

CONCEPTUAL DESIGN REPORT

City of Fort Saskatchewan

High Performance Field



April 2016

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CONCEPTUAL DESIGN REPORT

1 Introduction

In 2015, the City of Fort Saskatchewan updated its Recreation Facility and Parks Master Plan. During the process, the community identified the need for a multi-purpose, high performance artificial turf field to support a variety of field sports users, including primarily minor and high school football and soccer as well as rugby and field hockey. In addition, the community desired site amenities such as washrooms, team and officials change rooms, concessions, field lighting and a score clock. User group investigation identified desired spectator seating for 1,000 seats with a press box.

The purpose of this conceptual design report is to compile the conceptual design and costs estimates for submission to City Council. The scope of work for the conceptual design report includes:

- Background
- Design Criteria
- Option Development
- Key Issues
- Construction Cost Estimate
- Operational Cost Estimate

2 Background

The City of Fort Saskatchewan, Associated Engineering and JSA Sports Architecture Inc. (JSA Sports) met on February 9th, 2016 to review the project scope, key objectives and user groups. The user groups for the High Performance Field are:

- The City of Fort Saskatchewan
- High School and Community Football Association
- Soccer Association

Once the user groups were identified, a workshop was scheduled to facilitate a joint meeting with City Staff, Associated Engineering, JSA Sports and the user groups to confirm the requirements that each user group would like to see as part of the High Performance Field. Both sets of meeting minutes are attached in [Appendix A](#).

3 Design Criteria

3.1 HIGH PERFORMANCE FIELD

The proposed High Performance Field will include an artificial turf field, change rooms for players and officials, space for washrooms, concession and seating for approximately 1000 spectators.

The artificial turf field will be designed based on FIFA regulations for a soccer field. Based on the regulations, the field size will be 68m wide by 105m in length. Both rugby and football fields can fit onto this field size. To change between different sports, painted lines and removable goal posts will be used. The field will also include lighting and a score clock.

There will be four change rooms that will be able to hold 25 players each. These change rooms will have the ability to combine into two – 50 player change rooms. Each change room will have its own services (washrooms, showers, entrance). There will also be a separate space for two official change rooms that will be able to hold 6 officials each. The site plan will also include space for future expansion of the change rooms into two additional 50 player change rooms that will be beneficial when staging back to back games.

The washrooms will be designed to manage 1000 spectators. The concession area will only have electrical outlets and gas hook-ups for the Associations to use during sporting events.

The grandstand seating will be able to seat 1000 spectators. The grandstands will also include a press box located at the top of the stands with landings and perimeter access deck.

3.2 UNDERGROUND UTILITIES

The underground utilities will include both deep and shallow utilities. The deep utilities will include water and sanitary services to all buildings. These will be designed based on the City of Fort Saskatchewan's Design Standards.

The shallow utilities will include power, gas and communication. The utility service locations and sizing will be designed based on the design standard of each utility franchise.

3.3 SURFACE UTILITIES

The surface utilities include the parking lots, access roads, storm water drainage and the hard and soft landscaping features.

The parking lot and access roads will be designed based on the City of Fort Saskatchewan's Design Standards or Thurber's recommendations based on the field drilling program, whichever is greater in structure. It is understood that a review of traffic volumes will not be required in order to size the parking lot or the accesses to/from the site.

The stormwater drainage will be designed based on City of Fort Saskatchewan's Design Standards and the Alberta Environment Stormwater Management guideline. AE will review opportunities to integrate Low Impact Development (LID) measures such as bioswales to reduce overall site impacts

The hard and soft landscaping features will be designed using the City of Fort Saskatchewan's Design Standards. The soft landscape elements associated with the development of the high performance field and related site civil works include landscape screening and storm water management features. The hard

landscape elements include walking paths, seating areas, a 35m by 35m warm-up area as well as trees and shrubs.

3.4 STORMWATER MANAGEMENT FACILITY

In the Dow Centennial Center (DCC) site, the required stormwater storage volume exceeds the capacity of the existing dry pond due to the site development. These developments include the DCC and its proposed expansion, the Park and Ride facility and the high performance field. The dry pond will need to be expanded to serve as the permanent stormwater management facility for the site.

The stormwater management facility will be designed based on the Southfort Stormwater Management Plan prepared by Associated Engineering in August, 2005. Based on this report, the existing dry pond on the DCC site does not have enough capacity for the required storage volume and will need to be expanded to serve as the permanent stormwater management facility for the site.

4 Option Development

During the user group workshop, four footprint options for the field and associated buildings were presented. It was agreed upon by all parties to proceed with option 3C.

Option 3C consisted of the sports field being on a north/south axis. The grandstands and main entrance will be located on the west side of the field. The players and officials change rooms will be located on the east side of the field.

The main entrance buildings will be made up of the washrooms, meeting rooms, concession and the tickets sales office. It will also have the mechanical rooms and storage space for the operation for the field.

The change rooms building will be made up of four team change rooms with 25 lockers in each one. These change rooms will also have washroom, showers and separate entrances. The change rooms will be able to combine to create 2 team change rooms with 50 lockers each. This will be done through a removable wall. Also within this building, there will be official change rooms, mechanical and electrical rooms and storage for the equipment.

See [Appendix B](#) for site layout and 3D rendering of the buildings and sports field.

5 Key Issues

In developing an outdoor high performance, multi-sport field such as that proposed for the Dow Centennial Centre, it is essential to understand the issues that will impact the long-term success of the facility. The key element that will determine success is the impact of the existing site conditions and the necessity to design in response to these site conditions, particularly soil conditions.

The single most important factor that will affect the success of the sports field is base and drainage design. There is enormous risk associated with the settlement and poor drainage of artificial turf fields. A lack of knowledge or experience in sub-base and drainage design can be a disaster. A natural grass field can be top-dressed to re-establish a level playing surface after settlement or heaving due to poor drainage or base construction. Artificial turf fields however, would require extensive and costly repairs to remediate. An artificial turf field base must be both strong and permeable, properties that are difficult to combine and rarely exist in nature. Specialized gravels must be blended to create optimum conditions for field performance. Artificial turf fields are typically vertically draining and must be constructed of non-frost susceptible materials. Sticking to proven methods and materials for base and drainage construction can ensure the success of a project.

6 Construction Costs Estimate

The construction costs estimate has been broken down into three tables. These tables provide a summary of the conceptual cost estimates for the proposed High Performance Field, Optional Amenities and the Park-n-Ride facilities. The estimated costs include contingencies, engineering services and are in 2016 dollars. **Appendix C** provides a detailed cost breakdown of the estimates.

Table 6.1 outlines the conceptual construction costs for the High Performance Field. The estimated total cost of the High Performance Field is approximately **\$7.67 million**.

Table 6.1
Conceptual Construction Cost Estimate for the High Performance Field

High Performance Field	Cost (\$)
General Requirements	\$50,000
Site Development and Parking Lot	\$371,000
One Sports Field (Artificial turf, site prep, install)	\$2,058,000
Lights	\$417,000
Score Clock	\$50,000
Site Services (Electrical, water, sanitary, storm)	\$658,000
Buildings	\$2,632,000
Hard & Soft Landscaping	\$158,000

High Performance Field	Cost (\$)
Subtotal	\$6,394,000
10% Contingency	\$640,000
10% Engineering	\$640,000
Total	\$7,673,000

Table 6.2 summarizes the conceptual construction cost estimate for the optional amenities for the High Performance Field. These amenities were part of the original scope for the High Performance Field but were removed due to budget restraints. These options can be considered during the construction phase if the budget permits.

Table 6.2
Conceptual Cost Estimate for the Optional Amenities

Optional Amenities	Cost (\$)
Grand Stands with Press Box	\$1,131,000
Main Entrance Bldgs. (Meeting Rooms & Storage)	\$487,000
50 Player Change Rooms (2 @ 267m ²)	\$1,515,000
Turf Pad	\$203,000
Black Vinyl along Fence	\$23,000
Upgrade Stadium Lighting to LED	\$473,000
Subtotal	\$3,832,000
10% Contingency	\$383,000
10% Engineering	\$383,000
Total	\$4,598,000

Table 6.3 outlines the conceptual construction cost estimate for the Park and Ride facilities. The construction of these facilities will be for the Park and Ride project and are outside the scope of work for the High Performance Field.

