



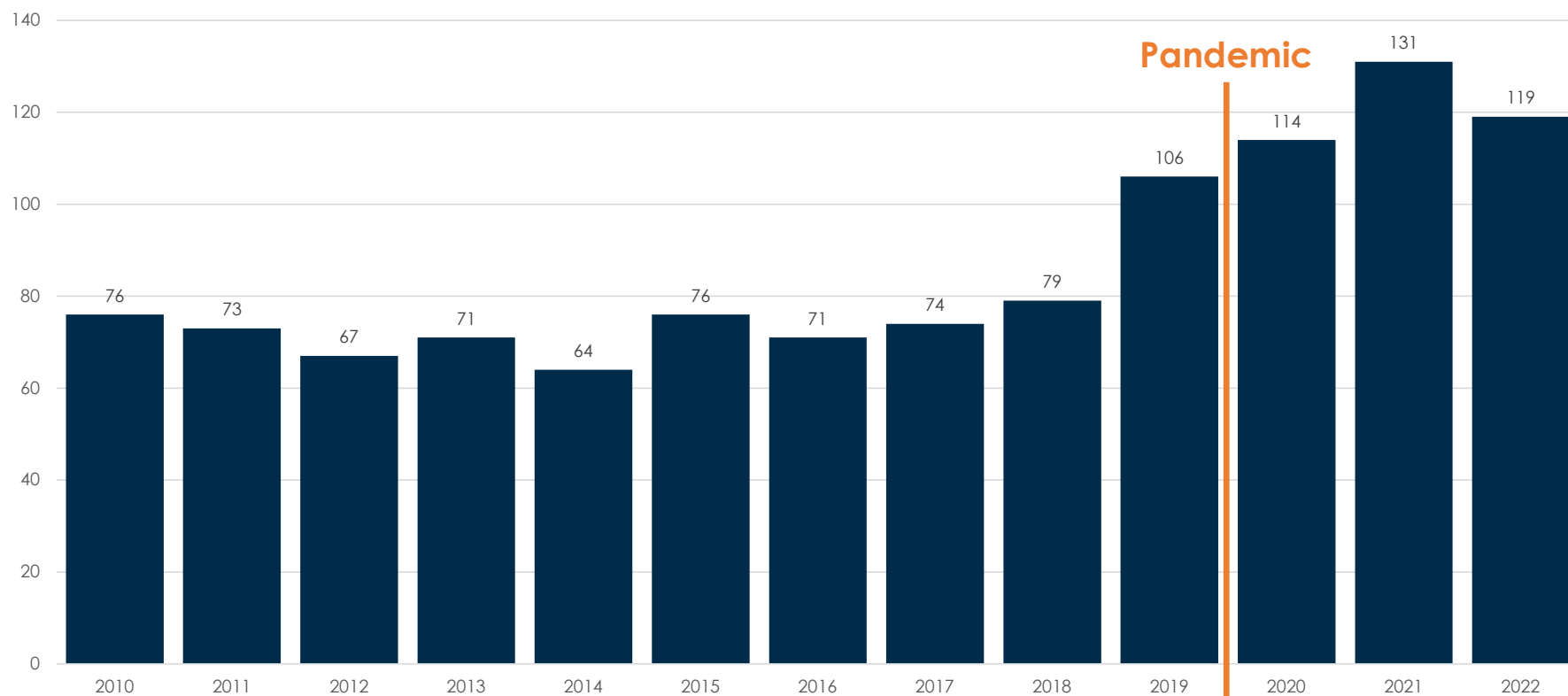
*NASHVILLE DEPARTMENT of TRANSPORTATION
& MULTIMODAL INFRASTRUCTURE*

Nashville Vision Zero

Brad Freeze, Chief Engineer
Highway Safety and Operations Conference
November 15, 2022



