



CATHOLIC CENTRAL NORTH CAMPUS JSP22-37

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Public hearing at the request of Catholic Central High School for Planning Commission's approval of revised Special Land Use Permit, Preliminary Site Plan, Phasing Plan, Wetland Permit, Woodland Permit, and Stormwater Management Plan. The subject property is zoned R-4 One Family Residential, R-1 One Family Residential, and I-1 Light Industrial and is located in Section 18, west of Wixom Road and south of Twelve Mile Road. The applicant is proposing several new facilities in the northwestern portion of the Catholic Central High School campus: a 4-level parking structure (700 spaces), a hospitality/concession building, an athletic field for practices and competition, discus and shotput fields, and a new track and stadium.

Required Action

Approve/Deny the revised Special Land Use permit, Preliminary Site Plan with Phasing Plan, Wetland Permit, Woodland Permit and Stormwater Management Plan.

REVIEW	RESULT	DATE	COMMENTS
Planning	Approval recommended	12.9.2022	<ul style="list-style-type: none"> • ZBA variance requested to allow building height to exceed 35 feet • ZBA variance request for the height of the athletic field light poles • Items to be addressed in Final Site Plan submittal
Engineering	Approval recommended	12.7.2022	<ul style="list-style-type: none"> • Items to be addressed in the Final Site Plan submittal
Landscaping	Approval recommended	11.30.2022	<ul style="list-style-type: none"> • Waiver to allow the detention basin plantings north of the parking deck to count toward the foundation landscaping requirement (Supported by staff) • Items to be addressed in Final Site Plan
Wetland	Approval recommended	12.2.2022	<ul style="list-style-type: none"> • Non-Minor Wetland Use permit required • Items to be addressed in the electronic stamping submittal
Woodland	Approval recommended	10.7.2022	<ul style="list-style-type: none"> • Woodland Use Permit for removal of 20 regulated trees • Items to be addressed in Final Site Plan
Traffic	Approval recommended	12.7.2022	<ul style="list-style-type: none"> • ZBA Variance for lack of end islands in the parking garage • Special Events Traffic Management Plan to be reviewed at the time of Final Site Plan submittal • Items to be addressed in Final Site Plan
Façade	Approval recommended	12.8.2022	<ul style="list-style-type: none"> • Full compliance with Ordinance
Fire	Approval recommended	10.7.2022	<ul style="list-style-type: none"> • Meets Fire Department Standards

Motion sheet

Approval – Revised Special Land Use Permit

In the matter of Catholic Central North Campus JSP22-37, motion to **approve** the Revised Special Land Use permit based on the following findings:

- a. Relative to other feasible uses of the site:
 - i. The proposed use will not cause any detrimental impact on existing thoroughfares in terms of overall volumes, capacity, safety, vehicular turning patterns, intersections, view obstructions, line of sight, ingress and egress, acceleration/deceleration lanes, off-street parking, off-street loading/unloading, travel times and thoroughfare level of service. *The applicant states student enrollment will not increase as a result of the new facilities, and therefore traffic will not increase in any significant way. No changes to exterior drives are proposed with this project. The applicant will provide a Special Events Management Plan for review by the City's traffic consultant to ensure that high traffic events will not overwhelm nearby roadways.*
 - ii. The proposed use will not cause any detrimental impact on the capabilities of public services and facilities, including water service, sanitary sewer service, storm water disposal and police and fire protection to service existing and planned uses in the area.
 - iii. The proposed use is compatible with the natural features and characteristics of the land, including existing woodlands, wetlands, watercourses and wildlife habitats *because the addition will be built on an area previously used for parking lots. Woodland and wetland impacts are relatively minor for this project.*
 - iv. The proposed use is compatible with adjacent uses of land in terms of location, size, character, and impact on adjacent property or the surrounding neighborhood, *because the use of the property has been and will remain a school and the number of students is not increasing. The applicant has shown an effort to minimize lighting and noise disturbance on neighbors.*
 - v. The proposed use is consistent with the goals, objectives and recommendations of the City's Master Plan for Land Use, *because it complies with Future Land Use map designation of Educational Facility.*
 - vi. The proposed use will promote the use of land in a socially and economically desirable manner, *because the investment in school facilities creates jobs.*
 - vii. The proposed use was previously approved by the Planning Commission for Special Land Use permit at this location. The addition represents a physical expansion of the use, and therefore revision of the previous permit. A variance will be required for the height of the parking garage and athletic field lighting, but otherwise the dimensional requirements of the ordinance are met.

b. *Additional comments here if any*

(This motion is made because the plan is otherwise in compliance with Article 3.1.5, Article 4, Article 5 and Article 6 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)

- AND -

Approval – Preliminary Site Plan

In the matter of Catholic Central North Campus JSP22-37, motion to **approve** the Preliminary Site Plan and Phasing Plan based on and subject to the following:

- a. This approval applies to the improvements shown on the detailed plans only, future phases depicted on the Master Plan will require additional approvals.
- b. Landscaping waiver from Section 5.5.3.D. to allow plantings on the north side of the detention basin to count towards the parking deck's foundation landscaping requirement, as *the intent of the ordinance is achieved and plantings closer to the deck would suffer when snow is plowed from the roof*, which is hereby granted.
- c. Approval of variances to be requested from the Zoning Board of Appeals as follows:
 - i. Building height of the parking garage exceeds the 35 foot limit (42 feet proposed).
 - ii. Athletic field light poles exceeds the 35-foot limit (80 feet proposed).
 - iii. Lack of end islands within the parking garage structure.
- d. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan; and
- e. *(additional conditions here if any)*.

(This motion is made because the plan is otherwise in compliance with Article 3, Article 4 and Article 5 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)

-AND-

Approval – Wetland Permit

In the matter of Catholic Central North Campus JSP22-37, motion to **approve** the Wetland Permit based on and subject to the following:

- a. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan; and
- b. *(additional conditions here if any)*

(This motion is made because the plan is otherwise in compliance with Chapter 12, Article V of the Code of Ordinances and all other applicable provisions of the Ordinance.)

-AND-

Approval – Woodland Permit

In the matter of Catholic Central North Campus JSP22-37, motion to **approve** the Woodland Permit based on and subject to the following:

- a. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan; and
- b. *(additional conditions here if any)*

(This motion is made because the plan is otherwise in compliance with Chapter 37 of the Code of Ordinances and all other applicable provisions of the Ordinance.)

- AND -

Approval – Stormwater Management Plan

In the matter of Catholic Central North Campus JSP22-37, motion to **approve** the Stormwater Management Plan, based on and subject to:

- a. The findings of compliance with Ordinance standards in the staff and consultant review letters, and the conditions and items listed in those letters being addressed on the Final Site Plan; and
- b. *(additional conditions here if any).*

(This motion is made because it otherwise in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance.)

- OR -

Denial – Revised Special Land Use Permit

In the matter of Catholic Central North Campus JSP22-37, motion to **deny** the Revised Special Land Use permit as the project does not comply with the findings required for Special Land Use approval ... *(because the plan is not in compliance with Article 6 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)*

Denial – Preliminary Site Plan

In the matter of Catholic Central North Campus JSP22-37, motion to **deny** the Preliminary Site Plan... *(because the plan is not in compliance with Article 3, Article 4 and Article 5 of the Zoning Ordinance and all other applicable provisions of the Ordinance.)*

-AND-

Denial– Woodland Permit

In the matter of Catholic Central North Campus JSP22-37, motion to **deny** the Woodland Permit... *(because the plan is not in compliance with Chapter 37 of the Code of Ordinances and all other applicable provisions of the Ordinance.)*

-AND-

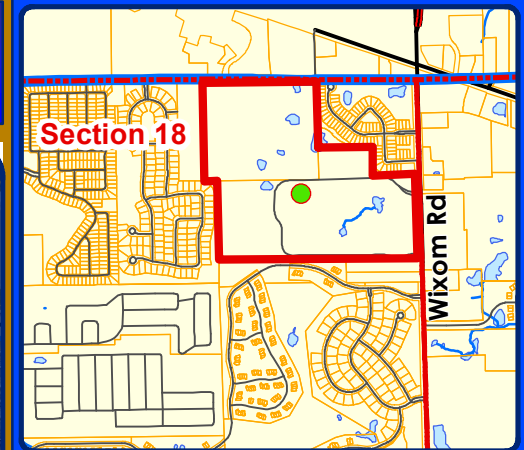
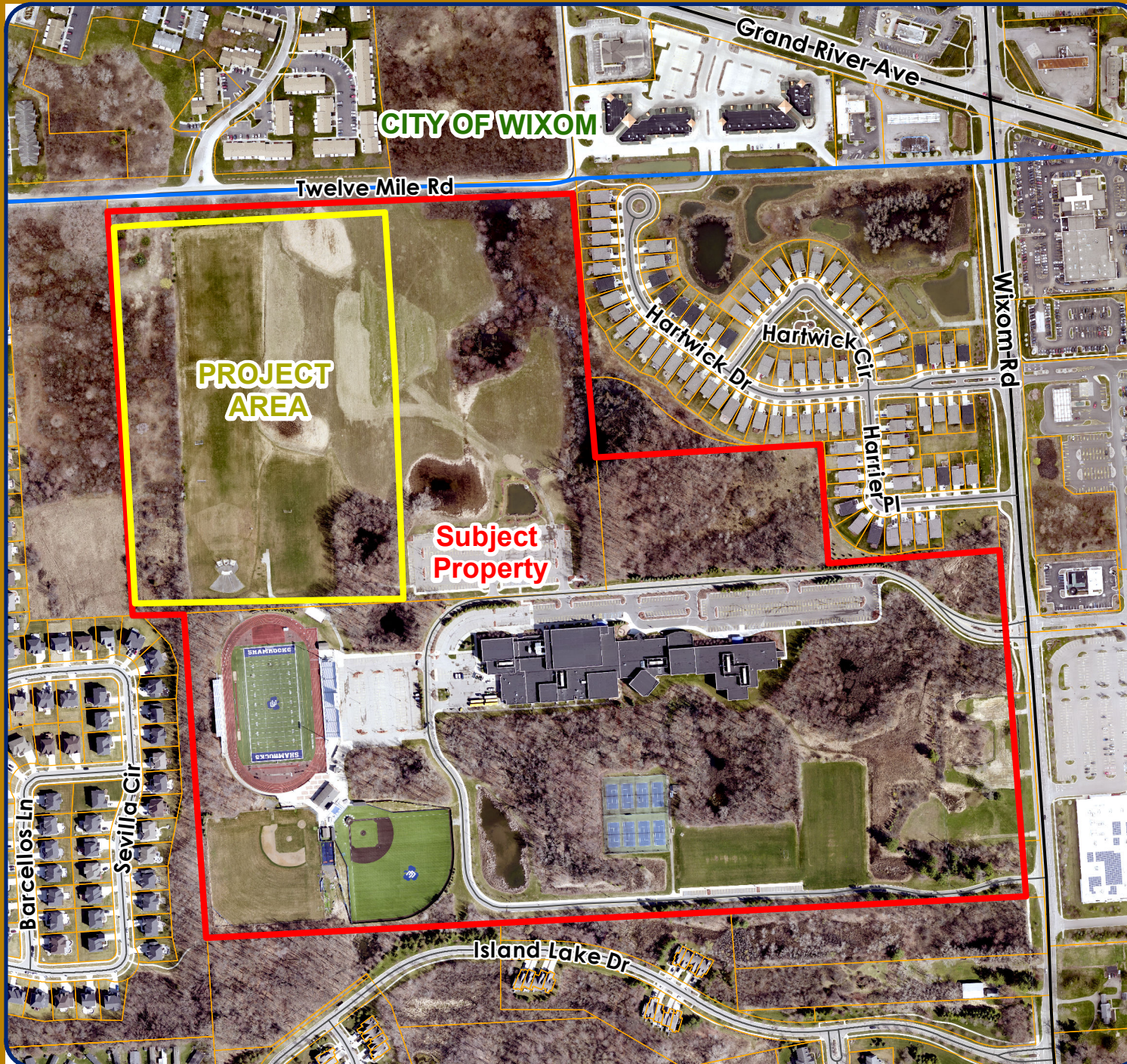
Denial – Stormwater Management Plan

In the matter of Catholic Central North Campus JSP22-37, motion to **deny** the Stormwater Management Plan... *(because the plan is not in compliance with Chapter 11 of the Code of Ordinances and all other applicable provisions of the Ordinance.)*

MAPS
Location
Zoning
Future Land Use
Natural Features

JSP22-37 CATHOLIC CENTRAL NORTH CAMPUS

LOCATION



LEGEND

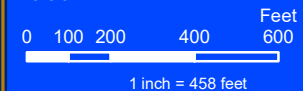
 Subject Property



City of Novi

Dept. of Community Development
City Hall / Civic Center
45175 W Ten Mile Rd
Novi, MI 48375
cityofnovi.org

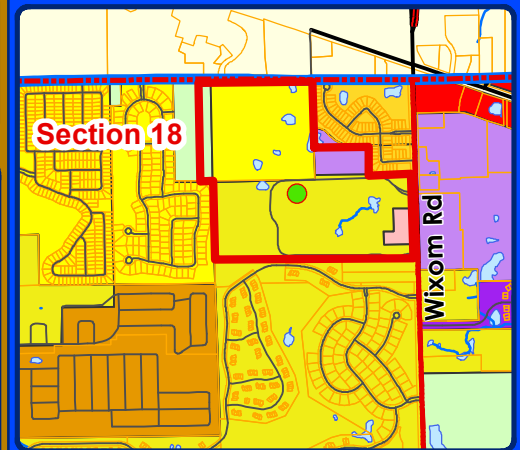
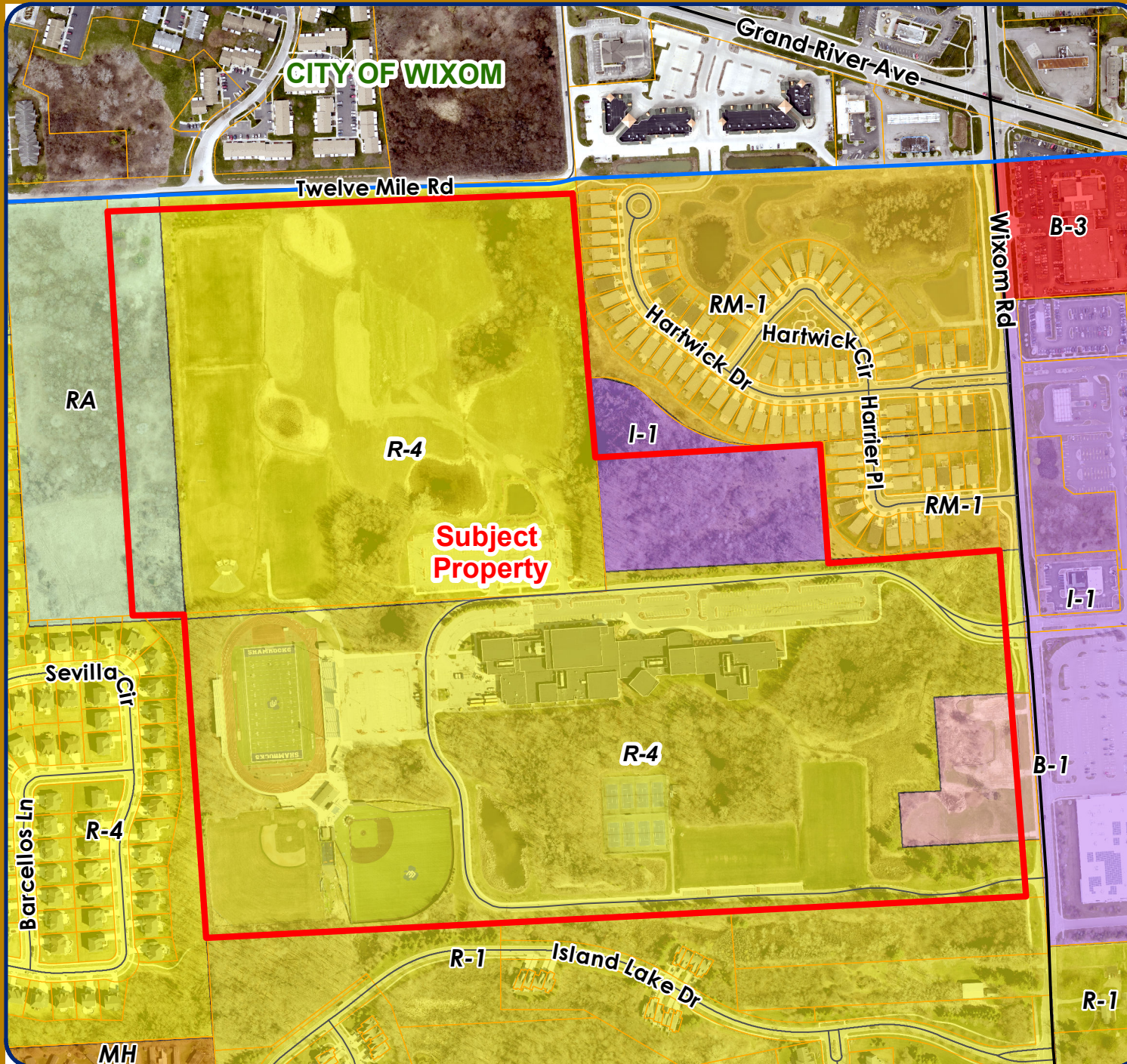
Map Author: Lindsay Bell
Date: 12/28/22
Project: CATHOLIC CENTRAL NORTH CAMPUS
Version #: 1



MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

JSP22-37 CATHOLIC CENTRAL NORTH CAMPUS ZONING



LEGEND

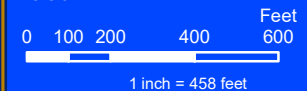
- R-A: Residential Acreage
- R-1: One-Family Residential District
- R-4: One-Family Residential District
- RM-1: Low-Density Multiple Family
- MH: Mobile Home District
- B-1: Local Business District
- B-3: General Business District
- I-1: Light Industrial District
- I-2: General Industrial District
- Subject Property



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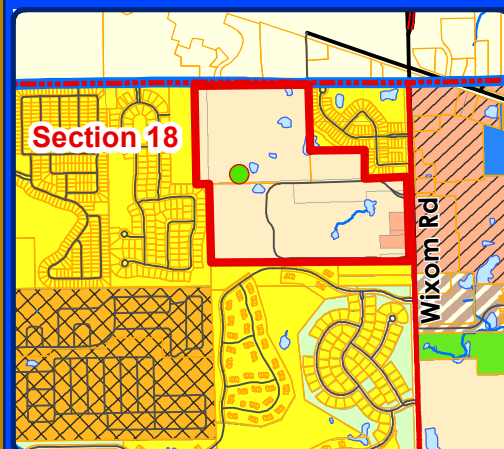
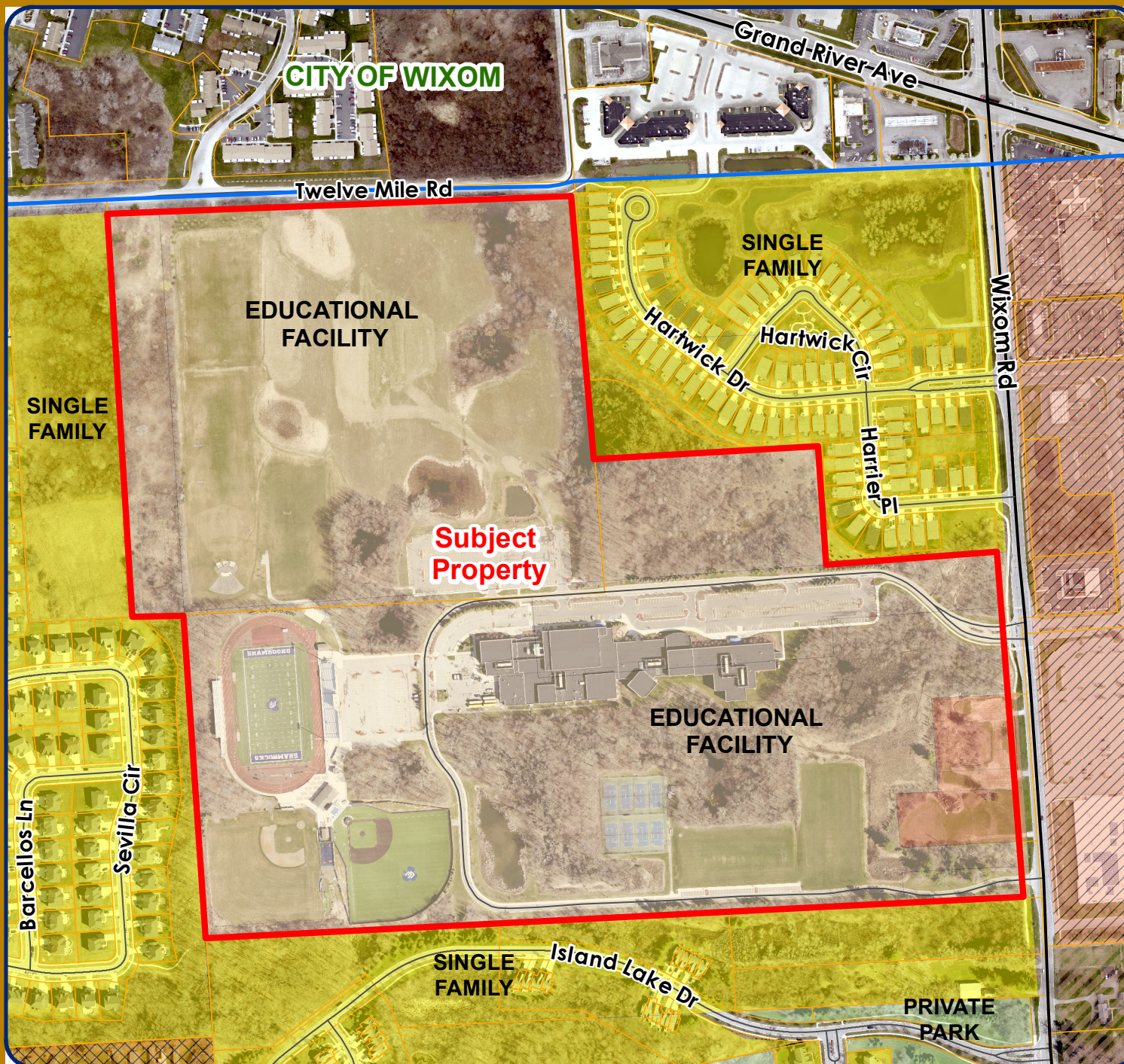


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JSP22-37 CATHOLIC CENTRAL NORTH CAMPUS

FUTURE LAND USE



LEGEND

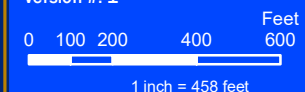
- Single Family
- Mobile Home Park
- Suburban Low-Rise
- Office Research Development Technology
- Local Commercial
- Community Commercial
- Educational Facility
- Public Park
- Private Park
- Subject Property



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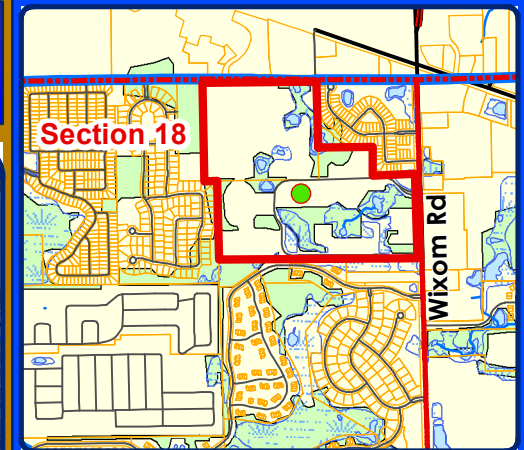


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JSP22-37 CATHOLIC CENTRAL NORTH CAMPUS

NATURAL FEATURES



LEGEND

-  WETLANDS
-  WOODLANDS
-  Subject Property



City of Novi

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0 100 200 400 600 Feet

1 inch = 458 feet



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SITE PLAN

**(Full plan set available for viewing at the Community Development
Department.)**



PRELIMINARY SITE PLAN AND STORMWATER MANGEMENT PLAN FOR NORTH CAMPUS ATHLETICS AND PARKING STRUCTURE CATHOLIC CENTRAL HIGH SCHOOL SECTION 18, CITY OF NOVI, MICHIGAN

TAX I.D. NUMBER: 22-18-200-026

SITE DATA:

PROPOSED: NORTH CAMPUS ATHLETICS AND PARKING STRUCTURE FOR CATHOLIC CENTRAL HIGH SCHOOL

PROJECT: 22-18-200-026

DEVELOPMENT CALCULATIONS:

EXISTING: 174,800 S.F. LOT COVERAGE: 8.40%

PROPOSED: 87,203 S.F. 1.70%

TOTAL: 262,003 S.F. 5.05%

PARKING STRUCTURE:

PROPOSED: PRESS BOX: 39'x22' 604.00' 146.83'

FRONT (PORT): 1,001.00' 874.44' 212.19'

SIDE (WEST): 414.45' 483.97' 760.38'

REAR (SOUTH): 874.79' 602.73' 671.33'

PARKING LOT:

ALLOTMENT: 35

PROPOSED: PRESS BOX: 39'x22' 604.00' 146.83'

HOSPITALITY: 21'x12' 252.00' 63.00'

PARKING STRUCTURE: 41'x7' 494.00' 123.50'

Catholic Central Parking Schedule

Parking Provided after STEM addition and North Athletic Field.

Parking Lot Regular Barrier Free Van Accessible Total

East 87 2 2 91

West & Visitor 175 4 2 181

Stadium 138 4 2 146

North 277 5 2 284

South 27 2 2 31

Parking Deck 686 11 5 702

TOTAL 1,596 26 16 1,638

Total Barrier Free Provided: 41

Parking Required:

1 space for every Teacher/Administrative/Bus Employee 130

1 space for every student of driving age (1000) 252

Total 382

or

1 space for each 3.4 auditorium seats (Cym Stadium 2,052) 603

1 space for every employee 130

Total 733

or

1 space for each 3 stadium seats (Existing Stadium 3,500) 1167

(No simultaneous events are scheduled during football games)

Total 1167

PARCEL 22-18-200-026 LEGAL DESCRIPTION:

PART OF THE NORTH 1/2 OF SECTION 18, T. 1 N., R. 8 E., CITY OF NOVI, OAKLAND COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS:

BEGINNING AT THE NORTH 1/4 CORNER OF SECTION 18 AND PROCEEDING ALONG THE NORTH LINE OF SAID SECTION 18, SAID LINE ALSO BEING THE CENTERLINE OF 12 MILE ROAD (33 FEET

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APPLICANT/OWNER:

CATHOLIC CENTRAL HIGH SCHOOL

27225 WISDOM ROAD

NOVI, MI 48374

PHONE: (248) 596-3899

CONTACT: MICHAEL WILSON

CIVIL ENGINEER/LAND SURVEYOR:

ZEIMET WOZNIAK AND ASSOCIATES, INC.

33800 GRAND RIVER, SUITE 100

NEW HUDSON, MI 48161

PHONE: (248) 437-5099 FAX: (248) 437-5222

CONTACT: ANDY WOZNIAK

WETLAND/WOODLAND CONSULTANT:

WET ENGINEERING

3000 BROADVIEW DR.

ANN ARBOR, MI 48106

PHONE: (734) 922-4400

CONTACT: WOODY HELL

LANDSCAPE ARCHITECT:

GRISSEM METZ AND ASSOCIATES

13000 N. BROADVIEW DRIVE

PLYMOUTH, MI 48170

PHONE: (248) 347-7010

CONTACT: RICH HOUDEK

ARCHITECT:

IDS

1441 WEST LONG LAKE, SUITE 200

PLYMOUTH, MI 48170

PHONE: (248) 823-2100

CONTACT: BRUCE SNYDER

CONSTRUCTION MANAGER:

J.S. VIG CONSTRUCTION COMPANY

10000 CLEARY STREET

PLYMOUTH, MI 48170

PHONE: (734) 283-3002

CONTACT: JOSEPH S. VIG

22-18-100-004
"NOVI PARKS & RECREATION"
ZONED R-A

"ANDELINA RIDGE OF NOVI"
ZONED R-4

SITE MAP

SHEET INDEX:

COVER SHEET

CIVIL DRAWINGS:

- CE-1 EXISTING CONDITIONS & SOILS MAP
- CE-2 SOIL BORINGS
- CE-3 TREE SURVEY - NORTH
- CE-4 SITE DIMENSION AND PAVING PLAN
- CE-5 CONSTRUCTION PLAN NOTES AND DETAILS
- CE-6 GRADING PLAN
- CE-7 STORM SEWER PLAN
- CE-8 SANITARY SEWER PLAN
- CE-9 WATER MAIN PLAN
- CE-10 POST-DEVELOPMENT DRAINAGE MAP
- CE-11 200 PRE-DEVELOPMENT DRAINAGE MAP
- CE-12 EROSION CONTROL PLAN
- CE-13 EROSION CONTROL NOTES AND WETLAND DETAILS
- CE-14 STORM WATER MANAGEMENT PLAN AND DETAILS
- CE-15 WETLAND IMPACTS
- CE-16 EASEMENT PLAN

LANDSCAPING DRAWINGS:

- LM-1 COMPOSITE PLAN
- LM-2 TREE REMOVAL PLAN AREA A
- LM-3 TREE REMOVAL PLAN AREA B
- LM-4 TREE REMOVAL PLAN AREA C
- LM-5 TREE REMOVAL PLAN AREA D
- LM-6 TREE REMOVAL PLAN AREA E
- LM-7 TREE REMOVAL SCHEDULE
- LM-8 LAYOUT & PAVING PLAN AREA A
- LM-9 LAYOUT & PAVING PLAN AREA B
- LM-10 LAYOUT & PAVING PLAN AREA C
- LM-11 LAYOUT & PAVING PLAN AREA D
- LM-12 LAYOUT & PAVING PLAN AREA E
- LM-13 SITE DETAILS
- LM-14 LANDSCAPE PLANTING REQUIREMENTS PLAN
- LM-15 LANDSCAPE PLANTING AREA A
- LM-16 LANDSCAPE PLANTING AREA B
- LM-17 LANDSCAPE PLANTING AREA C
- LM-18 LANDSCAPE PLANTING AREA D
- LM-19 LANDSCAPE PLANTING AREA E
- LM-20 LANDSCAPE DETAILS
- LM-21 LANDSCAPE DETAILS
- LM-22 LANDSCAPE DETAILS

ARCHITECTURAL DRAWINGS:

- SA-1 RENDERINGS
- SA-2 RENDERINGS
- SA-3 HOISTILITY FIRST LEVEL FLOOR PLAN
- SA-4 PRESS BOX & BLEACHED PLANS
- SA-5 PARKING STRUCTURE - FIRST AND SECOND LEVEL FLOOR PLAN
- SA-6 PARKING STRUCTURE - THIRD LEVEL AND ROOF PLAN
- SA-7 LANDSCAPE PLANTING AREA A
- SA-8 LANDSCAPE PLANTING AREA B
- SA-9 LANDSCAPE PLANTING AREA C
- SA-10 LANDSCAPE PLANTING AREA D
- SA-11 LANDSCAPE PLANTING AREA E
- SA-12 PARKING STRUCTURE EXTERIOR ELEVATIONS
- SA-13 PARKING STRUCTURE EXTERIOR ELEVATIONS
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- SA-100 PARKING STRUCTURE EXTERIOR ELEVATIONS

ELECTRICAL DRAWINGS:

- ES-1 ELECTRICAL REFERENCE INFORMATION
- ES-2 ELECTRICAL SITE COMPOSITE PLAN
- ES-3 ELECTRICAL SITE PLAN SECTION 1
- ES-4 ELECTRICAL SITE PLAN SECTION 2
- ES-5 ELECTRICAL SITE PLAN SECTION 3
- ES-6 RISER AND ONE LINE DIAGRAM
- ES-7 DETAILS
- ES-8 DETAILS
- ES-9 SPORTS FIELD ATHLETIC LIGHTING
- ES-10 SPORTS FIELD ATHLETIC LIGHTING
- ES-11 SPORTS FIELD ATHLETIC LIGHTING
- ES-12 SPORTS FIELD ATHLETIC LIGHTING
- ES-13 SITE LIGHTING CALCULATIONS
- ES-14 SITE LIGHTING CALCULATIONS
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- ES-100 SITE LIGHTING CALCULATIONS

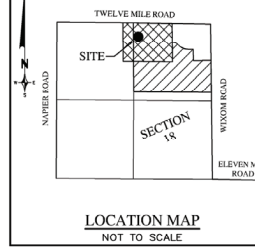
SITE DEVELOPMENT NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS AND STANDARD DETAILS OF THE CITY OF NOVI.
2. CALL MESS OR (1-800-447-7244) / 1-800-MESS DID A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING UNDERGROUND UTILITIES CAUSED BY HIS OPERATIONS.
4. TRENCHES UNDER OR WITHIN 3 FEET OF EXISTING OR PROPOSED PAVED DRIVEWAYS, AND/OR SIDEWALKS SHALL BE BACKFILLED AND COMPACTED WITH
5. NOT CLAY OR SAND FILL.
6. WHERE UTILITIES CROSS, PROVIDE PROPER BACKFILL TYPED IN 12" GALLONS
7. THE UNDERSIDE OF THE HIGHWAY UTILITY, A 6" MIN. SAND GUSSET SHALL BE PROVIDED BETWEEN UTILITIES.
8. ALL SEWER CONSTRUCTION SHALL HAVE WOOD CLASS 1 BEDDING UNLESS OTHERWISE SPECIFIED ON THE PROFILES.
9. ALL ELEVATIONS SHOWN ARE BASED ON U.S.S. DATUM.
10. ALL DISTURBED AREAS BE PROPERLY RESTORED BY THE CONTRACTOR.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING UTILITIES CAUSED BY HIS OPERATIONS.
12. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE EMERGENCY ACCESS TO PROPERTY FOR THE CITY OF NOVI.
13. EMERGENCY VEHICLES TO PROTECT LIFE, HEALTH AND PROPERTY.
14. ROAD STREET AND DRIVEWAYS SHALL BE MAINTAINED IN A REASONABLE STATE OF CLEANLINESS AND THE CONTRACTOR SHALL REMOVE ACCUMULATIONS OF
15. DEBRIS AND OTHER OBSTRUCTIONS.
16. CONTRACTOR MUST PROVIDE ALL NECESSARY SHEETING, SHORING, Dewatering, BRACING, BRIDGE WORK, AND PROTECT EXISTING UTILITIES AND IMPROVEMENTS IN ACCORDANCE TO MICHIGAN OCCUPATIONAL SAFETY AND HEALTH REGULATIONS.
17. IF DETERMINED AS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION, THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE STRUCTURE AND THE CITY OF NOVI SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF THE STRUCTURE.
18. SUBMITTAL TO THE CITY'S ENGINEERING DIVISION FOR REVIEW AND APPROVAL.
19. ALL WORK WITHIN THE 12 MILE ROAD RIGHT-OF-WAY IS UNDER THE JURISDICTION OF THE CITY OF NOVI AND REQUIRES A PERMIT.
20. BULDOZING OF THE PARKING STRUCTURE IS PHASE 2. ALL OTHER PROPOSED IMPROVEMENTS INCLUDING THE PARKING STRUCTURE SHALL BE INSTALLED WITH PHASE 1.

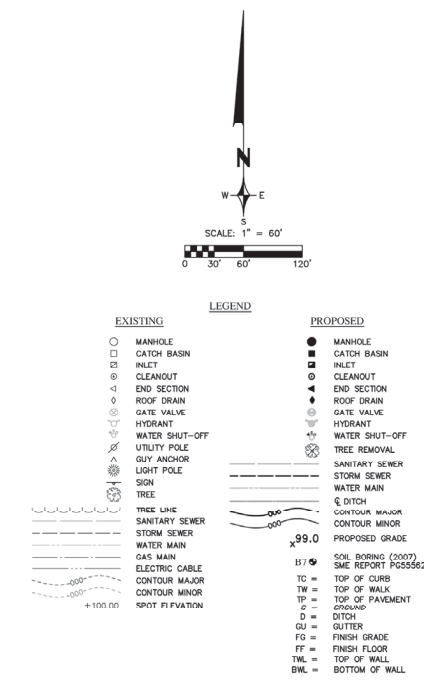
GENERAL NOTE:

ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOVI SPECIFICATIONS.

NOT FOR CONSTRUCTION



DATE: 10/20/22
ISSUED FOR: COVER SHEET
DRAWN BY: J.S. VIG
CHECKED BY: J.S. VIG
APPROVED BY: J.S. VIG
PROJECT: CATHOLIC CENTRAL HIGH SCHOOL
SECTION 18, CITY OF NOVI, MICHIGAN
SHEET NO. 191203
COVER SHEET



NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE OR EITHER EXPRESS OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE CITY ENGINEER OF ANY DISCREPANCIES OR DISAGREEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITIES CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESENCE ANY UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

2. IMMEDIATELY IF A CONFLICT IS APPOINTED.

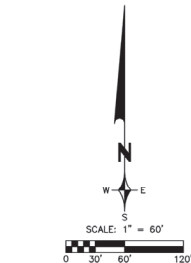
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES, KNOWN OR UNKNOWN, SHOWN OR UNKNOWN, LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH STRUCTURES ARE IDENTIFIED. ALL LOSSES ASSOCIATED WITH LOCATING AND ADJUSTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



























4. DESIGN PROFESSIONAL AND CLIENT WARRANT THAT IN TRANSMITTING INSTRUMENTS OF SERVICE, OR ANY OTHER INFORMATION, THE TRANSMITTING PARTY IS THE COPYRIGHT OWNER OR HAS THE RIGHT TO REPRODUCE OR TRANSMIT SUCH INFORMATION BY ANY MEANS, IN ANY FORM OR BY ANY INFORMATION SYSTEM, WITHOUT INFRINGING ON THE RIGHTS OF ANY OTHER PARTY. THE CONTRACTOR SHALL NOT REPRODUCE OR TRANSMIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGN PROFESSIONAL INTEND TO REPRODUCE OR TRANSMIT SUCH INFORMATION IN ANY FORM OR BY ANY INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH NECESSARY PROTOCOLS GOVERNING SUCH TRANSMISSIONS.

NOT FOR CONSTRUCTION

**NOT FOR
CONSTRUCTION**

NOTE: ALL STORM SEWER PIPE SHALL BE RCP CLASS IV WITH PREMIUM JOINTS UNLESS NOTED OTHERWISE.



- | <u>EXISTING</u> | | <u>PROPOSED</u> | |
|---|----------------|---|----------------|
|  | MANHOLE |  | MANHOLE |
|  | CATCH BASIN |  | CATCH BASIN |
|  | INLET |  | INLET |
|  | CLEANOUT |  | CLEANOUT |
|  | END SECTION |  | END SECTION |
|  | ROOF DRAIN |  | ROOF DRAIN |
|  | GATE VALVE |  | GATE VALVE |
|  | HYDRANT |  | HYDRANT |
|  | WATER SHUT-OFF |  | WATER SHUT-OFF |
|  | UTILITY POLE |  | TREE REMOVAL |
|  | OUT ANCHOR | _____ | SANITARY SEWER |
|  | LIGHT POLE | _____ | STORM SEWER |
|  | SIGN | _____ | WATER MAIN |
|  | TREE | _____ | 6 DITCH |
|  | TREE LINE |  | LIGHT POLE |
| _____ | SANITARY SEWER | | |
| _____ | STORM SEWER | | |
| _____ | WATER MAIN | | |
| _____ | GAS MAIN | | |
| _____ | ELECTRIC CABLE | | |

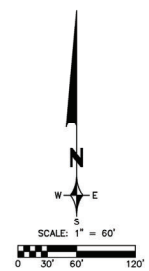
NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ON THE ATTACHED DRAWINGS AND SHALL NOT BE CONSIDERED A GUARANTEE OR INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE ACCURACY OF ANY INFORMATION PROVIDED HEREON FOR THE PURPOSES OF DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING ALL DAMAGES WHICH MAY OCCUR OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXCAVATE LOCAL AND DEEPLY BURIED AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DETECTION OF SUCH DAMAGE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES INCLUDING BUT NOT LIMITED TO, CURBS, SIDEWALKS, DRIVEWAYS, ETC., CAUSED BY THE CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH DAMAGE OCCURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING SUCH DAMAGES. THESE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

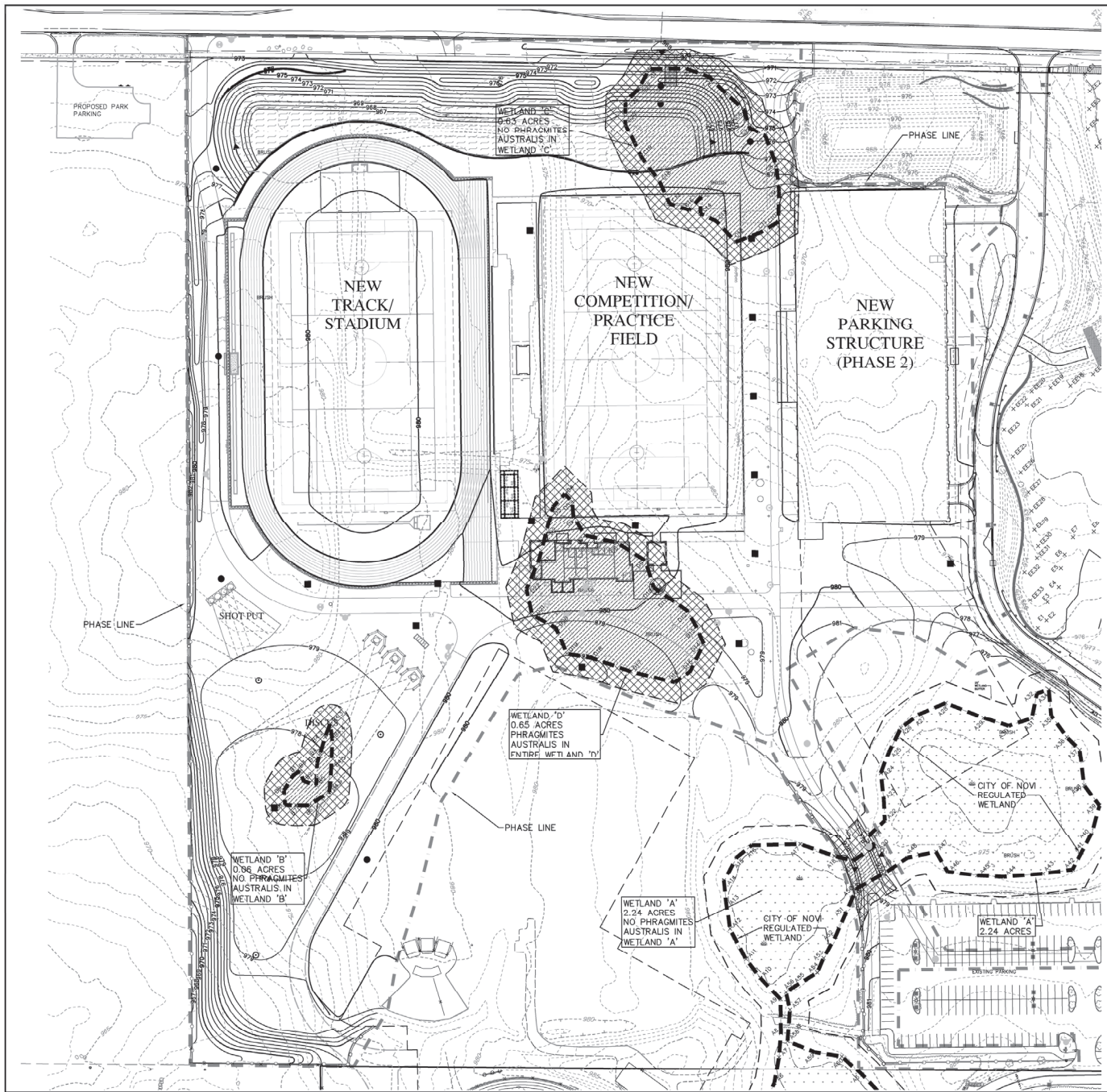
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INSTRUMENTS OF SERVICE, OR ANY OTHER INFORMATION, THE TRANSFERRING PARTY IS THE COPYRIGHT HOLDER THEREOF. SUCH INFORMATION MUST BE OBTAINED PRIOR TO THE START OF THE PROJECT. TRANSMIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGNER HAVE BEEN ADVISED THAT ANY INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH THE SOURCE OF SUCH INFORMATION.

