



October 16, 2024

Prospective Respondents

**RE: Addendum #2 25-02 Southport Sports Complex**

Please accept this as Addendum No. 2 for the above referenced solicitation.

For clarification purposes, **please see revised and additional drawings:**

- a. Revised plan sheet from VBA
- b. Revised plan sheets from PSE
- c. Supplemental Lighting Package
- d. Original Geotech Report

The following question have been received. The County's answers follow in **bold**.

1. Lighting - Pages 45 through 54 detail various lighting luminaires. Is this bid restricted to those specific luminaires or are equivalent or better allowed? **The contractor will be responsible for purchasing all lighting components. An alternative is acceptable providing it meets or exceeds the requirements in the attached supplemental lighting package.**
2. Lighting - Has the architect performed any photometric studies or is there specific luminance requirements specified? **Reference attached supplemental lighting package for requirements.**
3. Can the civil construction CAD file be provided for this project? **CAD files can be made available to the awarded contractor with release of liability waiver after the contract has been awarded.**
4. Can you provide the exact scope of work intended for the Sports Field Contractors? **The scope of work for Sports Field Contractors is described in Specifications Section 00 21 14 – Supplementary Instructions to Bidder – Sports Field Contractors.**
5. Can you provide Engineer estimated quantities for the earthwork portion of the project? **Estimated earthwork quantities are provided on the attached Addendum 2 Revised Bid Form.**

6. Please provide fire extinguisher and cabinet locations on G1.2 Life Safety Plan. Currently none are shown. **Please see attached revised sheet G1.2 for fire extinguisher locations.**
7. Please confirm if overhead doors are to be motorized or manual. **Overhead doors are to be manually operated.**
8. Please advise if permits are by owner or by contractor. **Building permits during construction are responsibility of the contractor.**
9. Please advise if builder's risk is applicable to this project. If so, is it by owner or by contractor. **Yes, please see page Exhibit 7 page 817**
10. Please advise if testing and inspections are by the owner or by the contractor. **Testing needed to meet specifications are the responsibility of the contractor.**
11. Please advise if Davis Bacon, prevailing wages, etc. are applicable to this project. **Please see Addendum 1 question 1.**
12. Please advise if a budget has been outlined for this project. **The estimated budget is \$10,000,000.00**
13. Please advise the projected start date for this project. **TBD, however most likely to start soon after the new calendar year.**
14. Please advise if CAD files can be made available.  
**CAD files can be made available to the awarded contractor with release of liability waiver after the contract has been awarded.**
15. Please advise if an alternative to specified Musco Lighting System is acceptable. **An alternative is acceptable providing it meets or exceeds the requirements in the attached supplemental lighting package.**
16. Please advise if a geotechnical report can be made available.  
**Please see attached Southern Earth Sciences original geotechnical report.**
17. Please advise quantities for the following specified site/ball field materials depicted on the schedule. **The County will be responsible for Items a through d. Contractor responsible for item e., and the estimated quantity of 155LF for the base bid and 70LF for the alternates.**
  - a. Bike Rack
  - b. Benches
  - c. Trash Receptacles
  - d. Fence Topper
  - e. Seat Wall

18. Framing detail on S3.1-F calls for 8x8 PT posts on the Dugout but A2.3 and other notes call for 12x12 PT posts. Please advise which is correct. **12x12 PT posts are correct.**
19. I see Concrete Floor Sealer listed in the project specifications but the plans don't call it out to be applied anywhere. Please advise areas, if any, where concrete sealer is to be applied. **See Finish Schedules on sheet A6.1**
20. Can you confirm if this project scopes includes sports lighting equipment as part of the bid? We noticed the plans and specifications have performance and general specifications for the lighting but there was a note indicating the lighting equipment would be purchased directly by the county and is not part of this package. **The contractor will be responsible for purchasing all lighting components. An alternative is acceptable providing it meets or exceeds the requirements in the attached supplemental lighting package.**
21. I was going thru the Specs of the Sports Complex and notices that all the Security was missing. Does the County have their own Div 28 Security Contractor under contract? **These items will not be required for base bid.**
22. Having trouble locating the desired color for the powder coated doors. **Color to be selected by owner from manufacturers' standard colors.**
23. Please provide detail for the Curb and Gutter on the entrance road from Station 9+20 to Station 16+36.10. **Use FDOT Index Drawing 520-001 Type F curb and gutter for entrance road.**
24. Will CAD with updated existing elevations and proposed elevations be provided? **CAD files can be made available to the awarded contractor with release of liability waiver after the contract has been awarded.**
25. Have you guys got together the new drawings with the new topo's and changes to the site? **Contractor to bid earthwork as estimated in the attached revised bid form. Topographic survey of the site will be made available after contract has been awarded to the awarded contractor once it is obtained.**
26. On page S1.2 is calls out the Columns for the batting cage as Pressure Treated but it does not say if they are round or square columns. Please advise if they are for accurate pricing. **The 12x12 posts are square.**
27. Do site work contractors have to be "Sports Field Certified" in order to bid on this project? **The general contractor for the site does not have to be a sports field contractor (SFC), but a SFC is required to construct the fields as specified in the bid documents.**

