

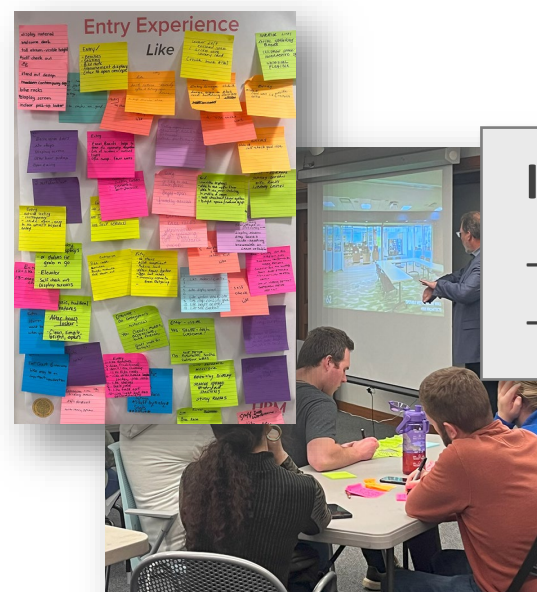
# Manchester Public Library

Board of Directors Meeting | 3.05.2024





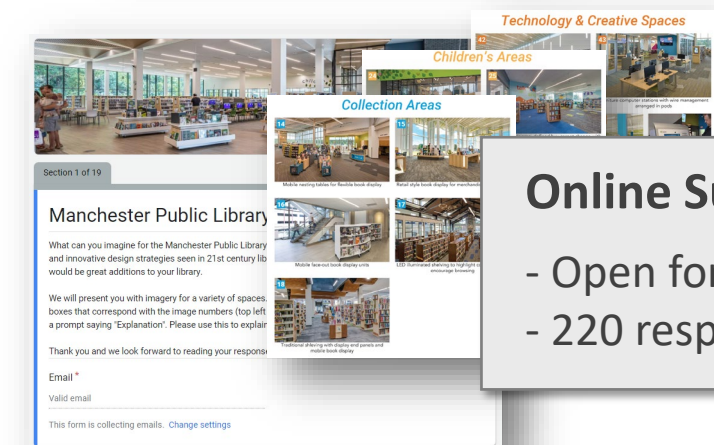
# Community + Staff Engagement



## In-Person Engagement

- 2 sessions
- 120+ attendees

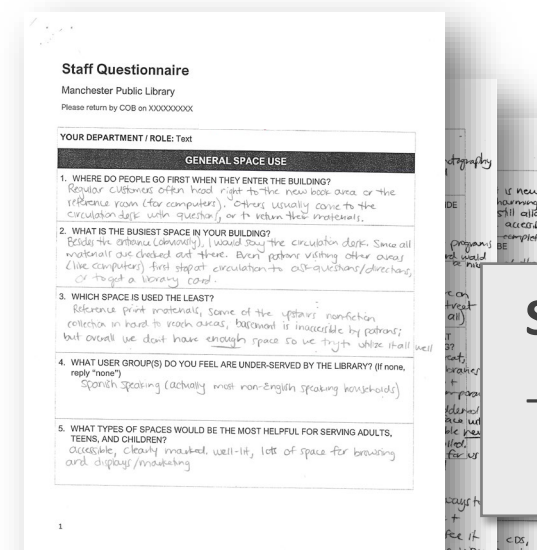
*Images of innovative library spaces were shared with participants who were then asked to place post-it notes with reactions and comments for each space category.*



