



**RISE**  
modular



**DJR**

# MPHA Family Housing Expansion

Confluence of Innovation



# PRESENTERS

## MPHA Family Housing Expansion



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Presenter

DJR Architecture



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Presenter

RISE Modular

# AGENDA

## MPHA Family Housing Expansion

- Why MPHA pursued scattered site development
- The winning RFP team and design approach
- The modular process
- Community review approach
- Financing for a one-of-a-kind project
- Key takeaways
- Q&A



# MPHA (MINNEAPOLIS PUBLIC HOUSING AUTHORITY)

## At a glance

- MPHA operates approximately 700 scattered-site units across Minneapolis
- Units are in single-family homes, duplexes, fourplexes and townhomes
- These units represent more than 80% of MPHA housing for families with children and are the critical deeply affordable housing infrastructure for the City of Minneapolis
- We are a separate entity from the City of Minneapolis

*The mission of the Minneapolis Public Housing Authority (MPHA) is to promote and deliver quality, well-managed homes to a diverse low-income population and, with partners, contribute to the well-being of the individuals, families and community we serve.*

**6,259**

public housing  
units

**10,500**

public housing  
residents

**26,000**

people in Minneapolis  
served by MPHA

**5,304**

housing choice  
vouchers

**15,500**

people with housing  
choice vouchers

# WHAT BROUGHT US HERE?

## Need for Affordable Housing

- Existing MPHA Family Housing waitlist consists of over 8,000 families
- Highest demand is for two- and three-bedroom units

## MPHA Strategic Vision

- Called for the construction of approximately 100+ units in fourplexes
- **Focusing new construction on sites that could use improvement**

## Site Opportunities

- Set the goal of building affordable housing in all areas of Minneapolis
- **Identified sites with suitable characteristics and dimensions**

Housing  
Need



Strategic  
Vision



Sites

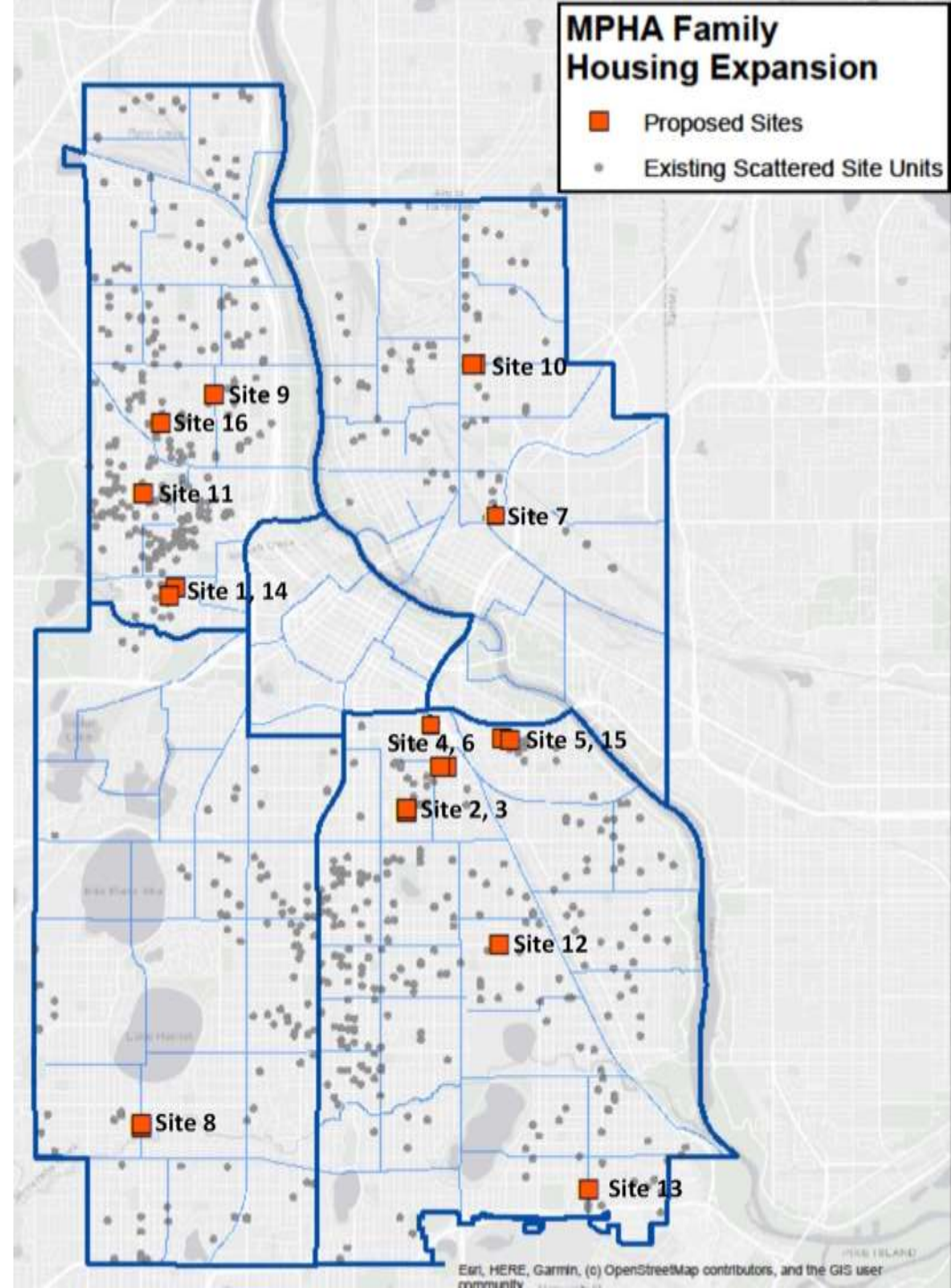
# WHY SCATTERED SITES?

- MPHA manages approximately 540 single-family homes throughout Minneapolis
- Minneapolis 2040 provided an opportunity to densify sites that did not exist previously. This project pioneers the intentions of the plan.
- Successes of scattered sites:
  - Increased employment rate compared to when residents entered their new homes
  - Residents saw increases in income while in scattered sites
  - 17% of all families leaving scattered sites went on to homeownership

# PROJECT OVERVIEW

## MPHA Family Housing Expansion

- 84 New Units in 16 Small Apartment Buildings
  - 16 accessible units
  - 17 high-priority homelessness units with services funded by Hennepin County
  - Mix of two- and three-bedroom units
- All units will have project-based vouchers, meaning all units will be available to households at or below 30% AMI
  - Residents will pay 30% of their income
  - Units will have long-term affordability
- Long-term owner and operator of the property
- All existing tenants will receive relocation benefits and have the right to return to a new unit after construction completion
- Future tenants will come from MPHA's Family Housing waitlist



# A UNIQUE APPROACH TO RFP

## MPHA process

- Goals of the Agency
  - Economies of scale on costs
  - Speed
  - Quality
  - Fulfill strict procurement guidelines
- Worked closely with our procurement department to create a *never-before-used* structure
- Issued two-part RFP for Integrated Design Process
  - Wanted design and construction teams to start collaborating from the beginning





# A UNIQUE APPROACH TO RFP

## MPHA process

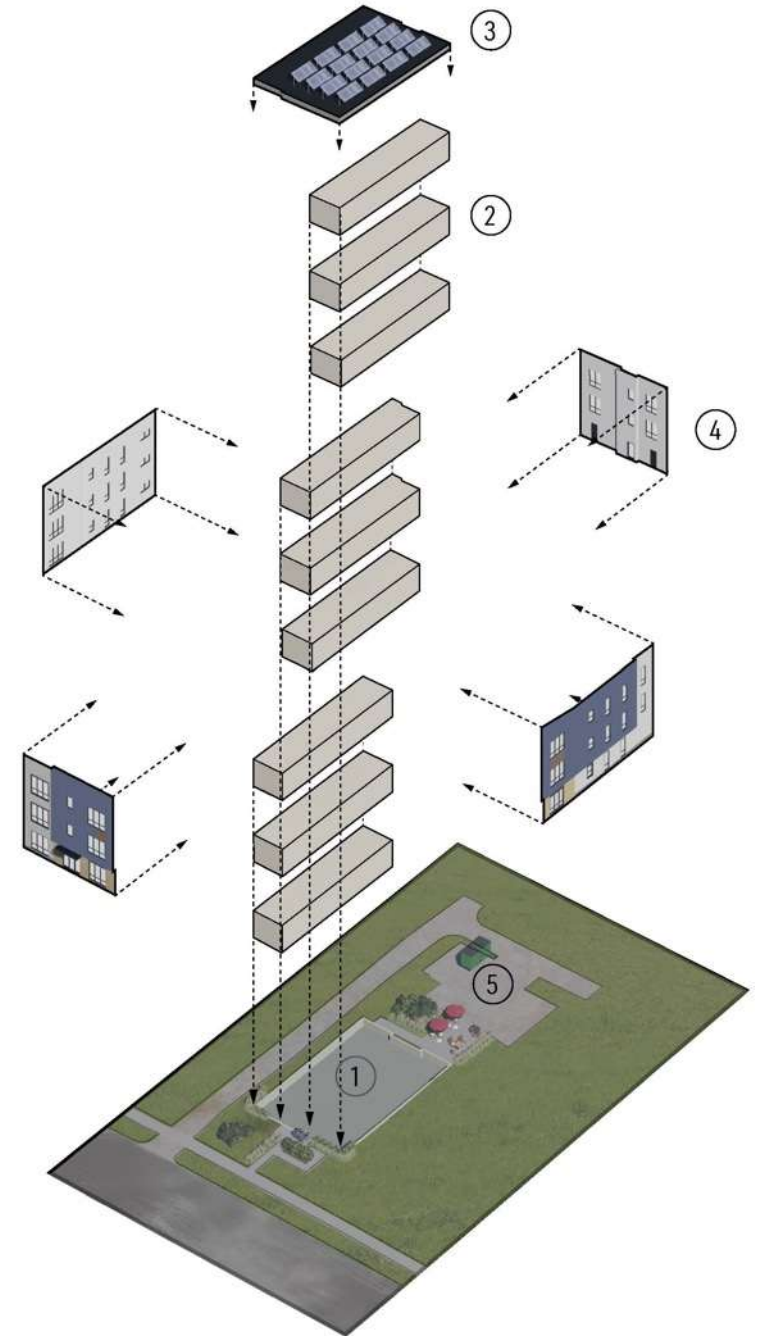
- Part 1 – Qualifications
  - Goal was a low bar of entry
- Part 2 – Selected 3 most qualified teams
  - Included both traditional and modular construction methods
  - Compensated all 3 teams to create a schematic design based on our provided scope of services
  - Asked for initial construction pricing based on schematic design
  - Evaluated teams on cost, design and construction process



