

Sustainability Advisory Committee Meeting

December 11, 2024



Agenda

- I. Welcome
- II. Public Comments
- III. Sustainability and Nissan Stadium
- IV. Sustainability and Resilience on the East Bank
- V. Brief Metro Updates



Public Comments



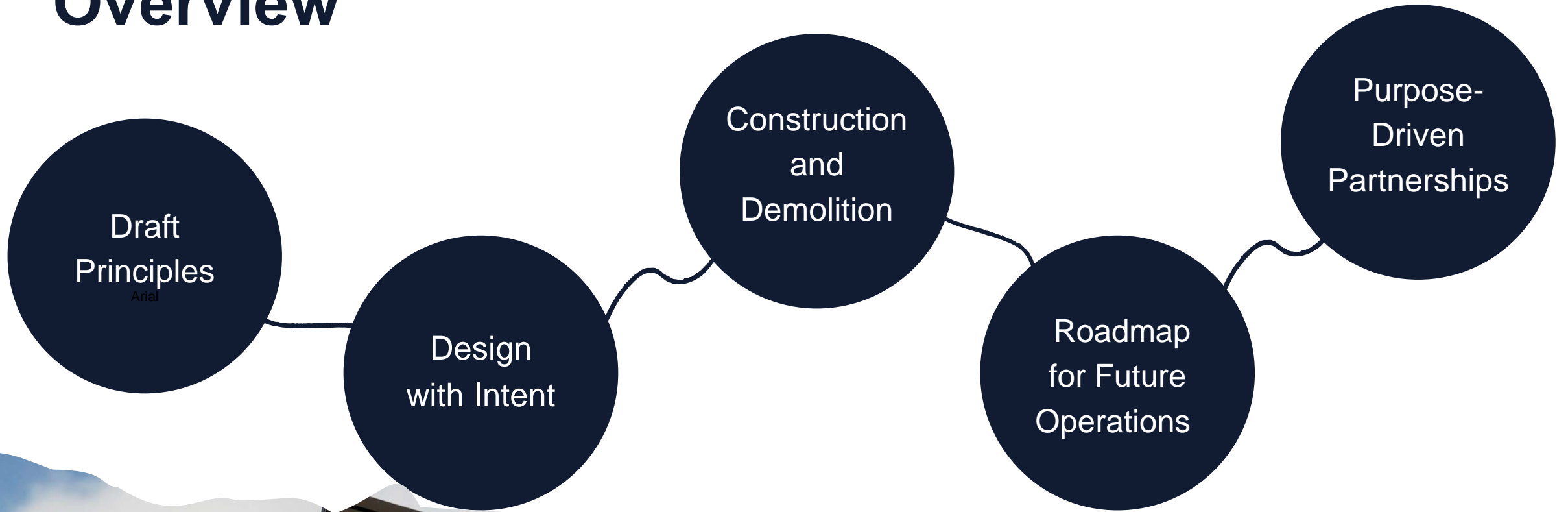


Sustainability at Nissan Stadium

December 11, 2024



Overview



Our Sustainability Statement

The Titans and Nissan Stadium are committed to fostering a sustainable future, reducing our environmental footprint, and amplifying impactful solutions.

Our Principles

WIN. Reduce energy, water and waste.

SERVE. Improve the surrounding environment.

ENTERTAIN. Amplify and drive sustainable solutions through purpose-driven partners.

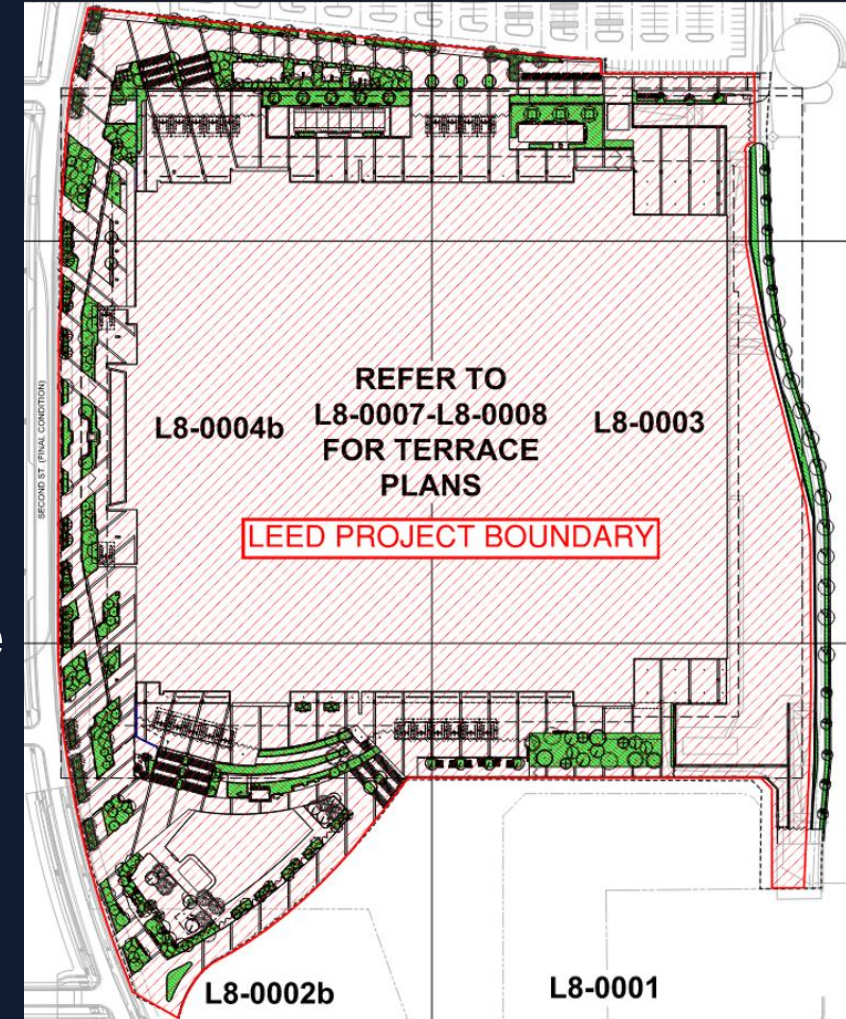


Design with Intent



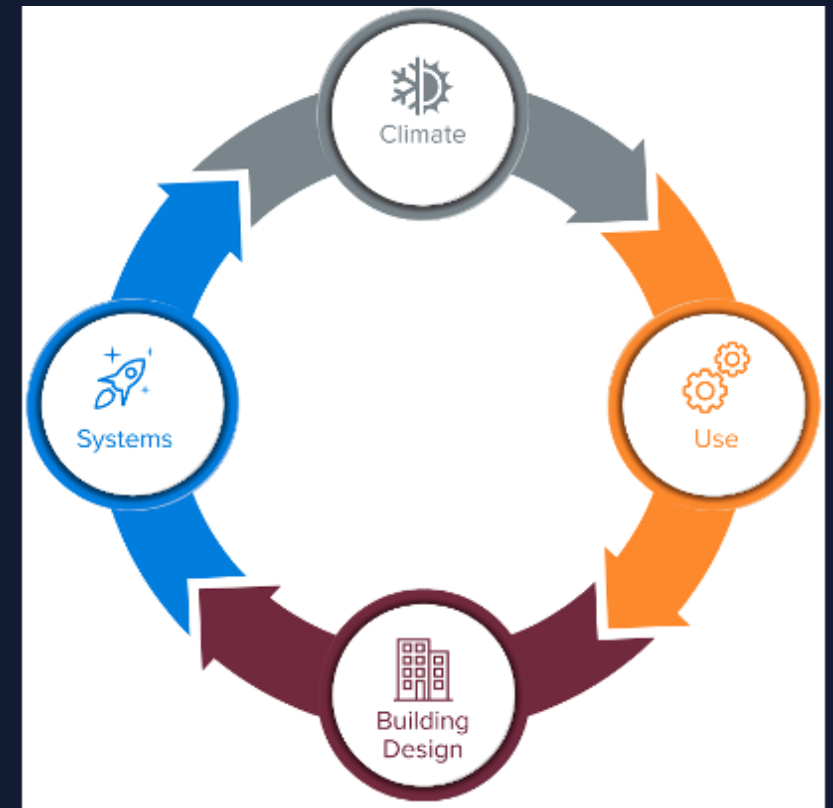
Strategies for LEED®

- Energy efficiency and building performance
- Water efficiency and conservation
- Use of sustainable materials
- Site plan with responsible landscaping and open space

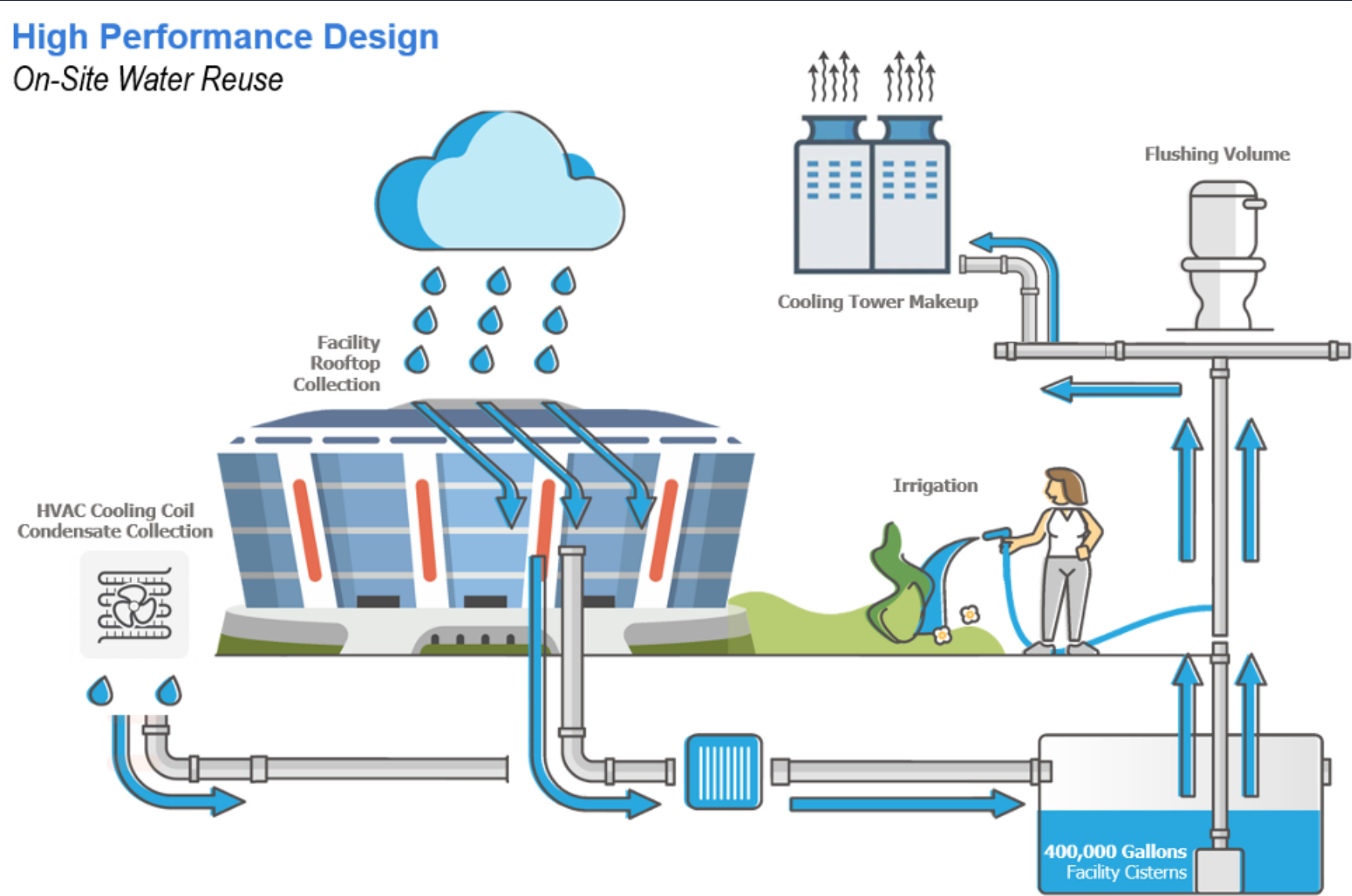


Reduce Energy + GHG Emissions

- Integrated load reduction analysis
- Continuous benchmarking
- Increase energy efficiency by 22%
- Decrease GHG emissions by 32%
- Innovative low / no-impact refrigerants



Water Conservation



SAFETY **WARNING**
CONFINED SPACE
ESPACIO CONFINADO
Contact The Safety Company





Nearly 10 million gallons of water each year could be saved through on-site water reuse and conservation.



