

March 23, 2015

Albemarle County Community Development
401 McIntire Road
Charlottesville, Virginia 22902

Re: Special Exception Request for the Carson Raymond Baseball Field Lighting

To whom it may concern,

On behalf of the Northside Cal Ripken League (NCRL) and the County of Albemarle School Board, we present to you our request for a special exception to Albemarle County Code section 18.4.17 for outdoor lighting. The purpose of our proposed plan is to provide adequate lighting of the existing Carson Raymond Baseball Field located on County property shared by Hollymead Elementary School and Sutherland Middle School. The property is located at 2801 Powell Creek Drive and is within the Rivanna Magisterial District.

The NCRL is a non-profit, 100% volunteer organization whose mission is: *Developing a strong community by teaching baseball fundamentals and life skills; helping kids improve as players, work as a team, and grow as individuals.* The NCRL has been teaching baseball fundamentals to kids ages 12 and younger in the northern corridor of Albemarle County for more than 40 years. All revenue generated from league activities and tournaments pay for field upgrades, maintenance and keeping registration fees affordable.

Over the past four years, NCRL has seen a 60% increase in the number of participants wishing to play baseball in their league. There are currently not enough baseball fields available in the northern corridor of Albemarle County to satisfy demand. For this reason, the NCRL proposes to install four (4) sixty to seventy-foot light poles to illuminate Carson Raymond Field on the subject property. Installing lights on Carson Raymond Field will allow NCRL to provide an additional 450 hours of practice and game time from March through October.

The County Code cites three main objectives to its purpose for an outdoor lighting ordinance. Those objectives are: the protection of dark skies, the prevention of lighting spillover onto adjacent properties and the prevention of glare from the outdoor luminaires. The proposed plan we are presenting to your attention makes every effort to reasonably coincide with each of these objectives. The lighting spillover and glare plans both meet County standards; however, the fixtures project approximately 2-3% of uplighting, which does not meet strict application of the Code's standards for dark skies.

The NCRL has been coordinating their lighting design process with several different lighting manufacturers, and ultimately selected Musco Lighting. Musco has been working for over 30 years on improving the technology of outdoor lighting systems to increase energy efficiency and to reduce glare, spillover and uplighting. The NCRL has selected the "Light Structure Green" system from Musco for two main reasons. Their design characteristics closely parallel County



goals and they have a proven track record of achieving these goals. Similar systems have been installed in our area recently, including the softball field at Charlottesville High School.

The proposed design of the lighting system would utilize a luminaire fixture that offers three advantages to previous lighting systems. Each fixture reflector is customizable to minimize light "spillover." The fixtures also have visors that significantly reduce uplighting and protect dark skies better than any other system currently available in the marketplace. The ability to control the beam within the fixture allows for optimal lighting efficiency. The result of these components is a lighting design that offers less than half of the glare of previous systems, energy efficiency and minimizes effects on dark skies. Detailed drawing and similar project example photographs have been attached to this memo for your review.

The NCRL currently has an operating agreement with the County of Albemarle for their use of Carson Raymond Field and they presented their design to the School Board on January 8, 2015. The School Board unanimously approved the plan at their January 22, 2015 meeting. The School Board endorses this request for a special exception and site plan amendment and a copy of their meeting agenda action item has been attached to this memorandum.

The NCRL has presented this proposal to the Principals and staff of both the Hollymead Elementary School and Sutherland Middle School. Each school provided valuable insight to their approach for coordination of activities on the property. The NCRL has confirmed their willingness to coordinate the scheduling of all activities with both schools in order to ensure that evening events will not strain the parking capabilities of the campus and grounds.

School properties within the County are considered parks during non-school hours. The improvements proposed with this plan will enhance the park space by extending its hours of usage for members of the community and further promoting the active lifestyles embodied by the Hollymead and Forest Lakes communities. This improved use is directly in concert with the visions and guiding principles of the County's Comprehensive Plan for the Community of Hollymead. The County Parks and Recreation department also endorses this submittal and has provided a letter of support that we have attached to this request.

The NCRL has also been proactive in engaging the community and its neighbors in an open dialogue during this design phase of the project. On January 20, 2015 the NCRL hosted a community meeting at Sutherland Middle School and invited members of both the Hollymead and Forest Lakes communities, along with County staff, to share the plan with their neighbors. The NCRL gathered feedback and subsequently invited the community at large to the following County School Board meeting cited previously.

There is concern from the community about lighting potentially being in use during late night hours. Those fears can be assuaged by the fact that this field size limits its use to only youth baseball and the NCRL would not operate late night activities for children. The only other concern raised at the public meeting was related to traffic generation. The plan proposes only to light an existing baseball field. We do not anticipate a significant increase in peak traffic generation due to outdoor lighting; however, we do anticipate that the opportunity for prolonged use of the field will extend the period of use of the existing parking facility. We do not



anticipate that the increase in potential vehicular trip generation would overlap with periods of existing peak traffic volumes of Powell Creek Drive.

Over the past several years, the NCRL has invested over \$25,000 into upgrading their fields to improve the quality of baseball that they offer to our community. During their last renovation, the League made significant improvements to Carson Raymond field that included: regrading the infield and backstop areas, replacing fencing, rebuilding the pitching mound, adding sod to infield, adding irrigation sprinkler heads to improve and protect the grass areas, replacing the scoreboard and painting the dugouts. The lighting project for the Carson Raymond field is a logical progression of their investment campaign to improve existing youth baseball fields. The NCRL has an established successful partnership with the County Parks & Recreation for joint maintenance of the fields, and has demonstrated their additive impact to the community.

The NCRL has taken the initiative to communicate with the board members of both the Hollymead and the Forest Lakes Communities in an effort to share their vision for this project and to provide opportunities for continued dialogue with their neighbors. Each community has been included in the design process and their concerns have been incorporated into the team's planning considerations. It is our opinion that the NCRL has made a considerable effort to submit a plan that embraces the goals of nurturing public health, safety and welfare, and we hope you will share that view and endorse this special exception for outdoor lighting.

I hope that this memorandum, in combination with the attached exhibit documents, provides enough information to sufficiently evaluate our request for special exception. Please let me know if you have any questions or require further material to support our request. Thank you for your time and consideration.

Best regards,



Eric Woolley, P.E.

Cc: Alice Riccabona, Board of Directors President, Northside Cal Ripken League

Attached: Copy of School Board agenda item from January 22, 2015
Copy of endorsement letter from Albemarle County Parks & Recreation
Copy of endorsement letter from the Carson Raymond Foundation
Photographs of a similar project
Musco "Light Structure Green" Brochure
Site Lighting plan exhibits (6)
Detail drawings of the proposed luminaire fixture

Meeting Date: 1/22/2015 - 6:30 PM

Category: SCHOOL DIVISION WORK SESSION

Type: Action

Subject: Northside Cal Ripken Field Lighting Project (6:55 to 7:00)

ACPS Division: Objective 4
We will create and expand partnerships.
Objective : Objective 5
We will optimize resources.