# TEAM SELECTED

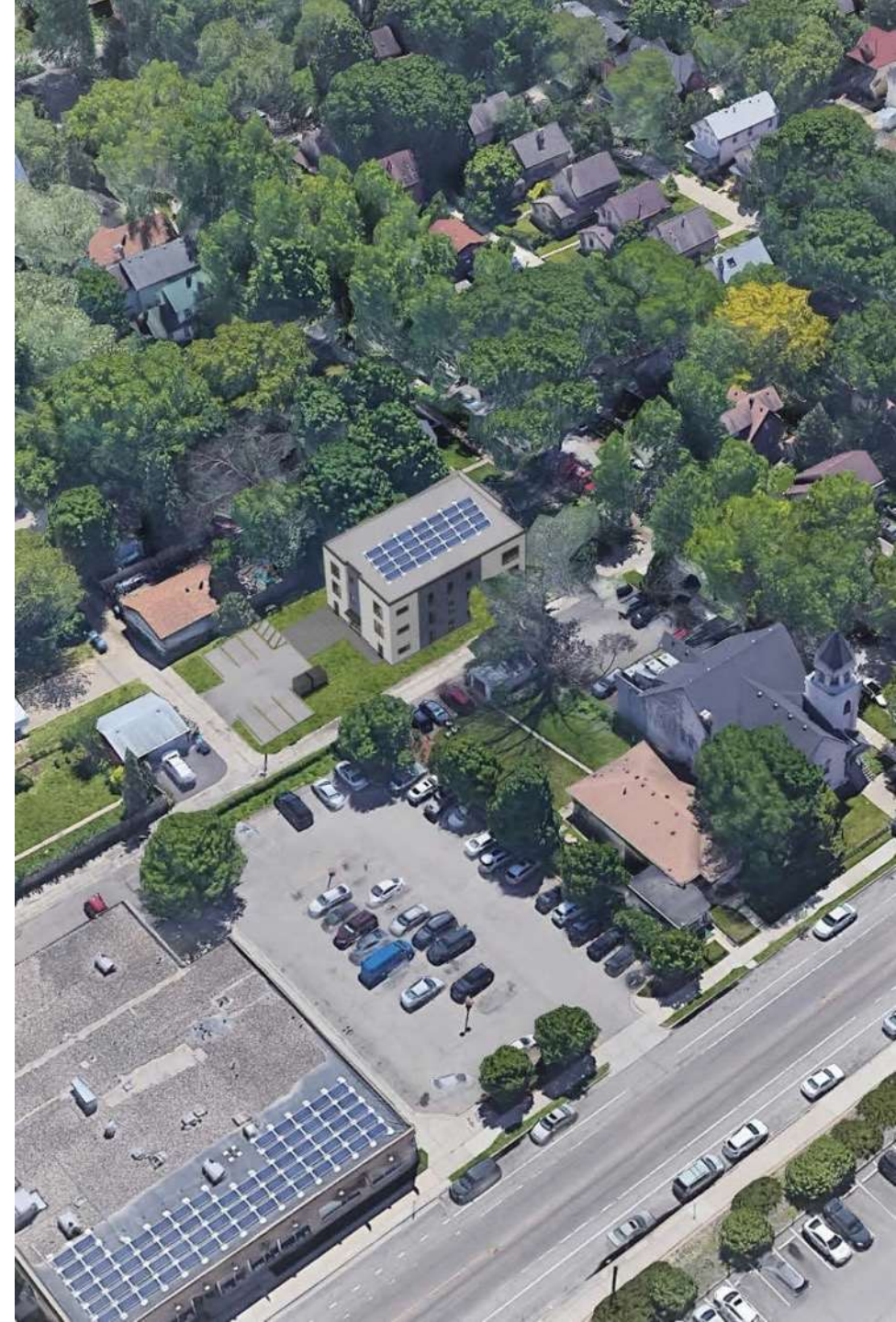
## DJR, RISE, & Frerichs

- RFP provided the opportunity to compare traditional and modular construction
- Modular significantly aligned with the scattered-site nature of the project
- Construction timeline was 33% faster than traditional
  - Reduces impact to existing residents and neighbors, and allows us to house new families sooner
- The modular approach provided a 13-21% cost reduction compared to traditional in a scattered site setting at the time of RFP
- As a long-term owner, the team was excited about the superior construction product modular construction provided



# SOLAR ENERGY

- Each building will have a 22.6 kW system for a total system size of 361.6 kW
- Supports about 30% of electrical usage across the project and increases debt capacity
- Funded in part by:
  - Federal Solar Tax Credit
  - Minneapolis Green Cost Share
  - Xcel Solar rewards
- System equates to removing 65.2 gas-powered cars per year or avoiding the burning of 335,000 pounds of coal



# PROJECT APPROACH

## The team

Frerichs Construction — General Contractor

DJR — Architecture & Interior Design

RISE Modular — Module Manufacturer

- Team experience
  - Project Delivery in the City of Minneapolis
  - Affordable Housing
  - Urban Infill sites
  - Sustainable construction
  - Modular Construction of Multifamily Housing
  - Public Housing



# PROJECT APPROACH

## Overall RFP goals

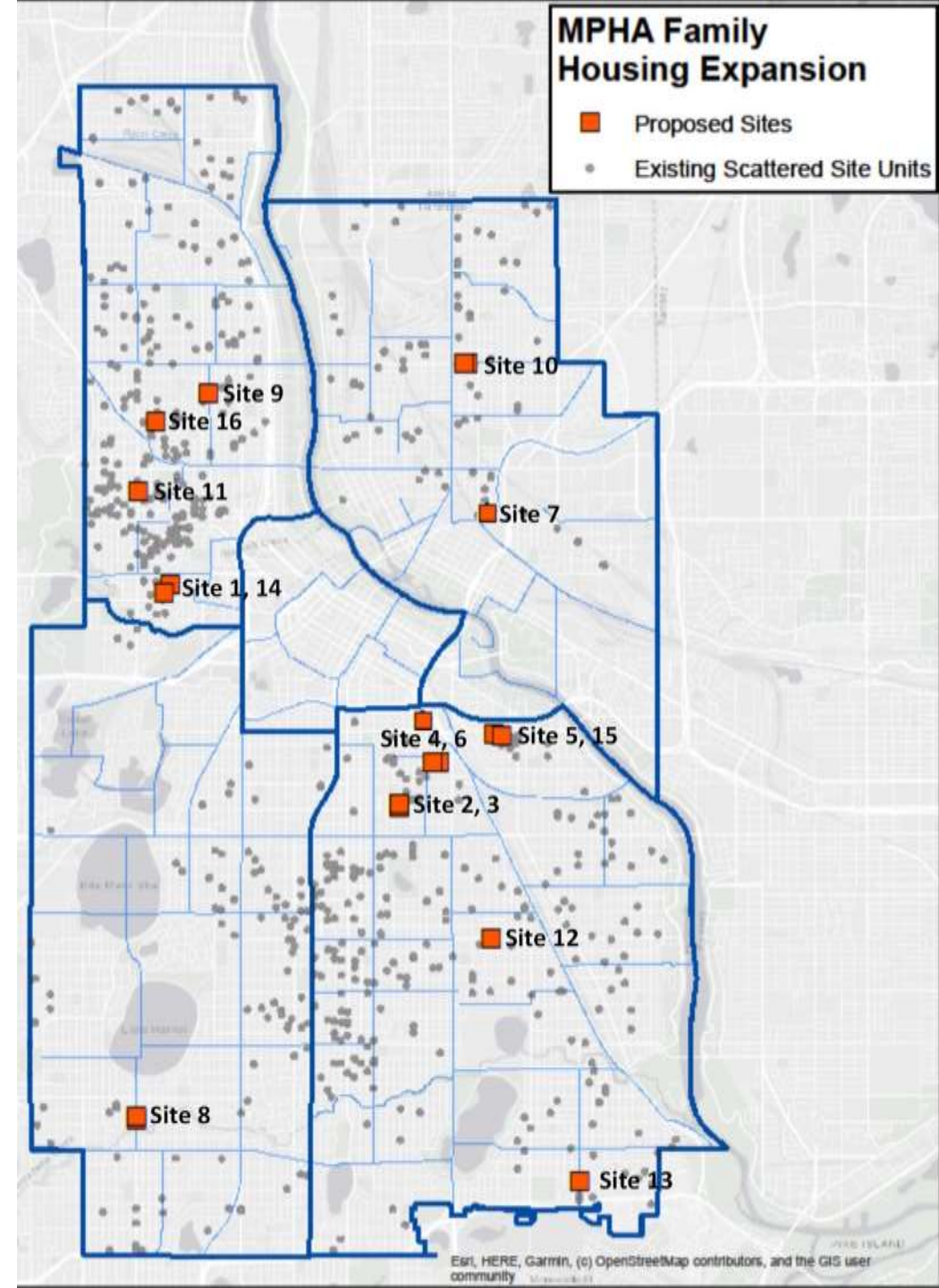
- Long-term ownership
- Housing for families
- Energy efficiency and healthy buildings
- Solar energy
- Innovative building methodology
- MN Green Communities certification
- MHFA Multifamily Rental Housing Design/Construction Standards



