



CITY OF EAST GRAND FORKS

ARENA FEASIBILITY STUDY

NOVEMBER 2019

[DRAFT]
11/08/19



Table of Contents

Table of Contents	iii
Acknowledgements	iv
Summary	1
Study Purpose	1
Goals of the Study	2
Study Process and Timeline	3
Existing Facility Assessments	4
Summary	4
Facility Condition Assessments	6
Facility Program Needs	8
Recommendations	10
Recommendations Budget Summary	12
Facility Investment List	14
Facility Investment List	16
Site Diagrams	22

Acknowledgements

EAST GRAND FORKS CITY COUNCIL

Mayor Steve Gander
Mark Olstad, Council President
Chad Grassel, Council Vice-President
Marc DeMers
Dale Helms
Tim Johnson
Clarence Vetter
Tim Riopelle

EAST GRAND FORKS CITY STAFF

David Murphy, City Administrator
Reid Huttunen, Parks & Recreation Superintendent
Mark Dragich, Recreation Supervisor
Brian Larson, Arena Maintenance Supervisor

PARKS & RECREATION COMMISSION

Tom McDonald
Mark McDonald
Nick Bowen
Brian S. Larson
Marla Wolfe

Summary

STUDY PURPOSE

The **East Grand Forks Civic Center**, originally built in 1974, serves as the home of the East Grand Forks Green Wave hockey programs as well as youth hockey and figure skating for the community. The buildings structure has undergone many larger construction projects and renovations through its history, but limited improvements have been made to the arena's ice plant. The current rink is served by an indirect flooded R22/glycol system with air-cooled condensers. The R22 plant is currently working as intended, but does require annual maintenance and is at an age that various components are at risk of failing at any time. The arena floor, installed in 1993, has a subfloor heating system, but that is no longer working as intended and it is unknown for how long it has not been working.



Civic Center Arena

The **VFW Memorial Arena**, originally built in 1982, serves both the youth figure skating and youth hockey community. The VFW Memorial Arena has one rink (85'x190') with a seating capacity for approximately 500 people. The building structure has remained largely the same since a locker room addition was completed in the early 1990's, and the arena's ice plant was replaced with a used ice plant in 1997 following major flooding. The current ice rink is served by a direct R22 system with water and air cooled condensers. The direct R22 compressors have been re-built in the last year and are currently working as expected. Various parts of the systems such as the direct filled pump barrels, solenoids, and water tanke for the conensers have needed regular maintenance in recent years and are all condiseder to be at risk of failing at any time. The arena floor is original with the building and at 37 years old is no longer cost effective to operate (25 years is typical).



VFW Arena

The purpose of this study is to further evaluate the conditions of the existing facilities, the ice systems, and the long term programmatic needs for arena space for the East Grand Forks Community. R-22 will no longer be imported into or manufactured in the U.S. after 2020, so now is the time to evaluate how these buildings and systems should be addressed for the long term needs of the community.



Existing Facility Assessments

SUMMARY

The facility assessments of the Civic Center Arena and the VFW Arena cover two different aspects. The first is the **physical condition** of each facility, which consists of the various categories highlighted below:

SITE IMPROVEMENTS
ENVELOPE
CODE COMPLIANCE/ADA
SAFETY
INTERIOR AND FINISHES
INDOOR AIR QUALITY
MECHANICAL
ELECTRICAL/I.T./TECHNOLOGY
ICE SYSTEMS
MAJOR PROJECT/RENOVATION

These categories are each highlighted with a color designation that corresponds to items listed in the investment matrix (see pages 20-23), and are used a visual guide to illustrate the type of improvement.

The second area studied were the **program needs** as identified by steering committee meetings, meetings with the parks and recreation staff, and confirmation of dimensions and space layouts during site visits.

These two aspects have been investigated together to help determine the best approach for addressing the major concerns and deficiencies in these buildings - with the goal of how to best address these in a manner that provides a long term solution for the community.

FINDINGS

The condition of the ice systems is the biggest factor in deciding the next steps for these facilities. Both systems are aging, and are due for major repairs or replacement in the near future. Both systems use R-22 refrigeration systems. This type of system is no longer a viable type of system to install in today's arena facilities due to the phasing out of R-22 due to environmental and safety concerns (see appendix page 73 for more information).

Because both systems are in need of replacement soon, there is an opportunity to consolidate the system and rinks at one location, which would be less expensive to operate long term. The direct cost of replacing the system and rink floor at the VFW to an ammonia system is approximately \$1.2 million. The direct cost of replacement of the ice system at the Civic Center (no rink floor replacement) is approximately \$650 thousand. For comparison, a consolidated system (one system serving two rinks) would have a direct cost of about \$825,000 dollars, with about \$550,000 for a second ice rink floor. The latter option is roughly \$450-500 thousand less in terms of ice system replacement costs.

In terms of structure and envelope, both facilities are in good condition, with some recommended modifications needed to the VFW. The following are other major deficiency items at each facility:

CIVIC CENTER NEEDS:

- Lack of accessibility to the ice rink floor for the public and for players to and from the lockers. Not enough available accessible parking or ADA viewing areas.
- Size and quantity of the lockers is lacking for the space. The location of the lockers is also not ideal.
- Egress width of aisles and main concourse width are narrow.
- The building is not sprinkled (required by today's code requirements due to type and size of building).
- Major mechanical items in need of replacement (air handling units, one water heater, lower level furnaces).
- Major electrical items in need of replacement (main service and distribution, fluorescent lighting replacement, expand emergency lighting and fire alarm system, no security cameras or card access).

VFW NEEDS:

- Poor exterior drainage and need of more parking spaces.
- Water tightness of roof at the corners of the arena, installation of additional gutters at the north end, and installation of insulation at the exterior walls (interior perimeter side).
- Floor finishes in need of replacement, both in condition and type of space (non-porous floors required in public restrooms and concessions).
- The building is not sprinkled.
- Major mechanical items in need of replacement (water heaters, insulated plumbing, natural gas hot water boilers, main arena air handling unit, proper ventilation at lockers and auxiliary spaces).
- Major electrical item needs (lighting replacement, expansion of emergency lights, install security systems, install fire alarm/voice notification systems).

Civic Center Condition Assessment

Year Built 1973 Square Footage 65,400 SF Additions/Renovations 2006,2015 Seating Capacity 3,400

SITE IMPROVEMENTS

- Parking lot paving and drainage is in poor condition.
- Ineqdequate number of ADA parking spaces and some of the current designated spaces are on the drive with a cross slope greater than 2%.
- There is positive drainage around the building.

ENVELOPE

- The wall panel and trim is in good condition, but damaged and dented near grade.
- The closure trim at the NE concourse door shows corrosion.
- Window sealant (south facade) is brittle and discolored.
- There is a louver right at grade on the west end that has potential for water to get into the building. Patch or relocate.
- Overall, the building envelope is in good condition.

CODE COMPLIANCE/ADA

- Lacking ideal quantity of designated accessible seating in the arena.
- Narrow egress width at the main concourse. Aisle widths at seating are also about 6" narrower than code required, and no hand rails are provided.
- No accessible route (elevator or other) provided to the rink level.

INTERIOR AND FINISHES

- Finishes in recent renovated areas are in good condition.
- Finishes in the locker room areas on the lower level (east side) are in fair or below average condition.
- There is some paint that is bubbling on the perimeter walls of the main concourse.

MECHANICAL/INDOOR AIR QUALITY

- The building is not sprinkled.
- Air handling units in the ice arena are starting to fail and should be replaced.
- Replace 1997 water heater.
- Plumbing fixtures in older locker rooms do not meet current standards as stated in the Minnesota Plumbing Code.
- Lower level furnaces (installed in 2006) serving the locker rooms should be scheduled for replacement in the next few years.
- Some lower level exhaust fans are original to the building, may need to be replaced soon.

