



**City of Dallas**

# **2024 Bond Program Streets & Transportation Subcommittee**

*May 25, 2023*

**Meeting No. 2  
Project Categories and Technical Criteria  
City of Dallas**

# Overview



- Public Works Team Introduction
- Background Information on Department Responsibilities
- Background Information on Scoring
- Public Works Department Responsibilities and Bond Process Recap
- Bond Program Project Categories and Examples (Public Works)
- Technical Criteria for Projects Scoring (Public Works)
- Transportation Team Introduction
- Transportation Department Plan and Policy Guidance
- Bond Program Project Categories and Examples (Transportation)
- Technical Criteria for Projects Scoring (Transportation)
- Next Steps
- Questions and Answers (Both Departments)





# Public Works Department Team Introduction



# Public Works 2024 Bond Liaisons



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# Background Information on Departments Responsibilities



# Responsibilities Relevant to Bond Program



## Public Works Department

- Streets (improved and unimproved) – resurfacing and reconstruction
- Alleys (improved and unimproved)
- Bridges
- Sidewalks

## Transportation Department

- Complete Streets
- Thoroughfare Expansions
- Partnership Projects
- Traffic signals (upgrades and warranted signals)
- Streetlights
- Safety/Vision Zero
- Quiet Zones
- Transportation Systems Development





# Background Information on Scoring



## Parameters Provided by the Bond Office:

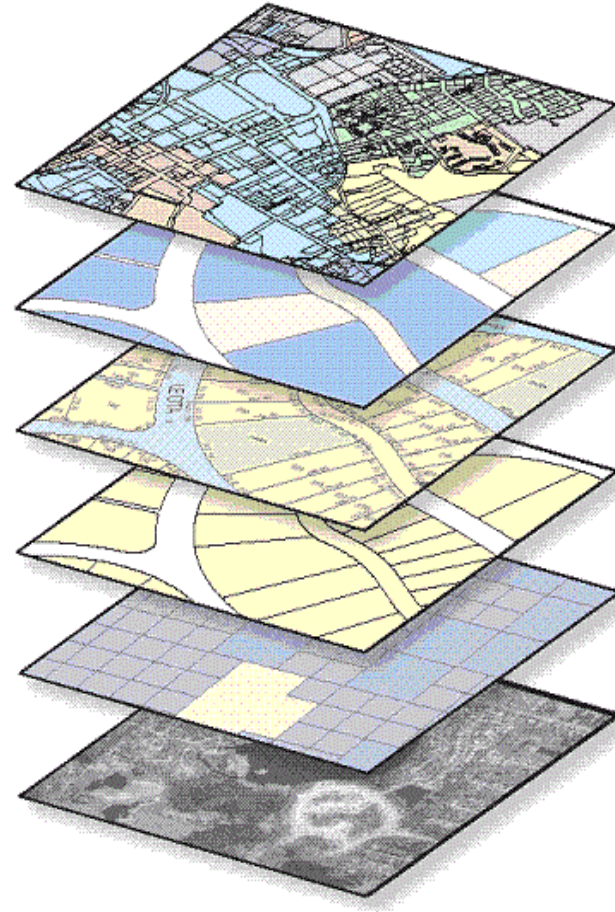
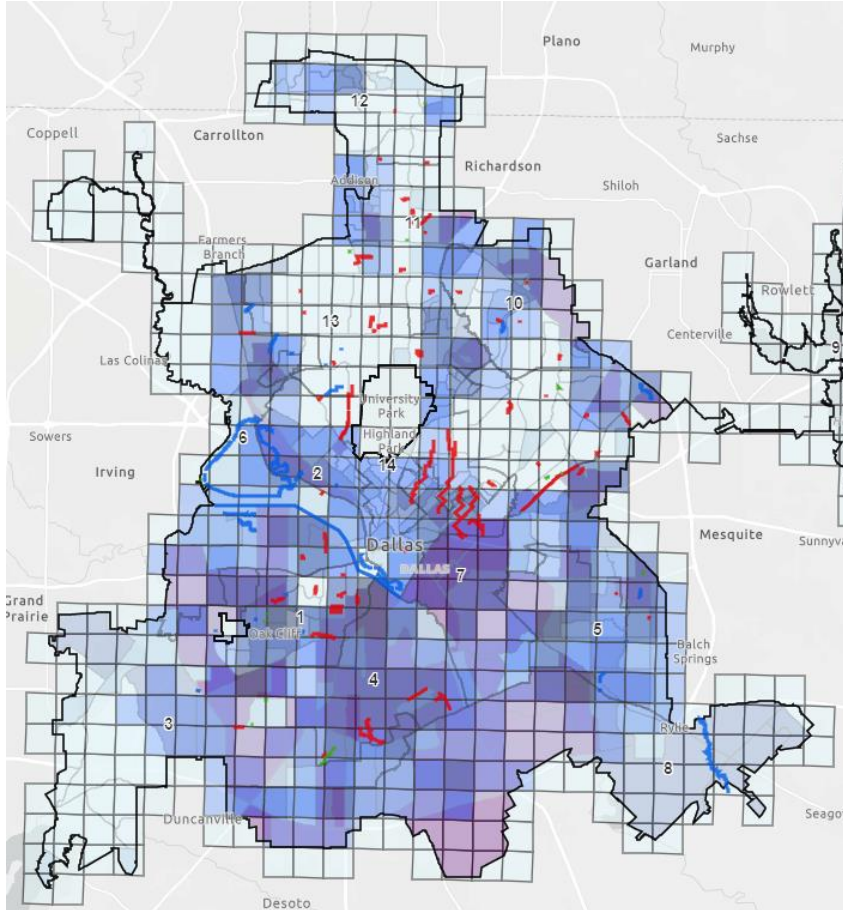


