



## COMMUNITY DEVELOPMENT DEPARTMENT

45175 Ten Mile Road  
Novi, MI 48375  
(248) 347-0415 Phone  
(248) 735-5600 Facsimile  
[www.cityofnovi.org](http://www.cityofnovi.org)

# ZONING BOARD OF APPEALS STAFF REPORT

**FOR:** City of Novi Zoning Board of Appeals

**MEETING DATE:** November 19, 2024

**REGARDING:** 27225 Wixom Road Parcel # 50-22-18-200-027 (PZ24-0052)

**BY:** Alan Hall, Deputy Director Community Development

### I. GENERAL INFORMATION:

#### **Applicant**

Catholic Central High School

#### **Variance Type**

Dimensional Variance

#### **Property Characteristics**

Zoning District: This property is zoned One Family Residential (R-1)

Location: south of Twelve Mile Road, west of Wixom Road

Parcel #: 50-22-18-200-027

#### **Request**

The applicant is requesting a variance from the City of Novi Zoning Ordinance Section 5.7.3.A to allow the height of the field light poles of 80 feet (25 ft. permitted, variance of 55 ft.).

### II. STAFF COMMENTS:

*The applicant, Catholic Central High School, is seeking a variance to increase the height of their field light poles to 80-feet (A variance of 55-feet). The 80-foot pole height is similar to other schools in the area.*

*On March 14, 2023 – the ZBA approved this same request.*

**III. RECOMMENDATION:**

**The Zoning Board of Appeals may take one of the following actions:**

1. I move that we **grant** the variance in Case No. **PZ24-0052**, sought by \_\_\_\_\_, for \_\_\_\_\_ because Petitioner has shown practical difficulty requiring \_\_\_\_\_.

(a) Without the variance Petitioner will be unreasonably prevented or limited with respect to use of the property because \_\_\_\_\_.

(b) The property is unique because \_\_\_\_\_.

(c) Petitioner did not create the condition because \_\_\_\_\_.

(d) The relief granted will not unreasonably interfere with adjacent or surrounding properties because \_\_\_\_\_.

(e) The relief is consistent with the spirit and intent of the ordinance because \_\_\_\_\_.

(f) The variance granted is subject to:

1. \_\_\_\_\_.
2. \_\_\_\_\_.
3. \_\_\_\_\_.
4. \_\_\_\_\_.

2. I move that we **deny** the variance in Case No. **PZ24-0052**, sought by \_\_\_\_\_, for \_\_\_\_\_ because Petitioner has not shown practical difficulty requiring \_\_\_\_\_.

(a) The circumstances and features of the property including \_\_\_\_\_ are not unique because they exist generally throughout the City.

(b) The circumstances and features of the property relating to the variance request are self-created because \_\_\_\_\_.

(c) The failure to grant relief will result in mere inconvenience or inability to attain higher economic or financial return based on Petitioners statements that \_\_\_\_\_.

(d) The variance would result in interference with the adjacent and surrounding properties by \_\_\_\_\_.

(e) Granting the variance would be inconsistent with the spirit and intent of the ordinance to \_\_\_\_\_.

Should you have any further questions with regards to the matter please feel free to contact me at (248) 347-0417.

Alan Hall – Deputy Director Community Development - City of Novi



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## ZONING BOARD OF APPEALS APPLICATION