# PROJECT APPROACH

## Site goals

- Analyze 22 sites for compatibility with prototype
- Zoning constraints
- Setbacks
- Onsite parking, 1 per unit if possible
- Trash enclosure on site
- Singular prototype for each 2- and 3-story building that would fit on the smallest, most constrained site



# PROJECT APPROACH

## Building goals

- 2- and 3-bedroom units – weighted to providing more 3-bedroom units if possible (50% min)
- 2-bedroom, 1250 SF, 1-bath | 3-bedroom, 1450 SF, 1- and ½-bath
- Standard design and unit configuration
- In-unit laundry
- 1 type-A unit per building
- MHFA Multifamily Rental Housing Design/ Construction Standards
- Onsite exterior storage ~32 SF per unit
- Bike storage per City standards



# PROJECT APPROACH

## Modular impact on design

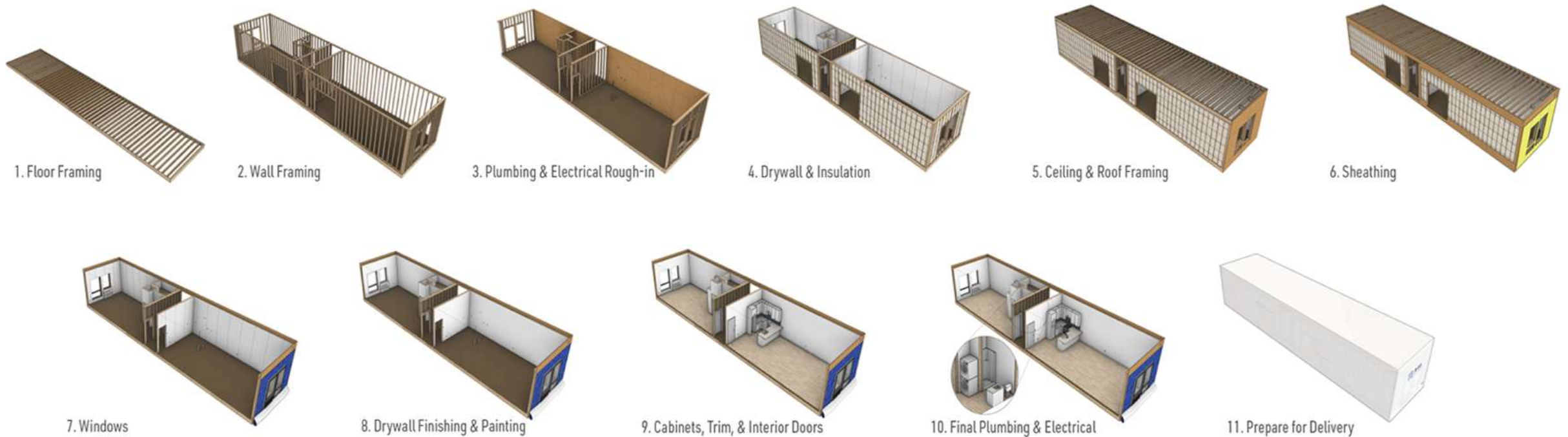
- Replicability
- 150,000-SF manufacturing Facility in Owatonna
- Experienced in Multifamily Housing
- Climate-controlled construction of up to 75% of the construction work
- Reduction of waste
- Able to work onsite while mods are being constructed in the factory to reduce overall construction time