28. The recent hurricanes has or will be causing a delay for potential sub and vendor quotes on the project. Due to this reason and the amount of questions submitted to the EOR for answers, can the bid date be changed to give the Contractors more time to provide the most accurate bid possible? **No, the bid date will not be extended at this time.**
29. Sheet E1.03, GENERAL NOTES, Note 2. States the Sports Lighting (package) to be furnished by Bay County. Is this correct? Is Bay County purchasing the Sports Lighting direct? **The contractor will be responsible for purchasing all lighting components. An alternative is acceptable providing it meets or exceeds the requirements in the attached supplemental lighting package.**
30. The Lighting Control Panel for Fields 5 & 6 is shown mounted in a freestanding NEMA 4X cabinet. Where is the Lighting Control Panel for Fields 1-4 to be located. **The panel is to be located in the concessions building, see sheet E2.02.**
31. Who will be providing the Hand Dryers for the restrooms in the Concession Bldg. If we are to include, can you provide a design standard? **Reference Spec Section 102800 – Toilet, Bath, and Laundry Accessories for 2.3.B Basis of Design for the Warm-Air Dryers**
32. Is the electrical contractor responsible for any portion of the Primary duct from the Right of Way on Hwy 77 into the Pad Mount transformer location shown between Fields 1&2. **Contractor will be responsible for any underground service charges related to the project. Contact Shannon Newsome with GCEC (Gulf Coast Electric Cooperative) for more information.**
33. E1.03 Plan Note #18 – is there a detail or requirements for concrete encasement? **Contractor to center the conduit in a 12"x12", 3000psi concrete encasement, no reinforcement required, top of concrete to be 24" below finished grade.**
34. Please clarify electrical contractors scope for Roadway Lighting (Sheet E1.01 Plan Note #1 Roadway Rental Pole & Light by GCEC). **GCEC will be providing primary cabling and conduit on the primary side of the transformer. GCEC will install lights for the access roadway.**
35. The current specified system includes Musco Lighting. Can the lighting be substituted with other manufactures that meet or exceed the Musco Lighting? **The contractor will be responsible for purchasing all lighting components. An alternative is acceptable providing it meets or exceeds the requirements in the attached supplemental lighting package.**
36. Where is the highlighted section in C7.01 required? **C7.01 Detail 9 should be used for all areas identified with 'Reinforced Turf' hatch in landscape and civil site plans. This includes the area between the west bullpens of fields 1 and 3 and parking spaces along the inner loop of northern parking area.**

37. On S3.0 There (2) 2x12 beams on each side of the building. How do they attach to the CMU wall? **The beams will be face mounted using Simpson MBHU3.56 with (2) 3/4" x 5" long stainless steel Titen HD per hanger.**

All respondents shall acknowledge receipt of this addendum by signing and submitting, with their bid, the addendum acknowledgement form included in the Bid package.

Regards,

Ken Longstreet  
Grant Procurement Administrator  
Bay County Purchasing Department  
(850) 248-8270

**ADDENDUM 2  
REVISED BID FORM  
ITB NO: 25-02**

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This proposal of \_\_\_\_\_, hereinafter called "BIDDER," organized and existing under the laws of the State of \_\_\_\_\_ doing business as \_\_\_\_\_ (Insert "a corporation", "a partnership" or "an individual" as applicable), is hereby submitted to the Board of County Commissioners, Bay County, hereinafter called "OWNER."

In compliance with the Advertisement for Bids, BIDDER hereby proposes to perform all work, as detailed in this bid.

By submission of this BID, each Bidder certifies, and in the case of a joint BID each party thereto certifies as to its own organization, that this BID has been arrived at independently, without consultation, communication or agreement as to any matter relating to this BID with any other BIDDER or with any other competitor.

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Vendor agrees to perform the entire work as indicated on the drawings and in compliance with the Contract Documents and Specifications, complete in every detail.

