

Infrastructure Discussion

DECEMBER 19, 2022

Overview

Defining Infrastructure

Evaluation of Infrastructure Needs

Wrap Up and Next Steps

Defining Infrastructure

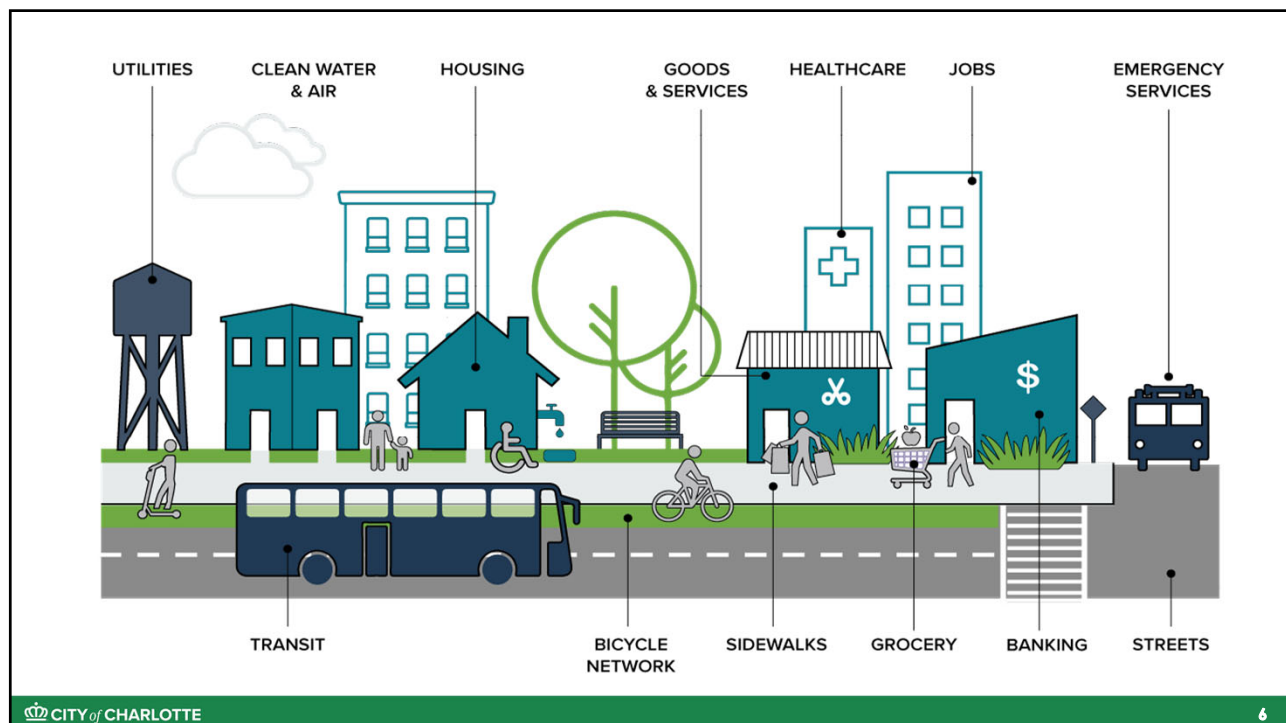
Infrastructure Master List

Over 100 areas and categories of infrastructure identified



			
	<h2 style="text-align: center;">Prioritizing Infrastructure Needs</h2> <p>Staff considered:</p> <ul style="list-style-type: none"> • Previously adopted council policies and plans • Stakeholder feedback: Council, residents, partners • Ability for city to influence/control through regulation • Factors commonly used in decision making 		
			

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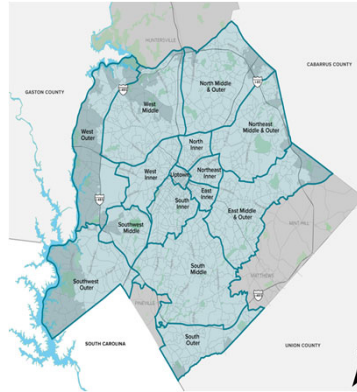
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What's Next: Community Area Planning

2040 Comprehensive Plan:
Citywide Guidance



Community Area Planning:
Community Specific Guidance



- Place Type Refinements (2040 Policy Map)
- New Street Connections
- Needed Infrastructure Projects
- Public/Private Partnership Opportunities

Tools: Implementation Dashboard



Goal 5 : Safe and Equitable Mobility

Charlotte will provide safe and equitable mobility options for all travelers regardless of age, income, ability, race, where they live, or how they choose to travel. An integrated system of transit and tree-shaded bikeways, sidewalks, trails, and streets will support a sustainable, connected, prosperous, and innovative network that connects all Charlotteans to each other, jobs, housing, amenities, goods, services, and the region.

