

# Transportation Capital Investment Programs

BUDGET WORKSHOP  
MARCH 9, 2022

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## Overview

### Evolution of Complete Streets

#### Discuss transportation program prioritization

- Thoroughfare Streetlighting
- Sidewalk & Pedestrian Safety

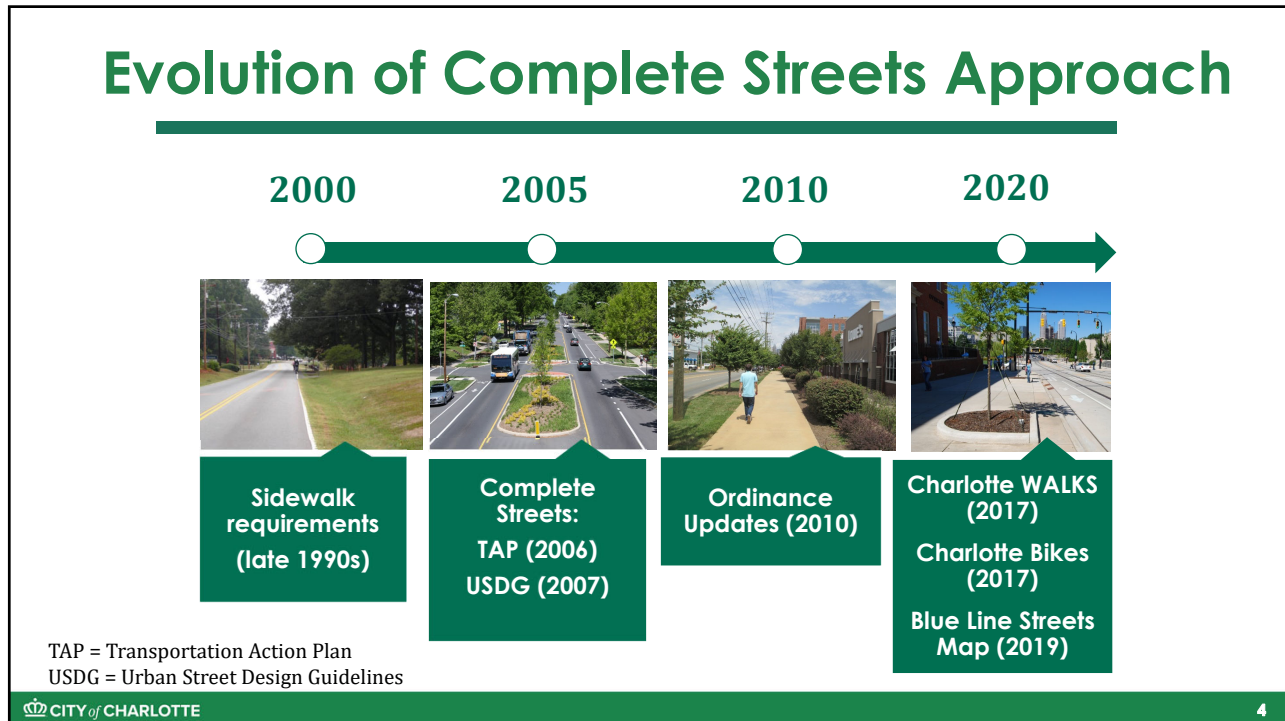
#### Review street resurfacing program

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## Draft 5-Year Bond Plan from FY 2022 Budget

