

# Roll-down Side Panel Feasibility Study



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market**  
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# Purpose of Today's Presentation

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- Provide an update on the roll-down side panel feasibility study concept and process.
- Solicit feedback from PMAC on the concept design to help inform whether to proceed further with this approach.
- Discuss alternatives for roll-down side panels vs. overhead heating, as well as locations of proposed side panels.





## Purpose & Goals of the Study

1. Desire to improve comfort for vendors and customers during inclement weather, especially during the winter months.
2. Desire to provide an equitable solution that benefits many, rather than a few.
3. Explore the option of roll-down side panels as a financially feasible alternative to the Market Building project.



## Why now?

- New Market building was not financially feasible.
- Initial project budget for New Building was **\$875,000**
- Project was originally bid in Fall of 2016 and the lowest bid came in at **\$1.4m**, a shortfall of over **\$500,000** from the budget.
- Project scope was reduced and value-engineered to bring costs down.
- Project was re-bid in Spring of 2017 but due to rising construction costs the lowest bid was **\$1.5m**, an increase in cost despite efforts to reduce scope and a shortfall of over **\$600,000** from the budget.
- Additional funding sources were explored but project was ultimately placed on hold indefinitely.



## Why now?

- Explored idea of roll-down side panels during design process for new market building but decided against them for the following reasons:
  1. It was thought that they would reduce current stalls sizes, which is not the case with the new proposed design.
  2. There were unknown costs regarding the ability of the existing structure to support them, which we evaluated and are now known.
  3. There was a concern that it would decrease the open air feel, which can be avoided by making them temporary and flexible so they are only used seasonally.

# Criteria & Considerations

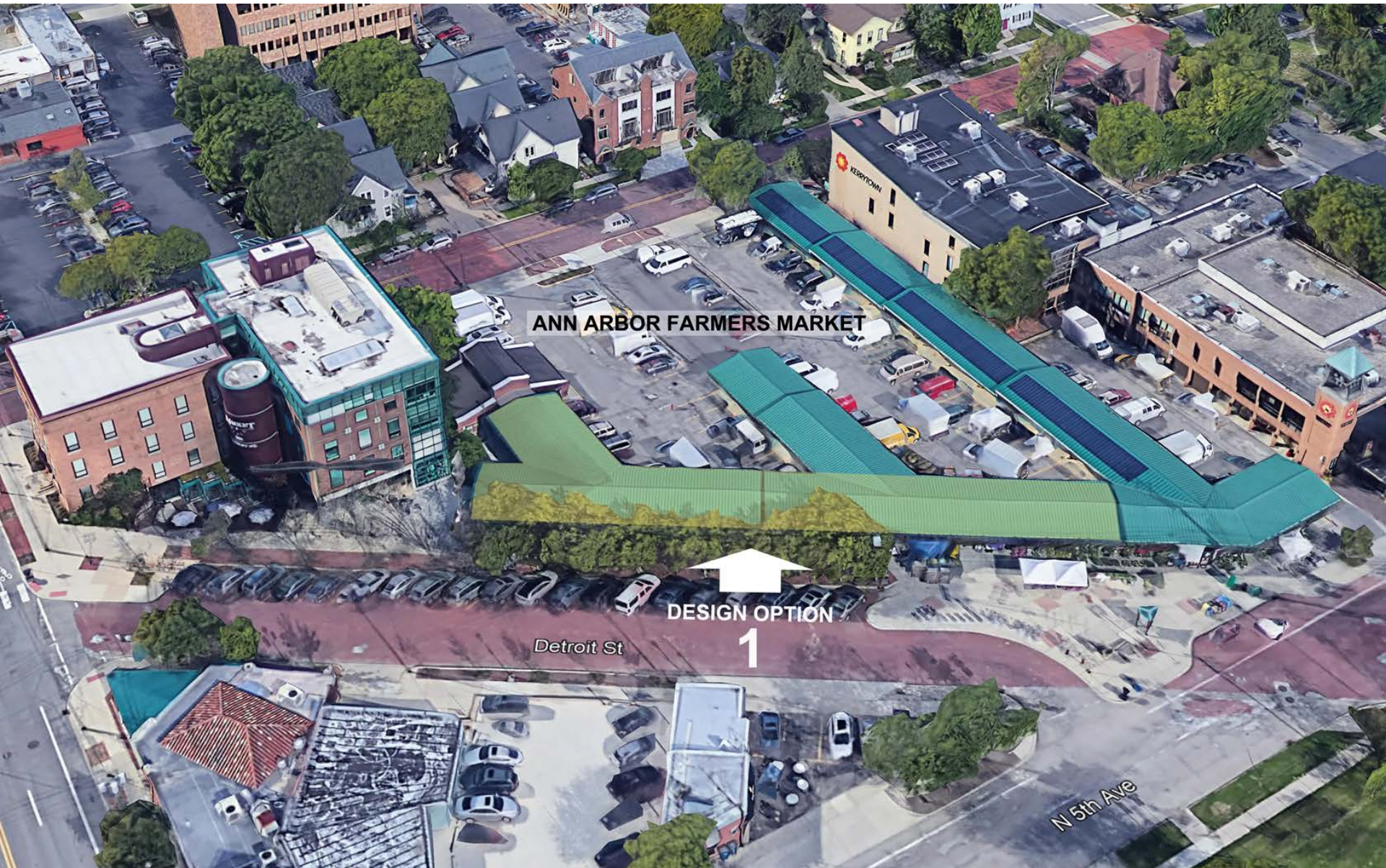
- Providing access and ease of use for vendors who may need to restock inventory
- Maintain the Market's visibility and accessibility to the public and patrons, including multiple access points
- Maintain the architectural character of the Market and the open-air feeling
- Provide for flexibility of use
- Minimize construction impacts to Market operations
- Don't impact existing parking
- Cost-effective solution