Submitted By: \_\_\_\_\_  
Name of Firm/Vendor Submitting This Bid

Bid Prepared By: \_\_\_\_\_  
Name of Individual Who Prepared This Bid

Contact Email: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

Contractor's License No. \_\_\_\_\_

Sports Field Contractor: \_\_\_\_\_

Vendor's Unique Entity Identifier (UEI) No. \_\_\_\_\_

\_\_\_\_\_  
Signature of Authorized Representative of Firm/Vendor

\_\_\_\_\_  
Date

SEAL: (If bid is by Corporation)

**ADDENDUM 2  
REVISED BID FORM  
ITB NO: 25-02 (Con't)**

Bidder agrees to perform all the work described in the Contract Documents for the following Unit Prices and Lump Sum Prices.

Item No.	Description	Estimated Qty.	Unit	Unit Price	Total Price
1..	Furnishing all products, materials and equipment and performing all labor necessary to complete and put into operation the Southport Sports Complex, including all work shown on the Drawings and/or specified, and not included in Items 2 through 4 below, nor the Alternates, the total amount of:	1	LS	\$	\$
2.	Unclassified Excavation On Site (Owner has installed fill prior to bid and raised the existing surface to approximate elevation 36.00. Earthwork unit price quantities are assumed to be calculated from raised existing surface.)	21,500	CY	\$	\$
3.	Imported Fill Material (Owner has installed fill prior to bid and raised the existing surface to approximate elevation 36.00. Earthwork unit price quantities are assumed to be calculated from raised existing surface.)	42,000	CY	\$	\$
<b>Lump Sum Base Bid (Item 1 + Item 2 + Item 3)</b>					\$

**\*\*\* ADDITIVE – FIELDS 5 & 6 \*\*\***

4.	Construction of Fields 5 and 6, including concrete sidewalks and plaza areas adjacent to Fields 5 & 6 and batting cages; picnic shelter, batting cages, Fields 5 & 6 including sports field, lighting, fencing backstops, dugouts, irrigation, landscaping, laser/ finish grading and all other items incidental to construction of noted items as shown on Drawing Sheets C1.04, C2.04, AND L3.04		LS	\$	
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SUPPLEMENTAL LIGHTING PACKAGE

LIGHTING SPECIFICATION  
PREPARED FOR

**Southport Park**

Ballfield Lighting Project  
Southport, Florida  
December 14, 2021

Project # 197570

SUBMITTED BY:

**Musco Sports Lighting, LLC**

2107 Stewart Road  
PO Box 260  
Muscatine, Iowa 52761  
Local Phone: 563/263-2281  
Toll Free: 800/756-1205  
Fax: 800/374-6402





**SECTION 26 56 68 – EXTERIOR ATHLETIC LIGHTING**

**Lighting System with LED Light Source**

**PART 1 – GENERAL**

**1.1 SUMMARY**

- A. Work covered by this section of the specifications shall conform to the contract documents, engineering plans as well as state and local codes.
- B. The purpose of these specifications is to define the lighting system performance and design standards for Southport Park using an LED Lighting source. The manufacturer / contractor shall supply lighting equipment to meet or exceed the standards set forth in these specifications.
- C. The sports lighting will be for the following venues:
  - 1. Fields 1-6
- D. The primary goals of this sports lighting project are:
  - 1. **Guaranteed Light Levels:** Selection of appropriate light levels impact the safety of the players and the enjoyment of spectators. Light levels are guaranteed to not drop below specified target values for a period of 25 years.
  - 2. **Environmental Light Control:** It is the primary goal of this project to minimize spill light to adjoining properties and glare to the players, spectators and neighbors.
  - 3. **Cost of Ownership:** In order to reduce the operating budget, the preferred lighting system shall be energy efficient and cost effective to operate. All maintenance costs shall be eliminated for the duration of the warranty.
  - 4. **Control and Monitoring:** To allow for optimized use of labor resources and avoid unneeded operation of the facility, customer requires a remote on/off control system for the lighting system. Fields should be proactively monitored to detect luminaire outages over a 25-year life cycle. All communication and monitoring costs for 25-year period shall be included in the bid.

**1.2 LIGHTING PERFORMANCE**

- A. **Illumination Levels and Design Factors:** Playing surfaces shall be lit to an average target illumination level and uniformity as specified in the chart below. Lighting calculations shall be developed and field measurements taken on the grid spacing with the minimum number of grid points specified below. Appropriate light loss factors shall be applied and submitted for the basis of design. Average illumination level shall be measured in accordance with the IESNA LM-5-04 (IESNA Guide for Photometric Measurements of Area and Sports Lighting Installations). Illumination levels shall not to drop below desired target values in accordance to IES RP-6-15, Page 2, Maintained Average Illuminance and shall be guaranteed for the full warranty period.