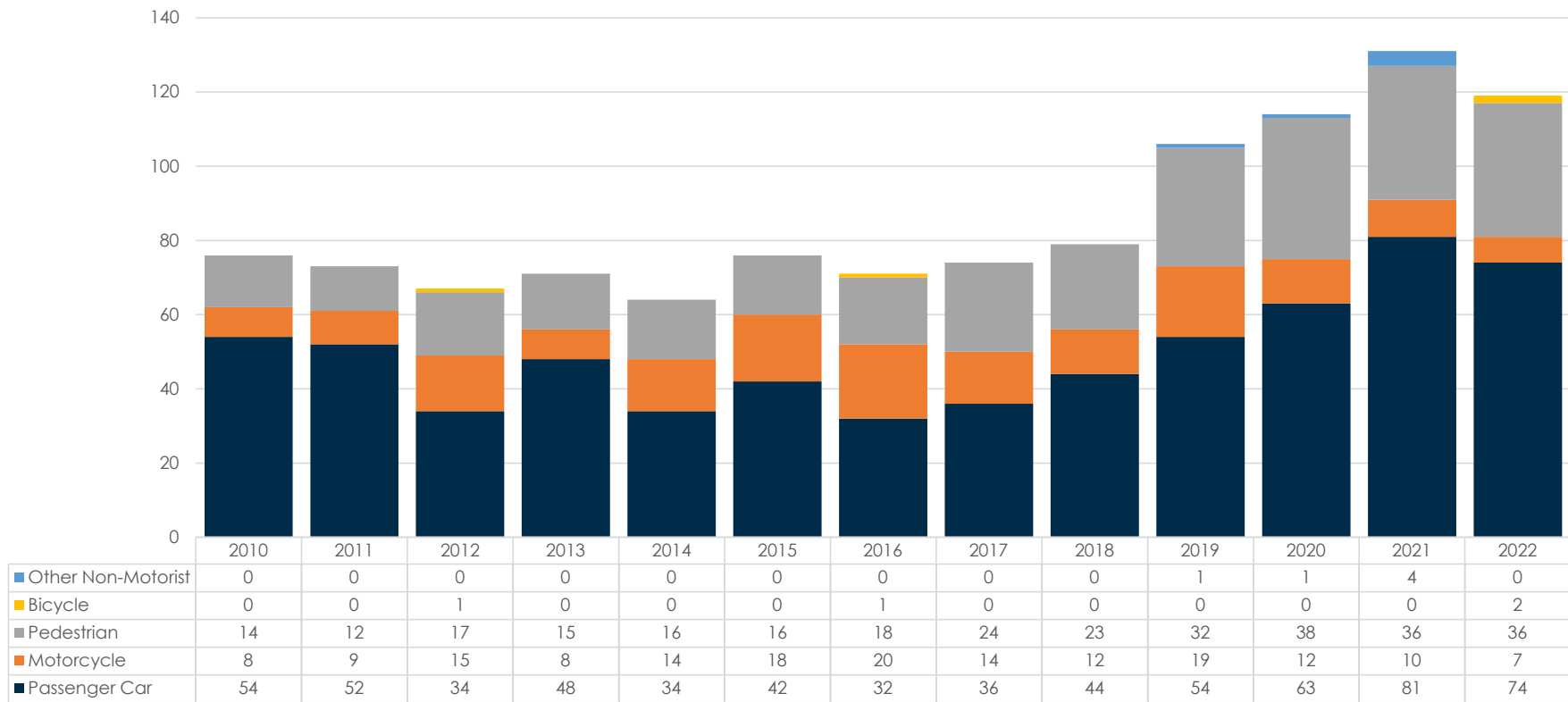
Davidson County Fatal Crashes



Data as of November 10, 2022



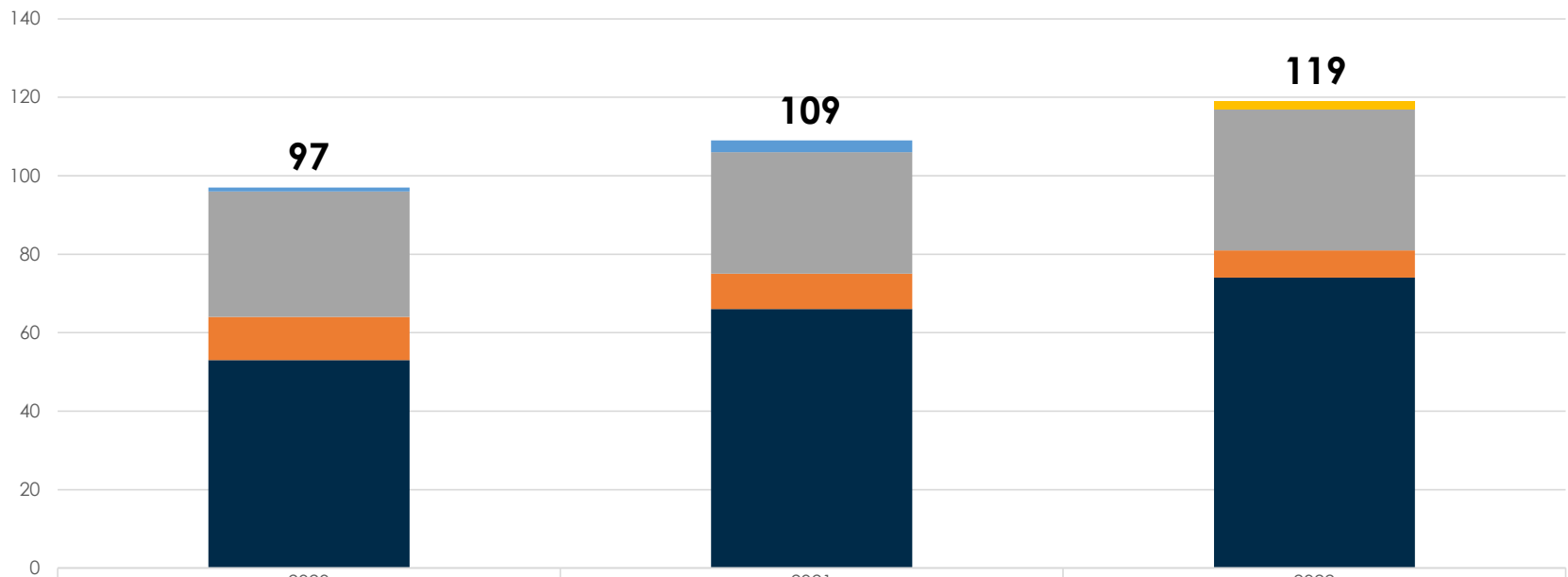
Davidson County Detailed Fatal Crashes



Data as of November 10, 2022



Davidson County Detailed Fatal Crashes – YTD



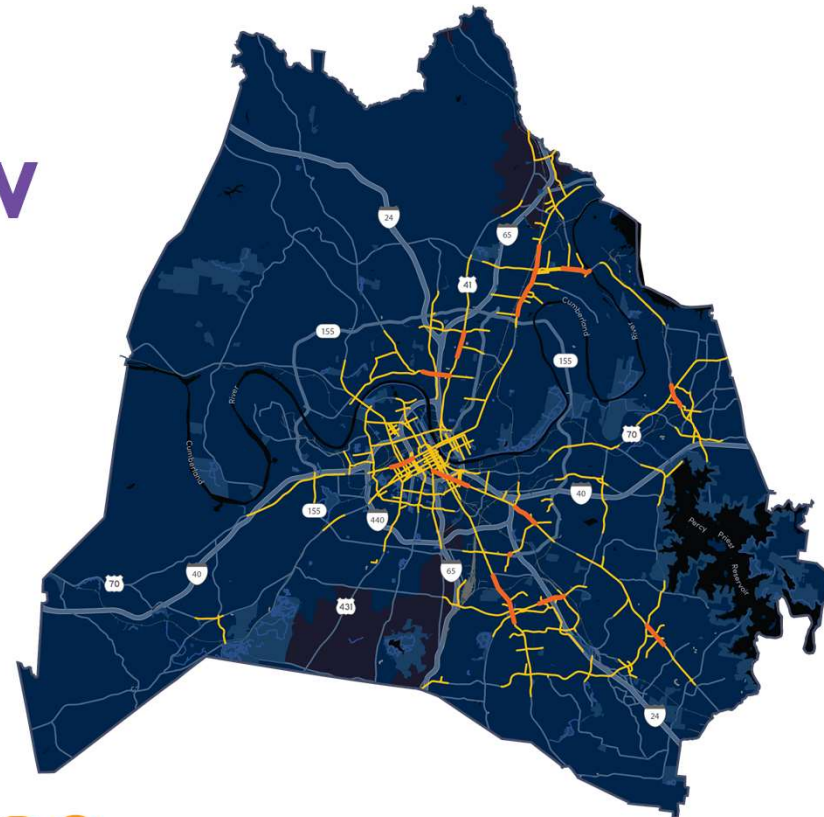
	2020	2021	2022
Other Non-Motorist	1	3	
Bicycle			2
Pedestrians	32	31	36
Motorcycle	11	9	7
Car	53	66	74

Data as of November 10, 2022



Vision Zero Program Overview

- > 6% of streets account for 59% of all fatal and serious injury crashes (all modes)
- > 46% of Nashville's high-injury network is owned by TDOT
- > The high-injury network will be the priority for implementation and evaluation



HIGH INJURY NETWORK - ALL MODES

— PRIORITY HIGH INJURY STREETS

— HIGH INJURY STREETS

SEVERITY INDEX



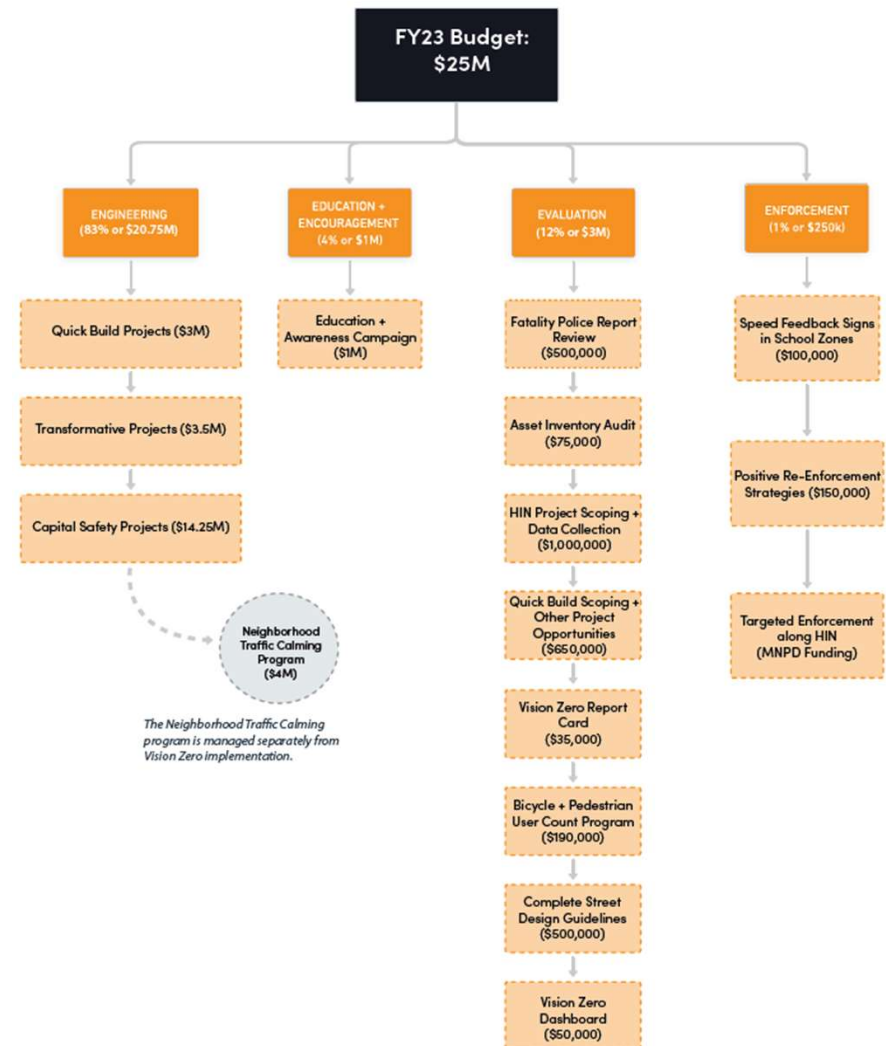
Action Plan to Implementation Plan

- › The Five E's Framework
 - › Engineering
 - › Evaluation
 - › Encouragement
 - › Education
 - › Enforcement
- › Equity is a priority focus in each E
- › The Five Themes
 - › Create Safe Streets for Everyone
 - › Prioritize Equity
 - › Increase Collaboration and Transparency
 - › Promote a Culture of Safety
 - › Improve Data Quality



