PRELIMINARY INVESTIGATION

Line Mountain School District
Athletic Facilities Feasibility Study

Location
187 Line Mountain Road
Lower Mahanoy / Jordan Townships
Northumberland County, PA

Prepared For
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K&W Project No. 2003.090

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Introduction

Introduction & Purpose

K&W Engineers (K&W) has contracted with Crabtree, Rohrbaugh & Associates (CRA) to develop an analysis of the existing outdoor athletic facilities located on the Line Mountain School District (LMSD) High School / Middle School campus, which straddles the municipal boundary between Lower Mahanoy and Jordan Townships in Northumberland County. The facilities included in this study are the centrally located Eagle Stadium (Glenn Ressler Field), baseball field and football practice field to the north, and softball, field hockey, and soccer fields to the south. All outdoor athletic facilities are located on the east (rear) side of the school building, and are bordered by agricultural fields and wooded areas.

K&W performed a site visit on September 4, 2024, to review and observe existing site conditions and discuss related needs and priorities with staff.

The purpose of this evaluation is to investigate the subject facilities with respect to potential site related improvements in order to confirm regulatory requirements and identify any areas of significant concern from a use, design, cost, and schedule perspective.

Municipal Regulatory Requirements

The site is located in Lower Mahanoy and Jordan Townships. Both municipalities fall under the purview of the Northumberland County Subdivision and Land Development Ordinance, and neither Township has a Zoning Ordinance.

Eagle Stadium / Glenn Ressler Field

Site Summary

Eagle Stadium is located directly east of the school building with the main pedestrian entrance structure on the opposite side of the parking area. The limited access vehicular access gate is located directly south of the entrance structure. The stadium includes a compacted cinder walking / jogging path, natural grass athletic field, aluminum plank seating for +/- 3,300 spectators, press box, four-pole Hubbell athletic field lighting system, concession building, play clocks and scoreboard. The field level sits lower in relation to the main entry building and bleacher units. Solar orientation of the field is not ideal for daytime events; north/south orientation is generally preferred.

Athletic Surface

The natural grass field surface within the cinder oval was observed to be in very good condition, with very few bare spots or lawn weeds. The field had recently been mowed short in preparation for an upcoming football game. The field lacks a discernable crown, which according to staff has progressively receded over years of use. Drainage over much of the field appears to be adequate, however the southeast quadrant tends to hold surface water during wet periods. A series of four drainage inlets with rubber mat covers were observed in close proximity to the sideline along the north side of the field. On the south side, several inlets exist along the outside of the cinder oval. Access to the field is restricted by a post and rope barrier around the inside of the cinder oval. The approximate dimension between the edges of the cinder oval is 190'.

Spectator & Athlete Facilities

There are two areas of aluminum plank bleachers that overlook the athletic field, all of which appear to be in good condition. The south bleachers serve as the home seating location, and accommodate approximately 2,600 seats (based on 18" spacing), while the north visitor bleacher capacity is approximately 700. There is no accommodation for integrated ADA seating.

The home bleachers include four separate structures separated by stone access walks. The upper three sections sit on a level surface above the athletic field, and include a retaining wall, pipe railing and stone walkway along the front. The central stand-alone portion of the bleachers includes the pressbox, with access via the two side stair aisles. The front section of bleachers appears to be an aluminum and steel retrofit based on a pre-existing masonry base. This portion of the bleachers is set into the earthen side slope. There is a concrete stair and railing system that provides access from the lower level directly to the central stone walkway between the front and rear bleachers, as well as a sloped stone walkway directly to the base of the front bleacher system.

Rest room facilities for events are mainly located in the school building across the parking lot from the main stadium entry, with a few portable toilets provided near the concessions building. Approximately one-half of the spectator seating areas are greater than 500 feet from the restrooms in the school building.

Team rooms serving events in the stadium are also located in the school building.

Pedestrian Circulation

Pedestrians access the stadium via four unsecured ticket window aisles within the main entry structure. An asphalt surfaced steep slope connects the main entry building to the cinder oval, which leads to the concessions building and bleacher areas. A concrete ADA ramp with railings is also provided on the north side of the entry slope.