More Info

Safe and equitable mobility is dependent upon having the needed infrastructure for all modes of transportation. It is important for pedestrian and vehicular traffic to have access to sidewalks and roadways in a safe and connected manner. This goal provides data percentages for transit use, as well as availability of bike lanes and sidewalks to measure the existing network of and access to various forms of transportation. [Click here](#) to learn more.

Bicycle Trips: 949

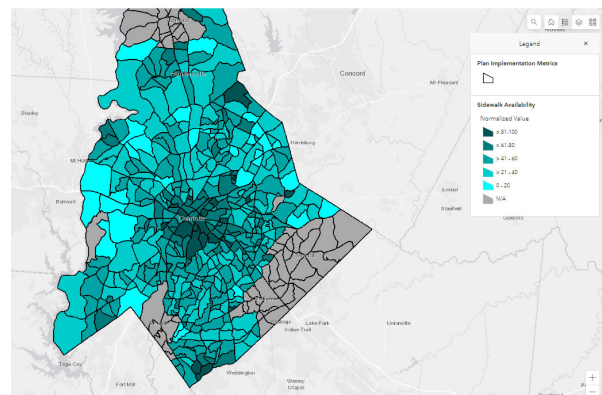
Crash Fatalities: 63

Overall Citywide Averages

Sidewalk Availability: 43.5%

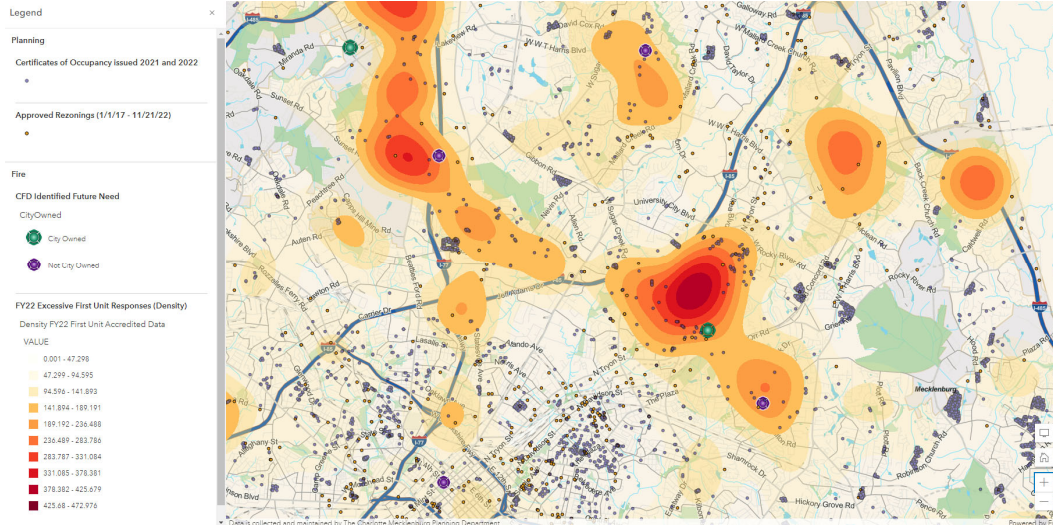
Transit Ridership: 45 boardings

Bicycle Friendliness: 2 index value

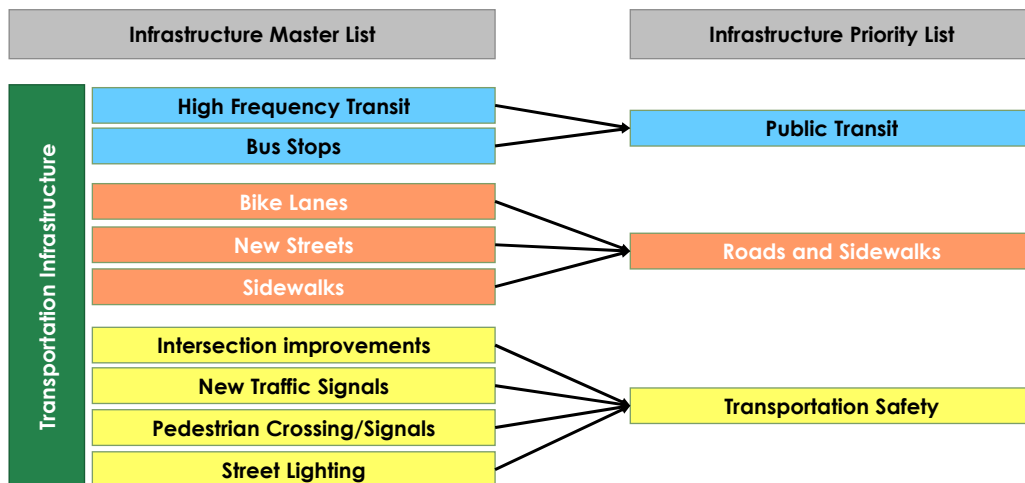


cltfuture2040.com/implementation/

Tools: Understanding Current Metrics



Crosswalk: Master List → Priority List



Priority Infrastructure Areas

~100
Infrastructure
Areas/
Categories



Priority Area	Primary Responsibility				
	City	County	State	Private Sector	CMS
Affordable Housing	X	X	X	X	
Emergency Services	X	X			
Public Open Space	X	X		X	
Public Storm Drainage Infrastructure	X	X		X	
Public Transportation	X	X			
Roads and Sidewalks	X		X	X	
Schools		X	X	X	X
Transportation Safety	X		X	X	
Water/Sewer Capacity	X			X	

Council Discussion

Do the priority areas reflect Council's priorities?

Are there any priorities that need to be added?

Evaluation of Infrastructure Needs

Infrastructure Priority List:

Roads and Sidewalks

