



THE
CITY of PELLA

STAFF MEMO TO COUNCIL

ITEM NO: E-4
SUBJECT: Facility Needs Assessment Results
DATE: July 2, 2019

BACKGROUND:

In August of 2018, Council approved a professional services contract with Short Elliott Hendrickson, Inc. (SEH) to develop a facility needs assessment for the City of Pella. The intention of this assessment is to generate a recommendation and plan to address the City's facility needs through the year 2040. The assessment included an evaluation of the following facilities: City Hall, Community Center, Electric Distribution, Public Library, Public Safety Complex (Police, Fire, Ambulance), and Public Works.

Listed below is a summary of the scope of services under the contract:

- Perform building condition assessments including site visits with architectural, mechanical, and electrical disciplines.
- Meet with City staff, applicable boards, focus groups, or key stakeholders for each facility to develop space needs assessments.
- Perform an analysis of the usage of the Community Center, which will include meeting with four key stakeholder groups.
- Develop concept building design layout options, including preliminary estimates of probable costs, for future growth or expansion.
- Prepare a written report outlining the items listed above. Upon completion, the final report and findings will be presented to the City Council.

SEH's drafted report documenting their findings and recommendations is included as a memo attachment.

For Council's review, staff has prepared a brief summary for each city facility:

Community Center

In considering options for the Community Center, it is important to realize the analysis conducted to date is preliminary in nature and should not be considered a formal recommendation. Rather, the information presented is intended to facilitate discussion in determining a course of action for the Community Center. Furthermore, the City Council will be the ultimate decision-making entity in determining whether to renovate the existing Community Center or build a new Community Center. In addition, if the City Council decides to build a new facility, they will also determine what amenities will be included in the new facility.

As background on this matter, the focus group interviews conducted by the consultant identified a need in excess of 45,000 square feet of space for a Community Center. It is important to note that the existing Community Center has the ability to provide 20,000 square feet of space, which excludes the theater area. The need for additional space is being driven by requests for additional gymnasiums and a large community meeting room which could accommodate approximately 300 people.

Listed below are two options for the Community Center as identified by SEH:

- ***Renovate Existing Facility – \$10.3 million***

The proposed renovation would include replacement of the mechanical, electrical, and HVAC systems. In addition, there would be accessibility improvements to the gym and exterior entrance. However, due to the footprint of the structure, there would still be accessibility issues even after the renovation.

- ***New Community Center – \$14.5 million***

For discussion purposes, the new 47,000 square foot Community Center is proposed to be located in close proximity to the Aquatic Center. The new facility would include two gymnasiums, one large meeting room (accommodations for 300 people) and a new Council chambers. In addition, the new facility would be able to accommodate the City's existing art and recreational activities which occur at the current facility.

In considering this option, it is important to note that the proposed facility would require property acquisition from the Pella Community School District. In addition, the new facility does not include a theater, but the proposed community meeting room could be used by the community theater group for their performances.

Finally, if the City Council were to proceed with a new Community Center, this could potentially free up the Memorial Building to support other City functions as the new Community Center could be the future home to the American Legion and Veterans for Foreign Wars.

Both of the above options would likely require a community referendum for financing purposes.

City Hall

The City Hall is adequately sized for existing service levels; however, if the City Council proceeds with the proposed municipal telecommunications utility, we will need to reconfigure the floor plan of the main level to accommodate areas needed for utility billing functions. In addition, there is also a proposed reconfiguration of the lower level to accommodate one additional office. The estimated cost of the reconfiguration is \$255,000.

Library

Through focus group meetings, the consultant identified the need for an additional 5,000 square feet of space at the Library to accommodate service levels through 2040. This additional space is attributed to areas needed for children's programming, meeting rooms, storage, and staff work areas. Depending on the service levels approved by Council, potential options for the renovation could range from \$345,000 to \$5.5 million. Staff recommends potential renovation options at the Library should be considered in the same time period as the Community Center as potential new meeting space options for the Community Center could potentially reduce the Library space needs.

Public Safety Complex

The long-term plans for the Public Safety Complex involve a new 28,000 square foot shared Fire/EMS building. The plans also involve renovating the existing Fire and Ambulance buildings to accommodate additional space needs by the Police Department. The estimated cost of the project is \$11.4 million. From City administration's perspective, this project should be considered within the next ten years; however, the time frame may need to be accelerated depending on service level demands of the Pella Community Ambulance. In addition, it would be beneficial if the City were able to move the Council chambers from the Public Safety Complex within the next five years as this would free up space for the Police Department.

Electric/Telecom Utility

The current plans call for a new 15,000 square foot shared Electric/Telecommunications building which could accommodate the operational needs of both departments. The new building would house administration of both utilities and would be located on the current Electric utility site. In addition, the new building would provide storage needs for both departments. This would free up approximately 2,000 square feet in the current Electric building for our distribution staff. The estimated cost of the new building is \$2.3 million. In addition, there is also a need for an additional 15,000 square feet of cold storage for the Electric utility. This should be considered by Council within the next two to five years. However, if the decision is made to construct the 15,000 square feet of cold storage with the proposed Electric/Telecom building, the estimated cost of the new building would be \$3.8 million. This option would also likely provide economies of scale to the City by building a larger facility in one construction season instead of incrementally over a period of years.

Public Works

The forecasted space needs of the Public Works campus involve additional cold storage space needs of approximately 11,700 square feet. The estimated cost of the new building is \$978,000 and should be considered by the City Council within the next 12 to 24 months.

Summary

In summary, staff would again like to emphasize that this is a preliminary assessment and there are multiple ways the City can accommodate its facility needs through the year 2040. However, it is also important to keep in mind that these options are directly related to the service level expectations established by the City Council. Finally, consultants with SEH will be in attendance on Tuesday night to discuss the facility assessment.

ATTACHMENTS: Facility Needs Assessment
REPORT PREPARED BY: City Administration
REVIEWED BY: City Administrator, City Clerk
RECOMMENDATION: Discussion item



City of Pella Facility Needs Assessment

July 2, 2019

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EXECUTIVE SUMMARY

INTRODUCTION

The City of Pella retained Short Elliott Hendrickson, Inc. (SEH) to perform a Facility Needs Assessment of 8 city owned buildings located throughout Pella. Buildings in this assessment include City Hall, Community Center, Police Department, Fire Department, Ambulance Building, Public Library, Electric Distribution Building and the Public Works Complex. The purpose of the Facility Needs Assessment is to provide the City with a comprehensive overview of each facilities current condition and to evaluate the space needs through the year 2040. The assessment also includes an opinion of estimated costs for the recommended improvements, modifications or facility replacement.

SCOPE OF WORK

The Scope of Work included the following:

1. Conduct a Facility Condition Assessment of each building including the following:
 - a. Assess current condition structural systems and building envelope (walls, windows, and doors), roofing systems.
 - b. Assess interior finishes, handicapped accessibility and code deficiencies.
 - c. Assess mechanical, electrical systems.
2. Perform a Space Needs Study for each facility including the following:
 - a. Visit each building to understand current operations and use of space.
 - b. Meet with key stakeholder groups, as identified by the City, to discuss current and future operations and related space needs to accommodate planned operations.
 - c. Develop a space needs matrix identifying anticipated needs through 2040 for each facility.
3. Prepare concept facility plans based on the identified space needs.
4. Develop Estimates of Probable Cost for the identified building improvements, additions or new facilities.

5. Prepare a written report outlining the findings of the condition assessment, space needs study and concept planning efforts. Report shall include Estimates of Probable Cost for the identified improvements, building additions or new facilities

METHODOLOGY

FACILITY CONDITION ASSESSMENT

The Facility Conditions Assessments were completed by staff specializing in architectural, mechanical and electrical engineering fields. The assessment process began with a review of available original building drawings and previously completed reports and studies followed by a site visit. During the site visit a facility tour was conducted with city staff to visually observe existing interior and exterior conditions and discuss current and past issues at each building included in this study. Detailed notes, dimensions and photographs were taken to document the current conditions during the site visit. At the completion of the assessment the collected data was compiled into a written report outlining the findings and describing the current conditions and deficiencies along with recommended repairs or improvements.

The assessment and recommendations in this report are based on limited site observations. Field observations were limited to visual observations without testing of materials and without removal of finishes to verify obstructed construction. Observations were not made in all locations throughout the building for the purpose of this evaluation. However, an attempt was made to observe representative conditions in each part of the structure and of most of the different types of construction and finishes.

SPACE NEEDS STUDY

The City's goal for this project was to identify the anticipated space needs for each facility through the year 2040. In order to achieve the most accurate projections for future space needs there are several factors that need to be considered for each facility such as current needs, anticipated growth, staff projections, level of public use or interaction, industry trends, and population growth to name a few.

We began this process by asking participants to review and fill out our building questionnaire tool. This questionnaire focuses on collecting readily available data on current space needs, historical data on staff levels and asking questions about what the anticipated future needs may be. As a second step our team visited each facility again to sit down and interview staff, project stakeholders, city officials and user groups. Through these conversations we gained a detailed understanding of the daily operations, current special deficiencies, expected growth, and overall future needs.

As a final step in this process we compiled the data collected into a space needs matrix for each building. Using the information we had gathered along with industry space standards and our knowledge of municipal building design we categorize the types of space and assign a square footage to each area. The result of this process is a comprehensive list of each buildings space needs and the anticipated total square footage needed to accommodate future growth through 2040.



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INTRODUCTION

The Pella City Hall is located at 825 Broadway Street in the center of the downtown area. The site is located directly across from the historic town square. The original building was built in 1906 as a Carnegie Library and served the City of Pella until its conversion to the City Hall in 2006. The 2006 conversion included building additions to the north and south of the original library building, updated interior finishes and the addition of an elevator. The 2-story City Hall building now houses city administration, city clerk, finance, human resources, and utility billing on the upper level and planning, zoning and building inspection services on the lower level.

SITE

The City Hall building is located on an approximate one-quarter acre site in the center of the historic downtown area. The front side of the building (east façade) overlooks a small landscaped plaza area with bench seating and a veterans memorial. The plaza pavement/pavers and landscaping are in good condition. Behind the building (west façade) is a 14 stall parking lot. The parking lot pavement is also in good condition.

BUILDING SHELL

The exterior walls of the original 1906 building are constructed of load bearing brick masonry. This masonry is in fair condition but several areas are in need of tuck-pointing. It is recommended that portions of the walls be re-pointed in the coming year to prevent water infiltration and further structural deterioration of the building. Primary areas in need of re-pointing were along the west façade and at the roof level. The masonry cladding of the exterior walls of the building addition to the original Carnegie Building are in good condition. The floor and roof structure was not visible at the time of the site visit for review. There did not appear to be any signs of structural deterioration, or settlement of the building.

Exterior windows are fixed aluminum clad wood units with insulated glazing throughout. These units are in good condition.



Roofing Systems



Masonry in need of tuck-pointing

Exterior man doors are painted steel frames and doors and are in fair condition. Several of the doors are showing signs of wear and corrosion beginning to form. It is recommended that exterior doors and frames be cleaned and painted in the near future.

Roofing

Direct roof access was not available at the time of the site visit however the roof was visually observed from the second floor an adjacent building. Roofing systems appeared to consist of a thermoplastic olefin (TPO) single-ply membrane most likely fully adhered to rigid board roof insulation layered directly over the roof deck. Based on comments from the Owner this roof was installed around 2012 and there have been no significant leaking issues noted. The areas of the roof that were visually accessible appeared to be in good condition with no significant deterioration. The existing roofing systems can be expected to function properly, with proper preventative maintenance, for another 15 years. Roof drainage is achieved through a series of metal gutters and downspouts.

Interior Finishes

Interior partition walls are primarily painted gypsum board. Interior glazed windows/partition walls separate a few of the upper level offices and this was noted to create acoustical and privacy issues for staff in these spaces. It is recommended that restroom walls have a tile or durable water resistant finish installed around sinks and toilets, as is required by current building code, should a renovation of these spaces be undertaken in the future.

Interior finishes throughout the building date to the 2006 renovation and in general are in good condition. Floor finishes include a combination of ceramic tile in the entry, lobby and restrooms and carpet flooring in the office spaces. Stairs are clad with vinyl treads and risers.

Ceilings consist of 2-foot square acoustical panels supported by a suspended grid system. Ceilings are in good condition.

Cabinetry in the lower level lunch room and upper level

staff work areas includes plastic laminate clad cabinets and countertops. Lunch room cabinets do not meet current building code requirements for height. Sinks in the lunch room and upper level staff work areas also do not meet current accessibility codes for handicapped access.

The folding partition separating the administration office from the meeting room is in good condition but it was noted that this creates significant acoustical and privacy issues.

Elevator

There is a three-stop, hydraulic elevator that serves the main entry, upper and lower levels of the building. The elevator has a 1,500 pound capacity with a 100 feet per minute travel speed. Interior cab finishes included laminate clad side wall panels, stainless steel front and back walls, painted doors and carpet flooring. Finishes are in good condition and do not show signs of significant wear. The elevator inspection card was displayed in the cab and indicated the unit was up-to-date on its required yearly inspections. Given that the elevator sees a relatively low volume of use it should continue to function properly, with regular maintenance, for the foreseeable future.

MECHANICAL

Building HVAC

The building is heated and cooled via conventional Carrier, vertical fan coil units with electric resistance heat and DX cooling. The two floors are zoned with four (4) units: two (2) for each floor. With limited thermostats and zones, some spaces could have comfort issues where a single thermostat controls spaces with differing loading/usage, which appears to be the case on the upper level with the conference room and offices.

The fan coil units were installed in the early 2000's, which puts the condensing unit compressors near the end of their useful life. Regular maintenance can prolong the life of the condensing units and fan coil units. If there is an issue/repair, these units are R-22 which is an old refrigerant that is no longer manufactured and reclaimed refrigerant is expensive.

In the lower level mechanical room, condensate from a fan coil unit is routed to a floor mounted condensate pump which could potentially cause an issue if the pump fails.

The HVAC units have ventilation air ducted from return air of the fan coil units to exterior louvers. The louvers are installed near the ground so care may need to be taken with snow drifting in the winter. One issue with the return air back to AHU-4, a return grille is located within the corridor. Normally using a corridor for return air is a code violation.

Exhaust fans interlocked with lights for the restrooms appear to be in working order.

Electric cabinet unit heaters are used for supplemental heat near exterior doors.

The fan coil units are near the end of their anticipated life, with replacement or major maintenance expected on most units. An upgraded HVAC system would most certainly improve energy efficiency and provide for opportunities for enhanced comfort as well (humidity control, improved zoning, etc.) If maintained until failure, would not recommend investing any significant money into repair of this system due to its age and refrigerant.

HVAC Controls

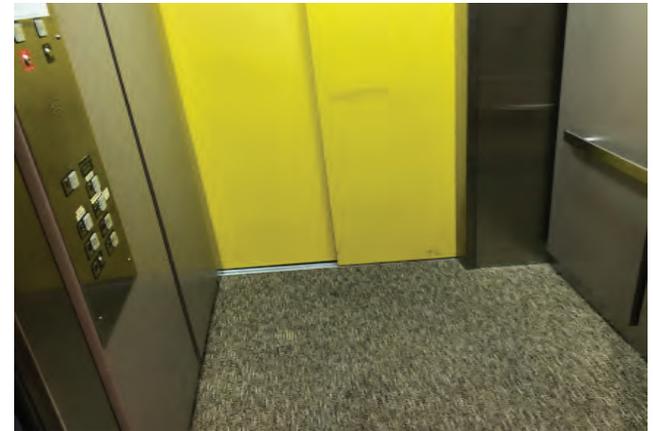
The controls for the fan coil units are stand-alone programmable thermostats. A DDC system could provide for system scheduling and alarms, which would provide an opportunity for enhanced energy savings and alert staff with any issues before potential for damage.

Plumbing

A 3/4" or 1" domestic cold water entrance has a water meter, but no backflow preventer. Further investigation on site would need to be done to determine if backflow prevention is happening further upstream. The plumbing piping is insulated and appears to be in good condition.



Casework in Lunchroom



Elevator Cab Interior

Cold water is routed to a 2kW, 10 gallon, electric water heater that was installed in 2005, which is nearing the end of the water heaters useful life. The domestic water heating system does not have a thermostatic mixing valve, which would allow the hot water storage at 140°F and distribution at a safer 110°F. A master thermostatic mixing valve arrangement minimizes the risk of legionella, but this system doesn't appear to be high risk.

Plumbing fixtures are vitreous china lavatories, toilets (floor mounted) and urinals. There are stainless drinking fountains and stainless steel drop in sinks. Flush valves are automatic and faucets are manual. The plumbing supplies under the lavatory have ADA insulating wrap, but the hot water is missing an ASSE 1070 hot water mixing valve which is a new code item for public lavatories. The plumbing fixtures appear to be newer and in good condition.

Fire Protection

There is no fire protection (sprinkler) system installed in the building.

ELECTRICAL

Power Distribution

A pad-mounted utility transformer is located west of the building next to the alley. Service feeders are routed underground below the main mechanical room located in the lower level where it terminates to a 400 amp, 208/120 volt, 3-phase Square D Power-Style switchboard.

The switchboard above are in fair or good condition having all been installed in 1978. All branch panels were manufactured by Square D and appear to be newer than the switchboard and were likely installed in the early 2000 renovation. Spare breaker capacity is available in both the switchboard and the branch panels. The main switchboard and branch panels could be reused if there was a renovation to the building.

The grounding electrode system needs to be improved. There is not a bond to the incoming water service pipe and

no jumper across the water meter. Arc flash labels are installed on the electrical gear. The study appears to be completed recently. If the report was completed in the last five years the report would not need to be ran again.

According to NFPA 70E 130.5 an arc flash risk assessment should be updated when a major modification or renovation takes place. It shall be reviewed periodically, at intervals not to exceed five years, to account for changes in the electrical distribution system that could affect the results of the arc flash risk assessment. If no major renovations take place in the five years, it is our recommendation to approach the firm that completed the arc flash study to rerun the report to keep costs down.

Interior Lighting

The building fixtures utilize fluorescent lamps. The fixtures can either be replaced with all new LED fixtures or LED tube retrofits. A complete fixture replacement will have more energy savings than replacing with LED tube retrofits. The LED tube retrofit would be far less costly than the complete fixture replacement.

The lighting throughout the building should be replaced with more efficient LED-based luminaries. This would have an impact on the electric bill each month. Energy rebates are available through Bright Energy Solutions, should be considered to help offset upfront replacement costs.

Interior Lighting Controls

No automatic controls (i.e. occupancy sensors) were noted during the walk-through. Manual wall switches are provided in each room. No dimming was noted. Lighting controls that could be updated are manual switches for small rooms. These switches could be replaced with wall mounted occupancy sensors. Daylight harvesting is not recommended for the lighting control upgrade because of the limited number of fixtures, high cost of installation and limited payback.

Exterior Lighting

Wall packs with high pressure sodium (HPS) lamps on the back of the building and decorative fixtures on the front of the building are installed.

All the exterior luminaries could be replaced with new, LED luminaries. Retrofitting the existing HPS luminaries with LED is not recommended since heat dissipation is a major concern. The housings of new LED luminaries are designed for proper heat dissipation and longer life. Energy rebates available through Bright Energy Solutions should be considered to help offset upfront replacement costs.

Life Safety Lighting

Recessed emergency lights with two adjustable heads and battery backup are installed in the building. It is unknown if the batteries are replaced on a regular basis and tested monthly. All emergency lights should be tested and replace any lights that fail.

No exterior life safety egress lighting has been provided at exterior doors. Exterior rated LED emergency battery packs should be added to both exterior doors. Exit signs have been installed along the paths of egress. All exit lights should be tested and replace any lights that fail.

Fire Alarm

A Notifier FireWarden-100 addressable fire alarm system is installed throughout the building. The main fire alarm panel is located in the lower level. Duct detectors were not noted on any of the HVAC units, but are not required because of the size of the units.

In general, smoke detection and heat detection are provided in the building as required. Single action pull stations were noted by exterior doors. Horn/strobe devices were noted in the required spaces.

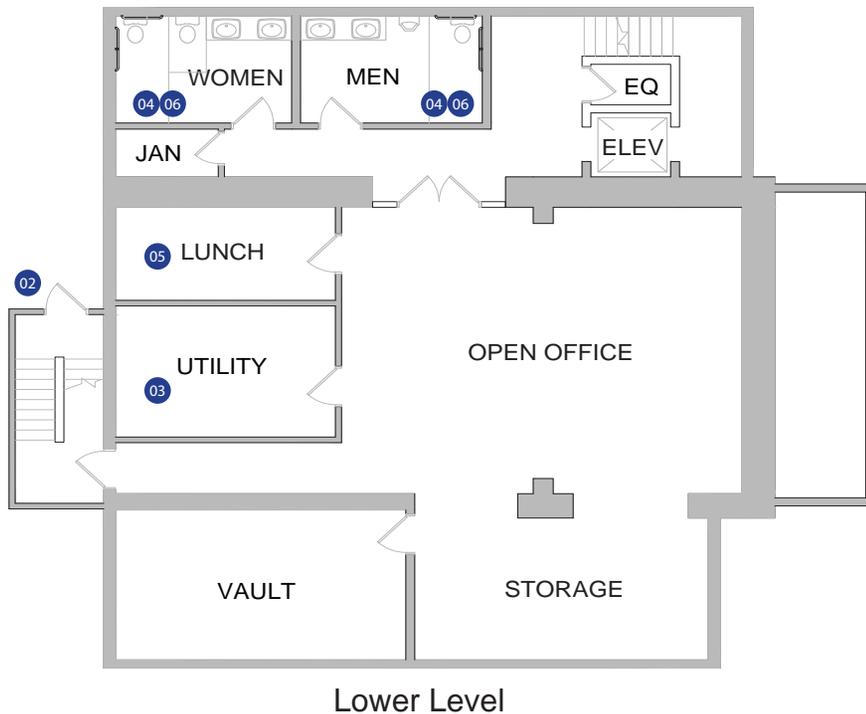
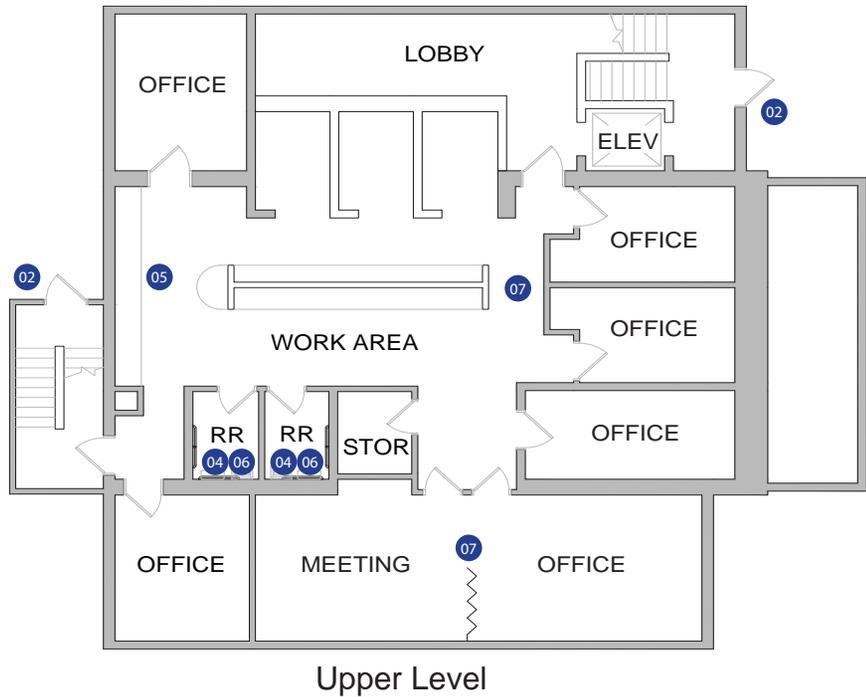
It is recommended that the current fire alarm system and associated devices remain and not be replaced. The fire alarm will likely be supported for the next 10-15 years. When the panel is not supported or replacement parts are no longer available the panel should be replaced.



Common Area



Lobby



Legend - City Hall

- 01 Tuck-point approximately 10-percent of the exterior brick masonry to prevent further deterioration and water infiltration.
- 02 Install code compliant exterior emergency egress lighting throughout the building.
- 03 Provide proper grounding of the electrical systems.
- 04 Provide durable, water resistant wall finishes at toilet and lavatory restroom fixtures.
- 05 Modify cabinets at sink locations in lower level break room and at upper level work room area to meet minimum current accessibility requirements. Current codes require countertops to have a roll under countertop to allow for wheel chair access at sink locations.
- 06 Provide vertical grab bars at handicapped men's and women's restroom.
- 07 To reduce the privacy and acoustical issues it is recommended that the glass office partitions and the folding partition at the meeting room be replaced with solid, permanent walls.