	2022 Bond FY 2023	2024 Bond FY 2025	2026 Bond FY 2027	2028 Bond FY 2029	Total
<b>PROJECTS FUNDED WITH GENERAL OBLIGATION BONDS (Require Voter Approval)</b>					
<b>Economic Development (Economy, Jobs, and Upward Mobility)</b>					
Promote Public/Private Partnerships	\$11,000,000	\$26,000,000	\$13,000,000	\$26,000,000	\$76,000,000
Support Ballantyne Reimagined Infrastructure	\$8,800,000	\$8,700,000	-	-	\$17,500,000
<b>Great Neighborhoods (Affordable and Sustainable Neighborhoods)</b>					
Create and Preserve Affordable Housing	\$50,000,000	\$50,000,000	\$50,000,000	\$50,000,000	\$200,000,000
Invest in Corridors of Opportunity	\$10,000,000	\$10,000,000	-	-	\$20,000,000
<b>Safe Communities (Safe, Healthy, and Inclusive Communities)</b>					
Enhance Transportation Safety (Vision Zero)	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$16,000,000
<b>Transportation, Planning, and Environment (Accessibility, Mobility, and Connectivity)</b>					
Improve Sidewalks and Pedestrian Safety	\$50,000,000	\$20,000,000	\$17,000,000	\$20,000,000	\$107,000,000
Improve Eastway Drive/Shamrock Drive Intersection	\$12,700,000	\$18,300,000	-	-	\$31,000,000
Mitigate Congestion	\$10,000,000	\$10,000,000	\$5,000,000	\$5,000,000	\$30,000,000
Connect Bicycle Facilities	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$32,000,000
Resurface Streets	\$8,000,000	\$8,000,000	\$8,000,000	\$8,000,000	\$32,000,000
Connect Northeast Corridor Infrastructure	\$6,000,000	-	-	-	\$6,000,000
Construct Improvements with Bonus Allocation Funding	\$6,000,000	-	-	-	\$6,000,000
Repair and Replace Bridges	\$5,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$23,000,000
Upgrade Traffic Control Devices	\$4,500,000	\$5,000,000	\$5,000,000	\$5,000,000	\$19,500,000
Maintain Intelligent Transportation Systems	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$16,000,000
Construct Road #1 from Advanced Planning Program	-	\$20,000,000	\$50,000,000	-	\$70,000,000
Construct Road #2 from Advanced Planning Program	-	-	\$20,000,000	\$50,000,000	\$70,000,000
Construct Intersection #2 from Advanced Planning Program	-	-	\$8,000,000	\$12,000,000	\$20,000,000
<b>Total General Obligation Bonds</b>	<b>\$198,000,000</b>	<b>\$198,000,000</b>	<b>\$198,000,000</b>	<b>\$198,000,000</b>	<b>\$792,000,000</b>

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## Policies and master plans are foundation of prioritization



### Prioritization Criteria

- Safety: crashes per mile based on High-Injury Network
- Congestion: traffic volumes or traffic delay during peak times
- Connectivity: access to employment, transit, sidewalk and bicycle facilities
- Leverage: public/private partnership opportunities

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# Vision Zero

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# Transportation Safety (Vision Zero)

Supports the Vision Zero philosophy by making the transportation system safer for all modes

**Program focuses on:**

- Street Lighting
- Neighborhood Traffic Calming
- Spot Safety Projects
- Technology Improvements

Prioritized using data from the High Injury Network & Vision Zero Action Plan

Funding Summary	
2020 Bond	2022 Bond
\$2 M	\$4 M



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# Street Lighting

77,100 streetlights citywide

City staff conducts annual nighttime inventory < 5% outages

**System upgrades**

- LEDs
- “Smart” streetlights



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# Street Lighting Cost Impacts

