

# CITY OF ATKINS FIRE STATION REBUILDING

## PRELIMINARY CONCEPTS

City of Atkins Iowa

May 24, 2022



# ADVISORY COMMITTEE

*The Committee's stated goal, "Gather information to rebuild the Atkins Fire Station that meets the community and Rural Fire District needs and to enable a sound decision for today and the future with a capacity of 20 years and expected life span of 50 years. Meeting codes and standards required which apply to this critical infrastructure building."*

- Mayor Bruce Visser
- Mayor Pro-Tem Samantha Petersen
- Mayor Pro-Tem/Citizen Heather Rinderknecht
- Fire Chief Dan Rammelsburg
- Assistant Fire Chief Dave Kurka
- Planning and Zoning Chair Gordy Jacobsen
- City Administrator Kelly Groskurth
- Tom Gruis with East Central Iowa Council of Governments
- Solum Lang Architects Al Buck and Elyse Garlock

# THE PROCESS

# TYPICAL DESIGN / PLANS / CONSTRUCTION SEQUENCE



# TYPICAL DESIGN / PLANS / CONSTRUCTION SEQUENCE

**Figure 4.1 — The first Schematic Design (SD) Phase.**

## Phases

### Schematic Design Phase (SD)

- Facility Programming
- Floor Plan Sketches



Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

**Figure 4.2 — The second SD Phase.**

## Phases

### Schematic Design Phase (SD)

- Site Plan Sketches
- Construction Budget Estimates



Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

# TYPICAL DESIGN / PLANS / CONSTRUCTION SEQUENCE

**Figure 4.3 — The third SD Phase.**

## Phases

### **Schematic Design Phase (SD)**

- Elevation Sketches & Massing

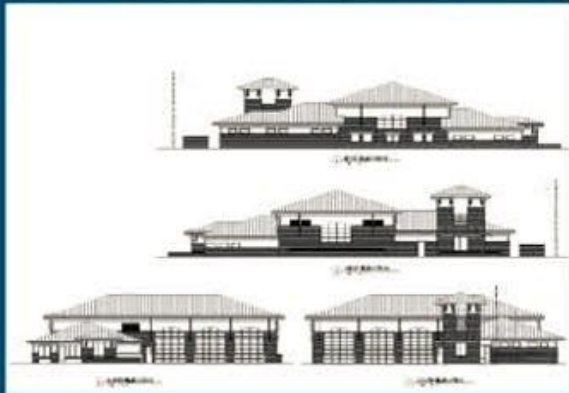


Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

**Figure 4.4 — The first Design Development (DD) Phase.**

## Phases

### **Design Development Phase (DD)**

- Revise Schematic Plans
- Building Systems



Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

# TYPICAL DESIGN / PLANS / CONSTRUCTION SEQUENCE

**Figure 4.5 — The second DD Phase.**

## Phases

### **Design Development Phase (DD)**

- Project Renderings
- Presentations to Council, Citizens, Etc.
- Budget Review



Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

**Figure 4.6 — The Construction Document (CD) Phase.**

## Phases

### **Construction Document Phase (CD)**

- Known as “Blueprints”
- Complete Plans and Specifications for Bidding, Permitting and Building
- Includes:
  - Architectural
  - Civil
  - Structural
  - Plumbing
  - Mechanical
  - Electrical
- Comprehensive Budget Review



Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

# TYPICAL DESIGN / PLANS / CONSTRUCTION SEQUENCE

**Figure 4.7 — The Bid/Negotiation (B/N) Phase.**



Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

**Figure 4.8 — The Construction Administration (CA) Phase.**



Photo courtesy of Ken Newell, Stewart-Cooper-Newell Architects.

# PROCESS

- 9 potential sites:
  - Mayor Visser, City Engineer Nick Eisenbacher, and Public Works Department: Todd Damon, Jarrod Tomlinson, and Mike Rammelsburg
    - Team Reviewed:
      - Water Access
      - Sewer Access
      - Storm Water
      - Street Connectivity
      - Traffic Flow: Traffic Flow, Safety Turning onto street, Safety getting to Parkridge
      - Type of Neighborhood (Residential, Commercial)
      - Flood Plain
- Determined 4 Potential Sites are Viable:
  - Architect and Advisory Committee reviewed each site
    - Developed Concepts for each site
    - Reviewed
      - Water Access
      - Sewer Access
      - Storm Water
      - Street Connectivity
      - Traffic Flow: Traffic Flow, Safety Turning onto street, Safety getting to Parkridge
      - Type of Neighborhood (Residential, Commercial)
      - Flood Plain
      - Parking
      - Ability to expand
    - Analyzed Pros and Cons of each site
    - Narrowed sites to 2