01 Typical at exterior walls

Existing Floor Plan

A

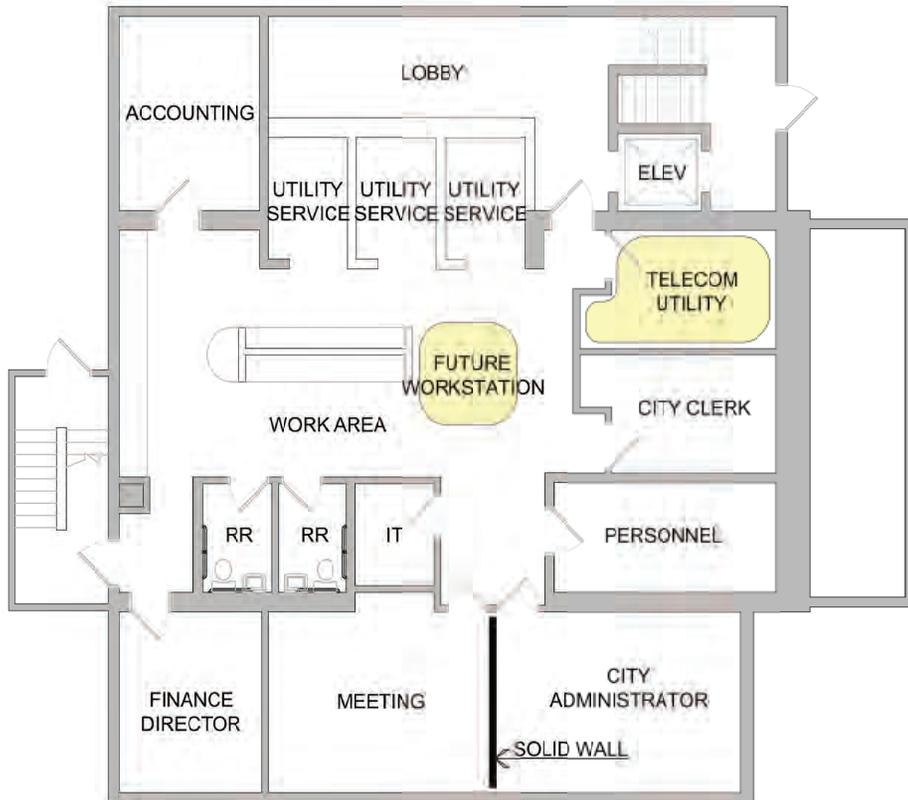
Existing Building Remodel

The current City Hall building is in good condition and while it provides adequate spaces for the current needs of city staff it will likely need some minor modifications to accommodate future growth. With the planned telecom utility being implemented in the near future there will be a need for additional staff to fill customer service positions at City Hall. There is also the planned addition of an Economic Development Director that will need office space at City Hall.

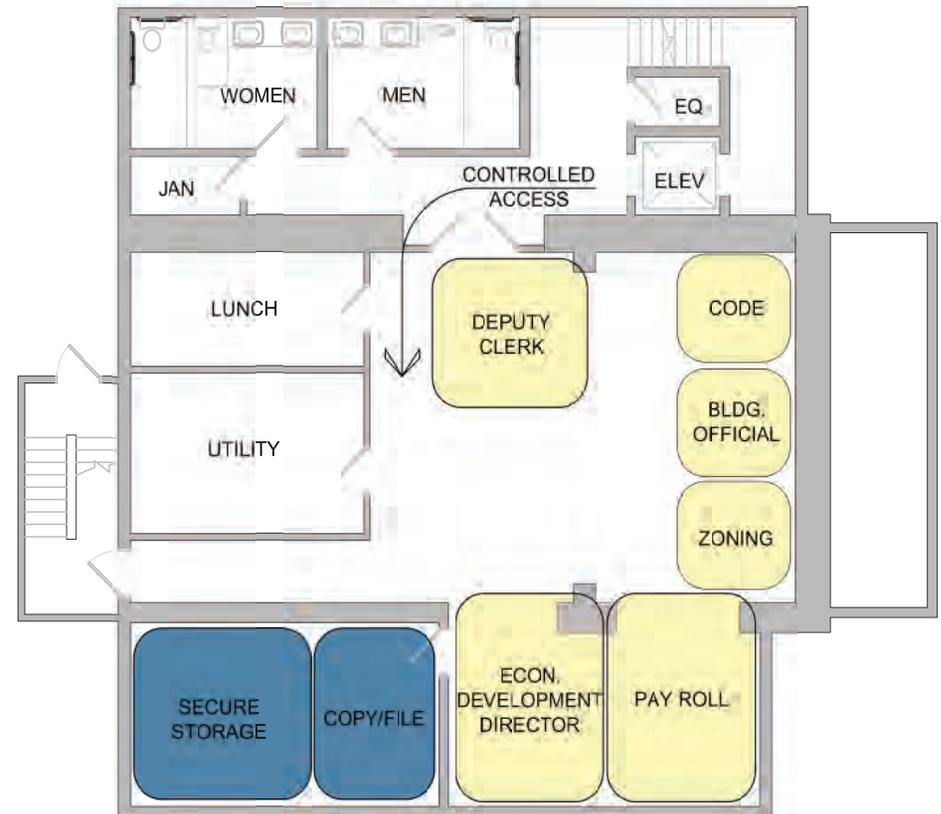
With some minor adjustments to the buildings lower level layout there is an opportunity to add additional office space and improve security by creating a more formal public access point. The upper level could also provide additional work spaces for future telecom customer service personnel with some minor modifications to the existing layout.–The

The City is also in discussions with Marion County regarding the transfer of ownership of the Memorial Building to the City. The Memorial Building is located directly adjacent to City Hall and would provide additional space for future expansion of city offices and meeting spaces. Review of this building was not included in the scope of this project but a brief tour was conducted during our teams site visit. The building is in good overall condition but will require renovations and improvements prior to use as a city building.

Note: Plan layout does not include large meeting room or consultation room.



Conceptual Upper Level Floor Plan



Conceptual Lower Level Floor Plan

City Hall - Estimate of Probable Cost

Estimate of Probable Cost

DESCRIPTION	FORMULA	COST
City Hall Renovations		
Lower Level Improvements	1,500 sf x \$50	\$75,000
Upper Level Improvements	1,000 sf x \$50	\$50,000
HVAC Improvements	2,600 sf x \$15	\$39,000
Electrical Improvements	2,600 sf x \$12	\$31,000
Building Subtotal:		\$195,000
Permitting and Inspections	5%	\$10,000
Design Fees		\$30,000
Contingency	10%	\$20,000
ESTIMATED PROJECT TOTAL:		\$255,000

- Estimates are based on SEH's historical data from similar projects, 2019 RS Means, and current industry market trends.
- The following items are not included in this estimate:
 - Inflation costs (estimated to be 5% per year)
- The preliminary Estimate of Probable Cost prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding market conditions. Accordingly, the Architect cannot and does not warrant or represent that bid prices will not vary from the Owner's budget for the Cost of the Work or from any Estimates of Probable Cost prepared or agreed to by the Architect.

City Hall Space Needs

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
City Administration						
City Administrator	PO	200	1	1	200	Space for small conference table
Finance Director	PO	125	1	1	125	
City Clerk	PO	125	1	1	125	
Personnel Officer	PO	125	1	1	125	
<i>Telecom Utility Office</i>	PO	125	2	2	250	Office for future staff
<i>Telecom Customer Service</i>	WS	60	2	2	120	Work space for future staff / Adjacent to Utility Billing Stations
Utility Billing	WS	60	3	3	180	Work stations directly off of lobby space
Meeting Room	ER	250	-	1	250	Space for up to 15 people seated at table
Accounting Manager	PO	150	-	0	0	This position move to alternate location within city
Payroll Accounting Specialist	PO	150	-	0	0	This position moves to alternate location within city
<i>Consultation Room</i>	ER	80		1	80	Close to public lobby area
Work Area (copy/print/billing/supply)	OA	200	-	1	200	
<i>City Council Room</i>	ER	1,000	-	0	0	At alternate location within city / Up to 100 people
				Subtotal	1,655	
Planning and Zoning						
<i>Meeting Room</i>	ER	160	-	1	160	Space for up to 8 people seated at table
Reception Area	OA	200	-	1	200	Doubles as Deputy Clerk work space
<i>Economic Development Director</i>	PO	150	1	1	150	
Zoning Administrator	WS	100	1	1	100	
Code Enforcement	WS	100	1	1	100	
Building Official	WS	100	1	1	100	
Deputy City Clerk	WS	100	1	0	0	Deputy Clerks work station is at Reception Area / Security Point
<i>Work Area (copy/print/supply)</i>	OA	80	-	1	80	
<i>Zoning Board Room</i>	ER	500	-	0	0	At alternate location / Up to 50 people
				Subtotal	890	

City Hall Space Needs

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Shared Support Spaces						
Vault/Storage	ER	150	-	1	150	
Lunch Room	ER	120	-	1		
IT Room	ER	100	-	1	100	
Mechanical Room	ER	150	-	1	150	
Public Restrooms	ER	150	-	2	300	
Staff Restrooms	ER	70	-	2	140	
Lobby/Waiting Area	OA	100	-	1	100	
Stairs/Elevator	OA	200	-	1	200	
Entry/Vestibule	OA	100	-	1	100	
				Subtotal	1,995	
TOTAL STAFF			16			
Subtotal - Net Square Feet						4,540
Partition & Circulation Factor			20%			908
TOTAL GROSS SQUARE FEET						5,448



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Design Options

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INTRODUCTION

The Community Center building is located at 712 Union Street in the center of the downtown area. The original building was built in 1915 and served as a school until the 1970's when ownership was transferred to the City. An addition was added to the east side of the structure and included additional usable interior spaces and an entry and elevator that likely served as a handicapped accessible entrance. The building was transformed to serve as a Community Center and has been providing space for a variety of functions since.

The 3-story building now houses community center functions such as arts programs, children's after school programming, senior's programming, leasable space for businesses providing community services and a home for the Union Street Players.

Site

The Community Center building is located on an approximate one acre site near the center of the historic downtown area. The front side of the building (south façade) overlooks a small landscaped plaza area with monumental concrete stair that are in fair condition. The building site is elevated from the street level making handicapped accessible to the building a challenge.

As part of a previous addition to the east side of the building an accessible ramp was added that leads directly to the elevator. This ramp is no longer compliant with current codes and may be difficult for disabled and elderly persons to transverse given its steep incline and lack of complaint handrails. The ramp leads directly to an alleyway to the east of the building that also creates a safety concern as vehicle traffic passes directly adjacent to the bottom of the ramp structure. There is also a lack of available handicapped parking in close proximity to the handicapped building entry. It is recommended that this entry and ramp be reconfigured to allow for a code complaint and safe entrance to the building.



Aged Roofing



Gymnasium

BUILDING

Building Shell

The exterior walls of the original 1915 building are constructed of load bearing brick masonry. This masonry is in fair condition and shows evidenced of previous repairs and tuck pointing efforts. It is recommended that additional tuck-pointing work be completed to maintain the building in weather tight condition. It is estimated that approximate 10 to 15-percent of the exterior wall surface is in need of additional repair work.

The floor and roof structure was not directly visible at the time of the site visit for review. It is believed to be constructed from wood framing and dates to the original building construction. There did not appear to be any signs of structural deterioration, or settlement of the building.

Exterior windows are primarily operable wood units with insulated glazing. These units are in fair condition and could continue to serve the building in the short term. It would be recommended that they be replaced with energy efficient new windows should the building undergo a significant renovation project.

Exterior man doors vary throughout the building. There is a combination of painted steel frames and doors, pre-finished aluminum storefront entry doors and wood doors at the main entry. Overall the doors range from poor to fair condition and should be considered for replacement. The wood doors at the main entry on the south façade of the building could be replaced or restored and refinished to preserve their historical value if desired.

Roofing

Roofing systems appeared to consist of a combination thermoplastic olefin (TPO) and EPDM single-ply membranes most likely fully adhered to rigid board roof insulation layered directly over the roof deck. Based on visual observations it appears the TPO membrane located on the northern and eastern portion of the building was installed within the past 10 years and shows no significant signs of

deterioration. The remainder of the roof consists of EPDM membrane roofing and is in need or replacement. The membrane is showing signs of deterioration at the seams and shrinkage at the roof area over the theater. Staff did not note any significant active leaks in the roof at this time it is recommended that the roofing be replaced within the next 2 to 3 years to prevent further deterioration and possible leaking issues.

Elevator

There is a three-stop, hydraulic elevator that serves the main entry, upper and lower levels of the building. It is believed the elevator was added in the 1970's as part of the conversation from a school to a Community Center. The elevator has a 2,000 pound capacity with a 125 feet per minute travel speed. Interior cab finishes included vinyl clad side wall panels, stainless steel front wall, painted doors and vinyl tile flooring. Finishes are in poor condition and show signs of significant wear. The elevator inspection card was displayed in the cab and indicated the unit was up-to-date on its required yearly inspections. Given the age of the elevator it is recommended that any significant renovations to the building include elevator modernization. This would likely include replacement of the existing controls, elevator machinery, doors, and interior finishes. A modernization would also allow the unit to be brought up to current elevator codes and standards and include current technology and safety features.

Theater

The building includes an approximate 300+ person auditorium space with balcony seating and a thrust stage. The interior finishes appear to have been updated in the past and while continuing to serve their intended purpose are starting to show signs of wear. The theater space lacks code compliant handicapped accessible seating spaces.

MECHANICAL

Building HVAC

The community center was constructed in 1916. It served as the high school building until about 1962 and the middle school building for another 16 years. This building didn't officially become the community center until around 1978.

The building is heated by two (2) steam boilers located in the basement with steam routed to radiators and coils around the building.

The combustion air damper for the steam boilers does not open when the boilers run.

Ventilation for parts of the building is served by a fan room in the basement. An outside air louver and chase provide fresh air down a shaft into the basement mixing room. Return air is ducted to this room. This mixed air is pulled across a steam coil to heat the air as needed. An old steam humidifier is downstream of the steam pre-heat coil. A large, open, double inlet forward curved fan pulls air from the room and is ducted within the building for ventilation. At the time, there was no belt on the fan, but maintenance staff said they still use this fan for ventilation and were planning on putting a new belt on shortly. This fan room and associated equipment are very dirty and do not provide an opportunity for good indoor air quality. This is a very outdated way of providing ventilation and the recommendation is to abandon it and provide ventilation in an alternate approach.

Around 1989, the auditorium was renovated with heating and cooling provided via a steam, DX McQuay indoor air handling located in a penthouse built on the roof. The condensing unit is located just outside the penthouse and is an R-22 unit.

The third level rooms on the west side of the building have steam unit ventilators.

Window air conditioners are used to provide localized cooling throughout the building.



Restroom



Stairs



Theater

The third level corridor has two (2), DX blower coil units located above the ceiling with condensing units located on the roof.

The kitchen has an exhaust hood and fan, but does not have kitchen equipment underneath the hood.

The art rooms have two (2) kilns with individual exhaust.

In general, All HVAC systems in the community center are outdated, past their anticipated life and should be replaced.

Steam System

The building is heated by two (2) steam boilers located in the basement. While the age of the boilers are unknown, it very well could be original to the building as originally coal fired units. At some point they were converted to natural gas, as they operate today. There are also fuel oil tanks that operate on dual fuel.

There is also a smaller steam boiler but it has been disconnected and is not operational.

The steam boilers and associated equipment are past its useful life. One had a stamp that said it was repaired in 2007 by the Iowa Boiler and Welding Company. While some components have been repaired and replaced (condensate return station pumps), overall this entire steam system is past its useful life and is recommended for replacement.

HVAC Controls

The controls for the building are pneumatic. Some pneumatic actuators have been replaced. A DDC system would provide for better control, system scheduling and alarms. This would provide an opportunity for enhanced energy savings and alert staff with any issues before potential damage.

The pneumatic air compressor is broken into separate parts for the tank, compressor and air dryer. It appears to be well passed its anticipated life.

Plumbing

A roughly 1-1/2" domestic cold water entrance with meter and backflow preventer is located in the basement of the gym. The cold water is routed through a filter due to poor water quality from the city mains and onto the rest of the building.

Cold water is routed to a 76 gallon, natural gas, commercial Rheem water heater that was installed in 2016, which means that this has a lot of life left. There is an old steam to domestic water tank, but it has since been disconnected. The domestic water heating system does not have a thermostatic mixing valve, which would allow the hot water storage at 140°F and distribution at a safer 110°F. A master thermostatic mixing valve arrangement minimizes the risk of legionella, and with this amount of storage and potential intermittent use, adding a thermostatic mixing valve would be recommended.

The domestic water circulating pump looks relatively new and some plumbing piping has been modified and/or replaced in the boiler room.

Galvanized piping is pervasive throughout the building for domestic water and sanitary and should be replaced.

Plumbing fixtures are vitreous china lavatories, toilets (floor mounted) and urinals. Flush valves are manual and faucets are manual. There are stainless drinking fountains (some with bottle fillers) and stainless steel drop in sinks. The plumbing under some of the lavatories do not have ADA insulating wrap on the drainage or water supplies and the hot water is missing an ASSE 1070 hot water mixing valve which is a new code item for public lavatories. Much of the plumbing fixtures are dated within the building.

The 3-compartment sink in the kitchen is direct connected to the sanitary. Some jurisdictions would require the 3-compartment sink to be indirectly connected to the sanitary with a grease trap downstream.

Fire Protection

There is no Fire protection (sprinkler) system installed in the building, but there are wet fire protection standpipes near the stairwells with hose valves on each floor. A backflow preventer is installed in the basement to serve these standpipes.

ELECTRICAL

Power Distribution

A pad-mounted utility transformer is located north of the building. Service feeders are routed underground below the main mechanical room located in the lower level where it terminates to an 800 amp, 208/120 volt, 3-phase Square D Power-Style switchboard. The service conduits are routed overhead in the basement. This installation does not meet the current NFPA 70 230.6. To meet the NFPA requirements the services feeders would need to be installed in two inches of brick or concrete. Another option would be to install a service disconnect on the exterior of the building.

The switchboard above is in fair to poor condition. The age of the switchboard is not known but looks to be over 30 years old. Switchboard housing is rusting and dirty. The switchboard was not opened but the dirt on the outside is also likely on the inside of the panel. Due to the condition of the switchboard and since the switchboard is in a harsh location it is recommended to replace the switchboard.

Branch panels were manufactured by multiple manufacturers from different vintages. Some branch panels are fuse boxes that are likely well over 50 years old. The replacement of the fuse boxes should be a high priority. When the fuse boxes are replaced the wiring should be evaluated. The wiring to the panels and the devices may also need to be replaced. Other branch panels are manufactured by Eaton or Square D. These branch panels still can have breakers purchased for them they would not need to be replaced.



Boiler



Damaged Ceilings

A distribution panel is located on the third level that feeds the air handling unit, auditorium and auditorium lighting. The distribution panel is manufactured by Square D and appears to be in good condition. During a renovation the distribution could be re-fed and reused.

The grounding electrode system needs to be improved. There is not a bond to the incoming water service pipe and no jumper across the water meter.

Arc flash labels are installed on the electrical gear. The study appears to be completed recently. If the report was completed in the last five years the report would not need to be ran again. According to NFPA 70E 130.5 an arc flash risk assessment should be updated when a major modification or renovation takes place. It shall be reviewed periodically, at intervals not to exceed five years, to account for changes in the electrical distribution system that could affect the results of the arc flash risk assessment. If no major renovations take place in the five years it is our recommendation to approach the firm that completed the arc flash study to rerun the report to keep costs down.

Interior Lighting

The building fixtures utilize fluorescent lamps and incandescent lamps. The fluorescent fixtures can either be replaced with all new LED fixtures or LED tube retrofits. A complete fixture replacement will have more energy savings than replacing with LED tub retrofits. The LED tube retrofit would be far less costly than the complete fixture replacement. Incandescent fixtures would be replaced with LED fixtures and would not have the option for LED tube retrofits.

The lighting throughout the building should be replaced with more efficient LED-based luminaries. This would have an impact on the electric bill each month. Energy rebates may be available through Bright Energy Solutions and should be considered to help offset upfront replacement costs.

Interior Lighting Controls

No automatic controls (i.e. occupancy sensors) were noted during the walk-through. Manual wall switches are provided in each room. No dimming was noted.

Lighting controls that could be updated are manual switches for small rooms. These switches could be replaced with wall mounted occupancy sensors. Daylight harvesting is not recommended for the lighting control upgrade because of the limited number of fixtures, high cost of installation and limited payback.

The auditorium has a separate lighting and lighting control system. The theatrical lights appear to be functional. On the third floor near the HVAC unit that feeds to the auditorium is the theatrical lighting control panel. This panel has a fan that constantly circulates air through the panel. The filters to the panel appear to be dirty. The filters would need to be changed more frequently or remove the existing roof ballast to clean the space. According to the manufacturer representative for the lighting control panel, it is about 20 years old and replacement parts are still available. Since the auditorium is not used very frequently is not recommended to the replace the lights or the lighting control system.

Exterior Lighting

Wall packs with high pressure sodium (HPS) lamps are installed on the exterior of the building.

All the exterior luminaries could be replaced with new, LED luminaries. Retrofitting the existing HPS luminaries with LED is not recommended since heat dissipation is a major concern. The housings of new LED luminaries are designed for proper heat dissipation and longer life. Energy rebates available through Bright Energy Solutions should be considered to help offset upfront replacement costs.

Life Safety Lighting

Surface mounted emergency lights with two adjustable heads and battery backup are installed in the building. It is unknown if the batteries are replaced on a regular basis and tested monthly. All emergency lights should be tested and replace any lights that fail.

No exterior life safety egress lighting has been provided at exterior doors. Exterior rated LED emergency battery packs should be added to both exterior doors.

Exit signs have been installed along the paths of egress. Some exit signs are also combination emergency lights. All exit lights should be tested and replace any lights that fail.

No emergency stop button is installed for the boiler shutdown. The boiler emergency stop button would need to be installed outside the door to the boiler room.

Fire Alarm

A Simplex 4006 addressable fire alarm system is installed throughout the building. The main fire alarm panel is located on the first floor at the south entrance. Duct detectors are noted on the HVAC unit that feeds the auditorium.

In general, smoke detection and heat detection are provided in the building as required. Single action pull stations were noted by exterior doors. Horn/strobe devices were noted in the required spaces. The horn/strobe devices are newer and the pull stations are older from a previous fire alarm system.

It is recommended that the current fire alarm system and associated devices remain and not be replaced. The fire alarm will likely be supported for the next 10-15 years. When the panel is not supported or replacement parts are no longer available the panel should be replaced.



