



FORWARD Orlando

Safe Streets and Roads For All
2023 Application

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I. Overview

Introduction

The City of Orlando focuses on innovative mobility options to safeguard our residents and visitors. Building and enhancing our transportation network to comprehensively provide access to goods and services, schools, hospitals, and grocery stores, is essential to ensuring equity and access. A complete transportation network allows the student to cross the street, the biker to choose not to take a car, the individual dependent on public transportation to have a sidewalk to get to work, the elder to access healthcare, groceries, or the ability to visit a neighbor. Movement around Orlando in a seamless manner is immeasurable, but this does not begin to happen without a full and complete ADA sidewalk for feet to walk, wheelchairs to roll, strollers to be pushed, mobility devices to move, and a finished and safe network to provide people with a route.

Safety Context

Orlando ranks high for many great lists – best largest city to start a business ([WalletHub](#)), and best cities to live in the US ([US News and World Report](#)). However, one list we don't want to be on is Smart Growth America's [Dangerous by Design](#). Recently dropping from #1 to #8 most deadly for people walking, we are beginning to see tangible results from our Vision Zero safety efforts, but we must do more and are dedicated to ending this tragedy and changing direction.

Under the leadership of Mayor Buddy Dyer, the city [adopted a resolution](#) committing to Vision Zero with a goal of eliminating traffic deaths and serious injuries by 2040.

Jurisdiction

Located in central Florida, the City of Orlando is a vibrant and diverse city known for its enchanting theme parks, cultural richness, and thriving economy. Situated in Orange County, Orlando spans approximately 59 square miles and serves as the county seat. Orlando is home to 305,573 residents, making it the fourth-largest city in Florida, with even more visitors to our area every year.

Central Florida has an average of 1,500 residents moving to the region per week, that number is more than double the rate of growth in the United States ([Orlando Economic region Partnership](#)). Combined with a current population of 1.4 million in our area (U.S. Census) there is an urgent need to create a safe, active, and accessible transportation network across all travel modes for residents and visitors alike.

Grant Request

The City of Orlando is requesting **\$10,843,352**, with a local match of **\$2,710,838**, for a total project cost of **\$13,554,190**, for FORWARD Orlando (Focusing on Resilient Walkways and Rethinking Design).

FORWARD Orlando will transform high-need areas for pedestrian safety into dynamic living labs for safety countermeasures, quick-build and demonstration activities. These demonstration activities will inform a 5-year update to the Vision Zero Action Plan as well as development of the city's Pedestrian Facilities Plan while connecting our high priority sidewalk gaps.

Released in June 2023, the [City of Orlando’s Quick Build Guide](#) outlines how, where, when and why to implement quick-build projects. The City’s Transportation Department realized a need to find a solution to our increasing population, increasing safety needs and stagnant budget. This guide gives us interim solutions making it easier and more affordable for our city to implement safety improvements, our communities to recommend changes to their streets, and our districts to receive interim solutions before more permanent infrastructure is funded and installed. This guide supports the city’s commitment to [Vision Zero](#) and improving safety at an accelerated rate.

FORWARD Orlando will use the lessons learned from quick-build projects to inform a city-wide Pedestrian Facilities Plan. Creating a city with a complete and accessible pedestrian network must include access to public transportation. The goal for Orlando is seamless multimodal connections to and from a bus stop, our commuter rail stations, micromobility hubs, and bike trails. Effectively integrated, bicycling and walking to public transportation advances our city’s environmental, health, and livability goals.

Within any large and growing city, sidewalk gaps present discontinuities for the pedestrian access route by ending abruptly or not presenting a street crossing. An effective pedestrian network is a backbone of our complete streets. **Based on the recommendations in the 2019 Connected City report, we will complete high-priority sidewalks on our major roadways.**

FORWARD Orlando sidewalks will focus on key sidewalk design elements such as proper sizing, accessibility, safe connections, clear signage, inviting spaces, security, equity, and quality surfaces to improve walkability. The project will also enhance safe routes to school and public transit by providing a sustainable pavement solution with efficient drainage along these routes.

Overall, the activities and strategies will improve connectivity with complete streets design solutions that support multimodal mobility. Finally, FORWARD Orlando incorporates sustainability by implementing low-impact design into roadway networks to reduce flood-risk and urban head, improve water quality, and combat climate change.

Figure 1: Sidewalk Gaps by Score

Sidewalk Gap	Score
W Kaley St S Division Ave - Kuhl Ave	24
S Osceola Ave Shannon Rd - E Michigan St	15
W Grant St S Division Ave - CSX RR (W of Lucerne Ter)	20
Winter Park St N Westmoreland Dr - I-4	20
E Gore St W of N Mills Ave - S Primrose Dr	20
N Mills / Jefferson / Thornton E Robinson St - E Jefferson St	19
E South St S Primrose Dr - S Crystal Lake Dr	18
Marks St / Summerlin Ave Kenilworth Dr - N Hyer Ave	17
S Primrose Dr Curry Ford Rd - E Anderson St	17
Fern Creek Dr N of E Michigan St - N of Page Ave	16
Fredrica Dr Fayann St - Curry Ford Rd	16

II. Location

Jurisdiction

FORWARD Orlando’s geographic focus is the City of Orlando’s High Injury Network (HIN) with an emphasis on projects located near schools, parks, and community centers.