GENERAL NOTE:
ALL WORK SHALL CONFORM TO THE
CURRENT CITY OF NOM STANDARDS AND
SPECIFICATIONS.



NOTE:
SEE SHEET CE-8 FOR STORMWATER
MANAGEMENT ANALYSIS AND CALCULATIONS

**NOT FOR
CONSTRUCTION**



LEGEND

EXISTING

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- END SECTION
- ROOF DRAIN
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SIGN
- TREE
- TREE LINE
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- GAS MAIN
- ELECTRIC CABLE
- CONTOUR MAJOR
- CONTOUR MINOR
- SPOT ELEVATION

PROPOSED

- MANHOLE
- CATCH BASIN
- INLET
- CLEANOUT
- END SECTION
- ROOF DRAIN
- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- TREE REMOVAL
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- DITCH
- CONTOUR MAJOR
- CONTOUR MINOR

SCALE: 1" = 60'

0 30' 60' 120'

WETLAND IMPACTS:

WETLAND	AREA (AC)	NOVI REGULATED	EGLE REGULATED	IMPACT (AC)	MITIGATION RATIO	REQUIRED MITIGATION (AC)	TYPE
A	2.24	YES	NO	0.03	2.0	0.06	EMERGENT/FORESTED
B	0.06	NO	NO	0.06	0.0	0.00	EMERGENT
C	0.63	NO	NO	0.63	0.0	0.00	EMERGENT
D	0.65	NO	NO	0.65	0.0	0.00	EMERGENT
TOTALS	3.58 AC			1.37 AC		0.06 AC	

* PENDING CONFIRMATION BY THE CITY OF NOV WETLAND CONSULTANT AND EGLE, IT IS ASSUMED THAT WETLAND 'A' IS THE ONLY REGULATED WETLAND IMPACTED BY THE PROPOSED IMPROVEMENTS. THE IMPACT TO WETLAND 'A' IS 0.03 ACRES WHICH IS BELOW THE CITY OF NOV MITIGATION REQUIREMENT OF 0.25 ACRES. NO WETLAND MITIGATION IS PROPOSED.

BUFFER IMPACTS:

WETLAND	PERMANENT IMPACT (AC)	TOTAL IMPACT (AC)
A	0.07	0.07
B	0.22	0.22
C	0.42	0.42
D	0.46	0.46
TOTALS	1.17 AC	1.17 AC

WETLAND LEGEND

- WETLAND IMPACT (1.37 ACRES)
- WETLAND BUFFER IMPACT (1.17 ACRES)

THERE IS NO VISIBLE EVIDENCE OF JAPANESE KNOTWOOD ON THE CATHOLIC CENTRAL CAMPUS.

- NOTES:**
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. BEFORE COMMENCING WORK, THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTMENT OF ALL STRUCTURES, KNOWN OR UNKNOWN, SHOW OR UNKNOWN, LOCATED WITHIN THE LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY SUCH STRUCTURES ARE IDENTIFIED. ALL COSTS ASSOCIATED WITH LOCATING AND ADJUSTING THESE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - DESIGN PROFESSIONAL AND CLIENT WARRANT THAT IN TRANSMITTING INSTRUMENTS OF SERVICE OR ANY OTHER INFORMATION, THE TRANSMITTING PARTY IS THE COPYRIGHT OWNER OF SUCH INFORMATION OR HAS PERMISSION FROM THE COPYRIGHT OWNER TO TRANSMIT SUCH INFORMATION FOR ITS USE OF THE PROJECT. IF THE CLIENT AND DESIGN PROFESSIONAL INTEND TO TRANSMIT INSTRUMENTS OF SERVICE OR ANY OTHER INFORMATION OR DOCUMENTATION IN DIGITAL FORM, THEY SHALL ENDEAVOR TO ESTABLISH NECESSARY PROTOCOLS GOVERNING SUCH TRANSMISSIONS.

GENERAL NOTE:

ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOV STANDARDS AND SPECIFICATIONS.

NOT FOR CONSTRUCTION

DATE: 11/17/22
ISSUED FOR: 11/17/22 P&P SUBMITTAL

DATE: 11/17/22
REV: 11/17/22 P&P SUBMITTAL

PROJECT SPONSOR:
CATHOLIC CENTRAL HIGH SCHOOL
27225 KNOW ROAD
NOV, MI 48374

WETLAND IMPACTS
NORTH CAMPUS ATHLETICS AND PARKING DECK
SECTION 18, CITY OF NOV, MICHIGAN

FIELD WORK
DATE: 11/17/22
BY: JAV
JOB NO. 19120.3
SHEET NO. CE-9

Z:\Projects\11120_20402\11120.3 WETLAND IMPACTS.dwg, CE-9 WETLAND IMPACTS, 11/17/2022 09:09 AM, 11/17/2022 09:09 AM

Year	Scientific Name	Common Name	Dom. 1	Dom. 2	Dom. 3	Dom. 4	Dom. 5	Condition	Notes
1746	<i>Pipula arvensis</i>	Field Marigold	24.0					Good	
1748	<i>Quercus macrocarpa</i>	Bur Oak	23.1					Good	
1750	<i>Quercus macrocarpa</i>	Bur Oak	26.1					Good	
1751	Crow oak	Black Oak	25.0					Good	
1752	<i>Pinus strobus</i>	Pinus strobus	15.0					Fair	
1753	<i>Quercus macrocarpa</i>	Bur Oak	19.8					Good	
1754	Little bluestem	Black Chokeberry	15.0					Good	
1755	<i>Pinus strobus</i>	Black Cherry	14.2	10.0				Fair	insect damage
1756	<i>Pinus strobus</i>	Aspen	14.0	9.0				Fair	3 dead limbs
1757	<i>Pinus strobus</i>	Black Cherry	14.0					Fair	
1758	<i>Pinus strobus</i>	Black Cherry	14.2	10.0				Fair	
1759	<i>Pinus strobus</i>	Black Cherry	12.8	8.0				Fair	insect
1760	<i>Pinus strobus</i>	Black Cherry	10.0	11.5				Fair	
1762	<i>Aspen</i>	Sugar Maple	12.0					Good	
1763	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
1764	<i>Pinus strobus</i>	Black Cherry	19.7					Good	Very Much - 70%ms
1765	<i>Pinus strobus</i>	Black Cherry	17.5					Fair	
1767	<i>Pinus strobus</i>	Black Cherry	15.2					Good	
1768	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
1769	<i>Pinus strobus</i>	Black Cherry	14.0					Fair	
1770	<i>Pinus strobus</i>	Black Cherry	15.0					Good	
1771	<i>Pinus strobus</i>	Black Cherry	15.0					Good	
1772	<i>Pinus strobus</i>	Black Cherry	15.0					Good	
1773	<i>Pinus strobus</i>	Black Cherry	15.0					Good	
1774	<i>Pinus strobus</i>	Black Cherry	15.0					Good	
1775	<i>Pinus strobus</i>	Black Cherry	20.0					Good	
1776	<i>Pinus strobus</i>	Black Cherry	24.0					Good	
1777	<i>Pinus strobus</i>	Black Cherry	20.1					Good	
2002	<i>Quercus macrocarpa</i>	Bur Oak	9.4					Good	
2003	<i>Quercus macrocarpa</i>	Bur Oak	9.0					Good	
2004	Cane oak	Shagbark hickory	10.0					Good	
2005	<i>Quercus macrocarpa</i>	Shagbark hickory	10.0					Good	
2006	<i>Quercus rubra</i>	Red Oak	10.0					Good	
2007	<i>Pinus strobus</i>	Black Cherry	8.5					Fair	
2008	<i>Pinus strobus</i>	Black Cherry	10.0					Fair	dry
2009	<i>Pinus strobus</i>	Black Cherry	10.0					Fair	
2010	<i>Pinus strobus</i>	Black Cherry	13.2					Good	
2011	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2012	<i>Pinus strobus</i>	Black Cherry	6.0					Good	
2013	<i>Pinus strobus</i>	Black Cherry	6.0					Good	
2014	<i>Pinus strobus</i>	Black Cherry	12.0					Good	
2015	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2016	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2017	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2018	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2019	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2020	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2021	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2022	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2023	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2024	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2025	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2026	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2027	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2028	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2029	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2030	<i>Pinus strobus</i>	Black Cherry	10.0					Good	
2031									

9 (25" CALIPER) CANOPY TREE REPLACEMENTS REQUIRED. TREES WILL BE LOCATED AT EAST FACE OF PARKING DECK RATHER THAN AROUND THE EXISTING PARKING LOT DUE TO FUTURE DEVELOPMENT. SEE SHEET L405.

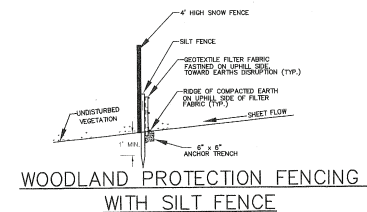
No.	Scientific Name	Common Name	Dim. 1	Dim. 2	Dim. 3	Dim. 4	Dim. 5	Condition	Notes	Credibility
724	<i>Quercus laevis</i>	Swamp White Oak	10.5					FAIR		1
725	<i>Quercus laevis</i>	Swamp White Oak	14.4					FAIR		2
726	<i>Quercus laevis</i>	Swamp White Oak	14.4					FAIR		1
727	<i>Quercus laevis</i>	Swamp White Oak	13.5	10.0				FAIR		1
728	<i>Quercus laevis</i>	Swamp White Oak	14.4					FAIR		1
762	<i>Quercus laevis</i>	Swamp White Oak	14.4					Very Poor	1 branch	0
783	<i>Pinus strobus</i>	Black Cherry	15.1					Poor	1 branch dead	0
784	<i>Pinus strobus</i>	Black Cherry	15.1					Poor		0
785	<i>Pinus strobus</i>	Black Cherry	19.4					Very Poor		0
786	<i>Pinus strobus</i>	Sage Maple	19.4					FAIR		2
787	<i>Pinus strobus</i>	Black Cherry	15.1					Very Poor	1 twig	0
788	<i>Pinus strobus</i>	Black Cherry	14.4					Poor		0
790	<i>Pinus strobus</i>	Black Cherry	14.4					Poor		0
801	<i>Pinus strobus</i>	Sage Maple	9.4					FAIR		1
802	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
803	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
804	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
805	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
806	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
807	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
808	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
809	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
810	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
811	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
812	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
813	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
814	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
815	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
816	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
817	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
818	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
819	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
820	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
821	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
822	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
823	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
824	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
825	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
826	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
827	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
828	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
829	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
830	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
831	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
832	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
833	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
834	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
835	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
836	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
837	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
838	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
839	<i>Pinus strobus</i>	Black Cherry	9.4					FAIR		1
840	<i>Pinus strobus</i>	Black Cherry	9.4							

l. Replace expected trees within a City of Novi regulated woodland by planting new 2 1/2" caliper sized deciduous trees at a 1:1 ratio, less 6" ht. evergreen trees at a 1:1 ratio, reforestation measures as indicated in Section 37-8c, payment into the city's tree fund, or a combination thereof.

DDB	8-11	>11-20	>20-29	>29	Mid-Stream	Total
Credits per DDB	1 to 1	1 to 2	1 to 3	1 to 4	Total ddb / 8	
Quarter Removed	14	4	0	2 trees		28 Replanted Trees to be removed
Credits Required	14	8	0	0	5	27 Tree Credits Required

Replacement Tree Type	Replacement Ratio	Credits Required from chart above
2.5" cal Deciduous	1:1	27

GREEN ASH SAPLINGS (*FRAXINUS PENNSYLVANICA*), COMMON BUCKTHORN (*RHAMNUS CATHARTICA*) AND GRAY DOGWOOD (*CORNUS RACEMOSA*) ARE LOCALLY COMMON SHRUBS. LESS COMMON ARE ALLEGHENY BLACKBERRY (*RUBUS ALLEGHENENSIS*) AND CHOCOCERRY (*FRINUS VIRGINIANA*). GROUND COVER SPECIES INCLUDE VINES SUCH AS VIRGINIA CREEPER (*PARTHENOCISSUS QUINQUEFOLIA*) AND RIVERBANK GAGE (*VITIS RIPARIA*) AS WELL AS HERBACEOUS SPECIES SUCH AS JUPPEREED (*PETERNCARIA VIRGINIANA*), WHITE AVENS (*GEUM CANADENSE*), SUMPT AGRIPONT (*AGRIPONTA PAVLOVIA*), ENCHANTER'S NIGHTSHADE (*SILIRIA CANADENSIS*) AND SEDGES (*CAREX* spp.).



COST TO STAKE, INSTALL, AND REMOVE WOODLAND FENCE = (46-LF × 193¢ LF) = \$8,878



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Project: **Catholic Central High School**
North Campus Athletics and Parking Deck

Sheet: **Tree Removal Schedule**

Joh Number:	[30-221]
Drawn:	SE
Checked:	RH
Scale:	

Date:	Lead for:
09.16.2022	PSP Submittal
10.28.2022	Design Development
11.14.2022	Rev. PSP Submittal

Sheet Number: **L201**

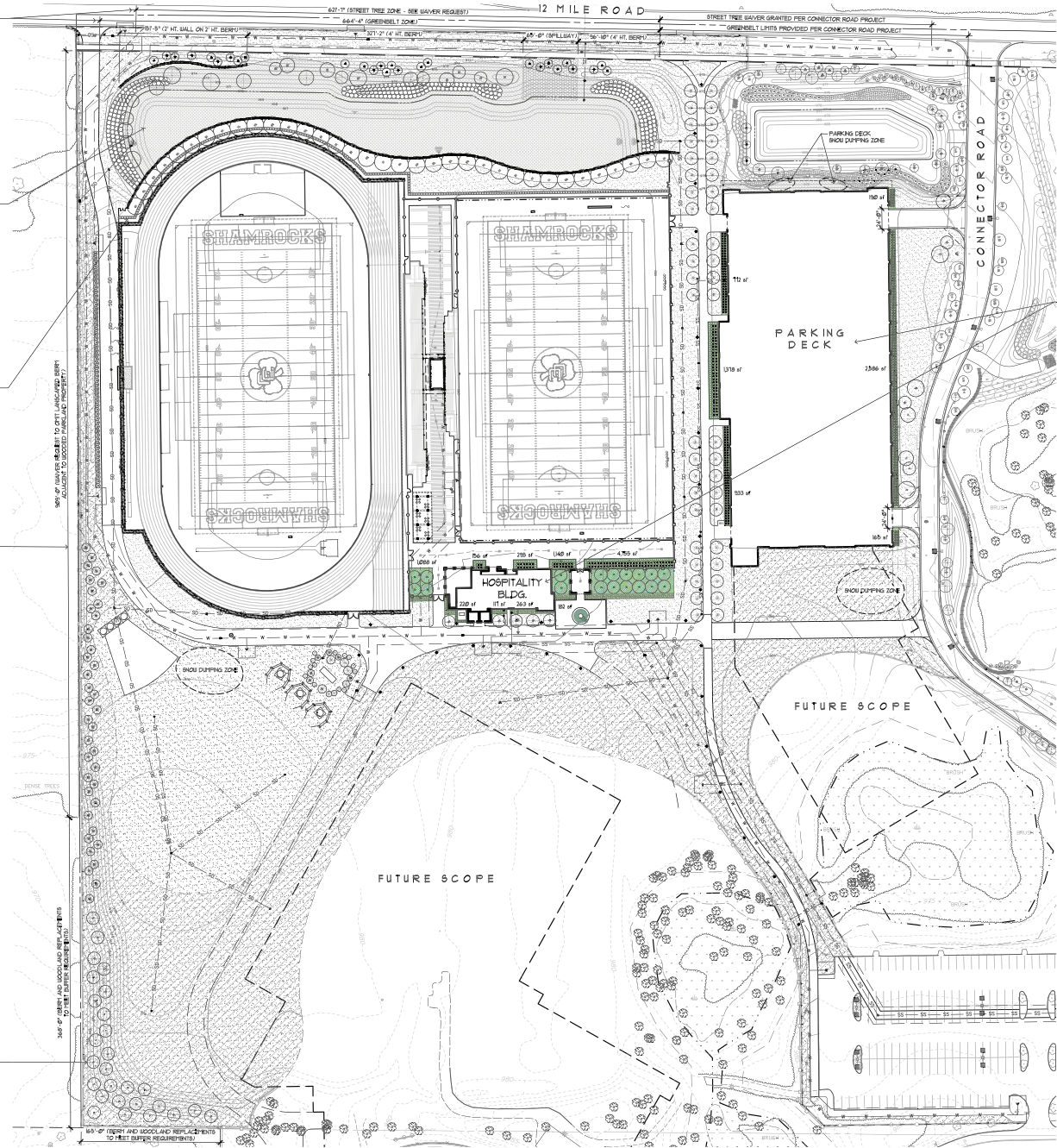
12 MILE FRONTAGE
ORDINANCE NO. 8-753, SECTION 55.3(b)(1), PAGE 5 OF 33
4' HT. BERRY REQUIRED BY GREENBELT REQUIREMENTS IN SECTION 55.3(b)(1)
GREENBELT FRONTAGE ON 12 MILE ROAD - 665 LF
GREENBELT WIDTH - 34'
GREENBELT DECIDUOUS CANOPY OR LARGE EVERGREEN TREES, 1 PER 40 LF
665 LF / 40 LF = 16.63 TREES REQUIRED
GREENBELT RUB CANOPY TREES, 1 PER 25 LF
665 LF / 25 LF = 26.6 TREES REQUIRED
STREET CANOPY TREES BETWEEN CURB AND GULCH, 1 PER 35 LF
602 LF / 35 LF = 17.2 TREES REQUIRED
① REQUESTING WAIVER TO OBTAIN STREET CANOPY TREES DUE TO PROPOSED WATER MAIN LINE RELOCATION

NORTH DETENTION POND TREES
DESIGN MANUAL PART 13A, PAGE 1
DETENTION POND CANOPY TREE, 1 PER 35 LF OF POND EDGE REARERED AT THE PERMANENT WATER LINE
PERMANENT WATER LINE - 1348 LF
1348 LF / 35 LF = 38.51 TREES REQUIRED
NORTH DETENTION POND SHRUBS
DESIGN MANUAL PART 13B-C, PAGE 8
COVER 10-15% OF POND PERIMETER REARERED 10 FEET FROM THE PERMANENT WATER LINE, FULL CLUSTER SHRUBS
PERIMETER AT 10 FEET FROM FULL - 1485 LF x 15% = 222.75
MIN 1 LF OF DETENTION POND SHRUB COVERAGE REQUIRED

EVERGREEN HEDGE SCREENING PROVIDED AS A COURTESY TO RESIDENTS ON THE NORTH SIDE OF TWELVE MILE ROAD.

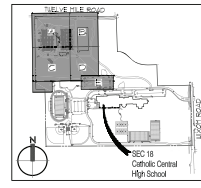
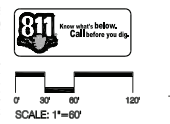
WEST PROPERTY LINE BUFFER
ORDINANCE NO. 8-753, SECTION 55.3, PAGES 2-3 OF 33
4'-6" HEIGHT OBSCURING LANDSCAPED EARTH BERRY OR WALL REQUIRED
① REQUESTING WAIVER OF LANDSCAPED EARTH BERRY OR WALL FOR PRESERVATION OF WOODLAND AREAS ALONG 300 LF OF WEST PROPERTY LINE PER ORDINANCE SECTION 55.3(c), PAGE 6 OF 33
FOR THE REMAINING 368 LF OF WEST PROPERTY LINE AND 865 LF OF BOTH PROPERTY LINE AN OBSCURING LANDSCAPED EARTH BERRY SHALL BE PROVIDED.
368 LF x 65 LF = 23,920 SF OF LANDSCAPED EARTH BERRY REQUIRED
132' WIDTH AT 1 ON 1.5% SLOPE
60% WATER CAPACITY
50% WATER CAPACITY
50% WATER CAPACITY ABOVE 4' HT.

WOODLAND REGENERATION
ORDINANCE SECTION 51 WOODLANDS PROTECTION
CLIMATOLOGICAL CREDITS REQUIRED - REFER TO TREE REMOVAL SCHEDULE, SHEET L-60
WOODLAND REPLACEMENT TREES TO BE PROVIDED ALONG WEST PROPERTY LINE TO SATISFY PROPERTY LINE BUFFER REQUIREMENTS



BUILDING FOUNDATION LANDSCAPE REQUIREMENTS
ORDINANCE NO. 8-753, SECTION 55.3, PAGE 8 OF 33
PARKING DECK
PERIMETER - 1380 LF
BASE OF CALC - 1380 LF x 34 FT = 46,920 SF
REQUIRED LANDSCAPE AREA - 1380 LF x 8 FT = 11,040 SF
PROVIDED LANDSCAPE AREA - 6,824 SF
HOSPITALITY BLDG.
PERIMETER - 448 LF
BASE OF CALC - 448 LF
REQUIRED LANDSCAPE AREA - 394 LF x 8 FT = 3,152 SF
PROVIDED LANDSCAPE AREA - 8,036 SF
TOTAL REQUIRED - 18,972 SF x 1.568 SF = 16,348 SF
TOTAL PROVIDED - 14,860 SF x 1.568 SF = 16,348 SF
FACADE VISIBLE TO STREET TO BE AT LEAST 60% PLANTED WITH A MIX OF TREES, SHRUBS, AND GROUNDCOVERS
① REQUESTING WAIVER TO OBTAIN FOUNDATION PLANTING FROM SOUTH FACE OF PARKING DECK DUE TO PROXIMITY TO DETENTION POND TREES, SHRUBS, AND GRASSES PROVIDED IN CONNECTOR ROAD PROJECT. ADDITIONALLY, THIS FACE SERVED AS THE SHOW DRIVING ZONE FROM THE TOP OF THE DECK AND ANY PLANTING ALONG THIS FACE WOULD BE GRASS.

GENERAL LANDSCAPE REQUIREMENTS
ALL SHADE TREES TO BE MIN 13" CALIPER
ALL UNDERSTORY TREES TO BE MIN 6" HT.
ALL EVERGREEN TREES TO BE MIN 6" HT.
ALL SHRUBS TO BE MIN 36" HT. x 6" SPREAD



Key Map
Scale: 1"=60'



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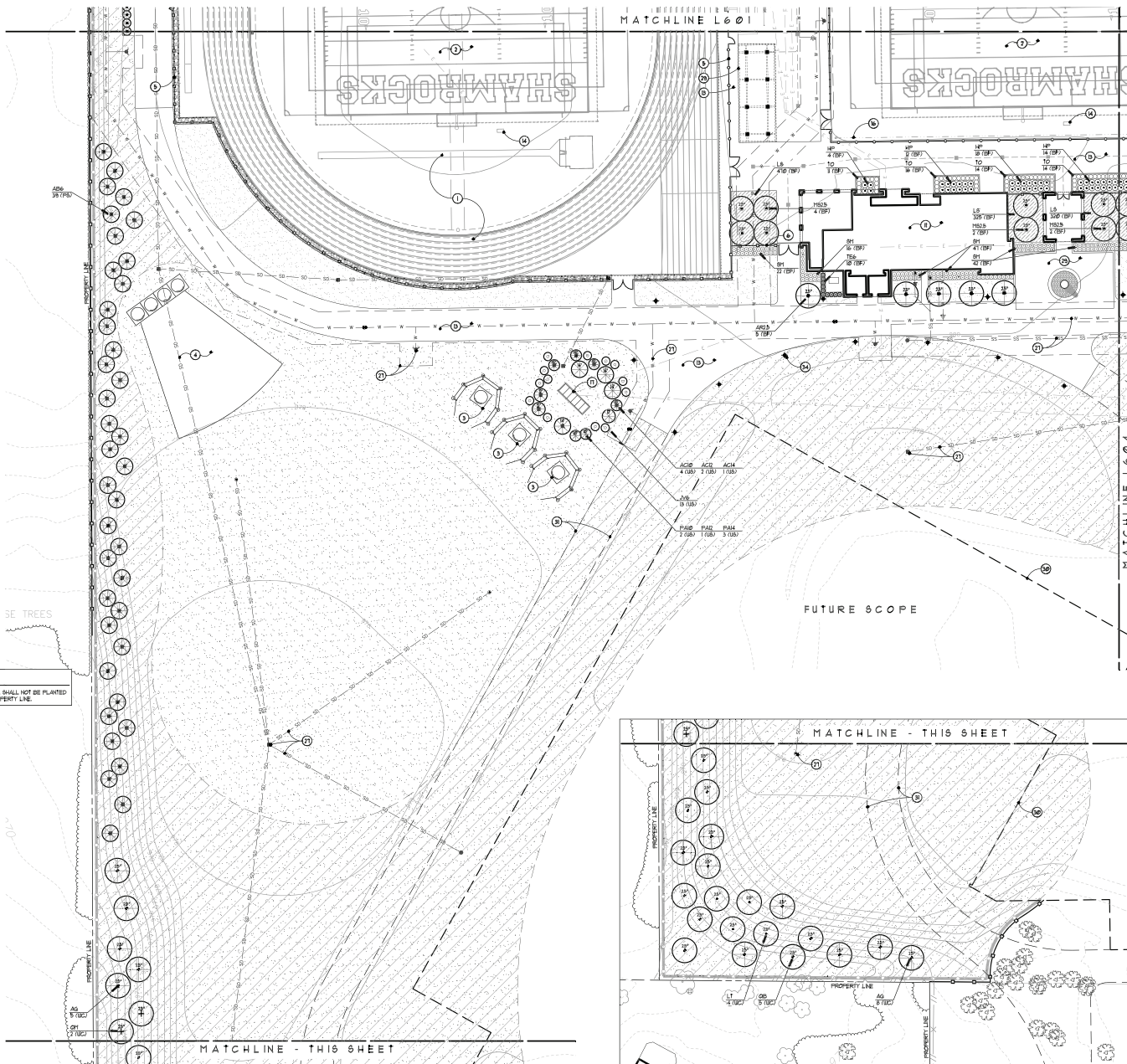
Project: Catholic Central High School
North Campus Athletics and Parking Deck

Sheet: Landscape Ordinance Requirements

Job Number: 130-271
Drawn: SE
Checked: RM
Scale: 1" = 60'-0"

Date: 09.16.2022
10.28.2022
11.14.2022
Revised: PFP Submittal
Design Development
Rev. PFP Submittal

Sheet Number: L600
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Landscape Legend:

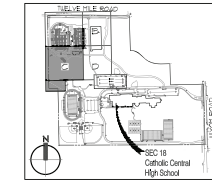
- (APPLIES TO SHEETS L601 - L605, NOT ALL APPLY PER SHEET)
- EXISTING TREES TO REMAIN - PROJECT THROUGHOUT CONSTRUCTION
 - PERMANENT WATER LEVEL
 - EXISTING METAL
 - EXISTING EDGE OF VEGETATION
 - SILT FENCE - REFER TO CIVIL PLANS
 - RETAIN WALLS AND PROTECTION FENCE - REFER TO DETAIL ON SHEET L601
 - STREET / PEDESTRIAN LIGHT POLES - REFER TO ELECTRICAL PLANS
 - ROCKED LASH ON 4" TOPSOIL, 6" TOPSOIL AT BERM
 - BEED FUTURE TYPE 'A' - FUTURE LASH ON 4" TOPSOIL
 - BEED FUTURE TYPE 'B' - FUTURE LASH ON 4" TOPSOIL
 - DEFENTION POND BEED RIN ON 4" TOPSOIL
 - DEFENTION POND GRAVEL ACCESS PATH - REFER TO CIVIL PLANS
 - ORNAMENTAL GRASSES
 - PLANT CODE
 - 1" CALIPER SIZE IF APPLICABLE
 - ORANGE REQUIREMENT CODE (SEE BELOW)
 - QUANTITY
 - 1" BUILDING INFORMATION CANOPY TREES / BARNES
 - 1" DETENTION POND CANOPY TREES / BARNES
 - 1" GREENBELT CANOPY TREES
 - 1" GREENBELT MID-CANOPY TREES
 - 1" GREENBELT UNDER-CANOPY TREES
 - 1" PARKING LOT REPLACEMENT CANOPY TREES
 - 1" PARKING LOT REPLACEMENT UNDER-CANOPY TREES
 - 1" WOODLAND REPLACEMENT CANOPY TREES
 - 1" WOODLAND REPLACEMENT UNDER-CANOPY TREES
 - 1" WOODLAND REPLACEMENT EVERGREEN TREES
 - 1" UTILITY SCREENING PLANTINGS

Note Key:

- (APPLIES TO SHEETS L601 - L605, NOT ALL APPLY PER SHEET)
- 1" TRACK AND FIELD EVENTS
 - 1" SYNTHETIC TURF ATHLETIC FIELD
 - 1" 1/4" DISCROSS CAGES
 - 1" 1/4" DISCROSS CAGES WITH CRUSHED STONE LANDING AREA
 - 1" FENCE TYPE 'C' - 4' HT. TRACK PERIMETER FENCE
 - 1" FENCE TYPE 'D' - 4' HT. ATHLETIC COMPLEX PERIMETER FENCE
 - 1" MULTI-SPORT SCORING BARNES - REFER TO ARCH AND ELECTRICAL PLANS
 - 1" 30' HT. TAPERED ALUMINUM FLAGPOLE
 - 1" RAMPED BLEACHERS - REFER TO ARCH PLANS
 - 1" DOUBLE-SIDED PREMIUM BOY - REFER TO ARCH PLANS
 - 1" HOSPITALITY BUILDING AND ENTRY PORTICO - REFER TO ARCH PLANS
 - 1" PRECAST RESIDENTIAL RETAINING WALL W/ FENCE TYPE 'A' - 3'-6" HT. GUARDRAIL FENCE
 - 1" PAVING
 - 1" MULTI-SPORT GATE CLOSURE - REFER TO ELECTRICAL PLANS
 - 1" SHREDED BARK MULCH BED
 - 1" 30' HT. LACROSSE / SOCCER / FOOTBALL NETTING
 - 1" ELECTRICAL BUTCH GEAR - REFER TO ELECTRICAL PLANS
 - 1" 2' HEIGHT NATURAL STONE WALL
 - 1" 10' WIDE TEMPORARY PEDESTRIAN PATH
 - 1" TEMPORARY FIRE LANE ACCESS ROUTE
 - 1" PARKING DECK - REFER TO PARKING CONSULTANT PLANS
 - 1" CONNECTOR ROAD DETENTION POND AND PLANTINGS
 - 1" BIKE RACKS (4 TOTAL) ON 4' X 8' CONCRETE PAD
 - 1" EXISTING PARKING LOT
 - 1" DETENTION BASIN - REFER TO CIVIL PLANS
 - 1" SYNTHETIC TURF
 - 1" UTILITIES BELOW - REFER TO CIVIL PLANS
 - 1" TREES IN TREE GRASSES
 - 1" CUSTOM PENINSULA STRUCTURE
 - 1" FUTURE BUILDING
 - 1" FUTURE PAVING
 - 1" TEMPORARY ASPHALT SULK
 - 1" 30' CLEAR VISION TRIANGLE
 - 1" SITE LIGHTING - REFER TO LIGHTING PLANS
 - 1" CAST-IN-PLACE CONCRETE TRENCH DRAIN - REFER TO GRADING & DRAINAGE PLAN
 - 1" AGO IMPACT 10'10" 1000 POLYMER TRENCH DRAIN N-LINE CATCH BASIN - REFER TO GRADING & DRAINAGE PLAN

General Notes:

- (APPLIES TO SHEETS L601 - L605, NOT ALL APPLY PER SHEET)
- REFER TO SHEET L601 FOR PLANT LIST AND ORNAMENTAL REQUIREMENTS.
 - PLANT MATERIAL SHALL NOT BE PLANTED WITHIN 4' OF THE PROPERTY LINE.
 - LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING ANY EXCAVATION WORK.
 - NO OVERHEAD UTILITY LINES ARE KNOWN TO BE PRESENT WITHIN THE WORK AREA. PLANTING TREES BENEATH OVERHEAD UTILITY LINES IS PROHIBITED.
 - PROTECT ALL NEW AND EXISTING UTILITIES, LIGHTS, PAVEMENT, POLES, ETC. DURING CONSTRUCTION.
 - RESTORE ANY DAMAGED LANDSCAPE OR INFRASTRUCTURE TO PRE-CONSTRUCTION CONDITIONS PER SPECIFICATIONS.
 - CONTRACTOR SHALL VERIFY ALL EXISTING CONDITION INFORMATION (BOTH PRIOR TO CONSTRUCTION, NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONCERNS PRIOR TO PROCEEDING).
 - PROPOSED UTILITIES BARNES FOR REFERENCE ONLY; REFER TO CIVIL PLANS.
 - REFER TO BROWN CONCRETE PLANS FOR AGL TYPE DESIGNATIONS.
 - DECORATIVE STONE MULCH SHALL BE SUPPLIED BY CAPITAL STONEMARKS, KESHO HARBOR, PROSPAN 48350 OR APPROVED EQUAL.
 - ALL BEED LINES FROM EXISTING BARNES AND TREE LOCATIONS SHALL BE PAINTED OUT BY THE CONTRACTOR FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
 - ALL LAWN AREAS TO BE IRRIGATED. REFER TO THE IRRIGATION PLANS.
 - ALL STREET CANOPY TREES ARE TO BE PLANTED WITHIN 10' OF BACK OF CURB EXCEPT WHERE IN CONFLICT WITH UTILITIES AND BASEMENTS.
 - PROVIDE LANDSCAPE CONTINUOUS UNDERDRAGGE AT ALL PLANT BEDS ALONG BOTH SIDES OF THE HOSPITALITY BUILDING AND THE PARKING DECK.



Key Map
Scale: 1"=300'



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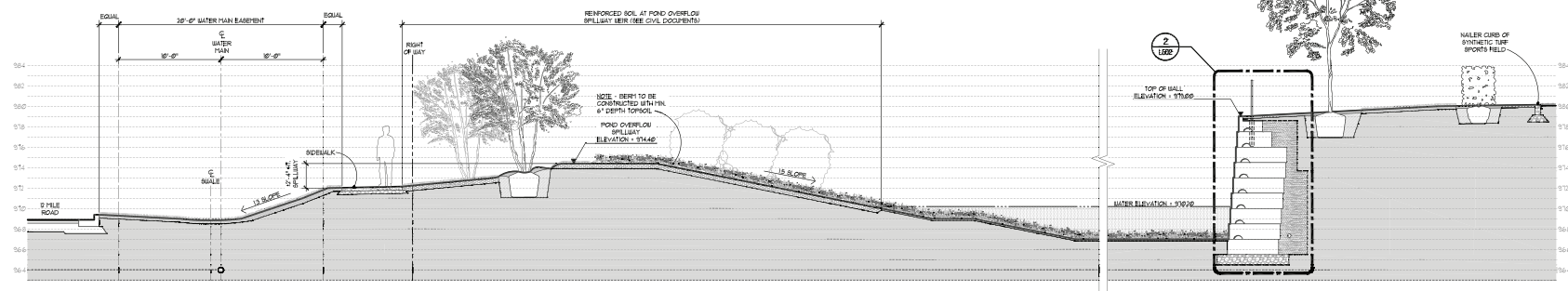
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Project: Catholic Central High School
North Campus Athletics and Parking Deck

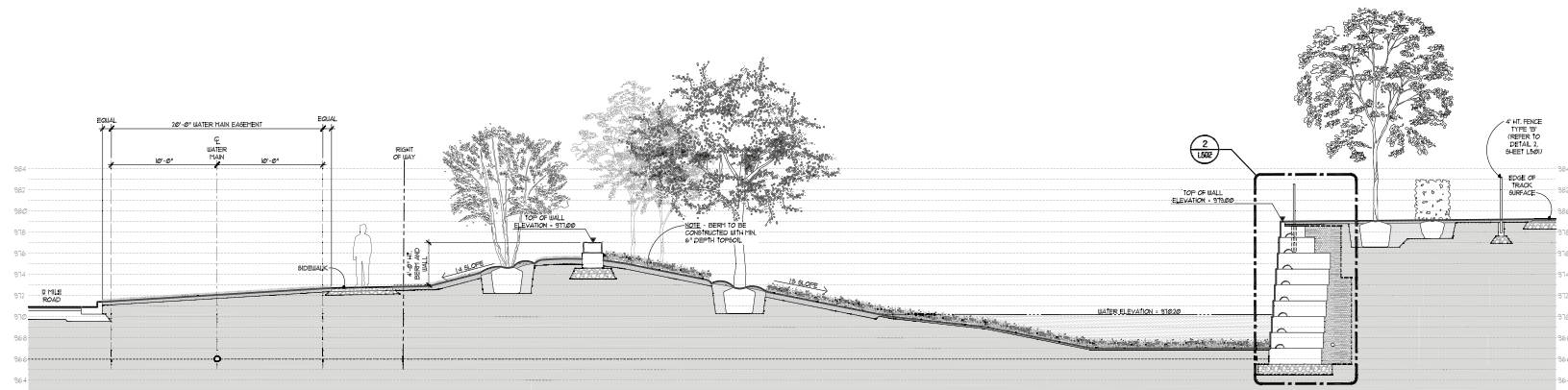
Sheet	Landscape Plan
Area	C
Job Number:	130-271
Drawn:	SE
Checked:	RM
Scale:	1" = 30'-0"

Date:	Revised By:
09.16.2022	PJP Submittal
10.28.2022	Design Development
11.14.2022	Rev. PJP Submittal





2 Frontage Landscape Section at Pond Overflow Spillway
L601 SCALE: 3/16" = 1'-0"



1 Frontage Landscape Section at Berm and Wall
L601 SCALE: 3/16" = 1'-0"



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Project:
Catholic Central High School
North Campus Athletics and Parking Deck

Sheet:
Landscape Details

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Checked: RH
Scale: As Noted

Date: 11.14.2022
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Sheet Number:
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L703



PARKING DECK NORTH RENDERING - NTS



PARKING DECK SOUTHWEST RENDERING - NTS



PARKING DECK NORTHWEST RENDERING - NTS



PARKING DECK NORTHEAST RENDERING - NTS

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Project Title



North Campus Athletics

27225 Wilcox Rd.
Novi, MI 48374

Key Plan

Project Administrator
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Project Designer
A. LaTona
Project Architect / Engineer
R. Gurche
Drawn By
R. Gurche
C.M. Review
N. LaForest
Approved
B. Sunberg
Drawing Scale
As Noted

Issued for Issue Date
Pre App Submittal 07-25-2022
PSP Submittal 09-16-2022
Rev. PSP Submittal 11-14-2022

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IDS Drawing Title

Renderings

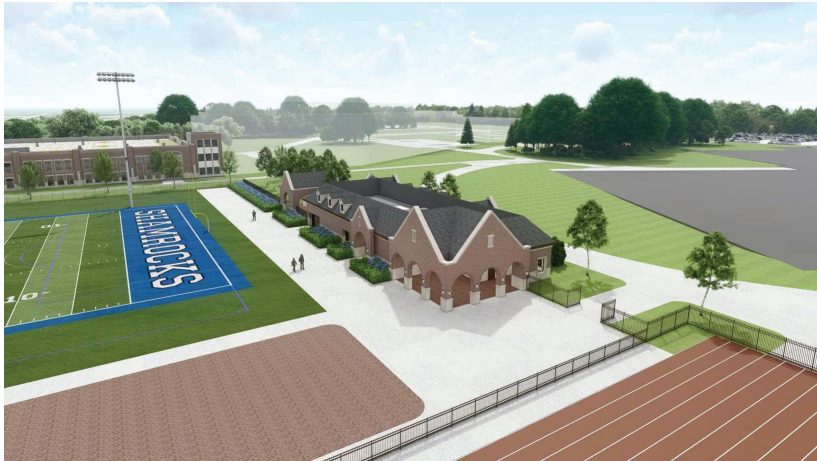
NOT FOR CONSTRUCTION

ID# Project Number Drawing Number

19200-4000 S.A.0.1



HOSPITALITY SOUTHWEST RENDERING - NTS



HOSPITALITY NORTHWEST BIRDSEYE VIEW RENDERING - NTS



PRESS BOX NORTHEAST RENDERING - NTS



PRESSBOX NORTHWEST BIRDSEYE VIEW RENDERING - NTS



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North Campus Athletics

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Key Plan

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 Project Designer
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 Project Architect / Engineer
 R. Gurche
 Drawn By
 R. Gurche
 C.M. Review
 N. LaForest
 Approved
 B. Sunberg
 Closing Date
 As Noted

Issued for	Issue Date
Pre App Submittal	07-25-2022
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Renderings

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Project Number	Drawing Number
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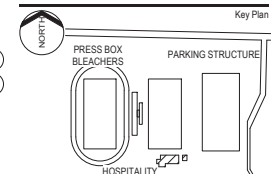
19200-4000 S.A0.2



North Campus Athletics

27225 Wixom Rd.
Novi, MI 48374

Key Plan



HOSPITALITY

Project Administrator
A. Everett

Project Designer
A. LaTona

Project Architect / Engineer
R. Gurchie

Drawn By
R. Gurchie

C.I.M. Review
N. LaForest

Approved
B. Sunberg

Drawing Scale
1/8" = 1'-0"

