

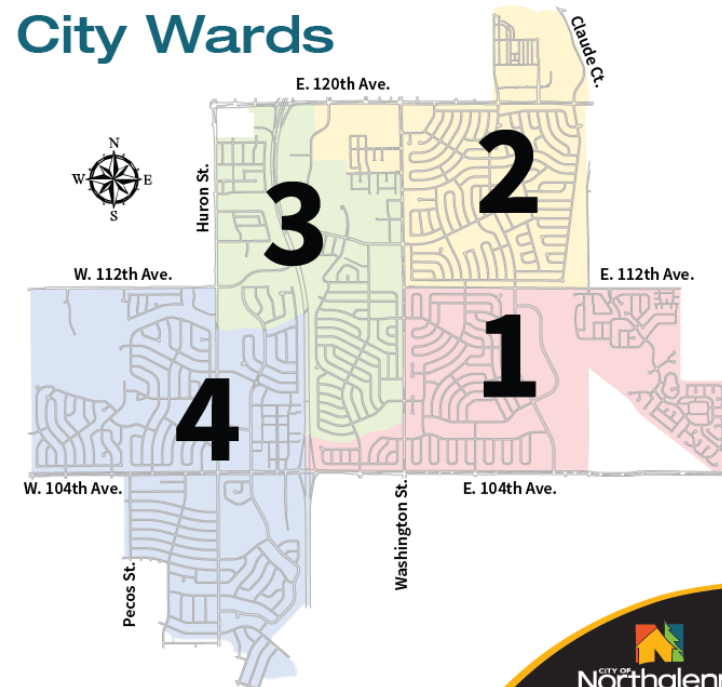


# **Creating Resilient, Inclusive Civic Spaces: Northglenn's NetZero City Hall Story**

# The City of Northglenn

- Population 38,164
- 7.5 Square Miles
- Utilities: Xcel Energy & United Power
- Elevation: 5,460