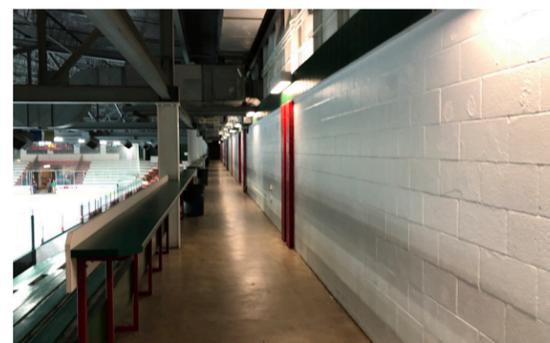
- Consider cost effective long term option to replace the electric heating source to hot water heating plant with high efficiency boilers.

ELECTRICAL/I.T./TECHNOLOGY

- Original 1970's 480V electrical service and distribution is ready for upgrade.
- Lighting throughout is mostly flourescent. Many areas in need of an upgrade. The Arena has updated high-bay LEDs that are in great condition
- Emergency lighting needs to be expanded to properly cover the spaces.
- No card access installed.
- No security cameras are installed.
- Some areas are missing fire alarms. The current fire alarm system does not support voice notification which is now required for assembly occupancies in MN.

ICE SYSTEMS

- Existing system is an indirect R-22/glycol refrigeration "stick built" system that is 45 years old.
- Compressor 1 replaced in 2008, Compressor 2 was replaced in 2015 and the air-cooled condensers were replaced in 2012. The electrical motor control center, pumps, and other equipment appears to be original equipment.
- Ice rink floor was replaced in 1993 (26 years old) and has exceeded its 25 year life expectancy. Given its age and failed subfloor heating system, the City should plan to replace the rink floor in the near future to assure reliability and performance, especially if the ice system will be extended beyond 6 months per year to prevent costly frost build up under the ice rink floor.
- Dasher board system was installed in 2012.



Narrow egress width at Civic Center Arena.

VFW Arena Condition Assessment

Year Built 1982 Square Footage 45,725 SF Additions/Renovations ~1992 Seating Capacity 500

SITE IMPROVEMENTS

- Poor drainage at the NW corner of the building, should be addressed to prevent water from seeping into foundation and floor. Water flows under doors in heavy rain events.
- Ground heaving at the north and east exterior doors prevents these doors from opening in the winter.
- Lack of parking, and parking lot lighting.

ENVELOPE

- North Facade: Gutters need to be added at the roof to keep water away from eroding soil at grade.
- Generally, exterior stoop/slabs are heaved and noticeable gaps at the building edge.
- Overall, exterior brick is in good condition.
- Noticeable areas of water leaking at the NW and SW corners of the main arena space.
- Exterior walls of arena space are not insulated.

CODE COMPLIANCE/ADA

- Public restrooms at the Lobby do not have adequate clearances.
- The ramp in the lobby to access the arena is too steep for proper wheelchair access.
- Rubber flooring in concessions is porous and not an acceptable material for commercial kitchen applications.
- Door knobs are not ADA compliant.
- No ADA stalls at locker room/public restrooms.
- No elevator access to second floor spaces (weight room area, offices).

INTERIOR AND FINISHES

- Flooring is generally in below average condition. Rubber flooring is bubbling in several areas (including lobby) and can be a trip hazard. Carpet in the locker room at the lobby is worn. Arena floor is uneven and has noticeable bumps.
- Paint is peeling at NW, SE corners of the arena space, likely due to moisture.

MECHANICAL/INDOOR AIR QUALITY

- The building is not sprinkled.
- The two main water heaters are 19 years old.
- Electric water heater servicing the lobby fixtures was manufactured in 1997 and is due for replacement.
- Existing domestic water piping is generally not insulated throughout the building.
- Not all plumbing fixtures meet current Minnesota Plumbing Code standards.

- Majority of building is heated through electric unit heaters.
- Two natural gas hot water boilers for ice rink are 30 years old and not operational.
- Ice rink has a dedicated air handling unit, original to the building. No air conditioning.
- Building auxiliary spaces (lockers, restrooms) are not being provided with ventilation air. Lobby restrooms do not have exhaust installed. Locker room exhaust does not have airflow rates that meet current code requirements.
- Very limited temperature control systems.

ELECTRICAL/I.T./TECHNOLOGY

- Existing services and power distribution were replaced/refurbished after the 1997 flood and in good condition.
- Lighting throughout is mostly flourescent.
- Very limited automatic lighting controls.
- Emergency lighting needs to be expanded.
- No card access installed.
- No security cameras are installed.
- No fire alarm/voice notification system in building.

ICE SYSTEMS

- Existing system is a direct R-22 refrigeration system manufactured by Holmstern Ice Rinks installed after the 1997 flood, and was a used system at the time of installation and nearing 25 year life expectancy.
- The ice rink floor is original to the facility that was built in 1982 and has lasted much longer than expected.



VFW Arena floor.

Civic Center Program Needs

Year Built 1973 Square Footage 65,400 SF Additions/Renovations 2006,2015 Seating Capacity 3,400

ICE SHEET

- 200x85 (NHL size).

BOWL SEATING

- The amount of seating is sufficient for tournaments and largest events.
- Narrow aisles and no handrails at aisles. This is problematic for people with mobility issues as well as an egress safety issue.
- No wheelchair seating at the ice level. Space available at the south end to further evaluate this.

CONCOURSE

- Concourse width is narrow, especially for the home team side. There are also an insufficient number of ADA seating spaces.
- Current press area locations are too low to see the entire ice sheet (televised games, etc.).
- A typical game has 2 stations, big games have 4-6 stations.
- For big games, makeshift platforms are installed that further encroach on the egress width and take up additional seating space.

LOBBY

- Lobby concessions are currently not used.
- The location of the ticketing booth causes a line of people waiting right at the entrance door, consider turning lobby concessions into the ticketing stations.

CURRENT LOCKER ROOMS

- Currently there is a total of 7 locker rooms:
 - 2 varsity locker rooms.
 - ▶ Women's home locker is 30 lockers, at or near locker capacity.
 - ▶ Men's home team is 40 lockers.
 - ▼ bad ventilation, moisture issues.
 - ▼ space works, but amenities are lacking.
 - 2 referee locker rooms with shared shower space (2 used as referee locker rooms).
 - 1 overflow referee locker room (trainer room is used for overflow or mix-gender crews)
 - 1 visitor/general locker room @ 250 sf. (small).
 - 1 small changing room for figure skating.
- Shared bathroom/shower rooms to locker is problematic.

LOCKER ROOM NEEDS

- 13 total locker rooms needed:
 - 10 locker rooms.
 - ▶ guest locker room @400 sf is ideal.
 - 2 varsity locker rooms.
 - 1 figure skating locker room.

PLAYER AREAS

- Player and penalty rooms - not currently full size, undersized player bench.
- Weight room - enlarged room at facility available to all hockey and figure skating members.
- Training room currently has two sets of steps up and down to the players boxes, not ideal.
- Player's entrance on the east end is problematic (stairs down, not accessible at all).
- Locker rooms downset a half-level on the east side of the building is also problematic.
- Space underneath the west arena seating is used for game warm-ups and puck shooting, not ideal space (access, size, lighting, proximity, etc.)

OTHER

- Generally lacking storage in the facility
- Zamboni bay 90 degree orientation requires a 3-point turn. No snow pit.
- Zamboni operator's office is not easy to find for visitors, and there is no direct route from the community locker rooms.
- Security - no way to secure ice equipment during other community events, i.e. Arts and Crafts.
- Need for a multi-function community space for 100-150 people.



Example of renovated locker room space.

VFW Arena Program Needs

Year Built 1982 Square Footage 45,725 SF Additions/Renovations ~1992 Seating Capacity 500

ARENA FLOOR - USE

- Need for a multipurpose facility in East Grand Forks, this has been identified as a possible location for this.
- Consider replacing ice rink with field turf.
- 4-lane running/walking track around the main field turf area.
- Ability to host baseball, softball, football, soccer, golf, lacrosse, and track practices.
- No need for permanent seating, use aluminum roll-in as needed.
- Consider opportunities to bring natural light into the space.