## Factors in cost

- Required pole type
- Utility impacts and connection to power
- Real estate

## Cost per mile

- Breakaway poles up to \$300,000/mile
- Wood pole up to \$200,000/mile

## Annual Operating Cost Increase

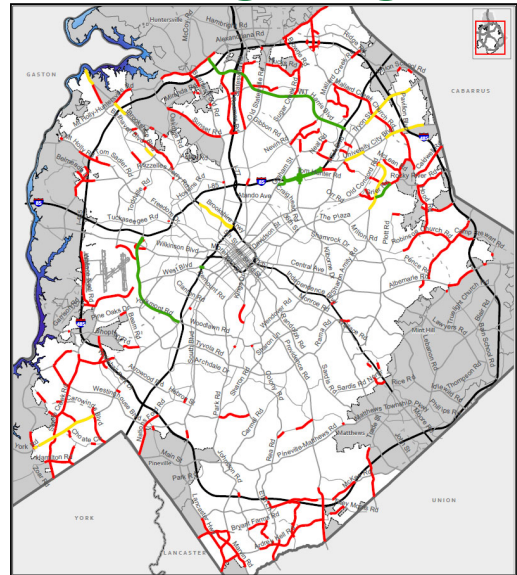
- \$20,000 per mile added



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# Thoroughfares Without Street Lighting

- Funded  
19 miles
- Prioritized (future bond)  
15 miles
- Other Thoroughfares Without Street Lighting  
141 miles



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# Sidewalk and Pedestrian Safety

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## Sidewalk & Pedestrian Safety

**Aims to improve walkability and provide an experience that is safe, useful, and inviting**

**Funding is used to:**

- Construct new sidewalks
- Fill gaps in existing sidewalks
- Provide safe pedestrian crossings

**Goal: 10 miles of sidewalk**

**Prioritized by Charlotte WALKS Plan**

Funding Summary	
2020 Bond	2022 Bond
\$15 M	\$50 M



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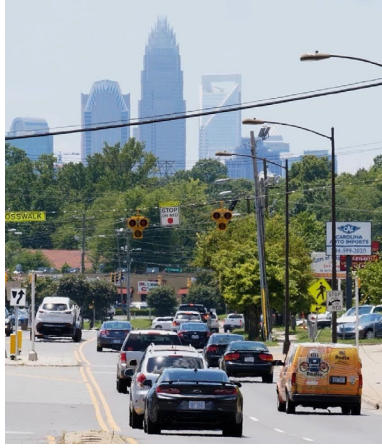
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# Sidewalk & Pedestrian Safety Criteria



**Safety**



**Congestion**



**Connectivity**

# Types of Pedestrian Crossings



**Rectangular Rapid Flash Beacon**

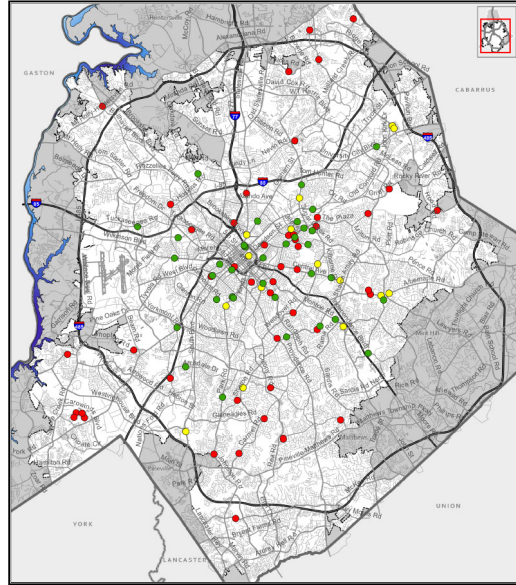


**Pedestrian Hybrid Beacon**

**Cost Ranges \$50,000 – \$300,000**

# Pedestrian Crossings

- Funded  
35 crossings
- Prioritized (future bond)  
15 crossings
- Other Identified Pedestrian Crossings  
47 crossings