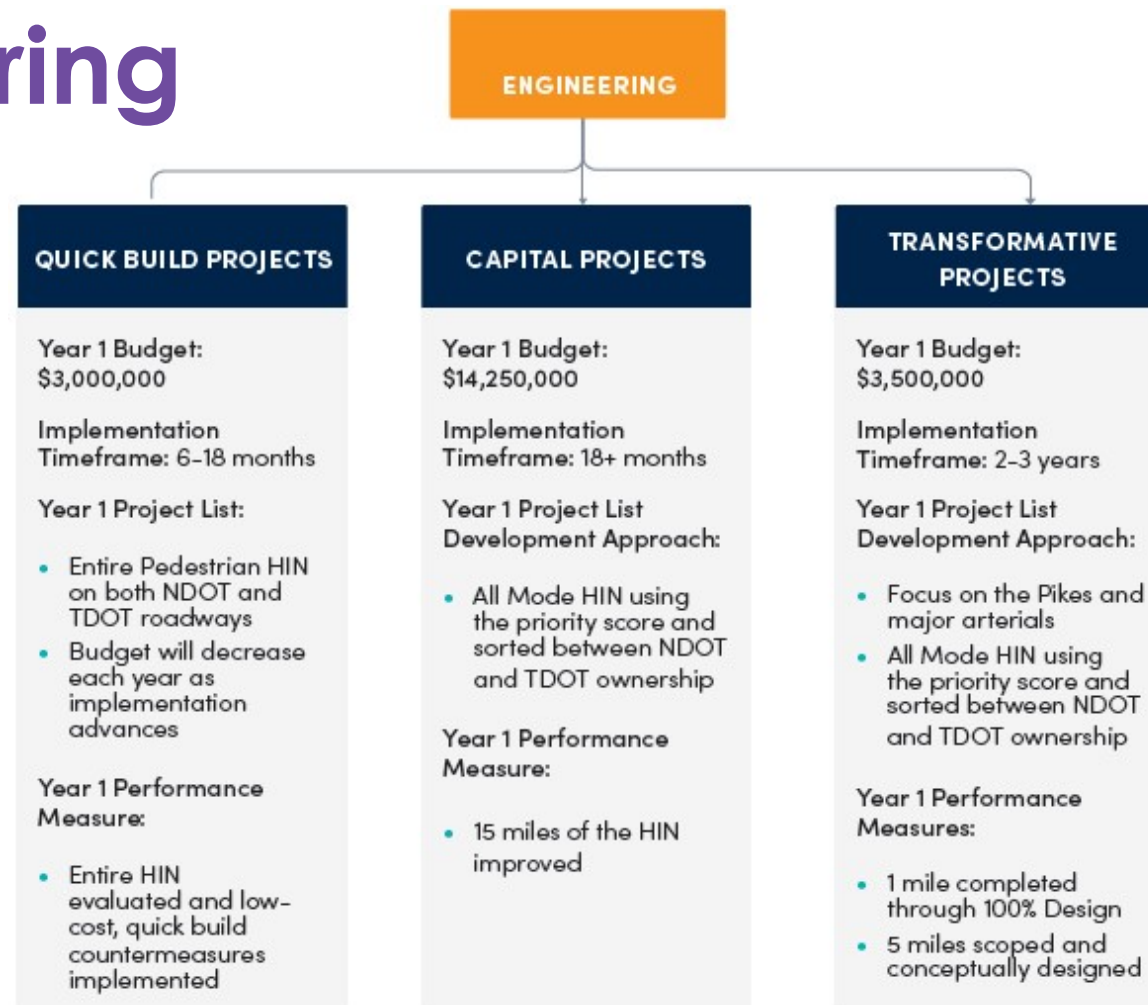
Vision Zero Program Funding

- Requested \$25 million FY22-FY23
 - Engineering: 83% / \$20.75m
 - Education / Encouragement: 4% / \$1.0m
 - Evaluation: 12% / \$3.0m
 - Enforcement: 1% / \$250k