# PROCESS

- Determined 2 Viable Sites
  - Architect and Advisory Committee reviewed each site
    - Developed Multiple Concepts for each site
      - Reviewed with Each Concept
        - Water Access
        - Sewer Access
        - Storm Water
        - Street Connectivity
        - Traffic Flow: Traffic Flow, Safety
        - Flood Plain
        - Parking
        - Ability to expand
    - Analyzed Pros and Cons of each site
    - Architect Recommendation of City Hall City

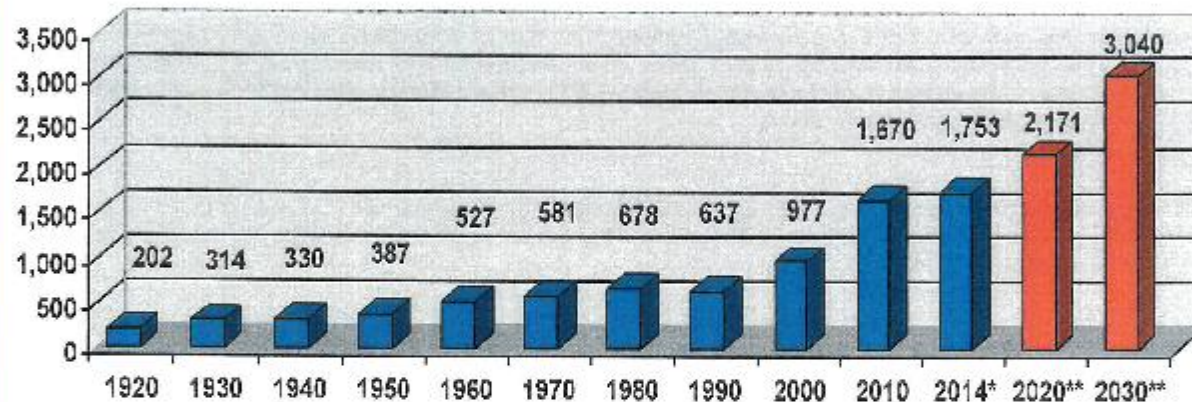
# HISTORICAL INFORMATION

- Original Fire Station was constructed in 1992 (30 years)
- City Population in 1990 was 637 (236 houses)
- City Population in 2020 is 2,050 (722 Houses)
- Projected population in 2030 is 3,040 per the 2016 Comprehensive Plan

# HISTORICAL INFORMATION

## Profile and Analysis

Population Trends, City of Atkins (1920 – 2014)



## City of Atkins Comprehensive Plan 2016

Source: U.S. Census

\* 2014 is a U.S. Census estimate

\*\* 2020 and 2030 predictions are based on a 30% and 40% increase per census, respectively