<p>Guiding Policy Documents</p> <p>Comprehensive Plan Goal 5: Safe & Equitable Mobility</p> <p>Strategic Mobility Plan: Manage Roadway Congestion and Reduce Emissions</p> <p>Strategic Energy Action Plan: Reduce Greenhouse Gas Emissions</p>	Targets/Outcome	Metrics	Needs/Workplan
	<p>System Operation & Network Capacity</p> <ul style="list-style-type: none"> Identify Annual Targets for all metrics 	<ul style="list-style-type: none"> New Traffic Signals Installed Intersection Delay & Volume/Capacity Index Miles of Fiber-Optic Cable Installed 	<ul style="list-style-type: none"> Assess new signal needs, use SMP to prioritize implementation of the approved future signals Track intersection delay and Corridor Travel Time Reliability to inform project identification and prioritization
	<p>Corridor Travel Time</p> <ul style="list-style-type: none"> Establish Performance Targets 	<ul style="list-style-type: none"> Corridor Vehicular Planning Time Index Bus Reliability: On-time bus performance via Transit Signal Priority 	<ul style="list-style-type: none"> Expand continuous and real-time traffic data collection with permanent traffic count stations. Evaluate individual corridors to establish performance targets & potential projects Conduct bus corridor tests to establish adequacy/needs of existing infrastructure
	<p>Trip Length</p> <ul style="list-style-type: none"> Establish Performance Targets 	<ul style="list-style-type: none"> Trip length in Activity Centers & high-growth areas 	<ul style="list-style-type: none"> Expand use of origin & destination travel data (freight, pedestrian, transit, and bike) Document impact of 2040 Policy Map & increases roadway vehicular capacity

Infrastructure Priority List:

Roads and Sidewalks

<p>Guiding Policy Documents</p> <p>Comprehensive Plan Goal 5:</p> <p>Safe & Equitable Mobility</p> <p>Strategic Mobility Plan:</p> <p>50/50 Mode Share</p>	Targets/Outcome	Metrics	Needs/Workplan
	<p>Complete Sidewalk Network</p> <ul style="list-style-type: none"> Evaluating Targets 	<ul style="list-style-type: none"> Miles of new sidewalk (arterials) Miles of new sidewalk (local & arterials) in transit areas (½ mile of rail/bus stops & mobility hubs) 	<ul style="list-style-type: none"> Explore new funding sources to accelerate public investments in sidewalk facilities. Track/measure sidewalk completion through private land development (UDO/CTR)
	<p>Complete Bike Priority Network</p> <ul style="list-style-type: none"> Evaluating target 	<ul style="list-style-type: none"> Miles of new bike facilities 	<ul style="list-style-type: none"> Explore new funding sources to accelerate public investments in bicycle facilities. Track/measure bicycle facility completion/ROW protection through private land development (UDO/CTR)
	<p>Expand Connectivity</p> <ul style="list-style-type: none"> Evaluating target 	<ul style="list-style-type: none"> Miles of new streets 	<ul style="list-style-type: none"> Track/measure new street completion/ROW protection through private land development (UDO/CTR)
	<p>50/50 Mode Share</p> <ul style="list-style-type: none"> 50% non-SOV commute trips 	<ul style="list-style-type: none"> Commute trips by mode 	<ul style="list-style-type: none"> Conduct frequent Household Travel Surveys to track travel mode changes (remote work, carpooling, transit, walking, biking)

Infrastructure Priority List:

Transportation Safety

<p>Guiding Policy Documents</p> <p>Comprehensive Plan Goal 5:</p> <p>Safe & Equitable Mobility</p> <p>Strategic Mobility Plan:</p> <p>Vision Zero</p>	Targets/Outcome	Metrics	Needs/Workplan
	<p>Eliminate traffic deaths and serious injuries</p> <ul style="list-style-type: none"> Vision Zero 	<ul style="list-style-type: none"> Number of Fatal and Serious Injury Crashes 	<ul style="list-style-type: none"> Review crash data entry process to identify ways to increase speed and efficiency of data analysis
	<p>Complete Street Lighting</p> <ul style="list-style-type: none"> Identifying Targets 	<ul style="list-style-type: none"> Miles of New Streets with Lighting (arterials) 	<ul style="list-style-type: none"> Continue to use SMP/High Injury Network data to prioritize street lighting projects
	<p>Increase Safe Pedestrian Connectivity</p> <ul style="list-style-type: none"> Identifying Targets 	<ul style="list-style-type: none"> Number of New Crossings Installed Number of New/upgraded Signals 	<ul style="list-style-type: none"> Use SMP to identify & prioritize future pedestrian signal installations and upgrades Track/measure new crossings & signal upgrade completion through private land development (UDO/CTR)

Infrastructure Priority List:

Affordable Housing

	Targets/Outcome	Metrics	Needs/Workplan
<p>Guiding Policy Documents</p> <p>Comprehensive Plan Goal 3: Housing Access for All</p>	<p>Create New Affordable Housing</p> <ul style="list-style-type: none"> At least new 900 units/year 	<ul style="list-style-type: none"> Number of new affordable housing units funded 	Currently measuring
	<p>Preserve Existing Affordable Housing</p> <ul style="list-style-type: none"> At least 200 units/year 	<ul style="list-style-type: none"> Number of units acquired and/or rehabilitated and restricted for low-to moderate-income residents 	Currently measuring

Infrastructure Priority List:

Emergency Services

	Targets/Outcome	Metrics	Needs/Workplan
<p>Guiding Policy Documents</p> <p>National Fire Protection Association (1710 Standard)</p> <p>National Emergency Number Association (911 Call Processing Standard)</p> <p>Comprehensive Plan Goal 6: Health, Safe, and Active Communities</p>	<p>Timely Response to Fire Calls for Service</p> <ul style="list-style-type: none"> Respond to at least 90% of Fire Calls for Service within 6 minutes Respond to Structure Fire Calls with an effective firefighting force within 10 minutes 20 seconds 90% of the time Answer 911 calls within 10 seconds or less at least 90% of the time 	<ul style="list-style-type: none"> Response Time: Fire Calls for Service Response Time: Structure Fire Calls Response Time: 911 Calls 	<ul style="list-style-type: none"> Expand and update Fire Facilities Master Plan and evaluate strategic placement of additional ladder companies throughout the city
	<p>Reduce Fire Company Workload</p> <ul style="list-style-type: none"> Reduce or eliminate the number of Fire companies responding to over 3,500 calls for service each year 	<ul style="list-style-type: none"> Fire Company Workload 	<ul style="list-style-type: none"> Enhance Analysis on projected retirements, retention rates, growth in calls-for-service, growth and development in the city to create short and long-term staffing targets and strategies for Police and Fire
	<p>Timely Response to Police Call for Service</p> <ul style="list-style-type: none"> Respond to priority 1 emergency Police calls for service within 7 minutes on average Answer 911 calls within 10 seconds or less at least 90% of the time 	<ul style="list-style-type: none"> Response Time: Priority 1 Emergency Police Calls Response Time: 911 Calls 	