Table 6.3
Conceptual Cost Estimate for the Park-n-Ride Facilities

Park-n-Ride Facilities	Cost (\$)
Stormwater Management Pond	\$630,000
Bus Shelter	\$407,000
Parking Lot	\$930,000
Access Roads	\$342,000
Multi-use Trail	\$180,000
Subtotal	\$2,522,000
20% Contingency	\$505,000
15% Engineering	\$378,000
Total	\$3,405,000

7 Estimated Operations and Maintenance Costs

Table 7.1 provides a summary of the conceptual operations and maintenance cost estimates for the proposed High Performance Field. The costs include a 12 year replacement plan for the turf field and a 10 year equipment replacement plan. **Appendix D** provides a detailed cost breakdown of the estimate.

The estimated total annual operations and maintenance cost of the High Performance Field is approximately **\$338,600**.

Table 7.1
Estimated Annual Operation and Maintenance Costs (2016 Dollars)

Item	Cost (\$)
Revenues (Rentals)	(\$40,000)
Salaries, Wages and Benefits	\$85,600
Contracted and General Services	\$76,000
Material, Supplies and Utilities	\$144,000
Other Expenses (Replacement Costs)	\$73,000
Total	\$338,600

8 Conclusions

The conceptual design report for the High Performance Field has resulted in the following conclusions:

- The City of Fort Saskatchewan and the user groups have agreed to proceed with Site Plan Option 3C.
- The official's change rooms have been moved to the east side of the field.
- The size of the field will be 68m wide by 105m long based in FIFA regulations
- There will be four team change rooms with 25 lockers in each.
- The four change rooms can be combined to create two change rooms with 50 lockers in each.
- The cost of the parking lot and the stormwater management facility will be allocated to the Park and Ride project.

9 Recommendations

We recommend the following for consideration in moving the project forward:

1. The City adopts the conceptual design report presented herein as the basis of the detailed design.
2. The City to proceed with design and construction for the High Performance Field for the 2016 Capital Budget of \$7.67million.
3. The City to include items from the optional amenities as the budget becomes available.
4. The City to proceed with the design and construction of the Park and Ride facilities as part of the scope of work for the Park and Ride Project.

Closure

This report was prepared for the City of Fort Saskatchewan for the High Performance Field project.

The services provided by Associated Engineering Alberta Ltd. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,
Associated Engineering Alberta Ltd.



Patrick Mastromatteo, P.Eng
Project Manager

Chris Parfitt, E.I.T
Project Engineer

ASSOCIATED ENGINEERING	
QUALITY MANAGEMENT SIGN-OFF	
Signature:	
Date:	April 18, 2016

APEGA Permit to Practice P 3979
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Appendix A – Meeting Minutes



Date:	February 9, 2016	File:	2016-3656.P.02.00
Time:	2:30pm	Page:	1 of 5
Project:	High Performance Field		
Subject:	Start-up Meeting		
Client:	City of Fort Saskatchewan		
Location:	James E. Graham Building, Fort Sask.		
Present:	Joey Farebrother - Fort Saskatchewan Grant Schaffer - Fort Saskatchewan Barb Shuman - Fort Saskatchewan Kelly Almer - Fort Saskatchewan Richard Christenson - Fort Saskatchewan Robert Johnston - JSA Sport Patrick Mastromatteo - Associated Engineering Chris Parfitt - Associated Engineering Peter Spearey - Associated Engineering		
Distribution:	Those Present Ann Stephenson - Associated Engineering Carolyn Sherstone - Associated Engineering Lisbeth Medina - Associated Engineering Roger Dupuis - AES Engineering Paul Anseeuw - AME Group Ada Lao – Thurber Engineering		

RECORD OF MEETING

This Record of Meeting is considered to be complete and correct. Please advise the writer within one week of any errors or omissions, otherwise this Record of Meeting will be considered to be an accurate record of the discussions

Action By:

Discussion:

1 INTRODUCTIONS

Information

1.1 City of Fort Saskatchewan:

- Joey Farebrother – Project Manager
- Grant Schaffer – Director of Project Management
- Barb Shuman – Recreation Director
- Kelly Almer – Manager, Dow Centennial Centre
- Richard Christenson – Operation and Maintenance, Dow Centennial Center

Information

1.2 Associated Engineering Project Team:

- Patrick Mastromatteo – Project Manager
- Chris Parfitt – Project Engineer
- Peter Spearey – Senior Landscape Architect
- Robert Johnston - Architect and Sports Surfacing Specialist (JSA Sport)

Subject: Start-up Meeting

February 9, 2016

- 2 -

Action By:

Discussion:

2 COMMUNICATION PLAN

Information 2.1 All communication is to be copied to Patrick M., Chris P. and Joey F.

3 PROJECT OVERVIEW

Information 3.1 The project scope is to design and build a High Performance Field (HPF) which includes spectator seats for 1000 people, washrooms, team and officials change rooms, concessions, field lighting, score clocks, storm water management facility, parking lot, and hard and soft landscapes features. The scope also includes a Site Master Plan for the Dow Centennial Centre (DCC).

Information 3.2 The overall objectives of the project are as follows:

- Conceptual design drawings and 3D rendering of the High Performance Field and building.
- Conceptual Design Report
- Construction and operational cost estimates
- Site Master Plan for the DCC
- Detail design and specifications for the High Performance Field (see project scope)
- Construction services

4 SCHEDULE

Information 4.1 Geotechnical and site survey will need to be completed within the next month. The survey will only cover the HPF, parking lot and storm water management facility.

AE 4.2 Council presentation is schedule for March 22, 2016 but can be pushed back to April 12 if required. The City would need to know by March 15, 2016.

5 STAKEHOLDERS

Information 5.1 The Stakeholders for the HPF requirements are as follows:

- School
- High School and Community Football Association
- Soccer Association
- City
- Neighbourhoods affected by the lighting

Subject: Start-up Meeting

February 9, 2016

- 3 -

Action By:**Discussion:**

City/AE

5.2 The Stakeholder meeting should be scheduled for approximately 3 weeks from today. The City is to arrange the meeting approximately 2 weeks after the City has contacted the Stakeholders.

City

5.3 City is to contact all Stakeholders to confirm the requirements that each user would like to see as part of the HPF. These requirements will be sent to AE to create a starting point for the workshops.

6**CONTRACTOR PRE-QUALIFICATION**

AE

6.1 City would like to proceed with a pre-qualification of General Contractors for the construction of the HPF.

7**TENDER PROCESS**

Information

7.1 AE recommends that the project be separated into a possible 3 tenders:

- Building
- Turf
- Civil work

City/AE

7.2 A cash allowance could be used to tie the entire project together under one prime contractor. AE to make recommendation, then discuss with the City.

8**DRAWING STANDARDS**

AE

8.1 City has no set standards requirements for the project.

9**SCHOOL**

Information

9.1 The school location is fixed in the north-east portion of the site and construction will begin this summer.

10**BACKGROUND INFORMATION**

City

10.1 City is to provide footprint areas for the proposed pool, field house and arena with general dimensions to AE

Subject: Start-up Meeting

February 9, 2016

- 4 -

<u>Action By:</u>	<u>Discussion:</u>
City	10.2 City is to provide DWG files and records drawings of the DCC and infrastructure to AE.
City	10.3 City is to provide any geotechnical reports on record for the area.
AE	10.4 AE to investigate if we have any LiDAR on file for the site.
City	10.5 City is to provide records of the current trail system around the site.

11 SITE CONCERNS

Information	11.1 A HPF should be built in a north – south axis. This can be deviated from but is not recommended.
Information	11.2 The south-west corner of the site is fill. The remaining area is native soil. The field needs a stable base to be built on. Fill is not a good base as it tends to shift.
Information	11.3 There is an approximate 3m drainage ditch running through the site.
Information	11.4 There are wetlands in the south-east corner of the site.

12 FIELD OPTION

City	12.1 There are two different size fields for soccer depending on the level of play required. <ul style="list-style-type: none">• CSA regulations: 64m x 100m• FIFA regulations: 68m x 105m
City	12.2 Both rugby and football fields can fit into both sizes of soccer fields. Although removable goal posts will need to be installed if the larger field is built.
City	12.3 There are two options for lines on the field. <ul style="list-style-type: none">• Painted Lines• Inlaid Lanes

Painted lines have a higher maintenance costs but are more versatile when changing sports.