SUPPORT SPACES

- Concessions area needs to be renovated with updated equipment. Can be used to serve possible events with turf/track programming (tournaments, etc.)
- Lobby restrooms need to be renovated to be ADA compliant.
- Multi-purpose room on second floor is not accessible (no elevator).
- If converted to a multipurpose facility, consider the zamboni and ice mechanical rooms for storage or operations desk.

LOCKERS

- Use two of the lockers as lockers, re-purpose rest of the space (if converted to multipurpose facility).
- Old figure skater locker could be converted to ground level weight room, would be a staffing investment that would need to be explored.

PARKING AND BUILDING ACCESS

- Reconfigure for better traffic flow and improve drainage. Re-orient the parking squarely on the site relative to the building.
- Add parking stalls on south side of the building (approximately 80 on south end).
- Add/improve site and parking lot lighting for security.
- Consider a NW entry, some of the space in the ice mechanical room could provide space for entry or check-in.



Indoor turf facility example.



Clerestory glazing provides natural daylighting.



Example of updated concession stands space.

Recommendations

STATE OF THE FACILITIES

Both the Civic Center Arena and the VFW Arena have provided significant value over the last 35 - 45 years for the East Grand Forks community. Now, in 2019, there are several realities that have brought a need to evaluate what is next for these two facilities.

East Grand Forks and surrounding communities fully utilize 2 ice sheets, which the Civic and VFW now provide together. However if major factors are considered, the prospect of a second ice sheet at the Civic is very strongly supported.

- Both rinks need new ice refrigeration systems. The VFW also needs the refrigerated floor slab to be replaced, and the Civic will need the same in a relatively short time frame. Combining both new ice plants into one and putting the new ice slab in a new building would be a logical primary investment.
- Consolidating two of the city's indoor ice sheets under one roof helps keep costs down for staffing, utilities, and maintenance.
- The primary competition rink (Civic) is badly in need of locker room upgrades and accessibility needs. A new ice sheet could provide a solution for these items without additional costly renovations to the Civic.
- Visitors to EGF for events such as tournaments will have a far better experience by being able to use one facility instead of two separate ones.
- Two rinks in the same building allows a greater opportunity for dry floor/off season events.
- EGF has invested in several renovations and upgrades to the Civic Center: it is the primary choice for events due to its location, capacity, and fan experience. Adding a second ice sheet furthers this investment and strengthens all of these amenities.

After completion of the facility assessments and reviewing programmatic needs and options with the steering committee, we recommended the following option: **ADD AN ADDITIONAL ICE SHEET TO THE CIVIC CENTER ARENA and CONVERT THE VFW ARENA TO A FIELDHOUSE.**

Because both ice sheets would be at the Civic Center Arena, the VFW Arena has the opportunity to be converted to a fieldhouse facility. This includes field turf with a 4-lane walking/running track around it. The conversion also could provide space for football, baseball, softball, soccer, golf, lacrosse, track, and other athletic programs in town.

This option also provides the ability for the City of East Grand Forks to determine the level of renovation work needed at both of the existing facilities. Most of the major scope items could happen with the option, but they can also be phased in at a later date if that is desired.

There would always be two ice sheets operational for this option as expansion and renovations occurred. The expansion of the Civic Center Arena would happen first, allowing both the existing Civic Center Arena and the VFW Arena to remain in operation (especially during hockey season). Once the expansion is completed, the renovations at the VFW to convert it to a fieldhouse would take place.

The expansion adds roughly and additional 45,000 sf of building to the community to serve two ice rinks and a multipurpose facility. The total cost per square foot (in today's dollars) for construction and renovation costs for this option would be approximately \$133 per sf. Additional soft costs (fixtures, equipment, design, management, surveys, misc.) would be roughly \$2-3 million depending on the amount of new equipment, furniture, and features would be included as part of this option. The following pages provide more detailed summaries of two versions of this option.



WHY AN AMMONIA SYSTEM?

While synthetic refrigerants like R-22, R-507, etc. are being phased out due to their Ozone Depleting Potentials (ODP) and Global Warming Potentials (GWP), natural refrigerants like ammonia are making a comeback.

The benefits of ammonia refrigerant include, it is: a natural and pure refrigerant; friendly to the environment; one of the most efficient refrigerants used in the ice rink industry today; has been widely used in the ice rink industry since artificial ice was first used; used in industrial grade systems with proven performance, dependability and longevity (30+ years); lower cost refrigerant, and service contractors and parts are readily available.

There are new synthetic refrigerants entering the market with lower GWP than the old synthetic refrigerants (500 to 700 GWP) but still are much higher than ammonia (0 GWP). These new synthetic refrigerants are blends of two to four different type of refrigerants and are much less efficient than ammonia. Often the synthetics refrigerants are used with more commercial level or quality of systems with a lower life expectancy (20 years).

Recommendations Budget Summary

The budget summary on page 13 (right) represents a budget overview of the recommendations. Included in the summary are items that are in need of repair and replacement on the existing Civic Center Arena and VFW Arena (included in 'Renovation' costs in the budget summary).

This summary includes costs for a future civic center expansion, renovation costs at each facility, site costs (parking, grading, accessibility), contingency, and a breakdown of what the soft costs might look like if the recommended option moved forward.

The 15% contingency is a number that is used to account for all of the unknowns that will be discovered as an actual plan and design gets developed. This number typically will get smaller and smaller as scope becomes more specific and this placeholder is then utilized to cover the design and construction of the project.

The following pages provide an comprehensive list of all of the items that were identified and discussed with the Steering Committee. Items highlighted in green in the options tab (far right column) on the detailed investment list (page 14-22) represent what is included in the total budget summary.

The investment list is meant to be a flexible document that can be modified based on further discussions, priorities, and timeline of implementation. It is a guide to help identify the best way to address deferred maintenance items in the context of a master plan for these facilities.

CONSTRUCTION COSTS			
	Cost/SF	Area (SF)	
New Construction			
Civic Center Expansion	\$210	45,000	\$9,450,000.00
Renovation			
EGF Civic Center Renovation	\$56	65,400	\$3,632,518
VFW Renovation	\$59	45,725	\$2,675,990
		SUBTOTAL	\$15,758,508
Site			
EGF Civic Center Renovation			\$1,614,633
VFW Renovation			\$907,600
		SUBTOTAL	\$2,522,233
Contingency	15%		\$2,681,308
Escalation			\$0
		SUBTOTAL	\$2,681,308

TOTAL CONSTRUCTION COSTS	\$20,962,049
---------------------------------	---------------------

SOFT COSTS (OWNER)	
Professional Fees	\$1,755,000
Reimbursable Expenses	\$12,000
Furniture, fixtures and equipment (FFE)	\$785,000
Technology Security and Equipment	\$435,000
Site Survey(s)	\$12,000
Geotechnical Report	\$12,000
Special Inspections and Testing	\$26,501
Permits	\$12,000

**All softcosts are estimated at 12.70%*

TOTAL SOFT COSTS	\$3,049,501
-------------------------	--------------------

TOTAL PROJECT COST	
TOTAL PROJECT COST	\$24,011,550

OPTION LIST	
Civic:	
Add accessible seating and concourse width	\$404,800
Install a dedicated dehumidification unit for year-round rink operation (sized for one rink)	\$517,500
Convert weight room to toilets & concessions to serve Itts Williams fields	\$215,050
Convert furnace-serviced areas to hot water (req's boiler plant)	\$357,982
VFW:	
Install elevator to 2nd level	\$168,750
Translucent panel, arena clerestory	\$85,608
SUBTOTAL	\$1,749,690

Facility Investment List

READING THE INVESTMENT LIST

The investment list is an inventory of all condition and program items discussed to date, along with an analysis on the cost of each item. These items include overall project costs (soft costs, site, contingency, inflation, etc.) and are tallied at the bottom for each option.