## City Wards

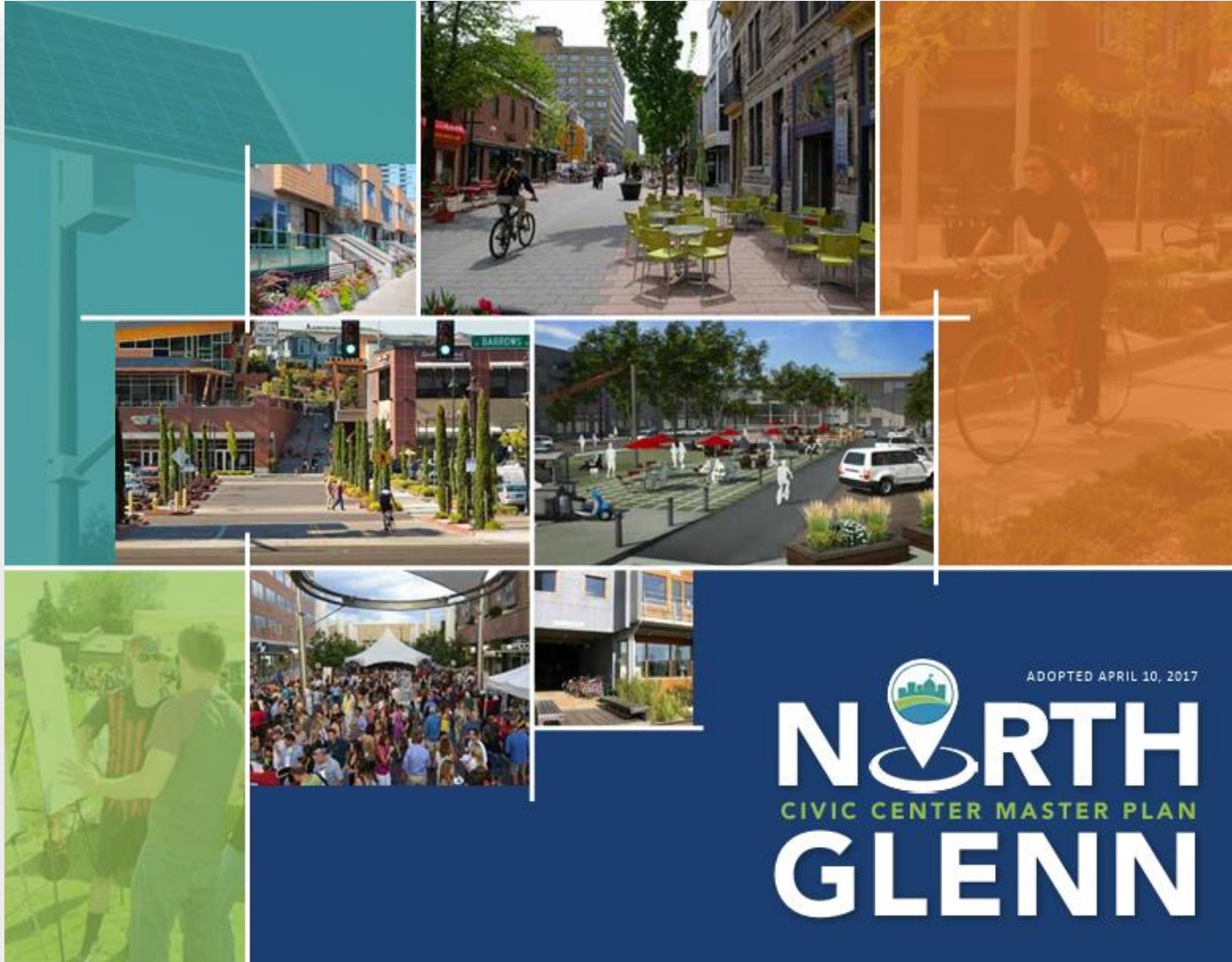


# How did we get here?



Northglenn City Hall

# Civic Campus Planning History



- 2017 - City Council adopts Civic Center Master Plan as part of Comprehensive Plan
- Evaluated the best location and design of several municipal facilities:
  - City Hall
  - Northglenn Recreation Center
  - Northglenn Senior Center
  - D.L. Parsons Theatre

# Three Phase Implementation:

- **Phase 1 (completed 2020):** Construction of a new recreation center/senior center/theatre + required infrastructure
- **Phase 2 (completed 2024):** Construction of a new city hall facility and demolition of the existing city hall
- **Phase 3 (in process):** Redevelopment of the remainder of the Civic Center area by a private developer



# Sustainability History



# Same starting point

- 2017 - Council adopts Civic Center Master Plan -Sustainability is a guiding principle, but net zero was not contemplated at this time

Connected	Sustainable	Contextual
 <p>The proximity to I-25 makes the site highly visible and accessible. Multi-modal access to the site allows for vehicular, pedestrian, bicycle and transit access from near and far. Unique site design provides thoughtful form with innovative placemaking elements and great function that responds to adjacencies and access opportunities. The Civic Center will be a memorable place to which visitors will want to return.</p> <ul style="list-style-type: none"> <li>• Incorporate traffic demands, multi-modal circulation and parking requirements.</li> <li>• Ensure safety for all modes of transportation.</li> <li>• Create connections to adjacent places.</li> <li>• Consider internal wayfinding, ease of access and convenient parking.</li> </ul>	 <p>Low-impact development and sustainable technologies appropriate to Colorado such as solar should be integrated into the redevelopment of the Civic Center Campus.</p> <ul style="list-style-type: none"> <li>• Integrate sustainable drainage, detention and water quality.</li> <li>• Set an example of sustainability for the rest of the City.</li> <li>• Practice smart growth and infill.</li> <li>• Create a diverse and active City Center.</li> <li>• Ensure a walkable environment and a comfortable pedestrian realm.</li> </ul>	 <p>A new, updated Civic Center will become the identifiable character for the City of Northglenn. Iconic and contemporary civic buildings can serve the needs of both today and tomorrow along with additional uses that accommodate diversity and flexibility for long and short-term use.</p> <ul style="list-style-type: none"> <li>• Think of the Civic Center area as a key gateway to the City.</li> <li>• Protect and enhance view corridors and site visibility.</li> <li>• Consider the condition, location and capacity of utilities.</li> </ul>

- Same year - Council directs staff to initiate a sustainability plan
- 2019- Council Strategic Plan 2019-2023 includes Sustainability as 1 of 8 priority areas