Subject: Start-up Meeting

February 9, 2016

- 5 -

Action By:

Discussion:

Information

13 ADDITIONAL AMENITIES

13.1 There is a possibility of the following additional amenities on site, if there is room:

- Playground
- Outdoor workout area
- New pool at DCC
- Skateboard park

14 OPEN HOUSE

Information

14.1 AE is willing to present an open house on the project if the City requires it. (Not currently in scope)

15 CITY ISSUES

AE

15.1 The Council Presentation and report needs to be kept simple with realistic construction and operation & maintenance costs.

City

15.2 The City to send AE with the 7.7 million project budget breakdown.

16 NEXT MEETING

AE

16.1 Next meeting is tentatively scheduled for the week of March 1st. AE to provide date which will match with the user group workshop.

Recorded by:

Chris Parfitt, EIT
Project Engineer

Date:	March 1, 2016	File:	2016-3656.P.02.00
Time:	3:30pm	Page:	1 of 5
Project:	High Performance Field		
Subject:	Progress Meeting		
Client:	City of Fort Saskatchewan		
Location:	James E. Graham Building, Fort Sask.		
Present:	Joey Farebrother - Fort Saskatchewan Grant Schaffer - Fort Saskatchewan Barb Shuman - Fort Saskatchewan Kelly Almer - Fort Saskatchewan Richard Christenson - Fort Saskatchewan Shelia Gagnon - Fort Saskatchewan Robert Johnston - JSA Sport Patrick Mastromatteo - Associated Engineering Chris Parfitt - Associated Engineering		
Distribution:	Those Present Peter Spearey - Associated Engineering Jason Bennett - Associated Engineering Ann Stephenson - Associated Engineering Carolyn Sherstone - Associated Engineering Lisbeth Medina - Associated Engineering Roger Dupuis - AES Engineering Paul Anseeuw - AME Group Ada Lao - Thurber Engineering		

RECORD OF MEETING

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Action By: Discussion:

1 SCHEDULE

- | | |
|-------------|--|
| AE | 1.1 Geotechnical and site survey will need to be completed within the next month. The survey will only cover the HPF, parking lot and storm water management facility.
(03/01) AE to organize Thurber to mobilize to site ASAP. |
| Information | 1.2 Council presentation is schedule for March 22, 2016 but can be pushed back to April 12 if required. The City would need to know by March 15, 2016.
(03/01) City and AE confirmed that the Council presentation will be scheduled for March 22. |

Subject: Progress Meeting

March 1, 2016

- 2 -

Action By:**Discussion:****2 STAKEHOLDERS**

Information 2.2 The Stakeholder meeting should be scheduled for approximately 3 weeks from today. The City is to arrange the meeting approximately 2 weeks after the City has contacted the Stakeholders.

(03/01) Completed

Information 2.3 City is to contact all Stakeholders to confirm the requirements that each user would like to see as part of the HPF. These requirements will be sent to AE to create a starting point for the workshops.

(03/01) Completed**3 CONTRACTOR PRE-QUALIFICATION**

AE 3.1 City would like to proceed with a pre-qualification of General Contractors for the construction of the HPF.

(03/01) On-going**4 TENDER PROCESS**

Information 4.1 AE recommends that the project be separated into a possible 3 tenders:

- Building
- Turf
- Civil work

City/AE 4.2 A cash allowance could be used to tie the entire project together under one prime contractor. AE to make recommendation, then discuss with the City.

(03/01) On-going**5 DRAWING STANDARDS**

AE/JSA 5.1 City has no set standards requirements for the project.

(03/01) AE and JSA Sport will use their own templates to produce required drawings.

Subject: Progress Meeting

March 1, 2016

- 3 -

Action By:

Discussion:

6 BACKGROUND INFORMATION

- | | |
|-------------|--|
| Information | 6.1 City is to provide footprint areas for the proposed pool, field house and arena with general dimensions to AE
(03/01) Completed |
| Information | 6.2 City is to provide DWG files and records drawings of the DCC and infrastructure to AE.
(03/01) Completed |
| Information | 6.3 City is to provide any geotechnical reports on record for the area.
(03/01) City and AE to investigate getting the Geotechnical report from the DCC grading plan. (03/03) Completed after meeting. |
| City | 6.4 AE to investigate if we have any LiDAR on file for the site.
(03/01) AE does not have LiDAR for the site. City to check their records. |
| Information | 6.5 City is to provide records of the current trail system around the site.
(03/01) Completed |

7 FIELD OPTION

- | | |
|-------------|--|
| Information | 7.1 There are two different size fields for soccer depending on the level of play required. <ul style="list-style-type: none">· CSA regulations: 64m x 100m· FIFA regulations: 68m x 105m (03/01) City has decided to go with the FIFA regulation size field. |
| Information | 7.2 Both rugby and football fields can fit into both sizes of soccer fields. Although removable goal posts will need to be installed if the larger field is built.
(03/01) Football goal posts will be in the soccer goaltenders area. The goal post sockets need to be covered up and be consistent with the surrounding area to pass FIFA regulations. |
| JSA | 7.3 There are two options for lines on the field. <ul style="list-style-type: none">· Painted Lines· Inlaid Lanes Painted lines have a higher maintenance costs but are more versatile when changing sports.
(03/01) The City has decided to go with painted line. JSA to provide equipment list and cost for painting and removing line. |

Subject: Progress Meeting

March 1, 2016

- 4 -

Action By:

Discussion:

8 CITY ISSUES

AE/JSA

8.1 The Council Presentation and report needs to be kept simple with realistic construction and operation & maintenance costs.

(03/01) City requires the information by March 14, 2016

Information

8.2 The City to send AE with the 7.7 million project budget breakdown.

(03/01) Completed

9 WORKSHOP (03/01)

Information

9.1 JSA presented 4 footprints options for the field and associated buildings. It was agreed by all parties to proceed with option 3 (attached)

JSA/AE

9.2 Football and Soccer Associations have requested a green space near the field for warming up and practices. This space only needs to be 35 yards by 35 yards and does not need lightening or services. JSA Sport and AE to investigate if this is possible.

Information

9.3 Every change room will have its own services (washroom, showers, entrance, etc). The showers will have 5-8 showerheads.

City/AE

9.4 Both Football and Soccer have inquired if there will be storage on site for their equipment and if it will be heated. Soccer loses roughly 100 balls due to cold winter storage. Football needs storage for practice equipment, heat is not needed. City and AE to discuss options.

City

9.5 City to let user groups know what kind of score clock will be installed. Football can get sponsorships to help install or upgrade the clock if required.

JSA

9.6 Official change rooms will hold 6-7 people. The change rooms will have separate services. JSA to check the FIFA guidelines for official change rooms to make sure they conform.

AE

9.7 Concession to have space with electrical outlets only. It will not be an industrial kitchen, no kitchen equipment. It is expected to be run by the Associations. The Associations have requested a natural gas hook-up for BBQs on the outside and a couple of 220 volts plug-in on the inside of the concession. AE/JSA to investigate.

