

CITY OF PEARL PARKS & RECREATION



BASEBALL & SOFTBALL FIELDS ELITE 1000wLED - APPROVAL SUBMITTAL

Prepared By:
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Date:
10/18/19

APPROVAL SUBMITTAL

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Resume'



Company Profile

Techline Sports Lighting's world headquarters is located in beautiful Austin, Texas. We are the Sports Lighting professionals for football, baseball, soccer, softball, tennis, lacrosse, driving ranges and golf courses, multi-sport complexes, city park multi-use fields, motor sports complexes, tracks, and arenas. Our team of experts partner with you to bring light to your unique sports lighting project. Whether we are lighting your youth field, high school, city or municipal park, college, intramural, or professional venue, Techline Sports Lighting's goal is to exceed your expectations! We offer the highest quality products at the most competitive prices, while providing the best customer service in the industry.



Products & Services

Techline Sports Lighting provides innovative LED sports lighting systems. Retrofit upgrades or new installations, we are your one stop source for all your sports lighting needs. Techline maintains a large engineered pole and fixture inventory and provides various levels of installation services. Our systems include the most versatile LED fixtures in the industry. Powered by Ephesus, these fixtures are built with superior solid state technology, advanced circuitry, precisely engineered optics, and a built in power supply. The revolutionary AirMesh wireless remote control system allows you endless entertainment possibilities for fan and player experiences. With state contract purchasing, financing or lease purchase options, we provide solutions for your budget.



TSL Team

Our staff includes experienced engineers, electricians, lighting designers, wireless control specialists, LED commissioners, inside and outside sales personnel, plus our own in-house marketing, production, logistics and after hours support team. We provide consultation, design and engineering, comprehensive budgets, complete engineered systems, professional installation, aiming and light tests, and training for wireless controls.



Mission – The Techline Sports Lighting Difference

Sports lighting is our only business! For over 20 years, Techline Sports Lighting has been your source for sports lighting solutions. Your Techline representative partners directly with you and your team to manage everything from concept to design through installation and beyond. Our team brings you more than 70 years combined sports lighting experience and thousands of installations throughout the world. Our one goal is your satisfaction! At Techline Sports Lighting, we bring our BEST game...to light!



Major Installations

- **U.S. Bank Stadium**, Minneapolis, Minnesota
 - 2018 Super Bowl
 - 2019 NCAA Final Four
- **Mercedes-Benz Stadium**, Atlanta, Georgia
 - 2018 MLS Cup
 - 2019 Super Bowl
 - 2018 & 2019 Chic Fil A Peach Bowl
 - NCAA National Football Championship
- **Hard Rock Stadium**, Miami Gardens, Florida
 - 2020 Super Bowl
 - 2019 Miami Open Tennis Tournament
- **Martinsville Speedway**





Project Name:	City of Pearl Parks & Recreation
Project City-State:	Pearl, Mississippi
Quote Date:	10/18/2019
Type of Field(s):	Baseball Fields A,B,C,D,E,F,G,H
Photometrics Per Design #:	30/20 FC Light Level / 19-0608-BB
Warranty:	10 Year Warranty

Quantity	Description
158	ELITE 1000w LED w/ Visor
2	Wireless Controller (Digital Contactor)
158	Retrofit Diving Board Mounting Adapter Bracket
158	Retrofit Installation Hardware Kit (bolts, washers, wire nuts, etc...)

Project Notes:




- Price includes all materials listed above (excluding adders & deducts).
- Price includes delivery to jobsite.
- Price firm for 60 days.
- Allow 6-8 weeks for delivery.
- (*Delivery process will begin once P.O./Contract has been issued and the Voltage Verification & Design Approval Form (if applicable) - have been properly filled out and returned.*)
- All work to be performed that requires a license, including but not limited to electrical & plumbing will be performed by individuals - currently licensed in the proper jurisdiction.
- All proposals are based in bids by licensed individuals anticipated to perform the work.

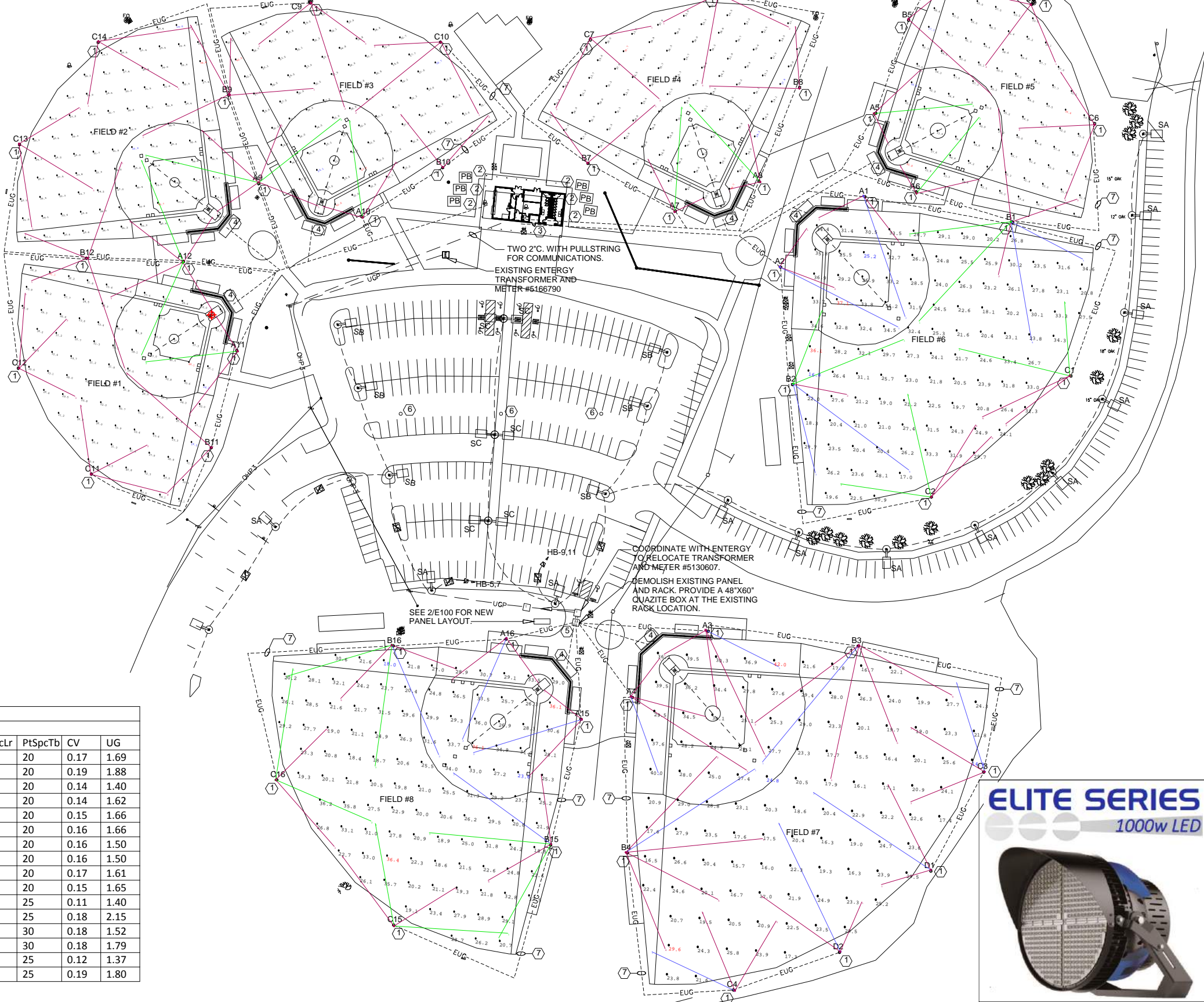
Warranty Notes:

- Seller warrants that Equipment furnished or manufactured by Seller will be free from defects in material and workmanship for a period - of 25 years from date of shipment.
- Seller will replace any defective material for the entire 25 year period.
- Techline will make every effort to maintain any component of our sports lighting system for the entirety of the warranty period.
- Advances in technology and obsolescence of some components, including but not limited to; regulatory changes, cellular upgrades, - and other items beyond our control, could possibly render this impossible for some components in the future.
- Techline will always make every effort to support our system as long as manufactured components are available.

Pole Summary		
Scene: DEFAULT		
Poles	# Lums	MH
A01	3	60
A02	3	60
A03	4	60
A04	4	60
A05	3	50
A06	3	50
A07	3	50
A08	3	50
A09-F2	3	50
A09-F3	3	50
A10	3	50
A11	3	50
A12-F1	3	50
A12-F2	3	50
A15	3	60
A16	3	60
B01-F5	2	60
B01-F6	5	60
B02	5	60
B03	5	60
B04	5	60
B05	2	50
B07	2	50
B08	2	50
B09-F2	2	50
B09-F3	2	50
B10	2	50
B11	2	50
B12-F1	2	50
B12-F2	2	50
B15	5	60
B16	5	60
C01	4	60
C02	4	60
C03	3	60
C04	3	60
C05	3	50
C06	3	50
C07	3	50
C08	3	50
C09	3	50
C10	3	50
C11	3	50
C12	3	50
C13	3	50
C14	3	50
C15	4	60
C16	4	60
D01	3	60
D02	3	60

Pole Wattage Summary	
Scene: DEFAULT	
Label	Total Watts
A01	3000
A02	3000
A03	4000
A04	4000
A05	3000
A06	3000
A07	3000
A08	3000
A09	6000
A10	3000
A11	3000
A12	6000
A15	3000
A16	3000
B01	7000
B02	5000
B03	5000
B04	5000
B05	2000
B07	2000
B08	2000
B09	4000
B10	2000
B11	2000
B12	4000
B15	5000
B16	5000
C01	4000
C02	4000
C03	3000
C04	3000
C05	3000
C06	3000
C07	3000
C08	3000
C09	3000
C10	3000
C11	3000
C12	3000
C13	3000
C14	3000
C15	4000
C16	4000
D01	3000
D02	3000
TOTAL	158000

Luminaire Schedule					
Scene: DEFAULT					
Symbol	Qty	Label	LLF	Lum. Watts	Arrangement
	18	ELITE_1000-M	0.950	1000	SINGLE
	26	ELITE_1000-W	0.950	1000	SINGLE
	114	ELITE_1000-EW	0.950	1000	SINGLE



Calculation Summary										
Scene: DEFAULT										
Label	Units	Avg	Max	Min	Max/Min	# Pts	PtSpcLr	PtSpcTb	CV	UG
BB#1 INFIELD	Fc	32.74	44.1	24.2	1.82	25	20	20	0.17	1.69
BB#1 OUTFIELD	Fc	26.42	41.1	19.2	2.14	71	20	20	0.19	1.88
BB#2 INFIELD	Fc	32.08	40.7	23.0	1.77	25	20	20	0.14	1.40
BB#2 OUTFIELD	Fc	24.84	34.8	19.0	1.83	71	20	20	0.14	1.62
BB#3 INFIELD	Fc	33.30	43.6	24.1	1.81	25	20	20	0.15	1.66
BB#3 OUTFIELD	Fc	27.33	42.5	18.7	2.27	70	20	20	0.16	1.66
BB#4 INFIELD	Fc	36.90	49.7	28.2	1.76	25	20	20	0.16	1.50
BB#4 OUTFIELD	Fc	24.74	35.7	17.9	1.99	71	20	20	0.16	1.50
BB#5 INFIELD	Fc	34.68	45.8	26.8	1.71	25	20	20	0.17	1.61
BB#5 OUTFIELD	Fc	25.13	36.4	17.3	2.10	71	20	20	0.15	1.65
BB#6 INFIELD	Fc	31.75	37.1	25.2	1.47	25	25	25	0.11	1.40
BB#6 OUTFIELD	Fc	25.46	36.1	16.8	2.15	85	25	25	0.18	2.15
BB#7 INFIELD	Fc	31.34	42.0	24.8	1.69	25	30	30	0.18	1.52
BB#7 OUTFIELD	Fc	21.68	29.6	14.3	2.07	85	30	30	0.18	1.79
BB#8 INFIELD	Fc	30.30	36.1	23.6	1.53	25	25	25	0.12	1.37
BB#8 OUTFIELD	Fc	25.04	36.4	18.0	2.02	88	25	25	0.19	1.80

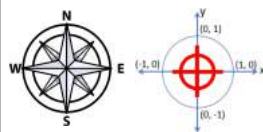


CITY OF PEARL ATHLETIC COMPLEX
PEARL, MS
BASEBALL FIELDS: A,B,C,D,E,F,G,H
19-0608-BB



1. THIS LIGHTING DESIGN IS BASED ON INFORMATION SUPPLIED BY OTHERS. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AND FIELD CONDITIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, OBTAIN SITE INFORMATION (POLE LOCATION, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY SIZE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