RECEIVED

SEP 11 2024

CITY OF NOVI  
COMMUNITY DEVELOPMENT

APPLICATION MUST BE FILLED OUT COMPLETELY

I. PROPERTY INFORMATION (Address of subject ZBA Case)			
PROJECT NAME / SUBDIVISION Catholic Central High School North Campus			
ADDRESS 27225 Wixom Rd., Novi, MI 48374		LOT/SIUTE/SPACE #	
SIDWELL # 50-22-18 - 200 - 026 and -027		May be obtain from Assessing Department (248) 347-0485	
CROSS ROADS OF PROPERTY Wixom and Grand River			
IS THE PROPERTY WITHIN A HOMEOWNER'S ASSOCIATION JURISDICTION? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		REQUEST IS FOR: <input type="checkbox"/> RESIDENTIAL <input checked="" type="checkbox"/> COMMERCIAL <input type="checkbox"/> VACANT PROPERTY <input type="checkbox"/> SIGNAGE	
DOES YOUR APPEAL RESULT FROM A NOTICE OF VIOLATION OR CITATION ISSUED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
II. APPLICANT INFORMATION			
<b>A. APPLICANT</b>		EMAIL ADDRESS eturek@catholiccentral.net	CELL PHONE NO. 248-318-9690
NAME Edward Turek		TELEPHONE NO. 248-596-3899	
ORGANIZATION/COMPANY Catholic Central High School		FAX NO.	
ADDRESS 27225 Wixom Rd.		CITY Novi	STATE MI
			ZIP CODE 48374
<b>B. PROPERTY OWNER</b> <input checked="" type="checkbox"/> CHECK HERE IF APPLICANT IS ALSO THE PROPERTY OWNER			
Identify the person or organization that owns the subject property:		EMAIL ADDRESS	CELL PHONE NO.
NAME		TELEPHONE NO.	
ORGANIZATION/COMPANY		FAX NO.	
ADDRESS		CITY	STATE
			ZIP CODE
III. ZONING INFORMATION			
<b>A. ZONING DISTRICT</b>			
<input type="checkbox"/> R-A <input checked="" type="checkbox"/> R-1 <input type="checkbox"/> R-2 <input type="checkbox"/> R-3 <input type="checkbox"/> R-4 <input type="checkbox"/> RM-1 <input type="checkbox"/> RM-2 <input type="checkbox"/> MH <input type="checkbox"/> I-1 <input type="checkbox"/> I-2 <input type="checkbox"/> RC <input type="checkbox"/> TC <input type="checkbox"/> TC-1 <input type="checkbox"/> OTHER <u>B-1</u>			
<b>B. VARIANCE REQUESTED</b>			
INDICATE ORDINANCE SECTION (S) AND VARIANCE REQUESTED:			
1. Section <u>5.7.3.A</u> Variance requested <u>Increase the height of the field light poles to 80 feet (this is a</u>			
2. Section _____ Variance requested <u>renewal of a variance granted on March 14, 2023).</u>			
3. Section _____ Variance requested _____			
4. Section _____ Variance requested _____			
IV. FEES AND DRAWINGS			
<b>A. FEES</b>			
<input type="checkbox"/> Single Family Residential (Existing) \$200 <input type="checkbox"/> (With Violation) \$250 <input type="checkbox"/> Single Family Residential (New) \$250 <input checked="" type="checkbox"/> Multiple/Commercial/Industrial \$300 <input type="checkbox"/> (With Violation) \$400 <input type="checkbox"/> Signs \$300 <input type="checkbox"/> (With Violation) \$400 <input type="checkbox"/> House Moves \$300 <input type="checkbox"/> Special Meetings (At discretion of Board) \$600			
<b>B. DRAWINGS 1-COPY &amp; 1 DIGITAL COPY SUBMITTED AS A PDF</b>			
<ul style="list-style-type: none"> <li>• Dimensioned Drawings and Plans</li> <li>• Site/Plot Plan</li> <li>• Existing or proposed buildings or addition on the property</li> <li>• Number &amp; location of all on-site parking, if applicable</li> </ul>		<ul style="list-style-type: none"> <li>• Existing &amp; proposed distance to adjacent property lines</li> <li>• Location of existing &amp; proposed signs, if applicable</li> <li>• Floor plans &amp; elevations</li> <li>• Any other information relevant to the Variance application</li> </ul>	







**Community Development Department**

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**REVIEW STANDARDS  
DIMENSIONAL VARIANCE**

The Zoning Board of Appeals (ZBA) will review the application package and determine if the proposed Dimensional Variance meets the required standards for approval. In the space below, and on additional paper if necessary, explain how the proposed project meets each of the following standards. (Increased costs associated with complying with the Zoning Ordinance will not be considered a basis for granting a Dimensional Variance.)

**Standard #1. Circumstances or Physical Conditions.**

Explain the circumstances or physical conditions that apply to the property that do not apply generally to other properties in the same zoning district or in the general vicinity. Circumstances or physical conditions may include:

- a. Shape of Lot.** Exceptional narrowness, shallowness or shape of a specific property in existence on the effective date of the Zoning Ordinance or amendment.  
 Not Applicable     Applicable    If applicable, describe below:

*and/or*

- b. Environmental Conditions.** Exceptional topographic or environmental conditions or other extraordinary situations on the land, building or structure.  
 Not Applicable     Applicable    If applicable, describe below:

*and/or*

- c. Abutting Property.** The use or development of the property immediately adjacent to the subject property would prohibit the literal enforcement of the requirements of the Zoning Ordinance or would involve significant practical difficulties.  
 Not Applicable     Applicable    If applicable, describe below:

## **Standard #2. Not Self-Created.**

Describe the immediate practical difficulty causing the need for the Dimensional Variance, that the need for the requested variance is not the result of actions of the property owner or previous property owners (i.e., is not self-created).

Due to limited space, the proposed fields are located to optimize the available property. Field lights are required to maximize the use of the fields and meet the needs of the school.

## **Standard #3. Strict Compliance.**

Explain how the Dimensional Variance in strict compliance with regulations governing area, setback, frontage, height, bulk, density or other dimensional requirements will unreasonably prevent the property owner from using the property for a permitted purpose, or will render conformity with those regulations unnecessarily burdensome.

Pole height impacts aiming angles, which directly affect the evenness of light distribution across the field and the potential for spill light pollution. Taller poles allow fixtures to be aimed more directly down onto the playing surface, reducing the amount of light spilling into unwanted areas.

## **Standard #4. Minimum Variance Necessary.**

Explain how the Dimensional Variance requested is the minimum variance necessary to do substantial justice to the applicant as well as to other property owners in the district.

The proposed pole height of 80 feet is typical for this type of use to maximize light distribution. Please note that this same lighting system was installed at Novi High School (please see attached advertisement).