A stone path connects the cinder oval to concrete steps that lead to the upper tier of home bleachers and also to the corner of the front bleacher section. There is no formal or informal path up the grassy slope to the visitors' bleachers.

There is no security fencing on the north, east and south sides of the stadium. A chain link fence runs between the northern and southern wooded areas, connecting to the sides of the main stadium entry structure on both sides.

Vehicular Circulation

There is a vehicular entrance to the stadium directly south of the main entry structure which connects to the sloped asphalt area and cinder oval. A second vehicular access point is located south of the stadium which leads to a large stone lot between the stadium and agricultural fields via a stone road. According to School District personnel, the stone lot is used to provide vehicular spectating of events on the field for those with mobility issues. There is a stone connection between the cinder oval and the stone lot as well.

Site Recommendations

The following items represent suggested improvements to the site, along with potential cost. The ranking represents the level of importance and immediacy, with 1 being the most important and 5 being the least.

1. Provide ADA access to the bleacher areas via paved ADA route pathways, railings, ramps, and integrated seating areas within the existing bleachers. This includes paving the front walkway above the home bleachers retaining wall .....**$100,000 - $125,000**
   Rank: 1
2. Add fencing and gates around north end of concessions building to prevent pedestrian access to the propane tank. .....**$2,500 - $3,500**
   Rank: 1
3. Add new fieldhouse building with team rooms, restrooms, concessions and storage east of the stadium for use during stadium and other athletic venue events. .....**$1,800,000 - $3,250,000**
   Rank: 1
4. Pave or partially pave the perimeter cinder oval path to provide ADA access to all points of the stadium floor. The existing surface may be ADA compliant, however an asphalt path will provide better all-weather pedestrian and emergency access with less maintenance. Widen the oval to provide additional sideline area on the visitor's side, and relocate the existing storm inlets for safety.....**$85,000 - $110,000**
   Rank: 2
5. Add perimeter fence around stadium and gates to ticket window aisles for improved security and control during events. .....**$70,000 - $85,000**
   Rank: 3
6. Remove athletic field topsoil, add fill, and replace topsoil to establish a crown for positive field drainage. .....**$100,000 - $120,000**
   Rank: 4
7. Add fencing and gates around the outside perimeter of the athletic field to better control pedestrian access during events. .....**$55,000 - $70,000**
   Rank: 5
8. **Option**: Convert the existing natural grass field to synthetic turf to accommodate all athletic program contests and physical education classes. .....**$1,250,000 - $2,000,000**
   Rank: 5

Eagle Stadium

Potential Projects

1. ADA improvements to seating areas, concessions building fencing, and new fieldhouse

   $1,902,500 - $3,378,500

2. Widen and pave walking oval around field, add perimeter fence around facility

   $155,000 - $195,000

3. Athletic field surface work (crown), fencing and gates around athletic field

   $155,000 - $190,000

Baseball and Practice Fields

Site Summary

The baseball and football practice fields are located north of the large stone lot adjacent to the stadium. The ballfield sits lower than the stone lot at the base of a grassy embankment from south to north, while the practice field sits well above the ballfield level. The remainder of the site slopes down to the west via a meadow which terminates in a wooded area. A small storage/concession building with an attached covered patio is located on the upper practice field level between the two fields, and additional storage units exist in the northeast corner of the site, also on the upper level. A synthetic turf batting cage and a bullpen are placed off the right field foul line. The baseball field includes a 15′ wide cinder warning track and a 6′ high chain link fence which is in fair to poor condition. The fence has an offset opening near centerfield, which may be considered a safety hazard, as well as no bottom rail. A small scoreboard is located beyond the center field fence. Approximate baseball field dimensions are:

- 325′ – right field (min. 300′ recommended by NFHS/PIAA)
- 320′ – right-center
- 348′ – center field (min. 350′ recommended by NFHS/PIAA)
- 322′ – left-center
- 310′ – left field (min. 300′ recommended by NFHS/PIAA)

The NFHS/PIAA recommended distance between the foul lines to any obstructions is 60′. The distances that exist at the baseball field range from 30′ to 36′ (dugouts and backstop). Solar orientation of the ball field is not ideal, as a north-northeast orientation is preferred.