Subject: Progress Meeting

March 1, 2016

- 5 -

Action By: **Discussion:**

Information 9.8 The Football and Soccer Association request the following options:

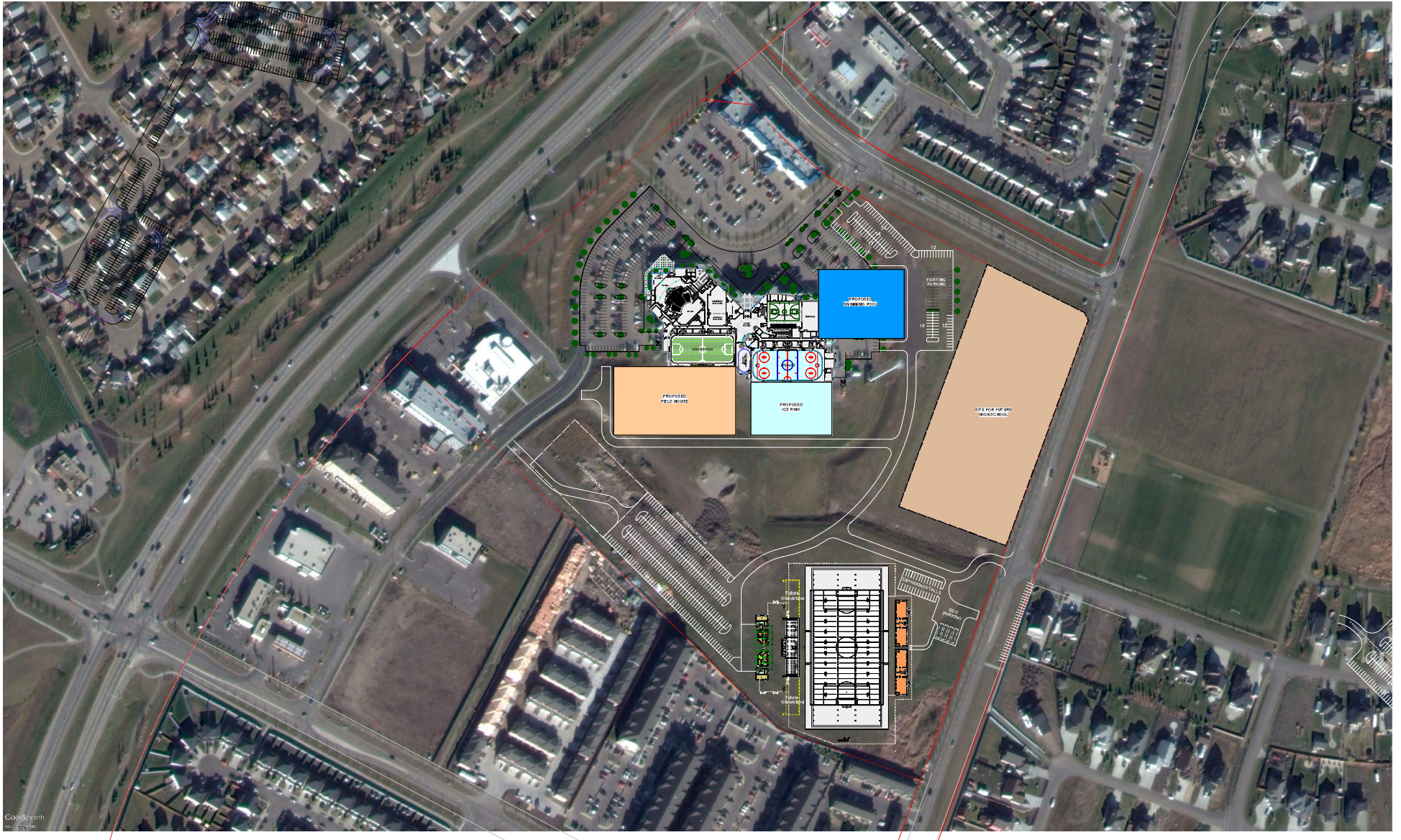
- The field be aligned on a north/south axis
- The stands and the main entrance on the west side of the field
- The change room on the east side of the field with separate entrance
- 4 - 25 people change rooms that combine into 2 – 50 people change rooms and 2 additional 50 people change rooms for a total of 6 change rooms.
- Football regulations requires a minimum of 4 – 50 people change rooms
- Official change rooms to be on the east side of the field
- Flat grassed area for practice and warm-ups

10 NEXT MEETING

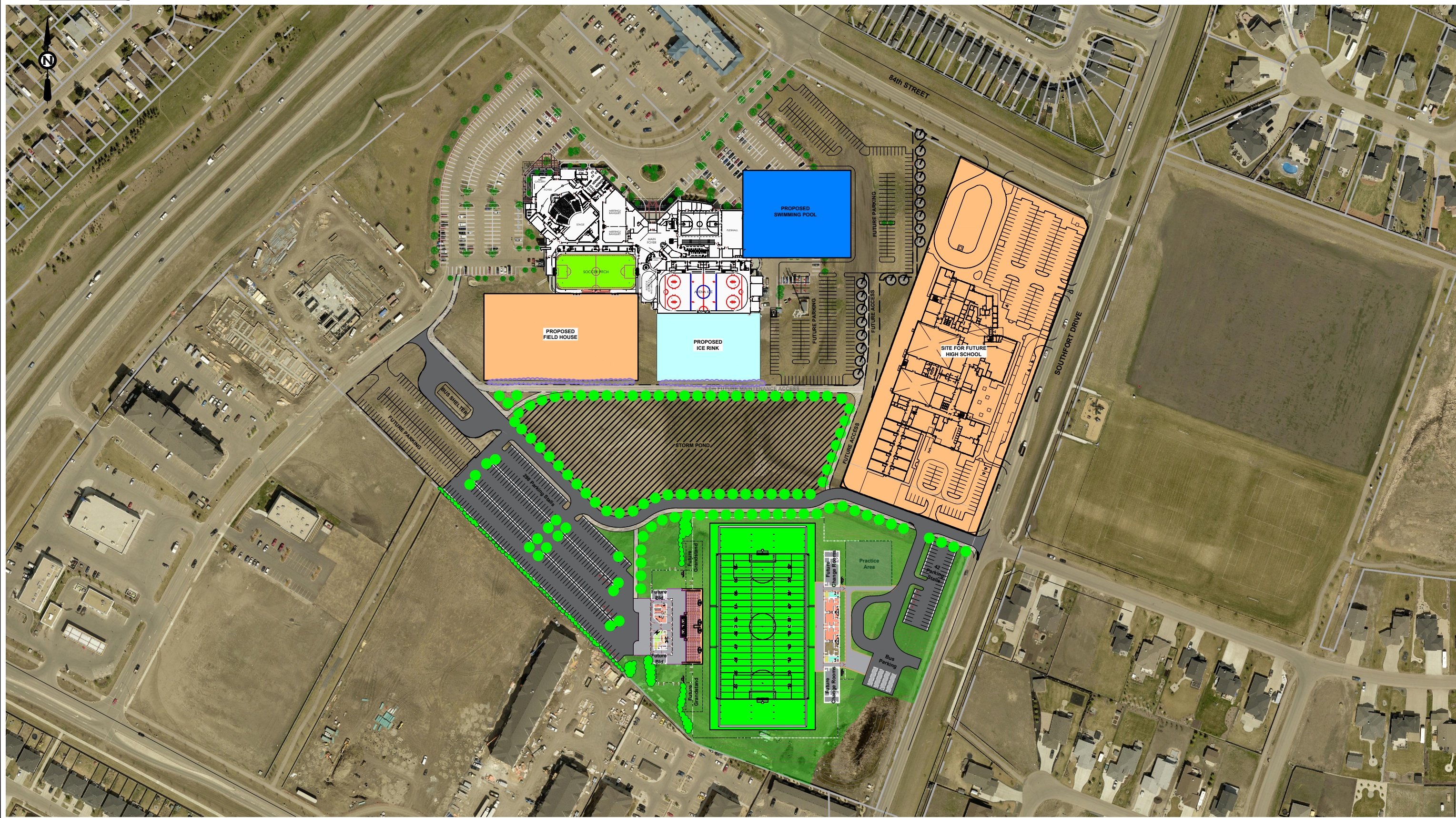
AE/City 10.1 Next meeting is TBA.

