Ely Public Schools
Independent School District 696

Ely School Sports Facilities Assessment

Ely, MN

ISDEL 180193 | November 12, 2024

SEH

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INTRODUCTION

Independent School District 696 Ely Schools retained Short Elliott Hendrickson Inc. (SEH) to perform an assessment of the sports facilities located on ISD 696 campus in Ely, Minnesota. The goal of the assessment was to determine the condition of the current sports facilities, plan for future needs, and make recommendation for improvements and repairs. The assessment included the Ice Arena, Football Stadium, Baseball and Softball Facilities, and the Original Gymnasium, Weight Room and Old Locker Room in the high school.

Generally, the assessment involved the following three major components: (1) Facility Condition Assessment, (2) Conceptual Design, and (3) Preliminary Cost Estimating. The three major components of the assessment are further summarized below and described in detail in the report sections which follow.

SCOPE OF WORK

The scope of work conducted by SEH in support of the assessment included the following major tasks:

1. **Perform condition assessment of existing facility.** Condition assessment included site visit by architectural, structural, civil and electrical disciplines to visually observe condition of existing buildings and equipment.
2. **Develop conceptual site masterplan layouts.** Develop a conceptual site masterplan document using the information gathered during the site assessment and ideas present during project kickoff meeting.
3. **Develop preliminary cost estimates.** Prepare preliminary estimates of probable cost for the recommended improvements and concept designs.

FACILITY AND CONDITION ASSESSMENT

The SEH team started by conducting an extensive discovery tour of the existing facilities to gain an understanding of the current conditions. During this process, SEH documented the condition of the major building systems and elements such as the building shell, roofing, interior finishes, structural systems, and mechanical and electrical systems. The assessment began with a review of available original building drawings in conjunction with a site visits. During the site visit a facility tour was conducted with school staff to visually observe existing interior and exterior conditions. Detailed notes, dimensions, and photographs were taken to document the current conditions. At the completion of the assessment the collected data were compiled into the following written report.

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

CONCEPTUAL DESIGN

After compiling initial information from the facility condition assessment and meeting with school staff to discuss possible improvements a conceptual site masterplan design was developed. The

conceptual plan provides a scaled graphical representation of the suggested facility improvements, site upgrades, and accessory building additions.

PRELIMINARY COST ESTIMATE

A preliminary estimate of probable cost was developed for the recommended repairs and improvements to support the schools future planning and funding decisions. The preliminary cost estimates are limited to the known project constraints and includes anticipated costs for building renovations and improvements and include anticipated soft costs, design fees, and a contingency for unforeseen items. SEH used current industry standard cost reference materials, as well as an internal historical database of costs based on building size, scope and type.

LIMITATIONS

The assessments and recommendations in this report are based on limited site observations of accessible and exposed portions of the building. Some portions of the buildings such as roof structure, and wall framing were not visible due to finish materials. Because of these limitations, the observations and assessments in this report are not comprehensive. If conditions that differ from what is described in this report are later discovered, we request that you contact us to discuss and possibly evaluate the specific conditions.

Assessments and recommendations in this report apply only to the specific conditions observed and documented herein. Building components were assessed based on condition and apparent original intended function. SEH's services for this project have been conducted consistent with the care and skill ordinarily exercised by members of SEH's professional staff practicing under similar circumstances at the same time and in the same locality. SEH provides no warranty, express or implied through this evaluation and recommendations.

SUMMRY OF FINDINGS

The Ely Public Schools, Independent School District 696 has conducted a thorough assessment of its sports facilities, including the Ice Arena, Football Field, Baseball Field, Softball Field, High School Gymnasium, Old Locker Room, and Weight Room. The goal of this assessment is to evaluate the current condition of these facilities and offer recommendations for improvements to enhance their functionality, safety, and accessibility

Below is an overview summary of the recommendation for each of the facilities included in the assessment:

- **Ice Arena**: Built in 1972, the Ice Arena is in fair to poor condition with many components aged and beyond their useful lifespan. Immediate structural repairs are needed, and a comprehensive renovation is recommended. The arena lacks accessible restrooms, locker rooms, and spectator seating. HVAC and lighting systems are aged and in need of replacement to improve indoor air quality and energy efficiency. Exterior roofing, wall cladding and doors are in need or replacement and the parking lot is in need of an overlay or complete replacement.
- **Football Field**: Improvements are suggested for the site, grandstand, and accessory structures. Recommendations include upgrading the field's drainage system, regarding the turf field or upgrading to a synthetic field, updating the sports lighting to energy efficient LED

fixtures, and providing structural and accessibility improvements to the grandstands. Included in the assessment are alternative options for complete replacement of the grandstand, addition of permanent restroom facilities and the addition of a maintenance garage adjacent to the field for consideration.

- **Baseball Field:** The current baseball field is in good condition but would benefit from modernization. Suggestions include regrading the natural turf field or upgrading to synthetic turf, replacement of the current sports field lighting with LED fixtures, additional accessible bleacher seating and the addition of a stand-alone restroom and concessions building. Additional recommendations include updating the batting cages, making minor structural repairs to the dugouts and exterior cladding updates to the storage and equipment building.
- **Softball Field**: Suggested improvements to the softball field include new fencing, replacing bleacher seating, regrading the natural turf field or upgrading to synthetic turf and minor repairs to the dugouts.
- **High School Gymnasium**: The gymnasium is currently in good condition. A lighting and electrical upgrade is recommended to replace old and outdated fixtures. Application of a spray-applied acoustical finish material over the existing plywood sheathing at the ceiling level is also recommended to improve the visual appearance and acoustics of the space.
- **Old Locker Room:** The locker room lacks accessibility and features currently expected in a modern locker room facility. Recommendations include updating interior finishes, plumbing fixtures, lighting and HVAC systems.
- **Weight Room**: The current weight room is in good condition overall and appears to be meeting the needs of the school and its students. Suggested improvements include replacement of current lighting and ceilings to brighten up the room and improve energy efficiency of the lighting.

The total estimated cost for all of the improvements ranges from $15.4 million to $17.2 million covering site improvements, exterior and interior building improvements, HVAC upgrades, and structural repairs. A more detailed breakdown of the estimated costs can be found in the following assessment report for each facility.

Ely School Sports Facilities Assessment

Prepared for ISD 696 Ely

1 Ice Arena

1.1 Facility Overview

The original ice arena building was constructed in 1972 and is located on the west side of the school campus. The original building is an approximately 26,500 square foot single-story pre-engineered steel structure supported by a concrete foundation system. The building houses one sheet of ice, bleacher seating, a small concessions area, public restrooms and an elevated press box/announcer's booth. In 1998 a 5,500 square footlocker room addition was added to the east side of the original structure. The addition is also a pre-engineered steel structure with concrete block interior partitions. Located north of the arena building is a below grade storage area that dates to the origin school building construction. This space is used primarily for storage.

Both the original structure and the addition have a fire sprinkler system installed throughout however it was noted at the time of the site visit that this system was not operational. A detailed review of the ice making equipment is beyond the scope of this study, but it was noted to have been recently updated and in good operating condition by school staff at the time of the site visit.

Overall, this facility is in fair to poor condition. As detailed in the following narrative many of the building components are aged and beyond their useful lifespan, there is a general lack of handicapped accessibility throughout the building, mechanical and electrical systems are in need up updating and there are structural deficiencies that need repair. As was detailed in the memo dated September 17, 2024, there are immediate structural repairs needed to stabilize the building until a longer-term repair can be completed.

1.2 Site Overview

The current arena site includes the arena facility itself, a bituminous parking lot located on the West side, and a gravel access drive along the South. The bituminous pavement exhibits multiple pavement distresses and has surpassed its service life. Some areas appear to have damage due to poor drainage. Fencing borders the parking lot on the West and North sides, as well as along the South and West property lines adjacent to the alley and South 4th Avenue East. Much of the fencing around the arena site needs repair or replacement due to post movement and overall aging. Additionally, there is a concrete walkway along the North side of the parking lot and the East side of the arena, along with concrete steps on the South side, adjacent to the alley. The concrete walks have cracking and settlement with potential ADA compliance issues. The current exterior lighting consists of wall pack luminaires mounted to the West side of the arena. The luminaires don't currently illuminate the entire parking lot. Lastly, the interior rink light is non-LED and could be upgraded to more energy efficient LED lighting.

1.3 Architectural Overview

1.3.1 Exterior Shell

The exterior cladding and door openings are generally in poor condition and beyond their useful lifespan. Many areas of damage and deterioration are present across the building's exterior.