## **Standard #5. Adverse Impact on Surrounding Area.**

Explain how the Dimensional Variance will not cause an adverse impact on surrounding property, property values, or the use and enjoyment of property in the neighborhood or zoning district.

Sports field lighting fixtures are provided with glare-reducing optics and are mounted to an 80'-0" pole to optimize aiming and reduce glare from adjacent properties. The proposed pole height allows for maximum light distribution of the fields while reducing the foot candles to zero at the property lines. Please see the attached photometric study and additional information.



**CIVIL ENGINEER/LAND SURVEYOR:**

ZEIMET WOZNAK AND ASSOCIATES, INC.  
 55800 GRAND RIVER, SUITE 100  
 NEW HUDSON, MI 48165  
 PHONE: (248) 437-5099 FAX: (248) 437-5222  
 CONTACT: ANDY WOZNAK

**WETLAND/WOODLAND CONSULTANT:**

BARR ENGINEERING  
 3005 BOARDWALK DR.  
 ANN ARBOR, MI 48108  
 PHONE: (734) 922-440  
 CONTACT: WOODY HELD

**LANDSCAPE ARCHITECT:**

GRISSIM METZ ANDRIESE ASSOCIATES  
 15000 N. EDWARD HINES DRIVE  
 PLYMOUTH, MI 48170  
 PHONE: (248) 347-7010  
 CONTACT: RICH HOUDEK

**ARCHITECT:**

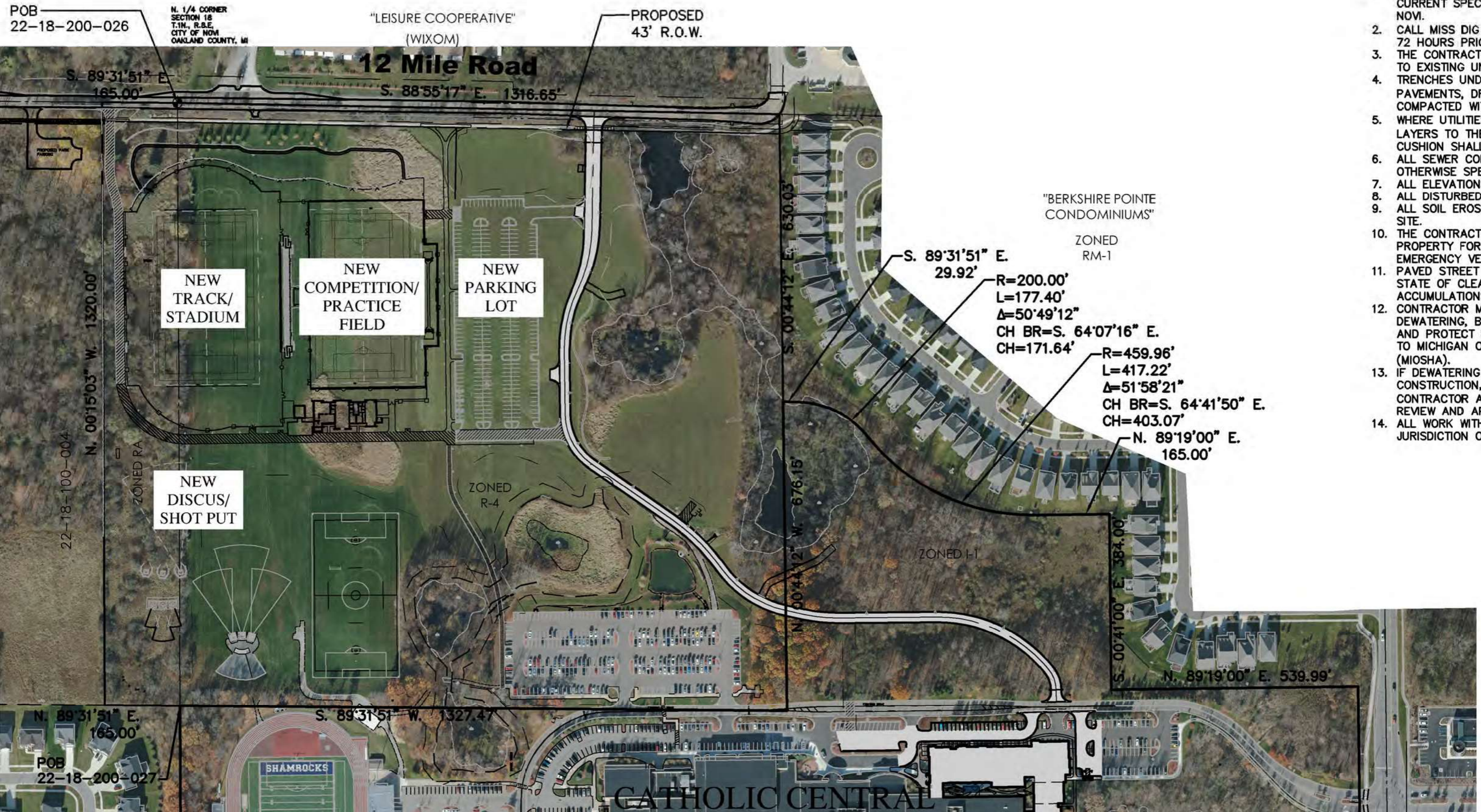
IDS  
 1441 WEST LONG LAKE, SUITE 200  
 TROY, MI 48098  
 PHONE: (248) 823-2100  
 CONTACT: BRUCE SNYDER