KEY: WORK CATEGORIES

SITE IMPROVEMENTS
ENVELOPE
CODE COMPLIANCE/ADA
SAFETY
INTERIOR AND FINISHES
INDOOR AIR QUALITY
MECHANICAL
ELECTRICAL/I.T./TECHNOLOGY
ICE SYSTEMS
MAJOR PROJECT

WORK CATEGORIES are color-coded to illustrate the type of improvement.

YEAR can be used to estimate costs at a future date, i.e. escalation.

SUBTOTAL plus CONTINGENCY represents total construction costs.

SOFT COSTS are estimated at either 10% or 20%.

TOTAL represents total project cost in today's dollars.

ESCALATION estimates the total project cost in future dollars. Items assigned to year 1 are not escalated.

Only items checked and highlighted in green are totaled.

EGF CIVIC CENTER		YEAR (n)	QTY	COST	SUBTOTAL	CONTGNCY @	SOFT COSTS @	TOTAL	ESCALATION @ 3% PER YEAR (n-1)	IN OPTION?	
Regular Investment and Other Improvements						15%	10%	20%	3%	OPTION	
Site											
1	Resurface E parking lot (earthwork, mill and overlay)	1	61,000 SF	\$ 3.00	\$ 183,000.00	\$27,450.00	\$21,045.00		\$ 231,495.00	\$ 231,495.00	\$ -
1	Total reconstruction, E parking lot (+ stormwater) *2018 engineer's estimate*	2			\$391,821.63	\$39,182.16	\$70,527.89		\$ 501,531.68	\$ 516,577.63	\$ 516,577.63
1	Resurface W parking lot, sized for W addition (earthwork, mill and overlay)	1	93,000 SF	\$ 3.00	\$ 279,000.00	\$41,850.00	\$32,085.00		\$ 352,935.00	\$ 352,935.00	\$ -
1	Total reconstruction, W parking lot (+ stormwater) *2018 engineer's estimate*	2			\$ 788,933.86	\$78,893.39	\$141,089.39		\$1,008,916.64	\$ 1,030,085.38	\$ 1,030,085.38

Notes

- * Assume cost captured in new addition, therefore exclude line item
- + Cost captured in another line item, therefore exclude
- # Optional pair; either-or

Facility Investment List

EGF CIVIC CENTER		YEAR	QTY	COST	SUBTOTAL	CONTGCY @	SOFT COSTS @		TOTAL	ESCALATION @ 3% PER	IN OPTION?
Regular Investment and Other Improvements		(n)				15%	10%	20%		YEAR (n-1)	OPTION
Site											
1	Resurface E parking lot (earthwork, mill and overlay)	1	61,000 SF	\$ 3.00	\$ 183,000.00	\$27,450.00	\$21,045.00		\$231,495.00	\$ 231,495.00	\$ -
1	Total reconstruction, E parking lot (+ stormwater) *2018 engineer's estimate*	2			\$391,821.63	\$39,182.16	\$70,527.89		\$501,531.68	\$ 516,577.63	x \$ 516,577.63
	Resurface W parking lot, sized for W addition (earthwork, mill and overlay)	1	93,000 SF	\$ 3.00	\$ 279,000.00	\$41,850.00	\$32,085.00		\$352,935.00	\$ 352,935.00	\$ -
	Total reconstruction, W parking lot (+ stormwater) *2018 engineer's estimate*	2			\$ 788,823.86	\$78,882.39	\$141,988.29		\$1,009,694.54	\$ 1,039,985.38	x \$ 1,039,985.38
	Construct S parking lot	1	33,214 SF	\$ 12.00	\$ 398,568.00	\$59,785.20	\$45,835.32		\$504,188.52	\$ 504,188.52	x \$ 504,188.52
	Total reconstruction, inner streets (+ stormwater) *2018 engineer's estimate*	2			\$ 374,755.38	\$37,475.54	\$67,455.96		\$479,686.88	\$ 494,077.49	\$ -
	Add ADA parking stalls, limit cross-slope to 2%	1	5,900 SF	\$ 12.00	\$ 70,800.00	\$10,620.00	\$8,142.00		\$89,562.00	\$ 89,562.00	\$ -
Building											
	Replace damaged wall panels and trim	1	3,600 SF	\$ 5.00	\$ 18,000.00	\$2,700.00			\$20,700.00	\$ 20,700.00	\$ -
	Replace damaged vents near SE door	1	1 LS	\$ 800.00	\$ 800.00	\$120.00			\$920.00	\$ 920.00	\$ -
	Correct cause of corrosion at NE concourse door	1	1 LS	\$ 2,000.00	\$ 2,000.00	\$300.00			\$2,300.00	\$ 2,300.00	\$ -
	Replace dented doors at S game level (restrooms, locker, coaches)	1	3 EA	\$ 350.00	\$ 1,050.00	\$157.50			\$1,207.50	\$ 1,207.50	x \$ 1,207.50
	Replace door knobs with levers, new locksets	1	30 EA	\$ 200.00	\$ 6,000.00	\$900.00			\$6,900.00	\$ 6,900.00	x \$ 6,900.00
	Rebuild Compressor Room ramp to be accessible	1	8 LF	\$ 400.00	\$ 3,200.00	\$480.00	\$368.00		\$4,048.00	\$ 4,048.00	\$ -
	Reconfigure door for pull-side clearances at Zam Office	1	1 LS	\$ 3,000.00	\$ 3,000.00	\$450.00			\$3,450.00	\$ 3,450.00	\$ -
	Modify curb at Shop door	1	1 LS	\$ 1,500.00	\$ 1,500.00	\$225.00			\$1,725.00	\$ 1,725.00	x \$ 1,725.00
	Reconfigure Boys' Varsity Locker toilets and shower for ADA clearances	1	150 SF	\$ 300.00	\$ 45,000.00	\$6,750.00	\$5,175.00		\$56,925.00	\$ 56,925.00	\$ -
	* Renovate entire Boy's Varsity Locker room	1	1,393 SF	\$ 250.00	\$ 348,250.00	\$52,237.50	\$40,048.75		\$440,536.25	\$ 440,536.25	\$ -
	2 Repair cracking at exterior wall of Players' Entrance east addition	1	1 LS	\$ 3,000.00	\$ 3,000.00	\$450.00	\$345.00		\$3,795.00	\$ 3,795.00	\$ -
	2 Demolish east entrance/weight room addition, re clad with metal panel	1	1 LS	\$ 25,000.00	\$ 25,000.00	\$3,750.00	\$2,875.00		\$31,625.00	\$ 31,625.00	x \$ 31,625.00