- The building's exterior shell consists of corrugated metal wall panel siding and a standing seam metal roof. The siding and roofing are believed to be original to the building construction and need replacement. Wall panels are dented, scratched and have holes in several areas. Roofing is nearly 50 years old and has exceeded its useful life. It is recommended that the siding and roofing systems be replaced. It is recommended that the exterior wall panels be replaced with an insulated metal sandwich panel and the roofing be replaced with a like-kind standing seam metal roof. As part of the roofing replacement if is also recommended that the insulation system be replaced and upgraded to comply with current energy codes. This will provide a more energy efficient building and weather tight exterior enclosure.
- The exposed concrete foundation wall around the perimeter of the building is also showing signs of deterioration. Improper drainage away from the building structure may be contributing to the deterioration. The addition of gutters and downspouts on the east and west roof edge and regrading of the soils around the building is recommended to improve drainage.
- Exterior passage doors consist of painted steel doors and frames, the main building entry on the west façade is an aluminum framed glass storefront door system and there are multiple overhead sectional garage doors all in poor condition. It is recommended that the exterior doors be replaced with new insulted doors to maintain the building in a weathertight and secure condition.
- Roofing over a portion of the below grade storage areas to the north of the arena needs replacement.

1.3.2 Interior Building Systems

Overall, the interior finishes and systems are aged and in need of updating. It is recommended that the following improvements be incorporated into any major renovation project.

- Demolish existing public restrooms and concessions stand and reconstruct new main entry lobby, handicapped accessible restrooms, concessions stand and climate-controlled viewing area. The renovation of these spaces may require a small building addition of approximately 1,500 square feet to accommodate these spaces at the appropriate size.
- Modify one toilet and shower stall in each of the existing locker rooms to meet current handicapped accessible requirements.
- Replace the existing interior arena lighting with new energy efficient LED fixtures.
- Replace the dasher boards and netting around the ice sheet perimeter.
- Replace bleacher seating with new handicapped accessible bleachers.
- The existing wood-framed press box appears to have been added after the time of original building construction. The materials and numerous details of the construction suggest that it was not constructed using an engineered design. It is recommended that

the press box be removed, and a new press box be engineered and constructed to meet current structural codes / requirements and have proper stair access.

1.3.3 Accessibility

The ice arena facility lacks general accessible features throughout.

- The main building entry adjacent to the west parking lot is not accessible and requires visitors the transvers a roughly 4-inch-high step up into the building. There is an accessible entry on the east side but there is no sidewalk from the main parking lot to the accessible entry.
- Interior restrooms in the original building do not provide adequate clear space for wheelchair access and restroom finishes and plumbing fixtures are aged and in need of replacement. Restrooms in the locker room addition are also not compliant with current accessibility standards and do not provide complain toilet and shower stalls. It is recommended that a complete replacement of the two main public access restrooms in the arena be included in any major facility improvements Project. Restroom and shower facilities in the locker room area should also be modernized to provide accessible facilities.
- The current bleachers in the main arena lack accessible access and wheelchair accessible seating spaces. Bleacher seating should be replaced with new seating areas that have accessible ramps and seating areas.

1.3.4 HVAC Systems

Mechanical HVAC systems are either beyond their useful lifespan, ineffective, or non-existent.

- The main arena area has suspended radiant heaters over the bleacher area that are aged. It is recommended that the radiant heaters be replaced to maintain a comfortable temperature for the spectators.
- There is no mechanical means to dehumidify the arena or effectively provide fresh air or exhaust other than a fan and louvered opening in the end wall. A dehumidification system should be installed with distribution ductwork to reduce moisture buildup and provide fresh air circulation throughout the arena. This system would likely require two exterior ground mounted HVAC units with interior distribution ductwork suspended from the roof structure.
- The locker room addition is also lacking proper heating/cooling and fresh air circulation. There are two suspended unit heaters that provide minimal heat but do not supply fresh air or exhaust. It is recommended that a new HVAC system be installed with ducted supply and exhaust throughout the locker room space. This could be accomplished with a ground mounted HVAC unit or forced air furnace units with an energy recovery system.

1.3.5 Life Safety Systems

The life safety systems within the building are aged and in need of replacement or modernization.

- The building is equipped with fire suppression sprinkler system throughout. The system is believed to have been added as part of the 1998 locker room addition and should be evaluated and modernized by a qualified fire sprinkler contractor.

- The building also has a fire alarm system and emergency battery backup egress lighting and exit signs. Amy major renovations or improvements to the facility should include replacement of these systems as they are aged and beyond their useful lifespan.

1.4 Structural Overview

The structural condition of the arena is generally fair with the exception of serious foundation issues discovered on the west side of the building. Other less significant issues also warrant minor repairs and rehabilitation, but the focus of structural concern is on the west side foundation.

The major foundation issues warranting priority temporary stabilization measures were described in detail in a September 9th memorandum that was emailed to school staff that was formalized subsequently in a September 17, 2024, assessment memorandum. There are significant cracks and concrete separation at three foundation piers along the west foundation wall. These cracks and spalls are present at the pre-engineered metal building system mainframe connections to the foundation, a location of structural significance. The pre-engineered metal building (PEMB) system relies on steel moment frames to support gravity and lateral loads. The geometry and design of the moment frames results in outward thrust loads at the base of columns when the frames are subjected to snow loads. The large cracks and spalling at three building columns could compromise the transfer of these thrust loads and destabilize the building in a design-level snow event or heavy snow season.

Drawings dated 1970 by Mid-Continent Steel Corp show that the building system was constructed on footing-supported concrete piers. The drawings provide indication reinforcing in the piers and rebar ties across the building in the floor slab that appears to be intended to restrain thrust loads. Based on the cracks in the piers and the settlement of the floor slab along this portion of the west wall, it is possible that the rebar ties across the building may have been compromised at the three column locations in question, possibly during prior retrofit work replacing the ice sheet. The development of permanent repairs will warrant further investigation into previous foundation changes.

Temporary stabilization measures were recommended, and at the authorization of the School Board, design drawings and details were developed for obtaining contractor quotations for this temporary work. The memorandum and drawings of temporary stabilization measures provide further information about mass concrete footings and piers and steel braces that are proposed to provide resistance to building thrust loads until comprehensive repairs of the conditions can be completed in conjunction with other building repairs and improvements. It is possible that the foundations installed for temporary stabilization can be repurposed later for exterior billboard signage or other exterior features.

Other foundation issues are present in components and conditions that warrant repair but do not present immediate structural stability concerns. Such conditions include:

- Concrete grade beams between piers on the west wall lean outward, apparently caused by fill material loss due to roof stormwater from the eave and poor drainage.
- Associated with poor drainage and standing water along the west wall, concrete at the outside edge of each of the piers is spalled, exposing corroded reinforcing bars. These are not the primary pier reinforcement but should be addressed to avoid further degradation.

- Soil subsidence or erosion has caused voids below the floor slab. These are most observable on the south end of the west wall where the three distressed piers were identified, but it extends further along the wall to a lesser degree and may extend the full length of the west wall.
- Floor slabs are settled by several inches adjacent to the exterior wall, probably caused by the subsidence and erosion noted above.

We recommend repair and retrofit of foundations on the entire west wall in order to provide a permanent correction to stability concerns and prevent further deterioration. Recommended repair measures will include replacement of settled floor slabs and installation of supplemental tie rebar where piers are cracked or separated, protecting original column tie bars in the removal process. Repairs will also include supplementing soils below floor slabs that have not settled, and stabilization or replacement of precast grade beam panels that have moved or tipped outward. Design details may include partial removal of precast panels and replacement with cast-in-place concrete foundations, installation of tie-back anchors, and placing lean concrete fill or pumpable "mud-jacking" materials to fill voids. Exterior concrete at piers exhibiting spalling and exposed rusted rebar will require removal of loose material, removing concrete around reinforcing bars to allow rust to be cleaned and application of rust-inhibitive coating, installing new adhesive dowels to secure materials together, and repairing concrete with a concrete repair mortar product. It is expected that limiting the extents of removal to the settled floor slab extents will be better for the integrity of the building foundation system. Other repairs beyond this area may be performed from the outside.

Other structural conditions in the arena are generally fair but miscellaneous items are in need of maintenance level repairs. Masonry walls on the east side and at the basement level link to the school building exhibit some minor cracks that need repointing. Foundations away from the west foundation wall need joint sealant and spot patching.