- Technical Criteria: It is the scoring criteria used to rank the needs inventory projects to create priority list for the Bond Program selection.
- Departments score projects on the Needs Inventory with a maximum of an 80-point technical score.
- After the technical score has been assigned, the points for 'Priority Overlays' and Equity will be assigned by the Department of Data Analytics and Business Intelligence.
  - Up to 10 points for Priority Overlays
  - Up to 10 points for Equity





The priority areas were determined by overlaying multiple data layers (see image below)



## Priority Overlays

**(2 points each):**

1. High Crime Areas
2. TOD (DART sites)
3. Market Value Analysis
4. 311 Service Requests (calls for flooding, speeding, traffic calming, potholes, street resurfacing, and illegal dumping)
5. Project Overlaps





## Parameters Provided by the Bond Office:

- Equity Impact Assessment Score factors are based on the Racial Equity Plan. Each factor is worth 2 points.
  1. >70% of population is Black, Hispanic, or Native American
  2.  $\geq$ 15% of families at or below 100% of the federal poverty level
  3. <50% of households own the home they live in?
  4. Area rated “High” on the CDC’s Social Vulnerability Index
  5. >12% of the area’s residents are 65 or older?





# Public Works Department Projects Categories



# Public Works Department Responsibilities and Bond Process Recap

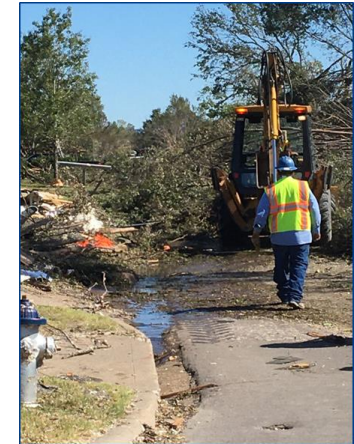
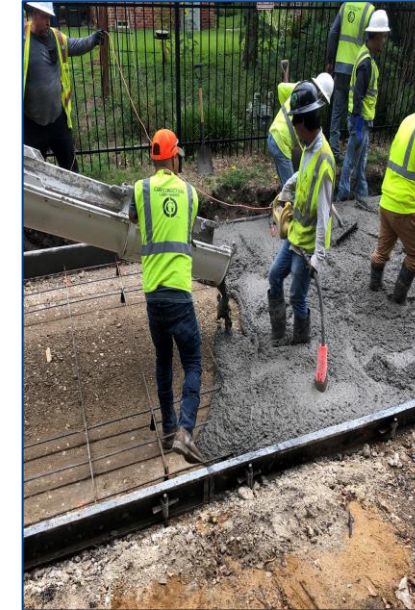


## What are the Department of Public Works Main Responsibilities?

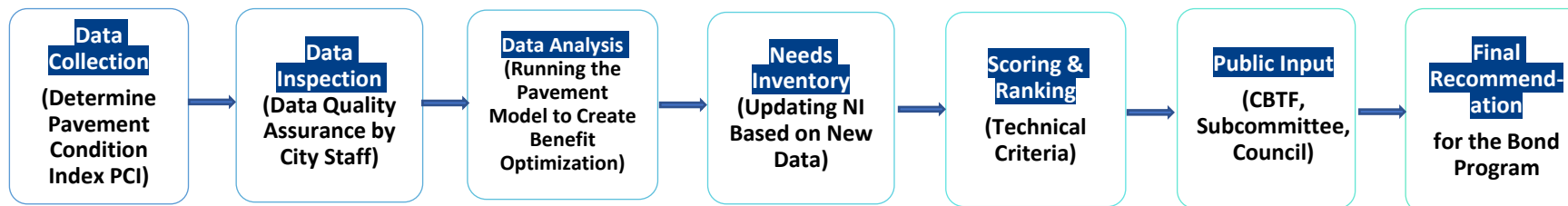
- Design, Construct, and Maintain Streets, Alleys, and Sidewalks.
- Maintain Bridges, Review and Approve Permits, Address Service Requests (SR).
- Planning Infrastructure Improvements and Engineering Survey Reviews.
- Handle Snow & Ice, Storm & Tornado, and Mowing and Sweeping Activities.