Policy: D1 - Financial Accounting and Reporting

Enclosure: Revised Proposal from the Northside Cal Ripken League

File Attachment:  School Board Proposal final v2.pdf

Summary: At the January 8, 2015 School Board Meeting, the Board received a proposal from the Northside Cal Ripken League to illuminate the Carson Raymond Baseball Field that is located between Hollymead Elementary School and Sutherland Middle School. The proposal includes installing lights on the Carson Raymond Field, which is maintained in partnership with the Northside Cal Ripken League and the Albemarle County Parks & Recreation Department. The attached, revised proposal includes the following change:
1) All new fixtures will be purchased, rather than retrofitting fixtures.

The Cal Ripken League will absorb all construction, maintenance and electrical costs associated with the project and will use a Class A contractor. If the School Board approves this request, a Site Plan amendment will be submitted. If the Site Plan Amendment is approved, the League will raise the necessary funds and the project will be constructed. The planned completion is in August, 2015.

Funding: The Cal Ripken League will secure funding for the project prior to July, 2015.

Recommendation: Request the School Board to approve the field illumination project as noted above, and support the submittal of a minor site plan amendment to Albemarle County Community Development. Once the project is completed, the donation of the field lighting will be brought back to the Board.

Recommended By:

Signed By:

Signature

Joe Letteri - Director, Building Services

Approvals:

Signed By:

Signature

Dean Tistadt - Chief Operating Officer

Signed By:

Signature

Dr. Pamela Moran - Superintendent



COUNTY OF ALBEMARLE
Parks & Recreation Department
401 McIntire Road
Charlottesville, Virginia 22902
Telephone (434) 296-5844
FAX (434) 293-0299

Rob Probes

Northside Cal Ripken

Rob,

This letter serves as support by the Albemarle County Department of Parks and Recreation in regards to the potential lighting of the existing baseball field at Hollymead Elementary School. This support is largely due to increase in participation which increases demand for field space, and the lack of public or private opportunities in providing any new athletic facilities.

I would like to also make clear that at this point in time, our support does not commit this department toward capital funding, nor operating funds for electrical or routine maintenance.

Support for this project will also be required by the Albemarle County Department of Community Development for a waiver of the light fixtures per County ordinance. This department will support any lighting fixture that is equal to the MUSCO TLC product which has satisfied the waiver in the past.

If I can be of further assistance please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Bob Crickenberger", with a long, sweeping horizontal line extending to the right.

Bob Crickenberger

Director, Albemarle County Department of Parks and Recreation



Brian Moriarty
Board Member/Youth Baseball Director
Carson Raymond Foundation
BrianM@carsonraymondfoundation.com
(434) 465-0838
carsonraymondfoundation.com

To: Rob Propes and Northside Cal Ripken League
Re: Endorsement of Lighting Proposal for Carson Raymond Field
Date: December 8, 2014

Dear Rob,

This letter serves as a statement support by the Carson Raymond Foundation in regards to the potential lighting of the existing baseball field known as 'Carson Raymond Field' located at Hollymead Elementary School.

The Foundation feels strongly that the installation of lights would greatly enhance the baseball experience for the youths in our area. With the increase of registration that the Northside League has experienced in recent years, the lights would provide more game & practice time for the young people who enjoy playing in our area, as well as improved "Fall Ball" experience during the fall season.

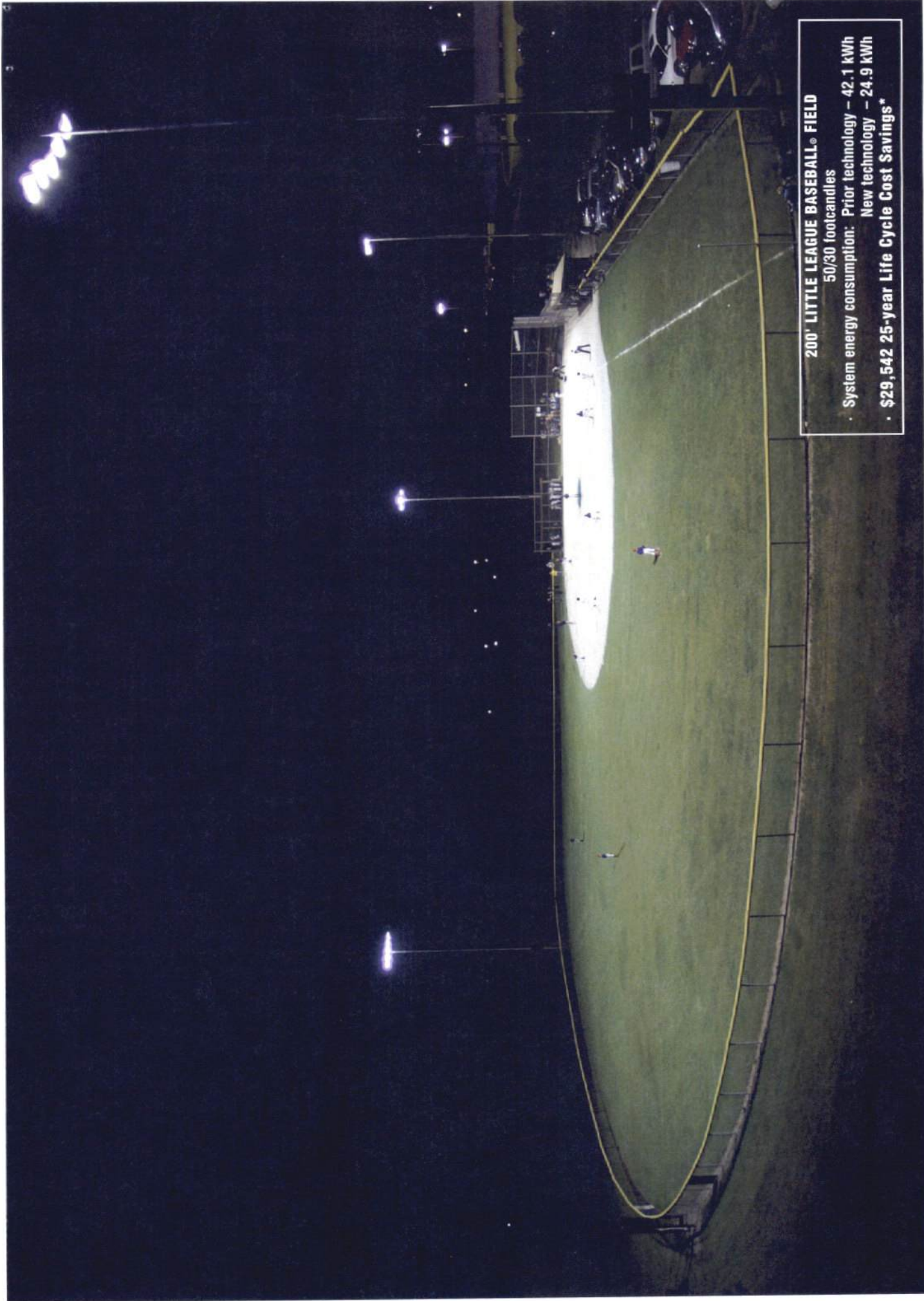
We appreciate that Northside Cal Ripken League continues to support the community as it seeks to provide the best possible baseball experience to our local youth ball players.