## Online Surveys

- Open for 2-3 weeks
- 220 responses

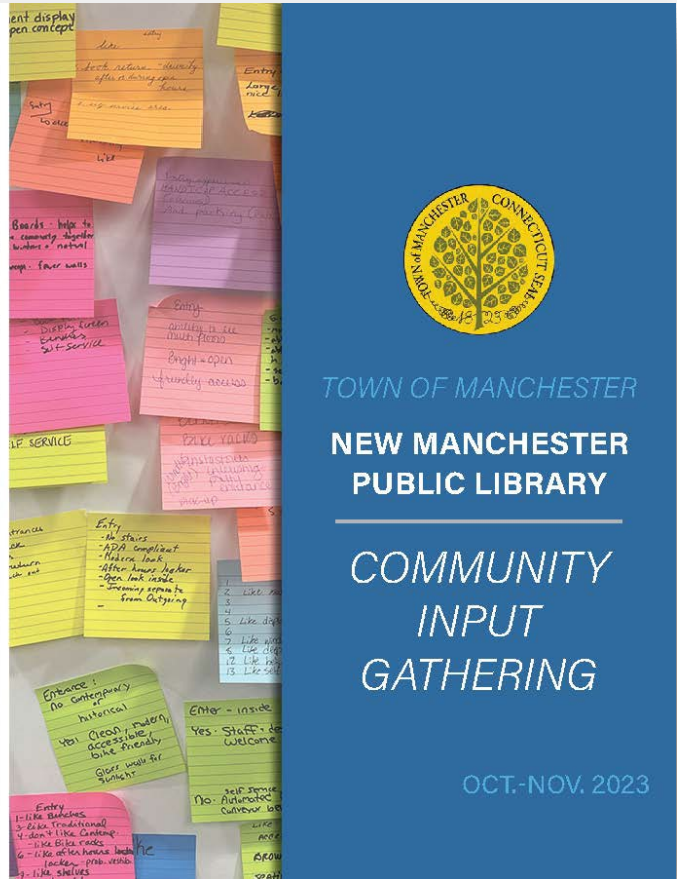
*The online survey displayed the same images from the in-person sessions and asked participants to select images they liked and leave comments with their thoughts on each category of space.*



## Staff Questionnaires

- 23 staff submissions

*Questions related to **general space use, materials/collection, and services**, were presented to staff to collect information on how the library functions and determine what is needed in a new building.*