## What are the Assets Managed by the Department of Public Works?

- Streets: Approximately a total of 11,753 Lane Miles
- Alleys: Approximately a total of 1,400 Miles
- Sidewalks: Approximately a total of 4,536 Miles
- Bridges: Approximately a total of 638 Bridges



## What is the Process for the Bond Program Selection?



# Bond Program Project Categories (Public Works):



## 1. Streets

- A. Street Reconstruction- Local
- B. Street Reconstruction- Thoroughfare
- C. Unimproved Streets Construction
- D. Street Resurfacing

## 2. Alleys

- A. Alley Reconstruction
- B. Unimproved Alley Construction

## 3. Sidewalks

- A. Sidewalk Cost Share Program
- B. Sidewalk Masterplan

## 4. Bridges

- A. Bridge Repair and Modification



# Bond Program Project Categories and Examples (Public Works)

## 1. Streets:

### A. Street Reconstruction - Local:

Engineering and construction to improve paved local streets that have exceeded their structural life expectancy. The scope of work includes subgrade treatment, replacing concrete pavement, replacing sidewalks, replacing barrier-free ramps, replacing driveway approaches, upgrading water and wastewater lines, upgrading storm drainage system, replacing curbs and gutters. If needed, widening of local streets to City standards will be considered. These projects do not include complete streets elements.



## Bond Program Project Categories and Examples (Public Works)

### B. Street Reconstruction - Thoroughfare:

Engineering and construction to improve paved collector or arterial streets that have exceeded their structural life expectancy. The scope of work includes subgrade treatment, replacing concrete pavement, replacing sidewalks, replacing barrier-free ramps, replacing driveway approaches, replacing curbs and gutters, upgrading water and wastewater lines, upgrading storm drainage system, and upgrading traffic signals as needed. These projects do not include complete streets elements or change the roadway capacity.



## Bond Program Project Categories and Examples (Public Works)

**C. Unimproved Street Construction:** Engineering and construction to improve unimproved local or residential streets that lack curb, gutters, and sidewalks to current City standards.





## Bond Program Project Categories and Examples (Public Works)

**D. Street Resurfacing:** Resurfacing of streets consists of removal of previous asphalt overlays or milling of existing concrete, repairs to base pavement, curb, gutter, and sidewalks where required for the resurfacing project, and placement of asphalt overlays or concrete repairs. Traffic markings are replaced when present.



## Bond Program Project Categories and Examples (Public Works)

### 2. Alleys:

A. Alley Reconstruction: Engineering and construction to improve the surface of paved concrete or asphalt alleys that have exceeded their structural life expectancy. The scope of work includes subgrade treatment, the replacement of surface with reinforced concrete pavement, drainage improvements and the replacement of driveway approaches.



## Bond Program Project Categories and Examples (Public Works)

**B. Unimproved Alley Construction:** Engineering and construction to improve unpaved dirt or gravel alleys to current City standards. The scope of work includes subgrade treatment, the installation of new reinforced concrete pavement, new storm drainage system (if needed) and the replacement of driveway approaches with reinforced concrete.



## Bond Program Project Categories and Examples (Public Works)

### 3. Sidewalks:

#### A. Sidewalk Cost Share Program:

Sidewalk replacement cost sharing program between the City and property owners. This program was created to assist property owners with the cost of replacing sidewalks. Under this program, the City pays 50% and the property owners pay 50% of the cost to replace the sidewalk.



# Bond Program Project Categories and Examples (Public Works)

**B. Sidewalk Master Plan:** To improve pedestrian safety, identifies the most impactful projects for new construction of missing sidewalks and sidewalk repair projects within the City.