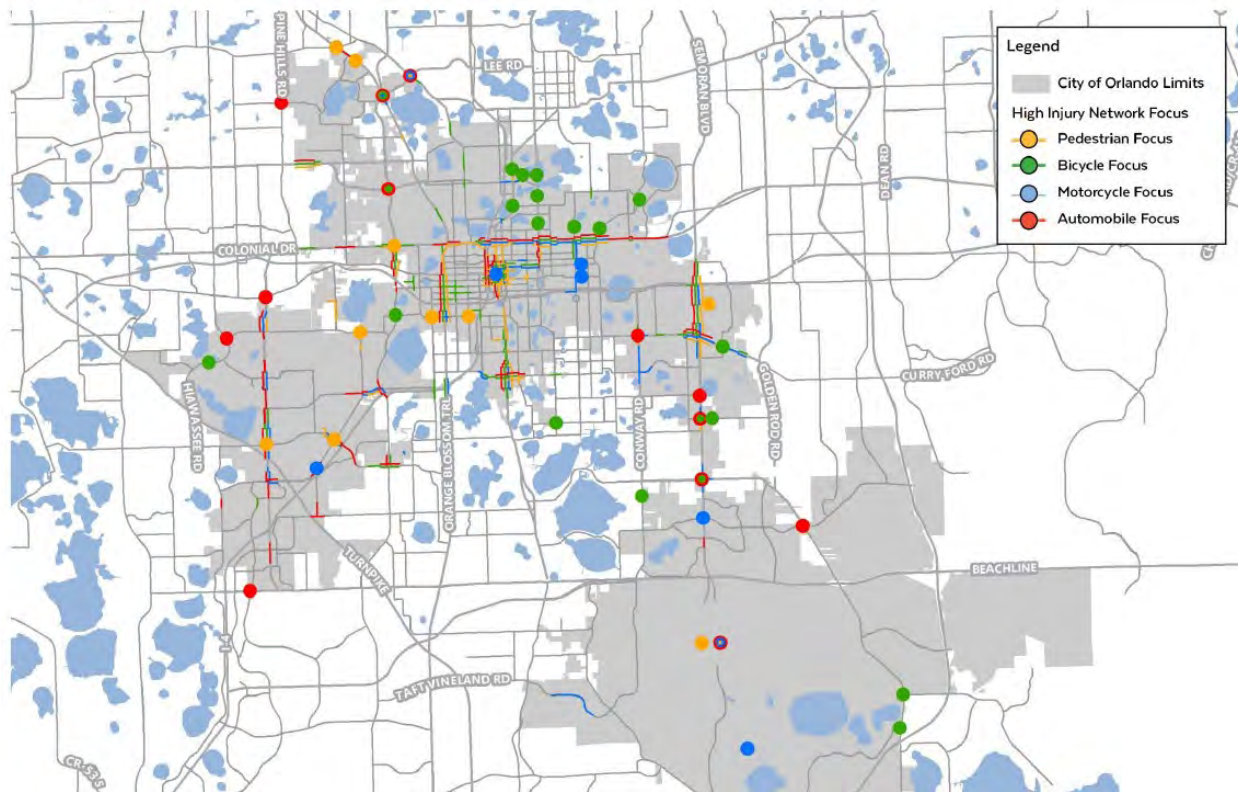
Figure 1 lists sidewalk gaps under consideration for implementation. They are within the top 20 identified in Orlando’s *Connected City: Completes Sidewalks on Major Roadways 2019 Report*. Contributing factors to the high need-based score includes:

- Safety
- Access to essential services
- Demand
- Proximity to schools
- HIN
- Nearby crashes
- Roadway context classification
- Transit headways

Final determination will include the following analysis: right-of-way or maintenance agreements, geographic balance between 6 city commission districts, concurrent plans for construction, or environmental and engineering obstacles.

High Injury Network (HIN)

Citywide High Injury Network Corridors and Intersections (SSOGisand S4 data from 2012 –2017)



#1: Safety Impact

Safety Problem

As part of the Vision Zero Orlando Action plan, an in-depth crash analysis evaluated crashes by type, location, mode of travel, and other contributing factors such as weather, road condition, lighting. The resulting analysis is summarized in our High Injury Network (HIN).

The HIN was used to prioritize the sidewalk completions and will be used to prioritize quick-build and demonstration activity locations. Additional factors to determine final locations will include a quarter mile proximity to schools, parks and community centers where we expect our most vulnerable travelers such as children and seniors to be walking. This triaged approach will maximize pedestrian safety and reduce pedestrian crashes and severity.

The 2013-2021 crash analysis findings are summarized in the table below. FORWARD Orlando will deploy the associated quick-build and safety countermeasures indicated to address each safety problem, with an evaluation based on the identified metrics in the Impact Assessment Table.

