



## ST. FRANCIS CITY HALL & FIRE STATION FEASIBILITY STUDY 2022

St. Francis, MN



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# INTRODUCTION

Brunton Architects & Engineers was commissioned by the City of St. Francis, MN to complete a comprehensive study for the feasibility of a new combination Fire Station and City Hall.

At the time of the study, the City had already selected the site at 3740 Bridge St. NW for the proposed facility. The City had also conducted Facilities Assessments of the existing Fire Station and City Hall, which illustrated the deficiencies of the current buildings and the need to build new to support future growth. Space Needs Studies were also provided to Brunton, which provided existing and recommended square footages for each department. The City required a more focused evaluation of its needs for these two departments on the specified lot to get a more accurate estimate of probable cost of the project for presentation to the City Council.

## Scope of Work:

### Comprehensive Document Review:

1. Perform a thorough review and analysis of each of the studies and assessments performed to date.
2. Conduct meetings with City Staff involved in these studies and the future planning efforts to gain a complete understanding of the project context and goals.

### Space Program:

1. Compile existing Space Needs Assessment information with comments provided by Building Committee to generate a refined Space Program.
2. Determine wants/needs for community center component of project.

### Site Analysis:

1. Use refined Space Program to illustrate potential building footprints as they relate to the overall site context.
2. Analyze potential site layouts, incorporating building footprints, to show exiting/returning of emergency vehicles, separation of pedestrians from vehicles, and lines of site.
3. Review zoning codes/ordinances, traffic flow/site circulation, orientation, separation of departments, availability for future growth/flexibility, security, and the overall exterior aesthetic in the context of the downtown community.

### Block Diagrams:

1. Generate block diagrams using the Space Program to inform the functionality of the proposed facility on the proposed site and confirm square footage requirements and scope.
2. Determine appropriate location for community center component based on phasing needs, budget, and square footage requirements.

# INTRODUCTION

## Methodology:

The Feasibility Study process began with a review of each of the studies and assessments performed to date. The previously contracted firm analyzed multiple City facilities, potential sites, and combination new-construction projects. At the time of our review, the City had used this information to narrow down the project to a combination facility and a site, but the previous studies and cost estimates were out-of-date. Meetings were conducted to review the desired space needs with the Mayor, City Administrator and Fire Chief and discuss functional needs specific to each department. Our team used this information, industry standards, and professional experience to generate a revised programming document that would be used to inform the building square footage and footprint.

The team also reviewed the St. Francis Forward document, the Bridge Street Design Guidelines, and the Northern Anoka County River Crossing Study to gain a better understanding of the project needs within the larger context of the City and its future growth projections. These findings informed programmatic recommendations and site layouts.

The next step in the process was to take the program and turn the desired spaces into a scaled block diagram. The team used a City-provided site survey, Google Earth imagery, and visual observations to develop site context diagrams. Traffic flow scenarios utilized existing curb cuts onto Bridge Street and Ambassador (County roads), as well as existing and/or new cuts onto Woodbine. Separation of City and Fire traffic was the primary driver in the traffic flow analysis, prioritizing safety and site lines.

After settling on a consensus with the Building Committee for the site layout, the next step involved more detailed block diagrams of the programmatic elements as they related to the site. Our understanding of the functional needs of these departments, professional expertise, future expansion needs and desire for simple geometry for construction efficiencies informed the various iterations of floor plan block diagrams.

The final step in the Feasibility Study process was to use the site and floor plan block diagrams to generate a Professional Opinion of Probable Costs. In discussions with the Building Committee, it was determined that Architectural Precast Concrete would be the best value for a construction system. Our Construction Specialist took the proposed construction system, project square footage, footprint, sitework, market data and comparable examples to itemize a list of costs to complete the proposed project. Additional iterations were performed to evaluate the benefit of constructing unfinished space for future expansion.