Figure 2. Missing Sidewalk Inventory in Dallas by City Council District

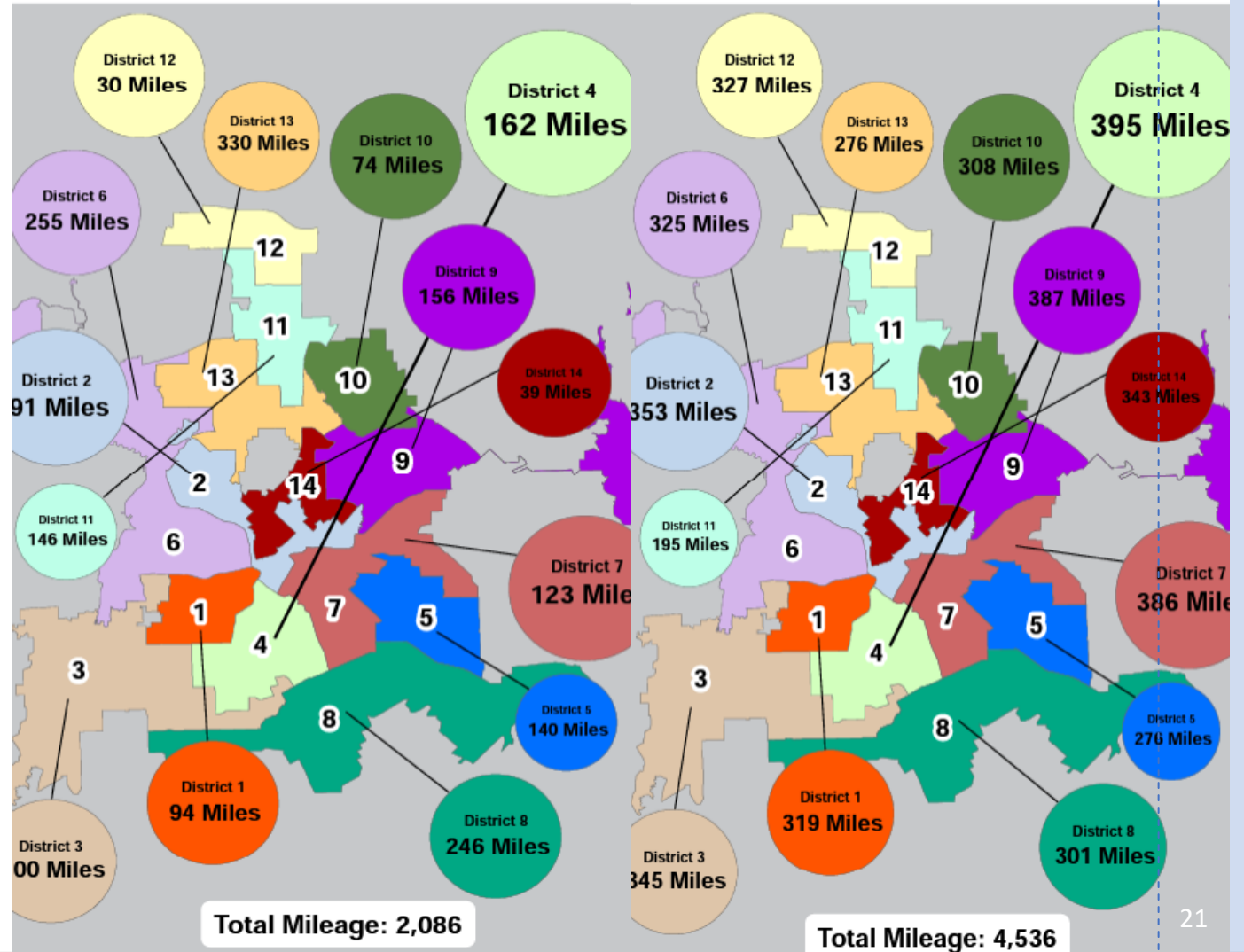
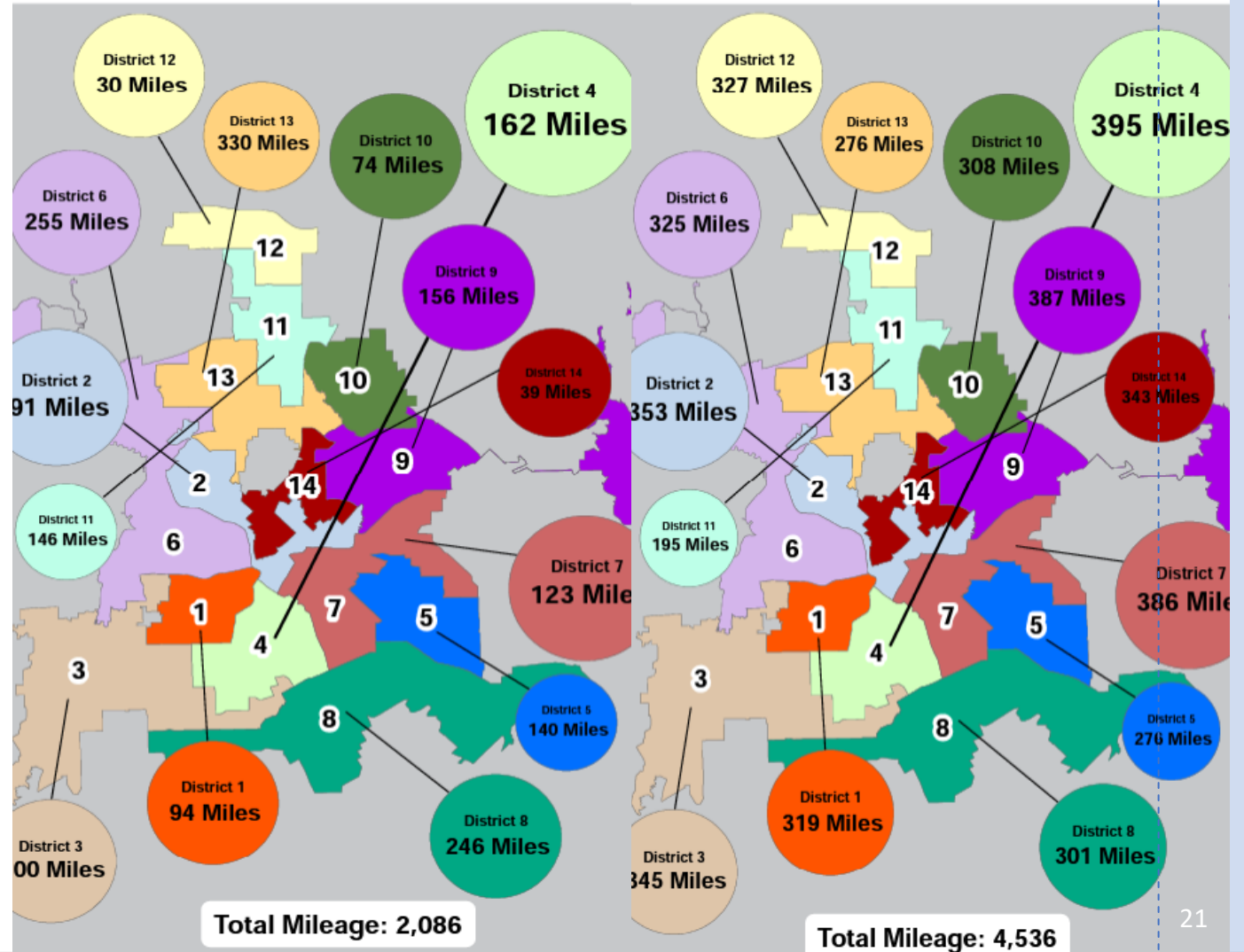