Recorded by:

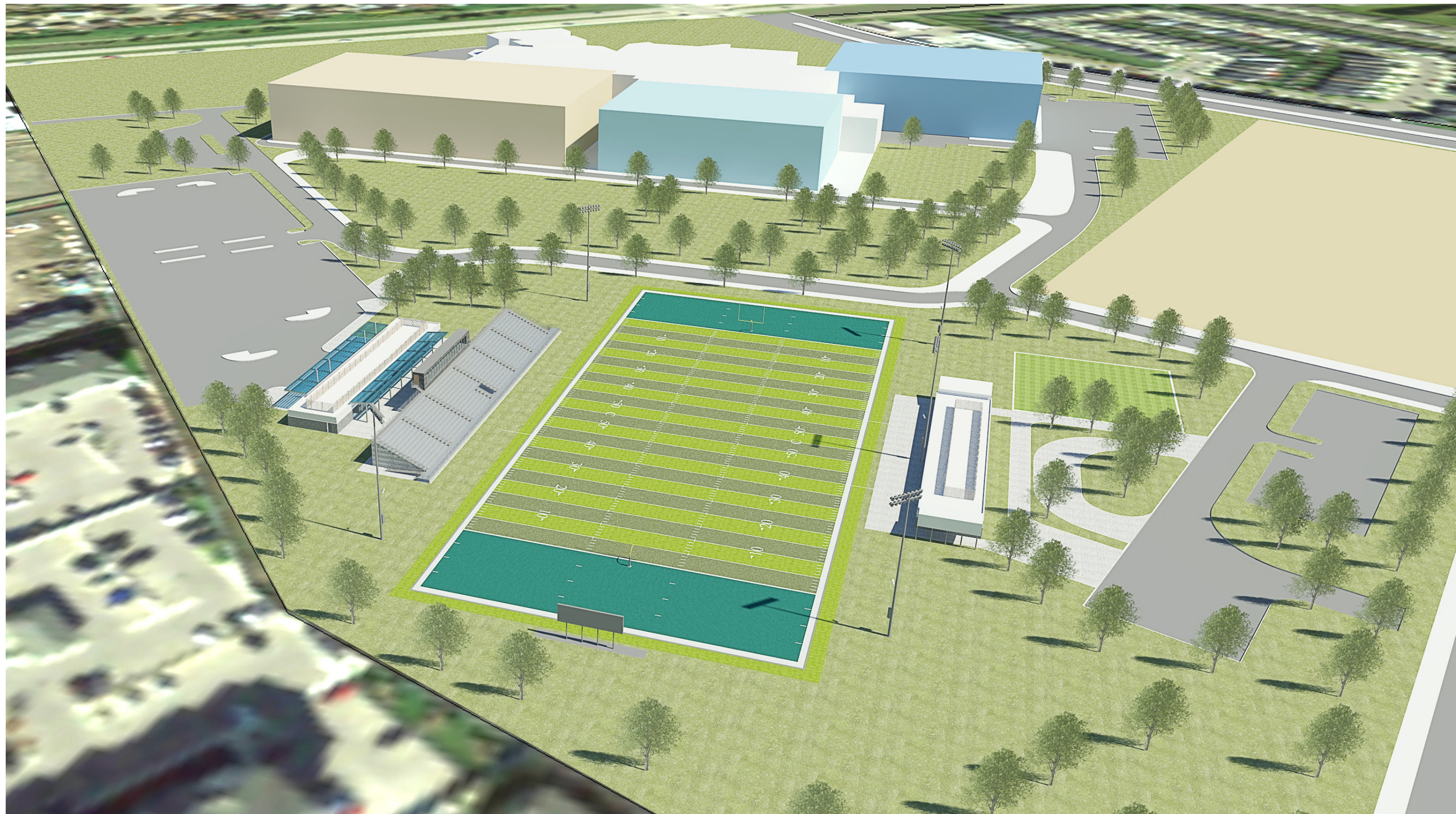
Chris Parfitt, EIT
Project Engineer

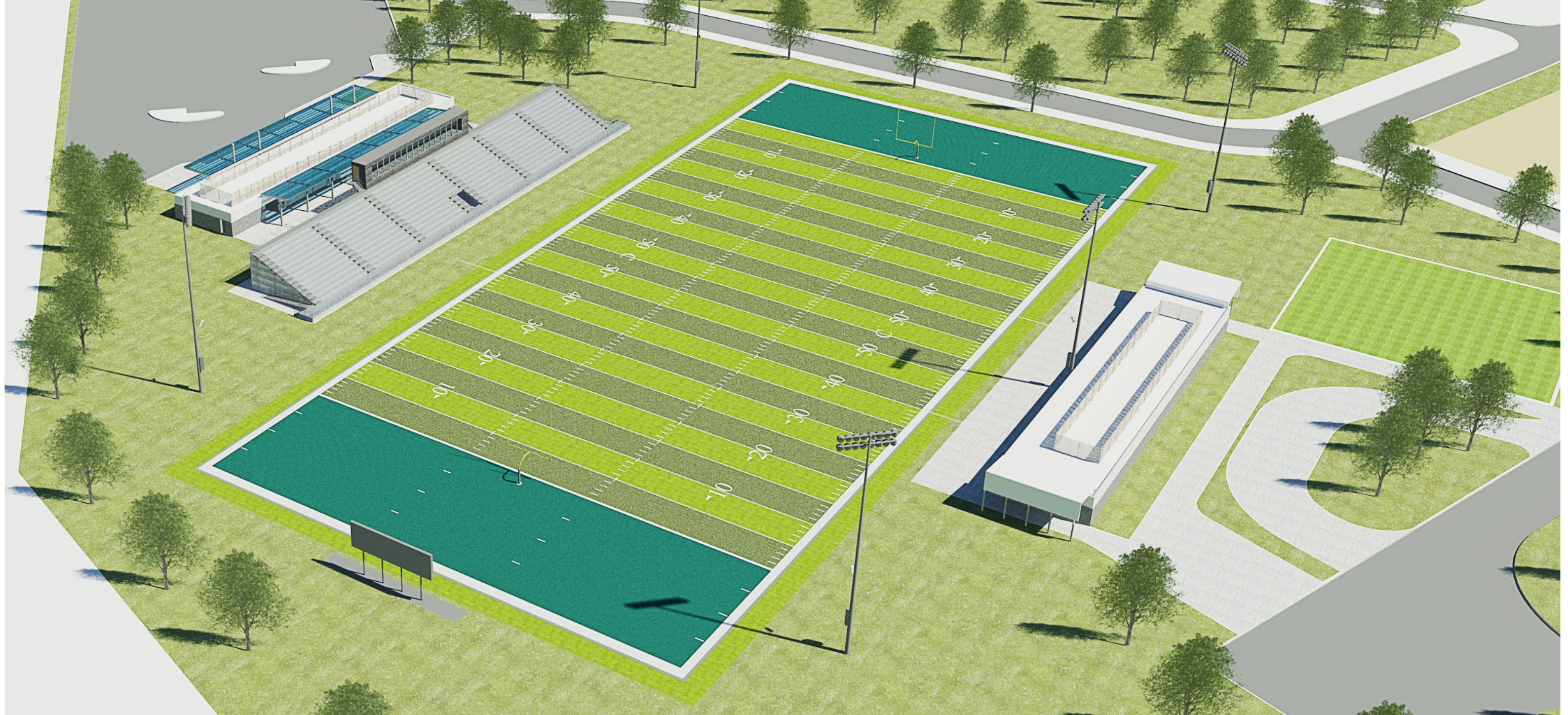


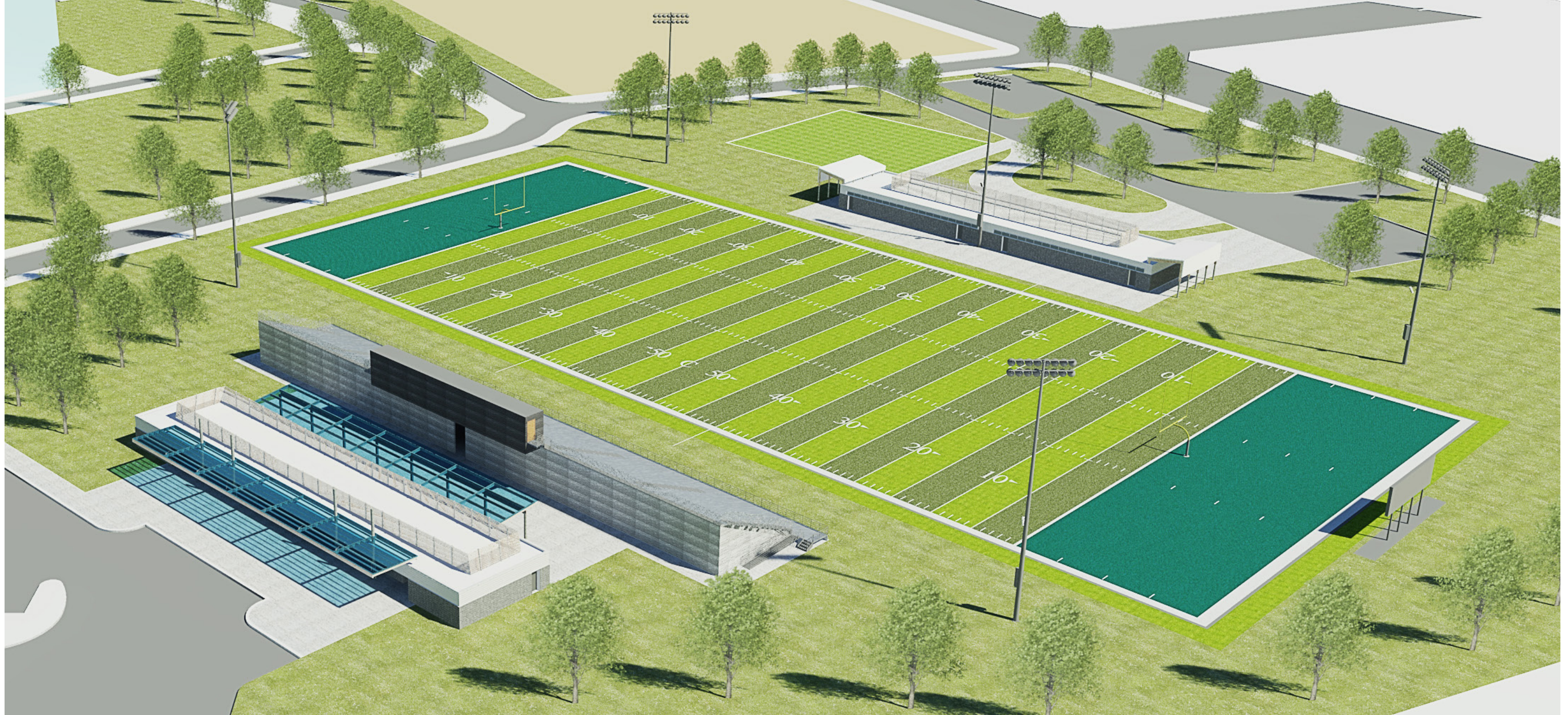
Appendix B – Site Layout

