

Planning a Sustainable Sunnyside Yard

LaGuardia Community College
July 25th, 2019



 AMTRAK



City of New York

NYCEDC

The Problem At Hand

Anthropogenic Climate Change –

a human-induced alteration in Earth's normal climate.

Every region and community faces a unique set of sustainability and resiliency challenges. At Sunnyside Yard, there is an opportunity to plan better.

Polar vortex claims eight lives as US cold snap continues



NYC Sandy Death Toll Reaches 44 After Body Found In Rockaways Months After Storm



ENVIRONMENT JULY 14, 2018

The Heat In New York Is Literally Killing People. Here's What the City Has to Do Now.



New Yorkers weather the storm

NYC Sandy Death Toll Reaches 44 After Body Found In Rockaways Months After Storm



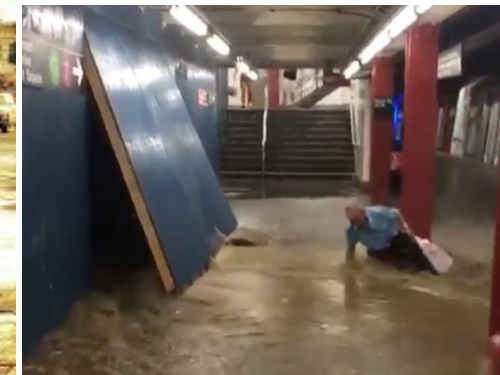
Triple-digit temperatures could bring blackouts in New York City, DC and Chicago

ENVIRONMENT JULY 14, 2018

The Heat In New York Is Literally Killing People. Here's What the City Has to Do Now.



Bronx and Queens face power outages as Staten Island hit again



Subway stop floods after downpour knocks out wall in Queens

By David Meyer

What has NYC done so far?

Climate Mobilization Act – A Green New Deal for NYC

NYC 80 X 50 – A plan for achieving 80% of emissions cuts by 2050

Climate Resiliency Design Guidelines – A guidebook on designing for climate hazards