The football practice field is approximately 60 yards long and is bordered on the north and west sides by relatively steep grassy embankments down to the meadow area. A second truncated 60-yard practice field is seasonally located in the baseball outfield.

Athletic Surface

The natural grass surface of both fields is generally good, with larger areas of wear evident from more recent football practice use. The baseball infield edges are somewhat pronounced, and the infield is in good condition. Drainage appears to be adequate, however there is no structured stormwater management at the bottom of the large embankment outside of left field, which may result in slow runoff in that area.

Spectator & Athlete Facilities

The baseball field includes two dugouts built into the side embankments, a small chain link fence backstop, and a small set of portable bleachers on a stone base. The dugouts and bleachers are not currently ADA compliant.

The dugouts are block construction with wood roof framing, front supports and player benches, and concrete floor. Chain link fencing is attached to the fronts of the dugouts for protection; however the two front access points remain unprotected. The dugouts are in fair condition.

The bleacher unit behind the backstop is in good condition, and the backstop offers little protection from foul balls. Two portable toilet units are located near the bleacher seating. The open portion of the upper level storage building provides covered shelter from weather if needed.

The bullpen on the right-field side of the facility incorporates two timber retaining walls and a single section of netting behind the home plate side. The condition of the bullpen is poor. The batting cage uses recycled synthetic turf for the surface within the netting, and the netting supports are in poor to fair condition.

Pedestrian Circulation

Pedestrian access to the site is via the stone driveway that extends from the large stone lot to the south. The path continues up to the storage building. There are no other established walkways throughout the site.

Vehicular Circulation

The stone path noted in the above section is also used for vehicular access. There is an area near the storage building where vehicles may park for event observation by spectators with mobility issues.

Site Recommendations

The following items represent suggested improvements to the site, along with potential cost. The ranking represents the level of importance and immediacy, with 1 being the most important and 5 being the least. Note that the new fieldhouse (Item 3 under "Eagle Stadium", above) would also serve the baseball venue.

1. Add padding to the end post of the outfield fence at the open offset in centerfield to reduce injury potential, and replace windscreen. ..... **$3,000 - $4,000**
   Rank: 1
2. Add ADA path to dugouts, support building, and spectator seating area, and ADA seating at bleachers. ..... **$100,000 - $120,000**
   Rank: 1
3. Construct new bullpens on each side of the field. ..... **$7,000 - $10,000**
   Rank: 1
4. In lieu of Item 1 above, remove and replace the 6' ht. outfield fence, safety cap, and windscreen. ..... **$28,000 - $40,000**
   Rank: 1
5. Add new foul poles. ..... **$5,000 - $7,500**
   Rank: 2
6. Replace scoreboard. ..... **$24,000 - $36,000**
   Rank: 3
7. Construct new dugouts. ..... **$80,000 - $100,000**
   Rank: 3
8. Add fencing down the right and left field lines. ..... **$25,000 - $32,000**
   Rank: 3
9. Replace backstop with taller, non-hooded chain link backstop. ..... **$45,000 - $55,000**
   Rank: 3
10. Replace batting cage. ..... **$8,000 - $10,000**
    Rank: 3
11. Add fencing around north, west and south sides of football practice field. ..... **$18,000 - $24,000**
    Rank: 3

12. Add stormwater management system at the base of the left field embankment to outlet downstream (lawn inlets and piping). .....**$22,000 - $30,000**
    Rank: 3
13. Pave access drive from stone lot to upper support building. .....**$25,000 - $32,000**
    Rank: 4
14. General reconditioning of the grass and infield mix areas. .....**$15,000 - $20,000**
    Rank: 4

Potential Projects

1. Establish ADA routes to seating and dugouts, new ADA seating, new bullpens, replace outfield fence, add right and left field side fencing, replace backstop, add fencing at football practice field
   $223,000 - $274,000

