



Village of Harrison, Wisconsin
Facilities Evaluation and Concept Planning
January 31, 2024

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Executive Summary

In August of 2023, the Harrison Village Board took action to approve the agreement for professional services to study the current operations of the six Village owned facilities and make recommendations for accommodating the future operations and long-term growth of each of the departments.

During the five-month analysis period, the consultant team worked with Calumet County Sheriff, fire staff, DPW, Water Utility and Village administrative staff to analyze the current condition and operations of the each of the departments and make recommendations for future accommodations.

Tasks specific to the analysis included determination of the facility size based on current and future staffing projections, fire department apparatus storage and DPW fleet expansion as well as incorporation of best practices for occupant spaces in the design of modern public safety facilities.

Six facilities were analyzed to determine their suitability for accommodating future operations and identifying short term maintenance projects to extend facility service life. Site analysis developed criteria that included pedestrian and vehicular accessibility, analysis of the site size and buildable area, access to Public Utilities, and upfront costs to make the sites ready for new construction and development.

As part of the programming and feasibility analysis, the consultant team was engaged in conversations with several Village Departments to understand current and future operations.

Once the programming was complete, the consultant team projected future space needs and developed plans for expansion of the Fire Department, Village Hall, and Public Works facilities. Maintenance and accessibility improvement projects were recommended for the Harrison Utilities building and the park facility buildings. Associated

cost estimates for each of the recommended improvements were developed.

Harrison Village Hall and Public Works Department

Current Challenges In Existing Village Hall

Current challenges in the existing Village Hall fall into three main categories:

- a. Operational efficiency
- b. Health and safety
- c. Other related concerns

Operational Efficiency

Each of the categories impact the daily operations and functionality of the Village Hall. For several decades the Village's administrative operations have functioned in a facility that has evolved and changed over time. The original building was partially demolished and an expansion was built onto the facility in 2004. Based on conversations with Village staff during the interview and programming process, it was apparent that certain areas of the building are lacking in terms of their capacity and it is impacting the **operational efficiency** of the facility. Currently Village staff occupies all available office spaces. Additional growth space to accommodate future staff headcount could only be accomplished by expanding the open workstation or cubicle area. Storage is at a premium and the two designated storage rooms are completely full with no additional space for expansion. Between historic records and files and the election equipment, the rooms are full. Plans and file storage have spilled over into the conference room and additional floor space is being occupied by storage materials that should be placed in a lockable storage room with restricted access to specific staff.

The police function of the Village Hall lacks the necessary space required for operational efficiency of the Sheriff's Department operation. The officer's room is too small to accommodate more than one staff member at a time and serves several functions including an armory, evidence

storage and processing, an interview room, and resume and report writing by the officers. In order to realize better operational efficiency individual spaces for each of the functions listed above should be created for the Sheriff's Department staff. There is no accommodation for Village residents and visitors outside the department that come to the Village Hall with police business. Officers are not able to have private conversations with suspects or victims in the current configuration. These meetings are currently held at the Calumet county facility in Chilton. As the Village grows and develops, a stronger police presence should be established in the community. Developing a formal area for police operations will enhance safety and security as well as staff and user experience.

Further discussion as it relates to the public safety aspect within the Village hall building Has been provided in a separate section of this report.

There are a few minor changes within the Village Hall facility that can enhance the user experience and the security and safety of the staff and operation. Separating the sensitive electronic equipment by providing a designated IT room that is large enough to accommodate all of the information technology components will help safeguard the Village from unauthorized access to the computer servers.

Adding the necessary ADA required enhancements in the toilet rooms and the break area will provide accessible amenities for users of all abilities.

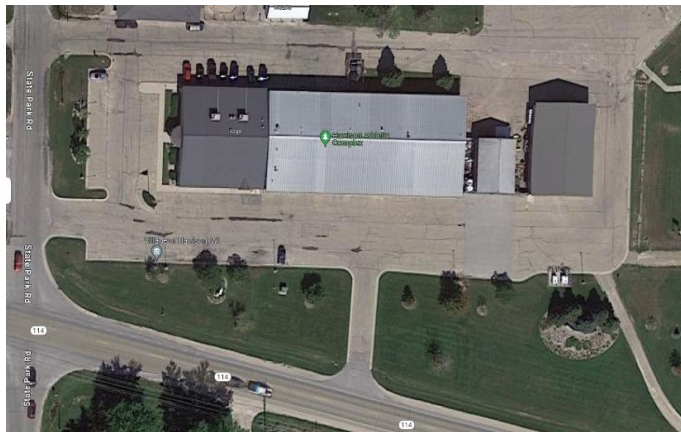
Other Related Concerns

Other related concerns could be those classified as items that impact the Village Hall building, operations and staffing.

During the interview process with Village Hall staff, there were no additional related concerns expressed to the consultant team at the time of our facility tour and staff interviews. Staff felt the building adequately met the needs of the operation currently with the exception of the much-

needed storage space, but the current facility did not provide enough additional growth area to accommodate the function of the Village Hall and staff operations in the future. Sheriff's Department staff was keen to point out the shortcomings of their operation within the Village Hall. Adding staff to accommodate the contracted police services and the anticipated growth of the operation in the future will make it necessary for the police operations to expand. Whether that is in the current Village Hall facility or part of a future public safety campus, considerations for operational expansion should be made in the short term (0-5 years).

Current Facilities Conditions



Aerial Image of the Village of Harrison Village Hall and DPW Facility W5298 State Hwy 114, Menasha

The Harrison Village Hall building is a pre-engineered metal facility that houses the operations of the Harrison Village administration operations. The main building function is the administrative office portion of the operation. The building also contains a DPW vehicle and shop function area on the back of the building. The Calumet County Sheriff's department provides local police protection for the Village and has a small office area contained within the Village Hall administrative offices. There were drawings of the 2004 renovation of the facility available for the consultants to review. The building was

expanded and updated roughly 20 years ago and is in good shape with no notable areas of concern as it relates to the physical condition of the building beyond normal maintenance requirements.

The building was renovated and expanded to provide additional office, staff amenity areas and conferencing space as necessary for the business operations of the Village. The Village boardroom and the amenity spaces that serve it were also provided in the expansion and renovation of 2004. Growth of the Village precipitated the need for additional staff office space and operational areas of the building. This recent growth has expanded to the point that any additional floor area and potential operations expansion space has been accounted for. There is currently no future growth space available for the expansion of operations.

The building is ADA accessible and the parking area incorporates the required wheelchair accessible parking stalls. The asphalt parking lot is sloped to the elevation of the front walk making the transition from the parking lot to the building an accessible route.

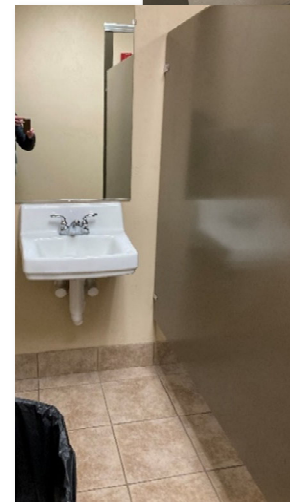


The parking lot contains concrete curbs and gutter around the South and West side of the building. Other areas of asphalt pavement are shouldered where they abut manicured lawn areas. Sheet drainage by sloping of the asphalt conveys stormwater away from the building. The asphalt parking lots have been recently re-paved and are in good condition.



The interior of the building is in good condition and requires very little maintenance. The staff kitchenette and break area lacks ADA accessible countertop heights and there is not a compliant work surface directly adjacent to the residential oven/stove. All of the case goods and cabinetry are in good condition. The microwave shelf above the stove top is not ADA accessible.

Office and storage areas appear to be grossly under sized for the operation. In conversations, staff revealed the need for additional storage areas. The toilet rooms are ADA accessible and only lack the 18 inch vertical grab bar required on the side of the water closet.



The IT closet is undersized and does not accommodate current IT equipment needs. Future expansion of computer servers, building automation and security equipment will not fit in the current IT closet. It was also reported to the consultants that the door to the room needs to be left open to achieve proper air flow and regulate the temperature in the IT closet. This is a security concern for the Village since the sensitive electronic equipment cannot be secured by a locked door.



During interviews with the Calumet County sheriff's representatives, it was brought to the consultants attention that the space reserved for the community police officers is undersized. The room is not large enough for occupancy by more than one officer at a time and the space serves multiple functions including evidence processing and storage, an Armory and report writing area for the on-duty officer. Currently the Sheriff's Department stores two patrol vehicles in the DPW garage. The long-range plan for the Village under the agreement with Calumet County is to store one additional patrol vehicle on site in the DPW garage. This will add additional stress to the already tight vehicle storage Bay reserved for the Sheriff's Department

and eliminate one potential vehicle storage spot for Village DPW operations.



As it pertains to the proposed use as public safety vehicle (patrol car) storage and police department operations center, there is concern regarding change in risk category corresponding to current building code requirements for buildings that house "Essential Services". Back when the Village Hall was constructed, the state and national building code did not make considerations for risk categories based on the occupancy type of a building. With the adoption of more current building and life safety codes, definitions were provided for buildings that contain essential services. It is difficult to determine how the structure type would translate to the risk categories defined by today's building code. Existing building drawings would be necessary to ascertain the original construction methods used to construct these two buildings. From there an analysis could be completed comparing the building category type to the actual built facility. SEH Structural Engineer, Matt Gundry summarizes this concern as follows:

If this building were to house "essential services" as defined by current building code, additional structural considerations are in order. ASCE 7 commentary states "Buildings and structures typically grouped in Risk Category IV include hospitals, police stations, fire stations, emergency communication centers, and similar uses." Based solely on visual inspection, I suspect this building

originally fell under Risk Category II. Risk Category IV buildings are required to be structurally capable of withstanding larger snow (20%) and wind (~9%) loads than Risk Category II structures. In that case, strengthening of the building would be required to meet code when modifying, renovating or expanding the current building. It is assumed that the existing building was designed to Risk Category II. Given the proprietary nature of the building, evaluating the structure for these new loads becomes very time intensive. All of the components and connections need to be catalogued in detail for evaluation and potential strengthening. If the original building manufacturer can be identified, it is recommended they be contacted to see if the original design is still available and can be evaluated by the manufacturer for the change in risk category prior to committing to any renovations or expansion as public safety use building. If that option is not available, it is reasonable to assume there would be an increase in structural engineering costs associated with evaluating and designing strengthening of the frame to meet code requirements for Risk Category IV.

The DPW garage houses maintenance and Fleet vehicles. There is also a small maintenance shop operation that shares space with the vehicle storage areas within the DPW garage. The proximity of this maintenance shop is not ideal from a safety perspective. The shop operation shares space with vehicle storage and movement areas within the building. There is no physical separation between these two functions and staff members commingle with vehicles moving in and out of the facility several times a day.

The vehicle storage bays of the building are completely full and stored vehicles commingle in spaces with other functions like the sign shop, maintenance shop and wash bay. When the wash bay needs to be utilized fleet vehicles need to be removed from the wash bay and parked outside the building.



There are small non ADA accessible toilet rooms directly off the shop. These restrooms typically serve the DPW staff and are an additional convenience for on duty officers from the Sheriff's Department. There is a small break room adjacent to the DPW vehicle storage garage. It is technically reserved for DPW staff but during the interview process it was relayed to the consultant that the break room is too small to occupy by all on shift DPW staff. To accommodate for this staff takes their breakout in the



maintenance shop area directly adjacent to the vehicle storage and maintenance areas.

The existing overhead doors were original to the building and were not modified during the 2004 renovation. The are too small to accommodate some of the newer plow trucks when they are outfitted with front plows and wings. Damage was observed on several of the door jams of the overhead doors, evidence that plow drivers are challenged with the width of the doors when their plow trucks are set up for plowing operations.

Recommendations

Based on the relatively good condition of the Harrison Village Hall and DPW building there are only a few maintenance items that could use attention.

Providing a dedicated and expanded IT and server room will safeguard this sensitive equipment from potential damage and tampering by unauthorized staff.

Patching of the metal wall panels at the door jams will extend the life of the wall panel.

Modifying a section of the countertop in the break room will bring the kitchenette into compliance with ADA requirements.

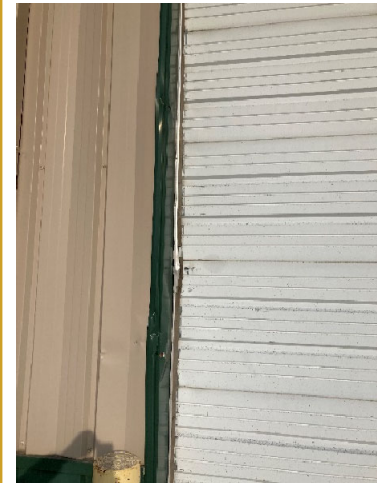
Installing an 18" vertical grab bar in the restrooms will bring the toilet room into compliance with ADA requirements.

Finding space to expand police operations and the IT room are two short term improvements that should be considered by the Village and moved up on a priority list.

Continuous monitoring and maintenance of the asphalt parking areas will prolong the service life of the asphalt.

Existing Facility Renovation Feasibility

Based on the age and condition of the Harrison Village Hall Building it is highly feasible and recommended the existing facility be renovated. DPW operations should be expanded to the East. Removal of the existing salt shed would



provide the needed area for DPW expansion. Investing in the recommended maintenance and accessibility improvements will extend the life and functionality of the facility for users of all abilities for a minimum of 20 years. The cost of these improvements will be realized in terms of payback over the course of the next two decades that the building is in service.

Expanding police operations within the existing facility will require some thought as to the risk category of the building and the potential hardening of the structure that would accommodate the Police Department expansion.

If a long-range plan for a public safety facility is realized, it would make sense to centralize all of the Village operations onto 1 campus as a convenience to Village residents and as an operational efficiency measure for all Village staff. A new Village Hall as part of the public safety facility should be a consideration on the consolidated Village campus.

Current Challenges in Existing DPW Facility

Current challenges in the existing public works building also falls into three main categories:

- a. Operational efficiency
- b. Health and safety
- c. Other related concerns

Each of the categories impact the daily operations and functionality of the public works building. For several decades the Village's public works operations have functioned in a building that was programmed for a smaller operation that maintained a smaller community. With the growth that the Village has seen in the past decade, it is evident when analyzing the operations of the current public works department that community growth has a direct impact on the space needs and function of the public works department.

From the expansion of the equipment fleet and maintenance vehicles to the increase in FTE staffing, the public works department has shown steady growth over

time. Just in the 20 years since the Village Hall and DPW facility was renovated and expanded, the need for additional vehicle maintenance and storage has been documented. With additional personnel being hired to operate the equipment and manage the operations, office and amenity space like locker room functions and a break room with adequate capacity to accommodate all staff simultaneously are becoming necessities for the operations. Recent staff growth and the increase in the number of FTE's does not take into account seasonal help that increases the number of staff during the summer months.

Operational Efficiency is impacted in the DPW garage by the need to provide indoor storage for the equipment and vehicle fleet. Additional equipment has taken over spaces originally reserved for vehicle maintenance, sign shop operations and the wash bay. Vehicles must be jockeyed inside the building and to complete some operations, completely removed from the vehicle storage areas and parked outside.

With the growth of the Calumet County sheriff and policing operations, one of the original vehicle bays reserved for DPW vehicles has now been converted to full-time squad car storage for the sheriff's department. This further impacts the operational efficiency of the DPW department. Now DPW staff must work around the 2 squad cars that are parked in the middle of the DPW operation. In programming discussions with Calumet county sheriff's representatives it was discovered that it is the intent of the Sheriff's Department to expand to three patrol vehicles that will need to be parked inside the DPW garage. This will put even more stress on the efficiency of the operations of the DPW area. During the 2004 renovation and expansion of the DPW area, floor plan space was identified for vehicle storage area and a two-ton jib crane was installed between 2 vehicle storage bays. With the addition of fleet and maintenance vehicles, those two previously reserved maintenance bays have since been occupied by fleet vehicles that now need to expand into those reserved bays.

Health and Safety is also compromised in the DPW facility. Since the staff break room is not large enough to accommodate the DPW department during common break times, the repair shop has become a makeshift break room with staff preparing and eating their lunches in the shop next to facilities originally intended for welding and cutting operations, painting operations and general equipment maintenance work. As part of the 2004 renovation, code required vehicle exhaust was added to the vehicle storage bays. The exhaust fans were sized to deliver the proper air exchanges based on the number of vehicles stored in the building. The existing vehicle exhaust system should be reevaluated to determine whether or not air exchanges in the building are adequate for the number of vehicles currently stored in the DPW garage.

Air quality in the vehicle storage and maintenance areas was observed as being sub-par. Vehicle exhaust odors and smoke were observed by the consultant team during their tour through the building. With areas of the vehicle storage and maintenance bays being occupied full time by members of the DPW staff, air quality and vehicle exhaust emission capture should be a high priority and treated as a health and safety consideration for the employees.

Safety in the DPW garage could be greatly enhanced by providing physical separation from the vehicle storage and movement areas and the vehicle maintenance shop within the garage space. Currently maintenance operations and vehicle movement are adjacent to one another and at times occupy the same spaces. Having better defined areas between personnel occupancy and vehicle storage will increase safety within the operation.

Other Related Concerns

Other related concerns could be those classified as items that impact the DPW building, operations and staffing.

Employee morale is one of the metrics that weighs heavily on a departments ability to successfully recruit and retain the best talent possible. With the popularity of public sector careers waning, it is more important than ever to provide

proper, safe, welcoming and inclusive environments for employees. It has been demonstrated through recent DPW facility improvement and construction projects that employees exposed to the proper work environment are more motivated, healthier, feel safer and are more likely to stay in their current positions when given best in class environments to live and work.

New facilities should be seen as a long-term investment by the community to preserve a well maintained community. Communities that invest in facilities to house their DPW departments see long term benefits to the Community. The facilities that house these departments are only one facet that garners civic pride but it is a critical piece in the equation that illustrates the benefit and importance of an efficient, well run DPW department within a community.

Bringing a new facility online that is more environmentally sustainable and responsible is a long-term consideration the Village should embrace. Expanding and improving the current DPW building with and energy efficient highly sustainable building will provide economic and environmental benefit for decades to come.

Programming and Space needs

Programming and Future Space Needs were derived and based on current operation and potential expansion discussions with Harrison Village Staff and Calumet County Sheriff's department members. Separate fire and police space needs documents have been developed and include the current and future programmed spaces necessary for the operation of a police, fire and EMS station.

The program areas were also applied to the existing building renovation options analyzed as part of the study so the appropriately sized building could be used in determining the feasibility of occupying the existing public safety building and Village Hall site(s).

The following is a high level summary of the building program spaces and their appropriate areas and does not

include a room by room breakdown. Square footage areas between the new program and the existing facility have been listed comparatively.

Programmed Village Hall Administration: 6,883 s.f.

Existing area of current Village Hall Administration:
6,375 s.f.

Programmed area of DPW Vehicle Storage and Operations: 24,000 s.f.

Existing area of DPW Vehicle Storage and Operations:
14,875 s.f.

The space needs programming documents with room by room descriptions and recommended sizes can be found on the pages following this section.

DPW & Administration Programming - Office Administration

OFFICE	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Open Office/Work Room	32	x	25	=	800	1	800	4 cubicles need one for intern,
Private Offices	10	x	15	=	150	5	750	5 currently no need for additional in next 5 years
Lobby/Vestibule	10	x	12	=	120	1	120	
File Storage Room	15	x	20	=	300	1	300	currently undersized expands to other areas of building.
MFD/Print/Copy/supplies	8	x	10	=	80	1	80	Layout space and cabinets
Lobby Conf. Room	6	x	8	=	48	1	48	Off Lobby.
Election supplies	15	x	12	=	180	1	180	
Workstations	8	x	8	=	64	4	256	
Break Room	15	x	21	=	315	1	315	Double as safety training room 12-13 staff
Janitor Room	8	x	8	=	64	1	64	
Vault	8	x	8	=	64	0	0	safe in file storage room
Locker Room	32	x	20	=	640	1	640	Gender neutral locker shower room
Board room	30	x	40	=	1200	1	1200	moveable tables and chairs additional polling location
Public Restroom	8	x	8	=	64	2	128	
Conference Room	16	x	24	=	384	1	384	10 person conf table can be off lobby not in back of office space- camera and AV functionality
Training Room	16	x	32	=	512	0	0	
Inspections	10	x	15	=	150	1	150	On DPW side
Plan Storage	15	x	20	=	300	0	0	In office in cabinets 7 year retention
IT Room	8	x	12	=	96	1	96	HVAC upgrades combine with Board room IT
Mechanical Room	15	x	10	=	150	1	150	
Mud Room	8	x	10	=	80	1	80	
Survey Equipment/GIS Room	8	x	10	=	80	1	80	On shelves in trucks or in tool storage room
Mother's room	8	x	8	=	64	1	64	
Officer Room/Resume/Report Writing	10	x	10	=	100	1	100	
Interview room (hard, soft, family)	0	x	0	=	0	0	0	
							5,985	Subtotal
							898	Efficiency Ratio of 15%
							6,883	Administration/Office Spaces

DPW & Administration Programming - Vehicle Storage

Vehicle Storage Room							0
Number of Bays		3	4	5	6	7	8
		Length					
		80	104	128	152	176	200
Depth	60	4800	6240	7680	9120	10560	12000
	80	6400	8320	10240	12160	14080	16000
	100	8000	10400	12800	15200	17600	20000

0							Total Truck Room
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DPW Department Program	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Trucks, trailers, attachments	200	x	120	=	24000	0	0	Includes all required indoor storage
	0	x	0	=	0	0	0	Heated, tempered, cold
	0	x	0	=	0	0	0	
	0	x	0	=	0	0	0	

0							Subtotal
0							Efficiency Ratio of 10%

0							DPW Department Vehicle Requirements
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DPW & Administration Programming - Shop

SHOP	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Wash bay	30	x	60	=	1800	1	1800	
Small Tool Room	10	x	20	=	200	1	200	
Gas Handheld Tool Room	40	x	20	=	800	1	800	
Paint/Oil/Chemical Storage	12	x	15	=	180	1	180	
Sign Storage	40	x	5	=	200	1	200	
Vehicle Maintenance	30	x	80	=	2400	2	4800	with vehicle hoist
Parts Storage	50	x	20	=	1000	1	1000	eliminate storage racks
Tire Storage	8	x	20	=	160	1	160	
Wood Shop	25	x	20	=	500	0	0	
Welding Shop	30	x	15	=	450	1	450	Combine with wood shop
Bulk Fluid Storage	15	x	15	=	225	1	225	
Shop Toilet	8	x	8	=	64	1	64	
Shop Office	15	x	20	=	300	1	300	Shared with Lead foreman- Code enforcement might move out to front office.
Shop IT Room	6	x	6	=	36	0	0	
Compressor Room	15	x	15	=	225	1	225	
Mezzanine	60	x	25	=	1500	1	1500	
Paper Product & Maintenance Supplies	20	x	15	=	300	1	300	
Janitor Room	8	x	8	=	64	0	0	
Shop HVAC	25	x	15	=	375	0	0	
Plow blade storage	5	x	20	=	100	0	0	Follow program from Jeff.
Parks supply/maintenance storage	15	x	15	=	225	1	225	Volleyball and pickle ball nets etc.
Holiday display storage	5	x	40	=	200	1	200	Future need.
	0	x	0	=	0	0	0	
	0	x	0	=	0	0	0	
							12,629	Subtotal
							1,894	Efficiency Ratio of 15%
							14,523	Shop Spaces

DPW & Administration Programming - Site Program

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Staff Parking	32	x	10	=	320	15	4800	Current parking is adequate
Public Parking (DPW dept business)	32	x	10	=	320	0	0	
Outdoor Patio	25	x	45	=	1125	0	0	
Enclosed Dumpster	12	x	24	=	288	1	288	Hazmat appliances and electronic drop off
Generator	20	x	10	=	200	1	200	Power entire building
Storm Water Treatment	50	x	100	=	5000	1	5000	
Cold Storage	60	x	100	=	6000	1	6000	
Brush Collection	32	x	100	=	3200	0	0	-
Salt Storage	32	x	100	=	3200	0	0	800 ton 1 new 2 old 500 ton
Cell Tower	50	x	50	=	2500	0	0	
Yard Storage	32	x	100	=	3200	0	0	
Outdoor wash down area	32	x	100	=	3200	0	0	
Cold patch storage	15	x	30	=	450	1	450	
Sweeper pit	25	x	45	=	1125	0	0	
Black dirt	15	x	30	=	450	0	0	
Appliance storage	15	x	30	=	450	0	0	
Street tree storage and mulch (100 trees)	40	x	40	=	1600	0	0	
Crushed stone	15	x	30	=	450	1	450	
clear stone	15	x	30	=	450	0	0	
							17,188	Subtotal
							1,719	Efficiency Ratio of 10%
							18,907	Site Program Total

DPW & Administration Programming - Summary Total

Office/Administration	6,883
Vehicle Storage	20,000
Shop	14,523
Site Program	18,927

41,406	Building footprint
60,333	Minimum Site Requirements

Cost Estimates & Inflationary Impacts

Cost Estimate- Addition and Remodel- Current Sites

The Cost Estimate is based on renovation and addition of the DPW and Village Hall. The estimate of probable cost developed by the consulting team includes “all in” project costs. The estimate includes the costs to fully renovate and add on to the facilities (hard costs) in 2023 dollars as well as other associated (soft costs) the Village will incur when designing, constructing, and occupying the facility.

This cost scenario was developed assuming selective demolition would be required for the existing facilities and renovation as identified by individual facility. The cost includes a roughly 500 s.f. expansion to the Village Hall, removal of the existing salt shed and a building expansion of 9,125 s.f. to the current DPW facility.

The total cost of the project is \$4.8 million. This cost is reflective of building construction and additional site improvement costs necessary to provide an efficient, functioning Village Hall and DPW facility. The cost does not reflect the value to purchase property. It is assumed the facility expansion can be accomplished on the current site once the existing salt shed is removed.

A complete breakdown of the program and costs are represented on this page.

The estimate was established using per square foot costs in include site development costs (pavement, stormwater improvements, site lighting and amenities).

Square foot costs were established using the “Basis of Design” for the definition of the construction materials and methods for the building type. The assumptions used in developing the basis of design is defined in a separate section later in this report. The cost per square foot was derived from current project cost data from similarly sized projects within the market area (Northeast WI) recently bid and constructed.

Based on the preliminary nature and status of the design, the cost per square foot estimating method is a reliable method of estimating projects at the schematic design level.

Table 1 – Village of Harrison DPW/Village Hall Building Addition/Remodel Costs

Village Hall		
Office/Admin	507	s.f.
DPW		
Opps/Vehicle Storage	9125	s.f.
Total Areas:		
Village Hall	507	s.f.
DPW	9125	s.f.
Total Area	9632	s.f.
Renovated/New Areas		
Demolition	2580	s.f.
Renovation	2580	s.f.
New addition	9632	s.f.
Cost/s.f. Demolition	\$7	s.f.
Cost/s.f. Renovation	\$190	s.f.
Cost/s.f. New Addition	\$365	s.f.
Construction Cost	\$4,023,940	
Additional Costs		
Land	0	
Design	\$301,795.50	
FFE	\$80,478.80	
Contingency	\$402,394.0	
Total Project Cost:	\$4,808,608	

Inflationary Impacts

As discussed in each of the individual building analysis reports, recommendations for replacement of facilities are addressed on a case-by-case basis. The replacement of these facilities should be planned for starting within the next 2-3 years to maximize the return on investment in terms of the size and quality of the building for the estimated cost for replacement. It should also be noted that based on inflation and cost of materials and labor, for every year the project is delayed, it will cost the Village an additional 9% per year compounded; based on current inflation rates. This is a conservative estimate of inflation and current market analysis, and inflationary trends tend to be more volatile. To illustrate the impact of delaying the construction of a new facility, a table of inflation for each of the buildings recommended for replacement follows this section.