Congestion Pricing

Voluntary Organics Collection

Fossil Fuel Divestment

Comprehensive Resiliency Planning

Green Infrastructure

NYC Cool Roofs

Infrastructure Hardening

RISE NYC

NYC Care

Promoting community-led preparedness



The Path Forward – OneNYC 2050

CARBON NEUTRALITY by 2050

Cut Buildings Emissions

Sustainable Transportation

Zero Waste By 2030

100% Clean Energy By 2040

STRENGTHEN COMMUNITIES, BUILDINGS, INFRASTRUCTURE, & WATERFRONT TO **BE MORE RESILIENT**

Mitigate Physical Risks

Capacity Building For Adaptation

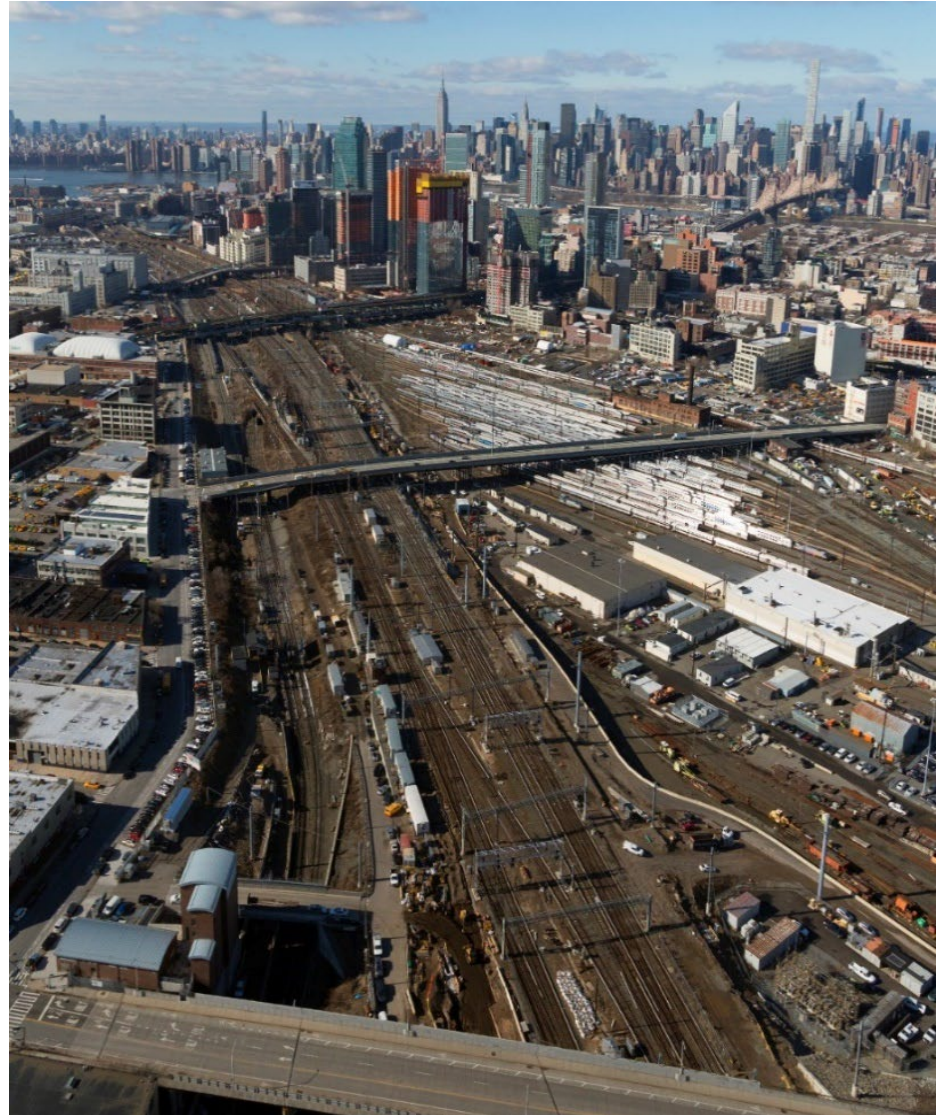
GREEN ECONOMIC OPPORTUNITIES FOR ALL

Grow The Green Economy



Sunnyside Yard: An opportunity to plan better for the future

- **180 acres** connected to local and regional networks
- **Active railyard** owned by Amtrak, MTA and City; unique moment to coordinate with rail planning
- 2017 **Feasibility Study** found overbuild technically possible
- **Master planning process** launched in summer 2018 to develop a vision and planning framework to guide phased, long-term investments



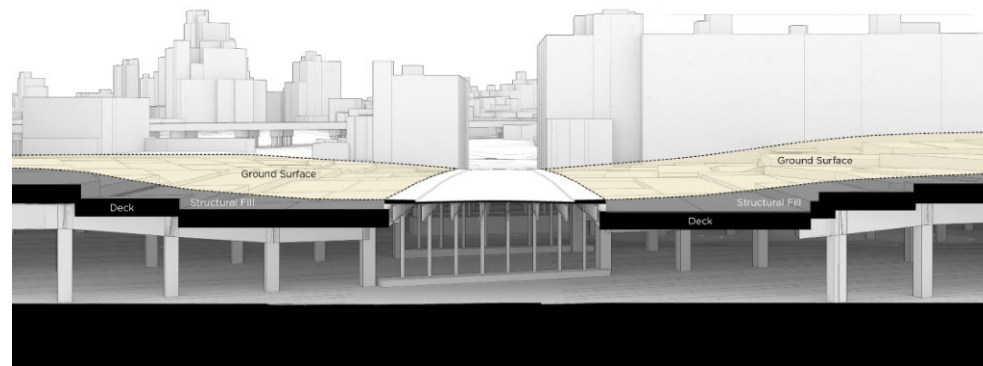
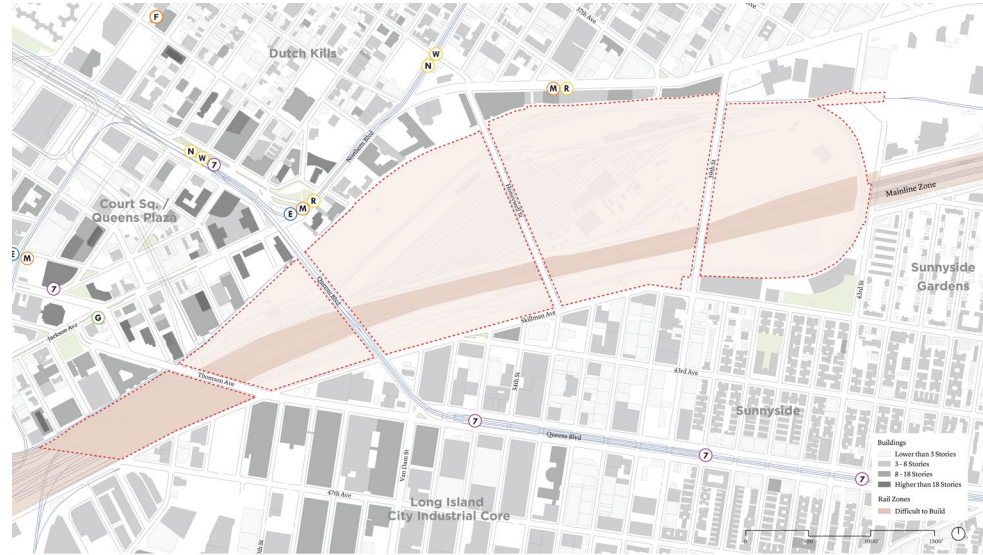
Sunnyside Yard: An opportunity to plan better for the future