2. Replace foul poles, replace scoreboard, replace dugouts, replace batting cage
   $117,000 - $153,500

3. Stormwater management in left field, pave access drive, lawn reconditioning
   $62,000 - $82,000

Softball and Field Hockey Field

Site Summary

The softball/field hockey field is a shared venue at the southeast corner of the property. The facility includes a softball infield, chain link backstop, two block dugouts, two storage sheds, and a concessions shed. The field has a permanent fence along the western end of the field hockey field, and a multi-use scoreboard at the south end of the fence. The solar orientation of both fields is not ideal (softball preferred orientation is north-north east, and field hockey is north-south). The field hockey field size reflects NFHS /PIAA recommendations (180' x 300').

Athletic Surface

The natural grass surface is in very good condition despite being shared by two athletic programs. There are minor areas of wear at the two field hockey goal mouths. The outfield incorporates a consistent slope from south to north, and there were no apparent drainage issues. The skinned infield is consistent and well groomed. The infield edges are reasonably flush with the adjacent grass, and some of the edges are less than clean. There is some minor overlap between the south field hockey sideline and the softball infield, however it appears that the field is lined so that no infield mix area is within the boundaries of the competition area.

Spectator & Athlete Facilities

The softball field includes two dugouts built into the side embankments, a small chain link fence backstop, and a small set of portable bleachers on a stone base located along the right field side. The dugouts and bleachers are not currently ADA compliant. A portable outfield fence is used in the spring during the softball season.

The dugouts are block construction with wood roof framing, front supports and player benches, and concrete floor. Chain link fencing is attached to the fronts of the dugouts for protection; however the two front access points remain unprotected. The dugouts are in fair condition, with the third base side front wooden structure recently replaced. Some cracking of the block walls was observed.

The bleacher unit and backstop are in good condition. The backstop is relatively small, however there is no formal seating or other amenities behind it that require protection. Two portable toilet units are located on the south side of the storage building. There is no shelter from weather outside of the dugouts.

The batting cage is located on the left field side of the ballfield between the two storage buildings. The framework appears to be failing in places. There are no bullpens associated with the softball field.

Pedestrian Circulation

Pedestrian access to the site is via the stone driveway that extends from the large stone lot to the north. The path continues around the south side of the fields toward the storage building where there is an expanded stone area. There are no other established pedestrian walkways throughout the site.

Softball and Field Hockey Field

Vehicular Circulation

The stone path noted in the above section is also used for vehicular access. There is an area near the storage building where vehicles may park for event observation by spectators with mobility issues.

Site Recommendations

The following items represent suggested improvements to the site, along with potential cost. The ranking represents the level of importance and immediacy, with 1 being the most important and 5 being the least. Note that the new fieldhouse (Item 3 under "Eagle Stadium", above) would also serve the softball/field hockey venue.

1. Add ADA path to dugouts, support building, and spectator seating area, and ADA seating at bleachers. .....**$90,000 - $110,000**
   Rank: 1
2. Construct new bullpens on each side of the field.....**$7,000 - $10,000**
   Rank: 1
3. Replace batting cage. .....**$8,000 - $10,000**
   Rank: 2
4. Construct new dugouts. .....**$80,000 - $100,000**
   Rank: 3
5. Add fencing down the right and left field lines.....**$20,000 - $30,000**
   Rank: 3
6. Add fence along top of embankment between the north side of the field hockey field and the stone access drive. .....**$12,000 - $17,000**
   Rank: 3
7. Pave access drive from stone lot to upper parking area.....**$30,000 - $40,000**
   Rank: 4
8. General reconditioning of the grass and infield mix areas. .....**$11,000 - $17,000**
   Rank: 4

Potential Projects

1. Establish ADA routes to seating and dugouts, new ADA seating, new bullpens, add right and left field side fencing, add embankment fence

   $129,000 - $167,000

2. Replace dugouts, replace batting cage, pave access drive, lawn reconditioning

   $121,000 - $157,000

Soccer Field

Site Summary

The soccer field is located west of the softball/field hockey field and south of Eagle Stadium. It sits at a lower elevation then the softball field, and a slightly higher elevation than the stadium home bleachers. The field slopes from south to north, and no discernable drainage issues were observed. There is a large grassy embankment that overlooks the south and east sides of the field, and grade drops off on the north and west sides. Solar orientation of the field is not ideal, as a north-south orientation is preferred. The field is generally lined to be 180' x 340', which is within NFHS/PIAA recommendations.