Reduce Waste: Pathway to Zero Waste

- Conduct design review for streamlining materials
- Optimize recycling and composting solutions
- Activate Resource Recovery Room for on-site sorting

NISSAN STADIUM



HOME OF THE TENNESSEE TITANS





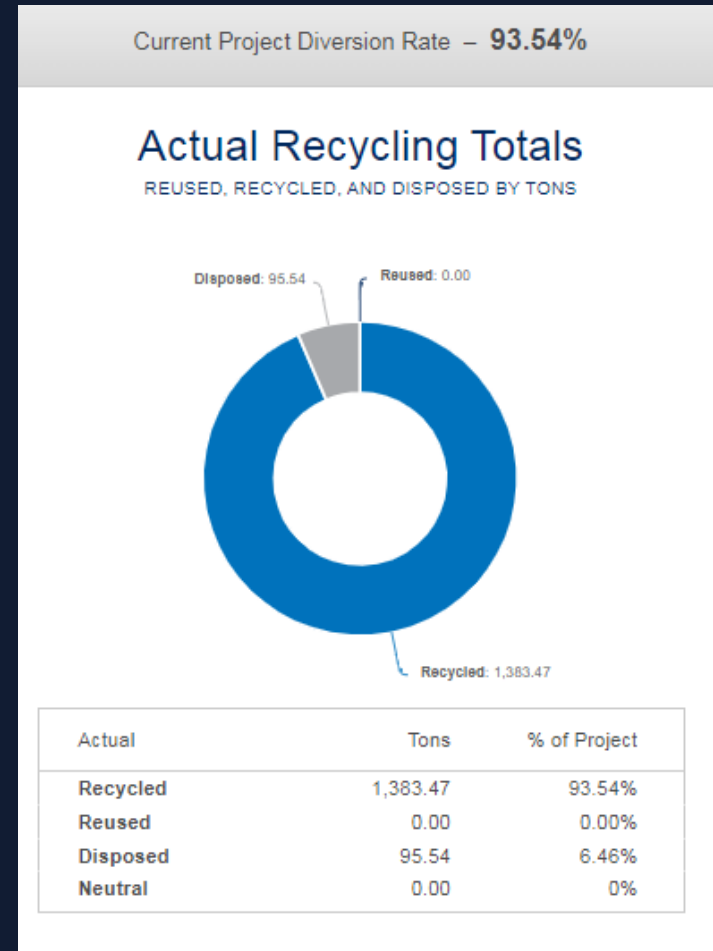
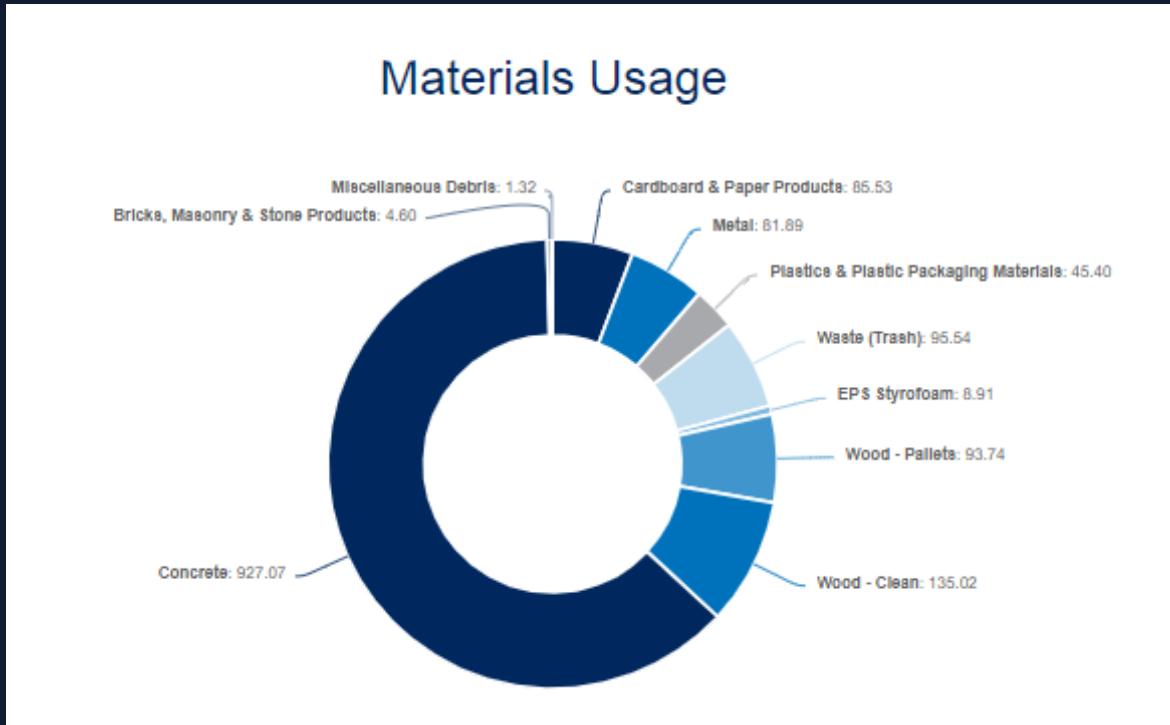
Construction and Demolition

Construction Waste Diversion

- LEED v4.1 standards with diversion of at least 50%
- Separate recyclable from non-recyclable materials
- Track progress by weight, log haul data and verify



TBA Tracker - November



Demolition Diversion

- Comprehensive salvage and donation plan
- At least five waste streams diverted
- Nine-month demolition



NISSAN STADIUM

An architectural rendering of the Nissan Stadium, a large, modern building with a prominent sign on top. The stadium is surrounded by lush green trees and a large crowd of people walking on a paved area in the foreground. The scene is set during the day under a clear blue sky.

New Stadium Operations

Roadmap for Future Operations

- Adjust protocols now to prepare
- Draft a materials management procedure
- Establish sustainability requirements for suppliers
- Write a Titans Zero Waste Roadmap
- Learn from purpose-driven partners





Our 5 Sustainability Pillars

Our strategy is based on our five sustainability pillars and Sodexo's Better Tomorrow commitments, while always keeping our clients' objectives in mind.

01

Reducing Waste

Food waste reduction and diversion practices are fundamentally important to us, our clients, and the future of our planet. The negative impacts of waste are far-reaching and can have severe consequences on the environment, wildlife, and human health. Sodexo Live! prioritizes actions that reduce food waste and promote sustainability.

02

Boosting Plant-Based Dining

The food we serve is not only central to our guests' experiences, but it also plays a significant role in our carbon footprint. As more people become aware of how diet and food choices impact the environment and our health, having nutritional plant-based options on menus has become a necessity rather than a novelty.

03

Smart Serviceware and Packaging

As a market maker in sustainability, we have committed to championing sustainable resource usage. One area we focus on is reducing single-use plastic usage, which is crucial for both us and our clients. By decreasing our dependence on single-use plastics, we can help create a healthier and more sustainable future for everyone.

04

Responsible and Local Sourcing

We are committed to making a positive impact on the communities we serve. We prioritize directing our procurement spend toward local businesses and suppliers that use sustainable practices. Our aim is to contribute to the well-being of the communities we operate in and support local economic growth.

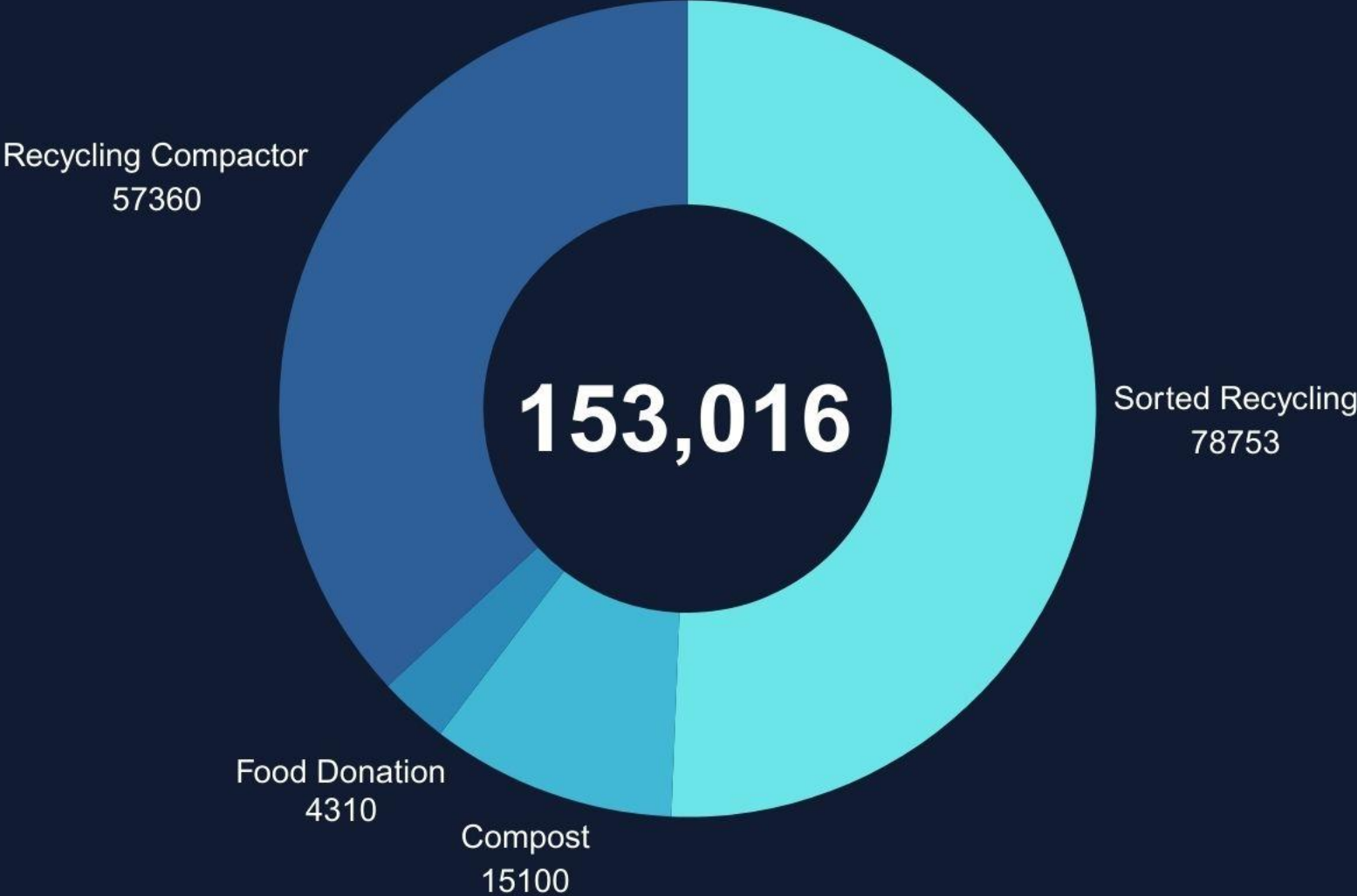
05

Supporting Communities

Inadequate access to healthy food is a significant challenge faced by millions of Americans. As a leader in the hospitality industry, we have a presence in communities across the country. We possess the skills, expertise, leadership, and resources necessary to help in the fight against hunger in America.