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Date:10/18/2019
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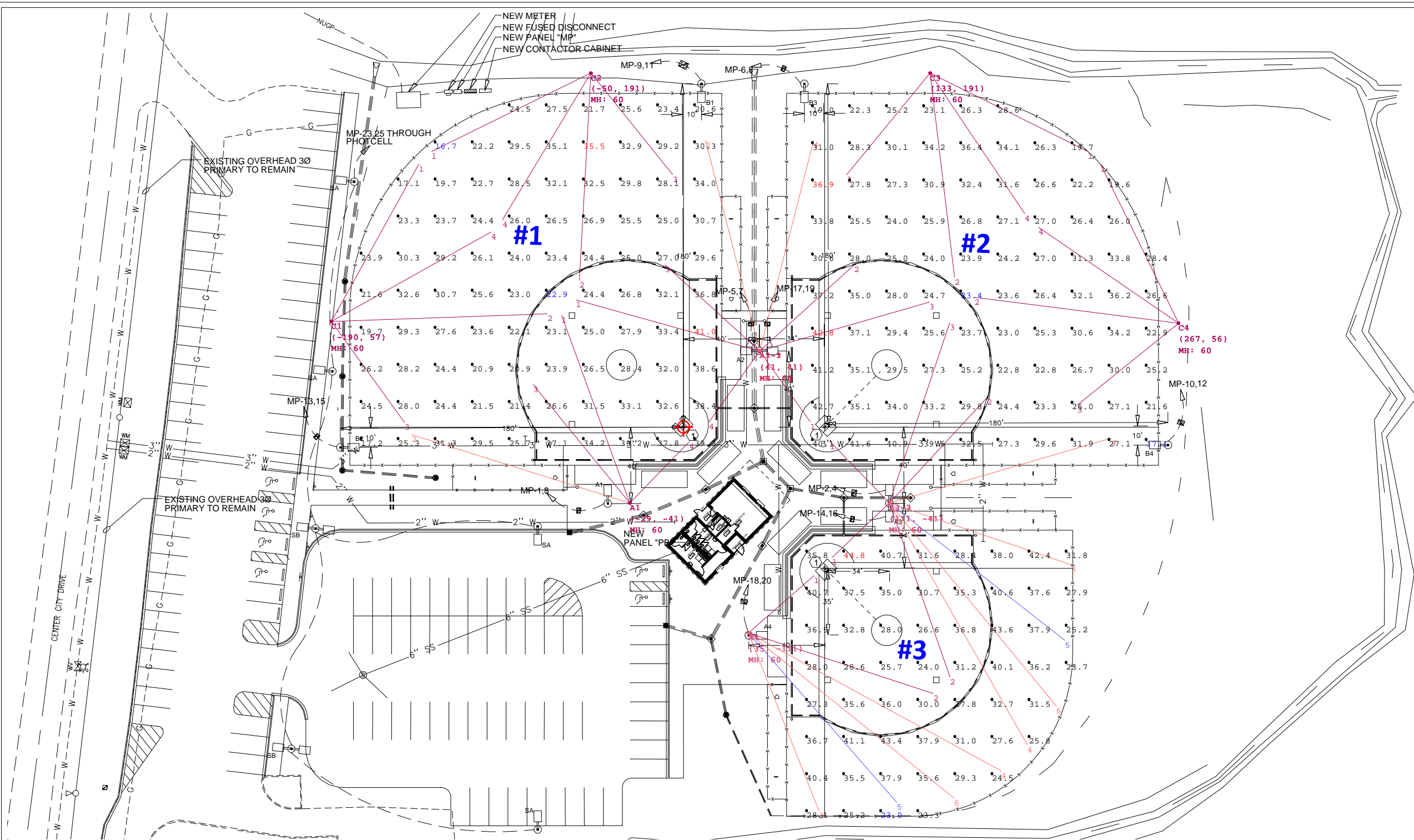


Project Name:	City of Pearl Parks & Recreation
Project City-State:	Pearl, Mississippi
Quote Date:	10/18/2019
Type of Field(s):	Softball Fields #1, #2, #4
Photometrics Per Design #:	30/20 FC Light Level / 19-0608-SB
Warranty:	25 Year Warranty

Quantity	Description
8	60 Foot Mounting Height - Anchor Base Steel Poles w/ Disconnect Device
5	4 Fixture Crossarms
1	6 Fixture Crossarms
1	8 (4/4) Fixture Crossarms - For Common Pole
1	10 (6/4) Fixture Crossarms - For Common Pole
44	ELITE 1000w LED w/ Visor
1	Wireless Controller (Digital Contactor)
44	Prewiring for Poles and Crossarms

Project Notes:
<ul style="list-style-type: none">➤ Price includes all materials listed above (excluding adders & deducts).➤ Price includes delivery to jobsite.➤ Price firm for 60 days.➤ Allow 6-8 weeks for delivery.➤ (<i>Delivery process will begin once P.O./Contract has been issued and the Voltage Verification & Design Approval Form (if applicable) - have been properly filled out and returned.</i>)➤ All work to be performed that requires a license, including but not limited to electrical & plumbing will be performed by individuals - currently licensed in the proper jurisdiction.➤ All proposals are based in bids by licensed individuals anticipated to perform the work.

Warranty Notes:
<ul style="list-style-type: none">➤ Seller warrants that Equipment furnished or manufactured by Seller will be free from defects in material and workmanship for a period - of <u>25 years</u> from date of shipment.➤ Seller will replace any defective material for the entire <u>25 year</u> period.➤ Techline will make every effort to maintain any component of our sports lighting system for the entirety of the warranty period.➤ Advances in technology and obsolescence of some components, including but not limited to; regulatory changes, cellular upgrades, - and other items beyond our control, could possibly render this impossible for some components in the future.➤ Techline will always make every effort to support our system as long as manufactured components are available.



Pole Summary		
Scene: DEFAULT		
Poles	# Lums	MH
A1	4	60
A2-1	4	60
A2-2	4	60
A3-2	4	60
A3-3	6	60
A4	6	60
C1	4	60
C2	4	60
C3	4	60
C4	4	60

Pole Wattage Summary	
Scene: DEFAULT	
Label	Total Watts
A1	4000
A2	8000
A3	10000
A4	6000
C1	4000
C2	4000
C3	4000
C4	4000
TOTAL	44000

Luminaire Schedule					
Scene: DEFAULT					
Symbol	Qty	Label	LLF	Lum. Watts	Arrangement
○	10	ELITE_1000-N	0.950	1000	SINGLE
○	2	ELITE_1000-M	0.950	1000	SINGLE
○	32	ELITE_1000-EW	0.950	1000	SINGLE

Calculation Summary											
Scene: DEFAULT											
Label	Area Size	Units	Avg	Max	Min	Max/Min	# Pts	PtSpCLr	PtSpCLb	CV	UG
SB#1 INFIELD	185'/205'/200'	Fc	31.26	41.0	22.9	1.79	25	20	20	0.18	1.26
SB#1 OUTFIELD		Fc	25.96	35.5	16.7	2.13	67	20	20	0.16	1.64
SB#2 INFIELD	180'/205'/180'	Fc	33.39	42.8	23.4	1.83	25	20	20	0.19	1.26
SB#2 OUTFIELD		Fc	27.20	36.9	17.1	2.16	67	20	20	0.16	1.63
SB#3	135'/150'/135'	Fc	33.05	44.8	23.0	1.95	56	20	20	0.18	1.65

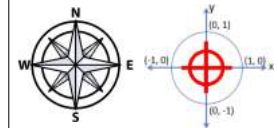


CITY OF PEARL ATHLETIC COMPLEX
PEARL, MS
SOFTBALL FIELDS: #1, #2, #3
19-0608-SB



1. THIS LIGHTING DESIGN IS BASED ON INFORMATION SUPPLIED BY OTHERS. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AND FIELD CONDITIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, OBTAIN SITE INFORMATION (POLE LOCATION, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT.
2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LUMEN OUTPUT, LUMINAIRE MAY AFFECT FIELD RESULTS.
3. CONFORMANCE TO FACILITY SIZE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.

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Date:10/17/2019
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ELITE SERIES
ELITE 1000w

TECHNICAL DATA
FIXTURE



ELITE SERIES
ELITE 1000w

TECHNICAL DATA
SYSTEM SPECIFICATIONS

High Performance Sports Lighting System

System Watts: 1,000W

Housing Material: Aluminum, Powder Coated

L70 Hours: >90,000 hours

Lumen Output: 120,000

CCT: 5700K

CRI: >90Ra

Input Voltage: 208-480v

Power Factor: 0.95

THD: <15%

Input Protection: 10KV Current Surge

Driver: Integral / Remote

Operating Temp Range: -40° C to +55°

IP Rating: IP66

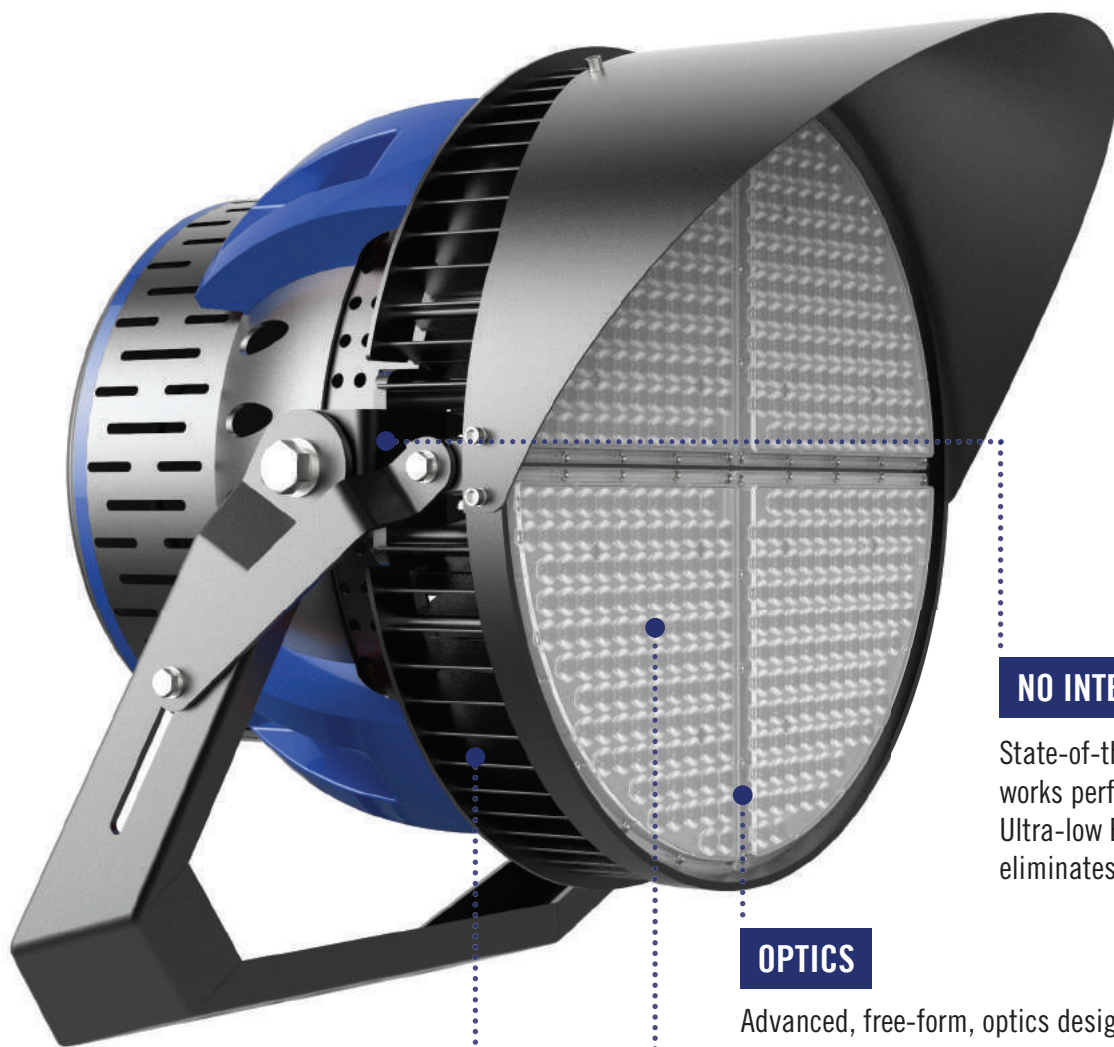
Weight of Fixture: 43lbs

EPA: 2.5



ELITE SERIES ELITE 1000w

TECHNICAL DATA TECHNOLOGY CHANGES PERFORMANCE



SOLID STATE DESIGN

Unique "SSD" design, simple, and advanced.