Issued for

Issue Date

Pre App Submittal 07-25-2022

PSP Submittal 09-16-2022

Rev. PSP Submittal 11-14-2022

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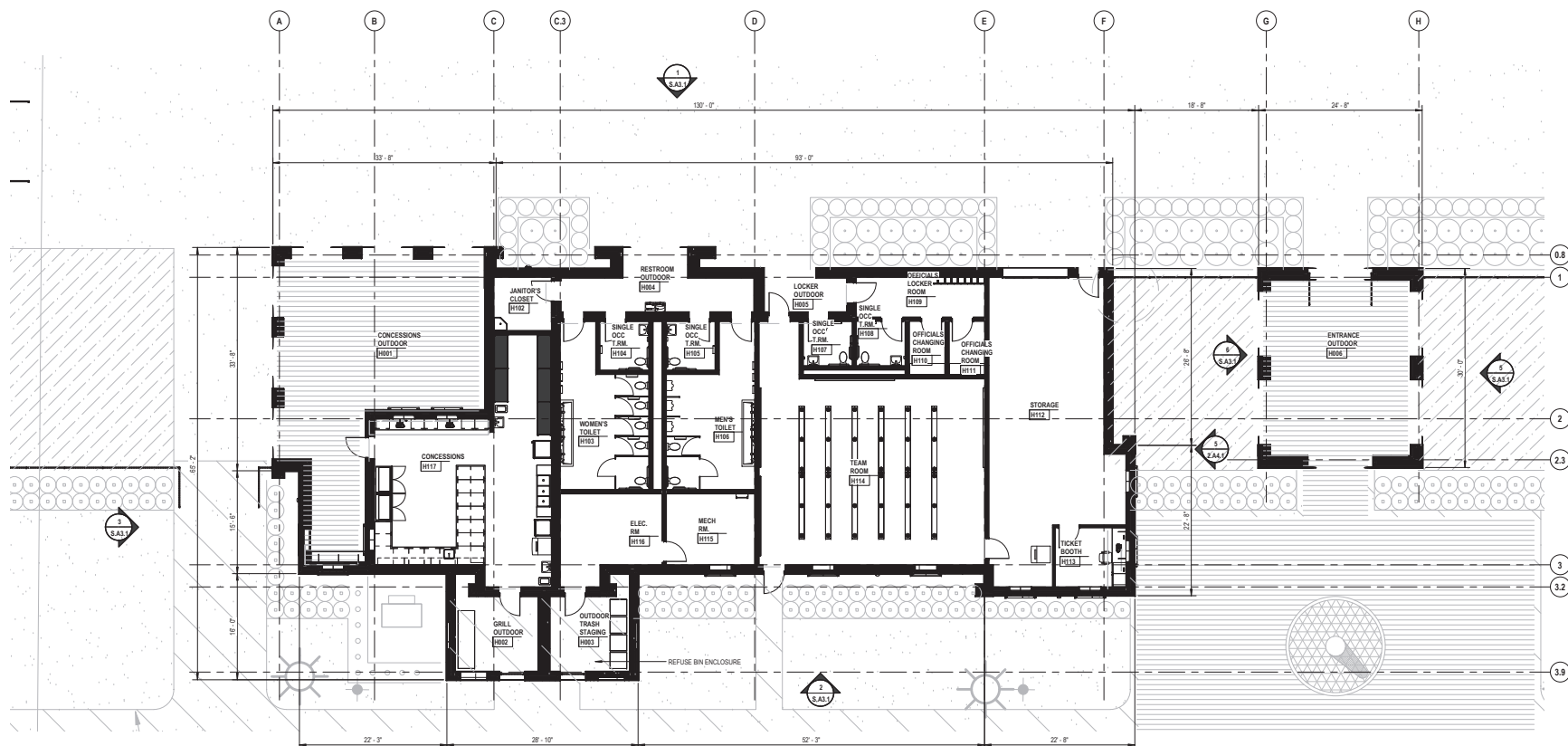
IDS Drawing Title

Hospitality First Level Floor Plan

NOT FOR CONSTRUCTION

181 Project Number Drawing Number

19200-4000 S.A.1.1



0.8
1
2
2.3
3
3.2
3.3

NORTH

PRESS BOX
BLEACHERS

PARKING STRUCTURE

HOSPITALITY

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19200-4000 S.A.1.1

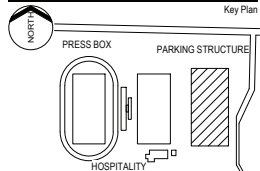
19200-4000 S.A.1.1



North Campus Athletics and Parking Structure

27225 Wixom Rd.
Novi, MI 48374

Key Plan



Project Administrator

A. Everett

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A. LaTona

Project Architect / Engineer

M. Nowakowski

Drawn By

R. Gurche

C.A. Brown

N. LaForest

Approved

B. Sunberg

Drawing Scale

As Noted

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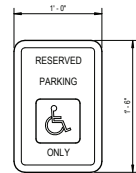
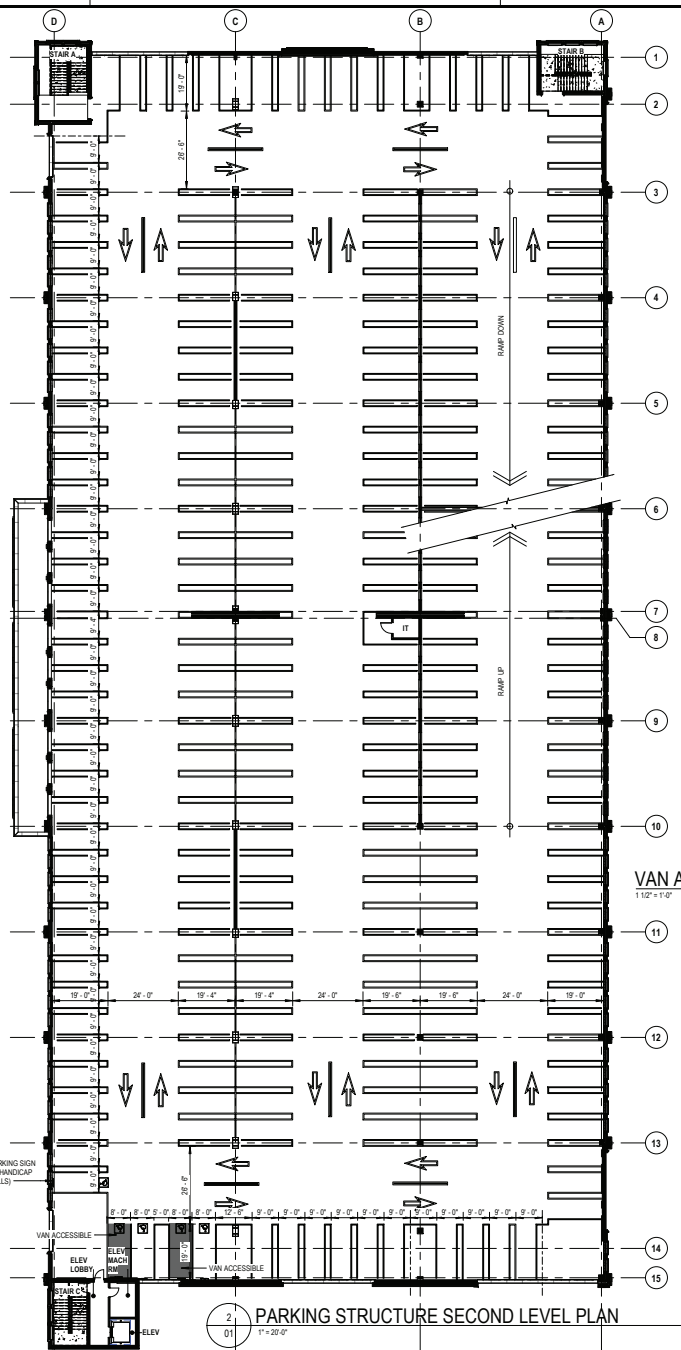
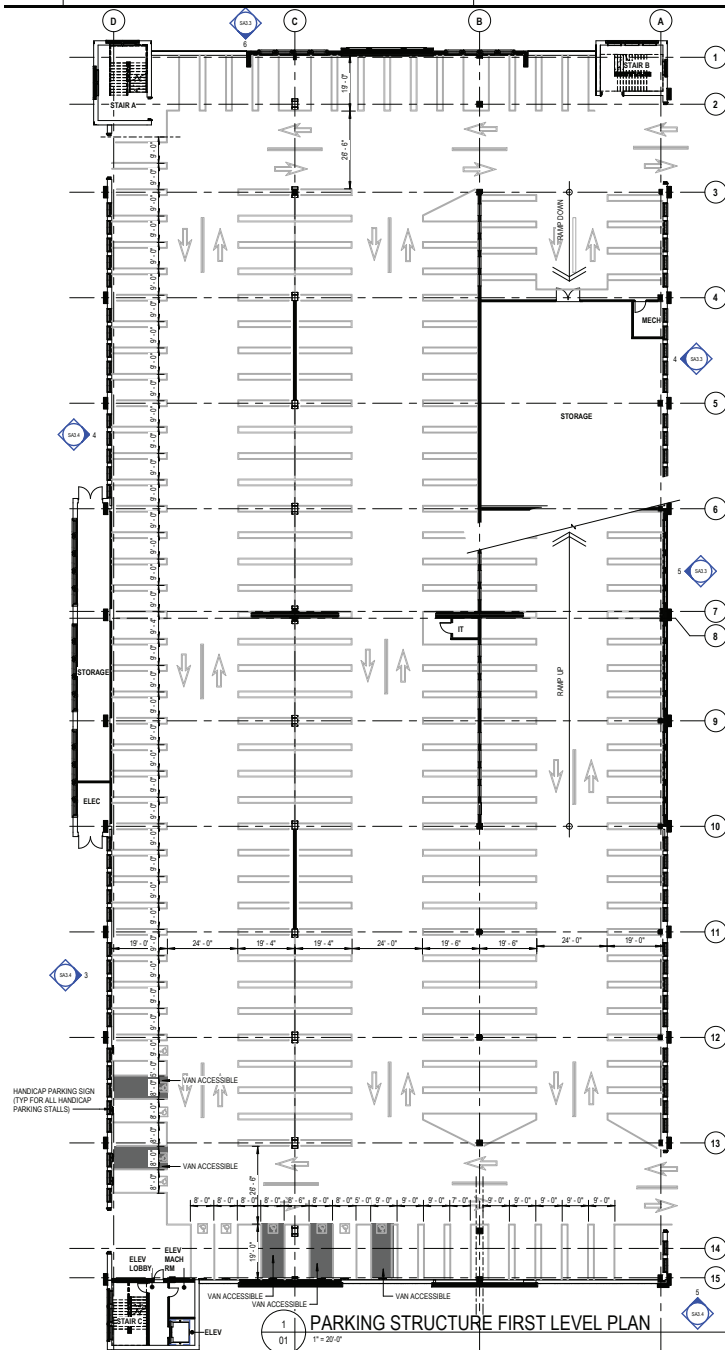
IDS Drawing Title

Parking Structure - First and Second Level
Floor Plan

NOT FOR CONSTRUCTION

19200.4000 Drawing Number

SA1.3



*SIGN TO BE MOUNTED MIN. 5' ABOVE PARKING SURFACE

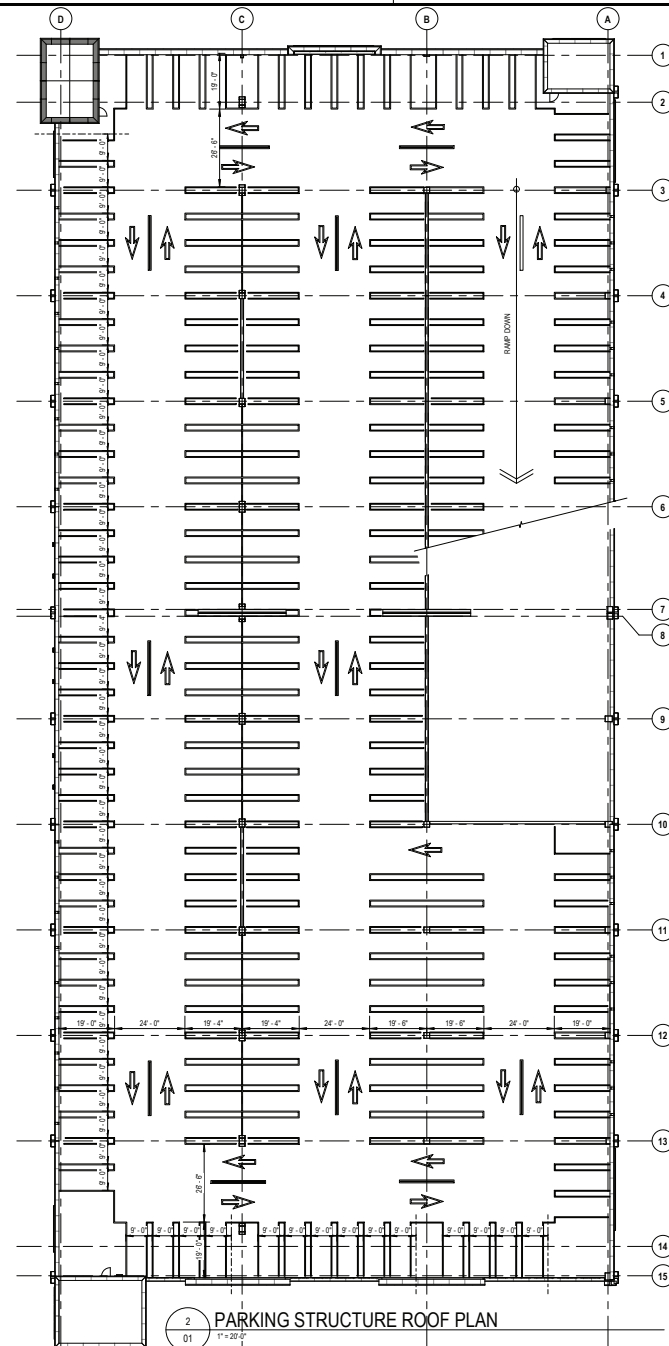
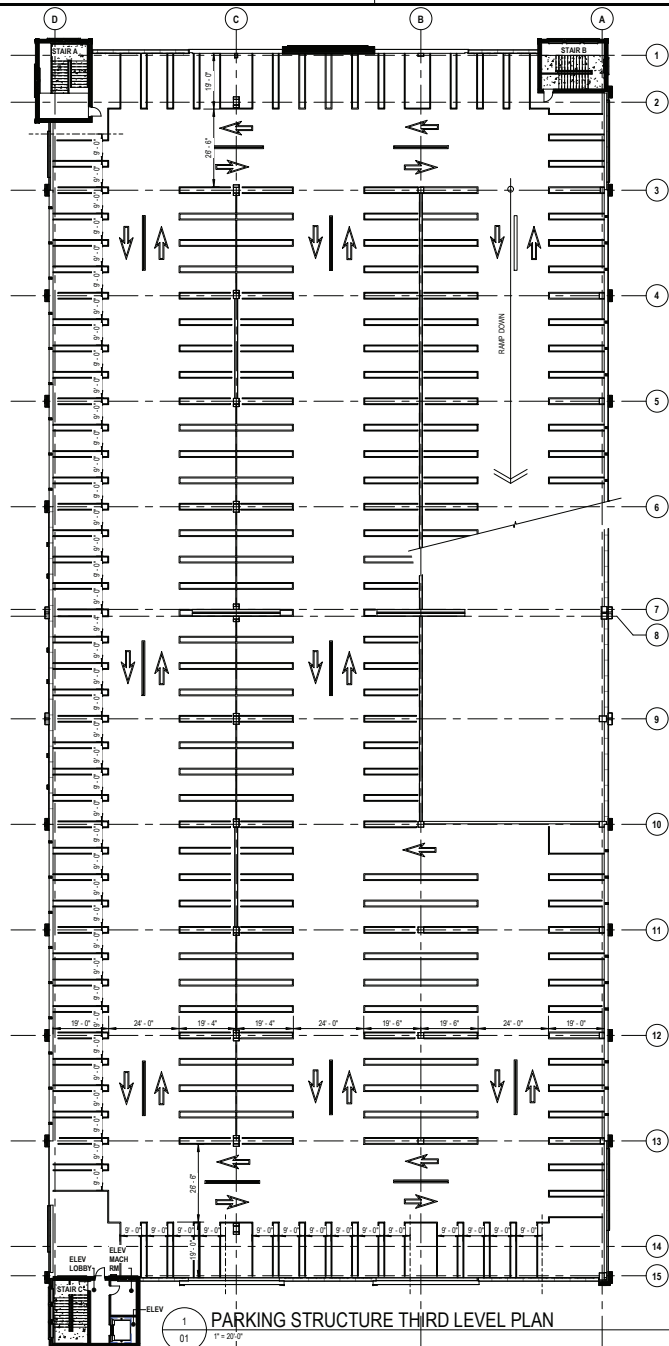
ACCESSIBLE PARKING SIGN
1'-0" x 1'-6"



*SIGN TO BE MOUNTED MIN. 5' ABOVE PARKING SURFACE

VAN ACCESSIBLE PARKING SIGN
1'-0" x 1'-6"

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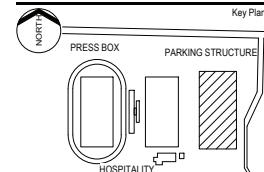


1441 west long lake, suite 200
troy, michigan 48066
5211 cascade road SE, suite 300
grand rapids, michigan 49506
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www.ids-michigan.com
STRUCTURAL ENGINEER
SDI STRUCTURES
275 EAST LIBERTY
ANN ARBOR, MI 48104
734-213-6091
www.sdistructures.com

Project Title



**North Campus Athletics and
Parking Structure**
27225 Wixom Rd.
Novi, MI 48374



Project Administrator	A. Everett
Project Designer	A. LaTona
Project Architect / Engineer	M. Nowakowski
Drawn By	R. Gurche
C.M. Review	N. LaForest
Approved	B. Sunberg
Drawing Scale	As Noted
Issued for	Issue Date
Pre App Submittal	07-25-2022
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Rev. PSP Submittal	11-14-2022

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IDS Drawing Title

Parking Structure - Third Level and Roof
Plan

NOT FOR CONSTRUCTION

19200.4000 Project Number Drawing Number

SA1.4



North Campus Athletics

27225 Wilcox Rd.
Novi, MI 48374

Key Plan

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A. Everett
Project Designer
A. LaTona
Project Architect / Engineer
R. Gurche
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Drawing Scale
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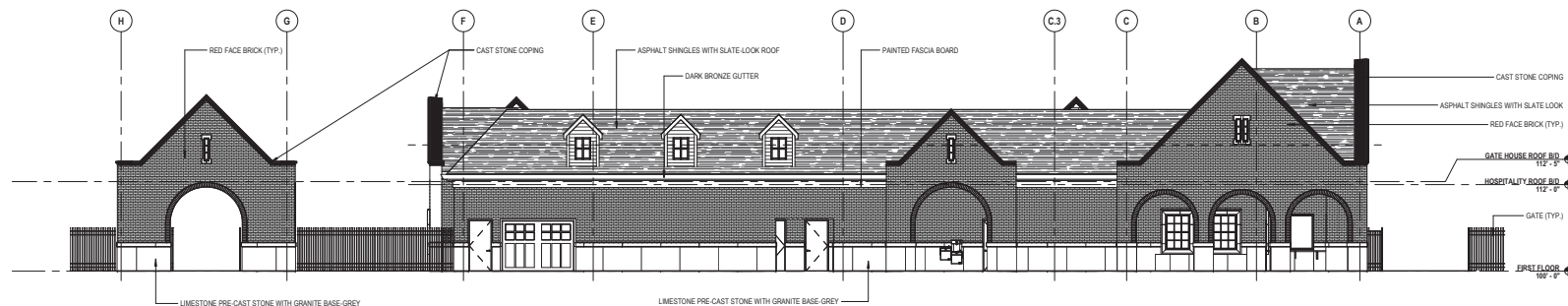
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IDS Drawing Title

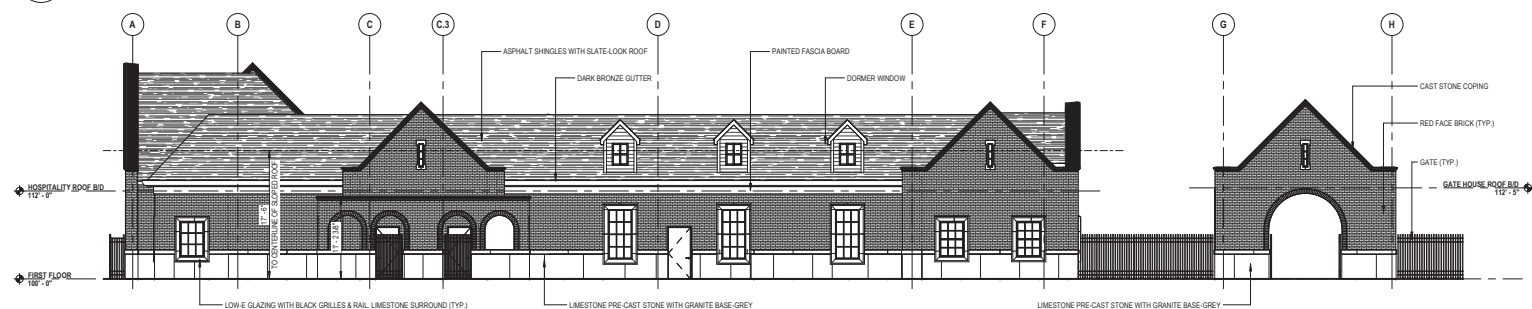
Hospitality Building Elevations

NOT FOR CONSTRUCTION

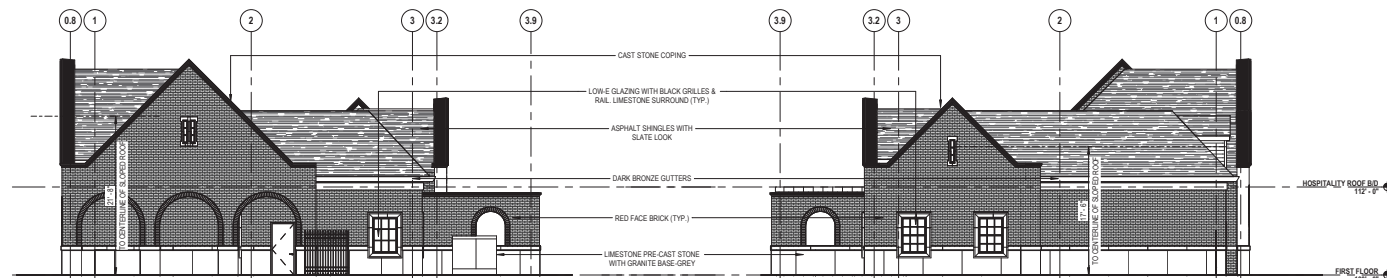
19200-4000 S.A3.1



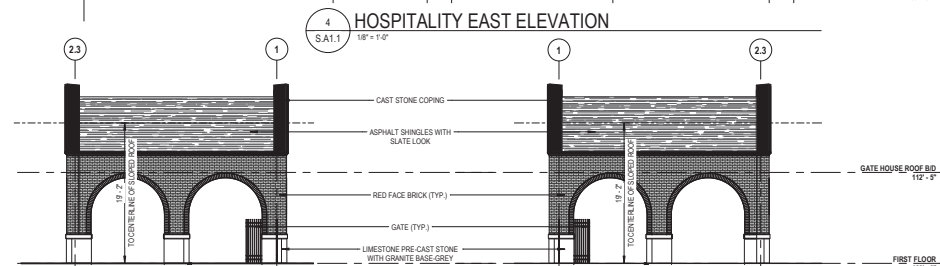
1 HOSPITALITY AND GATE HOUSE NORTH ELEVATION
S.A1.1 1/8" = 1'-0"



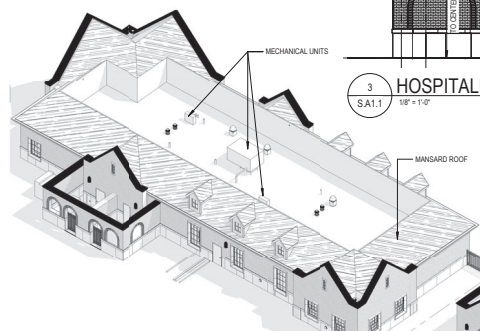
2 HOSPITALITY AND GATE HOUSE SOUTH ELEVATION
S.A1.1 1/8" = 1'-0"



3 HOSPITALITY WEST ELEVATION
S.A1.1 1/8" = 1'-0"



4 HOSPITALITY EAST ELEVATION
S.A1.1 1/8" = 1'-0"



7 HOSPITALITY ROOF SCREENING
Not To Scale

5 GATE HOUSE EAST ELEVATION
S.A1.1 1/8" = 1'-0"

6 GATE HOUSE WEST ELEVATION
S.A1.1 1/8" = 1'-0"



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Drawn By

R. Gurche

C.H. Brown

N. LaForest

Approved

B. Sunberg

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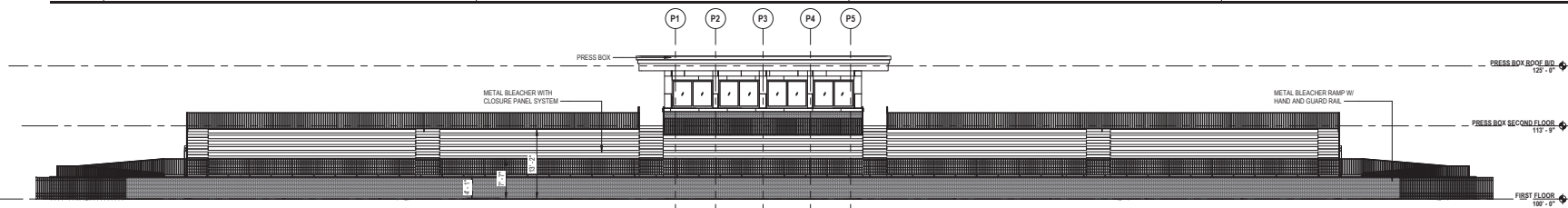
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Press Box & Bleacher Elevations

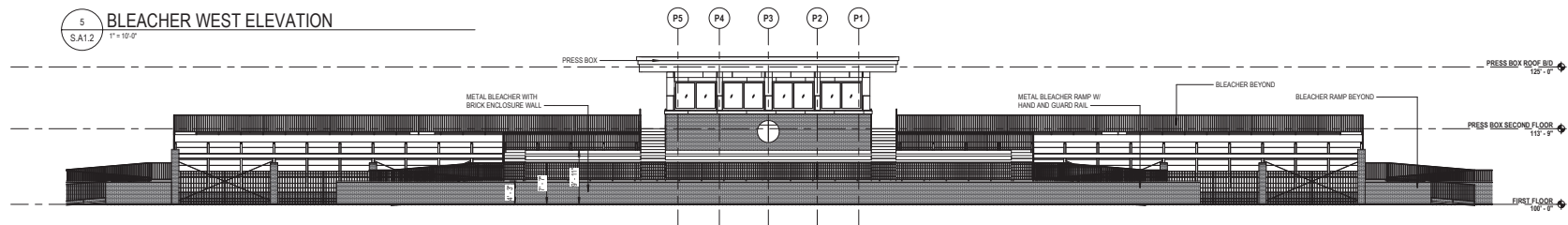
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193 Project Number Drawing Number

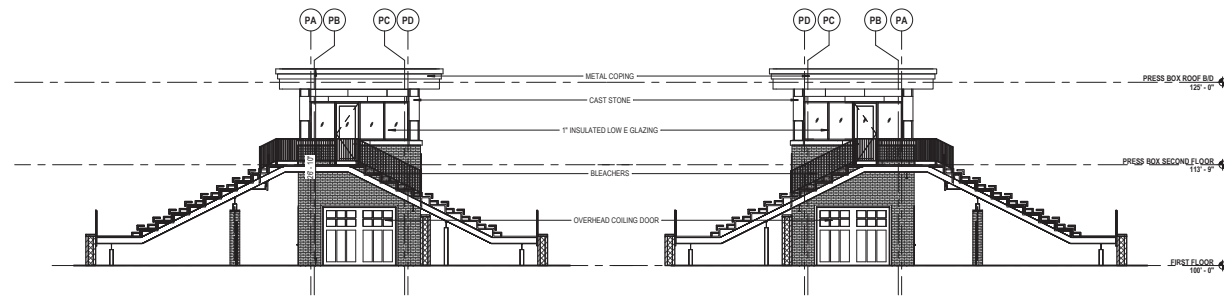
19200-4000 S.A3.2



5 BLEACHER WEST ELEVATION
S.A1.2 1" = 10'-0"

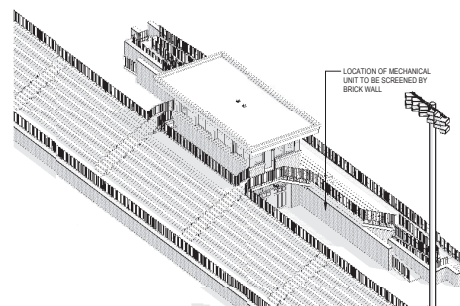


6 BLEACHER EAST ELEVATION
S.A1.2 1" = 10'-0"

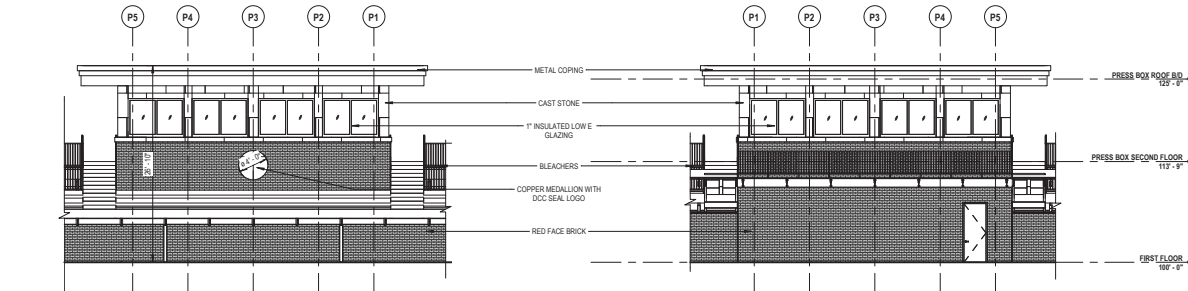


4 PRESS BOX SOUTH ELEVATION
S.A1.2 1/8" = 1'-0"

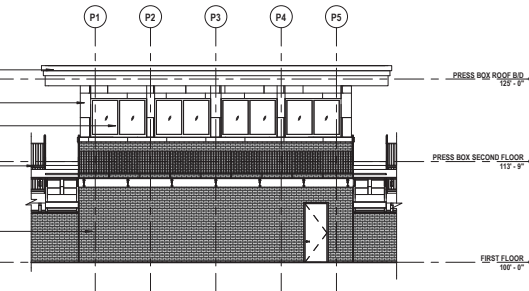
3 PRESS BOX NORTH ELEVATION
S.A1.2 1/8" = 1'-0"



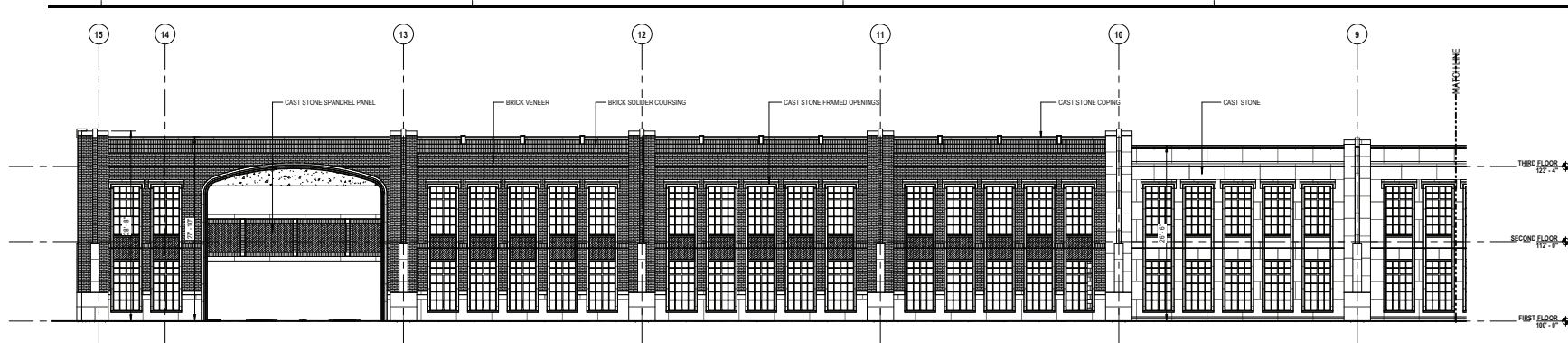
7 PRESS BOX MECHANICAL SCREENING
Not To Scale



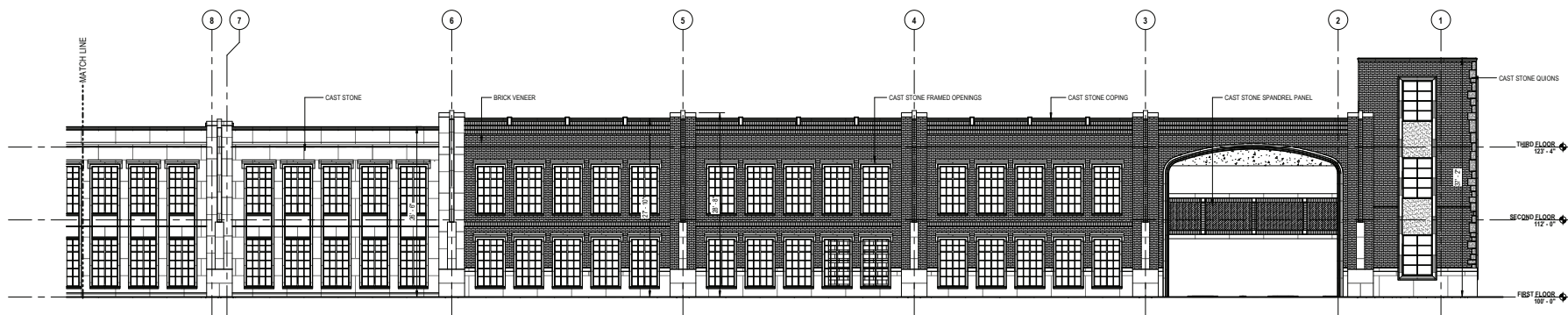
1 PRESS BOX EAST ELEVATION
S.A1.2 1/8" = 1'-0"



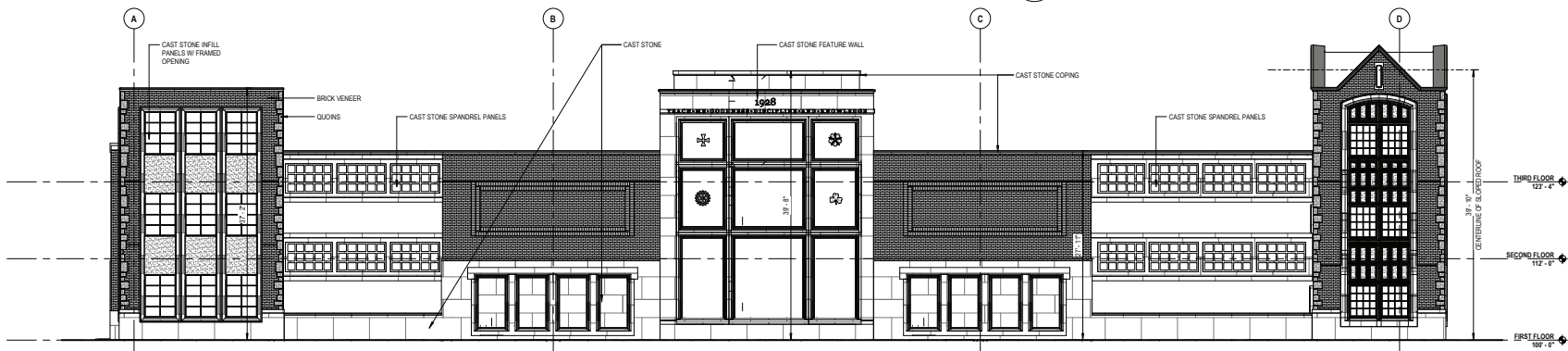
2 PRESS BOX WEST ELEVATION
S.A1.2 1/8" = 1'-0"



5 PARKING STRUCTURE PARTIAL EAST ELEVATION
SA1.3 1/8" = 1'-0"



4 PARKING STRUCTURE PARTIAL EAST ELEVATION
SA1.3 1/8" = 1'-0"



6 PARKING STRUCTURE NORTH ELEVATION
SA1.3 1/8" = 1'-0"

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IDS Drawing Title

Parking Structure Exterior Elevations

NOT FOR CONSTRUCTION

19200.4000

Drawing Number

SA3.3

19200.4000



North Campus Athletics and Parking Structure

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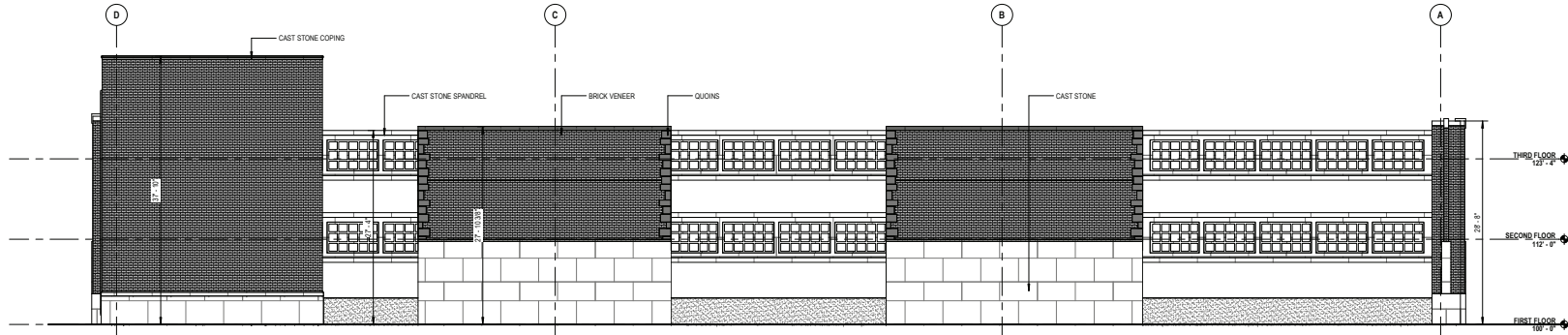
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Parking Structure Exterior Elevations

NOT FOR CONSTRUCTION

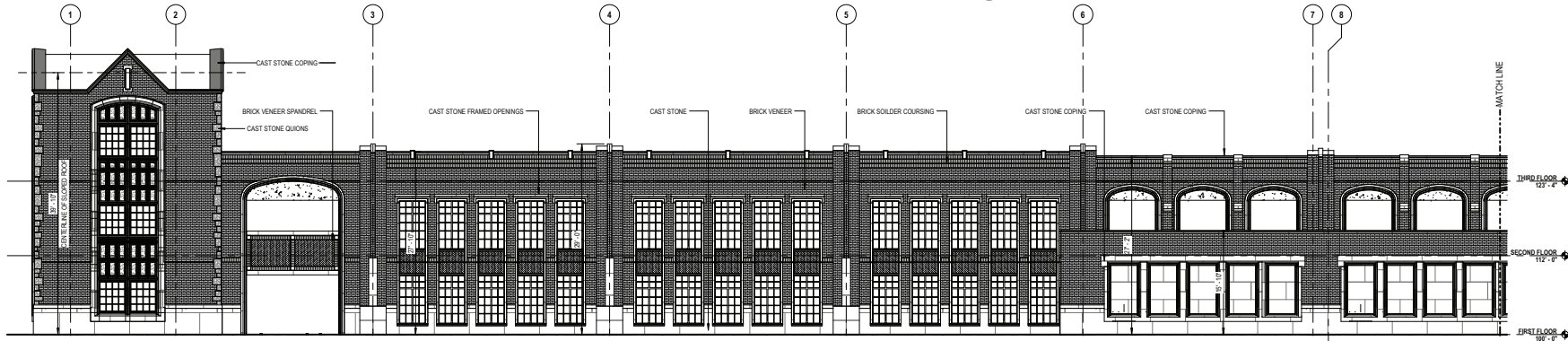
18" Project Number Drawing Number

19200.4000 SA3.4



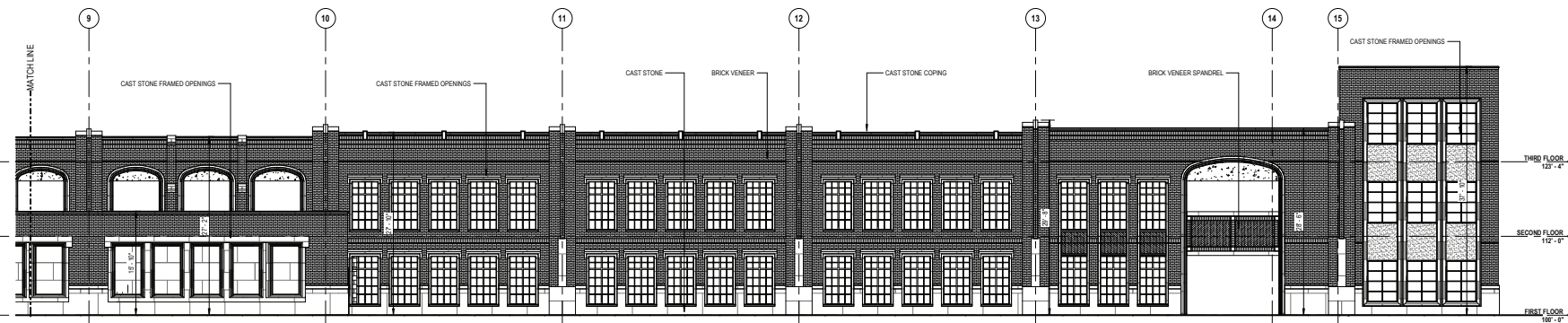
5 PARKING STRUCTURE SOUTH ELEVATION

SA1.3 1/8" = 1'-0"



4 PARKING STRUCTURE PARTIAL WEST ELEVATION

SA1.3 1/8" = 1'-0"



3 PARKING STRUCTURE PARTIAL WEST ELEVATION

SA1.3 1/8" = 1'-0"

PLANNING REVIEW



PLAN REVIEW CENTER REPORT

Planning Review

CATHOLIC CENTRAL NORTH CAMPUS

JSP 22-37

December 9, 2022

PETITIONER

Catholic Central High School

REVIEW TYPE

Revised Preliminary Site Plan

PROPERTY CHARACTERISTICS

Section	18	
Site Location	West of Wixom Road, South of Grand River; Catholic Central HS Campus; 22-18-200-027; 22-18-200-026;	
Site School District	Novi Community School District	
Site Zoning	RA, R-1 & R-4 One Family Residential, B-1 Local Commercial & I-1 Light Industrial	
Adjoining Zoning	North	City of Wixom north of 12 Mile (RM-1 Low Density Multiple Family)
	East	RM-1 Low Density Multiple Family
	West	RA Residential Acreage, R-4 One-Family Residential
	South	R-1 One-Family Residential
Current Site Use	Detroit Catholic Central High School campus	
Adjoining Uses	North	Multifamily Residential in Wixom, vacant
	East	Berkshire Pointe residential community
	West	Northwest Park; Andelina Ridge single family residential
	South	Island Lake residential community
Site Size	115.77 acres	
Plan Date	November 15, 2022	

PROJECT SUMMARY

The applicant is proposing several new facilities in the northwestern portion of the Catholic Central High School campus: a 4-level parking structure (702 spaces), a hospitality/concession building, an athletic field for practices and competition, discus and shotput fields, and a new track and stadium. These new facilities would replace existing practice fields and open space, and are considered accessory uses to the high school use, subject to Special Land Use consideration in the R-4 Zoning District. Woodland and wetland impacts are proposed, which will require permitting following public hearing and approval by the Planning Commission. A revision of the Special Land Use permit for educational facilities in a residential district is also required.