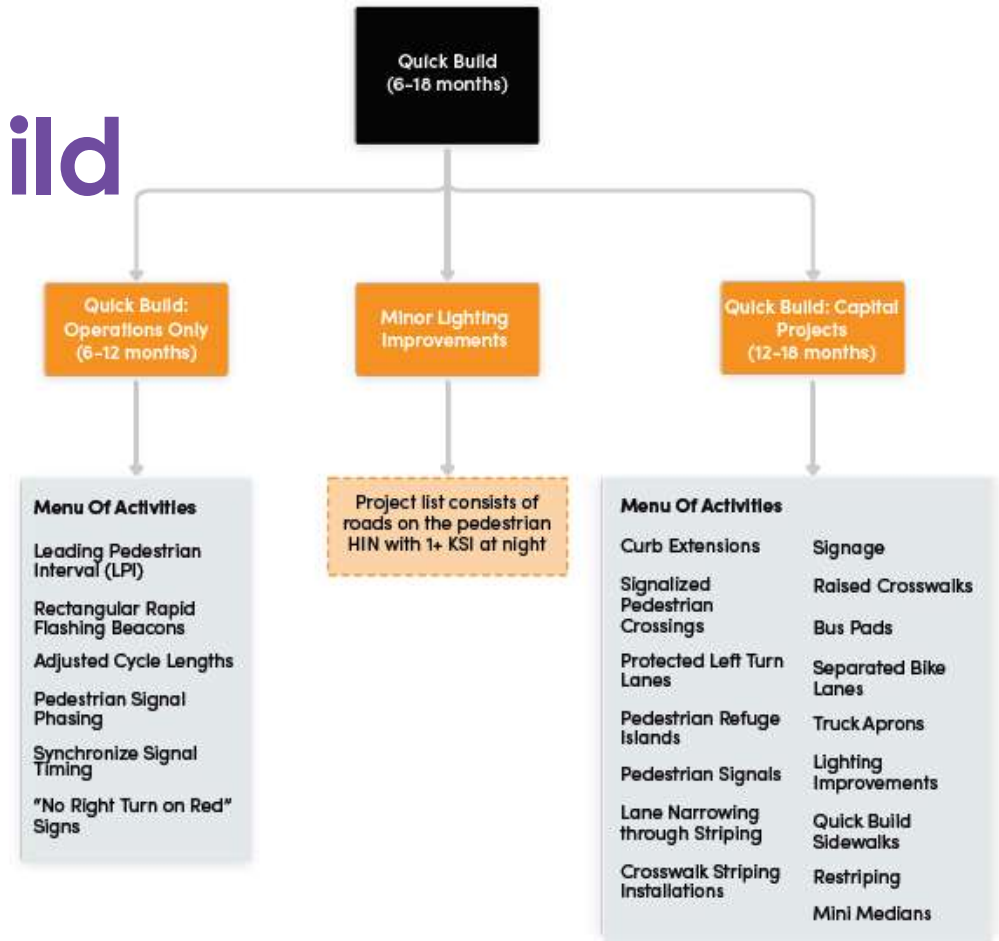


Engineering Actions





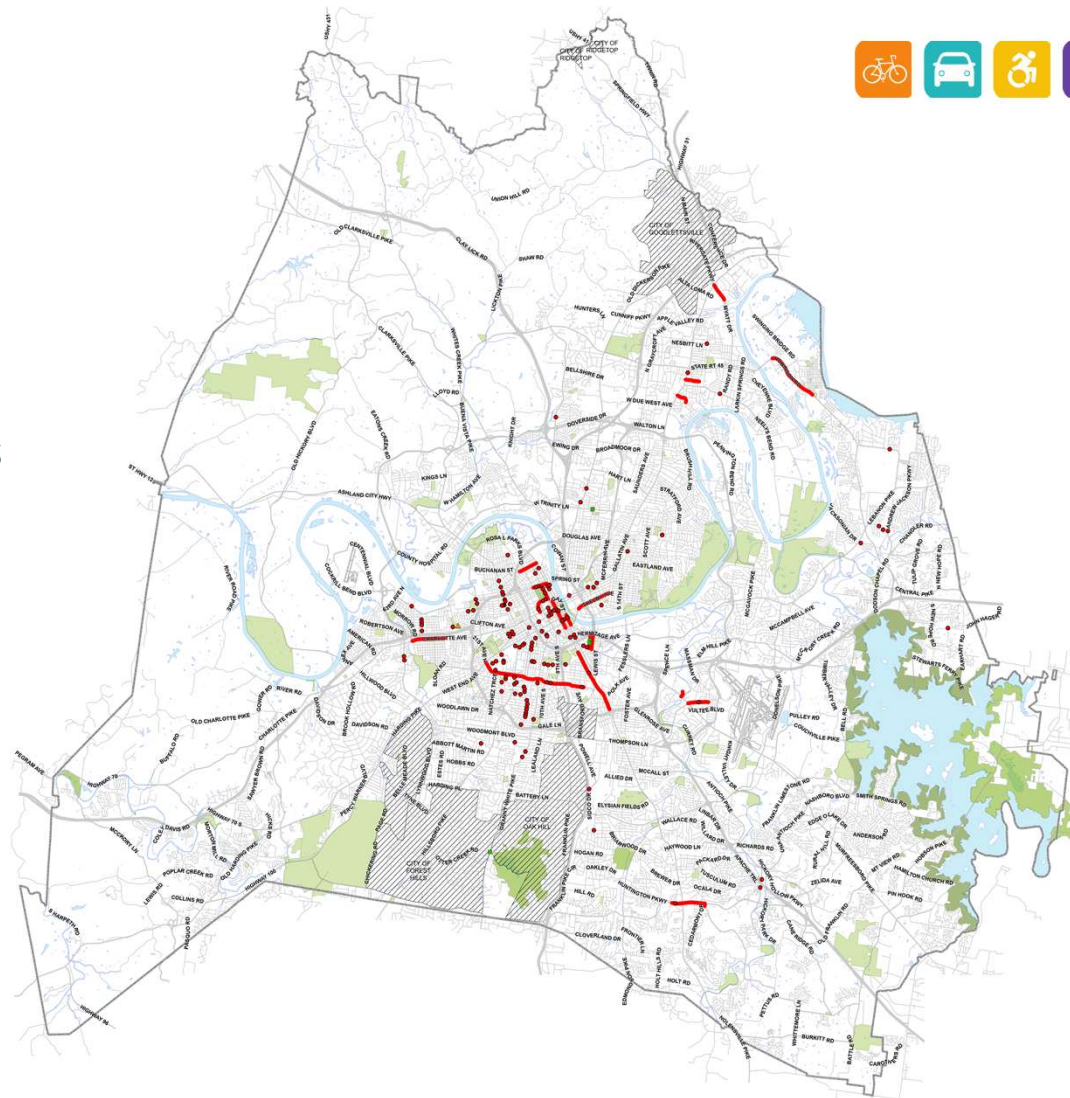
Engineering Actions: Quick Build





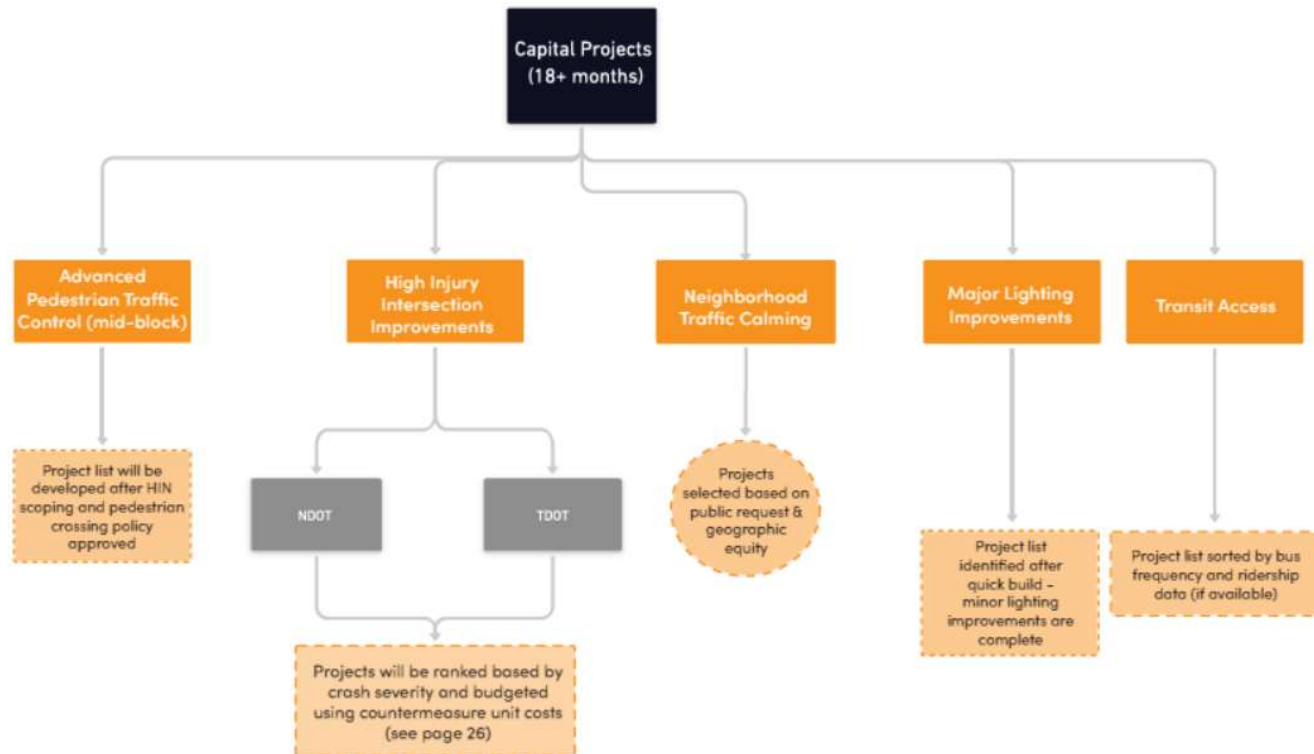
Quick Build

- › Focus on pedestrian generators:
 - › Schools, libraries, parks, hospitals, elderly care facilities
- › 15 miles of roadway on 19 corridors
- › Unsignalized Crossings
 - › 140+ existing or requested locations
 - › 150 RRFBs purchased
- › Signalized Crossings
 - › Retrofit missing signal heads