<b>Area of Lighting</b>	<b>Average Target Illumination Levels</b>	<b>Maximum to Minimum Uniformity Ratio</b>	<b>Grid Points</b>	<b>Grid Spacing</b>
Field 1 infield	50fc	2:1	25	30 x 30
Field 1 Outfield	30fc	2.5:1	86	30 x 30
Field 2 Infield	50fc	2:1	25	30 x 30
Field 2 outfield	30fc	2.5:1	86	30 x 30

Field 3 infield	50fc	2:1	25	30 x 30
Field 3 outfield	30fc	2.5:1	63	30 x 30
Field 4 Infield	50fc	2:1	25	20 x 20
Field 4 outfield	30fc	2.5:1	73	20 x 20
Field 5 infield	40fc	2:1	25	20 x 20
Field 5 outfield	30fc	2:1	6	20 x 20
Field 6 infield	50fc	2:1	25	20 x 20
Security	.95fc	-	1612	30 x 30

- B. Color: The lighting system shall have a minimum color temperature of 5700K and a CRI of 65+.
- C. Mounting Heights: To ensure proper aiming angles for reduced glare and to provide better playability, minimum mounting heights shall be as described below. Higher mounting heights may be required based on photometric report and ability to ensure the top of the field angle is a minimum of 10 degrees below horizontal.

# of Poles	Pole Designation	Pole Height
8	A1-A4, B1-B4	80'
9	C1-C6, P1	70'
3	A7,A8,C7	60'

### 1.3 ENVIRONMENTAL LIGHT CONTROL

- A. Light Control Luminaires: All luminaires shall utilize spill light and glare control devices including, but not limited to, internal shields, louvers and external shields. No symmetrical beam patterns are accepted.
- B. Lighting Ordinance: In accordance with Southport, Florida requirements
- C. Spill Light and Glare Control: To minimize impact on adjacent properties, spill light and candela values must not exceed the following levels taken at 3 feet above grade.

	Average	Maximum
Property Line Specified Spill Line Horizontal Footcandles not to exceed	.65 fc	7.5 fc
Candela at 100' outside of the property line not to exceed	1,100 cd	10,000 cd

- C. Spill Scans: Spill scans must be submitted indicating the amount of horizontal and vertical footcandles along the specified lines. 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. Illumination level shall be measured in accordance with the IESNA LM-5-04 after 1 hour warm up.
- D. The first page of a photometric report for all luminaire types proposed showing horizontal and vertical axial candle power shall be provided to demonstrate the capability of achieving the specified performance. Reports shall be certified by a qualified testing laboratory with a minimum of five years experience or by a manufacturer's laboratory with a current accreditation under the National Voluntary

Laboratory Accreditation Program for Energy Efficient Lighting Products. A summary of the horizontal and vertical aiming angles for each luminaire shall be included with the photometric report.

#### **1.4 Cost of Ownership**

- A. Manufacturer shall submit a 25 year Cost of Ownership summary that includes energy consumption, anticipated maintenance costs, and control costs. All costs associated with faulty luminaire replacement - equipment rentals, removal and installation labor, and shipping - are to be included in the maintenance costs.