Diverted Year to Date



Purpose-Driven Partners



POV: You're ready to Titan Up and Roll with WeGo for Free-Fare Sundays! 🏈💰

wegotransit • Follow

wegotransit Score a free ride to the @titans game by mapping out your plan using the Transit app or Google Maps tomorrow! 🚌🏈 #TitanUp #RollWithWeGo #Titans

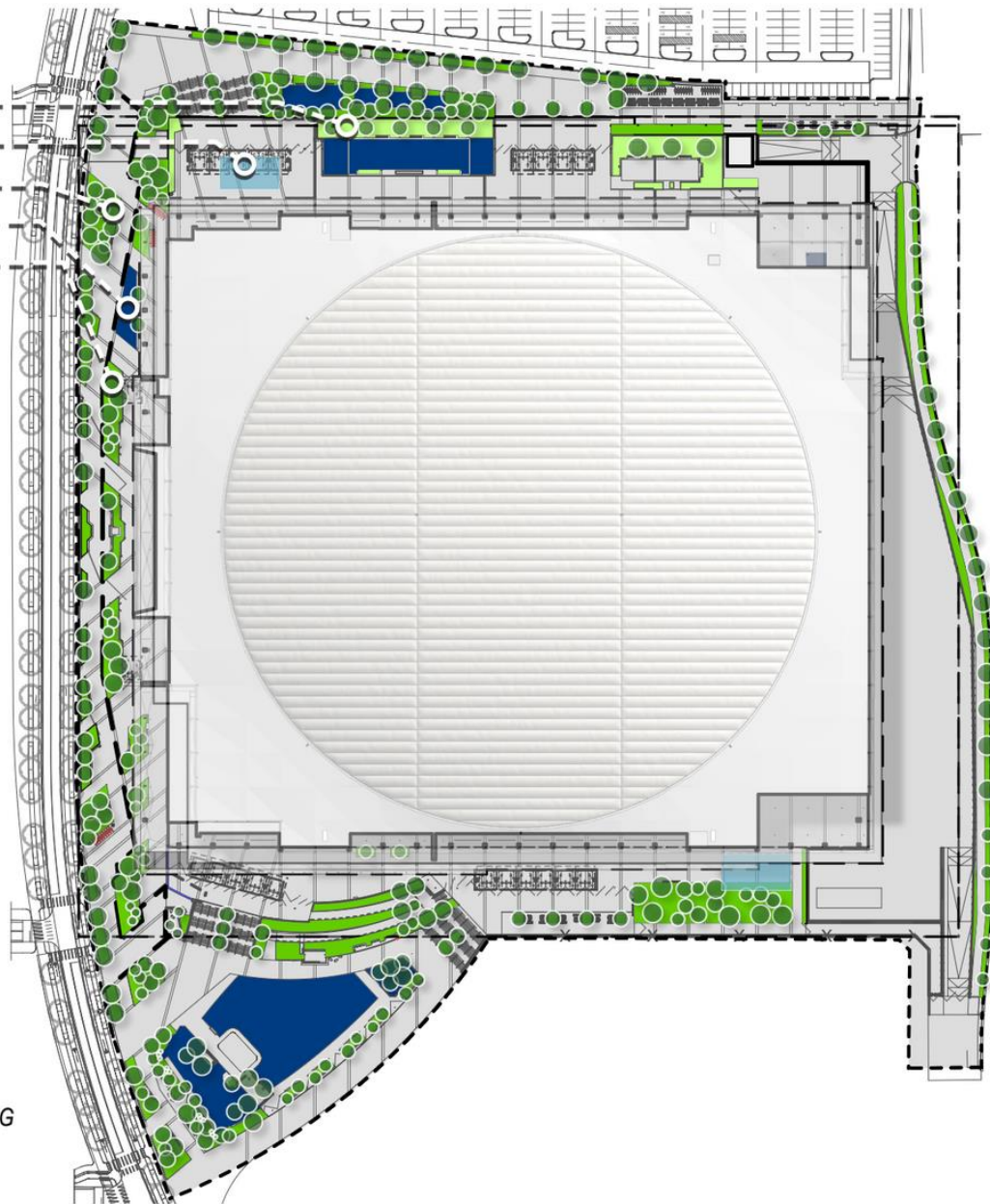
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charles.james.kelly 🚌💜🏈🚌💜
3d 1 like Reply

40 likes
3 days ago

Log in to like or comment.

- GREEN ROOF
- WATER HARVESTING CISTERN
- TREES
- PERMEABLE SURFACE
- LANDSCAPE PLANTING



SUMMARY:

- 276 TREES, 27 SPECIES
- 8,800 SF GREEN ROOF
- 63,300 SF LANDSCAPE PLANTING
WITH NATIVE AND LOCALLY ADAPTIVE SPECIES
- 29,200 SF PERMEABLE SURFACE
- 416,200 GALLON WATER HARVESTING
PROVIDING ALL IRRIGATION WATER
- 248 BIKE PARKING SPACES



PERMIT SET - LEED SCORECARD



LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: New Titans Stadium

Date: 12/3/2024

Y ? N

1		Credit	Integrative Process	1
8	0	8	Location and Transportation	16
		Credit	LEED for Neighborhood Development Location	16
1		Credit	Sensitive Land Protection	1
2		Credit	v4.1_High Priority Site	2
1	4	Credit	v4.1_Surrounding Density and Diverse Uses	5
2	3	Credit	v4.1_Access to Quality Transit	5
1		Credit	v4.1_Bicycle Facilities	1
1		Credit	v4.1_Reduced Parking Footprint	1
		Credit	v4.1_Green Vehicles	1
6	1	3	Sustainable Sites	10
Y		Prereq	Construction Activity Pollution Prevention	Required
1		Credit	Site Assessment	1
	2	Credit	Site Development - Protect or Restore Habitat	2
1		Credit	v4.1_Open Space	1
1	1	Credit	v4.1_Rainwater Management	3
2		Credit	Heat Island Reduction	2
1		Credit	Light Pollution Reduction	1
11	0	0	Water Efficiency	11
Y		Prereq	Outdoor Water Use Reduction	Required
Y		Prereq	Indoor Water Use Reduction	Required
Y		Prereq	Building-Level Water Metering	Required
2		Credit	Outdoor Water Use Reduction	2
6		Credit	Indoor Water Use Reduction	6
2		Credit	Cooling Tower Water Use	2
1		Credit	Water Metering	1
15	3	15	Energy and Atmosphere	33
Y		Prereq	Fundamental Commissioning and Verification	Required
Y		Prereq	Minimum Energy Performance	Required
Y		Prereq	Building-Level Energy Metering	Required
Y		Prereq	Fundamental Refrigerant Management	Required
6		Credit	Enhanced Commissioning	6
6	12	Credit	Optimize Energy Performance	18
	1	Credit	Advanced Energy Metering	1
	2	Credit	Demand Response	2
2	3	Credit	v4.1_Renewable Energy (RECs/Offsets)	5
1		Credit	Enhanced Refrigerant Management	1

7	4	2	Materials and Resources	13	
Y		Prereq	Storage and Collection of Recyclables	Required	
Y		Prereq	Construction and Demolition Waste Management Planning	Required	
2	2	1	Credit	v4.1_Building Life-Cycle Impact Reduction	5
1	1		Credit	v4.1_BPDO - Environmental Product Declarations	2
	1	1	Credit	v4.1_BPDO - Sourcing of Raw Materials	2
2			Credit	v4.1_BPDO - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2
7	2	7	Indoor Environmental Quality	16	
Y		Prereq	Minimum Indoor Air Quality Performance	Required	
Y		Prereq	Environmental Tobacco Smoke Control	Required	
1		1	Credit	Enhanced Indoor Air Quality Strategies	2
	3		Credit	v4.1_Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
	1	1	Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1		1	Credit	v4.1_Interior Lighting	2
	1	2	Credit	v4.1_Daylight	3
		1	Credit	Quality Views	1
		1	Credit	Acoustic Performance	1
6	0	0	Innovation	6	
1			Credit	Pilot Credit: MRpc 103_Integrative Analysis of Materials	1
1			Credit	Sustainable Purchasing - Low Mercury Lamps	1
1			Credit	EP: EPDs	1
1			Credit	EP: Heat Island Reduction	1
1			Credit	Green Building Education	1
1			Credit	LEED Accredited Professional	1
2	2	0	Regional Priority	4	
	1		Credit	Rainwater Management - 2 pts	1
1			Credit	Reduced Parking Footprint - 1 pt	1
1			Credit	Access to Quality Transit - 1 pt	1
	1		Credit	Daylight - 2 pts / Surrounding Density - 2 pts	1
63	12	35	TOTALS	Possible Points: 110	