Athletic Surface

The natural grass surface of the field is very good, with small bare patches in the high-wear areas of the goal mouths. There was some minor waviness of the surface observed in the northwest corner of the field.

Spectator & Athlete Facilities

The team bench areas are located on the north side of the field at the top of a downward embankment. The team areas should be at least 10' from the sideline, which is not possible due to the topography when the field width is maximized at approximately 180'.

There was no bleacher seating observed at this venue. Spectators most likely view events from the south embankment and above.

A storage/concession shed is located in the southeast corner of the venue at the top of the embankment. The scoreboard is also located in the southeast corner, mounted on the back side of the softball scoreboard.

Pedestrian Circulation

Pedestrian access to the site is via the stone driveway that extends from the large stone lot to the south, around the softball/field hockey venue. The path continues to the storage/concessions shed at the southeast corner of the facility overlooking the field. The main drive to the north of the field also provides access for pedestrians. There are no other established walkways throughout the site.

Vehicular Circulation

The stone paths noted in the above section is also used for vehicular access. There is an area near the storage building where vehicles may park for event observation by spectators with mobility issues.

Site Recommendations

The following items represent suggested improvements to the site, along with potential cost. The ranking represents the level of importance and immediacy, with 1 being the most important and 5 being the least. Note that the new fieldhouse (Item 3 under "Eagle Stadium", above) would also serve the soccer venue.

1. Add ADA paths to support buildings, sidelines, and spectator seating area, add ADA seating. ....**$90,000 - $110,000**

   Rank: 1

2. Add ball control netting on west end of the field. .....**$11,200 - $15,000**
   Rank: 2
3. Adjust field layout to a narrower width to allow additional sideline area. ..... **N/A**
   Rank: 2
4. In lieu of Item 3 above, construct a retaining wall and fence along the north side of the field to allow for adequate sideline area on both sides. .....**$85,000 - $110,000**
   Rank: 3
5. Add fence along top of embankment between the north side of the soccer field and the stone access drive. .....**$11,000 - $20,000**
   Rank: 3
6. Pave main access drive and east stone lot. .....**$180,000 - $210,000**
   Rank: 3
7. Pave access drive extension and upper parking area near concessions shed. ...**$12,000 - $18,000**
   Rank: 4
8. General reconditioning of the grass athletic field. .....**$16,000 - $22,000**
   Rank: 4
9. **Option**: Convert the existing natural grass field to synthetic turf. .....**$1,200,000 - $1,800,000**
   Rank: 5
10. **Option**: Add new lighting system to maximize use of synthetic turf field. .....**$650,000 - $800,000**
    Rank: 5

Potential Projects

1. Establish ADA routes to seating and dugouts, new ADA seating, west end ball control netting, add fence along embankment **$112,200 - $145,000**

2. Pave access drives and stone lot, lawn reconditioning **$192,000 - $228,000**

3. Retaining wall and fence along north side, convert to synthetic turf, add lighting **$1,935,000 - $2,710,000**

Conclusions

Overall, the existing outdoor athletic facilities on the Line Mountain High School / Middle School Campus are in good condition and appear to be very well maintained. The quality of the natural grass surface at each venue is better than most and is a testament to the continuous hard work and know-how of the maintenance staff. When discussing the need for synthetic turf facilities, we look at the overall number of events held on the existing natural grass fields coupled with the ability of the Owner to properly and adequately maintain those fields.

In the case of LMSD, there was no visible evidence at the time of our observation that would suggest that a synthetic turf venue is needed to successfully accommodate the existing athletic program needs. That being said, the addition of a synthetic turf field would likely reduce overall yearly maintenance costs, as the natural grass fields would not experience as many events as they currently do, and the synthetic turf would require far less maintenance than a natural grass one. Obviously, the recouped maintenance expenses would be offset by the up-front cost to install the synthetic turf for several years.