**Table 2 – Project Cost Impact of Annual Inflation
Addition and Remodel – Village Hall and DPW Facility**

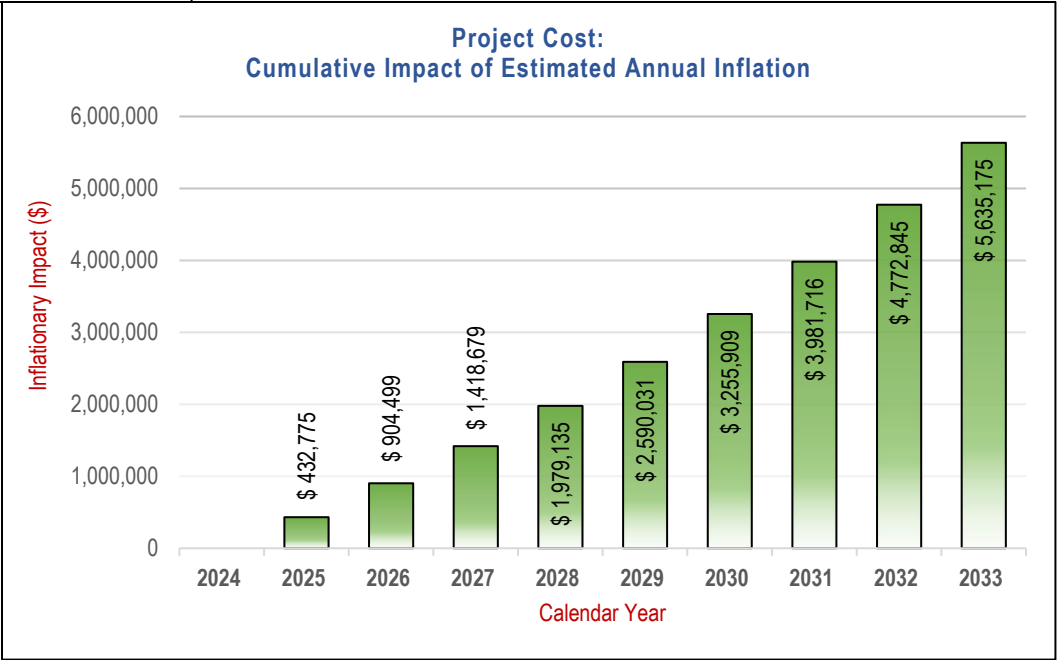
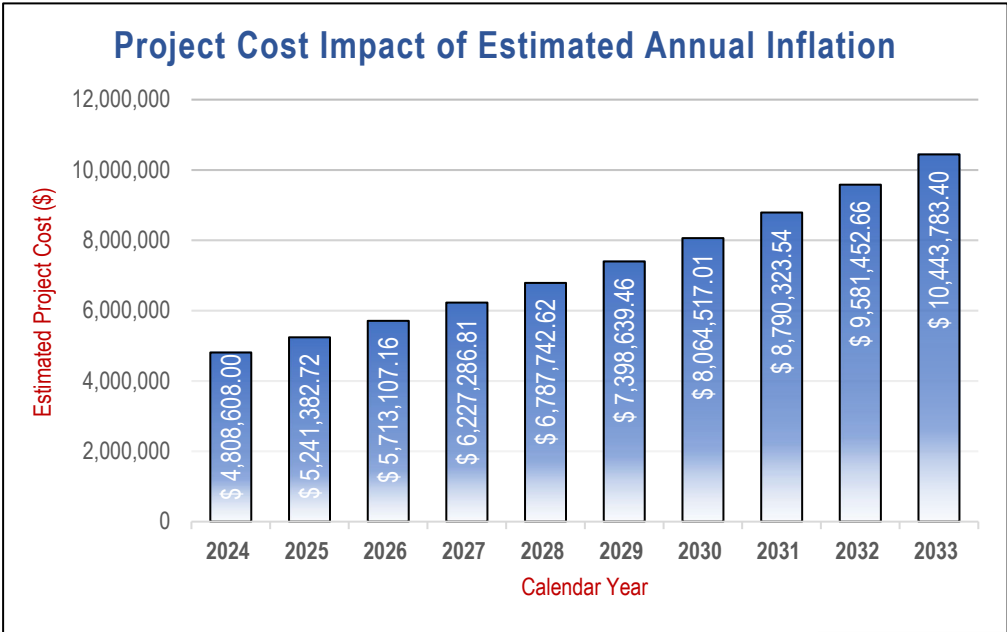
Year One for Analysis:

2024

PROJECT COST	
Estimated Total Project Cost:	\$4,808,608
Percent of Soft Costs:	12%
Soft Costs (Consulting, Administration):	\$577,033
Hard Costs (Construction):	4,231,575
Project Costs:	\$4,808,608

Potential Rate of Annual Inflation:	
Estimated Soft Costs Inflation:	9%
Estimated Hard Costs Inflation:	9%

Year:	1	2	3	4	5	6	7	8	9	10
Calendar Year Ending:	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Soft Cost:	\$577,033	\$628,966	\$685,573	\$747,274	\$814,529	\$887,837	\$967,742	\$1,054,839	\$1,149,774	\$1,253,254
Hard Cost:	4,231,575	4,612,417	5,027,534	5,480,012	5,973,214	6,510,803	7,096,775	7,735,485	8,431,678	9,190,529
Estimated - TOTAL Project Cost:	\$4,808,608	\$5,241,383	\$5,713,107	\$6,227,287	\$6,787,743	\$7,398,639	\$8,064,517	\$8,790,324	\$9,581,453	\$10,443,783
Annual Cost Variance:	\$0	\$432,775	\$471,724	\$514,180	\$560,456	\$610,897	\$665,878	\$725,807	\$791,129	\$862,331
Annual Percent Variance:	0.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Cumulative Annual Cost Variance:	\$0	\$432,775	\$904,499	\$1,418,679	\$1,979,135	\$2,590,031	\$3,255,909	\$3,981,716	\$4,772,845	\$5,635,175
Cumulative Annual Variance:	0.00%	9.00%	18.81%	29.50%	41.16%	53.86%	67.71%	82.80%	99.26%	117.19%





Site Aerial of Harrison Utilities
N8722 Lake Park Road, Menasha

Harrison Utilities

Current Challenges in Existing Water Utility Facility

Current challenges in the existing water utility building also falls into three main categories:

- a. Operational efficiency
- b. Health and safety
- c. Other related concerns

Each of the categories impact the daily operations and functionality of the water utility building. Since the building was originally programmed for a larger operation that has reduced in size overtime, **operational efficiency** can be found in reorganizing some of the interior spaces to take advantage of some of the additional interior square footage. These alterations are minor and of a lower priority but thought should be given to the long term operation and whether or not it is feasible to incorporate other Village administrative functions within the utility building.

There are a few minor changes within the utility building that can enhance the user experience and the security and safety of the staff and operation. Separating the sensitive electronic equipment by providing a designated IT room will help safeguard the Village from unauthorized access to the computer servers.

Adding the necessary ADA required enhancements in the toilet rooms and the break area will provide accessible amenities for users of all abilities.

Providing additional vehicle exhaust in the garage area and wash bay will improve the air quality and remove harmful vehicle exhaust emissions.

Other Related Concerns

Other related concerns could be those classified as items that impact the Utility building, operations and staffing.

During the interview process with utility department staff, there were no additional related concerns expressed to the consultant team at the time of our facility tour and staff interviews. Staff felt the building adequately met the needs of the operation currently and provided enough additional growth area to accommodate the function of the utility operations for several years to come.

Current Facilities Conditions

Harrison Utilities building is a pre-engineered metal facility that houses the operations of the Harrison Utilities . The main building function is the administrative office\operations portion of the facility. The building also contains a vehicle storage and shop function area on the back of the building. There were not drawings available for the consultants to review. The building appears to be roughly 15-20 years old and is in good shape with no notable areas of concern.

The building was originally constructed for the Harrison Water Commission. The building served as the utilities main office space and housed the operation of the Water Commission as well as the employees of the water utility. Additional office and conferencing space was necessary for the business operations of the water Commission. After the Commission was dissolved the additional spaces and areas of the facility were repurposed for water staff. There is still a fair amount of unprogrammed area within the water utility office building. That additional office space is being considered for future growth of water utility staff by management.

The building is ADA accessible and the parking area incorporates the required wheelchair accessible parking stalls. The asphalt parking lot is sloped to the elevation of

the front walk making the transition from the parking lot to the building an accessible route.

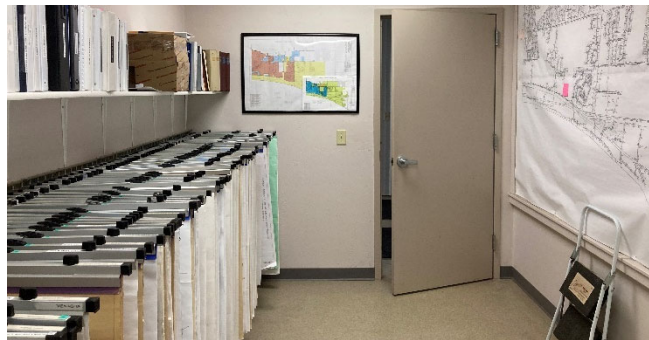


The parking lot contains concrete curbs and gutter around the South and West side of the building. Other areas of asphalt pavement are shouldered where they abut manicured lawn areas. Sheet drainage by sloping of the asphalt conveys stormwater away from the building. The asphalt parking lots have been seal coated and crack filled and are in fair condition.

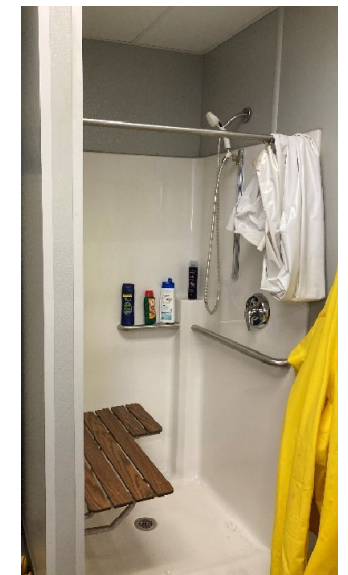
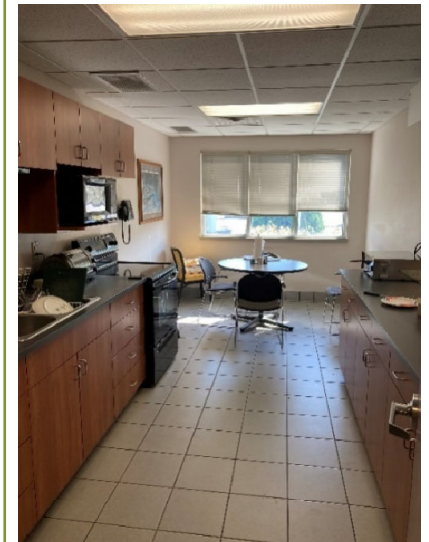


The interior of the building is in good condition and requires very little maintenance. The staff kitchenette and break area lacks ADA accessible countertop heights and there is not a work surface directly adjacent to the residential oven/stove. All of the case goods and cabinetry are in good condition. The microwave shelf above the stove top is not ADA accessible.

Office and storage areas appear to be adequately sized for the operation. In conversations, staff did not reveal the need for additional storage or work areas.



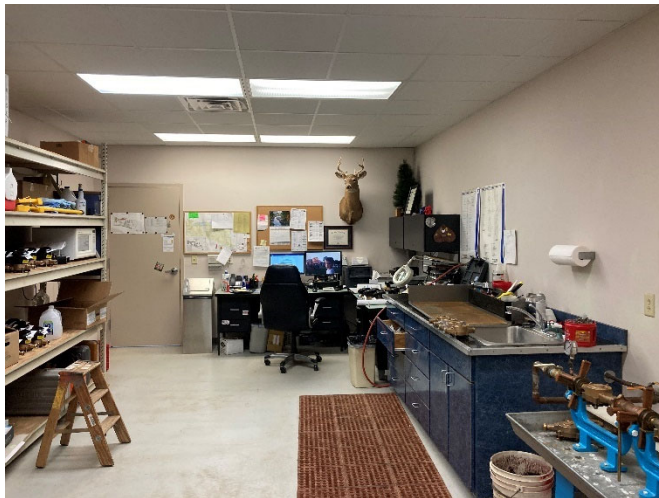
The toilet rooms are ADA accessible and only lack the 18 inch vertical grab bar required on the side of the water closet. There are some storage cabinets and furniture placed in the restrooms that were installed after occupancy. These additional accessory pieces are not ADA accessible. There is a staff shower that water department field staff utilize that appears to be ADA accessible.



The water department garage houses water department vehicles and temporary power generators that are stored on site and used for emergency backup power for lift stations throughout the Village.



According to staff interviewed during the condition walk through, the water laboratory and testing facility is of adequate size in order to conduct the types of testing necessary.



There is a wash bay directly adjacent to the indoor parking garage that is served by a hot water pressure washer located remotely on the other side of the wall of the wash bay. Staff reported that the wash bay is utilized as an overflow parking stall for water department vehicles due to the lack of size and ability to accommodate department vehicles in the storage garage. There is a staff work area in the storage garage that accommodates a small workbench for general routine maintenance activities.

All of the exterior entrances observed were in good condition with operable door hardware and no reports of any issues or concerns with the operation of the door hardware.

There was some visible corrosion to the metal wall panels at the overhead and passage door locations of the water department garage. Staff reported that salting operations prematurely eroded the paint finish on the metal panels and was causing corrosion. Some of the flaking corrosion was removed and asphaltic coating was applied to the panel to retard the corrosion process.



Storm water is diverted from the roof and gutter system into downspouts that are tied together below grade along pedestrian sidewalks diverting the stormwater underground versus overland which eliminates icing conditions on the walking surfaces. All other downspouts daylight for surface draining in areas where the possibility of icing on paved surfaces is not a critical safety concern.



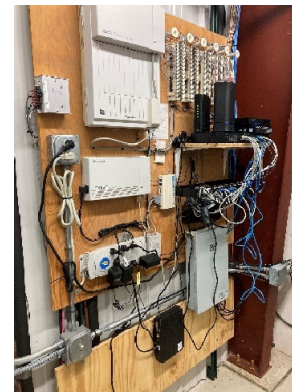
There was noticeable frost heaving of the approach slabs at the entrance doors. Over time, portions of the concrete was ground down to provide better accessibility to the entrances and eliminate trip hazards around the building.



Recommendations

Based on the relatively good condition of the Harrison Utilities building there are only a few maintenance items that could use attention.

Providing a dedicated IT and server room will safeguard this sensitive equipment from potential damage and tampering by unauthorized staff.



Removing and Patching of the metal wall panels along the concrete sidewalks will extend the life of the wall panel and

remove the corrosion that is deteriorating the metal wall panels.

Modifying a section of the countertop in the break room will bring the kitchenette into compliance with ADA requirements.

Installing an 18" vertical grab bar in the restrooms will bring the toilet rooms into compliance with ADA requirements.

Continuous monitoring and maintenance of the asphalt parking areas will prolong the service life of the asphalt.

Existing Facility Renovation Feasibility

Based on the age and condition of the Harrison Utilities Building it is highly feasible and recommended the existing facility be renovated. Investing in the recommended maintenance and accessibility improvements will extend the life and functionality of the facility for users of all abilities for a minimum of 20 years. The cost of these improvements will be realized in terms of payback over the course of the next two decades that the building is in service.

Because there are no recommendations for the physical expansion of the Harrison utility building, a space needs spreadsheet was not developed for this particular facility. A cost estimate was provided for the minor maintenance and accessibility improvements to the facility. That estimate follows this section.

Cost Estimates & Inflationary Impacts

Table 3 – Harrison Utilities Improvements- Estimate of Probable Cost

Renovation of the Harrison Utilities Building					
DESCRIPTION	UNIT	Unit Cost	Designed	Cost	
Install grab bars	Ea.	\$550.00	2	\$1,100	
Replace metal wall panels at entry door- North bld. Face	Ea.	\$12,500.00	1	\$12,500	
Build IT closet for IT equipment	Ea.	\$4,500.00	1	\$4,500	
Roof repairs	Ea.	\$500.00	1	\$500	
Countertop modifications	Ea.	\$12,000.00	1	\$12,000	
Lower microwave shelf	Ea.	\$4,500.00	1	\$4,500	
\$35,100					
Sub Total					\$35,100
A/E Design Fee		8.00%			\$2,808
General Conditions		10.00%			\$3,510
Contingency		20.00%			\$7,020
Total					\$48,438

Costs are in 2024 Dollars

Harrison Fire Rescue Protection District Operational and Physical Infrastructure Review

Current Facilities Conditions

The Village of Harrison contracted the consultant to review the current fire station facilities and department operations and make recommendations based on the findings as well as implement current best practices and understand the challenges that rural fire protection entities encounter in the delivery of fire/EMS services. The basis of the study work is to provide future planning within the confines of the existing structures and recommendations for needed improvements, expansion, or relocation.

The intent of this review is to evaluate the current facilities assessment study measured against the demographic make-up of the protection area, the current workforce compared against industry standards and the projected future needs to deliver efficient public safety services to the community. The Village of Harrison has had several recent studies and reviews of operations that have focused more specifically on emergency operations and equipment. This study was intended to look at the physical infrastructure, condition and space needs of the Village's two fire stations and provide recommendations for long term operational efficiency.

The Harrison Fire and Rescue Department is located within the County of Calumet and protects the Village of Harrison, Village of Shorewood, a portion of the Town of Woodville and the Town of Buchanan as an automatic mutual aid response. The population of this area is over 18,000 residents and 52 square miles. The district has realized a double-digit percentage of population growth since 2000 and this is expected to continue due to the desirable location in the northeast portion of Lake Winnebago shores, Appleton, Menasha, Neenah and High Cliff State Park recreational area/campground.

Both current facilities are very well maintained and the efficiency of these are limited due to size constraints and lack of storage, office spaces, report writing areas, decontamination areas, laundry room, separate bathroom facilities, formal training room, fitness area, ADA accessibility and accommodations for overnight staff. Industry standard vehicle size has also dictated the need for larger truck bay areas, higher ceilings and overhead door head heights, and wider truck bay doors. This facility is currently used at a maximum capacity and efficiency of operations will ultimately be reduced because of the lack of space and dedicated, task specific areas. Any future increase in service would require remodeling and/or annexing of currently used space or moving non-essential tasks to other locations (trainings, meetings, etc). The space constraints further challenge the overall operational efficiency of the Department.

Operational Challenges

Harrison Fire District has some unique challenges as the geographical footprint is large relative to the size and capability of the current operational model of the organization. The area is dissected by the Canadian National Railway, which ships a variety of products including hazardous materials cargo through parts of the Village. Most rural communities have a contingent of staff trained to the Operations Level certifications and minimally equipped to handle a moderate to large scale derailment or spill. The district is bordered on the south-west by Lake Winnebago, and to the south, High Cliff Escarpment and Recreational area. These pose additional challenges by way of the need for specialty rescue and mitigation (Water rescue, tactical and high angle rescue).

Due to the size of the area as well as the staffing challenges, response times are significantly less than the NFPA #1721 recommendation.

As noted earlier, the current configuration of both facilities makes no provisions for separate spaces for decontamination, physical fitness, sleeping, food preparation, dining, training, report writing, civilian receiving

areas, gear storage and laundry, SCBA compressor and maintenance areas.

Current size limitations require sharing spaces, shifting tasks like training and maintenance between buildings and off site, and storage of assets at different facilities within the Village. Time and resources are required to coordinate for training and most importantly emergencies.

The current facility will not allow for larger fire trucks, ancillary equipment such as EMS transport vehicles or additional utility vehicles used to mitigate some of the unique hazards identified within the Harrison Fire District.

Current Facilities Challenges

The current staffing model for Harrison FD is volunteer with a full time Fire Chief. Per staff, this model currently suits the needs, day-time staffing can be a challenge that can lead to longer than ideal response times. Staff felt that the current volunteer model may currently work, but a goal to staff a part-time or complete full-time position should be no more than 10 years out based on the increasing number of calls for service, the size of the response area and the demographics of the community. The Harrison FD currently has an agreement with Gold Cross Ambulance Service, located approximately 11 miles to the furthest area of the Harrison response district. Accommodations for female fire fighters were not designed into the facility, nor overnight provisions for internship or full-time staffing because of a large contingent of volunteers serving the community when this facility was built. Many fire departments with a similar model use an “overnight” or internship program to attract talent and mentor potential Fire/Rescue candidates and recruits. It would be expected that Harrison would continue to contract EMS services for a fee until such time that they take the responsibility of EMS treatment and transport. Either service delivery method will require dedicated space for crew operations, additional truck bay space, storage for durable medical equipment and report writing/administrative office space.

Gender designated restroom/locker/shower facilities were not originally incorporated into the station. The existing restroom facilities have been converted to “gender neutral” facilities but lack adequate size to accommodate anything but a daytime crew. There are currently small non-ADA accessible toilet facilities for female staff but there are no private “gender neutral” shower facilities. ADA accessibility was another accommodation that was not required when these facilities were built. The facility has no ADA accessible toilet facilities and makes no accommodations for accessible entrances or paths of travel.

Due to the age of construction of both buildings, the current facilities were constructed at a time in the fire service industry well prior to emphasis on diversity of employees as the intent was to support volunteer “day staff”.

Wisconsin does not currently have a statute or language that references “presumptive” cancers that extend to the volunteer staff members, but several states in the US do and any change to the legislation or staffing model would apply the liability of these cancers to the organization. Any future plan that would increase the building footprint and operational objectives must keep in mind the health and wellness of employees. Trending data shows that not only the byproduct of firefighting shows a direct link to several cancers, but also the chemicals that are used to give fire gear it’s fire resistive qualities. Developing decontamination zones to help mitigate the spread of carcinogens and pathogens into the living quarters was not a consideration when these facilities were constructed. The lack of decontamination facilities to isolate, clean and properly store fire gear and firefighting equipment after being contaminated at a fire scene should be a concern when moving forward. Furthermore, internal combustion engines release many cancer-causing compounds that have also shown a direct correlation to similar cancers encountered during firefighting.

The physical size and arrangement of spaces at both station locations presents challenges to operational efficiency.

Storage is one of the biggest physical challenges facing the department. Most of the planned storage areas have been converted to office spaces needed for administrative office staff. Lacking is a functional training facility that accommodates the necessary props and training equipment necessary to properly train fire personnel. A relationship with the local technical college is suitable for recruit training, but on-going training in accordance with Wisconsin State code SPS #330.07 (monthly training) requires on site and in-station training. In order to be efficient, most organizations incorporate these elements in the design and remodel of fire stations.

The glaring deficiency is an area for overnight provisions and gender neutral areas. As with most rural fire protection districts, the ability to recruit volunteer staff has become challenging and a move toward integrating full-time staff as a partial POC/FTE staff will be needed to plan for future viability.

The construction and layout of the current facility may lend itself to expansion, but the current location at the edge of its district would gain space and useability at the expense of response times and may limit the volunteer staffing pool.

Site Specific Concerns

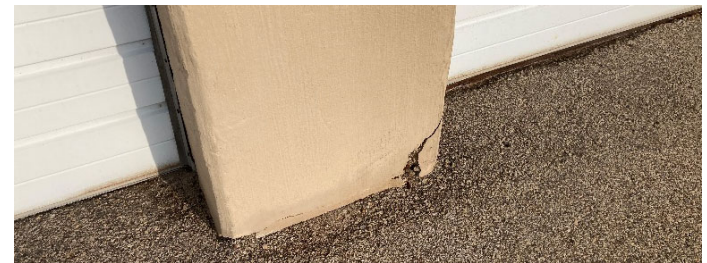
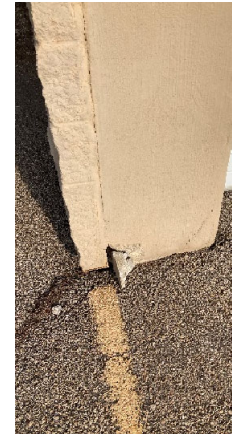
The Day Room is currently being used a multi-purpose work area and not adequate for a department wide (all call) meeting or training. For larger fire-related meetings or trainings, personnel and department equipment will be off-site which will increase "turn-out" time in event of an emergency.

Station #60, at W. 459 Clifton Road is a shed style design that was initially built to house vehicles and an office/day room addition was added later. The building is older than Station #70 but is also in very good repair. It is mainly block construction with interior partitions for separate dayroom and offices. It is also overused and inhibitive to existing operations. Offices are repurposed from a storage area and the Fire Chief and the five Assistant/Division Chief all share an office at this station. It houses an engine, water tender,

heavy rescue a ¾ ton, 4-wheel drive brush truck and a Polaris UTV with a pump and water. It is near High Cliff State Park, and the staff there is trained to execute high angle rescue. This station is surrounded by another jurisdiction and the Sherwood Village Hall is directly across the street.

Station 60 Condition Reporting

The exterior of Station 60 is in fair condition with the exception of some deteriorating masonry between the overhead truck Bay doors. Concrete masonry was used on most of the surfaces exposed to maintenance and potential abuse. Metal wall panels are installed 4 foot above grade on the north and West elevations of the building. The decorative concrete block is in fair to good condition and only require some surface staining removal.



The gutter system along the north elevation requires some repair to fix leaking spots along the entire run of the pre-finished metal gutter system. Downspout leader should be added in locations where the downspouts daylight to the



Site Aerial of Harrison Fire Station 60
W469 Clifton Rd, Sherwood

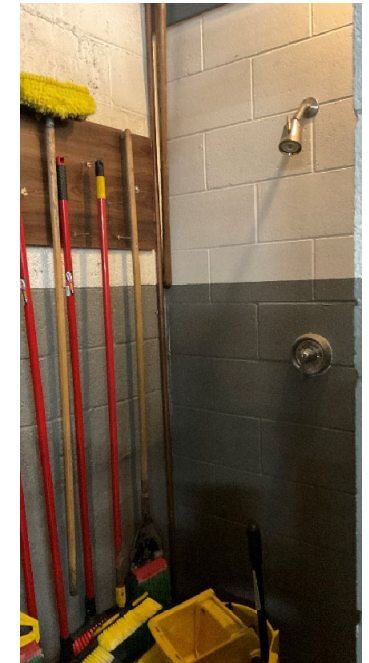
surface and overland flow directs water away from the building.

All of the asphalt pavement surfaces around Station 60 are in need of complete replacement. Signs of alligator cracking and complete absence of asphalt pavement are present in many of the areas of the parking lot.



The interior configuration of Station 60 should be modified to include best practices for the health safety and welfare of the firefighters. Currently all of the maintenance operations ie. Air pack filling, bunker gear laundering, and turn out gear storage all take place in the apparatus bay where they are exposed to the harmful effects of carcinogens from vehicle exhaust. The decontamination shower is part of the apparatus Bay and should have its own separate showering and changing facility that is more conducive to the gender mix between male and female firefighters.

The toilet room should have better isolation from the apparatus Bay and exposure to vehicle exhaust. There are a few ADA improvements that need to be added to enhance the accessibility of the restroom.



Station 60 Recommendations

Near term recommendations (0-5 years)

Based on the current condition of the existing Fire Station 60, the Village should make some near term improvements and maintenance enhancements that will prolong the life of the facility.

Complete replacement of the asphalt paving on the site is a short-term recommendation. The current pavement is beyond its service life and is impacting stormwater drainage flow and does not provide a stable surface for training, maneuvering, and testing fire equipment.

Reconfigure the interior spaces to isolate the laundry equipment and turn out gear storage from the truck floor.

Install the necessary ADA accessibility hardware in the toilet room.

Clean the stained exterior masonry, properly seal the surface of the exposed split faced block

Repair the gutter on the North building eave and provide downspout extensions.

Patch the concrete walls at the door overhead door jambs.

Long term recommendations (10-15 years)

Based on the fact the building is aging and is too small to physically accommodate the operations and number of apparatus required to be stationed in that firehouse and the fact that it does not incorporate best practices for health, safety, welfare and gender mix, the long term solution for Station 60 is complete removal and replacement. This should be a long-term strategy for the Village over the next 10-15 years.

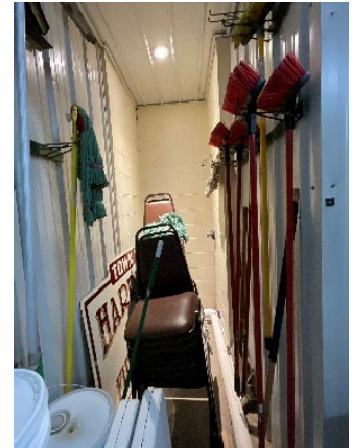
Station #70

Station #70 at 8714 Lake Park Road is a pole barn built in 1993. It houses 2 engines, a water tender, the Fire Chief car,



Site Aerial of Harrison Fire Station 70
8714 Lake Park Road, Menasha

a 3/4-ton utility truck, a bus used for water rescue and two snowmobiles. Some of the staffing that responds to this station live in an apartment complex located near this station and this proximity helps with response manpower and timing. It is very well maintained, but the staff and current operations have outgrown the facility. There are no provisions for overnight stay and there is a shower fixture in the truck bay area hallway that is used for storage. There is no privacy within this area and appears not used. Decontamination areas for gear, equipment and personnel are not feasible or existent. The Chief stated that he does not see full time staffing need in the next five years but would look to create full time staff provisions within 10 years. Day room facilities are small and group trainings and meetings are usually held at Station #60. Station #60 does not adequately facilitate these gatherings as some of the staff have to stand during meetings and trainings. There is a 26 KW stand-by generator less than 5 years old. The mechanical infrastructure is adequate for the current operations, but as they age and demand increase, this will change with increased traffic and staffing.



Because of area annexation, this station lies on the outer response area and not ideally located. GIS response mapping was developed for both stations within the fire service areas. The results of this analysis are provided in this report. Current staffing assigned to this station (that do not live in the adjacent apartments) come from other areas of the Village and take additional time to travel to the fire station. This impacts overall response time and the ISO rating of the department.

Existing Facility Renovation Feasibility

As noted earlier in this report, the current facilities are in good repair and regularly scheduled maintenance and repairs have been done to keep the facilities operating as efficiently as possible given the evolution of the operations over time. The buildings are centralized in their respective districts and the heat maps show nearly optimal response times from the current facilities. Impact on total response time is attributed to the location of the responding staff assigned to the specific station. Growth in the northwestern areas of the Village is stretching response times to those areas and long-term facility location and operations should consider these high growth areas.

The buildings were both built as “pole-shed” style, with post and beam with steel exterior. This construction type does lend itself well to expansion either up or outward. While both stations have a relatively large property footprint, it would not be advisable at this point to spend money or capitol on expansion of either building because of the age and construction style of both facilities. Near-term maintenance items of low cost should be considered to extend the life of the facility until such time that complete replacement can be scheduled. Structurally, the current buildings were constructed as a proprietary metal building system (PEMB).