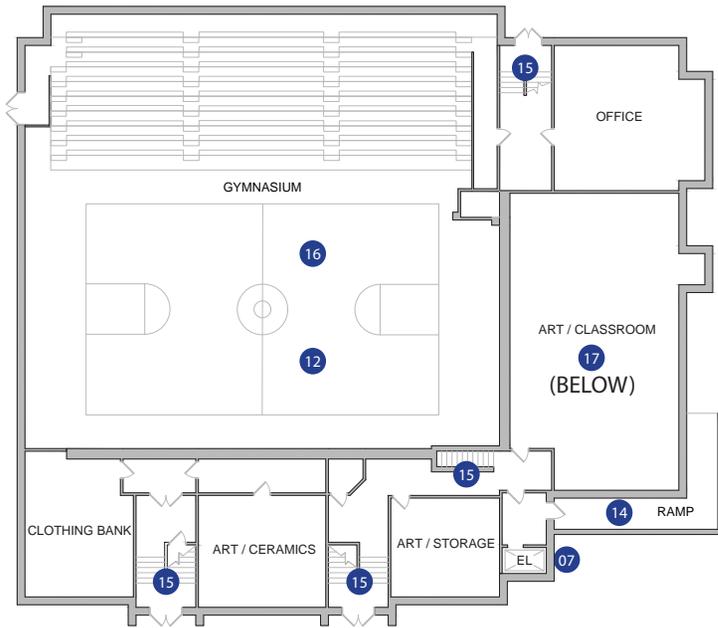
Carpet



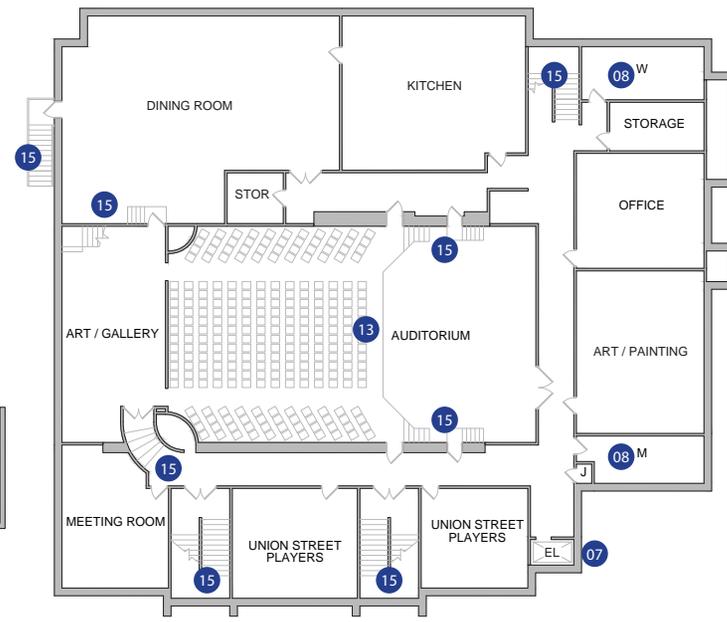
Casework



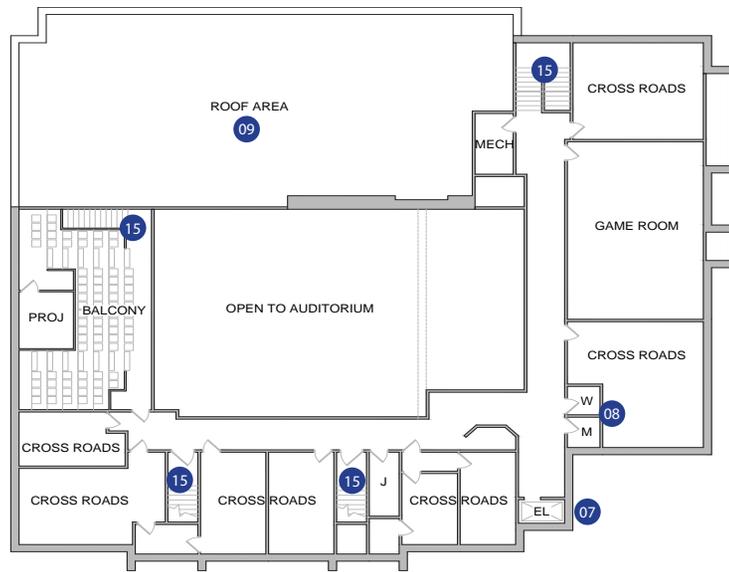
Window



Lower Level



Main Level



Second Level

Legend - Community Center

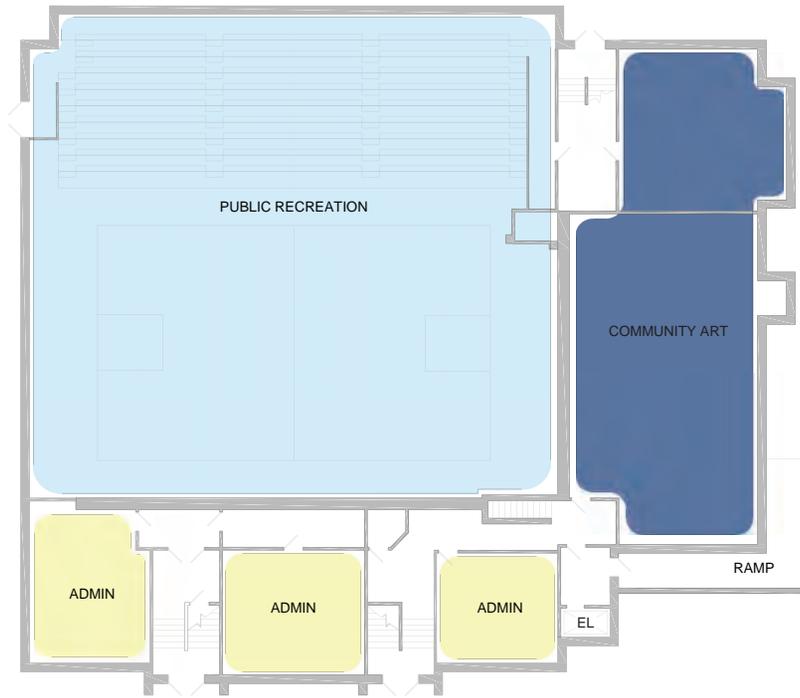
- 01 Typical exterior walls
- 02 Typical HVAC system
- 03 Typical Boilers
- 04 Typical HVAC system
- 05 Typical domestic water piping
- 06 Typical fire sprinkler system
- 09 Typical roofing system
- 10 Typical interior door hardware
- 11 Typical interior finishes
- 18 Typical all exterior windows
- 19 Typical all exterior doors

- 01 Tuck-point approximately 15-percent of the exterior brick masonry to prevent further deterioration and water infiltration.
- 02 Replace Heating, Ventilation and Air Conditioning Systems (HVAC).
- 03 Replace Boilers
- 04 Replace HVAC controls
- 05 Replace domestic water piping to eliminate galvanized pipe
- 06 Install fire sprinkler system throughout entire building
- 07 Modernize existing elevator systems
- 08 Provide accessibility upgrades to restrooms to comply with current codes
- 09 Replace roofing systems
- 10 Replace interior door hardware to provide handicapped accessible hardware and code required panic exit hardware
- 11 Replace interior floor, ceiling and wall finishes
- 12 Repair damaged gymnasium ceiling
- 13 Provide code compliant handicapped accessible seating in theater space
- 14 Provide code compliant accessible entry ramp
- 15 Provide code compliant handrails at stairs
- 16 Create accessible entry to gymnasium floor level
- 17 Significant water infiltration at lower level Mechanical Room
- 18 Replace exterior windows with energy efficient units
- 19 Replace existing doors

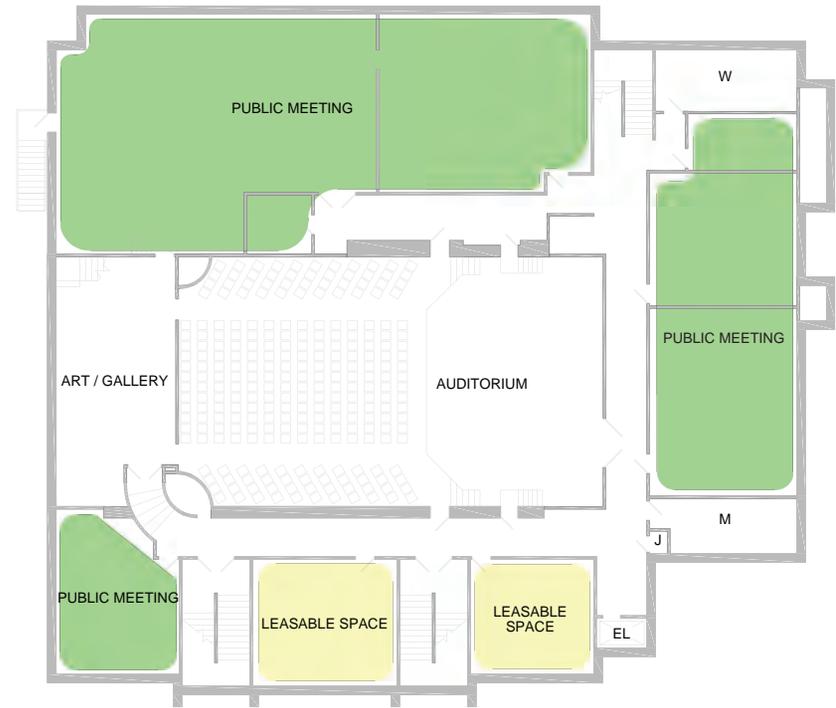
A

Renovation of Existing Building

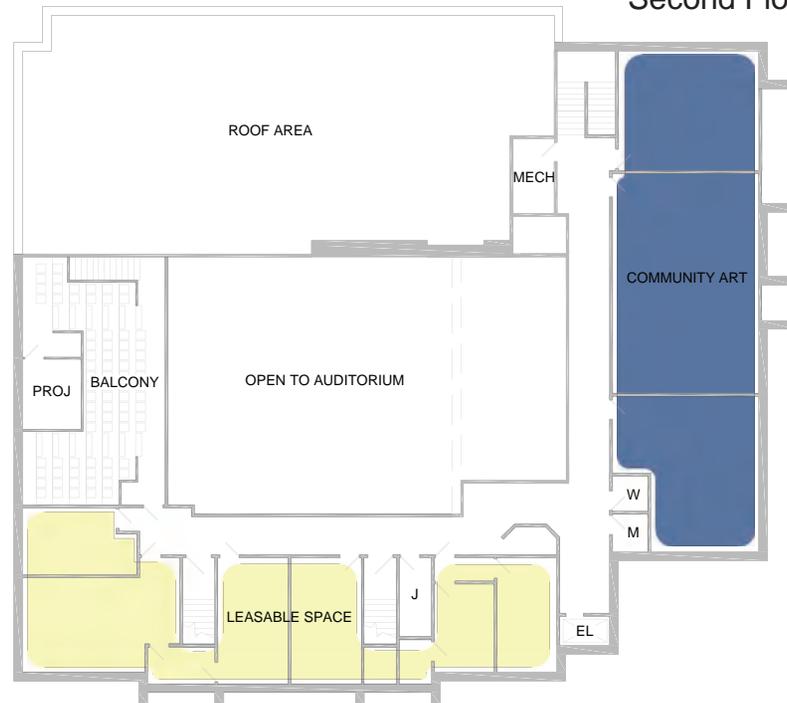
The existing Community Center Building has approximately 20,000 square feet of space that could be dedicated to community center function while leaving the theater in place. The current space needs analysis for the Community Center has identified approximately 45,000 square feet of needed space to support the full building program leaving slightly more than 50-percent of programmed spaces unaccounted for at the existing site. The existing building renovation would require complete replacement of the existing heating, ventilation and air conditioning (HVAC) and electrical systems. Interior partitions would be removed/relocated to provide spaces that would better support assigned functions and interior finishes would be completely replaced. Additional items as identified in the building condition assessment would be recommended as part of this renovation including, but not limited to, new roofing, elevator modernization and complete renovation of restrooms to comply with current handicapped accessibility codes.



First Floor Plan



Second Floor Plan



Third Floor Plan

Community Center Option A - Estimate of Probable Cost

Base Bid						
Section	Description	Quantity	Unit	Total Cost		
				Cost		Total
01 00 00	General Conditions (10% of building subtotal)				\$	629,313.00
02 00 00	Existing Conditions				\$	236,880.00
	Building Demolition	39480	SF	\$ 2.00	\$	78,960.00
	Mechanical Demolition	39480	SF	\$ 2.00	\$	78,960.00
	Electrical Demolition	39480	SF	\$ 2.00	\$	78,960.00
03 00 00	Concrete				\$	30,000.00
	Exterior Concrete Ramp	40	LF	\$ 750.00	\$	30,000.00
04 00 00	Masonry				\$	106,000.00
	Tuckpoint Masonry Wall (approximately 15% of exterior)	3,500	SF	\$ 18.00	\$	63,000.00
	Replace Brick Masonry Units (approximately 4% of exterior)	860	SF	\$ 50.00	\$	43,000.00
05 00 00	Metals				\$	58,500.00
	Exterior Steel Stair	1	Flight	\$ 18,000.00	\$	18,000.00
	Steel Handrails at Interior Stairs	270	LF	\$ 100.00	\$	27,000.00
	Steel Guardrails at Exterior Ramp	90	LF	\$ 150.00	\$	13,500.00
06 00 00	Wood and Plastic				\$	34,550.00
	Wall Cabinets	58	LF	\$ 175.00	\$	10,150.00
	Base Cabinets with Countertop	58	LF	\$ 250.00	\$	14,500.00
	Solid Surface Window Sills	165	SF	\$ 60.00	\$	9,900.00
07 00 00	Thermal and Moisture Protection				\$	432,070.00
	Metal Parapet Cap Flashing	644	LF	\$ 30.00	\$	19,320.00
	EPDM Fully Adhered Roofing (membrane and insulation)	14,380	SF	\$ 22.00	\$	316,360.00
	Sprayed Insulation (Exterior walls)	21,420	SF	\$ 4.50	\$	96,390.00
08 00 00	Openings				\$	268,800.00
	Interior Wood Doors	58	EA	\$ 1,200.00	\$	69,600.00
	Exterior Entry Storefront	10	EA	\$ 1,500.00	\$	15,000.00
	Exterior Windows	2,360	SF	\$ 55.00	\$	129,800.00
	Door Hardware	68	EA	\$ 800.00	\$	54,400.00
09 00 00	Finishes				\$	785,585.00
	Steel Stud and Gypsum Board Walls	30,000	SF	\$ 8.00	\$	240,000.00
	Tile Wall Finish	1,800	SF	\$ 16.00	\$	28,800.00
	Painting	1	LS	\$ 60,000.00	\$	60,000.00
	Acoustical Ceiling Tile	39,480	SF	\$ 4.50	\$	177,660.00
	Tile Flooring	2,350	SF	\$ 14.00	\$	32,900.00
	Carpet Flooring	3,200	SY	\$ 38.00	\$	121,600.00
	Hardwood Gym Flooring	4,985	SF	\$ 25.00	\$	124,625.00
10 00 00	Specialties				\$	33,250.00
	Interior Signage	30	EA	\$ 75.00	\$	2,250.00
	Fire Extinguishers	12	EA	\$ 250.00	\$	3,000.00
	Restroom Accessories	16	EA	\$ 250.00	\$	4,000.00
	Restroom Stall Dividers	16	EA	\$ 1,500.00	\$	24,000.00

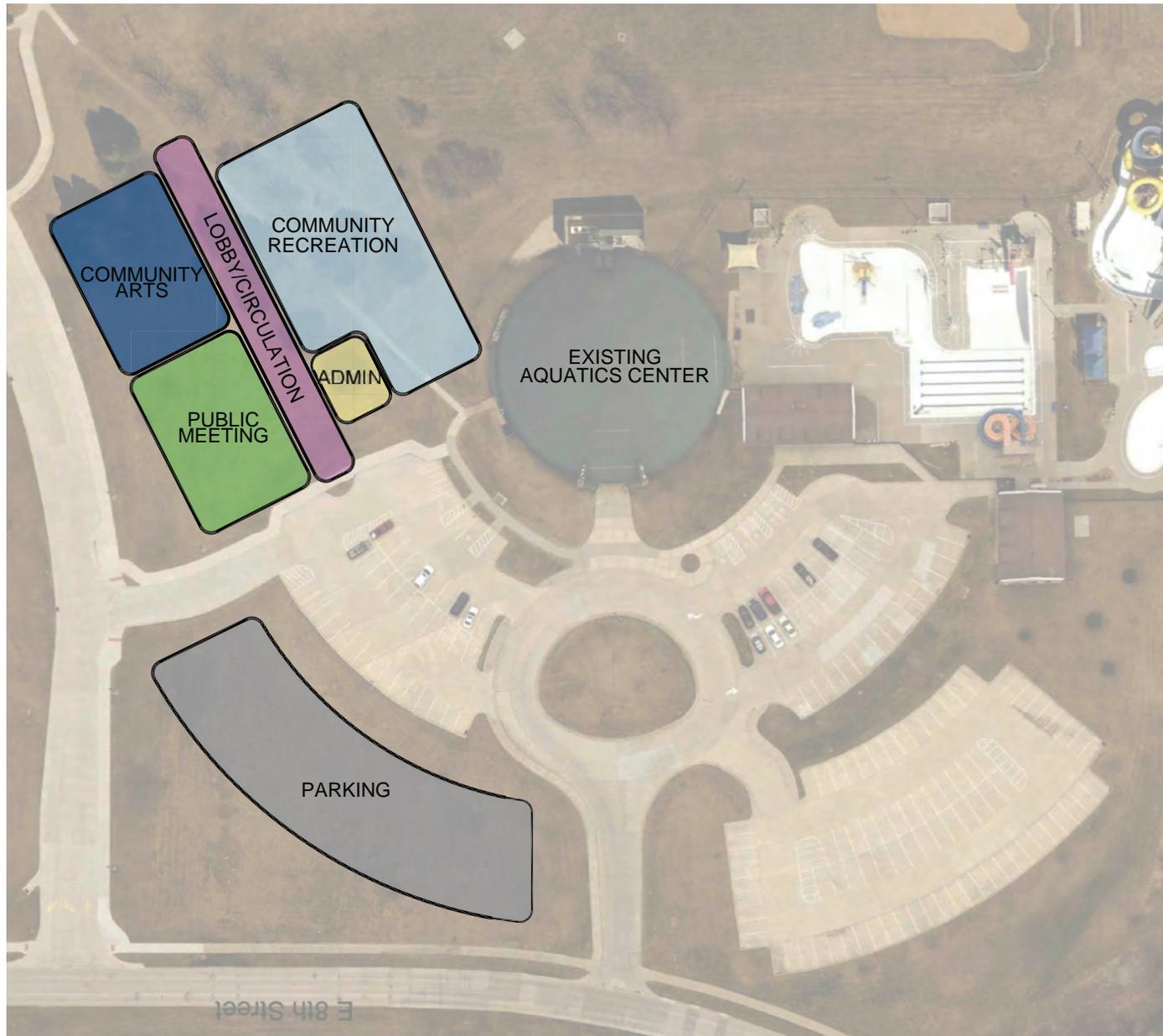
11 00 00	Equipment					\$	390,000.00	
	Gym Equipment	1	LS	\$	15,000.00	\$	15,000.00	
	Commercial Kitchen Equipment	1	LS	\$	75,000.00	\$	75,000.00	
	Theater Seating	300	EA	\$	1,000.00	\$	300,000.00	
14 00 00	Vertical Circulation					\$	195,000.00	
	Hydraulic Elevator Replacement	1	EA	\$	120,000.00	\$	120,000.00	
	Accessibility Lift (Gym Floor Access w/shaft)	1	EA	\$	75,000.00	\$	75,000.00	
21 00 00	Fire Sprinkler System					\$	157,920.00	
	Wet Pipe Sprinkler System	39480	SF	\$	4.00	\$	157,920.00	
22 00 00	Plumbing					\$	380,135.00	
	Plumbing Fixture	15	EA	\$	1,500.00	\$	22,500.00	
	Backflow Preventer	1	EA	\$	2,000.00	\$	2,000.00	
	Additional Restrooms	16	Fixture	\$	10,000.00	\$	160,000.00	
	Domestic Water Piping	39480	SF	\$	2.50	\$	98,700.00	
	Sanitary Drain/Vent Piping	39480	SF	\$	2.00	\$	78,960.00	
	Storm Drain Piping	14380	SF	\$	1.25	\$	17,975.00	
23 00 00	HVAC					\$	1,563,500.00	
	Gym - Single Zone VAV	7900	SF	\$	30.00	\$	237,000.00	
	Auditorium - Single Zone VAV	4000	SF	\$	30.00	\$	120,000.00	
	VRF	33100	SF	\$	35.00	\$	1,158,500.00	
	Kitchen Hood	12	FT	\$	1,000.00	\$	12,000.00	
	Makeup Air Unit	3000	CFM	\$	12.00	\$	36,000.00	
26 00 00	Electrical					\$	1,598,940.00	
	Lighting	39480	SF	\$	16.00	\$	631,680.00	
	Power	39480	SF	\$	13.00	\$	513,240.00	
	Phone / Data	39480	SF	\$	5.00	\$	197,400.00	
	Fire Alarm	39480	SF	\$	2.50	\$	98,700.00	
	Door Security	39480	SF	\$	2.00	\$	78,960.00	
	CCTV	39480	SF	\$	2.00	\$	78,960.00	
32 00 00	Site Improvements					\$	22,000.00	
	6" Water Service	50	LF	\$	40.00	\$	2,000.00	
	Street Patching	1	LS	\$	5,000.00	\$	5,000.00	
	Site Restoration	1	LS	\$	15,000.00	\$	15,000.00	
Estimated Building Subtotal							\$	6,922,443.00
	Contractor Overhead and Profit				10.00%	\$	692,244.30	
	Contingency				20.00%	\$	1,384,488.60	
	Fixtures, Furnishings & Equipment (FF&E)				6.00%	\$	415,346.58	
	Permitting and Testing				5.00%	\$	346,122.15	
	Design Fees				8.00%	\$	553,795.44	
Estimated Construction Cost							\$	10,314,440.07

This Estimate of Probable Cost prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding market conditions. Accordingly, the Architect cannot and does not warrant or represent that bid prices will not vary from the Owner's budget for the Cost of the Work or from any Estimates of Probable Cost prepared or agreed to by the Architect.

B

New Building Adjacent to Pella Community Aquatic Center

Construct an all new approximately 45,000 square foot facility adjacent to the existing aquatic center facility. This option allows for a facility that accommodates all current needs and provides space for future expansion and growth.



Site Plan - Option B

Community Center Option B - Estimate of Probable Cost

Estimate of Probable Cost

DESCRIPTION	FORMULA	COST
Community Center Building	45,000 sf x \$240	\$10,800,000
Site Development		\$500,000
Building and Site Subtotal:		\$11,300,000
Fixtures, Furnishings and Equipment	6%	\$670,000
Permitting and Inspections	5%	\$565,000
Design Fees	8%	\$900,000
Construction Contingency	10%	\$1,100,000
ESTIMATED PROJECT TOTAL:		\$14,535,000

- Estimates are based on SEH's historical data from similar projects, 2019 RS Means, and current industry market trends.
- The following items are not included in this estimate:
 - Land acquisition
 - Inflation costs (estimated to be 5% per year)
 - Site clearing (existing building demolition costs)
- The preliminary Estimate of Probable Cost prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding market conditions. Accordingly, the Architect cannot and does not warrant or represent that bid prices will not vary from the Owner's budget for the Cost of the Work or from any Estimates of Probable Cost prepared or agreed to by the Architect.

Community Center

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	Subtotal NSF	Comments
Community Center Administration						
Community Services Director	PO	200	1	1	200	Space for small conference table
Business / Community Center Mgr.	PO	150	1	1	150	
Recreation Manager	PO	150	1	1	150	
Administrative Assistant	WS	100	1	1	100	Share space or adjacent to work area
Work Area (copy/print/billing/supply)	OA	200	-	1	200	Adjacent to Admin. Assistant
File Room/Storage	ER	200	-	1	200	
Small Meeting Room	ER	150	-	1	150	Space for up to 8 people seated at table
Staff Restroom	ER	80	-	1	80	
Staff Lunch Room	ER	150	-	1	150	
Game Rental	ER	150	-	1	150	Close to office staff for supervision
				Subtotal	1,530	
Public Recreation Area						
Gymnasium	ER	5,800	-	2	11,600	Accommodates 2-50'x84' basketball courts or 8 pickle ball courts
Gymnasium Equipment Storage	ER	250	-	1	250	
Bleachers	OA	1,000	-	1	1,000	5 rows of seating (10' wide x length of gymnasium)
Walking Track	OA	3,900	-	1	0	Suspended above gymnasium area
Billiards Room	ER	750	-	1	750	3 billiards tables
Kids Play Room	ER	400	-	1	400	Open room for children/parent play activities
Restroom/Lockers	ER	350	-	2	700	Include showers and lockers
Future Gymnasium	ER	2,900	-	1	0	Accommodate future expansion of gym space to add 3rd court
				Subtotal	14,700	
Public Meeting Areas						
City Council Room	ER	1,000	-	1	1,000	Accommodate up to 100 people seated in chairs. Also serve as Zoning Board Room
Large Meeting Room	ER	5,000	-	1	5,000	Accommodate up to 300 people seated at tables / movable partition
Table and Chair Storage	ER	250	-	3	750	One room for each (large meeting, council and zoning rooms)
Small Meeting Rooms	ER	350	-	2	700	Accommodate up to 20 people at table
Veterans Room	ER	1,200	-	1	1,200	Veterans museum display/storage including weapons storage
Veterans Board Room	ER	570	-	1	570	Private room for veterans meetings
Commercial Kitchen	ER	500	-	1	500	
Dinning Room	ER	500	-	1	500	Seating for 50 people at tables
				Subtotal	10,220	

Community Center

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	Subtotal NSF	Comments
Community Art Programs						
Art Director	PO	150	1	1	150	
Art Instructor	WS	75	2	2	150	Adjacent to art room and art director 1 for lead and 1 shared WS
Art Center	ER	3,000	-	1	3,000	
Art Supply Room	ER	500	-	1	500	Adjacent to art room
Paint Studio	ER	1,000	-	1	1,000	
Paint Supply	ER	150	-	1	150	Adjacent to paint room
Clay Studio	ER	750	-	1	750	
Kiln Room	ER	350	-	1	350	Adjacent to clay studio
Glass Studio	ER	500	-	1	500	Includes kiln
Dark Room	ER	200	-	1	200	
Student Lockers	OA	10	-	50	500	50 cubbies for kids coats/back packs with bench seating
Staff Restroom	ER	80	-	1	80	
Public Restrooms	ER	150	-	2	300	
				Subtotal	7,630	
Leasable Areas						
General Offices	ER	200	-	1	200	
General Meeting Room	ER	250	-	2	500	
				Subtotal	700	
Support Spaces						
Entry Vestibule	ER	200	-	1	200	
Public Lobby	OA	750	-	1	750	Reception desk within lobby space
IT Room	ER	150	-	2	300	
Mechanical Room	ER	750	-	1	750	Possible divided into two spaces or mechanical penthouse
Public Restrooms	ER	250	-	2	500	
Mothers Nursing Rooms	ER	70	-	2	140	
Janitorial Closets	ER	100	-	3	300	Dispersed throughout building
Stairs	ER	200	-	2	400	
Elevator Shaft and Equipment	ER	200	-	1	200	
General Storage	ER	750	-	1	750	May be several smaller rooms throughout building
				Subtotal	5,295	
TOTAL STAFF			7			
Subtotal - Net Square Feet					40,075	
Partition & Circulation Factor			20%		8,015	
TOTAL GROSS SQUARE FEET					48,090	

Notes

- 1.) Union Street Players and theater spaces not included in space needs analysis; however, the 5,000 sq ft large meeting room could be utilized for performances.
- 2.) Gymnasium space is based on high school size basketball court 50'x84'



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INTRODUCTION

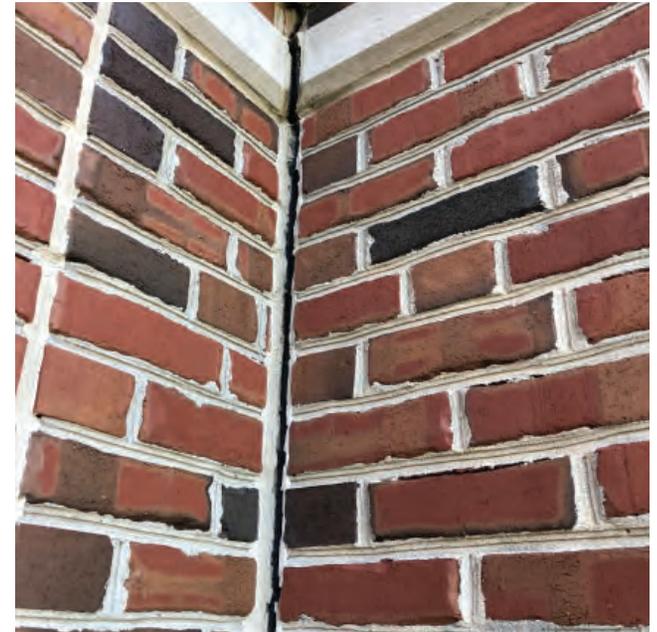
The Pella Public Library is located at 603 Main Street near the center of the downtown area. The site is located directly adjacent to the existing Community Center building and in close proximity to the historic town square. The original building was built in 1999 and replaced the historic Carnegie Library, which now serves as the City Hall building.