If I can be of further assistance, please do not hesitate to contact me

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Moriarty", is written below the word "Sincerely,".

Brian Moriarty
Board Member/Youth Baseball Director
Carson Raymond Foundation



200' LITTLE LEAGUE BASEBALL® FIELD

50/30 footcandles

- System energy consumption: Prior technology – 42.1 kWh
- New technology – 24.9 kWh
- \$29,542 25-year Life Cycle Cost Savings*

© 2005 Musco Lighting · Patents issued and pending · LSG_PS4_05-05.pdf *Includes energy, lamps, & maintenance. Operates 400 hours/yr. \$0.7 per kWh.



Light-Structure
GREEN.



200' LITTLE LEAGUE BASEBALL® FIELD

50/30 footcandles

- System energy consumption: Prior technology – 42.1 kWh
- New technology – 24.9 kWh
- \$29,542 25-year Life Cycle Cost Savings*



Light•Structure GREEN™

***For your budget,
for the environment.***

"OFFERED WITH THE CONFIDENCE
EARNED AND LEARNED FROM
30 YEARS OF TECHNOLOGY INNOVATION."

Myron Gordon *John Rodden*



Musco's Light-Structure GREEN₁

Musco's Green friendly system will reduce by half or more, the cost of operating and maintaining your ballfield lighting system.

For Your Budget

Innovative photometric improvements of the luminaire result in substantially more efficient light control.

Musco's evolution of fundamental lamp principles creates a new operating system — Smart Lamp™.

Savings

25 Year Life Cycle Cost Savings

Prior Technology Fixture Quantity	52
Light-Structure Green™ Fixture Quantity	32
1. Energy — photometric improvement	\$23,080
2. Group Relamp	\$16,250
3. Lamp Maintenance	\$3,750
4. Energy — controls	\$5,770
5. Labor — controls	\$10,000

Total Projected Savings \$58,850

- | | |
|--|--|
| 1. 300 hours per year, 9¢ per kilowatt hour | 4. 25% savings by switching on and off 20 minutes closer to actual usage time. |
| 2. \$125 per luminaire for relamp labor and materials. | 5. 15 minutes labor for turning on and off at \$8 labor rate — 2,500 operations. |
| 3. Average of 7.5 repairs at \$500 each. | |

Musco's journey to the Green Generation — 30 years of “good old fashioned” new technology

1976

Existing technology



1977

Factory assembled and wired light cluster — SportsCluster®. Predictable results, easier installation.



1981

Glare control research



1982

Temporary lighting service and rolling lab — Mobile Lighting System



1987

Easier maintenance — remote ballasts



... for a More Energy Conscious Generation.

Amazing new technology . . . big cost benefits.

And best of all, it does wonderful things for the adjoining environment. It puts much less light on nearby properties. It protects the beauty of the dark night skies.

For The Environment

Spill and glare control features are now a standard part of every luminaire at no extra cost.

This green generation luminaire system cuts spill by half or more, even when compared to Musco's prior industry-leading technology.

Less Spill		
360' x 225' Soccer Field		
30fc Average Maintained	30fc Constant Illumination	
Light-Structure with Total Light Control™ photometric option	Fixture Type	Light-Structure Green™
1500W MZ	Lamp Type	1500W MZ
Vertical Illumination		
0.50 fc	Average	0.15 fc
0.74 fc	Maximum	0.26 fc
52	# of Luminaires	32

Now 25 years of unprecedented, trouble-free operation

Musco's *Constant 25*™ product assurance and warranty program guarantees:

- Constant light levels and group lamp replacements at the end of rated lamp life
- Reduced energy consumption
- Monitoring, maintenance, and remote on/off control services
- System structural integrity

1989

Glare control with efficiency —
SportsCluster 2s



1991

Complete lighting and electrical system
from foundation-to-poletop,
Light-Structure System™



1997

Facility management services —
10 Club Services and Control-Link



2005

Energy, environment
... today's prices —
Light-Structure Green™



Light-Structure Green™ System — still Five Easy Pieces™ plus:

Improved Luminaire Efficiency

1. **Reflector system:** More than 2000 photometric patterns provide optimal energy efficiency and minimal spill light for each project.
2. **Visor System:** Several visor choices provide energy efficient light on the field and minimal spill light. The aerodynamics reduce wind load on the poles.
3. **Side Shift Beam Control:** Beams can be adjusted within the luminaire horizontally as well as vertically. We can now custom fit the light to the corners.

Smart Lamp™ Operating System

1. **Lamp:** 30 years of lamp experience has taught Musco how to operate the lamp with less energy and extend its life with a system of timed power adjustments.
2. **Geared tilt adjustment:** With a geared leveling mechanism, the lamp arc tube operates in the energy advantageous horizontal position.

Increased Durability, Assured Results

1. **Die-Cast aluminum reflector housing:** Provides a rugged foundation for building and maintaining a sophisticated photometric unit.
2. **Gasketing:** Improved material and gasket system design virtually eliminate "outgassing" and other contamination of the reflectors and lens.
3. **Factory Assembled Luminaires:** The luminaire ships totally assembled; avoids contaminants, saves time, improves aiming accuracy.
4. **Attaching Mechanism:** The factory assembled luminaire connects electrically and structurally to the crossarm with one simple attachment.
5. **Factory Aiming:** Musco's well established service of factory aiming is even better with Light-Structure Green™. . . field, changes can still be done.