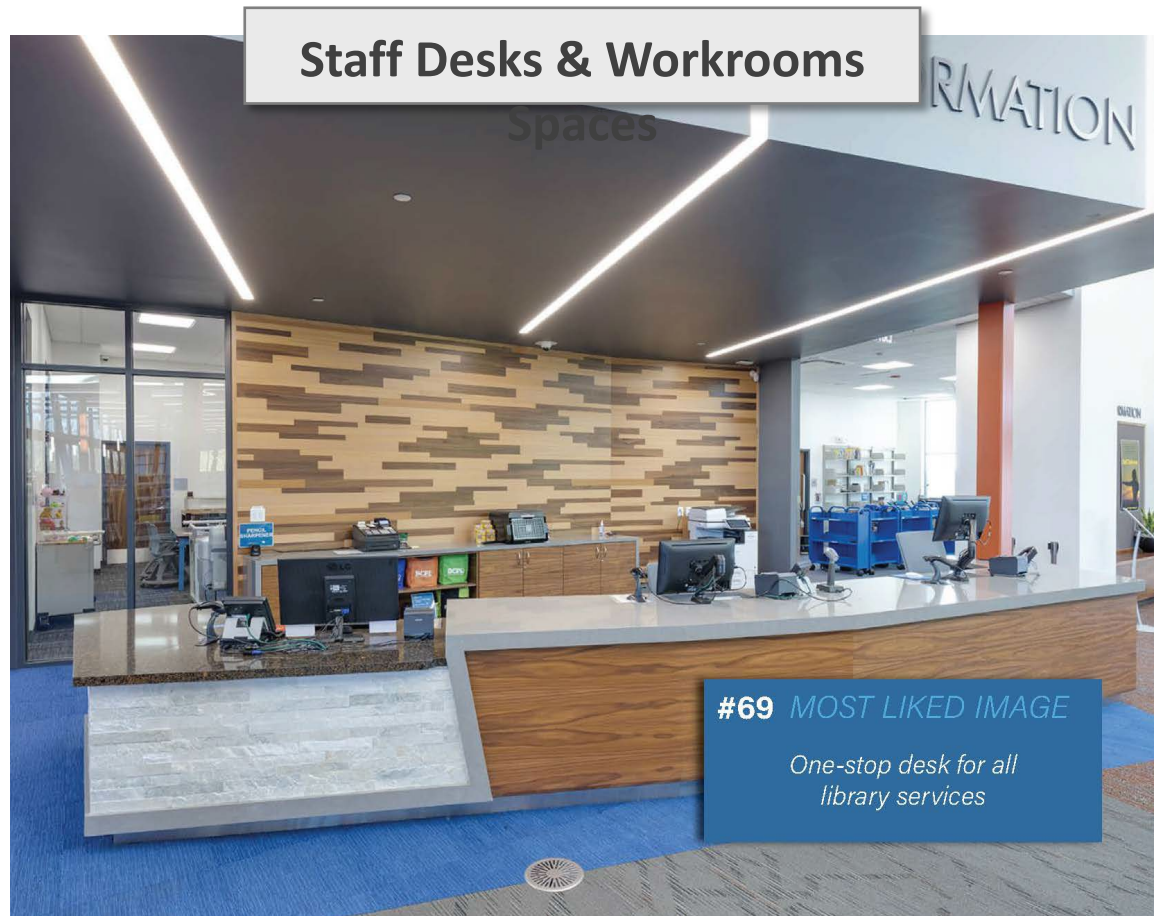
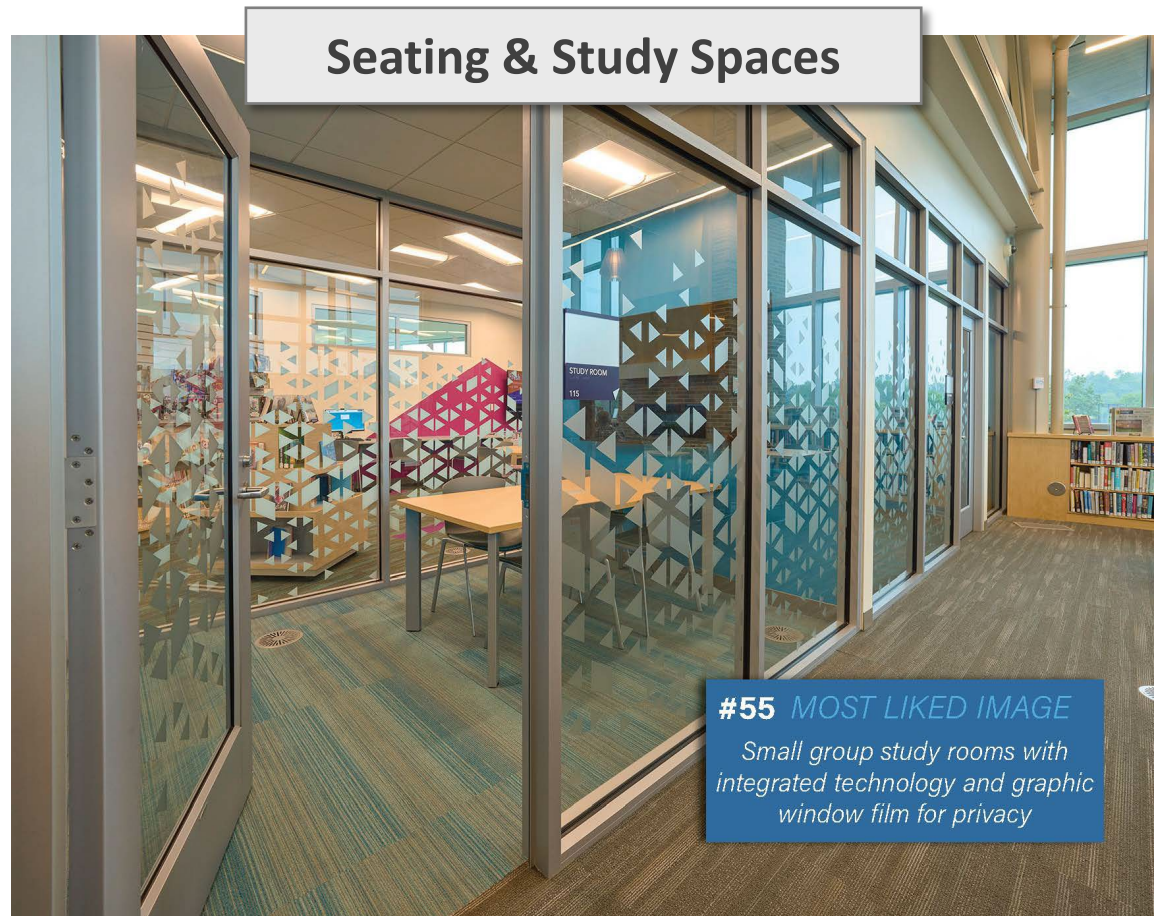