Ensures durability of LED chip.

All parts are individual, rugged, and strong.

NO INTERFERENCE

State-of-the art circuit system which works perfectly with other systems. Ultra-low EMI noise generation eliminates electrical interference.

OPTICS

Advanced, free-form, optics designed with unique "multi-scale lenses" to create uniform light distribution and glare-reduction.

ENERGY EFFICIENCY

Our photoelectric conversion is the most efficient method to save energy and produce more light.

ELITE SERIES ELITE 1000w

TECHNICAL DATA INNOVATION LIGHTS UP THE FUTURE



THERMAL MANAGEMENT

Seamless link between aerometal materials and numerous heat sink vents to improve heat management and ensure stability of lighting system.

CONTROL SYSTEM

Digital Contactor™ smart system wireless controls for zone and scheduling can be integrated into each system. Wireless digital or mechanical contactor compatible.

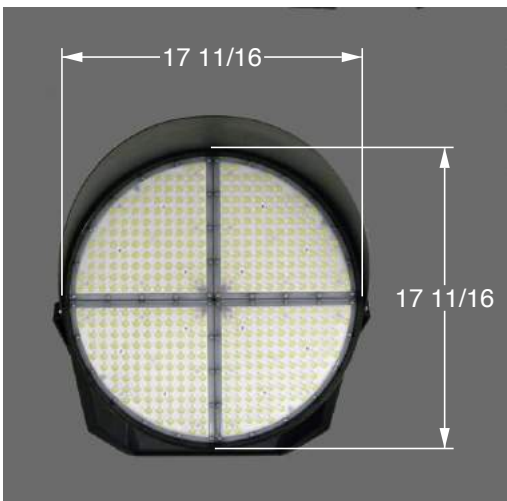
EASE OF INSTALLATION

Adjustable beam angle up to 240°.

Simple bolt on mounting template.

ELITE SERIES**ELITE 1000w****TECHNICAL DATA****INDEPENDENT TESTING LABORATORIES, INC.****(1 of 2)****REPORT NUMBER:** ITL90457-GONIOPHOTOMETRY**ISSUE DATE:** 05/17/18**PREPARED FOR:** GEOSPORT LIGHTING SYSTEMS, LLC**ADDRESS:** 7080 ST. GABRIEL AVENUE

ST. GABRIEL, LA 70776

CATALOG NUMBER: GEOSPORT LED - C**LUMINAIRE:** FABRICATED BLACK PAINTED METAL DRIVER HOUSING, FABRICATED BLACK PAINTED METAL MOUNTING BRACKETS, EXTRUDED BLACK FINISHED FINNED METAL HEAT SINK, 4 WHITE CIRCUIT BOARDS EACH WITH 105 LEDS, 1 FROSTED PLASTIC LENS PER CIRCUIT BOARD WITH ONE CLEAR MULTI-FACETED CONICAL OPTIC WITH RECESSED CENTER TOWARDS LED, FABRICATED BLACK PAINTED METAL VISOR MOUNTING RING AND VISOR. LUMINAIRE AIMED AT THE HORIZON FOR THIS TEST.**LAMPS:** FOUR HUNDRED TWENTY WHITE LIGHT EMITTING DIODES (LEDs) EACH WITH CLEAR HEMISPHERICAL INTEGRAL LENS, AIMED AT THE HORIZON.**INPUT ELECTRICAL:** 277.0 VOLTS, 979.1 WATTS, 3.75 AMPS**LED DRIVERS:** FOUR MEAN WELL HLG-240H-48B, DRIVERS HAVE MULTIPLE LEADS, LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST, CLIENT STATES DRIVER POTENTIOMETERS SET FOR UNKNOWN AMPERAGE AND VOLTAGE DRIVER OUTPUT..**NOTE:** DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (277VAC, 60Hz) TO THE DRIVERS.**TEST PROCEDURE:** IESNA LM-79-08**TEST DISTANCE =** 35.0 FEET

THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.

Approved! R BERGIN**INDEPENDENT TESTING LABORATORIES, INC.**

4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

THIS REPORT IS BASED ON PUBLISHED INDUSTRY PROCEDURES. FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE.

ELITE SERIES

ELITE 1000w

TECHNICAL DATA

INDEPENDENT TESTING LABORATORIES, INC.

(2 of 2)

REPORT NUMBER: ITL90457-GONIOPHOTOMETRY

ISSUE DATE: 05/17/18

PREPARED FOR: GEOSPORT LIGHTING SYSTEMS, LLC

CATALOG NUMBER: GEOSPORT LED - C

AXIAL CANDLEPOWER

DEG	HORIZ.	DEG	VERT.
90.0	0.	90.0	0.
85.0	122.	85.0	0.
75.0	496.	75.0	0.
65.0	1291.	65.0	0.
55.0	2532.	55.0	911.
47.5	3687.	47.5	1901.
42.5	4635.	42.5	2705.
37.5	6076.	37.5	4001.
33.0	9610.	33.0	7125.
29.0	18287.	29.0	15158.
25.5	37224.	25.5	31720.
22.5	65086.	22.5	56513.
19.5	101410.	19.5	91007.
17.0	130914.	17.0	121116.
15.0	157070.	15.0	148656.
13.0	193115.	13.0	185140.
11.0	246868.	11.0	242091.
9.0	328455.	9.0	322024.
7.0	454464.	7.0	450084.
5.0	591602.	5.0	592950.
3.0	730425.	3.0	732446.
1.0	825444.	1.0	826118.
0.0	838248.	0.0	838248.
-1.0	825444.	-1.0	824770.
-3.0	730425.	-3.0	731099.
-5.0	591602.	-5.0	591602.
-7.0	454464.	-7.0	431481.
-9.0	328455.	-9.0	320707.
-11.0	246868.	-11.0	245930.
-13.0	193115.	-13.0	191434.
-15.0	157070.	-15.0	154785.
-17.0	130914.	-17.0	128641.
-19.5	101410.	-19.5	99105.
-22.5	65086.	-22.5	64172.
-25.5	37224.	-25.5	37683.
-29.0	18287.	-29.0	19243.
-33.0	9610.	-33.0	9973.
-37.5	6076.	-37.5	6161.
-42.5	4635.	-42.5	4824.
-47.5	3687.	-47.5	4033.
-55.0	2532.	-55.0	2954.
-65.0	1291.	-65.0	1647.
-75.0	496.	-75.0	716.
-85.0	122.	-85.0	98.
-90.0	0.	-90.0	101.

FLOODLIGHT CHARACTERISTICS

IES TYPE 3H X 3V
 MAXIMUM CANDLEPOWER 838248. AT 0.0 H, 0.0 V
 HORIZONTAL BEAM ANGLE (50%)
 VERTICAL BEAM ANGLE (50%)
 HORIZONTAL FIELD ANGLE (10%)
 VERTICAL FIELD ANGLE (10%)
 BEAM LUMENS (% FIXTURE)
 FIELD LUMENS (% FIXTURE)
 TOTAL LUMENS (% FIXTURE)
 EFFICACY = 123.4 lm/W



INDEPENDENT TESTING LABORATORIES, INC.

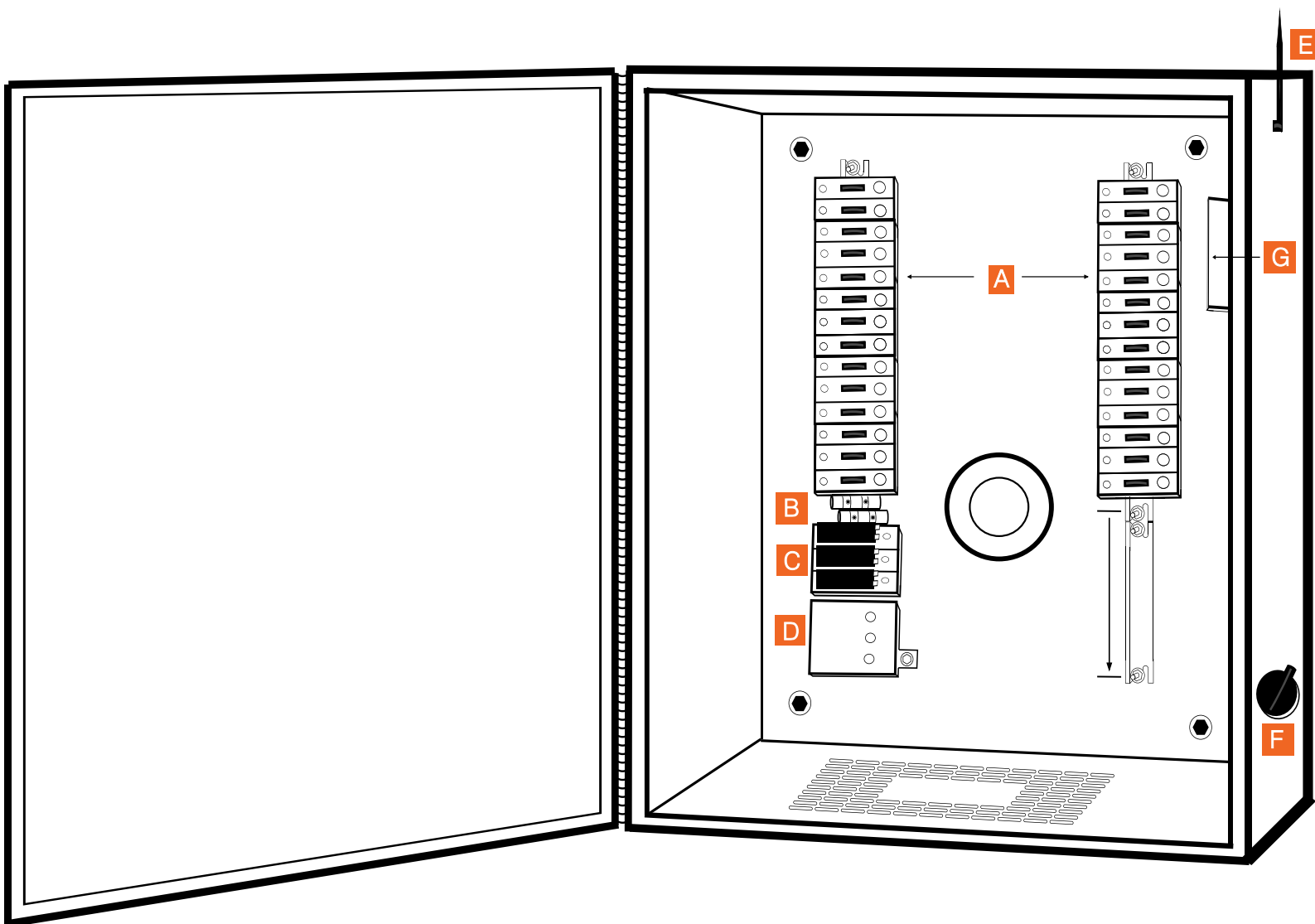
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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ELITE SERIES

TECHNICAL DATA FUSE BOX



Drawings do not designate fuse size, wiring, NEMA box type, distribution block information, disconnect switch size, ampacity, and surge arrester specification.

