

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	P13	60'	-	60'	1500W MZ	4	4	0
1	P14	60'	-	60'	1500W MZ	5	5	0
5	<b>TOTALS</b>					21	21	0



GUARANTEED PERFORMANCE

### ILLUMINATION SUMMARY

**Field 4**  
Del Mar Master Plan Soccer  
Del Mar, CA

**Field 4**  
- Size: 329' x 238'  
- Grid Spacing = 30.0' x 30.0'  
- Values given at 3.0' above grade

- Luminaire Type: Green Generation  
- Rated Lamp Life: 5000 hours  
- Avg Lumens/Lamp: 134,000

#### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid	
No. of Target Points:	68	
	<b>Average: 31.0</b>	
	Maximum: 42	
	Minimum: 18	
	Avg/Min: 1.73	
	<b>Max/Min: 2.34</b>	
UG (Adjacent Pts):	1.90	
CV:	0.22	

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	21
Avg KW over 5000 hours:	32.84
Max KW:	35.7

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

**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.

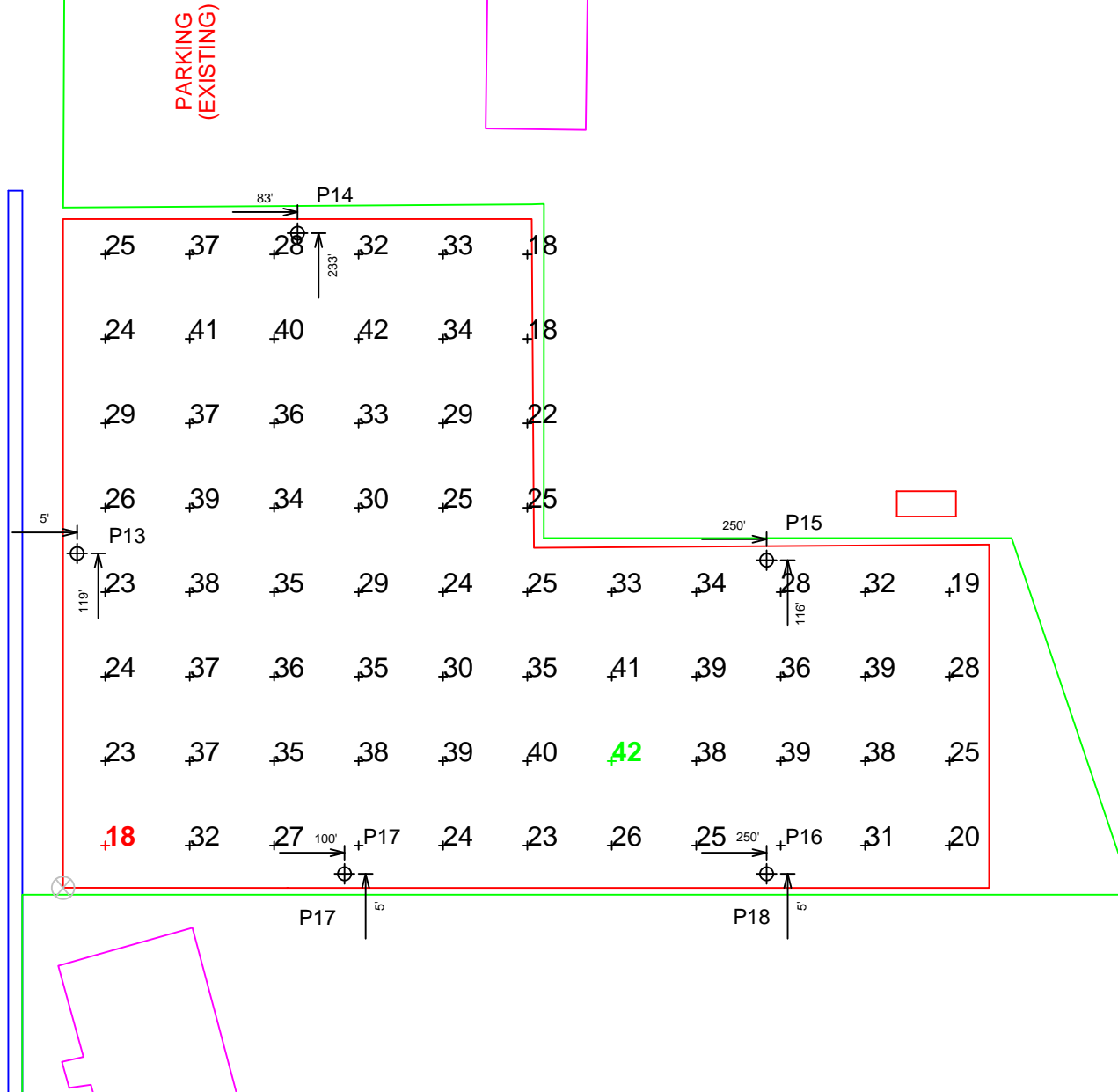
By: Shawn Moyer

File #: 133793F4

Date: 19-Nov-08

Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting

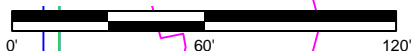
Print Date (19/Nov/2008) & Time (11:23)