# Feasibility Study Process

- The study included a structural analysis of the existing canopy's ability to support side panels.
- The study looked into building code & energy code implications to temporarily enclosing the open-air canopy.
- The study recommended an option for a system of vinyl roll-down side panels to be added on a portion of the market canopy that is used year-round.
- Additional considerations such as infrared heating were explored as well. However, there are very high costs associated with implementing it because of building and energy code compliance.



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DESIGN OPTION

1

Detroit St

N 5th Ave



isting Site and Metal Building Canopy Conditions



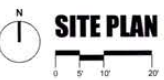
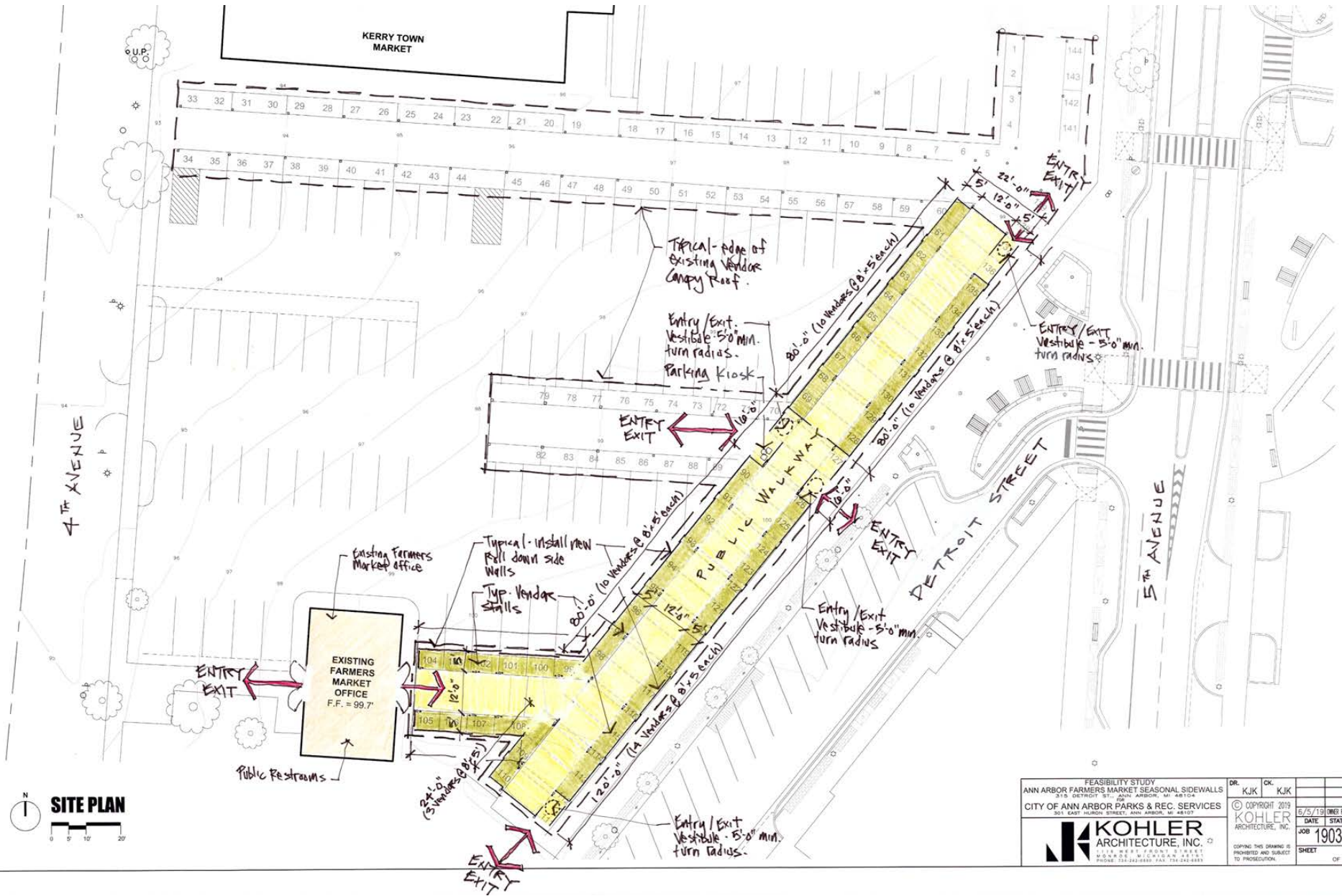
Existing Metal Building Canopy – south end along Detroit Street