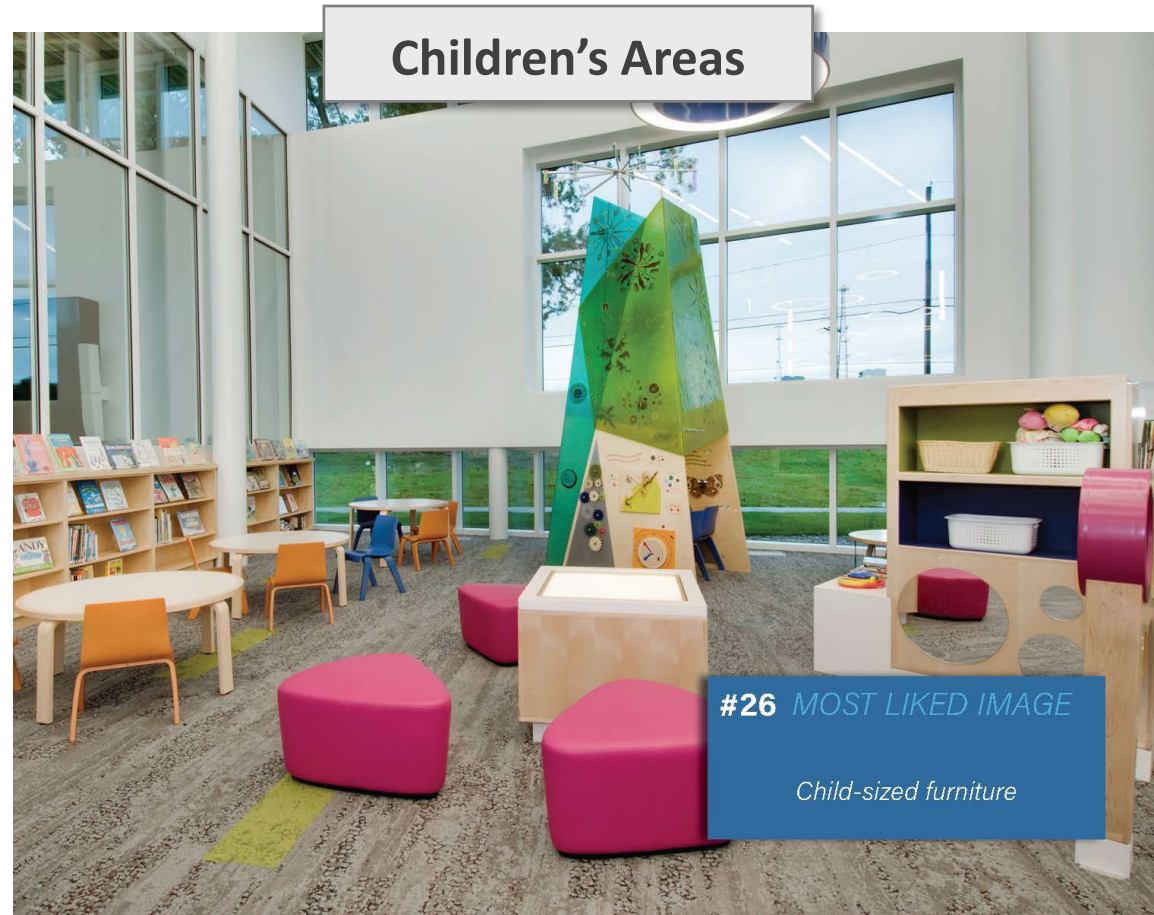