\*\*\* January 2018 estimate is approximate population is 1,850

# DESIGN TEAM

**Solum Lang Architects**

**Snyder & Associates Civil Engineers**

**M2B Structural Engineers**

**Design Engineers**



# ATKINS FIRE STATION – TIMELINE

## 2020

- AUG – DERECHO
- AUG – BEGAN WORKING WITH FEMA

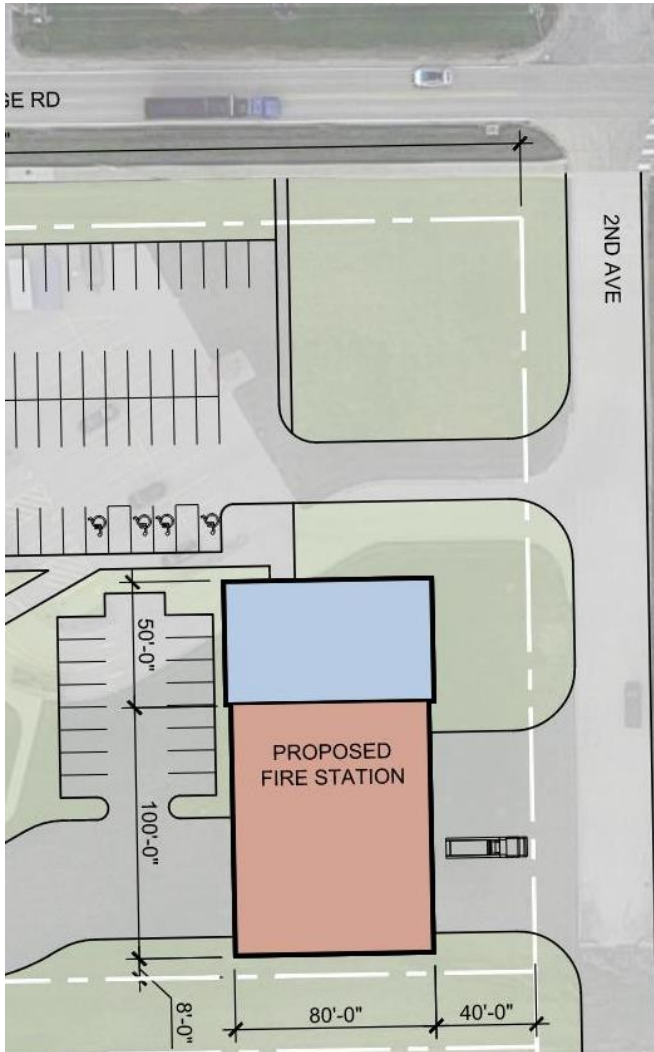
## 2021

- FORMED THE FIRE STATION COMMITTEE
- JANUARY– INITIATED SITE ASSESSMENT PROCESS
- MARCH – NARROWED SITE OPTIONS TO NINE LOCATIONS
- MAY/JUNE – INTERVIEWED ARCHITECTS & HIRED SOLUM LANG ARCHITECTS
- SEPT – BEGAN WORK WITH DESIGN TEAM & COMMITTEE TO DEVELOP SITE & BUILDING PROGRAMS