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# Sidewalk Cost Impacts

## Factors in cost

- Real estate
- Utility impacts
- Construction

## Complete cost per mile

- Ranges \$4M – 8M
- Includes planning, design and construction

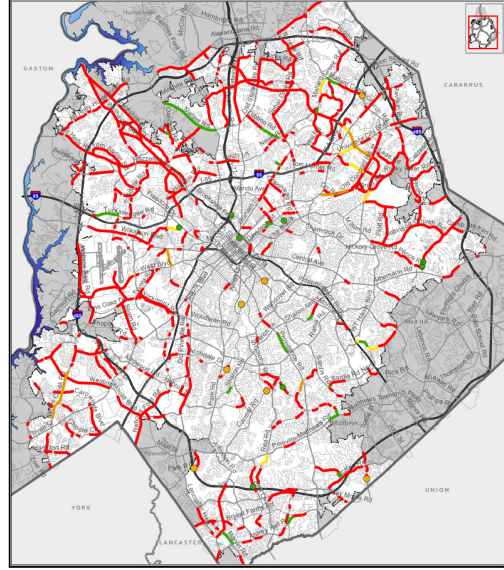


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# Thoroughfares Without Sidewalk

- Funded**  
11 miles
- Prioritized (future bond)**  
5 miles
- Evaluation Underway**  
7 miles
- Other Thoroughfares Without Sidewalks**  
245 miles



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# Street Resurfacing

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# Resurfacing Program Goals



**Extend life of the road structure**

**Minimize maintenance costs of the street network**

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# The Majority of City Streets are Currently Very Good or Good

**Scale of 0 to 100 points**

**Points are deducted for observed distresses**

- Potholes
- Cracking
- Ruts
- Heaved areas
- Utility Cuts

**Useful life of road surface is 18-20 years**

Pavement Condition Rating (PCR) Range	Condition Description	Percent of Charlotte Streets
91-100	Very Good	12.99%
81-90	Good	49.13%
66-80	Fair	33.96%
51-65	Poor	3.63%
0-50	Very Poor	0.29%
Total		100.00%

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# Street Deterioration Over 25 Years



Very Good



Good



Fair



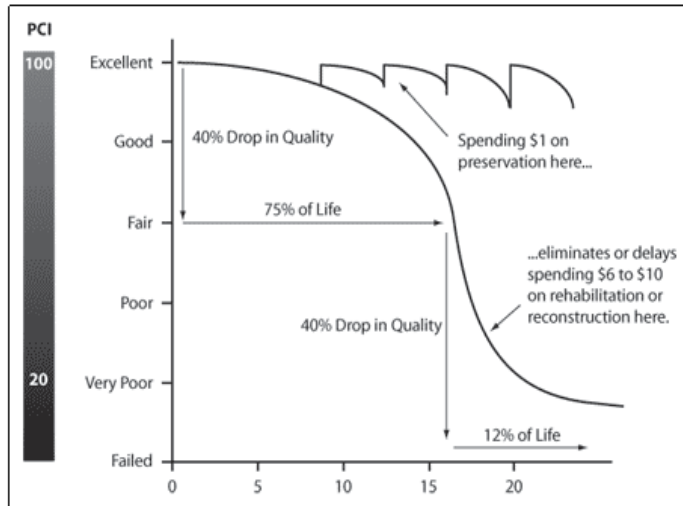
Poor/Very Poor

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# Resurfacing Cycle

**Older pavements require additional costs to resurface**

**Pavements between 15- and 20-years old experience a significant decrease in condition**



Source: Federal Highway Administration

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# Challenges

Size of the street network grows by 30+ lane miles annually

Increasing cost

Reductions from State Street Aid (Powell Bill)

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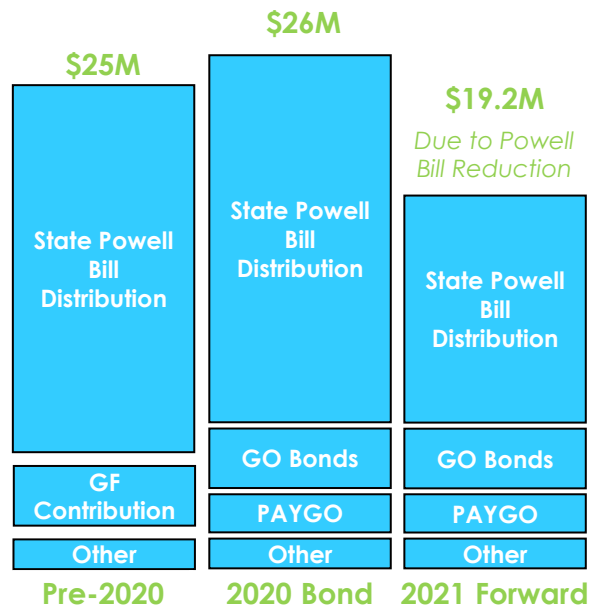
# Charlotte's Current Condition