Table 1: Impact Assessment

Safety Problem	Vision Zero Orlando Analysis	Quick Build Demonstration Activities	Implementation Solutions	Impact or Evaluation Metric
Road Users				
Pedestrians are killed on Orlando roadways at a higher rate than any other user.	Pedestrian crashes make up only 2% of all crashes, but 37% of all fatal crashes and 5% of all injury crashes	<ul style="list-style-type: none"> • Curb Extensions • Left-turn Hardening • Slow-turn wedges 	Complete the top ranked sidewalk connections needed on the Major Thoroughfare network	Linear feet of sidewalk or paved shoulder constructed
	Every 10 mph of increased speed driven doubles pedestrian mortality rates. (Governor's Highway Safety Administration)	<ul style="list-style-type: none"> • Daylighting • Chicanes • Median or Refuge Island 	Appropriate speed limits for all road users	↓ % of vehicles traveling above the speed limit based on 24-hour data with off-peak hours showing similar trends
Location				
The majority of pedestrian crashes occur near intersections	39% of these crashes occur in a crosswalk (marked or unmarked) at signalized intersections	Quick-build shade structures	Leading Pedestrian Intervals Protected Left Turns	↑ % of pedestrians complying with pedestrian signal phase
	22% of these crashes occur at unsignalized intersections , only 22% of the time pedestrians were in a crosswalk (marked or unmarked)	<ul style="list-style-type: none"> • Curb Extensions • Left-turn Hardening • Slow-turn wedges • Daylighting • Chicanes • Refuge Island 	Mark all crosswalks at unsignalized, controlled crosswalks within 1/4 mile of schools, parks, and community centers	↓ % of vehicles yielding to pedestrians at crosswalks after proper signage and pavement markings installed

Conditions			
Even though lighting is present in many corridors, the lighting is not sufficient to properly illuminate pedestrians	33% of pedestrian crashes occur under dark, lighted conditions (10% more than all crashes)	<ul style="list-style-type: none"> Enhance and improve as necessary through street lighting request to Orlando Utilities Commission and tree trimming In-road pedestrian lighting 	# of crosswalks evaluated and lighting improved; Driver yield rate during dark conditions
	19% of pedestrian crashes occurred between 6:00 and 9:00 PM.		Pre- and post-roadway safety audits at dusk

The quick build process allows community members and decision-makers to experience new and unfamiliar designs that might sound too confusing, too radical or too disruptive to existing traffic patterns, before committing to making them permanent. All quick-build projects in the City fulfill one of four goals: increase safety, invite public use, improve business, or improve travel options.

FORWARD Orlando seeks to increase safety using low cost countermeasures by slowing speeds, calming traffic, or reducing conflicts between users at intersections. Each step in the quick-build process will tie back to this goal, from selecting project type and location to choosing evaluation and outreach methods.

Over 446.3 miles of the city-maintained sidewalks (983.6 miles total) are located within the historically disadvantaged communities identified through Justice 40.

In addition to the measurable safety benefits listed in the table above, the City will use crosswalk art and intersection murals to reduce albedo effect and urban heat island. These can also be used to educate about climate resilience and traffic safety through content and media campaigns. For example, art may contain local wildlife motifs such as monarch butterflies.

Section 316.003 of the Florida Statutes defines crosswalk to mean “that part of a roadway at an intersection included within the connections of the lateral lines of the sidewalks on opposite sides of the highway, measured from the curbs or, in the absence of curbs, from the edges of the traversable roadway.”

The City’s education partnership with [Best Foot Forward High Visibility Enforcements](#) will enhance crash location metrics through training law enforcement officers on crash reporting including location and definitions of both marked and unmarked crosswalks

By combining quick-build demonstration activities that will inform updates to the city’s safety action plan, with proven safety countermeasures and outreach geared towards behavioral change, FORWARD Orlando will create safety benefits that persist over time.

#2: Equity, Engagement, and Collaboration

Equitable Investment

FORWARD Orlando quick-build project sites were selected near schools, parks, or community centers in disadvantaged census tracts and/or within a quarter-mile proximity to HIN spots and segments. This methodology ensures equitable investment in underserved communities and high-need safety areas.

Orlando's [Vision Zero Action Plan](#), as well as the [2020 Bike Plan Update](#) prioritize investments through an equity lens. Our equity lens overlaid on the City's HIN allows us to see any correlation between our high crash corridors and our most vulnerable residents to prioritize our projects. The seven socio-economic indicators identified are designed to decrease existing disparities and include: population below poverty level, minority population, population with limited English proficiency, zero-vehicle households, means of transportation to work other than personal vehicle, and population below 18 and above 65. Each indicator is valued at a score of one and when a census block has a score of four or more, it is identified as a community of concern. Having a composite score permits us to better identify communities with multiple transportation disadvantages.

Ensuring that we can support our residents' mobility also helps us lower the transit burden that Orlando households experience. Orlando households spend 53% of their income on housing and transportation costs when 45% is what Florida considers feasible ([Florida Department of Transportation: Florida Pedestrian and Bicycle Strategic Safety Plan](#)).

Engagement

Engagement and collaboration have gotten us to this application. Through community meetings for a transportation project, at a back-to-school event handing out backpacks, or correspondence to our city staff - we have heard Orlandoans. They ask for the basics - please complete the sidewalk, fix the cracks so we don't trip, allow us to walk on a route that is safe and leads us to our destination.

To demonstrate engagement with several public and private stakeholders for this project, the City's Vision Zero Action Plan established the Vision Zero Task Force to share a commitment to accountability and community engagement. The Vision Zero Task Force included representatives from MetroPlan Orlando, LYNX, FDOT District 5, Orange County Transportation Planning, Orlando Police and Fire Departments, Orange County Sheriff's Office, Florida Highway Patrol, University of Central Florida and Valencia College Campus Police, Advent Health, Orlando Health, Orange County Health Department and Public Schools, Bike/Walk Central Florida (Best Foot Forward), Orlando Bike Coalition, and AARP.