PARKING  
(EXISTING)



SCALE IN FEET 1 : 60



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

EQUIPMENT LIST FOR AREAS SHOWN										
Pole				Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS		
4	P13	60'	-	60'	1500W MZ	4	4	0		
1	P15-P17	60'	-	60'	1500W MZ	5	5	0		
5	← TOTALS →						21	21	0	



GUARANTEED PERFORMANCE

### ILLUMINATION SUMMARY

Area Grid  
Del Mar Master Plan Soccer  
Del Mar, CA

Area Grid  
· Grid Spacing = 30.0' x 30.0'  
· Values given at 3.0' above grade

· Luminaire Type: Green Generation  
· Rated Lamp Life: 5000 hours  
· Avg Lumens/Lamp: 134,000

#### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

Entire Grid  
No. of Target Points: 928  
**Average: 2.7**  
Maximum: 43  
Minimum: 0

Average Lamp Tilt Factor: 1.000  
Number of Luminaires: 21  
Avg KW over 5000 hours: 32.84  
Max KW: 35.7

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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

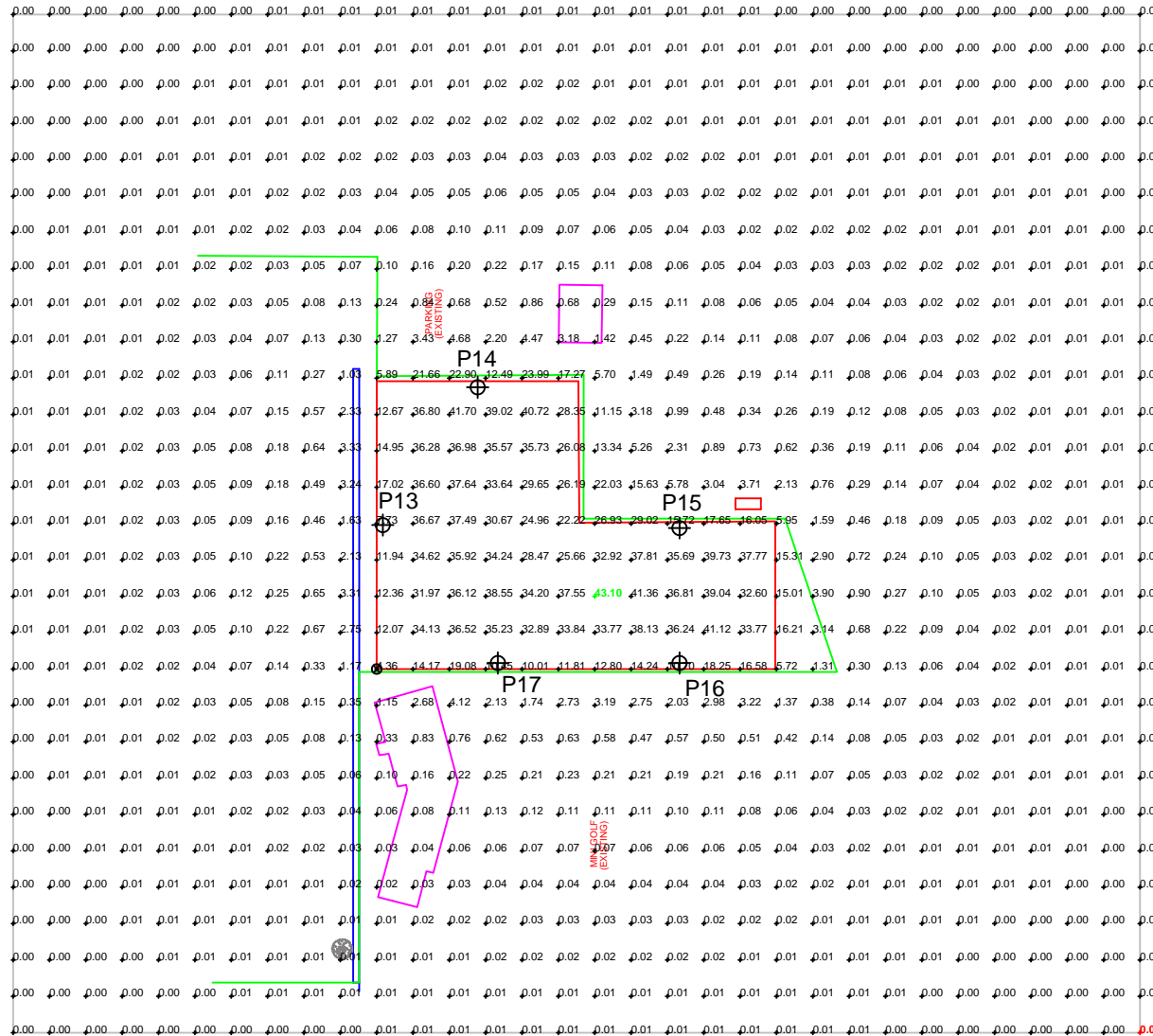
**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Shawn Moyer