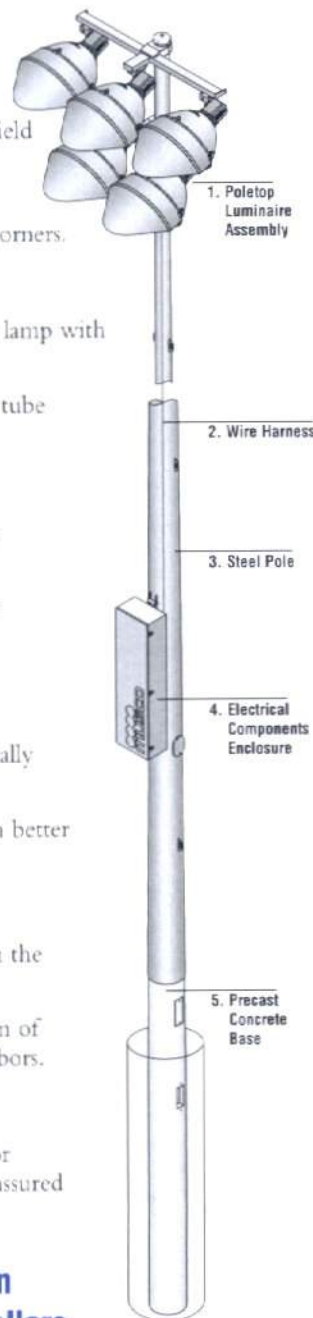
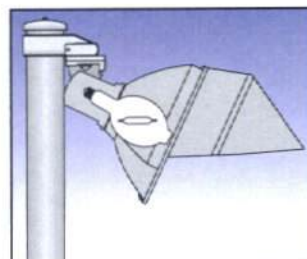
Solid control and flexible management

1. **Controls and monitoring:** This system, in one simple cabinet, included in the base price, saves energy and gives you a solid, flexible management tool.
2. **Control Link Central™:** Real people at Musco, 24/7, support the operation of your lights . . . from office, field or home . . . benefits field users and neighbors.

Ultimate guarantee

With **Green Generation Lighting**, Musco's Constant 25™ guarantees it all for 25 years, plus free relamping at the end of the lamps' rated life. All of this is assured by Musco's field service department and their technicians.

Light-Structure Green™ is the result of more than a dozen inventions and innovations from more than 10 million dollars of research and capital investment by Musco.



We Make It Happen.

800/825-6030

www.musco.com

e-mail: lighting@musco.com

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires			OTHER GRIDS
						LAMP TYPE	QTY / POLE	THIS GRID	
2	A1-A2	60'	60'	-	60'	1500W MZ	3	3	0
2	B1-B2	60'	60'	-	60'	1500W MZ	5	5	0
4	TOTALS						16	16	0



MY PROJECT

Name: Northside Cal Ripken Field
Location: Charlottesville, VA

GRID SUMMARY

Name: Softball

Size: Irregular 196' / 194' / 192'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

SUMMARY

HORIZONTAL FOOTCANDLES
Infield 50
Outfield 30

Guaranteed Average: 50.2

Scan Average: 50.2

Maximum: 62

Minimum: 38

Avg / Min: 1.32

Guaranteed Max / Min: 2

Max / Min: 1.62

UG (adjacent pts): 1.25

CU: 0.64

No. of Points: 25

LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of Luminaires: 16

Avg KW: 25.02 (27.2 max)

Guaranteed Performance: The Guaranteed Average CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA LM 5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

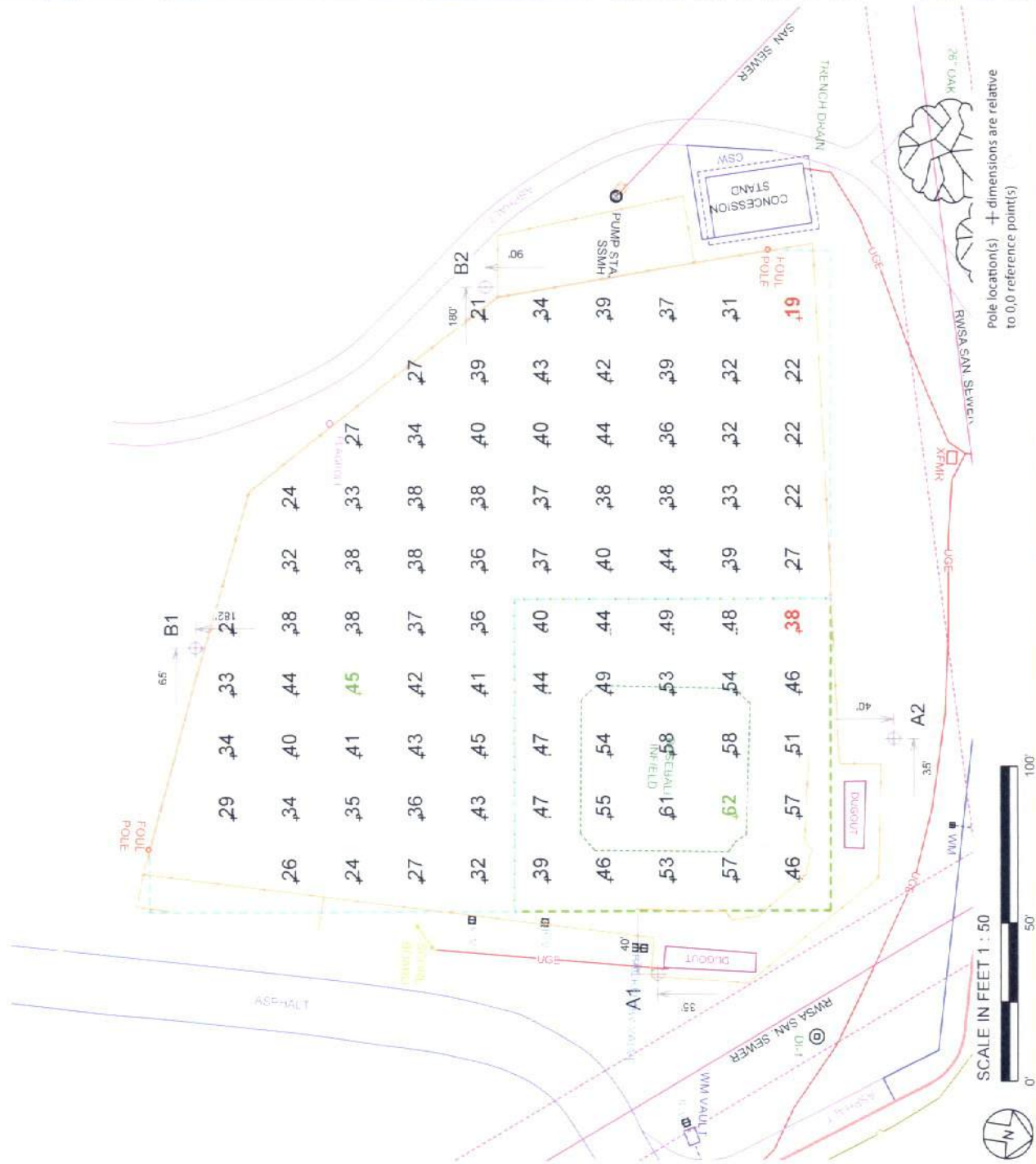
By: WVVICE

File # / Date: 171963C

30-Mar-15

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2015 Musco Sports Lighting, LLC.