### **PART 2 – PRODUCT**

#### **2.2 SPORTS LIGHTING SYSTEM CONSTRUCTION**

- A. Manufacturing Requirements: All components shall be designed and manufactured as a system. All luminaires, wire harnesses, drivers and other enclosures shall be factory assembled, aimed, wired and tested.
- B. Durability: All exposed components shall be constructed of corrosion resistant material and/or coated to help prevent corrosion. All exposed carbon steel shall be hot dip galvanized per ASTM A123. All exposed aluminum shall be powder coated with high performance polyester or anodized. All exterior reflective inserts shall be anodized, coated, and protected from direct environmental exposure to prevent reflective degradation or corrosion. All exposed hardware and fasteners shall be stainless steel, passivated and coated with aluminum-based thermosetting epoxy resin for protection against corrosion and stress corrosion cracking. Structural fasteners may be carbon steel and galvanized meeting ASTM A153 and ISO/EN 1461 (for hot dipped galvanizing), or ASTM B695 (for mechanical galvanizing). All wiring shall be enclosed within the cross-arms, pole, or electrical components enclosure.
- C. System Description: Lighting system shall consist of the following:
  - 1. Galvanized steel poles and cross-arm assembly.
  - 2. Non-approved pole technology:
    - a. Square static cast concrete poles will not be accepted.
    - b. Direct bury steel poles which utilize the extended portion of the steel shaft for their foundation will not be accepted due to potential for internal and external corrosive reaction to the soils and long-term performance concerns.
  - 3. Lighting systems shall use concrete foundations. See Section 2.4 for details.
    - a. For a foundation using a pre-stressed concrete base embedded in concrete backfill the concrete shall be air-entrained and have a minimum compressive design strength at 28 days of 3,000 PSI. 3,000 PSI concrete specified for early pole erection, actual required minimum allowable concrete strength is 1,000 PSI. All piers and concrete backfill must bear on and against firm undisturbed soil.
    - b. For anchor bolt foundations or foundations using a pre-stressed concrete base in a suspended pier or re-enforced pier design pole erection may occur after 7 days. Or after a concrete sample from the same batch achieves a certain strength.
  - 4. Manufacturer will supply all drivers and supporting electrical equipment
    - a. Remote drivers and supporting electrical equipment shall be mounted approximately 10 feet above grade in aluminum enclosures. The enclosures shall be touch-safe and include drivers and fusing with indicator lights on fuses to notify when a fuse is to be replaced for each luminaire. Disconnect per circuit for each pole structure will be located in the enclosure. Integral drivers are not allowed.
    - b. Manufacturer shall provide surge protection at the pole equal to or greater than 40 kA for each line to ground (Common Mode) as recommended by IEEE C62.41.2\_2002.

5. Wire harness complete with an abrasion protection sleeve, strain relief and plug-in connections for fast, trouble-free installation.
  6. All luminaires, visors, and cross-arm assemblies shall withstand 150 mi/h winds and maintain luminaire aiming alignment.
  8. Contactor cabinet to provide on-off control.
  9. Manufacturer shall provide lightning grounding as defined by NFPA 780 and be UL Listed per UL 96 and UL 96A.
    - a. Integrated grounding via concrete encased electrode grounding system.
    - b. If grounding is not integrated into the structure, the manufacturer shall supply grounding electrodes, copper down conductors, and exothermic weld kits. Electrodes and conductors shall be sized as required by NFPA 780. The grounding electrode shall be minimum size of 5/8 inch diameter and 8 feet long, with a minimum of 10 feet embedment. Grounding electrode shall be connected to the structure by a grounding electrode conductor with a minimum size of 2 AWG for poles with 75 feet mounting height or less, and 2/0 AWG for poles with more than 75 feet mounting height.
  10. Enhanced corrosion protection package: Due to the potentially corrosive environment for this project, manufacturers must provide documentation that their products meet the following enhanced requirements in addition to the standard durability protection specified above:
    - a) Exposed carbon steel horizontal surfaces on the crossarm assembly shall be galvanized to no less than a five (5) mil average thickness.
    - b) Exposed die cast aluminum components shall be Type II anodized per MIL-STD-8625 and coated with high performance polyester.
    - c) Exposed extruded aluminum components shall be Type II anodized per MIL-STD-8625 and coated with high performance polyester.
- D. Safety: All system components shall be UL listed for the appropriate application.

## **2.2 ELECTRICAL**

- A. Electric Power Requirements for the Sports Lighting Equipment:
  1. Electric power: 480 Volt, 3 Phase
  2. Maximum total voltage drop: Voltage drop to the disconnect switch located on the poles shall not exceed three (3) percent of the rated voltage.
- B. Energy Consumption: The kW consumption for the field lighting system shall be 197.93 kW.

## **2.3 CONTROL**

- A. Instant On/Off Capabilities: System shall provide for instant on/off of luminaires.
- B. Lighting contactor cabinet(s) constructed of NEMA Type 4 aluminum, designed for easy installation with contactors, labeled to match field diagrams and electrical design. Manual off-on-auto selector switches shall be provided.
- C. Dimming: System shall provide for 3-stage 4-stage dimming (high-medium-low-blackout). Dimming will be set via scheduling options (Website, app, phone, fax, email) or via an onsite user interface tablet or device.
- D. Remote Lighting Control System: System shall allow owner and users with a security code to schedule on/off system operation via a web site, phone, fax or email up to ten years in advance. Manufacturer shall provide and maintain a two-way TCP/IP communication link. Trained staff shall be available 24/7 to provide scheduling support and assist with reporting needs.

The owner may assign various security levels to schedulers by function and/or fields. This function must be flexible to allow a range of privileges such as full scheduling capabilities for all fields to only having permission to execute "early off" commands by phone. Scheduling tool shall be capable of

setting curfew limits.