# SPACE PROGRAM

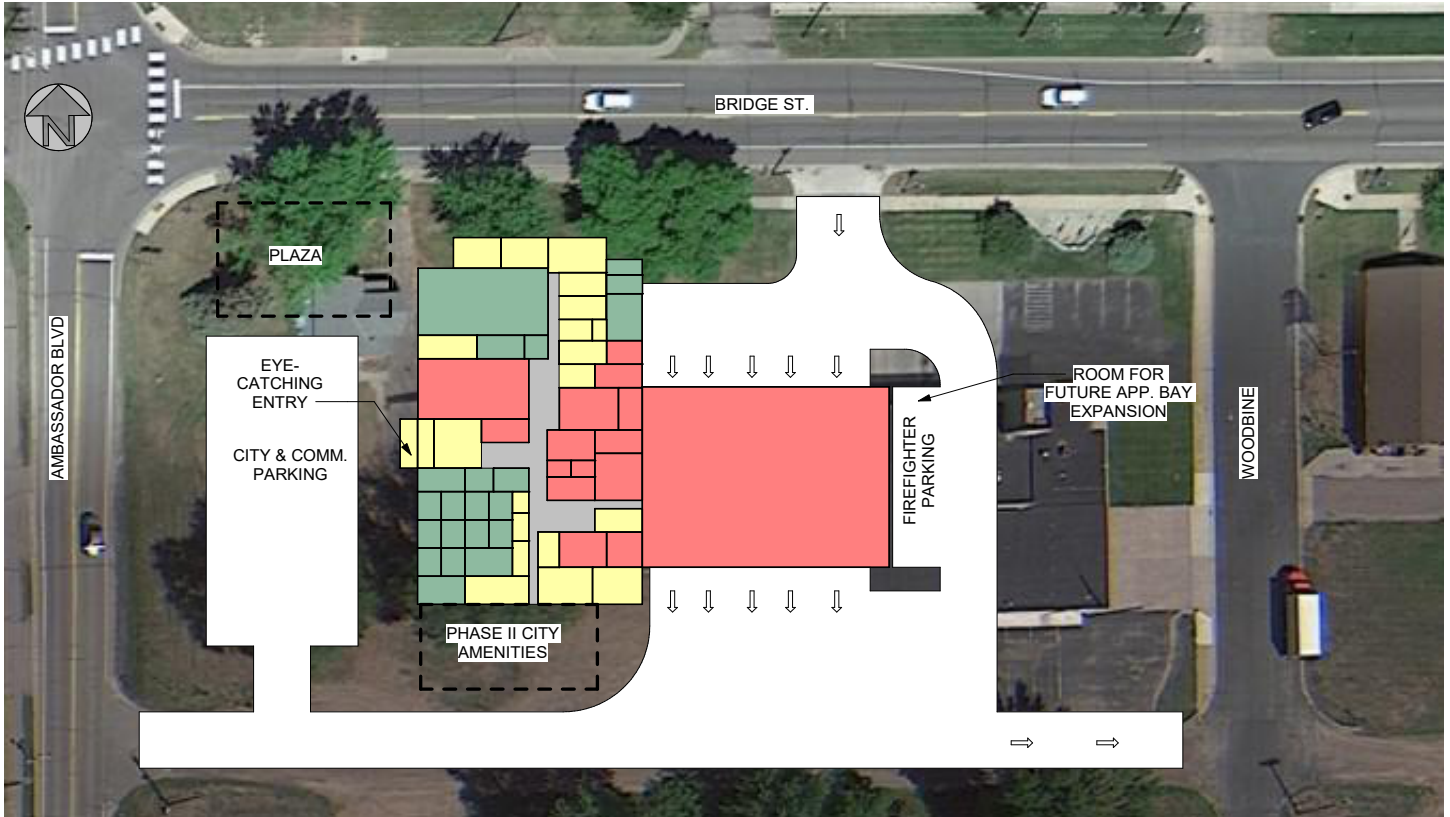
Space Description	Notes	Qty	Area	Proposed SF
<b>Reception/Waiting</b>				
Vestibule		1	100	100
Lobby/Waiting/Display		1	400	360
Service Counters	For City Hall & administration for Fire (Front Desk) one person, plan for two in the future, some open office	1	280	280
<b>subtotal:</b>				<b>740</b>
<b>Shared Amenities</b>				
Break Room/Kitchenette		1	280	280
Print/File/Copy/Office Supply Area		1	250	250
Meeting Room - Small	Closed Session Room	1	200	200
Meeting Room - Large		1	400	400
Staff Restroom Men		2	80	160
Staff Restroom Women		2	80	160
Mother's Room		1	80	80
Fitness Room		1	300	300
<b>subtotal:</b>				<b>1830</b>
<b>City Administration</b>				
City Administrator		1	220	220
Offices - large		3	170	510
Offices - small		8	120	960
Building Official		1	220	220
Future Private Offices	Plan for Future	2	150	300
IT	Future, Workbench	1	200	200
Records Storage		1	200	200
Records Vault	2 hour fire rated / combined with elections storage? / server protected within	1	440	440
Elections Storage	2 hour fire rated / combined with records vault?	1	200	200
<b>subtotal:</b>				<b>3250</b>
<b>Council Chambers</b>				
Council Chambers (seat count: 35-50)	Elections will take place in here, Community Room	1	1500	1500
Warming Kitchen		1	200	200
A/V Booth		1	100	100
Storage	Tables and chairs	1	200	200
Closed Session Room	<i>Duplicates as a secondary conference room</i>	1	0	0
<b>subtotal:</b>				<b>2000</b>
<b>Training Room - Fire</b>				
Training Room	50-100 people, BLS Training	1	1200	1200
Warming Kitchen	<i>Shared with Council Chambers Warming Kitchen, if possible</i>	1	0	0
Table/Chair Storage		1	200	200
<b>subtotal:</b>				<b>1400</b>
<b>Fire Hall</b>				