Engagement through the project will follow the [City of Orlando's Quick Build Guide](#). Outreach immediately leading up to and during project implementation will ensure a smooth transition for the neighboring community, successful project upkeep, and the ability to quickly identify and respond to concerns.

To maintain a healthy partnership between the city and the community, outreach at this time should be coordinated and shared with the community champion. This will also ensure a better

chance at reaching more stakeholders and develop a sense of ownership by community members, while preventing unintended consequence for people living near the quick-build projects.

The day or days following installation can serve as an opportunity to host an outreach-focused event, such as a project opening or inauguration. This provides an opportunity for the city to communicate directly with the users of the project space and to explain project elements in real time and space.

For pedestrians with visual or mobility impairments, this event can also serve as a touchpoint for learning how to navigate the new installation safely. Communication around this event, if such an event is to be held, must begin prior to installation, ideally with one to three weeks' notice.

#3: Effective Practices and Strategies

Updating the Vision Zero Orlando Action Plan and creating a Pedestrian Facilities Plan will improve safety decision making by

- analyzing HIN shifts, which prioritizes funding from automated enforcement proceeds
- creating a prioritized project list for safety projects
- inventorying existing crosswalks for maintenance program
- recommending locations for the addition of more safe crossings

Complete Streets

FORWARD Orlando is supported by our existing complete streets policy. The City of Orlando adopted the [Complete Streets policy](#) in 2015, with a simple vision of designing safe, accessible, and equitable streets. Since then, it has been updated to prioritize our most vulnerable travelers – pedestrians, bicyclists, transit, and micromobility riders. We recognize that streets not only influence our mobility choices, but they also affect the safety, economic activity, and quality of life in our neighborhoods. For this reason, the city approaches every street on an individual basis. Evaluating factors like the functional characteristic of the street, urban vs. suburban context, surrounding land uses, collision history, and expected pedestrian and roadway demand.

FORWARD Orlando will deploy innovative low-cost safe streets components while filling sidewalk gaps across all districts of the city. The city has added proven safety countermeasures to our engineering toolbox. FORWARD Orlando will build on the success of these spot improvements and deploy them on a larger scale citywide, alongside the completed sidewalk gaps to leverage investments.

Efficiency in Roadway Management

In following the development of the Quick Build Guide, FORWARD Orlando will kick off with an interdisciplinary project team with representatives from various departments such as Transportation Planning, Engineering, Capital Improvements, Streets and Stormwater, Economic Development, Main Streets, and Community Redevelopment. This will leverage internal efficiency for planning, design, installation, coordination, and outreach.

Extensive legwork completed through previous studies has provided a refreshing collaboration and nexus between the City of Orlando departments (Public Works/Streets and

Stormwater/Transportation/Economic Development/Park and Rec/Sustainability/Future Ready/Housing) to ensure that the studies don't collect dust on a shelf but are implemented for the betterment of our city.

Land use and the built environment

FORWARD Orlando prioritizes the efficient use of space and aims to create a safer, more walkable environment. By quickly implementing temporary infrastructure changes, such as curb extensions or crosswalk art, quick-build projects rapidly transform the built environment, encouraging active transportation modes, and reducing reliance on private vehicles. Additionally, the integration of sidewalks fosters connectivity, enhancing pedestrian accessibility and encouraging people to walk rather than drive for short trips. These interventions not only improve safety for pedestrians and cyclists, but also contribute to a more sustainable and livable urban landscape, and promoting healthier lifestyles. Overall, quick-build safety projects and sidewalk connections provide effective tools for shaping transportation-efficient design and creating more vibrant and sustainable communities.

Safe Systems Approach

The project applies the Safe Systems approach through multiple activities and interventions to address safety: education, engineering, evaluation. This mixture of strategies includes quick-



Photo Credit: MetroPlan Orlando Notes on the Future: 2022 Report to the Community

build infrastructure, behavioral encouragement, operational tweaks (such as leading pedestrian intervals), and post-crash roadway safety audits. These safety countermeasures are low cost, ranging from \$0 (Leading Pedestrian Intervals) to \$30,000 (refuge islands or transit stop enhancements). Long-term capital improvements include Pedestrian Hybrid Beacons (up to \$750,000) or full-intersection crosswalk improvements (\$200,000 each)

Proven Safety Countermeasures

The safety countermeasures identified in the Safety Impact Assessment table on pages 4-5 are widely implemented improvements that have demonstrated success in reinforcing safe automobile speeds, such as raised crosswalks, speed tables, pedestrian lighting enhancements, and leading pedestrian intervals. They will be evaluated as indicated, and supplemented if needed by [FHWA's Proven Safety Countermeasures](#).

Technology

FORWARD Orlando will leverage innovative technology in various applications to achieve its goals. By embracing the latest advancements, the City of Orlando aims to offer forward-thinking solutions to its residents and visitors. These include stormwater management, solar-powered sidewalks, solar trees, rain gardens, sustainable alternatives to concrete, and other emerging innovations. To monitor progress and strategically allocate resources, satellite imagery and artificial intelligence can be employed to map existing crosswalks and determine optimal locations for new ones. Near-miss technology can assess the effectiveness of safety measures without relying on crash data and provide counts for pedestrians, cyclists, and micromobility users.