Building mainframes, wall girts, and roof purlins are in generally good condition. However, these structural elements lack coating beyond what appears to be an original shop primer. Interior steel is in good condition, but it is expected that some areas of spot rust will be found during a cladding replacement project. For long term performance and protection, a coating system on exposed interior steel would be an alternative to consider.

1.4.1 Recommendations

Site Improvements

- Reconstruct or rehabilitate the existing parking lot. If a geotechnical investigation finds that poor soils underlay the existing pavement, a full reconstruction will be necessary to ensure adequate support for current vehicle loads. This process involves removing the existing pavement and underlying base layers, followed by the placement of a granular subbase over geotextile fabric. Drain tile will be placed at the bottom of this granular layer to capture water that infiltrates the pavement structure. An aggregate base layer will then be added on top of the granular subbase, followed by the placement of new bituminous pavement. Conversely, if the investigation indicates that the existing base material is of good quality and has sufficient depth, a full depth reclamation can be performed. This method involves grinding up the existing pavement and a portion of the underlying base material to create a new, homogeneous base layer, over which new bituminous pavement will be laid.

- Extend the new bituminous pavement to the South side of the arena, creating additional parking spaces.
- Install concrete curb and gutter along the West and South sides of the arena with ADA compliant concrete walkways for ease of access to the arena.
- Install stormwater collection and conveyance systems to improve overall site drainage.
- Remove the existing fence along the West side of the parking lot to create additional parking spaces for the arena.
- Replace the existing fence along the North side of the parking lot and with an 8-foot-tall chain link fence to separate the playground area from the parking lot.
- Replace the existing fence along the South and West property lines adjacent to the alley and street with an 8-foot-tall chain link fence.
- Replace the existing concrete walkways along the North side of the parking lot and East side of the arena with ADA compliant concrete walkways.
- Replace the existing concrete steps on the South side of the arena adjacent to the alley.
- Install a parking lot lighting system that illuminates the entire parking lot including the additional parking on the South side of the arena.

Exterior Building Improvements

- Replace exterior metal panel siding with new insulated prefinished metal wall panels
- Replace metal panel roofing with new standing seam metal roofing
- Replace roof insulation and vapor barrier systems
- Replace exterior overhead sectional doors and passage doors
- Provide gutters and downspouts on the east and west roof edges
- Replace a portion of the norther storage area roofing

Interior Building Improvements

- Provide accessibility upgrades including the following:
  - Replace bleacher seating with new bleachers that includes accessible access and seating areas
  - Renovate existing public access restrooms in the arena to provide accessible modern, accessible facilities.
  - Renovate locker room restrooms to provide accessible toilet and shower facilities
- Replace ice rink dasher boards
- Upgrade hockey arena lighting to LED luminaires
- Modernize fire sprinkler system
- Replace fire alarm and emergency egress lighting

HVAC Upgrades

- Replace radiant heater over bleacher seating
- HVAC upgrades in locker room addition to improve heating and fresh air distribution
- Add dehumidification system to the main arena space

Structural Repairs

- Repair and retrofit of west wall foundations and interior floor slab (detailed description of conditions and possible repair measures provided above in description of existing conditions)
- Floor patching and replacement of exposed rebar at overhead door on east side of building.
- As part of the building retrofit, we recommend at a minimum addressing areas of spot corrosion on building mainframes and purlins (limited locations expected based on observations). As an alternative, to extend service life and improve appearance, consider applying a new coating system to at least the main frames.
- Patching and application of joint sealant at foundations away from the west wall.
- Replacement of the canopy covering the entrance on the north end of the west wall with a more robust and extended canopy to protect visitors from potential sliding snow loads.
- Miscellaneous repointing of cracks in exterior masonry walls on the east side of the arena.
- Repointing and repairs of masonry foundations at lower-level connection of arena to main school building.

Ice Arena Improvements Estimate		
Item Description	**Low**	**High**
Site Improvements	$820,500	$869,000
Exterior Building Improvements	$587,000	$604,000
Interior Building Improvements	$1,554,000	$1,680,000
HVAC Improvements	$535,000	$588,500
Structural Repairs	$450,000	$525,000
Subtotal:	**$3,946,500**	**$4,266,500**
Contingency (20%)	$789,000	$853,000
Construction Total (Subtotal + Contingency):	**$4,735,500**	**$5,119,500**
Soft Costs* (20%)	$789,000	$853,000
Total (Construction Total + Soft Costs):	**$5,524,500**	**$5,972,500**
Estimated Deduct Cost to Reclaim Parking Lot		**($189,000)**

*Soft costs include design fees, permitting fees, construction phase materials testing and other miscellaneous cost items.

2 Football Field

2.1 Facility Overview

The current football field consists of a natural turf field with a dirt running track around the perimeter. A grandstand with a press box is located along the north edge of the football field and has seating capacity for approximately 750 spectators. The grandstand and football fields were originally constructed in 1939. The area below the grandstands includes a small lobby space with two outdated restrooms and a storage/mechanical room space. The remainder of the area below the seating is enclosed with wood framed walls and is used for vehicle and maintenance equipment storage. The football field has 8 steel truss framed tower structures supporting field lighting and a maintenance platform on each tower

2.2 Site / Athletic Field

The field exhibits slope inconsistencies which affect overall field drainage. Perimeter fencing is located along on all sides of the field except for the Northwest corner. Much of the perimeter fencing needs repair or replacement due to post movement and overall aging. Additionally, there is a long jump/triple jump runway and landing area as well as a shotput circle to the West of the football field. The current football field lighting consists of inefficient HID (high intensity discharge) sports lighting.

2.3 Grandstand

The grandstand structure consists of a steel pan bleacher system supported by regular steel frames below and a concrete wall at front adjacent to field and running track. The remaining walls and the sides rear consist of wood framed enclosure with vehicle and pedestrian doors for access. The space directly below the grandstand is used to store vehicles and maintenance equipment. There is no fire suppression or fire rated separation between the seating areas and the storage spaces below as required by current building codes. At the upper level of the grandstand a press box appears to have been constructed without engineered design and requires structural strengthening or reconstruction. In the center of the grandstand is a set of egress stairs that lead to a first-floor lobby space with two restrooms that are outdated and do not meet current minimum accessibility standards.

Primary grandstand structure condition is generally good. However, numerous individual elements need repair, strengthening or reconstruction.

- Stair on West End - Unattached to foundation, requires foundation reconstruction or replacement as part of bleacher extension.
- The press box lacks weak-direction stability framing and does not have adequate anchorage to primary structure. Requires strengthening or reconstruction. Strengthening measures would include addition of hold down anchors and shear wall framing for lateral stability, install hold-down anchorage to bleachers, reconstruction of moisture/impact damaged front base wall, add steel reinforcing below front wall (will require removal of plaster in entry lobby).
- Foundation and Floor Slab undermining in lobby: cracking at base of rear wall and slab undermining in electrical room is a structural concern but appears isolated to this space. Will require floor removal and repair of undermined walls by mudjacking or grouting.

- Moisture deterioration on entry canopy wood sheathing, likely extends to structural framing. Roofing over the entry area has deteriorated and wood roof planks are exposed in some areas. Remove and replace deteriorated wood framing and replace roofing.
- Grandstand seating is not accessible. Recommend adding an accessible ramp to the west end of the structure and reconfiguring a portion of the seating to create wheelchair accessible spaces.
- Restrooms in the grandstand are not accessible and are beyond their useful life. Restrooms could be renovated in place but given the lack of usable space this option would likely not a cost-effective solution. Alternatively, a new standalone restroom building could be constructed adjacent to the grandstands to provide fully accessible facilities with plumbing fixture quantities that would be adequate to support the full occupant load of the grandstands.
- Guardrails at the back and sides of the seating areas should be replaced with new guards that are a minimum of 42-inches in height and stairs should have handrails added to prevent tripping and fall hazards and to comply with current codes.

Alternatively, demolition and replacement of the grandstand structure could be considered as an option. A replacement grandstand is proposed to consist of a pre-engineered, free-standing bleacher system supported by a concrete foundation. The system could be designed to have a similar seating capacity, press box, and include accessible access and seating. The vehicle and equipment storage garage space below the grandstand would not be incorporated into the proposed new system.

2.4 Football Field Accessory Structures

Accessory structures at the football field include galvanized truss-framed light towers for stadium lighting, standalone bleachers at the far side of the field, a flagpole beyond the west end zone, and pickleball courts located at the east end of the football bleachers.