	Address cause of bubbling interior paint near pilasters, Event Level	1	1 LS	\$ 10,000.00	\$ 10,000.00	\$1,500.00			\$11,500.00	\$ 11,500.00	x \$ 11,500.00
	Add guardrail at north end of Upper Bowl Seating	1	42 LF	\$ 250.00	\$ 10,500.00	\$1,575.00	\$1,207.50		\$13,282.50	\$ 13,282.50	x \$ 13,282.50
	Add grab bars in ADA stalls, Upper Bowl Restrooms	1	6 EA	\$ 100.00	\$ 600.00	\$90.00			\$690.00	\$ 690.00	x \$ 690.00
	Reconfigure stalls to provide clearances at column, Women's Upper Bowl Restrooms	1	1 LS	\$ 12,000.00	\$ 12,000.00	\$1,800.00	\$1,380.00		\$15,180.00	\$ 15,180.00	\$ -
	* Add elevator	1	1 LS	\$ 125,000.00	\$ 125,000.00	\$18,750.00	\$14,375.00		\$158,125.00	\$ 158,125.00	\$ -
	Major building expansion for second ice sheet	1	1 LS	\$ 9,450,000.00	\$ 9,450,000.00	\$1,417,500.00	\$2,173,500.00		\$13,041,000.00	\$ 13,041,000.00	x \$ 13,041,000.00
	Provide req'd fire rating at occupied spaces under existing arena seating, west side	1	4,089 SF	\$ 12.00	\$ 49,068.00	\$7,360.20	\$5,642.82		\$62,071.02	\$ 62,071.02	x \$ 62,071.02
Mechanical											
	Add fire sprinkler throughout	1	65,400 SF	\$ 5.00	\$ 327,000.00	\$49,050.00	\$37,605.00		\$413,655.00	\$ 413,655.00	x \$ 413,655.00
	Replace 1997 water heater	1	1 LS	\$ 20,000.00	\$ 20,000.00	\$3,000.00			\$23,000.00	\$ 23,000.00	x \$ 23,000.00
	Replace 2011 water heater	7	1 LS	\$ 20,000.00	\$ 20,000.00	\$3,000.00			\$23,000.00	\$ 27,463.20	\$ -
	+ Replace existing plumbing fixtures with new + ASSE 1070 thermostatic mixing valve	1	4 EA	\$ 5,000.00	\$ 20,000.00	\$3,000.00	\$2,300.00		\$25,300.00	\$ 25,300.00	\$ -
	* Install hot water heating plant w/ high efficiency boilers	1	1 LS	\$ 400,000.00	\$ 400,000.00	\$60,000.00	\$46,000.00		\$506,000.00	\$ 506,000.00	\$ -
	Replace air handling units	1	1 LS	\$ 650,000.00	\$ 650,000.00	\$97,500.00			\$747,500.00	\$ 747,500.00	x \$ 747,500.00
	Replace lower level, Lobby bathroom exhaust fans	1	1 LS	\$ 47,000.00	\$ 47,000.00	\$7,050.00			\$54,050.00	\$ 54,050.00	x \$ 54,050.00
	3 Replace 2006 furnaces	10	1 LS	\$ 20,000.00	\$ 20,000.00	\$3,000.00			\$23,000.00	\$ 30,009.78	\$ -
	Install new digital controls (DDC) system w/ central monitoring	1	1 LS	\$ 420,000.00	\$ 420,000.00	\$63,000.00	\$48,300.00		\$531,300.00	\$ 531,300.00	x \$ 531,300.00
	Make improvements to existing R-22 system (not recommended)	1	1 LS	\$ -	\$ -	\$0.00	\$0.00		\$0.00	\$ -	\$ -
	Replace refrigerant with R-448A or similar	1	1 LS	\$ -	\$ -	\$0.00	\$0.00		\$0.00	\$ -	\$ -
	Replace refrigeration system (Ammonia system) - like size	1	1 LS	\$ 650,000.00	\$ 650,000.00	\$97,500.00	\$74,750.00		\$822,250.00	\$ 822,250.00	\$ -
	Replace refrigeration system upsized for two ice sheets	1	1 LS	\$ 825,000.00	\$ 825,000.00	\$123,750.00	\$94,875.00		\$1,043,625.00	\$ 1,043,625.00	x \$ 1,043,625.00
	Replace existing rink floor	1	1 LS	\$ 700,000.00	\$ 700,000.00	\$105,000.00	\$80,500.00		\$885,500.00	\$ 885,500.00	x \$ 885,500.00
Electrical											
	Upgrade existing electrical equipment and associated feeders	1	1 LS	\$ 200,000.00	\$ 200,000.00	\$30,000.00			\$230,000.00	\$ 230,000.00	x \$ 230,000.00
	+ Replace non-GFCI devices in locker rooms w/ GFCI type (assume 20)	1	20 EA	\$ 75.00	\$ 1,500.00	\$225.00			\$1,725.00	\$ 1,725.00	\$ -
	Replace all interior lighting (except at arena ice)	1	65,400 SF	\$ 5.00	\$ 327,000.00	\$49,050.00	\$37,605.00		\$413,655.00	\$ 413,655.00	\$ -
	Install occupancy sensor controlled lighting throughout building	1	65,400 SF	\$ 1.25	\$ 81,750.00	\$12,262.50	\$9,401.25		\$103,413.75	\$ 103,413.75	\$ -
	Install contactor or relay-based lighting control for arena lighting, secure location	1	1 LS	\$ 10,000.00	\$ 10,000.00	\$1,500.00			\$11,500.00	\$ 11,500.00	x \$ 11,500.00
	Add additional emergency lighting for proper coverage	1	1 LS	\$ 27,000.00	\$ 27,000.00	\$4,050.00	\$3,105.00		\$34,155.00	\$ 34,155.00	x \$ 34,155.00
	Add exterior emergency lighting	1	1 LS	\$ 9,000.00	\$ 9,000.00	\$1,350.00	\$1,035.00		\$11,385.00	\$ 11,385.00	x \$ 11,385.00
	Replace arena sound system	1	1 LS	\$ 100,000.00	\$ 100,000.00	\$15,000.00	\$11,500.00		\$126,500.00	\$ 126,500.00	x \$ 126,500.00
	Install electronic access control system (15 doors)	1	1 LS	\$ 35,000.00	\$ 35,000.00	\$5,250.00	\$4,025.00		\$44,275.00	\$ 44,275.00	x \$ 44,275.00
	Install surveillance camera system (\$10k + 1200 /camera, assume 15)	1	1 LS	\$ 28,000.00	\$ 28,000.00	\$4,200.00	\$3,220.00		\$35,420.00	\$ 35,420.00	x \$ 35,420.00
	New addressable fire alarm system	1	65,400 SF	\$ 2.00	\$ 130,800.00	\$19,620.00	\$15,042.00		\$165,462.00	\$ 165,462.00	x \$ 165,462.00