- | | | | |
|----------|--------------------|----------|-------------------|
| A | Fuses | E | Antenna |
| B | Ground Block | F | Disconnect Switch |
| C | Distribution Block | G | Wireless Relay |
| D | Contactor | | |

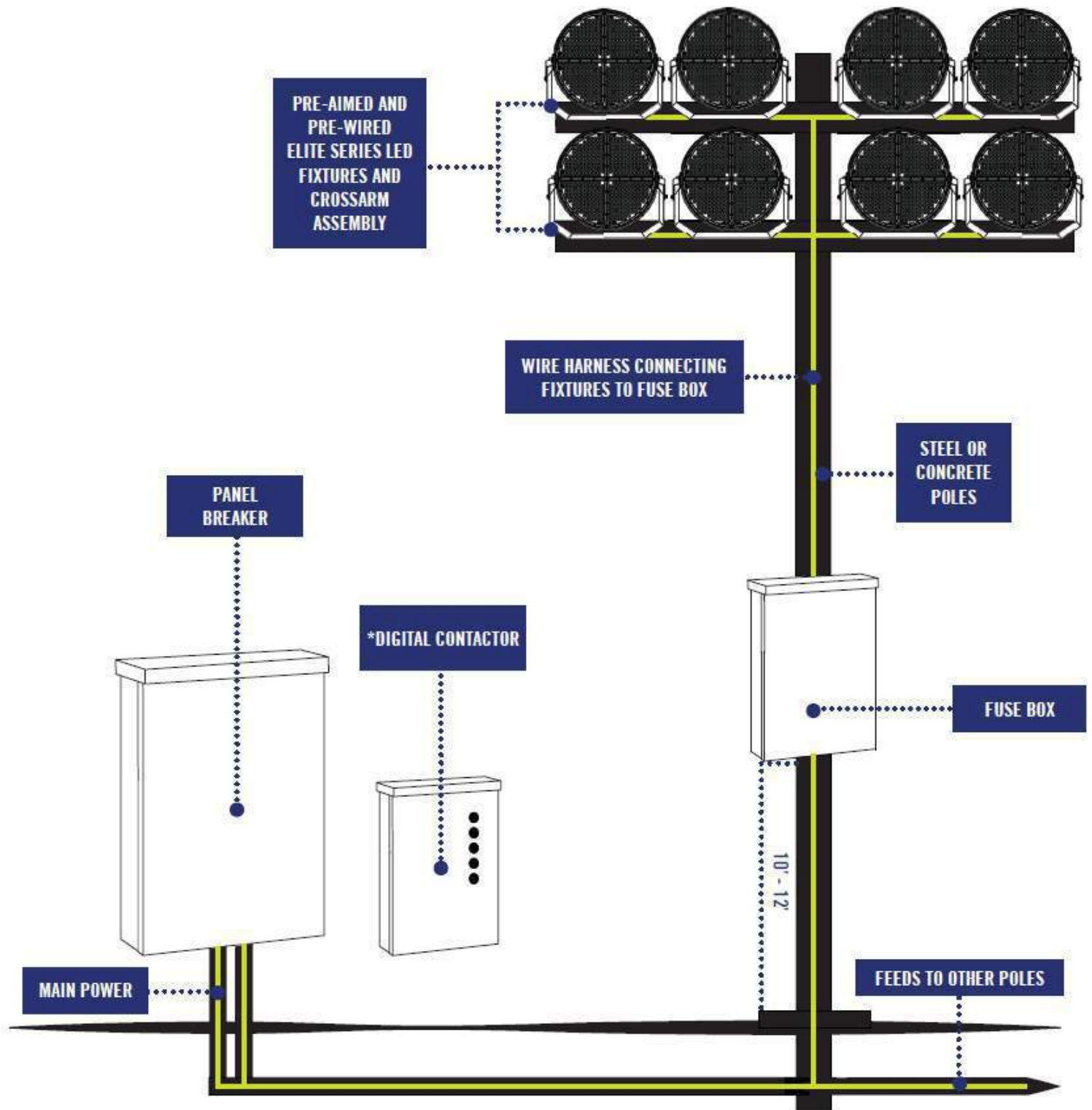
ELITE SERIES

TECHNICAL DATA
WIRELESS CONTROLS



ELITE SERIES

TECHNICAL DATA SIMPLE SYSTEM DRAWING



ELITE SERIES

TECHNICAL DATA CENTRAL BASE STATION (CONTROLLER ACCESSORIES)

Product Overview

The **Central Base Station** is a SimplySNAP component that can be installed anywhere you need wireless push-button lighting control, such as municipal ballparks, hockey arenas, basketball facilities, and other multi-use complexes.

The heart of the Central Base Station is the SS420/450 site controller, contained in the NEMA 4X enclosure. An optional bank of 5 buttons allows for controlled manual access to site lighting controls.

The Central Base Station makes it easy for electricians to quickly install the SimplySNAP site controller and enables quick and simple access to a switch station that can be programmed to meet the needs of the end-user.

Features

- Allows for controlled manual access to a SimplySNAP lighting system
- Weather protected — perfect for both indoor and outdoor applications
- Optional, pre-configured 5-button switch to allow for control of all lighting within the facility
- External Ethernet port for connecting to IT network



Product #	Description
CBSSW-450-001	SS450-based Model w/ 5-button switch
CBSSW-420-002	SS420-based Model w/ 5-button switch
CBS-450-001	SS450-based Model (gateway only)
CBS-420-002	SS420-based Model (gateway only)

Dimensions	15.5" x 13.5" x 7.7" (393 x 342 x 195 mm)
Input Power	90-120VAC; 8W max, 6kV surge protection
Operating Environment	-20°C to +55°C, IP65
Radio	SNAP 2.4GHz 802.15.4 Wi-Fi 2.4Ghz 802.11 b/g/n
Certifications	FCC/IC; Tested to CAN/CSA C22.2 No. 60950-1/A2:2014 and UL 60950-1/R:2014-10
Warranty	5 Years

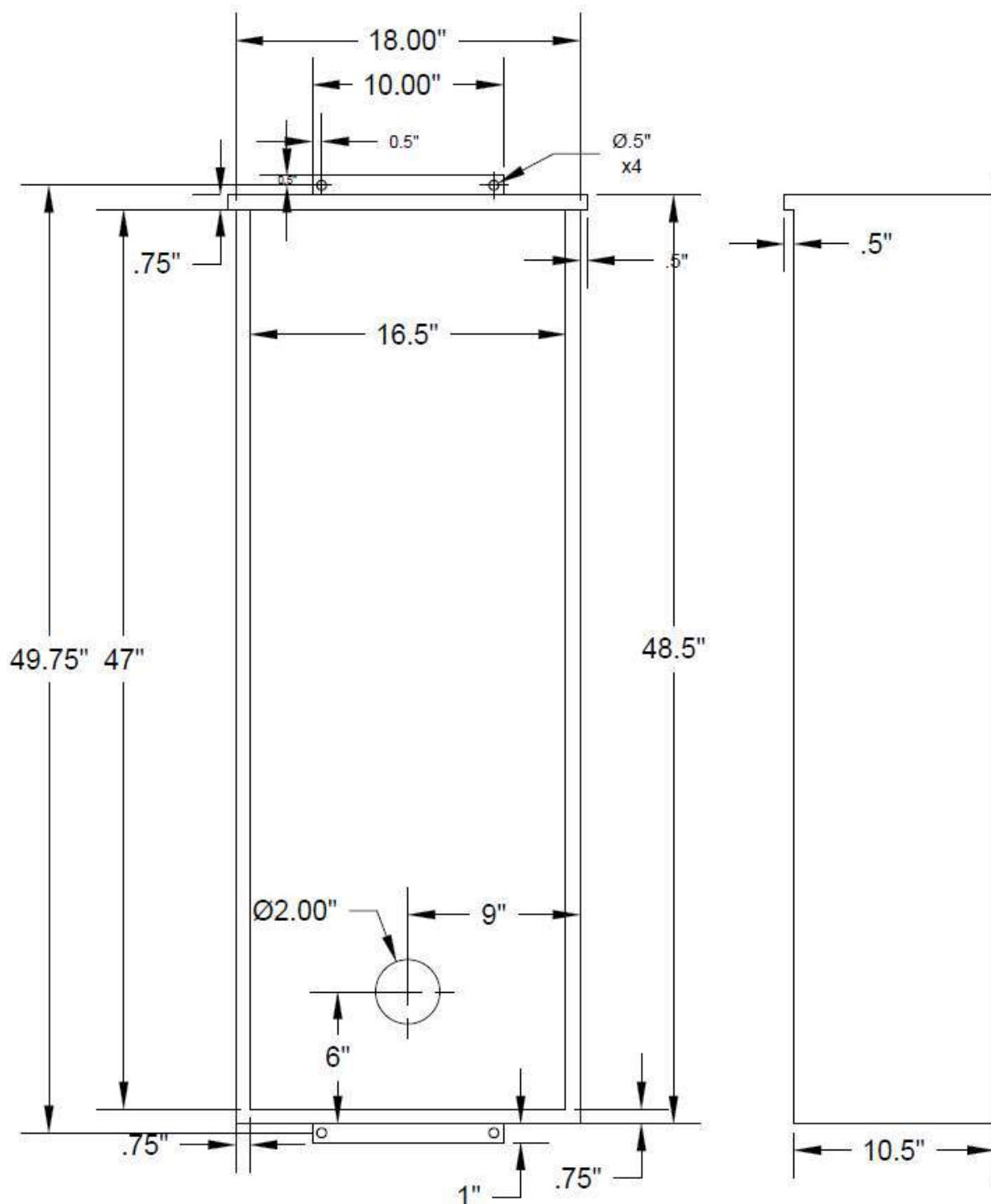
To learn more, call or visit:
synapsewireless.com
(877) 982-7888



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ELITE SERIES

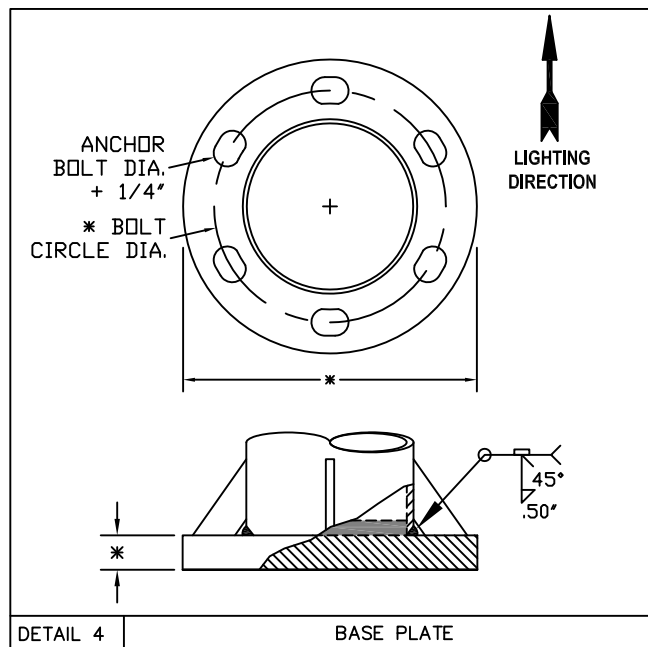
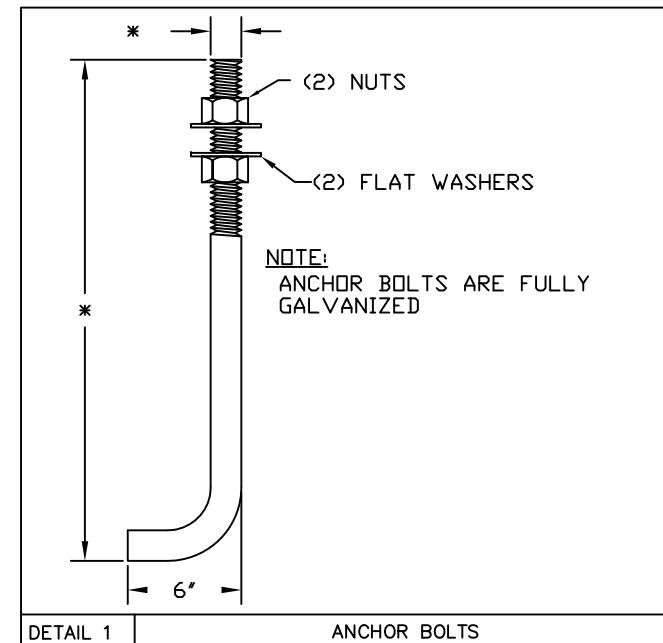
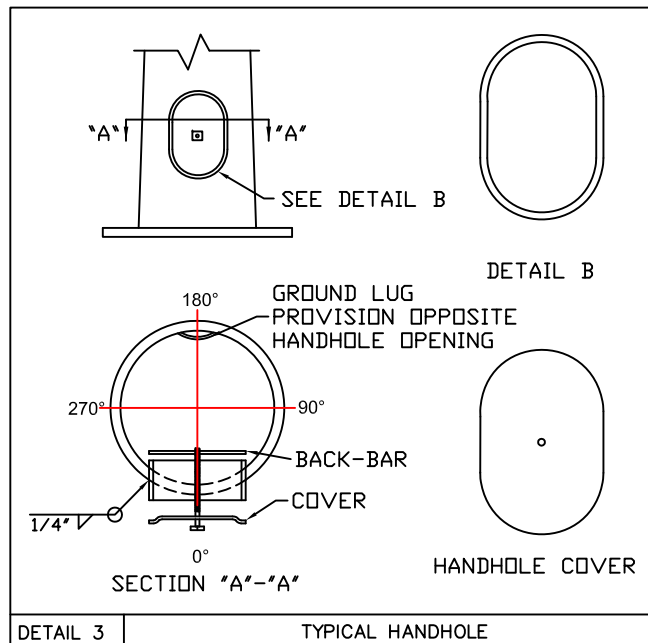
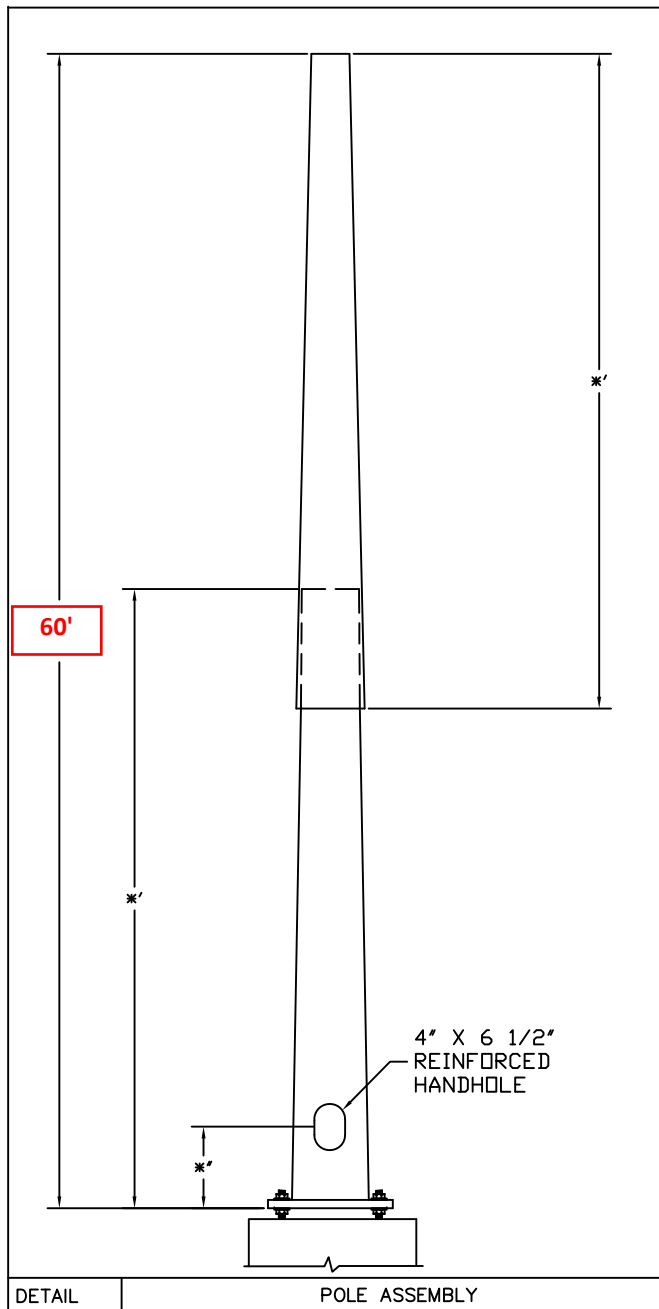
TECHNICAL DATA
LARGE BOX