The light tower structures are in generally good condition but exhibit some items of concern that warrant repair or maintenance. The flagpole is rusted, shows prior impact damage, and is leaning at the base.

- Bolts securing the galvanized tower framing members generally show surface rust but not pack rust. Cleaning the bolts and coating with a cold-galvanizing coating is recommended to control ongoing corrosion and to extend the life of the towers.
- Each tower has a service platform surrounding the lights at the top as well as rods for climbing. The towers are no longer serviced by climbing and use of the platforms, so removal of the platform framing and bracing is recommended. Removal of the service platforms would have the benefit of reducing wind area at the top of towers, which lowers stresses on the aging structures.
- Two towers at the south side of the field opposite the bleachers and two towers located in the vicinity of the football bleachers have bases which are partially buried in soil. This condition creates a risk of corrosion and degradation at the base of the towers where stresses are highest, so it is recommended that these conditions be addressed. At the towers in the field, soil should be removed from the top of the concrete pedestal and surrounding soil should be regraded to slope away from the towers. At the two towers adjacent to the bleachers, surrounding grades are higher than the tower bases, so an alternative approach is recommended. We recommend removing soil and paving

material, cleaning and recoating the framing members at base connection, applying fluid applied waterproofing to the bottom 12 inches of framing members, and placing grout around the base to slope stormwater away from the structure. An alternative approach would be to replace these two light towers with new pole mounted lights. If replacing, it would recommend to extend the foundation for the tower in parking lot 3 to 4 feet above grade for better protection from potential vehicle impact.

- It is recommended that the flagpole be removed and replaced with a new pole.

2.5 Recommendations

Field Improvements

- Install synthetic turf or, alternatively, re-grade and establish natural turf.
- Install an inground irrigation system if the natural turf option is chosen.
- Install a drain tile system to improve overall field drainage.
- Replace the existing perimeter fence with an 8-foot-tall chain link fence.
- Replace the existing flagpole.
- Replace both existing field goal posts.
- Replace the existing long jump/triple jump runway, take-off board, and landing area.
- Install a new shotput throwing circle, stop board, and landing sector.
- Install a new discus throwing circle and protective cage.
- New irrigation system for football field with a local controller

Grandstand Improvements

- Add a handicapped accessible ramp to the east end of the grandstand and modify seating to include wheelchair accessible spaces (may require pickleball court relocation)
- Eliminate vehicle and maintenance storage below the grandstands and construct standalone bus and maintenance garage adjacent to grandstands (may require pickleball court relocation) or install fire rated separation
- Repair grandstand stair foundation on west end of grandstands
- Replace and add additional grandstand guardrails and handrails
- Replace grandstand bench seat covers
- Reconstruct the press box and provide new lighting, electrical and communication systems
- Repair / replace damaged wood framing and replace roofing over entry area
- Replace exterior garage doors and wood trim
- Paint the exterior of the grandstand building

Standalone Restroom Building

- Construct stand-alone restroom building adjacent to the grandstand and abandon existing restrooms in the grandstands building.

Field Lighting Improvements

- Upgrade football field lighting on existing poles to LED luminaires, upgrade electrical infrastructure, and provide a new control system.
- Repair / strengthen steel framed light towers and remove maintenance platforms

Relocated Pickleball Courts

- The proposed improvements to the pickleball site include the following:
  - Remove existing six (6) pickleball courts and construct a new bus/storage garage.
  - Construct four new pickleball courts with perimeter fencing between the baseball and softball fields.
  - Alternatively, a practice football field of 30 yards maximum length could be placed in the proposed pickleball court location or on the West side of the existing football field. If placed on the West side of the football field, the shotput, discus, and long jump/triple jump areas would need to be eliminated.

Standalone Bus / Maintenance Garage

- Construct new approximately 7,500 square foot insulated and climate controlled pre-engineered steel structure for vehicle and maintenance operations and storage needs adjacent to the football stadium grandstand.

Football Field Improvements Estimate		
Item Description	**Low**	**High**
Football Field Improvements	$521,500	$546,000
Grandstand Improvements	$464,000	$490,000
Standalone Restroom Building	$525,000	$556,000
Field Lighting Improvements	$328,000	$340,000
Pickleball Court Relocation	$329,000	$358,000
Bus / Maintenance Garage	$1,500,000	$1,750,000
Subtotal:	**$3,667,500**	**$4,040,000**
Contingency (20%)	$733,500	$808,000
Construction Total (Subtotal + Contingency):	**$4,401,000**	**$4,848,000**
Soft Costs* (20%)	$733,500	$808,000
Total (Construction Total + Soft Costs):	**$5,134,500**	**$5,656,000**
Estimated Alternate Added Cost for Synthetic Turf Field		**$1,261,000**
Estimated Alternate Cost for Replacement Grandstands		**$825,000**

*Soft costs include design fees, permitting fees, construction phase materials testing and other miscellaneous cost items.

3 Baseball Field

3.1 Facility Overview

The baseball field is located on the east side of the school campus and consists of a natural turf outfield with a partial dirt and natural turf infield. Currently the outfield exhibits slope inconsistencies which adversely affect gameplay and drainage capabilities. A grandstand with a press box and roof cover is located behind home plate. It is our understanding the grandstand was constructed in the 1980's and has a seating capacity of approximately 400 spectators. At the upper level of the grandstand is a press box. The area below the grandstand is enclosed with two restrooms that do not meet current accessibility standards and a concessions area that is undersized. There are several accessory structures around the baseball field including dugouts, batting cages, a storage building, and an old restroom facility that is currently used as an umpire locker room.

3.2 Site / Athletic Field

The field exhibits slope inconsistencies which affect overall field drainage. Perimeter fencing around the field is in good condition. The playing field is Illuminated with eight (8) inefficient pole mounted HID (high-intensity discharge) luminaires.

- Regrading the field surface and installing a draintile system will improve the playing surface and field drainage.
- A turf irrigation system would improve field conditions and minimize maintenance. An alternate approach would be to install a synthetic turf field in lieu or regrading the existing playing surface.
- Field lighting should be replaced with new high-efficiency LED fixtures on the existing light pole standards.

3.3 Grandstands

The grandstand has stairway access on both the first and third base sides but does not provide accessible access. At the upper level of the grandstand is a press box and the area below the grandstand is enclosed with two restrooms that do not meet current accessibility standards and a concessions area that is undersized. There does not appear to be a fire rated separation between the seating area and the ancillary spaces below the grandstand as is required by current building codes.

- The grandstand structure, roof system, and access stairs are generally in good structural condition.
- The grandstand seating is not accessible, and an accessible access ramp should be added to the third base side.
- The concession, restrooms and storage area below the bleachers limited with the lack of space for expansion. The concession and restroom area may be best repurposed as storage space upon construction of a new restroom and concession building. A fire rated separation will be required between the storage and seating spaces.

- Field netting behind home plate is currently attached to the grandstand roof structure. A new foundation and pole can be added to allow the foul ball netting to be adjusted out away from the grandstands.

3.4 Accessory Structures

Baseball field accessory structures include a number of buildings and structures that vary in condition from good to poor. Left and right field dugouts which are constructed of wood roof framing and masonry walls. Other structures include a wood framed lawn equipment storage building in left field behind the dugout, a masonry building southwest of the grandstand that appears to have formally served as a restroom but appears to currently function only as a storage building, and a batting cage area.

- Dugouts are in generally good condition, but wood posts at the front are poorly anchored at the base by toenails and exhibit moderate deterioration and splitting at the bases. Posts warrant replacement with pressure treated lumber of equal size, or at a minimum retrofit work for installation of new base connections. Double 2x8 headers at front of dugouts should be anchored to the masonry endwalls each end with standard brackets and adhesive anchors to masonry.
- The wood-framed equipment storage building is in fair condition in terms of framing but will need improvements to the exterior cladding and better foundation anchorage if it does not get replaced by another building. One option would be to provide additional storage area in the proposed new restroom/concession building and remove this storage structure. This would allow for better access to the storage spaces and fewer structures to maintain which may have long-term benefits.
- The masonry building located west of the grandstand appears to have previously been used as a restroom facility. This building is in fair condition but underutilized and is not well suited for repurposing. It is recommended that this building be removed to open of the site and create a more inviting entry plaza into the baseball and softball facilities.
- Along the first base line is an existing bleacher system that has a steel frame and wood decking / seating. The bleachers are aged, do not provide accessible access, and beyond their useful life. It is recommended that the bleachers be replaced with a new aluminum bleacher system with a ramp to provide accessible access.
- The wooden post batting cage situated to the East of the third base dugout is unstable and in overall poor condition. It is recommended that a new batting cage be erected on the site.