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110



SUSTAINABILITY & RESILIENCE on the East Bank

December 11, 2024

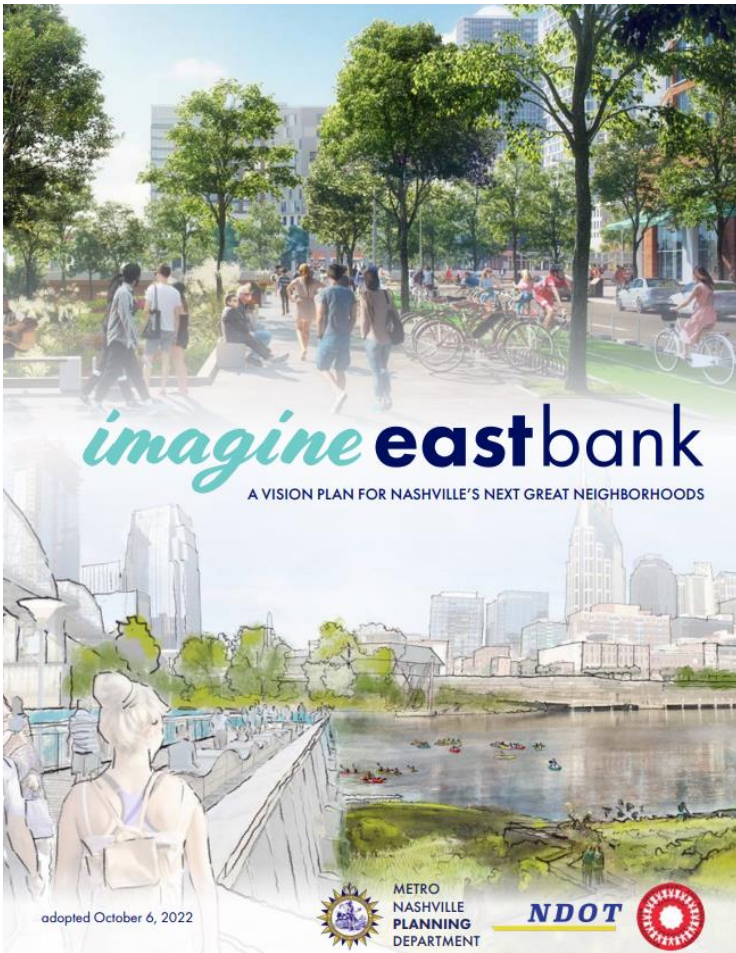


Key Sustainability and Resiliency Elements

1. District Flood Mitigation Strategies
2. Districtwide Stormwater Management
3. Brownfield Strategies
4. Complete Streets Implementation
5. Network of Open Space and Greenways

Imagine East Bank

February 2021 – October 2022



- One of the largest and most complex planning studies Nashville has undertaken
- 21-months of public engagement including 50+ public meetings and 1700+ survey responses
- Shaping new neighborhoods with essential building blocks established by the community:
 - equity and affordability
 - mobility
 - **resiliency**
 - building neighborhoods
- The Planning Commission unanimously adopted *Imagine East Bank* on October 6, 2022

Imagine East Bank Community Priorities



THE VISION: AN EQUITABLE & AFFORDABLE EAST BANK

- Affordable Housing
- Locally Owned Businesses
- Workforce Development & Worker Protections
- SMWBE



THE VISION: RESPECT FOR THE RIVER

- Districtwide Stormwater Management
- Districtwide Flood Mitigation Strategies
- Green Streets
- Brownfield Remediation



THE VISION: SAFE & SIMPLE MULTIMODAL CONNECTIONS

- Pedestrian Bridge Improvements
- New Greenways
- Mobility Hub
- New Streets
- New Pedestrian and Bike Network

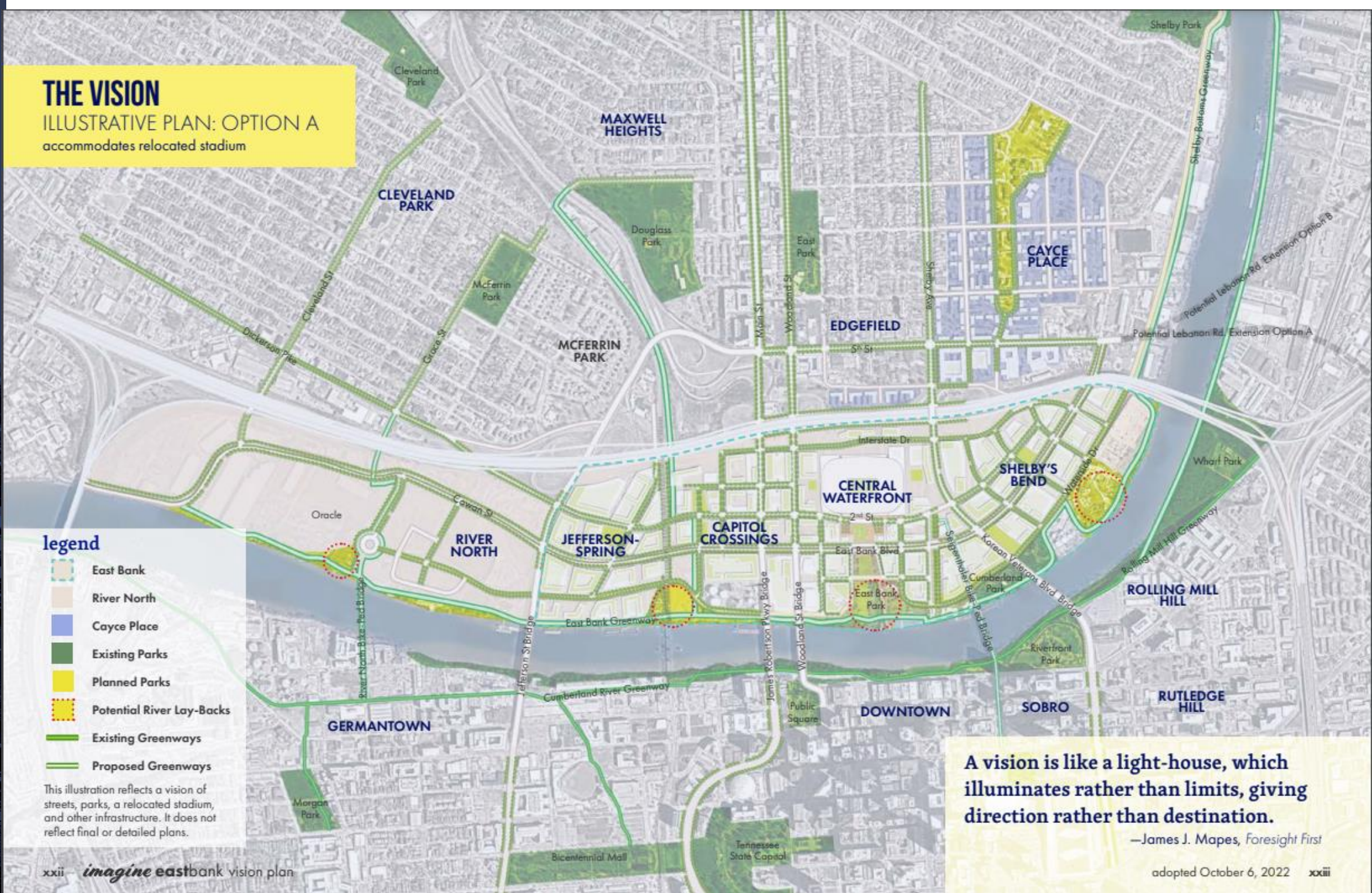


THE VISION: NEIGHBORHOODS FOR NASHVILLIANS

- Mixed Income
- Mixed Use
- Cultural Uses
- Zoning Restrictions on bars
- STRs Prohibited
- Ground Floor Activation

THE VISION

ILLUSTRATIVE PLAN: OPTION A
accommodates relocated stadium



legend

- East Bank
- River North
- Cayce Place
- Existing Parks
- Planned Parks
- Potential River Lay-Backs
- Existing Greenways
- Proposed Greenways

This illustration reflects a vision of streets, parks, a relocated stadium, and other infrastructure. It does not reflect final or detailed plans.

A vision is like a light-house, which illuminates rather than limits, giving direction rather than destination.

—James J. Mapes, *Foresight First*

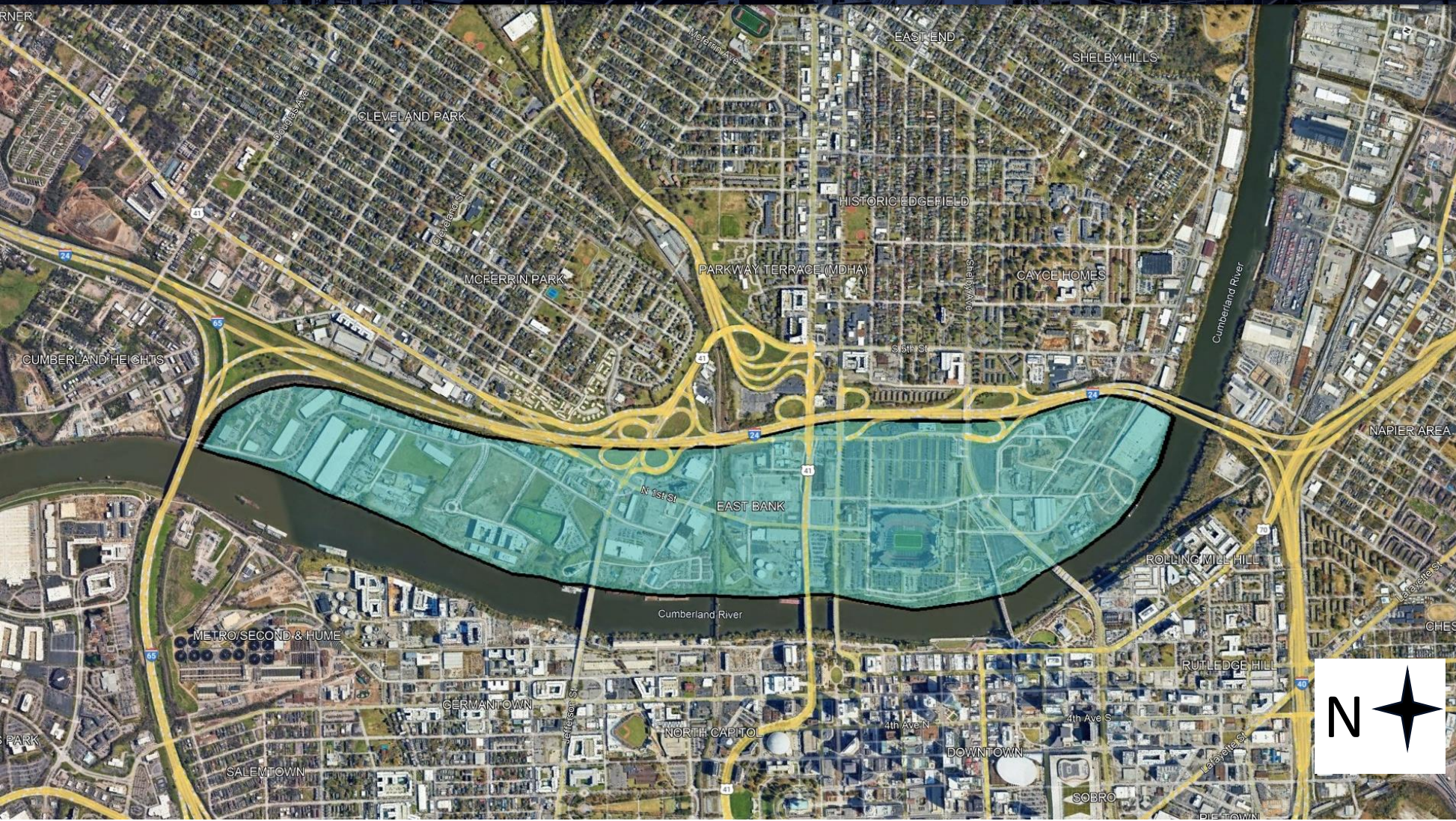
adopted October 6, 2022 xxiii

Two multi billion-dollar investments by Metro adjacent to each other

- **Titan's Stadium – 20 acres**
 - 1.8 M sf, 60k capacity for football, up to 70k for concerts
- **Fallon Development – 30 acres**
- **Station East – 18 acres**
 - Former Truck Stops of America site
 - 7-blocks, 1.2M sf of office, 650 hotel rooms, 1,400 residential units, 230,000 sf ground floor retail