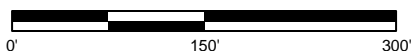
File #: 133793F4

Date: 19-Nov-08

Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting



SCALE IN FEET 1 : 150



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

GUARANTEED PERFORMANCE

**EQUIPMENT LAYOUT**

Del Mar Master Plan Soccer  
Del Mar, CA

**INCLUDES:**

· Field 4

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

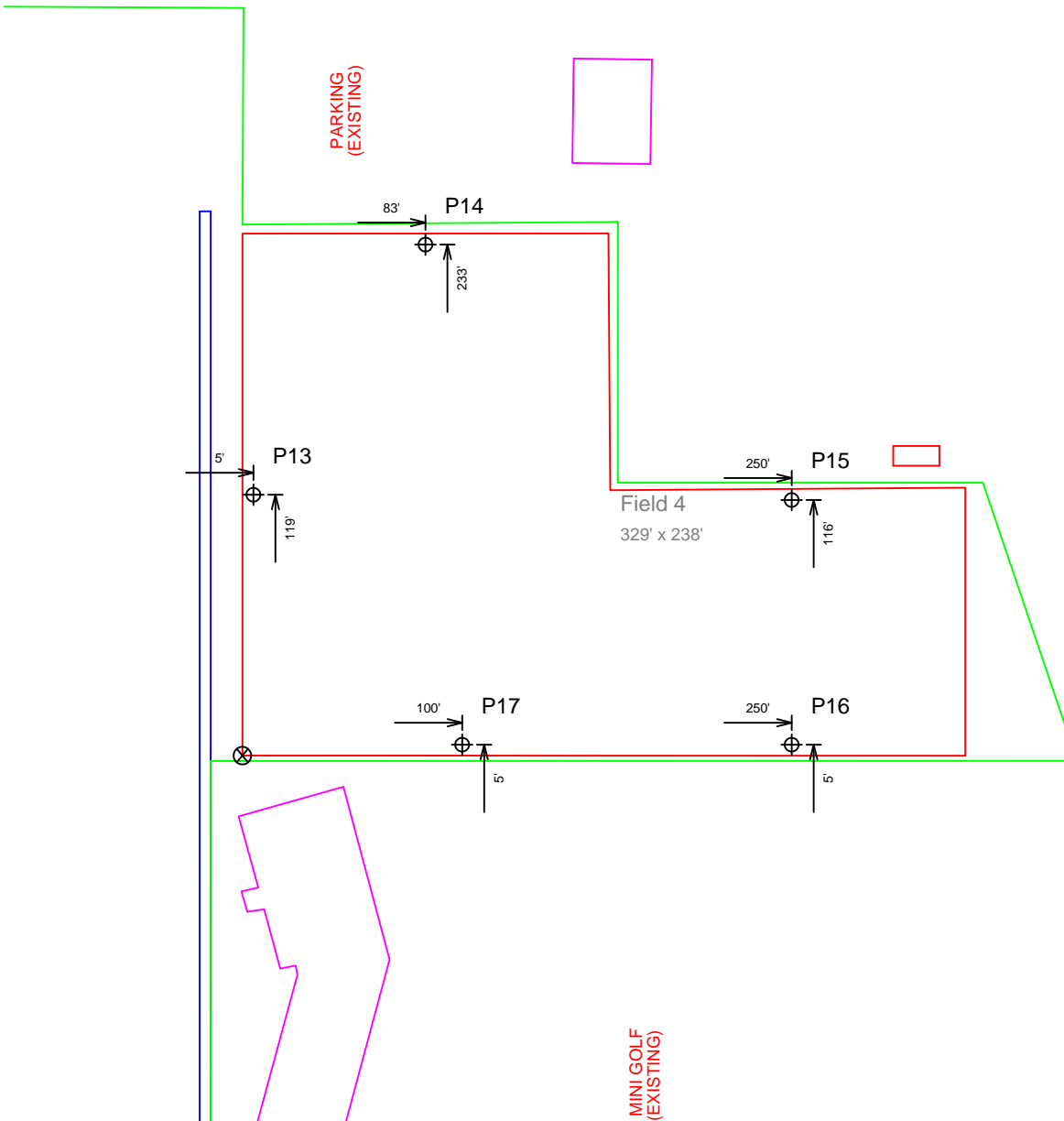
**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

**EQUIPMENT LIST FOR AREAS SHOWN**

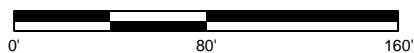
		Pole		Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
4	P13 P15-P17	60'	-	60'	1500W MZ	4
1	P14	60'	-	60'	1500W MZ	5
<b>TOTALS</b>						21

**SINGLE LUMINAIRE AMPERAGE DRAW CHART**

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)								
	Single Phase Voltage								
	120 (60)	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	415 (60)	480 (60)
1500 watt MZ	15.0	8.6	7.7	7.5	6.5	5.1	4.7	-	3.7



SCALE IN FEET 1 : 80



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

By: Shawn Moyer

File #: 133793F4

Date: 19-Nov-08

Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
4	P1-P4	70'	-	70'	1500W MZ	5	5	0
4	← TOTALS →					20	20	0



GUARANTEED PERFORMANCE

### ILLUMINATION SUMMARY

Field 1  
Del Mar Master Plan Soccer  
Del Mar, CA

Field 1  
· Size: 284' x 176'  
· Grid Spacing = 30.0' x 30.0'  
· Values given at 3.0' above grade