3.5 Restrooms / Concessions Building

It is proposed to construct a new building located between the baseball and softball fields to provide fully accessible restrooms and an enlarged concessions area to serve both fields. The new building size could be increased beyond what is needed for the restroom and concession function to add storage and umpire locker rooms spaces.

3.6 Recommendations

- Install synthetic turf or, alternatively, re-grade and establish natural turf.
- Install an inground irrigation system if the natural turf option is chosen.
- Install a drain tile system to improve overall field drainage.

- Replace the existing batting cage.
- Install a new water service line to the proposed concession/restroom facility.
- Install a new sanitary sewer service to the proposed concession/restroom facility.
- Construct a new ADA compliant bituminous walking path between the proposed concession/restroom facility and the proposed concrete slab with bleacher system outside of center field in softball area.
- Upgrade baseball field lighting on existing poles to LED luminaires, upgrade electrical infrastructure, and provide a new control system.
- Provide structural upgrades to dugout structures
- Install new foundations and posts to adjust foul ball netting outward from grandstand
- Construct new restroom / concessions building between baseball and softball fields
- Provide accessible ADA ramp to grandstand seating area
- Reclad and provide structural upgrades to equipment storage building
- Demolish old restroom building and create baseball field entry plaza
- Construct fire rated separation between grandstand seating and storage areas
- Replace first base line bleacher seating with new bleachers and viewing platform

Baseball Field Improvements Estimate		
Item Description	**Low**	**High**
Baseball Field Improvements	$931,000	$993,000
Grandstand Improvements	$95,000	$125,000
Standalone Restroom / Concessions Building	$1,275,000	$1,650,000
Accessory Structure Improvements	$212,000	$226,000
Subtotal:	**$2,513,000**	**$2,994,000**
Contingency (20%)	$503,000	$599,000
Construction Total (Subtotal + Contingency):	**$3,016,000**	**$3,593,000**
Soft Costs* (20%)	$503,000	$599,000
Total (Construction Total + Soft Costs):	**$3,519,000**	**$4,192,000**
Estimated Alternate Added Cost for Synthetic Turf Field		**$1,037,000**

*Soft costs include design fees, permitting fees, construction phase materials testing and other miscellaneous cost items.

4 Softball Field

The current softball field consists of a natural turf outfield with a dirt infield. Bleachers are located along the first and third base lines as well as behind home plate. Fencing surrounds the entire field and needs repair or replacement due to post movement and overall aging.

Bleacher seating behind home plate and along the first and third base lines consist of a steel frame supporting wood plank seating and access aisles. The bleachers are not anchored to foundation piers or pads. The bleachers are in fair condition, exhibiting surface rust on 1st and 3rd base bleacher units and recent paint coating on bleachers behind home plate. Bleacher seat boards and foot boards show moderate moisture deterioration and some sagging. The softball field bleachers should be considered for replacement to improve durability/longevity of the structures and to improve accessibility of the facility.

Left and right field dugouts are constructed of wood roof framing and masonry walls and are generally in good condition but should have additional framing anchors. Roof beams at the field side of each dugout are not anchored to support posts or the wall. Posts consisting of (2)2x6 at right field and 6x6 at left field are also missing anchorage to foundation. Left field dugout roof joists are missing tiedown anchors to the roof beam and rear wall.

4.1 Recommendations

- Install synthetic turf or, alternatively, re-grade and establish natural turf.
- Install an inground irrigation system if the natural turf option is chosen.
- Install a drain tile system to improve overall field drainage.
- Replace the existing flagpole.
- Replace the existing scoreboard.
- Replace the existing perimeter fence with an 8-foot-tall chain link fence as well as a 24-foot-tall backstop fence.
- Construct an ADA compliant concrete slab outside of center field for a new bleacher system, including an area designated for wheelchair-accessible viewing.
- Construct an ADA compliant bituminous walking path from the intersection of 8th Avenue East and East Conan St, leading to the bleachers along the third base line, behind home plate, and along the first base line.
- Replace the three (3) sets of bleacher seating behind home plate and along the first and third base lines with a new aluminum bleacher system.
- Install new galvanized steel components to anchor dugout roof beams, posts and joists. Install adhesive anchors to foundations.

Softball Field Improvements Estimate		
Item Description	**Low**	**High**
Softball Field Improvements	$381,500	$419,000
Subtotal:	**$381,500**	**$419,000**
Contingency (20%)	$76,300	$83,800
Construction Total (Subtotal + Contingency):	**$457,800**	**$502,800**
Soft Costs* (20%)	$76,000	$83,800
Total (Construction Total + Soft Costs):	**$533,800**	**$586,600**
Estimated Alternate Added Cost for Synthetic Turf Field		**$640,800**

*Soft costs include design fees, permitting fees, construction phase materials testing and other miscellaneous cost items.

5 High School Gymnasium

The high school gymnasium is original to the buildings construction and is centrally located in the high school building on the main level. The gym includes a wood sports floor, main level spectator seating and bleacher level seating accessed from the second floor of the building. It is understood that the gymnasium presents acoustical challenges when in use during events because of the hard surfaces throughout the space.

The gym roof originally had four skylights that have been closed off and roofed over. According to staff, the original plaster ceilings, attached directly to the wood roof structure, were previously failing and were covered with a layer of plywood sheathing to prevent further deterioration and to protect occupants from falling sections of plaster. It is not known how the sheathing was connected to backup framing. A thorough analysis of the existing gymnasium roof structure is beyond the scope of this study, but it is understood that original plaster is still in place and the weight of plywood sheathing was added. It is assumed that the roof structure was reviewed by a Professional Engineer to verify the original structure's capacity prior to adding plywood sheathing to the underside of the ceiling.

At the upper-level balcony seating it was also noted that the current guardrail system may not comply with current building codes for fall protection. The court lighting consists of inefficient HID lighting and the bleacher lighting consists of outdated luminaires that have reached the end of their useful life.

The structural condition of the wood bleacher system, apparently part of original construction, is good based on visible elements observed in a few select locations. The upper-level bleachers are supported by hanging rods from the roof structure. The connections are not visible, but no distress was observed in visible finish materials. The bleacher system was not assessed in its entirety as part of this project scope and no issues of concern were identified by the owner.

Overall, this space is in good condition and would benefit from updated lighting, acoustical treatments to the ceiling. Also included is repair work to the plaster wall finishes in the adjacent smaller gymnasium space.

5.1 Recommendations

- Provide a light-weight spray-applied acoustical finish material to the ceiling of the original gymnasium to improve acoustics while avoiding application of additional dead load to the structure. It is our recommendation to avoid adding any additional weight to the current roof structure unless a structural analysis of the original roof framing system is completed by a licensed Professional Engineer. Minor trim components to frame and contain the spray applied finish material would be considered incidental.
- Upgrade the gymnasium court lighting and recessed bleacher lighting to LED luminaires.
- Upgrade the electrical control panel that serves the gym.
- Replace or modify existing guardrails at the balcony level to meet current codes for fall protection

High School Gymnasium Improvements Estimate		
Item Description	**Low**	**High**
Gymnasium Improvements**	$224,750	$260,500
Subtotal:	**$224,750**	**$260,500**
Contingency (20%)	$45,000	$52,000
Construction Total (Subtotal + Contingency):	**$269,750**	**$312,500**
Soft Costs* (20%)	$45,000	$52,000
Total (Construction Total + Soft Costs):	**$314,750**	**$364,500**

*Soft costs include design fees, permitting fees, construction phase materials testing and other miscellaneous cost items.

**Estimate does not include any structural modifications to the building.

6 Old Locker Room

The existing locker room is in the southeast corner of the lower level of the original high school building and includes approximate 1,050 square feet of space. The space is currently configured with one single-user, a gang shower room and a large open space with lockers along the walls. The restroom toilet stall and shower facilities do not meet current accessibility standards and codes and should be upgraded. Finishes throughout the locker room consist of tile flooring in the toilet and shower stall areas and painted concrete in the open locker room space. Wall and ceiling finishes include painted plaster and tile in the shower spaces. All interior finishes are aged and beyond their useful lifespan.