ILLUMINATION SUMMARY



EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole		MOUNTING HEIGHT	Luminaires		QTY / POLE	THIS GRID	OTHER GRIDS
		SIZE	GRADE ELEVATION		LAMP TYPE	1500W MZ			
2	A1-A2	60'	-	60'	1500W MZ	3	3	3	0
2	B1-B2	60'	-	60'	1500W MZ	5	5	5	0
4	TOTALS					16	16	16	0



MY PROJECT

Name: Northside Cal Ripken Field
Location: Charlottesville, VA

GRID SUMMARY

Name: Blanket
Size: 650' x 650'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

SUMMARY

Entire Grid

Scan Average: 4.2

Maximum: 62

Minimum: 0

Avg / Min: 781.35

Max / Min: 11348.97

UG (adjacent pts): 5.55

CU: 0.86

No. of Points: 1089

LUMINAIRE INFORMATION

Luminaire Type: Green Generation

Design Usage Hours: 5,000 hours

Design Lumens: 134,000

Avg Lamp Tilt Factor: 1.000

No. of Luminaires: 16

Avg KW: 25.02 (27.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary.

See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

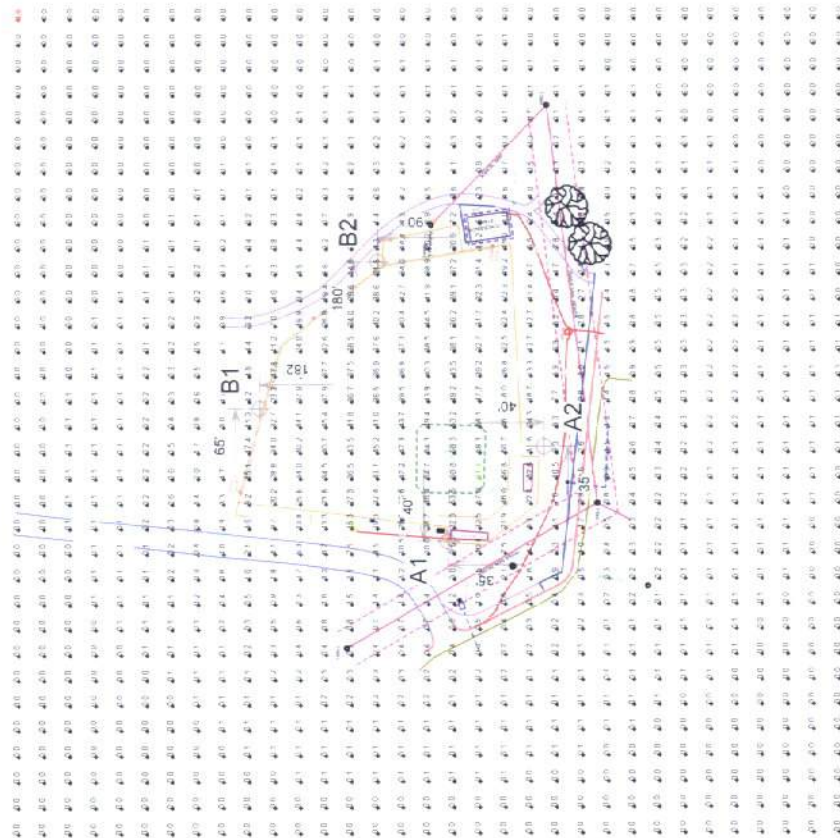
By: W/VICE

File # / Date: 171963C

30-Mar-15

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2015 Musco Sports Lighting, LLC.

ILLUMINATION SUMMARY



SCALE IN FEET 1 : 150



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

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole		GRADE ELEVATION	MOUNTING HEIGHT	Luminaires			
		SIZE	TYPE			LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	60'	1500W MZ	60'	60'	1500W MZ	3	3	0
2	B1-B2	60'	1500W MZ	60'	60'	1500W MZ	5	5	0
4	TOTALS						16	16	0



MY PROJECT

Name: Northside Cal Ripken Field
Location: Charlottesville, VA

GRID SUMMARY

Name: Blanket
Size: 650' x 650'
Spacing: 20.0' x 20.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

SUMMARY		MAX VERTICAL FOOTCANDLES	
Entire Grid		Scan Average:	5.4
		Maximum:	61
		Minimum:	0
		Avg / Min:	106.18
		Max / Min:	1201.52
UG (adjacent pts):		CU:	4.73
		CU:	0.86
No. of Points:			1089
LUMINAIRE INFORMATION			
Luminaire Type:		Green Generation	
Design Usage Hours:		5,000 hours	
Design Lumens:		134,000	
Avg Lamp Tilt Factor:		1.000	
No. of Luminaires:		16	
		Avg KW:	25.02 (27.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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

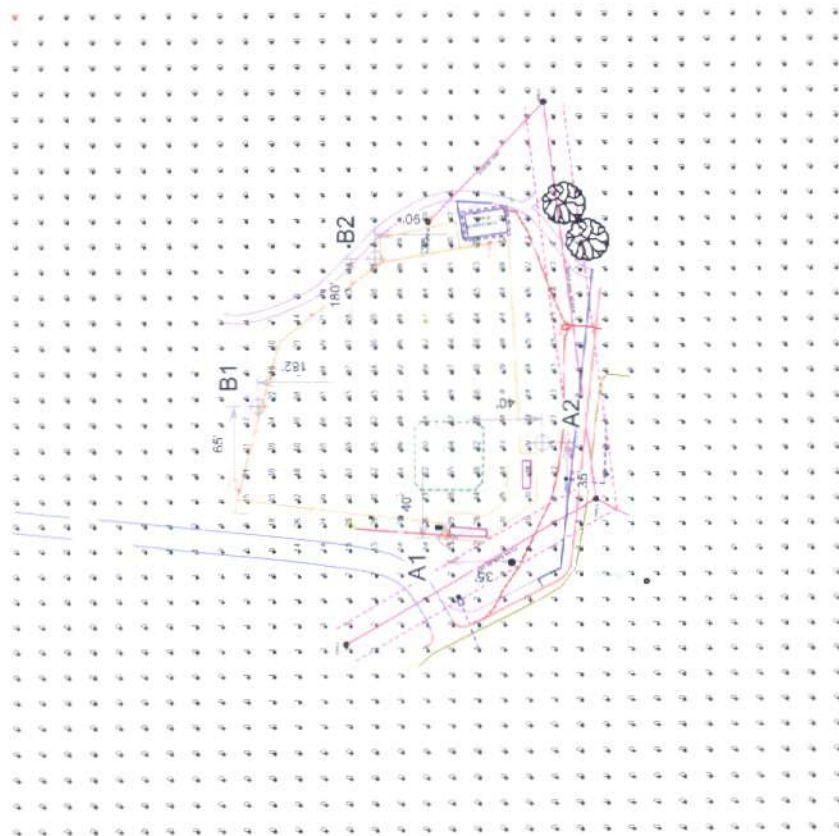
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