SPECIAL LAND USE REVIEW

Parochial schools in the R-4 District are subject to Special Land Use approval from the Planning Commission. The proposed athletic and parking facilities are accessory to the high school, and require

a revised Special Land Use approval, since the use of the site is intensified. The Planning Commission shall consider the following in the review of the Special Land Use Permit request:

- i. Whether, relative to other feasible uses of the site, the proposed use will cause any detrimental impact on existing thoroughfares in terms of overall volumes, capacity, safety, vehicular turning patterns, intersections, view obstructions, line of sight, ingress and egress, accel/decel lanes, off-street parking, off-street loading/unloading, travel times and thoroughfare level of service. **The applicant will need to provide a special events traffic management plan with the Final Site Plan submittal. Traffic will not increase on the daily basis, but traffic patterns may be different/higher during special events.**
- ii. Whether, relative to other feasible uses of the site, the proposed use will cause any detrimental impact on the capabilities of public services and facilities, including water service, sanitary sewer service, storm water disposal, and police and fire protection to serve existing and planned uses in the area. **The applicant states that enrollment at the school will not increase with the addition of the facilities, so no significant impact on public services and facilities is anticipated.**
- iii. Whether, relative to other feasible uses of the site, the proposed use is compatible with the natural features and characteristics of the land, including existing woodlands, wetlands, watercourses and wildlife habitats. **The proposed facilities are to be located in an area that is currently open space, wetlands, and practice fields. There will be impacts to natural features. Wetland impacts will not exceed the threshold for mitigation. Twenty regulated Woodland trees are proposed for removal, and 27 replacement credits are to be planted on-site.**
- iv. Whether, relative to other feasible uses of the site, the proposed use is compatible with adjacent uses of land in terms of location, size, character, and impact on adjacent property or the surrounding neighborhood. **The school has been in this location since 2005, predating many of the residential neighborhoods that have developed in the surrounding area. However, the additional noise and lighting of the athletic facilities, as well as new traffic patterns with the addition of the parking garage, may create new impacts on the adjacent residential areas. It appears the applicant is taking sufficient measures to minimize those impacts, and noise is not expected to exceed the performance standards of the ordinance.**
- v. Whether, relative to other feasible uses of the site, the proposed use is consistent with the goals, objectives and recommendations of the City's Master Plan for Land Use.
- vi. Whether, relative to other feasible uses of the site, the proposed use will promote the use of land in a socially and economically desirable manner.
- vii. Whether, relative to other feasible uses of the site, the proposed use is:
 - a. Listed among the provision of uses requiring special land use review as set forth in the various zoning districts of this Ordinance, and
 - b. Is in harmony with the purposes and conforms to the applicable site design regulations of the zoning district in which it is located.**Parochial schools are listed as a use requiring special land use review and the proposed project largely conforms to the R-4 Zoning District.**

RECOMMENDATION

Approval of the revised Preliminary Site Plan **is recommended. Planning Commission approval of the Special Land Use permit, Preliminary Site Plan, Wetland Permit, Woodland Permit, and Storm Water Management Plan is required.**

ORDINANCE REQUIREMENTS

This project was reviewed for compliance with the City of Novi Zoning Ordinance, Article 3 (Residential Acreage), Article 24 (Schedule of Regulations), Article 25 (General Provisions), and any other areas of the ordinance, as noted. The plans show general compliance with ordinance requirements.

1. Noise Impact Statement (Section 4.3.): The Zoning Ordinance requires a noise impact statement, as described in Section 5.14.10.b.i, for school uses in a residential district. A revised statement was provided by Senior AV Engineer Steve Robinson with Integrated Design Solutions, LLC in the submittal packet.

- a. The statement indicates the proposed stadium sound system will have directed patterns focused on the field and bleachers, with 80% of the energy absorbed by those areas. The remaining 20% as well as reverb remnants will disperse into the air. At a distance of 25 feet from the speaker source the decibel level will be 80dB. The closest residential receiving district is 470 feet away, with a calculated peak of 54.5 dB. The night-time decibel limit is 55 dB.
2. Traffic Impact Study: The types of facilities proposed are unique, and do not have traffic generation rates associated with them in the ITE manual. However, the expected change in traffic patterns associated with the types of events to be held and new parking available require greater assessment and understanding. **The traffic consultant has reviewed the proposed methodology to create a special events traffic management plan, which shall be submitted and reviewed at the time of Final Site Plan review.**
3. Building Height (Section 3.1.1.E): The proposed parking structure exceeds the 35-foot height limit for the district. **The applicant intends to request a Zoning Board of Appeals variance to allow the 42-foot building height.**
4. Lighting Plan (Section 5.7): There are additional lighting comments to be addressed in the next submittal – see Planning Chart. **A variance for the height of the light poles (80 feet) will be required.** The applicant's submittal demonstrates the height of the poles allows the lights to be directed onto the fields, with minimal spillover into adjacent areas, which should eliminate light disturbance on adjacent residential areas. The other requirements of the lighting ordinance appear to be met.
5. Phasing: There are notes on the plan that seem to indicate phasing. **Please verify whether phasing is proposed for this project, and if so clarify what elements are including in each phase, timing, etc.**

Other Reviews

- Engineering Review: Engineering recommends approval. Additional comments to be addressed with Final Site Plan submittal.
- Landscape Review: Approval of the revised Preliminary Site Plan is recommended with conditions that the applicant correct the unsupported waivers. See Landscape review letter and **indicate in response letter whether each deficiency will be addressed.**
- Wetland Review: MSG recommends approval. **Wetland fill volumes shall be provided in the response letter in order to determine whether the permit will be minor or non-minor,** and other comments to be addressed with Final Site Plan submittal.
- Woodland Review: Woodland permit and replacement credits will be required. DRG previously recommended approval of the Preliminary Site Plan, with additional comments to be addressed in the Final Site Plan. See woodland review letter for additional details.
- Traffic Review: Approval of the revised Preliminary Site Plan is recommended. Additional comments to be addressed with Final Site Plan, including the Special Events Traffic Management Plan.
- Façade Review: The revised Façade review notes that the proposed buildings and structures are compliant with the Façade Ordinance. Approval is recommended.
- Fire Review: Approval is recommended.

NEXT STEP: PLANNING COMMISSION MEETING

This Site Plan will be scheduled to go before the Planning Commission for public hearing on **January 11, 2023**. Please provide the following via email by **January 4, 2023**:

1. Revised Preliminary Site Plan set in PDF format (maximum of 10MB). **NO CHANGES MADE.**

2. A response letter addressing ALL the comments from ALL the review letters and a request for waivers as you see fit.
3. A color rendering of the Site Plan and/or buildings (optional, to be used for Planning Commission presentation).

ZONING BOARD OF APPEALS MEETING

The applicant should apply for Zoning Board of Appeals variances for any required items noted. The application can be found at this [link](#). Please call 248-347-0459 for meeting and deadline schedules.

FINAL SITE PLAN SUBMITTAL

After receiving the Preliminary Site Plan approval from the Planning Commission, please submit the following for Final Site Plan review and approval:

1. Seven copies of Final Site Plan addressing all comments from Preliminary review
2. Response letter **addressing all comments and refer to sheet numbers where the change is reflected**
3. [Final Site Plan Application](#)
4. [Final Site Plan Checklist](#)
5. Engineering Cost Estimate
6. Landscape Cost Estimate
7. [Other Agency Checklist](#)
8. [Hazardous Materials Packet](#) (Non-residential developments)
9. [Non-Domestic User Survey](#) (Non-residential developments)
10. [No Revision Façade Affidavit](#) (if no changes are proposed for Façade. If changes are proposed, include an additional set of plans in the submittal.)
11. Legal Documents as required
12. Drafts of any legal documents (note that any on-site easements need to be submitted in draft form before stamping sets will be stamped)

ELECTRONIC STAMPING SET SUBMITTAL AND RESPONSE LETTER

After receiving Final Site Plan approval, plans addressing the comments in all of the staff and consultant review letters should be submitted electronically for informal review and approval prior to printing Stamping Sets. A letter from either the applicant or the applicant's representative addressing comments in the review letters and associated charts is to be submitted with the electronic stamping set. This letter should address all comments in ALL letters and ALL charts and **refer to sheet numbers where the change is reflected.**

STAMPING SET APPROVAL

Stamping sets are still required for this project. After receiving approval of the Electronic Stamping Set from City staff, the applicant should submit **10 size 24" x 36" copies, folded, with original signature and original seals,** to the Community Development Department for final Stamping Set approval.

If required, drafts for all legal documents with a legal transmittal are to be submitted along with stamping sets. Any off-site easements must be reviewed, approved, and executed prior to approval of the Stamping Set.

PRE-CONSTRUCTION MEETING

A Pre-Construction meeting is required for this project. Prior to the start of any work on the site, Pre-Construction (Pre-Con) meetings must be held with the applicant's contractor and the City's consulting engineer. Pre-Con meetings are generally held after Stamping Sets have been issued and prior to the start of any work on the site. There are a variety of requirements, fees and permits that must be issued before a Pre-Con can be scheduled, so it is suggested you contact Sarah Marchioni [248.347.0430 or smarchioni@cityofnovi.org] once the Final Site Plan has been approved to begin the Pre-Con checklist. If you have questions regarding the checklist or the Pre-Con itself, please contact Sarah.

CHAPTER 26.5

Chapter 26.5 of the City of Novi Code of Ordinances generally requires all projects be completed within two years of the issuance of any starting permit. Please contact Sarah Marchioni at 248-347-0430 for additional information on starting permits. The applicant should review and be aware of the requirements of Chapter 26.5 before starting construction.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.347.0484 or lbell@cityofnovi.org.

A handwritten signature in black ink that reads "Lindsay Bell". The signature is written in a cursive, flowing style.

Lindsay Bell, AICP, Senior Planner



PLANNING REVIEW CHART: R-1 One Family Residential

Review Date: December 9, 2022
Review Type: Revised Preliminary Site Plan
Project Name: JSP 22-37 CATHOLIC CENTRAL NORTH CAMPUS
Plan Date: November 15, 2022
Prepared by: Lindsay Bell, Senior Planner
Contact: E-mail: lbell@cityofnovi.org; Phone: (248) 347-0484

Bold To be addressed with the next submittal
Underline To be addressed with final site plan submittal
Bold and Underline Requires Planning Commission and / or ZBA Approval
Italics Notes to be noted

Item	Required Code	Proposed	Meets Code	Comments
Zoning and Use Requirements				
Master Plan <i>(adopted July 26, 2017)</i>	Educational Facility	Existing parochial school	Yes	
Area Study	The site does not fall under any special category	NA	Yes	
Zoning <i>(Effective January 8, 2015)</i>	One-family Residential (R-1) Article 3	R-1, R-4, and I-1	Yes	Rezoning is not proposed at this time
Uses Permitted (Sec 3.1.1.B & C)	Sec 3.1.1.B Principal Uses Permitted. Sec 3.1.1.C Special Land Uses	Private parochial schools are a special land use in the R-1 District		Revised Special Land Use required as expansion proposes an increase in intensity of the use
Phasing	Phasing requires Planning Commission Approval	Phase 2 proposed at this time; overall phasing plan for campus has not been submitted for approval	NA	
Required Conditions: Schools (Section 4.3)				
Site Access <i>(Sec 5.13)</i>	- Vehicular access shall be provided to existing or planned major thoroughfare or freeway service drive	Two existing access drives on Wixom Road; New proposed road would provide another access point to Twelve Mile Road	Yes	Road project is under review as a separate submittal
Noise Impact Statement <i>(Sec 5.14.10.B)</i>	- A noise impact statement is required subject to the standards of Section 5.14.10.B	Changes proposed will increase noise emissions of site; Statement provided calculate noise emissions at peak of 54.5 dB at closest receiving point off-site, which is below the max. 55 dB during night-time hours	Yes	

Item	Required Code	Proposed	Meets Code	Comments
Height, bulk, density and area limitations (Sec 3.1.1.E)				
Maximum % of Lot Area Covered (By All Buildings)	25% Site size total sf: 5,009,400	Provided 5.6%	Yes	
Building Height (Sec. 3.1.1.E)	35 feet or 2 ½ stories	Parking structure: 41'7" Press box: 28' 1" Hospitality: 22' 8"		Maximum building height exceeded – will require variance from ZBA if not revised
Building Setbacks (Sec 3.1.1.E)				
Front @ 12 Mile Road (Sec. 3.6.2.B)	75 feet	Parking structure:146.5'	yes	Hospitality and press box buildings exceed setback requirements
Side (east, west)	75 feet	Exceeds	Yes	
Rear (south)	75 feet	Exceeds	Yes	
Parking Setback (Sec 3.1.1.E)Refer to applicable notes in Sec 3.6.2				
Front @ 12 Mile Road (Sec. 3.6.2.B)	75 feet for non-residential uses		NA	No surface parking proposed
Side (east and west)	20 ft. 35ft. (lot abuts a residential district)		NA	
Rear (south)	20 ft. 35ft. (lot abuts a residential district)		NA	
Note To District Standards (Sec 3.6.2)				
Area Requirements (Sec 3.6.2.A)	NA	Non-residential use	NA	
Parking Setbacks (Sec 3.6.2.B)	Refer to Sec 3.6.2 for more details	Minimum required setbacks are modified accordingly	Yes	
Building Setbacks (Sec 3.6.2.C)	Refer to Sec 3.6.2 for more details	Minimum required setbacks are modified accordingly	Yes	
Wetland/Watercourse Setback (Sec 3.6.2.M)	Refer to Sec 3.6.2 for more details		Yes	See Wetland review letter for detailed comments
Parking, Loading and Dumpster Requirements (Sec. 5.2)				
Number of Parking Spaces (Sec. 5.2) Senior High Schools (Sec. 5.2.12.B)	1 for each teacher, administrator, and other day employee, and 1 for each 4 students over driving age, or the requirements of the auditorium (stadium), whichever is the greater; Stadiums: 1 space per 3 seats	Football stadium capacity of 3,500 3,500/3 = 1167 spaces required Total of 1,501 spaces proposed between existing parking and new parking deck	Yes	No simultaneous events to be held during football games.

Item	Required Code	Proposed	Meets Code	Comments
Shared Parking Study (Sec. 5.2.7)	One is required if the applicant is requesting reduction of parking space due to multiple uses on Site. This would require Planning Commission's approval		NA	
Parking Space Dimensions and Maneuvering Lanes (Sec. 5.3.2)	<ul style="list-style-type: none"> - 90° Parking: 9 ft. x 19 ft. - 24 ft. two-way drives 	9 ft. x 19 ft parking spaces; 24 ft. two way drives	Yes	
Parking stall located adjacent to a parking lot entrance (public or private) (Sec. 5.3.13)	Shall not be located closer than twenty-five (25) feet from the street right-of-way (ROW) line, street easement or sidewalk, whichever is closer		NA	
End Islands (Sec. 5.3.12)	<ul style="list-style-type: none"> - End Islands are required at the end of all parking bays that abut traffic circulation aisles. - The end islands shall generally be at least 8 feet wide, have an outside radius of 15 feet, and be constructed 3' shorter than the adjacent parking stall as illustrated in the Zoning Ordinance 	No end islands in parking garage shown	No	<u>Painted end islands are required in parking structures – applicant indicates they will seek ZBA variance</u>
Barrier Free Spaces Barrier Free Code	Based on Total Parking required	33 spaces total on the site; 13 in new parking deck	Yes	<u>See detailed comment in Traffic Review</u>
Barrier Free Space Dimensions Barrier Free Code	<ul style="list-style-type: none"> - 8' wide with an 8' wide access aisle for van accessible spaces - 8' wide with a 5' wide access aisle for regular accessible spaces 	Provided	Yes	The access aisles should be shown as striped in the FSP submittal. Be sure all van accessible spaces are adjacent to 8' access
Barrier Free Signs Barrier Free Code	One sign for each accessible parking space.	Shown	Yes	<u>See detailed comment in Traffic Review</u>
Minimum number of Bicycle Parking Sec. 5.16.1	Five (5) percent of required automobile spaces, minimum eight (8) spaces	8 shown	Yes	

Item	Required Code	Proposed	Meets Code	Comments
Bicycle Parking General requirements Sec. 5.16	<ul style="list-style-type: none"> - No farther than 120 ft. from the entrance being served - When 4 or more spaces are required for a building with multiple entrances, the spaces shall be provided in multiple locations - Spaces to be paved and the bike rack shall be inverted "U" design - Shall be accessible via 6 ft. paved sidewalk 	<p>8 spaces shown in two locations</p> <p>U-design shown Accessible via 10' walk</p>	<p>Yes</p> <p>Yes Yes</p>	
Bicycle Parking Lot layout Sec 5.16.6	<p>Parking space width: 6 ft. One tier width: 10 ft. Two tier width: 16 ft. Maneuvering lane width: 4 ft. Parking space depth: 2 ft. single, 2 ½ ft. double</p>	30 inches between racks shown	Yes	
Loading Spaces Sec. 5.4.1	Required on all premises where receipt or distribution of materials or merchandise occurs and shall be separate from parking areas	No delivery trucks expected to serve these facilities	NA	
Dumpster Sec. 4.19.2.F	<ul style="list-style-type: none"> - Located in rear yard - Attached to the building or - No closer than 10 ft. from building if not attached - Not located in parking setback - If no setback, then it cannot be any closer than 10 ft, from property line. - Away from Barrier free Spaces 	Staff will transfer trash to existing dumpsters	NA	

Item	Required Code	Proposed	Meets Code	Comments
Dumpster Enclosure Sec. 21-145. (c)	<ul style="list-style-type: none"> - Screened from public view - A wall or fence 1 ft. higher than height of refuse bin - And no less than 5 ft. on three sides - Posts or bumpers to protect the screening - Hard surface pad. - Screening Materials: Masonry, wood or evergreen shrubbery 	Will use existing	NA	
Lighting and Other Equipment Requirements				
Exterior lighting Sec. 5.7	Photometric plan and exterior lighting details needed at time of Preliminary Site Plan submittal	A lighting plan is provided	Yes	
Roof top equipment and wall mounted utility equipment Sec. 4.19.2.E.ii	All roof top equipment must be screened and all wall mounted utility equipment must be enclosed and integrated into the design and color of the building		NA	See Façade Review
Roof top appurtenances screening	Roof top appurtenances shall be screened in accordance with applicable facade regulations, and shall not be visible from any street, road or adjacent property.		NA	See Façade Review
Sidewalk Requirements				
Article XI. Off-Road Non-Motorized Facilities	6-foot concrete path is required along Twelve Mile Road	Existing sidewalk on 12 Mile Road	Yes	
Pedestrian Connectivity (Design & Construction Standards)	Assure safety and convenience of both vehicular and pedestrian traffic both within the site and in relation to access streets	Sidewalk proposed from 12 Mile frontage	Yes	
Building Code	Building exits must be connected to sidewalk system or parking lot.	Shown	Yes	

Item	Required Code	Proposed	Meets Code	Comments
Other Permit and Legal Requirements				
Design and Construction Standards Manual	Land description, Sidwell number (metes and bounds for acreage parcel, lot number(s), Liber, and page for subdivisions).	Legal descriptions for all parcels are provided	Yes	
General layout and dimension of proposed physical improvements	Location of all existing and proposed buildings, proposed building heights, building layouts, (floor area in square feet), location of proposed parking and parking layout, streets and drives, and indicate square footage of pavement area (indicate public or private).	Mostly provided	Yes	Refer to all review letters for additional information requested in Final Site Plan
Community Impact Statement	<ul style="list-style-type: none"> - All non-residential projects over 30 acres for permitted use - All non-residential over 10 acres for special land use - All residential over 150 units 		NA	
Economic Impact	<ul style="list-style-type: none"> - Total cost of the proposed building & site improvements - Number of anticipated jobs created (during construction & after building is occupied, if known) 		NA	
Development/ Business Sign & Street addressing	<ul style="list-style-type: none"> - Signage if proposed requires a permit. - The applicant should contact the Building Division for an address prior to applying for a building permit. 	Signage is proposed – may require variances from ZBA	Yes	<u>Complete sign permit applications for each sign proposed; contact Maureen Underhill at 248-735-5602 for any questions</u>
Project and Street naming	Some projects may need approval from the Street and Project Naming Committee.	This project does not need approval of the Project Name	NA	

Item	Required Code	Proposed	Meets Code	Comments
Property Split	All property splits and combination must be submitted to the Assessing Department for approval.		NA	Applicant states parcels cannot be combined due to school district boundaries
Lighting and Photometric Plan (Sec. 5.7)				
Intent (Sec. 5.7.1)	Establish appropriate minimum levels, prevent unnecessary glare, reduce spillover onto adjacent properties & reduce unnecessary transmission of light into the night sky	Provided;	Yes	
Lighting Plan (Sec. 5.7.A.i)	Site plan showing location of all existing & proposed buildings, landscaping, streets, drives, parking areas & exterior lighting fixtures	Multiple plans for fields are provided based on optimum schedule for different types of events	Yes	
Building Lighting (Sec. 5.7.2.A.iii)	Relevant building elevation drawings showing all fixtures, the portions of the walls to be illuminated, illuminance levels of walls and the aiming points of any remote fixtures.	Provided	Yes	
Lighting Plan (Sec. 5.7.2.A.ii)	Specifications for all proposed & existing lighting fixtures	Provided?		
	Photometric data	Provided	Yes	
	Fixture height	80-90 feet shown	No	
	Mounting & design	Shown	Yes	
	Glare control devices	Partially provided	Yes	
	Type & color rendition of lamps	Provided	Yes	
	Hours of operation	Provided	No	
Maximum Height (Sec. 5.7.3.A)	Height not to exceed maximum height of zoning district (or 25 ft. where adjacent to residential districts or uses	80-90 feet shown	No	<u>ZBA variance required for height of lighting – justification for height is reduced impact on adjacent properties</u>
Standard Notes (Sec. 5.7.3.B)	<ul style="list-style-type: none"> - Electrical service to light fixtures shall be placed underground - Flashing light shall not be permitted - Only necessary lighting for security purposes & 	Notes indicate athletic field lighting would not be in use after 10:30pm except in unusual circumstances	Yes	

Item	Required Code	Proposed	Meets Code	Comments
	limited operations shall be permitted after a site's hours of operation			
Security Lighting (Sec. 5.7.3.H) Lighting for security purposes shall be directed only onto the area to be secured.	<ul style="list-style-type: none"> - All fixtures shall be located, shielded, and aimed at the areas to be secured. - Fixtures mounted on the building and designed to illuminate the facade are preferred 	Notes states lights to be dimmed to 35% between hours of 12am – 6am, and when no motion sensed	Yes	
Average Light Levels (Sec.5.7.3.E)	Average light level of the surface being lit to the lowest light of the surface being lit shall not exceed 4:1	Provided – Athletic field lighting under 4:1	Yes	
Type of Lamps (Sec. 5.7.3.F)	Use of true color rendering lamps such as metal halide is preferred over high & low pressure sodium lamps	LED lights shown	Yes	
Min. Illumination (Sec. 5.7.3.k)	Parking areas: 0.2 min	0.5 min	Yes	
	Loading & unloading areas: 0.4 min		NA	
	Walkways: 0.2 min	0.4 min	Yes	
	Building entrances, frequent use: 1.0 min	1.0 min	Yes	
	Building entrances, infrequent use: 0.2 min		NA	
Max. Illumination adjacent to Non-Residential (Sec. 5.7.3.K)	When site abuts a non-residential district, maximum illumination at the property line shall not exceed 1 foot candle		NA	
Cut off Angles (Sec. 5.7.3.L)	When adjacent to residential districts <ul style="list-style-type: none"> - All cut off angles of fixtures must be 90° - maximum illumination at the property line shall not exceed 0.5 foot candle 	Lighting at property lines is 0.0 fc	Yes	

NOTES:

1. This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards.
2. The section of the applicable ordinance or standard is indicated in parenthesis. Please refer to those sections in Article 3, 4 and 5 of the zoning ordinance for further details
3. Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Department with future submittals.

ENGINEERING REVIEW



PLAN REVIEW CENTER REPORT

12/7/2022

Engineering Review

Catholic Central – North Campus
(Athletic Fields and Parking Deck)
JSP22-37

Applicant

Catholic Central High School

Review Type

Revised Preliminary Site Plan

Property Characteristics

- Site Location: 27225 Wixom Road
- Site Size: 44.98 acres parcel, total site 115.77 acres
- Plan Date: 09/16/22
- Design Engineer: Zeimet Wozniak

Project Summary

- Project is split into two phases. Phase one is the construction of an athletic field stadium, a competition practice field, hospitality building, and supporting infrastructure to connect back to existing site features. Phase two is the construction of a parking structure that will connect to the future connector road that spans from an existing parking lot to Twelve Mile Road. Site access would be provided via private roadways and the existing parking lot on the north side of the school.
- Water service would be extended from the existing 12-inch water main along the north side of the existing school. The proposed 12-inch water main will extend to the south side of the proposed practice field and stadium, extend north along the western property line, and extend east before connecting to the existing stub on the south of Twelve Mile Road and provide a stub at the western property line in the Twelve Mile Road ROW. An unknown size domestic lead would be provided to serve the proposed Hospitality Building and proposed Press Box, along with additional hydrants and a stub to the south for a future scope on the property.
- Sanitary sewer service for the hospitality building and parking structure would be provided by a public sanitary sewer extension and a proposed pump station before connecting to the existing system on the north side of the school. Two stubs are proposed for future connections into the sewer.
- Storm water would be collected by a single storm sewer collection system and conveyed/discharged to a detention facility south of the Twelve Mile Road right-of-way. The outlet and emergency overflow for the basin will be to the southern ditch line of Twelve Mile Road.

Recommendation

Approval of the Preliminary Site Plan and the Preliminary Storm Water Management Plan is recommended with items to be addressed at Final Site Plan.

Comments:

The Preliminary Site Plan meets the general requirements of Chapter 11 of the Code of Ordinances, the Storm Water Management Ordinance and/or the Engineering Design Manual with the following exceptions, which can be addressed at Final Site Plan submittal:

General

1. **Only at the time of the printed Stamping Set submittal**, provide the City's standard detail sheets for water main (5 sheets), sanitary sewer (3 sheets), storm sewer (2 sheets), paving (2 sheets) and Boardwalks/Pathways (1 sheet). The most updated details can be found on the City's website at this location: <https://cityofnovi.org/services/public-works/engineering-division/engineering-standards-and-construction-details>
2. Provide a utility crossing table indicating that at least 18-inch vertical clearance will be provided, or that additional bedding measures will be utilized at points of conflict where adequate clearance cannot be maintained.
3. Show the locations of all light poles on the utility plan and indicate the typical foundation depth for the pole to verify that no conflicts with utilities will occur. Light poles in a utility easement will require a License Agreement.
4. The Non-Domestic User Survey form for sanitary sewer flow shall be submitted to the City so it can be forwarded to Oakland County.
5. For common area irrigation systems connected to public water supplies: Install a backflow prevention Reduced Pressure Zone Assembly (RPZ) with an ASSE 1013 listing approval at each tap to the public water supply. A minimum clearance of 12-inches measured from the bottom of pressure relief valve to the finished landscaped grade shall be required. Provide a detail showing the RPZ installation setup and height above grade. If backflow preventer is to be enclosed, provide a detail of the enclosure with required drainage outlets. Show all locations on a site plan. A plumbing permit is required for the installation of the backflow preventer. Installation of the backflow preventer shall be in such a manner as to not require blowing out the system through the backflow preventer. Drain ports and blow out ports shall be included. Any deviations from these requirements must be approved through the Novi Water & Sewer Division Cross Connection Control Specialist (248-735-5661).
6. The grading and SESC sheets shall show the tree fence at least as far from the trunk as the critical root zone, defined as a circular area around a tree with a radius measured to the tree's longest dripline radius plus one (1) foot. No grading shall occur within the dripline. If the critical root zone is not fully protected, then replacements for that tree may be required.

Water Main

7. Provide water main modeling calculations demonstrating that the required water supply of 4,000 GPM will be available.
8. Hydrants located in the proposed Twelve Mile Road right-of-way shall be at least 10 feet but no more than 15 feet from the back of curb or edge of pavement. Additionally, a 3-foot buffer distance between the sidewalk and any fixed object, including hydrants, is required. Provide a note on the plan for any location where this cannot be provided.
9. Valves shall be arranged so that no single line failure will require more than eight hundred (800) feet of main to be out of service.
 - a. Valve W5 should be moved as it is more than 800-feet from the existing valve to the south.
 - b. An additional valve should be added prior to the tee connection along Twelve Mile Road.
10. Per current EGLE requirements, provide a profile for all proposed water main 8-inch and larger.
11. On the profiles, add the following note: "Per the Ten States Standards Article 8.8.3, one full 20-foot pipe length of water main shall be used whenever storm sewer or sanitary sewer is crossed, and the pipe shall be centered on the crossing, in order to ensure 10-foot separation between water main and sewers." Additionally, show the 20-foot pipe lengths on the profile.
12. Three (3) sealed sets of revised utility plans along with the Michigan Department of Environment, Great Lakes & Energy (EGLE) permit application for water main construction, the Streamlined Water Main Permit Checklist, and electronic utility plan should be submitted to the Engineering Division for review, assuming no further design changes are anticipated. Utility plan sets shall include only the cover sheet, any applicable utility sheets, and the standard detail sheets.

Sanitary Sewer

13. Provide a sanitary sewer basis of design for the development on the utility plan sheet.
14. Provide a profile for all proposed sanitary sewer that is to become public.
15. Provide a testing bulkhead immediately upstream of the sanitary connection point. Additionally, provide a temporary 1-foot-deep sump in the first sanitary structure proposed upstream of the connection point, and provide a secondary watertight bulkhead in the downstream side of this structure. Show all items on the sanitary profiles.
16. Provide an internal drop connection at structure S11, where the inlet pipe (NE) enters the manhole at an invert elevation 18 inches or greater above the invert elevation of the outlet pipe (SE). Otherwise increase the pipe slope to reduce the differential in invert elevations.
17. Provide three (3) signed sealed sets of revised utility plans along with the EGLE permit application (01/18 rev.) for sanitary sewer construction and the Streamlined Sanitary Sewer Permit Certification Checklist shall be submitted to

the Engineering Division for review, assuming no further design changes are anticipated. Utility plan sets shall include only the cover sheet, any applicable utility sheets and the standard detail sheets. Also, the EGLE can be contacted for an expedited review by their office.

Storm Sewer

18. Provide storm sewer profiles for all storm sewer 12-inch and larger and illustrate all pipes intersecting storm structures.
19. Label the 10-year HGL on the storm sewer profiles and ensure the HGL remains at least 1-foot below the rim of each structure.
 - a. The pipes connecting structures R23 and Rex as well as R3 to R2 does not meet this requirement.
 - b. Structure R3 and R23 currently do not meet this requirement.
20. Show and label all roof conductors and show where they tie into the storm sewer.

Storm Water Management Plan

21. As part of the Storm Drainage Facility Maintenance Easement Agreement, provide an access easement for maintenance over the storm water detention system and the pretreatment structure. Also, include an access easement to the detention area from the public road right-of-way.
 - a. Part of the 15-foot Ingress/Egress easement shown on CE-10 intersects the proposed competition practice field. Please verify this is an acceptable path as it appears to cross a fence for the facility.
22. Revise runoff calculations using a minimum runoff coefficient of 0.35 for open lawn space per City standards.
23. Calculate the individual runoff coefficients for each drainage area specified in the conveyance calculations.
 - a. All drainage areas are currently specified at a 0.53 coefficient.
 - b. The drainage area contributing to structure R8 includes the roof for the future Center of Excellence. Adjust the coefficient to accurately show the expected drainage coming from the proposed building.
 - c. Provide supporting documentation for the artificial turf field runoff coefficient of 0.35.
24. The bankfull volume should only be retained for 24-40 hours, 42.2 hours is specified. Increase the number of holes in the outlet structure to meet this requirement.
 - a. Actual release rate for the bankfull volume is called out as 40.40 cfs, the calculation shown on the sheet should be 0.40 cfs.

Paving & Grading

25. Provide a minimum of 6 spot elevations where the existing sidewalk crosses the northwest driveway (one at each corner and two in the center of the driveway on each side of the pathway). Spot elevations shall be provided to demonstrate a level landing adjacent to each side of the pathway crossing.

26. Proposed sheets depicting the retaining wall design shall be signed and sealed by the design engineer responsible for the proposed retaining wall design and all associated calculations.
27. A License Agreement will be required for the proposed retaining wall within any utility easements. A plan view and cross-section shall be included with the agreement showing the relationship between the wall foundation and the existing/proposed utility.

Soil Erosion and Sediment Control

28. A SESC permit is required. A full review has not been completed at this time. The review checklist detailing all SESC requirements is attached to this letter. Please address the comments below and submit a SESC permit application under separate cover. The application can be found on the City's website at <http://cityofnovi.org/Reference/Forms-and-Permits.aspx>.

The following must be provided at the time of Preliminary Site Plan resubmittal:

29. A letter from either the applicant or the applicant's engineer must be submitted with the Final Site Plan highlighting the changes made to the plans addressing each of the comments listed above and indicating the revised sheets involved.

The following must be submitted at the time of Final Site Plan submittal:

30. A letter from either the applicant or the applicant's engineer must be submitted with the Final Site Plan highlighting the changes made to the plans addressing each of the comments listed above and indicating the revised sheets involved.
31. An itemized construction cost estimate must be submitted to the Community Development Department at the time of Final Site Plan submittal for the determination of plan review and construction inspection fees. This estimate should only include the civil site work and shall not include any costs associated with construction of the building or any demolition work. **The cost estimate must be itemized** for each utility (water, sanitary, storm sewer), on-site paving, right-of-way paving (including proposed right-of-way), grading, and the storm water basin (basin construction, control structure, pretreatment structure and restoration).
32. Draft copies of a recent title search and legal escrow funds must be submitted to the Community Development Department for review and approved by the Engineering Division and the City Attorney prior to getting executed.

The following must be submitted with the Stamping Set:

(Please note that all documents must be submitted together as a package with the Stamping Set submittal with a legal review transmittal form that can be found on the City's website. Partial submittals will not be accepted.)

33. A draft copy of the Storm Drainage Facility Maintenance Easement Agreement (SDFMEA), as outlined in the Storm Water Management

- Ordinance, must be submitted to the Community Development Department. Once the agreement is approved by the City's Legal Counsel, this agreement will then be sent to City Council for approval/acceptance. The SDFMEA will then be recorded at the office of the Oakland County Register of Deeds. This document is available on our website.
34. A draft copy of the 20-foot-wide easement for the water main to be constructed onsite must be submitted to the Community Development Department. This document is available on our website.
 35. A draft copy of the 20-foot-wide easement for the sanitary sewer to be constructed onsite must be submitted to the Community Development Department. This document is available on our website.

The following must be addressed prior to construction:

36. A pre-construction meeting shall be required prior to any site work being started. Please contact Sarah Marchioni in the Community Development Department to setup a meeting (248-347-0430). **Be advised that scheduling the pre-construction meeting can take 2-4 weeks.**
37. A City of Novi Grading Permit will be required prior to any grading on the site. This permit will be issued at the pre-construction meeting (no application required). No fee is required for this permit.
38. Material certifications must be submitted to Spalding DeDecker for review prior to the construction of any onsite utilities. Contact Heather Gendron at 248-844-5400 for more information.
39. Construction inspection fees in the amount of **\$TBD** must be paid to the Community Development Department.
40. Legal escrow fees in the amount of **\$TBD** must be deposited with the Community Development Department. **All unused escrow will be returned to the payee at the end of the project** (except for escrows that are \$50 or less). This amount includes engineering legal fees only. There may be additional legal fees for planning legal documents.
41. A storm water performance guarantee in the amount of **\$TBD** (Equal to 120% of the cost required to complete the storm water management facilities) as specified in the Storm Water Management Ordinance must be posted at the Community Development Department.
42. Water and Sanitary Sewer Fees must be paid prior to the pre-construction meeting. Contact the Treasury Department at 248-347-0498 to determine the amount of these fees.
43. A street sign financial guarantee in the amount of **\$TBD** (\$400 per traffic control sign proposed) must be posted at the Community Development Department. Signs must be installed in accordance with MMUTCD standards.
44. A Soil Erosion Control Permit must be obtained from the City of Novi. Contact Sarah Marchioni in the Community Development Department, Building Division (248-347-0430) for forms and information. The financial guarantee and inspection fees will be determined during the SESC review.
45. A permit for all proposed work activities within the road right-of-way must be obtained from the City of Novi. This application is available from the City

- Engineering Division or on the city website and can be filed once the Final Site Plan has been submitted. Please contact the Engineering Division at 248-347-0454 for further information. Please submit the cover sheet, standard details, and plan sheets applicable to the permit only.
46. A permit for water main construction must be obtained from EGLE. This permit application must be submitted through the Engineering Division after the water main plans have been approved. Please submit the cover sheet, overall utility sheet, standard details, and plan/profile sheets applicable to the permit.
 47. A permit for sanitary sewer construction must be obtained from EGLE. This permit application must be submitted through the Engineering Division after the sanitary sewer plans have been approved. Please submit the cover sheet, overall utility sheet, standard details and plan/profile sheets applicable to the permit. **Be aware that approval by both (1) Oakland County Water Resources Commissioner (OCWRC) and (2) Wayne County Department of Public Services (WCDPS) are required prior to submittal to EGLE.**
 48. An NPDES permit must be obtained from EGLE since the site is over 5 acres in size. EGLE may require an approved SESC plan to be submitted with the Notice of Coverage.
 49. An inspection permit for the sanitary sewer tap must be obtained from the Oakland County Water Resources Commissioner (OCWRC).
 50. Permits for the construction of each retaining wall exceeding 48 inches in height (measured from bottom of the footing to top of the wall) must be obtained from the Community Development Department (248-347-0415).

The following must be addressed prior to issuance of a Temporary Certificate of Occupancy (TCO) approval for the development:

51. The amount of the incomplete site work performance guarantee for any outstanding site improvement items (limited to top course of pavement and other minor items), is calculated at 1.2 times the amount required to complete the site improvements (as specified in the Performance Guarantee Ordinance).
52. All easements and agreements referenced above must be executed, notarized and approved by the City Attorney and Engineering Division.
53. A Bill of Sale for the utilities conveying the improvements to the City of Novi must be submitted to the Community Development Department. This document is available on our website.
54. The City's consultant Engineer Spalding DeDecker will prepare the record drawings for this development. The record drawings will be prepared in accordance with Article XII, Design and Construction Standards, Chapter 11 of the Novi Code of Ordinances.
55. Submit to the Community Development Department, Waivers of Lien from any parties involved with the installation of each utility as well as a Sworn Statement listing those parties and stating that all labor and material expenses incurred in connection with the subject construction improvements have been paid.

56. Submit a Maintenance Bond to the Community Development Department in the amount of **\$TBD** (Equal to 25 percent of the cost of the construction of the utilities to be accepted). This bond must be for a period of two years from the date that the Utility Acceptance Permit is issued by the City of Novi Engineering Division. This document is available on our website.
57. Submit an up-to-date Title Policy (dated within 90 days of City Council consideration of acceptance) for the purpose of verifying that the parties signing the Easement and Bill of Sale documents have the legal authority to do so. Please be sure that all parties of interest shown on the title policy (including mortgage holders) either sign the easement documents themselves or provide a Subordination Agreement. Please be aware that the title policy may indicate that additional documentation is necessary to complete the acceptance process.

Prior to preparing stamping sets, the Applicant is advised to provide any revised sheets directly to the Engineering Division for an informal review and approval.

To the extent this review letter addresses items and requirements that require the approval of/or a permit from an agency or entity other than the City, this review shall not be considered an indication or statement that such approvals or permits will be issued.

Please contact Adam Chludzinski at (248) 735-5643 with any questions.



Adam Chludzinski
Civil Engineer

cc: Lindsay Bell, Community Development
Ben Croy, PE; Engineering
Humna Anjum, Engineering

LANDSCAPE REVIEW



PLAN REVIEW CENTER REPORT

November 30, 2022

Catholic Central Parking Deck & Fields

Revised Preliminary Site Plan – Landscaping Review

Review Type

Revised Preliminary Site Plan Landscape Review

Job #

JSP22-0037

Property Characteristics

- Site Location: 27225 Wixom Road
- Site Acreage: 115.77 ac.
- Site Zoning: R-4/I-1
- Adjacent Zoning: North: Wixom MF residential, East: RM-4, South: R-1, West: RA/R-4
- Plan Date: 11/14/2022

Ordinance Considerations

This project was reviewed for conformance with Chapter 37: Woodland Protection, Zoning Article 5.5 Landscape Standards, the Landscape Design Manual and any other applicable provisions of the Zoning Ordinance. Items in **bold** below must be addressed and incorporated as part of the revised Preliminary Site Plan submittal. Please follow guidelines of the Zoning Ordinance and Landscape Design Guidelines. This review is a summary and is not intended to substitute for any Ordinance.

RECOMMENDATION:

The project is **recommended for Preliminary Site Plan approval, contingent on the applicant revising the plans to remove the unsupported waivers.** The other revisions can be made on Final Site Plans.

PLEASE ADD THE CITY PROJECT NUMBER, JSP22-37 IN THE LOWER RIGHT CORNER OF THE COVER SHEET.

LANDSCAPE WAIVERS THAT ARE REQUIRED BY PLANS PROVIDED:

- Deficiency in screening berm/landscaping along west property line – not supported by staff as currently shown.
- Lack of street trees along 12 Mile Road – not supported by staff as there is room for the trees
- Deficiency in accessway perimeter canopy trees to parking deck – not supported by staff
- Deficiency in building foundation landscaping for parking deck's south end – not supported by staff
- Waiver to count the detention basin plantings north of the parking deck toward the deck's foundation landscaping requirement – supported by staff

Ordinance Considerations

Existing Trees (Sec 37 Woodland Protection, Preliminary Site Plan checklist #17 and LDM 2.3 (2))

1. Provided
2. **Please see Mannik & Smith and DRG reviews for discussion of wetlands and woodlands.**

Adjacent to Residential - Buffer (Zoning Sec. 5.5.3.B.ii and iii)

1. The project is adjacent to residentially-zoned property to the west which is in the process of being developed into a nature-focused park.

2. **A landscape waiver is required for the lack of the required berm and screening landscaping.**
3. A large number of Green Giant arborvitae have been added west of the practice field and track to provide better screening. *If the applicant will add the additional plants and note requested on the Landscape Chart, the waiver will be supported by staff.*

Adjacent to Public Rights-of-Way – Berm/Wall, Buffer and Street Trees (Zoning Sec. 5.5.3.B.ii, iii)

1. The required greenbelt width and landscaping is provided.
2. **A landscape waiver is requested for the street trees, due to the proposed water main – not supported by staff as there appears to be sufficient room for the trees. Note: It was unknown how much space was available at the time of the last review. Now that the plans show the proposed water main location does provide sufficient room for the trees, the ability to plant the trees is now seen, which is why the waiver is no longer supported.**

Parking Lot Landscaping (Zoning Sec. 5.5.3.C.)

1. The parking deck is being treated as a building, not a parking lot, so the parking lot interior and perimeter requirements do not apply.
2. **A landscape waiver would be required to not plant the required accessway perimeter drives for the two parking deck entries. It would not be supported by staff as there is room for the required trees and they will help to shade the drives.**

Building foundation Landscaping (Zoning Sec 5.5.3.D)

Parking Deck:

1. **A landscape waiver is requested to allow the detention basin landscaping in front of the building to count toward the foundation landscaping requirement. This waiver request is supported by staff for both foundation area and the requirement that 60% of the building facing the street is landscaped as it is close enough to the deck to appear as if it could be associated with it, and the snow dumped from the deck would crush any plantings at the base of the deck.**
2. Although the calculations indicate that the required total foundation landscape area is provided, the area to be counted for the above waiver wasn't identified. **Please label the SF of the detention basin plantings south of the pond that can count toward the requirement. A waiver for a deficiency in landscape area provided would be required if the total area provided does not meet the requirement. It would not be supported by staff as there is sufficient area to meet the requirement.**
3. **Please add foundation landscaping along the south side of the parking deck unless the school intends to enlarge the deck within 2 years of approval of these plans.**

Hospitality Building:

The plans indicate that the required area for the building is provided in the immediate vicinity of the building.

Storm Basin Landscape (Zoning Sec 5.5.3.E.iv and LDM 3)

1. More than the required number of canopy trees are now provided along the east, south and west sides of the pond.
2. Additional native shrubs have been added to the north side of the pond to meet the requirement that at least 70% of the available bank are provided.
3. **Please move the ornamental trees off of the western detention basin's maintenance access path.**

Plant List (LDM 4, 10)

1. 17 of 27 (63%) non-woodland replacement species used are native to Michigan. This exceeds the 50% requirement and is appreciated.
2. Blackgums, spruces and oaks now exceed the limits of the tree diversity requirement of Landscape Design Manual Section 4.b. **Please see the Landscape Chart for a detailed**

discussion of this and reduce the number of those by adding more of other species already used or by using more of different species.