# SPACE PROGRAM

Fire Chief Office	Meetings within his office with foottraffic from pedestrians	1	240	240
Open Office/Report Writing	Captains, Lieutenants, Squad	1	300	300
Private Offices		3	120	360
Record Storage		1	120	120
Day Room	Dining table	1	380	380
Bunk Rooms	Individual 5, up to 8	8	120	960
Communications/Radio Room		1	240	240
Apparatus Bays + Extractors (Hot Zone)	20x80 - No circ. factor	5	1600	8000
EMT Vehicle Storage		1	0	0
Decontamination Shower/Restroom		2	80	160
Hose Tower	Roof access	2	400	800
Medical Supplies (some supplied on rescue truck)	Controlled access	1	100	100
Turnout Gear Room w/ Call Monitor on Wall	35 Lockers	1	400	400
Turnout Gear Storage		1	200	200
Engineer Tools Room/Work Bench		1	240	240
SCBA/General Laundry		1	380	380
General Storage (training prop, etc.)		1	300	300
Unisex Shower/Toilet	Off Locker Room	2	80	160
Locker Room	35 small lockers	1	230	230
Extractors		1	50	50
Pole		2	60	120
<b>subtotal:</b>				<b>13740</b>
<b>Support Area</b>				
Public Men's Restroom		1	80	80
Public Women's Restroom		1	80	80
Elevator / Elevator Equipment	10x10 Elev. + 10x10 (Equip.) + 2nd Fl. Elev.	2	130	260
Stair		4	250	1000
Janitors Closet		2	50	100
Mechanical/Elec. Room		1	430	430
Building Maintenance Storage		1	200	200
Generator	Indoor	1	400	400
<b>subtotal:</b>				<b>2550</b>
<b>Total Net Floor Area</b>				<b>25,510</b>
<b>Circulation Factor</b>				<b>20%</b>
<b>Circulation</b>	Not including App Bays			<b>3,902</b>
<b>Total Area (Conditioned Space)</b>				<b>29,412</b>

The combined facility total square footage determined by the previously contracted firm was 27,165 gross square feet. Our investigation was comparatively close to this conclusion.

