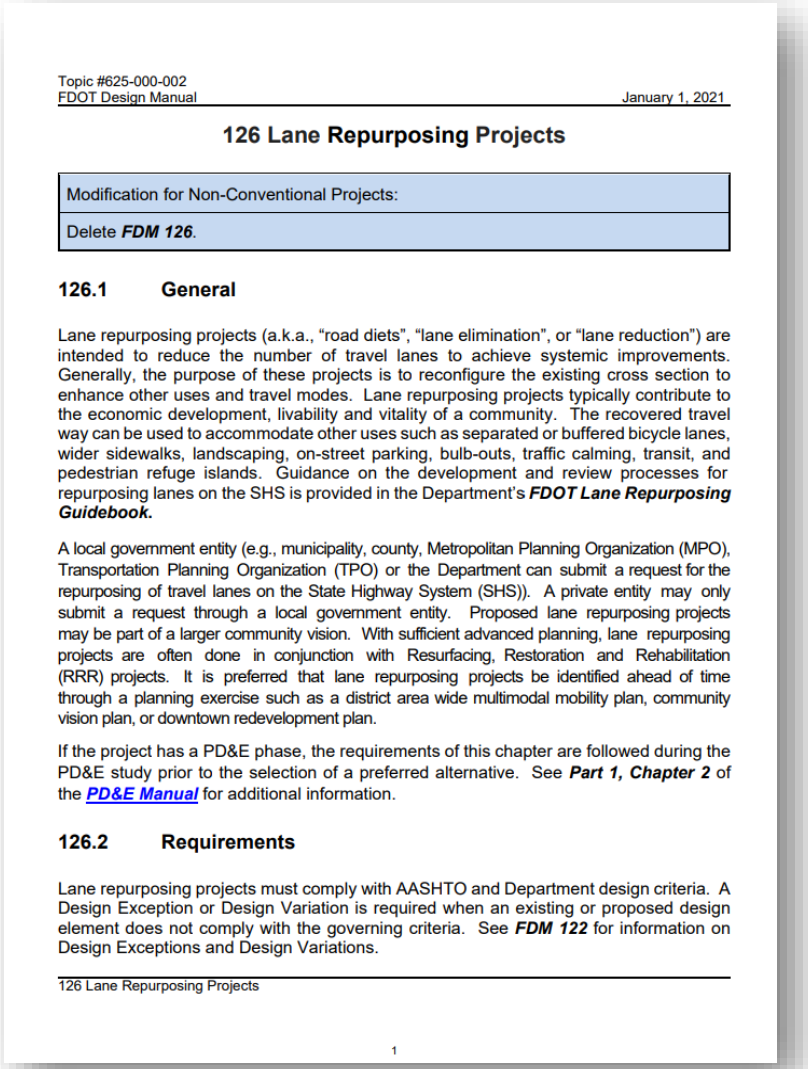


https://www.fdot.gov/planning/systems/

FDM Chapter 126

- General information
- Process
- Forms (Chapter 103)

https://www.fdot.gov/roadway/fdm/



Topic #625-000-002
FDOT Design Manual January 1, 2021

126 Lane Repurposing Projects

Modification for Non-Conventional Projects:
Delete ***FDM 126***.

126.1 General

Lane repurposing projects (a.k.a., "road diets", "lane elimination", or "lane reduction") are intended to reduce the number of travel lanes to achieve systemic improvements. Generally, the purpose of these projects is to reconfigure the existing cross section to enhance other uses and travel modes. Lane repurposing projects typically contribute to the economic development, livability and vitality of a community. The recovered travel way can be used to accommodate other uses such as separated or buffered bicycle lanes, wider sidewalks, landscaping, on-street parking, bulb-outs, traffic calming, transit, and pedestrian refuge islands. Guidance on the development and review processes for repurposing lanes on the SHS is provided in the Department's ***FDOT Lane Repurposing Guidebook.***