Safety for All Users

FORWARD Orlando is rooted in The [City of Orlando 2021 ADA Transition Plan Update](#). This plan documents the existing conditions of the City's public rights-of-way (PROW) and identifies the improvements necessary to make them accessible and usable for persons with disabilities. It is an update to previous plans and includes a self-evaluation and outlines steps to improve all PROW for pedestrian access. Key infrastructure components for the improvements include sidewalks, curb ramps, pedestrian crosswalks, and pedestrian signalization.

Multimodal Networks

FORWARD Orlando will improve **multimodal networks** by ensuring that our most vulnerable users have safe walking or rolling connections and crosswalks are marked so motorists can see people walking and biking better. Additionally, enhanced lighting has improved not only the roadway safety, but perceived safety for vulnerable users traveling alone.

To supplement our transportation system, Orlando has examined all modes of travel. In 2020, the city launched dockless scooter and bike share to improve first and last mile connections and further support mode shift from single occupancy vehicles. The city's micromobility program and our 2020 Orlando Bike Plan Update reflect the national best practices for planning bikeway networks and run concurrent with Vision Zero, to eliminate traffic fatalities and protect our most susceptible modes—walking, biking, and rolling. Moving forward, we seek to expand biking infrastructure in underinvested areas that currently don't have access to safe walking, biking, or transit. Micromobility programs offer a convenient alternative to owning, maintaining, and storing a personal bicycle. They also increase visibility of bicycling as a healthy and sustainable transportation option. This project's strategic safety improvements will leverage data from micromobility to provide more charging and parking hubs, and a comprehensive view of the entire transportation network for our community.

#4: Other DOT Strategic Goals

Climate and Sustainability

Pedestrian networks play a crucial role in sustainable cities by influencing residents' choices and behaviors. The design and condition of sidewalks directly impact the community, promoting walkability, biking, social interaction, and the use of public transportation. This helps reduce greenhouse gas emissions while stimulating economic activity, enhancing livability, and

improving public health. A well-designed and complete pedestrian network not only connects various points, but also ensures the quality and safety of travel. FORWARD Orlando will foster equity and accessibility for all residents, making a positive environmental impact. Recognizing their potential influence, Orlando is prioritizing the enhancement of pedestrian networks.

Furthermore, our proposal will provide some creative and proven solutions that support the efforts to construct climate change-based infrastructure that is green, innovative, and resilient. At the same time, this project will increase access to public transportation and engage residents in walking. Fundamentally, the goal is to provide safety for all - while simultaneously providing sustainably engineered green solutions.

Finally, we will use a multidisciplinary team approach to construct, design, and enhance our transportation network employing the talents of the City of Orlando's Transportation and Public Works Departments along with our Office of Sustainability and Resilience.

The project aims to address sustainability by incorporating sustainable materials such as:

- Solar sidewalks to power streetlighting
- Solar Trees for shade and charging personal devices
- Permeable concrete for sidewalks
- Permeable shoulders
- Rain Gardens, boxes under the surface (referred to as R-Tanks) for Stormwater solutions

Economic Competitiveness

The City of Orlando [Quick Build Guide](#) outlines promoting business as one of the potential project goals to support a stronger local economy within our city. Projects achieve this through increasing local foot traffic, enabling biking and walking connections, providing additional seating, or expanding connectivity to critical community services like schools, healthcare, job, and business.

Workforce

The City of Orlando prioritizes strong labor standards for construction and aims to provide equitable access to workforce training opportunities and will commit to that through this project. Through the Employment & Training Program *Rapid Increase of Skills & Employment (RISE)*, and in partnership with CareerSource Central Florida, residents receive assessment, education, training, coaching, and support services to enhance employability. The program offers in-person assistance by appointment, connecting individuals aged 18+ to job training, employment options, and wrap-around services such as social support and case management. The city has set goals of 12% for minority-owned and 6% for women-owned business enterprises in contracts and subcontracts for supplies, services, and construction. Workforce data will be tracked and reported on the city's website.

#5: Supplemental Planning and Demonstration Activities

Scope

Currently, our HIN summarized crash trends from 2013 to 2017. In Fall 2023, we will update the HIN based on new crash data from 2018-2022. Additionally, the city will update the equity lens, or Communities of Concern, identified in the [2021 Action Plan](#) based on 2022 Census data.

FORWARD Orlando will provide the following deliverables using the updated HIN:

- Analysis of the change in HIN spots and segments, and equity lens census tracts
- An Action Plan progress report that explains the shifts and potential causes
- Updated project prioritization within the Action Plan based on new HIN and Equity Lens
- Establish post-crash roadway safety protocol



Figure 2: City of Orlando Quick Build Project

In June 2023, the City of Orlando released a [Quick Build Guide](#) to expedite transportation improvements that addresses today's safety issues while still planning for tomorrow's infrastructure.