By: W/VICE
File # / Date: 171963C 30 Mar 15

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2015 Musco Sports Lighting, LLC.

ILLUMINATION SUMMARY



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

SCALE IN FEET 1 : 150



EQUIPMENT LIST FOR AREAS SHOWN

QTY	Pole		Luminaires		QTY / POLE	THIS GRID	OTHER GRIDS
	LOCATION	SIZE	MOUNTING HEIGHT	LAMP TYPE			
2	A1-A2	60'	60'	1500W MZ	3	3	0
2	B1-B2	60'	60'	1500W MZ	5	5	0
4	TOTALS				16	16	0



MY PROJECT

Name: Northside Cal Ripken Field
Location: Charlottesville, VA

GRID SUMMARY

Name: Softball Spill
Spacing: 30.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

SUMMARY

Entire Grid

Scan Average: 0.120
Maximum: 0.34
Minimum: 0.04
No. of Points: 55

LUMINAIRE INFORMATION

Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 16
Avg KW: 25.02 (27.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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 ballast and structures located within 3 feet (1m) of design locations.

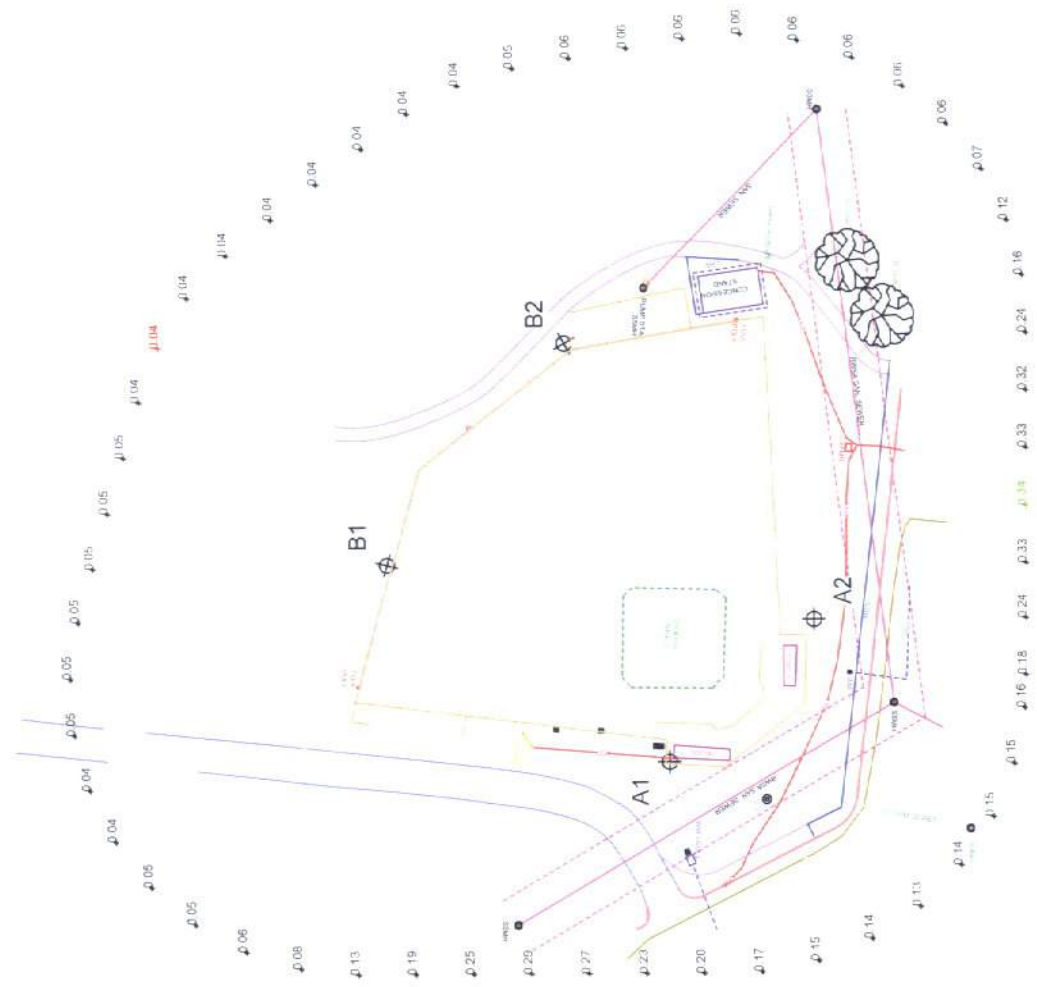
ENGINEERED DESIGN

By: W.VICE
File # / Date: 171963C

SCALE IN FEET 1 : 100



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



Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2015 Musco Sports Lighting, LLC.

ILLUMINATION SUMMARY

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	Pole	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	Luminaires		
						LAMP TYPE	QTY / POLE	THIS GRID
2	A1-A2	60'	60'	-	60'	1500W MZ	3	3
2	B1-B2	60'	60'	-	60'	1500W MZ	5	5
4	TOTALS						16	16
								0



MY PROJECT

Name: Northside Cal Ripken Field
Location: Charlottesville, VA

GRID SUMMARY

Name: Softball Spill

Spacing: 30.0'
Height: 3.0' above grade

CONSTANT ILLUMINATION

SUMMARY

MAX VERTICAL FOOTCANDLES

Entire Grid
Scan Average: 0.582
Maximum: 1.50
Minimum: 0.21
No. of Points: 55

LUMINAIRE INFORMATION

Luminaire Type: Green Generation
Design Usage Hours: 5,000 hours
Design Lumens: 134,000
Avg Lamp Tilt Factor: 1.000
No. of Luminaires: 16
Avg KW: 25.02 (27.2 max)

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary. See the Warranty document for details.