The facility includes a partial basement housing mechanical equipment, general storage and an elevator shaft (no elevator installed) for future use. The 21,000 square foot main level includes book stacks, reading areas, children's spaces, staff work spaces and a meeting room off the main lobby.

Based on staff comments it was noted that the original building may have been designed to accommodate a future second story within the existing building shell. After a preliminary review of the original design drawings this appears to be accurate and the existing structure is capable of supporting a second level. The use of this level would be limited to meeting and office space, no book stacks or heavy loads would be permitted. Following this condition assessment is a letter from a structural engineer outlining the findings of the preliminary structural analysis.

SITE

The Public Library building is located on an approximate 1.3 acre site in the center of the historic downtown area. An entry plaza and decorative canopy structure is located to the northeast of the building. The plaza area provides outdoor seating and landscaped green space. The plaza pavement/pavers and landscaping are in good condition. To the north of the building is a concrete paved parking lot that accommodates 43 stalls that are open to the public. The parking lot pavement is also in good condition. To the northwest side of the building is a mechanical courtyard with a masonry screen wall and steel security gates. The screen wall and gates are in fair condition.



Corner Brick



Masonry Repair

BUILDING

Building Shell

The building was constructed in 1999 and is in overall good condition. The exterior shell consists of a conventional wood framed building with a brick veneer cladding system. Roof framing is decorative laminated trusses supported by structural steel columns. The building does appear to have seen some minor settlement which likely resulted in minor cracking and deterioration of the veneer brick in localized areas. It was also noted by staff that there was a significant settlement issue along the south side of the building in the past. It was noted that this was the result of an underground utility line and the issue has been addressed. The buildings floor slab along the southern exterior wall does have a noticeable slope and gypsum board wall finishes have moderate cracking. It is unclear if the building is continuing to settle or if these items are the result of previous settlement that has now stopped. Overall the building exterior shell and structural systems appear to be in good condition. It is recommended that settlement issues be closely monitored and any changes be reviewed by a licensed design professional.

There is a partial basement constructed of cast-in-place concrete walls and floor slab. The main level floor structure over the basement is constructed of precast concrete plank with a concrete topping.

Exterior windows are fixed aluminum clad wood units with insulated glazing throughout. These units are in fair condition and at nearly 20 years old are towards the end of their expected lifespan. Joint sealants at window perimeters was noted to be aged and peeling. It is recommended that joint sealants around windows be monitored and replaced as needed to maintain a weathertight seal.

Exterior main entry doors are aluminum doors with glass infill. Doors and storefront framing are in good condition.

Roofing

The roof is clad with asphalt shingles that are likely original to the building construction. Library staff noted only minor roof leak issues, which have been addressed. Given the age of the roofing materials roofing systems should be planned for replacement in the next 5 year period. Roof drainage is achieved through a series of decorative metal gutters and downspouts which are in good condition and could be reused when the roofing is replaced. It was noted by staff that gutters often overflow and washout landscaping in heavy rains. Additional downspouts may help resolve this issue.

Interiors

The main interior library space housing the stacks and reading areas is a large open room with vaulted ceilings. Wall and ceiling finishes are primarily painted gypsum board and flooring is carpet. Staff noted significant issues with the acoustic in the main open space. The hard surface walls and ceilings along with the large open vault are likely contributors to the poor acoustics. It is recommended that an acoustical design consultant review the space and provide recommendations prior to adding sound absorbing materials, white noise or investing in other sound mitigation items

Interior finishes throughout the building are general are in good condition. Floor finishes include a combination of ceramic tile in the entry, lobby and restrooms and carpet flooring in the office, and book stack spaces and vinyl tile in the meeting and staff lunch room areas. It is generally recommended that interior floor finishes in high traffic public spaces be replaced on a 10-year cycle.

Ceilings in the office, staff work room and meeting room consist of 2-foot square acoustical panels supported by a suspended grid system. Ceilings are in good condition.

Cabinetry in the staff lunch room and kitchenette off the meeting room includes wood cabinets and plastic laminate countertops. Cabinets are in fair condition and appear dated and worn. Cabinets do not meet current accessibility code requirements at sink locations. An accessible sink is required to have a roll-under sink compartment for wheelchair access. It is recommended that cabinets be replaced should any significant building improvements be completed in the future.

MECHANICAL

Building HVAC

The new public library was constructed in 2000, so the majority of the equipment is original to the building.

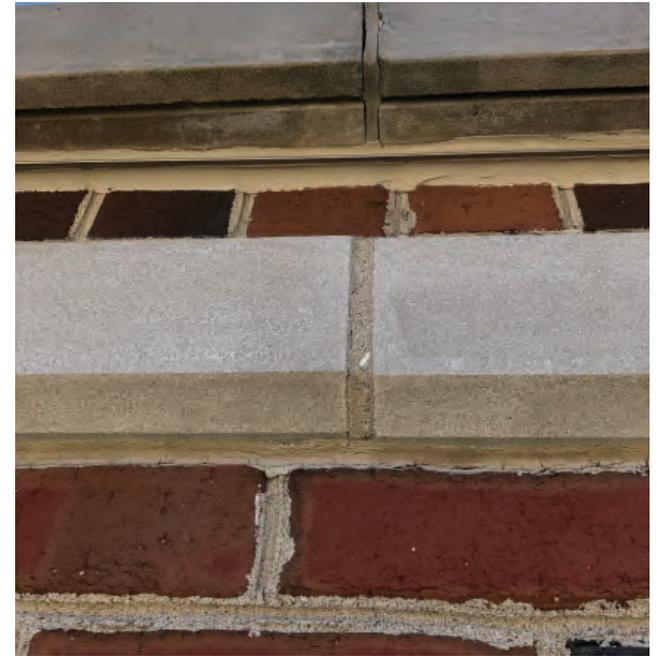
Two (2) Trane modular air handling units are used to heat and serve the building. One unit is a single zone, DX cooled, hot water heated and with humidification to serve the book repository area. The other unit is a multi-zoned, DX cooled, hot water heated with terminal air box, hot water reheat. Some spaces have supplemental radiation, as well. This provides spaces with individual room control. The units utilize a remote return fan arrangement in lieu of within the modular air handling unit. Outside air intake and relief louvers are located in area wells.

Heat is also provided by a hydronic, radiant floor system for the book repository area.

Exhaust appears adequate for the spaces requiring exhaust.

A Liebert split system unit is installed to serve the IT room in the basement.

Despite utilizing R-22 as the DX refrigerant, the units and system in general, are in good condition and have life left in the equipment.



Masonry Repair



Sealants

Hydronic Systems

The buildings hot water loop is served from one (1) condensing, sealed combustion, natural gas fired, Fulton pulse boiler and associated base-mounted pumps. The pumps are installed with starter/disconnects in lieu of variable frequency drives.

A 3-way valve and tertiary pumped system serves hydronic manifolds that control the radiant floor heat. There are a total of two (2) in-line pumps and four (4) manifolds.

The boiler room has an emergency stop switch.

The equipment is original to the building which was constructed in the early 2000's. This equipment appears to be maintained with some life remaining. There are advantages to replacement of units for energy efficiency upgrade benefits, though. For example, changing boilers to condensing boilers and adding VFD's to the hydronic pumping system.

The pumping system utilizes 3-way and 2-way valves with 2-way valves at the AHU's and 3-way valves at the terminal air boxes.

While some system changes could be made for energy-efficiency purposes, the system and equipment are in good condition and has plenty of useful life remaining.

HVAC Controls

A Trane direct digital control system is installed to control the buildings HVAC.

Plumbing

A roughly 2" domestic cold water entrance is located in the basement mechanical room and has a water meter and dual backflow preventers prior to being routed to the rest of the building. The domestic water plumbing piping is copper, insulated and appears to be in good condition.

Cold water is routed to a 40 gallon, natural gas water heater that was installed in 2006. The water heater appears to have been replaced at least since the building opened in 2000 which is probably an indication of the water quality. Based on the time line of the water heater replacement, this water heater is probably near to replacement, as well. The domestic water heating system does not have a thermostatic mixing valve, which would allow the hot water storage at 140°F and distribution at a safer 110°F. A master thermostatic mixing valve arrangement minimizes the risk of legionella, but this system doesn't appear to be high risk.

Plumbing fixtures are vitreous china lavatories, toilets (wall mounted) and urinals. Flush valves are manual and faucets are manual. One single restroom has a floor mounted tank-type water closet. There are stainless drinking fountains (some with bottle fill station) and stainless steel drop in sinks. The plumbing under the lavatories do not have ADA insulating wrap on the drainage or water supplies and the hot water is missing an ASSE 1070 hot water mixing valve which is a new code item for public lavatories. The plumbing fixtures appear to be in good condition throughout the building.

Fire Protection

A double check backflow preventer is installed in the basement mechanical room. The fire protection (sprinkler) system installed is a single zone system that only serves the basement. A branch is run up a chase, but it appears to be for a future second story addition.

The fire protection entrance has a post indicator valve.

ELECTRICAL

Power Distribution

A pad-mounted utility transformer is located northwest of the building in a screened in area. Service feeders are routed underground then to main mechanical room located in the basement where it terminates to a 600 amp, 208/120 volt, 3-phase Cutler-Hammer Pow-R-Line switchboard.

The switchboard above is in good or very good condition having all been installed in 2000. A surge protection device is installed on the switchboard. All branch panels were manufactured by Cutler-Hammer. Spare breaker capacity is available in both the switchboard and the branch panels. The main switchboard and branch panels could be reused if there was a renovation to the building.

The grounding electrode system needs to be improved. There is not a bond to the incoming water service pipe and no jumper across the water meter.

An arc flash label is installed on the main switchboard. The study appears to be completed recently. No other panels have an arc flash. It is recommended to have the other panels in the facility included in the arc flash study.

Interior Lighting

The building fixtures utilize several different lamp types. The lamp types include linear fluorescent, compact fluorescent, ceramic metal halide, incandescent and LED retrofit lamps. Some recessed fixtures are in a high ceiling and are difficult to replace the lamps. All the fixtures are in good condition and would be a good candidate for the LED retrofit lamps. Many of the fixtures in the building are expensive to replace and that is also why they would be a good option for the LED retrofit lamps.

The lighting throughout the building should be replaced with more efficient LED-based luminaries. This would have a substantial impact on the electric bill each month. Energy rebates may be available through Bright Energy Solutions should be considered to help offset upfront replacement costs.

Interior Lighting Controls

No automatic controls (i.e. occupancy sensors) were noted during the walk-through. Manual wall switches are provided in each room. No dimming was noted.



Children's



Kitchenette

Lighting controls that could be updated are manual switches for small rooms. These switches could be replaced with wall mounted occupancy sensors. Daylight harvesting is not recommended for the lighting control upgrade because of the limited number of fixtures, high cost of installation and limited payback.

Exterior Lighting

Wall packs with high pressure sodium (HPS) lamps on the back of the building and decorative fixtures on the front of the building are installed.

All the exterior luminaires could be replaced with new, LED luminaires. Retrofitting the existing HPS luminaires with LED is not recommended since heat dissipation is a major concern. The housings of new LED luminaires are designed for proper heat dissipation and longer life. Energy rebates available through Bright Energy Solutions and should be considered to help offset upfront replacement costs.

Life Safety Lighting

Surface emergency lights with two adjustable heads and battery backup are installed in the building. It is unknown if the batteries are replaced on a regular basis and tested monthly. All emergency lights should be tested and replace any lights that fail.

No exterior life safety egress lighting has been provided at exterior doors. Exterior rated LED emergency battery packs should be added to both exterior doors.

Exit signs have been installed along the paths of egress. All exit lights should be tested and replace any lights that fail.

Fire Alarm

A Simplex 4002 zone fire alarm system is installed throughout the building. The main fire alarm panel is located in the reception/dispatch space. Duct detectors were installed on the HVAC units.

In general, smoke detection and heat detection are provided in the building as required. Single action pull stations were noted by exterior doors. Horn/strobe devices were noted in the required spaces.

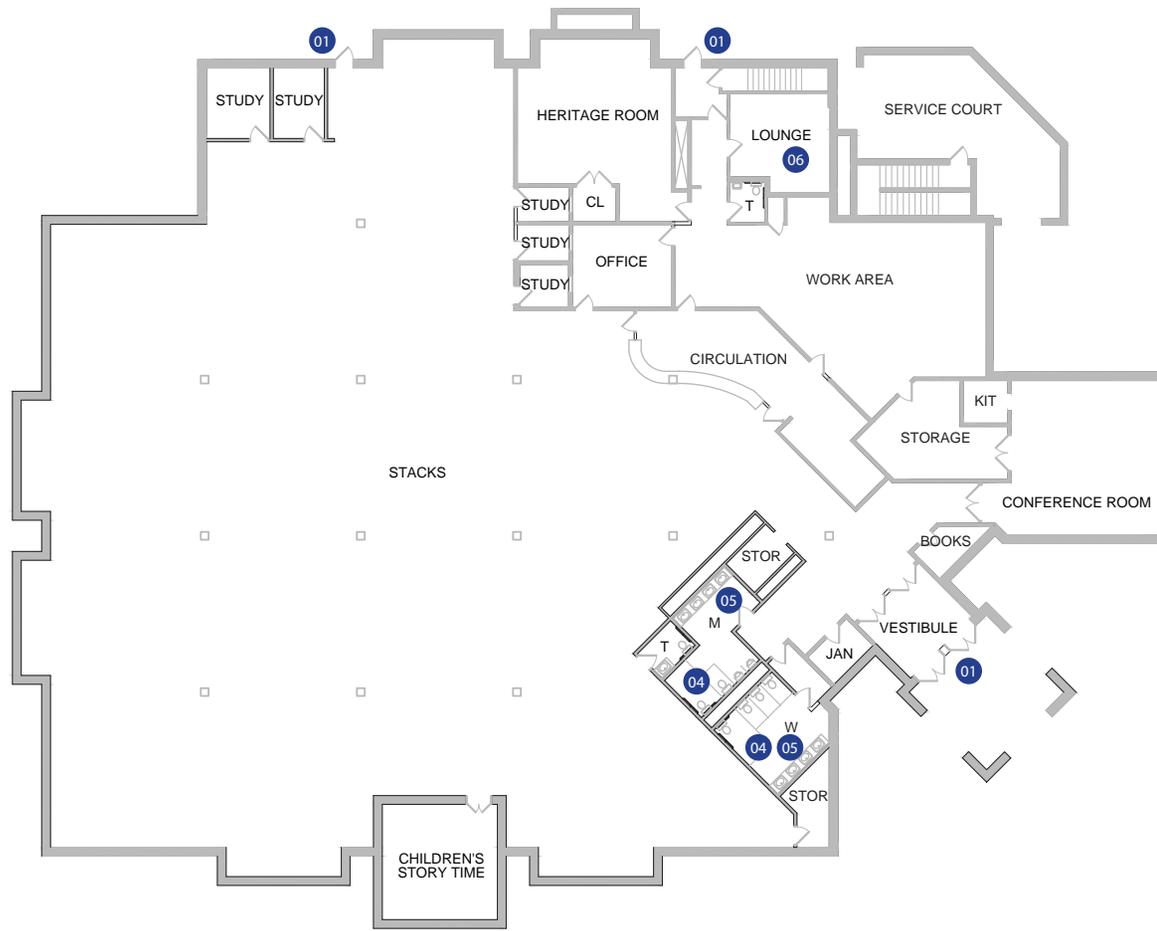
The existing fire alarm panel is a zone system and is original to the building. The panel is over 20 years old. The system is near the end of its useful life. Replacement parts will be hard to find after the panel is no longer supported by Simplex. It is our recommendation to replace the panel before components start to fail. The zone smoke detectors and heat detectors should also be replaced when the panel is replaced.



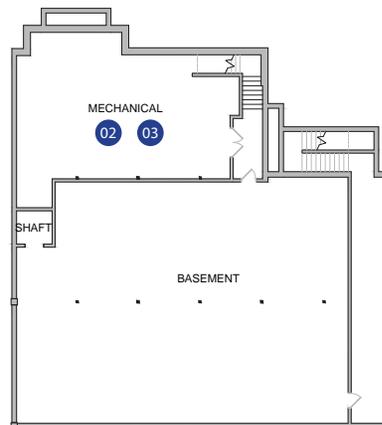
Elevator Pit



Kitchenette



Main Level



Basement

- 07 Typical exterior walls
- 08 Typical exterior walls

Existing Floor Plan

Legend - Public Library

- 01 Install code compliant exterior emergency egress lighting throughout the building.
- 02 Conduct an arc flash study and install proper labels on electrical gear.
- 03 Replace existing fire alarm panel in near future or should any renovations take plan.
- 04 Provide vertical grab bars at restroom handicapped accessible stalls to comply with current accessibility requirements and codes.
- 05 Install insulation wrap on exposed piping at handicapped accessible sink locations.
- 06 Provide new cabinets in kitchen areas to meet minimum handicapped accessibility requirements. Current codes require countertops to have a roll under access at sink locations.
- 07 Tuck-point approximately 10% of the exterior masonry wall surface.
- 08 Replace joint sealants at windows and exterior wall control and construction joints.

A

Building Renovation and Addition of Second Level

Reconfiguration of the interior spaces of the existing library will allow for a more efficient use of the space and support additional program space. A partial second floor addition would provide approximately 5,000 additional square feet of usable space for meeting rooms, study or office spaces. Based on an initial review of the existing structure it is believed that there is sufficient capacity to support the added second floor loads consistent with an office type of use. Book stacks or heavy storage would not be permitted.

The existing lower level of the Library building could also be renovated to provide an additional 3,000 square feet of space for use as meeting rooms and collection spaces such as the local heritage collection. With the addition of a second level and re-purposing the lower level spaces there would be approximately 29,000 square feet of usable space available which is sufficient to accommodate the current and future needs that have been identified in this report.



Building a Better World
for All of Us®

November 6, 2018

RE: City of Pella
Pella Public Library
SEH No. PELLA 147884 14.00

Mike Nardini
City Administrator
City of Pella
825 Broadway Street
Pella, IA 50219

Dear Mr. Nardini:

As part of the Facility Needs Assessment being performed by Short Elliott Hendrickson, Inc. (SEH) we have completed a structural review of the documents regarding the Public Library Building. The purpose of the review was to assess the ability of the existing structural systems to support an added mezzanine level internal to the building. Documents reviewed were Pella Public Library by Brown Healey Stone & Sauer.

The existing building drawings indicate that the structure was initially designed with capacity to have a second floor/mezzanine level added in the future. We have analyzed the columns and footings for the additional loads, and both appear to have sufficient capacity for such an addition. The mezzanine level addition would be limited in its use to office and meeting room spaces and could not be used for storage of book stacks.

This review has been limited to the existing structural systems only. We recommend review of additional items such as building egress, accessibility, mechanical, electrical and fire protection systems prior to moving forward with the addition of a mezzanine level.

We appreciate the opportunity to provide professional services to the City of Pella. If you have any questions or need further assistance please contact us.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

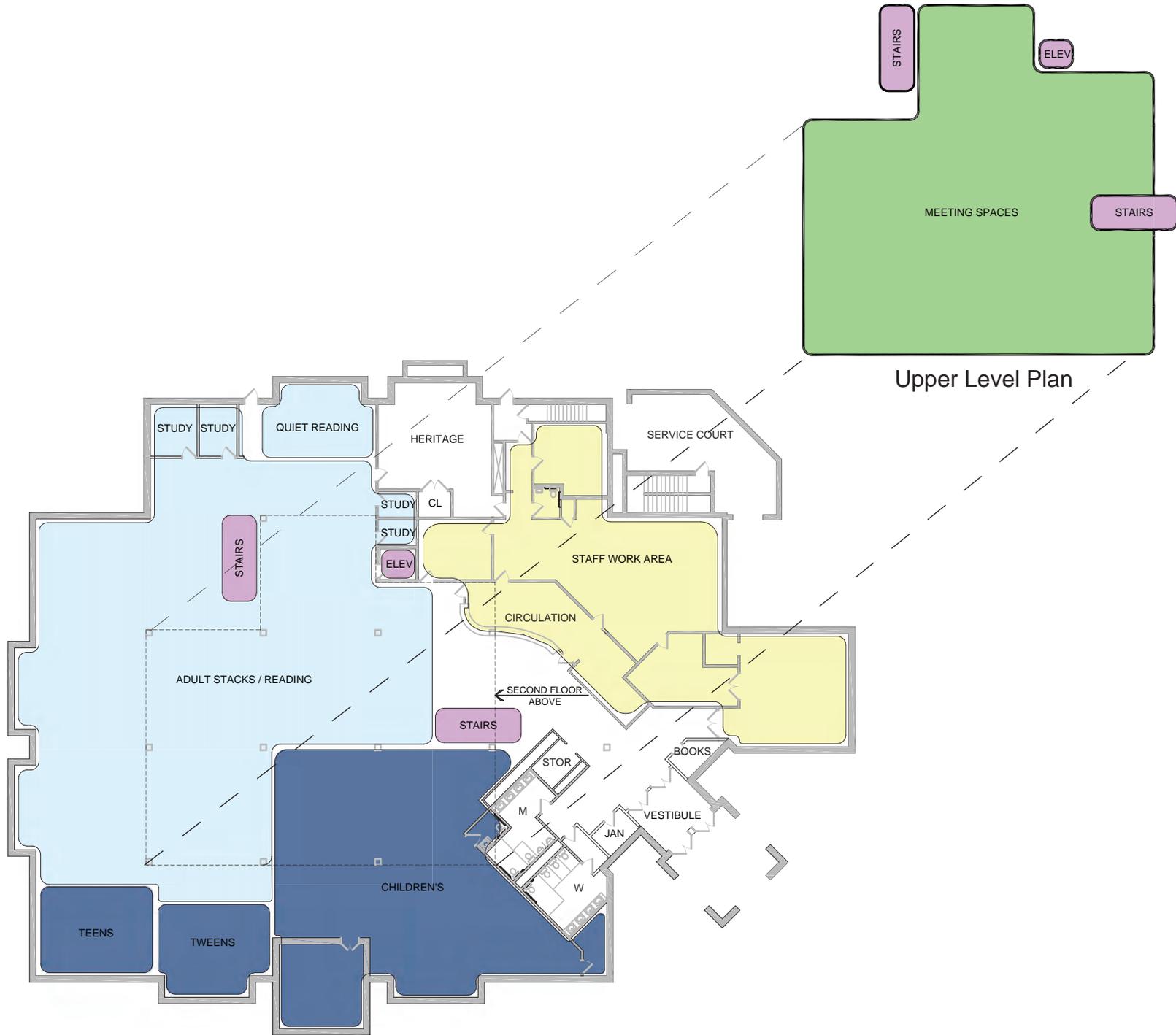
A handwritten signature in black ink that reads "Michael L. Hemstad".

Michael L. Hemstad, PE
Professional Engineer
Iowa License No. 23968
JMB

s:\pt\p\pella\147884\5-final-dsgn\50-final-dsgn\20-struct\opinion letter.docx

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 3535 Vadnais Center Drive, St. Paul, MN 55110-5196
SEH is 100% employee-owned | sehinc.com | 651.490.2000 | 800.325.2055 | 888.908.8166 fax



Main Level Plan

Library - Estimate of Probable Cost

Estimate of Probable Cost

DESCRIPTION	FORMULA	COST
Library Second Floor Addition	5,000 sf x \$325	\$1,625,000
Renovate Existing Library	21,000 sf x \$100	\$2,100,000
Renovate Existing Basement	3,000 sf x \$125	\$375,000
Building and Site Subtotal:		\$4,100,000
Fixtures, Furnishings and Equipment (Second level only)	4%	\$164,000
Permitting and Inspections	5%	\$205,000
Design Fees	8%	\$328,000
Construction Contingency	10%	\$410,000
ESTIMATED PROJECT TOTAL:		\$5,207,000

- Estimates are based on SEH’s historical data from similar projects, 2019 RS Means, and current industry market trends.
- The following items are not included in this estimate:
 - Inflation costs (estimated to be 5% per year)
- The preliminary Estimate of Probable Cost prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding market conditions. Accordingly, the Architect cannot and does not warrant or represent that bid prices will not vary from the Owner's budget for the Cost of the Work or from any Estimates of Probable Cost prepared or agreed to by the Architect.