Total Recommended Investments at Civic Center → **TOTAL \$ 19,588,079.55**

VFW ARENA

Regular Investment and Other Improvements	YEAR (n)	QTY	COST	SUBTOTAL	CONTGCY @			TOTAL	ESCALATION @ 3% PER YEAR (n-1)	IN OPTION?
					15%	10%	20%			
Site										
Replace stoops at N and E exterior doors to prevent heaving	1	2 EA	\$ 7,000.00	\$ 14,000.00	\$2,100.00			\$16,100.00	\$ 16,100.00	x \$ 16,100.00
Re-grade site at building perimeter	1	1 LS	\$ 5,000.00	\$ 5,000.00	\$750.00			\$5,750.00	\$ 5,750.00	x \$ 5,750.00
Replace apron at E overhead door (eliminate gap)	1	1 LS	\$ 1,000.00	\$ 1,000.00	\$150.00			\$1,150.00	\$ 1,150.00	x \$ 1,150.00
Install stoops at main entry doors	1	1 LS	\$ 8,000.00	\$ 8,000.00	\$1,200.00			\$9,200.00	\$ 9,200.00	x \$ 9,200.00
Reconfigure S parking lot perpendicular to VFW, add lighting and curb + gutter	1	73,300 SF	\$ 12.00	\$ 879,600.00	\$131,940.00	\$87,961.20		\$1,099,501.20	\$ 1,099,501.20	x \$ 1,099,501.20
Building										
Install gutter and downspouts at N roof edge	1	240 LF	\$ 15.00	\$ 3,600.00	\$540.00			\$4,140.00	\$ 4,140.00	x \$ 4,140.00
Replace dented metal doors, east side	1	2 EA	\$ 800.00	\$ 1,600.00	\$240.00			\$1,840.00	\$ 1,840.00	x \$ 1,840.00
Replace damaged wall panel trim at entry soffit	1	30 LF	\$ 15.00	\$ 450.00	\$67.50			\$517.50	\$ 517.50	x \$ 517.50
Reverse door swing at center 2nd fl Office (provide 18" CLR at door w/ closer)	1	1 EA	\$ 3,000.00	\$ 3,000.00	\$450.00			\$3,450.00	\$ 3,450.00	\$ -
Install grab bars in Conference Rm Toilet/Server	1	3 EA	\$ 100.00	\$ 300.00	\$45.00			\$345.00	\$ 345.00	x \$ 345.00
4 Replace rubber flooring in Lobby	1	1,200 SF	\$ 12.00	\$ 14,400.00	\$2,160.00			\$16,560.00	\$ 16,560.00	\$ -
4 Replace Lobby flooring with epoxy	1	1,200 SF	\$ 11.00	\$ 13,200.00	\$1,980.00			\$15,180.00	\$ 15,180.00	x \$ 15,180.00
Replace door knobs with levers, new locksets	1	20 EA	\$ 200.00	\$ 4,000.00	\$600.00			\$4,600.00	\$ 4,600.00	x \$ 4,600.00
Rebuild Lobby ramp to be accessible. Include handrail both sides	1	1 LS	\$ 8,000.00	\$ 8,000.00	\$1,200.00	\$1,600.00		\$10,800.00	\$ 10,800.00	x \$ 10,800.00
5 Replace flooring at Lobby Restrooms with non-porous material	1	430 SF	\$ 12.00	\$ 5,160.00	\$774.00			\$5,934.00	\$ 5,934.00	\$ -
5 Lobby Bathroom expansion	1	720 SF	\$ 300.00	\$ 216,000.00	\$32,400.00	\$21,630.00		\$270,030.00	\$ 270,030.00	x \$ 270,030.00
6 Replace flooring at Lobby Concessions with non-porous material	1	410 SF	\$ 12.00	\$ 4,920.00	\$738.00			\$5,658.00	\$ 5,658.00	\$ -
6 Concessions renovation	1	250 SF	\$ 120.00	\$ 30,000.00	\$4,500.00	\$6,900.00		\$41,400.00	\$ 41,400.00	x \$ 41,400.00
Replace dented frame at Lobby Concessions	1	1 LS	\$ 3,000.00	\$ 3,000.00	\$450.00			\$3,450.00	\$ 3,450.00	x \$ 3,450.00
Replace carpet in Lobby Locker Room	1	350 SF	\$ 4.50	\$ 1,575.00	\$236.25			\$1,811.25	\$ 1,811.25	x \$ 1,811.25
Repair/re-flash roof where leaking onto Concourse	1	1 LS	\$ 5,000.00	\$ 5,000.00	\$750.00			\$5,750.00	\$ 5,750.00	x \$ 5,750.00
Reconfigure Locker Room Restrooms to include ADA stalls, grab bars	1	10 EA	\$ 4,000.00	\$ 40,000.00	\$6,000.00	\$4,400.00		\$50,400.00	\$ 50,400.00	x \$ 50,400.00
Replace toilet partitions in Locker Room Restrooms to meet ADA force reqs	1	10 EA	\$ 1,700.00	\$ 17,000.00	\$2,550.00			\$19,550.00	\$ 19,550.00	\$ -
Relocate hallway drinking fountain to ADA compliant height	1	1 EA	\$ 3,000.00	\$ 3,000.00	\$450.00			\$3,450.00	\$ 3,450.00	x \$ 3,450.00
Provide tactile signage	1	1 LS	\$ 1,000.00	\$ 1,000.00	\$150.00			\$1,150.00	\$ 1,150.00	x \$ 1,150.00
7 Replace rubber flooring in Locker Rooms and Locker Restrooms	1	4,130 SF	\$ 12.00	\$ 49,560.00	\$7,434.00			\$56,994.00	\$ 56,994.00	\$ -
7 Replace Locker Rooms and Locker Restrooms flooring w/ epoxy	1	4,130 SF	\$ 11.00	\$ 45,430.00	\$6,814.50			\$52,244.50	\$ 52,244.50	x \$ 52,244.50
Relocate server equipment to dedicated room	1	1 LS	\$ 12,000.00	\$ 12,000.00	\$1,800.00	\$2,760.00		\$16,560.00	\$ 16,560.00	x \$ 16,560.00
8 Re-paint Concourse walls	1	13,627 SF	\$ 1.50	\$ 20,440.50	\$3,066.08			\$23,506.58	\$ 23,506.58	\$ -
8 Fur exterior walls, spray foam, install liner panel and netting	1	17,580 SF	\$ 12.00	\$ 210,960.00	\$31,644.00	\$21,097.20		\$263,701.20	\$ 263,701.20	x \$ 263,701.20
Install field turf	1	22,500 SF	\$ 10.00	\$ 225,000.00	\$33,750.00	\$51,750.00		\$310,500.00	\$ 310,500.00	x \$ 310,500.00
Install four lane Walking Track	1	8,000 SF	\$ 12.00	\$ 96,000.00	\$14,400.00	\$9,601.20		\$120,001.20	\$ 120,001.20	x \$ 120,001.20
Renovate zamboni and mechanical rooms	1	1,400 SF	\$ 100.00	\$ 140,000.00	\$21,000.00	\$32,200.00		\$193,200.00	\$ 193,200.00	\$ -
Mechanical										
Add fire sprinkler throughout	1	45,725 SF	\$ 5.00	\$ 228,625.00	\$34,293.75	\$22,863.00		\$285,781.75	\$ 285,781.75	x \$ 285,781.75
Replace water heater - gas (locker rooms)	1	2 EA	\$ 20,000.00	\$ 40,000.00	\$6,000.00			\$46,000.00	\$ 46,000.00	x \$ 46,000.00
Replace water heater - electric (front entry)	1	1 EA	\$ 12,000.00	\$ 12,000.00	\$1,800.00			\$13,800.00	\$ 13,800.00	x \$ 13,800.00
Insulate domestic cold, hot & hot water recirculation piping	1	1 LS	\$ 65,000.00	\$ 65,000.00	\$9,750.00			\$74,750.00	\$ 74,750.00	x \$ 74,750.00
+ Replace existing plumbing fixtures with new + ASSE 1070 thermostatic mixing valve	1	12 EA	\$ 5,000.00	\$ 60,000.00	\$9,000.00			\$69,000.00	\$ 69,000.00	\$ -
Replace hot water boilers with new high-efficiency hot water boilers, expand system	1	1 LS	\$ 240,000.00	\$ 240,000.00	\$36,000.00			\$276,000.00	\$ 276,000.00	x \$ 276,000.00
Replace existing air handling unit serving ice arena, re-use ductwork	1	1 LS	\$ 250,000.00	\$ 250,000.00	\$37,500.00			\$287,500.00	\$ 287,500.00	x \$ 287,500.00
Install a dedicated dehumidification unit for year-found rink operation	1	1 LS	\$ 400,000.00	\$ 400,000.00	\$60,000.00			\$460,000.00	\$ 460,000.00	\$ -
New A.H.U.s for locker/restrooms to provide req'd ventilation and exhaust	1	1 LS	\$ 500,000.00	\$ 500,000.00	\$75,000.00			\$575,000.00	\$ 575,000.00	x \$ 575,000.00
Install new digital controls (DDC) system w/ central monitoring	1	1 LS	\$ 225,000.00	\$ 225,000.00	\$33,750.00	\$45,000.00		\$303,750.00	\$ 303,750.00	x \$ 303,750.00
Replace ice system and rink floor with indirect system	1	1 LS	\$ 1,200,000.00	\$ 1,200,000.00	\$180,000.00	\$240,000.00		\$1,620,000.00	\$ 1,620,000.00	\$ -
Electrical										
Replace existing electrical panels (front of building)	1	3 EA	\$ 6,000.00	\$ 18,000.00	\$2,700.00			\$20,700.00	\$ 20,700.00	x \$ 20,700.00
Replace existing electrical panels, feeders, and main switchgear	8	1 LS	\$ 130,000.00	\$ 130,000.00	\$19,500.00			\$149,500.00	\$ 183,866.14	\$ -
+ Replace non-GFCI devices in locker rooms w/ GFCI type (assume 40)	1	40 EA	\$ 75.00	\$ 3,000.00	\$450.00			\$3,450.00	\$ 3,450.00	\$ -
Replace all interior lighting	1	45,725 SF	\$ 5.00	\$ 228,625.00	\$34,293.75	\$22,863.00		\$285,781.75	\$ 285,781.75	\$ -
Install occupancy sensor controlled lighting throughout building	1	45,725 SF	\$ 1.25	\$ 57,156.25	\$8,573.44	\$5,715.75		\$71,445.44	\$ 71,445.44	\$ -
Install contactor or relay-based lighting control for arena lighting	1	1 LS	\$ 10,000.00	\$ 10,000.00	\$1,500.00	\$2,000.00		\$13,500.00	\$ 13,500.00	x \$ 13,500.00
Replace remaining exterior HID lighting w/ LED	1	1 LS	\$ 3,000.00	\$ 3,000.00	\$450.00			\$3,450.00	\$ 3,450.00	x \$ 3,450.00
Add additional emergency lighting for proper coverage	1	1 LS	\$ 18,000.00	\$ 18,000.00	\$2,700.00	\$3,600.00		\$24,300.00	\$ 24,300.00	x \$ 24,300.00
Add exterior emergency lighting	1	1 LS	\$ 4,000.00	\$ 4,000.00	\$600.00	\$800.00		\$5,400.00	\$ 5,400.00	x \$ 5,400.00
Install electronic access control system (2 doors)	1	1 LS	\$ 15,000.00	\$ 15,000.00	\$2,250.00	\$3,450.00		\$20,700.00	\$ 20,700.00	x \$ 20,700.00
Install surveillance camera system (\$10k + 1200 /camera, assume 9)	1	1 LS	\$ 20,800.00	\$ 20,800.00	\$3,120.00	\$4,784.00		\$28,704.00	\$ 28,704.00	x \$ 28,704.00
New addressable fire alarm system	1	45,725 SF	\$ 2.00	\$ 91,450.00	\$13,717.50	\$9,145.20		\$114,312.70	\$ 114,312.70	x \$ 114,312.70