· Luminaire Type: Green Generation  
· Rated Lamp Life: 5000 hours  
· Avg Lumens/Lamp: 134,000

#### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

Entire Grid	
No. of Target Points:	60
Average:	30.1
Maximum:	42
Minimum:	16
Avg/Min:	1.88
Max/Min:	2.63
UG (Adjacent Pts):	2.13
CV:	0.24
Average Lamp Tilt Factor:	1.000
Number of Luminaires:	20
Avg KW over 5000 hours:	31.28
Max KW:	34.0

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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

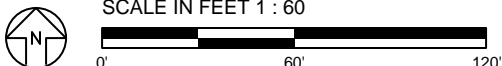
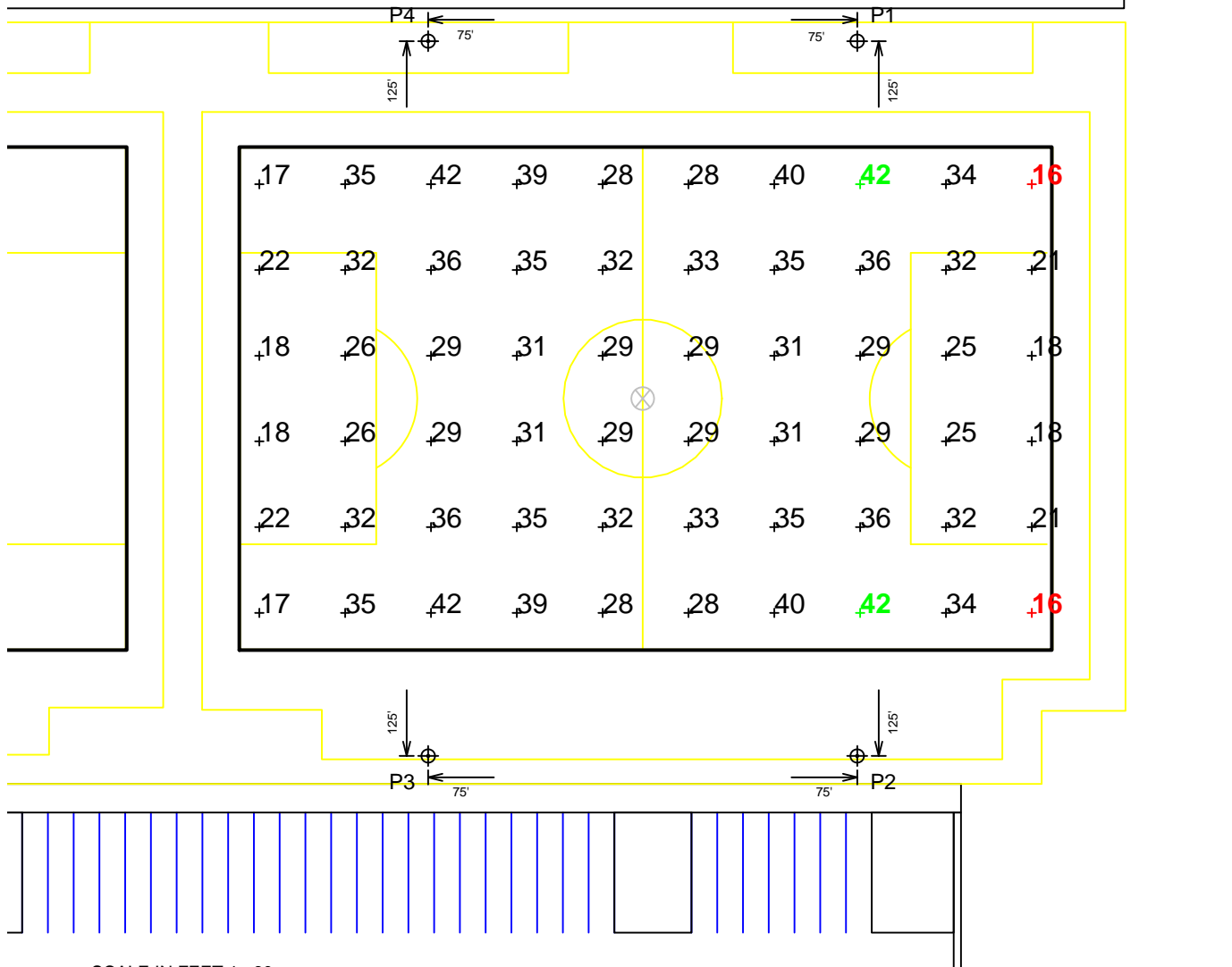
**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Shawn Moyer

File #: 133793

Date: 19-Nov-08

Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting



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

EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
2	P5, P8	70'	-	70'	1500W MZ	6	6	0	
2	P6-P7	70'	-	70'	1500W MZ	7	7	0	
4	<b>TOTALS</b>						26	26	0



GUARANTEED PERFORMANCE

### ILLUMINATION SUMMARY

Field 2  
Del Mar Master Plan Soccer  
Del Mar, CA

Field 2  
· Size: 336' x 176'  
· Grid Spacing = 30.0' x 30.0'  
· Values given at 3.0' above grade

