



**SAFE  
STREETS  
FOR  
DETROIT**

*The City of Detroit  
Department of Public Works  
Implementation Grant  
Application*

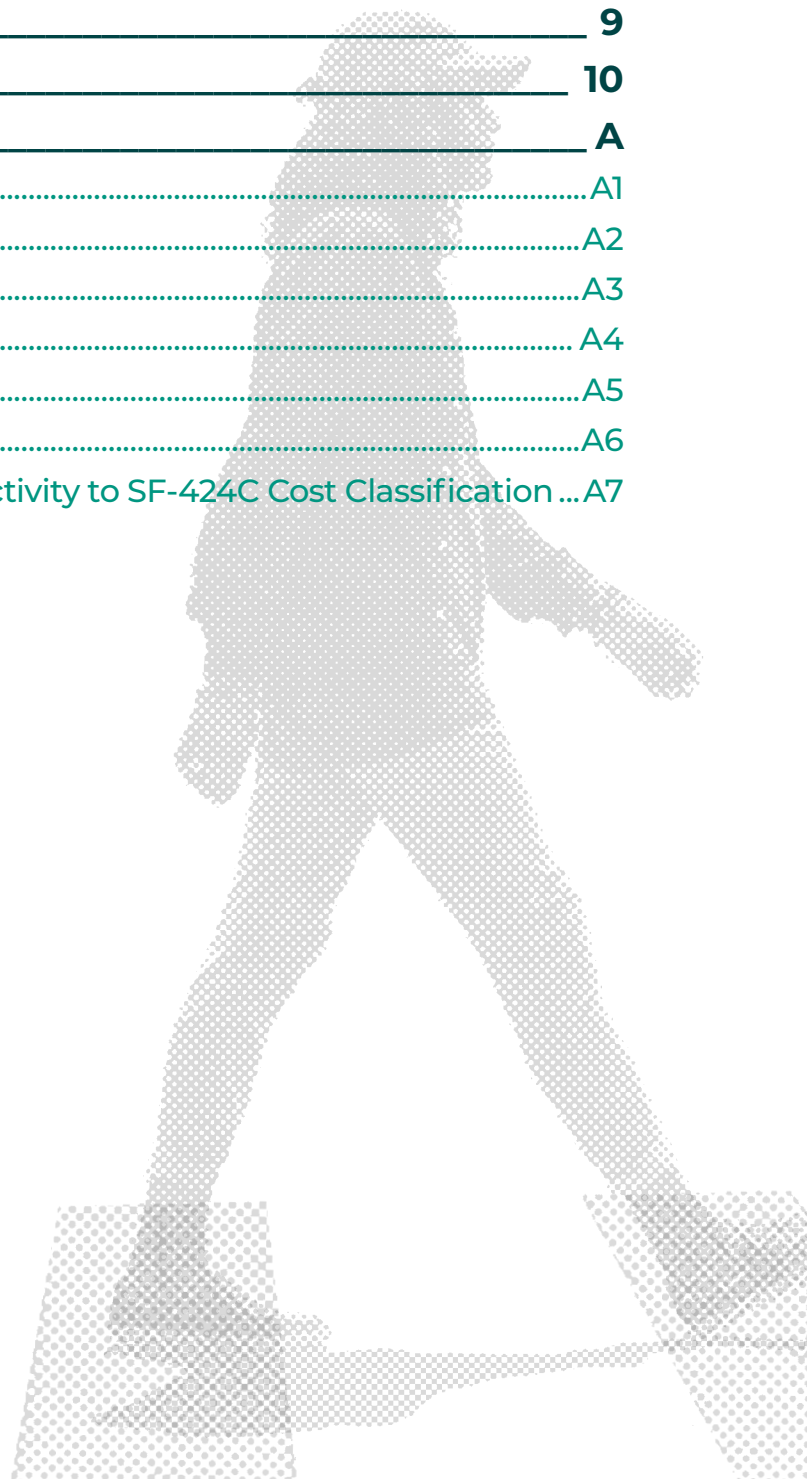


*September, 2022*



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# KEY INFORMATION TABLE

<b>Application Name</b>	<b>Safe Streets for Detroit (SS4D)</b>
<b>Lead Applicant</b>	<b>City of Detroit</b>
<b>If Multi-Jurisdictional, Additional Eligible Entities Jointly Applying</b>	n/a
<b>Roadway Safety Responsibility</b>	Ownership and/or maintenance responsibilities over a roadway network – Yes, all roadways in application under the ownership and jurisdiction of the City of Detroit
	Safety responsibilities that affect roadways - Yes, all roadways in application under the ownership and jurisdiction of the City of Detroit
	Have an agreement from an agency that has ownership and/or maintenance responsibilities for the roadway within the applicant’s jurisdiction – n/a
<b>Population in Underserved Communities</b>	57.1% (386,636 of 676,973 as per Interim DOT Disadvantaged Communities Definition and Mapping Tool; ACS 2015-2019 5-year Estimates)
<b>State(s) in Which Activities are Located</b>	Michigan
<b>Costs by State</b>	\$37,500,000 (100%) - Michigan
<b>Funds to Underserved Communities</b>	\$32,600,000 (86.9%)
<b>Cost total for eligible activity (A) supplemental action plan activities in support of an existing Action Plan</b>	0
<b>Cost total for eligible activity (B) conducting planning, design, and development activities for projects and strategies identified in an Action Plan</b>	0
<b>Cost total for eligible activity (C) carrying out projects and strategies identified in an Action Plan</b>	\$37,500,000
<b>Action Plan or Established Plan Link</b>	2022 Detroit CSAP: <a href="https://detroitmi.gov/departments/department-public-works/complete-streets/streets-people">https://detroitmi.gov/departments/department-public-works/complete-streets/streets-people</a>



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September 12, 2022

The Honorable Pete M. Buttigieg  
Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Ave, SE  
Washington, District of Columbia 20590

Dear Secretary Buttigieg,

It is with urgency that on behalf of the City of Detroit I write in support of the City of Detroit's 2022 application to receive \$30 million in federal Safe Streets and Roads for All (SS4A) implementation funding to address severe crashes throughout the Motor City through the new Safe Streets for Detroit (SS4D) program.

In 2020, 150 people died in traffic crashes on streets within the City of Detroit, Michigan. This is the second highest traffic fatality rate per capita of any U.S. city with over 500,000 people. While many cities across the country saw significant increases in the fatality rate during the pandemic, few saw increases as startling as Detroit: from 2017 to 2020 the traffic fatality rate in Detroit increased by 88%. This growth rate is the third steepest of any major city in the U.S. over the time period.

The City's \$30 million SS4D application represents an ambitious, comprehensive safety program that accelerates the City's current efforts to reduce and eliminate severe crashes and manage speeding. The pro-posed SS4D program is comprised of three primary implementation efforts: High Injury Network (HIN) Interventions, systemic safety interventions, and technology upgrades. Within the HIN intervention projects, the City will deploy rapid implementation project improvements and enhanced protection projects. The rapid implementation work will utilize low-cost, high return safety countermeasures that can be implemented within one year to quickly address issues along the HIN. The enhanced projection projects will involve more hardscape, concrete safety countermeasures at high-impact locations. The systemic safety interventions will deploy many of the same types of safety countermeasures at targeted corridors and locations outside of the HIN. The program will also utilize state-of-the-art technological solutions to proactively address and evaluate crashes to ensure the City is using the right solutions at the right locations.

Together, these investments in proven safety improvements will have a significant and immediate impact on reducing fatalities and serious injuries in Detroit's streets. I give my full support to this application for 2022 SS4A implementation funding for the Safe Streets for Detroit implementation project.