If the School District was to pursue a synthetic turf field in the future, we suggest considering its placement in the current stadium. The existing lighting system would provide additional time for field use into the early evening. On average, the field could be used for one or two after-school events (games, practices) without lights, pursuant to the time of year. The addition of lights would allow for an additional event after sunset.

The above "Site Recommendations" listed for each venue include other, more minor upgrades that may not represent immediate safety concerns but may improve the aesthetics and functionality of the facilities. There are two main areas of the outdoor athletic facilities that can be improved in our opinion:

- ADA Access
- Access to Support Facilities

ADA Access

As a result of the challenging terrain in which the athletic facilities reside, there is difficulty in achieving proper ADA accessibility to all areas of the venues. The Americans with Disabilities Act dictates that an accessible route be provided to all areas and facilities associated with an athletic venue, including but not limited to rest rooms, concessions, spectator seating, and team areas (i.e. dugouts, sidelines). Also, for venues that include a public address system, assisted listening devices are to be available. All the venues include allowances to attend and view sporting events from an automobile, however none of the venues provide accessible routes to the team areas or spectator seating areas. None of the spectator seating areas or team areas include integrated ADA wheelchair spaces.

Facilities constructed prior to the enactment of the ADA are not required to upgrade to the established ADA standards unless the facility undergoes renovations.

