

Project Scope

Client: **City of Keokuk**

Location: **Keokuk, IA**

The buildings, constructed in the 1890s, have extensive structural damage due to fire, water infiltration, pest and creep. The goal of the project is to restore the buildings for retail use on the first floors and residential use on the second and third floors.



Figure 1. Current Street View of 625, 623, and 619 Main St (From Left to Right)

Residential and Retail Space

The first floor of each structure is designed as an open layout for any retail or commercial occupancy. The upper levels include two 2 BR/2 Bath, five 2 BR/1 Bath, and six Studio apartments with a full kitchen and washer/dryer unit included in each.



Figure 2. Existing Condition of 623 Main St vs Concept Retail Space



Figure 3. 2 BR/2 Bath, 2 BR/1 Bath, and Studio Apartment Plans (From Left to Right)

Structural Façade Repair

The second floor of building 619 was experiencing some deflection of the front north facing wall due to the weight and bending moment of the metal façade that was attached post original construction. Two alternative solutions were engineered to restore the structural integrity of the building.



Figure 5. The 4-inch Gap Between the Front Façade and Second Floor Bedroom of Apartment 619.

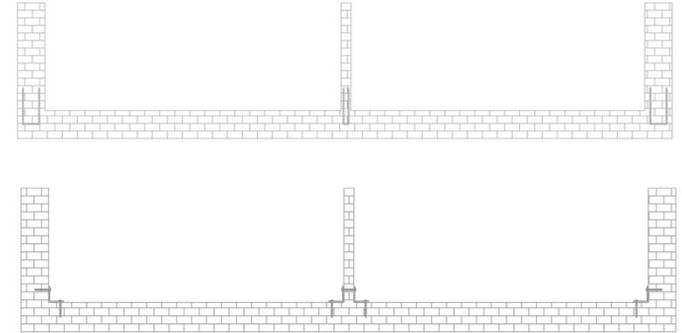


Figure 5. Structural Details for the Façade Tie Back System



Figure 7. Floors will be removed and replaced due to deterioration.



Figure 6. Roof structure replaced and sloped insulation will be used to ensure water drains from roof.



Figure 8. Design will declutter basements and seal out moisture.

Cost Opinion

Demolition	\$ 140,000
Materials	\$ 670,000
New Construction	\$ 180,000
Design	\$ 30,000
Administration (3%)	\$ 31,000
Contingency (10%)	\$ 102,000
Total Project Cost	\$ 1,150,000
Estimated Gross Yearly Earnings	\$ 320,000

References

- American Wood Council. (2015) *National Design Specification for Wood Construction*. Leesburg, Virginia.
- International Code Council. (2015). *International Building Code*. Falls Church, Virginia: International Code Council.
- United States. (2010). *2010 ADA standards for accessible design*. Washington, D.C.: Dept. of Justice.
- Weaver, M. E. (1997). *Conserving Buildings: A Manual of Techniques and Materials*. New York: Chichester Wiley.