- Process has been driven by the **Steering Committee** and robust community engagement effort to ensure the plan is a **collaborative vision for the future**
- Master planning technical analysis includes detailed **engineering, transportation, and urban design analysis** by Interdisciplinary consultant team
- **18-month process** began in summer 2018 and will wrap up in winter 2019



Relevant Technical Findings to date

- The **Main Line** is severely constrained for decking
- The deck will be higher than existing streets, but will **integrate seamlessly** with the existing bridges and new access points from surrounding neighborhoods
- Generally speaking, the deck will be thick enough to accommodate **neighborhood infrastructure** (water, sewer, utilities, etc.)
- The plan will include a **mix of uses and densities** including:
 - Open space
 - Housing
 - Commercial
 - Institutional
 - Social infrastructure (libraries, community centers, schools, etc.)



Guiding Principles

Drafted by Sunnyside Yard steering Committee, with input provided at the 1st public meeting

- 1. Design infrastructure and transportation systems to meet current needs and anticipate future trends**
2. Address the neighborhoods' needs for affordable housing, commercial, industrial, community services, and cultural spaces
3. Ensure sustained economic diversity in the community
- 4. Pilot and incorporate innovative approaches to technology, sustainability, and climate change adaptation**
5. Create public spaces that support health, creative expression, community-building and quality of life
6. Create more good jobs that lead to careers and workforce development strategies like union jobs, MWBE, local hiring, etc.
7. Support creative approaches to education, careers, and industries that envision how we want to live and work in the future
8. Respect and build on the heritage and diversity of the surrounding neighborhoods
- 9. Ensure high-quality, human-centered design at every scale**
- 10. Adapt to evolve with the needs of Western Queens and NYC over time**