# MODULAR PROCESS

How full volumetric modular comes together



# MODULAR IMPACT ON DESIGN



# MODULAR IMPACT ON DESIGN

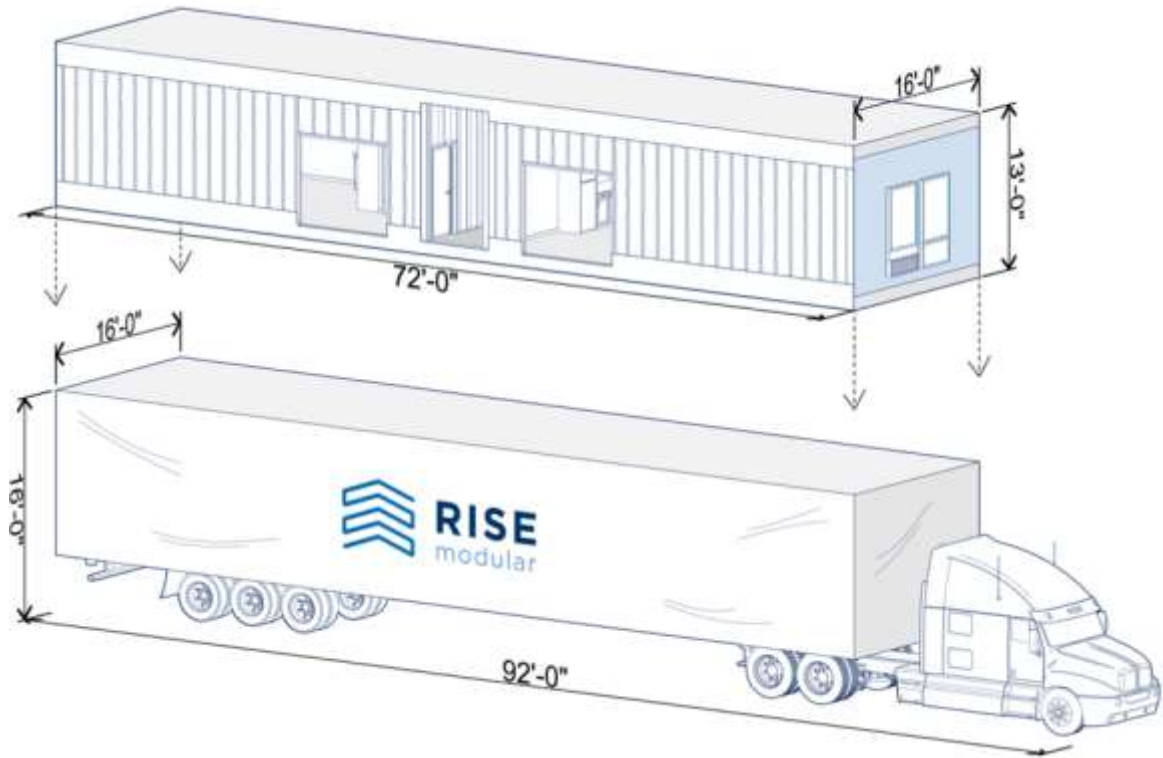


# MODULAR IMPACT ON DESIGN

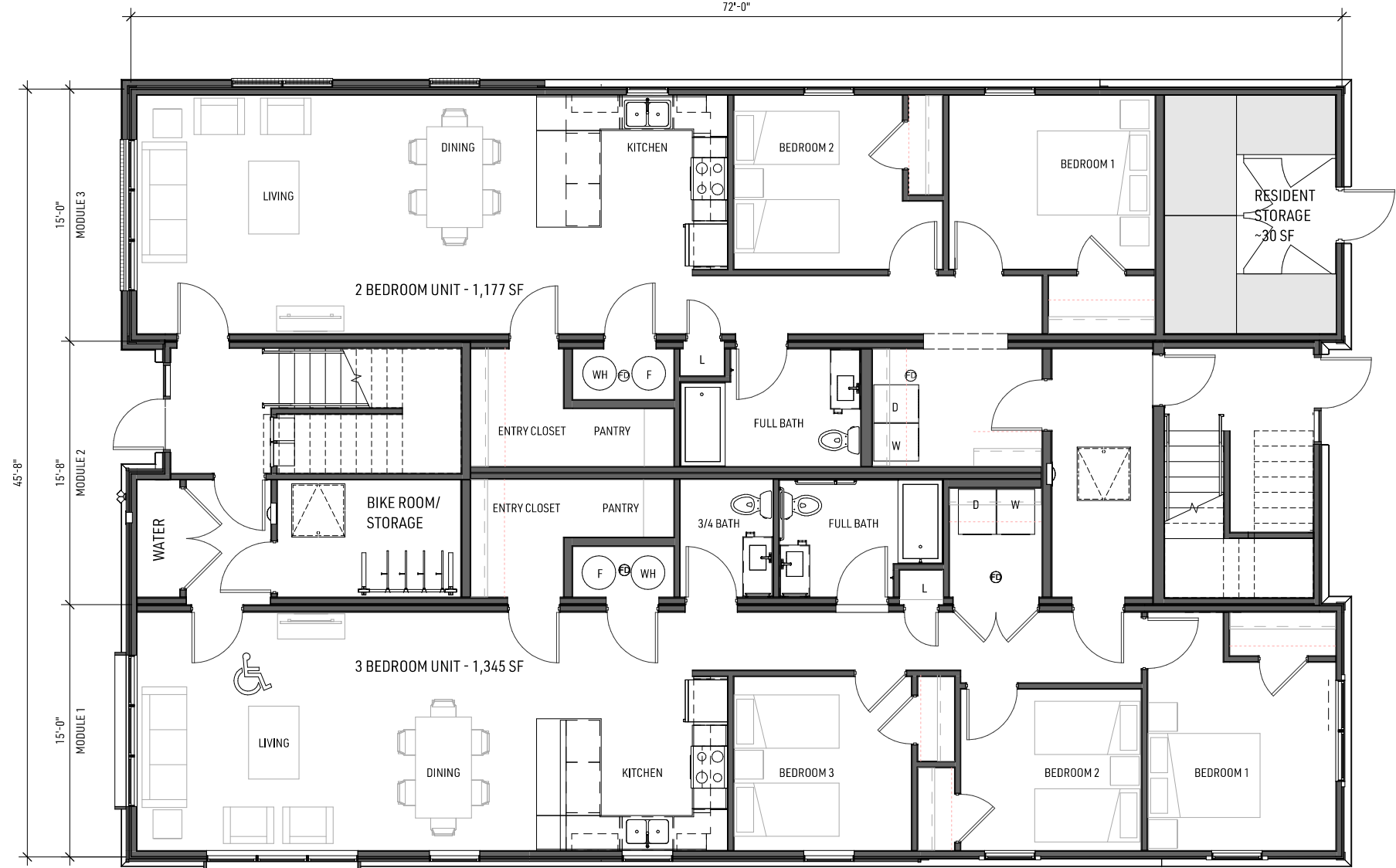


# MODULE TRANSPORT

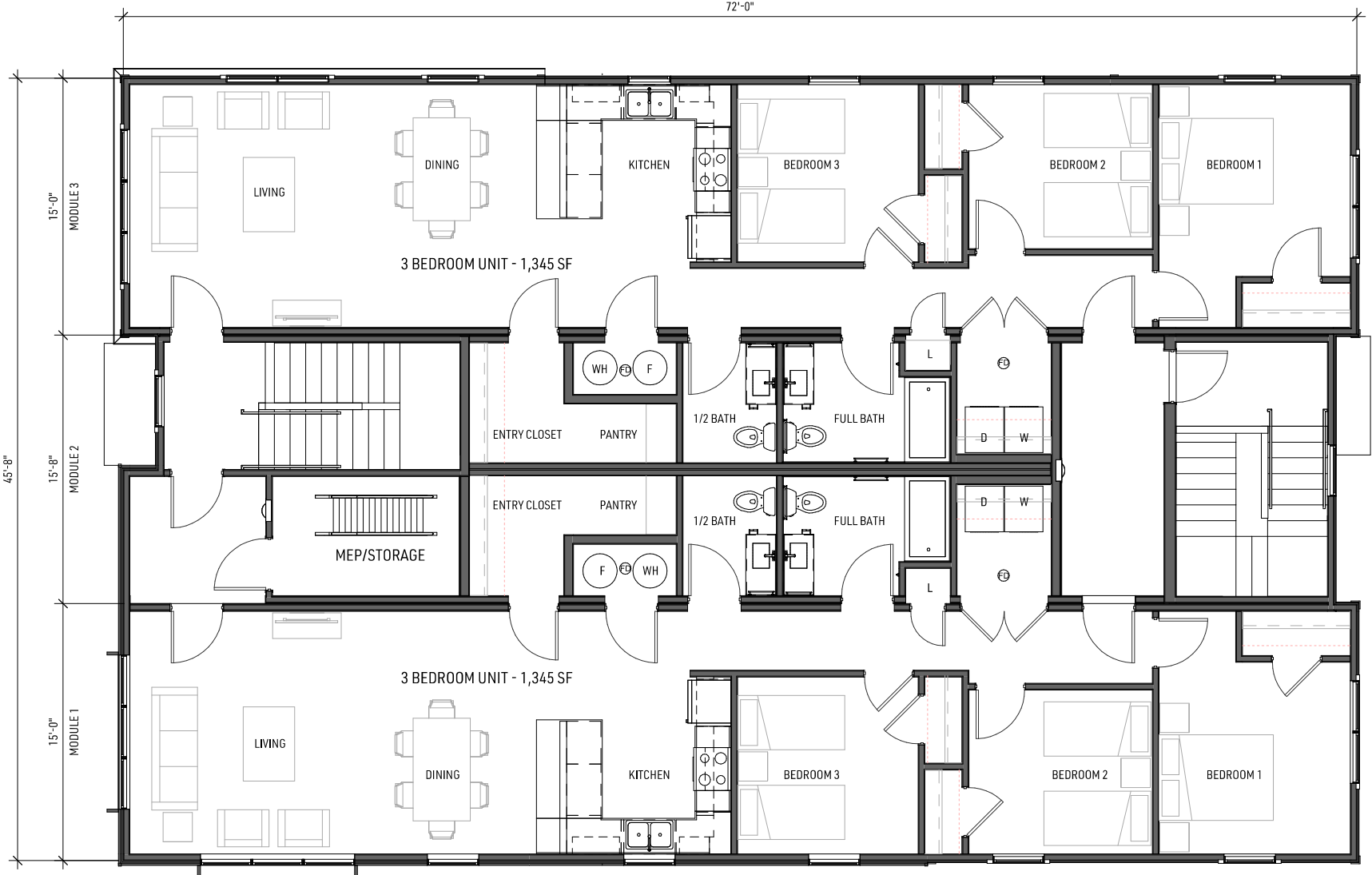
Dimensional considerations



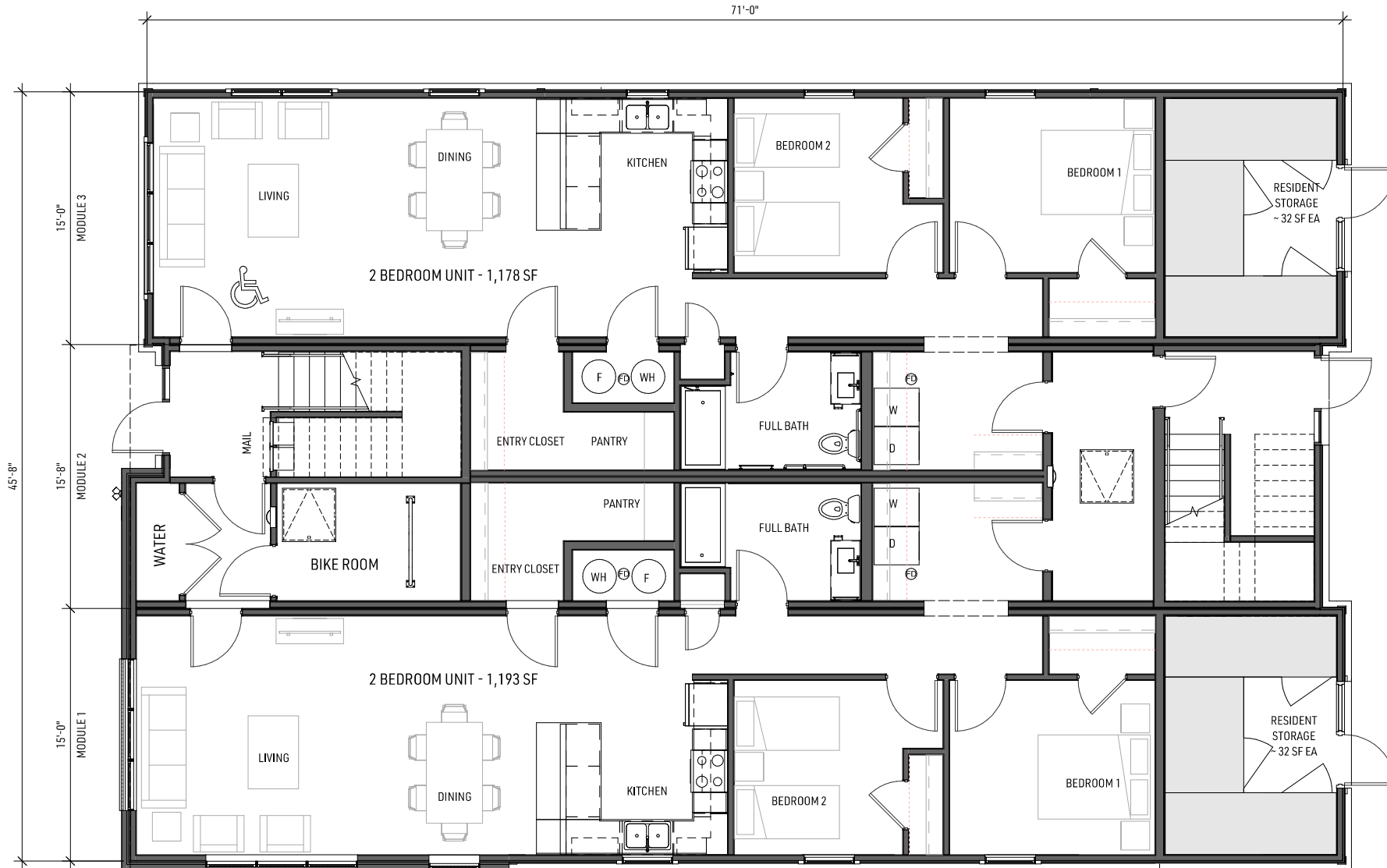