# Two Planning Processes Merge

- 2020- Council continues to prioritize sustainability, including re-evaluating City Hall Project
- 2021 - Sustainability Committee forms & City Hall selects architect
- 2021 - CORE Certification Chosen
  - Chosen over LEED or other certifications
  - Measures the actual operation of the building vs modeled or anticipated performance
  - Takes into consideration embodied energy
    - 50% embodied carbon savings compared to conventional construction
  - CORE certification = comparable to LEED platinum

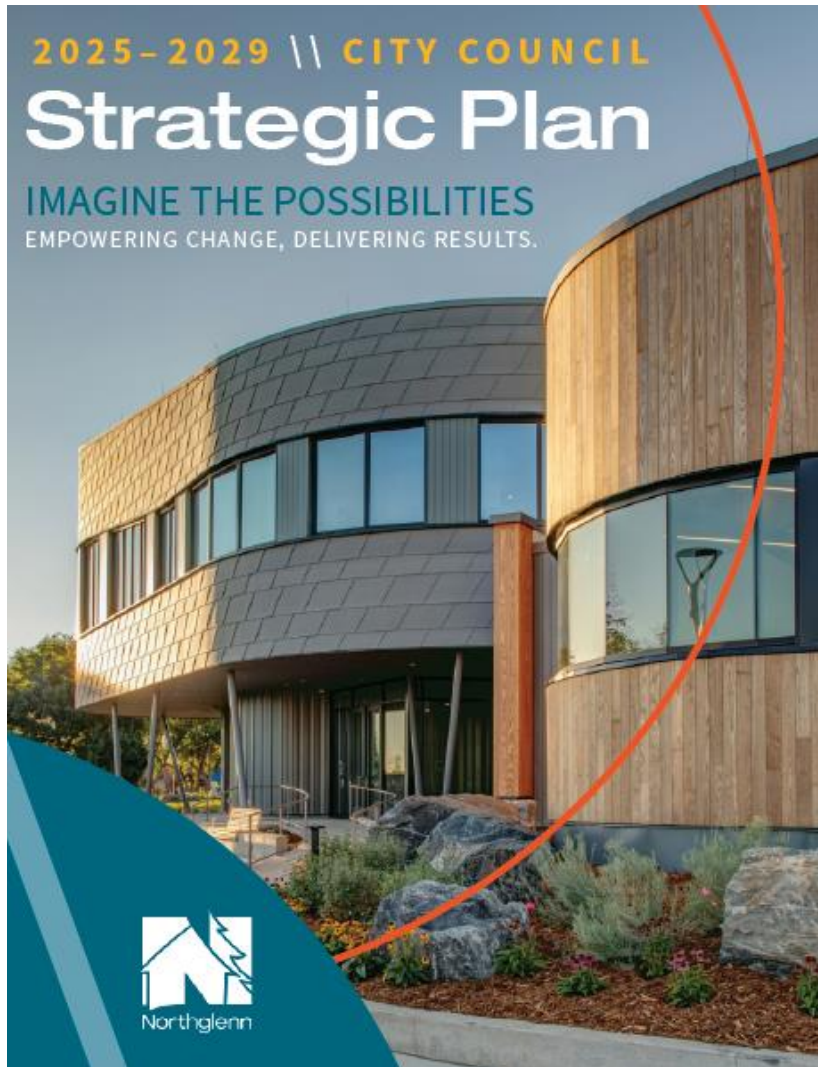


# Working Together



- 2022- Sustainability plan updated to add “Climate Action”
- 2023 (June) - City Hall groundbreaking
- 2023 (October) -First Sustainability Coordinator Position Hired
- 2024 (September)- New City Hall opens for operations