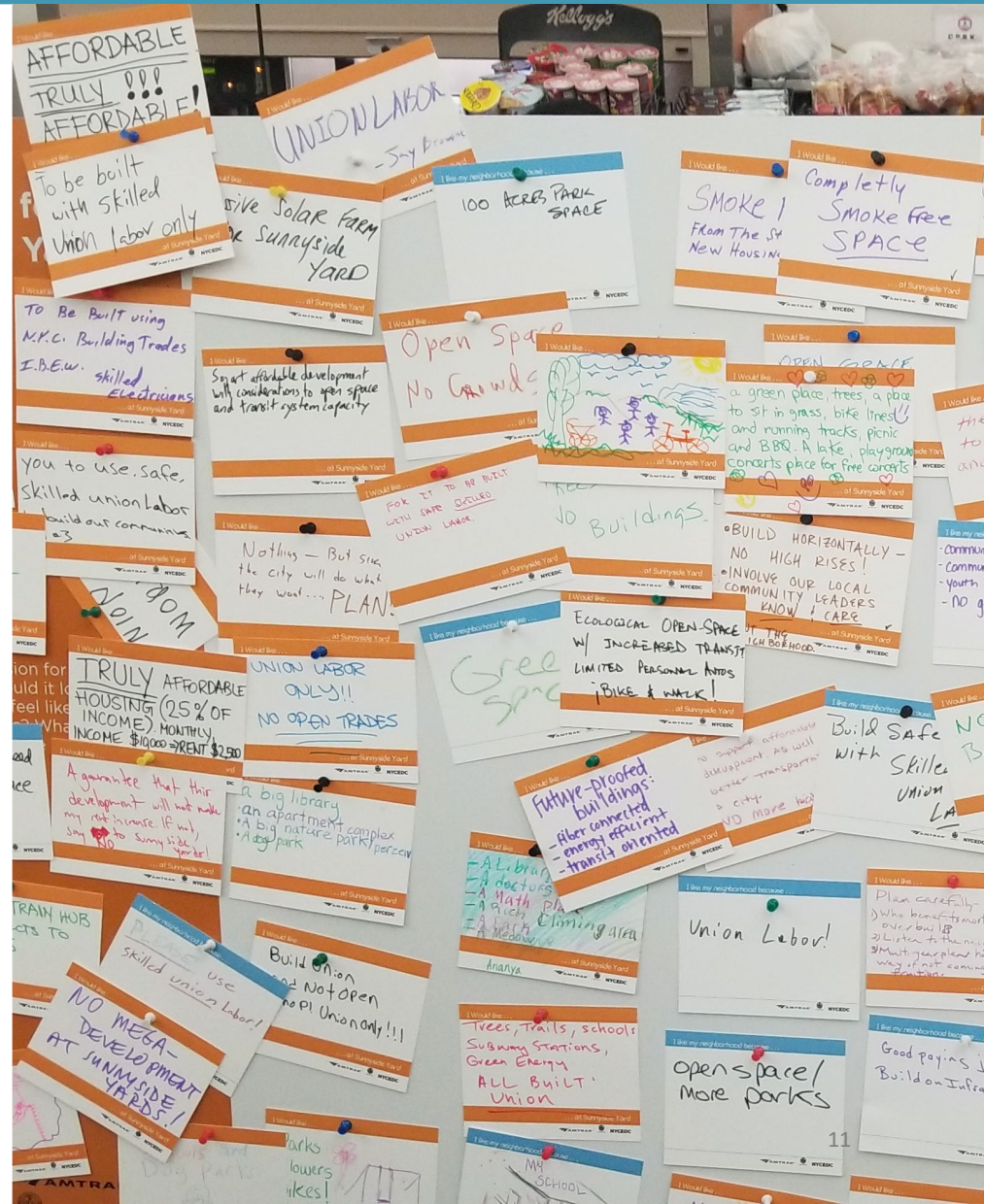
What We've Heard about Sustainability

AREAS OF CONCERN

- CSOs and stormwater
- Energy sources/
- Waste
- Driving & transportation emissions

IDEAS TO EXPLORE

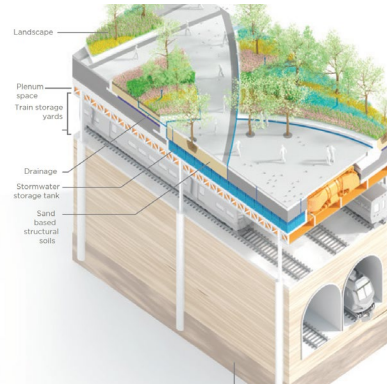
- Mandate renewable energy use & generation
- Off-grid energy
- Geothermal energy systems | Leveraging rail energy
- Recycling/waste management as anchor institution
- Mandatory composting
- Plastic free
- Community gardens, farmers' markets, & urban ag
- Green space for mitigation | Living walls
- Green infrastructure for stormwater & efficiency
- Promote walking, biking, and transit
- No cars or parking requirements
- Charging stations for electric vehicles
- Freight solutions
- Opportunity to tie into future industries, training workforce in green jobs



How sustainability fits into the Master Plan



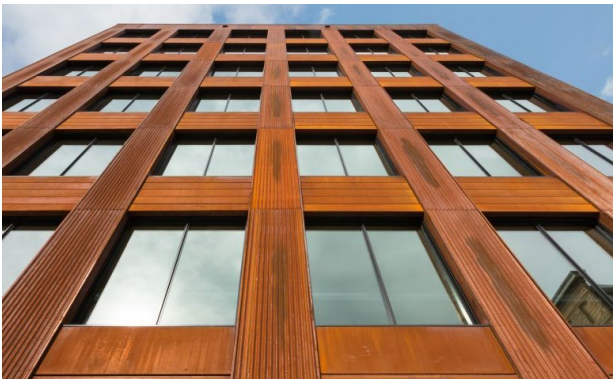
Infrastruktur



Deck Design



Transportation



Buildings



Smart City Technologies



Parks and open spaces

OTHER?