Sincerely,

Michael E. Duggan  
Mayor

## OVERVIEW

Tragically, the suffering and loss of life due to motor vehicle crashes is increasing across the country. The National Highway Traffic Safety Administration (NHTSA) estimates that 42,915 people died from motor vehicle traffic crashes in 2021, the highest annual fatality number since 2005.<sup>1</sup> Detroit, which experienced one of the highest traffic fatality rates per capita prior to 2020, is also one of those most highly affected by rising traffic deaths. In 2017 the City of Detroit's traffic fatality rate per 100,000 people was 15.3, the third highest nationally among major cities. In 2020, the traffic fatality rate increased 88% to 28.71, far exceeding the average increase. Detroit's startling rise in traffic deaths occurs in a city where 57% of people live in areas designated as Historically Disadvantaged Communities (HDCs) and 35% live below the poverty level, the largest share in any major US city.<sup>2</sup> Detroit has experienced significant loss by multiple measures, but the City and its residents are resilient. The City's emergence from bankruptcy has coincided with strong investments from private and public sector strategies to revitalize the economy, and now Detroit is further tightening its focus on counteracting the roadway safety crisis through a comprehensive set of data-backed interventions.

To meet the national challenge and respond to Detroiters' appeals for safer streets, the City of Detroit (City) has initiated its Safe Streets for Detroit (SS4D) program, and with it, has developed a \$37.5 million scope of projects, collectively known as the [2022 SS4D Project \(the Project\)](#). The Project, funded with a \$30 million US DOT's 2022 Safe Streets for All grant, kickstarts the City of Detroit's initial implementation of strategies and projects identified in its [2022 Comprehensive Safety Action Plan \(CSAP\)](#), a component of the Streets for People (SFP) Transportation Master Plan.

### THROUGH THE 2022 SS4D PROJECT, DETROIT WILL:

- **reduce severe crashes on High-Injury Network (HIN) corridors under the City's jurisdiction by implementing evidence-based safety countermeasures from rapid interventions to enhanced safety improvements proven to address entrenched behaviors and severe crash patterns**
- **proactively and systemically upgrade signals, school zones, trail crossings, and other areas with high numbers of vulnerable roadway users**
- **deploy emerging safety technologies to supplement engineering countermeasures**
- **execute a robust engagement and evaluation framework to build knowledge and momentum to propel Detroit's comprehensive safety strategy in the coming years**

Through SS4D, the City intends to be a model to communities across the country, especially those that have historically experienced sustained disinvestment and require an ambitious investment in outdated infrastructure, so that they can boldly apply data-driven solutions to create safer streets for everyone and drive down fatal and serious injury crashes in partnership with US DOT.

<sup>1</sup>[NHTSA's 2021 Estimate of Traffic Deaths Shows 16-Year High](#)

<sup>2</sup><https://www.forbes.com/sites/andrewdepietro/2021/11/26/us-poverty-rate-by-city-in-2021/?sh=50c71eb65a54>

## Location

The City of Detroit (Detroit) is the largest city in the state of Michigan with a current population of 676,973. Detroit serves as the seat of government for Wayne County and is the primary city of the Southeast Michigan metropolitan region, which is home to 4.3 million people. Detroit's street network was built for a city of nearly two million people, almost three times the current population. Detroit has been hard hit by redlining, employment discrimination, deindustrialization, white flight, and, more recently, housing market turmoil. Today, 57% of Detroit's residents live in areas designated as Historically Disadvantaged Communities and 35% of people live below the poverty level – the highest rate of any large city in the US. Losing 65% of its peak population has resulted in a sharply reduced tax base limiting the City's capacity to maintain and adapt a transportation network that was built for a city twice its size.

Population decline may exacerbate traffic safety issues, with an overbuilt street network providing ample opportunity for speeding and unsafe driving behaviors, resulting in increased risk of serious injury or death, especially for people walking, biking, and using assistive devices. The inequitable effects on the most marginalized people are stark. Over 75% of Detroit's HIN, which comprises only 3% of total centerline miles within the city but accounted for 34% of fatal and serious injury crashes between 2017 and 2021, pass through or form the border of an HDC.

The HIN and Neighborhood Corridor Interventions in Detroit's ambitious 2022 SS4D Project, shown in [Appendix 2](#), would all occur in HDCs. Further systemic safety improvements would be prioritized using the criteria found in Detroit's CSAP, which place a significant emphasis on prioritizing work in identified equity areas.

## RESPONSE TO SELECTION CRITERIA

In 2022, the City completed the CSAP as part of the SFP Transportation Master Plan, which sets a community-driven vision for safer streets and serves as the City's guidebook for planning and designing streets to make it easier and safer for all Detroiters to move around the city. Detroit's CSAP is based on citywide engagement, interdepartmental and stakeholder collaboration, and a systemic analysis of crashes resulting in a serious injury or death.

## SAFETY IMPACT

### Detroit's Safety Needs

On average, 108 people were killed and an additional 495 people were severely injured in traffic crashes annually on Detroit's local streets and roads between 2017 and 2021. Severe crash trends are headed in the wrong direction: the five-year severe crash average continues to rise steadily.

Detroit's serious crashes have grown significantly since 2014, moving the city even further above its peers in traffic fatalities per capita. As demonstrated based on data provided by NHTSA in Table 1 on the next page, Detroit ranked second among cities with populations greater than 500,000 people with a traffic fatality rate of 28.71 in 2020. From

### 2022 SS4D PROJECT HIGHLIGHTS

- nearly 35 miles of roadway safety improvements
- 15 Rapid Deployment corridors
- 10 Enhanced Protection safety projects
- 4 Neighborhood Corridor projects
- 86.9% of total project to be invested in historically Disadvantaged Communities
- Signal equipment, program evaluation, advanced traffic technologies, and maintenance

2017 to 2020, Detroit saw an increase of 88% in its per capita fatality rate, the third steepest increase among major cities for the same period.



## Detroit's Safety Needs (continued)

**TABLE 1: Traffic Crash Fatality Rate, Cities above 500,000 - 2017 and 2020**

City	2017	Rank	2020	Rank	Growth Rate
Memphis, TN	15.18	4	34.32	1	126%
Detroit, MI	15.3	3	28.71	2	88%
Tuscan, AZ	11.95	12	22.58	3	89%
Jacksonville, FL	16.25	1	19.34	4	19%
Albuquerque, NM	15.04	5	18.67	5	24%
Louisville, KY	14.32	8	18.27	6	28%
Dallas, TX	14.47	7	16.53	7	14%
Nashville, TN	10.19	17	15.49	8	52%
Indianapolis, IN	11.12	15	15.26	9	37%
Milwaukee, WI	11.76	13	14.77	10	26%

Source: NHTSA Pedestrian Fact Sheet, 2017 & 2020

Through SS4D, the City of Detroit aims to ignite a paradigm shift by continuing collaboration across all safety stakeholders and by implementing the 2022 SS4D Project, guided by the Safe System approach. The Department of Public Works, the Health Department, Planning and Development Department, Detroit Department of Transportation, and the Detroit Police Department, among other key stakeholders convened the CSAP will partner with the community to grow a culture of shared responsibility for traffic safety. Detroit's new approach takes human error into stronger

consideration and works to reduce the severity of crashes and save lives.

### Targeting the Streets with Demonstrated Safety Needs: The High Injury Network

As depicted in the Project Map in [Appendix 1](#), the SS4D program will improve the corridors in greatest need of safety interventions as demonstrated by crash data. In total, there were 2,501 fatal and serious injury crashes on surface streets across the City of Detroit between 2017 and 2021. Of those 2,501 crashes, 840 (34%) occurred along the HIN, the streets with the highest frequency of severe crashes. Of those 840 HIN crashes, 316 fatal and serious injury crashes occurred along the project corridors proposed for improvement in this application, accounting for 38% of severe crashes on the HIN and 13% of severe crashes across the city. These data points support that on the proposed corridors alone, improvements would have an immediate impact on reducing fatal and serious injury crashes in Detroit.