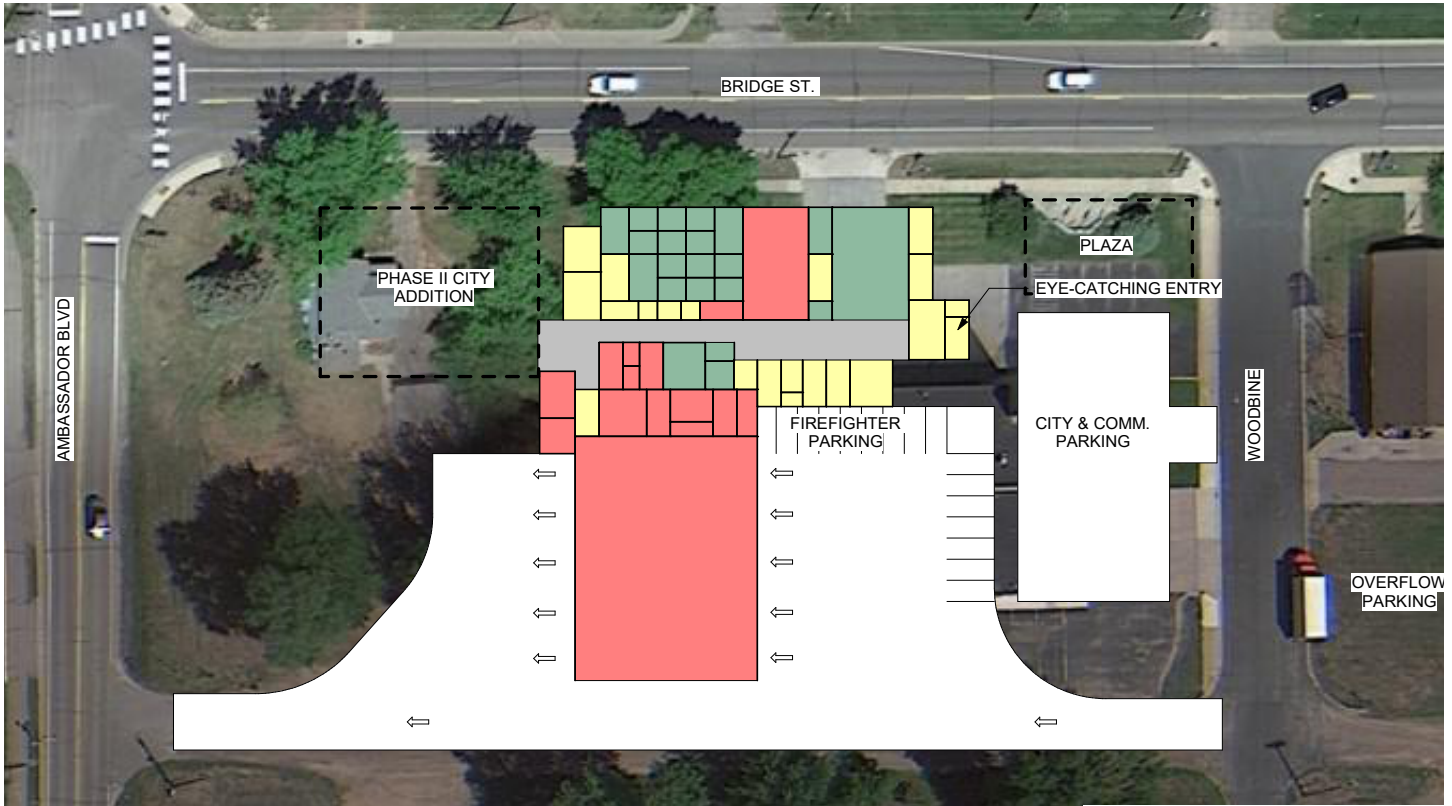
# SITE ANALYSIS



## OPTION A

This option utilized the existing curb cut off Bridge Street for returning apparatus and allowed for future apparatus bay expansion to the east. The Building Committee was hesitant about the Bridge Street access to the property, and expressed concern about the amount of parking available for the City Hall side. The Fire Chief also disliked the narrow access onto Woodbine.