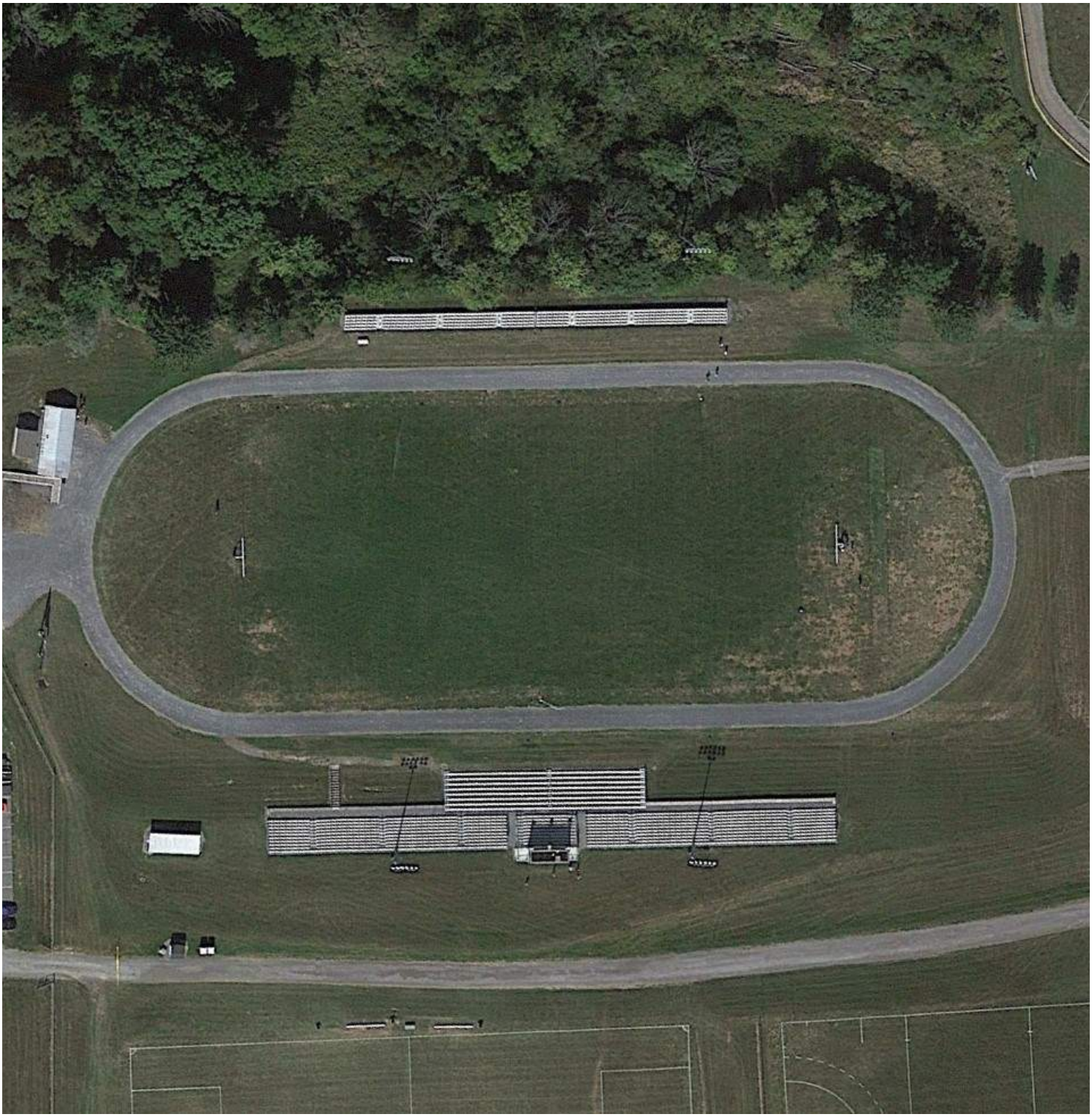
Access to Support Facilities

The athletic venues are dispersed over a relatively wide area, which means that many of the locations have little or no easy access to restroom facilities or emergency shelter. Portable toilets are currently used at each of the venues, and the stadium events are served by facilities in the

existing school building. Student athletes generally use team rooms within the school as well, and some then must walk across the campus to their venue.

A new fieldhouse building centrally located to the east of the stadium would serve as a relatively close support facility for all the athletic venues. A multi-use building including several team rooms, restrooms, concessions and storage along with potential training facilities, medical trainer's offices, coach's offices, and official's changing and rest rooms would allow all those uses to be removed from the school building and individual venues, opening up those spaces for additional school uses. It would also provide a closer safe haven for athletes and spectators in the event of sudden adverse weather events.