Using Orlando's Quick Build Guide, FORWARD Orlando will implement expedited, low-cost traffic safety projects at 28 locations with the following goals and actions:

- Assess and evaluate the safety impact of each quick-build safety countermeasure
- Explore additional innovative approaches or technologies for quick-build safety projects
- Incorporate safety impact findings into Vision Zero Orlando Action Plan a 5-year
- Employ and measure efficacy of various outreach and engagement strategies
- Identify additional countermeasures or strategies that can be deployed at other schools, parks, or community centers throughout the city

Further, the [Transportation Element of the Growth Management Plan](#) for the City identifies the creation of a Pedestrian Facilities Plan. FORWARD Orlando will build on the work completed in *Connected City* which identifies sidewalk gaps along the major throughfare network, by:

- Creating an inventory for existing crosswalks (signalized intersections and designated crossings)
- Recommending additional locations for designated crossings such as midblock and multiuse trail crossings with particular attention to those that promote connections to transit, schools, and parks
- Prioritizing pedestrian improvement projects throughout the city to be incorporated into the Capital Improvement Program

III. Project Readiness

FORWARD Orlando was selected for its readiness status. With our right-of-way already in place, our city teams have evaluated that FORWARD Orlando with complete funding can be initiated immediately and completed within the required timeframe. Upon notice of intent to award, the City will begin selection, in compliance with federal guidelines, of on-call contractors to complete the project outlined herein.

Project prioritization included filter for city-owned right-of-way, or ability to obtain a maintenance agreement with Orange County or Florida Department of Transportation. This omits sidewalk gaps in rail right-of-way.

The City of Orlando is financially sound and capable of addressing contingencies in construction costs and long-term maintenance and operations. We have extensive experience in grants management and compliance with federal funds. Total expenditures in federal and state awards for fiscal year end September 30, 2022, is \$95,186,871. An independent auditor designated the City of Orlando as a low-risk auditee and did not identify any material weaknesses or significant deficiencies in our internal controls. The City of Orlando's financial reporting team has been recognized by the Government Finance Officers Association for the past 44 years for excellence in its financial reporting. In addition to grant project managers and staff, the city employs a team of 3 full time grants management experts to oversee grants compliance.

The construction cost estimates for this project are based on the Florida Department of Transportation’s Long Range Estimation System, including contingency levels.

The FORWARD Orlando project will follow the schedule below, comprised of major tasks, with final design by mid-2024, and construction to be completed by 2027.

Major Task	Year 1	Year 2	Year 3	Year 4	Year 5
Grant Execution					
Final Design					
Supplemental Planning and Demonstrations Activities					
NEPA Process					
Public Engagement					
Local Permitting					
Sidewalk Completions					
Evaluation and Reporting					

The FORWARD Orlando sidewalk gap completion project qualifies for Categorical Exclusion (CE) under the appropriate sections of 23 CFR 771.117 (c)(3), which are actions that meet the definition contained in 40 CFR 1508.4, and based on FHWA’s experience with similar actions, do not involve significant environmental impacts. In addition, since no right-of-way is required for this project, the National Environmental Policy Act (NEPA) process is deemed not applicable.



FORWARD Orlando

Appendix A: Self-Certification Worksheet

Safe Streets and Roads For All
2023 Application



Safe Streets and Roads for All Self-Certification Eligibility Worksheet

Applicants should follow the instructions in the NOFO to correctly apply for a grant. See the [SS4A website](#) for more information.

Instructions: The purpose of this worksheet is to determine whether an applicant's existing plan(s) is substantially similar to an Action Plan for purposes of applying for an Implementation Grant or to conduct Supplemental Planning/Demonstration Activities only. Use of this worksheet is required. Applicants should not adjust the formatting or headings of the worksheet.

For each question below, answer "yes" or "no." If "yes," cite the specific page in your existing Action Plan or other plan(s) that corroborate your response, or cite and provide other supporting documentation separately.

An applicant is eligible to apply for an Action Plan Grant that funds supplemental action plan activities, or an Implementation Grant, only if the following two conditions are met:

- Answer "yes" to Questions **3 7 9**
- Answer "yes" to at least four of the six remaining Questions **1 2 4 5 6 8**

If both conditions are *not met*, an applicant is still eligible to apply for an Action Plan Grant that funds creation of a new Action Plan.

Lead Applicant:

UEI:

1 Are both of the following true?

YES NO
If yes, provide documentation:

- Did a high-ranking official and/or governing body in the jurisdiction publicly commit to an eventual goal of zero roadway fatalities and serious injuries?
- Did the commitment include either setting a target date to reach zero, OR setting one or more targets to achieve significant declines in roadway fatalities and serious injuries by a specific date?

2 To develop the Action Plan, was a committee, task force, implementation group, or similar body established and charged with the plan's development, implementation, and monitoring?

YES NO
If yes, provide documentation:

3 Does the Action Plan include all of the following?

YES NO
If yes, provide documentation:

- Analysis of existing conditions and historical trends to baseline the level of crashes involving fatalities and serious injuries across a jurisdiction, locality, Tribe, or region;
- Analysis of the location where there are crashes, the severity, as well as contributing factors and crash types;
- Analysis of systemic and specific safety needs is also performed, as needed (e.g., high risk road features, specific safety needs of relevant road users; and,
- A geospatial identification (geographic or locational data using maps) of higher risk locations.



4 Did the Action Plan development include all of the following activities?

YES NO

If yes, provide documentation:

- Engagement with the public and relevant stakeholders, including the private sector and community groups;
- Incorporation of information received from the engagement and collaboration into the plan; and
- Coordination that included inter- and intra-governmental cooperation and collaboration, as appropriate.

5 Did the Action Plan development include all of the following?

YES NO

If yes, provide documentation:

- Considerations of equity using inclusive and representative processes;
- The identification of underserved communities through data; and
- Equity analysis, in collaboration with appropriate partners, focused on initial equity impact assessments of the proposed projects and strategies, and population characteristics.