Public Library

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Administration / Staff Work Areas						
Director	PO	200	1	1	200	
Assistant Director	PO	150	1	1	150	
Youth Services Librarian	PO	150	1	1	150	
Staff Work Room	ER	1,400	1	1	1,400	4 part-time work stations plus open work area with table
<i>Drive-up Service Window</i>	OA	150	1	1	150	
Circulation Desk	OA	750	2	1	750	4 work stations at desk ideal / self check-out
Staff Lounge	ER	250	-	1	250	Kitchenette and staff lockers
General Storage	ER	200	-	1	200	Supplies
<i>Book Sorting Equipment</i>	ER	300	-	1	300	
Staff Restrooms	ER	80	-	2	160	
				Subtotal	3,710	
Adult Spaces						
Public Stacks	OA	6,000	-	1	6,000	Books and digital media
Local History Room	ER	650	-	1	650	
Computer Stations	OA	15	-	10	150	Located throughout library in clusters
Reading Areas	OA	2,500	-	1	2,500	Comfortable chairs dispersed throughout library space
New Book Stacks	OA	250	-	1	250	
<i>Quiet Reading Room</i>	ER	300	-	2	600	
Quiet Study Room (small)	ER	50	-	3	150	Up to 2 people
Quiet Study Room (large)	ER	100	-	3	300	Up to 4 people
Book Sale Room	ER	200	-	1	200	
Friends Storage Space	ER	150	-	1	150	
<i>Video Editing Room</i>	ER	300	-	1	300	
				Subtotal	11,250	
Children's Spaces						
<i>Teens Space</i>	ER	500	-	1	500	Separated from children's / good sight lines to circ desk
<i>Twens Space</i>	ER	500	-	1	500	Separated from children's / good sight lines to circ desk
Children's Stacks	OA	1,500	-	1	1,500	
<i>Children's Play Area</i>	ER	400	-	1	400	Noisy area - separate from quiet spaces
Story Time Room	ER	600	-	1	600	40 kids / Noisy area / Doubles as craft room
Children's Help Desk	OA	200	1	1	200	

Public Library

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Children's Area Storage	ER	200	-	1	200	Direct access to story time/craft room
Nursing Mothers Room	ER	60	-	1	60	Near Children's Area
Public Restroom	ER	60	-	1	60	Near Children's Area
Janitor Closet	ER	60	-	1	60	Near Children's Area for easy clean up
				Subtotal	4,080	
Meeting Spaces						
<i>Large Meeting Room</i>	ER	3,500	-	1	0	200 people at tables (assumed to be located in a separate building)
<i>Kitchenette (large meeting)</i>	OA	100	-	1	100	Sink and refrigerator to serve Large Meeting
<i>Small Meeting Room</i>	ER	200	-	2	400	8 to 10 people seated at tables
Classroom	ER	400	-	1	400	50 people at chairs only / 25 at tables and chairs
Table and Chair Storage	ER	200	-	2	400	One for classroom and one for large meeting room
Kitchenette (classroom)	OA	80	-	1	80	Sink and refrigerator to serve Classroom
<i>Display / Gallery</i>	ER	250	-	1	250	
Outdoor Gathering Area	ER	0	-	1	0	
				Subtotal	1,630	
Support Spaces						
Vestibule	ER	150	-	1	150	
Lobby	OA	500	-	1	500	
<i>Café / Vending Area</i>	OA	200	-	1	200	Adjacent to Lobby Space
Book Drop	ER	40	-	1	40	
IT Room	ER	175	-	1	175	
Elevator Shaft	ER	100	-	1	100	
Elevator Equipment	ER	100	-	1	100	
Stairs to Basement	ER	200	-	2	400	
Public Restrooms	ER	300	-	2	600	
Janitors Room	ER	80	-	1	80	
Mechanical Room	ER	1,200	-	1	1,200	
				Subtotal	3,545	
TOTAL STAFF			8			
Subtotal - Net Square Feet						24,215
Partition & Circulation Factor			15%			3,632
TOTAL GROSS SQUARE FEET						27,847



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INTRODUCTION

The Electric Distribution's main facility, located at 222 Truman Road, was originally constructed around 1987 and includes an approximately 13,500 sf office and vehicle storage building. A separate 6,500 sf cold storage building was constructed around the year 2000 and sits directly east of the main facility. The office and vehicle storage facility also includes an approximately 1,200 SF wood framed storage mezzanine built over the office portion of the building which is used primarily for record storage. The facility houses the Electric Distribution Utilities administrative, service vehicles, equipment and materials storage needs.

SITE

The Electric Distribution campus is located on a 23 acre parcel of land on the southern edge of the City. The parcel is shared with the Public Works and Water Utility departments. In addition to the two electric distribution building structures the site also include two buildings used by the Water Utility, four for public works and one of the city's water towers (water tower and water utility structures were outside the scope of this report).

In addition to the two building structures the site also include an approximately 80,000 sf fenced material storage and a 18 stall parking lot and recessed loading dock ramp which appears to be in good condition. The material storage yard is used to house large electrical equipment such as transformers, light poles and other materials that are critical to maintaining the electrical infrastructure for the City.

BUILDING SHELL

Exterior

The main building consists of a pre-engineer structural steel frame supported by concrete footings and foundation walls. The exterior steel framed walls and roof are clad with painted, corrugated steel panels which are generally in good condition. Roof drainage is achieved through a series of metal gutters and downspouts.

The floor is a concrete slab-on-grade and appears to be in good condition. There was no significant cracking in the concrete floor or signs of movement or settlement in the slab.



Reception



Garage Door

Exterior windows are operable aluminum clad wood units throughout. These units are in good condition and it was noted that they were recently replaced.

Exterior man doors are painted steel frames and doors and are in fair condition. Several of the doors are showing signs of wear and corrosion beginning to form. It is recommended that exterior doors and frames be cleaned and painted in the near future.

Overhead vehicle doors are also in fair condition. The exterior door finishes are aged and weatherstripping in several areas needs to be replaced or adjusted to provide a weathertight seal.

Interiors

The office portion of the building has painted gypsum board walls throughout. Flooring is a combination of carpeting in the lobby, offices and the meeting room and vinyl flooring throughout the corridors, lunch room and restroom areas. Ceilings are 2-foot by 4-foot suspended acoustical panels. Casework at the reception desk and the lunch room is stained wood cabinets and plastic laminate countertops and does not meet current handicapped accessibility code requirements. Overall interior office finishes are in fair conditions and while functioning as expected have a worn appearance and have reached the end of their expected lifespan.

Shop area walls are clad with pre-finished metal liner panels and ceiling are exposed structure. The meter testing and lunch room spaces have been built-out in the garage area and consist of painted gypsum board walls and bare concrete floors. The lunch room has plastic laminate casework and countertops that is in good condition.

Cold Storage Building

The 6,000 sf foot cold storage building is located to the east of the main Electric Distribution Building and is within the secure fenced area of the site. The buildings structure consists of a wooden post-frame building with wooden roof trusses. The floor is a cast-in-place concrete slab-on-grade system. The exterior walls and roof are clad with pre-fin-

ished corrugated metal panels and are uninsulated. The buildings structure, cladding and flooring systems are in good condition and show no signs of significant deterioration.

Exterior doors are painted steel and in need of a fresh coat of paint. There is one overhead vehicle door on the south side of the building that was recently replaced and is in good condition.

The interior space is divided into two separate rooms. The southern two-thirds of the building are used as general storage for equipment and supplies while the northern portion is used as a work shop space and houses tools, equipment and materials. This northern portion of the building does include minimal heating equipment although it is uninsulated.

MECHANICAL

Building HVAC

The office is heated and cooled via a single, downflow 4-ton RUUD, sealed combustion furnace with natural gas heat and DX cooling. With limited thermostats and zones, some spaces could have comfort issues where a single thermostat control spaces with differing loading/usage.

The furnace was installed in the early 2010's, so there is plenty of life remaining on the system. The DX system utilizes R-410A and a newer "Nest" thermostat has been installed recently.

It does not appear that ventilation air is ducted to the return of the furnace from the exterior of the building. Also, the furnace has a corrugated stainless steel natural gas hose connection, which may be against local jurisdiction.

The ductwork distribution system has mainly residential-type floor mounted registers, but some areas have an overhead ducted system. It was noted during the site visit that there has been issues with ground water infiltration into the below floor ductwork. This should be monitored and replaced should if a major HVAC upgrade takes place in the future.

Exhaust fans interlocked with lights for the restrooms appear to be in working order.

The IT room appears to have an abandoned cooling system with a “move-n-cool” type portable unit now providing the cooling for the server racks.

The garage has conventional, natural gas unit heaters used for supplemental heat, which appears to be in good condition. The garage also has infrared radiant heat for supplemental heating, which also appears to be in decent condition.

A vehicle exhaust system for an enclosed parking garage is not installed, but would normally be required. While some HVAC changes could be made for code-compliance purposes, the system has plenty of useful life remaining.

HVAC Controls

The controls for the furnace, unit and radiant heaters are stand-alone thermostats. A DDC system could provide for system scheduling and alarms, which would provide an opportunity for enhanced energy savings and alert staff with any issues before potential for damage. With the usage of this building and limited HVAC, a DDC system might not make the most economic sense.

Plumbing

A roughly 1” domestic cold water entrance has a water meter, but no backflow preventer. Further investigation on site would need to be done to determine if backflow prevention is happening further upstream. The plumbing piping is insulated and appears to be in good condition.

Cold water is routed to fixtures and a 4.5kW, 30 gallon, electric water heater. The domestic water heating system does not have a thermostatic mixing valve, which would allow the hot water storage at 140°F and distribution at a safer 110°F. A master thermostatic mixing valve arrangement minimizes the risk of legionella, and with this amount of storage, this system doesn't appear to be high risk.



Mechanical



Restroom



Thermostat

Plumbing fixtures are vitreous china lavatories, tank-type toilets and urinals. There are stainless drinking fountains with bottle fillers and stainless steel drop in sinks. The electrical water cooler in the office area is missing a cover, so it is unknown if it is being worked on. The urinal flush valve is manual and other faucets are manual. The plumbing under the lavatory does not have ADA insulating wrap on the drainage or water supplies and the hot water is missing an ASSE 1070 hot water mixing valve, which is a new code item for public lavatories. The plumbing fixtures appear to be in decent condition.

The garage appears to have a sand and grease trap.

Fire Protection

There is no fire protection (sprinkler) system installed in the building.

ELECTRICAL

Power Distribution

A pad-mounted utility transformer is located north of the building. Service feeders are routed underground where it terminates to a 400 amp, 208/120 volt, 3-phase Square D service rated panelboard.

The above panel is in fair or good condition having all been installed in 1987. All branch panels were manufactured by Square D or Cutler-Hammer. Spare breaker capacity is limited in the branch panels and the main service panel. If additional loads are added to the building a new branch panel would need to be added. The main panel and branch panels could be reused if there was a renovation to the building.

The grounding electrode system needs to be improved. There is not a bond to the incoming water service pipe and no jumper across the water meter. Arc flash labels are not installed on the electrical gear. It is our recommendation to have an arc flash study performed on the electrical system.

An 18 Kilowatt (KW) natural gas generator is installed north of the building. The generator feeds the UPS that is located in the mechanical room in the office area. The generator appears to be in good condition. The generator was installed in 1997. In the main mechanical room is a 4.3 Kilovolt Amp (KVA) 120 volt single phase UPS. The UPS appears to be about 20 years old and was likely installed the same year as the generator. Batteries in a UPS were replaced in 2018. UPS batteries should be tested and replaced as often as every five years.

Interior Lighting

The buildings lighting fixtures were upgraded to new high efficiency LED fixtures in 2018.

Some fixtures in the main service bay receive power from the UPS and are they are the emergency lights for this area.

Interior Lighting Controls

No automatic controls (i.e. occupancy sensors) were noted during the walk-through. Manual wall switches are provided in each room. No dimming was noted.

Lighting controls that could be updated are manual switches for small rooms. These switches could be replaced with wall mounted occupancy sensors. Daylight harvesting is not recommended for the lighting control upgrade because of the limited number of fixtures, high cost of installation and limited payback.

Exterior Lighting

Wall packs with high pressure sodium (HPS) lamps on the back of the building and decorative fixtures on the front of the building are installed.

All the exterior luminaires could be replaced with new, LED luminaries. Retrofitting the existing HPS luminaries with LED is not recommended since heat dissipation is a major concern. The housings of new LED luminaries are designed for proper heat dissipation and longer life. Energy rebates available through Bright Energy Solutions should be considered to help offset upfront replacement costs.

Life Safety Lighting

Emergency lights are powered from the UPS in the mechanical rooms. Current code requires the UPS to be UL 924 listed to be used for emergency lighting. The UPS is not UL 924 listed. To meet code the fixtures that currently power from the UPS would need to be powered from a lighting inverter (Bodine ELI-S-400 or equal).

No exterior life safety egress lighting has been provided at exterior doors. Exterior rated LED emergency battery packs should be added to both exterior doors. Exit signs have been installed along the paths of egress. All exit lights should be tested and replace any lights that fail.

Fire Alarm

Fire alarm is not provided in the building. Current codes do not require the building to have a fire alarm system because of the building occupancy.



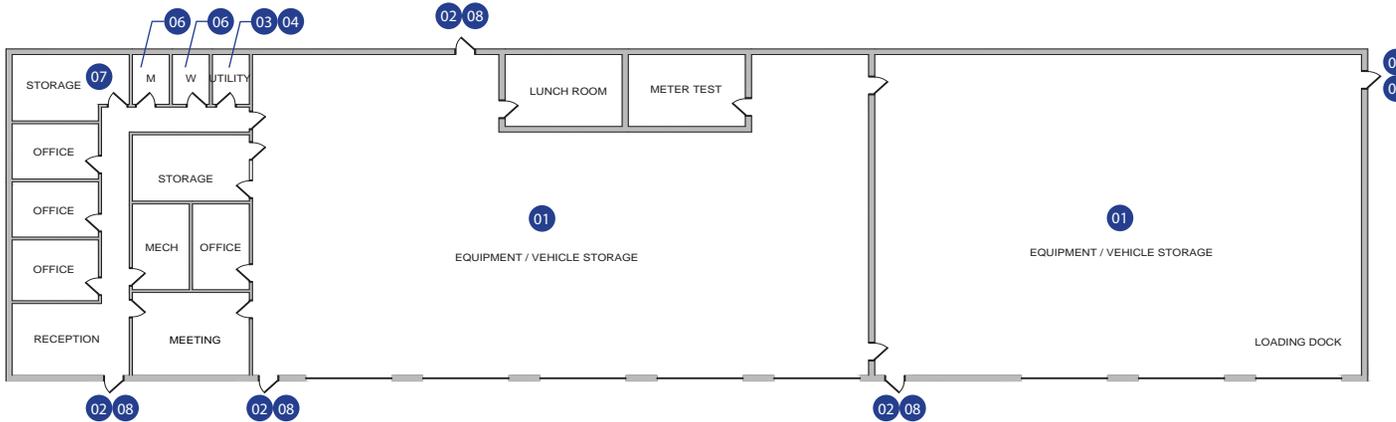
Cold Storage



Lunch Room

Legend - Elec. Dist. Warehouse

- 01 Install a vehicle exhaust system with CO/NO2 detectors in the vehicle parking areas.
- 02 Install code compliant interior and exterior emergency egress lighting throughout the building.
- 03 Provide proper grounding of the electrical systems.
- 04 Conduct an arc flash study and install proper labels on electrical gear.
- 05 Replace interior floor and ceiling finishes.
- 06 Provide accessibility upgrades to the existing facility restrooms to meet the minimum requirements of the American's with Disabilities Act (ADA) and State Building Code.
- 07 Provide new cabinets in break/lunch room areas to meet minimum handicapped accessibility requirements. Current codes require countertops to allow for wheel chair access at sink locations.
- 08 Paint exterior steel doors and frames to protect doors from corrosion.



Main Level

- 02 Typical throughout building
- 05 Typical at office area

Existing Floor Plan

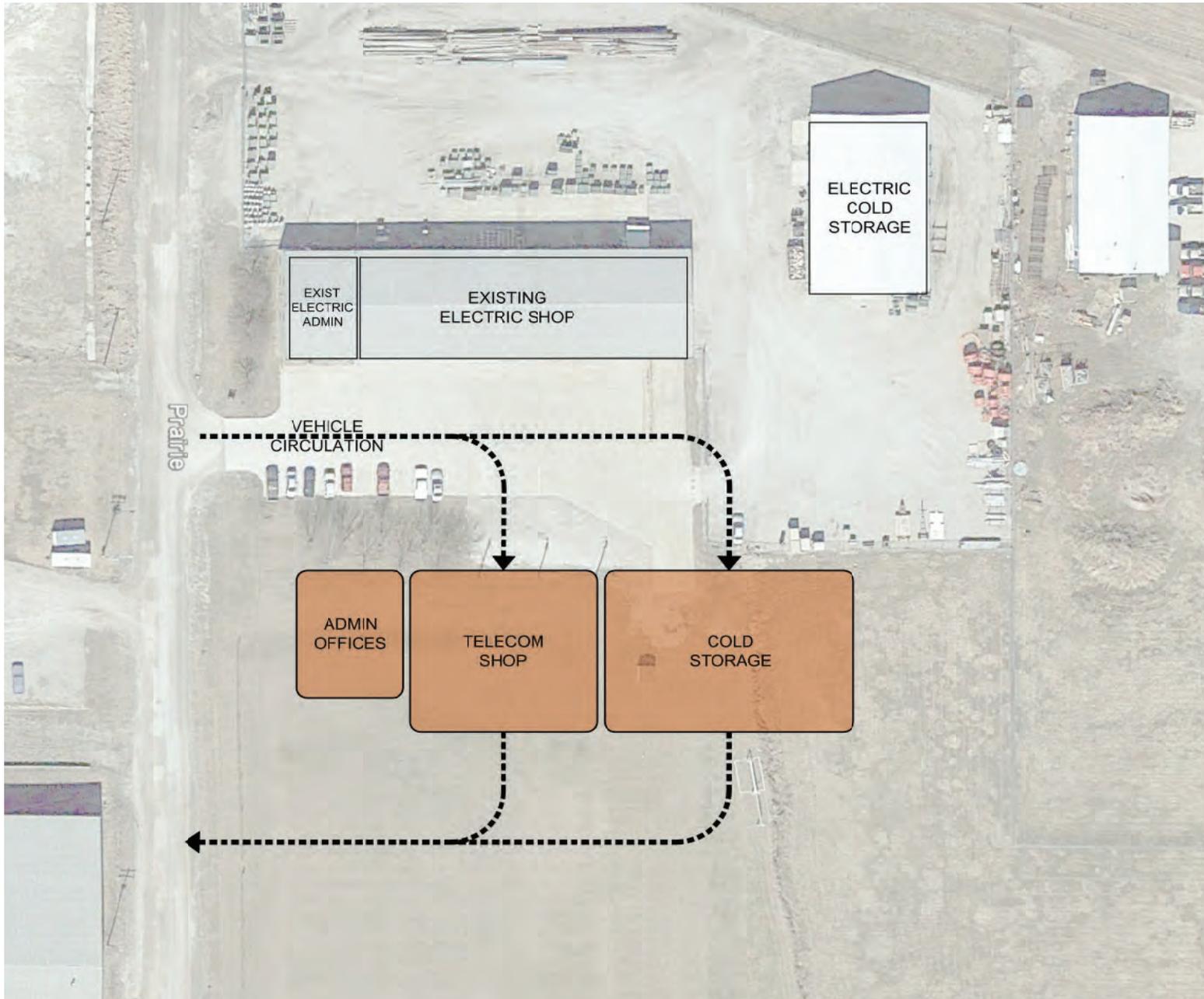
A

New Building for Electric Distribution and Telecom Utility

Construct a new approximately 30,000 square foot structure to accommodate the needs of the the Electric Distribution and future Telecom utilities. The new structure would be built directly south of the existing Electric Distribution Warehouse building allowing for shared parking and drive lanes and increased operational efficiencies.

The proposed new building would include approximately 5,000 square feet of offices and administrative spaces for both the electric and telecom utilities. Relocating the electric utility staff to the new building will open up approximately 2,000 square feet of space in the existing Electric Utility building that will provide additional shop and staff spaces such as locker rooms, staff lunch rooms and storage space.

The remainder of the new structure would include approximately 10,000 square feet of heated shop spaces for the Telecom Utility vehicles and equipment and approximately 15,000 square feet of cold storage spaces for storage of bulk materials for both public utilities.



Electric Distribution and Telecom Concept Site Plan

Electric Distribution / Telecom Building - Estimate of Probable Cost

Estimate of Probable Cost

DESCRIPTION	FORMULA	COST
New Storage Building		
Shop and Vehicle Storage	10,000 sf x \$125	\$1,250,000
Office / Administration	5,000 sf x \$150	\$750,000
Cold Storage	15,000 sf x \$60	\$900,000
Site Development		\$250,000
Building Subtotal:		\$3,150,000
Permitting and Inspections	5%	\$157,000
Design Fees	8%	\$250,000
Contingency	10%	\$315,000
ESTIMATED PROJECT TOTAL:		\$3,872,000

- Estimates are based on SEH's historical data from similar projects, 2019 RS Means, and current industry market trends.
- The following items are not included in this estimate:
 - Land acquisition
 - Inflation costs (estimated to be 5% per year)
 - Site clearing (existing building demolition costs)
 - Renovations to existing Electric Distribution Warehouse
- The preliminary Estimate of Probable Cost prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding market conditions. Accordingly, the Architect cannot and does not warrant or represent that bid prices will not vary from the Owner's budget for the Cost of the Work or from any Estimates of Probable Cost prepared or agreed to by the Architect.

Electric Distribution Warehouse Space Needs

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Office / Administration						
Directors Office	PO	175	1	1	175	
GIS Office	PO	150	1	1	150	
GIS Future	WS	100	3	3	300	Future GIS staff growth
Analyst Office	PO	150	1	1	150	
Crew Supervisor Office	PO	150	1	1	150	
Reception Area	OA	200	1	1	200	
Meeting Room	ER	250	-	1	250	15 people seated at a table
File Storage	ER	200	-	1	200	
Map Room	ER	200	-	1	200	
IT Room	ER	150	-	1	150	
Mechanical Room	ER	100	-	1	100	
<i>Lunch Room</i>	ER	150	-	1	150	
Restrooms	ER	80	-	2	160	
				Subtotal	2,335	
Shop Area						
Loading Dock	ER	400	-	1	400	
Vehicle Parking Bays	OA	600	-	7	4,200	Currently have 7
<i>Vehicle Parking Bays</i>	OA	600	-	4	2,400	Additional 4 stalls needed
<i>Vehicle Wash Bay</i>	OA	600	-	1	600	
Inventory Storage (heated)	OA	5,500	-	1	5,500	
Shop Work Area	OA	600	-	1	600	
Shop Tool Storage	ER	100	-	1	100	
Meter Testing Room	ER	300	-	1	300	
<i>Shop Restroom/Lockers</i>	ER	200	-	2	400	
Linemen Lunch Room	ER	250	-	1	250	
				Subtotal	14,750	

Electric Distribution Warehouse Space Needs

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Cold Storage						
Inventory Storage	ER	5,000	-	1	5,000	Current Storage Building
Work Shop (heated)	ER	1,500	-	1	1,500	Current Storage Building
Large Materials Cold Storage	ER	100	-	1	100	Include Bridge Crane
Large Materials Storage (heated)	ER	11,000	-	1	12,000	
Bulk Materials Storage	OA	900	-	2	1,800	Bulk gravel and dirt roof cover only
				Subtotal	20,400	
TOTAL STAFF			8			
Subtotal - Net Square Feet					37,485	
Partition & Circulation Factor			10%		3,749	
TOTAL GROSS SQUARE FEET					41,234	

Telecom Utility

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Office / Administration						
<i>Directors Office</i>	PO	175	1	1	175	
<i>Staff Office</i>	PO	150	2	2	300	
<i>Crew Supervisor Office</i>	PO	150	1	1	150	
<i>Reception Area</i>	OA	200	1	1	200	
<i>Meeting Room</i>	ER	250	-	1	250	15 people seated at a table
<i>File Storage</i>	ER	200	-	1	200	
<i>IT Room</i>	ER	150	-	1	150	
<i>Mechanical Room</i>	ER	100	-	1	100	
<i>Lunch Room</i>	ER	150	-	1	150	
<i>Restrooms</i>	ER	200	-	2	400	
				Subtotal	2,075	
Shop Area						
<i>Loading Dock</i>	ER	400	-	1	400	
<i>Vehicle Parking Bays</i>	OA	800	-	6	4,800	
<i>Inventory Storage (heated)</i>	OA	3,000	-	1	3,000	
<i>Shop Work Area</i>	OA	750	-	1	750	
<i>Shop Tool Storage</i>	ER	200	-	1	200	
<i>Lunch Room</i>	ER	250	-	1	250	
				Subtotal	9,400	
TOTAL STAFF			5			
Subtotal - Net Square Feet					11,475	
Partition & Circulation Factor			10%		1,148	
TOTAL GROSS SQUARE FEET					12,623	

Note: The information in this space needs analysis is not based on hypothetical needs for preliminary planning purposes.



Facility Condition Assessment.....85

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Space Needs Analysis.....98

INTRODUCTION

The Public Works campus, located at 100 Truman Road, consists of 4 structures. The first is the administration building which was originally a 1977 built residential house consisting of approximate 4,000 sf on three levels. This structure was moved to the site and re-purposed as office space. The main level is currently used as office and meetings spaces. The upper level has one large office and the lower level has office space that is currently not being utilized along with a file storage room.

The 9,800 sf Shop building provide space for vehicle storage, vehicle maintenance and a wash bay, shop administration offices and employee meeting/breakroom/restroom areas. A separate 7,200 sf cold storage building was constructed around the year 2000 and is used to store equipment and materials.

The final structure on this site is the 1,700 sf bulk materials storage building which holds salt/sand, and other fill materials.