# SITE ANALYSIS

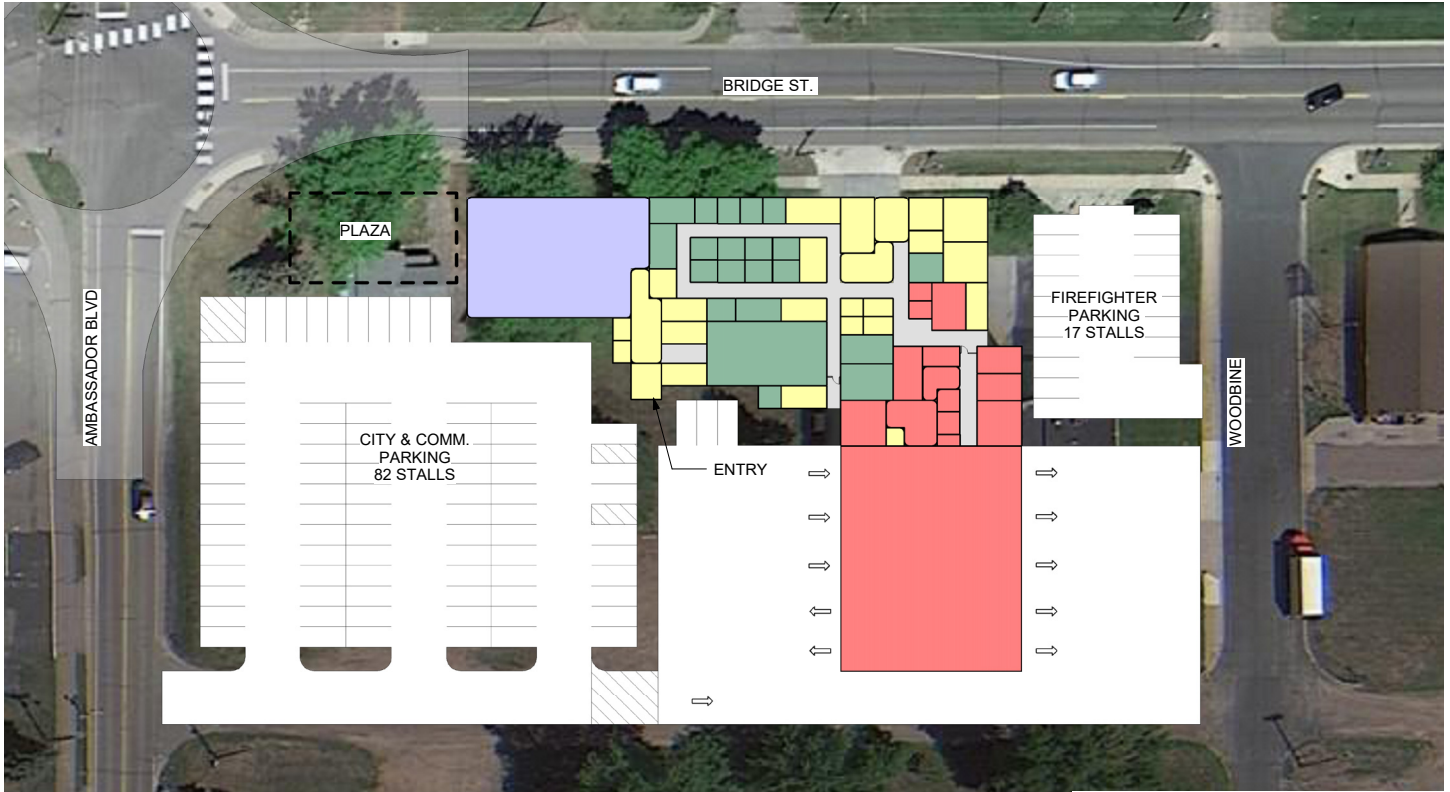


## OPTION B

This option allowed for City Hall parking off of Woodbine, as well as use of the current overflow parking south of the Post Office. The Fire Chief disliked the option of departing apparatus onto Ambassador due to high levels of traffic along the road at certain times of day.