As it pertains to the proposed use as public safety vehicle storage and fire department operations center, there is concern regarding change in risk category corresponding to current building code requirements for buildings that house “essential Services”. Back when Station 60 and 70 were constructed the state and national building code did not

make considerations for risk categories based on the occupancy type of a building. With the adoption of more current building and life safety codes, definitions were provided for buildings that contain essential services. It is difficult to determine how the structure type would translate to the risk categories defined by today's building code. Existing building drawings would be necessary to ascertain the original construction methods used to construct these two buildings. From there an analysis could be completed comparing the building category type to the actual built facility. SEH Structural Engineer, Matt Gundry summarizes this concern as follows:

If this building were to house "essential services" as defined by current building code, additional structural considerations are in order. ASCE 7 commentary states "Buildings and structures typically grouped in Risk Category IV include hospitals, police stations, fire stations, emergency communication centers, and similar uses." Based solely on visual inspection, I suspect this building originally fell under Risk Category II. Risk Category IV buildings are required to be structurally capable of withstanding larger snow (20%) and wind (~9%) loads than Risk Category II structures. In that case, strengthening of the building would be required to meet code when modifying, renovating or expanding the current buildings. It is assumed that the existing building was designed to Risk Category II. Given the proprietary nature of the building, evaluating the structure for these new loads becomes very time intensive. All of the components and connections need to be catalogued in detail for evaluation and potential strengthening. If the original building manufacturer can be identified, it is recommended they be contacted to see if the original design is still available and can be evaluated by the manufacturer for the change in risk category prior to committing to any renovations or expansion as public safety use building. If that option is not available, it is reasonable to assume there would be an increase in structural engineering costs associated with evaluating and designing strengthening of the frame to meet code requirements for Risk Category IV.

Expected growth in the area coupled with a decrease in available staffing to commit to a volunteer service will continue to challenge the organization and an expected demographic shift from a “landowner/farmer” demographic to a younger generation of business or blue-collar professionals with families. This will additionally decrease the volunteer staffing pool as well. For these reasons, many rural Volunteer/Paid on Call staffing models are forced to move to a full-time staff and/or sharing resources with other area departments. Harrison is a relatively large area, in land mass, population and fire calls among the smaller rural areas that surround the district. It is not likely that other local departments efficiently take over response in this vicinity because of the large geographical area as well as the specific hazards presented within the Village. This will dictate the need of the Harrison administrative staff to plan for the long-term viability of public protection to the district. The Harrison Fire District will limit itself and appropriate staffing pool by not expanding and modernizing its facilities to attract available talent. Many rural Fire Departments find themselves in the path of individuals seeking a career in the fire service. Some individuals seek to volunteer as a sense of duty or pride in the communities they live in and seeking a career in the fire services is secondary to this sense of duty to volunteer. The current model will dictate that interest within the ranks for fire/EMS as a career path will require candidates to leave for other departments because of the lack of full-time career opportunities within the organization. For these reasons as well, it is advisable that the district lay out a long-term plan to modernize the facilities and plan for full-time staffing well before the 10 year mark. Full-time staffing is defined as the hiring of Fire Inspector/Prevention staff.

The lack of a dedicated training facility is inhibitive to not only attracting talent, but also to providing incentive for light industry and manufacturing into the area. ISO, Insurance Services Offices, is a third-party rating organization that assigns a “Public Protection Classification” based on a variety of criteria that rates fire departments from 1 to 10. This rating is a culmination of many factors, such as staffing, training hydrant, location of the fire stations, water

supply/hydrants, communications center, community outreach and fire prevention. A “one” is considered the best, while a “ten” would be the least desirable rating. Insurance companies for both industry and residential occupancies rely on this rating to assign insurance rates. While home-owners insurance rates may not affect the decision of some to migrate or stay in the area, light industry and warehouse/distribution occupancies use this as one of the factors to determine where they locate.

The current relationship with Gold Cross Ambulance Company is good and the needs are addressed through this relationship. However, as noted in several areas, survival of the organization will rely on the long-term services, objectives, and viability of the organization. Fire based EMS continues to be the best value to the residents of the community. This is not meant to raise a question as to the service provided, rather to accentuate the benefits of community services realized with a combined Fire and EMS shared response model.

Existing Facility Condition Reporting

As noted earlier in this report, the current facilities are in good repair and regularly scheduled maintenance and repairs have been done to keep the facilities operating



efficiently but they are nearing the end of their service lives as size limitations for vehicle storage and department operations impact the facilities. The immediate concern at both fire stations is lack of storage areas. Currently, the fire department stores overflow items at the Water Utility offices.



This creates some inefficiencies in terms of limiting access to the stored items when they are needed to be retrieved. It also impacts the amount of available storage space the Utility has at its disposal to store their own items. There is a mezzanine area above the administrative offices in Station 70 that houses the breathing air compressor as well as miscellaneous mass casualty items and spare gear. Based



on the construction type, the load limits of this mezzanine limit the ability to store any items of considerable weight.



Station 70 faces the same health and safety issues that are present at Station 60. Administrative and maintenance functions like gear laundering, air pack filling, and general maintenance duties are done in the apparatus Bay. Station 70 does not contain a localized exhaust capture system typically found in fire stations. The lack of proper vehicle exhaust exposes staff and fire gear to toxins and carcinogens released from the apparatus while idling in the station.



There is also a considerable safety concern for the firefighters who are donning their PPE directly adjacent to the truck floor while there is movement of emergency services vehicles. A safety zone between the truck floor and the turnout area should be provided to keep firefighters safe while preparing for deployment. Wet turnout gear is dried in the apparatus bay using makeshift PVC gear dryers. A floor mounted fan circulates air around the gear. This practice extends the drying time of the turnout gear which can be problematic during big fire events or multiple fire calls in succession.



Station 70 also does not incorporate best practices for decontamination and there are no provisions for female firefighters. As the gender mix between male and female firefighters evolves, provisions like separate sleeping, showering and nursing mother's areas need to be considered in the station. Due to the physical lack of space at Station 70 modifying the floor plan of the existing building to make these accommodations is not feasible nor financially practical.



The administrative area of facility is ADA accessible since the asphalt parking area is flush with the concrete apron at the entry doors. Other entry doors on this facility are not ADA accessible because the door threshold is elevated greater than 1/2 inch above the adjacent concrete. There are no specific ADA parking signs identifying reserved spots for the disabled. There are, however, signs indicating the reserved stalls for responding firefighters.

Station 70 Recommendations:

Near term recommendations (0-5 years)

Based on the current condition of the existing Fire Station 70, the Village should make some near term improvements and maintenance enhancements that will prolong the life of the facility.

Crack filling and seal coating of the asphalt paving on the site is a short-term recommendation.

Reconfigure the interior spaces to isolate the turn out gear storage from the truck floor. This will require the downsizing and partial elimination of the administrative office and training room area.

Install the necessary ADA accessibility hardware in the toilet room.

Long term recommendations (10-15 years)

Based on the fact the building is aging and is too small to physically accommodate personnel, the operations and number of apparatus required to be stationed in that firehouse and the fact that it does not incorporate best practices for health, safety, welfare and gender mix, the long term solution for Station 70 is complete removal and replacement. This should be a long-term strategy for the Village over the next 10-15 years. When the station is replaced, consideration should be made for locating the fire station #70 in a more northerly and easterly location within the Village to improve response time to some of the more commercially developed and residentially located properties. Growth in the Village will ultimately drive the location of a future fire station.



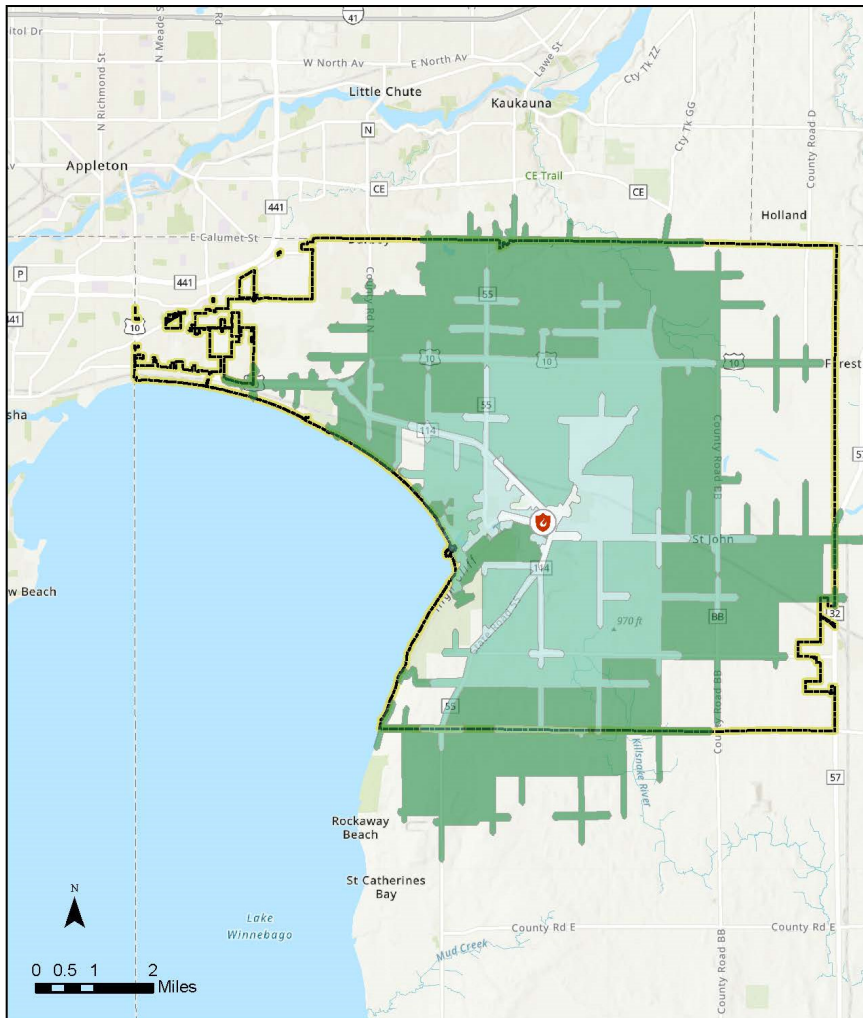
GIS Siting Analysis

Using emergency call data for the Harrison Fire and EMS department from 2014-2023, GIS Analysts on the consulting team developed drive time and heat mapping analysis to determine the best site location for the eventual replacement of the Fire/EMS Station. As part of this analysis the GIS specialists were asked to review the City's emergency response data to determine if there was an advantage to relocating the facility in a new location in the event the Village looks to improve and expand either of the fire stations. The maps show the incident locations within the response area for the HFD/EMS and also provide drive time analysis from the current station locations. The maps are included on the pages that follow this introduction. As residential development and expansion of the commercial core on the North end of the Village evolves, it would be wise for the Village to consider locating a fire and EMS station closer to the northwest edge of the Village limits.

Looking at the drive time map for Station 70 much of the response area North and East of the current location of the station fall between 4 to 6 minutes and 6 to 8 minutes within the response area. Moving Station 70 to the north would

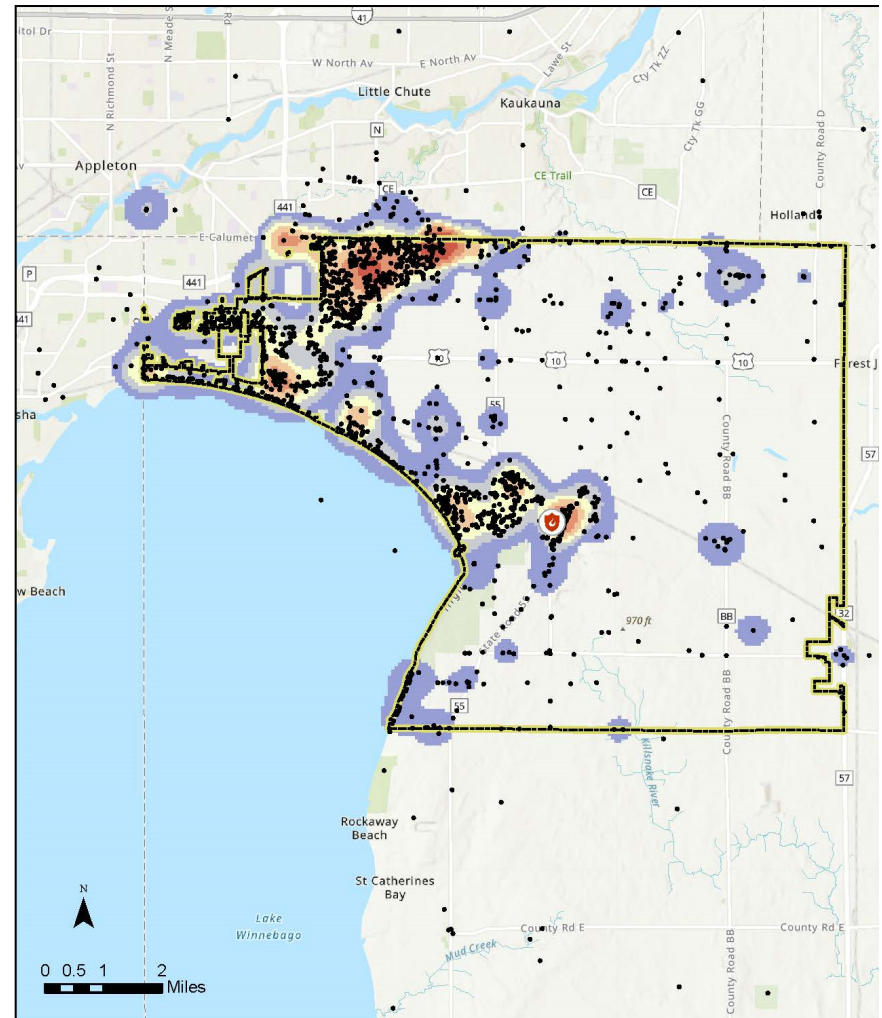
bring much of that response area into the two to four minute and four to six minute response times.

The location of Station 60 is appropriately placed and experiences reasonable response times to the southeast portion of the response area. Locating Station 60 a little farther to the East would reduce some of the response time to the far East reaches of the response area but would increase response times back to some of the higher residentially concentrated areas around High Cliff and the Village of Sherwood. If a functional replacement for Station 60 is part of the long term plan for the Village, it is advisable to find a site location somewhere near the vicinity of the current station.



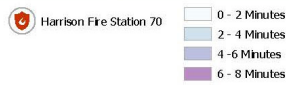
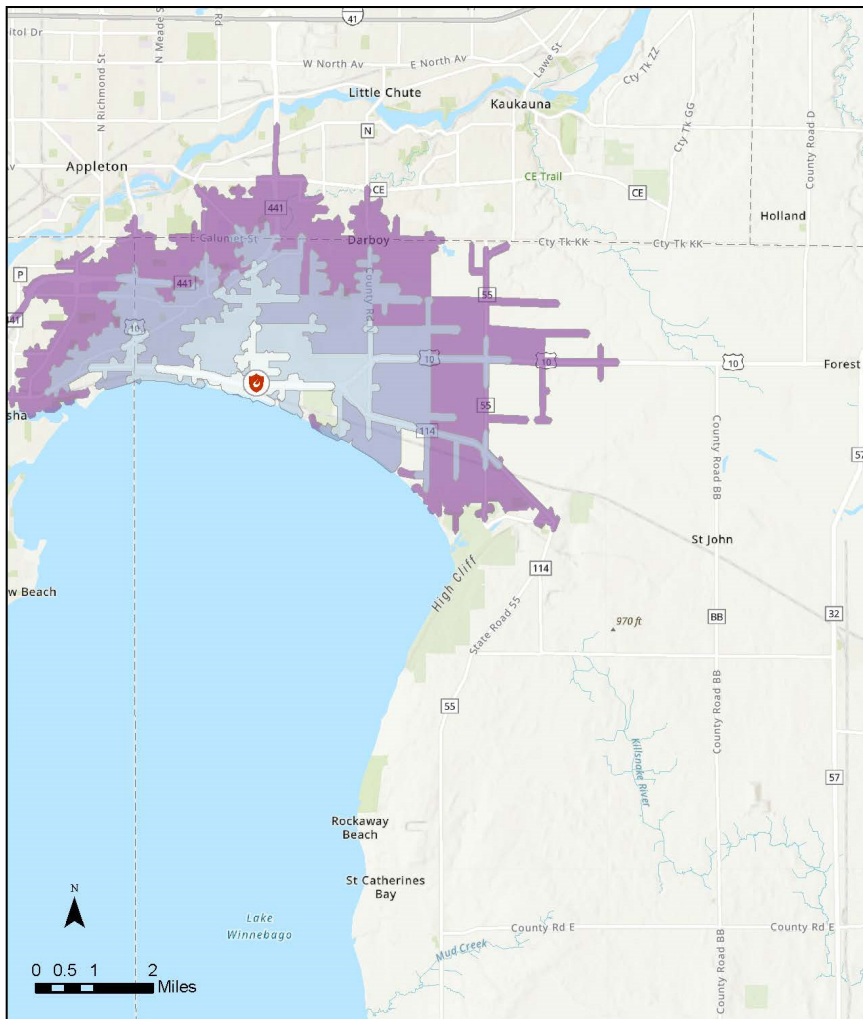
Harrison Fire Station

Fire Station 60 Drive Time Response Area



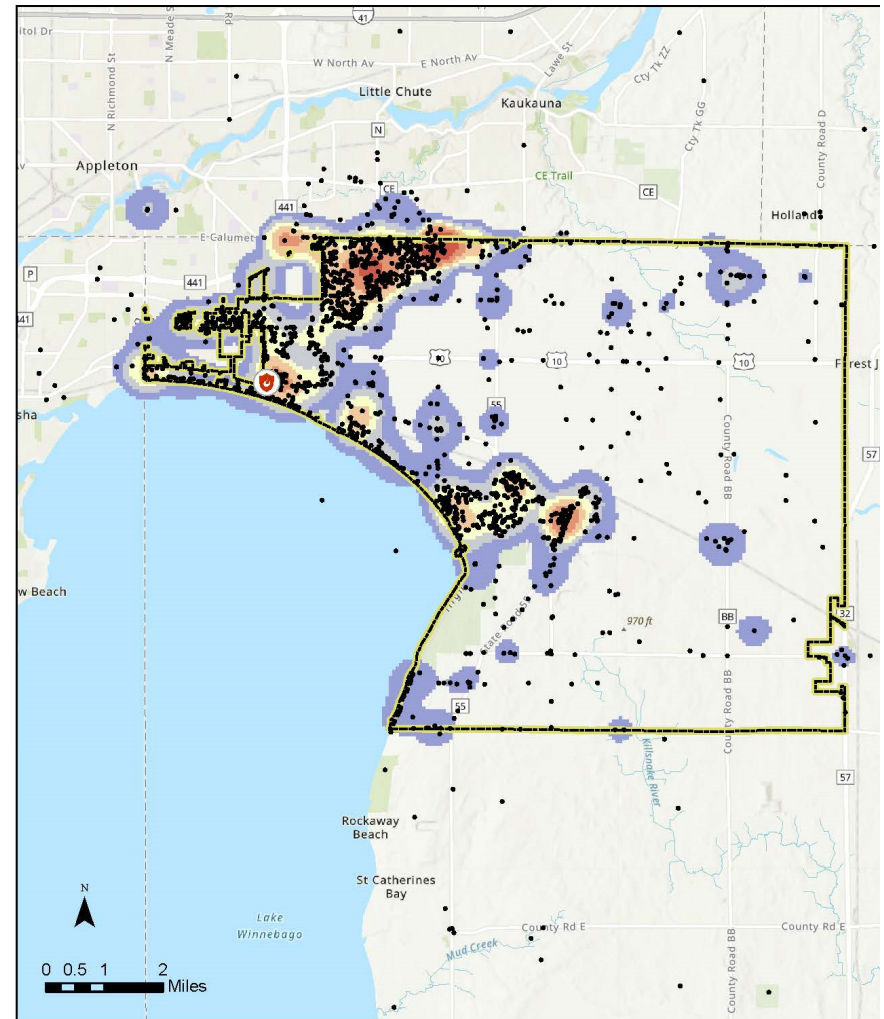
Harrison Fire Station

Fire Station 60 Heat Map Response Area



Harrison Fire Station 70

Fire Station 70 Drive Time Response Area



Harrison Fire Station 70

Fire Station 70 Heat Map Response Area

Programming and Space needs

Programming and Future Space Needs were derived and based on current operation and potential expansion discussions with Harrison Village Staff and Calumet County Sheriff's department members. Separate fire and police space needs documents have been developed and include the current and future programmed spaces necessary for the operation of a police, fire and EMS station.

The program areas were also applied to the existing building renovation options analyzed as part of the study so the appropriately sized building could be used in determining the feasibility of occupying the existing public safety building and Village Hall site(s).

The following is a high level summary of the building program spaces and their appropriate areas and does not include a room by room breakdown. Square footage areas between the new program and the existing facility have been listed comparatively.

Station 60 Programmed Fire Department Administration: 9,635 s.f.

Existing area of current Fire Department Administration: 1,300 s.f.

Programmed Fire Department Apparatus Storage (Truck Bays): 7,000 s.f.

Current Fire Department Apparatus Storage (Truck Bays): 4,160 s.f.

Programmed area of EMS related spaces 474 s.f.

Current area of EMS related spaces 0 s.f.

Station 70 Programmed Fire Department Administration: 10,325 s.f.

Existing area of current Fire Department Administration: 1,875 s.f.

Programmed Fire Department Apparatus Storage (Truck Bays): 6,652 s.f.

Current Fire Department Apparatus Storage (Truck Bays) 3,125 s.f.

Programmed area of EMS related spaces 474 s.f.

Current area of EMS related spaces 0 s.f.

The space needs programming documents with room by room descriptions and recommended sizes can be found on the pages following this section.

Table 4 – Fire Station 60 - Department Office, Administrative & Living Space

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Apparatus Bay Area								
Fire Turnout Gear	25	x	25	=	625	1	625	60 sets of gear (30 FF with reserve set)
Laundry Area	10	x	20	=	200	1	200	
Decon Area	10	x	12	=	120	1	120	
Shop and Storage Rooms	25	x	12	=	300	1	300	
Air Compressor	6	x	6	=	36	1	36	
SCBA Compressor (Fill Station) / Repair	12	x	10	=	120	1	120	Currently 3 fill places 2 trucks and Station 60
Bunk Rooms	10	x	12	=	120	6	720	
IT Room	10	x	12	=	120	1	120	
Hose Storage	10	x	3	=	30	1	30	
Fire Equipment storage	20	x	70	=	1400	1	1400	
Mechanical	0	x	0	=	0	1	0	TBD by Mech Eng- mezzanine area
Hose Tower Area	16	x	15	=	240	0	0	
Stairwell	0	x	0	=	0	0	0	
Living Space Area								
Day Room	25	x	15	=	375	1	375	
Crew Kitchen	22	x	25	=	550	1	550	
Pantry	3	x	4	=	12	1	12	
Dining Area	16	x	26	=	416	0	0	
Basement/Shelter In Place								
EOC and file storage room	20	x	12	=	240	0	0	
Bathrooms								
Men's/Women's locker room (Unisex)	15	x	10	=	150	1	150	Unisex
	20	x	25	=	500	0	0	
Public Men's	8	x	7	=	56	0	0	
Public Women's	10	x	10	=	100	1	100	Unisex
Linen Closet	8	x	10	=	80	1	80	
Janitor's Closet	8	x	8	=	64	1	64	
Other								
Fitness Room	30	X	40	=	1200	1	1200	

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Administrative Areas						0		
Reception Area	20	x	12	=	240	1	240	
Officer office	10	x	12	=	120	1	120	shared between DC and officers
Chief' office	10	x	15	=	150	1	150	
Chief's Conference Room	13	x	18	=	234	0	0	Meeting space in chief's office
Line officers	10	X	15	=	150	2	300	
Fire Inspectors/building Inspector Office	10	x	12	=	120	1	120	
Wellness Room	10	x	12	=	120	1	120	
Community Room Kitchen	12	x	24	=	288	0	0	
Community Room	50	x	36	=	1800	0	0	
Small Conference Room	10	x	15	=	150	1	150	
Copy/Work Area	12	x	10	=	120	1	120	
Locking report storage room	6	x	12	=	72	1	72	
Clothing Storage	8	x	12	=	96	1	96	
Watch Desks								
Local Dispatch/Watch Desk	12	x	14	=	168	1	168	
Radio Server / IT Room	10	x	11	=	110	1	110	
Training Area						0		
Large Training Room	20	x	30	=	600	0	0	Accommodate 75 staff
Restroom	10	x	6	=	60	1	60	
Janitor's Closet	4	x	4	=	16	1	16	
Table/Chair Storage	10	x	15	=	150	1	150	
AV Storage	6	x	10	=	60	0	0	
Pub Ed						0		?
Public Education Storage	12	x	12	=	144	1	144	
Lobby/History	2	x	20	=	40	1	40	

0	8,378	Subtotal
	1,257	Efficiency Ratio of 15%
	9,635	Administration/Office Spaces

Table 5 – Fire Station 60 – EMS Program

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
EMS Drug/Medical Storage	10	x	14	=	140	1	140	Medical Storage and med gas bottles
Paramedic Report Writing	8	x	8	=	64	2	128	
EMS chiefs office	12	x	12	=	144	1	144	Accommodate later
							412	Subtotal
							62	Efficiency Ratio of 15%
							474	EMS Program Total

Table 6 – Fire Station 60 – Site Program

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
On Call Parking	25	x	10	=	250	30	7500	Close to app floor. Training parking 50 cars + community room parking
Public Parking (fire dept business	32	x	10	=	320	2	640	Code required parking for community room
Fire Apparatus Apron	80	x	100	=	8000	1	8000	
EMS Apparatus Apron	50	x	20	=	1000	1	1000	
Outdoor Patio	25	x	45	=	1125	1	1125	
Enclosed Dumpster	12	x	24	=	288	1	288	
Generator	20	x	10	=	200	1	200	
Storm Water Treatment	50	x	100	=	5000	1	5000	
Cold Storage	60	x	60	=	3600	0	0	
Training Pavement	32	x	100	=	3200	0	0	-
LED Message Board	5	x	15	=	75	1	75	
Community add room parking								
							23,828	Subtotal
							2,383	Efficiency Ratio of 10%
							26,211	Site Program Total

Table 7 – Fire Station 60 – Summary Total

Fire Department Apparatus	6,625	
Fire Department Office, Administrative & Living Space	9,635	
EMS Program	474	
Site Program	26211	
	0	
	16,734	Station footprint
	42,945	Minimum Site Requirements

Table 8 – Fire Station 70 – Fire Department Office, Administrative & Living Space

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Apparatus Bay Area								
Fire Turnout Gear	25	x	25	=	625	1	625	60 sets of gear (30 FF with reserve set)
Laundry Area	10	x	20	=	200	1	200	
Decon Area	10	x	12	=	120	1	120	
Shop and Storage Rooms	25	x	12	=	300	1	300	
Air Compressor	6	x	6	=	36	1	36	
SCBA Compressor (Fill Station) / Repair	12	x	10	=	120	1	120	Currently 3 fill places 2 trucks and Station 60
Bunk Rooms	10	x	12	=	120	6	720	
IT Room	10	x	12	=	120	1	120	
Hose Storage	10	x	3	=	30	1	30	
Fire Equipment storage	20	x	70	=	1400	1	1400	
Mechanical	0	x	0	=	0	1	0	TBD by Mech Eng- mezzanine area
Hose Tower Area	16	x	15	=	240	0	0	
Stairwell	0	x	0	=	0	0	0	
Living Space Area								
Day Room	25	x	15	=	375	1	375	
Crew Kitchen	22	x	25	=	550	1	550	
Pantry	3	x	4	=	12	1	12	
Dining Area	16	x	26	=	416	0	0	
Basement/Shelter In Place								
EOC and file storage room	20	x	12	=	240	0	0	
Bathrooms								
Men's/Women's locker room (Unisex)	15	x	10	=	150	1	150	Unisex
	20	x	25	=	500	0	0	
Public Men's	8	x	7	=	56	0	0	
Public Women's	10	x	10	=	100	1	100	Unisex
Linen Closet	8	x	10	=	80	1	80	
Janitor's Closet	8	x	8	=	64	1	64	
Weight room								
Fitness Room	30	X	40	=	1200	1	1200	
Administrative Areas								
Reception Area	20	x	12	=	240	1	240	
Officer office	10	x	12	=	120	1	120	shared between DC and officers
Chief office	10	x	15	=	150	1	150	
Chief's Conference Room	13	x	18	=	234	0	0	Meeting space in chief's office

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
Line officers	10	X	15	=	150	2	300	
Fire Inspectors/building Inspector Office	10	x	12	=	120	1	120	
Wellness Room	10	x	12	=	120	1	120	
Community Room Kitchen	12	x	24	=	288	0	0	
Community Room	50	x	36	=	1800	0	0	
Small Conference Room	10	x	15	=	150	1	150	
Copy/Work Area	12	x	10	=	120	1	120	
Locking report storage room	6	x	12	=	72	1	72	
Clothing Storage	8	x	12	=	96	1	96	
Watch Desks								
Local Dispatch/Watch Desk	12	x	14	=	168	1	168	
Radio Server / IT Room	10	x	11	=	110	1	110	
Training Area						0		
Large Training Room	20	x	30	=	600	1	600	Accommodate 75 staff
Restroom	10	x	6	=	60	1	60	
Janitor's Closet	4	x	4	=	16	1	16	
Table/Chair Storage	10	x	15	=	150	1	150	
AV Storage	6	x	10	=	60	0	0	
Pub Ed						0		?
Public Education Storage	12	x	12	=	144	1	144	
Lobby/History	2	x	20	=	40	1	40	
						0	8,978	Subtotal
							1,347	Efficiency Ratio of 15%
							10,325	Administration/Office Spaces

Table 9 – Fire Station 70 – EMS Program

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
EMS Drug/Medical Storage	10	x	14	=	140	1	140	Medical Storage and med gas bottles
Paramedic Report Writing	8	x	8	=	64	2	128	
EMS chiefs office	12	x	12	=	144	1	144	Accommodate later
							412	Subtotal
							62	Efficiency Ratio of 15%
							474	EMS Program Total

Table 10 – Fire Station 70 – Site Program

	Length	x	Width	=	Sq. Ft.	Quantity	Totals	Notes
On Call Parking	25	x	10	=	250	30	7500	Close to app floor. Training parking 50 cars + community room parking
Public Parking (fire dept business	32	x	10	=	320	2	640	Code required parking for community room
Fire Apparatus Apron	80	x	100	=	8000	1	8000	
EMS Apparatus Apron	50	x	20	=	1000	1	1000	
Outdoor Patio	25	x	45	=	1125	1	1125	
Enclosed Dumpster	12	x	24	=	288	1	288	
Generator	20	x	10	=	200	1	200	
Storm Water Treatment	50	x	100	=	5000	1	5000	
Cold Storage	60	x	60	=	3600	0	0	
Training Pavement	32	x	100	=	3200	0	0	-
LED Message Board	5	x	15	=	75	1	75	
Community add room parking								
							23,828	Subtotal
							2,383	Efficiency Ratio of 10%
							26,211	Site Program Total

Table 11 – Fire Station 70 – Summary Total

Fire Department Apparatus	6,625	
Fire Department Office, Administrative & Living Space	10325	
EMS Program	474	
Site Program	26211	
	0	
	17,451	Station footprint
	43,662	Minimum Site Requirements

Cost Estimates & Inflationary Impacts

The cost estimate under this scenario assumes a completely new 23,383 s.f. Public safety facility is built on a pre-selected site chosen using response time mapping and land of appropriate size available in the Village prior to the time the project commences.