# 2025 – Continuing the Trend

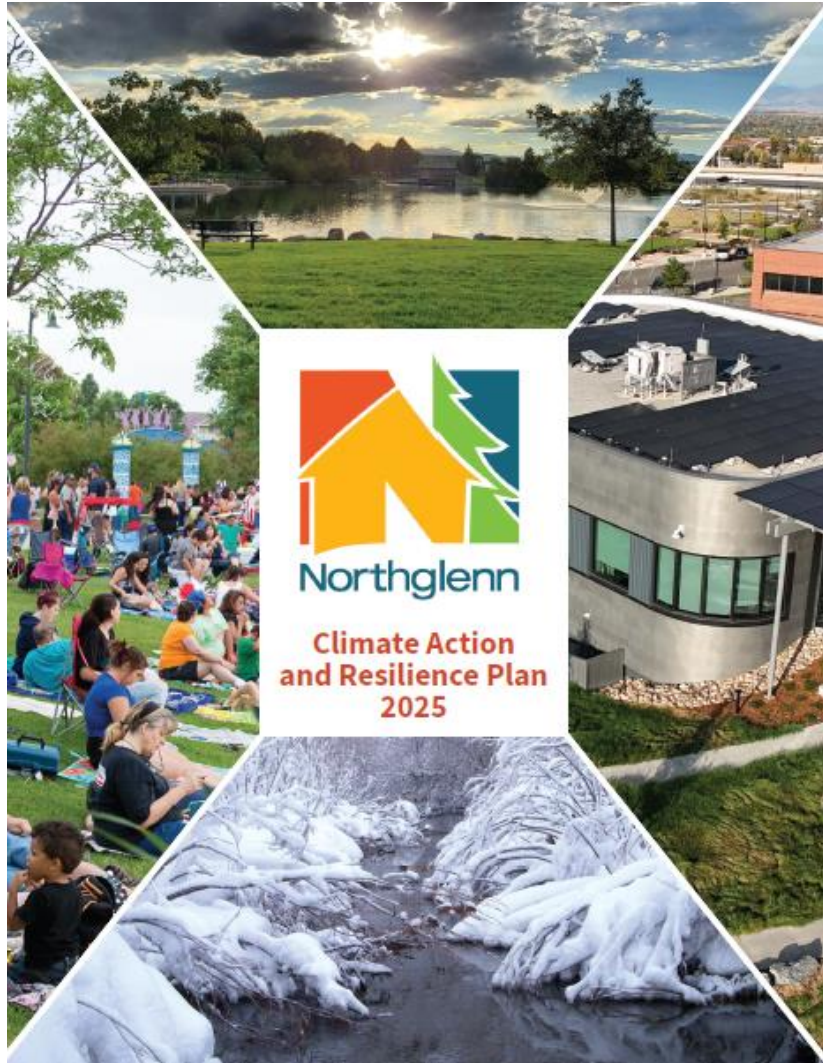


## City Council Strategic Plan Adopted February, 2025

- 6 strategic focus areas
- Includes Environmental Stewardship



# 2025 – Continuing the Trend



  
Northglenn  
Climate Action  
and Resilience Plan  
2025

## Northglenn's First Climate Action Plan

- Connects to existing Sustainability Plan and City Council Strategic Plan



### Connected Community

- **Objective:** Foster a community that is well prepared for, and has the resources to adapt to, the impacts of climate change.
- **CC-1:** Increase resilience of city services
- **CC-2:** Enhance social infrastructure and community preparedness
- **CC-3:** Advance climate advocacy and education



### Mobility

- **Objective:** Reduce greenhouse gas emissions associated with the transportation sector by making no- and low-carbon travel convenient and accessible for all community members.
- **M-1:** Reduce Vehicle Miles Traveled (VMT)
- **M-2:** Increase the prevalence of low- and no-emission vehicles and equipment



### Energy Supply

- **Objective:** Pursue a resilient and low-carbon energy supply.
- **ES-1:** Increase local renewable energy generation and storage
- **ES-2:** Increase participation in renewable energy subscription programs



### Buildings

- **Objective:** Improve the health, adaptive capacity, and efficiency of new and existing buildings.
- **B-1:** Support efficient and resilient new construction
- **B-2:** Support efficient and resilient existing homes
- **B-3:** Support efficient and resilient existing commercial, public, and institutional buildings
- **B-4:** Support regional building electrification workforce



### Natural Systems

- **Objective:** Cultivate natural resources and systems that can adapt and support climate resilience.
- **NS-1:** Enhance open and green spaces
- **NS-2:** Pursue a diverse and resilient water supply
- **NS-3:** Conserve water