# 4-UNIT BUILDING DESIGN — FLOOR 1



# 4-UNIT BUILDING DESIGN — FLOOR 2

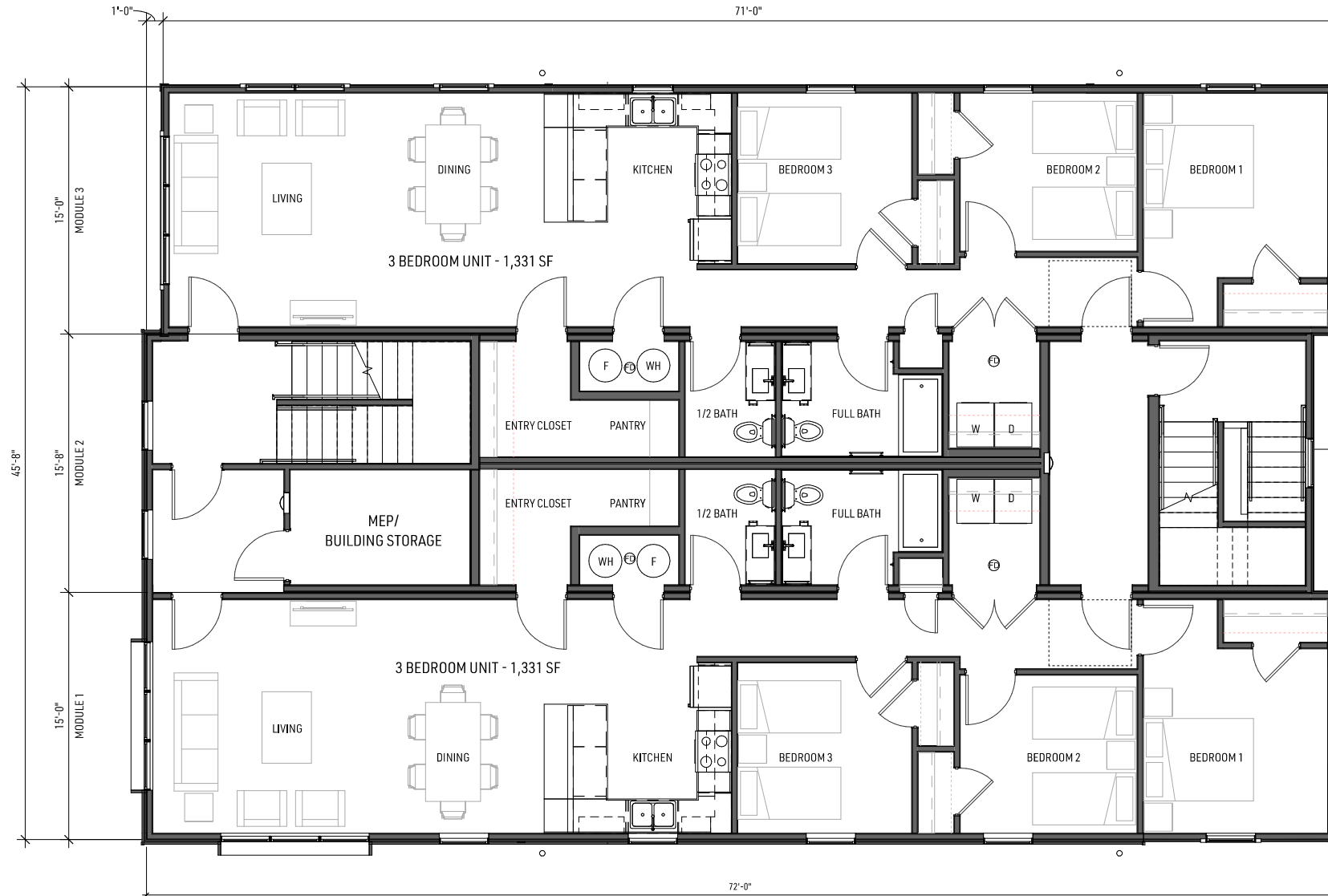


# 6-UNIT BUILDING DESIGN — FLOOR 1





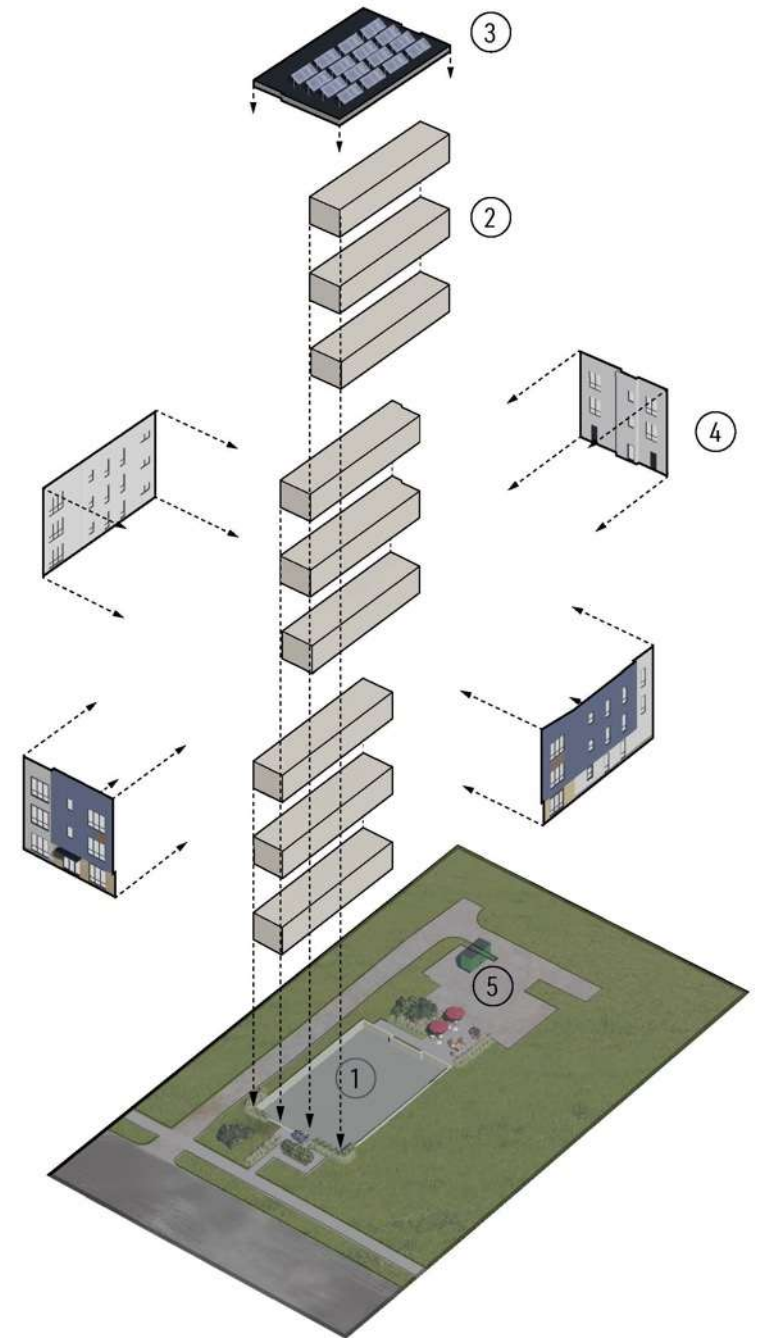
# 6-UNIT BUILDING DESIGN — FLOORS 2 & 3



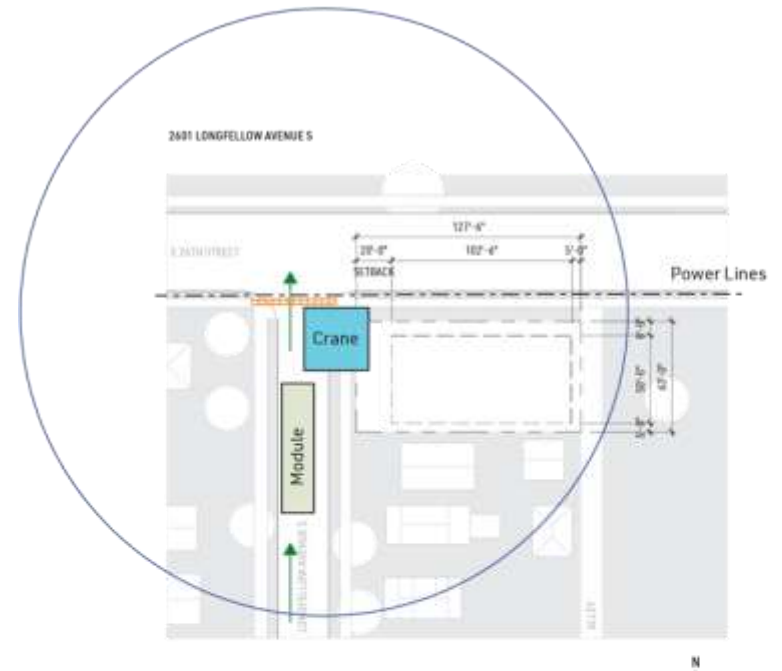
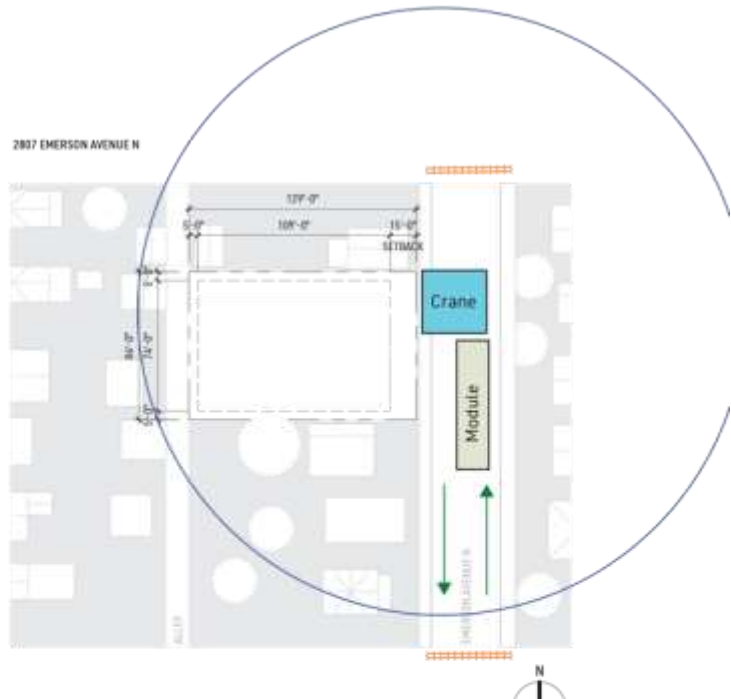
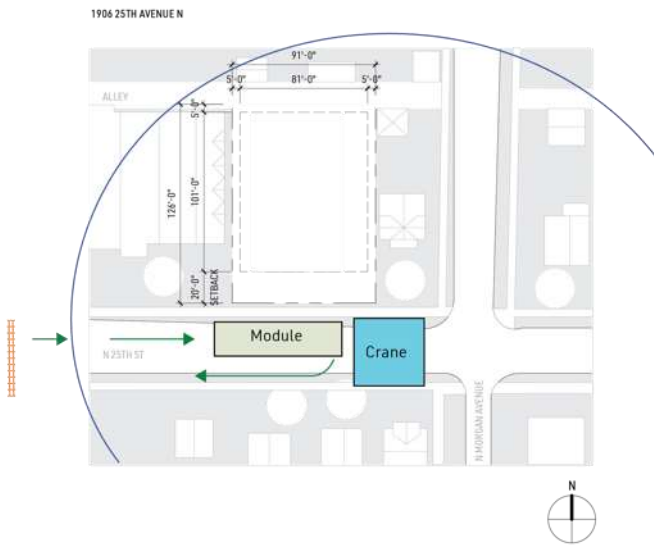
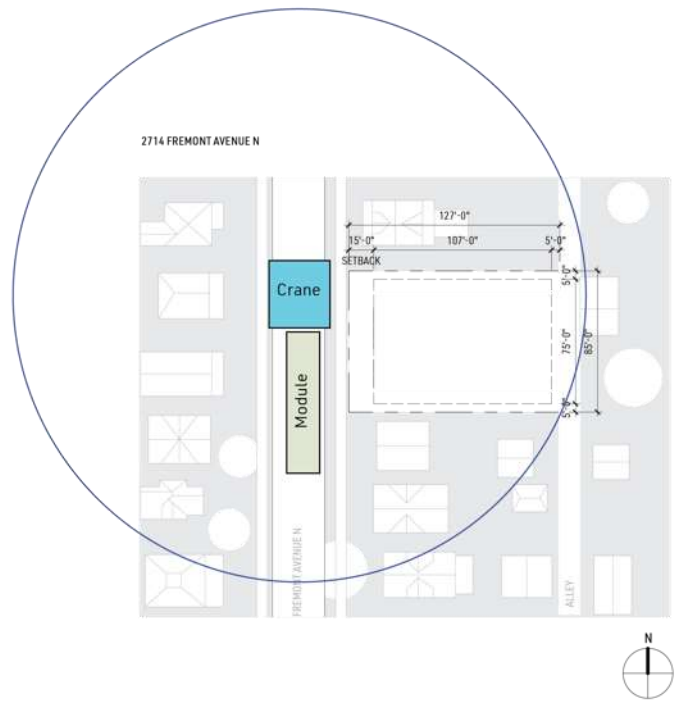
# BUILDING DESIGN