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

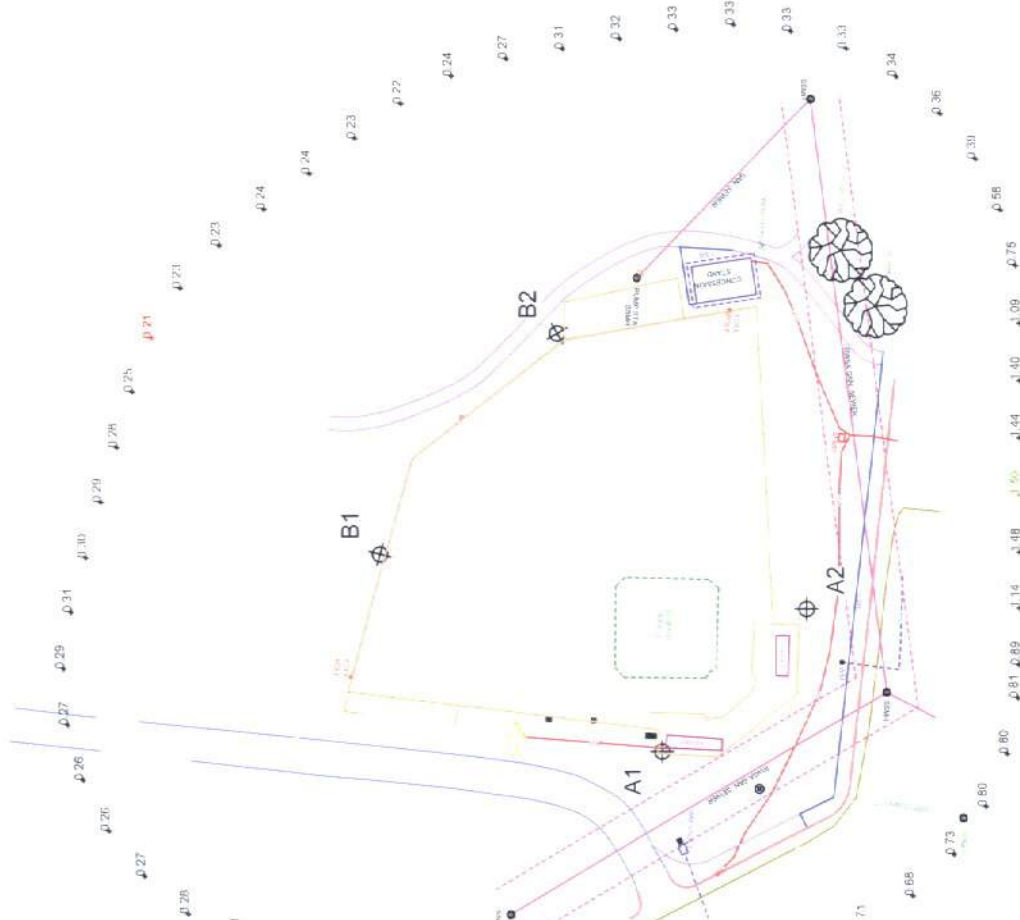
Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

ENGINEERED DESIGN

By: W.VICE
File # / Date: 171963C 30-Mar-15

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981-2015 Musco Sports Lighting, LLC.

ILLUMINATION SUMMARY



SCALE IN FEET 1 : 100



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



MY PROJECT

Name: Northside Cal Ripken Field
Location: Charlottesville, VA

EQUIPMENT LAYOUT

INCLUDES:

- Blanket
- Softball

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 ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
2	A1-A2	60'	-	60'	1500W MZ	3
2	B1-B2	60'	-	60'	1500W MZ	5
4	TOTALS					16

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)					
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
Single Phase Voltage	8.6	8.3	7.5	6.5	5.1	4.7
1500 watt MZ						3.7

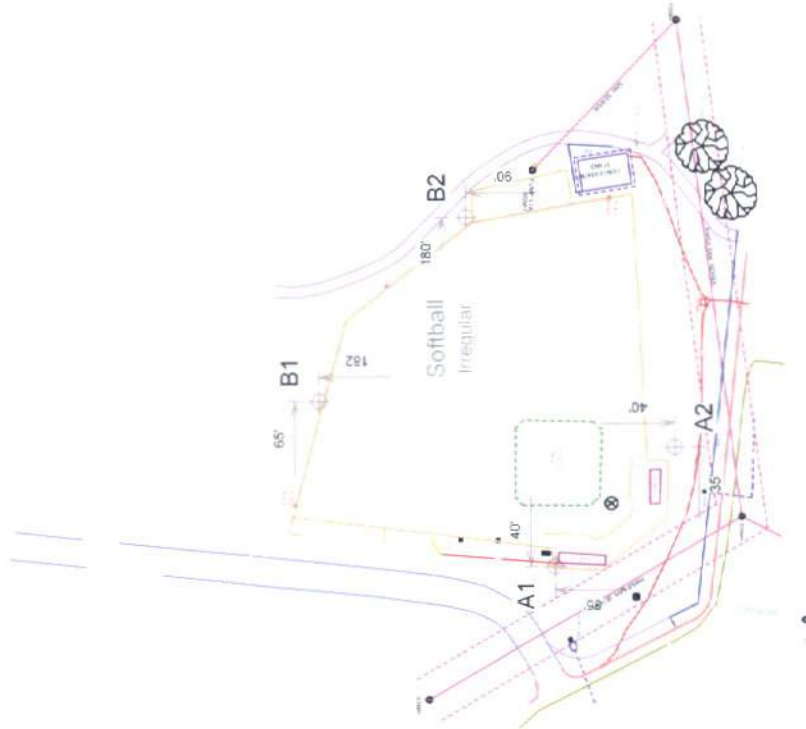
ENGINEERED DESIGN

By: W.VICE
File # / Date: 171963C

30 Mar-15

Not to be reproduced in whole or part without the written consent of Musco Sports Lighting, LLC. ©1981, 2015 Musco Sports Lighting, LLC.