Resiliency Challenges To Keep In Mind

Based on NPCC 2019 Report & Fourth National Climate Assessment:

Extreme **heat & cold** events

Sea-level rise: exacerbated tidal flooding, storm surge, **groundwater table rise**

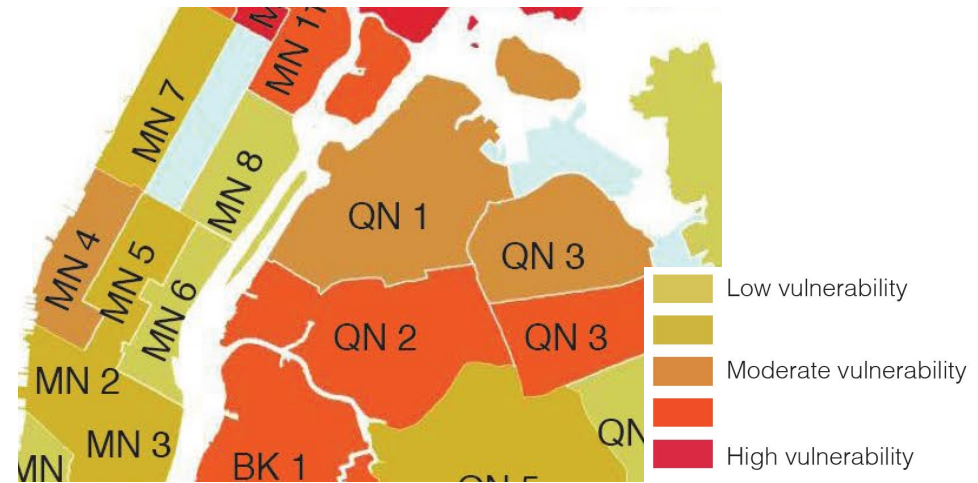
More frequent & intense **precipitation**

Strong **winds** from coastal storms

Critical **infrastructure** vulnerability

Vulnerabilities in global **food systems**

Heat Vulnerability Index



Source: NYC Climate Resiliency Design Guidelines v3.0



Source: New York braces for 'bomb cyclone' as snow starts hitting Queens – AOL.com

Group Brainstorm

Thinking about all the ways that climate change manifests –

What are some environmental challenges facing you or your community?

What would a sustainable and resilient community look like?

Workshop: Planning a Sustainable Sunnyside Yard

ADD Amtrak and City logos

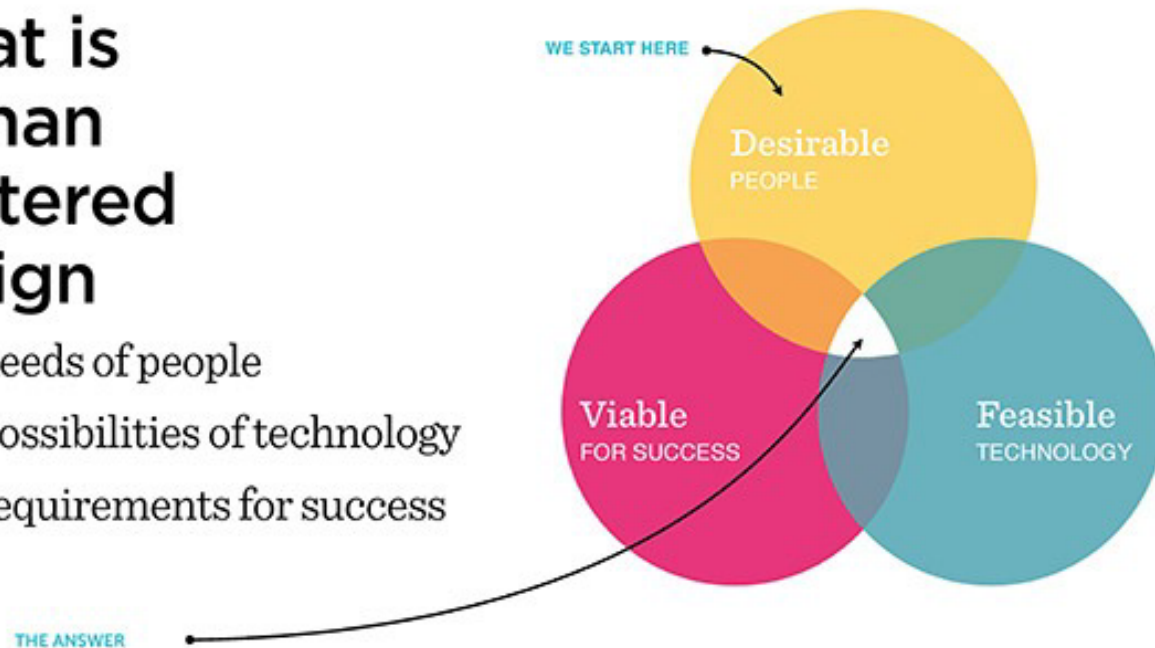
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New Process for Today