The total cost of the project is \$10.2 million. This cost is reflective of building construction and additional site improvement costs necessary to provide an efficient, functioning public safety facility. The cost does not reflect the value to purchase property. The land cost will be determined by which site is selected for development.

A complete breakdown of the program and costs are represented on this page. The estimate was established using per square foot costs and include site development costs (pavement, stormwater improvements, site lighting and amenities).

Square foot costs were established using the “Basis of Design” for the definition of the construction materials and methods for the building type. The assumptions used in developing the basis of design is defined in a separate section later in this report. The cost per square foot was derived from current project cost data from similarly sized projects within the market area (Northeast WI) recently bid and constructed.

Based on the preliminary nature and status of the design, the cost per square foot estimating method is a reliable method of estimating projects at the schematic design level.

Table 12 – Village of Harrison Public Safety Building New Construction Cost

Fire Department		
Apparatus Bay	6,652	s.f.
Office/Admin	10,325	s.f.
EMS	474	s.f.
Police		
Office/Admin	5,976	s.f.
Vehicle Storage	2,000	s.f.
Evidence	294	s.f.
Total Areas:		
Fire	17,451	s.f.
Police	8,270	s.f.
Total Area	25,721	s.f.
Cost/s.f.	\$365	s.f.
Construction Cost	\$9,388,165	
Additional Costs		
Land Improvements	\$0.00	
Design	\$704,112.38	
FFE	\$187,763.30	
Contingency	\$938,816.5	
Total Project Cost:	\$11,218,857	

Harrison Public Safety Department, Operational and Physical Infrastructure Review

Because of the highly synergistic nature of public safety service delivery, special attention was paid to developing a dedicated section in this report that addresses operational efficiencies between both police and fire services. Previous sections of the report address the fire service's operations specifically but based on the growth of the community and trends and best practices in public safety specifically around shared facilities, this section of the report was developed to address the near and long term delivery of public safety services to the Village of Harrison.

Current Challenges in existing Public Safety Buildings

Current challenges in the existing public safety buildings fall into three main categories:

- a. Operational efficiency
- b. Health and safety
- c. Other related concerns

Operational Efficiency

Each of the categories impact the daily operations and functionality of the public safety buildings. For several decades the Village's public safety operations have functioned in a building that was programmed as a volunteer fire department that served a mostly rural and agricultural community. With the Village evolving and growing, this operations model is becoming outdated. Even with a complete interior demolition and reprogramming of the existing facilities it would be extremely difficult to gain additional operational efficiency within the confines of the existing public safety buildings. Exterior door and window locations and site specific access challenges, all contribute to physical and environmental challenges that make

renovation and reprogramming the existing facility a difficult challenge.

Over the course of the alteration projects within the fire stations and Village Hall, there has been little or no attention paid to efficiency of day-to-day operations on the DPW, and Public Safety (Police) side. Proximity to stored vehicles and turn out time of responding volunteers and POC's for the fire department has not been a consideration. Best practices in terms of health safety and wellness as well as cancer prevention, future proofing and gender neutrality have not been incorporated into the building over time.

Although safety and security measures have been enhanced with renovation projects, there are some basic facility hardening and force protection practices that should be implemented.

Operational and staff growth over time has dramatically reduced or eliminated many of the storage areas in the police and fire departments and eroded isolation of critical and hazardous material testing and classified storage spaces for the sheriff. Most of this work has to take place at the County facility in Chilton. Spaces previously programmed for confidential file and record storage have been eliminated to provide workspace for additional staff members in the administrative areas of the Village Hall building. Growth into these previously dedicated spaces has moved the location of storage areas to the County facility. That has contributed to remote storage areas that are not adjacent to the workflow making for operational inefficiency when it comes to accessing these records and files by staff on a routine basis.

The facility is not only an inefficient model for public safety staff that operate out of the building but it is also a challenge for the public that must engage the facility on a periodic basis. As visitors flow through the building for various reasons, the separation of public versus administrative, versus restricted access areas are not as evident to the visitor. The architecture of the building should form the basis of restricted and secured areas within the facility but as the current building is arranged that is not evident. The flow of the general public through the facility is not only a safety and

security risk but there are also statute limitations that are not being observed in the day-to-day practices involving the public in the facility. Credential readers on some of the doors has helped with separation of public and private space but more can be done to create this demarcation.

Health and Safety

The health and safety of building occupants is an ever evolving process within the buildings that not only house staff on a daily basis but on a full time basis as is the case in fire and emergency response staffing. Occupants in today's work environments are becoming better educated as to the occupational hazards they face on a daily basis. Cancer prevention is top of mind for fire and emergency services personnel as they return to quarters after being on emergency response scenes. Best practices for cancer prevention require isolation between hot warm and cold zones of the building. Hot zones are those areas of the building that contain carcinogenic and pathogenic hazards. Contaminated clothing equipment and personnel must be properly disinfected within the hot zone to eliminate transfer of the hazards to the cold zone or administrative areas of the emergency services building. The warm zone can be considered the decontamination space between the hot and cold zone where clothing and personnel are cleaned and decontaminated of the cancer and biological health risks. Currently the layout of the Harrison fire department does not allow for proper isolation and decontamination of gear, equipment and personnel. Storage of turnout gear in its current configuration is not arranged to provide isolation from hazardous vehicle exhaust in the apparatus bays.

Police officers experience similar exposure to hazards specifically around biological and manufactured drug exposures when conducting tests on forensic evidence. Currently the Police administration space is not set up to properly isolate the activities of these testing areas from other administrative areas within the department. All operations are conducted out of a single room dedicated to, and shared by, the officers. In its current configuration overflow evidence processing and material testing has to be done in the County building in Chilton.

As the fire department evolves and expands over time, considerations for full time occupancy (meal preparation and sleeping accommodations) should be planned for. Any plans for a new facility or expansion to the existing buildings should consider future expansion to include full time staff. With the growth the Village is experiencing, it is a matter of time before full time public safety service will be necessary.

Physical security and separation are another safety feature that should be incorporated into the built environment. Providing secure parking areas for on duty staff should be a consideration especially as public safety buildings become more regular targets of civil unrest and domestic terrorism. Under its current configuration, neither of the Harrison public safety building's accommodate additional fencing and security measures necessary to provide secure parking for on duty staff.

Other Related Concerns

Other related concerns could be those classified as items that impact the public safety building, operations and staffing.

Employee morale is one of the metrics that weighs heavily on a departments ability to successfully recruit and retain the best talent possible. With the popularity of public safety careers waning, it is more important than ever to provide proper, safe, welcoming, and inclusive environments for employees. It has been demonstrated through recent public safety facility improvement and construction projects, that employees exposed to the proper work environment are more motivated, healthier, feel safer and are more likely to stay in their current positions when given best in class environments to live and work.

New facilities should be seen as a long-term investment by the community to preserve public safety. Communities that invest in facilities to house their police and fire departments see long term benefits to the Community. Lower crime rates, better relations with law enforcement and public safety officials, better outreach and public education are all benefits in communities where there is a strong presence and sense

of pride within the emergency services departments. The facilities that house these departments are only one facet that garners civic pride but it is a critical piece in the equation that illustrates the benefit and importance of a strong public safety presence within a community.

Bringing a new facility online that is more environmentally sustainable and responsible is a long term consideration the Village should embrace. Replacing the current public safety building with an energy efficient highly sustainable building will provide economic and environmental benefit for decades to come. By relocating the public safety facility the Village can convert the existing Lake Park Road site back to tax base and enhance the character of the neighborhood whether that be by residential development, expansion of the commercial core or a combination of both by a mixed-use development.

Current Facilities Conditions

The Village of Harrison contracts with the Calumet County Sheriff's Department to provide law enforcement and public safety services to the Village. The Village contracts with Calumet County on a 5-year contract term. As of January 1st, 2024 a new contract was signed between the Calumet County Sheriff's Department and the Village of Harrison. The Lieutenant currently in command of the Village Police operations foresees a second officer on duty or a supervisor on duty in the next 5-year contract term (2029-2033).

As part of the consultant's analysis regarding the public safety operations of the Village, interviews were held with representatives of the Calumet County Sheriff's Department to ascertain the current level of service provided, current future operations projections, and delivery of service methods currently employed. Lieutenant Joe Tenor provided input and insight as to the current operations.

During the interview Lieutenant Tenor identified several inefficiencies in the delivery of public safety services to the Village. Currently there is one small office in the Village Hall facility reserved for the officers to conduct daily operations. There is one stall in the DPW garage that is reserved for

Calumet County patrol vehicles. As the Village expands there will be a need for more full-time law enforcement operations. Even if the Village continues to contract with Calumet County to deliver public safety services, space provisions will need to be made for the officers assigned to the Village in order for them to provide their services as



safely and efficiently as possible.

One of the more serious safety concerns expressed by the officers is the ability to separate confiscated drugs and other evidence from the operations of the Village Hall. With the prevalence of fentanyl growing at an alarming rate, provisions need to be made for the handling and processing of these dangerous narcotics. Secure separated evidence processing and storage should be provided. A vented fume hood will eliminate the possibility of airborne exposure and contamination to occupants and occupied areas of the building. Having a dedicated evidence processing area in the building would allow evidence technicians to process evidence on site and not have to transport it to Calumet County. This would eliminate inefficiency in response time on cases and situations where immediate results shorten the delay in response to the situation at hand.

Additional office space could accommodate evidence technicians and an investigations officer. Based on current caseload and the types of criminal activity in the Village, these resources would be well utilized.

Existing Facility Renovation Feasibility

As noted earlier in this report, the current facilities are in good repair and regularly scheduled maintenance and repairs have been done to keep the facilities operating as efficiently as possible given the evolution of the operations over time. But the space allocated for law enforcement is not adequate to support the level of operations that are necessary to maintain law and order in the Village. Because the Sheriff's Department office is located in the middle of the facility landlocked between the Department of Public Works garage and the Village board room, expansion for their operation in their current location is not feasible. Finding enough space to renovate and properly allocate functional program area would require a rather robust and invasive remodel and expansion to the current Village Hall facility.

For much the same reason this is not practical for the fire station operations, it is not a fiscally responsible solution for the public safety department either.

Long term planning and programming for public safety services should include dedicated space specifically for the Police Department and law enforcement operations. Having a public safety campus to include police and fire operations will contribute to efficient and cost-effective delivery of services and avoid duplication of common areas typically found shared between police and fire departments. These areas typically include space for physical fitness, training, and administrative functions that can easily be shared between the two departments.

Public Safety Area Recommendations

Near term recommendations (0-5 years)

Based on the current condition of the existing Village Hall building, the Village should make some near term improvements and maintenance enhancements that will prolong the operations of the public safety operations until a shared public safety building can be constructed.

Reconfigure the interior spaces to isolate law enforcement operations from Village hall administrative areas and the

DPW. This will require the downsizing and partial elimination of the administrative office and Village Board room area or occupying some of the space within the DPW facility in the event that the DPW garage is expanded.

Long Term Recommendations (10-15 years)

Based on the fact the building is aging and is too small to physically accommodate personnel, the operations and number of emergency response vehicles required to be stationed in the Village hall and the fact that it does not incorporate best practices for health, safety, welfare and gender mix, the long term solution for station for the public safety department is complete removal from the current Village hall facility and build out in a new shared public safety building. This should be a long-term strategy for the Village over the next 10-15 years.

Programming and Space Needs

Programming and Future Space Needs were derived and based on current operation and potential expansion discussions with Harrison Village Staff and Calumet County Sheriff's department members. Separate fire and police space needs documents have been developed and include the current and future programmed spaces necessary for the operation of a police, fire and EMS station.

The program areas were also applied to the existing building renovation options analyzed as part of the study so the appropriately sized building could be used in determining the feasibility of occupying the existing public safety building and Village Hall site(s).

The following is a high level summary of the building program spaces and their appropriate areas and does not include a room by room breakdown. Square footage areas between the new program and the existing facility have been listed comparatively.

Programmed Police Administration & Training: 4,638 s.f.

Existing area of current Police Department Administration: 120 s.f.

Programmed area of Vehicle Storage: 2,000 s.f.

Existing area of Vehicle Storage: 375 s.f.

Programmed Evidence Processing and Storage: 294 s.f.

Existing Evidence Processing and Storage: 0 s.f.

The space needs programming documents with room by room descriptions and recommended sizes can be found on the pages following this section.

Table 13 – Sheriff Department Space Needs Summary

Program	Size			Quantity	Total	Notes
Town Hall	Length	x Width	= Sq. Ft.		Sq. Ft.	
Department Spaces						
Staff Toilet Room	10	x	10	1	100	
Safe Space in entry vestibule	10	x	10	1	100	
Family or soft interview room	12	x	12	1	144	Soft interview room
Supervising officer Office	10	x	15	2	300	investigator office
Open workstations in a work area	20	x	30	1	600	Similar to Kiel PD- 20 x 30
Unisex Locker Room	20	x	15	1	300	On PD Side Could share FD
Break Room	12	x	8	1	96	Shared with admin
Intake/Processing	12	x	12	1	144	
Evidence Storage	10	x	15	1	150	Room inside room for guns drugs and money.
Holding facilities	10	x	10	1	100	
Hard Interview	10	x	10	1	100	Video recording
Vehicle Storage/Speed board	20	x	20	5	2000	4 squads, speed board, found bicycles, fenced area for larger storage, duty bags
Sally Port	10	x	20	0	0	
Impound	10	x	20	0	0	
Kennel (Dept K9)	6	x	6	2	72	Found animals and K9
Secure Records Storage	20	x	12	1	240	Large and Small Format Scanner
Resume/Report/Officers Room	30	x	35	0	0	
Shelter in Place	30	x	40	0	0	
IT	10	x	10	1	100	Not part of other dept. IT rooms
Narcotics storage	10	x	10	0	0	
MFD- copy, print	10	x	8	1	80	
Conference Room	10	x	18	1	180	Off lobby double as family interview
Work Area	10	x	15	0	0	
Walk up counter/window	10		15	1	150	
Office Supply Space	5	x	10	1	50	
Armory	10	x	10	1	100	

Program	Size				Quantity	Total	Notes	
	Length	x	Width	= Sq. Ft.		Sq. Ft.		
Other work areas								
Secured training equip. storage	10	x	10		100	1	100	Pepper ball in locker room
Mud Room	6	x	8		48	1	48	
Janitor closet	6	x	8		48	1	48	
Public Education Storage	10	x	15		150	1	150	
Fenced in evidence storage	20	x	20		400	0	0	
Uniform Storage	5	x	10		50	0	0	
Subtotal							5,452	
** Efficiency Ratio							818	
Total							6,270	
<i>** Efficiency ratio includes circulation, structure and walls.</i>								
<i>Units in square feet unless specified otherwise</i>								
Square Foot Summary								
Admin Staff Program Total							6,270	

Cost Estimates & Inflationary Impacts

The Cost Estimate is based on the recommendation for full replacement of the fire station. The estimate of probable cost developed by the consulting team includes “all in” project costs. The estimate includes the costs to construct the facility (hard costs) in 2023 dollars as well as other associated (soft costs) the Village will incur when designing, constructing, and occupying the facility.

Table 14 – Village of Harrison Public Safety Building New Construction Cost

Fire Department		
Apparatus Bay	6,652	s.f.
Office/Admin	10,325	s.f.
EMS	474	s.f.
Police		
Office/Admin	5,976	s.f.
Vehicle Storage	2,000	s.f.
Evidence	294	s.f.
Total Areas:		
Fire	17,451	s.f.
Police	8,270	s.f.
Total Area	25,721	s.f.
Cost/s.f.	\$365	s.f.
Construction Cost	\$9,388,165	
Additional Costs		
Land Improvements	\$0.00	
Design	\$704,112.38	
FFE	\$187,763.30	
Contingency	\$938,816.5	
Total Project Cost:	\$11,218,857	

Inflationary Impacts

As discussed in each of the individual building analysis reports, recommendations for replacement of facilities are addressed on a case-by-case basis. The replacement of these facilities should be planned for starting within the next 2-3 years to maximize the return on investment in terms of the size and quality of the building for the estimated cost for replacement. It should also be noted that based on inflation and cost of materials and labor, for every year the project is delayed, it will cost the Village an additional 9% per year compounded; based on current inflation rates. This is a conservative estimate of inflation and current market analysis, and inflationary trends tend to be more volatile. To illustrate the impact of delaying the construction of a new facility, a table of inflation for each of the buildings recommended for replacement follows this section.

**Table 15 – Project Cost Impact of Annual Inflation
Replacement of the Fire Station to Include a New Police Department**

Year One for Analysis: 2024

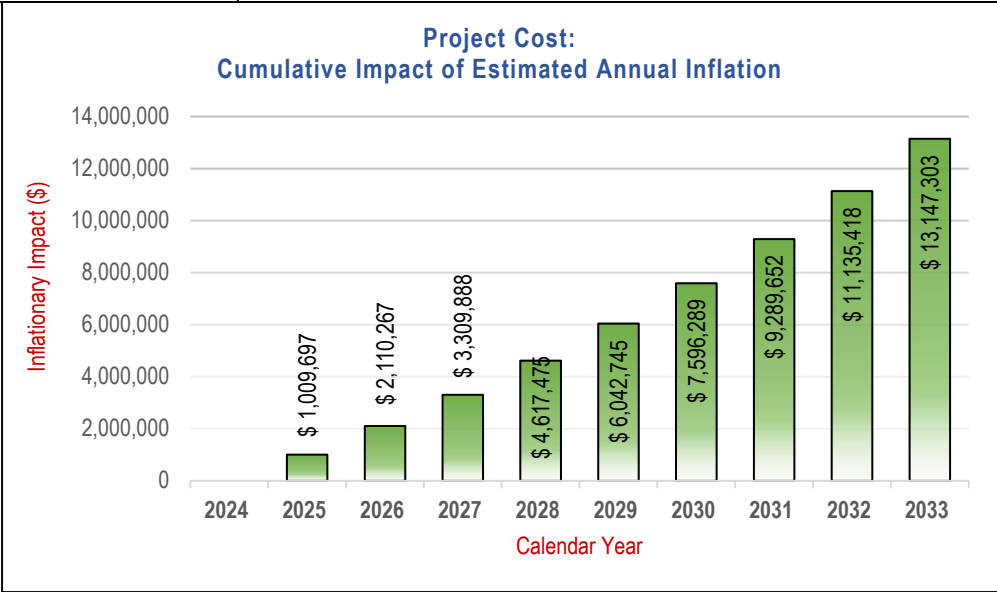
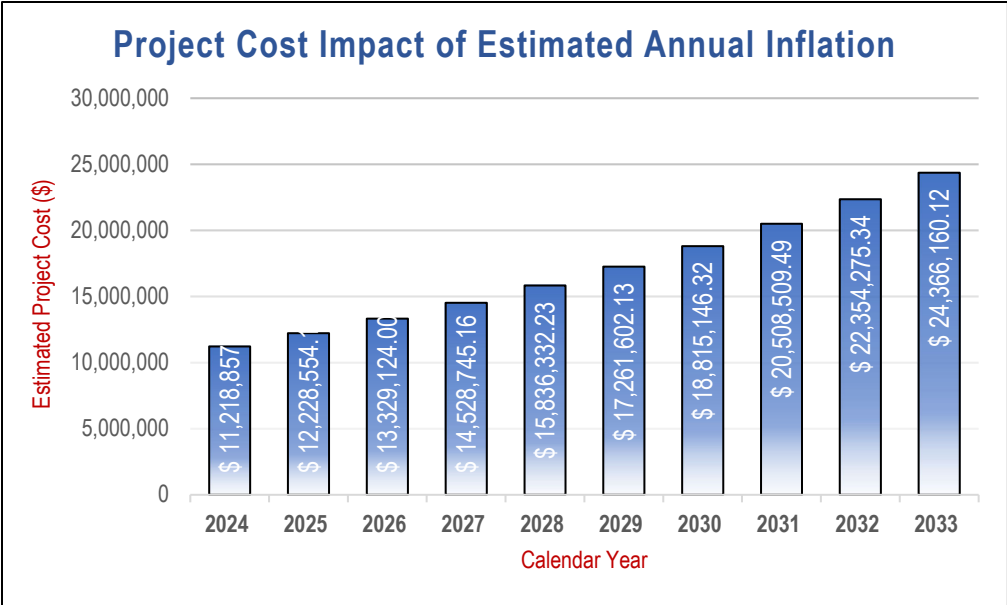
PROJECT COST

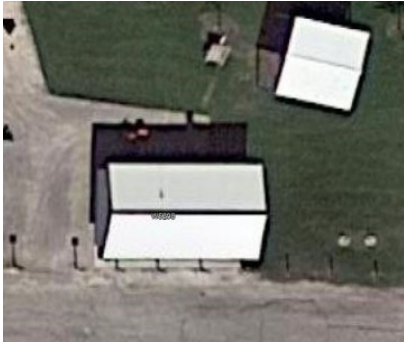
Estimated Total Project Cost:	\$11,218,857
Percent of Soft Costs:	12%
Soft Costs (Consulting, Administration):	\$1,346,263
Hard Costs (Construction):	9,872,594
Project Costs:	\$11,218,857

Potential Rate of Annual Inflation:

Estimated Soft Costs Inflation:	9%
Estimated Hard Costs Inflation:	9%

Year: Calendar Year Ending:	1 2024	2 2025	3 2026	4 2027	5 2028	6 2029	7 2030	8 2031	9 2032	10 2033
Soft Cost:	\$1,346,263	\$1,467,426	\$1,599,495	\$1,743,449	\$1,900,360	\$2,071,392	\$2,257,818	\$2,461,021	\$2,682,513	\$2,923,939
Hard Cost:	9,872,594	10,761,128	11,729,629	12,785,296	13,935,972	15,190,210	16,557,329	18,047,488	19,671,762	21,442,221
Estimated - TOTAL Project Cost:	\$11,218,857	\$12,228,554	\$13,329,124	\$14,528,745	\$15,836,332	\$17,261,602	\$18,815,146	\$20,508,509	\$22,354,275	\$24,366,160
Annual Cost Variance:	\$0	\$1,009,697	\$1,100,570	\$1,199,621	\$1,307,587	\$1,425,270	\$1,553,544	\$1,693,363	\$1,845,766	\$2,011,885
Annual Percent Variance:	0.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Cumulative Annual Cost Variance:	\$0	\$1,009,697	\$2,110,267	\$3,309,888	\$4,617,475	\$6,042,745	\$7,596,289	\$9,289,652	\$11,135,418	\$13,147,303
Cumulative Annual Variance:	0.00%	9.00%	18.81%	29.50%	41.16%	53.86%	67.71%	82.80%	99.26%	117.19%





Site Aerial of the Harrison Athletic Association Restroom Building
W5298 State Hwy 114, Menasha

Harrison Athletic Association Concession Building and Restroom

Current Facilities Conditions Restroom Facility

The restroom facility is operated by the Harrison Athletic Association and is located to the east of the concession building. The restroom facility includes a separate male and female restroom as well as a small garage that separates the two restrooms. The garage space is reserved for maintenance equipment used to prepare the athletic fields.

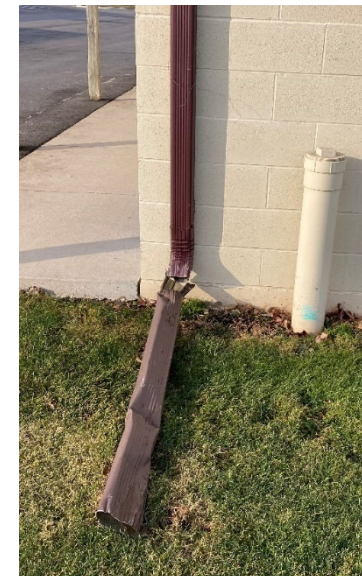
The facility is constructed of concrete masonry units and the concrete floor. Ceiling surfaces are plastered. The restrooms were constructed within the last 10 to 15 years and are fully ADA accessible. There were no drawings of the original building plans available for review by the consultant team.

The masonry walls act as load bearing partitions that support wood roof trusses. The construction is similar to residential construction with wood trusses, wood sheathing and asphalt shingles. The Gable ends of the roof



are covered with ribbed metal siding which appears to be in good condition.

The condition of the restroom is in good condition with the exception of one of the urinals in the men's toilet room that sustained some damage due to vandalism. There are vented aluminum soffits, gutters and downspouts all of which appear to be in good shape. The downspout extensions have sustained some damage and should be replaced.



The exterior painted surfaces of the concrete block and the metal doors and frames all appear to be in fair condition. The door hardware is fairly robust with continuous geared hinges, latch guard protection and ADA accessible lever lock sets. None of the door hardware appeared to be damaged or malfunctioning.

The interior floor surface appears to be painted concrete and is showing signs of wear beneath the

urinals and in front of the water closets. Resurfacing of the floors in and industrial epoxy finish will prolong the life of the floor surfaces and help with ease of maintenance and cleanability. There is evidence of removal and relocation of the hand soap dispenser in the women's restroom. The wall where the dispenser was previously mounted should be repainted.

The perimeter exterior concrete paving provides covered walkway under the roof eaves and allows for positive drainage away from the building. Rainwater and snow melt are diverted to the asphalt parking areas that have been channeled to convey stormwater around and away from the buildings.

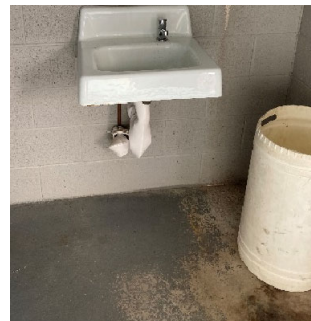
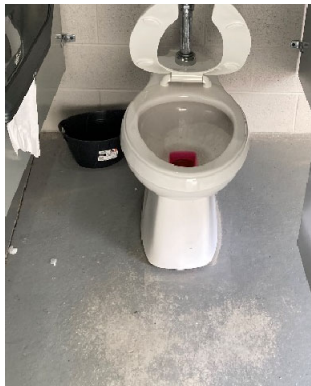
The treated lumber 6" x 6" posts that act as protective bollards are direct buried in the asphalt pavement. The columns appear to be in good condition. Even though the columns are treated lumber it would be advisable to stain/seal the columns to protect them from moisture penetration.

Recommendations

Due to the current condition of the toilet room building it is recommended that the interior floors be epoxy coated, minor wall patching and painting where the soap dispenser was relocated and sealing the wood protection bollards are all preventative maintenance practices that will extend the life of the toilet room facility. Replacement of the vitreous china urinal in the Men's toilet room is also advisable.

Existing Facility Renovation Feasibility

Based on the age and condition of the Harrison Athletic Association toilet room building, it is highly feasible and recommended the existing facility be renovated. Investing in the recommended maintenance improvements will extend the life and functionality of the facility for users of all abilities for a minimum of 20 years. The cost of these improvements will be realized in terms of payback over the course of the next two decades that the building is in service.