Please refer to Table 2 below for crash modification factors.

**TABLE 2: SS4D Sample Proven Safety Countermeasures by Sub-Project**

PROGRAM CATEGORY	SUB-PROJECT	TYPICAL COUNTERMEASURES	CRASH REDUCTION FACTOR (CRASH TYPE)	SAFE USERS	SAFE SPEEDS	SAFE STREETS
High Injury Network Interventions	Rapid Implementation Projects	Road Diet	39% (all)	X	X	X
		High visibility crosswalks	40% (pedestrians)	X		X
		Leading Pedestrian Intervals (LPI)	19% (pedestrians)	X		X
		Add pedestrian crossing time	50% (ped)	X		X
	Enhanced Protection Projects	Curb Extensions/Bus Bulbs	32% (all)	X		X
		Bike Lanes	35% (all)	X		X
		Pedestrian Refuge Islands	31% (pedestrians)	X		X
Systemic Safety Interventions	Neighborhood Corridor Improvements	Road Diet	39% (all)	X	X	X
		Curb Extensions/Bus Bulbs	32% (all)	X		X
		Pedestrian Refuge Islands	31% (pedestrians)	X		X
	Safety Improvements for Vulnerable Users	High visibility crosswalks	40% (pedestrians)	X		X
		RRFBs	47% (pedestrians)	X		X
		Raised Crosswalks		X		X
		Intersection lighting	44% (pedestrians)	X		X
		High visibility crosswalks	40% (pedestrians)	X		X
		Pedestrian Countdown Timers	9% (all), 70% (pedestrians)	X		X
	Signal Equipment Upgrades	LED signal heads	28% (all)	X		X
Protected Left Turn Phases		55% (all)	X		X	

Source: CMF Clearinghouse

### Proactively Addressing High Risk Areas using Detroit's Severe Crash Types

The SS4D program would target the three crash types with elevated levels of severity at the locations they are likely to occur. Analysis conducted for Detroit's CSAP indicated that single vehicle (inclusive of fixed object, pedestrian, and bicycle crashes) and angle crashes accounted for 61% of all fatal and serious injury crashes in Detroit between 2017 and 2021. Improvements would reduce vehicular speeds, which largely determine crash severity.

Improving safety for vulnerable users, with a particular focus on pedestrians, is a defining feature of all improvements proposed through the SS4D program. Analysis conducted for the CSAP demonstrates that crashes involving pedestrians result in much more severe outcomes than typical vehicle crashes in Detroit. Despite representing only 2% of all crashes in the city, pedestrian-involved crashes accounted for 20% percent of all fatal and serious injury crashes, rising to 41% percent on the HIN. Other vulnerable users are similarly over-represented in severe crashes.

### EFFECTIVE PRACTICES AND STRATEGIES

In 2021, as part of the SFP process, the City adopted the [Detroit Street Design Guide](#), through which the City commits to designing streets using a Complete Streets and Safe System approach, establishes a pedestrian-first design process rooted in the United States Access Board's proposed Public Right-of-Way Access Guidelines (PROWAG), prioritizes safety over convenience, focuses on reducing and managing speeds, and aims to maximize separation and minimize conflicts between users. Key components include:

- Safe speeds
- High visibility crosswalks
- Good lighting
- ADA-compliant curb ramps
- Accessible sidewalks
- Pedestrian countdown timers
- Street furniture
- Street trees and landscaping

The approach and design policies laid out in the guide dovetail neatly with the goals of SS4A and the SS4D program to reduce severe crashes, particularly fixed object, angle, and pedestrian crashes. Since adopting the Detroit Street Design Guide, the City has designed three streetscape projects that are currently being constructed in 2022, and three additional streetscape projects are currently being designed using the Guide. Furthermore, the Guide, paired with a new project development checklist, has been used to inform safety-focused, Complete Streets designs on a dozen projects implemented ranging from annual street resurfacing and restriping projects to streetscapes. Lastly, the Guide is being used to support the City's interests for safe street designs on three active MDOT projects including Michigan Ave (US 12) reconstruction, I-375 reconstruction, and Gratiot Ave (M-3) safety improvements as part of mitigation for the I-94 Modernization project.

### SS4D Safety Impact Assessment

The SS4D program would invest in safety improvements on corridors with known concentrations of crashes resulting in death and serious injury as well as proactively address locations where severe crashes are likely to occur. All projects would follow the guidance and policies in the *Detroit Street Design Guide*.<sup>3</sup>

The program would primarily improve HIN corridors, the streets with the highest concentrations of severe crashes. These streets have several shared characteristics known to increase the risk of severity, including wide rights-of-way, excess capacity, high traffic speeds, and long distances between safe crossings.

The safety countermeasures proposed for the 2022 SS4D Project covers three of the five Safe System elements, Safe Users, Safe Speeds, and Safe Roads. Additionally, they have been proven to significantly reduce crashes, each associated with strong, highly rated Crash Modification Factors (CMFs). The countermeasures were selected based

<sup>3</sup>[https://detroitmi.gov/sites/detroitmi.localhost/files/2021-12/SFP\\_DesignGuide\\_20210930%20%283%29.pdf](https://detroitmi.gov/sites/detroitmi.localhost/files/2021-12/SFP_DesignGuide_20210930%20%283%29.pdf)



## SS4D Safety Impact Assessment (continued)

on the three severe crash types discussed above and filtered down to meet the urban context of Detroit as well as design polices in the *Detroit Street Design Guide*. A sample of typical SS4D countermeasures and associated crash reduction factors is summarized in Table 2 on page 3. The full list of countermeasures employed is will be more expansive and selected based on additional existing conditions assessment and community engagement.

While the scope of each project location will differ based on the type and pattern of severe crashes, roadway geometry, site conditions, and community priorities, countermeasures will be used in combination to maximize the safety benefit and crash reduction for each project. Projects may also include emerging safety treatments such as hardened centerlines, which have shown early value in Seattle, WA and New York, NY. Even conservative estimates would suggest that, when combined, the improvements would result in hundreds of serious injuries and deaths prevented over the next decade, given that the corridors selected for improvement on the HIN accounted for 302 of Detroit's fatal and serious injury crashes over a five-year period.

### IMPLEMENTATION COSTS

The \$37.5 million SS4D implementation project is split over four categories – High Injury Network Interventions, Systemic Safety Interventions, Evaluation, and Capital Maintenance – with projected budgets and scopes as identified in the SS4D Project Overview in [Appendix 3](#).

#### High Injury Network Interventions

The bulk of the requested funding amount, \$27.125 million, will go towards planning, engagement, design, and construction of HIN Interventions across two project types. Additional Corridor Detail for projects on the HIN can be found in [Appendix 4](#).

#### Rapid Implementation Projects

- \$7.875 million will be applied towards up to 17.6 miles of Rapid Implementation Projects, which include low-cost, high return countermeasures that can be

implemented within approximately one year. Final design decisions will be determined as corridors are scoped in more detail, but these projects will typically include road diets, pavement markings such as high visibility crosswalks and daylighting, paint-and-post curb extensions, signage, and signal timing improvements. Approximate construction costs average \$350,000 per mile, with total average costs per mile at \$450,000 which will cover engagement, design, construction, construction engineering, construction inspection, and a project contingency.

#### Enhanced Protection Projects

- \$19.25 million will be applied towards up to 13.7 miles of Enhanced Protection Projects, which include proven safety countermeasures that require additional coordination and design time for implementation. Final design decisions will be determined as the community is engaged and corridors are scoped in more detail, but these projects will typically include road diets, curb extensions, separated bike lanes, refuge islands, and sidewalk improvements to increase ADA compliance. The funding request works out to approximately \$1.1 million in construction per mile, with a total average cost per mile at \$1.4 million which will cover engagement, design construction, construction engineering, and construction inspection costs.