SITE

The Public Works campus is located on a 23 acre parcel of land on the southern edge of the City. The parcel is shared with the Electric Distribution and Water Utility departments. In addition to the four public works building structures the site also include two buildings used by the Water Utility, two for Electric Distribution and one of the city's water towers (water tower and water utility structures were outside the scope of this report). There is also a paved parking lot with approximately 30 stall which appear to be in fair condition adjacent to the administration building. An approximately 30,000 sf material storage yard is located behind the cold storage building and is used to house large materials such as piping, bulk materials, pavers and two trailers with roll-off garbage collection bin parts.



Shop Building



Washout Area

BUILDING SHELL

Administration Building (Exterior Shell)

The building consists of a conventional wood framed structure supported by concrete and masonry foundations. Exterior walls are clad with vinyl siding and roofing is asphalt shingles with metal gutters and downspouts. The exterior materials are in good condition and appear to have been replaced within the last 5 years.

Exterior windows are operable aluminum clad wood units with insulated glazing throughout. These units are in good condition.

Exterior doors are metal clad wood doors with insulated glazing and are in good condition. Along the south and west sides of the building is a wood framed deck which is used to provide access to the buildings main second level entry door. Overall the deck is in poor condition. Its structural framing, decking boards and guardrails have significant deterioration. At the time of the site visit the deck area was chained off to discourage visitors from using the structure. It is recommended that the deck either be repaired/replaced or be removed completely and a new structure built to provide adequate access to the buildings main entry.

Administration Building (Interior Finishes)

The Administration building has painted gypsum board interior walls throughout. Flooring is a combination of tile in the lobby, vinyl flooring in the restrooms and carpeting throughout the offices and meeting room areas. Ceilings are 2-foot by 4-foot suspended acoustical panels. Casework at the reception desk is stained wood cabinets and plastic laminate countertops. Overall interior office finishes are in fair conditions and while functioning as expected have a worn appearance and have reached the end of their expected lifespan.

The buildings restrooms do not meet current handicapped accessibility requirements. Proper floor clearance around fixtures, access to the lavatory, grab bars and other ele-

ments are outside the parameters of current codes and the American's with Disabilities Act (ADA) requirements. It is recommended that the restrooms be renovated to comply with current codes and updated interior finishes.

Shop Building (Exterior Shell)

The shop building consists of a pre-engineer structural steel frame supported by concrete footings and foundation walls. The exterior steel framed walls and roof are clad with pre-finished, corrugated steel panels which are generally in good condition. Roof drainage is achieved through a series of metal gutters and downspouts. The structural roof framing members along the west end of the building in the wash bay area do appear to have corrosion forming on them and the roof insulation and vapor barrier system exhibits a fair amount of staining which appears to be caused by micro-biological growth. It is possible that over time the wash bay has introduced high levels of moisture to the building creating the corrosion and possible mold growth. It is recommended that the building insulation systems be more closely reviewed and replaced if there is evidence of micro-biological growth and the steel framing in the wash bay area at a minimum be cleaned and painted with product that will offer more protection to the steel.

The floor is a concrete slab-on-grade and appears to be in good condition. There was no significant cracking in the concrete floor or signs of movement or settlement in the slab.

Exterior windows are operable aluminum clad wood units throughout. These units are in fair condition. At the time of the site visit there was one broken window along the north side of the shop building.

Exterior man doors are painted steel frames and doors and are in fair condition. Several of the doors are showing signs of wear and corrosion beginning to form. It is recommended that exterior doors and frames be cleaned and painted in the near future or replaced if the corrosion is to severe.

Overhead vehicle doors are also in fair condition. The exterior door finishes are aged and weather-stripping in several areas needs to be replaced or adjusted to provide a weathertight seal.

Directly to the west of the shop building there appears to be a low spot in the site that has allowed water to pool. The wet conditions in this area are likely the cause of an electrical transformer beginning to lean and settle and corrosion at the existing man door. It is recommended that the site be regraded in this area to ensure proper drainage away from the building.

Shop Building (Interior Finishes)

The office portion of the building has painted gypsum board walls throughout. Flooring is vinyl tile in the meeting room and restroom areas. Ceilings are acoustical panels supported by a suspended grid. Restroom layouts do not meet minimum clearances for handicapped accessibility or clear floor space requirements. Overall, interior office area finishes are worn, in poor condition and in need of replacement.

Shop area walls are clad with pre-finished metal liner panels and ceiling are exposed structure. The floors are bare concrete.

Cold Storage Building

The 7,200 sf foot cold storage building is located to the northern edge of the Public Works campus. The buildings structure consists of a wooden post-frame building with wooden roof trusses and the floor is gravel fill. Exterior walls and roof are clad with pre-finished corrugated metal panels and are uninsulated. Roof drainage is achieved through a series of metal gutters and downspouts.

There is evidence of minor undermining of the exterior wall along the south side of the building adjacent to the center downspout. This is likely caused by water from the downspout washing out the soil below the building wall. This is a common issue with post framed wood structures and it is recommended that washed out soil be replaced and the issue monitored to prevent future structural damage.



Shop Meeting



Cold Storage

Overall the buildings structure and cladding systems are in good condition and show no signs of significant deterioration. It is recommended that a concrete floor slab be poured to provide greater protection for the equipment being stored.

Exterior man doors are painted steel and in good condition. There are two manually operated sliding vehicle door on the south side of the building that are in good operating condition.

Bulk Materials Shed

The salt shed has 4 storage bin areas and is a cast-in-place concrete structure for the lower 10-feet and has conventional wood framed walls and roof for the upper portion. The building is clad with pre-finished corrugated metal wall and roof panels and appears to be in overall good condition.

MECHANICAL

Building HVAC

The main office building is an old residential house that was relocated to this site. It is cooled via three (3) cooling-only, Luxaire fan coil units: one serves the first floor, one serves the majority of the second floor, and a third serves the conference room. The first floor and second floor units are located in a closet within the restroom, and the conference room unit is above the ceiling. These units are from an unknown manufacturer and are well passed their useful life. The third level is served from a PTAC unit.

Heating for the main office building is via a conventional, hot water hydronic system, consisting of an old boiler, pumps and baseboard radiation. The boiler is an old Hydrotherm boiler that is well passed its useful life, with the potential for equipment failure any day. There are (5) zones serving the office with Grundfos pumps that appear to be relatively new and in fair condition. The hydronic baseboard is older and a residential-style.

The main office is a residential application with ventilation from operable windows. The HVAC system throughout the house is past its useful life and replacement is recommended.

The shop area consists of the garage and attached administrative area. The shop admin area is served from a heating-only, natural gas, sealed combustion Carrier furnace that is only about a year old. Window air conditioners provide cooling in the office and conference room, with operable windows for ventilation. An upgraded system utilizing central air would enhance energy efficiency, but the usage of the building may not warrant the cost.

The shop garage has infrared radiant heat for supplemental heating, which appears to be in decent condition. There is a prop fan to remove air and exhaust that is manually controlled. A vehicle exhaust system for an enclosed parking garage is not installed, but would normally be required.

HVAC Controls

The controls for the furnace and radiant heaters are stand-alone thermostats.

Plumbing

A 3/4" or 1" domestic cold water entrance for the office building has a water meter, but no backflow preventer, which is typical for a residential application, but required in commercial construction. The domestic water plumbing piping is copper and appears to be in good condition, but is not insulated, which is typical in residential applications, but required in commercial construction.

Cold water is routed to a 2kW, 6 gallon, electric water heater that was installed in 2008, which is nearing the end of the water heaters useful life based on perceived water quality, but it appears to be in good condition. The domestic water heating system does not have a thermostatic mixing valve, which would allow the hot water storage at 140°F and distribution at a safer 110°F. A master thermostatic mixing valve arrangement minimizes the risk of legionella, but this system doesn't appear to be high risk.

The garage has a similar water heating system except with a conventional, 40 gallon, natural gas fired, State water heater. It is an older unit and ready for replacement in the near future.

Plumbing fixtures are vitreous china lavatories, tank-type toilets and urinals. There are old stainless drinking fountains and stainless steel drop in sinks. The urinal flush valve is manual and other faucets are manual. The plumbing under the lavatory does not have ADA insulating wrap on the drainage or water supplies and the hot water is missing an ASSE 1070 hot water mixing valve which is a new code item for public lavatories. The lavatory in another bathroom is a stainless steel drop in sink. The plumbing fixtures are still functional, but dated throughout the main office and shop.

The garage appears to have a sand and grease trap.

Fire Protection

There is no fire protection (sprinkler) system installed in the building.

ELECTRICAL

Power Distribution

A pad-mounted utility transformer is located west of the service building. Service feeders are routed underground where it terminates to a 400 amp, 208/120 volt, 1-phase Cutler Hammer service rated panelboard.

The above panel is in fair condition having all been around 30 years ago. All branch panels were manufactured by Cutler-Hammer. Spare breaker capacity is limited in the branch panels and the main service panel. The enclosure for the service rated panelboard is rusting. Rusting is for the exposure the salt for the snow removal vehicles. It is recommended to replace the existing panels because of the age and condition. Any new panel in the service bay should be NEMA 4X or better enclosure.

The grounding electrode system needs to be improved. There is not a bond to the incoming water service pipe and no jumper across the water meter.



Salt Storage



Deck

Arc flash labels are not installed on the electrical gear. It is noted on the panel that the electrical system does not need an arc flash study per NFPA 70E Section 130.3.

Interior Lighting

The office fixtures utilize T-8 fluorescent lamps. The fixtures can either be replaced with all new LED fixtures or LED tube retrofits. A complete fixture replacement will have more energy savings than replacing with LED tube retrofits. The LED tube retrofit would be far less costly than the complete fixture replacement.

Some fixtures in the main service bay are energy efficient T5 fixtures. These fixtures are less than 3 years old and do not need to be replaced.

The lighting throughout the building should be replaced with more efficient LED-based luminaries. This would have an impact on the electric bill each month. Energy rebates may be available through Bright Energy Solutions and should be considered to help offset upfront replacement costs.

Interior Lighting Controls

No automatic controls (i.e. occupancy sensors) were noted during the walk-through. Manual wall switches are provided in each room. No dimming was noted.

Lighting controls that could be updated are manual switches for small rooms. These switches could be replaced with wall mounted occupancy sensors. Daylight harvesting is not recommended for the lighting control upgrade because of the limited number of fixtures, high cost of installation and limited payback.

Exterior Lighting

Wall packs with high pressure sodium (HPS) lamps on the back of the building and decorative fixtures on the front of the building are installed.

All the exterior luminaries could be replaced with new, LED luminaries. Retrofitting the existing HPS luminaries with LED is not recommended since heat dissipation is a major concern. The housings of new LED luminaries are designed for proper heat dissipation and longer life. Energy rebates are available through Bright Energy Solutions and should be considered to help offset upfront replacement costs.

Life Safety Lighting

Emergency lights are not installed in the office area and the service garage. Battery powered emergency lights are recommended for both of these spaces.

No exterior life safety egress lighting has been provided at exterior doors. Exterior rated LED emergency battery packs should be added to both exterior doors.

Exit signs have been installed along the paths of egress. All exit lights should be tested and replace any lights that fail.

Fire Alarms

A central fire alarm is not provided in the building, battery powered stand-alone smoke detectors are installed in the office building. One smoke detector did not have a battery. Current codes do not require the building to have a fire alarm system because of the building occupancy.



Lobby



Reception



Restroom



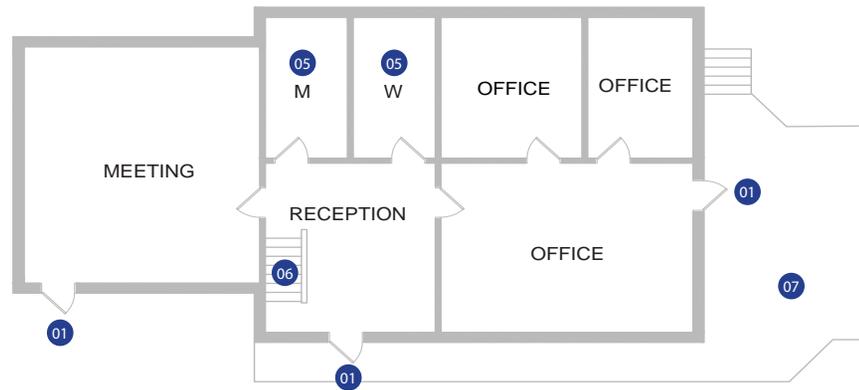
Shop Ceiling



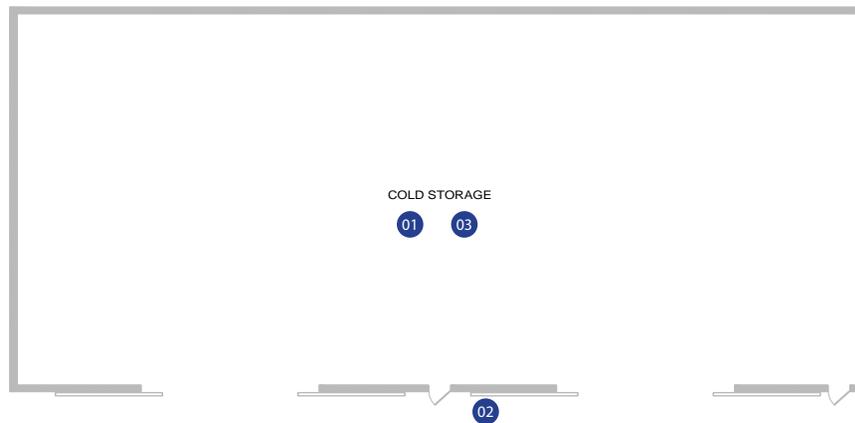
Stairs

- 01 Typical throughout building
- 02 Typical throughout building
- 03 Typical throughout building
- 04 Typical throughout building

Existing Floor Plan



Administration Building - Main Level



Cold Storage Building - Main Level

Legend - Admin Building

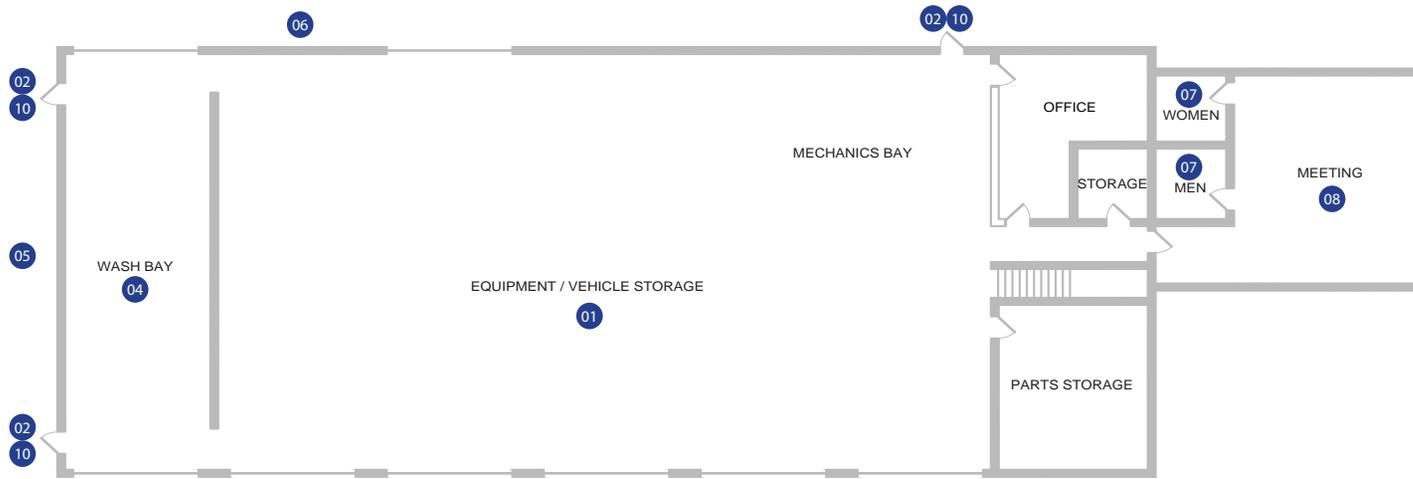
- 01 Install code compliant interior and exterior emergency egress lighting throughout the building.
- 02 Provide proper grounding of the electrical systems.
- 03 HVAC heating and cooling systems are aged and beyond expected lifespan. HVAC boilers and condensing units are in need of replacement.
- 04 Interior finishes are in poor condition. It is recommended that they be replaced.
- 05 Provide accessibility upgrades to the existing facility restrooms. Current plumbing fixtures do not meet current code minimum clearances or mounting heights.
- 06 Provide code complaint stair handrails to comply with current building codes.
- 07 Remove and/or replace deteriorated wood deck structure.

Legend - Cold Storage Building

- 01 Install a concrete floor slab throughout.
- 02 Backfill areas of the structure that are undermined by roof drainage.
- 03 Install emergency egress lighting.

Legend - Shop Building

- 01 Install a vehicle exhaust system with CO/NO2 detectors in the vehicle parking areas.
- 02 Install code compliant interior and exterior emergency egress lighting throughout the building.
- 03 Provide proper grounding of the electrical systems.
- 04 Paint steel roof structure to protect from corrosion in the wash bay area.
- 05 Regrade site along west side to prevent water pooling and drainage issues.
- 06 Replace broken window.
- 07 Provide accessibility upgrades to the existing facility restrooms. Current plumbing fixtures do not meet current code minimum clearances or mounting heights.
- 08 Interior finishes are in poor condition and beyond their useful life. It is recommended that office, meeting room and restroom finishes be replaced.
- 09 Further investigate possible microbiological growth in existing roof insulation and replace as required to eliminate possible contamination.
- 10 Paint or replace exterior steel doors and frames to protect doors from corrosion.



Shop Building - Main Level

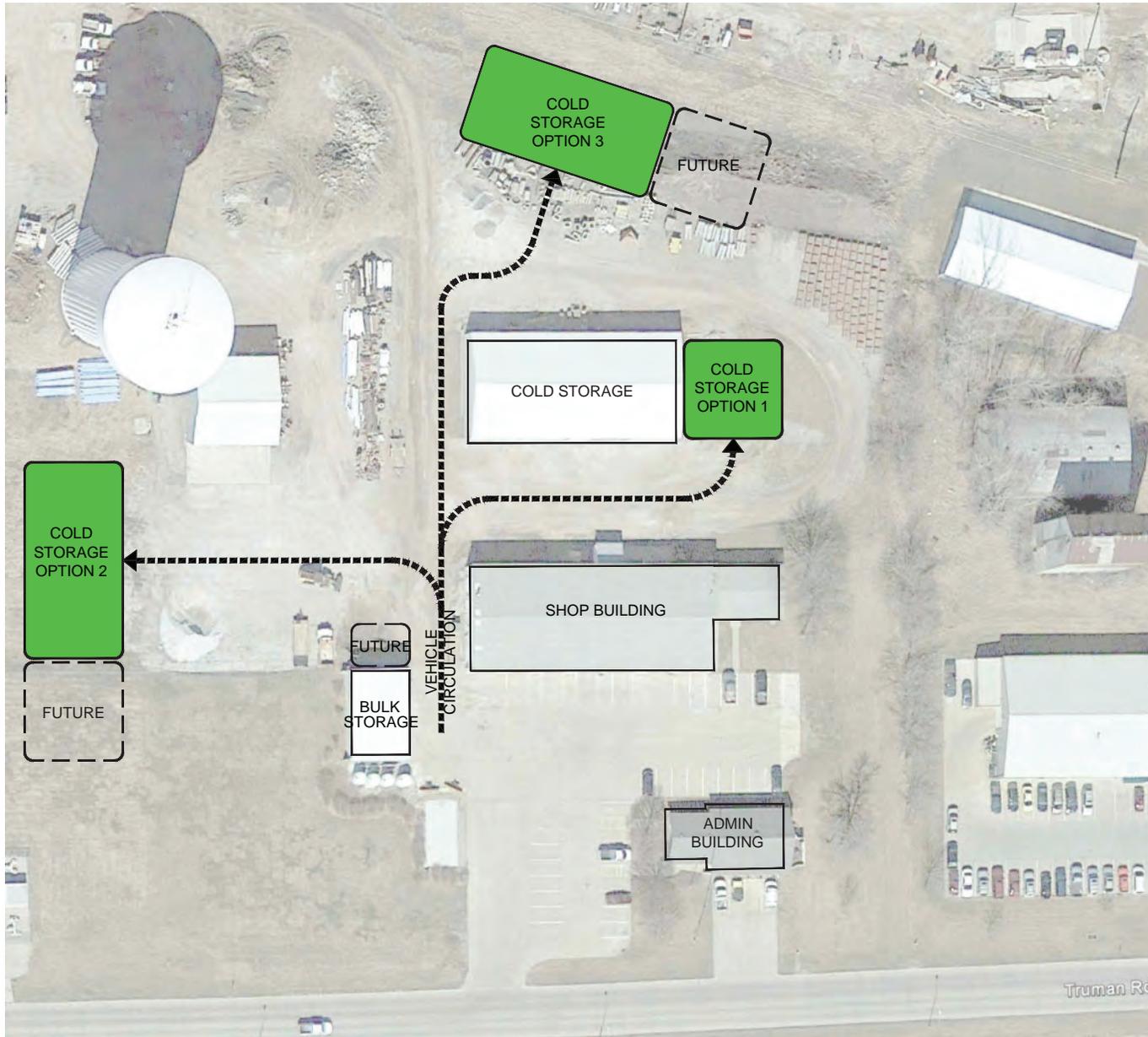
- 02 Typical throughout building
- 03 Typical throughout building
- 09 Typical throughout building

Existing Floor Plan

A

New Cold Storage Building

Construct new Cold Storage Building to house equipment, vehicles and provide space for roll-off storage and assembly. There is ample space at the existing Public Works facility to support a new cold storage building in various locations.



Concept Site Plan Layout Options

Public Works - Estimate of Probable Cost

Estimate of Probable Cost

DESCRIPTION	FORMULA	COST
New Cold Storage Building	11,700 sf x \$65	\$760,500
Building Subtotal:		\$760,500
Permitting and Inspections	10%	\$70,000
Design Fees	8%	\$60,840
Contingency	10%	\$87,000
ESTIMATED PROJECT TOTAL:		\$978,340

- Estimates are based on SEH's historical data from similar projects, 2019 RS Means, and current industry market trends.
- The following items are not included in this estimate:
 - Land acquisition
 - Inflation costs (estimated to be 5% per year)
 - Site clearing (existing building demolition costs)
- The preliminary Estimate of Probable Cost prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding market conditions. Accordingly, the Architect cannot and does not warrant or represent that bid prices will not vary from the Owner's budget for the Cost of the Work or from any Estimates of Probable Cost prepared or agreed to by the Architect.

Public Works

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Office / Administration						
Directors Office	PO	200	1	1	200	
Staff Office	PO	150	1	1	150	
Staff Work Stations	WS	75	2	2	150	
Reception Area/Lobby	OA	100	-	1	100	
Meeting Room	ER	250	-	1	250	15 people seated at a table
File Storage	ER	250	-	1	250	
IT Room	ER	60	-	1	60	
Mechanical Room	ER	100	-	1	100	
<i>Lunch Room</i>	ER	100	-	1	100	
Restrooms	ER	80	-	2	160	
				Subtotal	1,520	
Shop Building						
Shop Office	ER	300	1	1	300	Space for three desks
Mechanics Bay	OA	600	1	1	600	
Parts Storage Room	ER	200	-	1	200	
Parts Storage Mezzanine	OA	1,500	-	1	0	Space above office area - Does not add to building square footage
Vehicle/Equipment Parking Bays	OA	600	3	7	4,200	Currently have 7
<i>Vehicle/Equipment Parking Bays</i>	OA	600	3	4	2,400	Additional 4 stalls needed
Vehicle Wash Bay	ER	1,200	-	1	1,200	
<i>Sign Shop</i>	ER	400	-	1	400	Work Area for large table and sign storage
Shop Tool Storage	ER	200	-	1	200	
Break Room	ER	100	-	1	100	Kitchenette in large meeting room
<i>Shop Restroom/Lockers</i>	ER	250	-	2	500	
Large Meeting/Training	ER	800	-	1	800	50 people at tables
				Subtotal	10,900	

Public Works

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Cold Storage						
Vehicle/Equipment Storage	OA	7,200	-	1	7,200	Current Storage Building
Roll-Off Parts Storage	OA	500	-	1	500	Pallet Racking
Roll-Off Assembly Area	OA	400	-	1	400	Does not need to be dedicated space
Vehicle/Equipment Storage (future)	OA	600	-	6	3,600	6 additional parking bays for additional equipment
				Subtotal	11,700	
TOTAL STAFF			12			
Subtotal - Net Square Feet						
Partition & Circulation Factor			10%			
TOTAL GROSS SQUARE FEET						24,120
						2,412
						26,532



Facility Condition Assessment.....103
Design Option.....112
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INTRODUCTION

The Pella Fire and Police building is located at 614 Main Street on a parcel of land that is shared with the Pella Ambulance Department building. The date of the original Fire Station construction is not known however, based on the construction methods and materials it is believed to have been built in the 1940's or 50's. In 1995 two additions were constructed. The first was to the east to provide an additional 3,000 sf of parking space for fire equipment and vehicles and the second was a 10,000 sf addition to the north to house the Pella Police Department.

A portion of the building over the fire station portion has a second story which houses Fire Department meeting and kitchen spaces along with mechanical and general storage areas.

SITE

The building is located on an approximate one acre site near the center of the historic downtown area. The site is shared with the Pella Ambulance Department and the Historic Fire Department museum building. Directly to the east is a public parking lot area. In general the site paving appears to be in good conditions.