Site Aerial of the Harrison Athletic Association Concession Building
5298 State Hwy 114, Menasha

Concession Building

It is difficult to determine the age of the concession building but based on accounts by staff the facility was erected sometime in the 1970s or early 80s. The concession building is a wood framed structure that is clad in ribbed metal siding. The facility is designed to be completely open air but during the winter solid panels are installed in the South face of the facility.



The North Face of the facility facing the ball diamonds remains open in the winter months. The construction of the concession building is similar to the toilet room facility. Vented aluminum soffits and prefinished metal fascia wrap the eaves. Wood roof trusses bear on exterior load bearing walls and the roof is comprised of wood sheathing and asphalt shingles. Drainage is conveyed by pitching the asphalt to a pre-formed asphalt channel that carries water around the building.



There are three walk up concession windows that are all mounted at Non-ADA height. The height of these concession windows varies from 3'-6" to 4'-3". ADA Accessibility requires the counters to be no higher than 34 inches above the finished floor.

The exterior walls of the concession building under the roof overhang are constructed of T-111 wood siding. The paint finish on this wood siding is showing signs of wear and should be repainted to minimize any water penetration into the wood. The roof structure is supported by 6"x6" treated wood columns that are attached by angle brackets to the concrete slab of the pavilion. The underside of the pavilion is sheathed with sheets of OSB plywood that is showing signs of deterioration. The entire ceiling surface of the pavilion should be recoated. There are surface mounted light fixtures that illuminate the pavilion. The fixtures appeared to be in fair condition. Power was cut to the building for the winter months so confirmation of the operation of these surface mounted light fixtures could not be verified.



There are hollow metal doors that provide access into the concession kitchen and covered pavilion. The hollow metal doors are in poor shape and corrosion and delamination are visible on the door surfaces.



The interior of the concession kitchen show signs of wear. None of the serving counters are ADA height and sink is not ADA accessible. There is a step up into the serving area and walk-in cooler which is also not ADA accessible.



There is asphalt pavement along the South side of the pavilion. The North, East and West elevations all contain pea gravel surfaces directly adjacent to the facility. There are concrete stoops at the exterior entrance doors that appears to be in fair shape.

Recommendations

Based on the age of the facility the requirements for ADA accessibility were not imposed when the building was constructed. In order to have the building comply to modern accessibility requirements the entire serving area would need to be reconstructed to lower the current step up condition as well as lowering the walk up windows. In order for these modifications to be made to bring the pavilion into compliance, it is likely more reasonable to completely remove the pavilion and reconstruct it to meet the accessibility requirements.

Existing Facility Renovation Feasibility

Based on the age and condition of the Harrison Athletic Association concession building, it is recommended the existing facility be replaced. Investing in the recommended maintenance and accessibility improvements are costly enough that full replacement will provide a longer term solution to extend the life and functionality of the facility for users of all abilities for a minimum of 40 years.

If a full replacement of the concession building is not feasible, at a minimum, the hollow metal doors that are delaminating and corroded should be replaced. The entire facility should be painted. Existing surface mounted

incandescent light fixtures should be replaced with recessed LED energy efficient light fixtures. ADA improvements should be a serious consideration.

Programming and Space needs

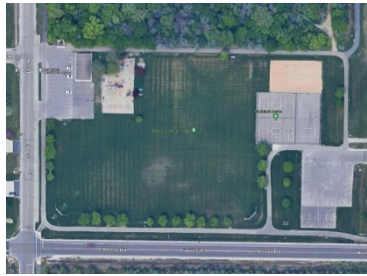
Because there are no recommendations for the physical expansion of the Harrison Athletic Association buildings, a space needs spreadsheet was not developed for this particular facility. A cost estimate was provided for the minor maintenance and accessibility improvements to the facility. That estimate follows this section.

Cost Estimates & Inflationary Impacts

Table 16 – HAA Park Pavilion Improvements - Estimate of Probable Cost

Renovation of the Park Pavilion Facility				
Description	Unit	Unit Cost	Designed	Cost
Replace doors	Ea.	\$4,500.00	2	\$9,000
Painting	Ea.	\$12,000.00	1	\$12,000
Sealing Bollards	Ea.	\$375.00	6	\$2,250
Epoxy Floors	Ea.	\$4,500.00	2	\$9,000
New toilet room fixture	Ea.	\$2,500.00	1	\$2,500
Interior ramps (concession building)	Ea.	\$4,500.00	2	\$9,000
Countertop modifications	Ea.	\$12,000.00	1	\$12,000
Lower serving window & countertop	Ea.	\$7,500.00	3	\$22,500
New light fixtures	Ea.	\$2,500.00	6	\$15,000
				\$93,250
Sub Total				\$93,250
A/E Design Fee		8.00%		\$7,460
General Conditions		10.00%		\$9,325
Contingency		20.00%		\$18,650
Total				\$128,685

Costs are in 2024 Dollars



Site Aerial of Darboy Community Park
N9334 Noe Rd Harrison

Darboy Community Park Pavilion

Current Facilities Conditions

The Darboy Community Park Pavilion is located at N9334 Noe Road on the North end of the Village.

The 2300 square foot park pavilion is primarily an open-air covered picnic shelter with a small concession and catering kitchen with male and female restrooms on the north face of the facility.

Drawings of the facility were not available to the consultant team but judging by the age and condition of the facility it is estimated in the neighborhood of 20 to 25 years old.

The functional spaces of the pavilion are constructed out of decorative split faced concrete masonry units. The block appears to be in reasonable condition for the age of the facility and no additional maintenance or tuck pointing was noted as being necessary. The Gable ends of the pitched roof pavilion are enclosed with pre-finished metal siding panels. The metal siding panels appeared to be in acceptable condition and no additional maintenance is recommended.

The underside of the open air picnic pavilion is covered with aluminum soffit material. It was reported to the consultants when they were conducting the site visit that periodically those soffit panels get damaged by vandalism and need to be replaced. During the onsite inspection, all of the soffit panels appeared to be in place and no damage was noted. The overhangs on the pavilion are wrapped with pre-finished metal vented soffits that provide proper roof venting of the attic space and shingled roof.

Continuous ridge vents provide proper attic venting but it was noted that some of the ridge cap asphalt shingles were missing and needed to be replaced. See the roof condition report provided by STR SEG, the forensic engineering consultant that is part of the appendix in this report. Pre-finished aluminum gutters and downspouts direct water away from the pavilion and appeared to be in fair shape.



ADA Accessibility: the open air park pavilion is not handicap accessible from the parking area. There is a 4-6" high curb along the side of the pavilion adjacent to the parking area that provides elevation transition from the parking area to the open air pavilion finished floor elevation. This curb prohibits ADA accessibility from the parking area. Accessibility concerns exist in the catering kitchen/ concession room in that the food preparation counter, the hand sink and the concession serving counter roll up window are not set at the appropriate height of

34 inches above floor elevation to meet the requirements of the ADA.

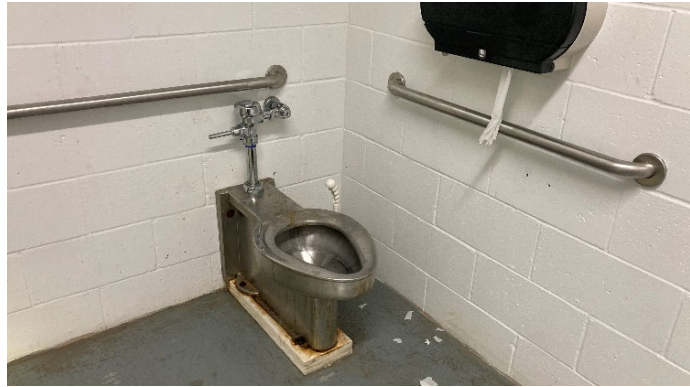


There are Hi-Low drinking fountains mounted to the exterior wall of the pavilion that meet the height requirements for ADA accessibility.

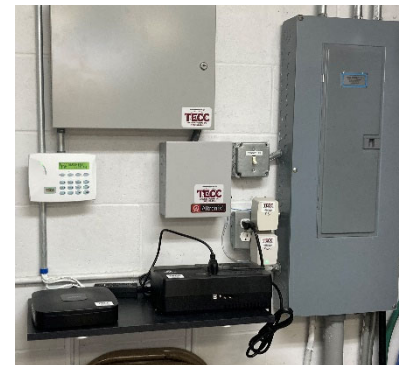


Both the men's and women's toilet rooms contain stainless steel toilet and lavatory fixtures set at the appropriate height and clearance distances to meet ADA requirements. There is a requirement to have an 18 inch high vertical grab bar above and perpendicular to the 36 inch grab bar on the wall opposite the water closet. It was noted that this vertical grab bar is missing from both the men's and women's toilet room and should be installed. The toilet paper dispenser is not mounted at the appropriate ADA mounting height and clearance requirements adjacent to the water closet. The toilet fixtures appear to have been shimmed up or leveled using resinous wood blocking which raises the rim height of the toilet above the required seat height for ADA accessibility. The resinous blocking material resist moisture penetration but it is not an

ideal material for shimming the toilet fixture on the concrete floor.



There is a closed-circuit television security camera system installed on the various locations of the pavilion to monitor activity around the pavilion. The head end equipment for the security system is located in the catering kitchen of the pavilion and remote monitoring is possible through Ethernet access tied back to the Village Hall facility. Closed circuit television cameras all appeared to be intact at their mounting locations and no damage was noted to them or the closed circuit television system. The CCTV equipment is vulnerable to tampering and damage based on its mounted location within the catering kitchen. Renters of the catering kitchen have full accessibility to the security equipment.



There is a 27 stall parking lot that is accessed from 2 entry drives off of Noe Road. There are no noted or placarded ADA accessible parking stalls. The parking lot is in generally good condition but should be crack filled, seal coated and restriped approximately every five years to maintain performance and extend the life of the paved surfaces.

Existing Facility Renovation Feasibility

Based on the age and condition of the Darboy Park pavilion it is highly feasible and recommended the existing facility be renovated. Investing in the recommended maintenance and accessibility improvements will extend the life and functionality of the facility for users of all abilities for a minimum of 20 years. The cost of these improvements will be realized in terms of payback over the course of the next two decades that the building is in service.

Recommendations and Conclusions

Steps should be taken to modify the existing Darboy Park pavilion shelter to make it ADA accessible.

The curb separating the parking area and the open-air pavilion should be modified to install an ADA ramp with tactile warning domes so accessible transition from the parking area to the pavilion can be accommodated.

Vertical grab bars should be installed in the restroom facilities on the wall opposite the water closet per the discussion above.

The toilet paper dispensers should be mounted per ADA requirements below the horizontal grab bar.

The catering kitchen countertop should be lowered to 34 inches above finished floor to accommodate ADA requirements.

ridge vent shingles should be replaced where noted in the roof condition summary.

The coiling overhead door from the catering kitchen to the open air pavilion should be lowered so they serve and counter height is 34 inches above finished floor.

Based on the age and condition of the stainless steel fixtures in both the men's and women's toilet rooms full replacement of those fixtures should be considered. When replacing the fixtures vitreous china should be a consideration. Since the existing stainless steel fixtures show signs of corrosion. This corrosion could be caused by the types of cleaning chemicals that are used to disinfect the toilet rooms.

The asphalt parking lot should be crack filled, seal coated and restriped approximately every five years to maintain performance and extend the life of the paved surfaces.

ADA accessible parking stalls should be properly placarded and signed per ADA requirements.

If damage to the existing metal soffit panels under the open air park shelter continue to be targets for vandalism, more robust surface treatments should be considered under the pavilion. These treatments could consist of weather resistant tongue and groove plywood (T-111) fiberglass reinforced panels (FRP) or painted exterior grade plywood.

Cost Estimates

Table 17 – Darboy Park Improvements- Estimate of Probable Cost

Renovation of the Park Pavilion Facility				
Description	Unit	Unit Cost	Designed	Cost
Install grab bars	Ea.	\$550.00	2	\$1,100
Relocate toilet paper dispenser	Ea.	\$250.00	1	\$250
Build IT closet for CCTV	Ea.	\$4,500.00	1	\$4,500
HC Ramp off parking area	Ea.	\$12,500.00	1	\$12,500
New toilet room fixtures	Ea.	\$2,500.00	8	\$20,000
Roof repairs	Ea.	\$1,500.00	1	\$1,500
Countertop modifications	Ea.	\$12,000.00	1	\$12,000
Lower serving window & countertop	Ea.	\$7,500.00	1	\$7,500
HC parking lot signage	Ea.	\$450.00	2	\$900
Sub Total				\$60,250
Sub Total				\$60,250
A/E Design Fee		8.00%		\$4,820
General Conditions		10.00%		\$6,025
Contingency		20.00%		\$12,050
Total				\$83,145

Costs are in 2024 Dollars

Harrison Public Safety Building and Village Hall Basis of Design

Based on the recommendations of the report there is a long term need for expansion and replacement of two specific facilities. The village hall and DPW garage and a new public safety facility to include both police and fire service functions.

The basis of design helps to identify the construction methods and equipment that would be planned into a new public safety and Village Hall facility. Even before design enters early preliminary stages, a baseline needs to be established for the type of construction of the building(s). The basis of design provides guidelines for developing rough cost per square foot of the new facility to help the Village budget and plan for the potential costs of a new facility in future years. By using the following assumptions, rough order of magnitude estimates can be developed:

Foundation System

Spread footings at frost depth around perimeter of building. (Pending geotechnical exploration and reporting results).

Frost walls should be utilized around the perimeter of the building

Interior column piers would be used in the apparatus bay

Structural System

Steel bar joists would be supported by steel framing system of girders and columns on the interior of the structure.

Exterior precast walls of the apparatus bays could be load bearing.

The mezzanine would be framed with steel bar joists, metal deck and 3" concrete floor slab. Steel pan stairs filled concrete treads.

Exterior walls of the administration area would be metal stud back up supported by an independent structural steel frame

maximizing expandable end walls wherever possible (limited X bracing).

Walls of the administration area would be steel stud back up walls with masonry veneer, 3" rigid insulation, 1" air space 5/8" densglass sheathing, spray applied moisture/air barrier and mortar netting. Masonry openings would be supported with steel lintels.

Roof System

The roof would be installed on metal deck fastened to the bar joists. The structure would be sloped to interior roof drains. 6" polyiso rigid insulation (built up of 2 layers) with staggered joints and a fully adhered EPDM membrane roof. Continuous metal coping around the perimeter of the top of wall around the entire facility.

Floor Slabs

The floor slab of the apparatus bay would be 10" thick concrete sloped to interior trench style floor drains on center of each of the OH doors. The floor would be reinforced with #5 rebar 12" o.c. each way. Slabs would receive a hard trowel finish and concrete sealer.

The administrative Office area floor slab would be 5" thick with #4 rebar 16" o.c. each way.

Interior Walls

Interior walls in the apparatus bay would be 8" CMU set on thickened grade beam under the floor slab.

Interior walls of the administration area would be 3 5/8" metal studs and drywall and would extend from the finished floor to the underside of the roof deck. Cavities would be filled with sound attenuation insulation and perimeter acoustic sealant at the floor and roof deck. All walls receive 1 coat primer/block filler and 2 coats of paint. 8" concrete block walls would be used in the evidence, booking and hard interview areas for durability and impact resistance.

Interior Doors

Interior doors in the apparatus bay would be hollow metal frames and hollow metal doors (painted).

Interior doors in the administrative area would be hollow metal door frames painted and solid wood slab doors stained. Each office and conference room would have an 18" side lite.

Exterior Doors

Main entry doors- aluminum storefront with full glass insulated aluminum door.

3' personnel doors: Hollow metal doors in hollow metal frames.

14'x14' full glass sectional OH doors with jack shaft openers.

14'x14' partial glass bi-fold doors would serve the first out apparatus.

Exterior Windows

Anodized aluminum storefront windows with 1" insulated Low E glazing. Tempered glass at entry door locations.

Flooring

The administrative area would receive floor finishes. The lobby, vestibule and toilet rooms/shower rooms and locker room would receive ceramic tile.

The training room, kitchen and all corridors would receive LVT. All offices, conference rooms, day room and bunk rooms would receive 24x24 carpet tile.

Ceilings

24x24 high NRC tile in all administration office spaces. Standard white grid. Painted exposed structure in all other locations.

Casework

Steel base cabinets with stainless counter tops in app bay work rooms and kitchen.

Plastic laminate base cabinets and solid surface (Corian) tops in all other areas.

Solid surface windowsills and toilet room vanity tops.

HVAC

Roof top gas fired forced air units with remote condensing units for administration area. Apparatus bay- Gas fired make up air unit with localized exhaust (plymovent) radiant floor heating by remote boiler unit on mezzanine.

Electrical

Backup generator sized to provide emergency power to OH doors, HVAC fans- No AC back up and select interior outlets in the EOC/training room, kitchen (refrigerators) and emergency lighting circuits.

All lighting to be 120 VAC LED lighting fixtures (interior and exterior).

Conclusions and Recommendations

Each of the buildings analyzed have unique challenges and needs. The conclusions and recommendations under each of the facility analysis will identify a path forward for each of the individual facilities but to summarize the findings of this report at a high level the consultant team concluded:

The Fire Stations, although well maintained, are at a point where they require some maintenance, but more importantly, expansion to accommodate equipment, operations and best practices for a healthy safe and operationally efficient facility.

The Harrison Utilities was originally designed and built to accommodate a larger operation. With the change in operation, the programmed area of the building is currently oversized for the function. As the department sees future growth, the additional floor area of the building that is currently underutilized can be renovated and expanded into. There are some minor maintenance, security, and accessibility upgrades there can be done to the facility to extend the service life of the building.

The Recreational Structures at Darboy Park and the Village Hall site require some accessibility upgrades and minor maintenance work to prolong the service life of the facilities. Consideration should be given to the older wood structure pavilion on the Village Hall site as to whether the cost for maintenance and improvement is a reasonable solution versus complete demolition and construction of a new facility.

Public Safety (Calumet County Sheriff) operations should consider long term service to the community and expansion of the operations should be a priority as the Village continues to grow. Incorporation of police services into a public safety facility along with the Harrison fire department should be a serious consideration when creating

a long-term solution to deliver public safety services to the growing community.

The Department of Public Works operation is grossly undersized for the service area and number of citizens it serves. Expansion should be considered in the near term to accommodate equipment, operations and best practices for a healthy, safe and operationally efficient facility.

The Village Hall currently accommodates the needs for the administrative functions of the Village. As expansion to the DPW facility is considered, additional floor area should be added to the Village Hall to accommodate expanded IT needs and ever growing storage needs for the Village.

Space Needs and Programming

Using the program documents as a guideline, it is recommended that the Village follow the suggested space needs program and plan for the new or expanded facilities incorporating the prescribed functions and suggested square foot areas as illustrated in the programming and future space needs section of the report. Developing a program that reduces the building area and removes some of the functional spaces will not provide a long-term solution that addresses the need for municipal services- especially emergency services in the Village of Harrison.

Basis of Design

The basis of design document was established to develop a baseline for the recommended and appropriate types of building construction materials and building systems. It is customary at the preliminary design phase of a project to identify the major building components and establish minimum standards for the quality of the facility. Since the cost of materials and the methods of construction can vary widely, it is important to establish a baseline during the preliminary design to set expectations and determine preliminary construction cost before the design of the project gets too far along in the architectural and engineering process. It is recommended that the basis of design for the

various building materials and systems be followed in the subsequent phases of design. Value engineering exercises may adjust some of the components of the basis of design but generally the basis of design should be followed if the Village is expecting a minimum of 50 years of service from the buildings they are proposing to renovate or construct.

Cost Estimates

Two different cost estimate scenarios were developed to adequately determine the value of the construction of a new public safety facility and expansion to the Village Hall and DPW operations. When looking at the long term service of the buildings and operations, location and ability to accommodate future growth must be considered.

Inflationary Impact

The replacement of the public safety facilities should be planned for within the next 2-3 years to maximize the return on investment in terms of the size and quality of the building for the estimated cost for replacement. It should also be noted that based on inflation and cost of materials and labor, for every year the project is delayed, it will cost the Village an additional 9% per year compounded based on current inflation rates. This is a conservative estimate of inflation and current market analysis and inflationary trends tend to be more volatile. It is highly recommended the Village work diligently to execute the replacement of the public safety facility and or any of the recommended improvements before inflationary impacts put the project out of reach from a bonding and borrowing perspective.

Appendix A - Aerial Images

5,460 SF TOTAL



Clifton Rd

Clifton Rd

Clifton Rd

Clifton Rd

Calculate s.f. area

Calculate S.f. area

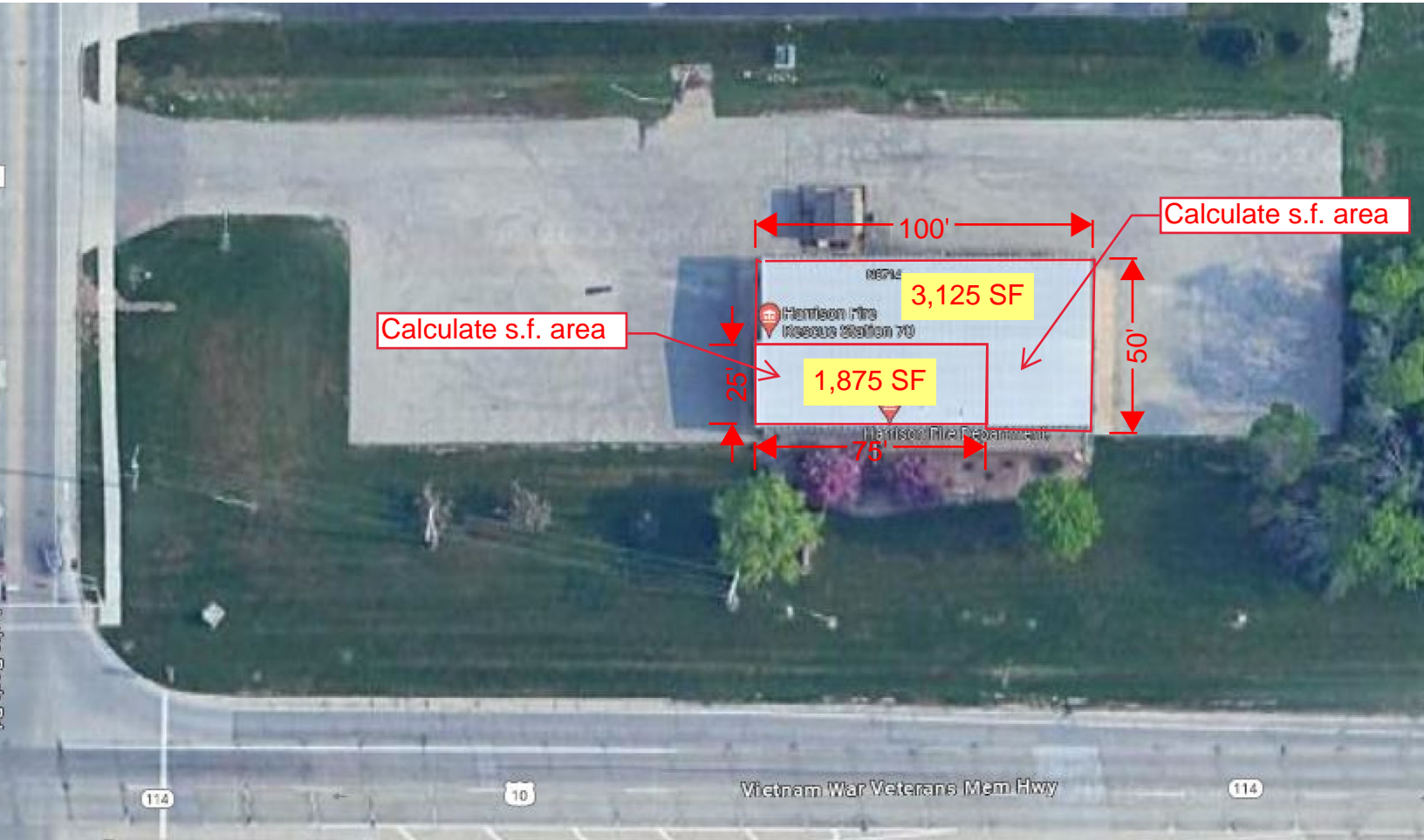
4,160 SF

1,300 SF

62'

80' 25'

5,000 SF TOTAL



Appendix B - MEP Reports

HVAC System Review:

The following report is the result of a site visit by Jason Testin of MSA Professional Services, Inc. that occurred on September 11, 2023. Site observations, existing plan review and interviews with staff were all used in the preparation of this report.

Heating System

Existing Data

- A. The meeting room is heated by a gas fired furnace. See the ventilation portion of the report for details.
- B. The garage is heated by gas fired unit heaters.

Observations

- A. The gas fired unit heaters are a mixture of ages and are in fair condition.

Recommendations

- A. Continue preventative maintenance on the system.

Ventilation and Air Conditioning Systems

Existing Data

- A. Constant volume single zone systems serve the facility.
- B. The meeting room is served by a single zone constant volume furnace. The furnace consists of a supply fan, gas fired heating section, DX cooling coil and remote mounted condensing unit. A room thermostat is utilized to control the temperature of the space.
- C. The garage is exhausted by an exhaust fan. The exhaust has an intake approximately 1' above the finished floor.

Observations

- A. The furnace was installed in 2020 and are in good condition. The unit has an estimated life expectancy of 15 years.
- B. The exhaust fan is original to the building and in fair condition.

Recommendations

- A. Continue preventative maintenance on the systems.

Control Systems

Existing Data

- A. There is no central BAS system serving the facility. All equipment has stand alone controls.

Recommendations

- A. Continue to maintain and operate the stand alone controls as long as the current mechanical equipment remains. When the equipment is replaced, a changeover to a digital control BAS is strongly recommended.



Electrical System Review:

The following report is the result of a site visit by Zack Wagner of MSA Professional Services, Inc. that occurred on September 21, 2023. Site observations and communication with staff were all used in the preparation of this report.

It is estimated that the original building was constructed in the early 1970s. Addition and renovations were done in 1998.

Main Electrical Service

Observations

- A. The main electric service is original to the 1998 addition. The service is 120/240 volt, 200 amp and is fed underground from a pole mounted utility transformer. The service is located in the first-floor meeting room. The service switchboard is a Square D QO Load Center type panelboard with a 200A main breaker. The panelboard is in good condition. No surge suppression device was found on the existing service.
- B. There is space for additional breakers in the existing distribution panelboard.
- C. The serving utility is WE Energies.



Main Electrical Service

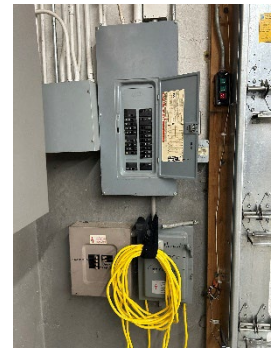
Recommendations

- A. The existing service panelboard is 25 years old and is nearing the end of its useful life and should be considered for replacement. Additional capacity on the electric service is available for small additions. However, if a large building addition were to be added to the facility, the existing service would likely need to be replaced with a new 120/208V service and switchboard with a surge suppression device.

Panelboards

Observations

- A. There are one Square D QO Load Center and two Cutler Hammer Safetybreaker Loadcenter type 120/240 volt panelboards in the building. These panelboards appear to be vintage to the 1998 renovation. These panelboards are in fair condition and have limited room for additional breakers.



Existing Panelboard

Recommendations

- A. The panelboards should be considered for replacement based on their age. Provide new replacement panelboards and new feeders in existing conduit. If new loads are added to the facility, additional panelboards may be needed.

Generator

Observations

- A. This facility has a natural gas, residential style, 26kW Generac generator. This generator back feeds the entire service via a 200A breaker switch located on the exterior wall adjacent to the utility meter. The generator was installed in 2023.



Existing Generator

Recommendations

- A. None at this time.

Interior and Exterior Lighting

Observations

- A. Most of the light fixtures throughout the facility have LED replacement tubes installed in the existing fixtures.
- B. Toggle switches are present for all lighting.
- C. No occupancy sensors are present in the facility.
- D. Exterior lighting is LED and are photocell controlled.

Recommendations

- A. Consider upgrading to all LED interior lighting with all new motion controls and dimmer switches.
- B. Consider upgrading to all LED exterior lighting with all new lighting control system.



Existing LED Fixture & Photocell

Emergency Lighting

Observations

- A. Limited emergency lighting is present in the facility. Staff indicated the battery light in the meeting room has not been maintained and does not work. The main service is backed by a standby generator.
- B. Exit lights are vintage to 1998 and have both red and green lettering.

Recommendations

- A. Provide new code approved egress lighting through new light fixtures with battery packs.



Existing Exit Light

Wiring Devices

Observations

- A. The receptacles and toggle switches are commercial grade 15 amp with plastic and stainless-steel plates. They appear to be vintage to 1998 and for the most part show signs of general wear and can be replaced as they age.

Recommendations

- A. Replace all wiring devices and plates that are damaged.
- B. Add additional receptacles and circuits as required.

Fire Alarm System

Observations

- A. There is no fire alarm system in this facility.

Recommendations

- A. Consider adding a complete, new code approved fire alarm system to the facility.

Intercom System



Observations

- A. There is no intercom system in this facility.

Recommendations

- A. Consider adding new IP based intercom system if owner sees a future benefit.

Data, Telephone

Observations

- A. There is no data rack in this facility. Internet is provided by Spectrum via coax cable, modem, and a wireless access point located in the office.
- B. There are only two wired CAT6 data connections in the facility. One for the VOIP telephone and one in the garage for the fire protection system computers.