Figure 1. Existing Sidewalk Inventory in Dallas by City Council District



## Bond Program Project Categories and Examples (Public Works)

### 4. Bridges:

#### A. Bridge Repair and Modification:

Repair and modification of bridges due to structural deficiencies identified in the bi-annual Bridge Inspection and Appraisal Program performed by the Texas Department of Transportation.





# Public Works Department Technical Criteria



# Technical Criteria for Projects Scoring (Public Works)



## 1. Street Reconstruction Criteria:

#	Criteria	Maximum Points	Scoring Methodology
1	Pavement Condition Index	50	Based on Pavement Condition Index (PCI) Rating from 100 to 0 using formula $[(100-PCI)*0.5]$
2	Street Classification	15	Arterial Street is 15 points, Collector Street is 10 points, Residential Street is 5 points
3	Time in Needs Inventory	10	1 point per year up to 10 points for 10 or more years
4	DWU Work Plan Project	5	5 points if Yes, 0 points if No
	Total Score	80	





# Technical Criteria for Projects Scoring (Public Works)



## 2. Unimproved Street Construction Criteria:

#	Criteria	Maximum Points	Scoring Methodology
1	Pavement Condition Index	50	Based on Pavement Condition Index (PCI) Rating from 100 to 0 using formula $[(100-PCI)*0.5]$
2	SWMP High Priority Areas	15	15 points if Yes, 0 points if No
3	Time in Needs Inventory	10	1 point per year up to 10 points for 10 or more years
4	DWU Work Plan Project	5	5 points if Yes, 0 points if No
	Total Score	80	



# Technical Criteria for Projects Scoring (Public Works)



## 3. Street Resurfacing Criteria:

#	Criteria	Maximum Points	Scoring Methodology
1	Pavement Condition Index	50	Based on Pavement Condition Index (PCI) Rating from 100 to 0 using formula $[(100-PCI)*0.5]$
2	Street Classification	15	Arterial Street is 15 points, Collector Street is 10 points, Residential Street is 5 points
3	Time in Needs Inventory	10	1 point per year up to 10 points for 10 or more years
4	DWU Work Plan Project	5	5 points if Yes, 0 points if No
	Total Score	80	



# Technical Criteria for Projects Scoring (Public Works)



## 4. Alleys Reconstruction Criteria:

#	Criteria	Maximum Points	Scoring Methodology
1	Pavement Condition Index	30	Based on Pavement Condition Index (PCI) Rating from 100 to 0 using formula $[(100-PCI)*0.3]$
2	Time in Needs Inventory	10	1 point per year up to 10 points for 10 or more years
3	Alley used for Rear Entry	15	15 points if Yes, 0 points if No
4	Alley used for Garbage Pickup	15	15 points if Yes, 0 points if No
5	Availability of Existing Right-of-Way	10	10 points if existing ROW is at least 15 ft. wide, 0 points if Inadequate ROW
	Total Score	80	



# Technical Criteria for Projects Scoring (Public Works)



## 5. Unimproved Alleys Construction Criteria:

#	Criteria	Maximum Points	Scoring Methodology
1	Pavement Condition Index	30	Based on Pavement Condition Index (PCI) Rating from 100 to 0 using formula $[(100-PCI)*0.3]$
2	Time in Needs Inventory	10	1 point per year up to 10 points for 10 or more years
3	Alley used for Rear Entry	15	15 points if Yes, 0 points if No
4	Alley used for Garbage Pickup	15	15 points if Yes, 0 points if No
5	Availability of Existing Right-of-Way	10	10 points if existing ROW is at least 15 ft. wide, 0 points if Inadequate ROW
	Total Score	80	