BUILDING SHELL

Police and Fire Building

Exterior Shell

The original Fire Station building is constructed of load bearing masonry walls. The vehicle and police department additions to the east and north are also load bearing concrete masonry units with a brick veneer. The exterior structure appears to be in good overall condition. There are small areas of deterioration that would benefit from tuck-pointing to maintain the building in weathertight condition. There is also a few small areas that are showing signs of more significant deterioration at the base of the wall. These areas should be more closely reviewed and addressed to avoid further deterioration.



Overhead Door



Masonry at base

The main level floor consists of a cast-in-place concrete slab-on-grade. The floor slab appears to be in good condition with not major signs of deterioration or settlement.

Second floor framing at the fire station building consisted of steel joist with a composite metal deck and concrete system over the newer portions of the building. The framing systems at the original building appear to be cast-in-place concrete and were in good condition with no major signs of deterioration.

Roof framing in the original Fire Station building consisted of steel joists with a metal decking. Framing at the building addition and in the Police Station addition also consisted of steel joist framing with a metal decking system.

The main level floor consists of a cast-in-place concrete slab-on-grade. The floor slab appears to be in fair condition with some cracking and spalling in areas of the vehicle garage.

Exterior windows are aluminum clad wood units with insulated glazing throughout the building. These units are in good condition and believed to date to the 1995 addition project.

Exterior man doors are painted steel frames and doors and are in fair condition. Exterior overhead garage doors at the fire and police stations are in fair condition.

Roofing

The roof was visually observed at the Fire and Police Station Buildings. Roofing systems appeared to consist of a thermoplastic olefin (TPO) single-ply membrane most likely fully adhered to rigid board roof insulation layered directly over the roof deck. The areas of the roof that were visually accessible appeared to be in good condition with no significant deterioration. The life span of this type of roofing system is generally 20-25 years. Given the current condition of the roofing these systems can be expected to function properly, with proper preventative maintenance, for another 5-10 years. Roof drainage is achieved with a series of internal roof drains.

Interior Finishes

Police Station

Interior partitions are a combination of painted gypsum board and concrete block and appear to be in good condition. It is recommended that paint finishes be updated on a 5-year cycle in high use situations such as this.

Interior floor finishes through the police station portion of the building include carpeting in meeting and office areas, tile in restrooms and locker room areas and bare concrete floors in the garage and general storage spaces. Carpet flooring appeared to be approximately 5 years old and was in good condition. Tile flooring in restroom areas was in fair condition but appears to be dated and worn. It is recommended that tile flooring be replaced should any major renovations be complete in the near future.

Ceilings throughout the facility are acoustical panels supported by a suspended grid. Ceilings are in fair condition and should continue to function properly.

The buildings public restrooms located in the lobby appear to be in compliance with current accessibility codes with the exception of missing grab bars at handicapped stalls. Staff restrooms and showers do not meet current handicapped accessibility requirements. Proper floor clearance around fixtures, access to the lavatory, grab bars and other elements are outside the parameters of current codes and the American's with Disabilities Act (ADA) requirements. It is recommended that the restrooms be renovated to comply with current codes and updated interior finishes.

Cabinetry in the breakroom and the training room does not meet minimum handicapped accessibility requirements at sinks. Accessible sinks are required to have roll-under wheel chair access. It is recommended that cabinetry be replaced or modified to meet current code requirements.

Fire Station

Interior finishes throughout the main level of the fire station portion of the building included painted masonry walls and bare concrete or painted floors. Ceilings are exposed structure.

Upper level meeting room and kitchen area also has painted walls and bare concrete flooring. The ceiling consists of a suspended acoustical tile system.

Restrooms on the main and upper level do not meet current handicapped accessibility requirements. Proper floor clearance around fixtures, access to the lavatory, grab bars and other elements are outside the parameters of current codes and the American's with Disabilities Act (ADA) requirements. It is recommended that the restrooms be renovated to comply with current codes and updated interior finishes.

It should also be noted that current codes require room or space used for assembly purposes with an occupant load of 50 or more to have two independent means of egress. The current second level meeting room does not meet this requirement. Stairs leading to the second level also lack code complaint handrails.

MECHANICAL

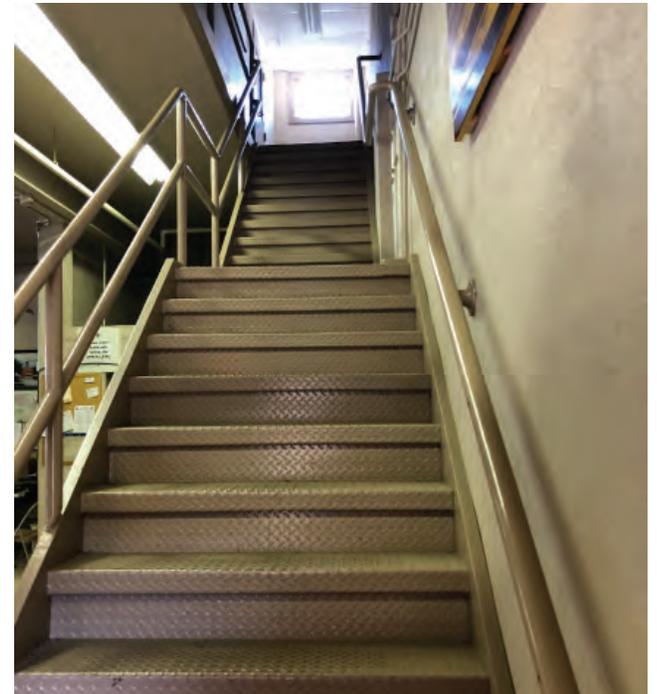
Building HVAC

The police building (non-garage) and upper level fire multi-purpose room is heated and cooled via a hot water heated, DX cooling, VAV McQuay air handling unit with terminal box, hot water reheat. This provides individual room control for many of the spaces.

The police garage and fire department garages have infrared radiant heat for supplemental heating, which appears to be in decent condition. A vehicle exhaust system for an enclosed parking garage is not installed, but would normally be required. The fire department garages do have sidewall propeller fans for exhaust that are manually controlled. The upper level storage room has stand-alone hot water unit heaters.



Roof



Missing stair rails

At the time of this site investigation, this building had a project out for bid. While not knowing the entire extent of the project, it appears to at least be a controls conversion from pneumatic to direct digital control. It was also mentioned that the existing air handling unit was getting a new DX coil and condensing unit.

Boiler combustion air appears to be appropriate and operational.

I expect this concurrent project would fix any HVAC issues identified in the building. One space to verify would be the IT/equipment closet that was very warm due to heat rejection from the equipment. Another space to investigate would be the fire department multi-purpose room. It has a gas range without a hood above. Commercial construction codes would require a type 1 hood with an Ansul fire suppression system over this piece of kitchen equipment.

Verify rating of boiler room. Many times, this room will have a fire rating and fire dampers are not installed in the ducts leaving this room. In addition, the ducts leaving to the West toward the multipurpose room have a large gap around the ducts. Normally, this would be sealed.

The sidewall grilles in the main police station lobby have some rust and possible mold/mildew on the grilles.

Hydronic Systems

The buildings hot water loop is served from two (2) non-condensing, Raypak boilers and associated pumps. The pumps are installed with starter/disconnects in lieu of variable frequency drives. The equipment is original to the building which was constructed in the late 1990's. While normally a 25-year life cycle cost would indicate nearing the end of useful life of equipment, this equipment appears to be maintained with some life remaining. There are advantages to replacement of units for energy efficiency upgrade benefits, though. For example, changing boilers to condensing boilers and adding VFD's to the hydronic pumping system.

Not sure if this will be corrected in the new project, but the 3-way valve for VAV-17 serving the fire department multi-purpose room appears to have had a leak at some point.

Currently, the piping is insulated and appears to be in good condition.

HVAC Controls

A concurrent project in bidding is replacing the pneumatic system to direct digital control system. I would expect the radiant and unit heaters to remain stand-alone thermostats/controls.

Plumbing

A 3" domestic cold water entrance is located in one of the fire department garage bays and has a water meter and backflow preventer. It serves both the fire department building and the police building. The domestic water plumbing piping is copper, insulated and appears to be in good condition.

Cold water is routed to a 72 gallon, natural gas water heater that was installed in 2008. The water heater has been replaced at least once since the late 1990's which, is probably an indication of the water quality. Based on the time line of the water heater replacement, this water heater is probably near to replacement. The domestic water heating system does not have a thermostatic mixing valve, which would allow the hot water storage at 140°F and distribution at a safer 110°F. A master thermostatic mixing valve arrangement minimizes the risk of legionella, and with this amount of storage, potential intermittent use and showers, a revised hot water plant would be recommended.

Plumbing fixtures are vitreous china lavatories, toilets (floor mounted) and urinals, with the exception of the cells. Flush valves are manual and faucets are manual. There are stainless drinking fountains, stainless steel drop in sinks and stainless steel wall-mounted showers. The plumbing under the lavatory do not have ADA insulating wrap on the drainage or water supplies and the hot water is missing an ASSE 1070 hot water mixing valve which is a new code item for public lavatories. The plumbing fixtures appear to be in good condition in the police station, but are a bit dated looking in the fire department building.

The 3-compartment sink in the fire department multi-purpose room does not have a grease trap and is directly connected to the sanitary. Some jurisdictions would require a grease trap where a cooking appliance is installed in a commercial facility and would possibly want the 3-compartment sink to be indirectly connected to the sanitary.

Both the police and fire department garages have a sand and grease trap.

Fire Protection

There is no fire protection (sprinkler) system installed in either of the buildings.

ELECTRICAL

Power Distribution

A pad-mounted utility transformer is located east of the building next to the alley. Service feeders are routed underground then to the main mechanical room located on the upper floor where it terminates to a 1000 amp, 208/120 volt, 3-phase Square D Power-Style switchboard. This installation does not meet the current NFPA 70 230.6. To meet the NFPA requirements the services feeders would need to be installed in two inches of brick or concrete. A better option would be to install a service disconnect on the exterior of the building.



Police Restroom



Cabinets

The switchboard above are in good or very good condition having all been installed in 1996. All branch panels were manufactured by Square D. Spare breaker capacity is available in both the switchboard and the branch panels. The main switchboard and branch panels could be reused if there was a renovation to the building.

The grounding electrode system needs to be improved. There is not a bond to the incoming water service pipe and no jumper across the water meter.

Arc flash labels are installed on the electrical gear. The study appears to be completed recently. If the report was completed in the last five years the report would not need to be ran again. According to NFPA 70E 130.5 an arc flash risk assessment should be updated when a major modification or renovation takes place. It shall be reviewed periodically, at intervals not to exceed five years, to account for changes in the electrical distribution system that could affect the results of the arc flash risk assessment. If no major renovations take place in the five years it is our recommendation to approach the firm that completed the arc flash study to rerun the report to keep costs down.

A 20 Kilowatt (KW) diesel generator is installed inside the fire department garage. The generator feeds the UPS that is located in the mechanical room on the upper floor. Generator subbase tank is being replaced. A temporary diesel tank is installed next to the generator. The generator was installed in 1996 when the police department was added. Current code NFPA 37 section 4.1.2.1.1 requires interior generators to be installed in a room with 1-hour rating of the walls and the ceiling. The generator should be installed in a separate 1-hour rated room or moved to the exterior and installed in a weatherproof enclosure.

In the main mechanical room is a 20 Kilovolt Amp (KVA) 208 volt single phase. The was installed in 2016 and does not need to be replaced. The UPS feeds computer equipment necessary for police dispatch. It is recommended to have a service agreement with a factory trained representative to have the UPS tested every two years.

Interior Lighting

The building fixtures utilize T5, T8 and T12 fluorescent lamps. The T8 and T12 fixtures can either be replaced with all new LED fixtures or LED tube retrofits. A complete fixture replacement will have more energy savings than replacing with LED tube retrofits. The LED tube retrofit would be far less costly than the complete fixture replacement. T5 fixtures are newer fixtures and can remain.

The lighting throughout the building should be replaced with more efficient LED-based luminaries. This would have an impact on the electric bill each month. Energy rebates may available through Bright Energy Solutions should be considered to help offset upfront replacement costs.

Interior Lighting Controls

No automatic controls (i.e. occupancy sensors) were noted during the walk-through. Manual wall switches are provided in each room. No dimming was noted.

Lighting controls that could be updated are manual switches for small rooms. These switches could be replaced with wall mounted occupancy sensors. Daylight harvesting is not recommended for the lighting control upgrade because of the limited number of fixtures, high cost of installation and limited payback.

Exterior Lighting

Wall packs with high pressure sodium (HPS) lamps on the back of the building and decorative fixtures on the front of the building are installed.

All the exterior luminaries could be replaced with new, LED luminaries. Retrofitting the existing HPS luminaries with LED is not recommended since heat dissipation is a major concern. The housings of new LED luminaries are designed for proper heat dissipation and longer life. Energy rebates may available through Bright Energy Solutions and should be considered to help offset upfront replacement costs.

Life Safety Lighting

Recessed emergency lights with two adjustable heads and battery backup are installed in the building. It is unknown if the batteries are replaced on a regular basis and tested monthly. All emergency lights should be tested and replace any lights that fail.

No exterior life safety egress lighting has been provided at exterior doors. Exterior rated LED emergency battery packs should be added to both exterior doors.

Exit signs have been installed along the paths of egress. All exit lights should be tested and replace any lights that fail.

Fire Alarm

A Simplex 4002 zone fire alarm system is installed throughout the building. The main fire alarm panel is located in the reception/dispatch space. Duct detectors were installed on the HVAC units.

In general, smoke detection and heat detection are provided in the building as required. Single action pull stations were noted by exterior doors. Horn/strobe devices were noted in the required spaces.

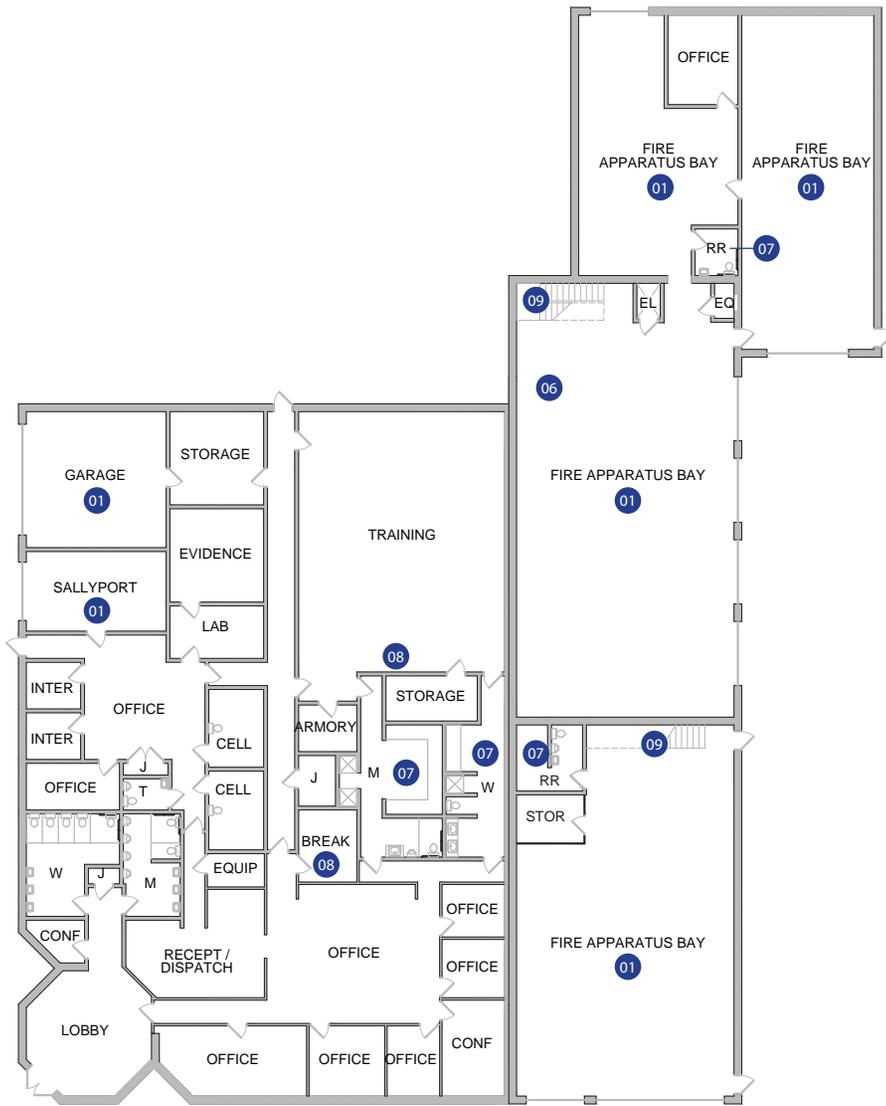
The existing zone fire alarm panel is a zone system and is original to the building. The panel is over 20 years old. The system is near its end of its useful life. Replacement parts will be hard to find after the panel is no longer supported by Simplex. It is our recommendation to replace the panel before components start to fail. The zone smoke detectors and heat detectors should also be replaced when the panel is replaced.



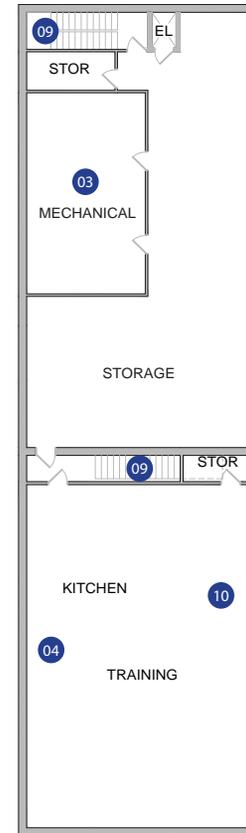
Carpet



Masonry



Lower Level



Upper Level

Legend

- 01 Install a vehicle exhaust system with CO/NO2 detectors in the vehicle parking areas.
- 02 Install code compliant exterior emergency egress lighting throughout the building.
- 03 Install a master thermostatic mixing valve on hot water plant to minimize the risk of legionella at showers and sinks.
- 04 Replace kitchen hood over stone/range with a hood that includes proper fire protection features.
- 05 Provide proper grounding of the electrical systems.
- 06 Install interior generator in a 1-hour fire rated enclosure per current code requirements at Fire Station.
- 07 Provide accessibility upgrades to the existing facility restrooms to meet the minimum. Current plumbing fixtures do not meet current code minimum clearances or mounting heights. Complete restroom renovations are recommended.
- 08 Provide new cabinets in kitchen area to meet minimum handicapped accessibility requirements. Current codes require countertops to have a roll under access at sink locations.
- 09 Provide handrails on stairs to comply with current code.
- 10 Provide second means of egress from upper level meeting room.

02 Typical throughout building

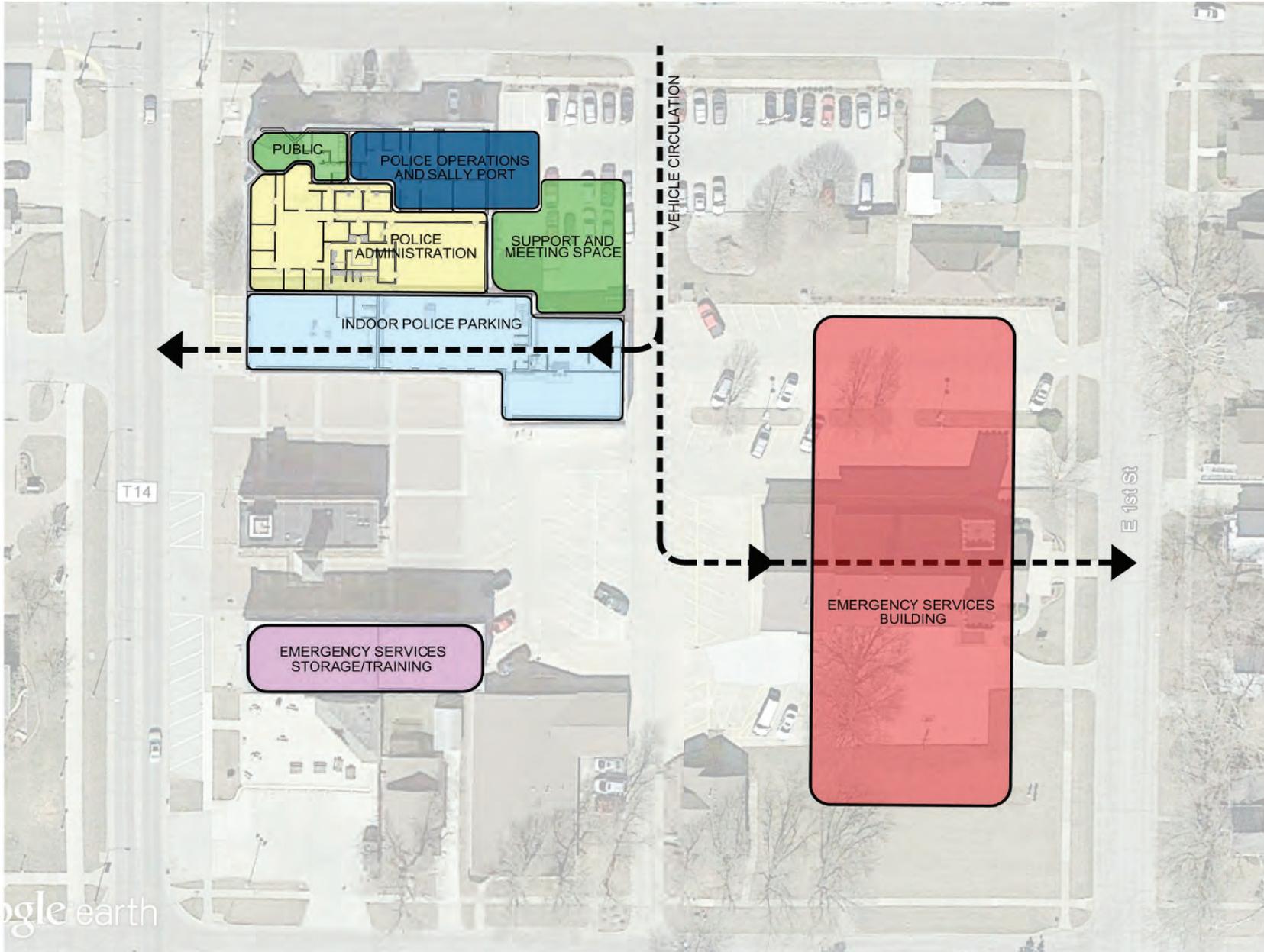
Existing Floor Plan

A

Existing Police Station Remodel & Expansion + New Emergency Services

Renovate the existing fire station apparatus bays to create 10,000 square feet of indoor parking space to house police department vehicles and construct an approximalty 5,000 sf addition to the exsiting building to provide needed office and support spaces.

Construct a new approximately 30,000 square foot Emergency Services Building adjacent to the Police Station. One option may be to locate this new building on the site of the Second Christian Reformed Church, whcih the city has entered into a purchase agreement for. This would allow the emergency services to remain in close proximty to one anouther and provide for greater efficencies. The exsiting Pella Ambulance Building can be repurposed for storage and training spaces for the city's Emergency Services Departments or other city function.



Emergency Services Concept Layout

Emergency Services Building - Estimate of Probable Cost

Estimate of Probable Cost

DESCRIPTION	FORMULA	COST
New Fire Station/EMS		
Office/Administration	9,000 sf x \$225	\$2,025,000
Apparatus Bay	19,000 sf x \$175	\$3,325,000
Police Department		
Renovate Existing Building	10,000 sf x \$150	\$1,500,000
Office Additions	6,000 sf x \$225	\$1,350,000
Renovate Parking Garage	8,000 sf x \$50	\$400,000
Site Development		\$400,000
Building and Site Subtotal:		\$9,000,000
Fixtures, Furnishings and Equipment	4%	\$360,000
Permitting and Inspections	10%	\$450,000
Design Fees	8%	\$720,000
Construction Contingency	10%	\$900,000
ESTIMATED PROJECT TOTAL:		\$11,430,000

- Estimates are based on SEH's historical data from similar projects, 2019 RS Means, and current industry market trends.
- The following items are not included in this estimate:
 - Land acquisition
 - Inflation costs (estimated to be 5% per year)
 - Site clearing (existing building demolition costs)
- The preliminary Estimate of Probable Cost prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized that neither the Architect nor the Owner has control over the cost of labor, materials or equipment; the Contractor's methods of determining bid prices; or competitive bidding market conditions. Accordingly, the Architect cannot and does not warrant or represent that bid prices will not vary from the Owner's budget for the Cost of the Work or from any Estimates of Probable Cost prepared or agreed to by the Architect.