Controller shall accept and store 7-day schedules, be protected against memory loss during power outages, and shall reboot once power is regained and execute any commands that would have occurred during outage.

- E. Remote Monitoring System: System shall monitor lighting performance and notify manufacturer if individual luminaire outage is detected so that appropriate maintenance can be scheduled. The controller shall determine switch position (manual or auto) and contactor status (open or closed).
- F. Management Tools: Manufacturer shall provide a web-based database and dashboard tool of actual field usage and provide reports by facility and user group. Dashboard shall also show current status of luminaire outages, control operation and service. Mobile application will be provided suitable for IOS, Android and Blackberry devices.

Hours of Usage: Manufacturer shall provide a means of tracking actual hours of usage for the field lighting system that is readily accessible to the owner.

1. Cumulative hours: shall be tracked to show the total hours used by the facility
2. Report hours saved by using early off and push buttons by users.

- G. Communication Costs: Manufacturer shall include communication costs for operating the control and monitoring system for a period of 25 years.
- H. Communication with luminaire drivers: Control system shall interface with drivers in electrical components enclosures by means of powerline communication wireless communication.

## 2.4 STRUCTURAL PARAMETERS

- A. Wind Loads: Wind loads shall be based on the 2020 Florida Building Code. Wind loads to be calculated using ASCE 7-10, an ultimate design wind speed of 140.
- B. Pole Structural Design: The stress analysis and safety factor of the poles shall conform to AASHTO 2013 Standard Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (LTS-6).
- C. Foundation Design: The foundation design shall be based on soil parameters as outlined in the geotechnical report. <Enter Geotech Company, Report #, Date, F11> If no geotechnical report is available, the foundation design shall be based on soils that meet or exceed those of a Class 4 material as defined by 2017 FBC Table 1806.2.

**OR.**

- C. Foundation Design: The foundation design shall be based on soils that meet or exceed those of a Class 4 material as defined by 2017 FBC Table 1806.2.
- C. Foundation Drawings: Project specific foundation drawings stamped by a registered engineer in the state where the project is located are required. The foundation drawings must list the moment, shear (horizontal) force, and axial (vertical) force at ground level for each pole. These drawings must be submitted at time of bid to allow for accurate pricing.

## **PART 3 – EXECUTION**

### **3.1 SOIL QUALITY CONTROL**

- A. It shall be the Contractor's responsibility to notify the Owner if soil conditions exist other than those on which the foundation design is based, or if the soil cannot be readily excavated. Contractor may issue a change order request / estimate for the Owner's approval / payment for additional costs associated with:
  - 1. Providing engineered foundation embedment design by a registered engineer in the State of Florida for soils other than specified soil conditions;
  - 2. Additional materials required to achieve alternate foundation;
  - 3. Excavation and removal of materials other than normal soils, such as rock, caliche, etc.

### **3.2 DELIVERY TIMING**

- A. Delivery Timing Equipment On-Site: The equipment must be on-site 8-12 weeks from receipt of approved submittals and receipt of complete order information.

### **3.3 FIELD QUALITY CONTROL**

- A. Illumination Measurements: Upon substantial completion of the project and in the presence of the Contractor, Project Engineer, Owner's Representative, and Manufacturer's Representative, illumination measurements shall be taken and verified. The illumination measurements shall be conducted in accordance with IESNA LM-5-04.
- B. Field Light Level Accountability
  - 1. Light levels are guaranteed not to fall below the target maintained light levels for the entire warranty period of 25 years. These levels will be specifically stated as "guaranteed" on the illumination summary provided by the manufacturer.
  - 2. The contractor/manufacturer shall be responsible for conducting initial light level testing and an additional inspection of the system, in the presence of the owner, one year from the date of commissioning of the lighting.
  - 3. The contractor/manufacturer will be held responsible for any and all changes needed to bring these fields back to compliance for light levels and uniformities. Contractor/Manufacturer will be held responsible for any damage to the fields during these repairs.
- C. Correcting Non-Conformance: If, in the opinion of the Owner or his appointed Representative, the actual performance levels including footcandles and uniformity ratios are not in conformance with the requirements of the performance specifications and submitted information, the Manufacturer shall be required to make adjustments to meet specifications and satisfy Owner.