# Technical Criteria for Projects Scoring (Public Works)



## 6. Sidewalks Improvement Criteria:

#	Criteria	Maximum Points	Scoring Methodology
1	Places of Public Accommodation	20	20 Points If a School within 0.5 Miles Radius, 15 points if by Major Public Destination like Government Facilities & Major Health Care Facilities & Transportation Centers, 10 points if by Bus Stops, 5 points if by Commercial Districts
2	Equity Index	20	20 points for Top 25%, 15 points for 2 <sup>nd</sup> Quartile, 10 points for 3 <sup>rd</sup> Quartile, and 5 points for Bottom 25%.
3	Pedestrian Safety	10	10 points if Specific Pedestrian Fatality, 5 points if on High Injury Network, 0 points if None
4	Street Classification System	10	10 points if Arterial, 5 points if Collector, 0 points if Residential
5	Citizen Request	10	10 points if 3+ years, 5 points if [1-3] years, 2 points if Less than a year
6	Activity Areas (DSMP Heat Map)	30	30 points for Top 25%, 20 points for 2 <sup>nd</sup> Quartile, 10 points for 3 <sup>rd</sup> Quartile, and 5 points for Bottom 25%.
	Total Score	100	



# Technical Criteria for Projects Scoring (Public Works)



## 7. Bridge Repair and Modification Criteria:

#	Criteria	Maximum Points	Scoring Methodology
1	Condition of components	50	It is based on the TXDOT rating of the worst component of each element like Deck, Superstructure, Substructure, and Culverts
2	Critical Service Disruption	20	It is based on severity of Service Disruption, 20 points for Large Scale Disruption, 10 points for Localized Disruption, 5 point for Risk of Disruption
3	Street Classification	10	Arterial Street is 10 points, Collector Street is 5 points, Residential Street is 0 points
4	Age of the Structure	20	Points for this factor ranges from 0 to 20 in a linear distribution based on the age of the structure. (Ex. Oldest City Bridge is 112 years and will get the maximum point of 20)
	<b>Total Score</b>	<b>100</b>	





# Transportation Department Team Introduction





# Transportation Department Plan and Policy Guidance





# Plan and Policy Guidance



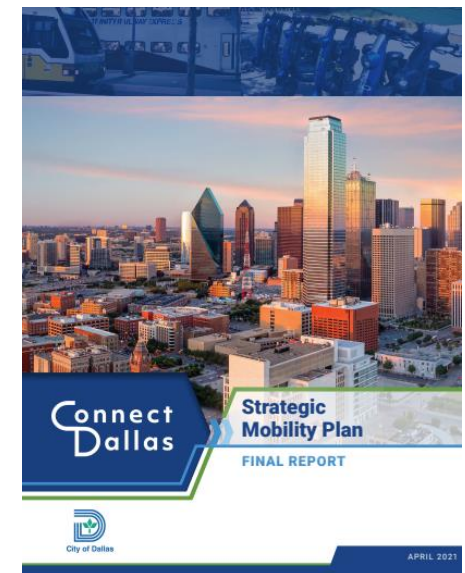
## ForwardDallas, CECAP, Racial Equity Plan:

- Establish vision for 'what' we want the City to look like in next 20 years.

## *Connect Dallas Strategic Mobility Plan (2021):*

- 'How' we plan to achieve the transportation part of that vision
- 5 years of strategies and actions
- Guided by six Driving Principles

**FORWARD**DALLAS



# Connect Dallas Strategic Mobility Plan



## Driving Principles:



**Safety:** Improve safety for all modes of transportation, with an emphasis on reducing traffic fatalities and severe injuries.



**Economic Vitality:** Integrate transportation investments with land use and economic priorities to improve quality of life.



**Environmental Sustainability:** Reduce vehicle miles traveled and provide a variety of travel options to encourage residents to take transit, walk, and bike to reduce greenhouse gas emissions.



**Housing:** Support the creation of affordable and varied housing options that meet the city's growing needs.



**Equity:** Provide safe, affordable access to jobs, services, education, and opportunities for all City residents.



**Innovation:** Leverage existing and emerging technologies to meet 21<sup>st</sup> century challenges.



# Connect Dallas Strategic Mobility Plan

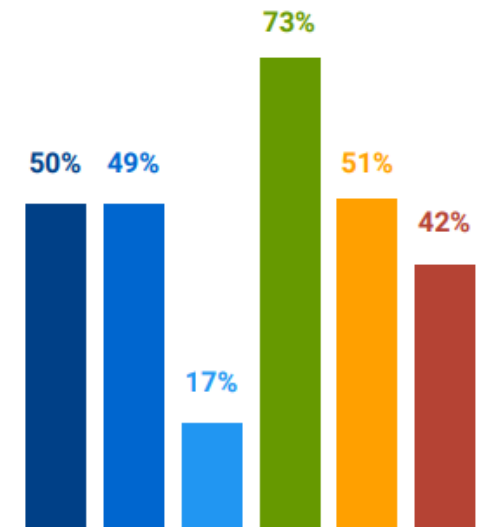


## Transportation Vision:

- Informed by 2,500+ survey responses
- Focus on adding space for pedestrians, bikes, and transit over adding space for cars
- Invest where the need is greatest, rather than spreading investments around
- Promote compact growth and transit-oriented development
- Make public transit more convenient

What three changes would you like to see through the Connect Dallas process?