Planting Notations and Details (LDM 10)
Provided

Irrigation (LDM 10)

1. No irrigation plan is provided, but a note indicates that one will be provided.
2. Please provide the plans in the Final Site Plan set. The system should meet the requirements listed on the Landscape Chart.

If the applicant has any questions concerning the above review or the process in general, do not hesitate to contact me at 248.735.5621 or rmeader@cityofnovi.org.



Rick Meader – Landscape Architect

LANDSCAPE REVIEW SUMMARY CHART – REVISED PRELIMINARY SITE PLAN

Review Date: November 30, 2022
Project Name: JSP22-37: Catholic Central Athletic Fields & Parking Deck
Plan Date: November 14, 2022
Prepared by: Rick Meader, Landscape Architect E-mail: rmeader@cityofnovi.org;
 Phone: (248) 735-5621

Items in **Bold** need to be addressed by the applicant before approval of the Preliminary Site Plan.
Underlined items need to be addressed for Final Site Plan.

PLEASE ADD THE CITY PROJECT NUMBER, JSP22-37 IN THE LOWER RIGHT CORNER OF THE COVER SHEET.

LANDSCAPE WAIVERS THAT ARE REQUIRED BY PLANS PROVIDED:

- Deficiency in screening berm/landscaping along west property line – *not supported by staff as currently shown.*
- Lack of street trees along 12 Mile Road – *not supported by staff as there is room for the trees.*
- Deficiency in accessway perimeter canopy trees to parking deck – *not supported by staff*
- Deficiency in building foundation landscaping for hospitality building – *supported by staff*
- Waiver to count the detention basin plantings north of the parking deck toward the deck's foundation landscaping requirement – *supported by staff*

Item	Required	Proposed	Meets Code	Comments
Landscape Plan Requirements (LDM (2))				
Landscape Plan (Zoning Sec 5.5.2, LDM 2.e.)	<ul style="list-style-type: none"> • New commercial or residential developments • Addition to existing building greater than 25% increase in overall footage or 400 SF whichever is less. • 1"=20' minimum with proper North. Variations from this scale can be approved by LA • Consistent with plans throughout set 	<ul style="list-style-type: none"> • Overall plan scale: 1"=60' • Detailed plan scale: 1"=30' 	<ul style="list-style-type: none"> • Yes • Yes 	
Project Information (LDM 2.d.)	Name and Address	Project information is shown on title bar.	Yes	
Owner/Developer Contact Information (LDM 2.a.)	Name, address and telephone number of the owner and developer or association	Business name and location are shown on title bar.	Yes	
Landscape Architect contact information (LDM 2.b.)	Name, Address and telephone number of RLA/PLA/LLA who created the plan	Rich Houdek of Grissim Metz Andriese is the Landscape Architect	Yes	

Item	Required	Proposed	Meets Code	Comments
Sealed by LA. (LDM 2.g.)	Requires original signature	Stamped seal and signature		<u>Live signatures will be required on stamping sets</u>
Miss Dig Note (800) 482-7171 (LDM.3.a.(8))	Show on all plan sheets	Yes	Yes	
Zoning (LDM 2.f.)	Include all adjacent zoning	Shown on Cover Sht Site: R-4 East: RM-1/I-1, South: R-1, West: RA North: Wixom MF	Yes	
Survey information (LDM 2.c.)	<ul style="list-style-type: none"> Legal description or boundary line survey Existing topography 	<ul style="list-style-type: none"> Descriptions on cover sheet Topo on Sheet CE-1 	Yes	
Existing plant material Existing woodlands or wetlands (LDM 2.e.(2))	<ul style="list-style-type: none"> Show location type and size. Label to be saved or removed. Plan shall state if none exists. 	<ul style="list-style-type: none"> Tree survey and chart are provided Chart on Sheet 201 shows the regulated trees to be removed. Some existing trees shown as being removed are not included on chart but the symbols are explained in the legend Based on removals from a regulated woodland, 27 woodland replacements are shown at the southwest corner of the site. 	<ul style="list-style-type: none"> Yes Yes Yes Yes 	See Mannik & Smith & DRG reports for wetlands and woodlands
Soil types (LDM.2.r.)	<ul style="list-style-type: none"> As determined by Soils survey of Oakland county Show types, boundaries 	Sheet CE-1	Yes	
Existing and proposed improvements (LDM 2.e.(4))	Existing and proposed buildings, easements, parking spaces, vehicular use areas, and R.O.W	Yes, on site plans and sheets L301-305	Yes	
Existing and proposed utilities (LDM 2.e.(4))	<ul style="list-style-type: none"> Overhead and underground utilities, including hydrants 	<ul style="list-style-type: none"> Clearly shown on landscape plans Correct spacing 	Yes	

Item	Required	Proposed	Meets Code	Comments
	<ul style="list-style-type: none"> Proposed light posts 	from hydrants appears to be provided. <ul style="list-style-type: none"> There seems to be at least 10 feet between the new water main and the 12 Mile Road curb. 		
Proposed grading. 2' contour minimum (LDM 2.e.(1))	Provide proposed contours at 2' interval	Greenbelt berm and detention pond, and spot elevations on Sheet CE-3	Yes	
Snow deposit (LDM.2.q.)	Show snow deposit areas on plan	Indicated clearly on Sheet L600	Yes	
LANDSCAPING REQUIREMENTS				
Berms, Walls and ROW Planting Requirements				
Berms				
<ul style="list-style-type: none"> All berms shall have a maximum slope of 33%. Gradual slopes are encouraged. Show 1ft. contours Berm should be located on lot line except in conflict with utilities. Berms should be constructed of loam with 6" top layer of topsoil. 				
Residential Adjacent to Non-residential (Sec 5.5.3.A) & (LDM 1.a)				
Berm requirements (Zoning Sec 5.5.A)	A 4.5-6 ft berm is required along the west property line as the school is a special use and the adjacent parcel is RA	<ul style="list-style-type: none"> A berm is proposed along the west property line south of the field and along the south property line. No berm is proposed west of the track and practice field. A swale is proposed between the western field and the adjacent property. A line of Green Giant arborvitae is now proposed west of most of the track A landscape waiver is requested to not provide berm as the site adjacent 	No, but getting closer to support	<ol style="list-style-type: none"> Please extend the line of Green Giant arborvitae as far to the north of the existing line by about 5 more plants (leaving a gap for access to the hydrant) to screen as much of the track as possible so lighting and noise is blocked better. Please extend it southward, as well, to the start of the maples. Please add a callout note stating that the screening arborvitae west of the access drive shall be allowed to grow to their full height. <i>The waiver request will be supported</i>

Item	Required	Proposed	Meets Code	Comments
		is wooded parkland • The discus area is elevated above the RA property and is heavily screened with woodland replacement trees		with the above additions.
Planting requirements (LDM 1.a.)	LDM Novi Street Tree List	NA		
Walls (LDM 2.k & Zoning Sec 5.5.3.vi)				
Material, height and type of construction footing	Freestanding walls should have brick or stone exterior with masonry or concrete interior	A decorative retaining wall for the detention pond north of the fields is proposed along the south side of the pond.	Yes	Please indicate the color of the blocks and appearance (a cut sheet?)
Walls greater than 3 ½ ft. should be designed and sealed by an Engineer		Detail with elevations is shown on L502	TBD	The walls will need to be reviewed along with building plans.
ROW Landscape Screening Requirements (Sec 5.5.3.B. ii) and (LDM 1.b)				
Greenbelt width (2)(3) (5)	34 feet	<ul style="list-style-type: none"> 155 ft to parking deck 100 ft to track 	Yes	
Berm requirements (Zoning Sec 5.5.3.A.(5))				
Min. berm crest width	4 feet	4 feet	Yes	
Minimum berm height (9)	4 feet	4-5 feet	Yes	
3' wall	<ul style="list-style-type: none"> (4)(7) 	<ul style="list-style-type: none"> A wall approximately 9 feet tall at the back edge of the detention pond is proposed A 2-foot tall natural stone wall is shown at west end of 12 Mile frontage, near pond 	Yes	Tall wall will be reviewed along with building plans.
Canopy deciduous or large evergreen trees	<ul style="list-style-type: none"> R-4 Zoning 1 tree per 40 lf 685/40 = 17 trees (eastern section north of parking deck was included in Connector 	17 deciduous canopy trees	Yes	

Item	Required	Proposed	Meets Code	Comments
	Road drawings)			
Sub-canopy deciduous trees	<ul style="list-style-type: none"> R-4 Zoning 1 tree per 25 lf 685/25 = 27trees (eastern section north of parking deck was included in Connector Road drawings) 	27 ornamental trees	Yes	
Canopy deciduous trees in area between sidewalk and curb (Novi Street Tree List)	<ul style="list-style-type: none"> R-4 Zoning 1 tree per 35 lf 622/35 = 18 trees 	None – a waiver is requested due to water main conflict	No	<p>1. It appears that there will be 10 feet between the water main and the back of curb along 12 Mile Road, which leaves sufficient room for street trees planted 4 feet behind the curb.</p> <p>2. Please plant the required street trees along 12 Mile Road 4 feet behind the curb and 6 feet from the water main.</p>
Cross-Section of Berms (LDM 2.j)				
Slope, height and width	<ul style="list-style-type: none"> Label contour lines Maximum 33% Constructed of loam 6" top layer of topsoil 	<ul style="list-style-type: none"> A 4-foot tall berm with some variation in height is proposed north of the detention pond. Berm/pond cross sections are provided on Sheet L703 	Yes	
Type of Ground Cover		Various groundcovers are indicated with different hatching and a legend defines what each area will have.	Yes	
Setbacks from Utilities	Overhead utility lines and 15 ft. setback from edge of utility or 20 ft. setback from closest pole	No utilities or trees are shown on plan Overhead lines are along north side of 12 Mile Road Trees are spaced appropriately from underground lines and utility structures	Yes	
Parking Area Landscape Requirements LDM 1.c. & Calculations (LDM 2.o.)				

Item	Required	Proposed	Meets Code	Comments
General requirements (LDM 1.c)	<ul style="list-style-type: none"> • Clear sight distance within parking islands • No evergreen trees 	No surface level parking is proposed	NA	
Name, type and number of ground cover (LDM 1.c.(5))	As proposed on planting islands	NA		
General (Zoning Sec 5.5.3.C.ii)				
Parking lot Islands (a, b. i)	<ul style="list-style-type: none"> • A minimum of 200 SF to qualify • Minimum 200 SF per tree planted in island • 6" curbs • Islands minimum width 10' BOC to BOC 	None	Yes	The parking lot will be treated as a building, not a parking lot.
Curbs and Parking stall reduction (c)	Parking stall can be reduced to 17' and the curb to 4" adjacent to a sidewalk of minimum 7 ft.	NA		
Contiguous space limit (i)	<ul style="list-style-type: none"> • Maximum of 15 contiguous spaces for customer parking and 25 spaces for vehicle storage • All endcap islands should also be at least 200sf with 1 tree planted in it. 	Maximum bay length in parking structure is 39 spaces		The parking lot will be treated as a building, not a parking lot.
Plantings around Fire Hydrant (d)	No plantings with mature height greater than 12' within 10 ft. of fire hydrants of utility structures (manholes, catch basins), and 5 feet from underground utility lines.	Most plantings except those noted have sufficient spacing from hydrants.	Yes/No	<ol style="list-style-type: none"> 1. There are six trees shown closer than 5 feet from the gas line east of the parking deck. Please move them away from the line. 2. In the Connector Road plans, there is a tree planted on top of a storm line just north of the north parking lot entry drive and several trees almost on top of the water line west of the road. Please move them away from the lines. 3. While it's not landscaping, there are 6 or 7 light poles west of the parking

Item	Required	Proposed	Meets Code	Comments
				deck shown as almost on top of the storm drain. You may want to move them away from the line.
Landscaped area (g)	Areas not dedicated to parking use or driveways exceeding 100 sq. ft. shall be landscaped	Groundcovers are indicated with hatching and legend	Yes	
Clear Zones (LDM 2.3.(5))	No new roads are part of this project.	<ul style="list-style-type: none"> Shown for the west accessway No trees are located within it 	Yes	
Category 1: For OS-1, OS-2, OSC, OST, B-1, B-2, B-3, C, NCC, EXPO, FS, TC, TC-1, RC, Special Land Use or non-residential use in any R district (Zoning Sec 5.5.3.C.iii)				
A = Total square footage of vehicular use area up to 50,000 sf x 7.5%	$A = x \text{ SF} \times 7.5\% = A \text{ sf}$	None	Yes	The parking lot will be treated as a building, not a parking lot.
B = Total square footage of additional paved vehicular use areas over 50,000 SF) x 1 %	$C = x \text{ SF} \times 1\% = B \text{ sf}$	None		See above
Category 2: For: I-1 and I-2 (Zoning Sec 5.5.3.C.iii)				
A = Total square footage of vehicular use area up to 50,000 sf x 5%	$A = x \text{ SF} \times 6\% = A \text{ sf}$	NA		
B = Total square footage of additional paved vehicular use areas over 50,000 SF x 0.5 %	$B = (x \text{ SF} - 50000) \times 0.5\% = B \text{ SF}$	NA		
All Categories				
C = A+B Total square footage of landscaped islands required	$A + B = C \text{ SF}$	None	No	The parking lot will be treated as a building, not a parking lot.
D = D/200 Number of canopy trees required	$D/200 = xx \text{ Trees}$	None	No	The parking lot will be treated as a building, not a parking lot.
Parking Lot Perimeter Trees (Sec 5.5.3.C.iv)	1 Canopy tree per 35 lf	None	No	The parking lot will be treated as a building, not a parking lot.
Accessway perimeter trees	<ul style="list-style-type: none"> 1 Canopy tree per 35 lf along accessways (within 15 feet of pavement edge) $210\text{lf}/35 = 6 \text{ trees}$ 	1 tree	No	1. A landscape waiver is required for this deficiency. It would not be supported by staff.

Item	Required	Proposed	Meets Code	Comments
				2. Please provide the required trees to shade the parking structure accessways.
Parking land banked	NA	None		
Other Landscaping				
Other Screening				
Screening of outdoor storage, loading/unloading (Zoning Sec. 3.14, 3.15, 4.55, 4.56, 5.5)		There is no loading area indicated		
Transformers/Utility boxes (LDM 1.e from 1 through 5)	<ul style="list-style-type: none"> A minimum of 2ft. separation between box and the plants Ground cover below 4" is allowed up to pad. No plant materials within 8 ft. from the doors 	All utility boxes are screened sufficiently	Yes	
Building Foundation Landscape Requirements (Sec 5.5.3.D)				
Interior site landscaping SF	<ul style="list-style-type: none"> Equal to entire perimeter of the building (less paved access areas) x 8 with a minimum width of 4 ft. A minimum of 75% of the building should have foundation landscaping. Parking Deck: (1244-81) lf x 8ft = 9304 sf Hospitality Building: (323-48)lf x 8 = 2584 sf 	Parking Deck: 6024 sf is labeled Hospitality Building: 3461 sf adjacent to building	<ul style="list-style-type: none"> No Yes 	1. A landscape waiver is required for the current layouts for the parking deck. <i>It would be supported for the hospitality due to the nature of the building's intense use, but not for the parking deck.</i> 2. The double-counting of the detention basin landscaping area in front of the building requires a waiver. <i>It would be supported by staff since it is close enough to the building to appear as if it is foundation landscaping for the deck and because any landscaping closer to the building would be crushed by plowed snow.</i>

Item	Required	Proposed	Meets Code	Comments
				<p>3. Please label in SF the area south of the detention pond that is being allowed to count as foundation area for the parking deck.</p> <p>4. If insufficient total area is provided, please add more to avoid needing a waiver.</p> <p>5. Unless the parking lot addition will be planted within 2 years, foundation landscaping must be added to the south end of the parking deck. This would not need to be as ornate as the east and west sides, but should have some sort of presence. If desired, they could be transplanted when the deck extension is built.</p>
<i>Zoning Sec 5.5.3.D.ii. All items from (b) to (e)</i>	If visible from public street a minimum of 60% of the exterior building perimeter should be covered in green space	A waiver to count the detention basin plantings in front of the building toward this requirement is requested	No	<i>Staff supports the waiver as the detention basin plantings will provide an effective look of landscaping the deck's foundation from Twelve Mile Road (only the area south of the pond)</i>
Detention/Retention Basin Requirements (Sec. 5.5.3.E.iv)				
Planting requirements <i>(Sec. 5.5.3.E.iv)</i>	<ul style="list-style-type: none"> Clusters of large native shrubs shall cover 70-75% of the basin rim area 10 feet from permanent water level Canopy trees at 1 per 35lf around the east, south and west sides of the pond. 10" to 14" tall grass along sides of basin Refer to wetland for basin mix 	<ul style="list-style-type: none"> Retaining wall is proposed along the south wall of the western basin A line of scarlet oaks is now proposed along the south edge of the pond, along with other canopy trees on either end of the pond 	Yes	<p>1. A landscape waiver is required for the lack of shrubs around 70% of the pond. <i>It is supported by staff as approximately 70% of the available banks are landscaped with masses of native shrubs.</i></p> <p>2. The west pond's</p>

Item	Required	Proposed	Meets Code	Comments
				<p>maintenance access way is shown as 65 feet wide, which seems excessive. Please reduce its width if possible.</p> <p>3. Also, six ornamental trees are shown as planted on the access path. Please move them.</p>
Phragmites and Japanese Knotweed Control (Sec 5.5.6.C)	<ul style="list-style-type: none"> Any and all populations of Phragmites australis or Japanese knotweed on site shall be included on tree survey. Treat populations per MDEQ guidelines and requirements to eradicate the weed from the site. 	<ul style="list-style-type: none"> Phragmites is noted in Wetlands B and D. Those wetlands are being eliminated. No Japanese Knotweed was noted on the site. 	Yes	
LANDSCAPING NOTES, DETAILS AND GENERAL REQUIREMENTS				
Landscape Notes – Utilize City of Novi Standard Notes				
Installation date (LDM 2.l. & Zoning Sec 5.5.5.B)	<ul style="list-style-type: none"> Provide intended dates Should be between March 15 and November 15. 	Mar 15 – Nov 15	Yes	
Maintenance & Statement of intent (LDM 2.m & Zoning Sec 5.5.6)	<ul style="list-style-type: none"> Include statement of intent to install and guarantee all materials for 2 years. Include a minimum one cultivation in June, July and August for the 2-year warranty period. 	Provided	Yes	
Plant source (LDM 2.n & LDM 3.a.(2))	Shall be northern nursery grown, No.1 grade.	Yes	Yes	
Irrigation plan (LDM 2.s.)	A method for providing the water required for plant establishment and long-term survival must be provided.	<ul style="list-style-type: none"> Notes indicate that an irrigation system will be provided. No plan is included in the set. 		<p>1. <u>Need for final site plan</u></p> <p>2. <u>Please provide either an irrigation system plan or information regarding the alternative method that will be used to water the plants</u></p>

Item	Required	Proposed	Meets Code	Comments
				3. <u>If an irrigation system will be used, it must meet the requirements listed at the end of this chart.</u>
Other information (LDM 2.u)	Required by Planning Commission	NA		
Establishment period (Zoning Sec 5.5.6.B)	2 yr. Guarantee	Yes	Yes	
Approval of substitutions. (Zoning Sec 5.5.5.E)	City must approve any substitutions <u>in writing</u> prior to installation.	Yes	Yes	
Plant List (LDM 4, 11)) – Include all cost estimates				
Quantities and sizes	<ul style="list-style-type: none"> A minimum of 50% of species used on the site, not including any woodland replacements, must be native to Michigan. When 200 or more trees are proposed (208 are proposed), not more than 15% of the tree plantings shall be of one genus and not more than 10% shall be of a single species 	Yes	Yes	
Root type		Yes	Yes	
Botanical and common names		<ul style="list-style-type: none"> 17 of 27 (67%) species used for non-woodland replacements are native to Michigan Blackgums (21%), spruces (22%) and oaks (20%) - particularly Scarlet oaks (18%) - are too highly represented. 	<ul style="list-style-type: none"> Yes No 	1. Please reduce the number of scarlet oaks, spruces and blackgums to no more than is allowed by LDM 4.b. 2. Juniperus virginiana and arborvitae should not be included in the tree diversity calculations, nor should woodland replacement trees.
Type and amount of lawn		All seed mixes are indicated with different hatching	Yes	
Cost estimate (LDM 2.t)	For all new plantings, mulch and sod as listed on the plan	No		<u>Please add on Final Site Plans.</u>
Planting Details/Info (LDM 2.i) – Utilize City of Novi Standard Details				
Canopy Deciduous Tree	Refer to LDM for detail drawings	Yes	Yes	
Evergreen Tree		Yes	Yes	
Multi-stem Tree		Yes	Yes	
Shrub		Yes	Yes	
Perennial/ Ground Cover		Yes	Yes	
Tree stakes and guys. (Wood stakes, fabric guys)		Yes	Yes	
Tree protection fencing	Located at Critical Root Zone (1' outside of	<ul style="list-style-type: none"> Detail on Sheet L201 	Yes	

Item	Required	Proposed	Meets Code	Comments
	dripline)	<ul style="list-style-type: none"> Fencing lines shown on Tree Removal Plans 		
Other Plant Material Requirements (LDM 3)				
General Conditions (LDM 3.a)	Plant materials shall not be planted within 4 ft. of property line	Note is provided	Yes	
Landscape tree credit (LDM3.b.(d))	<ul style="list-style-type: none"> Substitutions to landscape standards for preserved canopy trees outside woodlands/ wetlands should be approved by LA. Refer to Landscape tree Credit Chart in LDM 	No		
Plant Sizes for ROW, Woodland replacement and others (LDM 3.c)	Refer to Landscape Design Manual for requirements	Sizes are shown on plant list	Yes	
Plant size credit (LDM3.c.(2))	NA	No		
Prohibited Plants (LDM 3.d)	No plants on City Invasive Species List	No invasive plants are proposed	Yes	
Recommended trees for planting under overhead utilities (LDM 3.e)	Label the distance from the overhead utilities	There aren't any overhead lines on the site	Yes	
Collected or Transplanted trees (LDM 3.f)		None		
Nonliving Durable Material: Mulch (LDM 4)	<ul style="list-style-type: none"> Trees shall be mulched to 3" depth and shrubs, groundcovers to 2" depth Specify natural color, finely shredded hardwood bark mulch. Include in cost estimate. Refer to section for additional information 	Included on details	Yes	

NOTES:

- This table is a working summary chart and not intended to substitute for any Ordinance or City of Novi requirements or standards.
- The section of the applicable ordinance or standard is indicated in parenthesis. For the landscape requirements, please see the Zoning Ordinance landscape section 5.5 and the Landscape Design Manual for the appropriate items under the applicable zoning classification.
- Please include a written response to any points requiring clarification or for any corresponding site plan modifications to the City of Novi Planning Department with future submittals.

Irrigation System Requirements

- Any booster pump installed to connect the project's irrigation system to an existing irrigation system must be downstream of the RPZ.
- The RPZ must be installed in accordance with the 2015 Michigan Plumbing Code.
- The RPZ must be installed in accordance with the manufacture installation instructions for winterization that includes drain ports and blowout ports.
- The RPZ must be installed a minimum of 12-inches above FINISHED grade.
- Attached is a handout that addresses winterization installation requirements to assist with this.
- A plumbing permit is required.
- The assembly must be tested after installation with results recorded on the City of Novi test report form.

WETLAND REVIEW



December 2, 2022

Lindsay Bell
City Planner
Department of Community Development
City of Novi
45175 W. Ten Mile Road
Novi, Michigan 48375

RE: Catholic Central – North Campus; JSP22-37
Wetland Review of Revised Preliminary Site Plan
MSG Project No. N1030126

Dear Ms. Bell:

The Mannik & Smith Group, Inc. (MSG) reviewed the revised plan set titled *Preliminary Site Plan and Stormwater Management Plan for North Campus Athletics and Parking Structure, Catholic Central High School* prepared by Zeimet Wozniak & Associates dated November 14, 2022 (rPSP). The project site is located south of Twelve Mile Road and west of Wixom Road, Parcel 50-22-18-200-026, in Section 18 (Site). The rPSP depicts construction of athletic competition and practice fields, a parking structure, and a hospitality building with associated utility connections and landscaping changes (Project).

Published Data

Upon review of published resources, the portion of the Site included in the Project appears to contain:

- ☒ City-regulated wetlands, as identified on the City of Novi Wetlands interactive map website (Figure 1).
- ☐ Wetlands that are regulated by the Michigan Department of Environment, Great Lakes, and Energy (EGLE).
- ☐ Wetlands as identified on National Wetland Inventory (NWI) and Michigan Resource Inventory System (MIRIS) maps, as identified on the EGLE Wetlands Viewer interactive map website (Figure 2). NWI and MIRIS wetlands are identified through interpretation of topographic data and aerial photographs by the associated governmental bodies.
- ☐ Hydric (wetland) soil as mapped by the U.S. Department of Agriculture, Natural Resource Conservation Service, as identified on the EGLE Wetlands Viewer interactive map website (Figure 2).

MSG Wetland Boundary Verification

Sheet CE-9 of the rPSP, *Wetland Impacts*, depicts the location of four wetlands within the Project area and the following proposed impacts:

Wetland	Area	Permanent Impact Area	Mitigation Area	Permanent Buffer Impact Area
A	2.24 Acres	0.03 Acre	0.06 Acre	0.07 Acre
B	0.06 Acre	0.06 Acre	None proposed*	0.22 Acre
C	0.63 Acre	0.63 Acre	None proposed	0.42 Acre
D	0.65 Acre	0.65 Acre	None proposed	0.46 Acre
Total	3.58 Acres	1.37 Acres	0.06 Acre	1.17 Acres

* see Permits and Regulatory Status below



No temporary wetland impact and no temporary buffer impact are proposed in the rPSP.

MSG visited the Site on October 4, 2022 and November 18, 2022 to evaluate the accuracy of the rPSP's depiction of wetlands on the Site. Selected inspection photographs are found at the end of this letter. Identifiable wetland delineation flagging was not present at the time of MSG's initial evaluation but was present for the second evaluation. Wetland A is composed of both emergent and forested wetland; the proposed impact area is in the forested portion of the wetland (Photos 1 and 2). Wetland B is composed of scrub-shrub and emergent wetland (identified as only emergent in the rPSP) (Photos 3 and 4). Wetlands C and D is composed of emergent vegetation, primarily reed canary grass (*Phalaris arundinacea*) and common reed (*Phragmites australis*) respectively (Photos 5 and 6). The northern area of Wetland C included trees and brush.

MSG concurs with the general depiction of Wetlands A through D in the rPSP. Portions of Wetland D and portions of the buffers of each of the four wetlands appeared to have been subjected to mowing. Sheet CE-9 of the rPSP states "*Phragmites australis* in entire Wetland D", but the area of *Phragmites australis* was observed to end abruptly and was surrounded by reed canary grass. Topographical depressions were also observed extending from Wetland D into regularly mown lawn grass areas, which suggests areas that are currently mown could support wetland habitat (Photo 7).

Permits and Regulatory Status

The City of Novi Code of Ordinances, Chapter 12, Article V defines an essential wetland as meeting one or more of the criteria listed in subsections 12-174(b)(1) through (10). It is MSG's opinion Wetlands A and B provide the functional characteristics of storm water storage capacity and wildlife habitat, and accordingly Wetlands A and B meet the criteria for an essential wetland. Wildlife (primarily foraging birds) was observed actively using both of these wetlands at the time of MSG's evaluation(s).

Wetlands C and D were observed to be composed primarily of few invasive species and their function as wildlife habitat is likely minimal. Wetlands C and D may contribute storm water management functions, and while MSG does not consider Wetlands C or D essential, the applicant is encouraged to consider the on- and off-site consequences on stormwater management if the wetlands are eliminated.

Mitigation is required per Section 12-176 of the Novi Code of Ordinances when an activity results in 0.25 acre or greater of impairment or destruction of wetland areas that are determined to be essential wetland area, two acres in size or greater, or contiguous to a lake, pond, river, or stream. The Novi Code of Ordinances, Section 12-176 – Mitigation, states "Where an activity results in the impairment or destruction of wetland areas of less than one-quarter ($\frac{1}{4}$) acre that are determined to be essential under subsection 12-174(b), are two (2) acres in size or greater or are contiguous to a lake, pond, river or stream, additional planting or other environmental enhancement shall be required onsite within the wetlands or wetland and watercourse setback where the same can be done within the wetland and without disturbing further areas of the site."

The proposed impact to essential wetlands is 0.03 acre (Wetland A) and 0.06 acre (Wetland B) for a total of 0.09 acre. Based on the total being less than 0.25 acre, mitigation is not required but an environmental enhancement plan will be required. An environmental enhancement plan typically includes the removal of non-native species and/or planting of native wetland species within the affected wetland to compensate for lost wildlife habitat.

EGLE typically regulates wetlands that are located within 500 feet of an inland lake, pond, stream, or river, and/or isolated wetlands of an area of 5 acres or more. The applicant has provided a letter from EGLE dated October 24, 2022 that indicates an EGLE permit will not be required for the proposed project.

Based on the available information, the following wetland related items appear to be required for this project:

Item	Required/Not Required/Not Applicable
City Wetland Permit (specify Non-Minor or Minor)	Required, likely Non-Minor; see Comment 1 below
Wetland Buffer Authorization	Required
Wetland Mitigation	Not required
Environmental Enhancement Plan	Required
EGLE Wetland Permit	Not required
Wetland Conservation Easement	Not required

Comments

1. Fill volumes for wetlands must be identified on Site plans for determination if a Minor or Non-Minor City Wetland Permit is required.
2. The City of Novi requires the boundary lines of any watercourses or wetlands on the Site be clearly flagged or staked and such flagging or staking shall remain in place throughout the conduct of permit activity.
3. The Wetland A vegetative cover currently includes non-native species (e.g. reed canary grass, common reed). MSG recommends the applicant incorporate replacement native plantings, including trees and shrubs, in the project plans as well as removal of non-native invasive species to enhance the aesthetics and natural habitat benefits of the wetland area.

MSG recommends approval of the Preliminary Site Plan for Wetlands, on the condition that the following are provided:

- **Wetland fill volumes on the project plans, and**
- **An Environmental Enhancement Plan.**

Please contact the undersigned if you have any questions regarding the matters addressed in this letter.

Sincerely,

The Mannik & Smith Group, Inc.



Keegan Mackin
Environmental Scientist



Douglas Repen, CDT
Project Manager
Certified Storm Water Management Operator

CC: Sarah Marchioni, City of Novi Project Coordinator
Barbara McBeth, City of Novi Planner
Christian Carroll, City of Novi Planner
Ben Peacock, City of Novi Planning Assistant
Rick Meader, City of Novi Landscape Architect

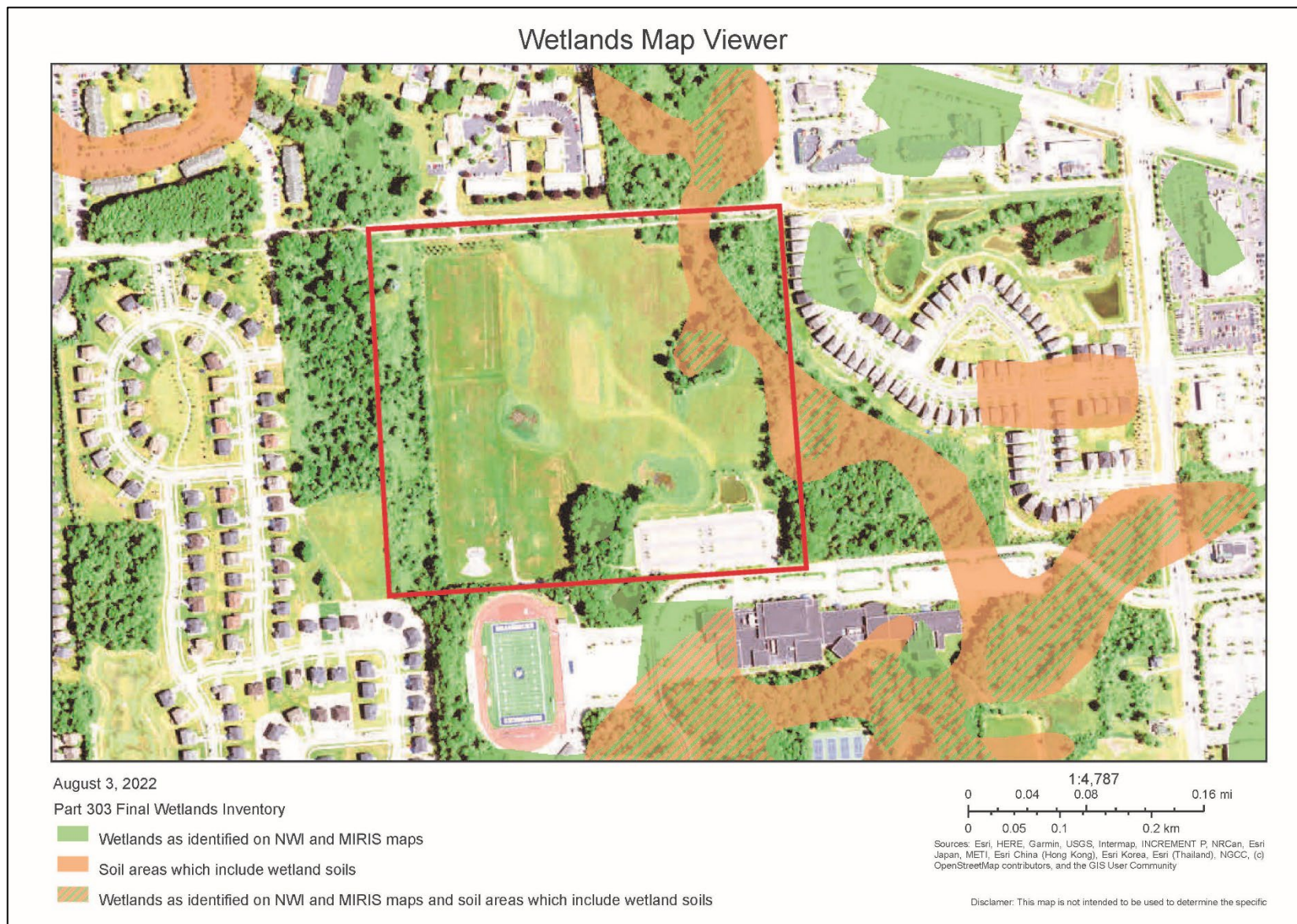
FIGURES



Figure 1 | City of Novi Regulated Wetland Map. Approximate Site boundary is shown in red. Regulated wetland areas are shown in blue.



Figure 2 | EGLE Wetlands Viewer Map. Approximate Site boundary is shown in red.



SITE PHOTOGRAPHS





Photo 1: Approximate location of proposed impact to Wetland A, facing north (Oct. 4, 2022)



Photo 2: View of emergent vegetation in Wetland A, facing west (Oct. 4, 2022)



Photo 3: View of scrub-shrub vegetation area of Wetland B (Nov. 18, 2022)



Photo 4: View of emergent vegetation area of Wetland B (Nov. 18, 2022)



Photo 5: View of Wetland C with construction road in foreground, facing east (Oct. 4, 2022)



Photo 6: View of Wetland D with wetland delineation flagging (pink ribbon on stakes) (Nov. 18, 2022)



Photo 7: View of Wetland D, facing north. Note lower area of lawn grass in foreground (Oct. 4, 2022)

WOODLAND REVIEW



Corporate Headquarters
295 South Water Street, Suite 300
Kent, OH 44240
800-828-8312

Local Office
3381 Lapeer Rd. West
Auburn Hills, MI 48326

To: Lindsay Bell, City of Novi Senior Planner
Community Development Department, City of Novi

From: Kerry Gray, Principal Consultant
Davey Resource Group

CC: Barbara McBeth, City Planner
Christian Carroll, City of Novi Planner
Rick Meader, City of Novi Landscape Architect
Ben Peacock, City of Novi Assistant Planner
Douglas Repen, Mannik and Smith Group

Date: October 7, 2022

RE: Catholic Central High School – North Campus
Woodland Review #1 - Preliminary Site Plan Review – JSP22-37

Davey Resource Group, Inc. (DRG) has conducted a review of the Preliminary Site Plan for the proposed **North Campus improvements at Catholic Central High School** located at 27225 Wixom Road (Parcel Nos. 22-18-200-026 and 22-18-200-027). The plan set prepared by Zeimet Wozniak and Associates, Inc. (issue date: 09/06/2022), proposes construction of a new track/stadium, competition/practice field, and parking deck. The site contains City of Novi regulated woodland (Figure 1). DRG reviewed the Preliminary Site Plan set for conformance with the City of Novi's Woodland Protection Ordinance, Chapter 37.

Recommendation: DRG **recommends approval** of the Catholic Central North Campus Preliminary Site Plan contingent upon addressing the minor Woodland Review Comments.

The following Woodland Regulations apply to this site:

Woodland Regulation	Required
Woodland Permit (Chapter 37, Section 37-26)	YES
Tree Replacement (Chapter 37, Section 37-8) & Financial Guarantee (Chapter 26.5-5)	YES
Tree Protection (Fence) (Chapter 37, Section 37-9) & Financial Guarantee (Chapter 26.5-5)	YES
Woodland Conservation Easement (Chapter 37-30 (e))	YES

Woodland Impacts

The woodlands in this portion of the property are located around the wetland to the west of the north parking lot and on the parcel that is to the west of the Catholic Central site owned by the City of Novi. The plan proposes disturbance to the regulated woodlands that are adjacent to the parking lot and current soccer (athletic) field. The woodlands are considered moderate quality with a mix of upland and bottomland species including bur oak, swamp white oak, red maple, silver maple, basswood, and shagbark hickory.

A site inspection conducted by DRG on 10/06/2022 confirmed the woodland tree survey.

Woodland Review Comments

1. **A Woodland Use Permit is required** to perform construction on any site containing regulated woodlands. The Woodland Use Permit for this project requires Planning Commission approval.
2. **Woodland Tree Removals (Sheet L201).** The Woodland Tree Removal List on sheet L201 shows both regulated woodland trees and non-regulated trees requiring mitigation - which is incorrect. Trees within city regulated woodlands, in the street right-of-way, and those that are 36" or greater in diameter at breast height (DBH) that are to be removed or whose critical root zone will be impacted by construction require mitigation (tree replacements). The applicant is encouraged to provide replacements for non-regulated trees that will be removed as they also provide a benefit to the site, however they should be listed separately from the tree replacements required for regulated trees. **Please revise applicable plan sheets to address comment.**
3. **Woodland Replacement Species (Sheet L203).** Over 35% of the replacement species to be planted are in the *Acer* (maple) genus. To maintain diversity on the Catholic Central campus and reduce the susceptibility of these species to insect/disease pests – reduce the number of *Acer* species that are to be planted to 20-25%. Selection of other native Michigan tree species should focus on mimicking the natural forests on the campus.
4. **Critical Root Zone.** The critical root zones of preserved regulated woodland trees are not shown in the plan set. **Revise plans to:**
 - a. Accurately depict the location of the critical root zone per Section 37-9(1)
 - b. If tree protection fence must be located within the critical root zone of preserved regulated woodland replacement trees, provide the woodland replacement credits required per the woodland replacement requirements outlined in Chapter 37 and calculate the amount to be paid into the City of Novi Tree Fund
5. **Financial Guarantees**
 - a. **A woodland fence guarantee of \$6,000 (\$5,000 x 120%) is required** per Chapter 26.5-37. The financial guarantee shall be paid prior to issuance of the City of Novi Woodland Use Permit.
 - i. To calculate the woodland fence inspection fees – **provide on Sheet L201 the cost to stake, install and remove the tree protection fencing**

- b. **Woodland Replacement Financial Guarantee of \$400 per woodland replacement credit** is required as part of the Woodland Use Permit fees to ensure planting of the on-site Woodland Replacement tree credits. This amount will be determined once Comment #2 is addressed.

Based on inspection of the installed on-site Woodland Replacement trees, the Woodland Replacement Financial Guarantee shall be returned to the Applicant. The Applicant is responsible for requesting this inspection. Following acceptance of the planted woodland replacement trees, a 2-year performance bond must be paid to ensure the continued health and survival of the replacement trees (comment 6).

- c. The applicant will be required to pay into the City of Novi Tree fund at a rate of \$400/credit for any Woodland Replacement tree credits that cannot be planted on site.
- d. **The applicant shall guarantee trees for two (2) growing seasons after installation and the City's acceptance**, per The City's Performance Guarantees Ordinance. A two-year maintenance bond in the amount of twenty-five (25) percent of the value of the trees, but in no case less than one thousand dollars (\$1,000.00), shall be required to ensure the continued health of the trees following acceptance (Chapter 26.5, Section 26.5-37).

Based on a successful inspection 2-years after installation of the on-site Woodland Replacement trees, the Woodland Replacement Performance Guarantee shall be returned to the Applicant. **The Applicant is responsible for requesting this inspection.**

- 6. **Woodland Replacement Inspection.** The Applicant is responsible for walking the entire site to confirm that all woodland replacement trees/shrubs have been planted on site according to the approved site plan stamping set. If any material is missing, dead or dying, replacements should be made prior to requesting the inspection. The applicant should also provide an as-built landscape plan if the trees planted do not match the species and/or location shown on the approved site plan stamping set. Once this occurs the Applicant should contact the Bond Coordinator to schedule the inspection (Angie Sosnowski at asosnowski@cityofnovi.org / 248-347-0441) and complete the inspection request form. If additional inspections are needed, then additional inspection fees will be required to be paid by the applicant.
- 7. **Woodland Guarantee Inspection.** Prior to requesting the 2-year woodland guarantee inspection, the Applicant is responsible for walking the entire site to confirm that all of the material has survived and is healthy. If any material is missing, dead or dying, replacements should be made prior to requesting the inspection. Once this occurs the Applicant should contact the Bond Coordinator to schedule the 2-year guarantee inspection (Angie Sosnowski at asosnowski@cityofnovi.org / 248-347-0441) and complete the inspection request form. If additional inspections are needed, then additional inspection fees will be required to be paid by the applicant. **Based upon a successful inspection for the 2-year warranty the Landscape/Woodland/Street trees financial guarantee will be returned to the Applicant.**

If the woodland replacements, street trees or landscaping guarantee period is scheduled to end during the period when inspections are not conducted (November 15th – April 15th) the Applicant is responsible for contacting the Bond Coordinator and Woodland/Landscape Inspector in late summer/early fall prior to the 2-year expiration to schedule an inspection.

- 8. The Applicant may be required to provide preservation/conservation easements as directed by the City of Novi Community Development Department for any areas of woodland replacement trees. The applicant shall demonstrate that all proposed woodland replacement trees and existing regulated

woodland trees to remain will be guaranteed to be preserved as planted with a conservation easement or landscape easement to be granted to the city. This language shall be submitted to the City Attorney for review. The executed easement must be returned to the City Attorney within 60 days of the issuance of the City of Novi Woodland permit. Any associated easement boundaries shall be indicated on the Plan.