Engineering Actions: Capital Projects



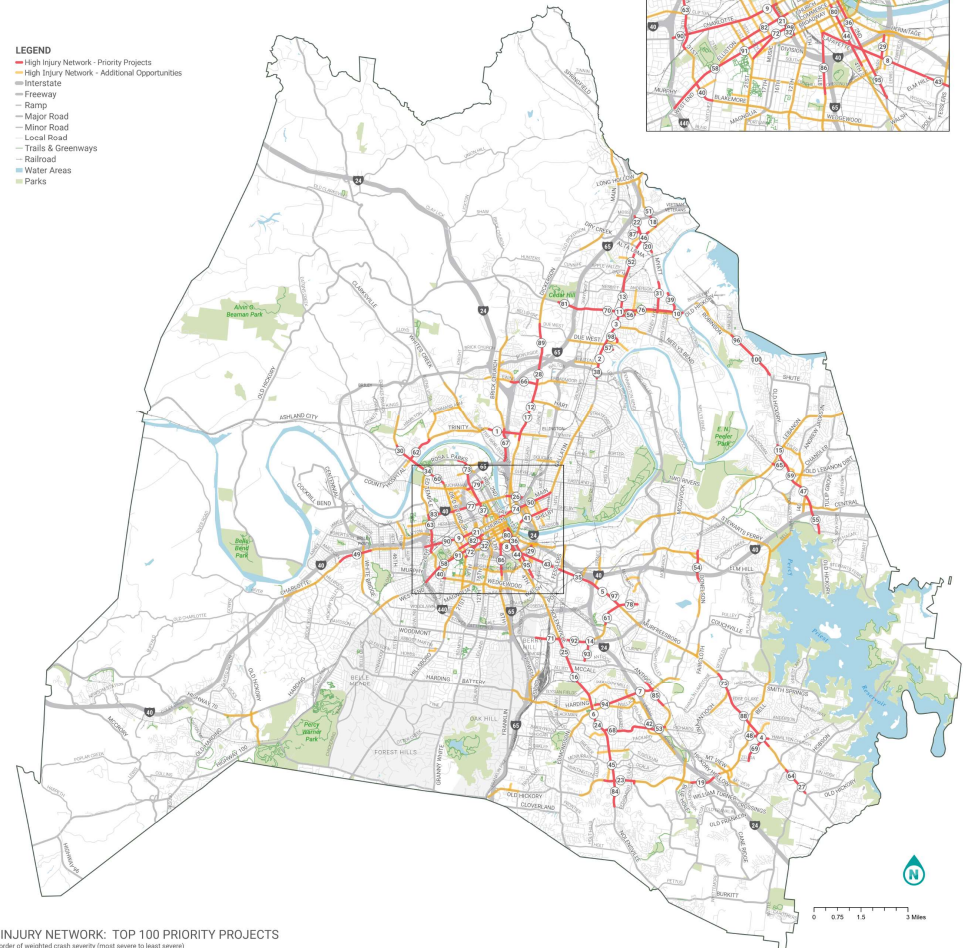
Capital Projects

- Performance measure: 15 miles of HIN improved
- All high injury intersections maintained by NDOT are being evaluated

HIGH INJURY NETWORK PROJECT LIST

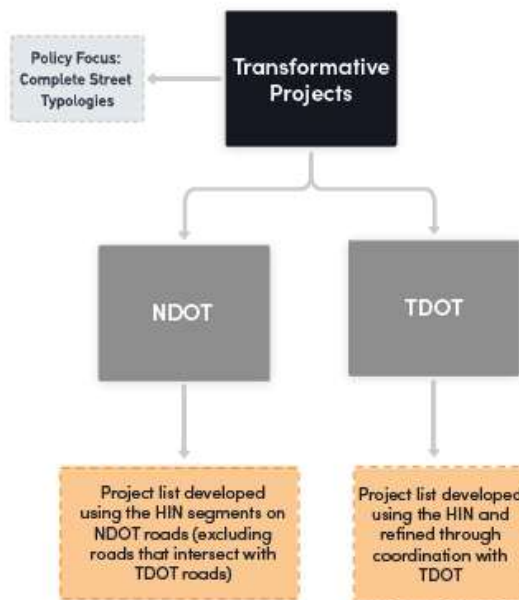
NASHVILLE VISION ZERO
IMPLEMENTATION PLAN

- LEGEND**
- High Injury Network - Priority Projects
 - High Injury Network - Additional Opportunities
 - Interstate
 - Freeway
 - Ramp
 - Major Road
 - Minor Road
 - Local Road
 - Trails & Greenways
 - Railroad
 - Water Areas
 - Parks





Engineering Actions: Transformative Projects



Typical Timeline of a Major Transformative Project

- Year 1*** Project Scoped + Conceptually Designed
- Year 2** Final Design Complete + Right-of-Way Acquisition Started
- Year 3-4** Right-of-Way Acquisition + Environmental Documentation Complete
- Year 4-6** Construction

**Vision Zero Program Funds will be allocated for this task but the rest of a Major Transformative Project cost will need to be funded outside of the Vision Zero Program using either capital, state or federal funds.*



Transformative Projects

- Performance measures
 - 1 mile 100% designed
 - 5 miles evaluated and conceptually designed

Step 1: Projects are ranked using their HIN priority score that considers crash severity, if the crash was located in an area of high need, and if the crash involved a vulnerable road user.

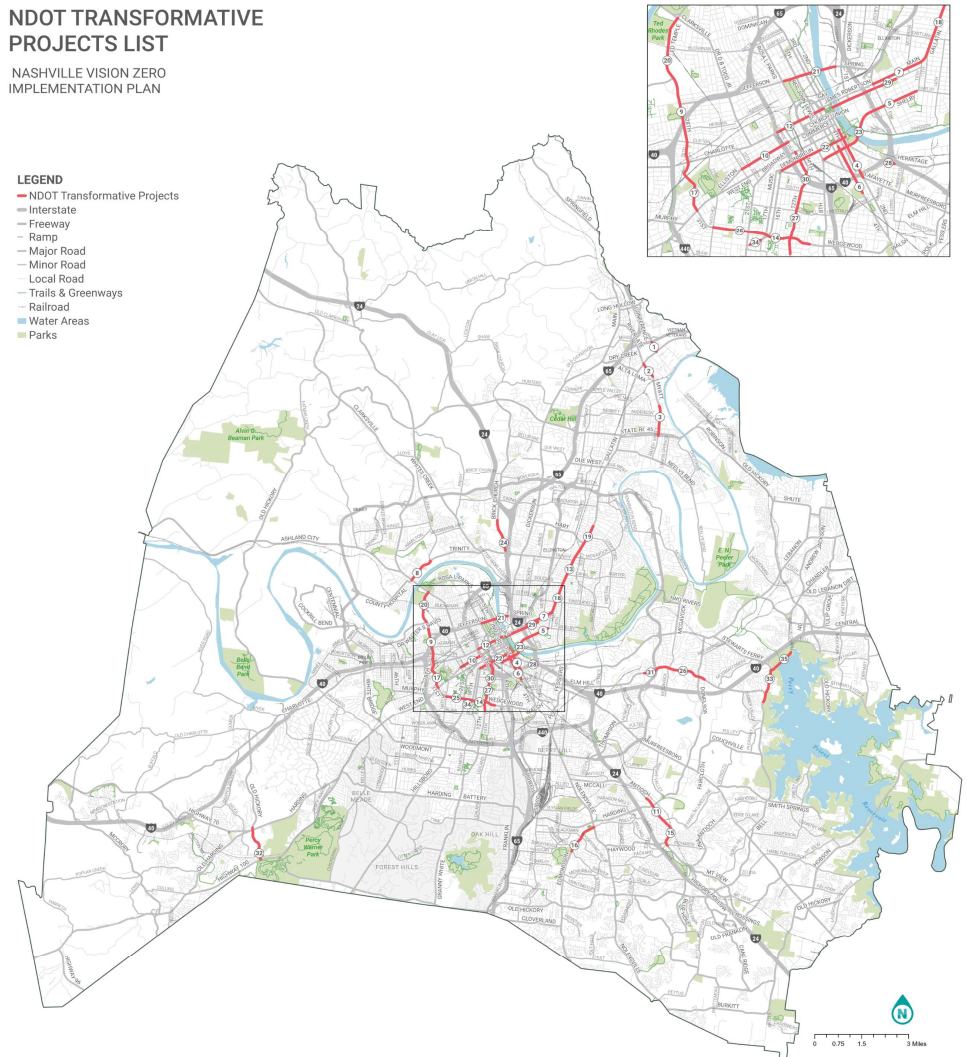
Step 2: Projects advance, regardless of Step 1 ranking, if they have some level of previous planning associated (example: Nashville Next, nMotion, Plan2Play, etc.) Projects may be removed if implementation can be consolidated or combined with other program priorities (example: WalknBike or WeGo Stop Improvement Priority List).