### **3.4 WARRANTY AND GUARANTEE**

- A. 25-Year Warranty: Each manufacturer shall supply a signed warranty covering the entire system for 25 years from the date of shipment. Warranty shall guarantee specified light levels. Manufacturer shall maintain specifically-funded financial reserves to assure fulfillment of the warranty for the full term. Warranty does not cover weather conditions events such as lightning or hail damage, improper installation, vandalism or abuse, unauthorized repairs or alterations, or product made by other manufacturers.
- B. Maintenance: Manufacturer shall monitor the performance of the lighting system, including on/off status, hours of usage and luminaire outage for 25 years from the date of equipment shipment. Parts and labor shall be covered such that individual luminaire outages will be repaired when the usage of any field is materially impacted. Manufacturer is responsible for removal and replacement of failed luminaires, including all parts, labor, shipping, and equipment rental associated with maintenance.

Owner agrees to check fuses in the event of a luminaire outage.

## **PART 4 – DESIGN APPROVAL**

### **4.0 PRE-BID SUBMITTAL REQUIREMENTS (Non-Musco)**

- A. Design Approval: The owner / engineer will review pre-bid submittals per section 4.0.B from all the manufacturers to ensure compliance to the specification 10 days prior to bid. If the design meets the design requirements of the specifications, a letter and/or addendum will be issued to the manufacturer indicating approval for the specific design submitted.
- B. Approved Product: Musco's Light-Structure System™ with TLC for LED™ is the approved product. All substitutions must provide a complete submittal package for approval as outlined in Submittal Information at the end of this section at least 10 days prior to bid. Special manufacturing to meet the standards of this specification may be required. An addendum will be issued prior to bid listing any other approved lighting manufacturers and designs.
- C. All listed manufacturers not pre-approved shall submit the information at the end of this section at least 10 days prior to bid. An addendum will be issued prior to bid; listing approved lighting manufacturers and the design method to be used.
- D. Bidders are required to bid only products that have been approved by this specification or addendum by the owner or owner's representative. Bids received that do not utilize an approved system/design, will be rejected.

**REQUIRED SUBMITTAL INFORMATION FOR ALL MANUFACTURERS (NOT PRE-APPROVED) 10 DAYS PRIOR TO BID**

*All items listed below are mandatory, shall comply with the specification and be submitted according to pre-bid submittal requirements. Complete the Yes/No column to indicate compliance (Y) or noncompliance (N) for each item. **Submit checklist below with submittal.***

Yes/ No	Tab	Item	Description
	<b>A</b>	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.
	<b>B</b>	Equipment Layout	Drawing(s) showing field layouts with pole locations
	<b>C</b>	On Field Lighting Design	Lighting design drawing(s) showing: <ul style="list-style-type: none"> <li>a. Field Name, date, file number, prepared by</li> <li>b. Outline of field(s) being lighted, as well as pole locations referenced to the center of the field (x &amp; y), Illuminance levels at grid spacing specified</li> <li>c. Pole height, number of fixtures per pole, horizontal and vertical aiming angles, as well as luminaire information including wattage, lumens and optics</li> <li>d. Height of light test meter above field surface.</li> <li>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.</li> </ul>
	<b>D</b>	Off Field Lighting Design	Lighting design drawing showing initial spill light levels along the boundary line (defined on bid drawings) in footcandles. Lighting design showing glare along the boundary line in candela. 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.
	<b>E</b>	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.
	<b>F</b>	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.
	<b>G</b>	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 Florida, if required by owner.
	<b>H</b>	Control & Monitoring System	Manufacturer of the control and monitoring system shall provide written definition and schematics for automated control system. They will also provide ten (10) references of customers currently using proposed system in the state of Florida.
	<b>I</b>	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 Florida.
	<b>J</b>	Warranty	Provide written warranty information including all terms and conditions. Provide ten (10) references of customers currently under specified warranty in the state of Florida.
	<b>K</b>	Project References	Manufacturer to provide a list of 10 projects where the technology and specific fixture proposed for this project has been installed in the state of Florida. Reference list will include project name, project city, installation date, and if requested, contact name and contact phone number.
	<b>L</b>	Product Information	Complete bill of material and current brochures/cut sheets for all product being provided.
	<b>M</b>	Delivery	Manufacturer shall supply an expected delivery timeframe from receipt of approved submittals and complete order information.



	<b>N</b>	Non-Compliance	Manufacturer shall list all items that do not comply with the specifications. If in full compliance, tab may be omitted.
	<b>O</b>	Cost of Ownership	Document cost of ownership as defined in the specification. Identify energy costs for operating the luminaires. Maintenance cost for the system must be included. All costs should be based on 25 Years
	<b>P</b>	Environmental Light Control Design	Environmental glare impact scans must be submitted showing the maximum candela on a map of the surrounding area until 500 candela or less is achieved.