Figure 1. Catholic Central High School
City of Novi Regulated Woodland Map
(Green hatched areas = City-regulated woodlands;
Blue oval = general location of proposed construction)

Site Photos



Site Photos

Upper left from the north looking east; **upper right** from the east looking south;
bottom left from the south looking west; **bottom right** from the west looking north



TRAFFIC REVIEW



AECOM
27777 Franklin Road
Southfield
MI, 48034
USA
aecom.com

To:
Barbara McBeth, AICP
City of Novi
45175 10 Mile Road
Novi, Michigan 48375

CC:
Lindsay Bell, Humna Anjum, Christian Carroll, Ben
Peacock

Project name:
JSP22-37 – Catholic Central Athletic Fields and
Parking Deck Revised Preliminary Site Plan
Traffic Review

From:
AECOM

Date:
December 7, 2022

Memo

Subject: JSP22-37 – Catholic Central Athletic Fields and Parking Deck Revised Preliminary Site Plan Traffic Review

The revised preliminary site plan was reviewed to the level of detail provided and AECOM recommends **approval with conditions** for the applicant to move forward as long as the comments below are addressed to the satisfaction of the City.

GENERAL COMMENTS

1. The applicant, Catholic Central High School, is proposing a set of athletic fields and a 3 story parking deck.
2. The development is located on the south side of 12 Mile Road and the west side of Wixom Road. 12 Mile Road is under the jurisdiction of the City of Novi and Catholic Central School Drive is a private road.
3. The site is currently zoned R-4 (One-Family Residential).
4. The following traffic-related deviations may apply to this development, if plans are not changed:
 - a. Applicant is requesting a variance for the lack of painted end islands in the parking structure.
5. Conditions for approval include:
 - a. Completion of the special events traffic management plan to be turned in as part of the final site plan submittal, with the caveat that any on or off-site mitigations be addressed as part of the FSP.

TRAFFIC IMPACTS

1. AECOM could not perform an initial trip generation based on the ITE Trip Generation Manual, 11th Edition as the facility type does not have an ITE Land Use Code.
2. The City of Novi generally requires a traffic impact study/statement if the number of trips generated by the proposed development exceeds the City's threshold of more than 750 trips per day or 100 trips per either the AM or PM peak hour, or if the project meets other specified criteria.

Trip Impact Study Recommendation	
Type of Study:	Justification
TMP	The change in future traffic patterns due to the location of the new facility (stadium, track, and practice field) and parking structure (with 700 parking spaces) supports an assessment to determine the impacts of the changes.

The applicant is proposing the creation of a traffic management plan for special events that would include traffic flow and route planning, parking access, pedestrian access and circulation, and temporary traffic control. AECOM agrees that this should be completed and proposes that it be done prior to the approval of the final site plan so that any mitigations required can be included in this project.

TRAFFIC REVIEW

The following table identifies the aspects of the plan that were reviewed. Items marked O are listed in the City's Code of Ordinances. Items marked with ZO are listed in the City's Zoning Ordinance. Items marked with ADA are listed in the Americans with Disabilities Act. Items marked with MMUTCD are listed in the Michigan Manual on Uniform Traffic Control Devices.

The values in the 'Compliance' column read as 'met' for plan provision meeting the standard it refers to, 'not met' stands for provision not meeting the standard and 'inconclusive' indicates applicant to provide data or information for review and 'NA' stands for not applicable for subject Project. The 'remarks' column covers any comments reviewer has and/or 'requested/required variance' and 'potential variance'. A potential variance indicates a variance that will be required if modifications are not made or further information provided to show compliance with the standards and ordinances. The applicant should put effort into complying with the standards; the variances should be the last resort after all avenues for complying have been exhausted. Indication of a potential variance does not imply support unless explicitly stated.

EXTERNAL SITE ACCESS AND OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
1	Driveway Radii O Figure IX.3	20'	Met	
2	Driveway Width O Figure IX.3	20'	Met	Drive is emergency access with a gate
3	Driveway Taper O Figure IX.11			
3a	Taper length	N/A	-	None proposed.
3b	Tangent	N/A	-	None proposed.
4	Emergency Access O 11-194.a.19	Multiple access points	Met	
5	Driveway sight distance O Figure VIII-E	Indicated	Met	
6	Driveway spacing			
6a	Same-side O 11.216.d.1.d	Not indicated	N/A	Emergency gate included at drive.
6b	Opposite side O 11.216.d.1.e	Not indicated	N/A	Emergency gate included at drive.
7	External coordination (Road agency)	Not indicated on plans	Met	Applicant noted in response letter that an application for a permit will be submitted to RCOC prior to construction. The applicant could include maintenance of traffic plan for work along 12 Mile Road in future submittals.

EXTERNAL SITE ACCESS AND OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
8	External Sidewalk Master Plan & EDM	Width not indicated	Existing	The applicant should ensure the sidewalk is indicated as existing on the plans.
9	Sidewalk Ramps EDM 7.4 & R-28-J	Not indicated	Met	Applicant has indicated no grade separated pedestrian paths are in place that would require a ramp, if that changes ramps would be required.
10	Any Other Comments:			

INTERNAL SITE OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
11	Loading zone ZO 5.4	Not indicated	Met	Applicant has indicated building will receive no deliveries.
12	Trash receptacle ZO 5.4.4	Not indicated	Met	Applicant has indicated staff will transfer refuse to appropriate receptacles on the property rather than include one at this site.
13	Emergency Vehicle Access	Turning movements provided	Met	
14	Maneuvering Lane ZO 5.3.2	24'	Met	
15	End islands ZO 5.3.12			
15a	Adjacent to a travel way	Not indicated	Inconclusive	Painted islands required in parking structures. The applicant stated they will be requesting a variance.
15b	Internal to parking bays	N/A	-	Not required in parking structures. If provided, they are to be painted.
16	Parking spaces ZO 5.2.12	N/A	-	
17	Adjacent parking spaces ZO 5.5.3.C.ii.i	N/A	-	Ordinance does not apply in parking structures.
18	Parking space length ZO 5.3.2	Indicated	Met	
19	Parking space width ZO 5.3.2	Indicated	Met	
20	Parking space front curb height ZO 5.3.2	N/A	-	

INTERNAL SITE OPERATIONS				
No.	Item	Proposed	Compliance	Remarks
21	Accessible parking – number ADA	16 indicated	Met	11 ADA spaces are provided on the 1 st floor, 5 ADA spaces are located on the 2 nd floor for the future connection to the adjacent building. The applicant has indicated the presence of an elevator to allow the 2 nd floor spaces to also serve the ground level access.
22	Accessible parking – size ADA	Indicated	Met	
23	Number of Van-accessible space ADA	7 indicated, 2 qualify	Not Met	Van accessible spaces require an 8' aisle on the passenger side of the space. Only 2 spaces currently marked van accessible meet these requirements, as the pillar in the 8'6" aisle on the ground floor south side prevents clear access. A total of 3 van accessible spaces are required.
24	Bicycle parking			
24a	Requirement ZO 5.16.1	8 indicated, 8 minimum required	Met	
24b	Location ZO 5.16.1	Indicated	Met	
24c	Clear path from Street ZO 5.16.1	Indicated	Met	
24d	Height of rack ZO 5.16.5.B	Indicated	Met	
24e	Other (Covered / Layout) ZO 5.16.1	N/A	-	
25	Sidewalk – min 5' wide Master Plan	10, 20'	Met	
26	Sidewalk ramps EDM 7.4 & R-28-J	N/A	-	
27	Sidewalk – distance back of curb EDM 7.4	N/A	-	
28	Cul-De-Sac O Figure VIII-F	N/A	-	
29	EyeBrow O Figure VIII-G	N/A	-	
30	Minor/Major Drives ZO 5.10	N/A	-	
31	Any Other Comments:			

SIGNING AND STRIPING				
No.	Item	Proposed	Compliance	Remarks
32	Signing: Sizes MMUTCD	Indicated	Met	

SIGNING AND STRIPING				
No.	Item	Proposed	Compliance	Remarks
33	Signing table: quantities and sizes	Indicated	Partially Met	5 van accessible plaque (R7-8p) signs are listed on sheet CE-2 but 7 are proposed.
34	Signs 12" x 18" or smaller in size shall be mounted on a galvanized 2 lb. U-channel post MMUTCD	Indicated	Met	
35	Signs greater than 12" x 18" shall be mounted on a galvanized 3 lb. or greater U-channel post MMUTCD	Indicated	Met	
36	Sign bottom height of 7' from final grade MMUTCD	Indicated	Met	
37	Signing shall be placed 2' from the face of the curb or edge of the nearest sidewalk to the near edge of the sign MMUTCD	Indicated	Met	
38	FHWA Standard Alphabet series used for all sign language MMUTCD	Indicated	Met	
39	High-Intensity Prismatic (HIP) sheeting to meet FHWA retro-reflectivity MMUTCD	Indicated	Met	
40	Parking space striping notes	Included in Civil plans	Met	Striping notes should also be included where striping plans are in architectural plans.
41	The international symbol for accessibility pavement markings ADA	Not included	Not Met	
42	Crosswalk pavement marking detail	N/A	-	
43	Any Other Comments:			

Note: Hyperlinks to the standards and Ordinances are for reference purposes only, the applicant and City of Novi to ensure referring to the latest standards and Ordinances in its entirety.

Should the City or applicant have questions regarding this review, they should contact AECOM for further clarification.

Sincerely,

AECOM



Patricia Thompson, PE
Traffic Engineer



Paula K. Johnson, PE
Senior Transportation Engineer



Saumil Shah, PMP
Project Manager

FAÇADE REVIEW



December 8, 2022

City of Novi Planning Department
45175 W. 10 Mile Rd.
Novi, MI 48375-3024

Facade Review Status Summary:

Approved - Section 9 Waiver not required.

Re: **FACADE ORDINANCE – Catholic Central North Campus, JSP22-37**
Facade Region: 1, Zoning District: R-1

Dear Ms. McBeth;

The following is the Facade Review for Revised Preliminary Site Plan Approval of the above referenced project. The applicant has submitted revised drawings dated 11/14/22. The revised drawings indicate that the south elevation has been brought into full compliance with the Facade Ordinance. Therefore, the previously recommended Section 9 Waiver is no longer required.

Parking Deck	North (Front)	South	East	West	Ordinance Maximum (Minimum)
Brick	85%	35%	85%	85%	100% (30% MIN)
Limestone	15%	35%	15%	15%	50%
Spandrel Panel	15%	30%	15%	15%	50%

Hospitality Building	North (Front)	South	East	West	Ordinance Maximum (Minimum)
Brick	40%	40%	40%	40%	100% (30% MIN)
Limestone	25%	25%	25%	25%	50%
Metal Trim (copper gutters)	5%	5%	5%	5%	15%
Wood Trim	5%	5%	5%	5%	15%
Asphalt Shingles	25%	25%	25%	25%	25%

Press Box	North (Front)	South	East	West	Ordinance Maximum (Minimum)
Brick	80%	80%	80%	80%	100% (30% MIN)
Limestone	10%	10%	10%	10%	50%
Stone (base)	10%	10%	10%	10%	50%

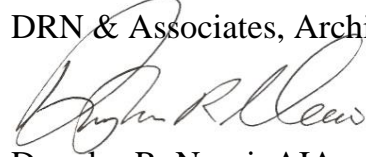
Notes to the Applicant:

1. It should be noted that all roof top equipment (RTU) must be screened from view from all vantage points both on-site and off-site using materials in compliance with the Façade Ordinance. RTU Screens are not currently indicated on the drawings.
2. Inspections – The Façade Ordinance requires inspection(s) for all projects. It is the applicant's responsibility to request the inspection of each façade material at the appropriate time. Inspections may be requested using the Novi Building Department's Online Inspection Portal with the following link. Please click on "Click here to Request an Inspection" under "Contractors", then click "Façade".
<http://www.cityofnovi.org/Services/CommDev/OnlineInspectionPortal.asp>.
3. The dumpster enclosure must meet the Façade Ordinance; typically Brick and/or Limestone to match the primary building.

If you have any questions regarding this project, please do not hesitate to call.

Sincerely,

DRN & Associates, Architects PC



Douglas R. Necci, AIA

FIRE REVIEW



October 7, 2022

TO: Barbara McBeth - City Planner
Lindsay Bell - Plan Review Center
Christian Carroll - Plan Review Center
Ben Peacock – Planning Assistant

CITY COUNCIL

Mayor
Bob Gatt

Mayor Pro Tem
Dave Staudt

Laura Marie Casey

Hugh Crawford

Justin Fischer

Brian Smith

Ericka Thomas

City Manager
Peter E. Auger

Director of Public Safety
Chief of Police
Erick W. Zinser

Fire Chief
Jeffery R. Johnson

Assistant Chief of Police
Scott R. Baetens

Assistant Fire Chief
John B. Martin

RE: Catholic Central Athletic Fields and Parking Deck

PSP #22-0125
PRE-APP 22-106

Project Description:

Construct athletic fields and parking structure

Comments:

Meets Fire Department Standards

Recommendation:

Approved

Sincerely,

Kevin S. Pierce-Fire Marshal
City of Novi – Fire Dept.

cc: file

Novi Public Safety Administration
45125 Ten Mile Road
Novi, Michigan 48375
248.348.7100
248.347.0590 fax

cityofnovi.org

APPLICANT RESPONSE LETTERS



Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

November 22, 2022

Ms. Lindsay Bell, Senior Planner AICP
City of Novi Planning Department
45175 Ten Mile Road
Novi, MI 48375 USA

Re: Catholic Central North Athletic Fields and Parking Deck
PSP Revision Application
JSP22-37

Dear Ms. Bell:

Attached for your consideration, please find the following as requested in your Planning Review Report dated December 9, 2022:

Response letters addressing all comments from the staff reviews for the following items:

- Planning
- Engineering
- Landscape (prepared by GMA)
- Wetlands
- Traffic
- Façade

Woodlands and fire reviews were previously approved.

A landscape waiver is requested to count the detention basin plantings north of the parking deck toward the deck's foundation requirement – *supported by staff*.

Application to the ZBA will be made by January 4th for three waivers to allow the following:

- A 42-foot building height.
- The height of the light poles (80 feet).
- No painted end islands in the parking structure.

A façade materials board will be submitted prior to the Planning Commission meeting.

We look forward to attending the Planning Commission public hearing on January 11, 2023.

Please contact us if you have any questions or need additional information.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'Andy Wozniak', is written over a horizontal line.

Andy Wozniak



Civil Engineers & Land Surveyors

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December 22, 2022

Ms. Lindsay Bell, Senior Planner AICP
City of Novi Planning Department
45175 Ten Mile Road
Novi, MI 48375

Re: Planning Review Response for
Catholic Central North Athletic Fields and Parking Deck
JSP22-37

Dear Ms. Bell:

We would like to thank city staff and consultants for their recommendation of approval of the Preliminary Site Plan for the Catholic Central North Athletic Fields and Parking Deck. We've read the review letters and will work with city staff to satisfactorily address all review comments. In response to your review of the Preliminary Site Plan Submittal dated December 9, 2022, we offer the following comments (variance requests are in **bold**):

ORDINANCE REQUIREMENTS

Traffic Impact Study

- A special events traffic management plan will be submitted and reviewed at the time of Final Site Plan review.

Building Height

- **Catholic Central will apply for a variance from the ZBA to allow a 42-foot building height.**

Lighting Plan

- **Catholic Central will apply for a variance from the ZBA for the height of the light poles (80 feet).**

Phasing

- The project will be constructed in two phases. Phase 1 will include all improvements, except for the parking deck, parking deck access drives, and sidewalks/site electrical/landscaping adjacent to the parking deck. These items will be completed in Phase 2. It is intended that Phase 2 be constructed concurrently with Phase 1 but the design, permitting, and construction of the parking deck is much more involved and will require more time. Phase 2 Final Site Plan submittal will occur after Phase 1 submittal to allow time to design the parking deck.

PLANNING REVIEW CHART

Zoning and Use Requirements

Master Plan

- It is noted that a revised Special Land Use is required.

Height, bulk, density and area limitations

Building Height

- **Catholic Central will apply for a variance from the ZBA to allow a 42-foot building height.**

Note to District Standards

Wetland/Watercourse Setback

- Please see the wetland review response letter.

Parking, Loading and Dumpster Requirements

End Islands

- Painted end islands in the parking structure are not proposed. Adding end islands would eliminate approximately 25 parking spaces. We discussed this requirement with the parking deck consultant, Rich and Associates. Since 1963, Rich and Associates has been one of the nation's leading parking consultants. They know of no other deck that has painted end islands. In addition, the parking decks located at the ITC headquarters and Fox Run, in the City of Novi, do not appear to have painted end islands. Given the premium on parking spaces and the huge financial cost of losing these spaces, **Catholic Central will apply for a variance from the ZBA.**

Barrier Free Space Dimensions

- The access aisles will be shown as striped, and the van-accessible spaces will be adjacent to 8' access aisles.

Lighting and Other Equipment Requirements

Roof top equipment and wall mounted utility equipment

- There are no current comments to address. Any additional comments will be addressed during Final Site Plan review.

Roof top appurtenances screening

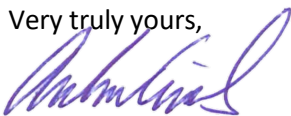
- There are no current comments to address. Any additional comments will be addressed during Final Site Plan review.

Lighting and Photometric Plan

- **Catholic Central will apply for a variance from the ZBA for the height of the light poles (80 feet).**

Please contact us if you have any questions or comments.

Very truly yours,



Andy Wozniak

ZEIMET WOZNIAK & ASSOCIATES

Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

December 22, 2022

Adam Chludzinski
City of Novi Engineering Division
26300 Lee BeGole Drive
Novi, MI 48375

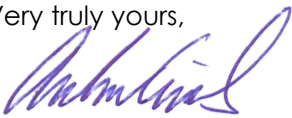
Re: Response to 12/7/2022 Engineering Review for
Catholic Central – North Campus (Athletic Fields and Parking Deck)
JSP22-37

Dear Mr. Chludzinski:

Thank you for your recommendation of approval of the Preliminary Site Plan and the Preliminary Storm Water Management Plan. As noted, the review comments will be addressed in the Final Site Plan.

Please contact us if you have any questions or comments.

Very truly yours,



Andrew Wozniak

December 22, 2022

Mr. Rick Meader, Landscape Architect
City of Novi Planning Department
45175 Ten Mile Road
Novi, MI 48375

**Re: Landscape Review Summary Chart
Catholic Central High School
North Campus Athletic Fields & Parking Deck JSP22 - 0037**

Dear Mr. Meader:

Please find the following responses to your review comments provided in the Landscape Review Summary Chart for Preliminary Site Plan dated December 9, 2022. Thank you also for discussing these review items via conference call on December 16. Responses are noted below review comments based on our understanding of our call with you.

LANDSCAPE WAIVERS REQUIRED:

- Waiver to count the detention basin plantings north of the parking deck toward the deck's foundation landscaping requirement – *supported by staff*

Landscape Plan Requirements [LDM (2)]

Sealed by LA (LDM 2.g)

1. Live signatures will be required on stamping sets

A live signature and seal will be provided on the Final Stamping set.

Existing plant material / Existing woodlands or wetlands [LDM 2.e.(2),]

1. See Mannik & Smith & DRG reports for wetlands and woodlands.

There are no further Woodlands comments. It is our understanding this is approved.

LANDSCAPING REQUIREMENTS:

Berms, Walls and ROW Planting Requirements:

Berms

Residential Adjacent to Non-residential (Sec 5.5.3.A) & (LDM 1.a)

Berm requirements (Zoning Sec 5.5.A)

- 1. Please extend the line of Green Giant arborvitae as far to the north of the existing line by about 5 more plants (leaving a gap for access to the hydrant) to screen as much of the track as possible so lighting and noise is blocked better.**

Additional arbs will be added to the north as requested.

- 2. Please extend it southward, as well, to the start of the maples.**

Additional arbs will be added to the south as requested.

- 3. Please add a callout note stating that the screening arborvitae west of the access drive shall**

December 22, 2022
Rick Meader
City of Novi
Page 2

be allowed to grow to their full height.

A note stating that the screening arborvitae west of the access drive shall be allowed to grow to their full height will be added to the drawing.

4. The waiver request will be supported with the above additions.

Noted.

Walls (LDM 2. k & Zoning Sec 5.5.3.vi)

Material, height and type of construction footing

1. Please indicate the color of the blocks and appearance (a cut sheet?)

Color and cut sheets of the wall will be provided at Final Stamping set submission.

Walls greater than 3 ½ feet should be designed and sealed by an Engineer

1. The walls will need to be reviewed along with building plans.

A typical wall detail is provided for on sheet L502. Engineered signed and sealed wall details, including structural calculations shall be provided for building permit review.

ROW Landscape Screening Requirements (Sec 5.5.3.B. ii) and (LDM 1.b)

Berm requirements (Zoning Sec 5.5.3.A.(5))

3' wall

1. Tall wall will be reviewed along with building plans.

A typical wall detail and wall elevation is provided for on sheet L502. Engineered and signed and sealed wall details, including structural calculations shall be provided for building permit review.

Canopy deciduous trees in area between sidewalk and curb (Novi Street Tree List)

- 1. It appears that there will be 10 feet between the water main and the back of curb along 12 Mile Road, which leaves sufficient room for street trees planted 4 feet behind the curb.**
- 2. Please plant the required street trees along 12 Mile Road 4 feet behind the curb and 6 feet from the water main.**

Trees will be added along Twelve Mile.

Parking Area Landscape Requirements LDM 1.c. & Calculations (LDM 2.o.)

- 1. The parking lot will be treated as a building, not a parking lot.**

Noted.

Plantings around Fire Hydrant (d)

- 1. There are six trees shown closer than 5 feet from the gas line east of the parking deck. Please move them away from the line.**

The trees will be moved min. 5' off the gas line.

- 2. In the Connector Road plans, there is a tree planted on top of a storm line just north of the north**

December 22, 2022
Rick Meader
City of Novi
Page 3

parking lot entry drive and several trees almost on top of the water line west of the road. Please move them away from the lines.

Any trees located within 5' of a utility line will be moved.

- 3. While it's not landscaping, there are 6 or 7 light poles west of the parking deck shown as almost on top of the storm drain. You may want to move them away from the line.**

This has been addressed with the appropriate consultants for review. Adjustments will be made.

Category 1: For OS-1, OS-2, OSC, OST, B-1, B-2, B-3, C, NCC, EXPO, FS, TC, TC-1, RC, Special Land Use or non-residential use in any R district (Zoning Sec 5.5.3.C.iii)

A = Total square footage of vehicular use area up to 50,000 sf x 7.5%

The parking lot will be treated as a building, not a parking lot.

Noted.

Accessway perimeter trees

- 1 Canopy tree per 35 lf along accessways (within 15 feet of pavement edge)
- $210\text{lf}/35 = 6$ trees

- 1. A landscape waiver is required for this deficiency.**

It would not be supported by staff.

- 2. Please provide the required trees to shade the parking structure accessways.**

Per our call on 12/16 the dimension of the calculable footage for the accessway was revised to eliminate the corner clearance area which cannot be planted in. The number of additional trees was revised to 4.

One tree on the north side of the drive was allowed to be counted, so 3 additional trees will be provided along the south side of the drive for shading of the drive.

Building Foundation Landscape Requirements (Sec 5.5.3.D)

Interior site landscaping SF

- 1. A landscape waiver is required for the current layouts for the parking deck.** *It would be supported for the hospitality due to the nature of the building's intense use, but not for the parking deck.*
- 2. The double-counting of the detention basin landscaping area in front of the building requires a waiver.** *It would be supported by staff since it is close enough to the building to appear as if it is foundation landscaping for the deck and because any landscaping closer to the building would be crushed by plowed snow.*

Noted.

- 3. Please label in SF the area south of the detention pond that is being allowed to count as foundation area for the parking deck.**

Per our call on 12/16 the square footage zone within the detention pond area to be considered was determined and the resulting square footage will be delineated on the landscape plan.

- 4. If insufficient total area is provided, please add more to avoid needing a waiver.**

Noted.

December 22, 2022
Rick Meader
City of Novi
Page 4

- 5. Unless the parking lot addition will be planted (built) within 2 years, foundation landscaping must be added to the south end of the parking deck.** This would not need to be as ornate as the east and west sides but should have some sort of presence. If desired, they could be transplanted when the deck extension is built.

Per our call on 12/16, three (3) additional trees will be added to the south side of the parking deck to help soften the building façade until the future building is built, at which time the trees would be moved.

Zoning Sec 5.5.3.D. ii. All items from (b) to (e)

- 1. Staff supports the waiver as the detention basin plantings will provide an effective look of landscaping the deck's foundation from Twelve Mile Road (only the area south of the pond).**
Noted.

Detention/Retention Basin Requirements (Sec. 5.5.3.E.iv)

Planting requirements (Sec. 5.5.3.E.iv)

- 1. A landscape waiver is required for the lack of shrubs around 70% of the pond.** *It is supported by staff as approximately 70% of the available banks are landscaped with masses of native shrubs.*
Noted.

- 2. The west pond's maintenance access way is shown as 65 feet wide, which seems excessive. Please reduce its width if possible.**

This is not the detention basin access way. The 65' wide zone noted reflects an overflow weir area that will be reinforced with Scour Stop Erosion mats and planted with sodded lawn and the detention basin seed mix. The matting will be cut to allow for the installation of the trees.

- 3. Also, six ornamental trees are shown as planted on the access path. Please move them.**
Please see note above.

Landscaping Notes, Details and General Requirements:

Landscape Notes – Utilize City of Novi Standard Notes

Irrigation plan (LDM 2.s.)

- 1. Need for final site plan**

A fully automatic irrigation system is intended to be installed and will be provided during Final Site Plan review.

- 2. Please provide either an irrigation system plan or information regarding the alternative method that will be used to water the plants.**

See note above.

- 3. If an irrigation system will be used, it must meet the requirements listed at the end of this chart.**

Once designed, the irrigation system will meet the requirements as specified by the city and as noted below.

Irrigation System Requirements

- Any booster pump installed to connect the project's irrigation system to an existing irrigation system must be downstream of the RPZ.

December 22, 2022
Rick Meader
City of Novi
Page 5

- The RPZ must be installed in accordance with the 2015 Michigan Plumbing Code.
- The RPZ must be installed in accordance with the manufacture installation instructions for winterization that includes drain ports and blowout ports.
- The RPZ must be installed a minimum of 12-inches above FINISHED grade.
- Attached is a handout that addresses winterization installation requirements to assist with this.
- A plumbing permit is required.
- The assembly must be tested after installation with results recorded on the City of Novi test report form.

Plant List (LDM 4) – Include all cost estimates

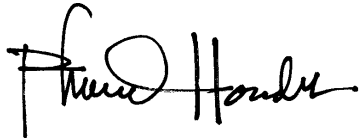
Botanical and common names

1. **Please reduce the number of scarlet oaks, spruces and blackgums to no more than is allowed by LDM 4.b.**
Quantities and tree varieties will be adjusted to reduce percentages.
2. **Juniperus virginiana and arborvitae should not be included in the tree diversity calculations, nor should woodland replacement trees.**
These plants will be removed from the tree diversity calculations, including the Woodland replacements.

Cost estimate (LDM 2.t) - Please add on Final Site Plans.

Cost estimate for plantings, mulch and seed/sod will be included in the Cost Estimate Table at Final Site Plan submission.

Respectfully submitted,



Richard Houdek, PLA, ASLA, LEED AP BD+C
Principal

Enc.



Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

December 22, 2022

Douglas Repen, CDT
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Canton, MI 48188

**Re: PSP Review Response for Wetlands – Catholic Central Athletic Fields and Parking Deck
JSP22-37**

Dear Mr. Repen:

Thank you for your recommendation of approval of the Preliminary Site Plan. We offer the following comments in response to your Wetland Review for this project dated December 2, 2022.

- Wetland fill volumes will be included in the Final Site Plan.
- An Environmental Enhancement Plan will be included with the Final Site Plan.

Please let us know if you have any questions or comments.

Very Truly Yours,

A handwritten signature in blue ink, appearing to read 'Andy Wozniak', is written over the typed name.

Andy Wozniak

ZEIMET WOZNIAK & ASSOCIATES

Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

December 22, 2022

Ms. Patricia Thompson, EIT, Traffic Engineer
AECOM
27777 Franklin Road
Southfield, MI 48034

Re: Catholic Central High School North Athletic Fields and Parking Deck
PSP Traffic Review Response
JSP21-44

Dear Ms. Thompson:

Thank you for your recommendation of approval of the Preliminary Site Plan. We offer the following comments in response to your Wetland Review for this project dated December 7, 2022.

TRAFFIC IMPACT STUDY RECOMMENDATION

A special events traffic management plan will be submitted and reviewed at the time of Final Site Plan review.

INTERNAL SITE OPERATIONS

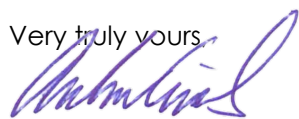
- 15a. Painted end islands in the parking structure are not proposed. Adding end islands would eliminate 25 parking spaces. We discussed this requirement with the parking deck consultant, Rich and Associates. Since 1963, Rich and Associates has been one of the nation's leading parking consultants. They know of no other deck that has painted end islands. In addition, the parking decks located at the ITC headquarters and Fox Run, in the City of Novi, do not appear to have painted end islands. Given the premium on parking spaces and the huge financial cost of losing these spaces, **Catholic Central will apply for a variance from the ZBA.**
23. A minimum of three van accessible parking spaces with an 8' aisle will be provided.

SIGNING AND STRIPING

33. The signing table will be corrected.
41. The international symbol ADA parking detail will be added.

Please contact us if you have any questions or comments.

Very truly yours,



Andy Wozniak

ZEIMET WOZNIAK & ASSOCIATES

Civil Engineers & Land Surveyors

55800 Grand River Avenue, Suite 100
New Hudson, Michigan 48165-9318
248.437.5099 · 248.437.5222 fax
www.zeimetwozniak.com

December 22, 2022

Douglas Necci, AIA
DRN and Associates, Architects, PC
50850 Applebrooke Dr.
Northville, MI 48167

Re: Response to 12/8/2022 Facade Review for
Catholic Central – North Campus (Athletic Fields and Parking Deck)
JSP22-37

Dear Mr. Necci:

Thank you for your recommendation of approval of the Preliminary Site Plan. We look forward to working with you on the Final Site Plan submittal.

There are no comments to address currently. Additional comments can be addressed during Final Site Plan review.

Please let us know if you have any questions or comments.

Very Truly Yours,



Andy Wozniak

NOISE IMPACT STATEMENT

November 14, 2022

Plan Review Center
City of Novi
45175 W. 10 Mile Road
Novi, MI 48375

Project Name: Detroit Catholic Central
Athletic Fields and Parking Deck
JSP22-0037

Subject: Sound Propagation Calculations Narrative

IDS Project No.: 19200-4000

Dear Plan Review:

The proposed sound system is based on a point source speaker system with very direct patterns to focus on the field as well as the bleacher section. 80% of the energy will be absorbed by the field and bleachers. The other 20% will be direct energy as well as reverb remnants from bouncing off objects and then into the air. The projected dB commissioning level will be at 80dB 25' from the speaker source. The closest receiving zone class R from the most direct speaker is 470' away. Calculations put that at a peak of 54.5 dB C weighted from the source. The system will have limiting capabilities to ensure levels do not go higher than intended from these calculations.

Sincerely,

Integrated Design Solutions, LLC

Steve Robinson, XTS-D, RCDD
Senior AV Engineer

ec: File

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PHOTOMETRIC STUDY

MUSCO LIGHTING PROPOSAL

PREPARED FOR:

Detroit Catholic Central High School Football Retrofit

Lighting Project
Novi, MI
September 1, 2022

Project #202595

Submitted by:

Musco Sports Lighting, LLC

Attn: Steve Garwood
2107 Stewart Road
Muscatine, Iowa 52761

Toll Free: 800-756-1205
Fax: 800-374-6402





TABLE OF CONTENTS

- A. INTENT (SEC. 5.7.1)**
- B. LIGHTING PLAN (SEC. 5.7.A.i) & AVERAGE LIGHT LEVELS (SEC.5.7.3.E) & TYPE OF LAMPS**
- C. MAXIMUM HEIGHT (SEC.5.7.3.A)**
- D. MAX. ILLUMINATION ADJACENT TO NON-RESIDENTIAL (SEC.5.7.3.K) & CUT OFF ANGLES (SEC.5.7.3.L)**



A. INTENT (SEC. 5.7.1)

Table A-2. Recommended Illuminance Criteria for Outdoor Sports and Recreation Areas

Recommended Maintained Illuminance Targets ^(a, b)												
APPLICATION TASK/AREA	Class of Play	TS = Task Surface: Recommended illuminances are at height of task surface above finished grade or floor										
		Horizontal (E_h)						Vertical (E_v)				
		Target E_h @ Height AFF			Uniformity Ratio			Target E_v @ Height AFF			CV	Uniformity Ratio
		C	A	T	Max	Avg	Min	C	A	T	Max	Ratio
		Lux @ m	(Fc @ Ft)	Min	CV	Ratio	Basis	Lux @ m	(Fc @ Ft)	Min	CV	Ratio
Skating (ice, figure)												
	I	U	1,500 @ 0.91	(150 @ 3.0)	Avg	0.13	1.7:1	Max:Min				
	II	T	1,000 @ 0.91	(100 @ 3.0)	Avg	0.21	2.5:1	Max:Min				
	III	S	750 @ 0.91	(75 @ 3.0)	Avg	0.25	3:1	Max:Min				
	IV	R	500 @ 0.91	(50 @ 3.0)	Avg	0.30	4:1	Max:Min				
	Rec	O	200 @ 0.91	(20 @ 3.0)	Avg	0.35	5:1	Max:Min				
Speed Skating (ice, inline)												
	II	P	300 @ 0.91	(30 @ 3.0)	Avg	0.21	2:1	Max:Min				
	III	O	200 @ 0.91	(20 @ 3.0)	Avg	0.25	3:1	Max:Min				
	IV	M	100 @ 0.91	(10 @ 3.0)	Avg	0.30	4:1	Max:Min				
Skeet and Trap Shooter												
Shooting line	III	M	100 @ 0.91	(10 @ 3.0)	Avg	0.21	2.5:1	Max:Min				
Target @ 18.3 m (60 ft)	III								P	300 @ 0.91	(30 @ 3.0)	Avg
Target @ 30.5 m (100 ft)	III								Q	400 @ 0.91	(40 @ 3.0)	Avg
Shooting line	IV	M	100 @ 0.91	(10 @ 3.0)	Avg	0.25	3:1	Max:Min				
Target @ 18.3 m (60 ft)	IV								O	200 @ 0.91	(20 @ 3.0)	Avg
Target @ 30.5 m (100 ft)	IV								O	200 @ 0.91	(20 @ 3.0)	Avg
Skiing												
	IV								-	5 @ 0.91	(0.5 @ 3.0)	Avg
Soccer												
	I	S	750 @ 0.91	(75 @ 3.0)	Avg	0.13	1.7:1	Max:Min				
	II	R	500 @ 0.91	(50 @ 3.0)	Avg	0.17	2:1	Max:Min				
	III	P	300 @ 0.91	(30 @ 3.0)	Avg	0.21	2.5:1	Max:Min				
	IV	O	200 @ 0.91	(20 @ 3.0)	Avg	0.25	3:1	Max:Min				
Softball												
See Baseball												

Table A-2. Recommended Illuminance Criteria for Outdoor Sports and Recreation Areas

Recommended Maintained Illuminance Targets ^(a, b)													
APPLICATION TASK/AREA	Class of Play	TS = Task Surface: Recommended illuminances are at height of task surface above finished grade or floor											
		Horizontal (E _h)						Vertical (E _v)					
		Target E _h @ Height AFF			Uniformity Ratio			Target E _v @ Height AFF			CV	Uniformity Ratio	
		C		Max				C		Max			
		A		Avg	Max	Ratio	A		Avg	Max	Ratio		
T	Lux @ m	(Fc @ Ft)	Min	CV	Ratio	Basis	T	Lux @ m	(Fc @ Ft)	Min	CV	Ratio	Basis
Football													
	I	T	1,000 @ 0.91	(100 @ 3.0)	Avg	0.13	1.7:1	Max:Min					
	II	R	500 @ 0.91	(50 @ 3.0)	Avg	0.17	2:1	Max:Min					
	III	P	300 @ 0.91	(30 @ 3.0)	Avg	0.21	2.5:1	Max:Min					
	IV	O	200 @ 0.91	(20 @ 3.0)	Avg	0.25	3:1	Max:Min					
Golf													
Golf course													
Tee boxes	IV	K	50 @ 0.00	(5 @ 0.0)	Avg	0.25	3:1	Max:Min					
Fairways	IV	I	30 @ 0.00	(3 @ 0.0)	Avg	0.35	6:1	Max:Min					
Greens	IV	O	200 @ 0.00	(20 @ 0.0)	Avg	0.25	3:1	Max:Min					
Golf driving													
Tee boxes	IV	O	200 @ 0.00	(20 @ 0.0)	Avg	0.25	3:1	Max:Min					
At 183 m (600 ft)									M	100 @ 0.91	(10 @ 3.0)	Avg	0.25 3:1 Max:Min
Handball, Raquetball, Squash													
	III	P	300 @ 0.91	(30 @ 3.0)	Avg	0.25	3:1	Max:Min	P	300 @ 0.91	(30 @ 3.0)	Avg	0.25 3:1 Max:Min
	IV	O	200 @ 0.91	(20 @ 3.0)	Avg	0.30	4:1	Max:Min	O	200 @ 0.91	(20 @ 3.0)	Avg	0.3 4:1 Max:Min
Horse Racing													
Track	I	R	500 @ 0.91	(50 @ 3.0)	Avg	0.25	3:1	Max:Min					
Home stretch	I	T	1,000 @ 0.91	(110 @ 3.0)	Avg	0.25	3:1	Max:Min					
Finish line	I								S	750 @ 0.91	(75 @ 3.0)	Avg	0.13 1.7:1 Max:Min
Ice Hockey, Roller Hockey													
	II	R	500 @ 0.00	(50 @ 0.0)	Avg	0.21	2.5:1	Max:Min					
	III	P	300 @ 0.00	(30 @ 0.0)	Avg	0.25	3:1	Max:Min					
	IV	O	200 @ 0.00	(20 @ 0.0)	Avg	0.30	4:1	Max:Min					
Ice Skating Speed													
	III	P	300 @ 0.91	(30 @ 3.0)	Avg	0.25	3:1	Max:Min					
	IV	O	200 @ 0.91	(20 @ 3.0)	Avg	0.30	4:1	Max:Min					



**B. LIGHTING PLAN (SEC.5.7.A.i)
&
AVERAGE LIGHT LEVELS (SEC.5.7.3.E)
&
TYPE OF LAMPS (SEC.5.7.3.F)**

Detroit Catholic Central High School Football Retrofit

Novi,MI

Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
F1-F2	80'	80'	11	TLC-LED-1500	15.73 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
F3-F4	90'	90'	12	TLC-LED-1500	17.16 kW	A
		90'	9	TLC-LED-1500	12.87 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
		16'	2	TLC-BT-575	1.15 kW	A
F5-F6	80'	80'	9	TLC-LED-1500	12.87 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
6			98		126.46 kW	

Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Field 1	70.38 kW	54
B	Field 2	56.08 kW	44

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	16
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	82

Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Blanket Spill	Horizontal	9.83	0	79	0.00		A,B	98
Blanket Spill	Max Candela (by Fixture)	99195	0	792999	0.00		A,B	98
Blanket Spill	Max Vert Illuminance (by Light Bank)	13	0	118	0.00		A,B	98
Football 1	Horizontal Illuminance	52.2	45	61	1.35	1.16	A	54
Football 2	Horizontal Illuminance	54.2	48	60	1.27	1.13	B	44
Lacrosse 1	Horizontal Illuminance	52.2	45	61	1.35	1.16	A	54
Lacrosse 2	Horizontal Illuminance	54.2	48	60	1.27	1.13	B	44
Soccer 1	Horizontal Illuminance	52.6	45	61	1.36	1.17	A	54
Soccer 2	Horizontal Illuminance	52.9	44	61	1.37	1.20	B	44
Track	Horizontal Illuminance	25.6	2	54	25.47	12.78	A	54
Twelve Mile Rd Spill	Horizontal	0.01	0	0.03	0.00		A,B	98
Twelve Mile Rd Spill	Max Candela (by Fixture)	1111	0.83	4508	5441.79	1338.60	A,B	98
Twelve Mile Rd Spill	Max Vertical Illuminance Metric	0.02	0	0.10	0.00		A,B	98

From Hometown to Professional

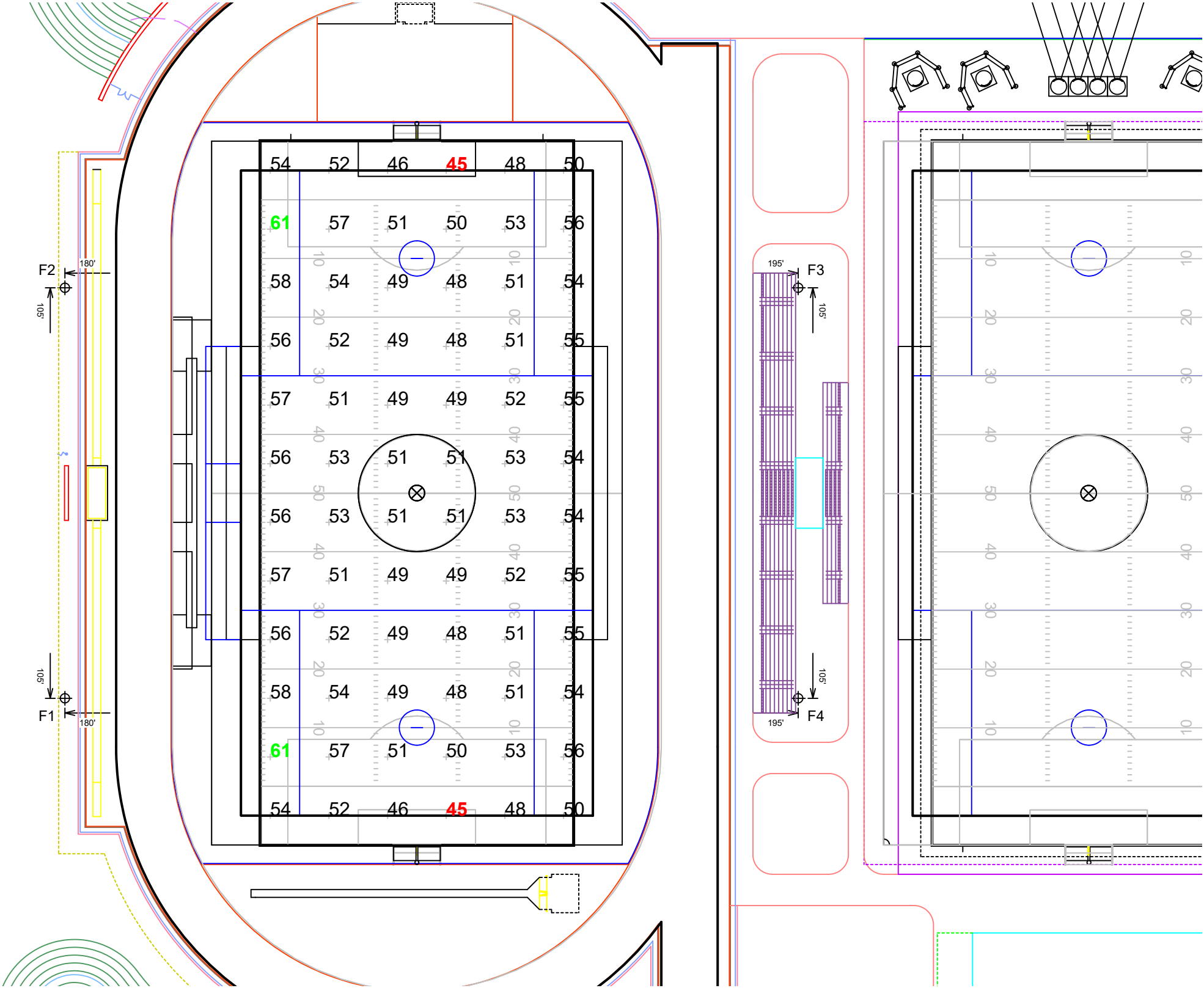


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EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1500	11	11	0
2	F3-F4	90'	-	15.5'	TLC-BT-575	2/2*	2	2
				90'	TLC-LED-1500	12/9*	12	9
4	TOTALS					76	54	22