· Luminaire Type: Green Generation  
· Rated Lamp Life: 5000 hours  
· Avg Lumens/Lamp: 134,000

#### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

Entire Grid	
No. of Target Points:	72
Average:	31.5
Maximum:	51
Minimum:	18
Avg/Min:	1.79
Max/Min:	2.89
UG (Adjacent Pts):	2.09
CV:	0.26
Average Lamp Tilt Factor:	1.000
Number of Luminaires:	26
Avg KW over 5000 hours:	40.66
Max KW:	44.2

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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

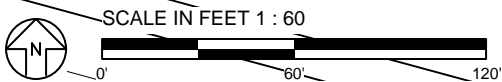
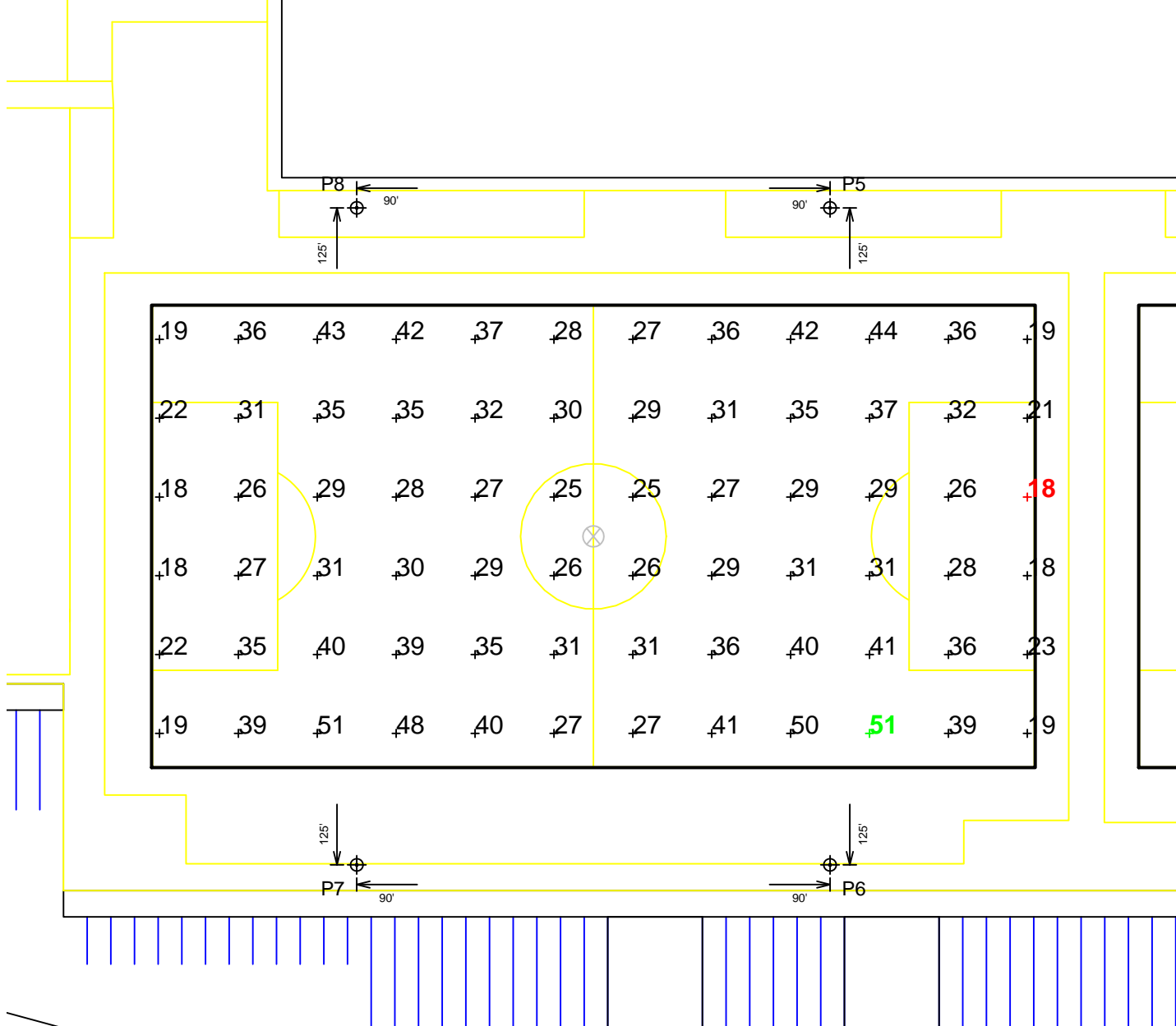
**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Shawn Moyer

File #: 133793

Date: 19-Nov-08

Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting



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

EQUIPMENT LIST FOR AREAS SHOWN								
Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	P10-P11	70'	-	70'	1500W MZ	5	5	0
2	P12, P9	70'	-	70'	1500W MZ	4	4	0
4	<b>TOTALS</b>					18	18	0