Step 3: Projects are evaluated to determine feasibility and conceptual design is completed. This step can bundle multiple projects together to quickly scope improvements and estimate implementation costs.

Step 4: Minor transformative projects advance to implementation as Vision Zero Program funding allows and at least one major transformative project advances through design each fiscal year. Due to the scope of major transformative projects, additional funding outside of the Vision Zero Program will be needed for full implementation.

NDOT TRANSFORMATIVE PROJECTS LIST NASHVILLE VISION ZERO IMPLEMENTATION PLAN

- LEGEND**
- NDOT Transformative Projects
 - Interstate
 - Freeway
 - Ramp
 - Major Road
 - Minor Road
 - Local Road
 - Trails & Greenways
 - Railroad
 - Water Areas
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Evaluation Actions

- › Advisory Committee
- › Fatal Crash Investigation Team
- › Vision Zero Report Card
- › Bicycle & Pedestrian User Count
- › Complete Street Design Guidelines
- › Asset Management Data Collection
- › VZ Dashboard and Project Tracker

Education / Encouragement Actions



- › Education + Awareness Campaign
- › Equitable Engagement Playbook
- › Community-Led Vision Zero Committee
- › Safe Routes to School



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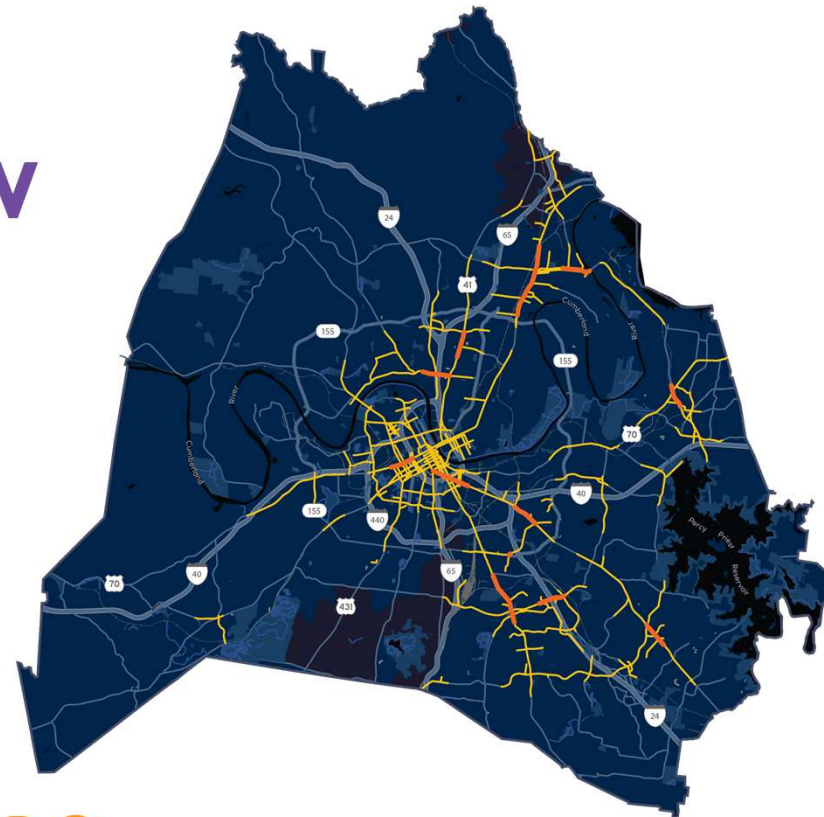
Nashville Vision Zero

Jason Oldham, Assistant Chief - TSM | NDOT
Traffic and Parking Commission
November 14th, 2022



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- > Evaluation
- > Encouragement
- > Education
- > Enforcement