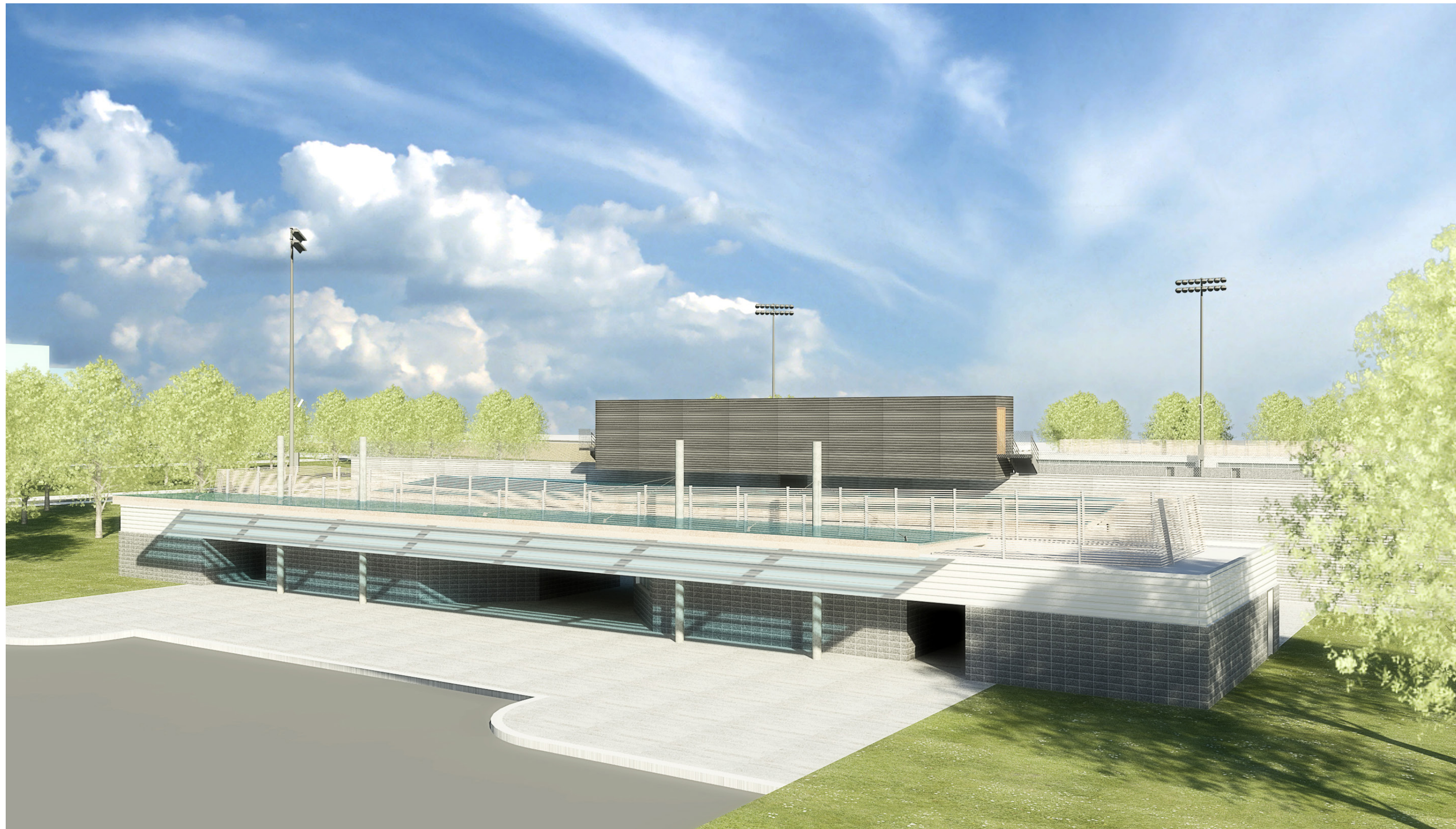


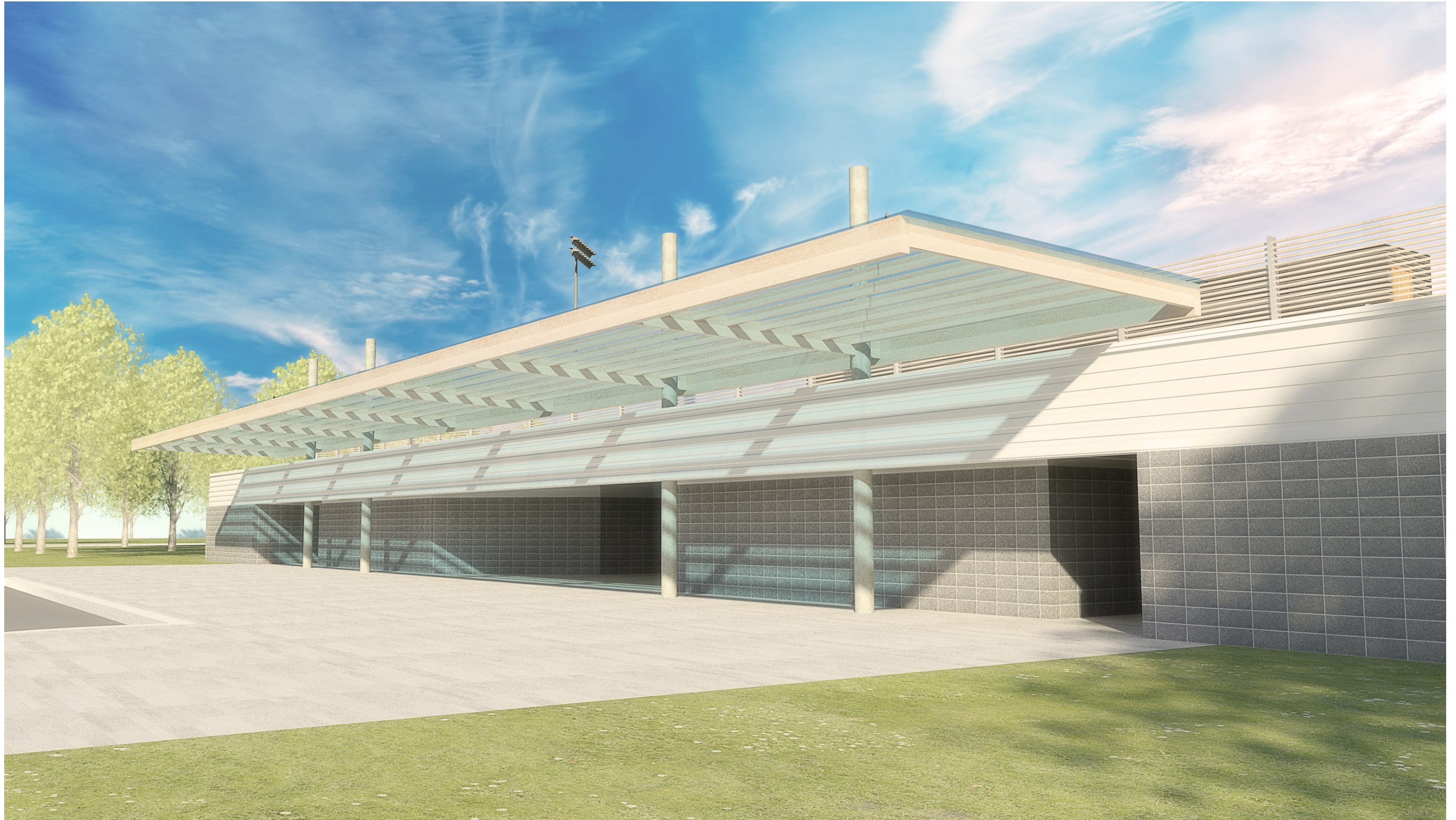
\\sadm-ls-01\projects\2016\365600_High_Performance\Working_Dwg\1100_Civil\3656-00-e-7102.dwg
DATE: 2016-04-12, Chris Parfitt