East Bank Today



550 acres



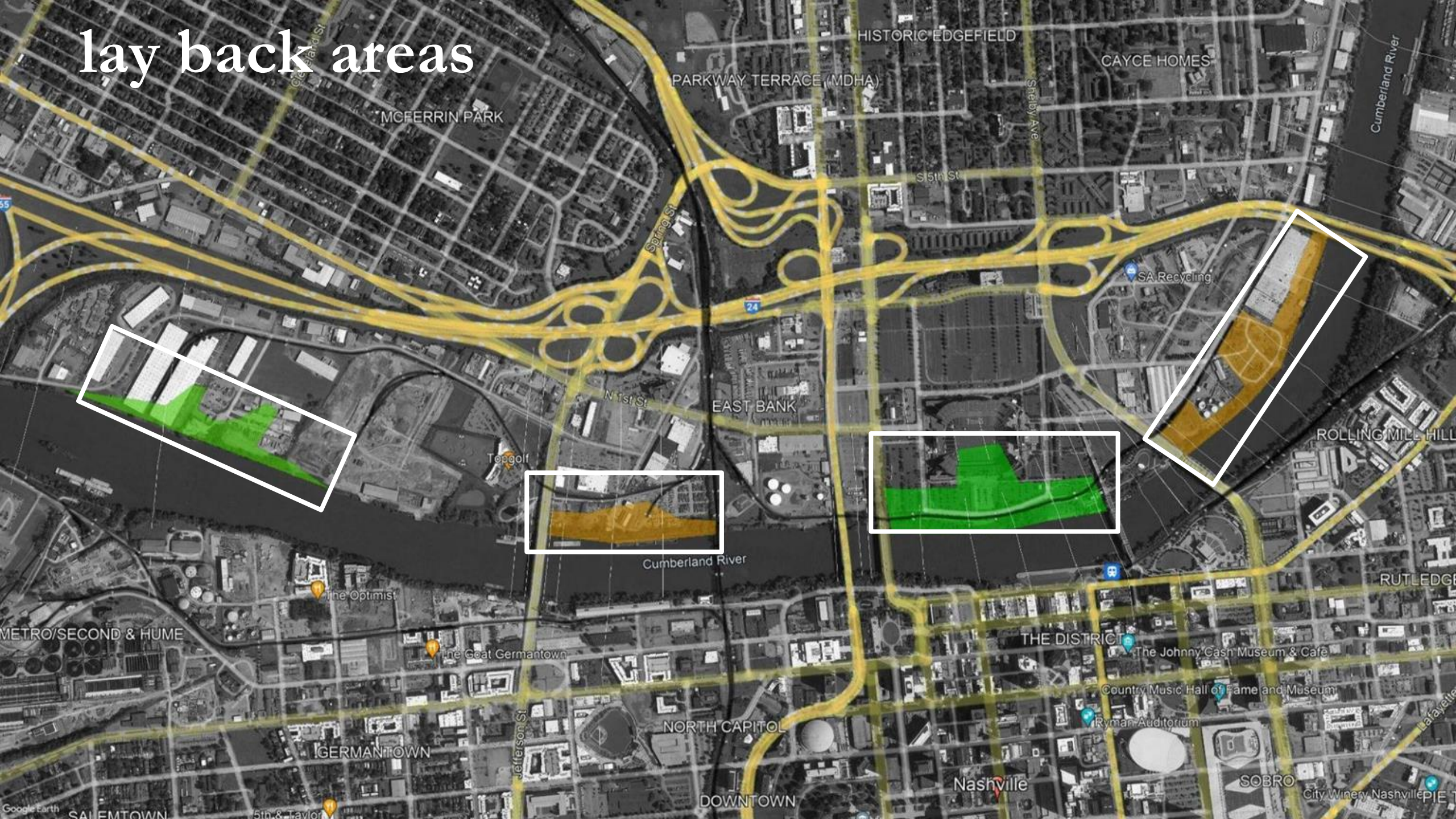
District Flood Mitigation Strategies

- Lay back the riverbank to provide floodable park space
- All roads and finished floor elevations required to be above the 100yr floodplain
 - USACE Base Flood Study anticipated no rise determination

Lay back the riverbank to provide floodable park space



lay back areas



HISTORIC EDGEFIELD

CAYCE HOMES

PARKWAY TERRACE (MDHA)

MCFERRIN PARK

S15th St

SA Recycling

EAST BANK

ROLLING MILL HILL

Cumberland River

RUTLEDGE

METRO/SECOND & HUME

THE DISTRICT

The Johnny Cash Museum & Cafe

Country Music Hall of Fame and Museum

Ryman Auditorium

NORTH CAPITOL

Nashville

SOBRO

DOWNTOWN

City Winery Nashville

GERMANTOWN

SALEM TOWN

5th & Taylor

Google Earth

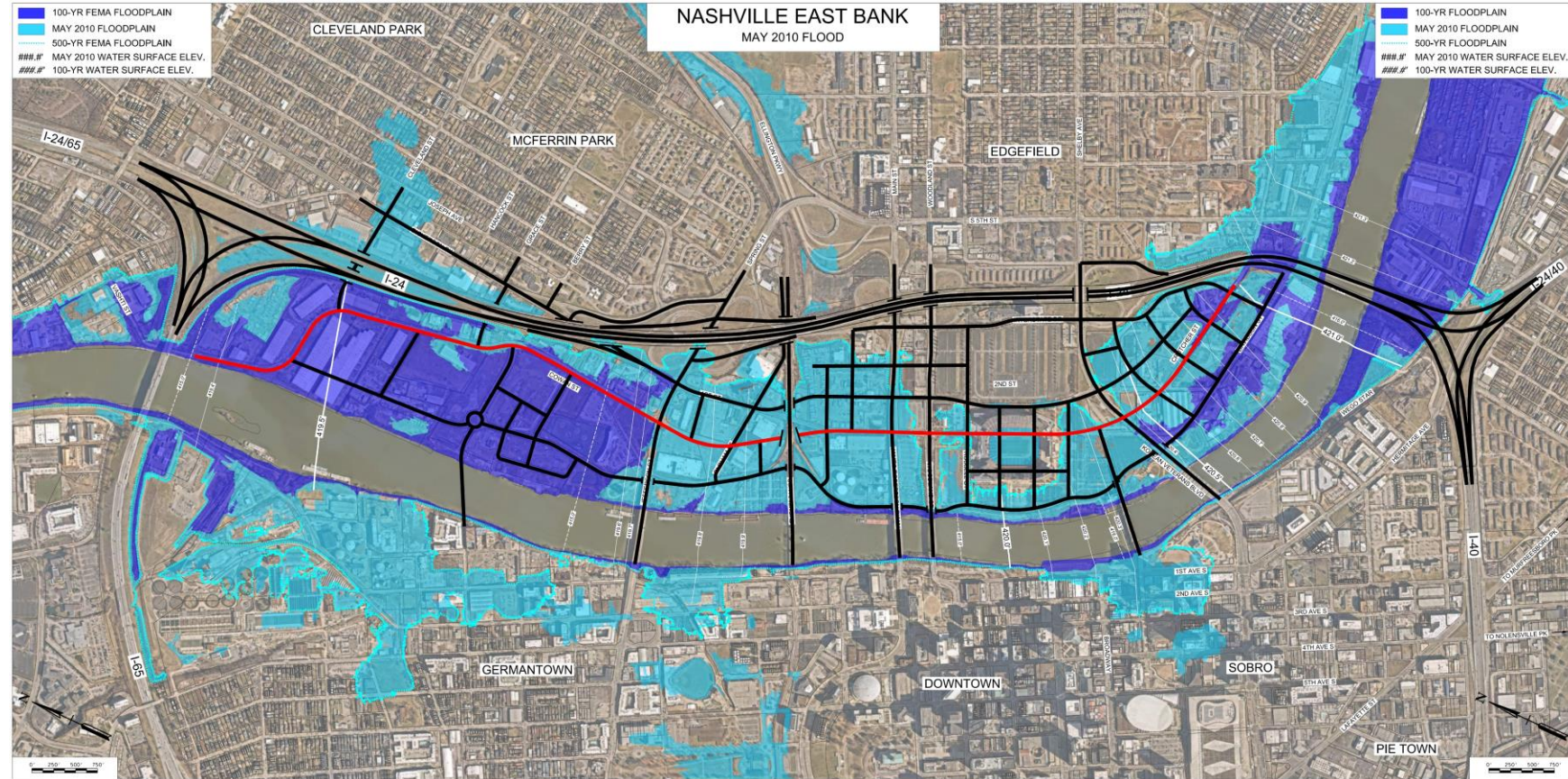


All roads and finished floor elevations required to be above the 100yr floodplain

- East Bank Team and Metro Water Services are developing a master plan that indicates all roads, buildings, and infrastructure will be constructed 1' above the USACE defined Base Flood Elevation.