Right
side
view

Drawings do not designate fuse size, wiring, NEMA box type, distribution block information, disconnect switch size, ampacity, and surge arrester specification.

For technical questions please contact us at 1-877-663-5968.



COMPONENT	SPECIFICATION
POLE TOP	ASTM A572 GR. 65
POLE BOTTOM	ASTM A572 GR. 65
MISC. STEEL	ASTM A36
ANCHOR BOLTS	ASTM F1554 GR. 55
BASE PLATE	ASTM A572 GR. 50

GENERAL NOTES:

1. ALL HARDWARE TO BE GALVANIZED TO ASTM A153.
2. POLE ASSEMBLY TO BE GALVANIZED TO ASTM A123.
3. ALL WELDING TO CONFORM TO AWS D1.1 MOST RECENT EDITION.
4. DESIGN INCORPORATE GUST FACTOR PER REF CODE.
5. REFER TO GENERAL INSTALLATION INSTRUCTIONS PRIOR TO ASSEMBLY.

FINISH:	WIND SPEED:	DESIGN CRITERIA:
<input checked="" type="checkbox"/> GALVANIZED	<input type="checkbox"/> 80 MPH <input type="checkbox"/> 110 MPH	<input type="checkbox"/> AASHTO LTS3 <input type="checkbox"/> ASCE
<input type="checkbox"/> PAINTED	<input type="checkbox"/> 90 MPH <input type="checkbox"/> 120 MPH	<input type="checkbox"/> AASHTO LTS4/5 <input type="checkbox"/> DSA
<input type="checkbox"/> PAINTED & GALV	<input type="checkbox"/> 100 MPH <input type="checkbox"/> ___ MPH	<input type="checkbox"/> IBC <input type="checkbox"/> UBC

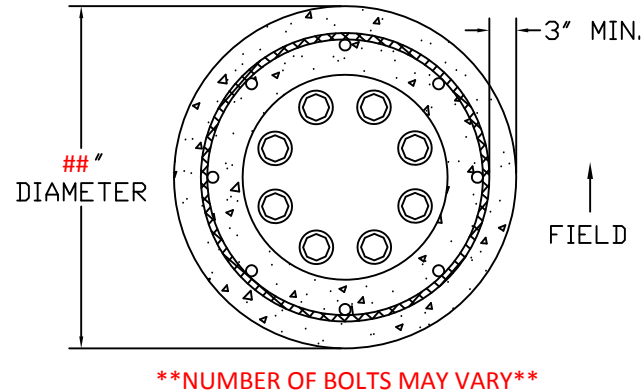
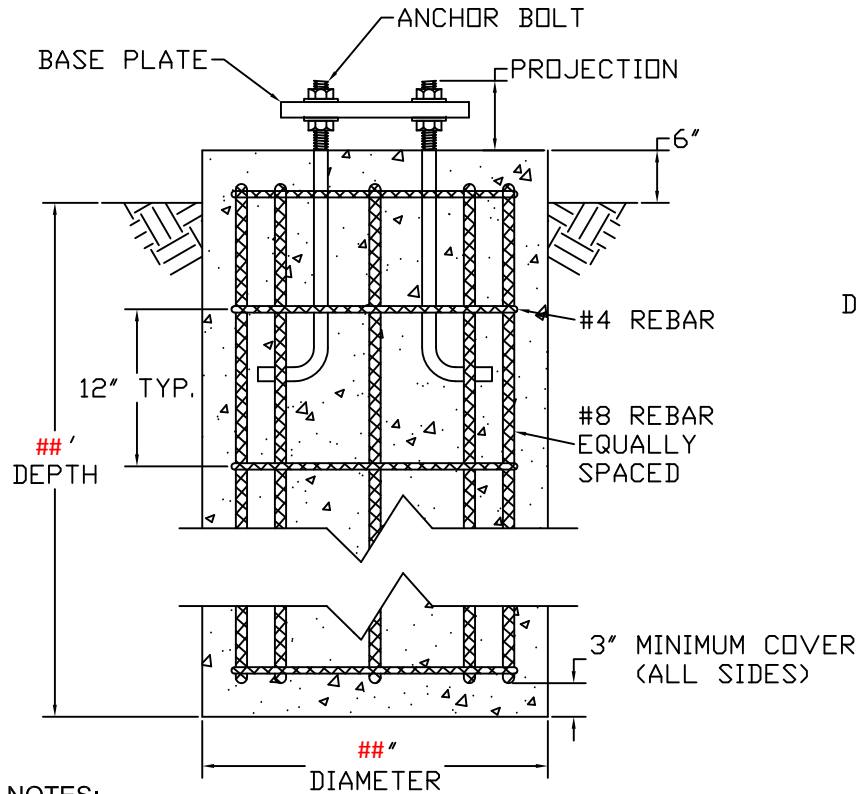
DETAIL 2 MATERIAL SPECIFICATIONS



DATE:	REV.:	JOB NO.:	SCALE:
	00	NA	NTS
DRAWING NUMBER:	DRAWN BY:	QUOTE NUMBER:	
(TYPICAL)			

TECHLINE SPORTS LIGHTING
Anchor Base Pole

NOT FOR CONSTRUCTION
FOR ESTIMATION ONLY



Stamp



* Signed State stamp to be supplied upon award

Project Information

Project Number:

Date:

Sheet Information

Sheet Name:

Drawing Scale: NTS

Drawn By:

DESIGN ASSUMPTIONS:

1. NON-COHESIVE SOIL
2. $\phi = 38^\circ$ MIN.
3. EFFECTIVE UNIT WEIGHT = 110 PCF MIN.
4. SITE GRADE IS 7H : 1 V OR FLATTER
5. WATER TABLE BELOW FOUNDATION

NOTES:

- IF ACTUAL SUBSURFACE CONDITIONS DIFFER FROM THOSE ASSUMED ABOVE OR IF THE POLE CALCULATIONS ARE REVISED THEN THE DESIGN MUST BE REVIEWED PRIOR TO ANY CONCRETE PLACEMENT.
- FOUNDATION TO BE CAST AGAINST UNDISTURBED SOIL.
- REBAR IS ASTM A615 GRADE 60 DEFORMED BARS. CONCRETE HAS MINIMUM 28 DAY COMPRESSIVE STRENGTH (f_c) = 3000 PSI.
- ANY NECESSARY CONDUIT LAYOUT IS NOT SHOWN.
- IF THIS DESIGN DIFFERS FROM ANY OTHER PROJECT SPECIFICATION OR REQUIREMENT THEN THE MORE DEMANDING REQUIREMENT WILL APPLY.



DATE:

REV.:

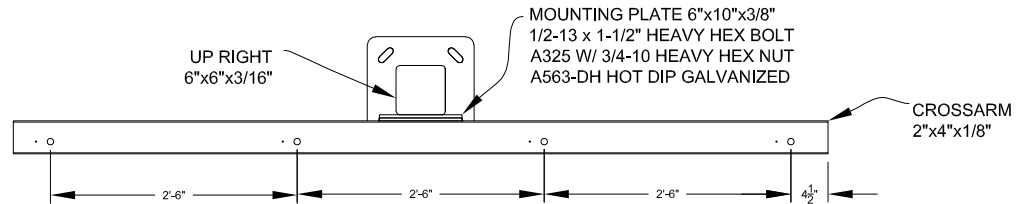
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DRAWING NUMBER:
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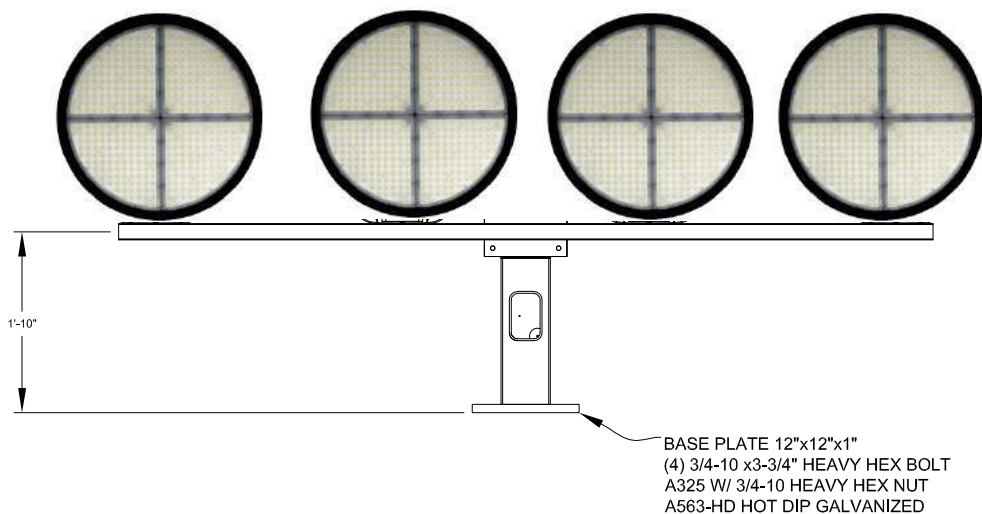
DRAWN BY:

ANCHOR BASE
POLE FOUNDATION

TOP VIEW



FRONT VIEW



** Hot-Dip galvanized after fabrication
to ASTM A123 specifications



** NOT TO SCALE

15303 STORM DR.
AUSTIN, TX 78734
PHONE: (512)977-8880
TOLL FREE: (800)500-3161
FAX: (512)977-8882

DATE:
3/1/19

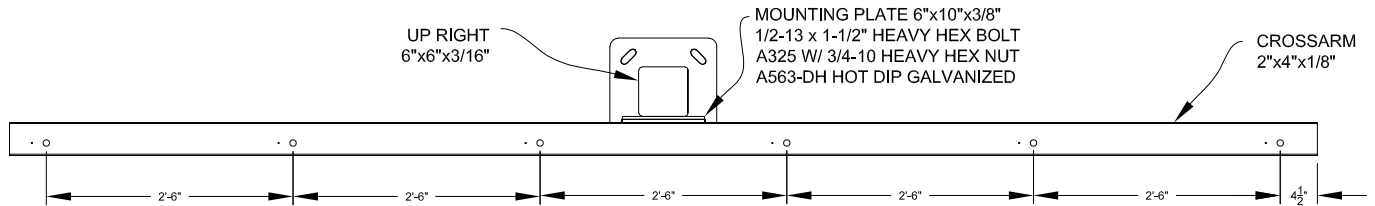
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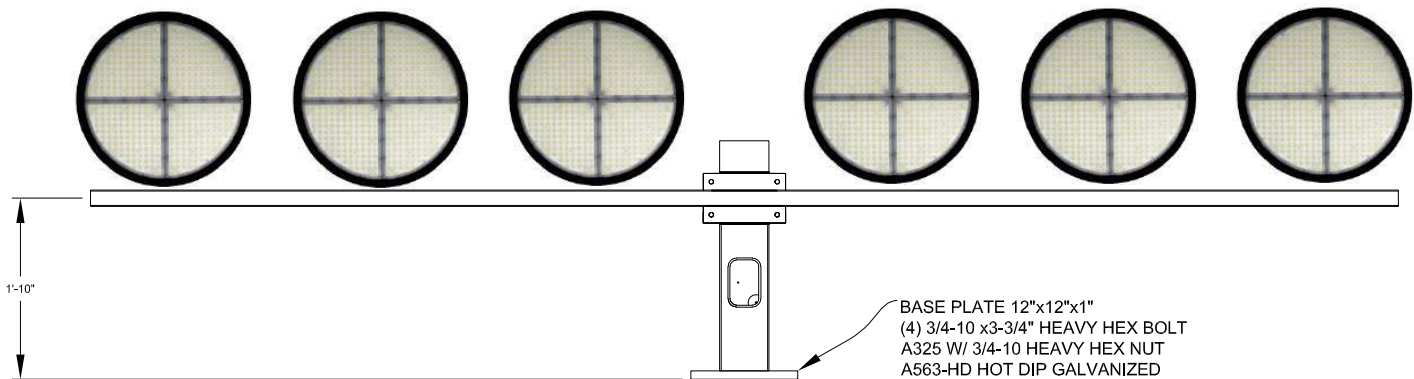
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WW

4 FIXTURE CROSSARM
ASSEMBLY

TOP VIEW



FRONT VIEW



** Hot-Dip galvanized after fabrication
to ASTM A123 specifications



** NOT TO SCALE

15303 STORM DR.
AUSTIN, TX 78734
PHONE: (512)977-8880
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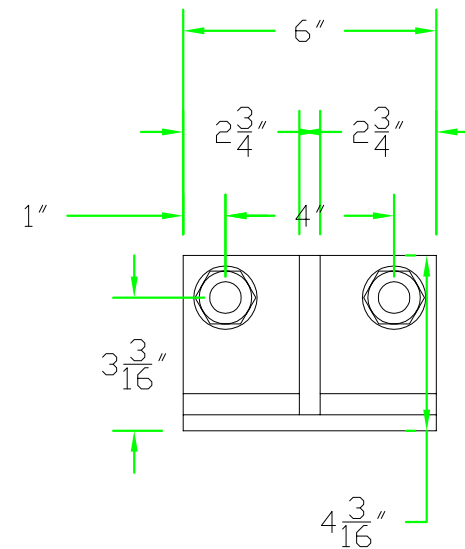
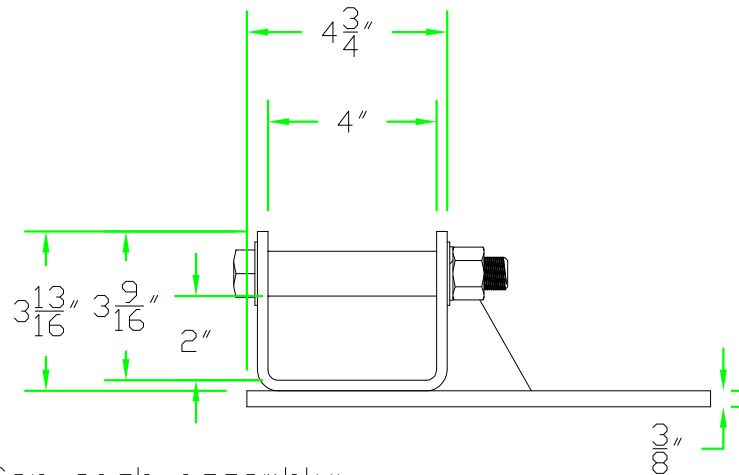
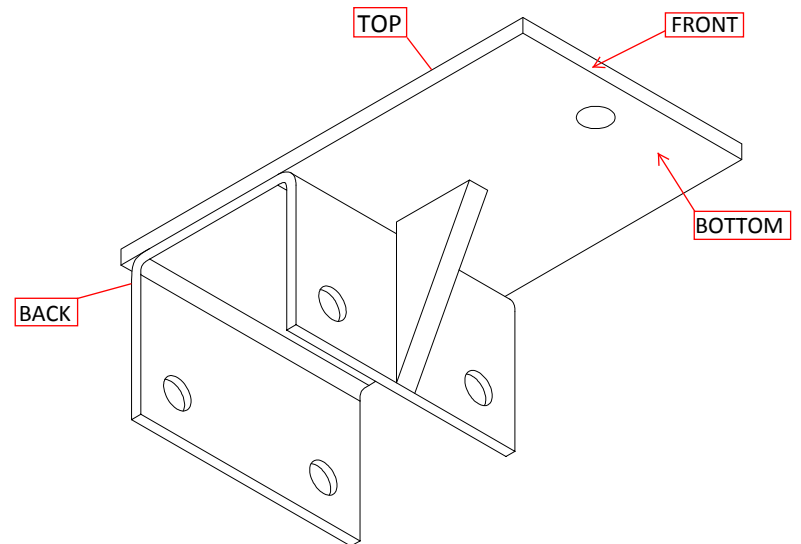
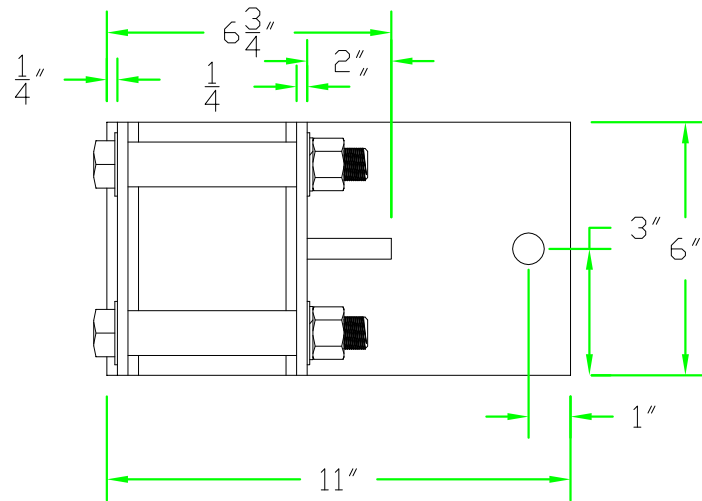
DATE:
3/1/19

REV.: CHECKED BY:

DRAWING NUMBER:
TSA 6

DRAWN BY:
WW

6 FIXTURE CROSSARM
ASSEMBLY



Hardware for each assembly:
 (2) 3/4 x 6" ASTM325 Bolts Galv.
 (2) 3/4 ASTM325 Nuts Galv.
 (4) 3/4 Flat Washers
 (2) 3/4 Lock Washers
 (2) 3/4 Dia. Bolt Sleeves

<small> 1. THIS LIGHTING DESIGN IS BASED ON INFORMATION SUPPLIED BY OTHERS. SITE DETAILS PROVIDED HEREON ARE REPRODUCED ONLY AS A VISUALIZATION AND FIELD DEVIATIONS MAY SIGNIFICANTLY AFFECT PREDICTED PERFORMANCE. PRIOR TO INSTALLATION, CRITICAL SITE INFORMATION (POLE LOCATIONS, ORIENTATION, MOUNTING HEIGHT, ETC.) SHOULD BE COORDINATED WITH THE CONTRACTOR AND/OR SPECIFIER RESPONSIBLE FOR THE PROJECT. 2. LUMINAIRE DATA IS TESTED TO INDUSTRY STANDARDS UNDER LABORATORY CONDITIONS. OPERATING VOLTAGE AND NORMAL MANUFACTURING TOLERANCES OF LAMP, BALLAST, AND LUMINAIRE MAY AFFECT FIELD RESULTS. 3. CONFORMANCE TO FACILITY CODE AND OTHER LOCAL REQUIREMENTS IS THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE. </small>	
REVISIONS	
△	DESCRIPTION
△	DESCRIPTION
△	DESCRIPTION
△	DESCRIPTION

**DIVING BOARD
Retrofit Bracket**

DATE: NTS
 DESIGNED BY: XXX
 PROJECT NUMBER: TSL-16-S106

TECHLINE
SPORTS LIGHTING

WARRANTY

10-YEAR MAINTENANCE FREE WARRANTY

TERMS & CONDITIONS

(1 of 2)

Service under this Contract is provided by Geo-Surfaces Manufacturing, LLC (GML). Services completed under this Contract shall consist of furnishing labor and parts necessary to restore the operation of the Warranted Product(s) to original design conditions provided such service is necessitated by failure of the Warranted Product(s) during normal usage. This Contract covers Product(s) consisting of GeoSport™ Lighting LED System.

“We”, “us” and “our” mean GML. “You” and “your” mean the Purchaser of the Warranted Product(s). No one has the authority to change this Contract without the prior written approval of GML. GML shall not assume responsibility for their agents or assignees other than as described below. If there is a conflict between the terms of this Contract and information communicated either orally or in writing by one or more of our employees or agents, this Contract shall control.

1. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of luminaires, lamps, and luminaire alignment products and to correct misalignment that occurs subsequent to successful acceptance tests. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, and unauthorized repairs and alterations from special warranty coverage.

2. Warranty Period: Ten (10) year(s) from date of Substantial Completion.

3. Hours of Usage: Designs shall be based on the following hours of usage:

4. Service Availability: Maintenance service specialists shall be available 8:00am to 5:00pm Central Standard Time, and services shall be performed during these same hours in your local time zone, Monday through Friday (with the exception of national holidays). Hours of operation are subject to change without notice. GML will exercise all reasonable efforts to perform service under this Contract but will not be responsible for delays or failure in performing such services caused by adverse weather conditions, acts of any government, failure of transportation, accidents, riots, war, labor actions or strikes or other causes beyond its control.

5. Repair Determination: GML will utilize the monitoring system and any information provided by the customer to determine when the usage of the field is materially impacted. From this information, GML will determine repair and/or replacement of Warranted Product(s) and parts. Repair will be with product(s) of similar kind and quality.

Your Requirements Under this Contract: You must meet all electrical and installation requirements as specified by the Manufacturer. In addition, you assure: full cooperation with GML technicians and authorized servicers during diagnosis and repair of the Warranted Product(s); reasonable accessibility of the Warranted Product(s); a non- threatening and safe environment for service. You agree to check and replace fuses as needed. GML provides spare fuses in each A-pole enclosure. GML will replace spare fuses used. You agree to keep your control system online. This means keeping the required control voltage to the control system at all times. Avoiding this practice must be discussed with GML's Warranty Department.

6. Service Limitations Not Covered by this Contract: Maintenance, repair or replacement necessitated by loss or damage resulting from any external causes such as, but not limited to, theft, environmental conditions, negligence, misuse, abuse, improper electrical/power supply, unauthorized repairs by third parties, attachments, damage to cabinetry, equipment modifications, vandalism, animal or insect infestation, physical damage to Warranted Product(s) parts or components, failure of existing structures, supporting electrical systems or any non-GML equipment, or acts of nature (including, but not limited to: earthquake, flood, tornadoes, typhoons, hurricanes or lightning).