Recommendations

- A. Consider upgrading to a new enclosed data rack with patch panels for extended data service throughout building as required with CAT6 cabling.

Keyless Entry System

Observations

- A. There is no keyless entry system at this facility.

Recommendations

- A. Consider adding keyless entry system for enhanced building security.

Security/CCTV System

Observations

- A. There is no security/CCTV camera system at this facility.

Recommendations

- A. Consider adding an IP type security/CCTV camera system for enhanced security.

Plumbing System Review:

The following report is the result of a site visit by Justin Monk of MSA Professional Services, Inc. that occurred on September 11th, 2023. Site observations and interviews with staff were all used in the preparation of this report.

It is estimated that the original building was constructed in the early 1970s. Addition and renovations were done in 1998.

Domestic Water Piping System

Observations

- A. The building is supplied by the local municipal water utility. It has a 4" ductile iron water service copper, with a 1" water meter. The system piping is galvanized and type L copper, which is original to the building. Renovated areas and additions contain type L copper piping. The isolation valves are ball and gate valves. The system consists of cold water hard and hot water supply. Pipe insulation is a mixture of fiberglass and elastomeric. The system pressure is 65psig. The hot water delivery time to the most remote fixture is over 60 seconds. There are no reports of any major issues with the piping system. The overall system is in fair condition.
- B. The building has an interior truck filling station that connects to the building's water piping system with a testable backflow preventer. It is not metered. There are no reports of any major issues.

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic water pipe mains in order to provide adequate pressure and flow to any new and existing fixtures. Current plumbing and energy codes require faster hot water delivery time to all fixtures. This will extend the domestic hot water piping system piping closer to all hand washing type fixtures and increase the size of the pipe main and circulation pump.
- B. Water testing shall be attained to determine water quality and proper treatment filtration equipment by the facility owner.

Fire Suppression Piping System

Observations

- A. The building does not contain an automatic fire sprinkler system.

Recommendations

- A. None at this time.

Sanitary Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to the municipal sewer. Floor areas that are prone to spills have floor drains and catch basins. The system piping material is no-hub cast iron and PVC, which



is original to the building. There are no reports of any major issues with the piping system. The overall system is in fair condition.

Recommendations

- A. Provide drain cleaning for the entire piping system as part of maintenance program once every two years.

Storm and Clear Water Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to on-site storm sewer drainage. The roof does not have any internal roof drains. The roof slopes to gutters and down spouts.

Recommendations

- A. None at this time.

Natural Gas Piping System

Observations

- A. The building is supplied by the local gas utility. The system serves the HVAC equipment. Main system pressure is 2-5psig with a 7"-14" w.c. pressure regulator serving the equipment. The system piping material is black iron steel. The isolations valves are ball valves. The overall system is in fair condition.

Recommendations

- A. None at this time.

Compressed Air Piping System

Observations

- A. The system is served by 60 gallon 150psig air compressor which is piped to work stations, equipment and booths. The some of the pipe terminations has pressure regulators and filters. The system piping material is black iron steel. The isolations valves are ball valves. The air compressor is not capable of filling the truck tire pressure of 175psig. The overall system is in fair condition.



Air Compressor

Recommendations

- A. Provide air compressor that meets the pressure requirements of the equipment and vehicles.

Plumbing Equipment

Observations

- A. Water Heater – Whole Building – Electric 6 gallon without an expansion tank or master thermostatic mixing valve. Tank storage temperature is 120 degrees. The system outlet temperature is 120degrees. Fair Condition.



Water Heater

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic hot water equipment to meet the demands of the any new and existing fixtures. Provide new

power vent, high efficiency gas water heater(s) with expansion tank and re-circulating pump to and from new hot water storage tank, master digital thermostatic mixing valve and circulating pump(s) for the distribution system.

- B. Provide a digital master thermostatic mixing valve to serve the hot water storage tank outlet piping to lower the hot water system distribution temperatures to prevent scalding.

Plumbing Fixtures

Observations

- A. Water Closets – Vitreous china floor mount bowl with tank. Fair Condition.
- B. Lavatories – Vitreous china wall mount basin with brass chrome plated manual lever faucet. Good Condition.
- C. Urinals – Vitreous china wall mount basin with brass chrome plated manual lever flush valve. Fair Condition.
- D. Showers – Stainless steel single use brass manual lever showers valve. Used as a decontamination shower. Fair Condition.
- E. General Sinks – Stainless steel drop-in basin with brass chrome plated manual lever faucet. Good Condition.
- F. Utility Sinks – Plastic floor mount with legs basin with brass chrome plated manual lever faucet and vacuum breaker spout. Fair Condition.

Recommendations

- A. Replace all plumbing fixtures that are 15 years and older. Provide wall mount fixtures where possible and sensor operated flush valves / faucets in toilet rooms to improve hygiene and sanitary efforts.



Water Closet



Lavatory



Sink

HVAC System Review:

The following report is the result of a site visit by Jason Testin of MSA Professional Services, Inc. that occurred on September 11, 2023. Site observations, existing plan review and interviews with staff were all used in the preparation of this report.

Heating System

Existing Data

- A. The meeting room is heated by gas fired furnaces. See the ventilation portion of the report for details.
- B. The garage is heated by gas fired infrared tube heaters.

Observations

- A. The infrared tube heaters are in fair condition.

Recommendations

- A. Continue preventative maintenance on the system.

Ventilation and Air Conditioning Systems

Existing Data

- A. Constant volume single zone systems serve the facility.
- B. The meeting room is served by two single zone constant volume furnaces. Each furnace consists of a supply fan, gas fired heating section (for one of the units), DX cooling coil and remote mounted condensing unit. A room thermostat is utilized to control the temperature of the space.
- C. The air compressor room has a wall exhaust fan to dissipate heat from the room into the garage.

Observations

- A. One furnace was installed in 2019 and the second unit is original to the building. The original unit has exceeded the estimated life expectancy of 15 years.
- B. There currently is no exhaust in the garage. Current code requires exhaust in garage areas that store vehicles as well and/or have gear lockers.

Recommendations

- A. Plans should be made for the eventual replacement of the aging furnace.
- B. Plans should be made to add code required exhaust to the garage area.

Control Systems

Existing Data

- A. There is no central BAS system serving the facility. All equipment has stand alone controls.

Recommendations

- A. Continue to maintain and operate the stand alone controls as long as the current mechanical equipment remains. When the equipment is replaced, a changeover to a digital control BAS is strongly recommended.



Electrical System Review:

The following report is the result of a site visit by Zack Wagner of MSA Professional Services, Inc. that occurred on September 21, 2023. Site observations and communication with staff were all used in the preparation of this report.

The original building was constructed in the 1993.

Main Electrical Service

Observations

- A. The main electric service is original to the facility. The service is 120/240 volt, 200 amp and is fed underground from the utility pad mounted transformer. The service is located in the first-floor vehicle garage. The service switchboard is a Cutler Hammer Safetybreaker Load Center type panelboard with a 200A main breaker. The panelboard is in fair condition with visible surface rust. No surge suppression device was found on the existing service.
- B. There is space for additional breakers in the existing distribution panelboard.
- C. The serving utility is WE Energies.



Main Electrical Service

Recommendations

- A. The existing service panelboard is 30 years old and is nearing the end of its useful life and should be considered for replacement in new location to avoid corrosion. Additional capacity on the electric service is available for small additions. However, if a large building addition were to be added to the facility, the existing service would likely need to be replaced with a new 120/208V service and switchboard with a surge suppression device.

Panelboards

Observations

- A. There are two additional Cutler Hammer Safetybreaker Loadcenter type 120/240 volt panelboards in the building. These panelboards are vintage to the original building. These panelboards are in fair condition and have limited room for additional breakers.



Existing Panelboard

Recommendations

- A. The panelboards should be considered for replacement based on their age and one having several double breakers. Provide new replacement panelboards and new feeders in existing conduit. If new loads are added to the facility, additional panelboards may be needed.

Generator

Observations

- A. This facility has a natural gas, residential style, 26kW Generac generator. This generator back feeds the entire service via a 200A breaker switch. The generator was installed in 2023.



Existing Generator

Recommendations

- A. None at this time.

Interior and Exterior Lighting

Observations

- A. Most of the light fixtures throughout the facility have LED replacement tubes installed in the existing fixtures.
- B. Toggle switches are present for all lighting.
- C. No occupancy sensors are present in the facility.
- D. Exterior lighting are LED replacements and are photocell controlled.

Recommendations

- A. Consider upgrading to all LED interior lighting with all new motion controls and dimmer switches.
- B. Consider upgrading to all LED exterior lighting with all new lighting control system.

Emergency Lighting

Observations

- A. No emergency lighting is present in the facility. The main service is backed by a standby generator.

Recommendations

- A. Provide new code approved egress lighting through new light fixtures with battery packs.

Wiring Devices

Observations

- A. The receptacles and toggle switches are commercial grade 15 amp and 20 amp with plastic and stainless-steel plates. They appear to be vintage to the original building and for the most part show signs of general wear and can be replaced as they age.

Recommendations

- A. Replace all wiring devices and plates that are damaged.
- B. Add additional receptacles and circuits as required.

Fire Alarm System

Observations

- A. There is no fire alarm system in this facility. The existing Sterling Fire Alarm system is obsolete and no longer in service.

Recommendations

- A. Consider adding a complete, new code approved fire alarm system to the facility.

Intercom System

Observations



- A. There is no intercom system in this facility.

Recommendations

- A. Consider adding new IP based intercom system if owner sees a future benefit.

Data, Telephone

Observations

- A. There is no data rack in this facility. Internet is provided by Spectrum via coax cable, modem, and a wireless access point located in the office.
- B. There are only two wired CAT6 data connections in the facility. One for the VOIP telephone and one in the garage for the fire protection system computers.

Recommendations

- A. Consider upgrading to a new enclosed data rack with patch panels for extended data service throughout building as required with CAT6 cabling.

Keyless Entry System

Observations

- A. There is no keyless entry system at this facility.

Recommendations

- A. Consider adding keyless entry system for enhanced building security.

Security/CCTV System

Observations

- A. There is no security/CCTV camera system at this facility.

Recommendations

- A. Consider adding an IP type security/CCTV camera system for enhanced security.

Plumbing System Review:

The following report is the result of a site visit by Justin Monk of MSA Professional Services, Inc. that occurred on September 11th, 2023. Site observations and interviews with staff were all used in the preparation of this report.

The original building was constructed in the 1993.

Domestic Water Piping System

Observations

- A. The building is supplied by the local municipal water utility. It has a 1.5" copper water service, with a 1" water meter. The system piping is type L copper, which is original to the building. The isolation valves are ball valves. There are no testable backflow preventers present in the building. The system consists of cold water hard and hot water supply. Pipe insulation is a mixture of fiberglass and elastomeric. The system pressure is 65psig. The hot water delivery time to the most remote fixture is over 60 seconds. There are no reports of any major issues with the piping system. The overall system is in fair condition.
- B. The building has an interior fire hydrant which serves as the truck filling station with its own water service. This water service is not metered. There are no reports of any major issues.

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic water pipe mains in order to provide adequate pressure and flow to any new and existing fixtures. Current plumbing and energy codes require faster hot water delivery time to all fixtures. This will extend the domestic hot water piping system piping closer to all hand washing type fixtures and increase the size of the pipe main and circulation pump.
- B. Water testing shall be attained to determine water quality and proper treatment filtration equipment by the facility owner.

Fire Suppression Piping System

Observations

- A. The building does not contain an automatic fire sprinkler system.

Recommendations

- A. None at this time.

Sanitary Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to the municipal sewer. Floor areas that are prone to spills have floor drains and catch basins. The system piping material is no-hub cast iron and PVC, which is original to the building. There are no reports of any major



issues with the piping system. The overall system is in fair condition.

Recommendations

- A. Provide drain cleaning for the entire piping system as part of maintenance program once every two years.

Storm and Clear Water Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to on-site storm sewer drainage. The roof does not have any internal roof drains. The roof slopes to gutters and down spouts.

Recommendations

- A. None at this time.

Natural Gas Piping System

Observations

- A. The building is supplied by the local gas utility. The system serves the HVAC equipment. Main system pressure is 2-5psig with a 7"-14" w.c. pressure regulator serving the equipment. The system piping material is black iron steel. The isolations valves are ball valves. The overall system is in fair condition.

Recommendations

- A. None at this time.

Compressed Air Piping System

Observations

- A. The system is served by 60 gallon 150psig air compressor which is piped to work stations, equipment and booths. The some of the pipe terminations has pressure regulators and filters. The system piping material is black iron steel. The isolations valves are ball valves. The air compressor is not capable of filling the truck tire pressure of 175psig. The overall system is in fair condition.



Air Compressor

Recommendations

- A. Provide air compressor that meets the pressure requirements of the equipment and vehicles.

Plumbing Equipment

Observations

- A. Water Heater – Whole Building – Electric 40 gallon without an expansion tank or master thermostatic mixing valve. Tank storage temperature is 120 degrees. The system outlet temperature is 120degrees. Fair Condition.

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic hot water equipment to meet the demands of the any new and existing fixtures. Provide new power vent, high efficiency gas water heater(s) with expansion



Water Heater

tank and re-circulating pump to and from new hot water storage tank, master digital thermostatic mixing valve and circulating pump(s) for the distribution system.

- B. Provide a digital master thermostatic mixing valve to serve the hot water storage tank outlet piping to lower the hot water system distribution temperatures to prevent scalding.

Plumbing Fixtures

Observations

- A. Water Closets – Vitreous china floor mount bowl with tank. Fair Condition.
- B. Lavatories – Vitreous china deck mount basin with brass chrome plated manual lever faucet. Fair Condition.
- C. Urinals – Vitreous china wall mount basin with brass chrome plated manual lever flush valve. Fair Condition.
- D. General Sinks – Stainless steel drop-in basin with brass chrome plated manual lever faucet. Fair Condition.
- E. Utility Sinks – Plastic floor mount with legs basin with brass chrome plated manual lever faucet and vacuum breaker spout. Fair Condition.

Recommendations

- A. Replace all plumbing fixtures that are 15 years and older. Provide wall mount fixtures where possible and sensor operated flush valves / faucets in toilet rooms to improve hygiene and sanitary efforts.



Water Closet



Lavatory



Urinal



Sink

HVAC System Review:

The following report is the result of a site visit by Jason Testin of MSA Professional Services, Inc. that occurred on September 11, 2023. Site observations, existing plan review and interviews with staff were all used in the preparation of this report.

Heating System

Existing Data

- A. The office area is heated by gas fired furnaces. See the ventilation portion of the report for details.
- B. The garage and wash bay are heated by gas fired infrared tube heaters and gas fired unit heaters.

Observations

- A. The infrared tube heaters and gas fired unit heaters were installed in 2001 and are in fair condition.

Recommendations

- A. Continue preventative maintenance on the system.

Ventilation and Air Conditioning Systems

Existing Data

- A. Constant volume single zone systems serve the facility.
- B. The office area is served by four single zone constant volume furnaces. Each furnace consists of a supply fan, gas fired heating section, DX cooling coil and remote mounted condensing unit. A room thermostat is utilized to control the temperature of the space.
- C. The wash bay is exhausted by a sidewall exhaust fan. The exhaust has an intake approximately 1' above the finished floor.
- D. A constant volume make up air unit serves the garage. The unit consists of a supply fan and gas fired heating section.

Observations

- A. The furnaces were installed in 2001 and are in fair condition. The units have exceeded the estimated life expectancy of 15 years.
- B. There currently is no exhaust in the garage. It is believed that the exhaust in the wash bay is serving both the wash bay and the garage. Current code requires exhaust in garage areas that store vehicles.
- C. The make up air unit was installed in 2021 and is in good condition.

Recommendations

- A. Plans should be made for the eventual replacement of the aging furnaces.
- B. Plans should be made to add code required exhaust to the garage area.

Control Systems

Existing Data

- A. There is no central BAS system serving the facility. All equipment has stand alone controls.

Recommendations



- A. Continue to maintain and operate the stand alone controls as long as the current mechanical equipment remains. When the equipment is replaced, a changeover to a digital control BAS is strongly recommended.

Electrical System Review:

The following report is the result of a site visit by Zack Wagner of MSA Professional Services, Inc. that occurred on September 21, 2023. Site observations and communication with staff were all used in the preparation of this report.

The original building was constructed in the 2000/2001.

Main Electrical Service

Observations

- A. The main electric service is original to the facility. The service is 120/208 volt, 400 amp and is fed underground from the utility pad mounted transformer. The service is located in the first-floor electrical room. The service switchboard is a Square D NQOD type panelboard (double tub) with a 400A main breaker. The panelboard is vintage to the original building and is in good condition. No surge suppression device was found on the existing service.
- B. There is limited space for additional breakers in the existing distribution panelboard.
- C. The serving utility is WE Energies.



Main Electrical Service

Recommendations

- A. Additional capacity on the electric service is available for small additions. However, if a large building addition were to be added to the facility, the existing service would likely need to be replaced with a new 120/208V service and switchboard with a surge suppression device.

Panelboards

Observations

- A. There is one Square D Loadcenter type 120/208 volt panelboard in the building. This panelboard is vintage to the original building. This panelboard is in good condition with limited room for additional breakers.

Recommendations

- A. An additional panelboard would likely be required for any additions made to this facility.

Generator

Observations

- A. This facility does not have a generator. A mobile diesel generator is used in emergencies for limited loads. There is a mobile generator hook-up located in the electrical room. This connection is made through a 100A disconnect switch.

Recommendations

- A. Consider adding a new generator to provide power to equipment crucial to facility operations such as overhead doors and HVAC units while also having the ability to provide emergency power to data closets, phones, and keyless entry devices. It would also assist in



Mobile Generator Connection

providing complete, new, code approved egress lighting paths throughout the facility.

Interior and Exterior Lighting

Observations

- A. Most of the light fixtures throughout the facility have LED replacement tubes installed in the existing fixtures.
- B. Toggle switches are present for all lighting.
- C. No occupancy sensors are present in the facility, except for the shop area.
- D. Exterior lighting is a combination of LED and CFL replacements screw in type and are photocell controlled.

Recommendations

- A. Consider upgrading to all LED interior lighting with all new motion controls and dimmer switches.
- B. Consider upgrading to all LED exterior lighting with all new lighting control system.



Existing Light Fixture

Emergency Lighting

Observations

- A. No emergency lighting is present in the facility.
- B. Exit lights were present.

Recommendations

- A. One option would be to provide new code approved egress lighting through new light fixtures with battery packs.
- B. The other option would be to provide a new, code approved egress lighting path with the addition of a new emergency generator. See generator section.



Existing Exit Light

Wiring Devices

Observations

- A. The receptacles and toggle switches are commercial 20 amp with plastic and stainless-steel plates. They appear to be vintage to the original building and for the most part show signs of general wear and can be replaced as they age.

Recommendations

- A. Replace all wiring devices and plates that are damaged.
- B. Add additional receptacles and circuits as required.

Fire Alarm System

Observations

- A. There is no fire alarm system in this facility.

Recommendations

- A. Consider adding a complete, new code approved fire alarm system to the facility.

Intercom System

Observations

- A. There is AI Phone wired intercom system in this facility. Staff indicated it is seldom used.

Recommendations

- A. Consider adding new IP based intercom system if owner sees a future benefit.

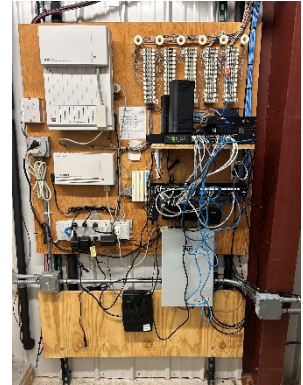
Data, Telephone

Observations

- A. There is no data rack in this facility. The existing patch panels is backboard mounted in the electrical room. Internet is provided by Spectrum via coax cable, modem, and a wireless access point.
- B. The data cable is CAT5E data cable which is routed to patch panel in the electric room.
- C. The facility had Wi-Fi boosters.
- D. The telephone system is VOIP.

Recommendations

- A. Consider upgrading to a new enclosed data rack with patch panels for extended data service throughout building as required with CAT6 cabling.



Existing Data Components

Keyless Entry System

Observations

- A. There is no keyless entry system at this facility.

Recommendations

- A. Consider adding keyless entry system for enhanced building security.

Security/CCTV System

Observations

- A. There is no security/CCTV camera system at this facility. There is an exterior “dummy” camera pointed at the dumpster to deter illegal dumping.

Recommendations

- A. Consider adding an IP type security/CCTV camera system for enhanced security.

Plumbing System Review:

The following report is the result of a site visit by Justin Monk of MSA Professional Services, Inc. that occurred on September 11th, 2023. Site observations and interviews with staff were all used in the preparation of this report.

The original building was constructed in the 2000/2001.

Domestic Water Piping System

Observations

- A. The building is supplied by the local municipal water utility. It has a 4" HDPE water service, with a 2" water meter. The system piping is type L copper, which is original to the building. The isolation valves are ball valves. There are no testable backflow preventers present in the building. The system consists of cold water hard, hot water supply and hot water return. Pipe insulation is a mixture of fiberglass and elastomeric. The system pressure is 65psig. The hot water delivery time to the most remote fixture is under 20 seconds. There are no reports of any major issues with the piping system. The overall system is in fair condition.

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic water pipe mains in order to provide adequate pressure and flow to any new and existing fixtures. Current plumbing and energy codes require faster hot water delivery time to all fixtures. This will extend the domestic hot water piping system piping closer to all hand washing type fixtures and increase the size of the pipe main and circulation pump.
- B. Water testing shall be attained to determine water quality and proper treatment filtration equipment by the facility owner.

Fire Suppression Piping System

Observations

- A. The building does not contain an automatic fire sprinkler system.

Recommendations

- A. None at this time.

Sanitary Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to the municipal sewer. Floor areas that are prone to spills have floor drains and catch basins. The system piping material is no-hub cast iron and PVC, which is original to the building. There are no reports of any major issues with the piping system. The overall system is in fair condition.

Recommendations



- A. Provide drain cleaning for the entire piping system as part of maintenance program once every two years.

Storm and Clear Water Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to on-site storm sewer drainage. The roof does not have any internal roof drains. The roof slopes to gutters and down spouts.

Recommendations

- A. None at this time.

Natural Gas Piping System

Observations

- A. The building is supplied by the local gas utility. The system serves the HVAC equipment. Main system pressure is 2-5psig with a 7"-14" w.c. pressure regulator serving the equipment. The system piping material is black iron steel. The isolations valves are ball valves. The overall system is in fair condition.

Recommendations

- A. None at this time.

Compressed Air Piping System

Observations

- A. The system is served by 60 gallon 150psig air compressor which is piped to work stations, equipment and booths. The some of the pipe terminations has pressure regulators and filters. The system piping material is black iron steel. The isolations valves are ball valves. The overall system is in fair condition.

Recommendations

- A. None at this time.

Plumbing Equipment

Observations

- A. Water Heater – Whole Building – Electric 50 gallon without an expansion tank or master thermostatic mixing valve. Tank storage temperature is 120 degrees. The system outlet temperature is 120degrees. Fair Condition.
- B. Circulating Pumps – Whole Building – 15gpm pump. Temperature is 120 degrees. Fair Condition.

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic hot water equipment to meet the demands of the any new and existing fixtures. Provide new power vent, high efficiency gas water heater(s) with expansion tank and re-circulating pump to and from new hot water storage tank, master digital thermostatic mixing valve and circulating pump(s) for the distribution system.



Air Compressor



Water Heater

- B. Provide a digital master thermostatic mixing valve to serve the hot water storage tank outlet piping to lower the hot water system distribution temperatures to prevent scalding.

Plumbing Fixtures

Observations

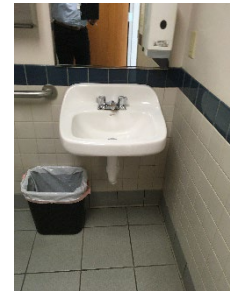
- A. Water Closets – Vitreous china floor mount bowl with tank. Fair Condition.
- B. Lavatories – Vitreous china wall mount basin with brass chrome plated manual lever faucet. Fair Condition.
- C. Urinals – Vitreous china wall mount basin with brass chrome plated manual lever flush valve. Fair Condition.
- D. General Sinks – Stainless steel drop-in basin with brass chrome plated manual lever faucet. Fair Condition.
- E. Utility Sinks – Plastic wall mount without legs basin with brass chrome plated manual lever faucet and vacuum breaker spout. Fair Condition.
- F. Utility Sinks – Plastic floor mount basin with brass chrome plated manual lever faucet and vacuum breaker spout. Fair Condition.
- G. Electric Water Cooler – Single use ADA without bottle filling station. Fair Condition.

Recommendations

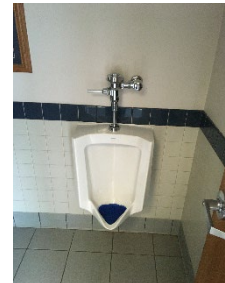
- A. Replace all plumbing fixtures that are 15 years and older. Provide wall mount fixtures where possible and sensor operated flush valves / faucets in toilet rooms to improve hygiene and sanitary efforts.



Water Closet



Lavatory



Urinal



Sink

HVAC System Review:

The following report is the result of a site visit by Jason Testin of MSA Professional Services, Inc. that occurred on September 11, 2023. Site observations, existing plan review and interviews with staff were all used in the preparation of this report.

Heating System

Existing Data

- A. The office area of the building is heated by multiple gas fired rooftop units. See the ventilation portion of the report for details.
- B. The DPW breakroom and office is served by a gas fire furnace. See the ventilation portion of the report for details.
- C. The garage area is heated by gas fired infrared tube heaters, gas fire unit heaters and waste oil heaters.

Observations

- A. The waste oil heaters and tube heaters are original to the building. According to information from the Owner, the waste oil heaters provide the majority of the heat for the garage. The units are in fair condition.

Recommendations

- A. Continue preventative maintenance on the system.

Ventilation and Air Conditioning Systems

Existing Data

- A. Constant volume single zone systems serve the facility.
- B. The board room is served by a single zone constant volume rooftop unit. The rooftop unit consists of a supply fan, gas fired heating section, and packaged DX cooling section. A room thermostat is utilized to control the temperature of the space.
- C. The office area is served by a single zone constant volume rooftop unit. The rooftop unit consists of a supply fan, gas fired heating section, and packaged DX cooling section. A room thermostat is utilized to control the temperature of the space.
- D. The DPW breakroom and office is served by a single zone constant volume furnace. The furnace consists of a supply fan, gas fired heating section, DX cooling coil and remote mounted condensing unit. A room thermostat is utilized to control the temperature of the space.
- E. The DPW garage and wash bay are exhausted by a single wall exhaust fan. The ductwork for both areas have intakes approximately 1' above the finished floor.

Observations

- A. The rooftop units are original to the building and have exceeded the estimated life expectancy of 15 years.
- B. The furnace is original to the building and has exceeded the estimated life expectancy 15 years.
- C. Recommendations
- D. Plans should be made for the eventual replacement of the rooftop units and furnace.

Control Systems



Existing Data

- A. There is no central BAS system serving the facility. All equipment has stand alone controls.

Recommendations

- A. Continue to maintain and operate the stand alone controls as long as the current mechanical equipment remains. When the equipment is replaced, a changeover to a digital control BAS is strongly recommended.

Electrical System Review:

The following report is the result of a site visit by Zack Wagner of MSA Professional Services, Inc. that occurred on September 21, 2023. Site observations and communication with staff were all used in the preparation of this report.

It is estimated that the facility was constructed in the 1970/80s.

Main Electrical Service

Observations

- A. The main electric service appears to original to the facility. The service is 120/240 volt, 600 amp and is fed overhead from a pole mounted utility transformer and meter. The service is located in a NEMA rated exterior enclosure; pole mounted on the south side of the northwest softball field. The service switchboard is a Square D NQOB type panelboard with a 600A main breaker. The panelboard is in poor condition. When the enclosure door is open, there is no interior cover. This creates a dangerous situation with exposed cabling. Note: the enclosure was locked to prevent the public from accessing the panelboard. No surge suppression device was found on the existing service.
- B. The serving utility is WE Energies.



Main Electrical Service

Recommendations

- A. The existing service panelboard is in poor condition and beyond its life expectancy and should be replaced with a new 120/208V service with surge suppression. A new location should be considered to an interior space.

Panelboards

Observations

- A. There are two Cutler Hammer Safetybreaker Loadcenter type 120/240 volt panelboards at this facility. One each located in the two concession buildings. These panelboards appear to be vintage to the 1980s. These panelboards are in fair condition and have limited room for additional breakers.

Recommendations

- A. These panelboards should be considered for replacement based on their age and condition. Provide new replacement panelboards and new feeders in existing conduit. If new loads are added to the facility, additional panelboards may be needed.



Existing Panelboard

Generator

Observations

- A. This facility does not have a generator.

Recommendations

- A. A generator is not needed at this facility.

Interior and Exterior Lighting

Observations

- A. Most of the light fixtures throughout the concession stands facility are vintage fluorescent or screw in type with CFL lamps.
- B. Toggle switches are present for all lighting.
- C. The restroom building has retrofitted LED fixtures with occupancy sensors.
- D. Exterior lighting was of the following: vintage lighting at pavilion, LED in parking areas & unknown fixtures at softball field.
- E. Most exterior lighting appeared to be controlled via toggle switch in concession stand.