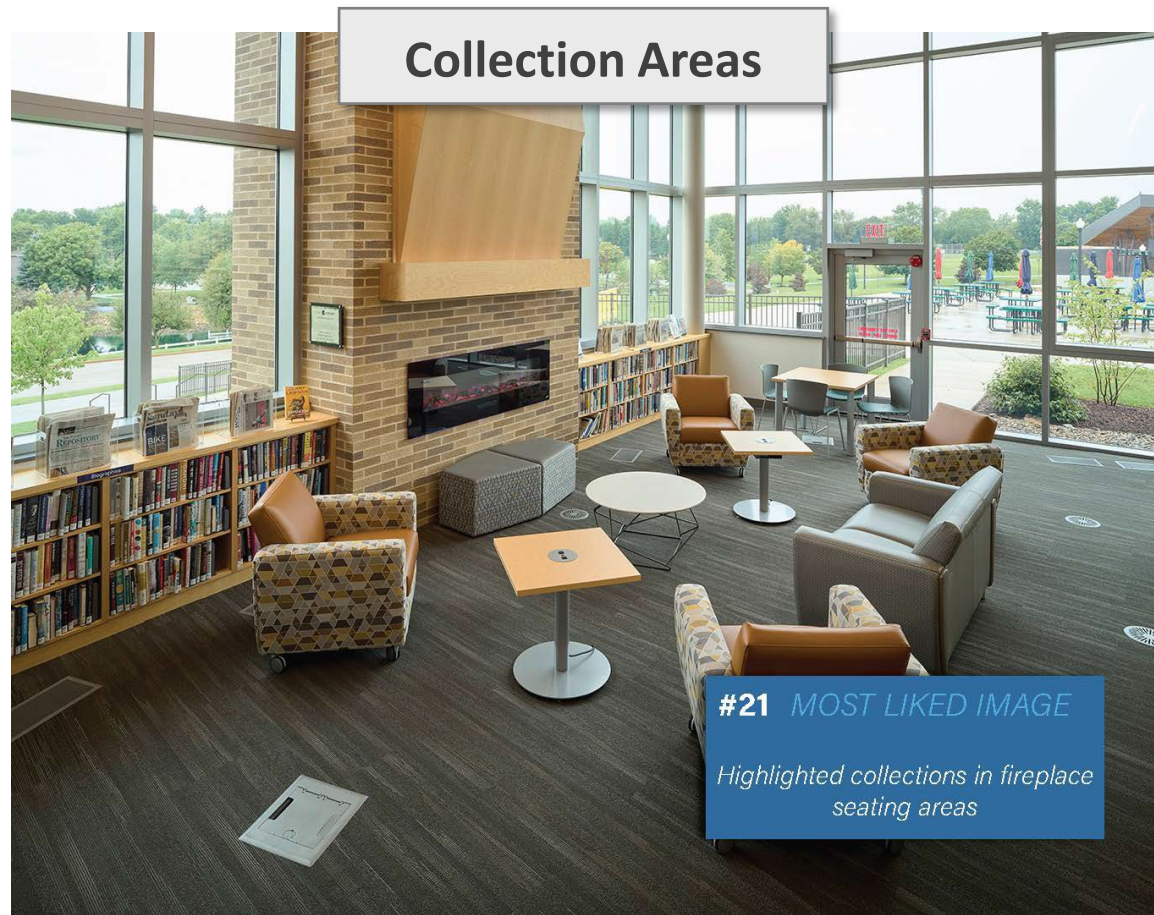
## Community Input Gathering Book