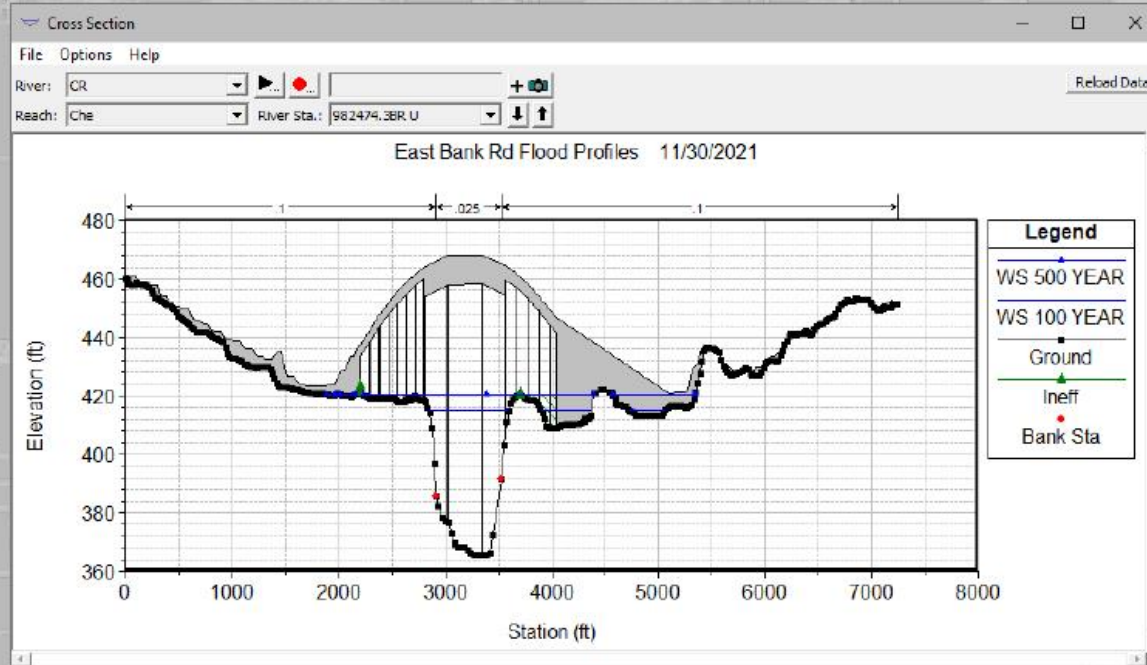
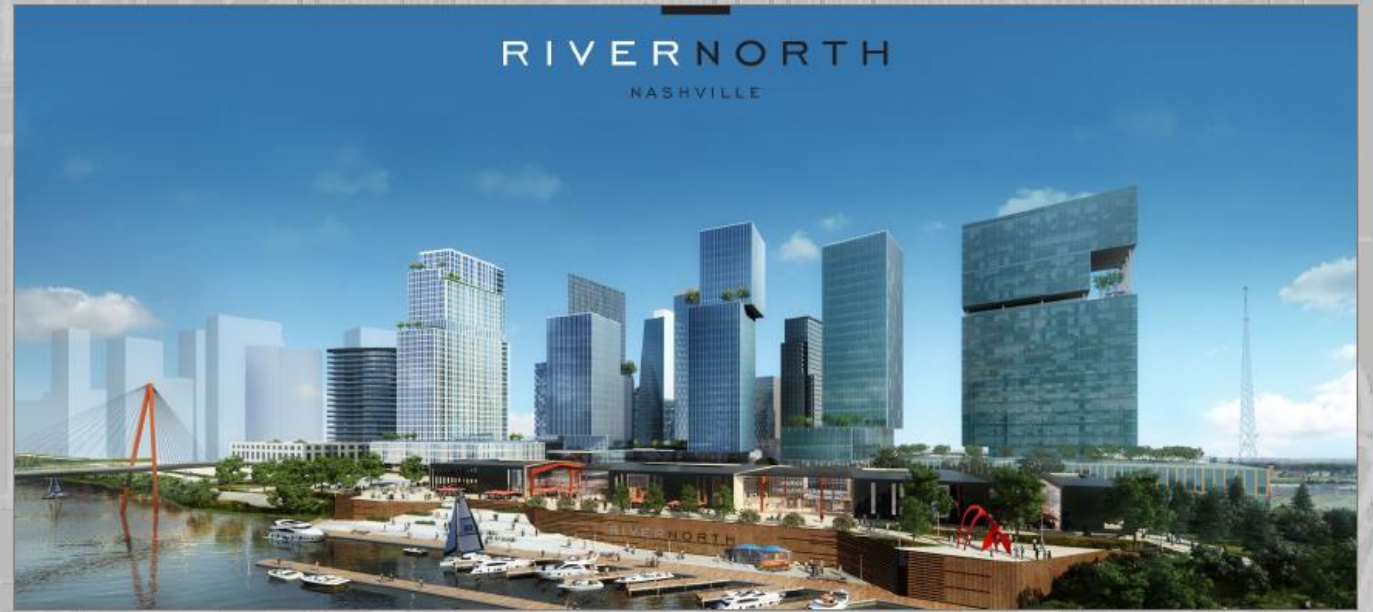
USACE Base Flood Study

MWS and the East Bank Team worked with the United States Army Corps of Engineers (USACE) to update the hydraulic model of the Cumberland River. USACE has determined that the full buildout of the Central Waterfront District would result in a no-rise condition. The final model results and floodplain elevations will not likely be available until December 2024 or later.



METRO NASHVILLE CUMBERLAND RIVER EAST BANK HYDRAULIC ANALYSIS

Barry P. Moran, P.E.
Senior Hydraulic Engineer
USACE Nashville District
Date: 01 December 2021



US Army Corps
of Engineers®



SUMMARY

East Bank Hydraulic Analysis

- ❑ Steady flow hydraulic model is not very sensitive to changes along the East Bank.
- ❑ East Bank (ROB) carries less than 1% of the 100yr flow and less than 2% of the 500yr flow.
- ❑ Addition of the East Bank Road (@ May 2010 plus 2 ft elevation) has no impact to 100yr or 500yr water surface profiles.
- ❑ Removal of the entire East Bank from flow calculations has minor impacts to water surface profiles.
 - 100yr - 0.01 ft
 - 500yr - 0.03 ft



Districtwide Stormwater Management

- June 2024 East Bank Stormwater District established per Metro Ordinance
- Central Waterfront District drainage concept presents a district-scale approach to addressing stormwater and riparian resilience via a centralized treatment facility within the East Bank Park
- System of open spaces have a stormwater management function

East Bank Stormwater District

- Metro Ordinance creating an East Bank Stormwater District for districtwide stormwater management strategies including conformance to MWS' Low Impact Development (LID) requirements.
- Metro Council Approved BL2024-381 on 6/18/2024
- Includes the 550-acre East Bank – I-24 on the East, I-65 on the North and Cumberland River on the West and South



Central Waterfront District Drainage Concept

Slow

provide space for local rainfall flow to move towards the river

Store

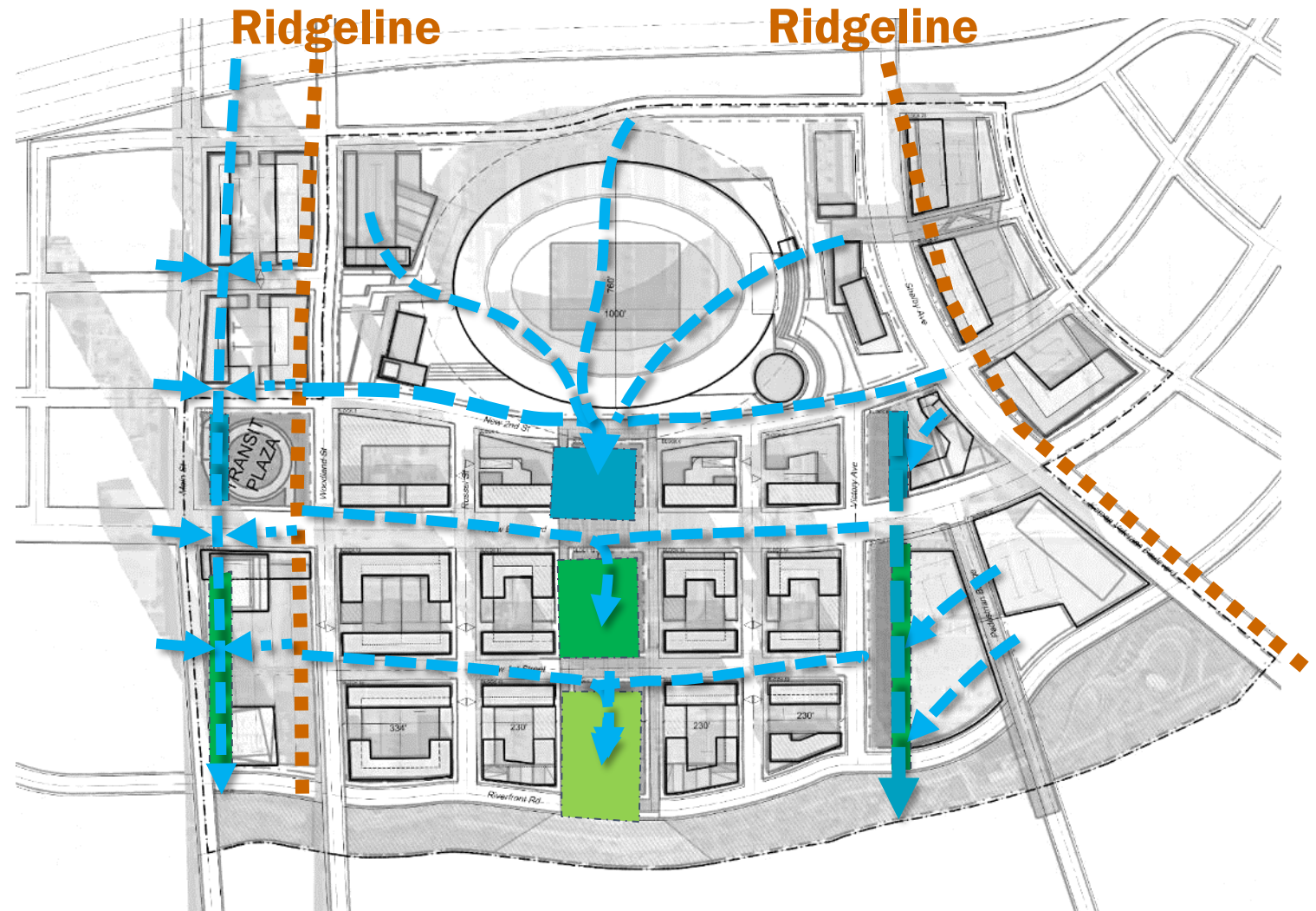
Provide space for local rain retention during compound rainfall and riverine flood events in programmed lowland landscape or native ecology

Restore

Intercept flow upstream to infiltrate and treat stormwater via green infrastructure along corridor

Show

Restore the riverfront to highlight the resilient and ecological nature of a natural riverbank



Open Spaces Have Stormwater Management Function



STORE

Provide space for local rain retention during compound rainfall and riverine flood events in programmed lowland landscape or native ecology