A local government entity (e.g., municipality, county, Metropolitan Planning Organization (MPO), Transportation Planning Organization (TPO) or the Department can submit a request for the repurposing of travel lanes on the State Highway System (SHS)). A private entity may only submit a request through a local government entity. Proposed lane repurposing projects may be part of a larger community vision. With sufficient advanced planning, lane repurposing projects are often done in conjunction with Resurfacing, Restoration and Rehabilitation (RRR) projects. It is preferred that lane repurposing projects be identified ahead of time through a planning exercise such as a district area wide multimodal mobility plan, community vision plan, or downtown redevelopment plan.

If the project has a PD&E phase, the requirements of this chapter are followed during the PD&E study prior to the selection of a preferred alternative. See ***Part 1, Chapter 2*** of the ***PD&E Manual*** for additional information.

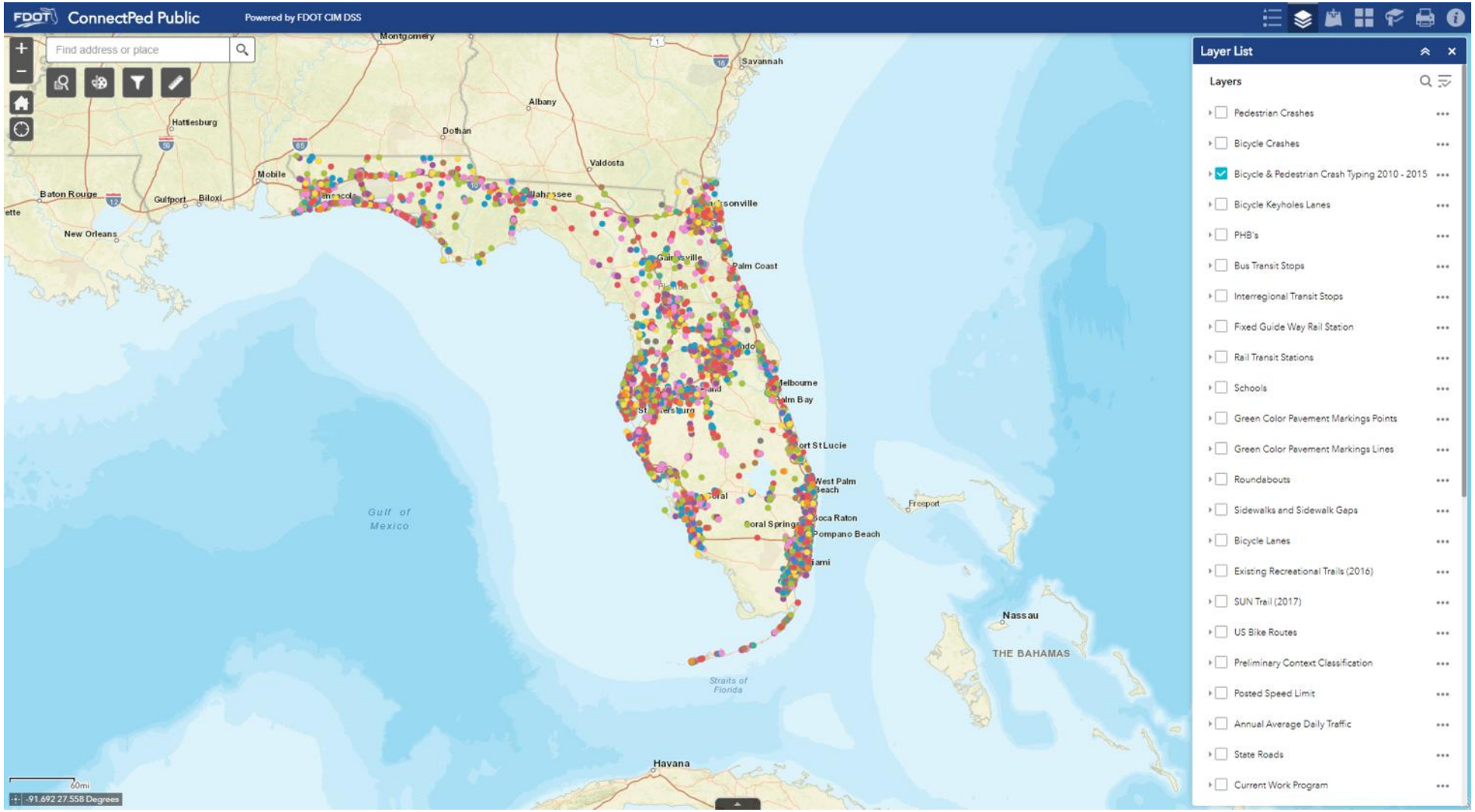
126.2 Requirements

Lane repurposing projects must comply with AASHTO and Department design criteria. A Design Exception or Design Variation is required when an existing or proposed design element does not comply with the governing criteria. See ***FDM 122*** for information on Design Exceptions and Design Variations.