#### Systemic Safety Interventions

The largest SS4D investment would be dedicated to \$8.375 million in systemic safety interventions on commercial corridors in strategic neighborhood areas, at major street crossings with high volumes of people walking, rolling, and biking, upgrades to signal equipment, and advanced technology to detect and deter dangerous driving behaviors.

- \$3.125 million for four non-HIN neighborhood commercial corridor projects, which will include up to 3.6 miles of Rapid Intervention Projects, at an estimate of approximately \$700,000 per mile in construction with a total average cost per mile at \$870,000.

## Systemic Safety Interventions (continued)

- \$1.875 million will target safety improvements for vulnerable road users. Crossings near schools, parks, and trail crossings will be upgraded with proven countermeasures including RRFBs, raised crosswalks, curb extensions, and high visibility crosswalks.
- \$1.875 million is proposed for pedestrian signal upgrades, to enhance existing signals with countdown timers and APS, among other proven treatments.
- \$1.5 million is proposed for the implementation of advanced traffic detection sensors, as a way for Detroit to pilot this type of new technology.

### Evaluation

\$1 million is proposed for evaluation of SS4D projects to enable the City to learn from these projects to inform future safety projects and enhance project outcomes. This will include robust pre- and post-implementation data collection and analysis that will be used to provide a clear narrative of the safety outcomes, providing Detroit and USDOT direction for implementation in future years.

### Capital Maintenance

To get the full benefit from existing and proposed safety improvements, the SS4D program includes \$1 million that will enable minimal delay executing ongoing maintenance and upkeep of new and existing street safety infrastructure. This maintenance fund will help the City ensure upkeep of markings and flex posts, replacement signage, signal maintenance, and other ongoing capital maintenance needs.

## EQUITY, ENGAGEMENT, AND COLLABORATION

Detroiters, 89% of whom are non-white or Hispanic/Latino, are disproportionately impacted by traffic violence in addition to environmental injustices, housing instability, and low access to quality jobs. As a starting point, SS4D would prioritize safety investments in HDCs to counteract these disparities but would go further still. Through SS4D, the City would make an intentional effort to elevate the voices of those who bear

the most severe burden from severe traffic crashes and leverage their expertise to guide investments that most benefit their lives. As mentioned, the collaboration will start with the key stakeholders, which will work together to ensure that the voices of residents are heard.

### Co-benefits for Transportation Equity

Limitations inherent to Michigan's crash data do not enable analysis on the background or identity of those involved in severe crashes in Detroit. Broader analyses, however, illustrate the disproportionate impacts of severe crashes on people of color. A 2022 study found that, when accounting for miles traveled, fatality rates for Black and Hispanic/Latino Americans are systematically higher than for white Americans. For example, 33.71 Black Americans died per 100,000 person miles cycling, a rate more than 4 times the rate for white Americans.<sup>4</sup> Comparisons to the state and region, shown in Table 4 below, suggest an association between traffic deaths based on race and income.

TABLE 4: *Disparities in Traffic Crash Deaths, 2017-2021*

	Detroit	SEMCOG Region	State of Michigan
Traffic Deaths per 10,000 Residents (2019 estimates)	1.61	0.66	0.88
KA Crashes per 10,000 Residents (2019 estimates)	8.99	4.39	5.78
Share Population Non-White, 2020	89%	36%	27%
Median Household Income (in 2020 dollars), 2016-2020	\$32,498	\$64,068	\$59,234

Source: Census 2020; American Community Survey 5-year Estimates, 2016-2020; American Community Survey 1-year Estimates 2019; SEMCOG 2022.

Notes: share population non-white are those people who identify as non-white, of multiple races, and/or Hispanic or Latino (the inverse of white alone, not Hispanic or Latino)

The 2022 SS4D Project represents a \$32.6 million investment in Historically Disadvantaged Communities. Additionally, 110 of the 112 Census tracts that neighbor the High Injury Network Interventions are classified as Economically Disadvantaged – with high poverty, low wealth, lack of local jobs, low rates of homeownership, low educational attainment, and high inequality. In addition, 73 of the 112 tracts are classified as Transportation Disadvantaged – where residents spend more,

<sup>4</sup>[https://www.ajpmonline.org/article/S0749-3797\(22\)00155-6/fulltext](https://www.ajpmonline.org/article/S0749-3797(22)00155-6/fulltext)

## Co-benefits for Transportation Equity (continued)

and take longer, to get where they need to go. One in three Detroiters do not own a car.<sup>5</sup>

The SS4D program will prioritize safe ADA access to transit stops in collaboration with the Detroit Department of Transportation, the public transit provider. Proposed HIN and commercial corridor improvements on W. Vernor Highway, Van Dyke St, and Seven Mile Rd would benefit transit riders on DDOT ConnectTen routes, those with the greatest frequency and service span.

### Inclusive Engagement

SFP engaged thousands of Detroiters, who voiced strong support for reducing driving speed through street design and safety improvements. 84% of respondents were concerned about speeding and dangerous driving and 79% were supportive of street safety improvements that will reduce speed and increase safety. The production of the CSAP and the SS4D Program grant is the City's direct response to Detroiters' strong and unequivocal message for safer streets. SS4D will continue to include the community to get the most out of safety investments and mitigate the potential unintended consequences to underserved and marginalized people.

As Detroit evolves and grows, sometimes rapidly and unevenly, it is vital that new investment does not lead to displacement, exclusion, unsafe environments, or unhealthy conditions for existing and future residents. For SS4D that means centering the most impacted people and communities, who have been historically underrepresented in the planning process, and executing engagement that reveals potential negative impacts of investments, unlocking intimate experiential knowledge of dangerous driver behaviors, gaps, and opportunities for improvement.

Throughout the SS4D implementation program, the City will follow Detroit's Community Outreach Ordinance and the policies in SFP, tailoring engagement to project scope. As the size of the project rises, so will the public's impact on design. Basic investments necessary to keep up state of good repair and improve safety will be driven by

data, with information distributed to the public prior to construction. More transformative projects will involve closer community consultation, with impacts on final design.

Beyond project-level engagement, SS4D will engage Detroiters in the evaluation of the overall program to develop an understanding of program impacts and what modifications may be necessary in future years.

### External Stakeholder Coordination

As part of the CSAP, the City coordinated with Wayne County, SEMCOG, and MDOT and received enthusiastic support for the SS4D program. Efforts were coordinated with SEMCOG and other agencies while putting this proposal together to ensure a seamless alignment for a safety vision for the region ensuring solutions are complementary, synchronized, and effective. Projects funded through the 2022 SS4D grant application, underpinned by robust analysis, will be a template for future improvements on corridors under the jurisdiction of others. The City's focus on on severe fixed object, angle, and pedestrian crashes is in alignment with the emphasis areas identified in SEMCOG's 2015 *Traffic Safety Plan*.<sup>6</sup> Findings from the SS4D evaluation will deepen the spirit of collaboration and help the region coalesce around contextually appropriate treatments and approaches for future roadway safety projects. At the time of this request for US DOT 2022 SS4A implementation funds, SEMCOG is leading a regional safety goal-setting process. The Transportation Safety Action Committee recently confirmed that it expects the region to adopt a goal of zero fatal and serious injury crashes on the region's roadways by 2050. The alignment of local and regional policies, programs, projects and strategies around eliminating deaths and serious injuries in the roadway represents an important shift in regional priorities that will help sustain the SS4D program in early implementation as well as longer term to continue bending the curve of fatal and serious injury crashes toward zero. As such, the City has proactively endorsed the anticipated 2050 goal for zero roadway fatalities as part of the 2022 CSAP.