**CONSTRUCT:**

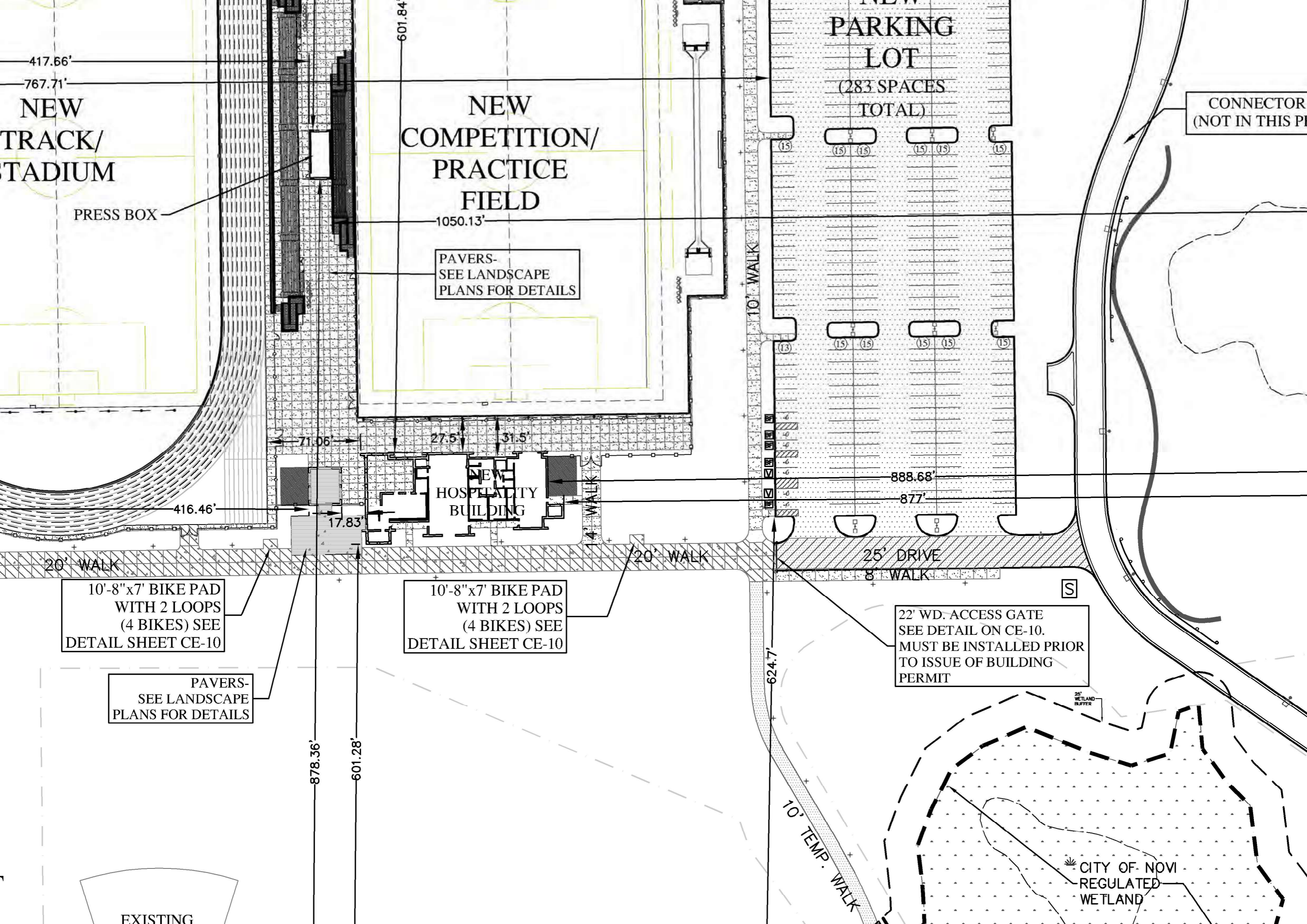
J.S. VIG CONSTRUCTION  
 15040 CLEAT STREET  
 PLYMOUTH, MI 48170  
 PHONE: (734) 281-1111  
 CONTACT: JOSEPH VIG