# SITE ANALYSIS



## OPTION C

This Option eliminated the direct access onto Bridge Street, has City Hall parking and returning apparatus coming from Ambassador and apparatus departing onto Woodbine with an expanded apron. This Option also demonstrated a maximized parking count on the City Hall side to support a Community Center component (purple). Brunton expressed concern about potential interference between responding apparatus and responding volunteer firefighters with the firefighter parking directly off of Woodbine, but the Fire Chief assured the team that with the provided site lines and their standard operating procedures that this would not be a problem. The City expressed concern that community members may try to use the alley as a cut-through street, so the dashed lines indicate an area where the pavement and signage will be designed to deter unauthorized traffic.

# BLOCK DIAGRAMS



## OPTION C

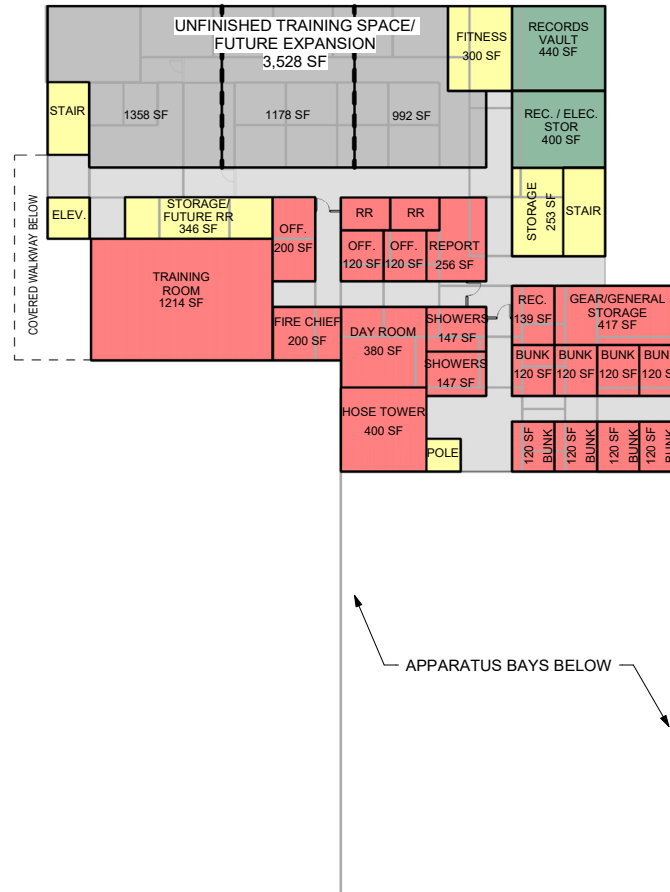
Brunton and the Building Committee concluded that Option C would be pursued for further plan development. The parking lot was reduced to a more manageable size, with the knowledge that there is still room for expansion on the two City-owned southwest lots. The Community Center component was removed from the plan due to budget concerns, with the understanding that the plan configuration will work for the City to add it in the future if they so choose. A placeholder stormwater detention pond was added to the plan that will need to be reviewed once a civil engineer is engaged. Additionally, the plaza on the northwest is dashed in to provide a literal and visual buffer to the community as they enter onto Bridge Street.