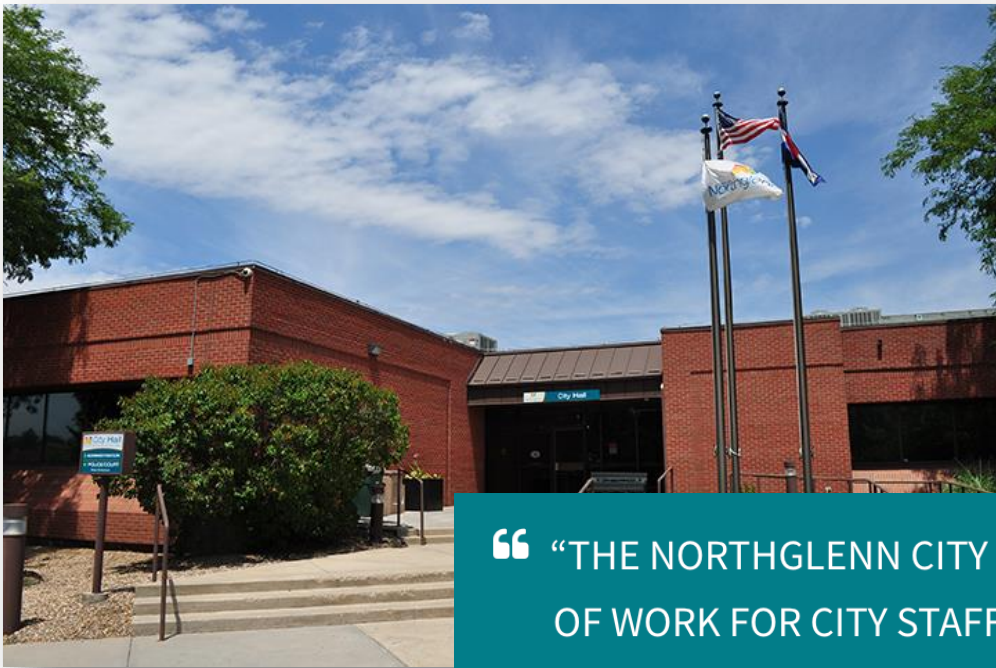
### Food and Waste

- **Objective:** Develop resilient food and waste systems that emphasize the local economy.
- **FW-1:** Reduce waste and consumption
- **FW-2:** Recover materials
- **FW-3:** Increase access to healthy, locally produced, and culturally relevant food

# City Hall Quick Intro

- Broke ground June 2023, completed in September of 2024
- All Electric – powered on-site by solar panels 195 kW rooftop solar (no gas)
- 32,600 square feet of space
- \$33.78M cost was fully-funded by the ½% sales tax and 4% Special Marijuana Tax, both of which can only be used for capital projects.
- CORE Certified (more info on this later)





“ THE NORTHGLENN CITY HALL WILL BE A HEALTHY, SAFE, AND PROGRESSIVE PLACE OF WORK FOR CITY STAFF; AND AN INSPIRING CIVIC RESOURCE FOR RESIDENTS, SERVING AS A GATHERING PLACE AND ANCHOR OF THE CIVIC CENTER CAMPUS THAT FOSTERS A SENSE OF PRIDE, CAMARADERIE, AND COMMUNITY.” ”



# CORE Certification

- **Colorado's First CORE-Certified Municipal Building**
  - Performance-based certification, beyond a points checklist
  - Comparable to LEED Platinum, but measured by real-world operation
- **100% Electric & Net Zero Energy**
  - 476 rooftop solar panels generating 195 kW annually
  - No natural gas—fully electrified mechanical systems
  - Highly efficient exterior envelope, like a "YETI cooler" for buildings
- **Sustainable Design for Long-Term Impact**
  - Natural ventilation, low-energy glass



# Materials Matter – Reducing Embodied Carbon



- **Lowering the Carbon Footprint from the Start**
  - 50% reduction in embodied carbon emissions using mass timber
  - Equal to the carbon sequestered by 621 acres of forest in 1 year
- **Locally Sourced Materials**
  - 20% of materials sourced within 310 miles
  - The materials that travelled the farthest are the all-wood mass timber structure from Quebec Canada

# Materials Matter – Responsible and Healthy



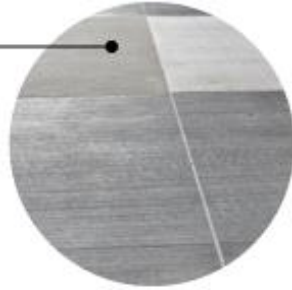
- **Responsible Material Choices**
  - Zinc & thermally modified wood: durable, natural, & chemical-free
- **Healthy and transparent**
  - Declare-labeled products with transparent ingredients
  - No petrochemical fertilizers or pesticides in landscaping

# Water Innovation – Setting a New Standard

- 100% non-potable water for irrigation
  - Collected in underground cisterns
- First municipal project in CO to secure water rights for this use
- Possible because Northglenn is a Municipal Utility Provider
  - Owns, operates and maintains its own water & wastewater systems
- Native and xeric landscaping reduces water demand by 70%



# Nature & Wellbeing in Design



# Inclusivity and Safety

## SUMMARY MATRIX

The Living Building Challenge is composed of 20 Imperatives grouped into seven petals. Some Imperatives are not required for all Typologies.