126 Lane Repurposing Projects

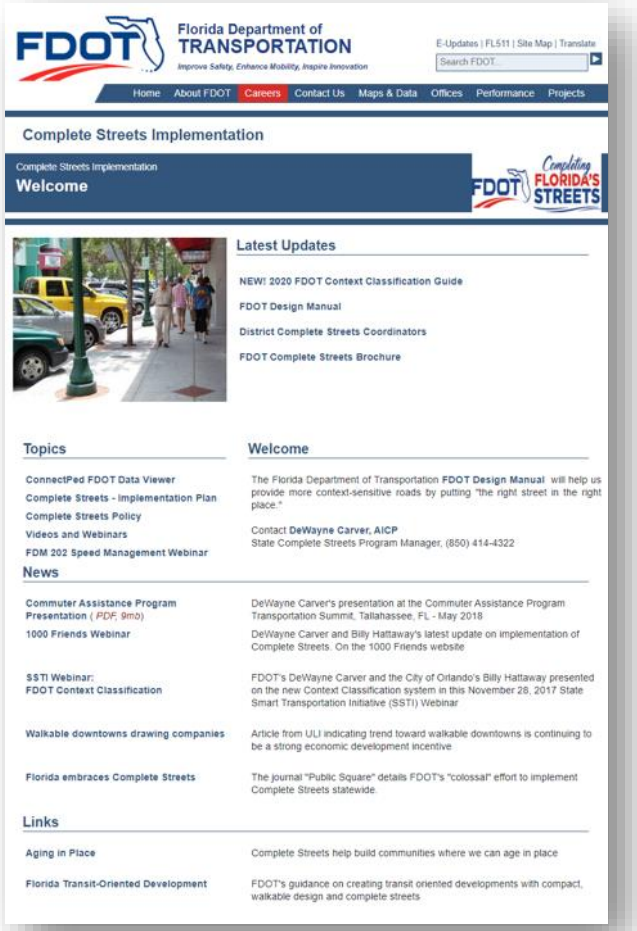
1

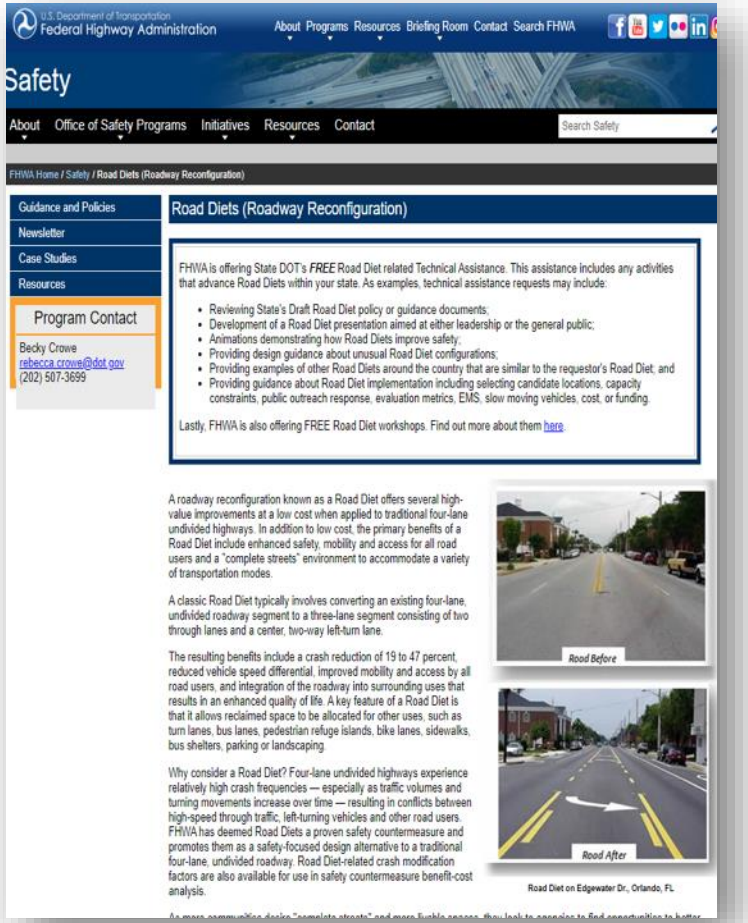
ConnectPed Public Site

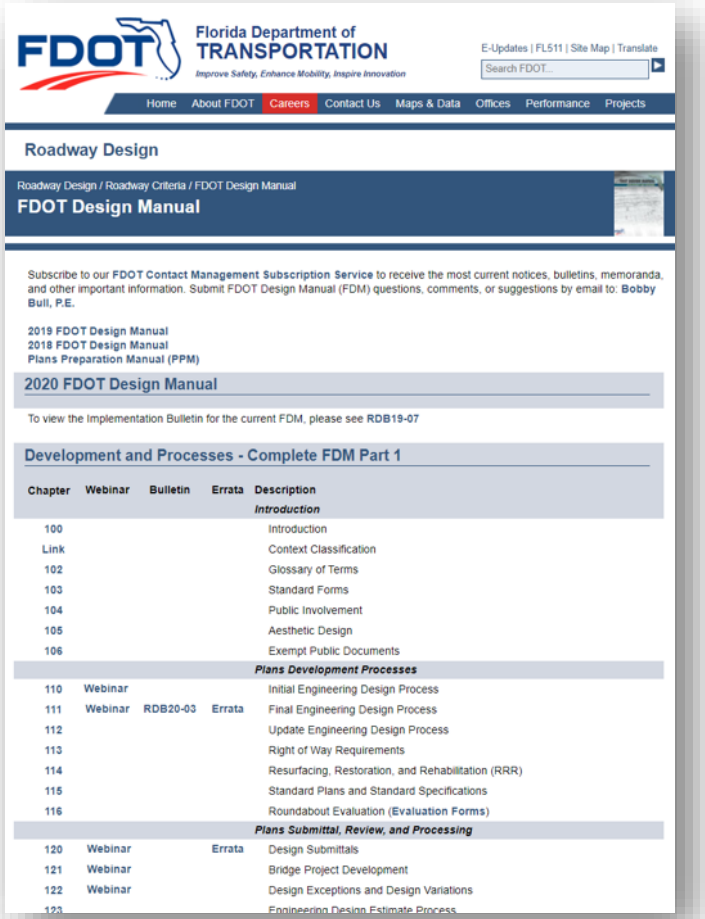


https://www.fdot.gov/roadway/csi/default.shtm

Other Resources







Public Involvement Resources

[Florida Statue 335.199]

[FDM 104- Public Involvement]

[Public Involvement Handbook]

[Office of Policy Planning]

Questions

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