Total Recommended Investments at VFW → **TOTAL \$ 4,423,470.30**

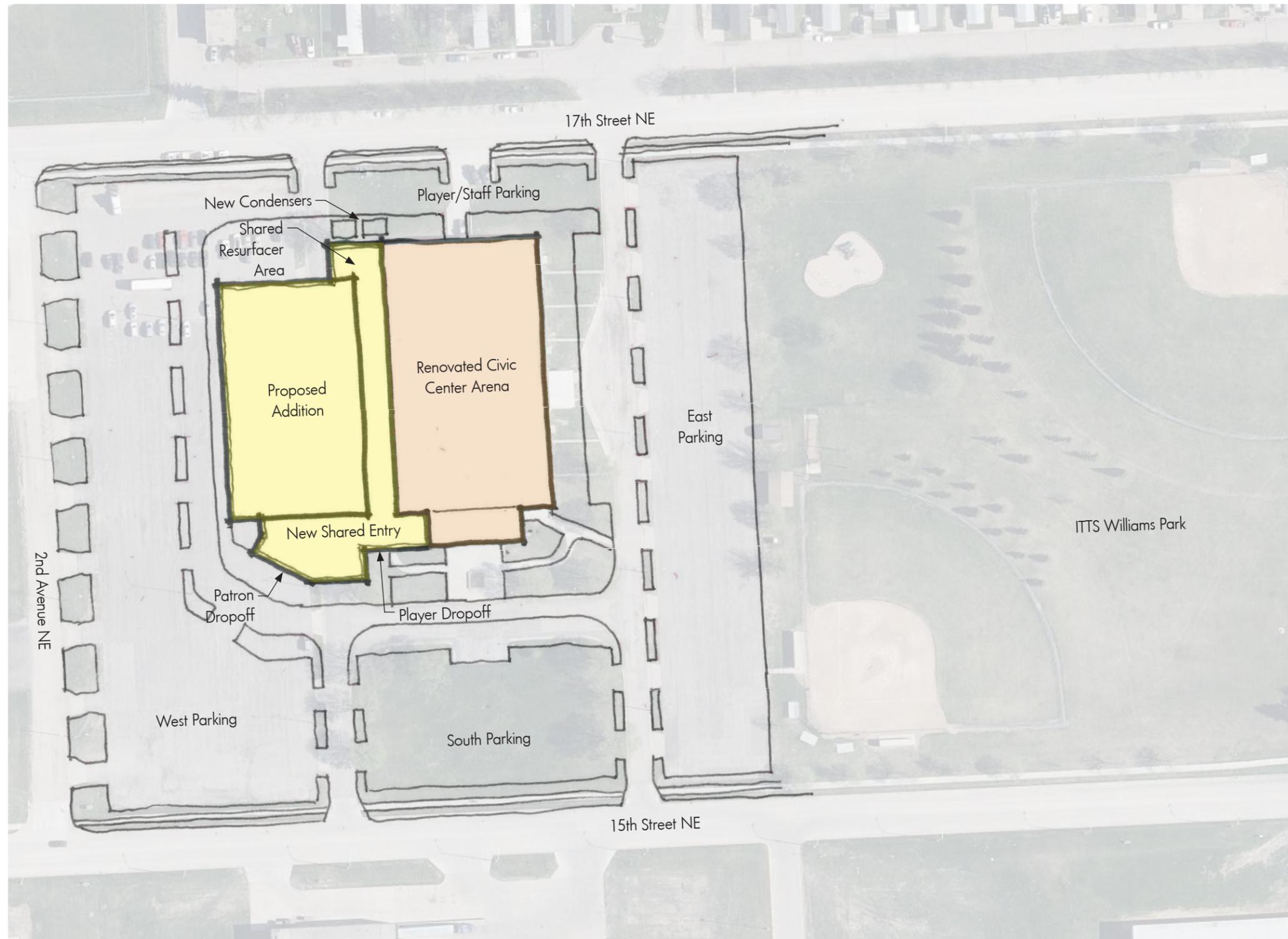
COST SUMMARY

Below is the estimated total project cost to build an additional ice sheet at the Civic Center and convert the VFW to a fieldhouse. This grand total is broken down by construction cost (including contingency) and soft costs. The grand total does not include improvements identified as Alternates, which are detailed below.

Total Recommended Investments at Civic Center →	TOTAL \$ 19,588,079.55
Total Recommended Investments at VFW →	TOTAL \$ 4,423,470.30
GRAND TOTAL	
\$ 24,011,550	

ALTERNATE ITEMS	YEAR (n)	QTY	COST	SUBTOTAL	CONTGCY @			TOTAL	ESCALATION @ 3% PER YEAR (n-1)		IN OPTION? OPTION
					15%	10%	20%		3%		
Other Improvements											
Civic Center											
Add accessible seating and concourse width	1	1	LS \$ 320,000.00	\$ 320,000.00	\$48,000.00	\$36,800.00		\$404,800.00	\$	404,800.00	x \$ 404,800.00
Install a dedicated dehumidification unit for year-found rink operation (sized for one rink	1	1	LS \$ 450,000.00	\$ 450,000.00	\$67,500.00			\$517,500.00	\$	517,500.00	x \$ 517,500.00
2 Convert weight room to toilets & concessions to serve Itts Williams fields	1	680	SF \$ 250.00	\$ 170,000.00	\$25,500.00	\$19,550.00		\$215,050.00	\$	215,050.00	x \$ 215,050.00
3 Convert furnace-serviced areas to hot water (req's boiler plant)	1	9,433	SF \$ 30.00	\$ 282,990.00	\$42,448.50	\$32,543.85		\$357,982.35	\$	357,982.35	x \$ 357,982.35
VFW											
Install elevator to 2nd level	1	1	LS \$ 125,000.00	\$ 125,000.00	\$18,750.00	\$25,000.00		\$168,750.00	\$	168,750.00	x \$ 168,750.00
Translucent panel, arena clerestory	1	856	SF \$ 80.00	\$ 68,480.00	\$10,272.00	\$6,856.00		\$85,608.00	\$	85,608.00	x \$ 85,608.00
											TOTAL \$ 1,749,690.35

Site Diagrams



This design option places the new ice sheet to the west of the existing Civic Center, connected by a “spine” between both rinks and capped by a new entry space on the south side of the building. Parking is still provided to the east and west, with the majority of spaces to the west. A third parking area is opened up to the south of the new entry. This arrangement eliminates the current player entrance on the east and focuses all building users to the north and south ends of the building. The concept suggests a drop off lane at the front entry in which players can be dropped at a separate door from other patrons. As a combined facility, the new entry area remains focused to the south/southwest.