## 2022

- APRIL – FINALIZED CONCEPTS FOR TWO SITES
- MAY – RECOMMENDATION TO CITY COUNCIL

# ATKINS FIRE STATION – CITY HALL SITE CONCEPT (RECOMMENDED)



**OPINION OF PROBABLE COST: \$4,151,698.00**  
**BUILDING AREA: 12,200 SF**

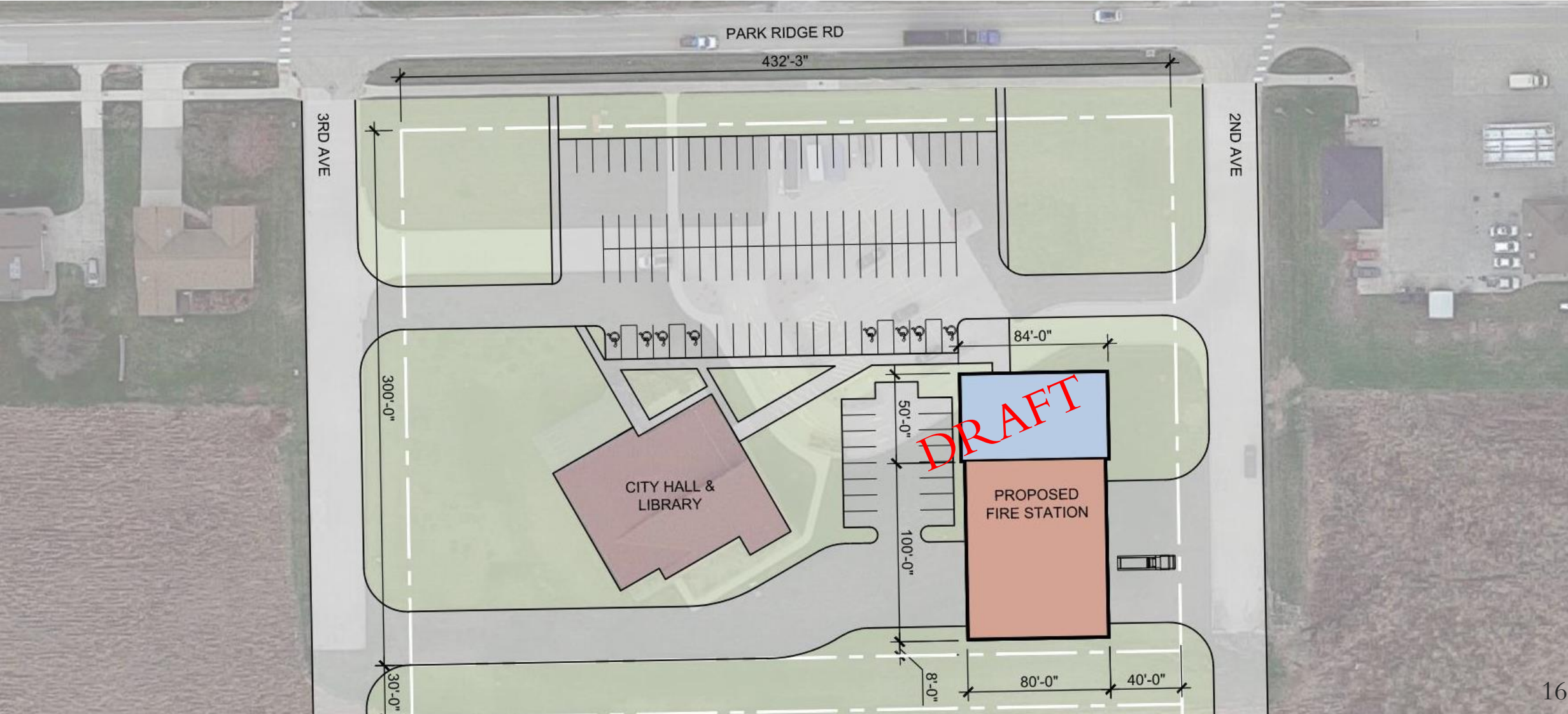
## PROS

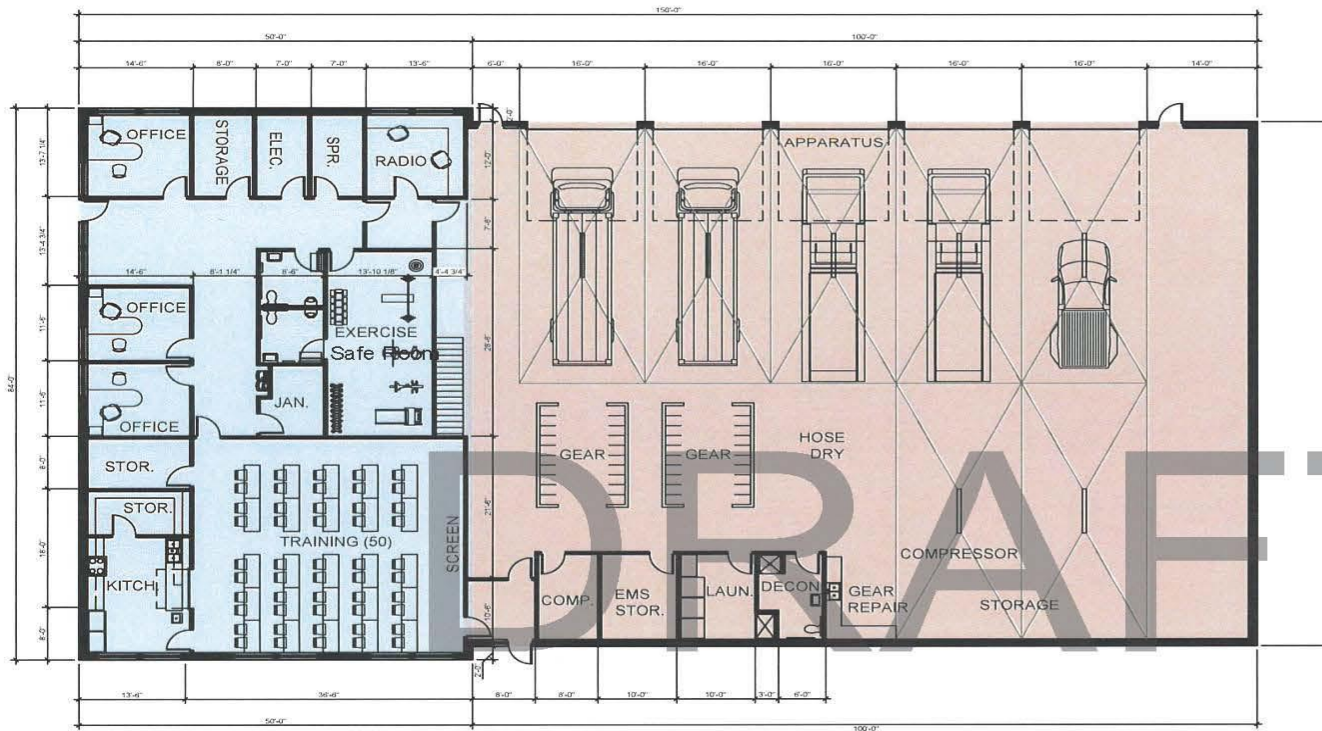
- CLEAR FRONT ENTRY
- PRESENCE ON PARK RIDGE
- POTENTIAL FOR EXPANSION
- LOCATED IN BUSINESS AREA
- CURB APPEAL
- EXIT ONTO SECONDARY ROAD
- SUFFICIENT PARKING (40+ SPACES)
- EXISTING GRADES
- OPTIMIZES PARKING LOT LAYOUT
- CITY OWNS PROPERTY