Lighting consists of surface mounted florescent fixtures and battery powered egress lights that have also reach the enod of their useful life. There are exposed HVAC ducts believed to be providing exhaust to the shower area.

Overall, this space does not have adequate lockers, accessible restrooms or shower facilities to properly support its use as a locker room. A complete renovation of this space is recommended to provide a modern locker room with amenities and features typically found in a school facility.

6.1 Recommendations

- Demolish the existing plumbing fixtures, lighting, HVAC ductwork and interior finishes.
- Reconstruct the locker room space with the following items:
  - New durable, low maintenance wall, floor, and ceiling finishes such as ceramic tile and epoxy flooring, ceramic wall tile and epoxy paint and vinyl faced suspended ceiling panels
  - Fully accessible restroom stalls
  - Individual shower and changing stalls with the code required quantity of accessible stalls
  - New lockers and bench seating
- Modernized electrical systems for power, LED lighting, and emergency egress lighting and exit signs
- Adjust HVAC system to include proper ventilation, exhaust and heating/cooling of the space

Old Locker Room Improvements Estimate		
Item Description	**Low**	**High**
Locker Room Renovation	$248,500	$287,500
Subtotal:	**$248,500**	**$287,500**
Contingency (20%)	$49,700	$57,500
Construction Total (Subtotal + Contingency):	**$298,200**	**$345,000**
Soft Costs* (20%)	$49,700	$57,500
Total (Construction Total + Soft Costs):	**$347,900**	**$402,500**

*Soft costs include design fees, permitting fees, construction phase materials testing and other miscellaneous cost items.

7 Weight Room

The existing weight room is located on the lower level of the original high school Building. The room is approximately 3,300 square feet and is used for various athletic training functions. Overall, the space is adequate for its intended use although it would benefit from upgraded lighting throughout. The weight room currently includes rubberized floor mats in weight training areas, and synthetic turf flooring in agility training areas. Walls have a painted finish, and ceilings are suspended acoustical panels with surface mounted lighting.

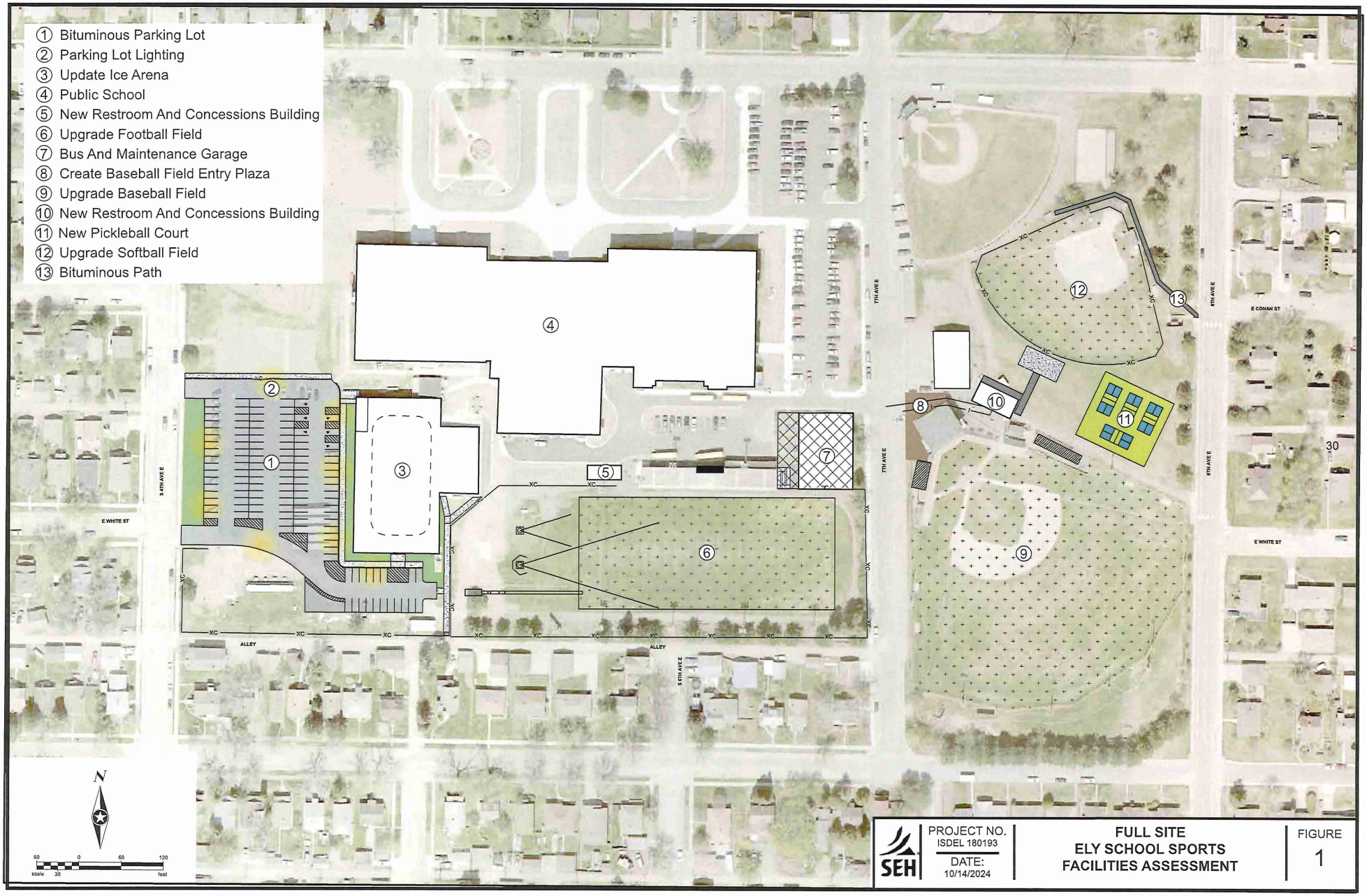
7.1 Recommendations

- Replace current surface mounted lighting with new high-efficiency LED lighting recessed into the suspended ceilings and add occupancy sensor.
- Replace outdated emergency egress lighting throughout the weight room.
- Replace suspended acoustical ceiling grid and panels to brighten up the room and accommodate light fixture replacement.

Weight Room Improvements Estimate		
Item Description	**Low**	**High**
Weight Room Improvements	$24,000	$29,500
Subtotal:	**$24,000**	**$29,500**
Contingency (20%)	$4,800	$5,900
Construction Total (Subtotal + Contingency):	**$28,800**	**$35,400**
Soft Costs* (20%)	$4,800	$5,900
Total (Construction Total + Soft Costs):	**$33,600**	**$41,300**

*Soft costs include design fees, permitting fees, construction phase materials testing and other miscellaneous cost items.