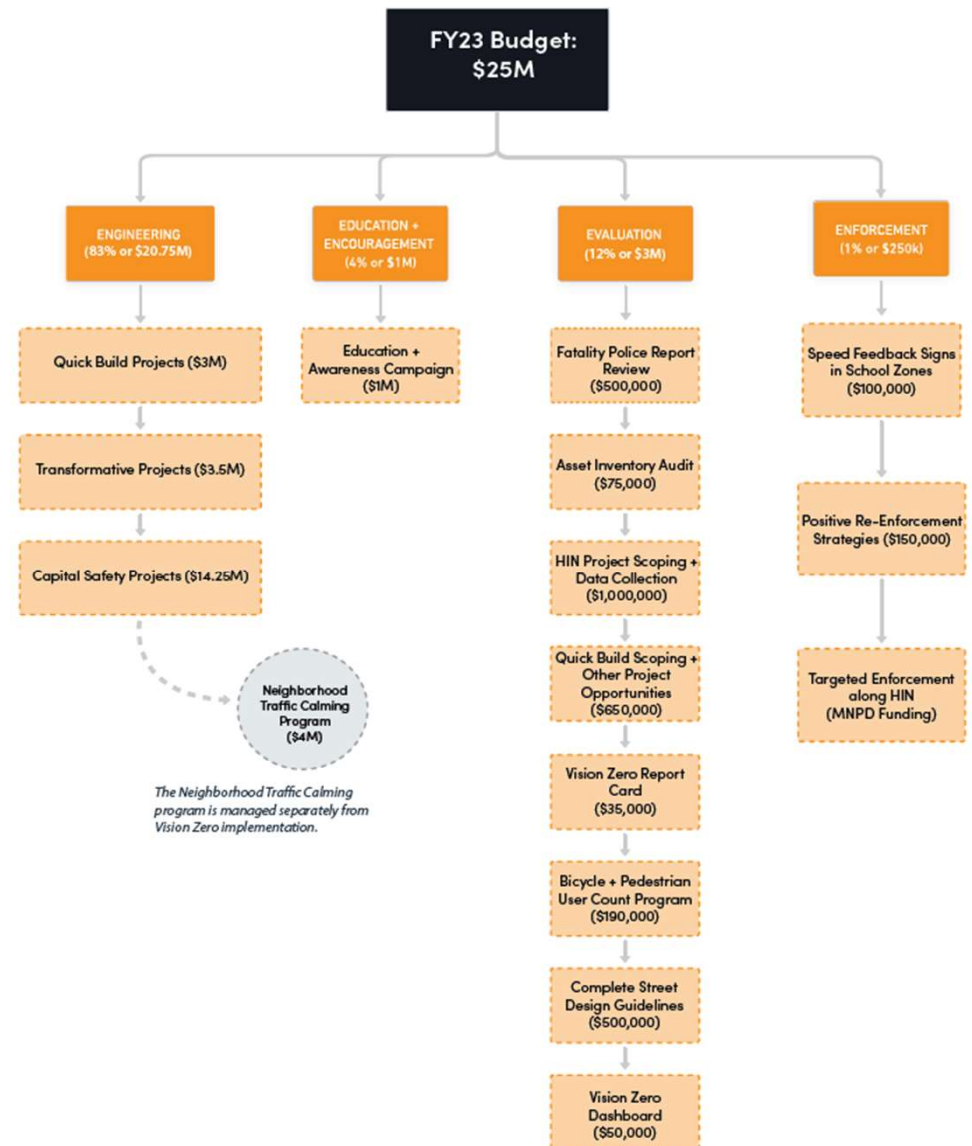
> The Five Themes

- > Create Safe Streets for Everyone
- > Prioritize Equity
- > Increase Collaboration and Transparency
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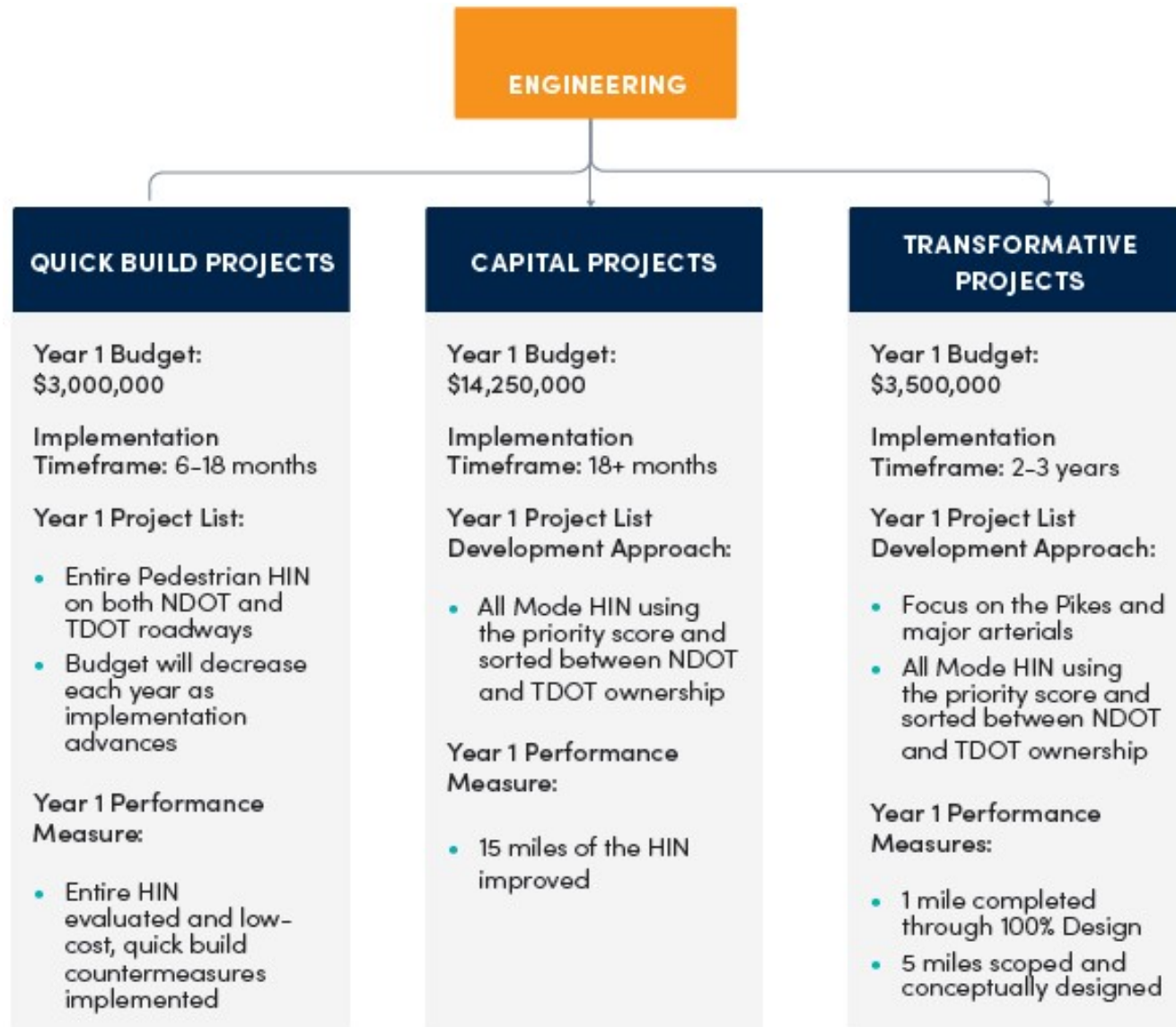
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- > Nolensville Pike: \$6.2m dedicated