## CONS

- \$70,000.00 HIGHER COST
- TEMPORARY DISRUPTION TO PARKING AT LIBRARY / CITY HALL

# ATKINS FIRE STATION – CITY HALL SITE CONCEPT (RECOMMENDED)





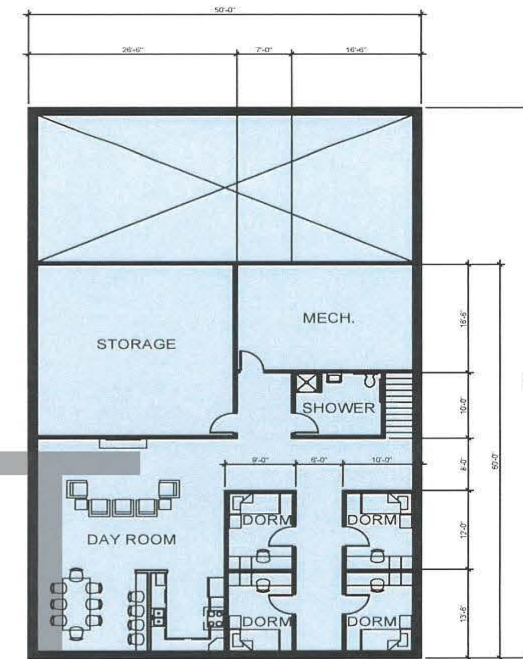
APPARATUS AREA: 8,000 SF

PERSONNEL AREA: 4,200 SF

TOTAL AREA: 12,200 SF

## FLOOR PLAN

1/16" = 1'-0"