<sup>5</sup><https://poverty.umich.edu/files/2018/05/W2-Transportation-F.pdf>

<sup>6</sup><https://semcog.org/safety>

## CLIMATE CHANGE AND SUSTAINABILITY, AND ECONOMIC COMPETITIVENESS

The SS4D program delivers on the 2022 Detroit Climate Action Strategy, which establishes a holistic approach to addressing racial equity, climate change, and to fulfill the requirements of the city's Greenhouse Gas Inventory ordinance to reduce greenhouse gas emissions from city operations by 35% by the year 2024 and 100% by the year 2050.<sup>7</sup> In particular, SS4D would advance goals to create safer, more appealing alternatives to driving and decrease impervious surfaces to reduce the release of pollutants into waterways and mitigate flooding.

### Modeshift for a Safer, Healthier, more Sustainable Detroit

SS4D would contribute to growing adoption of low- and no-carbon modes of transportation. Increasing the safety and accessibility of walking, biking, and using shared mobility would increase appeal and uptake, with ensuing environmental benefits. The City has, through SFP, set a goal of expanding the protected bike lane network, delivering an all-ages and abilities network. Through SS4D, the City will identify opportunities to grow and improve the protected bike network and improve connections between off-street greenways and the on-street network, with particular attention to addressing high crash locations for cyclists.

The SS4D program will also support transit ridership and multi-modal trips by closing gaps in the sidewalk network and improving ADA-compliant connections to DDOT stops on HIN and commercial corridors where DDOT and community members identify opportunities.

### Creating Greener Streets and More Resilient Infrastructure

Where feasible on HIN – Enhanced Protection projects, DPW will coordinate with the Detroit Water and Sewerage Department (DWSD) to incorporate green stormwater infrastructure like infiltration curb extensions in tandem

with safety upgrades. Road diets in particular provide opportunities to reclaim impervious surfaces and convert them to rain gardens – either through SS4D or in future projects.

### Fostering Inclusive Economic Opportunity

If awarded, the City's Department of Public Works (DPW) will work with the Detroit Employment Solutions Corporation (DESC), the City's designated workforce development arm, and the Civil Rights, Equity and Inclusion Office (CRIO) to ensure that Detroiters benefit from increased investment.

DESC currently implements its Skills for Life and Detroit At Work (DAW) programs to help place workers in the jobs that the SS4D program will produce, and create life-long career skills in the process.<sup>8</sup> DAW provides a holistic approach for workforce development in Detroit – particularly for those who are disconnected, underemployed or underserved – and to improve the talent available to Detroit-area employers. DESC, through DAW, will lead a cross-sectoral partnership anchored in existing networks, to ensure participants have the right training for the jobs available through SS4D. To execute this, they work with construction contractors and other employers, as well as community colleges and training institutions. DESC's holistic approach incorporates wraparound services, which include but are not limited to, providing transportation services, childcare, and the soft skills necessary to gain and keep meaningful employment.

DPW and DESC will also work with CRIO to ensure that high-quality and good-paying job creation meets all free and fair choice union standards and will ensure that all state and federal prevailing wage standards are met.

The City's goal for SS4D and all of its programs is to ensure that Detroiters are represented on the job site and that Detroit-based companies succeed. CRIO's mission is to advocate for inclusion and increased opportunities to all who live, work, play or do business in Detroit.<sup>9</sup>

<sup>7</sup><https://detroitmi.gov/departments/general-services-department/office-sustainability/detroit-climate-strategy>

<sup>8</sup>Detroit At Work Programs: <https://detroitatwork.com/>

<sup>9</sup>City of Detroit Civil Rights, Equity and Inclusion Office: <https://detroitmi.gov/departments/civil-rights-inclusion-opportunity-department>

## PROJECT READINESS

### Proven Track Record for Federal Safety Project Delivery

Using federal HSIP and CMAQ funding, the City's DPW has designed and implemented safety improvements on 116 miles of City streets and 122 intersections over the past 10 years. These projects share similar scopes with the SS4D program, addressing severe crash locations through safety countermeasures. Additionally, the City has delivered \$80 million in Streetscape projects over five years to catalyze commercial recovery on strategic corridors. The City of Detroit has demonstrated its technical capacity to ability to deliver proven countermeasures that benefit all users and is ready to accelerate its response to the roadway safety crisis through implementing its 2022 SS4D program of projects.

Detroit intends to submit its SS4D program and the 2022 projects identified in this grant application to the SEMCOG January 2023 call for projects as part of its annual Transportation Improvement Program (TIP) amendment process. The City of Detroit will be working ahead of the January 2023 call for projects to build momentum and support for the SS4D program among SEMCOG partners and voting Members of the committee that approves amendments to the TIP.

### Proactively Preparing for Timely Implementation

The City has already taken steps to expedite SS4D delivery. Through SFP and the CSAP, the City has built the internal relationships, processes, and tools to jumpstart project development. Through the plan itself, the *Detroit Street Design Guide*, and the accompanying *Complete Streets Checklist*, SFP has created a consensus approach to delivering projects rooted in Safe Systems. With agreement on the efficacy of proven countermeasures featured in the CSAP and accompanying project prioritization criteria, DPW is ready to deliver proven treatments where they are most needed.

The scope of the SS4D program categorically does not include right-of-way acquisition to expedite design and construction. Accordingly, the environmental and permitting processes are expected to be minimally significant in terms of schedule risk. To mitigate risk, the City will orient the State Historical Preservation Office (SHPO) to the SS4D program of projects, specific scopes of work identified for the 2022 implementation grant, and the proven countermeasures that will comprise typical improvements through the SS4D program.

All planning and design would be initiated and funded through a 2022 US DOT SS4A award and would not rely on other contracts or funding sources. The City intends to contract with one or more firms to lead the planning and design work in 2023, with the first bids for construction anticipated as early as Q4 2023. Some elements of the 2022 SS4D Rapid Deployment projects could be designed and implemented with in-house Detroit Department of Public Works capacity ahead of vendor selection. The City is actively working to identify those components and intends to advance procurement activity ahead of a notice of award of USDOT SS4A implementation funds to ensure timely progress toward reducing serious crashes.

### MILESTONES:

- Initiate Procurement Activity  
**Q1 2023**
- Grant Obligation  
**Q2 2023**
- Design Work Begins  
**Q2 2023**
- Rapid Implementation Projects reach 60% design  
**Q3 2023**
- Rapid Implementation Project construction begins  
**Q2 2024**
- All Construction complete  
**Q4 2025**

The 2022 SS4D Project Schedule is available in [Appendix 4](#).



## BUDGET SUMMARY

The City of Detroit's 2022 SS4D Project will implement a variety of safety treatments along corridors throughout the city. The 2022 SS4D Project Map – [Appendix 1](#) – identifies project corridors and their expected level of investment as summarized by [Appendix 2](#) – 2022 SS4D Project Overview. Additional detail is available in Table 2 on page 3 – SS4D Sample Proven Safety Countermeasures by Sub-Project – which identifies key countermeasures to be deployed with each project type, and the Project Corridor Detail – [Appendix 3](#) – provides supplementary information about each sub-project's extents and cost assumptions. Approximately half of the total \$37.5 million project budget (\$19.25 million) is dedicated to Enhanced Protection projects on the HIN while Rapid Deployment projects on the HIN (\$7.875 million) will quickly begin to improve the safety of vulnerable road users in critical areas with 17.6 miles of low-cost “paint and post” interventions providing proven safety benefits. Additionally, the City has identified 3.6 miles of non-HIN Neighborhood Corridor safety projects that will offer a mix of Rapid Deployment and Enhanced Protection roadways designs with \$3.125 million of the project budget. The Project also includes set-asides for upgraded pedestrian signals and corridor traffic signal changes to be deployed in addition to paint, post, and concrete elements. Line items also include funds for program evaluation and capital maintenance. Each of these cost elements is in support of implementing strategies and projects identified in Detroit's 2022 CSAP, therefore are all captured within (C) in the required Estimated Budget table – [Appendix 6.1](#). Please refer to [Appendix 4](#) – 2022 SS4D Project Schedule – for milestones around project activities. Sources and Uses of funds table as well as the Project Spending Schedule by year are

provided in the Budget Narrative – [Appendix 6.2 and 6.3](#).