Existing Metal Building Canopy – north end along Detroit Street





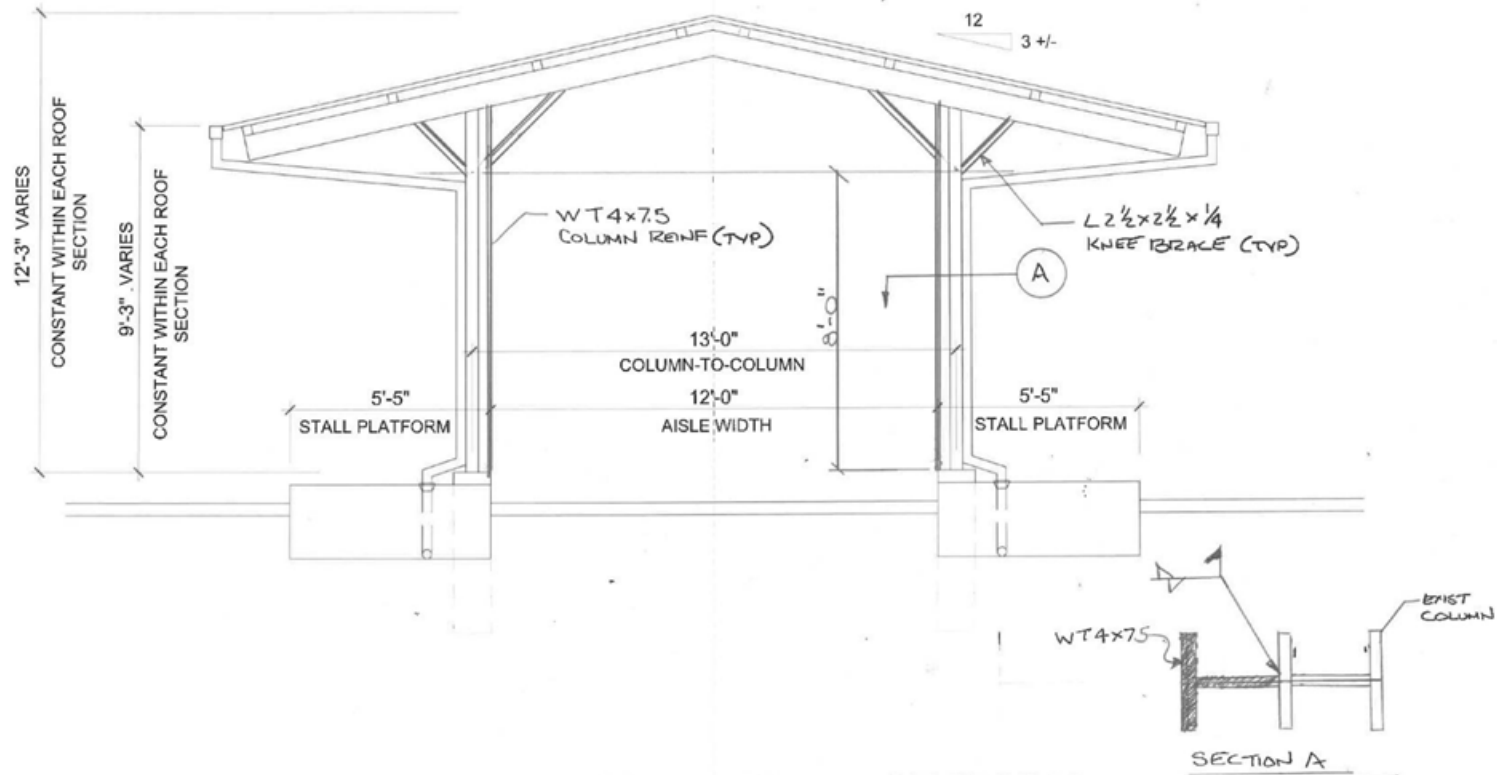


FEASIBILITY STUDY ANN ARBOR FARMERS MARKET SEASONAL SIDEWALLS 215 DETROIT ST., ANN ARBOR, MI 48104		DR. KJK	CK. KJK
CITY OF ANN ARBOR PARKS & REC. SERVICES 501 EAST HURON STREET, ANN ARBOR, MI 48107		© COPYRIGHT 2019	5/5/19
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# Structural Design Recommendations

We have evaluated the Farmers Market Canopy using a WT section to reinforce the columns and angle knee braces to stiffen the rafters. We have found that the modifications shown in the attached sketch brings the structure into compliance with Michigan Building Code including the addition of the wind loads from side wall enclosures. The service load lateral wind drift is reduced to less than 1/2-in.

We trust that this is the information that you requested. Please feel free to contact us if you need additional information.



## EXISTING CANOPY SECTION

SCALE: 3/8" = 1'-0"

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19-13012  
11/27/2019



### Conceptual Perspective View

- Update and reinforce existing steel rigid frame of existing metal building canopy - approximately 19 steel frames (6,050 square feet floor area under canopy) to support new side walls.





### Conceptual Perspective View

- Install new operable vinyl sidewalls (approximately 16ft. wide x 10ft. ht.) mounted on existing canopy frame with concealed header.