6 Are both of the following true?

YES NO

If yes, provide documentation:

- The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and
- The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.

7 Does the plan identify a comprehensive set of projects and strategies to address the safety problems in the Action Plan, time ranges when projects and strategies will be deployed, and explain project prioritization criteria?

YES NO

If yes, provide documentation:

8 Does the plan include all of the following?

YES NO

If yes, provide documentation:

- A description of how progress will be measured over time that includes, at a minimum, outcome data.
- The plan is posted publicly online.

9 Was the plan finalized and/or last updated between 2018 and June 2023?

YES NO

If yes, provide documentation:





FORWARD Orlando

Appendix B: Budget

Safe Streets and Roads For All
2023 Application

**Budget and Budget Narrative
Supplemental Planning and Demonstration (A)**

FORWARD Orlando **Supplemental Planning and Demonstration** budget is organized into the following four components.

1. Vision Zero Orlando: Safety Action Plan Updates
2. Pedestrian Facilities Plan
3. Quick Build Safety Projects – East
4. Quick Build Safety Projects – West

Project cost estimates are based off of actual 2022-2023 expenditures from the city’s Quick Build Guide and projects, as well as recent Safety Studies.

The Quick Build Safety Projects are divided into East (Districts 1, 2, and 4) and West (Districts 3, 5, 6) to bundle geographic outreach and engagement for project efficiency.

The table to the right details the sites for Quick Build Safety Projects, prioritized by proximity to the HIN, and if they are located in a census tract identified as disadvantaged using the USDOT Equitable Transportation Community Explorer tool.

Quick Build Safety Projects will include countermeasures identified in the Safety Impact Assessment table on pages 4-5:

- Curb Extensions
- Left-turn Hardening
- Slow-turn wedges
- Daylighting
- Chicanes
- Median or Refuge Island

Material options, design considerations, and evaluation metrics are further detailed in the [City of Orlando Quick Build Guide](#)

Quick Build Safety Project Location	Area	HIN	Disadvantaged
Vista Pointe Elementary*	East	N	N
Lake Nona High School*	East	N	N
Azalea Park Elementary	East	Y	N
Roberto Clemente Middle	East	Y	N
Dover Shores Elementary	East	Y	N
College Park Middle School	West	Y	N
Edgewater High School	West	Y	N
Audubon Park School	West	Y	N
Baldwin Park Elementary	West	Y	N
McCoy Elementary	West	Y	N
Rosemont Elementary	West	N	Y
Orlando Gifted Academy	East	Y	N
Blankner School	East	Y	N
Lake Lucerne Park	East	Y	N
Orlando Festival Park	East	Y	Y
Hillcrest Magnet	East	N	Y
Rock Lake Elementary	West	Y	Y
Jones High School	West	Y	Y
OCPS Ace	West	Y	Y
J.B. Callahan Neighborhood Center	West	Y	Y
Lake Dot Park	West	Y	Y
John H Jackson Neighborhood Center	West	Y	Y
Millenia Elementary	West	Y	N
James R Smith Neighborhood Center	West	Y	Y
Eagle's Nest Elementary	West	Y	Y
Washington Shores Elementary	West	Y	Y
Catalina Elementary	West	Y	Y
Memorial Middle	West	Y	Y
<i>*Locations included for geographic balance as District 1 is recently developed and does not have an established crash history in the HIN.</i>			

Appendix A - Budget



Design Activities and Proposed Projects (B, C)

FORWARD Orlando’s **Implementation Budget** includes funds for Design (B) and Construction (C) of approximately 11 sidewalk gap completions. Final locations will be determined based on safety audits, transit ridership data, and right-of-way availability. At least 50% of locations will be in disadvantaged areas.

Planning, Design, and Development (B) costs are estimates as percentages of construction budget based on the regional Metropolitan Transportation Plan as follows: 10% Planning; 30% Design.; 10% CEI No ROW or Environmental costs are included as all projects will take place within existing right-of-way and pursue categorical exclusion.

Sidewalk Gap	Boundaries	Need Based Score
W Kaley St*	S Division Ave - Kuhl Ave	24
S Osceola Ave	Shannon Rd - E Michigan St	15
W Grant St*	S Division Ave - CSX RR (W of Lucerne Ter)	20
Winter Park St	N Westmoreland Dr - I-4	20
E Gore St	W of N Mills Ave - S Primrose Dr	20
N Mills / Jefferson / Thornton	E Robinson St - E Jefferson St	19
E South St	S Primrose Dr - S Crystal Lake Dr	18
Marks St / Summerlin Ave	Kenilworth Dr - N Hyer Ave	17
S Primrose Dr	Curry Ford Rd - E Anderson St	17
Fern Creek Dr	N of E Michigan St - N of Page Ave	16
Fredrica Dr	Fayann St - Curry Ford Rd	16
<i>*Located within Disadvantaged Census tracts, 18% total linear feet of all sidewalk gaps</i>		

Additionally, the following complementary safety enhancements and resilient infrastructure will accompany the proposed sidewalk gap completions.