* This structure utilizes a back-to-back mounting configuration



Detroit Catholic Central High School Football Retrofit
Novi, MI

GRID SUMMARY	
Name:	Football 1
Size:	360' x 160'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average:	50
Scan Average:	52.17
Maximum:	61
Minimum:	45
Avg / Min:	1.16
Guaranteed Max / Min:	2
Max / Min:	1.35
UG (adjacent pts):	1.13
CU:	0.45
No. of Points:	72

LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	54
Total Load:	70.38 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

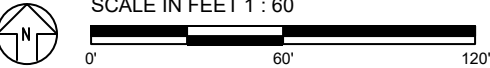
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY

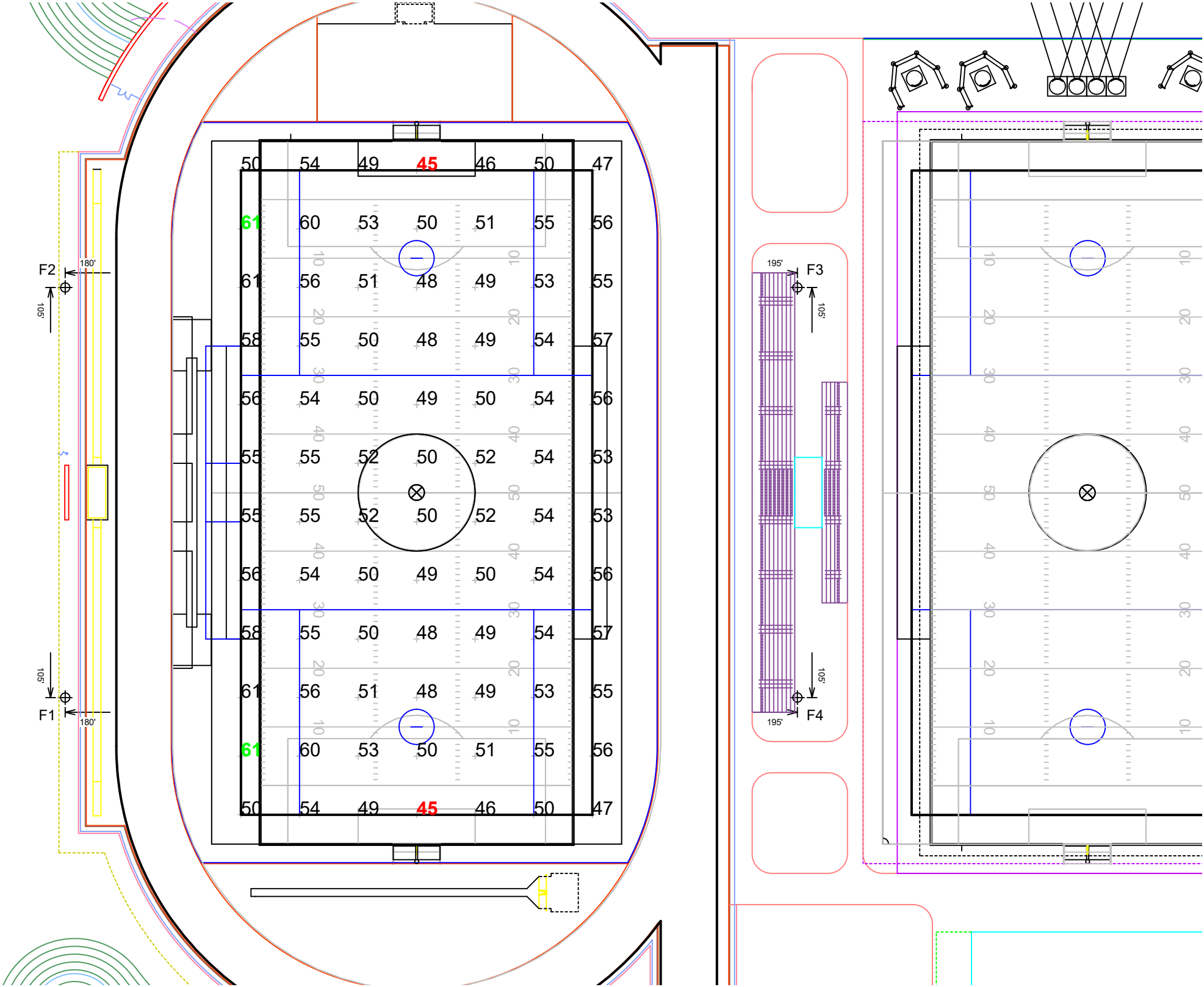


ENGINEERED DESIGN By: C.Hensley · File #202595Ar2 · 31-Aug-22

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	80'	0'	15.54'	TLC-BT-575	2	2	0
				80'	TLC-LED-1500	11	11	0
2	F3-F4	90'	0'	15.54'	TLC-BT-575	2/2*	2	2
				90'	TLC-LED-1500	12/9*	12	9
4	TOTALS					76	54	22

* This structure utilizes a back-to-back mounting configuration



Detroit Catholic Central High School Football Retrofit
Novi,MI

GRID SUMMARY	
Name:	Soccer 1
Size:	360' x 210'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

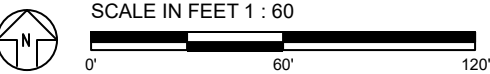
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average:	50
Scan Average:	52.58
Maximum:	61
Minimum:	45
Avg / Min:	1.16
Guaranteed Max / Min:	2
Max / Min:	1.36
UG (adjacent pts):	1.23
CU:	0.53
No. of Points:	84
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	54
Total Load:	70.38 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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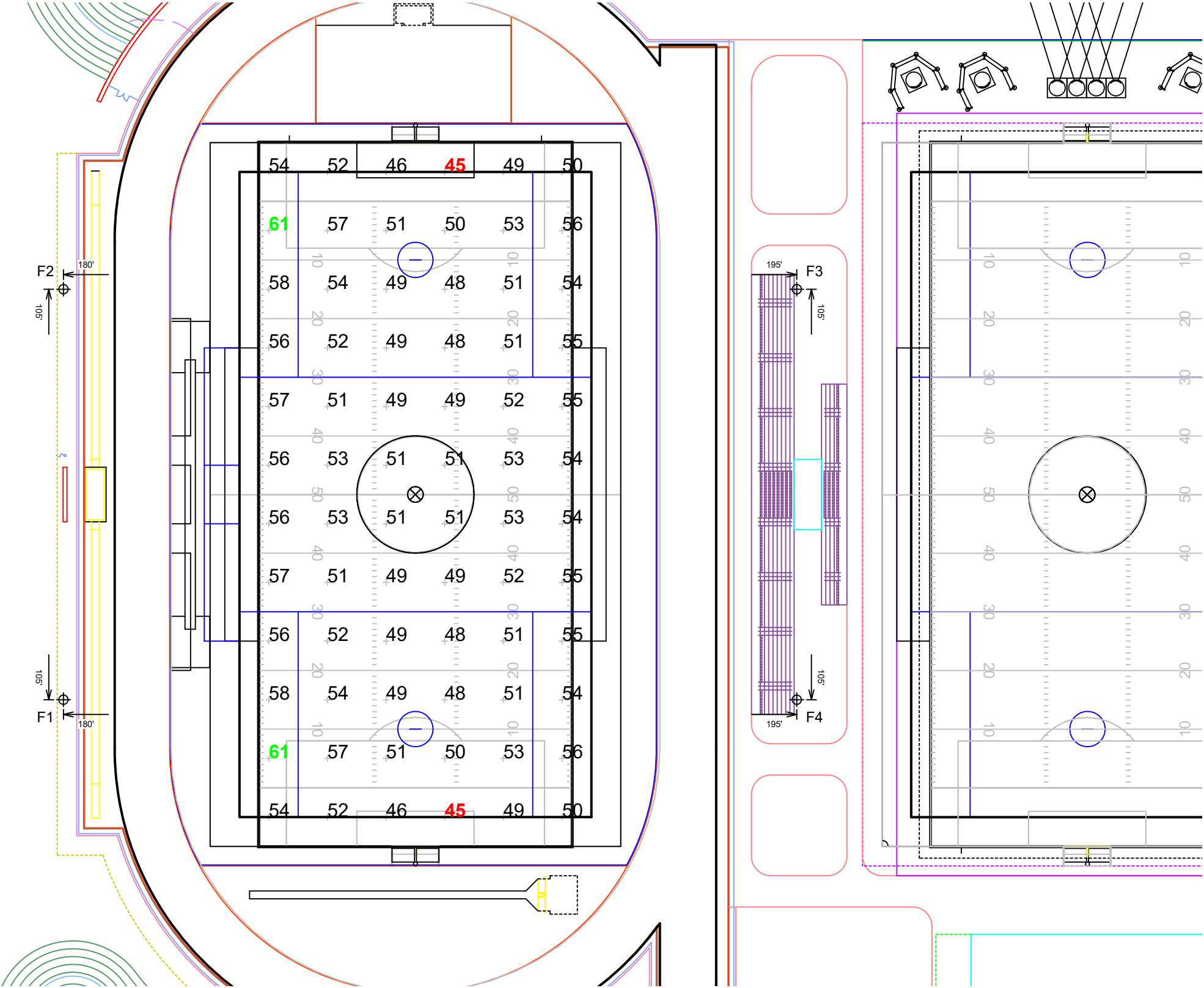
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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	80'	0'	15.52'	TLC-BT-575	2	2	0
				80'	TLC-LED-1500	11	11	0
2	F3-F4	90'	0'	15.52'	TLC-BT-575	2/2*	2	2
				90'	TLC-LED-1500	12/9*	12	9
4	TOTALS					76	54	22

* This structure utilizes a back-to-back mounting configuration



Detroit Catholic Central High School Football Retrofit
Novi, MI

GRID SUMMARY	
Name:	Lacrosse 1
Size:	330' x 180'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

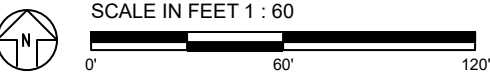
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average:	50
Scan Average:	52.18
Maximum:	61
Minimum:	45
Avg / Min:	1.16
Guaranteed Max / Min:	2
Max / Min:	1.35
UG (adjacent pts):	1.13
CU:	0.45
No. of Points:	72
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	54
Total Load:	70.38 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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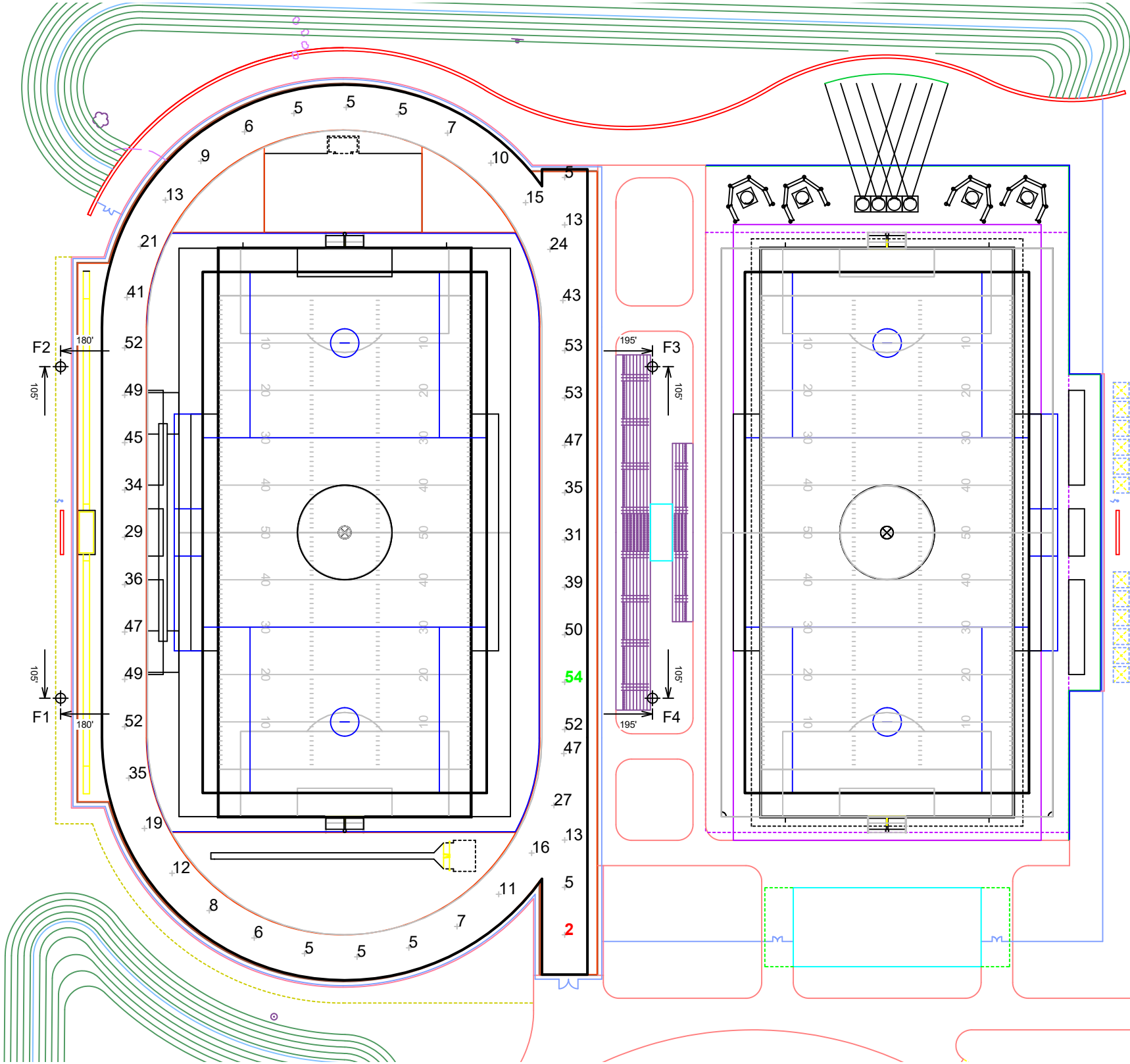
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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F1-F2	80'	.06'	15.56'	TLC-BT-575	2	2	0
				80.06'	TLC-LED-1500	11	11	0
2	F3-F4	90'	.06'	15.56'	TLC-BT-575	2/2*	2	2
				90.06'	TLC-LED-1500	12/9*	12	9
4	TOTALS					76	54	22

* This structure utilizes a back-to-back mounting configuration



Detroit Catholic Central High School Football Retrofit
Novi,MI

GRID SUMMARY	
Name:	Track
Size:	Irregular
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	25.55
Maximum:	54
Minimum:	2
Avg / Min:	12.13
Max / Min:	25.47
UG (adjacent pts):	0.00
CU:	0.15
No. of Points:	49
LUMINAIRE INFORMATION	
Applied Circuits:	A
No. of Luminaires:	54
Total Load:	70.38 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

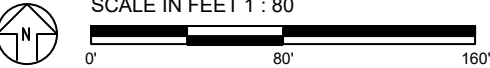
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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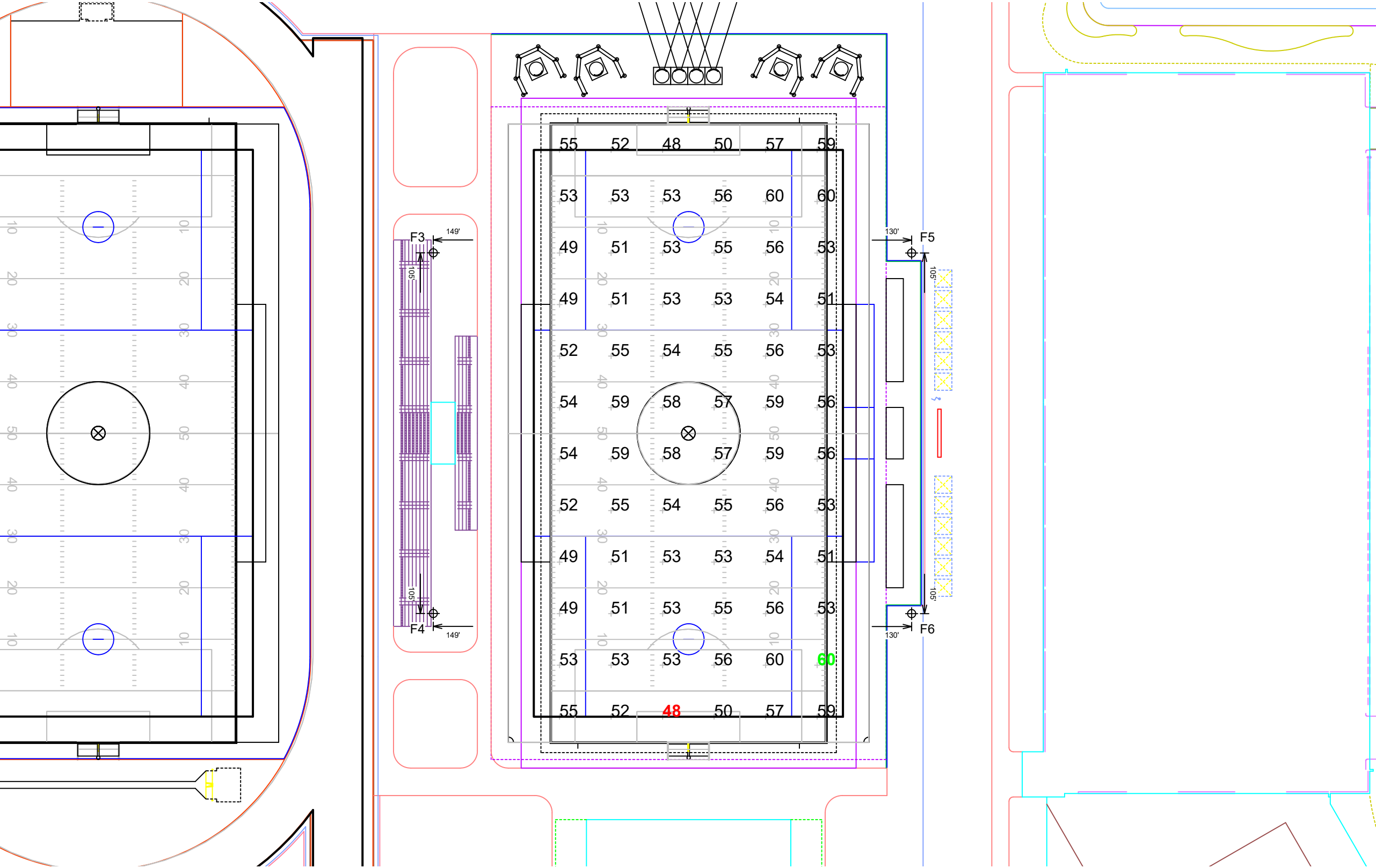
ILLUMINATION SUMMARY



EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F3-F4	90'	-	15.5'	TLC-BT-575	2/2*	2	2
				90'	TLC-LED-1500	12/9*	9	12
2	F5-F6	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1500	9	9	0
4	TOTALS					72	44	28

* This structure utilizes a back-to-back mounting configuration



Detroit Catholic Central High School Football Retrofit
Novi, MI

GRID SUMMARY	
Name:	Football 2
Size:	360' x 160'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	54.23
Maximum:	60
Minimum:	48
Avg / Min:	1.14
Guaranteed Max / Min:	2
Max / Min:	1.27
UG (adjacent pts):	1.14
CU:	0.58
No. of Points:	72
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	44
Total Load:	56.08 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



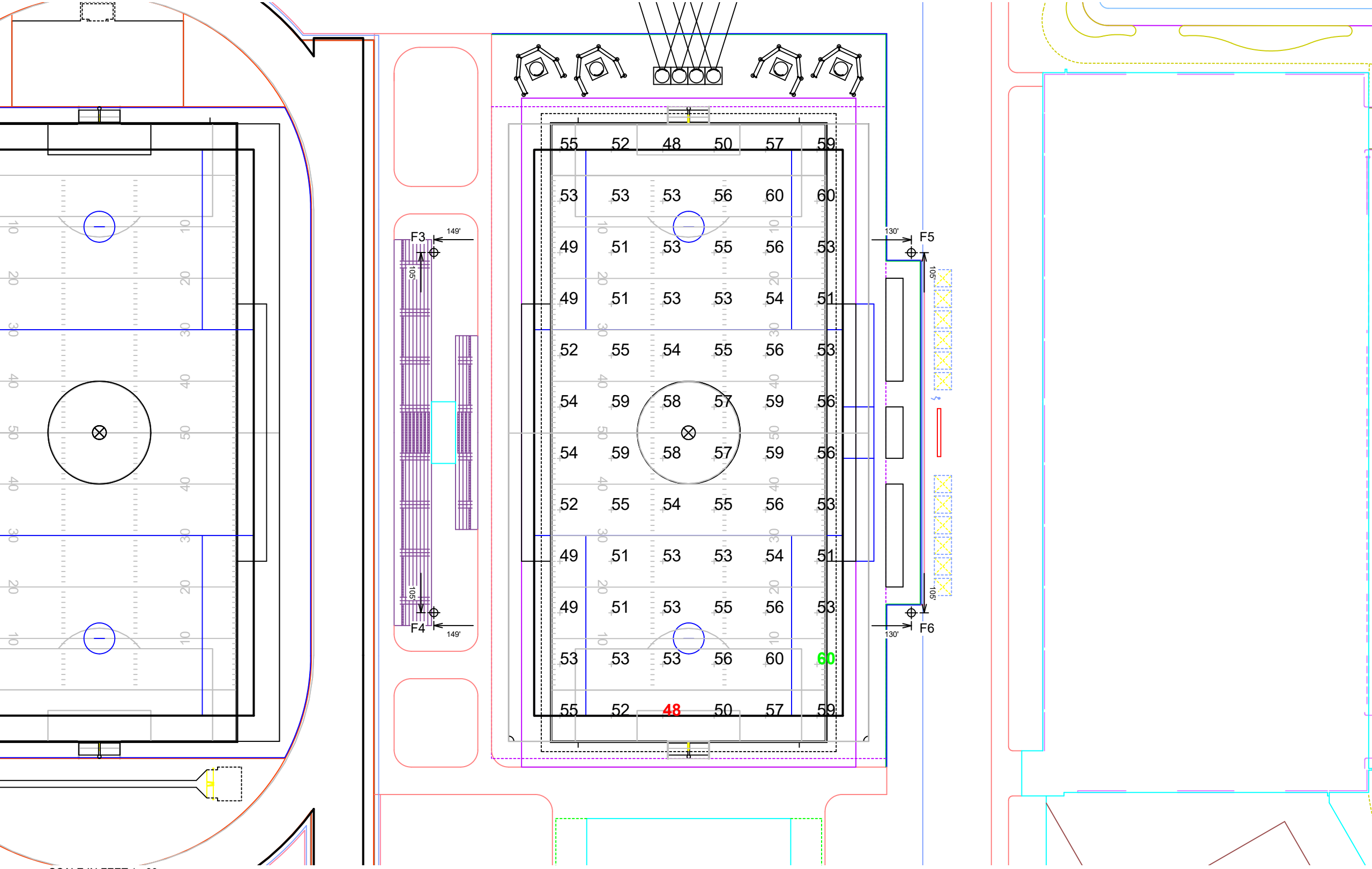
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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID
2	F3-F4	90'	0'	15.52'	TLC-BT-575	2/2*	2
				90'	TLC-LED-1500	12/9*	9
2	F5-F6	80'	0'	15.52'	TLC-BT-575	2	2
				80'	TLC-LED-1500	9	9
4	TOTALS					72	44

* This structure utilizes a back-to-back mounting configuration



Detroit Catholic Central High School Football Retrofit
Novi, MI

GRID SUMMARY	
Name:	Lacrosse 2
Size:	330' x 180'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	54.23
Maximum:	60
Minimum:	48
Avg / Min:	1.14
Guaranteed Max / Min:	2
Max / Min:	1.27
UG (adjacent pts):	1.14
CU:	0.58
No. of Points:	72

LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	44
Total Load:	56.08 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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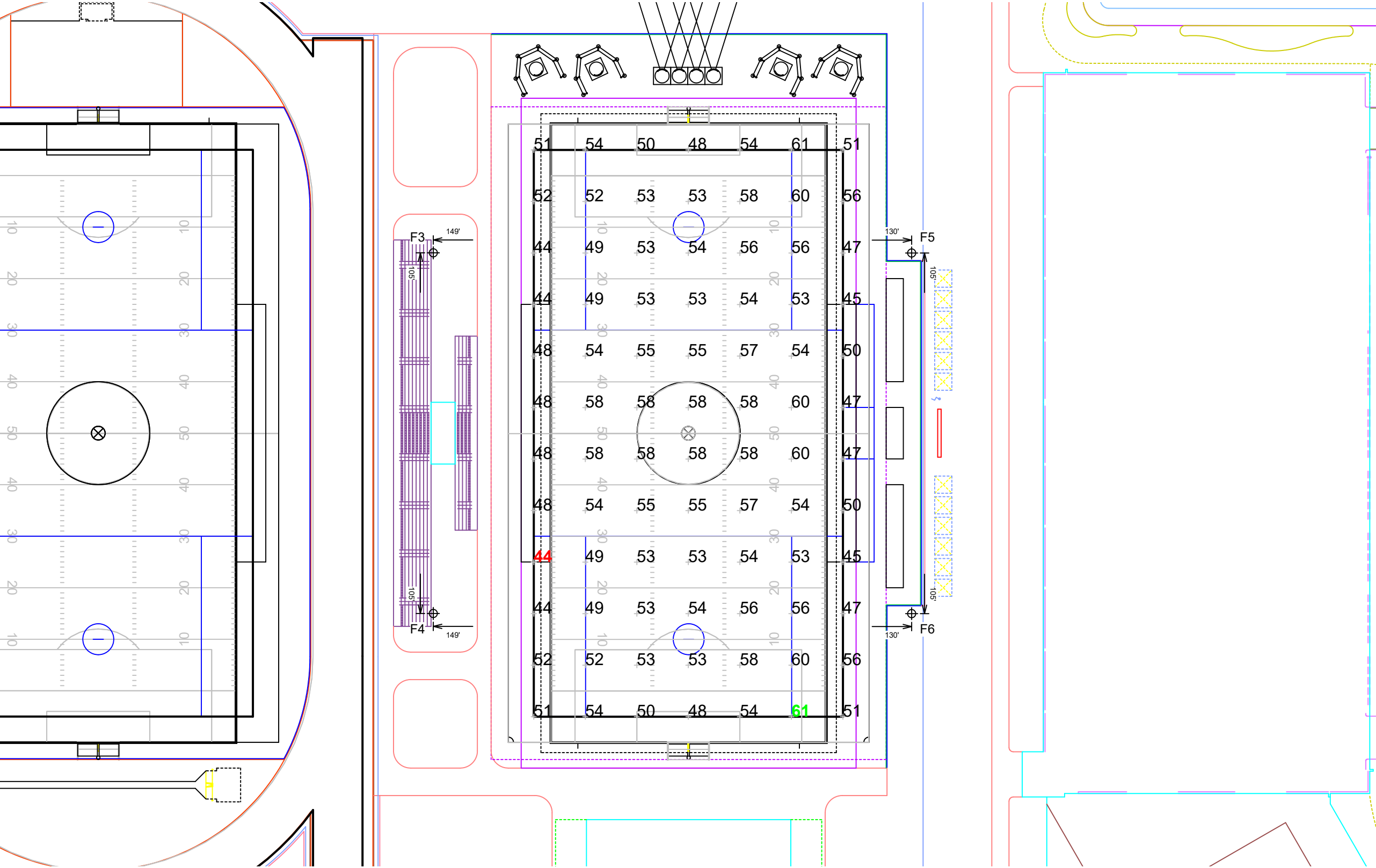
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ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	F3-F4	90'	0'	15.54'	TLC-BT-575	2/2*	2	2
				90'	TLC-LED-1500	12/9*	9	12
2	F5-F6	80'	0'	15.54'	TLC-BT-575	2	2	0
				80'	TLC-LED-1500	9	9	0
4	TOTALS					72	44	28

* This structure utilizes a back-to-back mounting configuration



Detroit Catholic Central High School Football Retrofit
Novi, MI

GRID SUMMARY	
Name:	Soccer 2
Size:	360' x 210'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
Entire Grid	
Guaranteed Average:	50
Scan Average:	52.90
Maximum:	61
Minimum:	44
Avg / Min:	1.20
Guaranteed Max / Min:	2
Max / Min:	1.37
UG (adjacent pts):	1.26
CU:	0.66
No. of Points:	84
LUMINAIRE INFORMATION	
Applied Circuits:	B
No. of Luminaires:	44
Total Load:	56.08 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

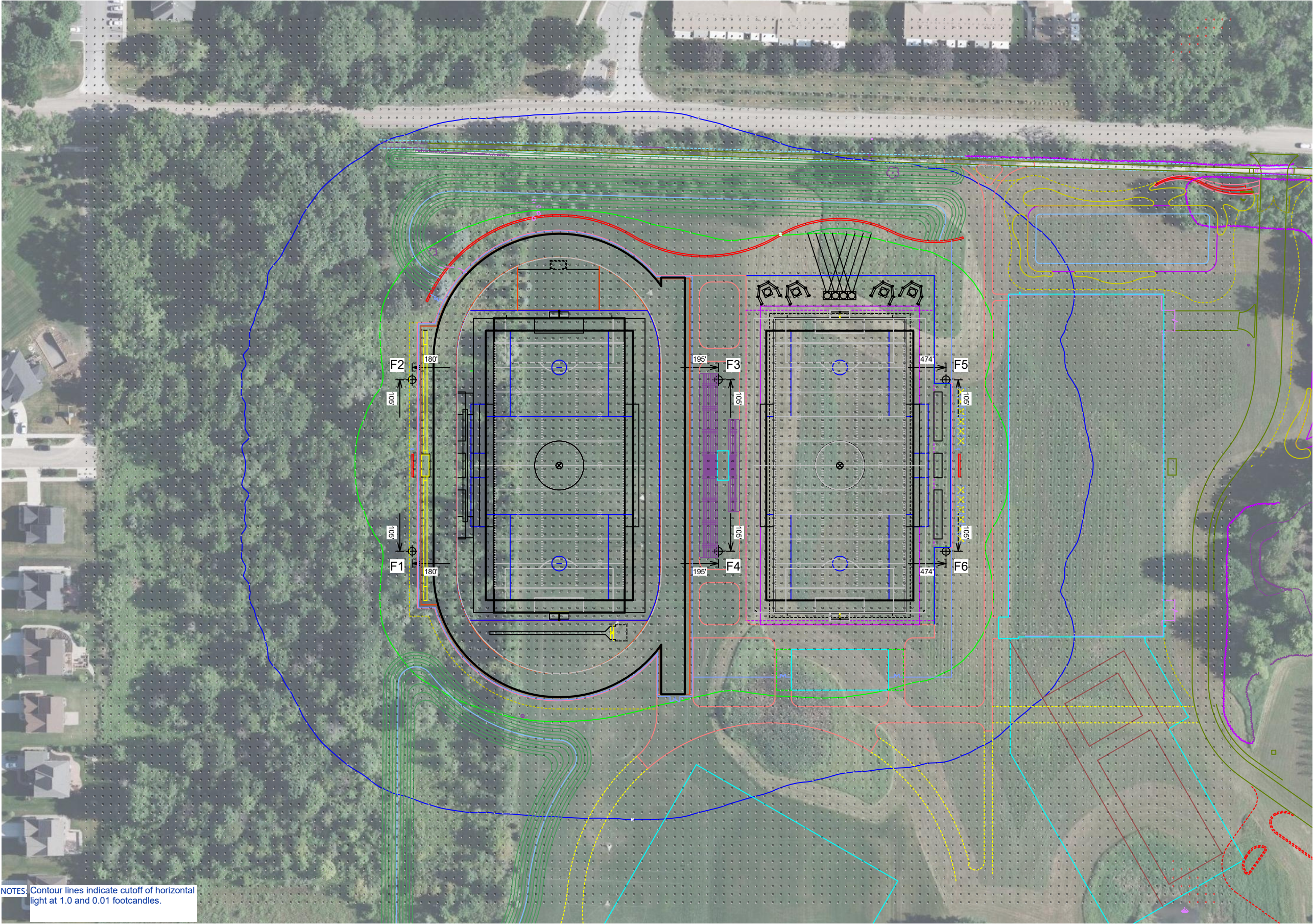
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



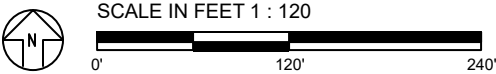
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ILLUMINATION SUMMARY



NOTES: Contour lines indicate cutoff of horizontal light at 1.0 and 0.01 footcandles.



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Detroit Catholic Central High School Football Retrofit
Novi,MI

GRID SUMMARY	
Name:	Blanket Spill
Size:	360' x 160'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	9.83
Maximum:	79
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	6.47
CU:	0.93
No. of Points:	15369
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	98
Total Load:	126.46 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

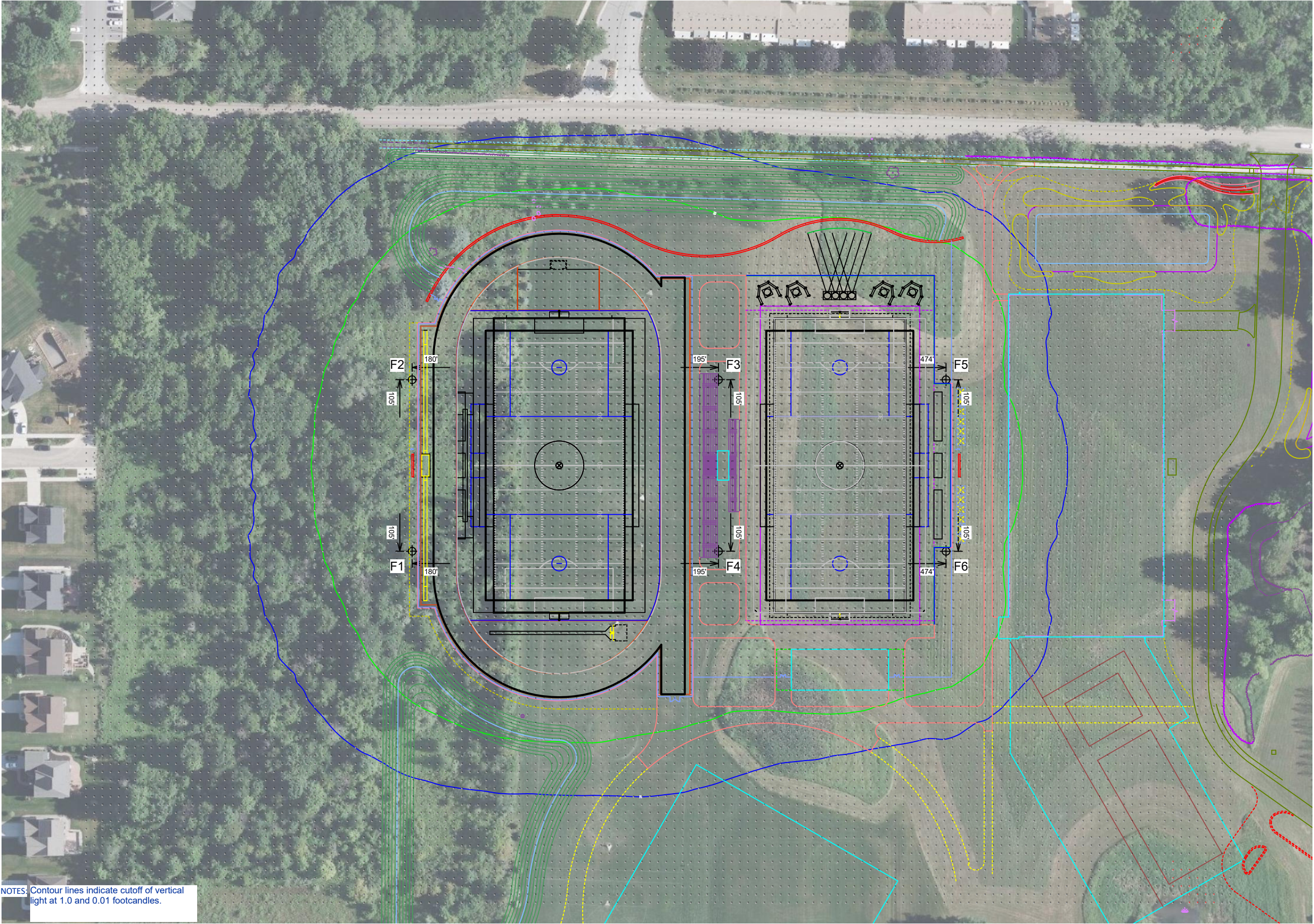
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



Detroit Catholic Central High School Football Retrofit
Novi, MI

GRID SUMMARY	
Name:	Blanket Spill
Size:	360' x 160'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
MAINTAINED MAX VERTICAL FOOTCANDLES	
	Entire Grid
Scan Average:	13.04
Maximum:	118
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	4.65
CU:	0.93
No. of Points:	15369
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	98
Total Load:	126.46 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

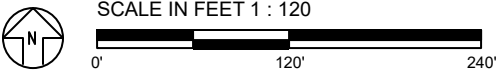
Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗

Detroit Catholic Central High School Football Retrofit
Novi, MI

GRID SUMMARY	
Name:	Blanket Spill
Size:	360' x 160'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

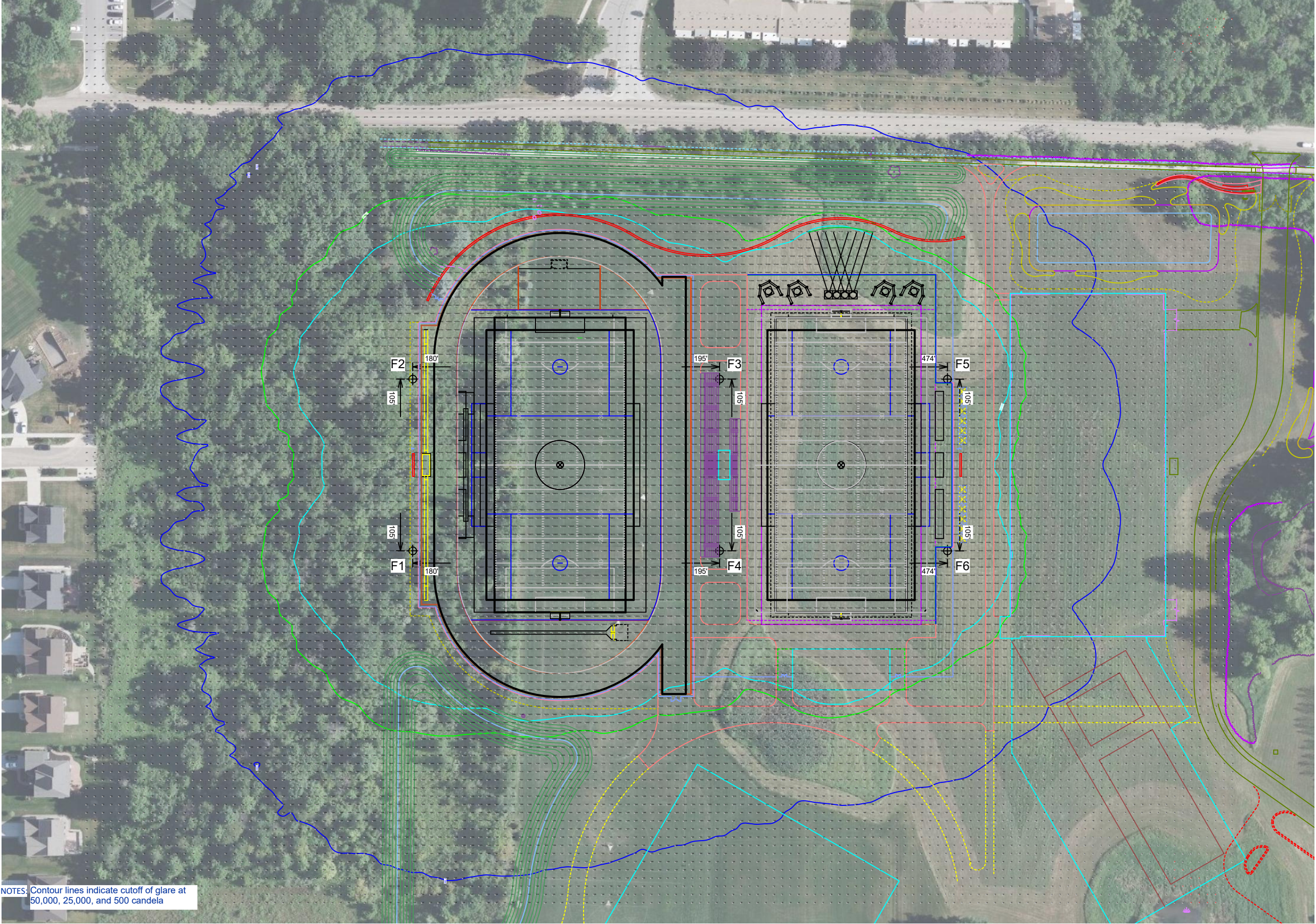
ILLUMINATION SUMMARY	
MAINTAINED CANDELA (PER FIXTURE)	
	Entire Grid
Scan Average:	99194.58
Maximum:	792999
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	120.97
CU:	0.93
No. of Points:	15369
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	98
Total Load:	126.46 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

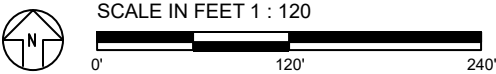
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