Appendix A
Eagle Stadium / Glenn Ressler Field



Eagle Stadium / Glenn Ressler Field

Figure 1: Unsecured Stadium entry

Figure 2: Sloped asphalt entry apron and ADA ramp

Figure 3: Cinder oval and concessions building

Figure 4: Home bleachers and stone access walk

Figure 5: Upper bleachers with stone walk and retaining wall

Figure 6: Access walk railing with missing segment

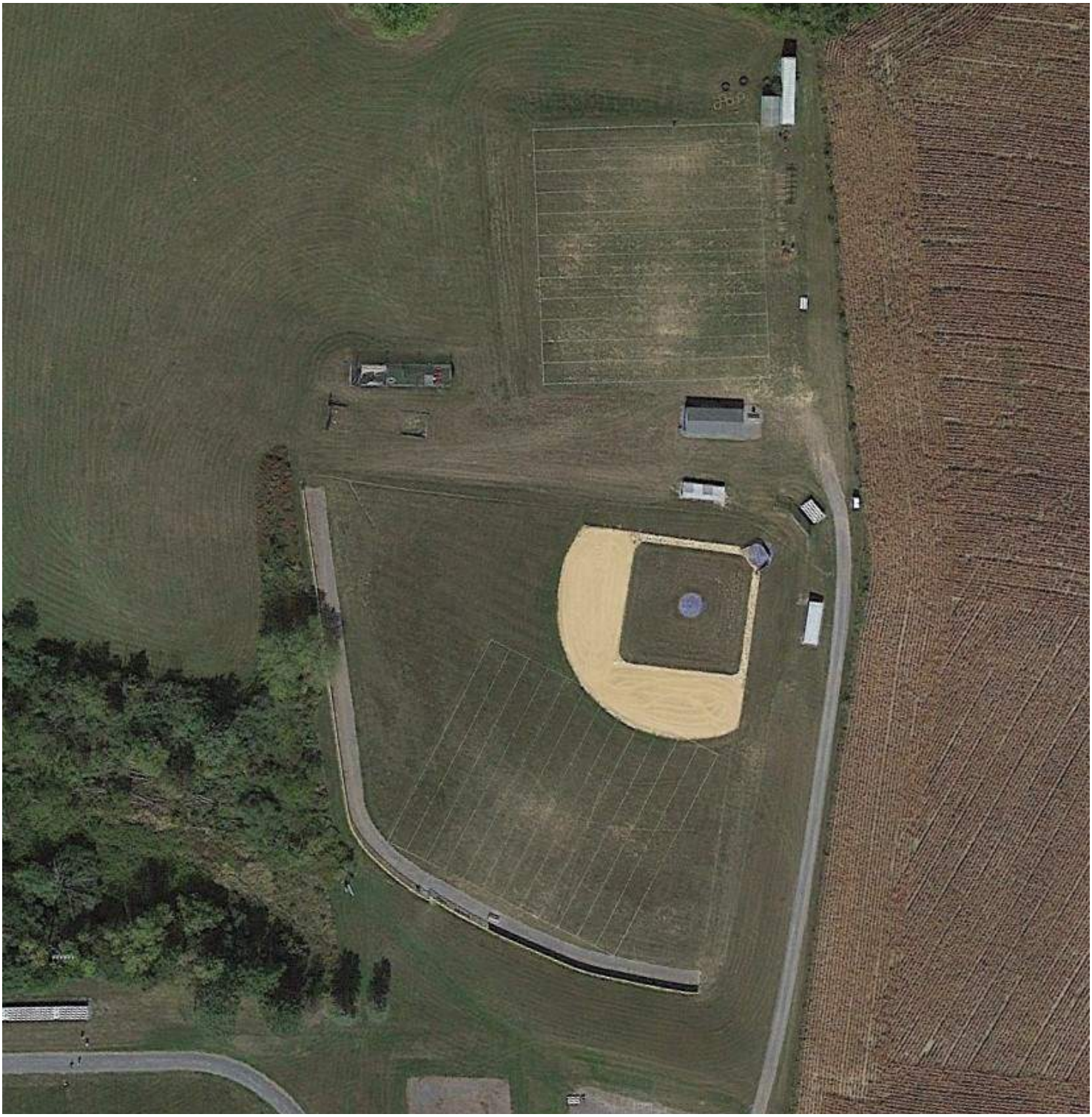
Figure 7: Visitor bleachers with no formal access

Figure 8: Close proximity of drainage structures to sideline

Figure 9: Open access to propane tanks

Figure 10: Access to east stone lot, post and rope barrier to field

Appendix B
Baseball and Practice Fields



Baseball Field and Football Practice Field

Figure 1: Stone access drive

Figure 2: Block Dugouts, Backstop, and support building

Figure 3: Spectator seating and backstop

Figure 4: Offset gap in outfield fence

Figure 5: General grass surface condition

Figure 6: Outfield fence condition, and scoreboard

Figure 7: Bullpen condition

Figure 8: Batting cage condition

Figure 9: Base of outfield embankment

Figure 10: West side slope from practice field

Figure 11: Practice field—general lawn condition

Figure 12: North side sloped embankment

Appendix C
Softball and Field Hockey Field

Softball / Field Hockey Field

Figure 1: Field Hockey field, Softball outfield

Figure 2: Support buildings

Figure 3: Batting cage

Figure 4: Softball dugout with recent repairs

Figure 5: Structural cracking in dugout

Figure 6: Field Hockey sideline and infield edge

Figure 7: Spectator seating

Figure 8: Storage shed and dugout

Appendix D
Soccer Field

Soccer Field

Figure 1: East embankment and scoreboard

Figure 2: Goal mouth surface condition

Figure 3: South embankment and limited sideline runoff

Figure 4: North embankment, stone access drive, and limited sideline area

Figure 5: West embankment and perimeter fence

Figure 6: Fence with no bottom rail

Figure 7: Ticket booth and portable toilets

Figure 8: Stone access drive and north embankment