Appendix C – Detailed Cost Estimate



GLOBAL PERSPECTIVE.
LOCAL FOCUS.



**City of Fort Saskatchewan - High Performance Field
Conceptual Construction Cost Estimate Detail Breakdown**

Item	Description	Unit	Estimated Quantity	Unit Price	Extension
1	START - UP				
1.1	General Requirments	LS	1	Lump Sum	\$ 50,000.00
	TOTAL PART 1.0 - START-UP				\$ 50,000.00
2	SITE DEVELOPMENT AND PARKING LOT				
2.1	Stripping (Field, Roads and Parking Lots)	m ²	20,000	\$ 5.00	\$ 100,000.00
2.2	Players and Officials Parking Lot				
	.1 Subgrade Preparation (150mm Depth)	m ²	1,250	\$ 10.00	\$ 12,500.00
	.2 250mm Depth Granular Base (20mm minus)	m ²	1,250	\$ 21.00	\$ 26,250.00
	.3 75mm Depth ACR Asphalt	m ²	1,000	\$ 35.00	\$ 35,000.00
2.3	Bus Parking				
	.1 Subgrade Preparation (150mm Depth)	m ²	1,250	\$ 10.00	\$ 12,500.00
	.2 250mm Depth Granular Course (63mm minus)	m ²	1,250	\$ 24.00	\$ 30,000.00
	.3 150mm Depth Granular Base (20mm minus)	m ²	1,100	\$ 15.00	\$ 16,500.00
	.4 100mm Depth ACO Asphalt	m ²	1,000	\$ 45.00	\$ 45,000.00
2.4	Pavement Markings				
	.1 Parking Stall Lines (100mm solid white)	m	310	\$ 7.00	\$ 2,170.00
	.2 Stop Bar (300mm solid white)	ea.	5	\$ 500.00	\$ 2,500.00
	.3 Zebra Crossing Bars (solid white)	ea.	3	\$ 250.00	\$ 750.00
	.4 Handicap symbol	ea.	4	\$ 200.00	\$ 800.00
2.5	Supply signs and base posts				
	.1 Stop signs	ea.	1	\$ 300.00	\$ 300.00
	.2 Handicap Parking Signs	ea.	2	\$ 300.00	\$ 600.00
2.6	Curb and Gutter	m	200	\$ 220.00	\$ 44,000.00
2.7	Pararamps	ea.	4	\$ 500.00	\$ 2,000.00
2.8	Players and Officials Parking Lot Lighting	LS	1	\$ 40,000.00	\$ 40,000.00
	TOTAL PART 2.0 SITE DEVELOPMENT AND PARKING LOT				\$ 370,870.00

3 SPORTS FIELD

3.1	Field Excavation (re-use on-site)	m ³	15,725	\$	15.00	\$	235,875.00
3.2	Base						
	.1 Supply and Place Non-frost susceptible (Pit Run) material	m ³	10,400	\$	30.00	\$	312,000.00
	.2 Supply and Place Base Course	m ³	4,850	\$	75.00	\$	363,750.00
	.3 Supply and Place Top Course	m ³	550	\$	85.00	\$	46,750.00
3.3	Drainage						
	.1 Supply and Place 300mm Dia. PVC SDR 35	m	170	\$	295.00	\$	50,150.00
	.2 Supply and Place Manholes						
	.1 1050mm Dia. Precast Base	ea.	1	\$	10,000.00	\$	10,000.00
	.2 1200mm Dia. Pre-cast Base	ea.	1	\$	12,500.00	\$	12,500.00
	.3 Lawn Basins 300mm Dia. Area Drains	ea.	14	\$	600.00	\$	8,400.00
	.4 150mm Dia. Perf. PVC Field Drains	m	2,325	\$	125.00	\$	290,625.00
	.5 Clean outs c/w case iron covers	ea.	17	\$	750.00	\$	12,750.00
3.4	Turf						
	.1 48 oz. turf	m ²	10,480	\$	56.00	\$	586,880.00
	.2 Concrete Field Edge	m	436	\$	225.00	\$	98,100.00
3.5	Sports Fittings						
	.1 CFL Goal Posts	LS	1	\$	17,000.00	\$	17,000.00
	.2 Soccer Goal	LS	1	\$	8,000.00	\$	8,000.00
	.3 Misc.	LS	1	\$	5,000.00	\$	5,000.00
	TOTAL PART 3.0 SPORT FIELD					\$	2,057,780.00

4 LIGHTS

4.1	Sport Field Lights (Metal Halide)	ea.	1	\$417,000.00	\$	417,000.00
	TOTAL PART 4.0 LIGHTS				\$	417,000.00

5 SCORE CLOCK

5.1	Sport Field Lights	ea.	1	\$ 50,000.00	\$	50,000.00
	TOTAL PART 5.0 SCORE CLOCK				\$	50,000.00

6 SITE SERVICES

6.1 Watermains

.1 Supply and Install 200mm Dia. PVC DR 18 Watermain	m	450	\$ 315.00	\$ 141,750.00
.2 Supply and Install Fire Hydrants	ea.	2	\$ 12,500.00	\$ 25,000.00
.3 Supply and Install 200mm Gate Valves	ea.	2	\$ 3,500.00	\$ 7,000.00
.4 Tie into Existing Watermain	ea.	1	\$ 20,000.00	\$ 20,000.00
.5 Supply and Install 50mm Dia. Service	m	140	\$ 225.00	\$ 31,500.00

6.2 Sanitary Sewer Mains

.1 Supply and Install 200mm Dia. PVC	m	350	\$ 330.00	\$ 115,500.00
.2 Supply and Install 1200mm Dia. Manholes c/w Precast Bases	ea.	5	\$ 12,000.00	\$ 60,000.00
.3 Supply and Install Frames and Covers				
.1 Type NF-80	ea.	5	\$ 600.00	\$ 3,000.00
.4 Tie-In to Existing Sanitary Mains	ea.	1	\$ 20,000.00	\$ 20,000.00
.5 Supply and Install 150mm Dia. Service	m	200	\$ 295.00	\$ 59,000.00

6.3 Utilities

.1 Supply and Install Power Service	LS	1	\$ 50,000.00	\$ 50,000.00
.2 Supply and Install Gas Service	LS	1	\$ 75,000.00	\$ 75,000.00
.3 Supply and Install Phone and Internet	LS	1	\$ 50,000.00	\$ 50,000.00

TOTAL PART 6.0 SITE SERVICES

\$ 657,750.00

7 BUILDINGS

7.1 Change rooms

.1 4 x 25 person (combine to 2 x 50)	m ²	538	\$ 2,745.00	\$ 1,476,810.00
.2 Foundation	ea.	1	\$215,000.00	\$ 215,000.00

7.2 Main Entrance Buildings

.1 Buildings (Washrooms & Ticket/Admin)	m ²	220	\$ 3,775.00	\$ 830,500.00
.2 Foundations	ea.	2	\$ 55,000.00	\$ 110,000.00