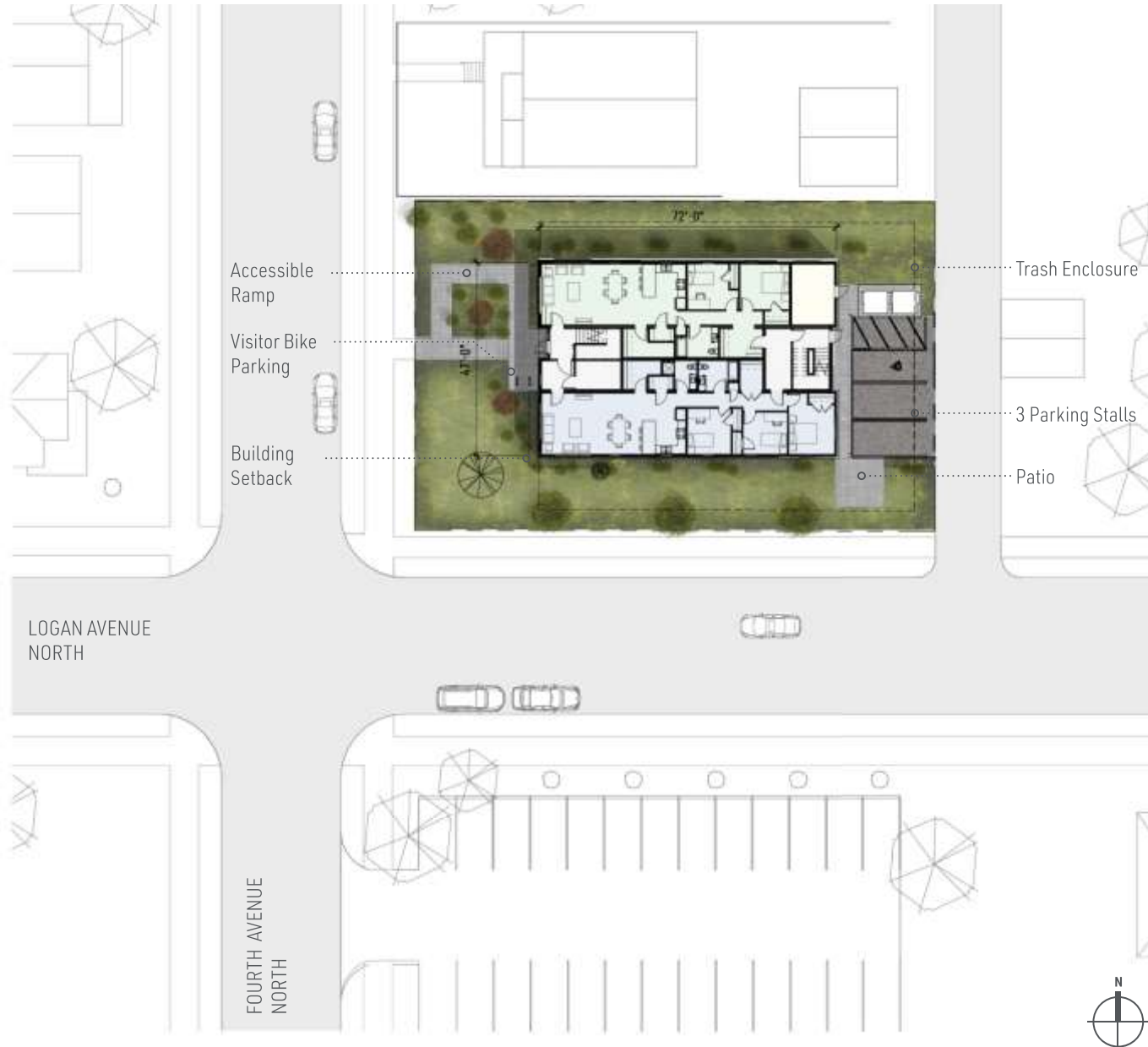
## Building overview

- 16 Sites
- Six — 4-unit buildings (6,576 SF)
  - (3) 3-bedroom units
  - (1) 2-bedroom unit
  - 6 modules per building
- Ten — 6 Unit Buildings (9,864 SF)
  - (4) 3-bedroom units
  - (2) 2-bedroom units
  - 9 modules per building
- 30% 2-bedroom – 70% 3-bedroom

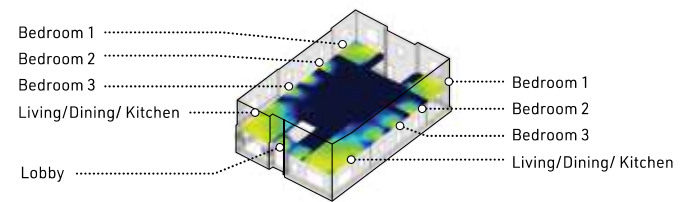




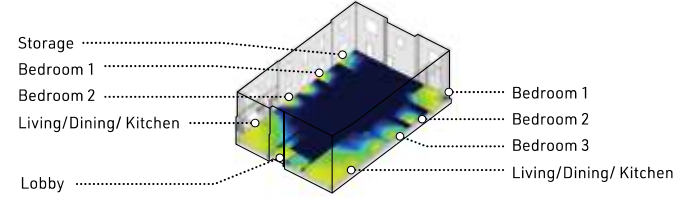




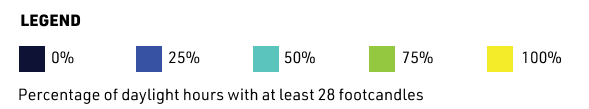
SITE PLAN- 1" = 30'-0"



LEVEL 2



LEVEL 1



DAYLIGHT ANALYSIS

# ELEVATIONS

Basis of design – 4-unit Building



FRONT ELEVATION - 1/16" = 1'-0"



RIGHT ELEVATION - 1/16" = 1'-0"



REAR ELEVATION - 1/16" = 1'-0"



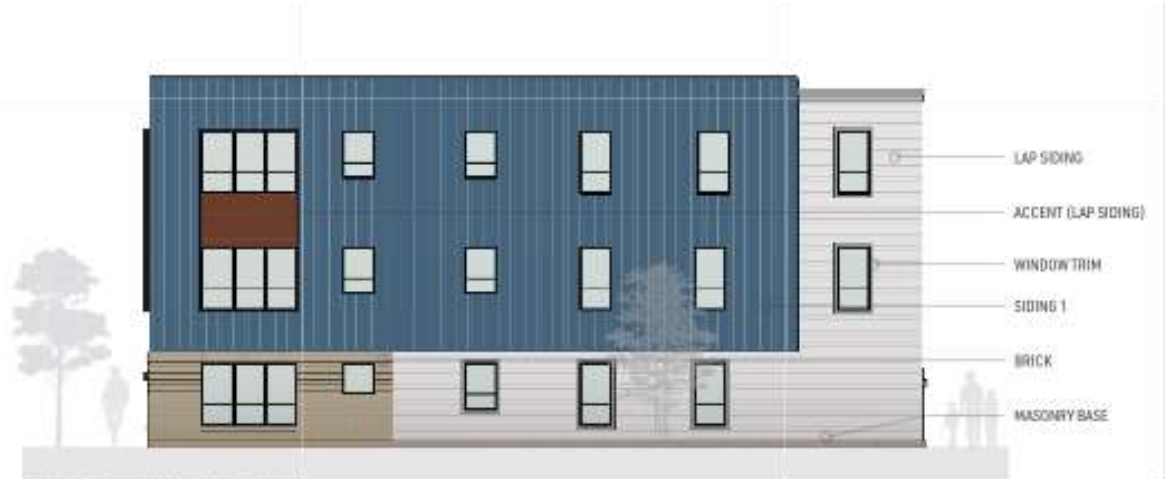
LEFT ELEVATION - 1/16" = 1'-0"