GUARANTEED PERFORMANCE

### ILLUMINATION SUMMARY

**Field 3**  
Del Mar Master Plan Soccer  
Del Mar, CA

**Field 3**  
- Size: 228' x 192'  
- Grid Spacing = 30.0' x 30.0'  
- Values given at 3.0' above grade

- Luminaire Type: Green Generation  
- Rated Lamp Life: 5000 hours  
- Avg Lumens/Lamp: 134,000

#### CONSTANT ILLUMINATION HORIZONTAL FOOTCANDLES

	Entire Grid	
No. of Target Points:	56	
	Average: 30.3	
	Maximum: 41	
	Minimum: 22	
	Avg/Min: 1.39	
	Max/Min: 1.88	
UG (Adjacent Pts):	1.70	
	CV: 0.18	

Average Lamp Tilt Factor:	1.000
Number of Luminaires:	18
Avg KW over 5000 hours:	28.15
Max KW:	30.6

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

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

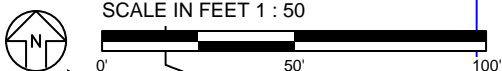
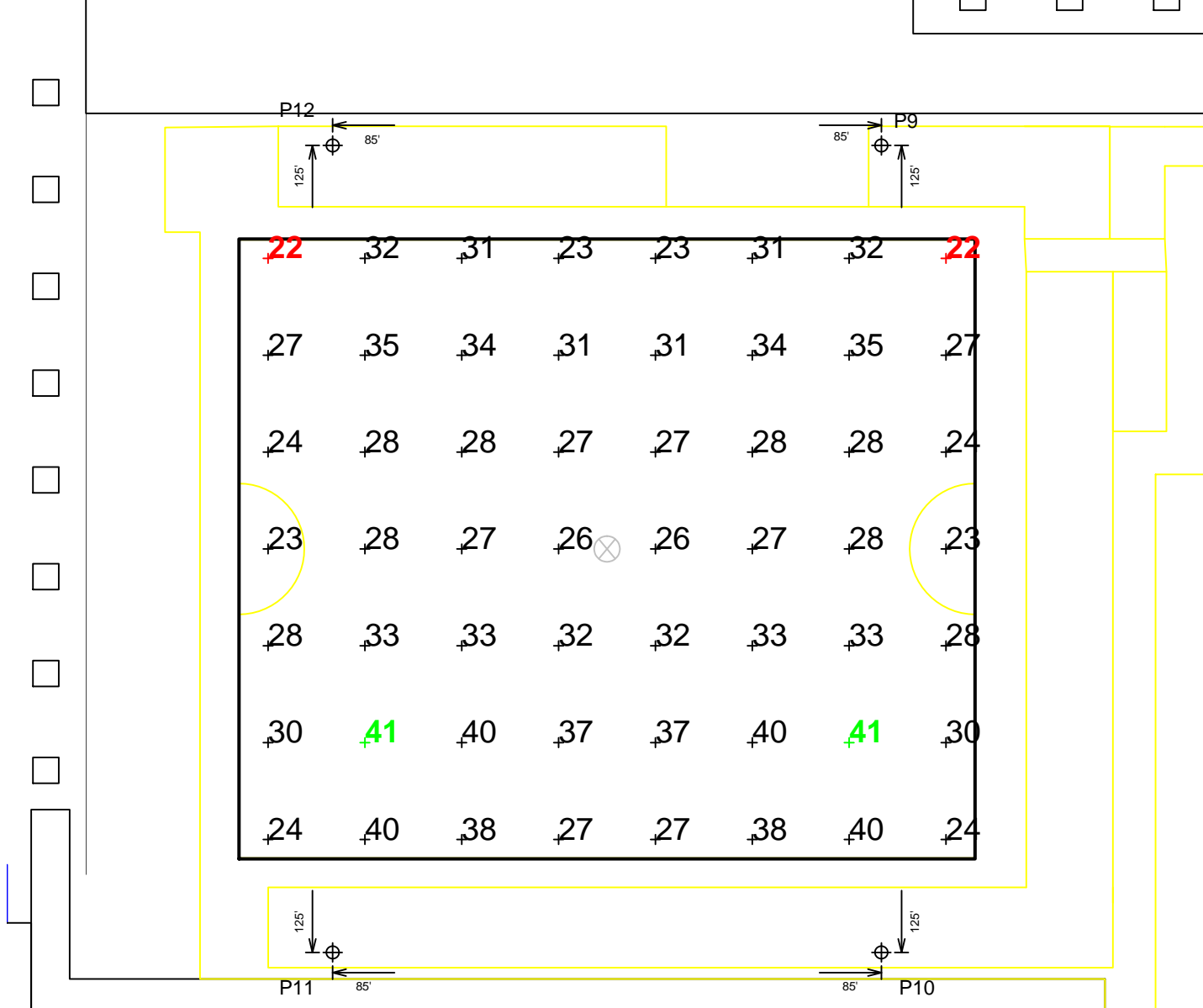
**Installation Requirements:** Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Shawn Moyer

File #: 133793

Date: 19-Nov-08

Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting



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

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
6	P1, P10-P11 P2-P4	70'	-	70'	1500W MZ	5	5	0
2	P5, P8	70'	-	70'	1500W MZ	6	6	0
2	P6-P7	70'	-	70'	1500W MZ	7	7	0
2	P12, P9	70'	-	70'	1500W MZ	4	4	0
12	<b>TOTALS</b>					64	64	0