Human-centered design is a tool that helps develop solutions to problems by involving the human perspective in all steps of the problem-solving process.

What is Human Centered Design

- the needs of people
- the possibilities of technology
- the requirements for success



Human involvement typically takes place in observing the problem within context, brainstorming, conceptualizing, developing, and implementing the solution.

Instructions for Today



Getting ready

Design experts: formed teams around issue areas

Community experts: pick an issue area you're passionate about, or float between them; be on hand to give ideas, context, expertise, feedback

Ideation (~20 mins)

Design experts: ask questions to give W. Queens context, create own ideas, pull ideas; "green light thinking" where no bad/infeasible ideas

Community experts: speak from your deep experience and expertise, offer ideas without regard to whether it's good or bad

Prototyping + Testing (~40 mins)

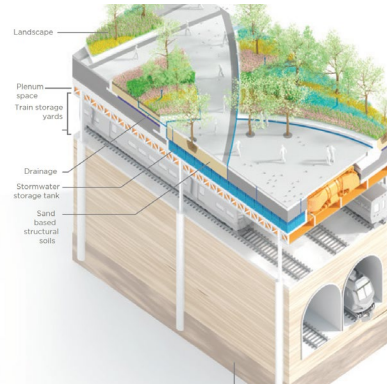
Design experts: focus on 2-3 ideas, design model(s), ask for feedback when ready, iterate

Community experts: take a "gallery walk", be on hand to offer feedback on feasibility/fit

How sustainability fits into the Master Plan



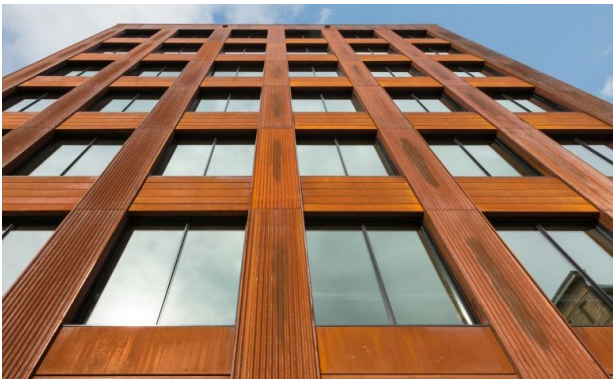
Infrastructure



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Transportation



Buildings



Smart City Technologies



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Appendix

ADD Amtrak and City logos

NYCEDC

What has NYC done so far?

Climate Mobilization Act – A Green New Deal for NYC

- Requires existing large buildings to retrofit in order to cut their emissions by 40% in 2030, and double cuts by 2050
- Requires all new construction to deploy solar, green, or cool roofs

NYC 80 X 50 – A plan for achieving 80% of emissions cuts by 2050

Congestion Pricing

- Vehicles to be charged once per day to drive south of 60th Street in Manhattan
- De-incentivizing driving and provides funding for transit improvements

Voluntary Organics Collection

- Provided organic waste collection waste to homeowners in Queens, Brooklyn, Staten Island, and certain parts of the Bronx

Fossil Fuel Divestment

- Divested all City-employee pension funds from fossil fuels



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Comprehensive Resiliency Planning

Green Infrastructure

Rain Gardens

Green & Blue Roofs

Permeable Paving

Stormwater Green Streets

NYC Cool Roofs

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Electric & gas systems

Sewage & wastewater systems

RISE NYC

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Promote community-led preparedness