Figures



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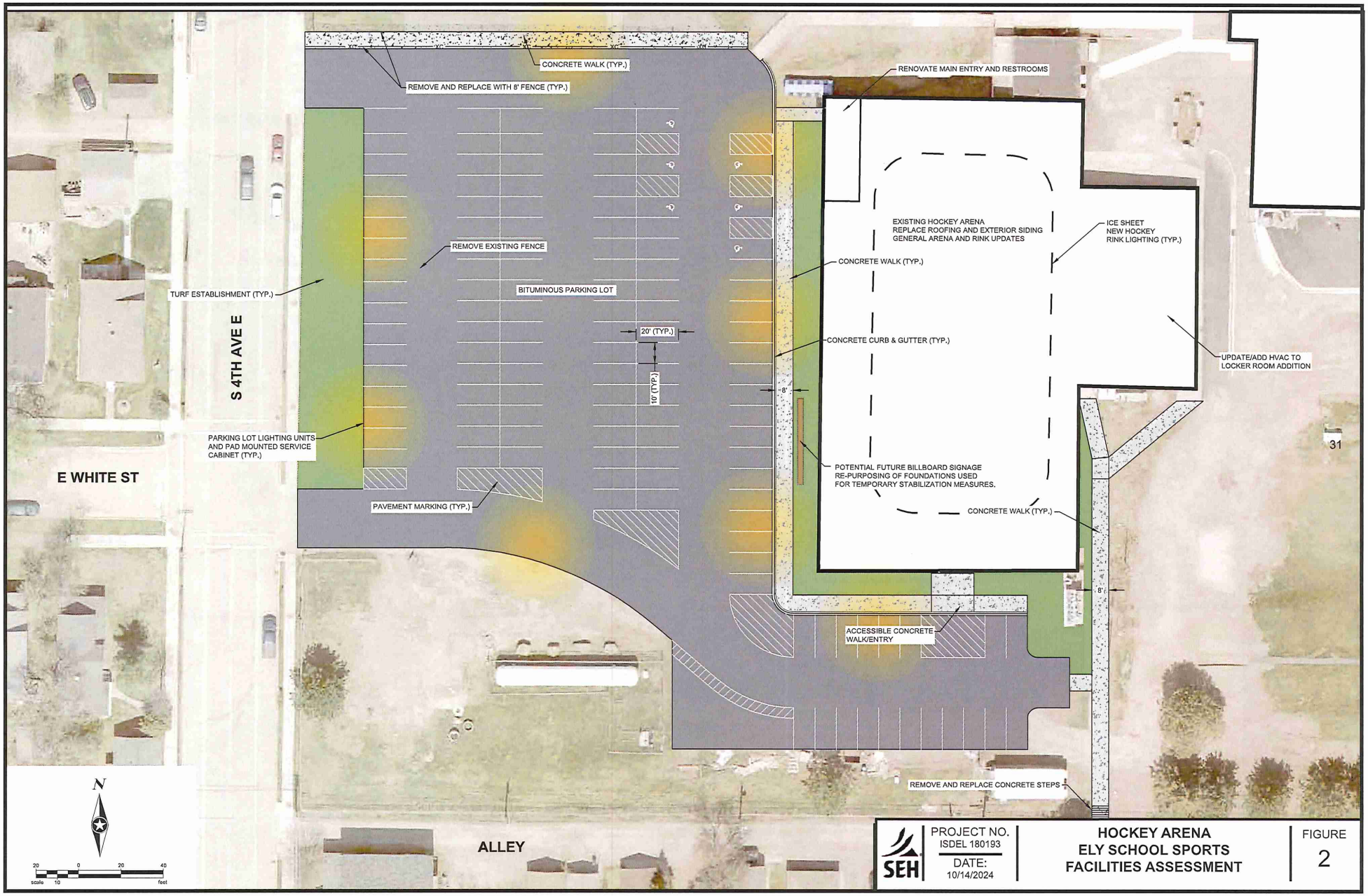
FULL SITE
ELY SCHOOL SPORTS FACILITIES ASSESSMENT

FIGURE 1


CONCRETE WALK (TYP.)
REMOVE AND REPLACE WITH 8' FENCE (TYP.)
RENOVATE MAIN ENTRY AND RESTROOMS
EXISTING HOCKEY ARENA
REPLACE ROOFING AND EXTERIOR SIDING
GENERAL ARENA AND RINK UPDATES
ICE SHEET
NEW HOCKEY
RINK LIGHTING (TYP.)
REMOVE EXISTING FENCE
CONCRETE WALK (TYP.)
TURF ESTABLISHMENT (TYP.)
BITUMINOUS PARKING LOT
S 4TH AVE E
20' (TYP.)
10' (TYP.)
CONCRETE CURB & GUTTER (TYP.)
UPDATE/ADD HVAC TO
LOCKER ROOM ADDITION
PARKING LOT LIGHTING UNITS
AND PAD MOUNTED SERVICE
CABINET (TYP.)
E WHITE ST
POTENTIAL FUTURE BILLBOARD SIGNAGE
RE-PURPOSING OF FOUNDATIONS USED
FOR TEMPORARY STABILIZATION MEASURES.
CONCRETE WALK (TYP.)
PAVEMENT MARKING (TYP.)
ACCESSIBLE CONCRETE
WALK/ENTRY
REMOVE AND REPLACE CONCRETE STEPS
ALLEY
N
20 0 20 40
scale 10 feet
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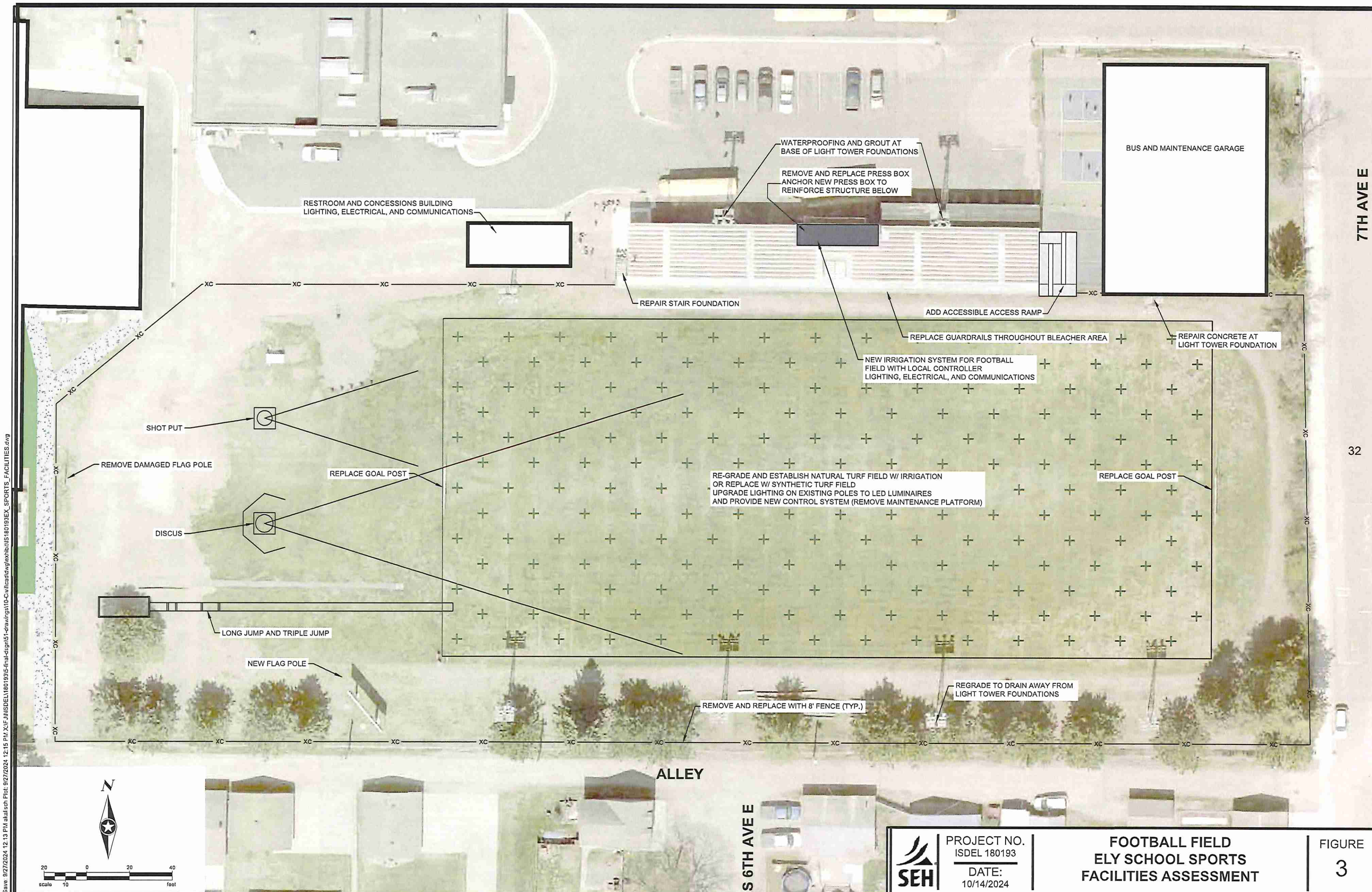
PROJECT NO.
ISDEL 180193
DATE:
10/14/2024
HOCKEY ARENA
ELY SCHOOL SPORTS
FACILITIES ASSESSMENT
FIGURE
2