- More travel options
- Better looking streets
- More convenient public transportation
- Easier access to quality places
- Projects for all areas of the city



# Connect Dallas Strategic Mobility Plan



## Project Delivery Recommendations:

- Use the Driving Principles as a starting point for creating project selection/prioritization processes for bond, CIP, and federal funding
- Use a data-driven project selection process
- Adequately fund maintenance
- Dedicate funding to technology improvements, local priority projects, bicycle infrastructure, sidewalks, Vision Zero implementation, and transit-supportive mobility improvements
- Increase clarity of project type groupings





# Transportation Department Projects Categories



# Transportation Project Categories for Scoring



1. Traffic Signal - Upgrade
2. Traffic Signal - Warranted Signal
3. Street Lighting
4. Safety/Vision Zero
5. Quiet Zone
6. Complete Street
7. Thoroughfare Expansion
8. Partnership Project - Funded
9. Partnership Project - Prospective



# Transportation Project Categories for Scoring



- **Traffic Signals - Upgrades:** Reconstructing signalized intersections, school and warning flashers, and related technology.
- **Traffic Signals - Warranted Signals:** Installing new warranted signals and flashers.



# Transportation Project Categories for Scoring



- **Street Lighting:** Filling street light gaps.
- **Safety/Vision Zero:** Projects that advance the Vision Zero Action Plan; address the causes of severe crashes at high injury locations. Includes intersection improvements.





# Transportation Project Categories for Scoring



- **Quiet Zones:** Installation of safety measures required to implement a train horn ban around railroad crossings. Measures include flashing lights and gates at crossings.



# Transportation Project Categories for Scoring



- **Complete Streets:** Projects that add or enhance bicycle and/or pedestrian facilities above existing conditions without increasing the number of vehicle travel lanes.
- **Thoroughfare Expansions:** Projects that increase the number of travel lanes on existing thoroughfares or build new thoroughfares. Typically include complete streets elements as well.



# Transportation Project Categories for Scoring



- **Partnership Project - Funded:** Projects that have been awarded external funding and the City made a commitment to also provide local funds.
- **Partnership Project - Prospective:** Funding to position the City to partner with external agencies or private developers to fund projects.





# Transportation Department Technical Criteria



# Transportation Technical Criteria



	* Safety	* Environment. Sustainability	* Economic Vitality	Prevent Critical Failure	Project Readiness	Future O&M Costs	TOTAL
<b>Traffic Signal - Upgrade</b>	15	10	10	30	5	10	80
<b>Traffic Signal - Warranted Signal</b>	20	20	20	-	10	10	80
<b>Street Lighting</b>	30	15	15	-	10	10	80
<b>Safety/Vision Zero</b>	40	10	5	5	10	10	80
<b>Quiet Zone</b>	15	15	30	-	10	10	80
<b>Complete Street</b>	20	20	15	5	10	10	80
<b>Thoroughfare Expansion</b>	15	20	20	5	10	10	80
<b>Partnership Project - Funded</b>	15	15	15	10	15	10	80
<b>Partnership Project - Prospective</b>	15	15	15	10	15	10	80

*\*Criteria that represent a Driving Principle. (Note: The Housing and Equity Driving Principals are represented under the Overlay Score. Innovation is incorporated into all projects.)*



# Transportation Technical Criteria



- Projects will be scored and ranked within each project category.
- All project categories use the same scoring criteria, but the weight of the criteria varies. (Weighting = max. number of points the criteria can receive).
- Driving Principles are the basis of the criteria, but three other criteria were also added based on a review of other cities.
- Each criteria has metrics by which they are evaluated. Goal was to limit the use of metrics that could not be auto-calculated for a project in ArcGIS mapping software.