- Highlights most-liked images
- Identifies most-mentioned comments  
*(for both public and staff responses)*

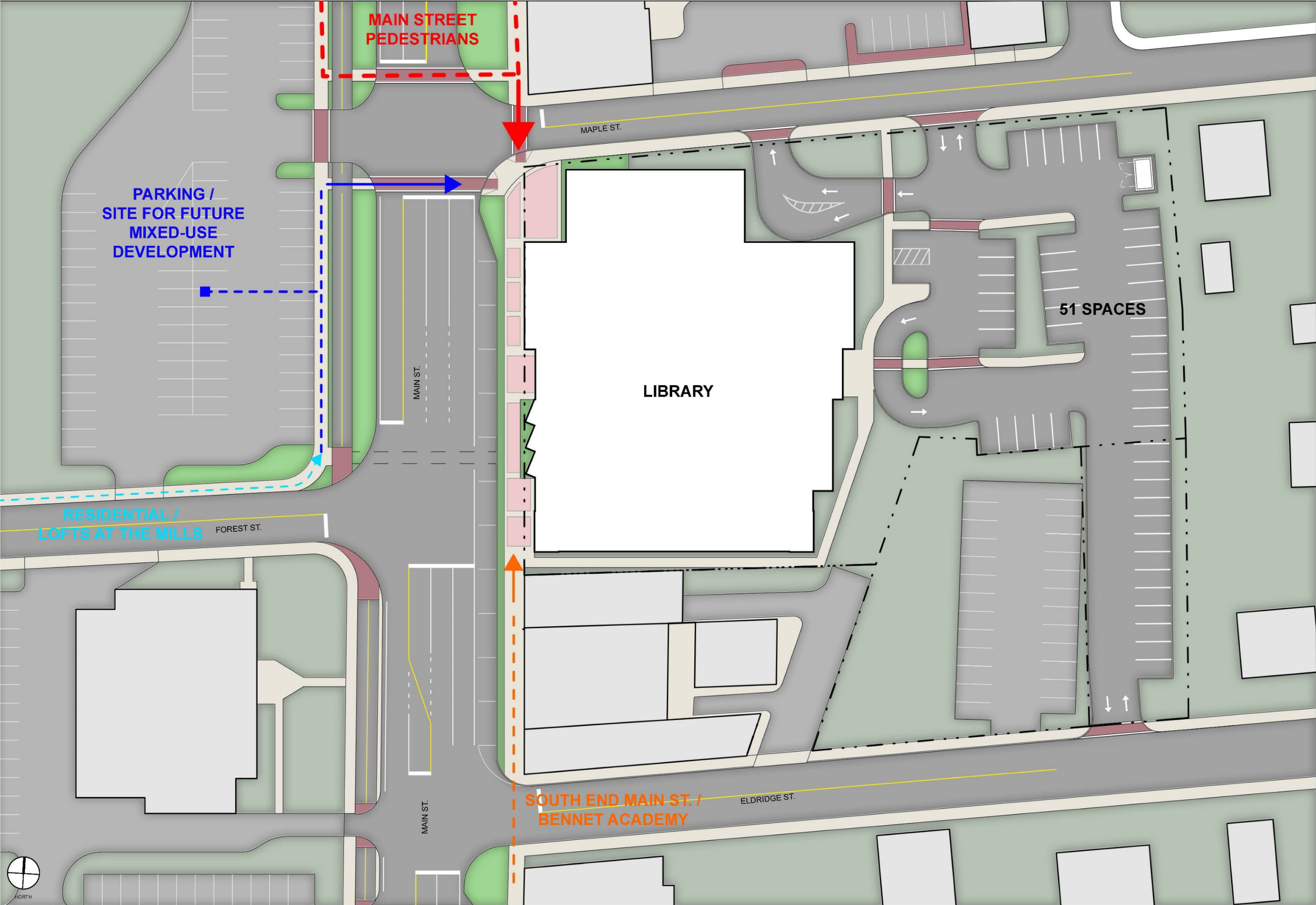
HBM uses the information collected in this book to help guide program design within the new library building.