Infrastructure Priority List:

Public Open Space

Guiding Policy Documents

Comprehensive Plan Goal 7:

Integrated Natural and Built Environment

Targets/Outcome
Expand Public Open Space

- Evaluating target

Metrics

- Percent of jurisdiction dedicated to publicly accessible open space

Needs/Workplan

- Work with Mecklenburg County to develop an approach

Infrastructure Priority List:

Public Storm Drainage

Guiding Policy Documents

Comprehensive Plan Goal 5:

Safe & Equitable Mobility

Comprehensive Plan Goal 10:

Fiscally Responsible

Targets/Outcome
Maintain Minimum Average Asset Score

- Evaluating System-wide Target

Metrics

- Asset Criticality Score

Needs/Workplan

- Continue to develop asset condition data through on-going field investigation.

Infrastructure Priority List:

Public Transit

	Targets/Outcome	Metrics	Needs/Workplan
<p>Guiding Policy Documents</p> <p>Comprehensive Plan Goal 4: Transit & Trail Oriented Development</p> <p>2030 Transit Corridor Plan</p> <p>Envision My Ride</p>	<p>Access to High Performance Transit Service</p> <ul style="list-style-type: none"> Evaluating Targets 	<ul style="list-style-type: none"> Share of households and jobs with access to high performance transit service (LRT, Streetcar, BRT & Bus) with 15-minute or better peak hour service Percent of riders with access to 15-minute or better peak hour service Number of new housing and non-residential units in station areas 	<p>Currently measuring Evaluating/establishing baseline</p>
	<p>Community Impact</p> <ul style="list-style-type: none"> Evaluating Targets 	<ul style="list-style-type: none"> Number of new affordable housing units in station areas Percent of transit enhancements made within the Corridors of Opportunity Number and percent of service hours in Corridors of Opportunity 	<p>Currently measuring</p>

Infrastructure Priority List:

Schools

	Targets/Outcome	Metrics	Needs/Workplan
<p>Guiding Policy Documents</p> <p>Comprehensive Plan Goal 1: 10-Minute Neighborhoods</p>	<p>School Capacity</p> <ul style="list-style-type: none"> Evaluating target 	<ul style="list-style-type: none"> Percent of School Capacity 	<ul style="list-style-type: none"> CMS working on 2023 Capital Improvement Plan; staff meeting in January

Infrastructure Priority List:

Water & Sewer Capacity

	Targets/Outcome	Metrics	Needs/Workplan
Guiding Policy Documents Comprehensive Plan Goal 10: Fiscally Responsible	Safe Drinking Water Act & Clean Water Act <ul style="list-style-type: none"> • 100% compliance 	<ul style="list-style-type: none"> • Maintain compliance with applicable requirements for the Safe Drinking Water Act and Clean Water Act 	Currently measuring
	Wastewater Treatment Plant Capacity <ul style="list-style-type: none"> • Below 80% of treated wastewater capacity 	<ul style="list-style-type: none"> • Maintain wastewater treatment plant capacity through master planning implementation 	Currently measuring
	Development & Capacity Review <ul style="list-style-type: none"> • 20-day review period 	<ul style="list-style-type: none"> • Meet the needs of the development community through prompt plan review and capacity availability 	Currently measuring
	Regional Economic Development Analysis <ul style="list-style-type: none"> • Complete baseline analysis this year 	<ul style="list-style-type: none"> • Conduct a regional economic development analysis 	Currently measuring

Wrap Up and Next Steps

Staff continue to develop measures, targets, and outcomes over the coming months

Routine check-ins with Council