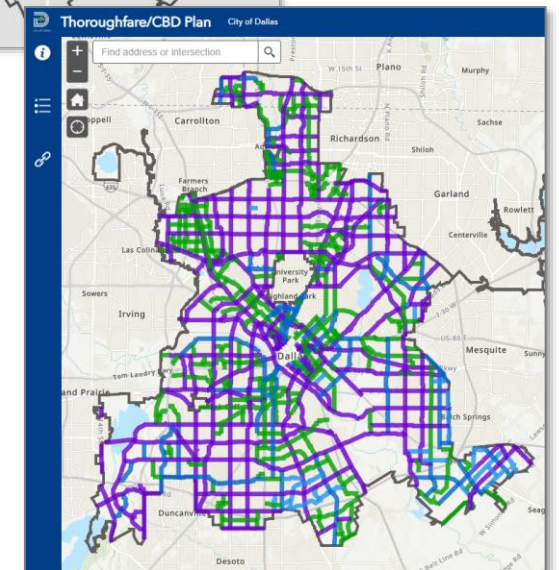
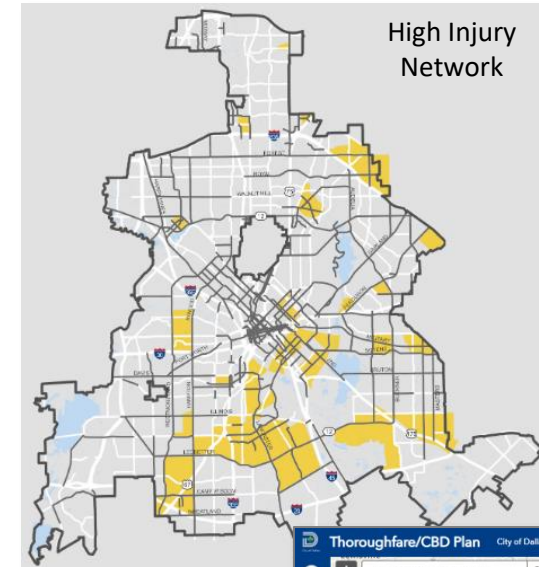


# Transportation Technical Scoring Criteria



**Safety:** Goal is to improve safety for all modes of transportation. Key Metrics:

1. Whether the project is on the Vision Zero High Injury Network (40 pts)
2. Street classification in the Thoroughfare Plan, which is a proxy for traffic volumes (40 pts)
3. DPD Criminal Activity Density (20 pts)



# Transportation Technical Scoring Criteria



**Environmental Sustainability:** Goals include reducing GHG emissions, traveling alone in a vehicle, and vehicle miles traveled (CECAP). Key Metrics:

1. Is project within 1/4 mile of DART station, on a DART Core Frequent Network bus route, or on a Bike Plan route? (40 pts)
2. Is any part of project located in an area that exceeds city average residential and/or employment density? (20 pts)
3. Does the project fill a gap (connect existing bicycle facilities, a traffic signal between previously upgraded signals)? (30 pts)
4. Intersection density of the area, as a proxy for walkability. (10 pts)





# Transportation Technical Scoring Criteria



**Economic Vitality:** Support the City's economic development goals and initiatives. Key Metrics:

1. In an economic development priority area, as determined by Office of Economic Development? (70 pts)
2. In a federally-designated Opportunity Zone? (30 pts)

**Preventing Critical Failure:** Avoid critical failure of infrastructure and potential for public endangerment by maintaining assets. Key Metric:

1. Is the traffic signal more than 25 years old by 2024, or does the street have a pavement condition of C-E? (100 pts)



# Transportation Technical Scoring Criteria



**Project Readiness:** Goal is for projects to go to construction quickly, support projects that are more developed, have fewer unknowns. Key Metrics:

1. To what extent has the public been engaged or expressed support? (40 pts)
  - High pts = Recommended in an adopted plan AND public meeting held
  - Medium pts = Recommended in an adopted plan OR public meeting held
  - Low pts = Interest from stakeholders or service request(s) received



# Transportation Technical Scoring Criteria



## Project Readiness: (cont.)

2. Has any engineering work been completed? (40 pts)
  - High pts = Engineering above 30% is complete
  - Medium pts = Warrant analysis, traffic study, or conceptual design is complete
  - Low pts = Engineer has reviewed project in the field and/or detailed line-item cost estimate has been prepared
3. Is there a potential that easement/right-of-way acquisition may be needed to implement a high-quality project? (20 pts)



# Transportation Technical Scoring Criteria



## Operations and Maintenance (O&M) Cost Implications:

Support projects that will reduce or have minimal impact on future O&M expenses. Key Metric:

1. Would the project increase or decrease the amount of funds the City needs in the future for O&M compared to existing conditions? (100 pts)
  - High pts = decrease or no increase in future O&M expenses
  - Medium pts = minimal increase in future O&M expenses (example:  $\leq \$100,000/\text{year}$ )
  - No pts = higher increase in future O&M expenses (example:  $> \$100,000/\text{year}$ )





# Next Steps



# Next Meetings Tentative Schedule



#	Date	Meeting Topics (Tentative)
1	June 3, 2023	Field Trip 1
2	June 10, 2023	Field Trip 2
3	June 13, 2023	Review Alley, Sidewalk, and Bridge Projects and Project Scores
4	June 20, 2023	Review Signals, Quiet Zones, and Street Lighting Projects and Project Scores
5	August 15, 2023	Review Partnership Projects, Review of Citywide Projects
6	August 22, 2023	Review Unimproved Streets, Streets Resurfacing, Street Reconstruction- Local, Streets Reconstruction- Thoroughfare, Complete Streets, and Thoroughfare Expansion Projects and Project Scores





# Questions & Answers





**City of Dallas**

# **2024 Community Bond Program Task Force and Subcommittees**

*May 25, 2023*

**Meeting No. 2  
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