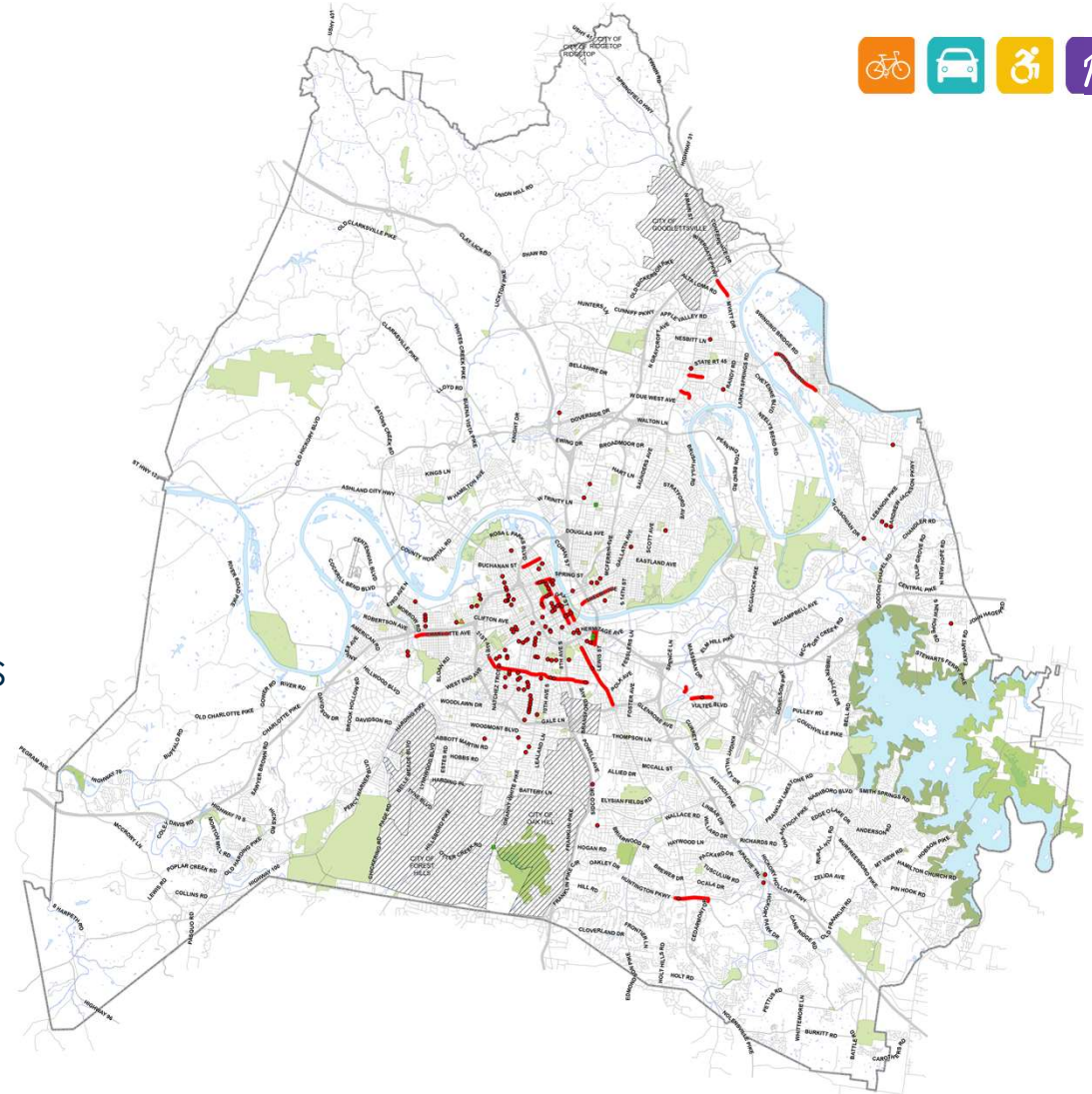


Engineering Actions



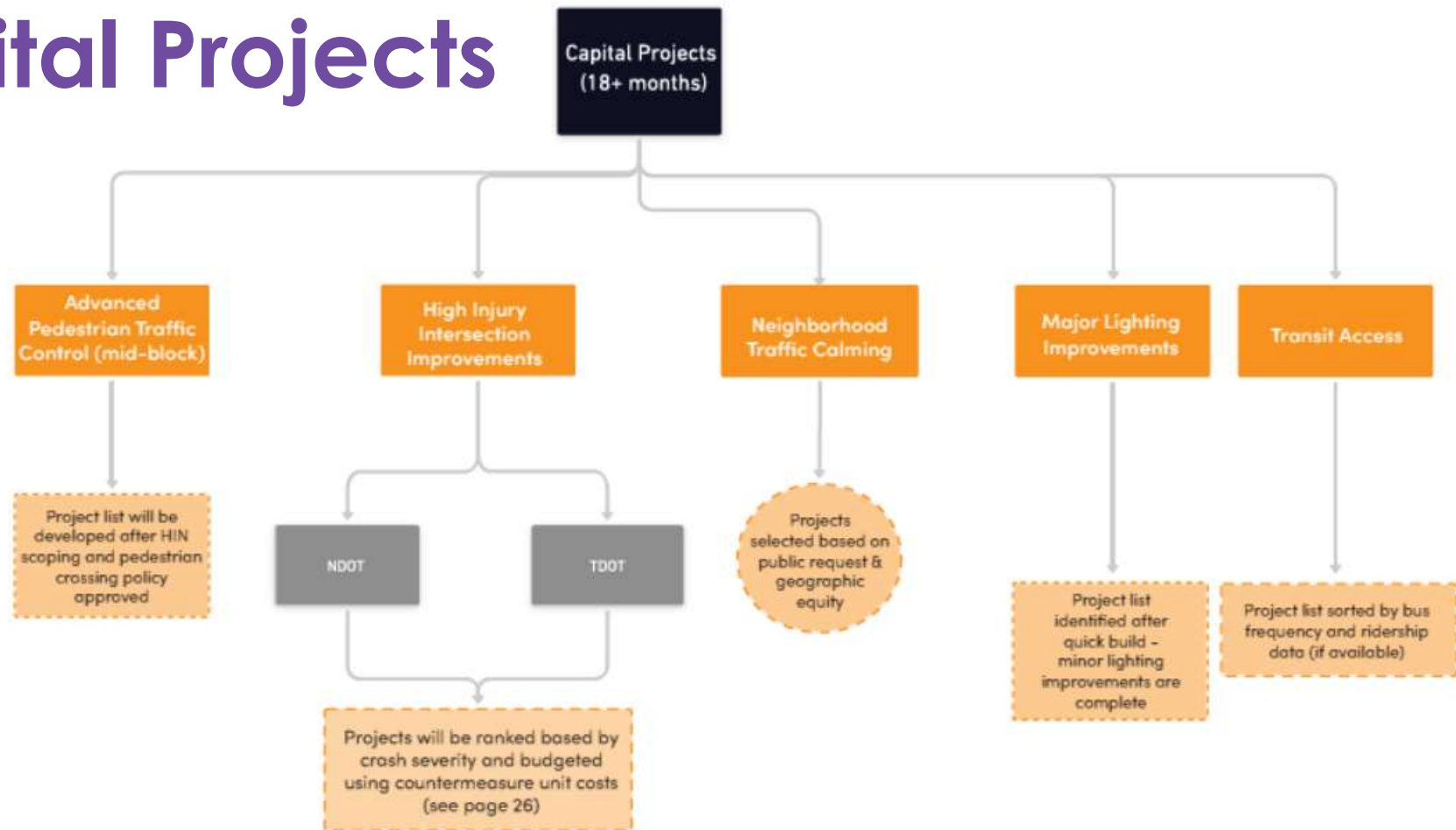
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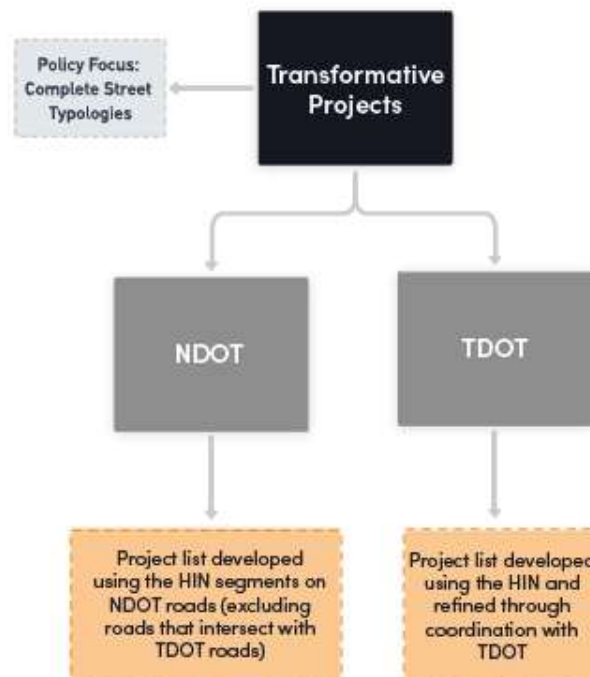


Engineering Actions: Capital Projects





Engineering Actions: Transformative Projects



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Enforcement Actions

- › Automated Enforcement in School Zones
- › Positive Re-Enforcement Strategies
- › Update Police Reports & Officer Training
- › Targeted Enforcement on HIN



Recent Deployments

Deployment of Leading Pedestrian Intervals (LPIs)

➤ As part of NDOT's Vision Zero Implementation Plan, over the last 3 months NDOT engineers have been working to deploy additional Leading Pedestrian Intervals (LPIs) across the city. LPIs give pedestrians the opportunity to enter the crosswalk at an intersection 3-7 seconds before vehicles are given a green indication. This strategy has been proven in national studies to provide a 13% reduction in pedestrian-vehicle crashes at intersections. These safety enhancements have been deployed at 67 intersections along Nashville's High Injury Network we more planned in the future.



Safety Benefits:

13%

reduction in pedestrian-vehicle crashes at intersections.¹





Recent Deployments

Rectangular Rapid Flashing Beacon (RRFB) Deployments

As part of NDOT's Vision Zero Implementation Plan, the Department is in the process of deploying RRFBs at midblock and unsignalized pedestrian crossing across the city. These enhancements have been proven in national studies to reduce crashes involving pedestrians up to 47%. NDOT engineers have identified over 130 locations along Nashville's High Injury Network for consideration in the Vision Zero quick build program. This week NDOT completed deployments of RRFBs on Charles E. Davis Blvd at the intersections of Cannon St. and Fain St.





For more information

- > Visit VisionZero.Nashville.Gov
- > Email VisionZero@Nashville.Gov



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Metro Nashville Vision Zero

Home > Departments > Transportation > Plans and Programs

Vision Zero Action Plan

Nashville's Vision Zero Action Plan is now live! This is a data driven document to guide Metro's investment in traffic safety improvements over the next five years. With the launch of the Vision Zero Action Plan, Nashville joins dozens of cities who have made the commitment to change the status quo and prioritize traffic safety for everyone. The action plan is just the start of Nashville's commitment to build strong partnerships, ensure transparency and accountability, and work with urgency to reduce the number of people killed and injured while traveling in Nashville.

- [Nashville Vision Zero Action Plan](#)
- [Nashville Vision Zero Action Plan Appendices](#)

Building on the Vision Zero Action Plan's guiding principles and recommended actions included in the Vision Zero Action Plan, NDOT staff is currently developing a five-year implementation plan that identifies specific projects and programs that NDOT and partners will develop and execute. NDOT staff anticipates completing the implementation plan in April 2022.

Explore the Crash Data and Trends

The Data Dashboard is an interactive online tool that showcases some of the key crash trends and locations identified during the Vision Zero planning process.

Explore the crash data and findings from the Vision Zero planning process. [Explore crash data and findings](#)