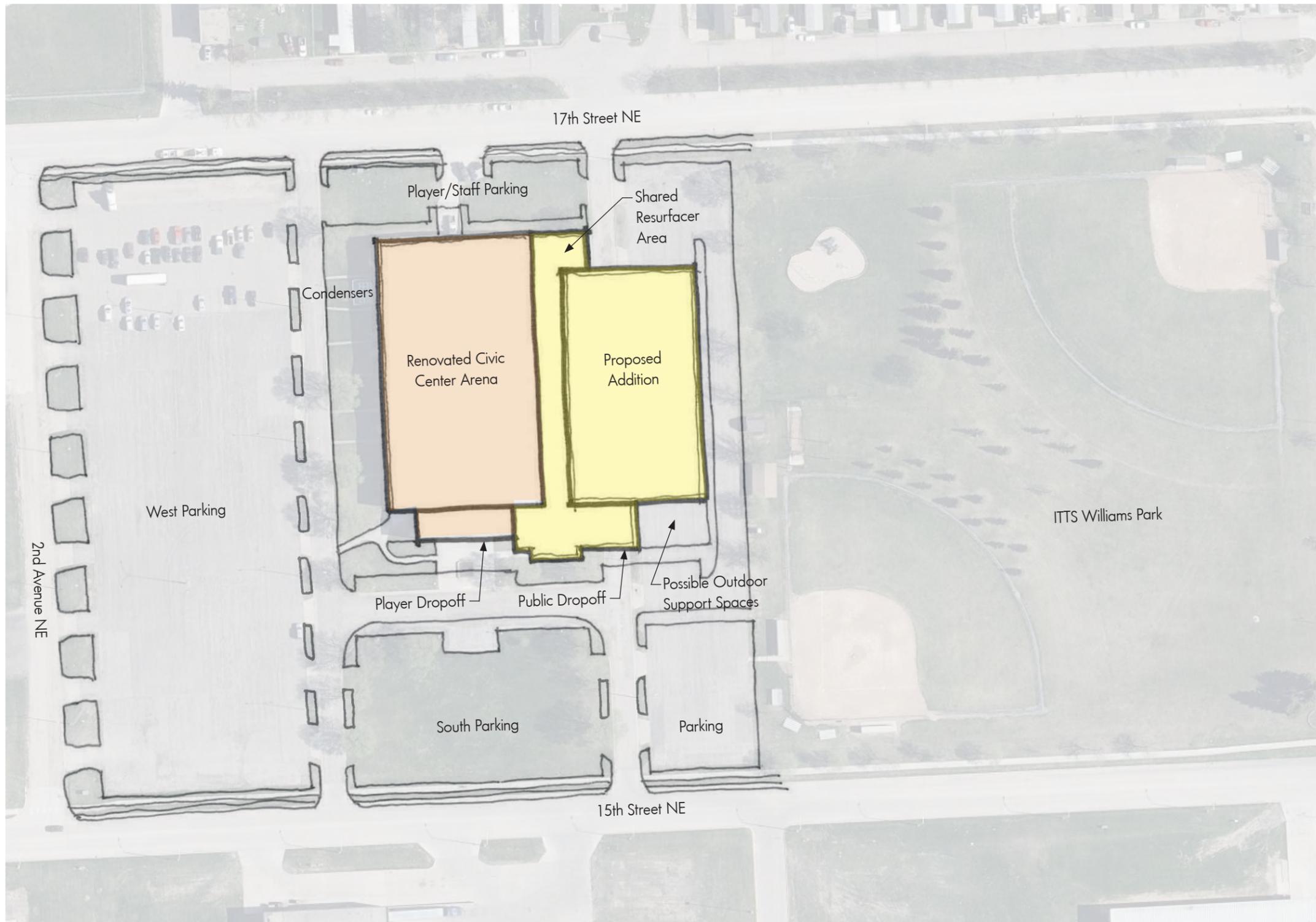
Placing the new rink in this orientation solves several design issues:

1. The new entry contains elevator and stairs to take patrons to the ice level of both rinks. It is part of the new construction and can be tailored to handle existing and new spaces.
2. The spine contains all new general locker rooms for both ice sheets. They can be on an accessible level and users can access either ice sheet from this centralized area. The spine could also host an upper level concourse gathering and viewing area as well as other building support spaces such as meeting rooms and offices.
3. The new ice plant would be centrally located to serve both rinks. Although a design challenge, the desire would be to also have a shared ice resurfacer area that serves both ice sheets.
4. Rather than attempt to renovate and provide necessary access to the existing boys’ hockey locker room, new space would be provided within the facility. It may be possible to use some of the open floor area under the Civic west seating for this.
5. The existing east player entrance would be discontinued for use by the public and would only be used for emergency exiting from that side of the building.
6. Existing locker rooms along the east side of the Civic would be converted to building storage, which may include some lower level floor infill. This would eliminate the need for updated HVAC systems for the existing lockers which are extremely undersized. Essentially the entire east lower level would revert to non-public use.
7. A secondary player entrance may be considered at the north end of the building but potential conflicts with the resurfacer activity may make this an unattractive solution.
8. The existing west Civic wall below grade has shown some bowing over the years. Placing new construction on this side of the building would remove that soil pressure and any issues it might eventually cause.

CIVIC CENTER ARENA EXPANSION - WEST OPTION

Approx. 600 parking spaces (public and players/staff)





CIVIC CENTER ARENA EXPANSION - EAST OPTION

Approx. 600 parking spaces (public and players/staff)



Placing the new ice sheet to the East of the Civic ends up being very similar to the West option in terms of site use. South entry, drop off locations, added south parking area are all essentially a mirror of the West option. If desired, the East option might allow the ability to include some support spaces for the ball fields at Itts-Williams such as toilet rooms or maybe even a concessions area. East placement would all but eliminate the east parking spaces and force nearly all users to the south and west.

While the interior space use would generally be similar to the West option, some differences would make this option much less desirable:

1. The lower level spaces on the west side of the Civic are relatively good for renovation and expansion on that side. These spaces are open and/or would become open due to reconfiguration, and most importantly are on the same level as the ice. The same spaces on the east side are sunken several feet below the ice surface and would require significant demolition and renovation to make the usable and accessible. This would drive cost up compared to the West option.
2. The player entrance assembly would likely need to be removed completely which would require relocation of the player weight room and add cost.
3. There has historically been a high water table on the east side of the building site (east of the Civic Center). If geotechnical studies prove this out, dewatering costs for construction and building operation would need to be considered.
4. Main utility connections are on the west side of the Civic Center. Placing a major addition on the east would increase cost of extending utilities around, through, under the building.



No significant changes would happen to the exterior of the VFW Arena in terms of building size, placement, or access. In order to convert to indoor turf and track use, minor renovation of public spaces on the lobby side would be the most noticeable - concessions, toilet rooms, and accessible path to the event floor. Within the arena volume, the removal of the bleacher seating, the turf and track system, and more lighting and HVAC would be evident.

At the facility site, building access to the main entry and amount/orientation of parking would be improved through a significant re-thinking of how the parking lot is placed on the site. In addition to the VFW Arena patron parking, consideration must be given to parking, drop off, and access to the Blue Line Arena, the pickleball courts, and playground at this location. Currently during the winter months if an event is happening at both the VFW and Blue Line arenas, traffic within the parking area is difficult at best. A new site design allows patrons to get to the Blue Line Arena through the rest of the parking without seriously clogging the way. Overflow for the BLA could be provided by using the south parking area next to the Blue Line and creating a new sidewalk path from that to the BLA main door.

VFW ARENA CONVERSION

Approx. 125 parking spaces (public and players/staff)