PETAL		IMPERATIVE	TYPOLOGY			
			New Building	Existing Building	Interior	Landscape + Infrastructure
PLACE	1	Ecology of Place	Imperative Required	Requirement Dependent	Not Required	Imperative Required
	2	Urban Agriculture	Imperative Required	Imperative Required	Not Required	Not Required
	3	Habitat Exchange	Imperative Required	Imperative Required	Imperative Required	Imperative Required
WATER	4	Human Scaled Living	Imperative Required	Requirement Dependent	Requirement Dependent	Not Required
	5	Responsible Water Use	Imperative Required	Imperative Required	Imperative Required	Imperative Required
ENERGY	6	Net Positive Water	Imperative Required	Imperative Required	Not Required	Imperative Required
	7	Energy + Carbon Reduction	Imperative Required	Imperative Required	Imperative Required	Imperative Required
HEALTH + HAPPINESS	8	Net Positive Energy	Imperative Required	Imperative Required	Imperative Required	Imperative Required
	9	Healthy Interior Environment	Imperative Required	Imperative Required	Imperative Required	Not Required
	10	Healthy Interior Performance	Imperative Required	Imperative Required	Imperative Required	Not Required
MATERIALS	11	Access to Nature	Imperative Required	Imperative Required	Imperative Required	Not Required
	12	Responsible Materials	Imperative Required	Imperative Required	Imperative Required	Imperative Required
	13	Red List	Imperative Required	Imperative Required	Imperative Required	Imperative Required
	14	Responsible Sourcing	Imperative Required	Imperative Required	Imperative Required	Imperative Required
	15	Living Economy Sourcing	Imperative Required	Imperative Required	Imperative Required	Imperative Required
EQUITY	16	Net Positive Waste	Imperative Required	Imperative Required	Imperative Required	Imperative Required
	17	Universal Access	Imperative Required	Requirement Dependent	Requirement Dependent	Requirement Dependent
	18	Inclusion	Imperative Required	Imperative Required	Imperative Required	Imperative Required
BEAUTY	19	Beauty + Biophilia	Imperative Required	Imperative Required	Imperative Required	Imperative Required
	20	Education + Inspiration	Imperative Required	Imperative Required	Imperative Required	Imperative Required

## Community responsive

- Open access and inclusion by design
- Fully public lobby with public amenities

## High Performance Staff Spaces

- Employee lounge designed for connection
- Family Lounge/Wellness Room, to support employee well-being

## Safety as a priority

- Police Department input led to added security features, including ballistic-rated panels throughout
- Intentional design

# Lessons Learned

# Funding and missed opportunities

- \$33.78M cost fully-funded, no loans
  - ½ % sales tax and 4% Special Marijuana Tax (can only be used for capital projects)
- Missed funding opportunities- “Too Shovel Ready”
- Tax Credits/ Grants used for the project:
  - Investment Tax Credit - Net Zero City Hall Solar Array
  - Approved Low-income community bonus credit
  - Clean Commercial Vehicle Credit
  - Alternative Fuel Vehicle Refueling Property Credit (EV Chargers)
  - FleetZERO State Grant (EV Chargers)
  - EECBG Federal DOE Program Voucher
  - Charge Ahead Colorado Grant (EV Chargers)





# Incremental Cost

- \$24 million originally
- \$38 million final due to inflation and COVID19 impact
- Net zero cost factor for budget- added \$1.6 million (5%)

# Brownfield Clean up

- \$2.75 million EPA Grant Awarded in 2024
- Cleanup soil contaminated with lead and arsenic on the former Recreation Center
- 6.85-acre property has sat unused since the new Rec Center was built
- Developers identified soil contamination as a significant barrier for redevelopment



**Q&A**