# ELEVATIONS

## Basis of design – 6-unit Building



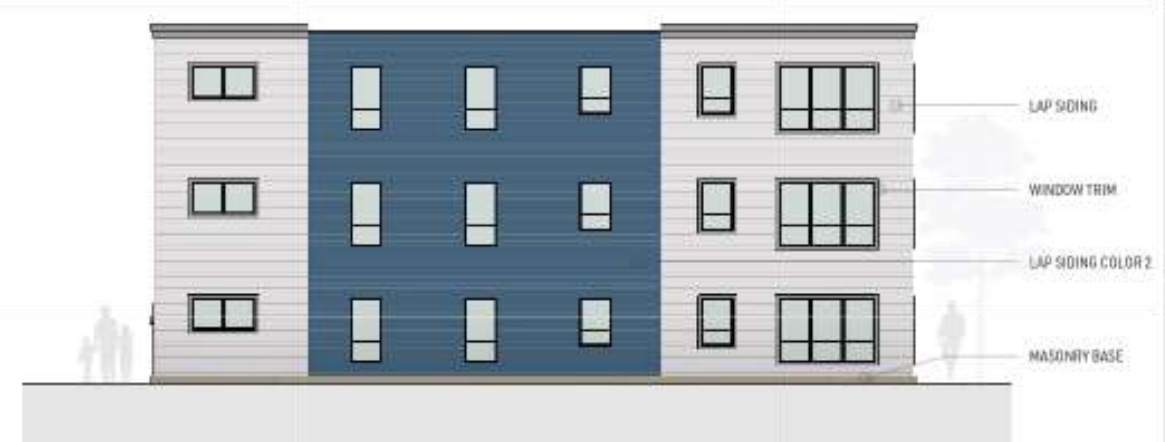
FRONT ELEVATION - 1/16" = 1'-0"



RIGHT ELEVATION - 1/16" = 1'-0"



REAR ELEVATION - 1/16" = 1'-0"



LEFT ELEVATION - 1/16" = 1'-0"

# COLOR VARIATIONS

Site variations based on neighborhood context























# BID PROCESS

## Modular considerations

- RISE sent people to walk all the sites to investigate them for barriers to modular
  - 22 sites were possible
  - Trees
  - Powerlines
  - Alleys or street access
  - 2 sites were crossed off because of the barriers
- It is important to think modular from the very beginning
- Collaborated with Frerichs to estimate and schedule on-site/off-site activities



# FEATURES OF MODULAR

## Urban infill benefits

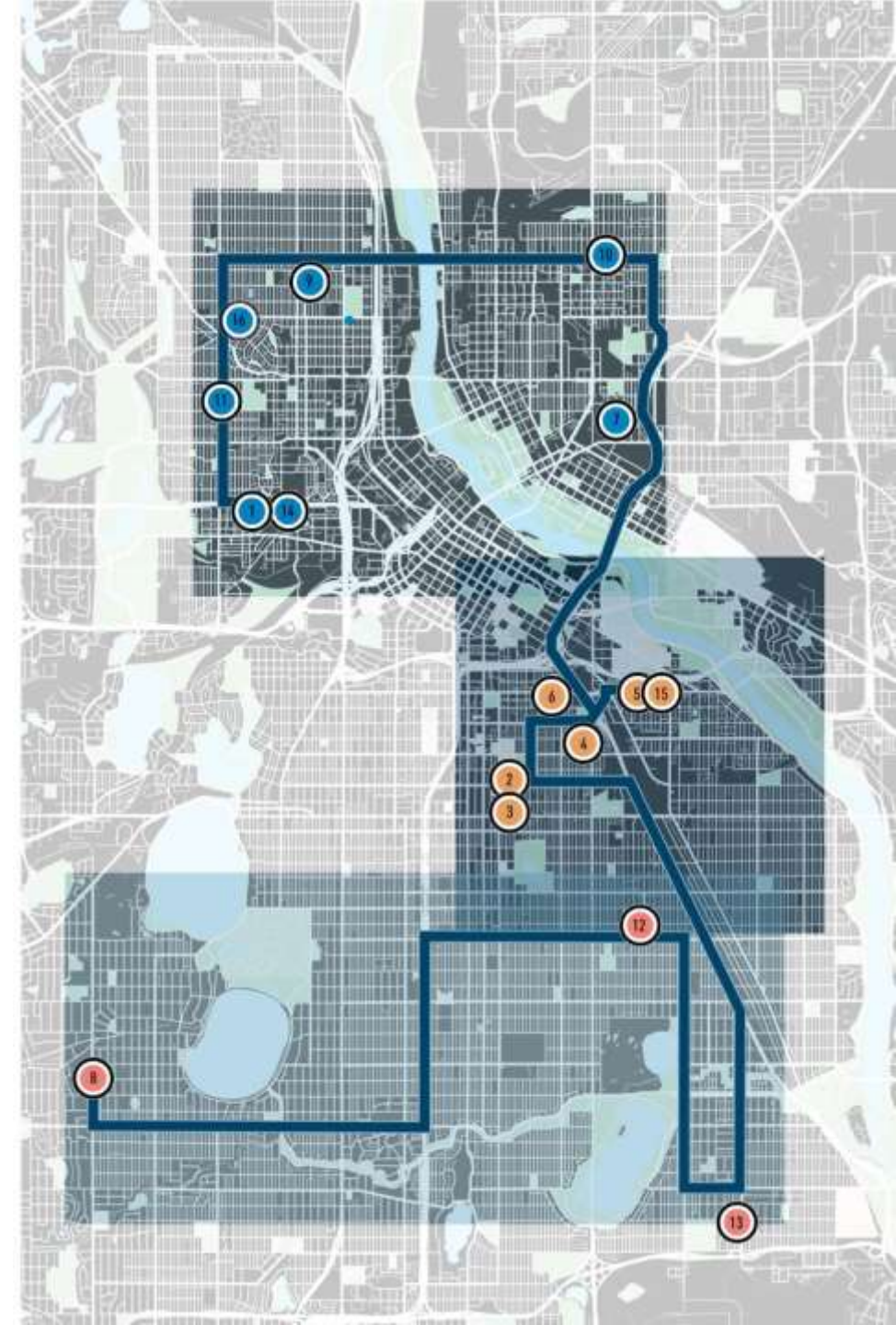
- Concurrent activities of Frerichs onsite and RISE offsite means a reduced construction timeline of 33%
- Modules for one site will be set in 1-2 days
- Dramatically reduces impact to the neighborhood
  - Less truck traffic for material delivery
  - Fewer workers onsite means less construction worker traffic/parking
  - Construction activities move inside much faster
- Volumetric modular nature of the project means superior quality and less waste



# MODULAR FOR SCATTERED SITES

## Logistics are key

- Each module is numbered, manufactured, delivered and set in a specific order
- There will be daily continuous transport of modules from the manufacturing facility directly to each site
- Morning of a set, the crane will be mobilized and the first module placed
- The goal will be to set each building (6 (4-unit) or 9 modules (6-unit)) in 1-2 days
- Goal is to set 2 buildings per week for a total of an 8-week installation of 16 buildings
- The setting crew will move from one site to the next and a smaller crew will remain behind to perform stitch-up, connect the modules and ensure the structure is secure







# ENTITLEMENTS

## 2040 Comprehensive Plan and required applications

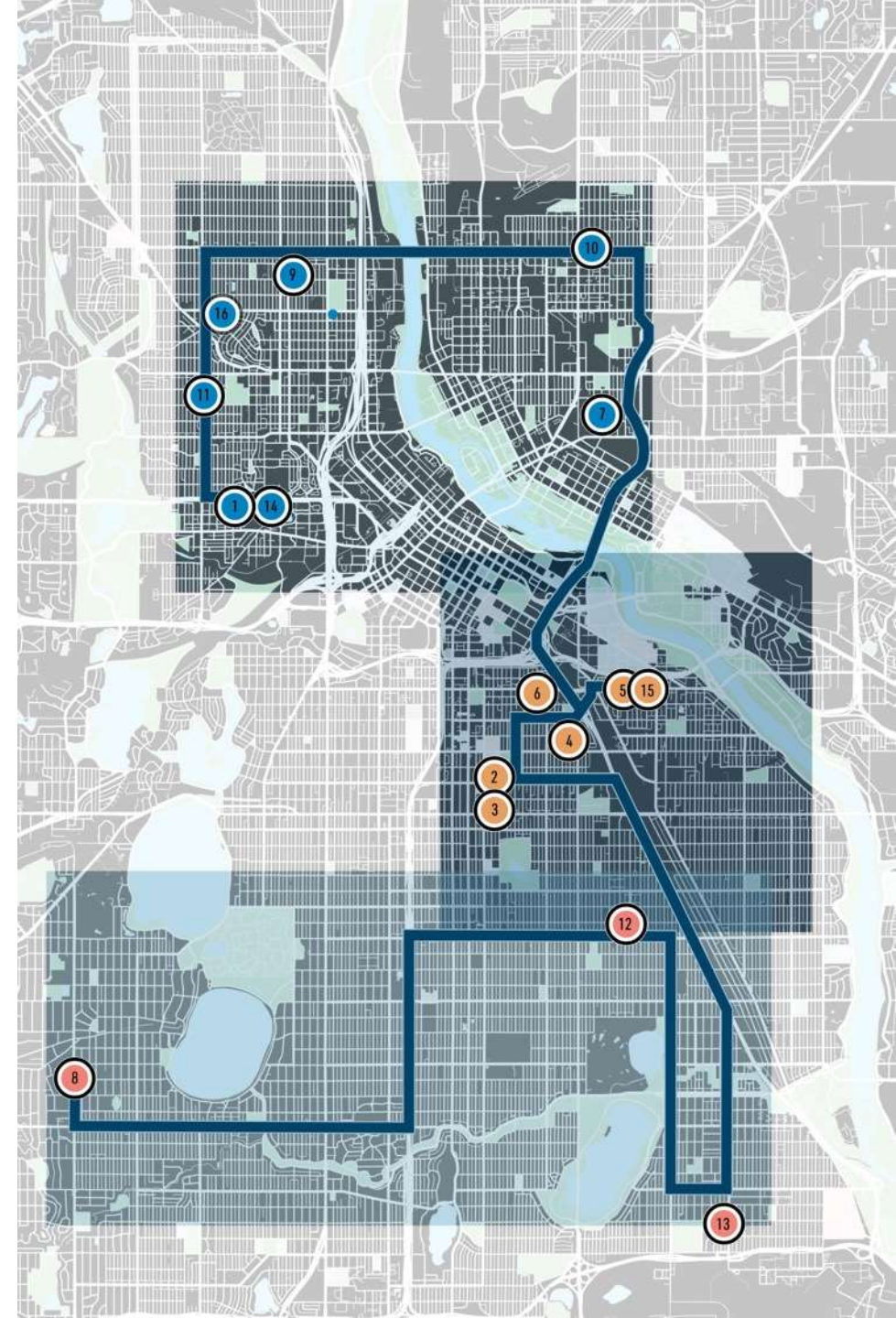
- Combination of Interior 2, Interior 3, Corridor 3 and Corridor 4 Sites zoned R1A & R2B
- Required Rezoning to R3 for all sites
  - Rezoning brought the parcels into conformity with the 2040 Comprehensive Plan — they comply with the adopted land use, built form maps and plan policies, which zoning did not permit
- 6 sites required Variances
  - 4 Sites — Front-yard Variances
  - 1 Site — Reverse Corner-yard Variance
  - 1 Site — Reverse Corner- and Front-yard Variance
- All Sites required Site Plan Review
  - Standard for all Land-use Applications in Minneapolis
- Unanimous approval of all 16 sites at Planning Commission