WARRANTY

10-YEAR MAINTENANCE FREE WARRANTY

TERMS & CONDITIONS

(2 of 2)

7. Contract Limitations:

a. Exclusions from coverage: in no event will GML be liable for any special, indirect, incidental or resulting damages which include, but are not limited to, any delay in rendering service or loss of use during the repair period of the Warranted Product(s) or while otherwise awaiting parts.

b. Limitation of liability: to the extent permitted by applicable law, the liability of GML, if any, for any allegedly defective Warranted Product(s) or components shall be limited to repair or replacement of the Warranted Product(s) or components at GML's option. This contract is your sole express warranty with respect to the Warranted Product(s). All implied warranties with respect to the Warranted Product(s) including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, are hereby expressly excluded.

c. For the purposes of and by your acceptance of this Contract you acknowledge and agree that if a surety bond ("Bond") is provided the warranty and/or maintenance guarantee provided for in this Contract and any corresponding liability on behalf of the issuing surety under the Bond is limited to the first twelve (12) months of said warranty and/or maintenance guarantee coverage period. Any warranty and/or guarantee coverage period in excess of said initial 12-month period does not fall within the scope of the Bond and shall be the sole responsibility of GML.

d. GML requires reasonable access for a crane or man lift equipment to service the lighting system. GML will not be responsible for damage from operating the vehicle on the property when the equipment is operated in the proper manner over the designated access route.

e. Obsolescence or Environmental Restrictions: If during any maintenance or other work performed under this Warranty, any of the parts of the Warranted Product(s) are found to be either obsolete, no longer available, or prohibited by any state or federal agency, GML shall replace said parts with comparable parts and materials with equal operating characteristics solely at GML discretion. The cost of replacement of any obsolete cellular related technology shall be borne by you. Prior to completing any such work, GML shall notify you of the cost (if any) you will incur in the replacement of such parts under this section.

8. Transfer and Assignment: Except to owners, you shall not have the right to assign or otherwise transfer your rights and obligations under this Contract except with the prior written consent of GML; however, a successor in interest by merger, operation of law, assignment or purchase or otherwise of your entire business shall acquire all of your interests under this Contract.

9. Governing Law: Unless otherwise governed by applicable state law, the Contract shall be interpreted and enforced according to the laws of the State of Louisiana.

Subrogation: In the event GML repairs or replaces any Warranted Product(s), parts or components due to any defect for which the manufacturer or its agents or suppliers may be legally responsible, you agree to assign your rights of recovery to GML. You will be reimbursed for any reasonable costs and expenses you may incur in connection with the assignment of your rights. You will be made whole before GML retains any amounts it may recover.

Electrical system must provide quality power withing +/- 3% of nominal voltage and must have surge protection for each sports lighting pole.

WARRANTY

25-YEAR MANUFACTURER WARRANTY

TERMS & CONDITIONS

(1 of 2)

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2. Warranty Period: Twenty-five (25) year(s) from date of Substantial Completion.

3. Hours of Usage: Designs shall be based on the following hours of usage:

Field Type	Annual Usage Hours	25-Year Usage Hours
All Field Types	300	7,500

- Manufacturer shall provide a means of tracking actual hours of usage for the field lighting system that is readily accessible to the owner.
- Cumulative hours shall be tracked to show the total hours used by the facility.

4. Service Availability: Maintenance service specialists shall be available 8:00am to 5:00pm Central Standard Time, and services shall be performed during these same hours in your local time zone, Monday through Friday (with the exception of national holidays). Hours of operation are subject to change without notice. GML will exercise all reasonable efforts to perform service under this Contract but will not be responsible for delays or failure in performing such services caused by adverse weather conditions, acts of any government, failure of transportation, accidents, riots, war, labor actions or strikes or other causes beyond its control.

5. Repair Determination: GML will utilize the monitoring system and any information provided by the customer to determine when the usage of the field is materially impacted. From this information, GML will determine repair and/or replacement of Warranted Product(s) and parts. Repair will be with product(s) of similar kind and quality.

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WARRANTY

25-YEAR MANUFACTURER WARRANTY

TERMS & CONDITIONS

(2 of 2)

6. Service Limitations Not Covered by this Contract: Maintenance, repair or replacement necessitated by loss or damage resulting from any external causes such as, but not limited to, theft, environmental conditions, negligence, misuse, abuse, improper electrical/power supply, unauthorized repairs by third parties, attachments, damage to cabinetry, equipment modifications, vandalism, animal or insect infestation, physical damage to Warranted Product(s) parts or components, failure of existing structures, supporting electrical systems or any non-GML equipment, or acts of nature (including, but not limited to: earthquake, flood, tornadoes, typhoons, hurricanes or lightning).

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c. For the purposes of and by your acceptance of this Contract you acknowledge and agree that if a surety bond ("Bond") is provided the warranty and/or maintenance guarantee provided for in this Contract and any corresponding liability on behalf of the issuing surety under the Bond is limited to the first twelve (12) months of said warranty and/or maintenance guarantee coverage period. Any warranty and/or guarantee coverage period in excess of said initial 12-month period does not fall within the scope of the Bond and shall be the sole responsibility of GML.

d. GML requires reasonable access for a crane or man lift equipment to service the lighting system. GML will not be responsible for damage from operating the vehicle on the property when the equipment is operated in the proper manner over the designated access route.

e. Obsolescence or Environmental Restrictions: If during any maintenance or other work performed under this Warranty, any of the parts of the Warranted Product(s) are found to be either obsolete, no longer available, or prohibited by any state or federal agency, GML shall replace said parts with comparable parts and materials with equal operating characteristics solely at GML discretion. The cost of replacement of any obsolete cellular related technology shall be borne by you. Prior to completing any such work, GML shall notify you of the cost (if any) you will incur in the replacement of such parts under this section.

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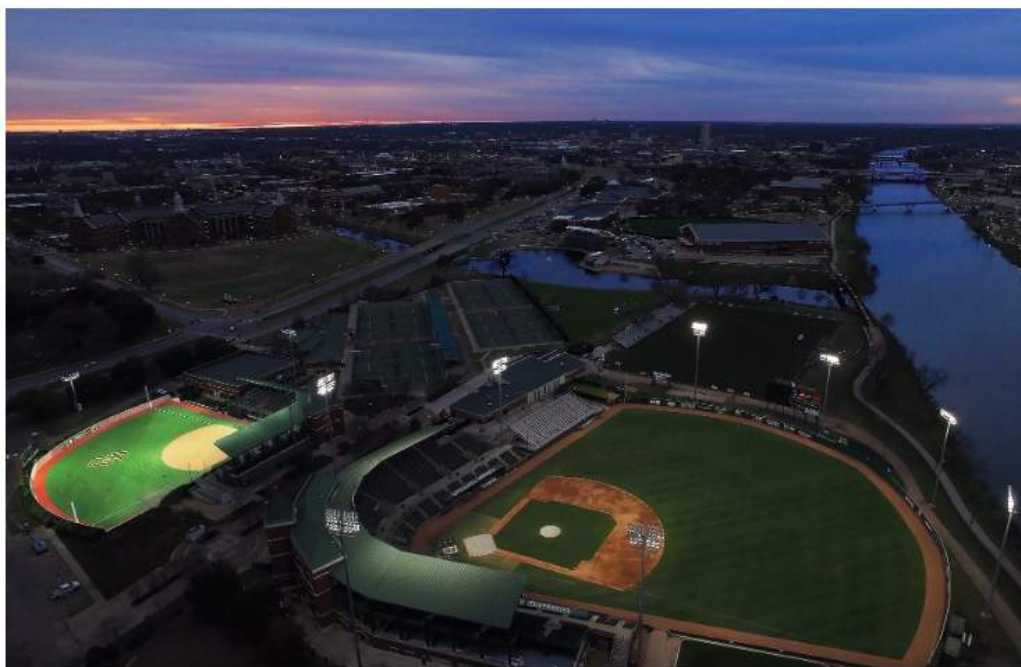
ELITE SERIES
ELITE 1000w

INSTALLATION REFERENCES



BAYLOR UNIVERSITY – GETTERMAN STADIUM

Waco • Texas • ELITE SERIES



GeoSport Lighting**LED Installations****Baylor University**

Softball
Waco, TX

Southern Arkansas University

Football
Magnolia, AR

Oklahoma Baptist University

Football
Shawnee, OK

John Slidell Park

Baseball
Slidell, LA

Hero's Park

Baseball
Thibodaux, LA

Zachary Youth Park

Baseball
Zachary, LA

Slaughter Community Charter School

Football
Independence, LA

Peaster High School

Football
Peaster, TX

Ascension Christian School

Football
Gonzales, LA

Gurdon High School

Football
Gurdon, AR

Malvern High School

Baseball
Malvern, AR

Independence High School

Football
Independence, LA

Middleton Park

Softball
Oak Island, NC

Iredell High School

Football
Iredell, TX

Sun Valley High School

Football
Monroe, NC

Dodd City High School

Softball
Dodd City, TX

Diamond High School

Football
Diamond, MO

Tidehaven High School

Football
Markham, TX

Jacksonville High School

Football
Jacksonville, AR

City of Euless

Baseball
Euless, TX

City of Bartlesville - Daniel's Field

Soccer
Bartlesville, OK

St. Amant Parks and Recreation

Baseball
St. Amant, LA

Rison High School

Football
Rison, AR

Hilldale High School

Football
Muskogee, OK

Bourg Baseball Complex

Baseball
Terrebonne, LA

Hemlock High School

Football
Hemlock, MI

Althea Gibson Tennis Complex

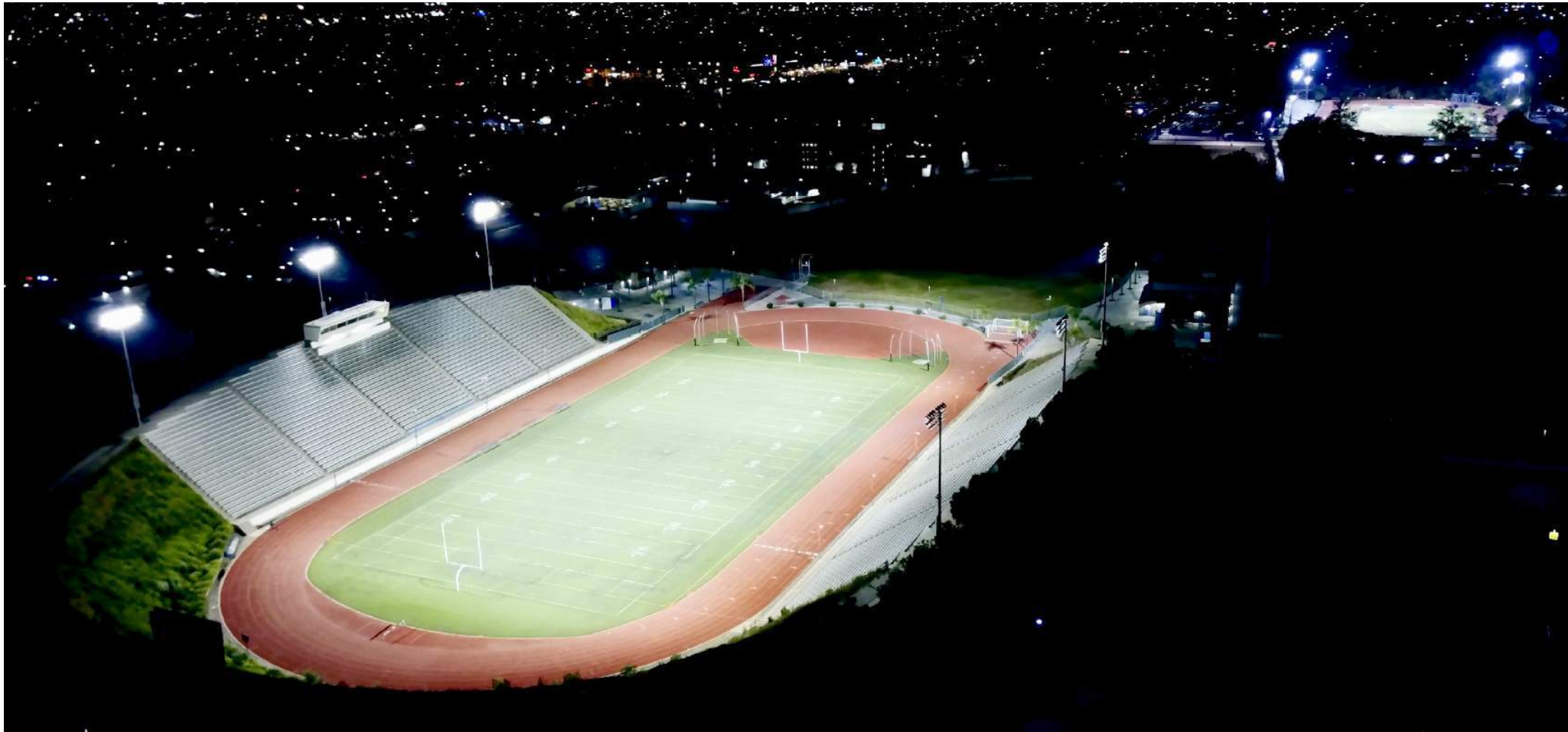
Tennis
Daniel Island, SC

H3 Sports Baseball Field

Baseball
College Station, TX

Geismar Soccer Field

Soccer
Geismar, LA









Benefits of Integrated Power Supply in LED Lighting System

- Integrated power supply will provide higher system efficiency, due to less cable power loss.
- Integrated power supply will provide Color Temperature Tuning and entertainment effects that are required for HD broadcast.
- Integrated power supply will provide phase shifted pulse width modulation, which enables Flicker Free HD Broadcast greater than 8000 Frames Per Second.
- Integrated power supply reduces stress on electronic components within the fixture and power supply, extending product lifetime 3x-5x.
- Integrated power supply reduces installation cost 2x-4x.
- Integrated power supply enables use of existing infrastructure, reducing material cost.
- Integrated power supply will provide feedback of multiple system parameters (Peak Voltages, Peak temperatures, Lifetime Hours, Power Consumption etc.)
- Integrated power supply will provide a constant voltage output, which enables boosting and balancing of Individual LED strings, extending lifetime and adding system redundancy.