Recommendations

- A. Consider upgrading to all LED interior lighting with all new motion controls and dimmer switches.
- B. Consider upgrading to all LED exterior lighting with all new lighting control system.

Emergency Lighting

Observations

- A. This facility has no emergency lighting.

Recommendations

- A. Emergency lighting is not required at this facility.

Wiring Devices

Observations

- A. The receptacles and toggle switches are commercial grade 15 amp with plastic and stainless-steel plates. They appear to be vintage to original buildings and for the most part show signs of general wear and can be replaced as they age.

Recommendations

- A. Replace all wiring devices and plates that are damaged.
- B. Add additional receptacles and circuits as required.

Fire Alarm System

Observations

- A. There is no fire alarm system in this facility. The existing Safe House fire/security system is obsolete and no longer in use.

Recommendations

- A. No fire alarm system is required at this facility.

PA Intercom System

Observations

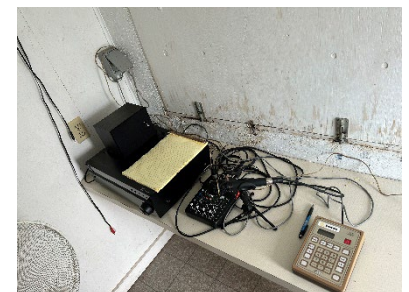
- A. Each of the softball fields has a vintage dedicated PA system. The PA systems are in fair to poor condition. One of the horn speakers has fallen off the wall.



Existing Exterior Lighting Controls



Existing Exterior Lighting Fixture



Existing PA System

Recommendations

- A. The PA systems appear to be beyond their life expectancy. Consider adding new PA systems at each softball field.

Data, Telephone

Observations

- A. There is no internet at this facility.

Recommendations

- A. Consider upgrading to a new enclosed data rack with patch panels for extended data service throughout building as required with CAT6 cabling.

Keyless Entry System

Observations

- A. There is no keyless entry system at this facility.

Recommendations

- A. Consider adding keyless entry system for enhanced building security.

Security/CCTV System

Observations

- A. There is no security/CCTV camera system at this facility. The existing Safe House fire/security system is obsolete and no longer in use.

Recommendations

- A. Consider adding an IP type security/CCTV camera system for enhanced security.

Electrical System Review:

The following report is the result of a site visit by Zack Wagner of MSA Professional Services, Inc. that occurred on September 11, 2023. Site observations and communication with staff were all used in the preparation of this report.

The original building was constructed in the mid 1990s.

Main Electrical Service

Observations

- A. The main electric service is original to the facility. The service is 120/208 volt, 600 amp and is fed underground from the utility transformer and wall mounted C/T meter cabinet. The service is located in the first-floor public works vehicle garage. The service switchboard is a Square-D I-Line type panelboard with a 600A main breaker. No surge suppression device was found on the existing service.
- B. There is minimal space for additional breakers in the existing distribution panelboard.
- C. The serving utility is WE Energies.



Main Electrical Service

Recommendations

- A. The existing service panelboard is close to 30 years old and is nearing the end of its useful life. Additional capacity on the electric service is available for small additions. However, if a large building addition were to be added to the facility, the existing service would likely need to be replaced with a new 120/208V service and switchboard with a surge suppression device.

Panelboards

Observations

- A. There are approximately three Square D QO Loadcenter type 120/208 volt panelboards in the building. These panelboards are vintage to the original building. These panels are in good condition but in general have limited room for additional breakers.



Existing Panelboard

Recommendations

- A. The panelboards should be considered for replacement based on their age. Provide new replacement panelboards and new feeders in existing conduit in each of these locations. If new loads are added to the facility, additional panelboards may be needed.

Generator

Observations

- A. This facility does not have a generator. A mobile diesel generator is used in emergencies for limited loads. There is a mobile generator hook-up located on the exterior wall adjacent to the CT cabinet. This connection is made through a 250A breaker located in the distribution panelboard.



Mobile Generator Connection

Recommendations

- A. Consider adding a new generator to provide power to equipment crucial to facility operations such as overhead doors and HVAC units while also having the ability to provide emergency power to data closets, phones, and keyless entry devices. It would also assist in providing complete, new, code approved egress lighting paths throughout the facility.

Interior and Exterior Lighting

Observations

- A. Most of the light fixtures throughout the facility have LED replacement tubes installed in the existing fixtures.
- B. Toggle switches are present for all lighting.
- C. No occupancy sensors are present in the facility.
- D. Exterior lighting appeared to be a mix of LED replacements and vintage wall packs.
- E. The exterior lighting is controlled via time clock for dawn to dusk illumination.

Recommendations

- A. Consider upgrading to all LED interior lighting with all new motion controls and dimmer switches.
- B. Consider upgrading to all LED exterior lighting with all new lighting control system.

Emergency Lighting

Observations

- A. A limited amount of emergency lighting was observed. Exit light battery combos and “Bug eye” type battery units were observed. Staff indicated that they were not regularly maintained or tested.

Recommendations

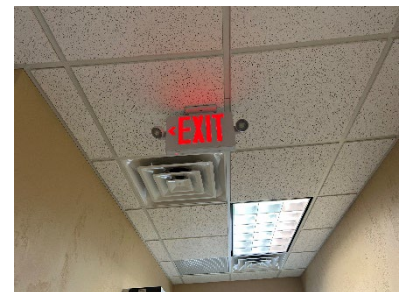
- A. One option would be to provide new code approved egress lighting through new light fixtures with battery packs.
- B. The other option would be to provide a new, code approved egress lighting path with the addition of a new emergency generator. See generator section.

Wiring Devices

Observations

- C. The receptacles and toggle switches are commercial grade 15 amp and 20 amp with plastic and stainless-steel plates. They appear to be vintage to the original building and for the most part show signs of general wear and can be replaced as they age.

Recommendations



Existing Exit Light/Batter Combo and Light Fixture

- A. Replace all wiring devices and plates that are damaged.
- B. Add additional receptacles and circuits as required.

Fire Alarm System

Observations

- A. There is an existing DMP fire alarm system. The FACP located in the data closet appeared to be newer and in good condition.
- B. There were horn/stobes present and appeared to meet current code requirements.
- C. Manual pull stations were present.
- D. The fire alarm system is maintained and monitored by TECC Security Systems, INC., contact Eric at 920-969-9901.



Existing FACP

Recommendations

- A. Add to or upgrade existing fire alarm as needed for building additions.

Intercom System

Observations

- A. A dedicated intercom system is in place for the public works garage area. It is operated through the VOIP telephone system. Staff indicated it is seldom used.
- B. There was a Bogen head end located in the data rack.



Existing Fire Alarm
Horn/Strobe

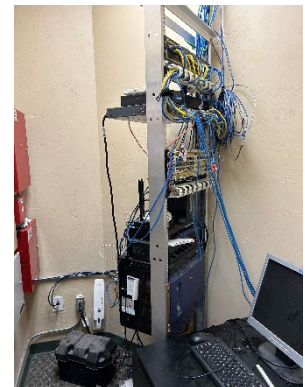
Recommendations

- A. Extend as needed for building additions.

Data, Telephone

Observations

- A. The floor mounted MDF data rack is located in the first-floor data closet located in the office area of building. The data service is provided by Spectrum and is coax cable type via Spectrum provided modem.
- B. The data cable is both CAT5E and CAT6 data cable which is routed to patch panels in the data rack.
- C. The building has wireless access points. There is also a cell signal booster located in the public works garage.
- D. The telephone system is VOIP.



Existing Data Rack

Recommendations

- A. Additional CAT6 cable can be added to rooms as needed.
- B. A possible upgrade is to provide a new enclosed data rack with new patch panels and all new CAT6 cable throughout the facility to increase the speed of the network.

Keyless Entry System

Observations

- A. There is a Altronix keyless entry system with card readers. There are 3 exterior and 4 interior doors on the system.
- B. The system is also maintained and monitored by TECC.

Recommendations

- A. Extend existing system as required for building additions.

Security/CCTV System

Observations

- A. There is an existing Life Safety Power security system.
- B. Keypads, glass break sensors, motion sensors and door contacts were present.
- C. The existing CCTV cameras are no longer in use but were maintained as “dummy” cameras as theft deterrent.
- D. The system is also maintained and monitored by TECC.

Recommendations

- A. Consider adding an IP type CCTV camera system for enhanced security.
- B. Consider upgrading security system to a more secure system.

Plumbing System Review:

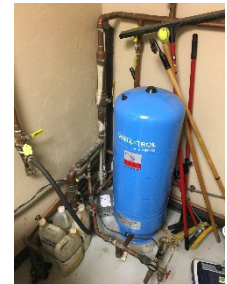
The following report is the result of a site visit by Justin Monk of MSA Professional Services, Inc. that occurred on September 11th, 2023. Site observations and interviews with staff were all used in the preparation of this report.

The original building was constructed in the mid 1990s.

Domestic Water Piping System

Observations

- A. The building is supplied by a private well with pressure tank and well pump VFD controller. The system piping is type L copper, which is original to the building. The isolation valves are ball valves. There are no testable backflow preventers present in the building. The system consists of cold water hard and hot water supply. There are pipe connections for a future water softener. Pipe insulation is a mixture of fiberglass and elastomeric. The system pressure is 65psig. The hot water delivery time to the most remote fixture is over 30 seconds. There are staff reports that the private well does not provide adequate water to supply the building, which limits the use of plumbing fixtures and garage operations. There are staff reports that the private well has traces of arsenic which have well known health issues when consumed. The overall system is in fair to poor condition.



Well Pressure Tank

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic water pipe mains in order to provide adequate pressure and flow to any new and existing fixtures. Current plumbing and energy codes require faster hot water delivery time to all fixtures. This will extend the domestic hot water piping system piping closer to all hand washing type fixtures and increase the size of the pipe main and circulation pump.
- B. Water testing shall be attained to determine water quality and proper treatment filtration equipment by the facility owner.
- C. Any future renovations and or additions shall account for the connection to a reliable water source other than the private well.

Fire Suppression Piping System

Observations

- A. The building does not contain an automatic fire sprinkler system.

Recommendations

- A. None at this time.

Sanitary Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to private holding tanks. Floor areas that are prone to spills have floor drains and catch basins.



The main system piping material is no-hub cast iron and PVC, which is original to the building. There are no reports of any major issues with the piping system. The overall system is in fair condition.

Recommendations

- A. Provide drain cleaning for the entire piping system as part of maintenance program once every two years.

Storm and Clear Water Drain, Waste and Vent Piping System

Observations

- A. The building system discharges to on-site storm sewer drainage. The roof does not have any internal roof drains. The roof slopes to gutters and down spouts.

Recommendations

- A. None at this time.

Natural Gas Piping System

Observations

- A. The building is supplied by the local gas utility. The system serves the HVAC equipment. Main system pressure is 2-5psig with a 7"-14" w.c. pressure regulator serving the equipment. The system piping material is black iron steel. The isolations valves are ball valves. The overall system is in fair condition.

Recommendations

- A. None at this time.

Compressed Air Piping System

Observations

- A. The system is served by 120 gallon 150psig air compressor which is piped to work stations, equipment and booths. The some of the pipe terminations has pressure regulators and filters. The system piping material is black iron steel. The isolations valves are ball valves. The overall system is in fair condition.



Air Compressor

Recommendations

- A. None at this time.

Plumbing Equipment

Observations

- A. Water Heater – Whole Building – Electric 40 gallon without an expansion tank or master thermostatic mixing valve. Tank storage temperature is 120 degrees. The system outlet temperature is 120degrees. Fair Condition.



Water Heater

Recommendations

- A. Any future renovations and or additions shall account for the resizing of the domestic hot water equipment to meet the demands of the any new and existing fixtures. Provide new power vent, high efficiency gas water heater(s) with expansion

tank and re-circulating pump to and from new hot water storage tank, master digital thermostatic mixing valve and circulating pump(s) for the distribution system.

- B. Provide a digital master thermostatic mixing valve to serve the hot water storage tank outlet piping to lower the hot water system distribution temperatures to prevent scalding.

Plumbing Fixtures

Observations

- A. Water Closets – Vitreous china floor mount bowl with tank. Fair Condition.
- B. Lavatories – Vitreous china wall mount basin with brass chrome plated manual lever faucet. Fair Condition.
- C. Urinals – Vitreous china wall and floor mount basin with brass chrome plated manual lever flush valve. Fair Condition.
- D. General Sinks – Stainless steel drop-in basin with brass chrome plated manual lever faucet. Fair Condition.
- E. Utility Sinks – Plastic wall mount without legs basin with brass chrome plated manual lever faucet and vacuum breaker spout. Fair Condition.
- F. Electric Water Cooler – Single use ADA without bottle filling station. Fair Condition.

Recommendations

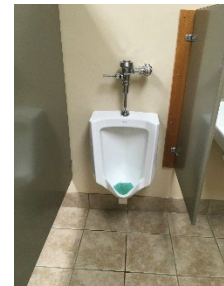
- A. Replace all plumbing fixtures that are 15 years and older. Provide wall mount fixtures where possible and sensor operated flush valves / faucets in toilet rooms to improve hygiene and sanitary efforts.



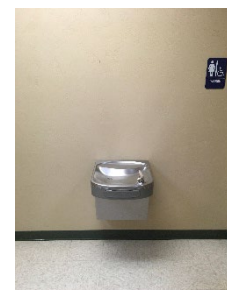
Water Closet



Lavatory



Urinal



Electric Water Cooler

Electrical System Review:

The following report is the result of a site visit by Zack Wagner of MSA Professional Services, Inc. that occurred on September 21, 2023. Site observations and communication with staff were all used in the preparation of this report.

The building and site electrical work was constructed in 2003.

Main Electrical Service

Observations

- A. The main electric service is original to the facility. The service is 120/240 volt, 200 amp and is fed underground from a pad mounted utility transformer. The service switchboard is a Square D QO Load Center type panelboard with a 200A main breaker. The panelboard is in good condition.
- B. There is space for additional breakers.
- C. No surge suppression device was found on the service.
- D. There is an additional metered service at this facility serving two exterior mounted 200A, 240V disconnect switches mounted on backboard adjacent to the playground. This appears to be a service for providing power for outdoor entertainment.
- E. No surge suppression device was found on the service.
- F. The serving utility is WE Energies.



Main Electrical Service

Recommendations

- A. Additional capacity on the electric service is available for small additions. However, if a large building addition were to be added to the facility, the existing service would need to be replaced with a new 120/208V service and switchboard with a surge suppression device.



Additional Electrical Service

Panelboards

Observations

- A. There are no additional panelboards at this facility.

Recommendations

- A. Add panelboards as needed for building addition or new building.

Generator

Observations

- A. This facility does not have a generator.

Recommendations

- A. A generator is not needed at this facility.

Interior and Exterior Lighting

Observations

- A. Most of the light fixtures throughout the facility are vintage fluorescent type fixtures.

- B. Toggle switches are present for all lighting.
- C. The restroom building has occupancy sensors.
- D. Exterior lighting was a combination of vintage HPS and LED.
- E. Parking lot and walking trail lighting appeared to have integral photocell for controls. These fixtures were mounted to wood poles.

Recommendations

- A. Consider upgrading to all LED interior lighting with all new motion controls and dimmer switches.
- B. Consider upgrading to all LED exterior lighting with all new lighting control system.

Emergency Lighting

Observations

- A. This facility has no emergency lighting.

Recommendations

- A. Emergency lighting is not required at this facility.

Wiring Devices

Observations

- A. The receptacles and toggle switches are commercial grade 20 amp with plastic and stainless-steel plates. They appear to be vintage to original building and for the most part show signs of general wear and can be replaced as they age.
- B. Several of the exterior mounted receptacles at the additional service location were missing the plastic while-in-use covers.

Recommendations

- A. Replace all wiring devices and plates that are damaged.
- B. Add additional receptacles and circuits as required.
- C. Provide new die cast aluminum while-in-use covers for exterior mounted receptacles missing covers.

Fire Alarm System

Observations

- A. There is no fire alarm system in this facility.

Recommendations

- A. No fire alarm system is required at this facility.

Intercom System

Observations

- A. There is no intercom system at this facility.

Recommendations

- A. No intercom system is needed at this facility.

Data, Telephone



Existing HPS Lighting



Existing LED Lighting



Missing Covers

Observations

- A. There is no internet at this facility.

Recommendations

- A. Consider upgrading to a new enclosed data rack with patch panels for extended data service throughout building as required with CAT6 cabling. Data service would be beneficial for the existing security/CCTV system for remote access and cloud storage.

Keyless Entry System

Observations

- A. There is an Altronix keyless entry system at this facility. It only services the two restroom doors.
- B. The restrooms have card readers, magnetic hold close devices, and request-to-exit (REX) devices. The magnetic hold close devices are on a schedule.
- C. The system is maintained by TECC Security Systems, INC.

Recommendations

- A. Expand existing keyless entry system as needed.

Security/CCTV System

Observations

- A. There is an Alhua Technology security/CCTV camera system at this facility.
- B. The system is also maintained and monitored by TECC. Monitoring is done via cellular communicator.
- C. The keypad is in the concessions building adjacent to the panelboard.
- D. There are door contacts on the restroom doors.
- E. There are four exterior mounted Alhua cameras. Camera footage storage is done onsite and cannot be accessed remotely.

Recommendations

- A. Expand existing security/CCTV camera system as required. See data recommendations for providing enhanced monitoring for remote access to CCTV system.



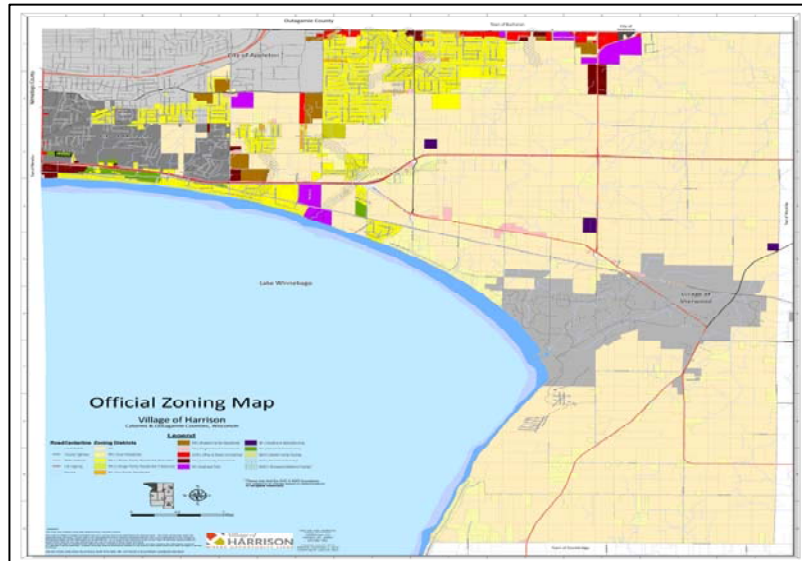
Existing Keyless Entry and Security/CCTV system



Existing CCTV Camera

Appendix C – Roof Assessment Reporting

**Roof Condition Assessment
Village of Harrison
Harrison, WI
SEG Project No. 15538**



Prepared for

**PREPARED FOR
Mr. Trevor Frank
Senior Architect
Short, Elliot, Hendrickson
425 W. Water Street, Suite 300
Appleton, WI 54911**

Prepared by

Specialty Engineering Group LLC
122 E. Olin Ave. Suite 190
Madison, WI 53713

September 18, 2023



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Roof Plan – FS 60	
Roof Plan – Utilities	
Roof Plan – Darboy	
Roof Plan – HAA Pavilion	
Roof Plan – HAA Restroom	



Introduction

The purpose of this assessment was to provide an assessment of existing roofing conditions on several buildings owned by the Village of Harrison. The visual assessment was accomplished via external access to the buildings by SEG. Existing building plans were not available for review and historical information was provided verbally. No investigatory or destructive testing was deemed necessary for this assessment.


The assessment was performed on September 15, 2023 by Bruce Flater of Specialty Engineering Group and included the following buildings.

1. Harrison Municipal Building; W5298 State Road 114, Harrison, WI 54952
2. Fire Station 70; N8716 County Road LP, Menasha, WI 54952
3. Fire Station 60; W469 Clifton Road, Sherwood, WI 54169
4. Harrison Utilities Building; N8722 Lake Park Road, Menasha, WI 54952
5. Pavilion Building at Darboy Community Park; N9334 Noe Road, Harrison, WI 54915
6. Pavilion Building at Harrison Athletic Assoc. Park; W5298 State Road 114, Harrison, WI 54952
7. Restroom Building at Harrison Athletic Assoc. Park; W5298 State Road 114, Harrison, WI 54952

Existing Roof Conditions Observed

Harrison Municipal Building:

The roofs at this facility consist of three roof areas and two variations of metal panel roofing. The roof over the office area consists of a single-lock standing seam metal panel. The age of the roof is unknown. Drainage is via roof edge gutters and downspouts and appears to be satisfactory. The seaming of the panel was poorly performed and does not appear to be fully crimped. The seams do appear to have sealant applied which was folded into the seams along with the concealed clips which anchor the panel to the structure. No panel damage or fastener back-out was noted. Weathering of the sealant at penetrations was noted which will require periodic (2-3 year intervals) reviews to monitor conditions as the sealant weathers.

	
<p>1. Deteriorating sealant at penetrations</p>	<p>2. Standing water on ridge cap, laps sealed with EPDM</p>
	
<p>3. Radiused, tapered panels over main entrance</p>	<p>4. Newer penetration, sealant will need to be monitored</p>

	
<p>5. Gutter lap leaking on north side of office area</p>	<p>6. Resulting leak location deteriorating and staining concrete walk</p>

The roof over the garage / shop area consists of a pre-fabricated structural standing seam metal roof system. The age of the roof is unknown but appears to be original to the building. Drainage is via roof edge gutters and downspouts and appears to be satisfactory. No panel damage or fastener back-out was noted. Weathering of the sealant at penetrations was noted which will require periodic (2-3 year intervals) reviews to monitor conditions as the sealant weathers.

	
<p>7. No panel damage or fastener back-out noted at critical perimeter locations</p>	<p>8. Aging sealant at stack boot</p>
	
<p>9. Several stack locations require periodic review</p>	<p>10. Poor detailing with an abundance of sealant. Monitor wear</p>

Fire Station 70 Building:

The roof at this facility consists of an exposed fastener metal panel roof system. The panels appear to be in satisfactory condition with no panel damage or fastener back-out noted. The age of the roof is unknown but appears to be original to the building. Drainage is via roof edge gutters and downspouts and appears to be satisfactory. Sealant repair along the laps of the ridge panel was observed, likely to address previous leaking at this location. Weathering of the sealant at penetrations was noted which will require periodic (2-3 year intervals) reviews to monitor conditions as the sealant weathers. The roof edge gutters are well supported and appear to drain well.

	
1. Well supported gutter	2. Sealant repairs at ridge panel laps
	
3. Deteriorating sealant at stack penetrations	4. General view field and ridge panels

Fire Station 60 Building:

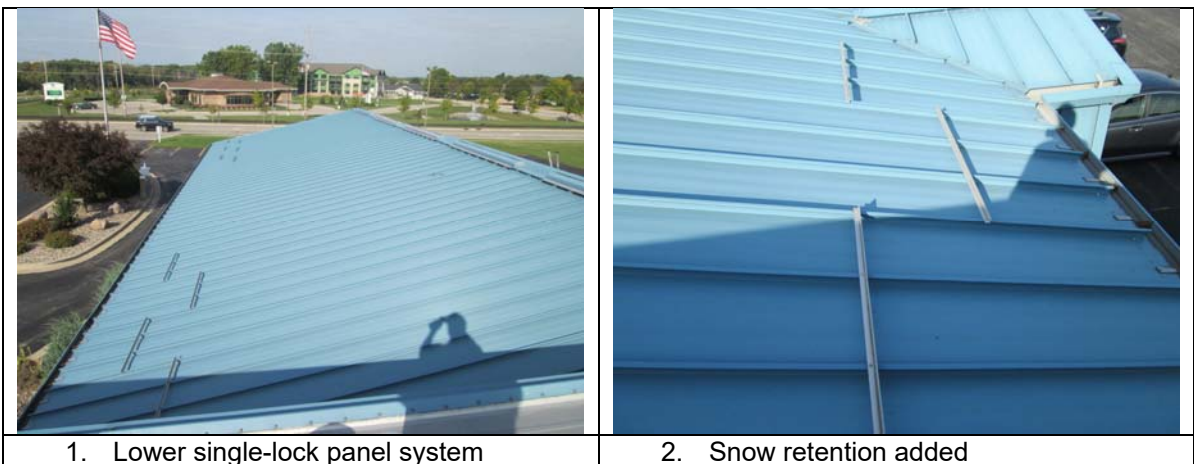
The roofs at this facility consist of two areas of structural standing seam metal panel roof systems. One section is pre-finished, the other is galvanized. The age of the roofs are unknown and appear to be original to the building. Drainage is via roof edge gutters and downspouts and appears to be satisfactory. In general, the panels appear to be in satisfactory condition with no panel damage or fastener back-out noted. Weathering of the sealant and splitting of boot flashings was noted which will require some maintenance to maintain watertightness. Periodic (2-3 year intervals) reviews to monitor conditions will also be necessary. A wind-driven vent stack on the upper roof is missing and allowing moisture from the exterior to enter. The roof mounted flag light was on, likely due to a faulty light sensor switch. The ground extension of the downspout on the southeast corner of the building is damaged.





Harrison Utilities Building:

The roofs at this facility consist of three roof areas and two variations of metal panel roofing. The roof over the entrance and office area consists of a single-lock standing seam metal panel. The roof is original to the building constructed circa 2001. Drainage is via roof edge gutters and downspouts and appears to be satisfactory. The seaming of the panel was poorly performed and does not appear to be fully crimped. The seams do appear to have sealant applied which was folded into the seams along with the concealed clips which anchor the panel to the structure. No panel damage or fastener back-out was noted. Weathering of the sealant at penetrations was noted which will require periodic (2-3 year intervals) reviews to monitor conditions as the sealant weathers.





3. Poor seaming of panels



4. Vented ridge exhaust locations

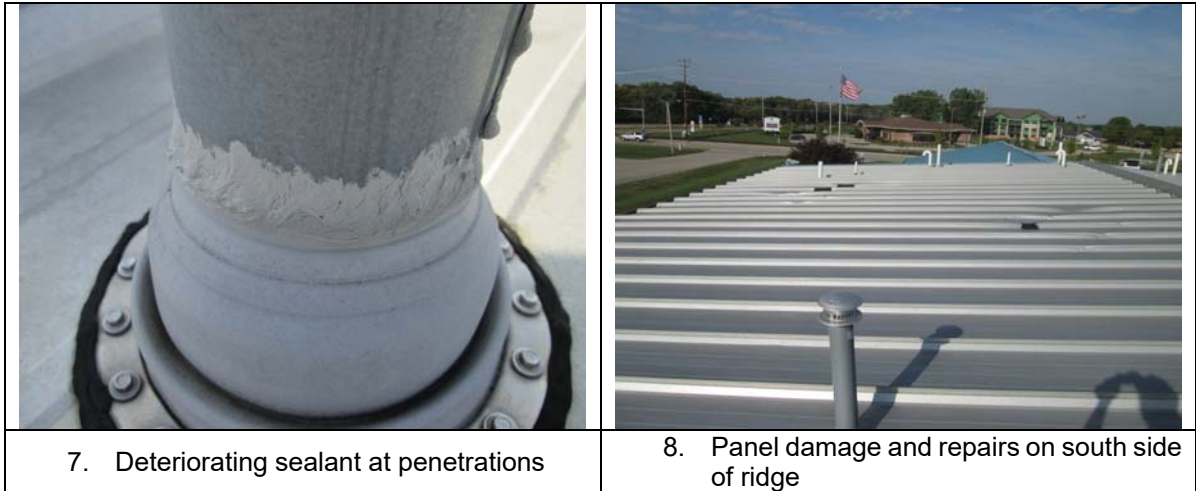
The roof over the garage area consists of a pre-fabricated structural standing seam metal roof system. The roof is original to the building constructed circa 2001. Drainage is via roof edge gutters and downspouts and appears to be satisfactory. Circa 2021, a roof mounted unit was blown off its curb and damaged several panels in its path. The majority of the damage was bent or kinked panels with little or no penetration. Repairs were made with uncured Ethylene Propylene Diene Terpolymer (EPDM) material which does deteriorate in ultra-violet light. The repairs will need to be monitored (5 year-intervals) and replaced as the material splits with exposure. Weathering of the sealant at penetrations was noted which will require periodic (2-3 year intervals) reviews to monitor conditions as the sealant weathers.



5. Typical panel damage



6. Panel repairs made with uncured EPDM and sealant



Darboy Community Park Pavilion:

The roof at this facility consists of an asphalt shingle roof system. Drainage is via roof edge gutters and downspouts and appears to be satisfactory. The age of the roof is unknown but appears to be in the 10 – 15 year range. Several missing and damaged shingles were noted, likely vandalized. Cracking of surface asphalt and granule loss throughout. Downspout missing on west elevation.



Harrison Athletic Association Park Pavilion:

The roof at this facility consists of an asphalt shingle roof system. Drainage is via roof edge run off with a small section of open-ended gutter. The age of the roof is unknown but appears to be in the 15 – 20 year range. Impact damage noted on north elevation with severe granule loss on the south elevation.