**SITE DEVELOPMENT**

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SPECIFICATIONS AND STANDARD PRACTICES.
2. CALL MISS DIG (1-800-485-4848) 72 HOURS PRIOR TO ANY EXCAVATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES UNDERGROUND AND ABOVEGROUND.
4. TRENCHES UNDER EXISTING PAVEMENTS, DRIVEWAYS, AND SIDEWALKS SHALL BE BACKFILLED AND COMPACTED WITH MATERIALS OF EQUAL OR BETTER QUALITY TO THE ORIGINAL.
5. WHERE UTILITIES CROSS UNDER EXISTING PAVEMENTS, DRIVEWAYS, AND SIDEWALKS, THE CONTRACTOR SHALL PROVIDE ADEQUATE CUSHION SHALL BE PROVIDED TO PROTECT THE UTILITIES.
6. ALL SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH OTHERWISE SPECIFIED REQUIREMENTS.
7. ALL ELEVATIONS SHALL BE TO THE FINISHED GRADE UNLESS OTHERWISE SPECIFIED.
8. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
9. ALL SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES UNDERGROUND AND ABOVEGROUND.
11. PAVED STREET AND SIDEWALKS SHALL BE CONSTRUCTED TO MEET THE STATE OF CLEANLINESS AND ACCUMULATIONS OF DEBRIS SHALL BE PREVENTED.
12. CONTRACTOR MUST PROVIDE AND MAINTAIN DRAINAGE SYSTEMS TO PREVENT DEWATERING, BRACING, AND PROTECT EXISTING UTILITIES TO MICHIGAN OCCUPATIONAL SAFETY AND HEALTH (MIOSHA).
13. IF DEWATERING IS REQUIRED DURING CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE LOCAL HEALTH DEPARTMENT AND REVIEW AND APPROVAL FROM THE LOCAL HEALTH DEPARTMENT.
14. ALL WORK WITHIN THE JURISDICTION OF THE LOCAL HEALTH DEPARTMENT SHALL BE IN ACCORDANCE WITH LOCAL HEALTH DEPARTMENT REGULATIONS.







NEW TRACK/  
STADIUM

PRESS BOX

NEW  
COMPETITION/  
PRACTICE  
FIELD

PAVERS-  
SEE LANDSCAPE  
PLANS FOR DETAILS

NEW  
PARKING  
LOT  
(283 SPACES  
TOTAL)

CONNECTOR  
(NOT IN THIS PL)

NEW  
HOSPITALITY  
BUILDING

10'-8"x7' BIKE PAD  
WITH 2 LOOPS  
(4 BIKES) SEE  
DETAIL SHEET CE-10

10'-8"x7' BIKE PAD  
WITH 2 LOOPS  
(4 BIKES) SEE  
DETAIL SHEET CE-10

22' WD. ACCESS GATE  
SEE DETAIL ON CE-10.  
MUST BE INSTALLED PRIOR  
TO ISSUE OF BUILDING  
PERMIT

PAVERS-  
SEE LANDSCAPE  
PLANS FOR DETAILS

25'  
WETLAND  
BUFFER

CITY OF NOVI  
REGULATED  
WETLAND

EXISTING

417.66'

767.71'

601.84'

1050.13'

416.46'

71.06'

27.5'

31.5'

17.83'

20' WALK

20' WALK

10' WALK

25' DRIVE  
8' WALK

888.68'

877'

624.7'

10' TEMP. WALK

878.36'

601.28'