GUARANTEED PERFORMANCE

**ILLUMINATION SUMMARY**

Area Grid  
Del Mar Master Plan Soccer  
Del Mar, CA

Area Grid  
· Grid Spacing = 30.0' x 30.0'  
· Values given at 3.0' above grade

· Luminaire Type: Green Generation  
· Rated Lamp Life: 5000 hours  
· Avg Lumens/Lamp: 134,000

**CONSTANT ILLUMINATION  
HORIZONTAL FOOTCANDLES**

Entire Grid  
No. of Target Points: 2278  
**Average: 3.3**  
Maximum: 50.09  
Minimum: 0.00

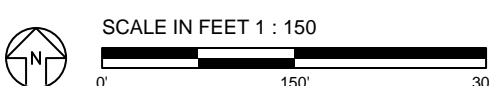
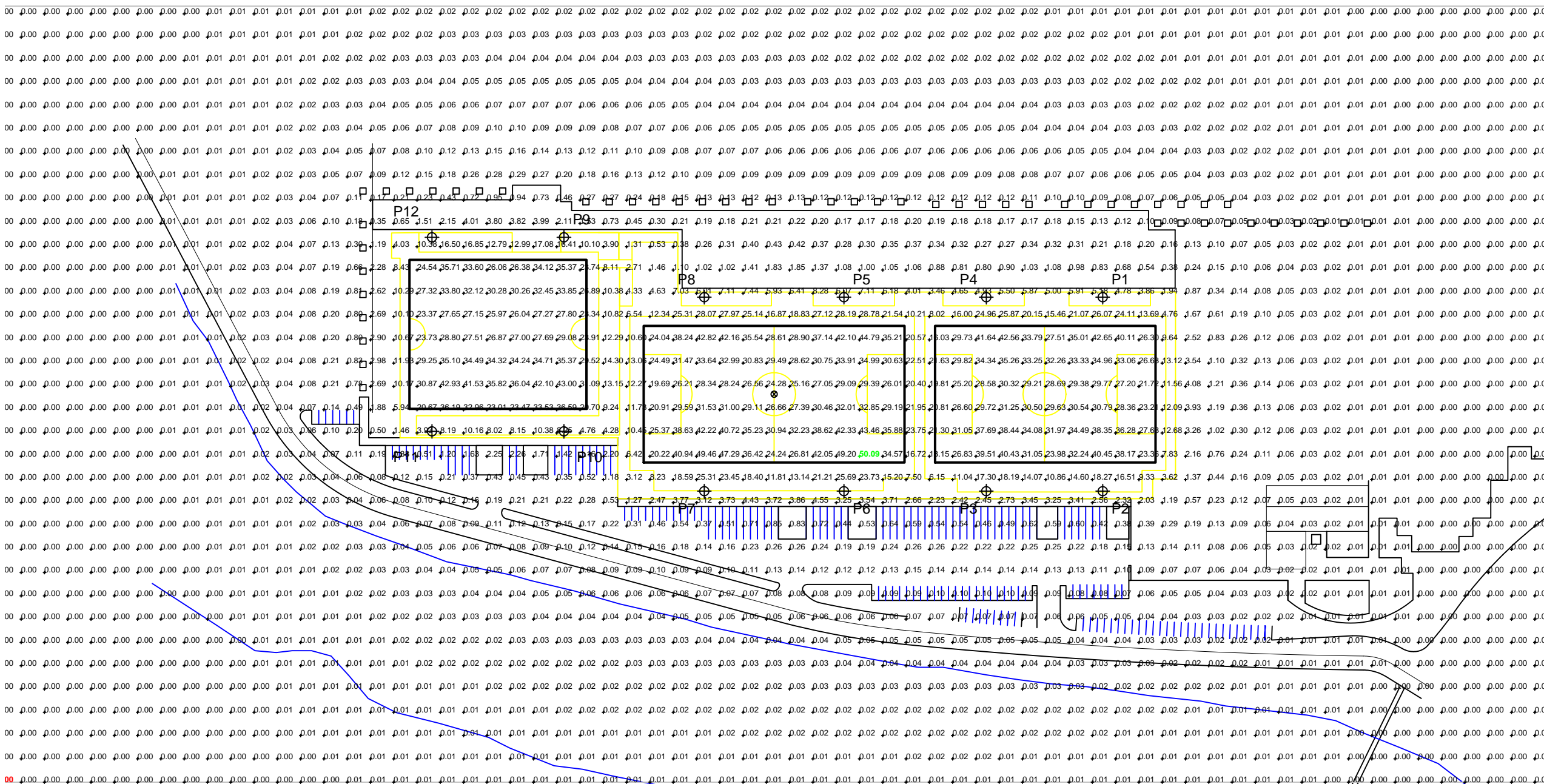
Average Lamp Tilt Factor: 1.000  
Number of Luminaires: 64  
Avg KW over 5000 hours: 100.1  
Max KW: 108.8

**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

**Field Measurements:** Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

**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.



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

By: Shawn Moyer  
File #: 133793 Date: 19-Nov-08  
Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting

NOTES: SEE SCANS FOR



GUARANTEED PERFORMANCE

## EQUIPMENT LAYOUT

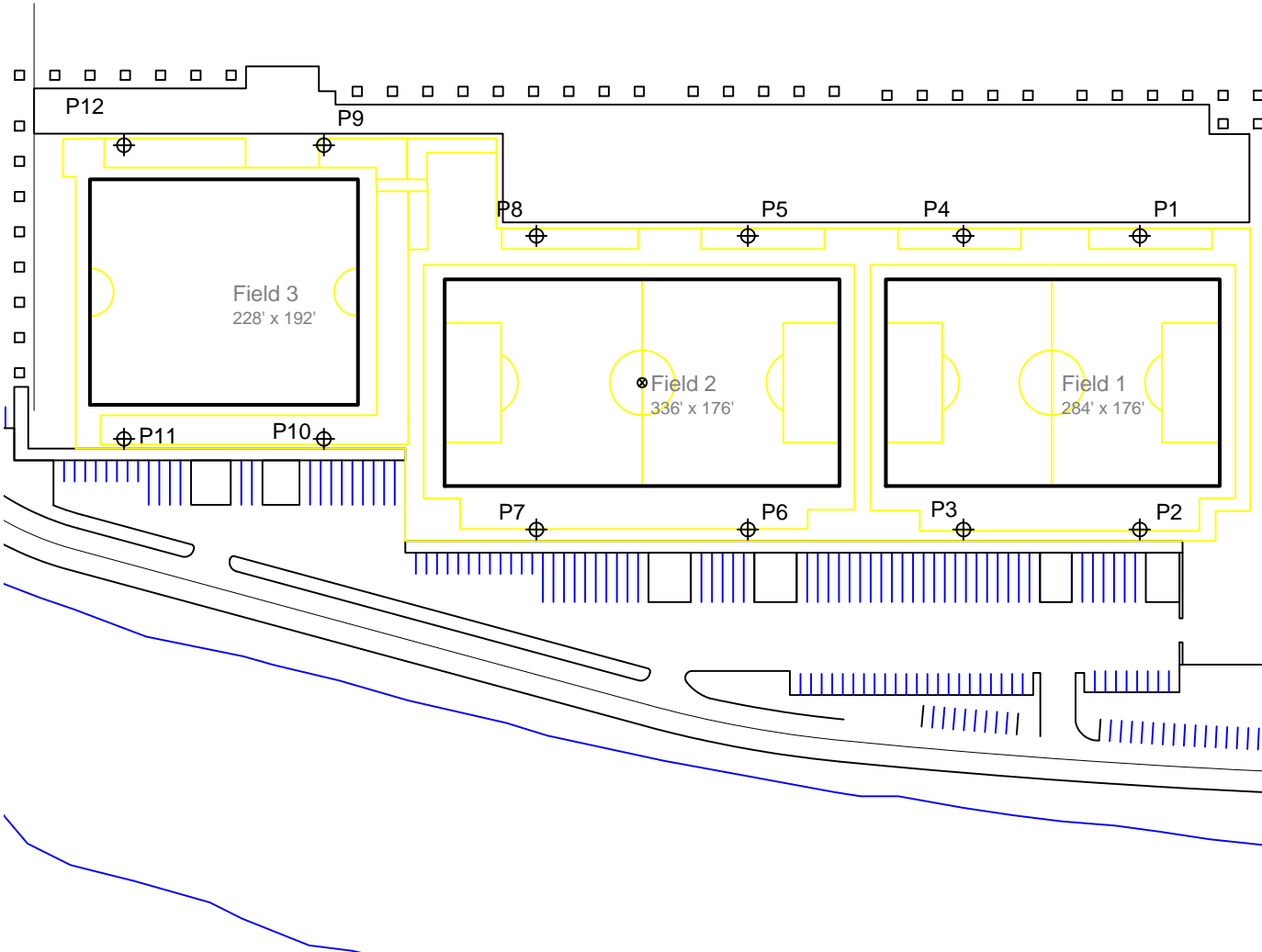
Del Mar Master Plan Soccer  
Del Mar, CA

**INCLUDES:**

- Field 1
- Field 2
- Field 3

**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.

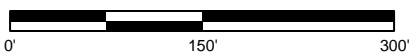


EQUIPMENT LIST FOR AREAS SHOWN						
Pole			Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE
6	P1 P2-P4 P10-P11	70'	-	70'	1500W MZ	5
2	P5, P8	70'	-	70'	1500W MZ	6
2	P6-P7	70'	-	70'	1500W MZ	7
2	P12, P9	70'	-	70'	1500W MZ	4
12	<b>TOTALS</b>					64

SINGLE LUMINAIRE AMPERAGE DRAW CHART									
Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)								
	120	208	220	240	277	347	380	415	480
Single Phase Voltage	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)	(60)
1500 watt MZ	15.0	8.6	7.7	7.5	6.5	5.1	4.7	-	3.7



SCALE IN FEET 1 : 150



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

By: Shawn Moyer

File #: 133793

Date: 19-Nov-08

Not to be reproduced in whole or part without the written consent of Musco Lighting. ©1981, 2008 Musco Lighting