MEZZANINE AREA: 3,000 SF



# ATKINS FIRE STATION FLOOR PLAN

MAY 18, 2022



**OPINION OF PROBABLE COST - CITY HALL SITE  
ATKINS FIRE STATION**



Created by: Al Buik		Date: 2/9/2022		
Project Title: Atkins Fire Station		Project #: 21020		
Estimate #: 3		Building Area: 15,200 SF		
OPINION OF PROBABLE COST				
ITEM	QUANTITY	COST / UNIT	COST	SUBTOTALS
BUILDING				
Concrete Form Footings	500 LF	\$80.00	\$40,000.00	
Concrete Slab-on-Grade - 4"	4,200 SF	\$8.50	\$35,700.00	
Concrete Slab-on-Grade - 6"	8,000 SF	\$10.50	\$84,000.00	
Building Excavation & Backfill	12,200 SF	\$2.00	\$24,400.00	
Brick Veneer on Steel Stud Backup	3,000 SF	\$30.00	\$90,000.00	
Interior Walls & Paint- Concrete Block	2,000 SF	\$20.00	\$40,000.00	
Interior Walls & Paint- Steel Stud & Gyp	6,000 SF	\$11.00	\$66,000.00	
Steel Railings	1 LS	\$8,000.00	\$8,000.00	
Concrete-filled Steel Pan Stair	1 LS	\$8,000.00	\$8,000.00	
Mezzanine Structure	3,000 SF	\$16.00	\$48,000.00	
Mezzanine Floor	3,000 SF	\$11.00	\$33,000.00	
Lower Cabinets - Plastic Laminate	35 LF	\$500.00	\$17,500.00	
Upper Cabinets - Plastic Laminate	40 LF	\$200.00	\$8,000.00	
Counter Tops - Plastic Laminate	25 LF	\$40.00	\$1,000.00	
Counter Tops - Solid Surface	10 LF	\$80.00	\$800.00	
Interior Doors & Frames	20 EA	\$2,500.00	\$50,000.00	
Aluminum Glazed Single Doors	8 EA	\$3,600.00	\$28,800.00	
14'-0" x 14'-0" Overhead Doors	7 EA	\$6,000.00	\$42,000.00	
Glazing	1,500 SF	\$55.00	\$82,500.00	
Ceiling - Acoustic Tile	4,500 SF	\$6.50	\$29,250.00	
Ceiling - Gypsum Board	500 SF	\$8.00	\$4,000.00	
Flooring - Sealed Concrete	8,000 SF	\$1.50	\$12,000.00	
Flooring - Polished Concrete	600 SF	\$5.00	\$3,000.00	
Flooring - Porcelain Ceramic Tile	400 SF	\$4.00	\$1,600.00	
Flooring - Walk-Off Mat	500 SF	\$6.50	\$3,250.00	
Flooring - Carpet	750 SF	\$4.00	\$3,000.00	
Floor - Rubber / Synthetic Sports Floor	400 SF	\$10.00	\$4,000.00	
Pre-Engineered Metal Building	12,200 SF	\$35.00	\$427,000.00	
Signage Allowance- Interior & Exterior	1 LS	\$10,000.00	\$10,000.00	
Flagpole	1 EA	\$4,000.00	\$4,000.00	
			BUILDING SUBTOTAL	\$1,208,800.00
ALTERNATE 1 - MEZZANINE BUILD OUT				
Interior Walls & Paint - Steel Stud & Gyp	1,000 SF	\$11.00	\$11,000.00	
Lower Cabinets - Plastic Laminate	15 LF	\$500.00	\$7,500.00	
Upper Cabinets - Plastic Laminate	10 LF	\$200.00	\$2,000.00	
Counter Tops - Solid Surface	15 LF	\$40.00	\$600.00	
Interior Doors & Frames	7 EA	\$2,500.00	\$17,500.00	
Ceiling - Acoustic Tile	1,500 SF	\$6.50	\$9,750.00	
Ceiling - Gypsum Board	100 SF	\$8.00	\$800.00	
Flooring - Polished Concrete	700 SF	\$5.00	\$3,500.00	
Flooring - Porcelain Ceramic Tile	100 SF	\$4.00	\$400.00	
Flooring - Carpet	1,200 SF	\$4.00	\$4,800.00	
			BUILDING SUBTOTAL	\$57,850.00
MECHANICAL, ELECTRICAL, PLUMBING				
MEP Improvements - Placeholder	1 LS	\$600,000.00	\$600,000.00	
			MEP SUBTOTAL	\$600,000.00
SITE				
Site Improvements - Placeholder	1 LS	\$780,000.00	\$826,000.00	
			SITE SUBTOTAL	\$826,000.00
ESTIMATING CONTINGENCY				
Estimating Contingency (10%)	10.00 %	\$2,692,650.00	\$269,265.00	
			ESTIMATING CONTINGENCY SUBTOTAL	\$269,265.00
			BUILDING, MEP, & SITE TOTAL	\$2,961,915.00
BUILDING, MEP, SITE, & CONTRACTOR FEES				
Building, MEP, & Site Subtotal (Line Item Above)			\$2,961,915.00	
Contractor Fees (10% Gen. Reg's, 5% OH, 3% Profit)	20.00 %	\$2,961,915.00	\$592,383.00	
			TOTAL BUILDING, MEP, SITE, & CONTRACTOR FEES	\$3,554,298.00
ANCILLARY				
Estimated Construction Contingency - 7%	7.00 %	\$3,554,298.00	\$248,800.86	
Furniture Allowance	1 LS	\$90,000.00	\$90,000.00	
Turnout Gear Lockers	40 EA	\$300.00	\$12,000.00	
Testing Estimate	1 LS	\$20,000.00	\$20,000.00	
Printing Estimate	1 LS	\$20,000.00	\$20,000.00	
Professional Fees	1 LS	\$206,600.00	\$206,600.00	
			TOTAL ANCILLARY COST	\$597,400.86
TOTAL PROJECT COST				
Total Building, MEP, Site, & Contractor Fees (Line Item Above)				\$3,554,298.00
Total Ancillary Cost (Line Item Above)				\$597,400.86
			TOTAL PROJECT COST ESTIMATE	\$4,151,698.86

## ESTIMATED TOTAL PROJECT COST

Estimated Cost: \$4,151,698.86

Cost of Issuance \$ 90,000.00

Less: Insurance \$ 600,000.00

Less: Grant – FEMA \$ 433,000.00

Estimated City Cost \$3,208,698.86

Estimated Bond Total: \$4,570,000.00

A photograph of a fire station interior. In the foreground, a fire hose is coiled on a metal reel. In the background, a red fire extinguisher is visible on a wall. The image has a warm, reddish-orange color cast and a torn-edge effect at the top and bottom.

# CITY OF ATKINS FIRE STATION REBUILDING