TOTAL PART 7.0 BUILDINGS

\$ 2,632,310.00

8 LANDSCAPING

8.1 Fences (8 double gates, 2 singles gates)	m	572	\$ 135.00	\$ 77,220.00
8.2 Deciduous Trees	ea.	115	\$ 600.00	\$ 69,000.00
8.4 Top soil and seeding	m ²	1,000	\$ 12.00	\$ 12,000.00

TOTAL PART 8.0 LANDSCAPING

\$ 158,220.00

TOTAL PART 1.0 - START-UP	\$	50,000.00
TOTAL PART 2.0 SITE DEVELOPMENT AND PARKING LOT	\$	370,870.00
TOTAL PART 3.0 SPORT FIELD	\$	2,057,780.00
TOTAL PART 4.0 LIGHTS	\$	417,000.00
TOTAL PART 5.0 SCORE CLOCK	\$	50,000.00
TOTAL PART 6.0 SITE SERVICES	\$	657,750.00
TOTAL PART 7.0 BUILDINGS	\$	2,632,310.00
TOTAL PART 8.0 LANDSCAPING	\$	158,220.00

SUBTOTAL	\$	6,393,930.00
10% CONTINGENCY	\$	639,393.00
10% ENGINEERING	\$	639,393.00
TOTAL ESTIMATE	\$	7,672,716.00

OPTIONAL AMENITIES (NOT INCLUDED IN ESTIMATE ABOVE)

.1	Grandstands					
	.1 1000 Seats (no backs)	LS	1	\$590,000.00	\$	590,000.00
	.2 Press Box	LS	1	\$250,000.00	\$	250,000.00
	.3 Foundation with excavation	LS	1	\$231,000.00	\$	231,000.00
	.4 Seating with backs	LS	1	\$ 20,000.00	\$	20,000.00
	.5 Wider platform/ higher risers	LS	1	\$ 40,000.00	\$	40,000.00
.2	Main Entrance Buildings					
	.1 Buildings (Meeting & Storage Blds)	m ²	164	\$ 2,300.00	\$	377,200.00
	.2 Foundations with excavation	LS	1	\$110,000.00	\$	110,000.00
.3	50 locker team rooms					
	.1 2 x 50 person (267m ² each)	m ²	534	\$ 2,415.00	\$	1,289,610.00
	.2 Foundations with excavation	ea.	2	\$112,500.00	\$	225,000.00
.4	Turf Pad	LS	1	\$203,040.00	\$	203,040.00
.5	Black Vinyl along Fence	LS	1	\$ 22,915.00	\$	22,915.00
.6	Upgrade Stadium Lighting to LED	LS	1	\$473,000.00	\$	473,000.00
	TOTAL OPTIONAL AMENITIES				\$	3,831,765.00

TOTAL OPTIONAL AMENITIES	\$	3,831,765.00
10% CONTINGENCY	\$	383,176.50
10% ENGINEERING	\$	383,176.50
TOTAL ESTIMATE	\$	4,598,118.00

PARK-N-RIDE FACILITIES

1 PARK-N-RIDE UTILITIES

1.1	Storm Water Management Pond					
	.1 Stripping	m ²	14,900	\$ 5.00	\$	74,500.00
	.2 Excavation	m ³	19,500	\$ 15.00	\$	292,500.00
	.3 Topsoil & seeding	m ²	15,200	\$ 12.00	\$	182,400.00
	.4 Shoreline treatment	m	400	\$ 150.00	\$	60,000.00
	.5 Outlet structure(s)	ea.	1	\$ 20,000.00	\$	20,000.00
1.2	Excavation					
	.1 Waste Excavation	m ³	4,800	\$ 30.00	\$	144,000.00
1.3	Bus Shelter	m ²	150	\$ 2,715.00	\$	407,250.00
1.4	Parking Lot					
	.1 Subgrade Preparation (150mm Depth)	m ²	9,800	\$ 10.00	\$	98,000.00
	.2 250mm Depth Granular Base (20mm minus)	m ²	9,800	\$ 21.00	\$	205,800.00
	.3 75mm Depth ACR Asphalt	m ²	8,900	\$ 35.00	\$	311,500.00
1.5	Access Roads					
	.1 Subgrade Preparation (150mm Depth)	m ²	3,700	\$ 10.00	\$	37,000.00
	.2 250mm Depth Granular Course (63mm minus)	m ²	3,700	\$ 24.00	\$	88,800.00
	.3 150mm Depth Granular Base (20mm minus)	m ²	3,600	\$ 15.00	\$	54,000.00
	.4 100mm Depth ACO Asphalt	m ²	3,600	\$ 45.00	\$	162,000.00
1.6	Pavement Markings					
	.1 Parking Stall Lines (100mm solid white)	m	2,040	\$ 7.00	\$	14,280.00
	.2 Stop Bar (300mm solid white)	ea.	5	\$ 500.00	\$	2,500.00
	.3 Zebra Crossing Bars (solid white)	ea.	3	\$ 250.00	\$	750.00
	.4 Handicap symbol	ea.	12	\$ 200.00	\$	2,400.00
1.7	Supply signs and base posts					
	.1 Stop signs	ea.	1	\$ 300.00	\$	300.00
	.2 Handicap Parking Signs	ea.	6	\$ 300.00	\$	1,800.00
	.3 No parking Signs	ea.	14	\$ 300.00	\$	4,200.00
	.4 Speed Limit	ea.	2	\$ 300.00	\$	600.00
1.8	Traffic Islands	m ²	220	\$ 335.00	\$	73,700.00
1.9	Road and Parking Lot Lighting	LS	1	\$104,000.00	\$	104,000.00
1.10	Multi-use trail (3.0 m Width)	m	900	\$ 200.00	\$	180,000.00

TOTAL PART 1.0 PARK-N-RIDE SHARED FACILITIES

\$ 2,522,280.00

TOTAL PART 1.0 PARK-N-RIDE SHARED FACILITIES

\$ 2,522,280.00

20% CONTINGENCY

\$ 504,456.00

15% ENGINEERING

\$ 378,342.00

TOTAL ESTIMATE

\$ 3,405,078.00

Appendix D – Detailed O&M Cost Estimate



HIGH PERFORMANCE FIELD PROJECTED OPERATING BUDGET

	Proposed Budget	Notes
Revenues		
Sales, Rentals and User Charges		
1431 Rentals	(40,000)	
Total Sales, Rentals and User Charges	<u> </u>	
Total Revenues	<u>(40,000)</u>	
Expenses		
Salaries, Wages and Benefits		
2021 Salaries - Regular		
2023 Wages - Regular		
2024 Wages - PT Regular		
2025 Wages - Casual Relief	80,000	seasonal support staff from April through to mid November
2026 Wages - Overtime		
2028 Wages - Temporary Staff		
2035 ER Contributions	5,600	7% of wages
Total Salaries, Wages and Benefits	<u>85,600</u>	
Contracted and General Services		
2131 Courses, Conferences & Seminars	5,000	Annual turf field maintenance training courses for Operators
2133 Travel, Meals & Accommodations	5,000	Allowance to attend training courses
2291 Contracted Services	15,000	Electrical, plumbing, painters, HVAC, etc
2401 Insurance	11,000	Based on quote
2451 Repairs & Maintenance	40,000	Includes parking lot and surrounding green space maintenance
Total Contracted and General Services	<u>76,000</u>	
Materials, Supplies and Utilities		
2481 Supplies & Materials-Maintenance	35,000	Janitorial, fuels & lubricants, paint, field testing equipment, etc
2551 Furnishings & Equipment	38,000	Tools, parts, groomer, brushes, sweeper, etc
2601 Electricity	45,000	Based on regional comparisons
2603 Natural Gas	15,000	Based on regional comparisons
2605 Water, Sewer & Solid Waste	11,000	Based on regional comparisons
Total Materials, Supplies and Utilities	<u>144,000</u>	
Other Expenses		
2931 Trsf to Cap (PAYG)-	65,000	12 year replacement plan for the turf
2941 Trsf to Reserve	8,000	10 year equipment replacement plan for field servicing equipment
Total Other Expenses	<u>73,000</u>	
Total Expenses	<u>378,600</u>	
Net (Revenues)/Expenses	<u>338,600</u>	