Police Department

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Administration Area						
Police Chief	PO	200	1	1	200	Space for small conference table
Lieutenant Office	PO	150	4	4	600	
Admin Services Manager	PO	150	1	1	150	
Drug Task Force Detective	PO	150	1	1	150	
Criminal Investigator	PO	150	3	3	450	
Probation/Parole	PO	150	1	1	150	
<i>Director of Public Safety</i>	PO	150	1	1	150	
<i>Supervisor Office</i>	PO	150	2	2	300	Future Office
<i>Desk Sergeant</i>	PO	150	1	1	150	Future Office
Officer Work Stations	WS	60	12	16	960	
Communications Work Stations	WS	60	4	4	240	
Office Work Room	OA	150	4	4	600	Supplies, copy, file
Dispatch Stations	ER	150	4	4	600	2 needed currently 4 in future
Dispatch Kitchenette	OA	80	-	1	80	
Dispatch Restroom	ER	80	-	1	80	
				Subtotal	5,363	
Meeting /Public Space						
Public Lobby	ER	400	-	1	400	
Public Restroom	ER	225	-	2	450	
Classroom / Training	ER	1,400	-	1	1,400	Space for up to 75 people seated at tables
Table and Chair Storage	ER	250	-	1	250	
<i>Conference Room</i>	ER	225	-	2	450	Meeting space for 8-10 people seated at table
Public Interview Room	ER	125	-	2	250	Meeting space for 3 or 4 people access from lobby
				Subtotal	3,200	
Police Operations						
Hard Interrogation	ER	100	-	1	100	
Soft Interrogation	ER	100	-	1	100	
Viewing/Recording Room	ER	100	-	1	100	Directly adjacent to interview rooms
<i>Booking</i>	OA	150	-	1	150	Adjacent to sally port
<i>Holding Cells</i>	ER	100	-	3	300	2 needed now could go to 3 in future
Booking Restroom	ER	80	-	1	80	Adjacent to booking area

Police Department

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Evidence Processing	ER	150	-	1	150	Tables and sink
Evidence Storage	ER	300	-	1	300	Evidence lockers
Narcotics Storage	ER	100	-	1	100	
Bulk Evidence Storage	ER	400	-	1	400	Large items - Could be caged area in garage
				Subtotal	1,780	
Support Spaces						
Laundry Room	ER	100	-	1	100	Close proximity to holding cells
Armory	ER	100	-	1	100	
Staff Locker/Restrooms	ER	250	-	2	500	Showers and locker for every officer
Secure File Storage	ER	400	-	1	400	
Lunch Room/Kitchen	ER	150	-	1	150	
Janitors Room	ER	100	-	1	100	
General Storage	ER	250	-	1	250	
<i>Exercise Room</i>	ER	250	-	1	250	
IT/Server/Radio Room	ER	150	-	1	150	
Mechanical Room	ER	200	-	1	200	
<i>Tornado Shelter</i>	ER	300	-	1	0	Space required by code. Can serve as alternate space in building
				Subtotal	2,200	
Vehicle Apparatus Area						
Vehicle Garage	OA	300	-	8	2,400	8 parking spaces needed currently
<i>Future Vehicle Parking</i>	OA	300	-	8	2,400	8 future parking spaced needed
<i>Wash Bay</i>	OA	600	-	1	600	
Sally Port	ER	600	-	3	1,800	40 sets of gear / 27 current fire fighters
General Storage	ER	250	-	1	250	
Dog Kennel	ER	100	-	3	300	Outdoor space
				Subtotal	9,255	
TOTAL STAFF			39			
Subtotal - Net Square Feet						21,798
Partition & Circulation Factor			20%			4,360
TOTAL GROSS SQUARE FEET						26,158

Fire Department

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Administration Area						
<i>Fire Chief</i>	PO	200	1	1	200	
<i>Assistant Chief</i>	PO	150	1	1	150	
<i>Book Keeping</i>	PO	150	1	1	150	
<i>Training Officer</i>	PO	150	1	1	150	
<i>Entry/Vestibule/Lobby</i>	OA	150	-	1	150	
<i>Work Room/Copy</i>	ER	100	-	1	100	
<i>Secure Record Storage</i>	ER	200	-	1	200	
<i>Office/Public Restroom</i>	ER	80	-	2	160	
				Subtotal	1,260	
Fire Operations						
Classroom / Training	ER	1,000	-	1	1,000	Space for up to 50 people seated at tables
Table and Chair Storage	ER	200	-	1	200	
Conference Room	ER	225	-	1	225	Meeting space for 8-10 people seated at table
Day Room	OA	500	-	1	500	Adjacent to Kitchen
Kitchen	OA	400	-	1	400	Adjacent to Day Room
Dinning Area	OA	400	-	1	400	Adjacent to Kitchen and Day Room
Dorm Room	ER	100	-	4	400	
Dorm Restroom/Shower	ER	150	-	2	300	Single use restroom/shower for dorm rooms
Staff Restrooms	ER	150	-	2	300	
General Storage	ER	250	-	1	250	
Exercise Room	ER	250	-	1	250	
IT Room	ER	100	-	1	150	
Mechanical Room	ER	200	-	1	200	
Tornado Shelter	ER	300	-	1	0	Space required by code. Laundry/work room double as shelter
				Subtotal	4,575	

Fire Department

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Vehicle Apparatus Area						
Vehicle Apparatus Bays	OA	900	-	14	12,600	Drive through bays preferred - Current need
Future Apparatus Bays	OA	900	-	4	3,600	Future Needed Bays
Wash Bay	OA	900	-	1	900	
Bunker Gear Storage	OA	8	27	40	320	40 sets of gear / 27 current fire fighters
Decontamination Area	OA	60	-	1	60	
Laundry/Work Room	ER	300	-	1	300	Commercial washer and dryer
SCBA Room	ER	175	-	1	175	Bottle fill and storage
SCBA Compressor	ER	80	-	1	80	
Hose Storage	ER	200	-	1	200	
Training Tower	ER	650	-	1	650	
Radio Room	ER	150	-	1	150	Direct visual access to bays and apron
General Storage	ER	250	-	1	250	
Restroom	ER	80	-	1	80	Unisex restroom serving apparatus bay area
Mezzanine Storage	ER	1,000	-	1	0	Does not add to overall square footage of building
				Subtotal	19,365	
TOTAL STAFF			31			
Subtotal - Net Square Feet					25,200	
Partition & Circulation Factor			20%		5,040	
TOTAL GROSS SQUARE FEET					30,240	



Facility Condition Assessment.....123

Design Options - See Fire/Police Building Options.....112

Space Needs Analysis.....132

INTRODUCTION

The Pella Ambulance building is located at 604 Main Street on a parcel of land that is shared with the Pella Fire Department building. The date of the buildings original construction is not known however, based on the construction methods and materials it is believed to have been built in the 1940's or 50's. The building has had interior and exterior renovations, improvements and modifications over the years including the recent addition of sleeping rooms on the upper level. The building is owned by the City of Pella and leased to the ambulance service.

The 2-story building is used by the Pella Ambulance Service to house administrative functions and ambulance vehicles and gear storage on the ground level and living, training and dorm rooms on the upper level.

We recommend that the building be reviewed for code compliance by a licensed professional with the addition of the second floor sleeping rooms. Sleeping rooms generally require the building to have a fire sprinkler system installed throughout along with a fire alarm and detection system with audible and visual notifications systems. Both of these systems are currently not provided within this building.

SITE

The building is located on an approximate one acre site near the center of the historic downtown area. The site is shared with the Pella Fire Department and the Historic Fire Department museum building. Directly to the south is a commercial building and a residence and to the east is a parking lot area. In general the site paving appears to be in good conditions. It is recommended that site grades be reviewed along the south side to prevent water ponding or further structural damage to the building.



Washout



Overhead Door

BUILDING

Building Shell

The exterior walls of the original building are constructed of load bearing brick masonry. The front façade (west) is clad with a limestone panels. This masonry is in fair condition but several areas are in need of tuck-pointing and construction and expansion joints need to have sealants replaced. It is recommended that portions of the walls be re-pointed in the coming year to prevent water infiltration and further structural deterioration of the building. Areas along the base of the wall on the southern façade of the building have been undermined and the brick facades are not being properly supported. The undermining is likely being caused by stormwater eroding the soils. It appears that repairs have been attempted in the past on a portion of the wall. It is recommended that the wall be repaired and the site grades be reviewed and adjusted to drain water away from the structure.

The main level floor consists of a cast-in-place concrete slab-on-grade. The floor slab appears to be in fair condition with some cracking and spalling in areas of the vehicle garage.

Second level floor framing was visually observed in the garage area and consists of steel joist framing with a steel decking topped with concrete fill. The steel floor structure appears to be in sound structural condition but is in need of cleaning and a fresh coat of a protective painting or coating. The existing finish on the floor/ceiling structure is in poor condition and is peeling and flaking off. It is recommended that paint materials be tested for lead or other hazardous materials before removal.

Roof framing includes steel joist framing supporting steel roof decking. The roof framing appears to be in sound structural condition. There is an overhead hoist crane and floor hatch located on the second level. It is understood based on comments during our visit that the crane no longer works and the hatch is not used.

Exterior windows are operable aluminum clad wood units with insulated glazing throughout most of the building. These units are in good condition and appear to be fairly new. Windows in the restrooms and laundry room do not appear to have been replaced and are in poor condition and beyond their useful life span. It is recommended that these units be replaced.

Exterior man doors are painted steel frames and doors and are in fair condition. Several of the doors are showing signs of wear and corrosion beginning to form. It is recommended that exterior doors and frames be cleaned and painted in the near future. Exterior glazed overhead garage doors are in poor condition. Several glazing panels have moisture built-up within them, door weather-stripping is in poor condition or missing on several doors. Overhead door replacement is recommended.

Roofing

Direct roof access was not available at the time of the site visit however the roof was visually observed from the roof level of the adjacent Fire Station Building. Roofing systems appeared to consist of a thermoplastic olefin (TPO) single-ply membrane most likely fully adhered to rigid board roof insulation layered directly over the roof deck. This type of roof would be consistent with the Fire and Police building roofing systems. The areas of the roof that were visually accessible appeared to be in good condition with no significant deterioration. The existing roofing systems can be expected to function properly, with proper preventative maintenance, for another 10 to 15 years. Roof drainage is achieved with a series of through-wall scuppers which drain to gutters and downspouts.

Interiors

Interior partition walls are primarily painted gypsum board in the office and upper level sleeping areas.

Restrooms finishes consist of painted gypsum board walls with floor tile. Finishes are in fair condition and floor tile is dated. Current restrooms do not meet current accessibility standards for wheel chair access and maneuverability. It is also recommended that restroom walls have a tile or durable water resistant finish installed around sinks and toilets as is required by current building code. It is recommended that a complete restroom renovation be undertaken should the building undergo any significant upgrades or renovations.

Floor finishes include a combination of ceramic tile, vinyl tile, carpet and bare concrete. In general floor finishes are in fair condition but near the end of their useful life span.

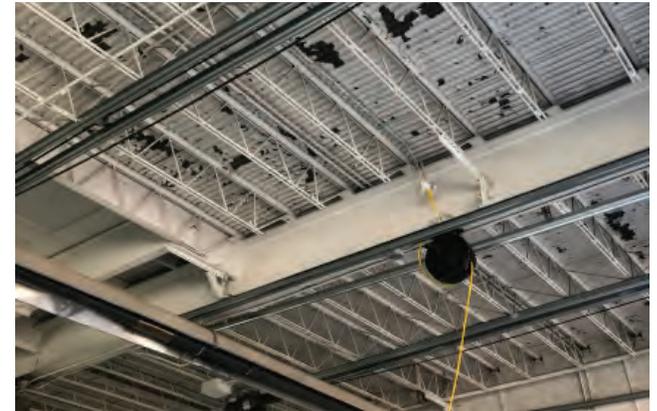
Ceilings consist of acoustical panels supported by a suspended grid system. Suspended ceilings are in poor condition.

Cabinetry in the kitchen area includes plastic laminate clad cabinets and countertops. Cabinetry is in fair condition and does not meet current building code requirements for hand-capped accessibility at sinks.

MECHANICAL

Building HVAC

The main building (non-garage) is heated and cooled via Lennox, sealed combustion furnaces with natural gas heat and DX cooling. The two floors are zoned with three (3) units: two (2) for the upper floor and one (1) for the lower floor. With limited thermostats and zones, some spaces have comfort issues where a single thermostat controls spaces with differing loading/usage, which appears to be the case on the lower level with the reception and corner office.



Ceiling Paint



Non-Compliant Rooms

The furnaces were installed in the late 1990's as part of a renovation, which puts the condensing unit compressors near the end of their useful life. Regular maintenance can prolong the life of the condensing units and fan coil units. If there is an issue/repair, these units are R-22 which is an old refrigerant that is no longer manufactured and reclaimed refrigerant is expensive.

The HVAC units have ventilation air ducted from return air of the furnaces to the exterior.

Exhaust fans interlocked with lights for the restrooms appear to be in working order.

The lounge has an electric stove with a residential-style hood above. In a commercial facility, this arrangement would normally require a type-1 hood with fire suppression. In some cases, local officials have allowed for a Denlar D1000 type hood with fire suppression.

The upper level includes conventional, natural gas unit heaters used for supplemental heat, which appears to be in good condition.

The ambulance garage has infrared radiant heat for supplemental heating, which appears to be in decent condition. A vehicle exhaust system for an enclosed parking garage is not installed, but would normally be required.

Currently, the upper level is under construction to add sleeping rooms. This might have some code ramifications, but that would have to be investigated further. It appeared that each room would have operable windows for ventilation.

The furnaces are near the end of their anticipated life, with replacement or major maintenance expected on most units. An upgraded HVAC system would most certainly improve energy efficiency and provide for opportunities for enhanced comfort as well (humidity control, improved zoning, etc.) If maintained until equipment failure, investing significant money into the repair of this system is not recommended due to its age and outdated refrigerant.

HVAC Controls

The controls for the furnaces and unit heaters are stand-alone programmable thermostats. A DDC system could provide for system scheduling and alarms, which would provide an opportunity for enhanced energy savings and alert staff with any issues before potential for damage.

Plumbing

A 2" domestic cold water entrance has a water meter and backflow preventer. The cold water is routed through a filter due to poor water quality from the city mains. The domestic water plumbing piping is copper, insulated and appears to be in good condition.

Cold water is routed to a 4.5kW, 40 gallon, electric water heater that was installed in 2009. The water heater has been replaced once or twice since the late 1990's renovation which is probably an indication of the water quality. At the rate of recent water heater replacements, this water heater is probably near to replacement. The domestic water heating system does not have a thermostatic mixing valve, which would allow the hot water storage at 140°F and distribution at a safer 110°F. A master thermostatic mixing valve arrangement minimizes the risk of legionella, and with this amount of storage, potential intermittent use and showers, a revised hot water plant would be recommended.

Plumbing fixtures are vitreous china lavatories, toilets (floor mounted) and urinals. There are stainless drinking fountains and stainless steel drop in sinks. Flush valves are manual and faucets are manual. The plumbing under the lavatory does not have ADA insulating wrap on the drainage or water supplies and the hot water is missing an ASSE 1070 hot water mixing valve which is a new code item for public lavatories. The plumbing fixtures appear to be in good condition.

The sink in the lounge does not have a garbage disposal or grease trap. Some jurisdictions would require a grease trap where a cooking appliance is installed in a commercial facility.

The ambulance garage has a sand and grease trap, per existing plans.

Fire Protection

There is no fire protection (sprinkler) system installed in the building.

ELECTRICAL

Power Distribution

A pad-mounted utility transformer is located east of the building. Service feeders are routed underground to the east side of the garage level where it terminates to a 225 amp, 208/120 volt, 3-phase Square D panelboard.

The service entrance panelboard above is in fair or good condition. It is estimated it was installed in the late 1990's to early 2000. Branch panels were manufactured by Square D and one (1) panel is manufactured by Frank Adam. The Square D panels have spare capacity and can be reused during a renovation. The Frank Adam panel is likely original to the building. Frank Adam company dissolved many years ago and replacement parts are difficult to find. It is our recommendation to replace the Frank Adam panel.

The grounding electrode system needs to be improved. There is not a bond to the incoming water service pipe and no jumper across the water meter.

Arc flash labels are not installed on the electrical gear. It is our recommendation to have an arc flash study performed on the electrical system.



Emergency Lighting



Exit Sign

Interior Lighting

The building fixtures are a variety of fixture lamp types. Some fixtures have the lamps replaced with LED retrofit lamps. These would not need to be replaced. In the garage space the fixtures are high pressure sodium. These fixtures would be replaced with a LED fixture and not use a retrofit lamp. The fluorescent and incandescent fixtures can either be replaced with all new LED fixtures or LED tube retrofits. A complete fixture replacement will have more energy savings than replacing with LED tube retrofits. The LED tube retrofit would be far less costly than the complete fixture replacement.

The non-LED lighting throughout the building should be replaced with more efficient LED-based luminaries. This would have an impact on the electric bill each month. Energy rebates may be available through Bright Energy Solutions and should be considered to help offset upfront replacement costs.

Interior Lighting Controls

No automatic controls (i.e. occupancy sensors) were noted during the walk-through. Manual wall switches are provided in each room. No dimming was noted.

Lighting controls that could be updated are manual switches for small rooms. These switches could be replaced with wall mounted occupancy sensors. Daylight harvesting is not recommended for the lighting control upgrade because of the limited number of fixtures, high cost of installation and limited payback.

Exterior Lighting

Wall packs with high pressure sodium (HPS) lamps are installed on the exterior of the building.

All the exterior luminaries could be replaced with new, LED luminaries. Retrofitting the existing HPS luminaries with LED is not recommended since heat dissipation is a major concern. The housings of new LED luminaries are de-

signed for proper heat dissipation and longer life. Energy rebates available through Bright Energy Solutions and should be considered to help offset upfront replacement costs.

Life Safety Lighting

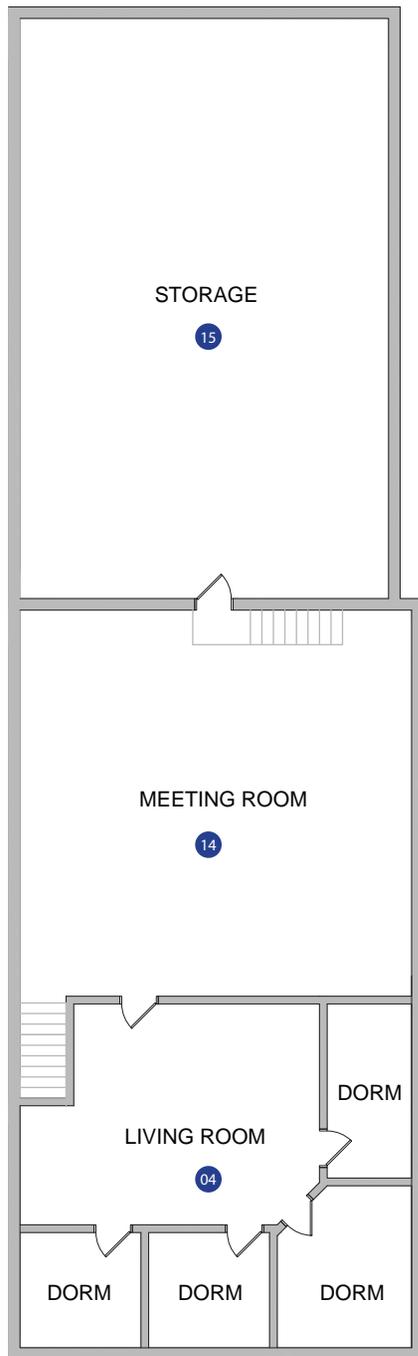
Recessed emergency lights with two adjustable heads and battery backup are installed in the building. It is unknown if the batteries are replaced on a regular basis and tested monthly. All emergency lights should be tested and replace any lights that fail.

No exterior life safety egress lighting has been provided at exterior doors. Exterior rated LED emergency battery packs should be added to exterior doors.

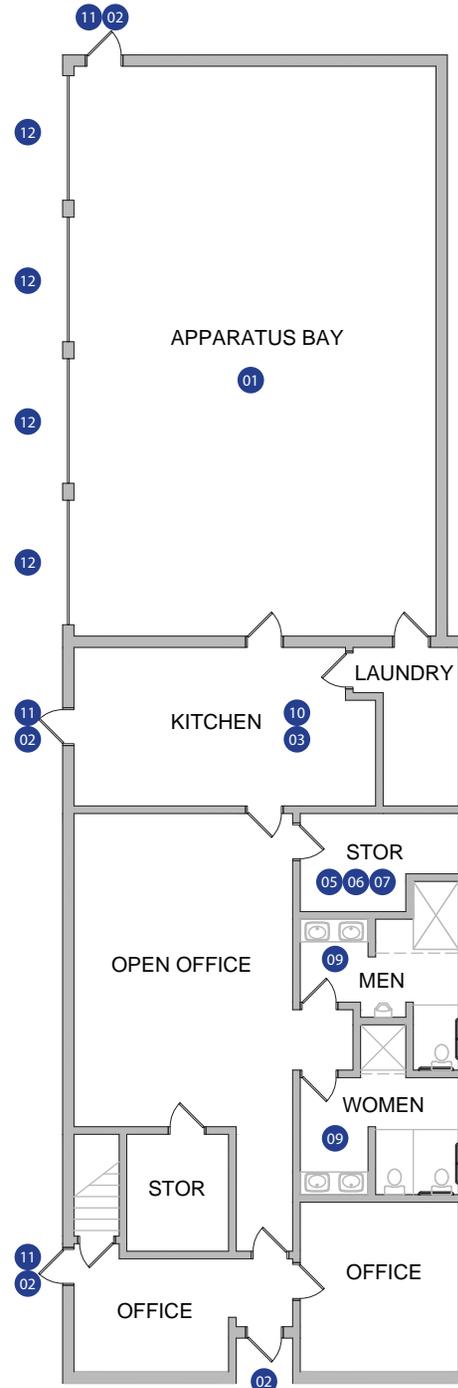
Exit signs have been installed along the paths of egress. All exit lights should be tested and replace any lights that fail.

Fire Alarm

A central fire alarm system was not noted in the building. Hard wired audio/visual notification devices are installed in the ceiling. It is unclear if detection devices are installed in the space. It is our recommendation to add an addressable fire alarm system to the building. Sleeping rooms are being added to the upper floor. Current fire alarm code requires low frequency sounder bases in sleeping rooms. The sleep rooms should also have high intensity strobe devices.



Upper Level



Lower Level

- 08 Typical interior
- 13 Typical exterior

Existing Floor Plan

Legend - Ambulance Building

- 01 Install a vehicle exhaust system with CO/ NO2 detectors in the vehicle parking areas.
- 02 Install code compliant interior and exterior emergency egress lighting throughout the building.
- 03 Replace kitchen hood over stone/range with a hood that includes proper fire protection features.
- 04 Verify life safety features (sprinkler and fire alarm systems) for upper level sleeping rooms.
- 05 Provide proper grounding of the electrical systems.
- 06 Conduct an arc flash study and install proper labels on electrical gear.
- 07 Replace one existing outdated electrical panels.
- 08 Replace interior floor and ceiling finishes to provide an up-to-date appearance.
- 09 Provide accessibility upgrades to the existing facility restrooms to meet the minimum requirements of the American's with Disabilities Act (ADA) and State Building Code. Current plumbing fixtures do not meet current code minimum clearances or mounting heights. Complete restroom renovations are recommended.
- 10 Provide new cabinets in kitchen area to meet minimum handicapped accessibility requirements. Current codes require countertops to have a roll under access at sink locations.
- 11 Paint exterior steel doors and frames to protect doors from corrosion.
- 12 Replace existing overhead garage doors and door weather-stripping.
- 13 Tuck-point approximately 25% of the exterior masonry wall surface.
- 14 Provide second means of egress from Meeting Room. Meeting rooms with occupant loads over 49 shall have two means of egress per current building codes.
- 15 Provide second means of egress from Upper Level to reduce exit travel distance. Occupants shall have two exits available to them within 75-foot travel distance per current code requirements.

Pella Ambulance

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Administration Area						
Director	PO	200	1	1	200	
Assistant Director	PO	150	1	1	150	Office for future staff
Office Manager - Billing	PO	200	1	1	200	
Administrative Assistant	PO	150	1	1	150	
Future Staff Office	PO	150	1	1	150	Office for future staff
Staff Work Stations	WS	50	8	8	400	Work spaces for report writing - currently have 4 need 4 additional
Entry/Vestibule	OA	80	-	1	80	
Record Storage/Work Room	ER	150	-	1	150	
				Subtotal	1,480	
Support Spaces						
Classroom / Training	ER	750	-	1	750	Space for up to 50 people seated at tables
Table and Chair Storage	ER	200	-	1	200	
Conference Room	ER	250	-	1	250	Meeting space for 12 people seated at table
Medical Supply Room	ER	200	-	1	200	
Living Room	OA	400	-	1	400	Adjacent to Kitchen
Kitchen	OA	400	-	1	400	Adjacent to Living Room
Dorm Room	ER	120	-	6	720	Currently have 4 would like 6
Dorm Restroom/Shower	ER	120	-	2	240	Single use restroom/shower for dorm rooms
Staff Restrooms	ER	120	-	2	240	Serve office staff
Laundry Room	ER	200	-	1	200	Direct access from Apparatus Bay
General Storage	ER	150	-	1	150	
Mechanical Room	ER	150	-	1	150	
				Subtotal	3,900	

Pella Ambulance

			Programmed 20-Year Projection			
Staff/Component Description	Space Code	Unit NSF	Staff	Units	SubTotal NSF	Comments
Vehicle Apparatus Area						
Vehicle Apparatus Bays	OA	720	-	4	2,880	Current Need
Future Apparatus Bays	OA	720	-	2	1,440	Future Needed Bays
Bunker Gear Storage	OA	8	-	40	320	40 sets of gear
Decontamination Area	OA	60	-	1	60	
General Storage	ER	150	-	1	150	Bikes, Supplies
Wash Bay	OA	720	-	0	0	Wash vehicles in parking spaces
				Subtotal	4,850	
TOTAL STAFF			13			
Subtotal - Net Square Feet			10,230			
Partition & Circulation Factor			20%			2,046
TOTAL GROSS SQUARE FEET						12,276