01

## EAST PROPERTY LINE

DETROIT CATHOLIC CENTRAL

11.14.2022

2







05

## 12 MILE

DETROIT CATHOLIC CENTRAL

11.14.2022

6

iDS





06

## WEST PROPERTY LINE

DETROIT CATHOLIC CENTRAL

11.14.2022

7

iDS



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

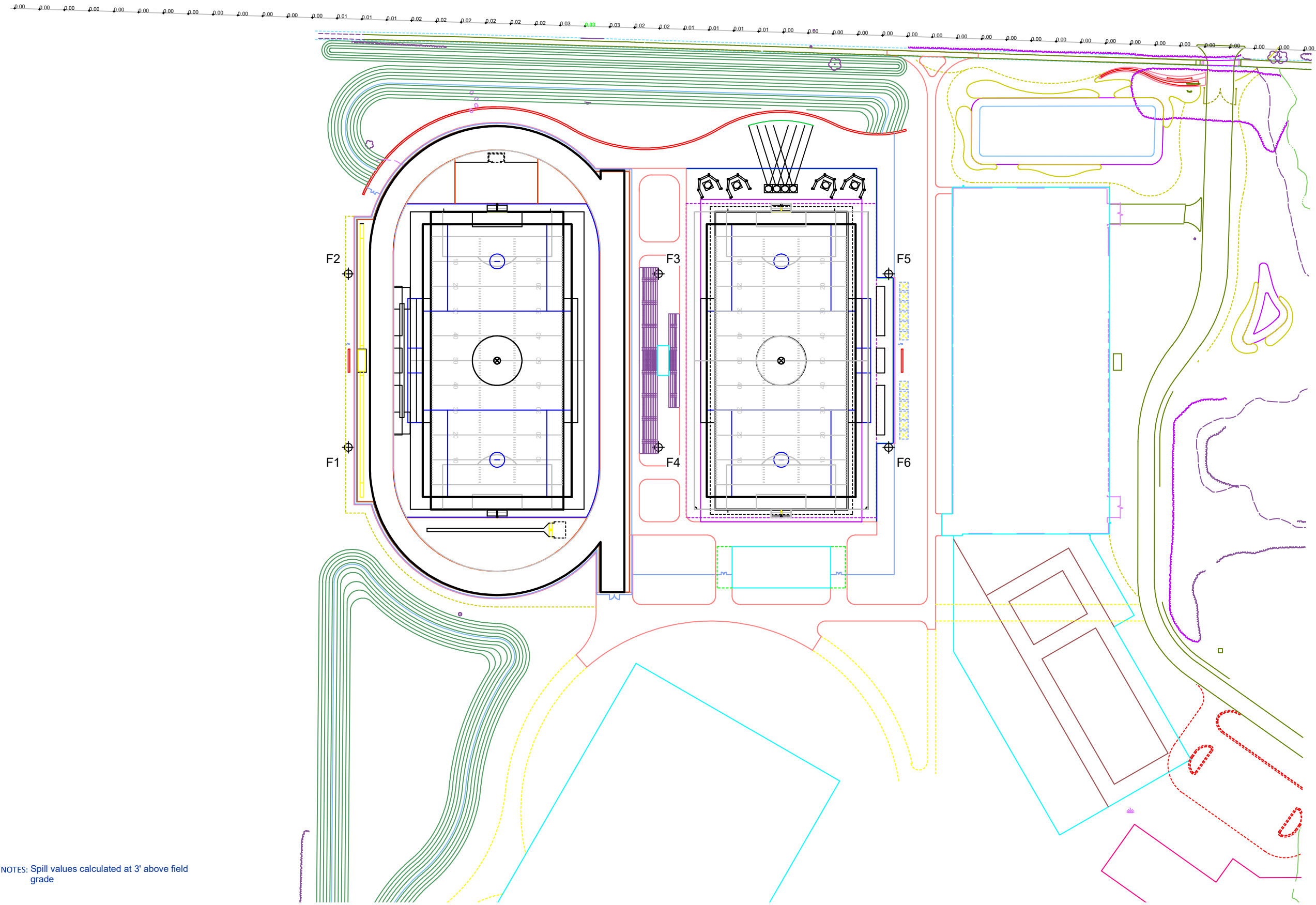
ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Entire Grid	
Scan Average:	0.0057
Maximum:	0.03
Minimum:	0.00
No. of Points:	59
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
<b>No. of Luminaires:</b>	<b>98</b>
Total Load:	126.46 kW

**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 ± 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) ⊗



**We Make It Happen.**

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

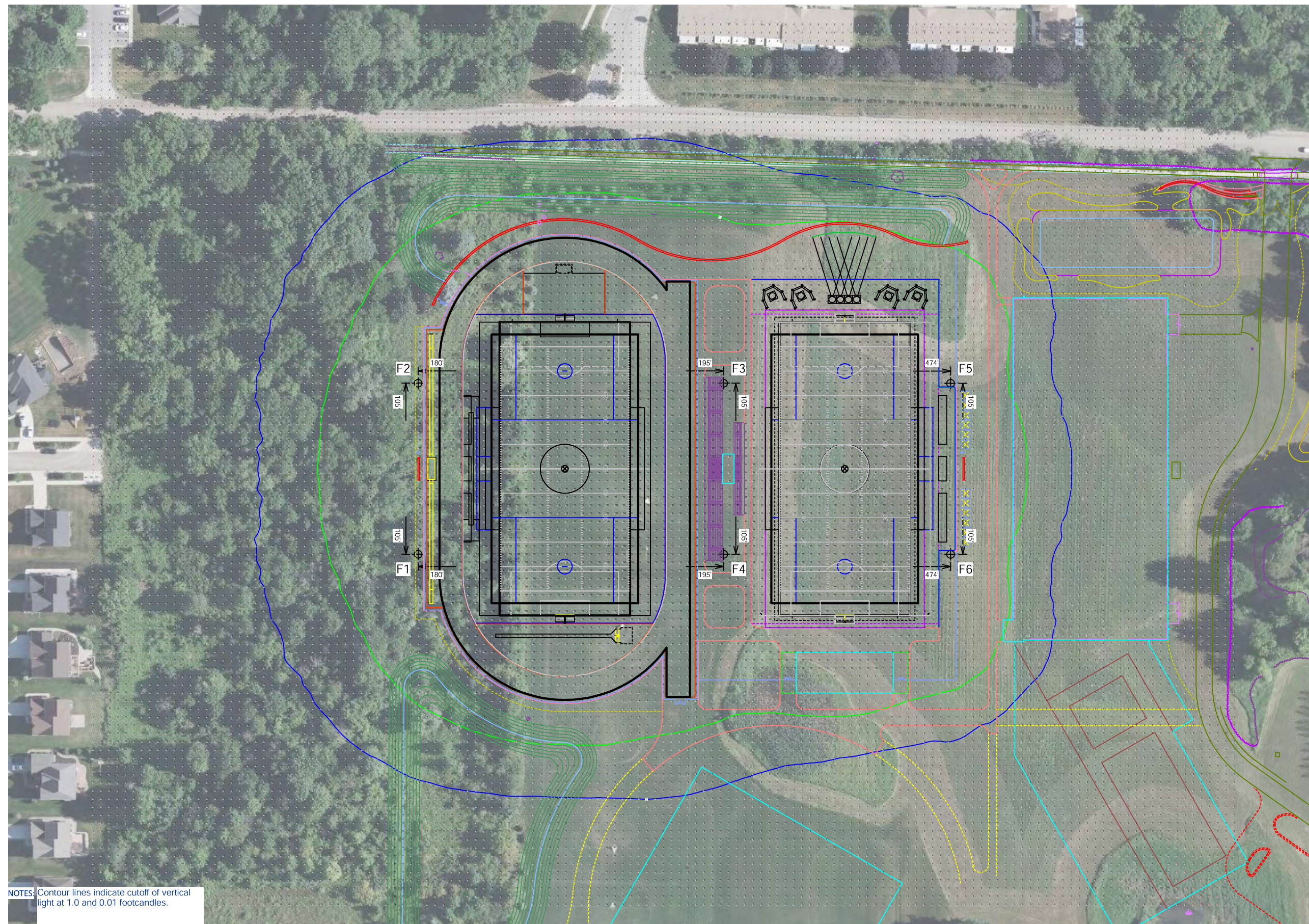
ILLUMINATION SUMMARY	
MAINTAINED MAX VERTICAL FOOTCANDLES	
	Entire Grid
Scan Average:	13.04
Maximum:	118
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	4.65
CU:	0.93
No. of Points:	15369
LUMINAIRE INFORMATION	
Applied Circuits:	A, B
No. of Luminaires:	98
Total Load:	126.46 kW