# Community Engagement | Most Liked Images











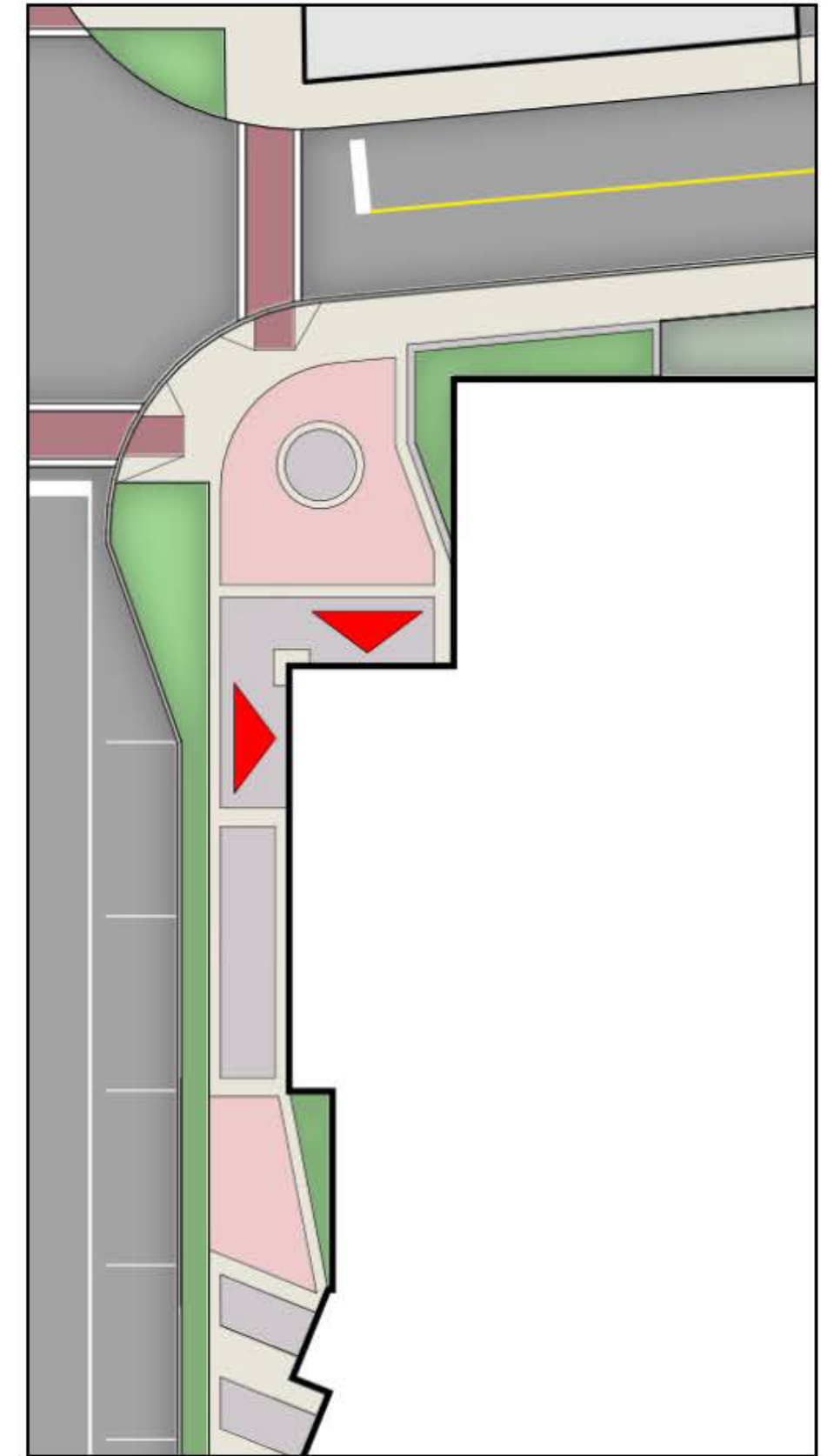












PLAN DIAGRAM









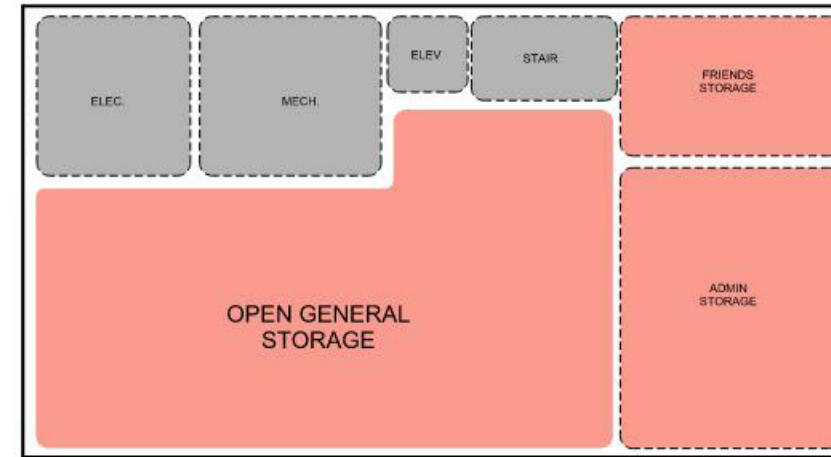






# SCHEMATIC BUBBLE DIAGRAMS

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BASEMENT FLOOR PLAN





# SCHEMATIC BUBBLE DIAGRAMS



  
NORTH


FIRST FLOOR PLAN

0 10 25 50  
1/16" = 1'-0"

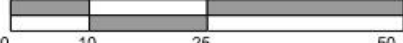


# SCHEMATIC BUBBLE DIAGRAMS



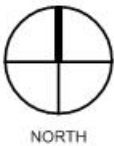
  
NORTH

SECOND FLOOR PLAN

 1/16" = 1'-0"



# SCHEMATIC BUBBLE DIAGRAMS



THIRD FLOOR PLAN





# Sustainability Goals

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## 1) **Decarbonization** - 100% Electric Building Infrastructure for Heating, Cooling & Hot Water