EQUIPMENT LAYOUT

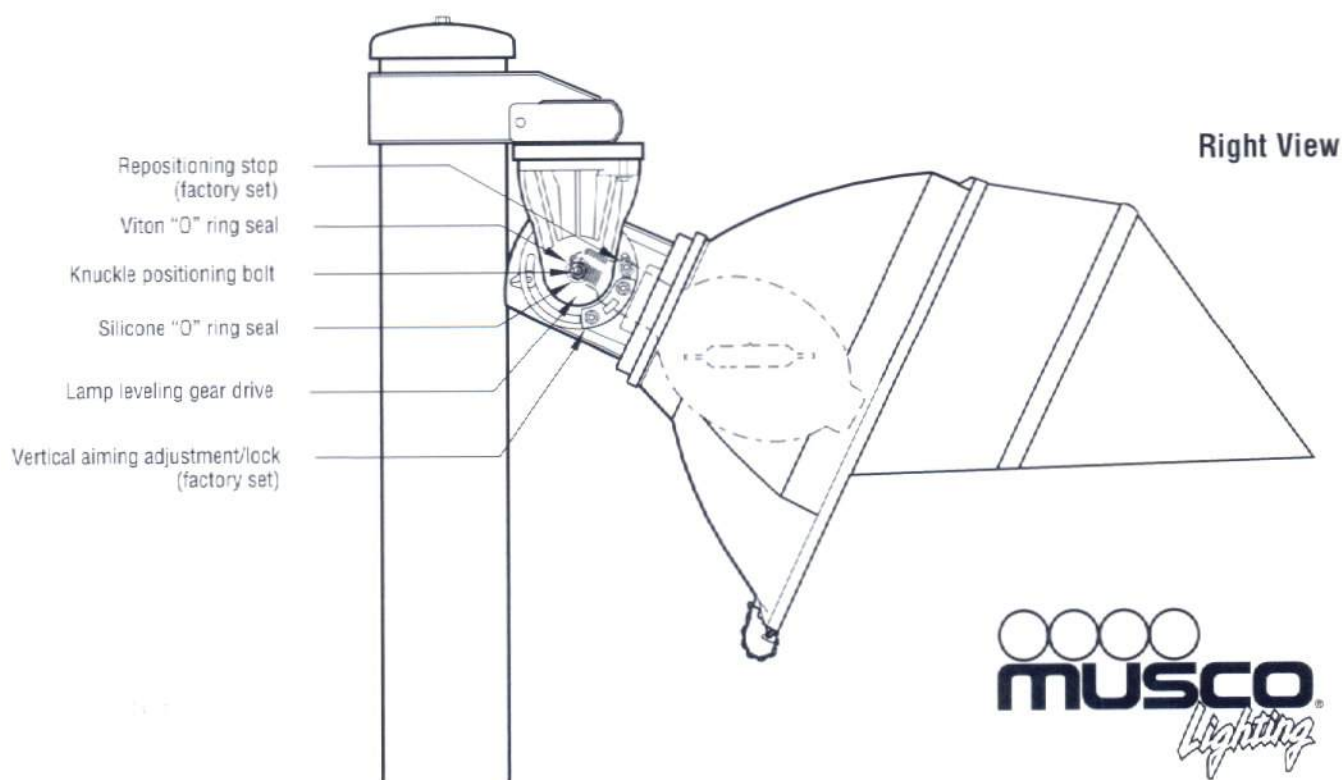
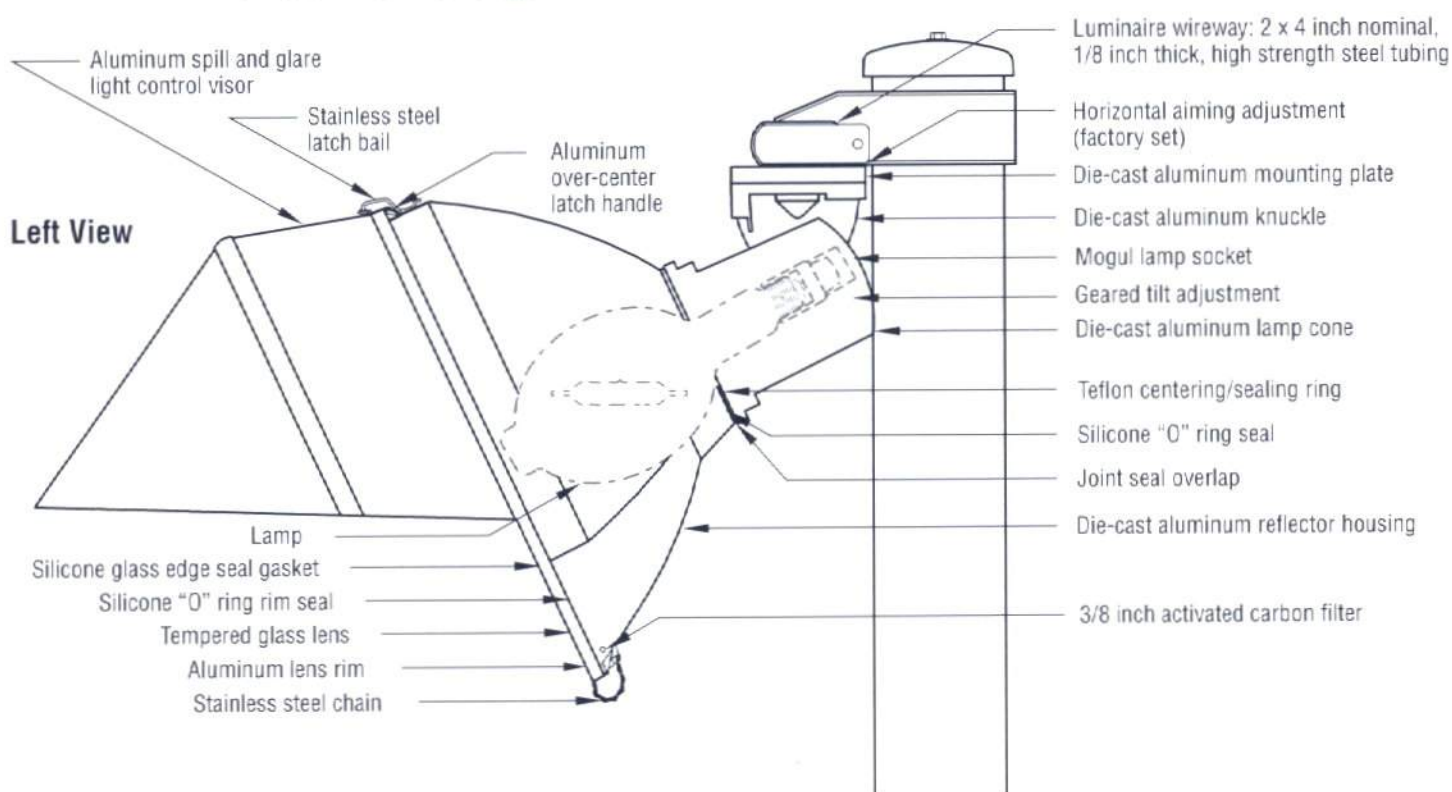


SCALE IN FEET 1 : 120



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





MUSCO
Lighting

800/825-6030
www.musco.com
lighting@musco.com