Complementary Safety Enhancements

- 10 Transit Stop Enhancements which could include bus boarding islands, shelters, bike racks or repair stations, trash cans, and more (est. at \$10,000 per stop)
- 10 Rectangular Rapid Flashing Beacons at nearby crosswalks to alert drivers when someone intends to cross the road (est. \$30,000 per crossing)
- 2 Pedestrian Hybrid Beacons (est. \$750,000 each)
- 40 High Visibility or Raised Crosswalks (\$50,000 each)
- 10 Lighting Upgrades (est. \$20,000 per project)

Appendix A - Budget



Resilient Infrastructure

- Porous Pavement Sweeper to maintain permeability of sidewalks (est. \$200,000)
- Solar Shades or Sidewalks to power nearby street lights or traffic signals during power outages (est. \$100,000 per project based on [Pilot in Tampa, FL](#))
- Rain Garden or pollinator friendly plantings (avg \$5,000 per 300 sq ft)
- Street Trees encourage walkability through shade as well as provide an enclosure effect for traffic calming. Budget includes watering for 18 months to ensure survivability with the Florida climate (est. \$200/tree, up to \$100,000 for watering)

Supplemental Estimated Budget			
Itemized Estimated Costs of the (A) Supplemental Action Plan Activities			
	Federal Costs	Total Project Costs	Federal Funds to Underserved Communities
Vision Zero Orlando Safety Action Plan Updates	\$384,000	\$480,000	
<i>High Injury Network Update Analysis</i>	\$80,000	\$100,000	
<i>Progress Report</i>	\$160,000	\$200,000	
<i>Project Identification and Prioritization</i>	\$120,000	\$150,000	
<i>Post-crash Roadway Safety Protocol</i>	\$24,000	\$30,000	
Quick Build Safety Projects - West (10 locations)	\$928,000	\$1,160,000	
<i>Design</i>	\$80,000	\$100,000	
<i>Outreach</i>	\$8,000	\$10,000	
<i>Materials and Installation</i>	\$800,000	\$1,000,000	
<i>Evaluation</i>	\$40,000	\$50,000	
Quick Build Safety Projects - East (18 locations)	\$1,670,400	\$2,088,000	
<i>Design</i>	\$144,000	\$180,000	
<i>Outreach</i>	\$14,400	\$18,000	
<i>Materials and Installation</i>	\$1,440,000	\$1,800,000	
<i>Evaluation</i>	\$72,000	\$90,000	
Pedestrian Facilities Plan	\$184,000	\$230,000	
<i>Crosswalk Inventory</i>	\$60,000	\$75,000	
<i>Crosswalk Expansion Recommendations</i>	\$44,000	\$55,000	
<i>Prioritized Project List</i>	\$80,000	\$100,000	
Subtotal Budget for (A) Supplemental Action Plan Activities	\$3,166,400	\$3,958,000	\$1,879,600
*Funds to Underserved Communities averaging 36% for systemwide updates to the HIN, and 50% for Quick Build Projects			

Appendix A - Budget



Itemized Estimated Costs of the (B) Planning, Design, and Development Activities			
	Federal Costs	Total Project Costs	Federal Funds to Underserved Communities
Sidewalk Completions	\$843,027	\$1,053,784	\$189,681
<i>Planning (10% construction)</i>	\$210,757	\$263,446	
<i>Design (30% construction)</i>	\$632,270	\$790,338	
Safety Enhancements	\$736,000	\$920,000	\$460,000
<i>Planning (10% construction)</i>	\$184,000	\$230,000	
<i>Design (30% construction)</i>	\$552,000	\$690,000	
Resilient Infrastructure	\$468,160	\$585,200	\$292,600
<i>Planning (10% construction)</i>	\$117,040	\$146,300	
<i>Design (30% construction)</i>	\$351,120	\$438,900	
Subtotal Budget for (B) Conducting Planning, Design, and Development Activities	\$2,047,187	\$2,558,984	\$482,281
Itemized Estimated Costs of the (C) Proposed Projects and Strategies			
	Federal Costs	Total Project Costs	Federal Funds to Underserved Communities
Sidewalk Completions	\$2,318,325	\$2,897,906	\$521,623
<i>Detectable Warnings</i>	\$38,498	\$48,122	
<i>Sidewalk Cost (pervious pavement)</i>	\$469,070	\$586,338	
<i>High Visibility Crosswalks</i>	\$1,600,000	\$2,000,000	
<i>CEI (10% construction)</i>	\$210,757	\$263,446	
Safety Enhancements	\$2,024,000	\$2,530,000	\$1,265,000
<i>Transit Stop Enhancements</i>	\$240,000	\$300,000	
<i>Rectangular Rapid Flashing Beacons</i>	\$240,000	\$300,000	
<i>Pedestrian Hybrid Beacon</i>	\$1,200,000	\$1,500,000	
<i>Lighting Upgrades</i>	\$160,000	\$200,000	
<i>CEI (10% construction)</i>	\$184,000	\$230,000	
Resilient Infrastructure	\$1,287,440	\$1,609,300	\$804,650
<i>Pervious Pavement Sweeper</i>	\$160,000	\$200,000	
<i>Solar Shades or Sidewalks</i>	\$800,000	\$1,000,000	
<i>Rain Gardens</i>	\$80,000	\$100,000	
<i>Street Trees</i>	\$130,400	\$163,000	
<i>CEI (10% construction)</i>	\$117,040	\$146,300	
Subtotal Budget for (C) Carrying Out Projects and Strategies	\$5,629,765	\$7,037,206	\$1,786,623
Total Budget for Activities (A), (B), and (C)	\$10,843,352	\$13,554,190	\$4,148,504
Check for Match Requirement (should not >80%)	80.00%		