## 2) **“Zero Net Energy Ready”** - Executed Energize CT Net Zero Path 1 Memorandum of Understanding

- **Zero Net Energy Ready (ZNE Ready):** A building designed with the intent to become fully ZNE, but does not yet have renewable energy equipment installed. Commitment to Energy Use Intensity (EUI) < 30 to meet Path 1 requirements.
- Site EUI is a measure of a building’s gross annual site energy consumption relative to its gross square footage. The units are kBtu/sf/year. The Program’s EUI calculation does not include onsite renewables.
- Infrastructure for battery electric storage and rooftop PV connection

## 3) **Maximize Incentives and Rebates**

- **2022 Inflation Reduction Act** – up to 36% of renewable energy systems cost
- **Zero Net Energy Path 1** - \$4.00/sq. ft. Eversource Incentive (~\$300k)
- **Ground-source geothermal heat pump system** - \$4,000/ton (~\$440k)
- **Battery Electric Storage/Grid Interactive Building Design**
  - Up to 100% of design/feasibility analysis costs
  - 50% of Initial Capital Cost from Connecticut Green Bank
  - Grid Interactive Load Reduction - Reduces operational utility costs
  - 10-year revenue stream for Eversource Load Shed



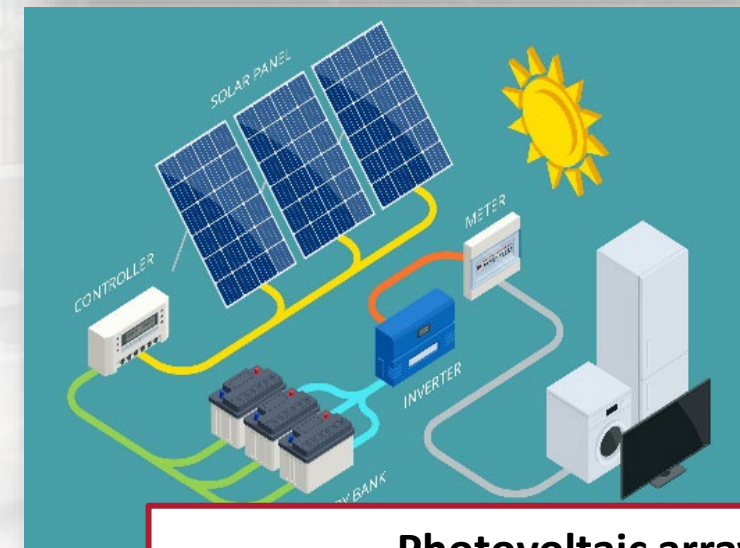
# Sustainability Strategies



**Geothermal Heat pumps**  
Test fit wellfield on project parcel and adjacent Town-owned sites



**Battery Electric Storage (BES)**  
Emergency power and demand reduction



**Photovoltaic array**  
Provides opportunities for island/micro grid mode with BES



# Sustainability Implementation Partners

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## Eversource

- Commercial & Industrial New Construction & Major Renovations team
- **Grid Interactive Building Group** – Lead for operational load reduction
- **Key Personnel:** Ellen Richer New Construction & Major Renovations; William O'Connor Grid-Interactive Efficient Building Incentives

## Connecticut Greenbank

- **Energy Storage Solutions** – Lead for capital investment of battery array  
*Energy Storage Solutions is an incentive program overseen by the Public Utilities Regulatory Authority (PURA), is paid for by electric ratepayers, and is administered by the Connecticut Green Bank, Eversource, and UI. This program will help lower the cost of buying a battery by providing upfront and performance incentives. Incentives are available for batteries paired with solar PV systems, as well as standalone batteries.*
- **Key Personnel:** Edward Kranich
  - **Thornton Tomasetti** - Eversource's technical experts
    - International engineering firm with Decarbonization 100% Electric Building expertise
    - Provide modeling verification of EUI target and compliance with Path

**Independent Commissioning Agent** - TBD, proposals under evaluation



# Budget

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## Current Budget

**\$39,000,000 = Referendum Budget**

**\$ 500,000 = Funding from State of Connecticut Legislature**

**\$ 5,000,000 = Federal Grant**

**\$ 1,500,000 = American Rescue Plan Act (ARPA)**

**\$ 5,500,000 = Community Investment Fund (\$5M to \$7M available)\***

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**\$50,500,000 = Budget**

## Current Budget vs. Schematic Estimate

**\$53,561,979 = Schematic Estimate**

**- \$50,500,000 = Current Budget**

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**\$ 3,061,979 = Current Amount to Value Manage**

\* These grants have yet to be awarded.