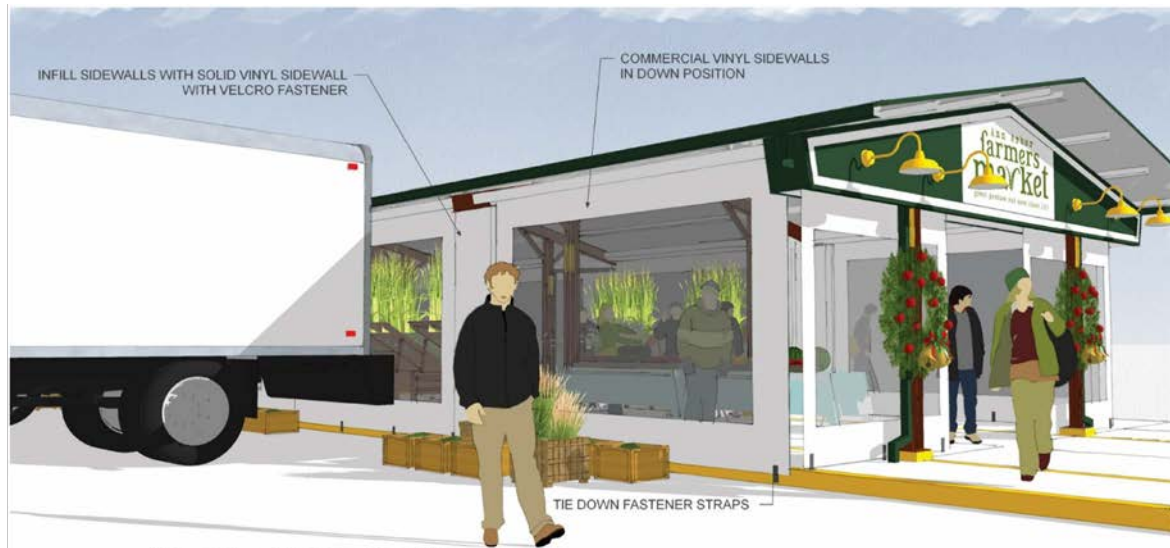


Conceptual Exterior Perspective View

- Typical end wall view with optional commercial vinyl end wall vestibule.



Interior Perspective View



**Conceptual Perspective View**

- Sidewalls in down position and fastened with tie down straps.



**Conceptual Perspective View**

- Sidewalls in rolled up and concealed in header mounted to canopy frame.







KOHLER  
ARCHITECTURE



## Radiant Heating

- Radiant heating was explored as an additional component of the side panel option.
- However, building & energy code restraints prevent us from having sidewalls and heating unless it is off the grid (i.e. solar-powered).
- The cost for replacing and expanding the solar infrastructure to support radiant heating would significantly expand the project cost, potentially doubling the cost estimate.

# Comparison with Proposed Market Building

- New building accommodated 34 stalls while the side panels accommodate 49 stalls with room to expand to full market.
- New building reduced parking by 12 spaces, side panels do not impact existing parking.
- New building would add to the total number of permanent stalls that are covered and have electricity, and help solve customer flow by extending the middle aisle.



# Comparison with Proposed Market Building

- Cost for the New Market Building were in the realm of **\$1.4m-\$1.5m** in 2016-2017, which was beyond the **\$875,000** budget that the City had available.
- Since then, construction costs have continued to rise.
- Roll-down Side Panels rough construction cost estimate is approximately **\$300,000** without heating for the current configuration along Detroit Street.



# Next Steps

- Review & incorporate feedback from PMAC.
- Refine cost estimates and explore funding opportunities.
- Meet with Market Vendor stakeholder group for input & feedback.
- Develop a community engagement plan with public meetings and informational outreach.
- Further develop the design and construction documents.





## Discussion topics:

1. Is the roll-down side panel concept appealing? Is there any feedback we should incorporate in the design?
2. Is the location of the side panels along Detroit Street acceptable or is there a desire to explore other configurations?
3. If funding only allows for side panels or overhead heating, is there a preference for one or the other?