The 2022 SS4D Project Sources and Uses of funds are detailed in [Appendix 2](#). The City of Detroit will contribute local funds to the Project at a rate of 20% of total costs across each expense category. Additionally, the Project Overview provided in [Appendix 2](#) summarizes expenses by activity.

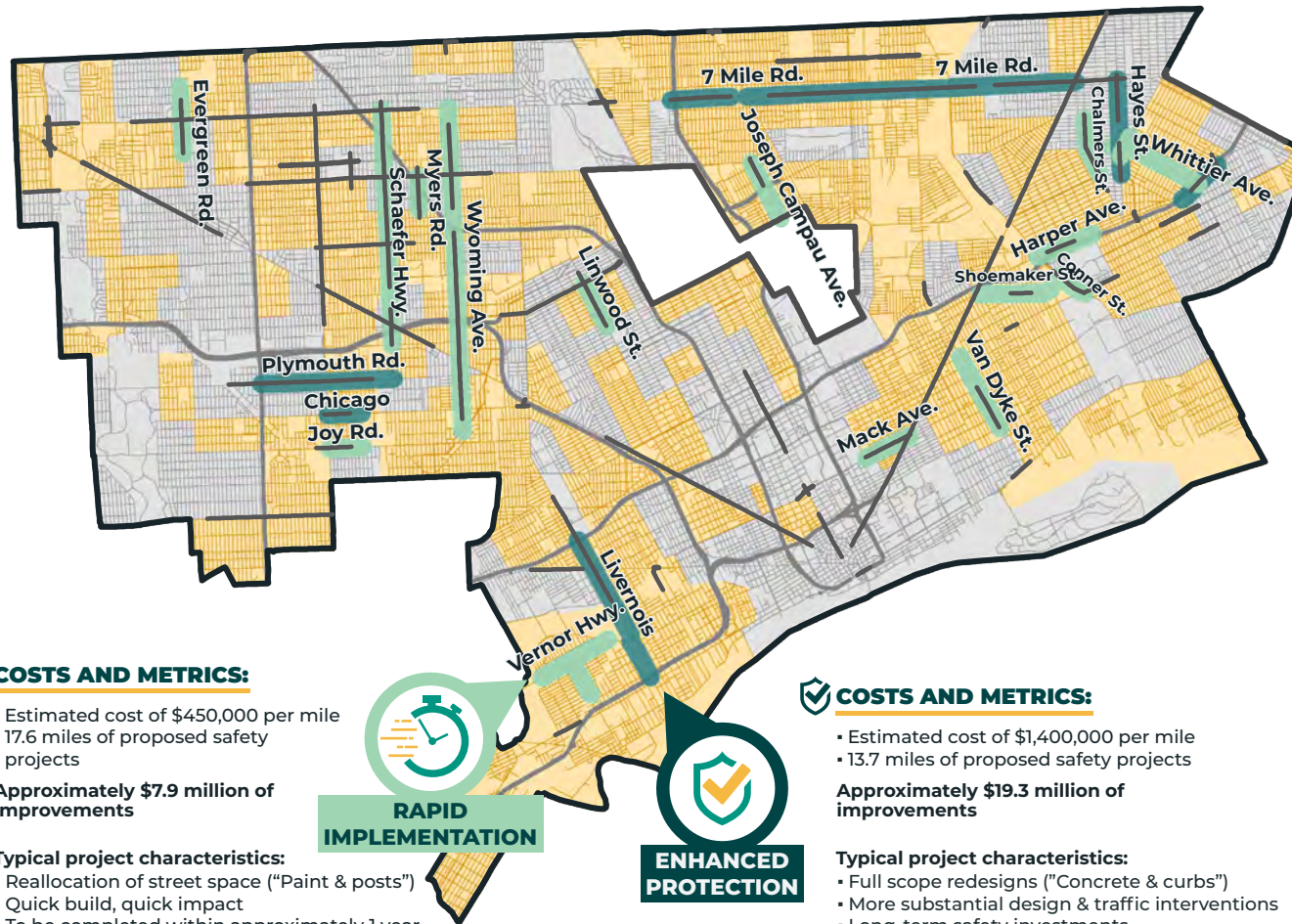
The City of Detroit applies the following assumptions during its cost estimating process:

- Design costs total 10% of construction costs
- Construction Engineering and Inspection is estimated at 15% of construction cost
- Contingency is planned at 10% of construction costs

For the Project budget information detailed in this application, contingency is rolled into the costs presented in the budget tables. Each corridor identified in the Project Corridor Detail in [Appendix 3](#) includes a breakout of the Design, Construction, Construction Engineering and Inspection, and Contingency. For the required SF-424C form, Construction Engineering and Inspection are represented on line 6. Project Inspection Fees, while Design Fees solely comprise the costs represented on line 4. Architectural and Engineering Fees. Contingency has been rolled up to the total project and represented on line 13. Contingencies. The City of Detroit's entry in line 11. Miscellaneous of the SF-424C is made up of two major costs: a) Advanced Traffic Technology and b) Evaluation and described in the Implementation Costs section of the project narrative document.

For further clarification, [Appendix 7](#) shows detail of cost categories represented in the project narrative and budget tables with the values entered on the SF-424C form.

APPENDIX 1: 2022 SS4D Proposed Project Map



**COSTS AND METRICS:**

- Estimated cost of \$450,000 per mile
- 17.6 miles of proposed safety projects

**Approximately \$7.9 million of improvements**

**Typical project characteristics:**

- Reallocation of street space ("Paint & posts")
- Quick build, quick impact
- To be completed within approximately 1 year of grant award



**COSTS AND METRICS:**

- Estimated cost of \$1,400,000 per mile
- 13.7 miles of proposed safety projects

**Approximately \$19.3 million of improvements**

**Typical project characteristics:**

- Full scope redesigns ("Concrete & curbs")
- More substantial design & traffic interventions
- Long-term safety investments

**LEGEND**

- High Injury Network
- Rapid Implementation projects
- Enhanced Protection projects
- Highways
- Local Streets
- Historically Disadvantaged Census Tracts
- City of Detroit

APPENDIX 2: 2022 SS4D Project Overview

CATEGORY	ACTIVITY	OUTPUTS	BUDGET	SCOPE	PHASE
<b>High Injury Network Interventions</b>	Rapid Implementation Projects	17.6 miles	\$7.875 m	Low-cost, high return countermeasures that can be implemented within one year including road diets, markings, paint-and-post curb extensions, signage, and signal timing improvements	Implementation – planning, design, construction
	Enhanced Protection Projects	13.7 miles	\$19.25 m	Proven countermeasures that require additional coordination and design time including curb extensions, separated bike lanes, and refuge islands.	Implementation – planning, design, construction
<b>Systemic Safety Interventions</b>	Neighborhood Corridor Improvements	3.6 miles	\$3.125 m	Rapid implementation and enhanced protection on commercial and strategic neighborhood corridors with high levels of activity	Implementation – planning, design, construction
	Safety Improvements for Vulnerable Users	10-20 locations	\$1.875 m	Proven countermeasures such as RRFBs, raised crosswalks, and enhanced crossings deployed in areas with high levels of people walking and biking including around schools, parks, and trail crossings	Implementation – planning, design, construction
	Signal Equipment Upgrades	5-10 intersections	\$1.875 m	Signal countermeasures to increase safety and access including pedestrian countdown timers, APS, and protected left turns	Implementation – planning, design, construction
	Advanced Traffic Technologies	10-20 locations	\$1.5 m	Advanced traffic detection hardware, software, data licenses, and apps to support data-driven analytics for the management of traffic safety operations	Implementation – planning, design, construction
<b>Evaluation</b>			\$1 m	Robust data analysis that will enable the City to learn from these projects to inform future safety projects and enhance project outcomes	Implementation – program evaluation
<b>Capital Maintenance</b>			\$1 m	Funding to upkeep new and existing infrastructure to extend service life	Implementation - maintenance