**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 ± 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 vertical light at 1.0 and 0.01 footcandles.



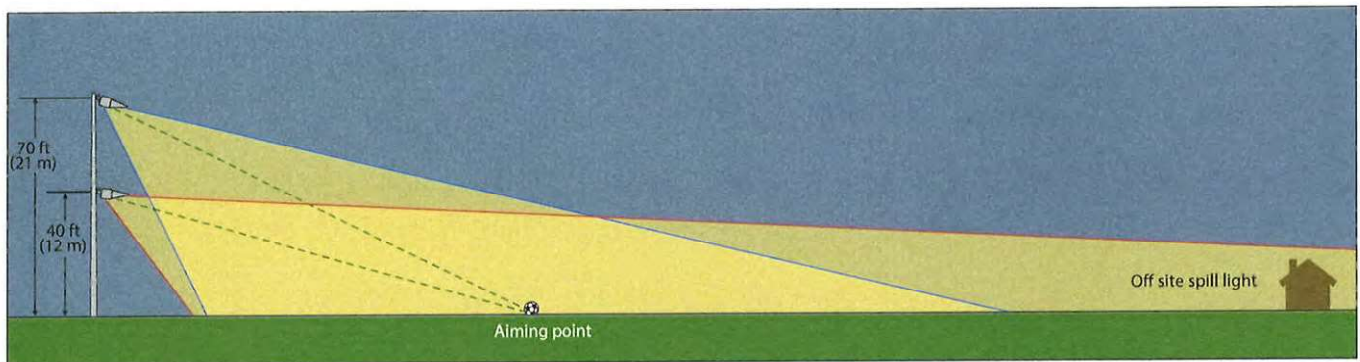
Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗





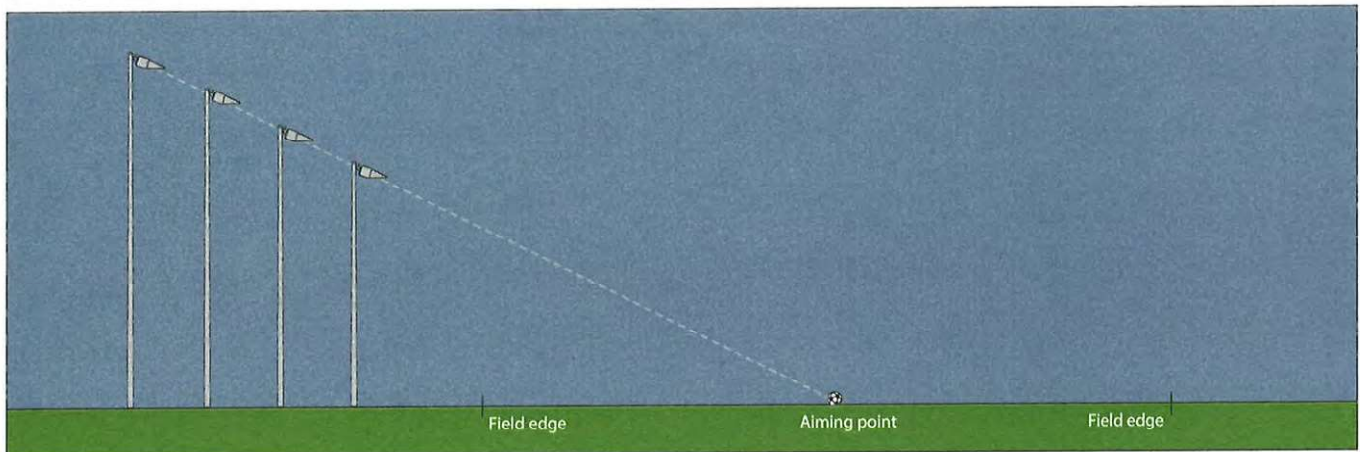
## Pole Height

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.