Remote Power Supply Deficiencies

- Remote power supply solution will generate high EMI (Electromagnetic Interference), which can disrupt communication of existing wireless devices.
- Remote power supply solution will generate higher THD (Total Harmonic Distortion) which will generate heat on power lines and components connected to this distribution system (ie transformers, circuit breakers, sensitive electronics) and cause premature failures of these components.
- Remote power supply solution cannot dim below 20% light output. When dimmed below this range, the LEDs become unstable and flicker and will exhibit various color temperatures.
- Remote power supply solution will vary ~200K CCT throughout the dimming range, which can be detrimental to HD Broadcast.

CITY OF PARL PARKS & RECREATION - BASEBALL FIELDS A-H (10-Day Prior Checklist)

Yes/ No	Tab	Item	Description
YES	A	Letter/ Checklist	Listing of all information being submitted must be included on the table of contents. List the name of the manufacturer's local representative and his/her phone number. Signed submittal checklist to be included.
YES	B	Equipment Layout	Drawing(s) showing field layouts with pole locations
YES	C	On Field Lighting Design	Lighting design drawing(s) showing: <ul style="list-style-type: none"> a. Field Name, date, file number, prepared by b. Outline of field(s) being lighted, as well as pole locations referenced to the center of the field (x & y), Illuminance levels at grid spacing specified c. Pole height, number of fixtures per pole, horizontal and vertical aiming angles, as well as luminaire information including wattage, lumens and optics d. Height of light test meter above field surface. e. Summary table showing the number and spacing of grid points; average, minimum and maximum illuminance levels in foot candles (fc); uniformity including maximum to minimum ratio, coefficient of variance (CV), coefficient of utilization (CU) uniformity gradient; number of luminaires, total kilowatts, average tilt factor; light loss factor.
Supplied Upon Approval	D	Off Field Lighting Design	Lighting design drawing showing initial spill light levels along the boundary line (defined on bid drawings) in footcandles. Light levels shall be taken at 30-foot intervals along the boundary line. Readings shall be taken with the meter orientation at both horizontal and aimed towards the most intense bank of lights. Boundary line not clear but can be added easily. Estimate 0.0FC @ 150'
YES	E	Photometric Report	Provide first page of photometric report for all luminaire types being proposed showing candela tabulations as defined by IESNA Publication LM-35-02. Photometric data shall be certified by laboratory with current National Voluntary Laboratory Accreditation Program or an independent testing facility with over 5 years experience.
YES	F	Performance Guarantee	Provide performance guarantee including a written commitment to undertake all corrections required to meet the performance requirements noted in these specifications at no expense to the owner. Light levels must be guaranteed to not fall below target levels for warranty period.
YES	G	Control & Monitoring System	Manufacturer of the control and monitoring system shall provide written definition and schematics for automated control system to include monitoring.
Supplied Upon Award	H	Electrical Distribution Plans	Manufacturer bidding an alternate product must include a revised electrical distribution plan including changes to service entrance, panels and wire sizing, signed by a licensed Electrical Engineer in the state of Iowa .
YES	I	Warranty	Provide written warranty information including all terms and conditions.
YES	J	Project References	Manufacturer to provide a list of projects where the technology and specific fixture proposed for this project has been installed in the state of Iowa . Reference list will include project name, project city, installation date, and if requested, contact name and contact phone number.
YES	K	Product Information	Complete bill of material and current brochures/cut sheets for all product being provided.
YES	L	Delivery	Manufacturer shall supply an expected delivery timeframe from receipt of approved submittals and complete order information.
YES	M	Non- Compliance	Manufacturer shall list all items that do not comply with the specifications. If in full compliance, tab may be omitted.
YES	N	Life-cycle Cost Calculation	Document life-cycle cost calculations as defined in the specification. Identify energy costs for operating the luminaires. Maintenance cost for the system must be included in the warranty. All costs should be based on 10 Years. (complete table below)



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RE: City of Pearl Parks & Recreation - Baseball Fields A-H

FIELD PERFORMANCE GUARANTEE

The proposed Techline Sports Lighting system outlined in the attached information will provide initial and maintained foot candle level required per specification, for the **City of Pearl Parks & Recreation Baseball Fields** sports lighting project.

NON-COMPLIANCE

This letter shall serve as "Guarantee" that the Techline Sports Lighting System meets all the lighting performance requirements of the specifications, excluding the LED remote power supply feature.

(see pg. 33)

The Techline Sports Lighting System will require no future costs to meet the performance requirements of the specifications.

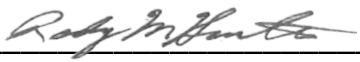
DELIVERY

Techline Sports Lighting, will deliver all materials within **6-8 weeks** from receipt of approved submittals and complete order information.

25-YEAR LIFE CYCLE COST

158 Luminaires X **1.025** KW Demand per Luminaire X **0.10** KWh X **300**

Annual Usage Hours X **10** Years = **\$48,585.00**

Signed: 
Rodney M. Hawthorne, President

CITY OF PARL PARKS & RECREATION - SOFTBALL FIELDS #1-3 (10-Day Prior Checklist)

Yes / No	Tab	Item	Description
YES	A	Letter/ Checklist	Listing of all information being submitted must be included on the table of contents. List the name of the manufacturer's local representative and his/her phone number. Signed submittal checklist to be included.
YES	B	Equipment Layout	Drawing(s) showing field layouts with pole locations
YES	C	On Field Lighting Design	Lighting design drawing(s) showing: <ul style="list-style-type: none"> a. Field Name, date, file number, prepared by b. Outline of field(s) being lighted, as well as pole locations referenced to the center of the field (x & y), Illuminance levels at grid spacing specified c. Pole height, number of fixtures per pole, horizontal and vertical aiming angles, as well as luminaire information including wattage, lumens and optics d. Height of light test meter above field surface. e. Summary table showing the number and spacing of grid points; average, minimum and maximum illuminance levels in foot candles (fc); uniformity including maximum to minimum ratio, coefficient of variance (CV), coefficient of utilization (CU) uniformity gradient; number of luminaires, total kilowatts, average tilt factor; light loss factor.
YES	D	Photometric Report	Provide first page of photometric report for all luminaire types being proposed showing candela tabulations as defined by IESNA Publication LM-35-02. Photometric data shall be certified by laboratory with current National Voluntary Laboratory Accreditation Program or an independent testing facility with over 5 years experience.
YES	E	Performance Guarantee	Provide performance guarantee including a written commitment to undertake all corrections required to meet the performance requirements noted in these specifications at no expense to the owner. Light levels must be guaranteed to not fall below target levels for warranty period.
Supplied Upon Award	F	Structural Calculations	Pole structural calculations and foundation design showing foundation shape, depth backfill requirements, rebar and anchor bolts (if required). Pole base reaction forces shall be shown on the foundation drawing along with soil bearing pressures. Design must be stamped by a structural engineer in the state of Mississippi , if required by owner. (May be supplied upon award).
YES	G	Control & Monitoring System	Manufacturer of the control and monitoring system shall provide written definition and schematics for automated control system to include monitoring. They will also provide ten (10) references of customers currently using proposed system in the state of Mississippi .
Supplied Upon Award	H	Electrical Distribution Plans	Manufacturer bidding an alternate product must include a revised electrical distribution plan including changes to service entrance, panels and wire sizing, signed by a licensed Electrical Engineer in the state of Mississippi .
YES	I	Warranty	Provide written warranty information including all terms and conditions. Provide ten (10) references of customers currently under specified warranty in the state of Mississippi .
YES	J	Project References	Manufacturer to provide a list of 5 projects where the technology and specific fixture proposed for this project has been installed in the state of Mississippi . Reference list will include project name, project city, installation date, and if requested, contact name and contact phone number.
YES	K	Product Information	Complete bill of material and current brochures/cut sheets for all product being provided.
YES	L	Delivery	Manufacturer shall supply an expected delivery timeframe from receipt of approved submittals and complete order information.
YES	M	Non-Compliance	Manufacturer shall list all items that do not comply with the specifications. If in full compliance, tab may be omitted.



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RE: City of Pearl Parks & Recreation - Softball Fields #1-3

FIELD PERFORMANCE GUARANTEE

The proposed Techline Sports Lighting system outlined in the attached information will provide initial and maintained foot candle level required per specification, for the **City of Pearl Parks & Recreation Softball Fields** sports lighting project.

NON-COMPLIANCE

This letter shall serve as "Guarantee" that the Techline Sports Lighting System meets all the lighting performance requirements of the specifications, excluding the LED remote power supply feature.

(see pg. 33)

The Techline Sports Lighting System will require no future costs to meet the performance requirements of the specifications.

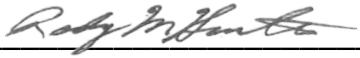
DELIVERY

Techline Sports Lighting, will deliver all materials within **6-8 weeks** from receipt of approved submittals and complete order information.

25-YEAR LIFE CYCLE COST

44 Luminaires X **1.025** KW Demand per Luminaire X **0.10** KWh X **300** Annual

Usage Hours X **25** Years = **\$33,825.00**

Signed: 
Rodney M. Hawthorne, President

***Techline Sports Lighting* and *GeoSport Lighting Systems* partner to provide unparalleled technology, experience, and customer service for the LED Sports Lighting Industry**

Austin, TX. & St. Gabriel, LA – **TECHLINE SPORTS LIGHTING** and **GEOSPORT LIGHTING SYSTEMS** announced today a partnership of two of the largest LED sports lighting companies in the industry. The alliance brings over 40 years combined experience to the rapidly changing LED sports lighting market. This strategic partnership offers customers the most innovative LED technology.

Techline Sports Lighting, based in Austin, Texas has provided turnkey sports lighting solutions to thousands of ball fields across the globe. From youth fields to NFL stadiums, high school, private, municipal or NCAA facilities, Techline has provided a one stop source for all sports lighting needs.

“For more than two decades, our team has been part of successful projects, applying our innovative and unique approach,” said owner and founder, Rodney Hawthorne. “We really wanted to take our company to the next level. Partnering with GeoSport Lighting allows us to quickly and effectively introduce advancements in technology while continuing to provide the best customer service in the industry.”

GeoSport Lighting Systems, based in St. Gabriel, Louisiana, and founded by Charles Dawson, has been a strong player in the Southeast sports lighting region and has extensive design and installation experience with a multitude of NCAA, municipal, high school and private partners.

“We have competed against Techline for a number of years and have always been impressed with the professionalism and courtesy they show their customers and fellow members of the sports lighting community,” Dawson said. “We could not imagine a better, more experienced partner than Techline. Their expertise in providing and installing high performance lighting systems is unmatched.”

Techline Sports Lighting and GeoSport Lighting systems will continue to invest in innovative research and cutting edge product development with the goal of offering the most reliable, economical LED Sports Lighting solutions in the industry.

A handwritten signature in black ink, reading 'Rodney M. Hawthorne'.

President
Rodney M. Hawthorne
Techline Sports Lighting, LLC.