APPENDICES

APPENDIX 3: 2022 SS4D Project Corridor Detail

PROJECT CORRIDOR	FROM	TO	SCOPE TYPE	HIN OR NON-HIN	PROJECT LENGTH (IN MILES)	CONSTRUCTION COST	DESIGN COST (10%)	CE&I COST (15%)	CONTINGENCY (10%)
7 MILE	Hoover	Gratiot	Enhanced Protection	HIN intervention	1.50	\$1,600,000	\$160,000	\$240,000	\$160,000
7 MILE	I-75	Conant	Enhanced Protection	HIN intervention	1.00	\$1,200,000	\$120,000	\$180,000	\$120,000
7 MILE	Conant	Hoover	Enhanced Protection	HIN intervention	3.50	\$3,800,000	\$380,000	\$570,000	\$380,000
CHICAGO	Greenfield	Hubbell	Enhanced Protection	HIN intervention	0.50	\$600,000	\$60,000	\$90,000	\$60,000
HARPER	Edsel Ford	Cadieux	Enhanced Protection	HIN intervention	0.75	\$1,000,000	\$100,000	\$150,000	\$100,000
HAYES	Seymour	Outer Drive	Enhanced Protection	HIN intervention	0.85	\$350,000	\$35,000	\$52,500	\$35,000
HAYES	7 Mile	Seymour	Enhanced Protection	HIN intervention	0.60	\$210,000	\$21,000	\$31,500	\$20,000
LIVERNOIS	John Kronk	I-75	Enhanced Protection	HIN intervention	2.00	\$2,200,000	\$220,000	\$330,000	\$220,000
LIVERNOIS	I-94	John Kronk	Enhanced Protection	HIN intervention	1.00	\$1,100,000	\$110,000	\$165,000	\$110,000
PLYMOUTH	M-39	Schaefer	Enhanced Protection	HIN intervention	2.00	\$2,200,000	\$220,000	\$330,000	\$220,000
CHALMERS	Outer Drive	Seymour	Rapid Implementation	HIN intervention	0.90	\$250,000	\$25,000	\$37,500	\$25,000
CONNER	Chandler Park	Warren	Rapid Implementation	HIN intervention	0.50	\$180,000	\$18,000	\$27,000	\$18,000
EVERGREEN	Pembroke	Curtis	Rapid Implementation	HIN intervention	1.00	\$250,000	\$25,000	\$37,500	\$25,000
HARPER	Dickerson	Conner	Rapid Implementation	HIN intervention	0.90	\$250,000	\$25,000	\$37,500	\$25,000
JOS CAMPAU	McNichols	Carpenter	Rapid Implementation	HIN intervention	1.00	\$250,000	\$25,000	\$37,500	\$25,000
JOY	Greenfield	Hubbell	Rapid Implementation	HIN intervention	0.50	\$180,000	\$18,000	\$27,000	\$15,750
KELLY	Hayes	Rochelle	Neighborhood Corridor	Non-HIN intervention	0.40	\$315,000	\$31,500	\$47,250	\$31,250
LINWOOD	Davison	Tuxedo	Rapid Implementation	HIN intervention	0.75	\$200,000	\$20,000	\$30,000	\$20,000
MACK AVE	Dequindre	Gratiot	Rapid Implementation	HIN intervention	0.75	\$200,000	\$20,000	\$30,000	\$20,000
MEYERS	McNichols	Puritan	Rapid Implementation	HIN intervention	0.50	\$175,000	\$17,500	\$26,250	\$17,500
SCHAEFER	Schoolcraft	Fullerton	Rapid Implementation	HIN intervention	0.50	\$200,000	\$20,000	\$30,000	\$20,000
SCHAEFER	7 Mile	Schoolcraft	Rapid Implementation	HIN intervention	3.00	\$750,000	\$75,000	\$112,500	\$75,000
SHOEMAKER	McClellan	St. Jean	Rapid Implementation	HIN intervention	1.05	\$250,000	\$25,000	\$37,500	\$25,000
SPRINGWELLS	W. Vernor	Chamberlain	Neighborhood Corridor	Non-HIN intervention	0.60	\$400,000	\$40,000	\$60,000	\$40,000
VAN DYKE	E. Warren	Vernor	Rapid Implementation	HIN intervention	1.25	\$300,000	\$30,000	\$45,000	\$30,000
W. VERNOR	Dix	Woodmere	Neighborhood Corridor	Non-HIN intervention	1.30	\$800,000	\$80,000	\$120,000	\$80,000
WHITTIER	Queen	Harper	Neighborhood Corridor	Non-HIN intervention	1.30	\$800,000	\$80,000	\$120,000	\$80,000
WYOMING	Puritan	7 Mile	Rapid Implementation	HIN intervention	1.50	\$1,500,000	\$150,000	\$225,000	\$150,000
WYOMING	Oakman	Puritan	Rapid Implementation	HIN intervention	3.50	\$900,000	\$90,000	\$135,000	\$90,000
<b>SUBTOTALS</b>						\$22,410,000	\$2,241,000	\$3,361,500	\$2,237,500
<b>TOTALS</b>					34.9 miles	\$30,250,000			

APPENDICES

APPENDIX 4: 2022 SS4D Project Schedule

Activity	2023				2024				2025				2026				2027			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Initiate procurement activity																				
Notice of Award																				
Grant Obligation																				
Design																				
Rapid Implementation		30%	60%	90%	PSEs															
Enhanced Protection				30%	60%	90%	PSEs													
Systemic Improvements				30%	60%	90%	PSEs													
Community Engagement		SS4D Launch	Year 1 Report	Design Alternatives	Select Preferred Alternatives		Year 2 Report				Year 3 Report				Year 4 Report				Year 5 Report	
Construction																				
Rapid Implementation																				
Enhanced Protection																				
Systemic Improvement																				
Evaluation			Collect "Before" Data				Year 2 Report			Collect "After" Data	Year 3 Report			Collect "After" Data	Year 4 Report				Year 5 Report	