# NEIGHBORHOOD ENGAGEMENT

## Bringing affordable housing to all quadrants of Minneapolis

- Met with 12 neighborhood groups
- MPHA door knocked on adjacent neighbors
  - 96 immediate neighbors
- Provided open lines of communication for neighbors to express support or concerns
- MPHA working with outside management consultant to create website to provide project updates
- All sites are to have preconstruction meetings prior to construction
- Onsite meetings with adjacent property owners and residents about construction and shared property items



# NEIGHBORHOOD ENGAGEMENT

Community Feedback or Comments	MPHA Response
Need for more affordable housing	Have received a significant amount of support around the creation of much-needed affordable housing
Parking	Design team worked hard to maximize the amount of off-street parking. City only allows 3 spaces at certain properties. Off-street parking is not required at any of the 16 sites.
Number of Units - Density	Buildings comply with the development intensity, goals, and policies adopted with Minneapolis 2040
What will happen to existing residents?	Right to return to site and encouraged to be a part of the design process
Access to greenspace/play space for children	Many of our sites are located near parks and greenways. Looking to provide perimeter fencing to increase amount of usable play space
How will these buildings be maintained?	Snow removal, yard maintenance, and Property Management will be handled by MPHA
Construction impacts	Modular Construction was selected in part due to its ability to reduce construction impacts to neighbors



# RESIDENT ENGAGEMENT

- Created Resident Design Advisory Panel (RDAP) to receive feedback on design, construction and temporary relocation
  - Meetings were held monthly
  - Members included impacted residents, 4-plex residents, and other scattered-site residents
- Reached out to existing 4-plex residents to receive their feedback on the design
- All residents being relocated were offered a chance to provide feedback on the design



Major Resident Feedback Items	Design Team Response
Liked the overall unit layout, central heating and cooling, washer and dryers, unit layout, 2 bathrooms in 3-bedroom unit.	Retained these features
Lighting & Security	Providing lighting for aesthetics and security. Exploring security cameras at every property.
Kitchen Storage Needs	Exploring options to increase kitchen cabinet space.
Interior Finishes	Presenting to residents in December.
Site plan design	Received feedback on site design.

# FINANCING OVERVIEW

## FUNDING SOURCES

- MPHA contribution
- Low-Income Housing Tax Credits (4%)
- Solar tax credits
- 2022 Multifamily Housing Revenue Bonds
- Permanent mortgage
- Affordable Housing Trust Fund / American Rescue Plan Act
- Local Housing Incentives Account Fund
- Hennepin County Accelerator Fund

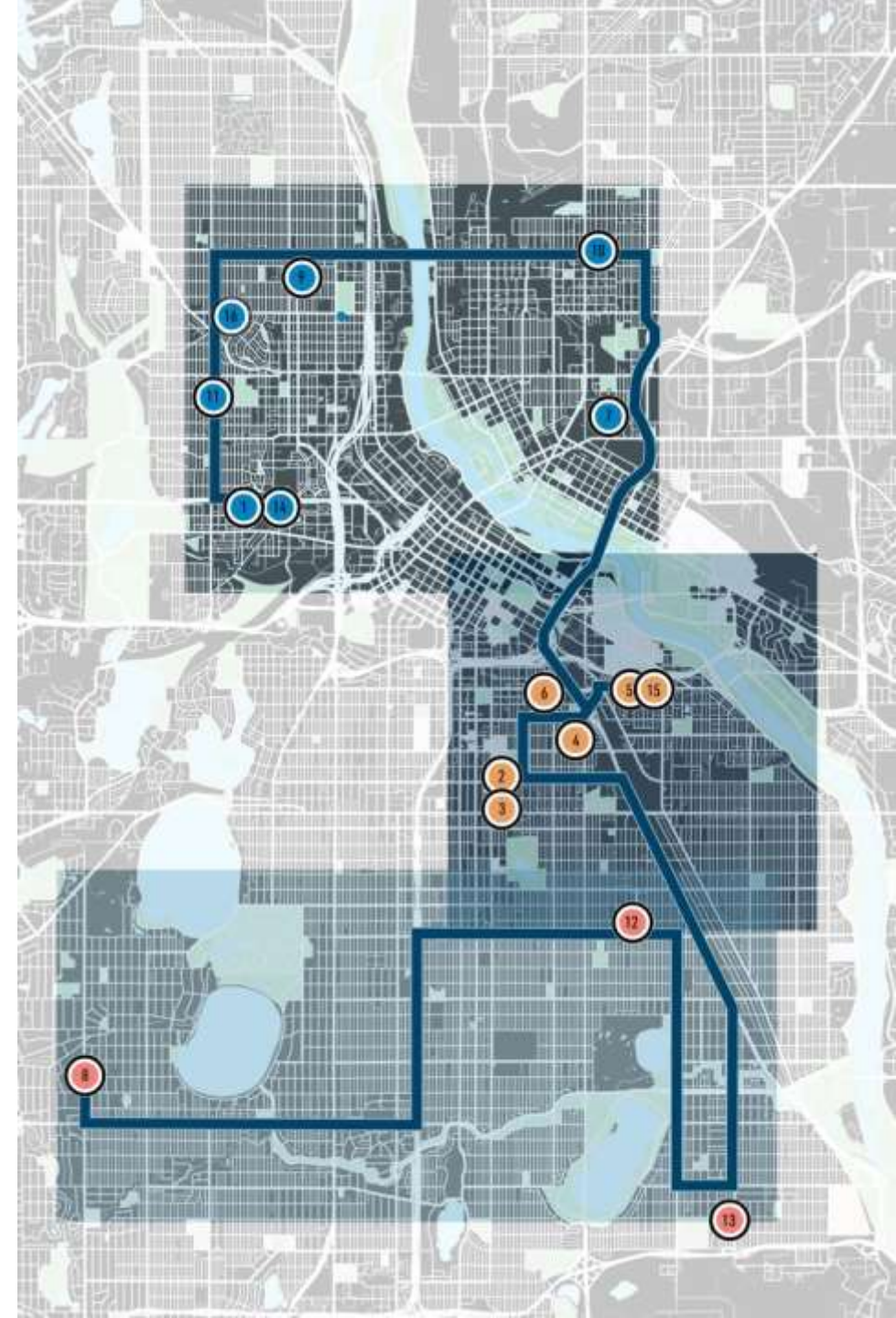
## FINANCING PARTNERS

- US Bank Community Development Corporation
- Citi Bank Community Capital
- City of Minneapolis - CPED
- Metropolitan Council
- Hennepin County

# COMPELLING ELEMENTS

## For financing partners

- Opportunity to use affordable housing financing in a unique way
- Deep affordability and partnership with Public Housing Authority
  - All units will have a Project-based Voucher issued by MPHA
  - These levels of affordability are rarely seen in new construction of this scale
- Usage of innovative construction and design
  - Modular construction
  - Solar and environmental goals
- Large-scale Scattered Site development
  - By creating opportunities to live in a variety of neighborhoods within Minneapolis, we are making our city's housing options more inclusive and equitable
  - Creation of missing middle structures furthers Minneapolis 2040 goals



# Overall timeline

Item	Timing
<b>Project concept established</b>	<b>December 2020</b>
Part 1 of RFP published	February 2021
Part 2 of RFP published	April 2021
<b>Selection of design &amp; construction team</b>	<b>May 2021</b>
Initial funding applications submitted	Summer 2021
Entitlement community process	Fall 2021
Entitlement process completed	January 2022
Construction drawing development: 100% set	January 2022
Financial partner selection process	February 2022
<b>Financing secured</b>	<b>Spring 2022</b>
Financial closing	November 2022
Construction – 14 months	November 2022 – January 2024
<b>Construction – First building ready for lease up</b>	<b>July 2023</b>



# KEY TAKEAWAYS



**RISE**  
modular



**DJR**

**Questions?**