Current Pavement Condition Rating is 82 out of 100

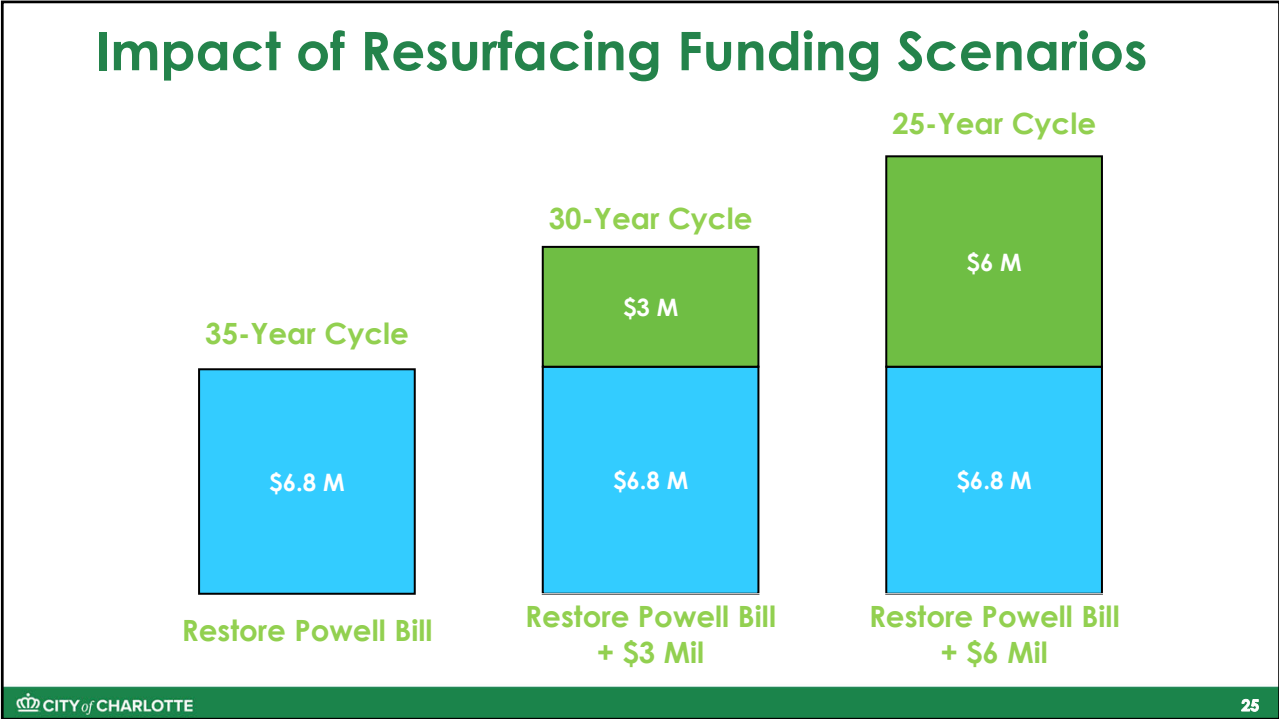
Additional \$1M per year increase started FY 2021

State Powell Bill distribution decreased by \$6.8M

Even if Powell Bill is restored, the resurfacing cycle at this funding level has grown to 35 years



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# Questions?

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