	
<p>1. Severe granule loss on south elevation</p>	<p>2. Deterioration worse on south elevation</p>
	
<p>3. Impact damage noted on north elevation</p>	<p>4. Typical condition, north elevation</p>

Harrison Athletic Association Park Restroom Building:

The roof at this facility consists of an exposed fastener metal panel roof system. Drainage is via roof edge gutters and downspouts. The age of the roof is unknown but appears to be newer. The downspout ground extensions have been damaged.





Conclusion

In general, the majority of the roofs in this assessment are metal panels and cover the most and definitely the most critical building square footage. Review and maintenance of sealant and flashing boots at penetrations as well as regular cleaning of gutter debris will allow the full anticipated service life of these roofs to be achieved at all locations.

The space covered by the asphalt shingle roof areas may not be as critical but are intended to protect not only the building assets, but also the underlying building construction components.

The following are the anticipated roof service lives of the individual buildings after performing repairs and regular reviews and maintenance of the existing roof systems.

- Municipal Bldg. – 11-20 years
- FS 70 – 11-20 years
- FS 60 – 6-10 years
- Utilities Bldg. – 6-10 years
- Darboy Pavilion – 1-5 years
- HAA Pavilion – 1-5 years
- HAA Restroom – 11-20 years

Recommendations

We recommend the repairs of the of the areas noted below be accomplished in 2023. The replacement of roofs noted below should be performed as soon as possible and as budgets allow.

1. Replace stack boots in-kind.
2. Replace missing shingles in-kind.
3. Replace missing / deteriorated sealant where appropriate.
4. Provide new sheet metal gutters, downspouts, ground extensions, flashings, etc. as required, where appropriate.

Opinion of Probable Costs:

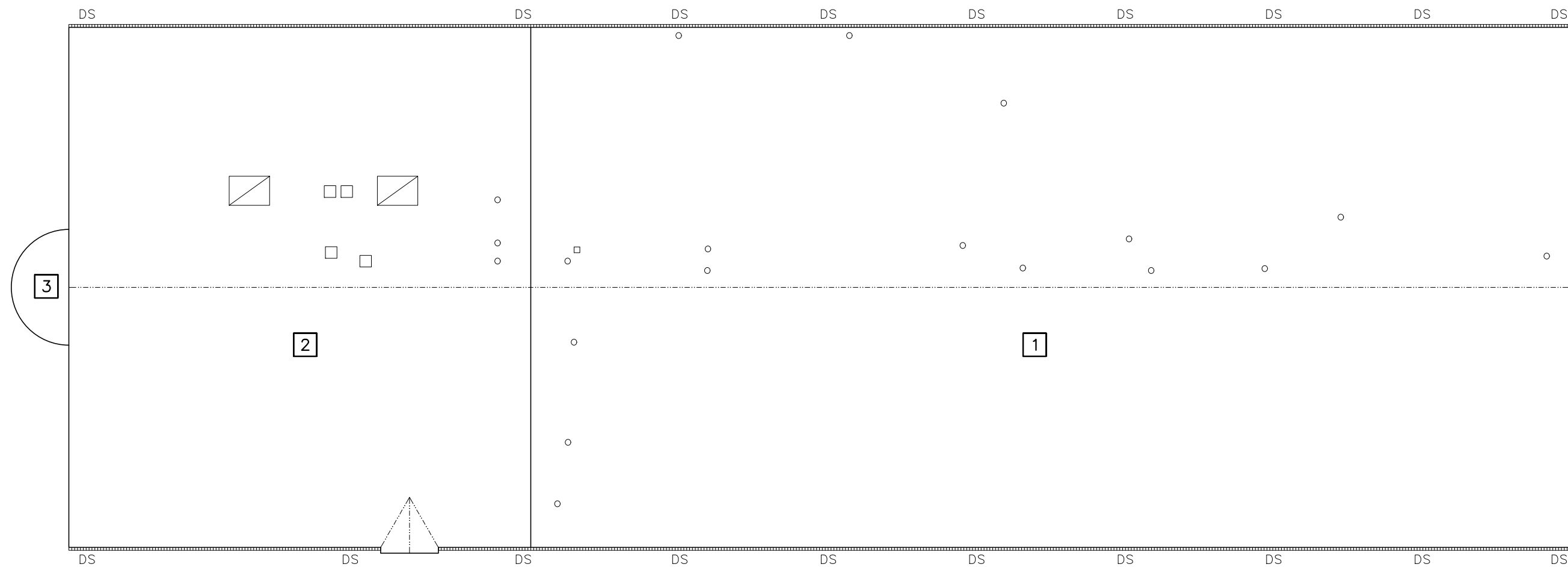
1. Roof Repair:

- a. Repair costs are based on a individual perception of the time it will take to make the repair in conjunction with necessary materials. The following opinions of probable cost are based on my perception and may vary by contractor or individual pricing the repair.

- Municipal Bldg. – Sealant repairs \$500 - \$800
 - FS 70 – No repair
 - FS 60 – Sealant repairs, boot and vent replacement, sheet metal \$2000 - \$3500
 - Utilities Bldg. – Sealant repairs \$300 - \$500
 - Darboy Pavilion – replace damaged / missing shingles, sheet metal \$800 - \$1500
 - HAA Pavilion – no repairs recommended
 - HAA Restroom – no repair
-

2. Roof Replacement:

- Darboy Pavilion – Replacement in-kind; \$30,000 - \$35,000
 - HAA Pavilion – Replacement in-kind; \$35,000 - \$42,000
-



KEY

- [X] - ROOF AREA DESIGNATION
- ⊕ - ROOF DRAIN
- ⊕ - THRU-WALL SCUPPER
- ⊕ - ROOF EDGE SCUPPER
- ⊕ - GUTTER EDGE
- - CURBED OPENING
- ▣ - H.V.A.C. CURB
- ▣ - ROOF HATCH
- ▣ - SKYLIGHT
- ⊕ - CURBED STACK
- ⊕ - CHIMNEY
- ⊕ - PIPE PORTAL CURB
- ⊕ - ROOF LADDER
- ⊕ - PIPE VENT
- - SOIL STACK
- ⊕ - SMALL PIPE PENETRATION
- ▣ - PITCH PAN
- ⊕ - EXPANSION JOINT
- ⊕ - SLOPE TRANSITION
- AB - ABANDONED EQUIPMENT

AREA SIZES

AREA NO.	SQ. FT.
1	17,200
2	7,800
3	175
TOTAL	25,175



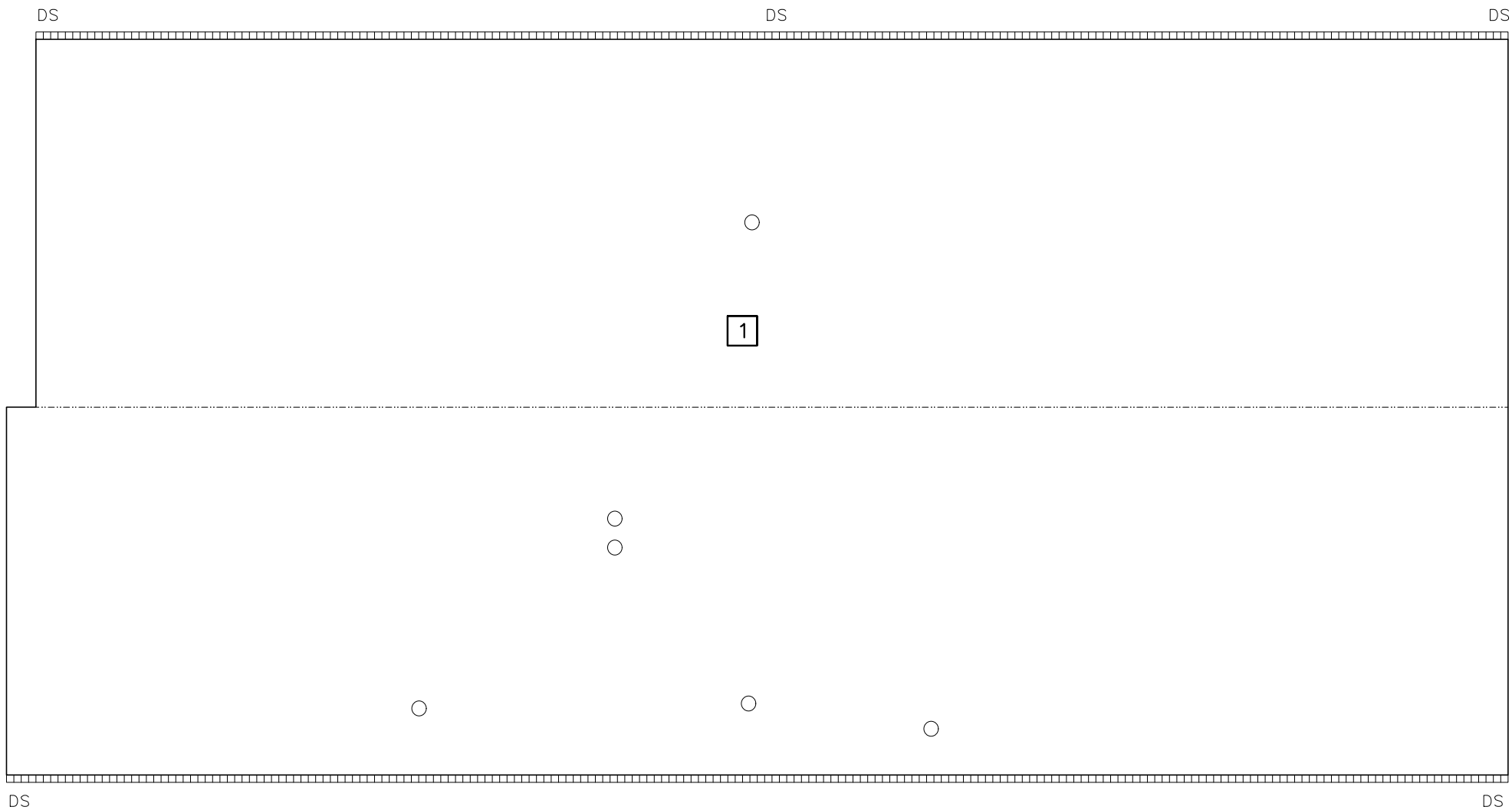
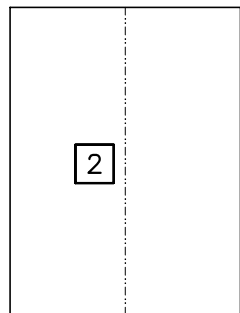
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122 E. OLIN AVENUE, SUITE 190
MADISON, WI 53713
TEL: 262 253 4700 | www.str-seg.com

The Village of Harrison
9/26/23

Village of Harrison Municipal Building
W5298 State Road 114 - Menasha, WI
ROOF PLAN

Drawn by
JW
Checked by
ZZ
Sheet No.
A100

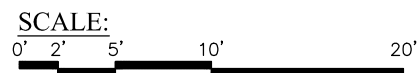


KEY

- ROOF AREA DESIGNATION
- ROOF DRAIN
- THRU-WALL SCUPPER
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- CURBED OPENING
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- PIPE PORTAL LADDER
- PIPE VENT
- SOIL STACK
- SMALL PIPE PENETRATION
- PITCH PAN
- EXPANSION JOINT
- SLOPE TRANSITION
- ABANDONED EQUIPMENT

AREA SIZES

AREA NO.	SQ. FT.
1	5,400
2	210
TOTAL	5,610



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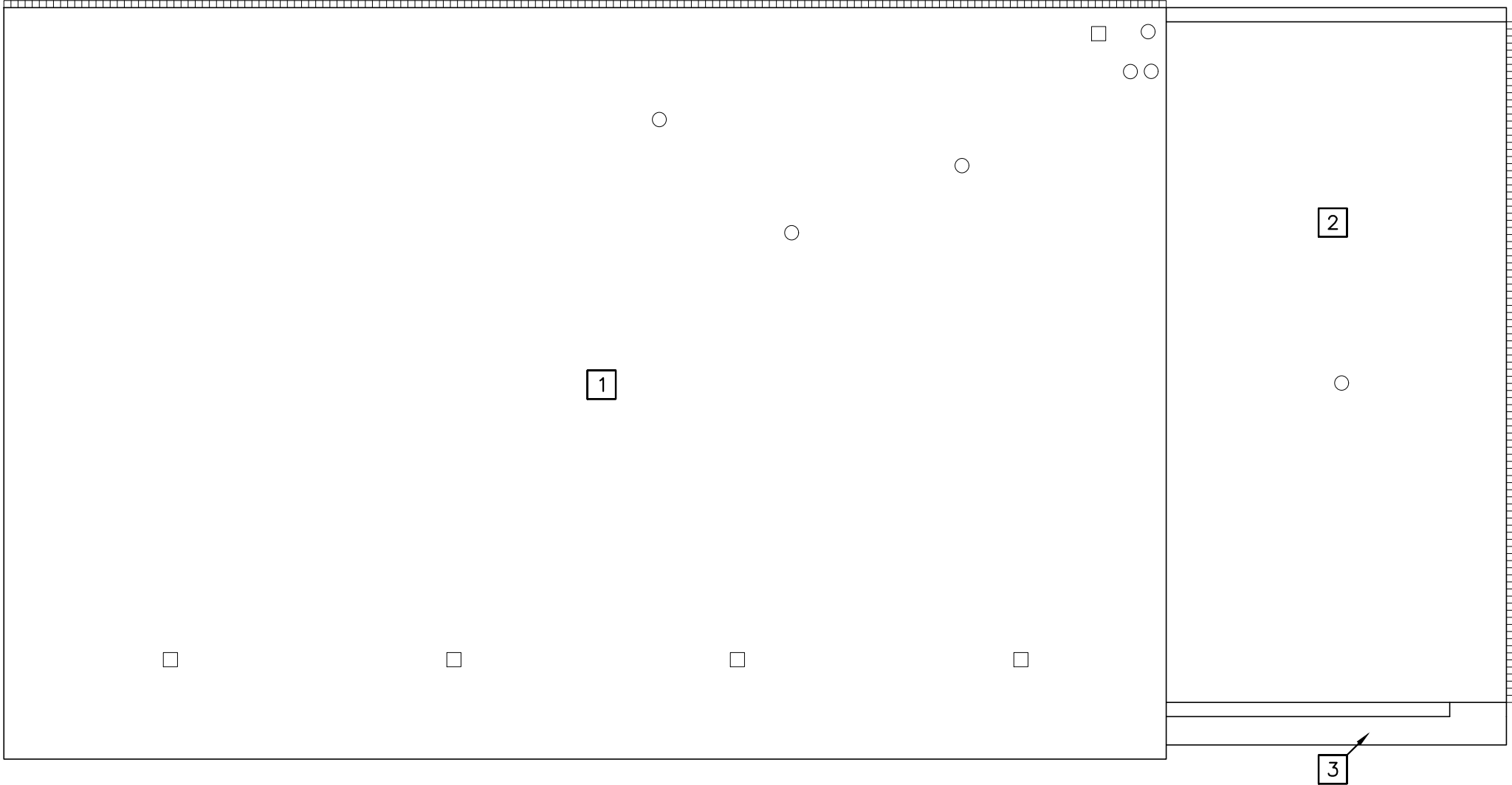
9/26/23

Harrison Fire Rescue Station 70
 N8716 County Road LP - Menasha, WI

ROOF PLAN

Drawn by
 JW
 Checked by
 ZZ

Sheet No.
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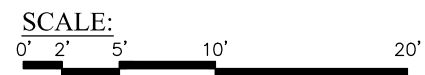


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- - SLOPE TRANSITION
- AB - ABANDONED EQUIPMENT

AREA SIZES

AREA NO.	SQ. FT.
1	4,600
2	1,300
3	100
TOTAL	6,000



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9/26/23

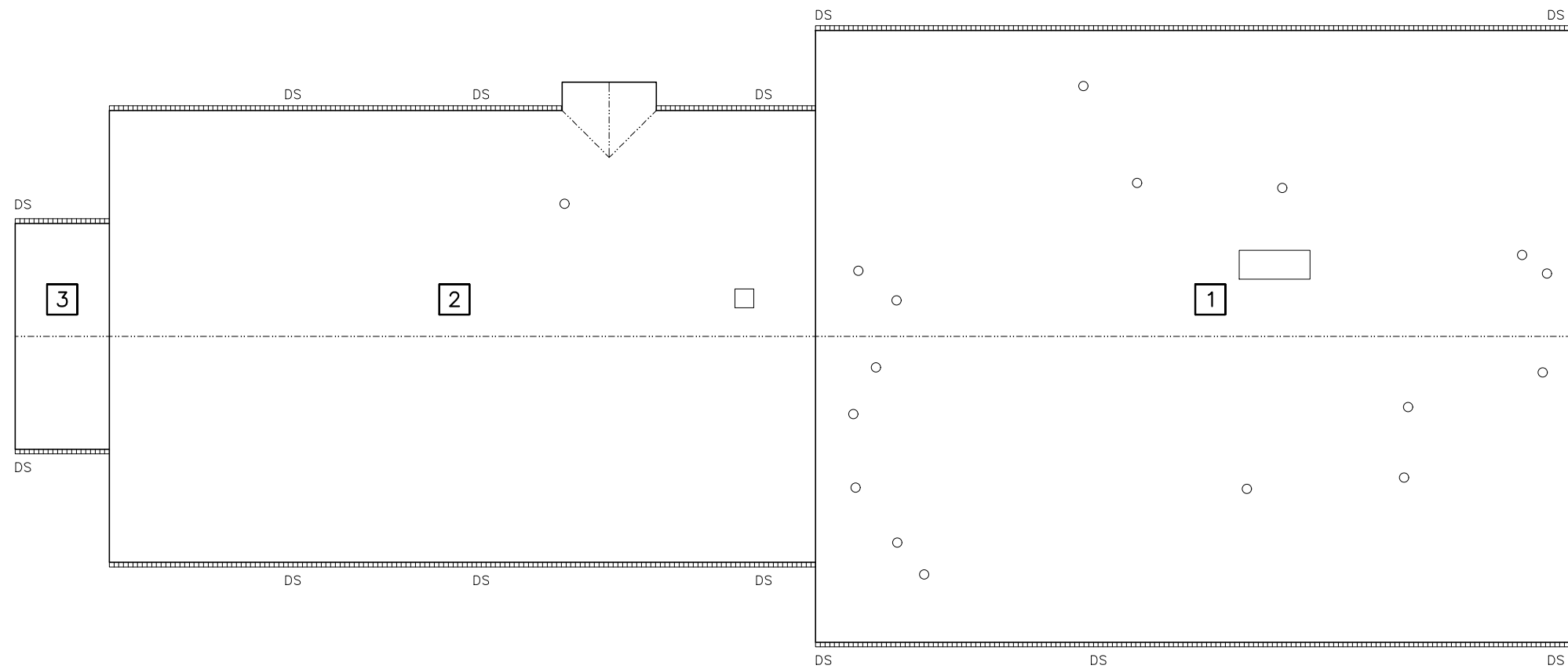
Harrison Fire Rescue Station 60
W469 Clifton Road - Sherwood, WI

ROOF PLAN

Drawn by
JW

Checked by
ZZ

Sheet No.
A100



AREA SIZES

AREA NO.	SQ. FT.
1	5,600
2	3,900
3	300
TOTAL	9,800

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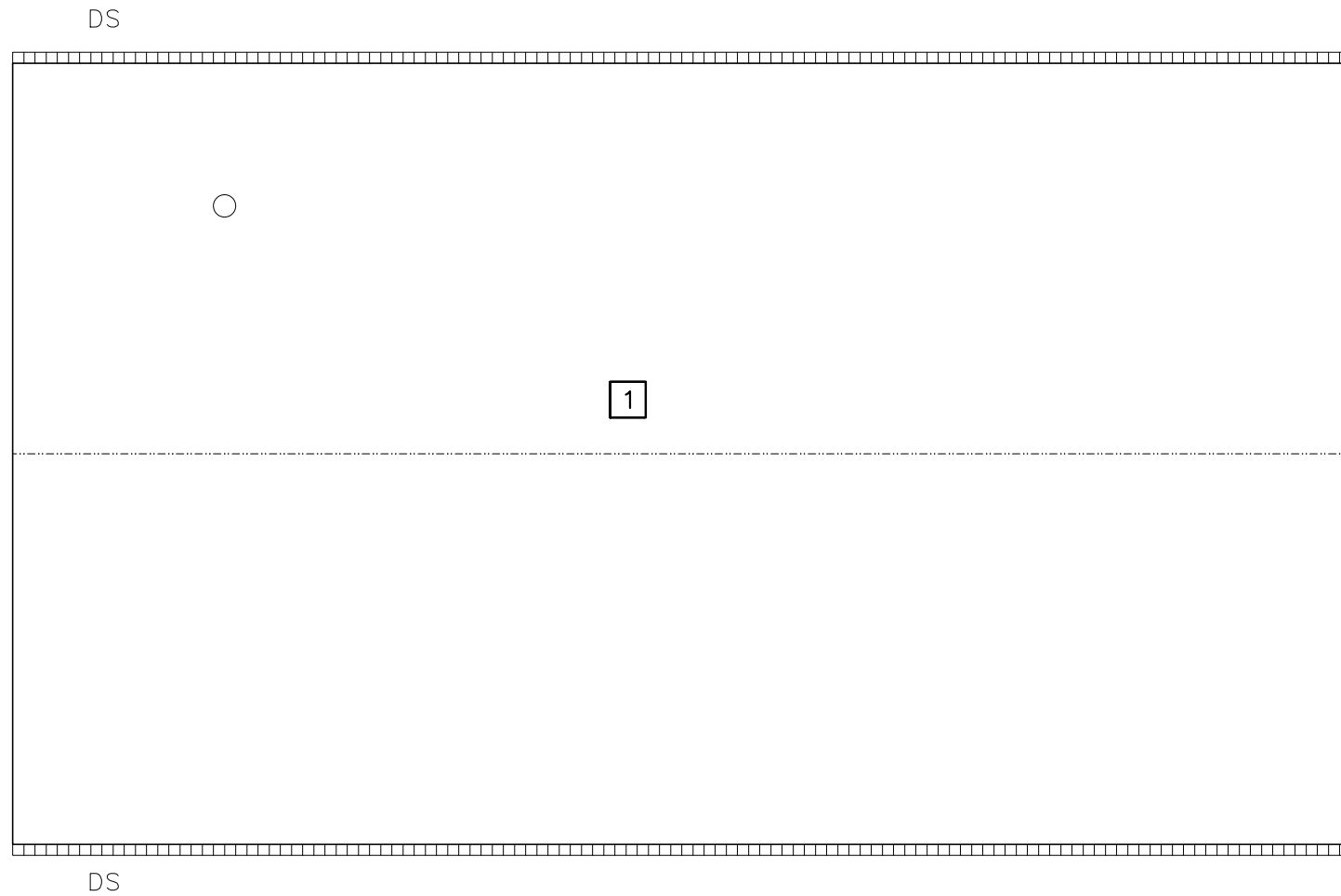
9/26/23

Harrison Utilities
 N8722 Lake Park Road - Menasha, WI

ROOF PLAN

Drawn by
 JW
 Checked by
 ZZ

Sheet No.
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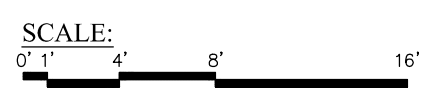


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- - SOIL STACK
- ⊗ - SMALL PIPE PENETRATION
- - PITCH PAN
- == - EXPANSION JOINT
- - SLOPE TRANSITION
- AB - ABANDONED EQUIPMENT

AREA SIZES

AREA NO.	SQ. FT.
1	2,300
TOTAL	2,300



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The Village of Harrison

9/26/23

Darboy Community Park Pavilion
 N9334 Noe Road - Menasha, WI

ROOF PLAN

Drawn by
 JW
 Checked by
 ZZ

Sheet No.
A100

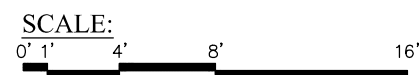


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- ⊕ - PITCH PAN
- ⊕ - EXPANSION JOINT
- ⊕ - SLOPE TRANSITION
- AB - ABANDONED EQUIPMENT

AREA SIZES

AREA NO.	SQ. FT.
1	2,800
TOTAL	2,800



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The Village of Harrison

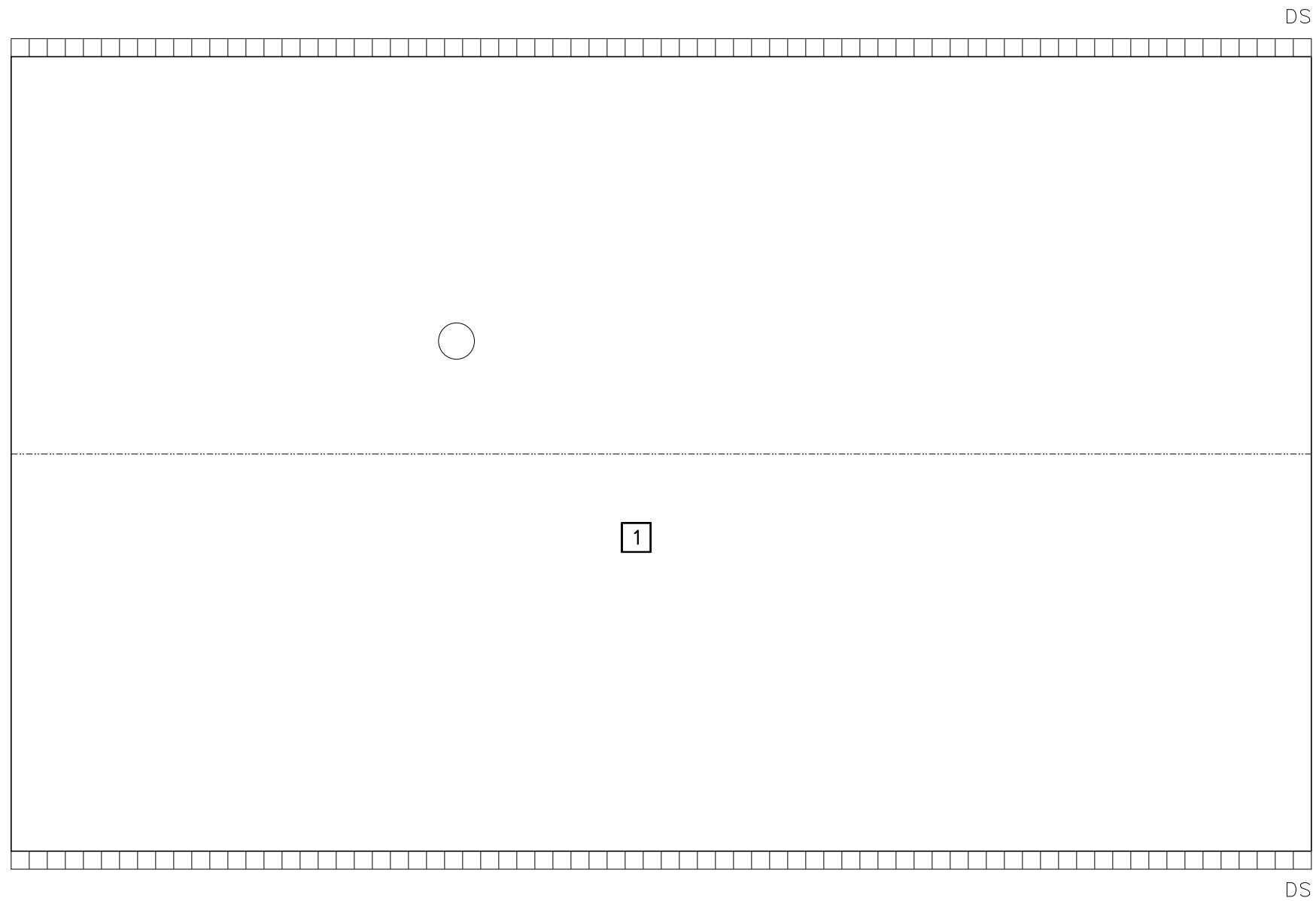
Harrison Athletic Pavilion
 W5298 State Road 114 - Menasha, WI

Drawn by
 JW
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 ZZ

Sheet No.
A100

ROOF PLAN

9/26/23



KEY

- ☒ - ROOF AREA DESIGNATION
- ⊕ - ROOF DRAIN
- ⊕ - THRU-WALL SCUPPER
- ⊕ - ROOF EDGE SCUPPER
- - GUTTER EDGE
- - CURBED OPENING
- ▣ - H.V.A.C. CURB
- ▣ - ROOF HATCH
- ⊗ - SKYLIGHT
- ⊗ - CURBED STACK
- ⊗ - CHIMNEY
- ⊗ - PIPE PORTAL CURB
- ⊗ - PIPE PORTAL LADDER
- ⊗ - PIPE VENT
- ⊗ - SOIL STACK
- ⊗ - SMALL PIPE PENETRATION
- - PITCH PAN
- - EXPANSION JOINT
- - SLOPE TRANSITION
- AB - ABANDONED EQUIPMENT

AREA SIZES

AREA NO.	SQ. FT.
1	2,800
TOTAL	2,800



SPECIALTY ENGINEERING GROUP LLC
 122 E. OLIN AVENUE, SUITE 190
 MADISON, WI 53713
 TEL: 262 253 4700 | www.str-seg.com

The Village of Harrison

Harrison Athletic Restroom Building
 W5298 State Road 114 - Menasha, WI

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ROOF PLAN