SLOW

provide space for local rainfall flow to move towards the river



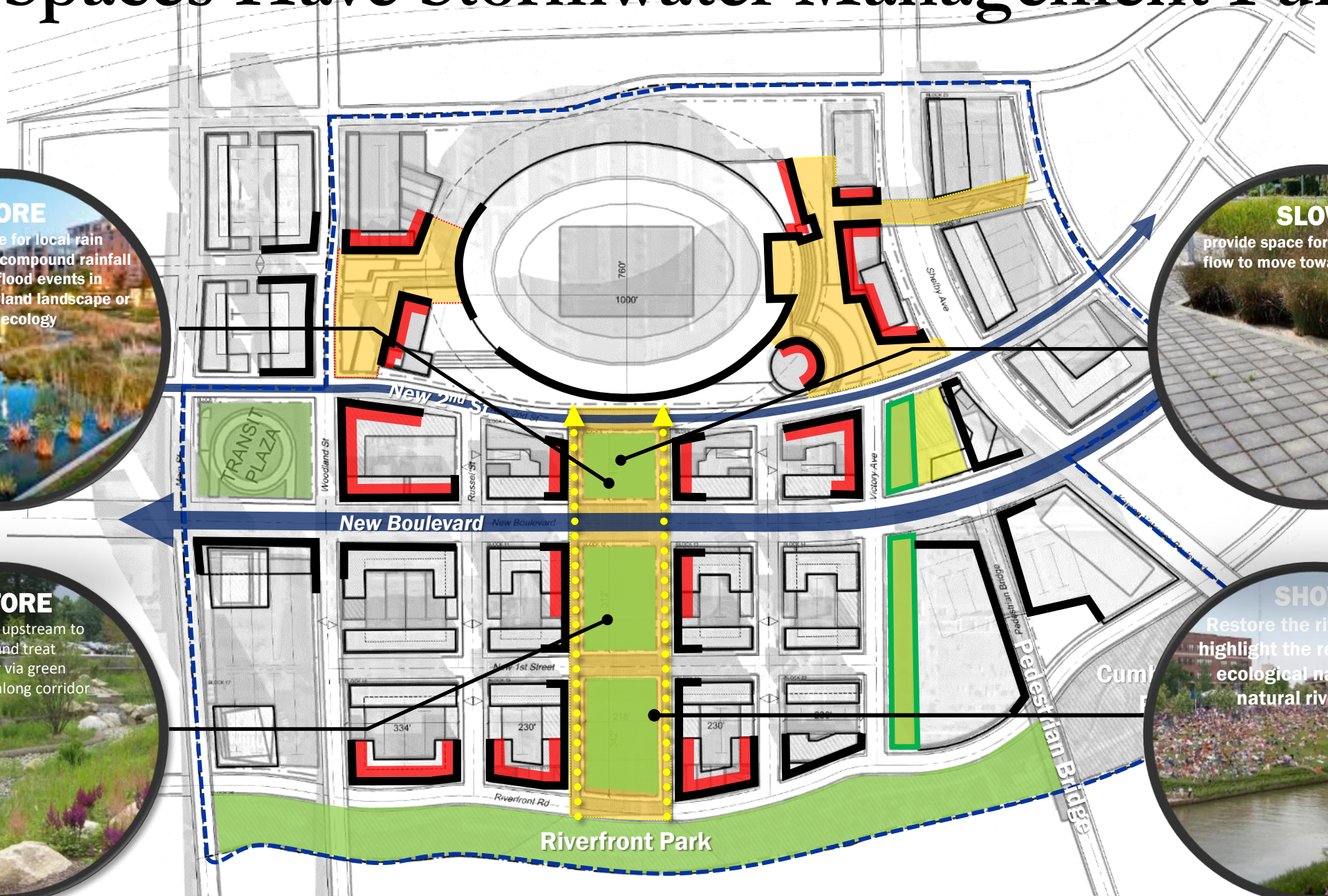
RESTORE

Intercept flow upstream to infiltrate and treat stormwater via green infrastructure along corridor



SHOW

Restore the riverfront to highlight the resilient and ecological nature of a natural riverbank



Riverfront Park

Stormwater Management Park

- The Home Depot Backyard at Mercedes-Benz Stadium



Brownfield Strategies

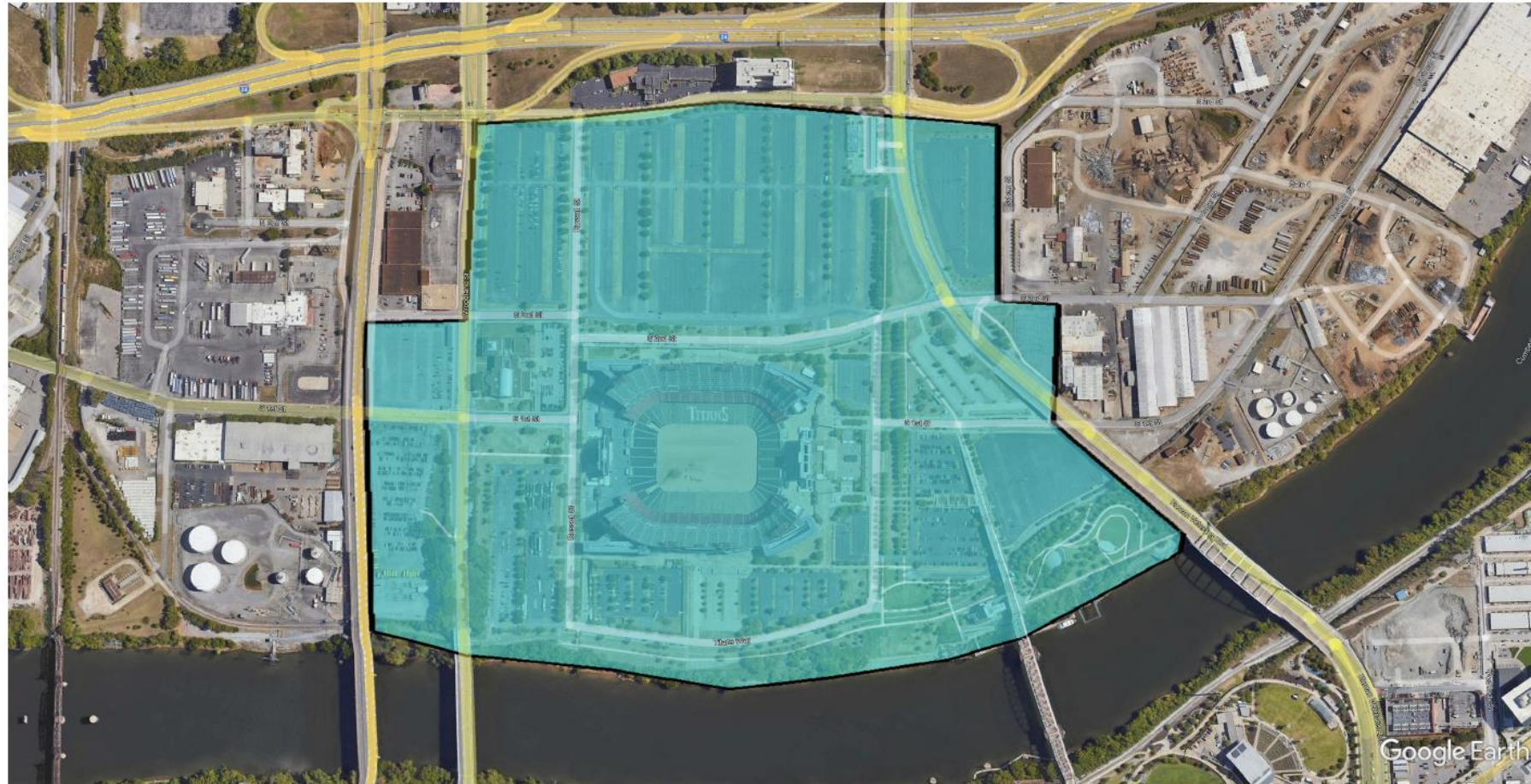
- January 2024 enrolled the Metro-owned Central Waterfront property in the TDEC Voluntary Brownfield Cleanup and Oversight Assistance Program (VOAP) for the purposes of addressing the presence of hazardous substances or other pollutants within the Central Waterfront District.
 - Currently working on a Brownfield Voluntary Agreement (BVA) to address environmental liability.
- November 2024 selected for a 2024 Brownfield Redevelopment Area Grant (BRAG) from TDEC.
 - The BRAG funds will be utilized to further the site environmental investigations

Brownfield Voluntary Clean Up & Assistance Oversight Program (VOAP)

VOAP program is in place to help address, develop, or redevelop a piece of property that could be, or is impacted by contamination.

Limits the liability for Metro and provides oversight in the investigation and any clean-up process.

Next step is to enter into a BVA to address significant legal and technical issues relating to environmental liability.



Central Waterfront (Metro Owned Lands)

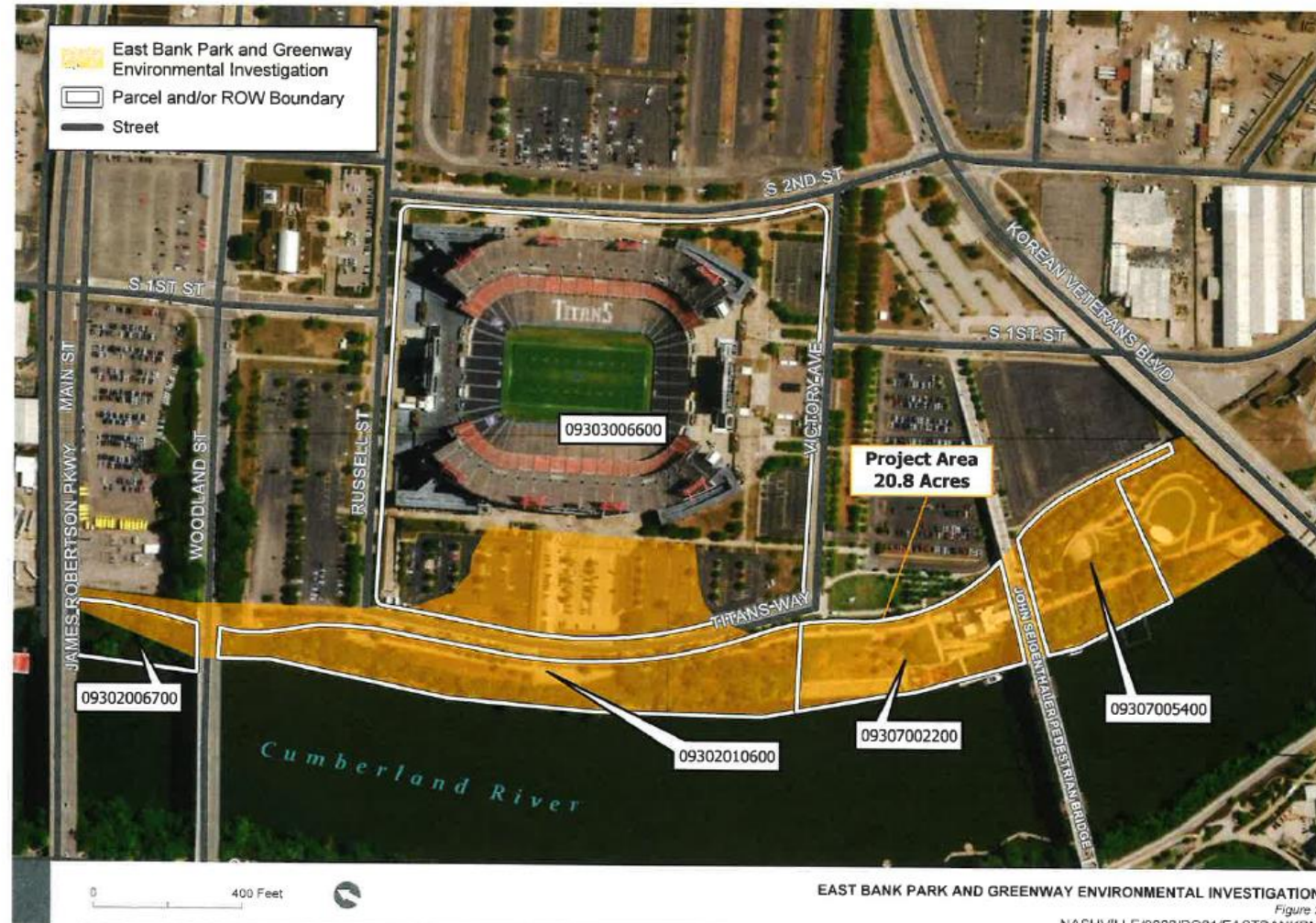
Potential VOAP Boundary

2024 Brownfield Redevelopment Area Grant (BRAG)

\$99,750,00 grant from TDEC for Phase II ESAs within the orange investigation area that build upon the Phase I ESAs previously completed in the vicinity.

Environmental Investigation includes soil quality and geotechnical characterization to inform decisions regarding public health and safety and soil reuse/disposal.