# BLOCK DIAGRAMS



The first floor plan shows the proposed separation of departments with their shared spaces. Green represents City Hall spaces, Red represents Fire Station spaces, and Yellow represents shared amenities and support spaces. Multiple iterations were explored before the team settled on the above layout.

# BLOCK DIAGRAMS



Second Floor Plan

Second floor will be primarily used for the Fire Department. The City desired the ability to expand within the building shell, so the team concluded that there was an opportunity to show unfinished training space (gray) on the second floor as well.

# PROFESSIONAL OPINION OF PROBABLE COST OPTION 1

<b>GROSS SQUARE FOOTAGE - 30,630</b>				
<b>Dated- 8-29-2022</b>				
<b>DIVISION 1</b>	<b>QUANT</b>	<b>UOM</b>	<b>AMT</b>	<b>TOTAL</b>
General Conditions	30630	HR	17.00	\$ 520,710.00
<b>DIVISION 2</b>				
Existing Conditions- Building Demolition	1	LS		EXCLUDED
<b>DIVISION 3</b>				
Concrete	30630	SF	90.00	\$ 2,756,700.00
<b>DIVISION 5</b>				
Steel	30630	SF	9.00	\$ 275,670.00
<b>DIVISION 6</b>				
Woods Plastics, & Composities	30630	SF	18.00	\$ 551,340.00
<b>DIVISION 7</b>				
Thermal & Moisture Protection	30630	SF	20.00	\$ 612,600.00
<b>DIVISION 8</b>				
Openings	30630	EA	14.00	\$ 428,820.00
<b>DIVISION 9</b>				
Finishes	30630	SF	23.00	\$ 704,490.00
<b>DIVISION 10</b>				
Specialties	30630	SF	4.00	\$ 122,520.00
<b>DIVISION 11</b>				
Residential Appliances	1	LS	10,000.00	\$ 10,000.00
<b>DIVISION 14</b>				
Elevator	1	LS	125,000.00	\$ 125,000.00
<b>DIVISION 21</b>				
Sprinklers	30630	SF	3.75	\$ 114,862.50
<b>DIVISION 22, 23</b>				
Mechanical	30630	SF	48.00	\$ 1,470,240.00
<b>DIVISION 26,27,28</b>				
Electrical	30630	SF	35.00	\$ 1,072,050.00
Emergency Generator	1	LS	200,000.00	\$ 200,000.00

# PROFESSIONAL OPINION OF PROBABLE COST OPTION 1

<b>DIVISION 31- Sitework</b>				
All Sitework, Utilities, Paving, & Landscaping	114000	SF	5.00	\$ 570,000.00
<b>SUBTOTAL</b>				\$ 9,535,002.50
<b>PERMIT - (Allowance)</b>	1	LS	50,000.00	\$ 50,000.00
<b>BOND</b>	1	LS	100,000.00	\$ 100,000.00
<b>SAC &amp; WAC EXCLUDED</b>	1	LS	-	EXCLUDED
<b>LIAB INSUR</b>	1	LS	30,000.00	\$ 30,000.00
<b>BLDR'S RISK</b>	1	LS	35,000.00	\$ 35,000.00
<b>GC FEE 4%</b>	1	LS	381,400.10	\$ 381,400.10
<b>SUBTOTAL- Total Construction Cost.....</b>				<b>\$ 10,131,402.60</b>
<b>FF&amp;E 4%</b>	1	LS	404,000.00	\$ 404,000.00
<b>CONTINGENCY 5%</b>	1	LS	505,000.00	\$ 505,000.00
<b>TOTAL .....</b>				<b>\$ 11,040,403</b>
Construction Cost per Gross Square Foot	\$ 296.60			