APPENDIX 5 : *Self-Certification Worksheet*

QUESTION	RESPONSE, DOCUMENT AND PAGE NUMBER
<p>1. Are both of the following true:</p> <ul style="list-style-type: none"> <li>a. 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?</li> <li>b. 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?</li> </ul>	<p><b>No</b>, Streets for People endorses a zero-based goal and references the regional goal of 2050, but this goal has not been adopted by City Council or the Mayor. The regional goal of 2050 is expected to be passed by SEMCOG.</p>
<p>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?</p>	<p><b>Yes</b>, See CSAP, SS4A Steering and Implementation Committee, Page 15</p>
<p>3. Does the Action Plan include all of the following?</p> <ul style="list-style-type: none"> <li>a. 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;</li> <li>b. Analysis of the location(s) where there are crashes, the severity, as well as contributing factors and crash types;</li> <li>c. 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</li> <li>d. A geospatial identification (geographic or locational data using maps) of higher risk locations.</li> </ul>	<p><b>Yes</b>,</p> <ul style="list-style-type: none"> <li>a. See CSAP, Safety Analysis, Page 17</li> <li>b. See CSAP, Safety Analysis, Page 17</li> <li>c. See CSAP, Safety Analysis, Page 17</li> <li>d. See CSAP, High Injury Network, Page 23</li> </ul>
<p>4. Did the Action Plan development include all of the following activities?</p> <ul style="list-style-type: none"> <li>a. Engagement with the public and relevant stakeholders, including the private sector and community groups;</li> <li>b. Incorporation of information received from the engagement and collaboration into the plan; and</li> <li>c. Coordination that included inter- and intra- governmental cooperation and collaboration, as appropriate.</li> </ul>	<p><b>Yes</b>,</p> <ul style="list-style-type: none"> <li>a. See CSAP, Community Engagement, Page 13</li> <li>b. See CSAP, Community Engagement, Page 13</li> <li>c. See CSAP, External Stakeholder Engagement, Page 16</li> </ul>
<p>5. Did the Action Plan development include all of the following?</p> <ul style="list-style-type: none"> <li>a. Considerations of equity using inclusive and representative processes;</li> <li>b. The identification of underserved communities through data; and</li> <li>c. Equity analysis, in collaboration with appropriate partners, focused on initial equity impact assessments of the proposed projects and strategies, and population characteristics.</li> </ul>	<p><b>Yes</b>,</p> <ul style="list-style-type: none"> <li>a. See CSAP, Community Engagement, Page 13</li> <li>b. See SFP Transportation Master Plan, Page 23 and CSAP, Streets for People, Page 34</li> <li>c. See Equity Implications, Page 51</li> </ul>
<p>6. Are both of the following true?</p> <ul style="list-style-type: none"> <li>a. The plan development included an assessment of current policies, plans, guidelines, and/or standards to identify opportunities to improve how processes prioritize safety; and</li> <li>b. The plan discusses implementation through the adoption of revised or new policies, guidelines, and/or standards.</li> </ul>	<p><b>Yes</b>,</p> <ul style="list-style-type: none"> <li>a. See CSAP, Policy, Practice, and Program Evaluation, Page 27</li> <li>b. See CSAP, Streets for People, Page 34 and Comprehensive Safety Strategies, Page 35</li> </ul>
<p>7. Does the plan identify a comprehensive set of projects and strategies to address the safety problems identified in the Action Plan, time ranges when the strategies and projects will be deployed, and explain project prioritization criteria?</p>	<p><b>Yes</b>, see CSAP Comprehensive Safety Strategies, Page 35 and , Page 51</p>
<p>8. Does the plan include all of the following?</p> <ul style="list-style-type: none"> <li>a. A description of how progress will be measured over time that includes, at a minimum, outcome data</li> <li>b. The plan is posted publicly online.</li> </ul>	<p><b>Yes</b>,</p> <ul style="list-style-type: none"> <li>a. See CSAP, Monitoring and Accountability, Page 54</li> <li>b. See: <a href="https://streetsforpeople.com/">Streets for People   City of Detroit (detroitmi.gov)</a></li> </ul>
<p>9. Was the plan finalized and/or last updated between 2017 and 2022?</p>	<p><b>Yes</b>, the plan was published in 2022</p>

APPENDIX 6.1: *Estimated Budget*

<b>Subtotal Budget for (A) supplemental action plan activities</b>		<b>\$0</b>
<b>Itemized Estimated Costs of the (A) supplemental action plan activities</b>		
Supplemental action plan activities could include, but are not limited to: a second round of analysis; expanded data collection and evaluation using integrated data; testing action plan concepts before project and strategy implementation; feasibility studies using quick-build strategies that inform permanent projects in the future (e.g., paint, plastic bollards, etc.); follow-up stakeholder engagement and collaboration; targeted equity assessments; progress report development; and complementary planning efforts such as speed management plans, accessibility and transition plans, racial and health equity plans, and lighting management plans.		
Item #1		\$0
Item #2		\$0
<b>Subtotal Budget for (B) conducting planning, design, and development activities</b>		<b>\$0</b>
<b>Itemized Estimated Costs of the (B) planning, design, and development activities</b>		
Project Engagement		\$0
Planning		\$0
Design		\$0
<b>Subtotal Budget for (C) proposed projects and strategies</b>		<b>\$37.5 million</b>
<b>Itemized Estimated Costs of the (C) proposed projects and strategies</b>		
HIN – Rapid Implementation Projects		\$7.875 million
HIN – Enhanced Protection Projects		\$19.25 million
Non-HIN Neighborhood Corridor Improvements (Rapid Implementation Projects)		\$3.125 million
Non-HIN Safety Improvements for Vulnerable Users		\$1.875 million
Signal Equipment Upgrades		\$1.875 million
Advanced Traffic Technologies and Data Collection & Management		\$1.5 million
<b>Evaluation</b>		<b>\$1 million</b>
<b>Capital maintenance</b>		<b>\$1 million</b>
<b>Subtotal Funds to Underserved Communities</b>		<b>\$32.6 million</b>

APPENDIX 6.2: *2022 SS4D Sources and Uses of Funds*

SS4A FUNDS REQUESTED	OTHER FEDERAL FUNDS	NON-FEDERAL SOURCES	TOTAL	% FEDERAL	
Planning/Design	\$2,212,800	-	\$ 553,200	\$2,766,000	80%
Construction/Implementation	\$20,483,000	-	\$5,120,750	\$25,603,750	80%
Construction Engineering & Inspection	\$3,319,200	-	\$829,800	\$4,149,000	80%
Equipment	\$975,000	-	\$243,750	\$1,218,750	80%
Evaluation	\$800,000	-	\$200,000	\$1,000,000	80%
Contingencies	\$2,210,000	-	\$552,500	\$2,762,500	80%
<b>TOTAL</b>	<b>\$30,000,000</b>	<b>-</b>	<b>\$7,500,000</b>	<b>\$37,500,000</b>	<b>80%</b>

APPENDIX 6.3: *2022 SS4D Spending Schedule*

	2023	2024	2025	2026	2027	TOTAL
Planning/Design	\$1,016,912	\$1,749,088				\$2,766,000
Construction/Implementation		\$10,007,980	\$14,594,971	\$583,799	\$416,999	\$25,603,750
Construction Engineering & Inspection		\$ 1,627,059	\$2,521,941			\$4,149,000
Equipment	\$60,938	\$60,938	\$1,096,875			\$1,218,750
Evaluation				\$500,000	\$500,000	\$1,000,000
Contingencies		\$690,625	\$690,625	\$690,625	\$690,625	\$2,762,500
<b>TOTAL</b>						<b>\$37,500,000</b>

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APPENDIX 7: Cross-Reference of Project Budget Activity to SF-424C Cost Classification

SS4D ACTIVITY	COST	SF-424C COST CLASSIFICATION					TOTAL
		CONSTRUCTION	ARCHITECTURAL AND ENGINEERING FEES	PROJECT INSPECTION FEES	CONTINGENCIES	MISCELLANEOUS	
Enhanced Protection	\$19,250,000	\$14,260,000	\$1,426,000	\$2,139,000	\$1,425,000		\$19,250,000
Rapid Implementation	\$7,875,000	\$5,835,000	\$583,500	\$875,250	\$581,250		\$7,875,000
Neighborhood Corridor	\$3,125,000	\$2,315,000	\$231,500	\$347,250	\$231,250		\$3,125,000
Vulnerable Users	\$1,875,000	\$1,218,750	\$187,500	\$281,250	\$187,500	\$ -	\$1,875,000
Signal Equip	\$1,875,000	\$1,218,750	\$187,500	\$281,250	\$187,500	\$ -	\$1,875,000
Adv Traffic Tech	\$1,500,000	\$975,000	\$150,000	\$225,000	\$150,000	\$ -	\$1,500,000
Subtotal	\$35,500,000						
Evaluation	\$1,000,000		-	-	-	\$1,000,000	\$1,000,000
Maintenance	\$1,000,000	\$1,000,000	\$ -	\$ -	\$ -		\$1,000,000
<b>Total</b>	<b>\$37,500,000</b>	<b>\$25,603,750</b>	<b>\$2,766,000</b>	<b>\$4,149,000</b>	<b>\$2,762,500</b>		<b>\$37,500,000</b>