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ISDEL 180193

DATE:
10/14/2024

FOOTBALL FIELD
ELY SCHOOL SPORTS
FACILITIES ASSESSMENT

FIGURE
3

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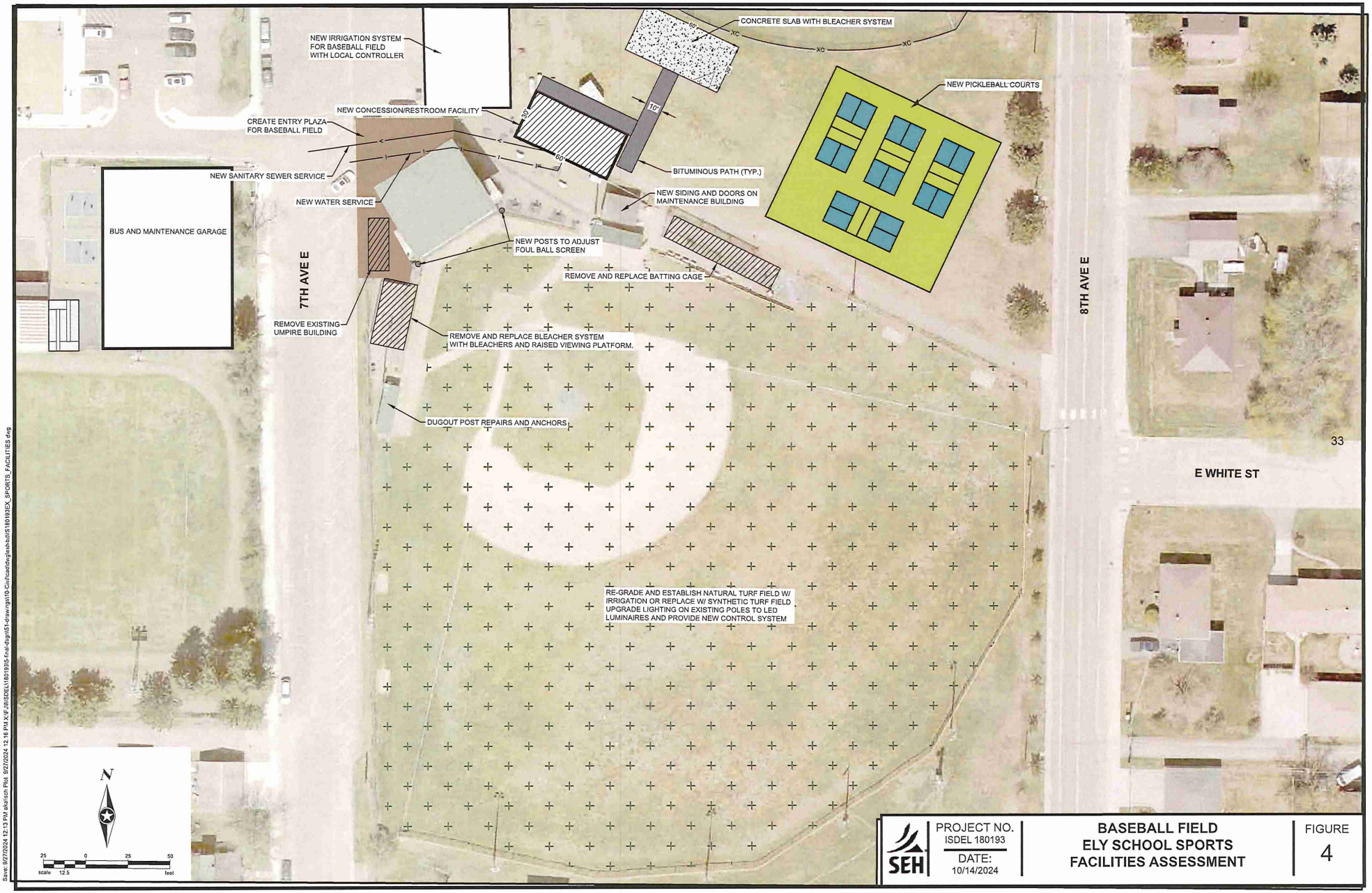

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BASEBALL FIELD
ELY SCHOOL SPORTS FACILITIES ASSESSMENT

FIGURE 4

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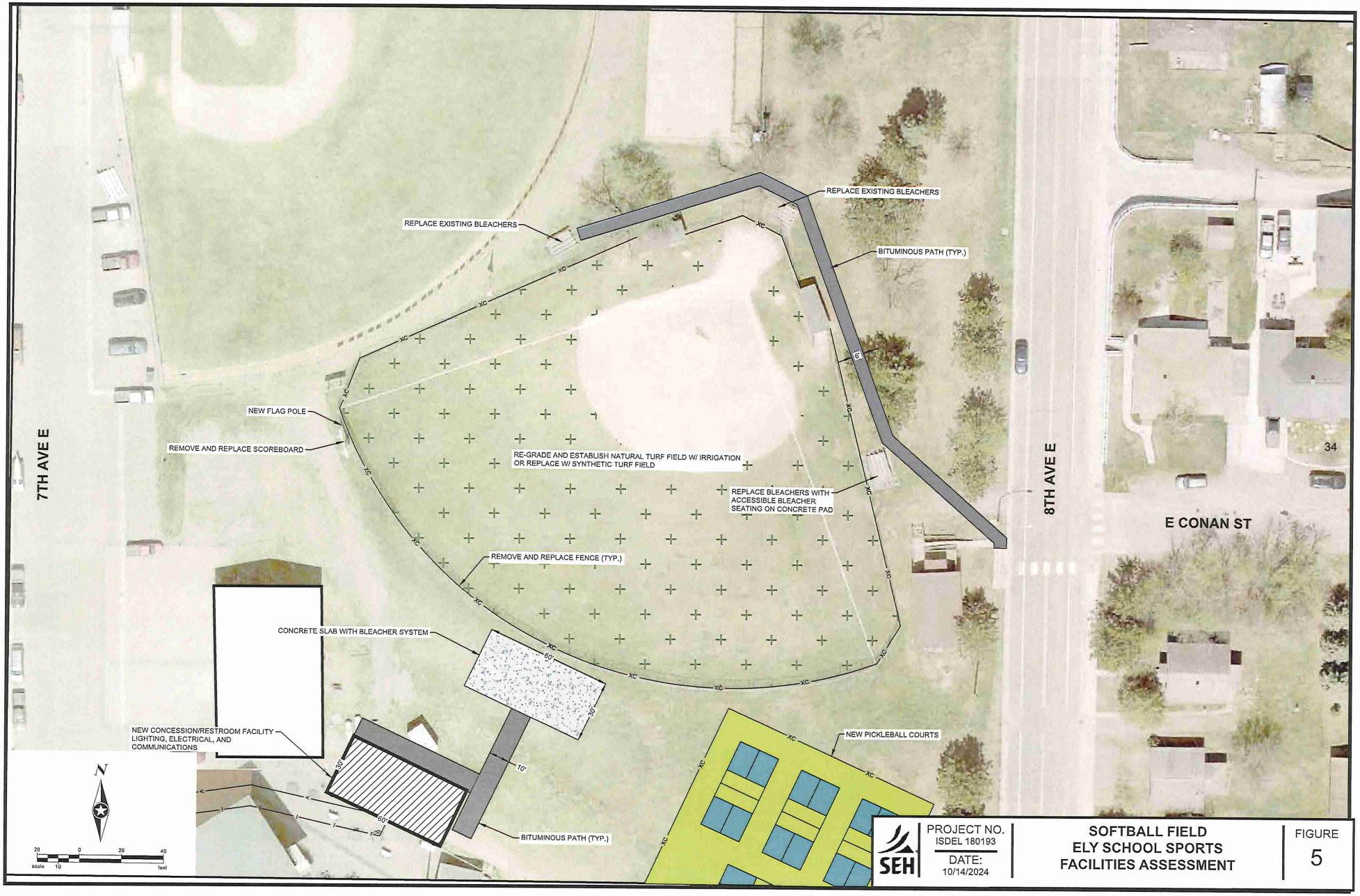
REPLACE EXISTING BLEACHERS
REPLACE EXISTING BLEACHERS
BITUMINOUS PATH (TYP.)
NEW FLAG POLE
REMOVE AND REPLACE SCOREBOARD
RE-GRADE AND ESTABLISH NATURAL TURF FIELD W/ IRRIGATION OR REPLACE W/ SYNTHETIC TURF FIELD
REPLACE BLEACHERS WITH ACCESSIBLE BLEACHER SEATING ON CONCRETE PAD
REMOVE AND REPLACE FENCE (TYP.)
CONCRETE SLAB WITH BLEACHER SYSTEM
NEW CONCESSION/RESTROOM FACILITY LIGHTING, ELECTRICAL, AND COMMUNICATIONS
NEW PICKLEBALL COURTS
BITUMINOUS PATH (TYP.)
7TH AVE E
8TH AVE E
E CONAN ST
34
N
20 0 20 40
scale 10 feet
SEH
PROJECT NO. ISDEL 180193
DATE: 10/14/2024
SOFTBALL FIELD
ELY SCHOOL SPORTS
FACILITIES ASSESSMENT
FIGURE 5