NOTES: Contour lines indicate cutoff of glare at 50,000, 25,000, and 500 candela



ENGINEERED DESIGN By: C.Hensley · File #202595Ar2 · 31-Aug-22

Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY

GRID SUMMARY	
Name:	Twelve Mile Rd Spill
Spacing:	30.0'
Height:	3.0' above grade

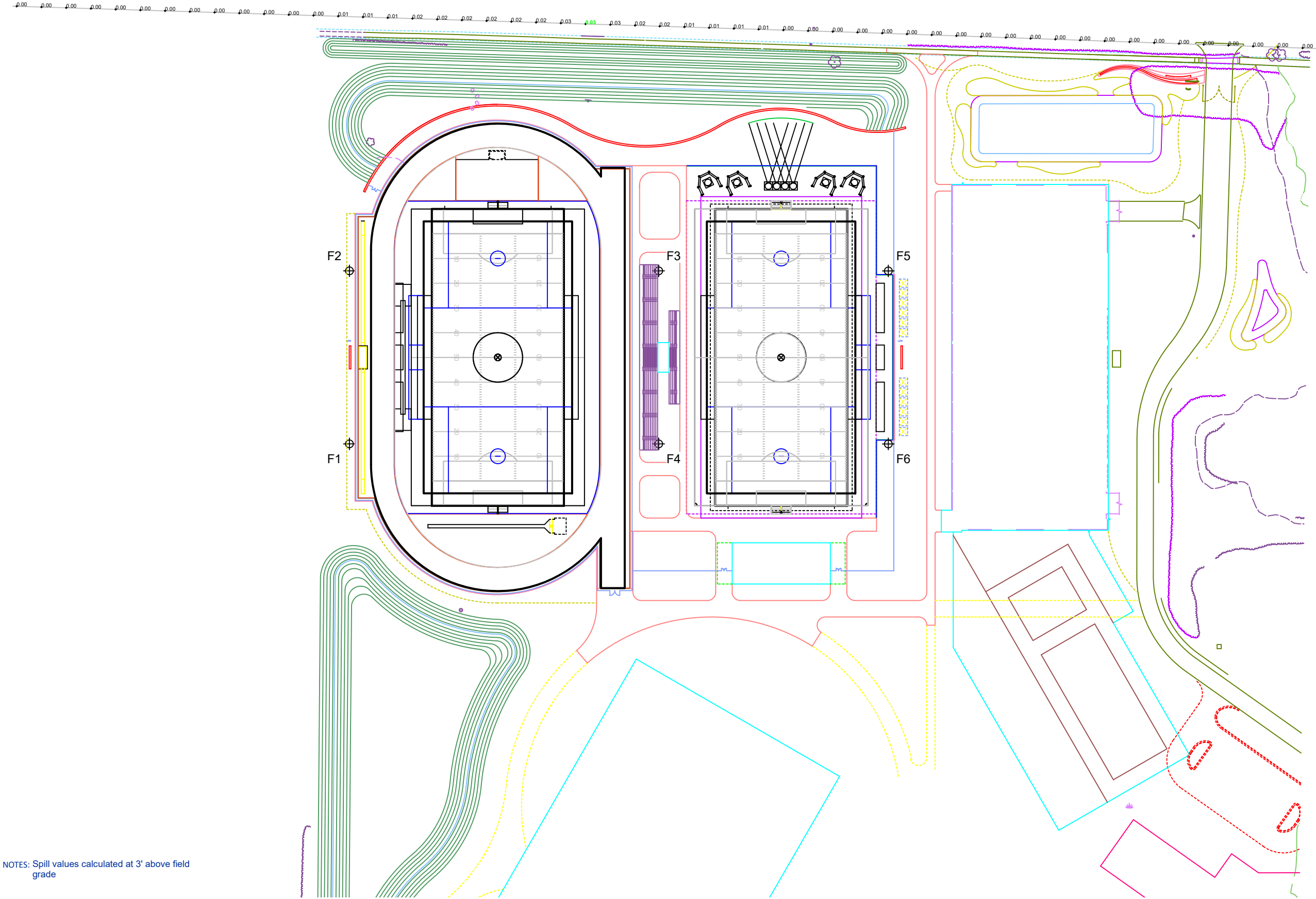
ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0057
Maximum:	0.03
Minimum:	0.00
No. of Points:	59
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	98
Total Load:	126.46 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

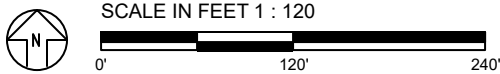
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



NOTES: Spill values calculated at 3' above field grade



ENGINEERED DESIGN By: C.Hensley · File #202595Ar2 · 31-Aug-22

Pole location(s) ⚓ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY

GRID SUMMARY	
Name:	Twelve Mile Rd Spill
Spacing:	30.0'
Height:	3.0' above grade

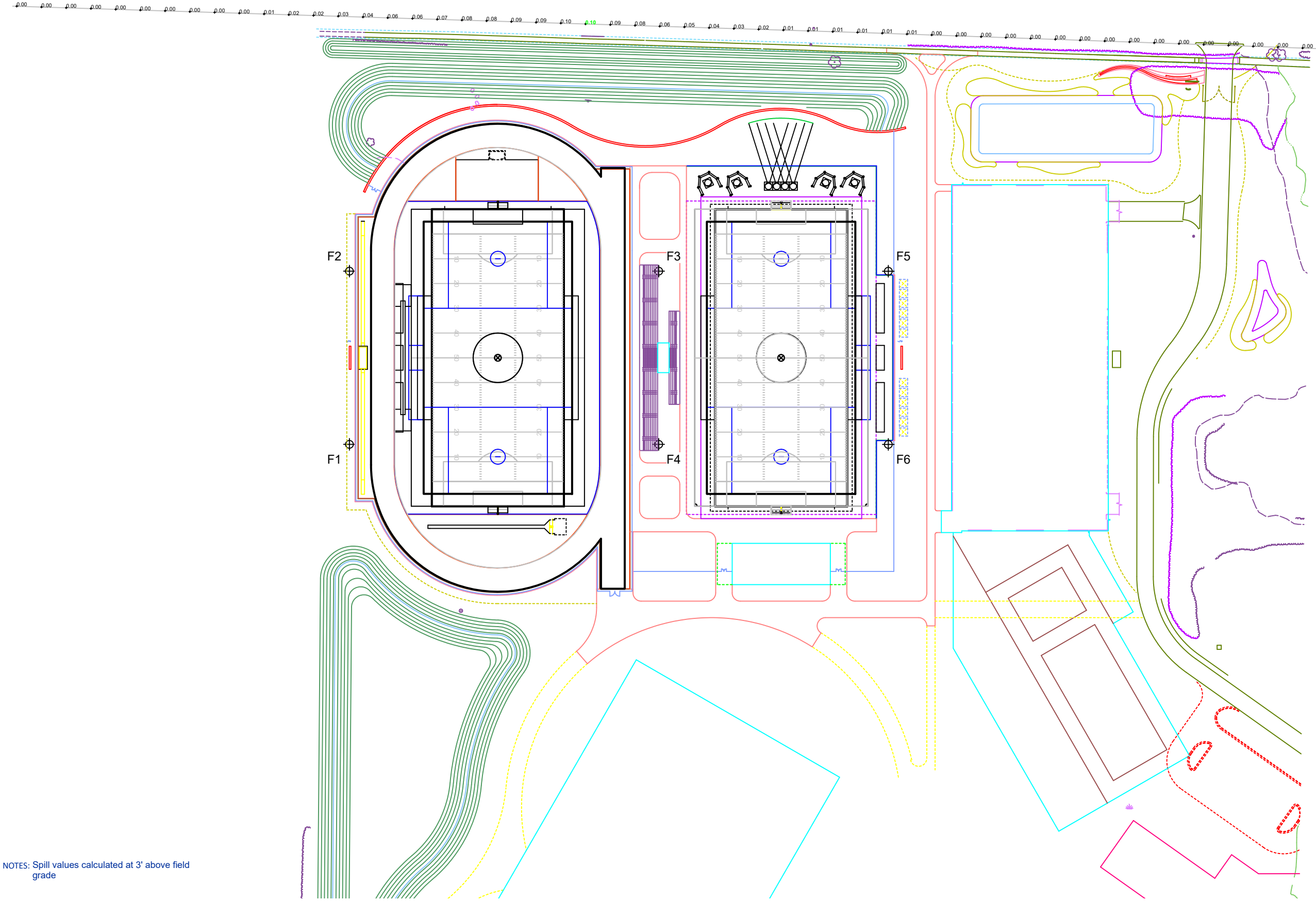
ILLUMINATION SUMMARY	
MAX VERTICAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0225
Maximum:	0.10
Minimum:	0.00
No. of Points:	59
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	98
Total Load:	126.46 kW

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

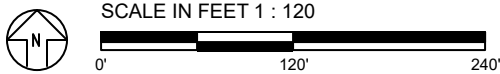
Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



NOTES: Spill values calculated at 3' above field grade



ENGINEERED DESIGN By: C.Hensley · File #202595Ar2 · 31-Aug-22

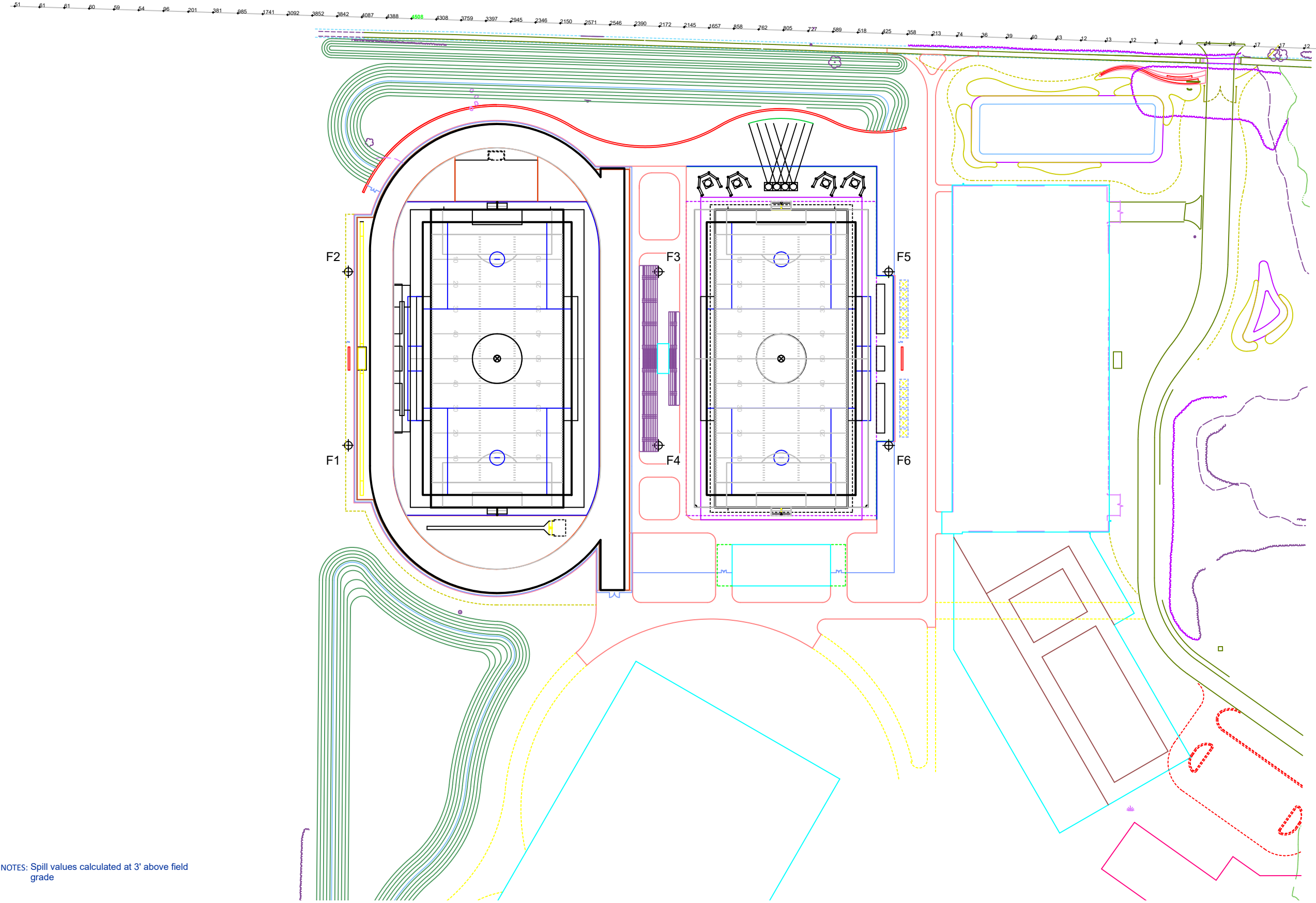
Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY



GRID SUMMARY	
Name:	Twelve Mile Rd Spill
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 1111.0385
Maximum:	4507.74
Minimum:	0.83
No. of Points:	59
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	98
Total Load:	126.46 kW

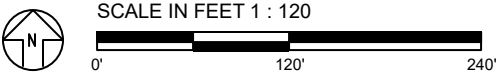
Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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Installation Requirements: Results assume $\pm 3\%$ nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

NOTES: Spill values calculated at 3' above field grade



ENGINEERED DESIGN By: C.Hensley · File #202595Ar2 · 31-Aug-22

Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY

EQUIPMENT LAYOUT

INCLUDES:

- Football 1
- Football 2
- Lacrosse 1
- Lacrosse 2
- Soccer 1
- Soccer 2
- Track

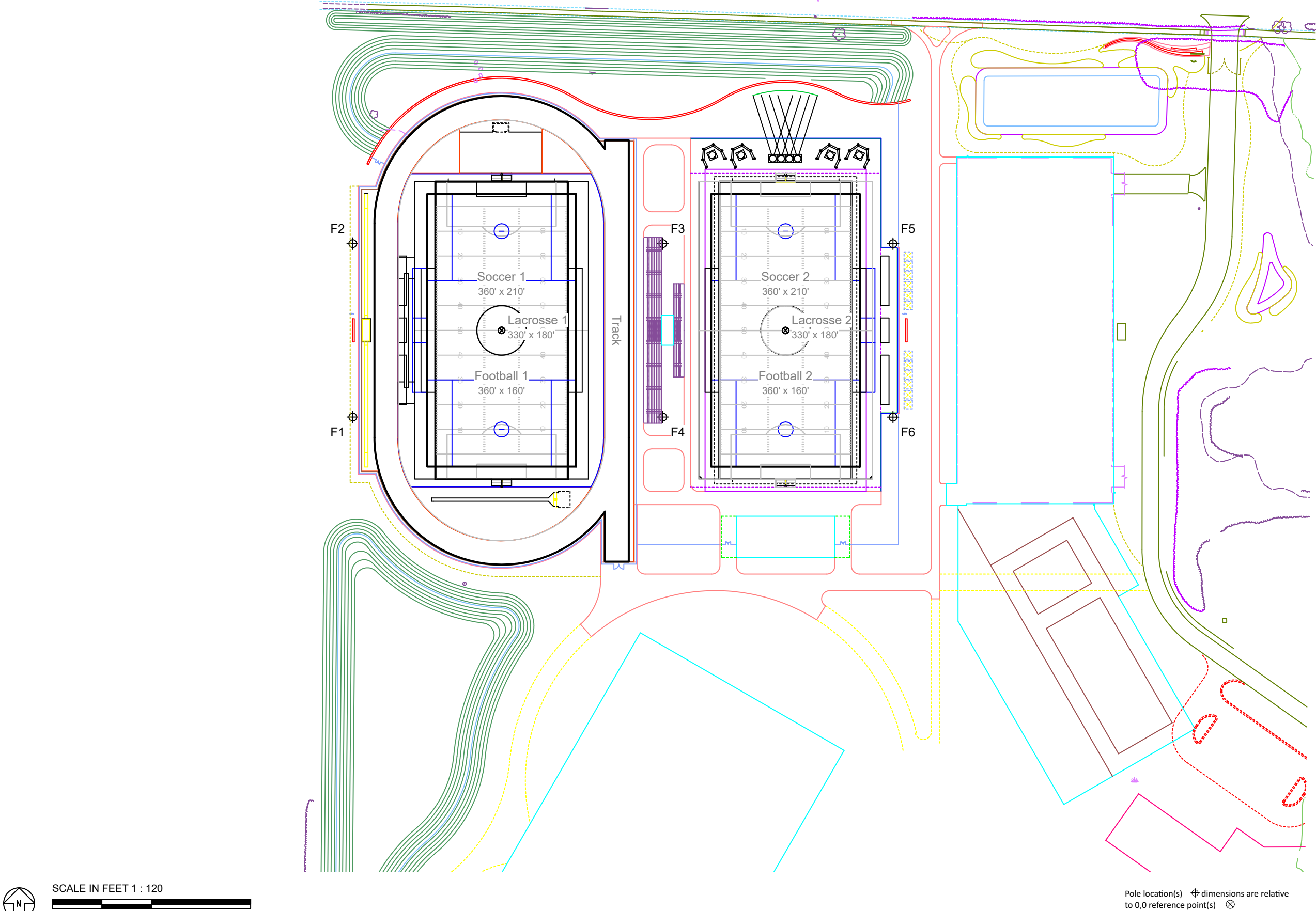
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN						
Pole			Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
2	F1-F2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 11
2	F3-F4	90'	-	15.5' 90'	TLC-BT-575 TLC-LED-1500	2/2* 12/9*
2	F5-F6	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1500	2 9
6	TOTALS					98

* This structure utilizes a back-to-back mounting configuration

SINGLE LUMINAIRE AMPERAGE DRAW CHART							
Ballast Specifications (.90 min power factor)		Line Amperage Per Luminaire (max draw)					
Single Phase Voltage		208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
TLC-BT-575		3.4	3.2	2.9	2.5	2.0	1.8
TLC-LED-1500		8.5	8.1	7.4	6.4	5.1	4.7



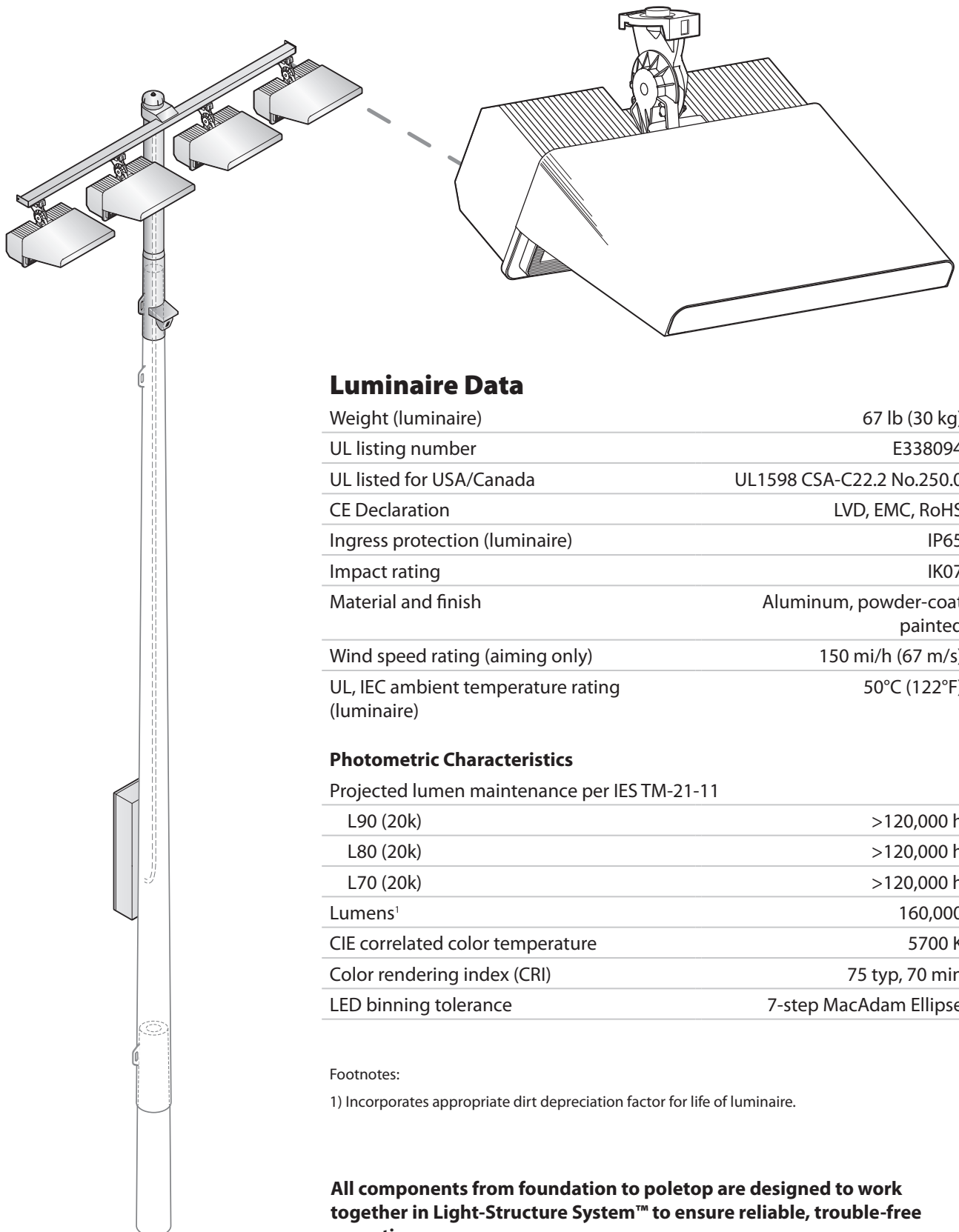
Pole location(s) ⚓ dimensions are relative to 0,0 reference point(s) ⊗



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Luminaire and Driver – TLC-LED-1500



Luminaire Data

Weight (luminaire)	67 lb (30 kg)
UL listing number	E338094
UL listed for USA/Canada	UL1598 CSA-C22.2 No.250.0
CE Declaration	LVD, EMC, RoHS
Ingress protection (luminaire)	IP65
Impact rating	IK07
Material and finish	Aluminum, powder-coat painted
Wind speed rating (aiming only)	150 mi/h (67 m/s)
UL, IEC ambient temperature rating (luminaire)	50°C (122°F)

Photometric Characteristics

Projected lumen maintenance per IES TM-21-11

L90 (20k)	>120,000 h
L80 (20k)	>120,000 h
L70 (20k)	>120,000 h
Lumens ¹	160,000
CIE correlated color temperature	5700 K
Color rendering index (CRI)	75 typ, 70 min
LED binning tolerance	7-step MacAdam Ellipse

Footnotes:

1) Incorporates appropriate dirt depreciation factor for life of luminaire.

All components from foundation to poletop are designed to work together in Light-Structure System™ to ensure reliable, trouble-free operation.

Luminaire and Driver – TLC-LED-1500

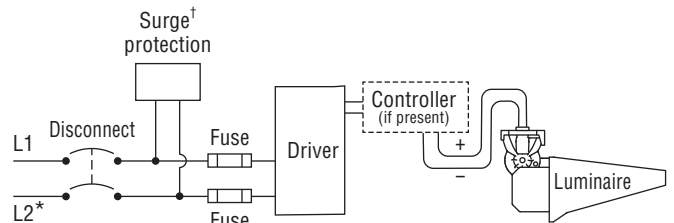
Driver Data

Electrical Data

Rated wattage¹

Per driver	1430 W
Per luminaire	1430 W
Number of luminaires per driver	1
Starting (inrush) current	<40 A, 256 μ s
Fuse rating	15 A
UL, IEC ambient temperature rating, electrical components enclosure	50°C (122°F)
Ingress protection, electrical components enclosure	IP54
Efficiency	95%
Dimming mode	optional
Range, energy consumption	12 – 100%
Range, light output	17 – 100%
Flicker	<2%
Total harmonic distortion (THD) at full output	<20%

Typical Wiring



* If L2 is neutral then not switched or fused.
† Not present if indoor installation.

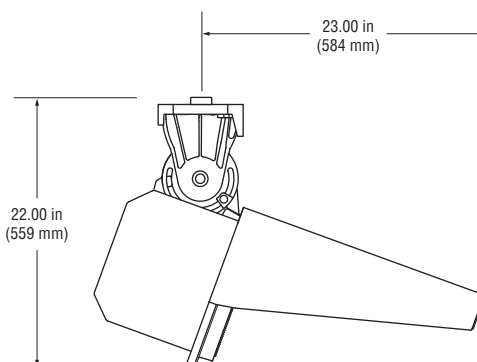
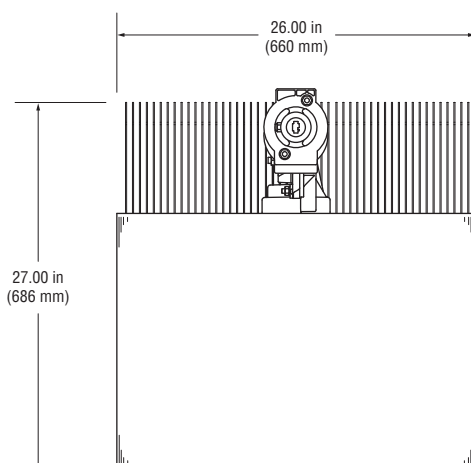
	200 Vac 50/60 Hz	208 Vac 60 Hz	220 Vac 50/60 Hz	230 Vac 50 Hz	240 Vac 50/60 Hz	277 Vac 60 Hz	347 Vac 60 Hz	380 Vac 50/60 Hz	400 Vac 50 Hz	415 Vac 50 Hz	480 Vac 60 Hz
Max operating current per luminaire ²	8.86 A	8.52 A	8.06 A	7.71 A	7.39 A	6.40 A	5.11 A	4.67 A	4.43 A	4.27 A	3.70 A

Footnotes:

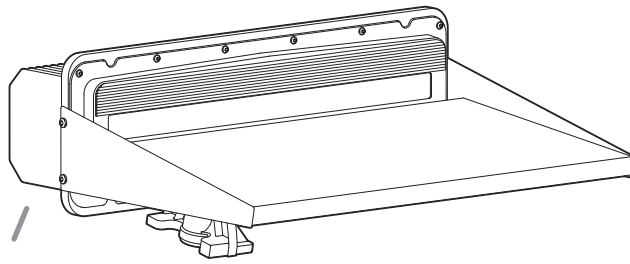
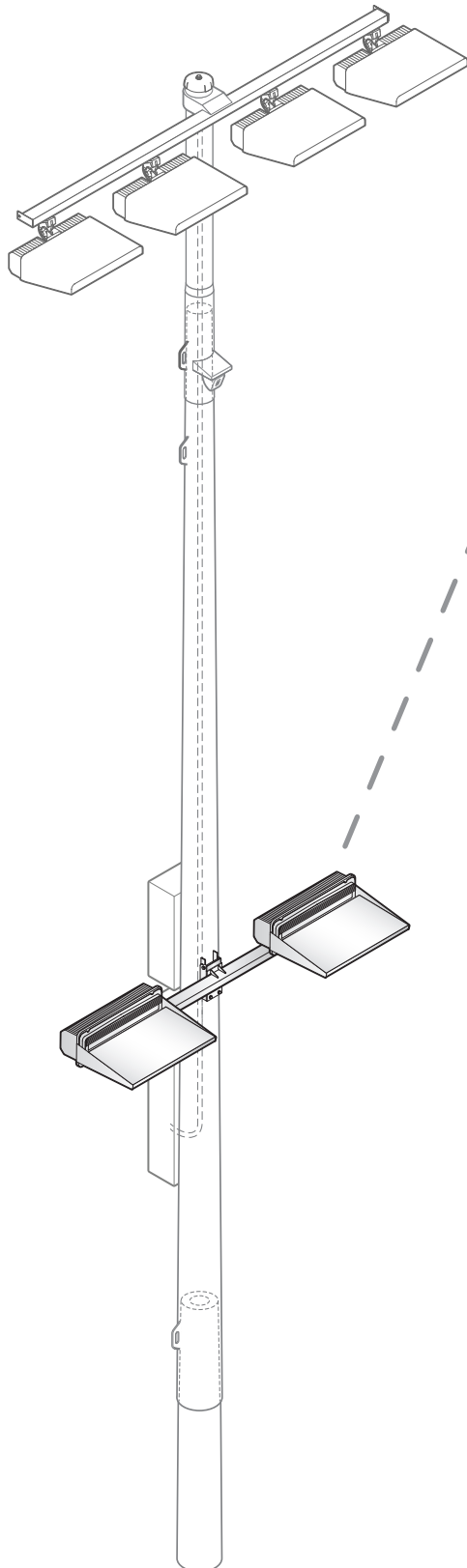
- 1) Rated wattage is the power consumption, including driver efficiency losses, at stabilized operation in 25°C ambient temperature environment.
- 2) Operating current includes allowance for 0.90 minimum power factor, operating temperature, and LED light source manufacturing tolerances.

Notes

1. Use thermal magnetic HID-rated or D-curve circuit breakers.
2. See *Musco Control System Summary* for circuit information.



Luminaire and Driver – TLC-BT-575



Luminaire Data

Weight (luminaire)	34 lb (15 kg)
UL listing number	E338094
UL listed for USA/Canada	UL1598 CSA-C22.2 No.250.0
CE Declaration	LVD, EMC, RoHS
Ingress protection (luminaire)	IP65
Impact rating	IK07
Material and finish	Aluminum, powder-coat painted
Wind speed rating (aiming only)	150 mi/h (67 m/s)
UL, IEC ambient temperature rating (luminaire)	50°C (122°F)

Photometric Characteristics

Projected lumen maintenance per IES TM-21-11

L90 (20k)	>120,000 h
L80 (20k)	>120,000 h
L70 (20k)	>120,000 h
Lumens ¹	52,000
CIE correlated color temperature	5700 K
Color rendering index (CRI)	75 typ, 70 min
LED binning tolerance	7-step MacAdam Ellipse

Footnotes:

1) Incorporates appropriate dirt depreciation factor for life of luminaire.

All components from foundation to poletop are designed to work together in Light-Structure System™ to ensure reliable, trouble-free operation.

Luminaire and Driver – TLC-BT-575

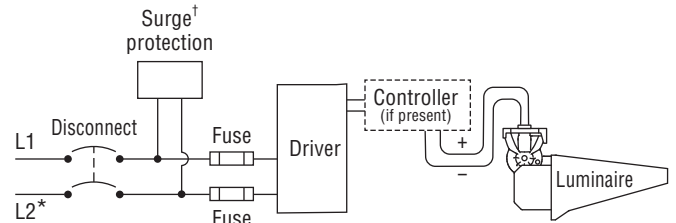
Driver Data

Electrical Data

Rated wattage¹

Per driver	575 W
Per luminaire	575 W
Number of luminaires per driver	1
Starting (inrush) current	<40 A, 256 μ s
Fuse rating	15 A
UL, IEC ambient temperature rating, electrical components enclosure	50°C (122°F)
Ingress protection, electrical components enclosure	IP54
Efficiency	95%
Total harmonic distortion (THD) at full output	<20%

Typical Wiring



* If L2 is neutral then not switched or fused.

† Not present if indoor installation.

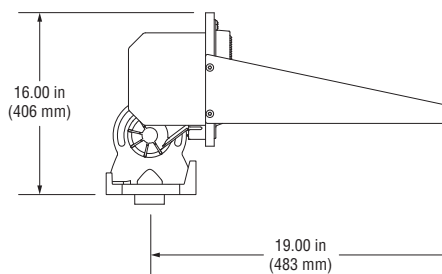
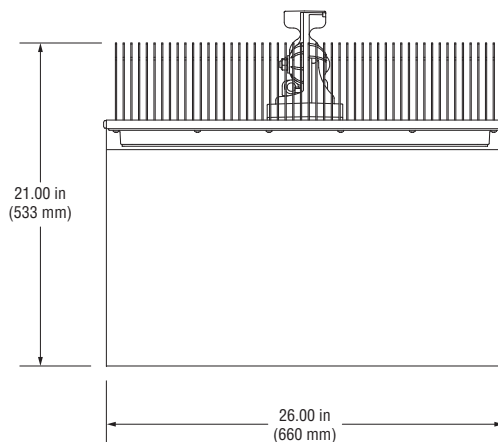
	200 Vac 50/60 Hz	208 Vac 60 Hz	220 Vac 50/60 Hz	230 Vac 50 Hz	240 Vac 50/60 Hz	277 Vac 60 Hz	347 Vac 60 Hz	380 Vac 50/60 Hz	400 Vac 50 Hz	415 Vac 50 Hz	480 Vac 60 Hz
Max operating current per luminaire ²	3.48 A	3.35 A	3.16 A	3.03 A	2.90 A	2.51 A	2.01 A	1.83 A	1.74 A	1.68 A	1.45 A

Footnotes:

- 1) Rated wattage is the power consumption, including driver efficiency losses, at stabilized operation in 25°C ambient temperature environment.
- 2) Operating current includes allowance for 0.90 minimum power factor, operating temperature, and LED light source manufacturing tolerances.

Notes

1. Use thermal magnetic HID-rated or D-curve circuit breakers.
2. See *Musco Control System Summary* for circuit information.

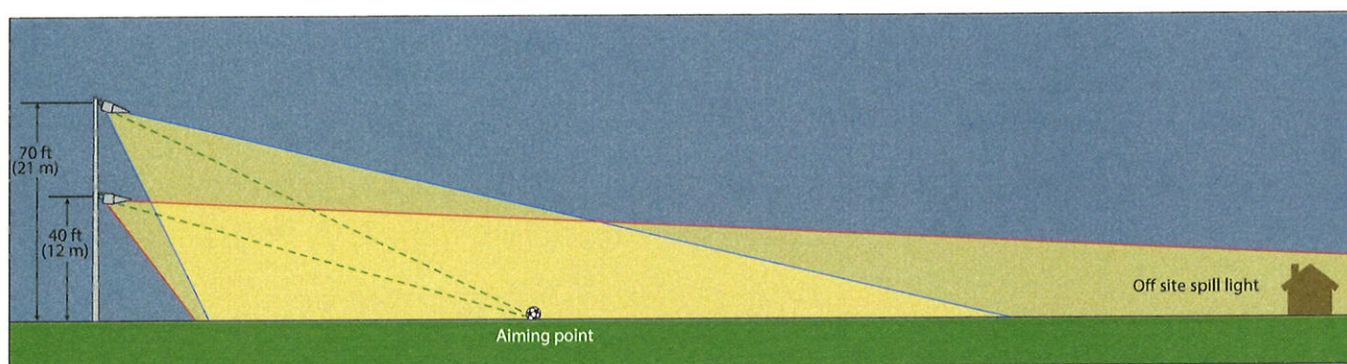




C. MAXIMUM HEIGHT (SEC.5.7.3.A)

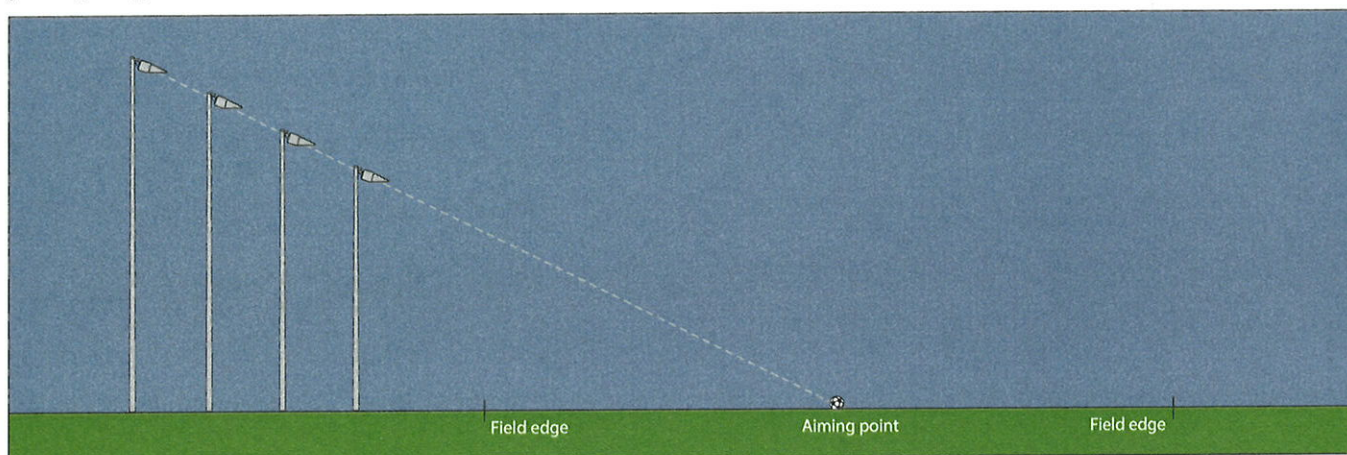
Pole Height

Pole height impacts aiming angles, which directly affect the evenness of light distribution across the field and the potential for spill light pollution. Normally, taller poles allow fixtures to be aimed more directly down onto the playing surface, reducing the amount of light spilling into unwanted areas. In some cases, city ordinances or other factors require the use of shorter poles, a challenge that experienced manufacturers can typically resolve with customizations like additional poles or creative aiming strategies to achieve your lighting goals on and off the field.



Pole Distance

The optimal height of the poles needed for your lighting system and resulting project cost is also affected by their distance from the playing surface. Structures such as bleachers and buildings will impact pole location and resulting distance from the field. Future expansions or other facility plans should be discussed with your lighting manufacturer.



Musco's expert project managers and engineers will work with you to design the ideal lighting system for your specific needs.

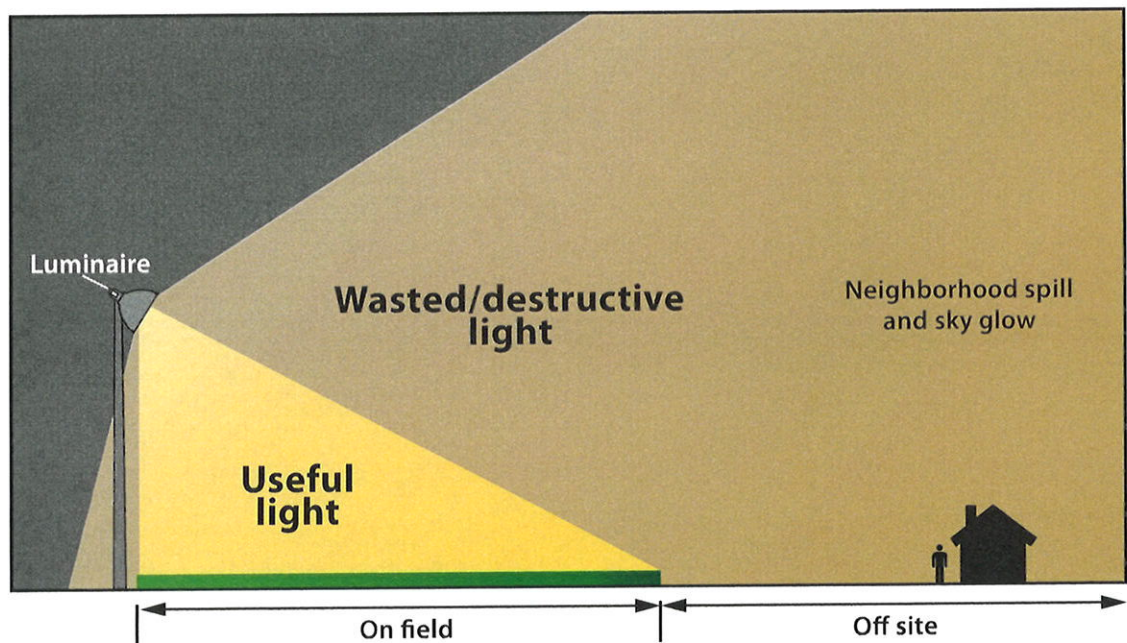
**D. MAX. ILLUMINATION ADJACENT TO
NON-RESIDENTIAL (SEC.5.7.3.K)
&
CUT OFF ANGLES (SEC.5.7.3.L)**

5. Why should I be concerned with spill light and glare?

The ability to effectively control spill light and glare is critical for a number of reasons.

Spill Light is Wasted Energy

Fixtures with poor light control waste light by allowing it to go off the field into neighborhood spill and sky glow. Proper light control redirects wasted spill light back onto the playing surface. Efficient fixture and system design, along with application expertise, will reduce the number of fixtures needed to get useful light onto the field. This can also significantly cut the energy consumption and carbon footprint at your facility.



RETROFITS

Planning a retrofit in which new LEDs are swapped in for old fixtures on a 1:1 basis can lead to serious problems with glare and spill if the fixture is not properly designed. Since LED involves hundreds of tiny light sources instead of one large one, effectively controlling the light being emitted is more challenging.

Impact on Players and Fans

Due to the intensity of the LED light source, increased measures should be taken to provide optic controls that minimize glare. Poorly designed fixtures create excessive glare, making it difficult for fans to follow the action and for players to follow the ball, creating the possibility for injury. Players competing on multi-field complexes can also be affected by glare from adjacent fields.

Impact on Neighbors

Neighboring homes and businesses can be significantly impacted if your lights create glare and/or spill that disrupt their evening hours. Some schools and organizations have even been forced to leave their lights off by homeowners associations and municipalities until they resolve problems with glare and spill.

There's a growing concern for wasting energy and for limiting the impact of light pollution. Many communities are enacting environmental light pollution ordinances to keep wasted light from impacting roadways, astronomical research facilities, and nearby wildlife habitats.

Community Growth

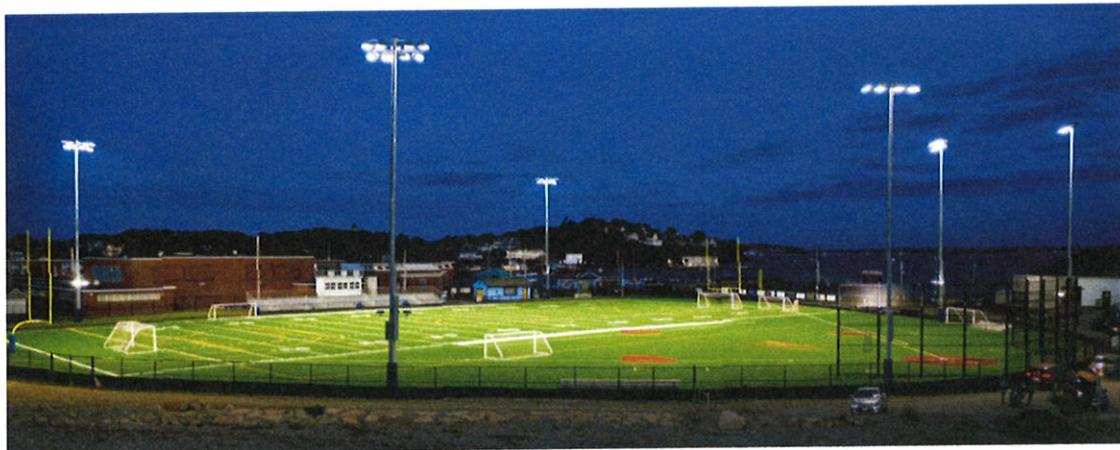
Even if there aren't currently homes in the immediate area around your facility, that could change. Communities often grow around sports facilities, and your lighting system should last 20 years or more. By minimizing spill light and glare now, you'll ensure happy neighbors when they do arrive and receive fewer complaints in the future.



Glare impacts players



Musco gets the glare out of the players' eyes



Musco has been evolving its advanced glare and spill control technology for over four decades, and has nearly two dozen patents focused on better light control.



CITY OF NOVI

RESPONSE FORM

CATHOLIC CENTRAL NORTH CAMPUS, JSP 22-37, FOR REVISED SPECIAL LAND USE PERMIT, PRELIMINARY SITE PLAN, WETLAND PERMIT, WOODLAND PERMIT, AND STORMWATER MANAGEMENT PLAN APPROVAL. THE SUBJECT PROPERTY IS ZONED R-4, R-1 AND I-1.

You are invited to attend the meeting and voice your support or objection. If you are unable to attend, you may use this form to reply by mail, email, or fax. Returning this form by mail, email, or fax has as much validity as verbal comments. Should you choose to email this form, please send to bpeacock@cityofnovi.org.

Information regarding the project is available the Saturday before the meeting date at: <https://www.cityofnovi.org/Agendas-Minutes/Planning-Commission/2021.aspx>. Participants may also choose to submit comments that can be read into the record. Comments shall be sent prior to 7 p.m. on the day of the meeting.

Plans are available for viewing during the City's regular business hours, Monday thru Friday, from 8:00 A.M. to 5:00 P.M., at the Community Development Department and also by contacting bmcbeth@cityofnovi.org. Signed comments will be added to the record of the meeting. Unsigned or anonymous comments **WILL NOT** be considered. Please return this form prior to 4:00 PM on the day of the meeting to:

Community Development Department
45175 W. Ten Mile, Novi, Michigan 48375
248-347-0475 (Main) 248-735-5633 (Fax)



I SUPPORT



I OBJECT

TO THE ABOVE REQUEST FOR THE FOLLOWING REASONS:

Improvements at Catholic Central means an overall
development of educational facilities for the area
surrounding.

SIGNATURE: _____

PRINT NAME: _____

ADDRESS: _____

IN ACCORDANCE WITH MCL 125.3103, THE MANAGER OR OWNER OF A SINGLE STRUCTURE CONTAINING MORE THAN 4 DWELLING UNITS OR OTHER DISTINCT SPATIAL AREAS OWNED OR LEASED BY DIFFERENT PERSONS, IS HEREBY REQUESTED TO POST THE NOTICE AT A PRIMARY ENTRANCE TO THE STRUCTURE(S).