# PROFESSIONAL OPINION OF PROBABLE COST OPTION 2

<b>GROSS SQUARE FOOTAGE - 34,158</b>				
<b>Dated- 8-29-2022</b>				
<b>DIVISION 1</b>	<b>QUANT</b>	<b>UOM</b>	<b>AMT</b>	<b>TOTAL</b>
General Conditions	34158	HR	17.00	\$ 580,686.00
<b>DIVISION 2</b>				
Existing Conditions- Building Demolition	1	LS		EXCLUDED
<b>DIVISION 3</b>				
Concrete	34158	SF	90.00	\$ 3,074,220.00
<b>DIVISION 5</b>				
Steel	34158	SF	9.00	\$ 307,422.00
<b>DIVISION 6</b>				
Woods Plastics, & Composities	34158	SF	18.00	\$ 614,844.00
<b>DIVISION 7</b>				
Thermal & Moisture Protection	34158	SF	20.00	\$ 683,160.00
<b>DIVISION 8</b>				
Openings	34158	EA	14.00	\$ 478,212.00
<b>DIVISION 9</b>				
Finishes	34158	SF	23.00	\$ 785,634.00
<b>DIVISION 10</b>				
Specialties	34158	SF	4.00	\$ 136,632.00
<b>DIVISION 11</b>				
Residential Appliances	1	LS	10,000.00	\$ 10,000.00
<b>DIVISION 14</b>				
Elevator	1	LS	125,000.00	\$ 125,000.00
<b>DIVISION 21</b>				
Sprinklers	34158	SF	3.75	\$ 128,092.50
<b>DIVISION 22, 23</b>				
Mechanical	34158	SF	48.00	\$ 1,639,584.00
<b>DIVISION 26,27,28</b>				
Electrical	34158	SF	35.00	\$ 1,195,530.00
Emergency Generator	1	LS	200,000.00	\$ 200,000.00

# PROFESSIONAL OPINION OF PROBABLE COST OPTION 2

<b>DIVISION 31- Sitework</b>				
All Sitework, Utilities, Paving, & Landscaping	114000	SF	5.00	\$ 570,000.00
<b>SUBTOTAL</b>				\$ 10,529,016.50
<b>Deduct finish cost for Unfinished space</b>	3528	SF	(100.00)	\$ (352,800.00)
<b>PERMIT - (Allowance)</b>	1	LS	50,000.00	\$ 50,000.00
<b>BOND</b>	1	LS	107,000.00	\$ 107,000.00
<b>SAC &amp; WAC EXCLUDED</b>	1	LS	-	EXCLUDED
<b>LIAB INSUR</b>	1	LS	30,000.00	\$ 30,000.00
<b>BLDR'S RISK</b>	1	LS	35,000.00	\$ 35,000.00
<b>GC FEE 4%</b>	1	LS	407,048.64	\$ 407,048.64
<b>SUBTOTAL- Total Construction Cost.....</b>				<b>\$ 10,805,265.14</b>
<b>FF&amp;E 4%</b>	1	LS	424,000.00	\$ 424,000.00
<b>CONTINGENCY 5%</b>	1	LS	530,000.00	\$ 530,000.00
<b>TOTAL .....</b>				<b>\$ 11,759,265</b>
Construction Cost per Gross Square Foot	\$ 316.33			



# PROFESSIONAL OPINION OF PROBABLE COST

## OPTION 1 - BASE PROJECT

Total square footage: 30,360

Total = \$11,040,403 (\$296/SF)

## OPTION 2 - COMPLETE PROJECT, INCLUDING UNFINISHED TRAINING SPACE

Total square footage: 34,158

Total = \$11,759,265 (\$316/SF)

## SUMMARY

Our findings conclude that a combination City Hall and Fire Station facility, as well as the parking to support it, will fit on the proposed site. The Building Committee concluded that a Community Center component can be added in a future phase, or built out in the unfinished second floor space. The City also owns two additional lots to the southwest that the team left for either future parking lot expansion or stormwater retention, should there be a need once a civil engineer is engaged. The construction estimate is subject to fluctuations in the market for materials, labor, and supply chain delays, however as the design moves forward the team will evaluate further opportunities to control costs and incorporate bid alternates. Updated cost estimates will be provided to assure the project budget is being maintained.