Figure 2: East Bank Park and Greenway Environmental Investigation





Complete Streets

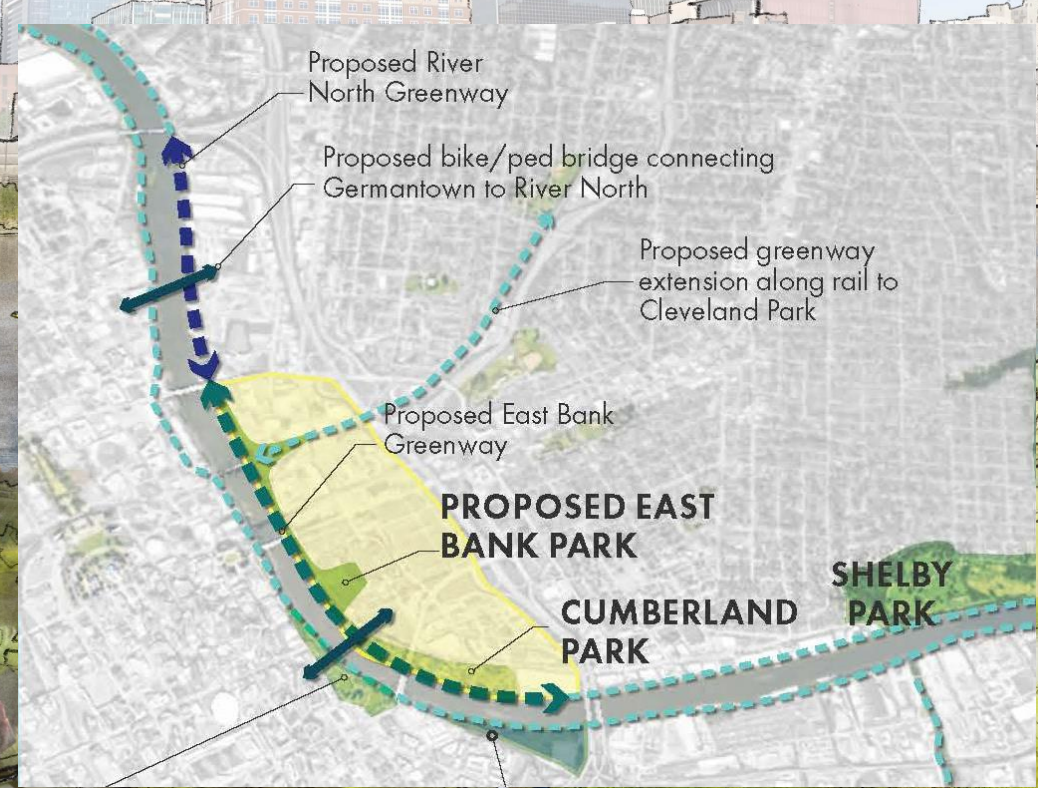
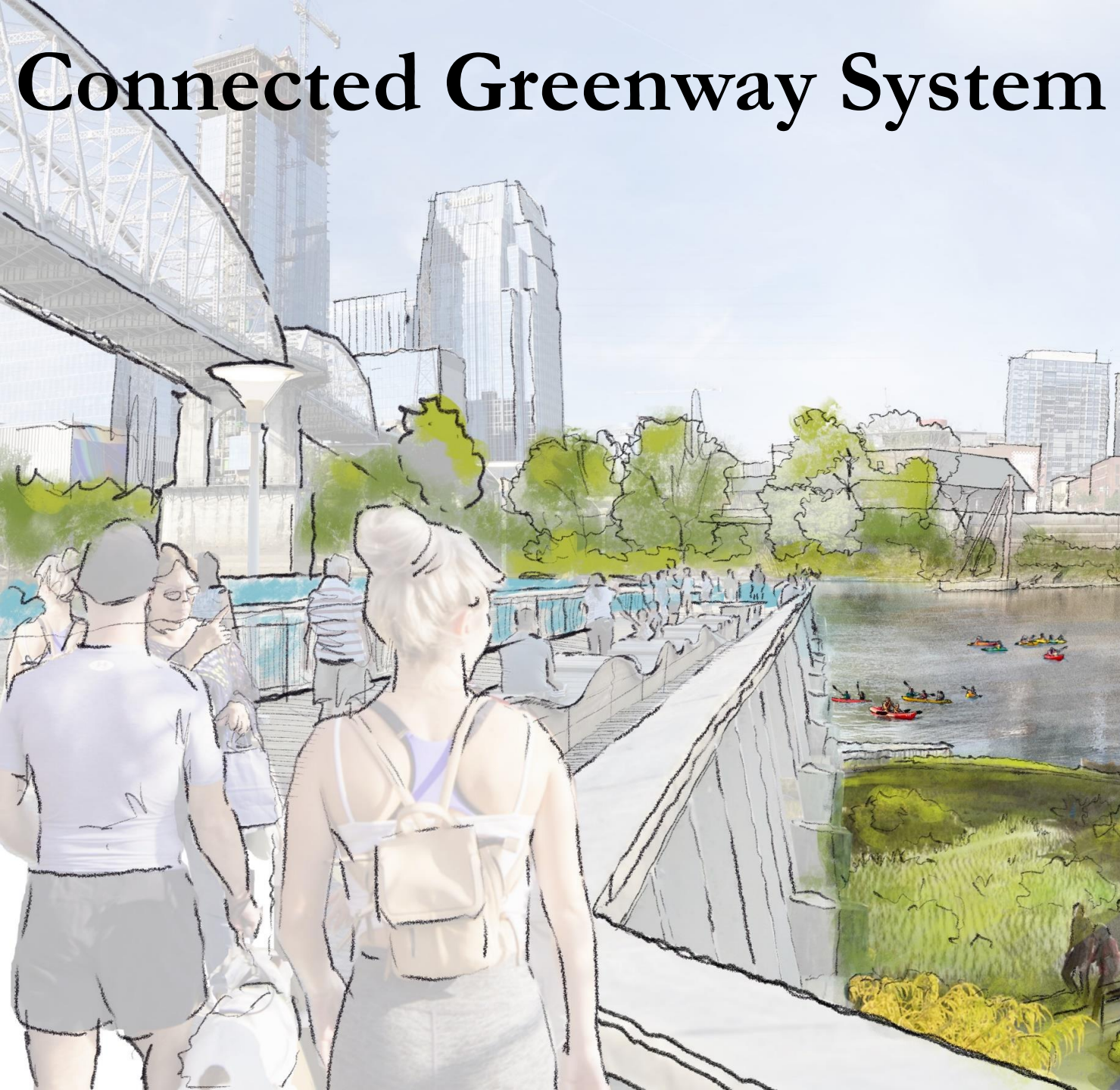
- East Bank Boulevard is a transit priority corridor and will include dedicated transit lanes and wide sidewalks to help reduce single occupancy vehicle trips.
- All public streets will be designed and installed to comply with NDOT Green and Complete streets guidelines
- All new public right-of-way to meet ADA requirements
- All right-of-way to comply with NDOT Vision Zero guidelines.



Network of Open Space and Greenways

Imagine East Bank outlines a vision for complete, mixed-use urban neighborhoods centered on 1.8 miles of publicly accessible, riverfront green spaces and an approximately 18-acre central park.

Connected Greenway System



Provide a Great Park



QUESTIONS?



Brief Metro Sustainability and Resilience Updates

Dr. Kendra Abkowitz, Senior Director of Sustainability and Resilience, Office of Mayor Freddie O'Connell

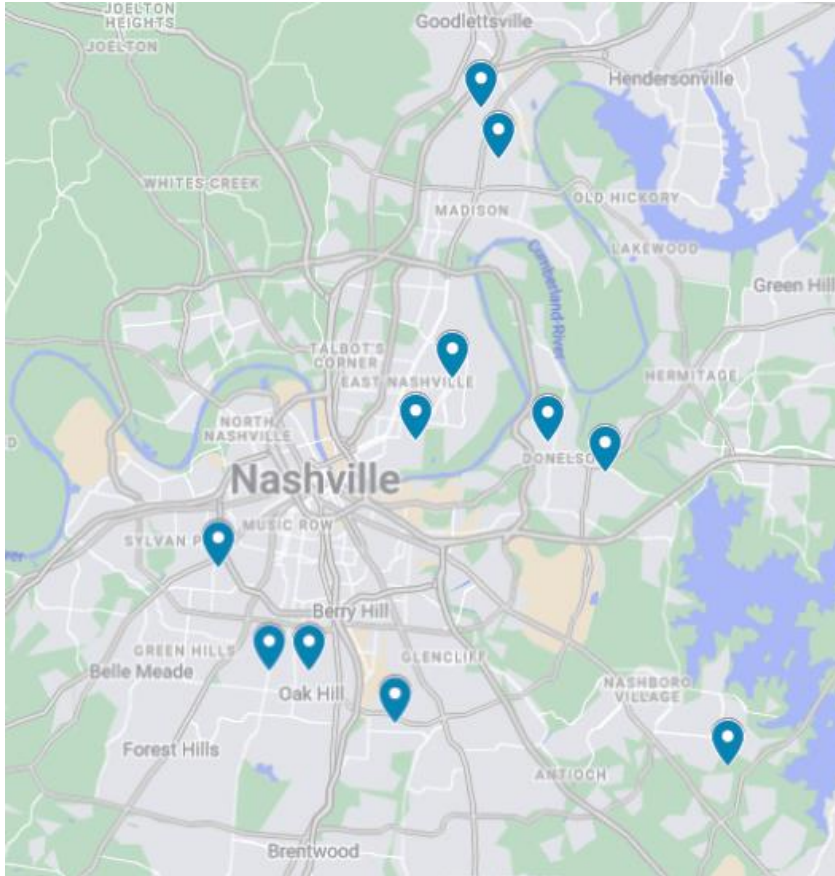


Proposed Capital Spending Plan – Sustainability and Resilience Elements

- \$9.5 million for solar installations across 14 sites in his proposed capital spending plan
- \$17.3 million that includes \$6.8 million for safety initiatives like Vision Zero and traffic calming; \$6 million for sidewalks in the Walk N Bike priority network; \$4 million for bikeways in the Walk N Bike priority network; and \$500,000 for the transportation management center and initial traffic signal upgrades.
- \$27.8 million in investments in Metro Parks to improve facilities, increase accessibility, and address ongoing safety, maintenance, and energy efficiency needs, so more Nashvillians can access and enjoy Metro Parks facilities and feel safe in their local communities.



MNPS Cafeteria Food Scraps Pilot



School name	Enrollment	Diversion from Landfill (mid-September to November)
Inglewood Elementary	225	1810
Gateway Elementary	316	1140
Lockeland Design Center	317	1830
West End Middle	337	1650
JT Moore	406	1820
Stanford Montessori Elementary	425	1800
Hickman Elementary	428	2820
Glendale Elementary	434	2930
Thomas Edison Elementary School	632	250
Norman Binkley Elementary	743	2680
Amqui Global Communication Magnet School	574	1880
Total	4,837	20,610



Choose How You Move Implementation Update

- Resolution for transportation improvement program advisory board (RS2024-880)
- Recruitment for Choose How You Move Chief Program Officer
- Choose How You Move Procurement Information Session (Dec. 8)
- Establishment of early process, organizational, and financial structures



2025 Meetings

Proposed in: February, May, August, November

4:30 – 6 pm