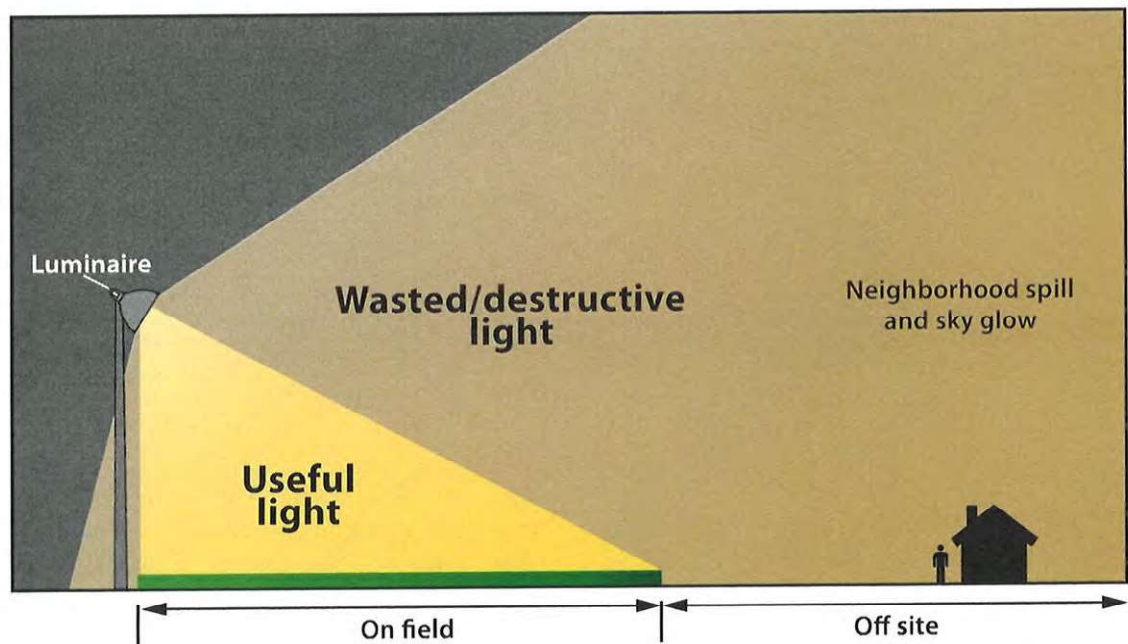
*Musco's expert project managers and engineers will work with you to design the ideal lighting system for your specific needs.*

## 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.



Glare impacts players



Musco gets the glare out of the players' eyes

### 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.



*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.*



## Novi High School Novi, Michigan, USA

Request Information



### Novi High School Achieves Lighting Goals with LED System Designed Specifically to Meet Its Structural Needs

With the existing HID lighting at Novi High School's football stadium outdated and consuming far too much energy, administrators decided to upgrade to a more efficient and versatile LED system. They also needed a solution that would include new poles for most of the lighting, while using an existing mounting structure for the rest. Having partnered together on several past projects, Novi again turned to Musco and its **Total Light Control—TLC for LED™ technology** for a customized, hybrid system that would adapt to this unique architectural setting, improve energy efficiency, simplify facility management with easy-to-use controls, and create a more memorable experience for fans and athletes.

- **Energy consumption is reduced by 74 percent** compared to the previous metal halide equipment, resulting in a more energy-efficient operation.
- **Staff can control the lights instantly, from anywhere, with a smartphone**, avoiding the need to go to the stadium late at night to manually turn them off.
- **The school gains proactive 24/7 scheduling and monitoring support** from the Control-Link® system, ensuring reliable performance and necessary light levels.
- **The school won't pay maintenance costs through the year 2044** as a result of Musco's long-term warranty covering every part and all labor.
- **Fans and players will enjoy superior visibility** with the system's custom optics designed around the LEDs and Musco's unique BallTracker® technology, achieving greater on-field light uniformity.



## TLC for LED® - Total Light Control



For nearly a decade, Musco has been testing the Light Emitting Diode (LED) light source and applying it on projects in which it was the best option. While LED saved energy, for a typical recreational facility the hours of operation weren't great enough to offset the higher cost.

With our Total Light Control – TLC for LED™ technology, we've paired our expertise in light control with the advancing output of LED to the point where it's a cost-effective option for recreational facilities.

The result is a system that makes Musco's great lighting even better.

**Better for Players...** who want to perform their best and be able to track the entire flight of the ball.

**Better for Neighbors...** who don't want glare in or around their homes or lights left on when not in use.

**Better for the Night Sky...** with bright, uniform light directed onto the field and not spilling above it.

**Better for Your Budget...** an affordable system that's built to last and control operating costs.

And with Musco's long-term parts and labor warranty, you can mark maintenance costs off your list for 25 years.