The information supplied herein shall be used for the purpose of complying with the specifications for Southport Park. By signing below I agree that all requirements of the specifications have been met and that the manufacturer will be responsible for any future costs incurred to bring their equipment into compliance for all items not meeting specifications and not listed in the Non-Compliance section.

**Manufacturer:** \_\_\_\_\_

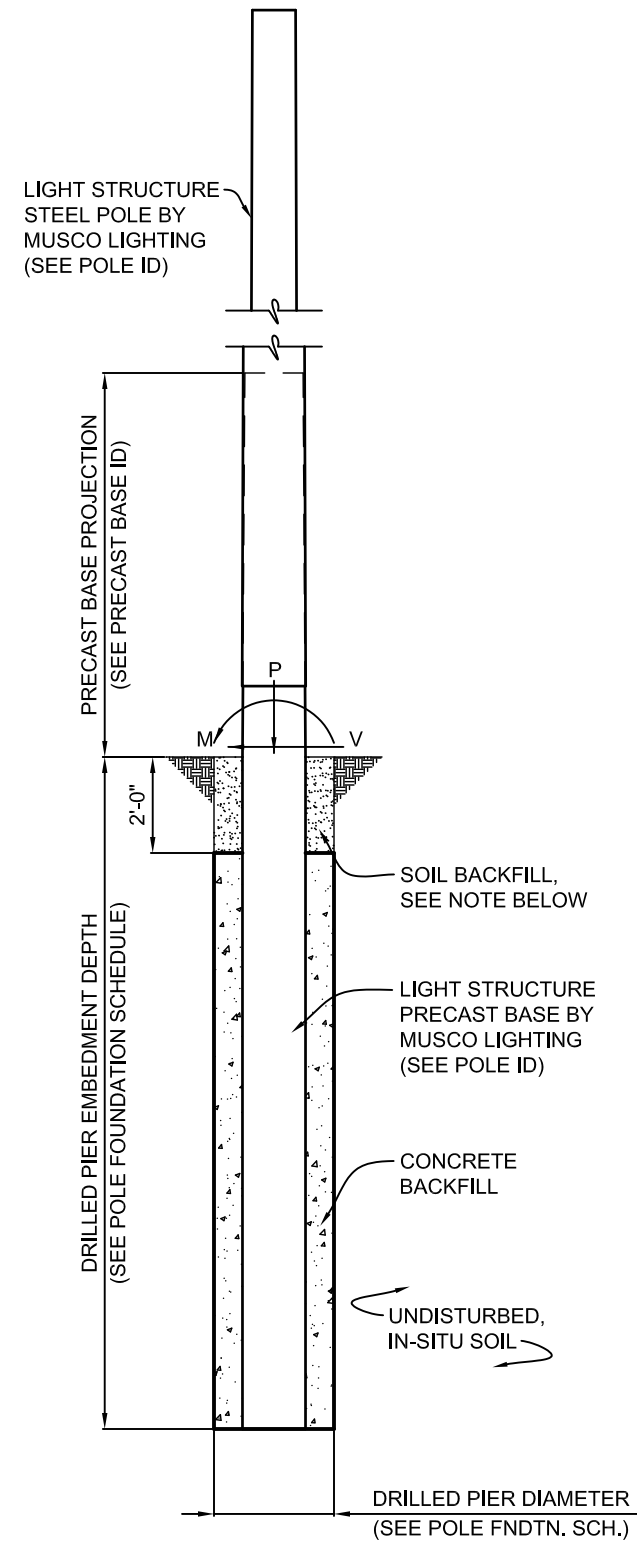
**Signature:** \_\_\_\_\_

**Contact Name:** \_\_\_\_\_

**Date:** \_\_\_\_/\_\_\_\_/\_\_\_\_

**Contractor:** \_\_\_\_\_

**Signature:** \_\_\_\_\_



**POLE FOUNDATION ELEV.**

SCALE: NOT TO SCALE

**SOIL BACKFILL NOTE:**  
 THE TOP TWO FEET OF ANNULUS SHALL BE BACKFILLED WITH SOIL, WITH A CLASSIFICATION OF CLASS 5 (TABLE 1806.2) OR BETTER. COMPACTION, 95% FOR COHESIVE SOIL AND 98% FOR A COHESIONLESS SOIL BASED UPON STANDARD PROCTOR TESTING (ASTM D698).

**DESIGN NOTES**

**DESIGN PARAMETERS:**  
 WIND:  $V_{ult} = 140$  MPH,  $V_{asd} = 108$  MPH ( EXPOSURE C, RISK CATEGORY II )  
 PER FBC, 2020 EDITION (ASCE 7-16), SECTION 1609. DESIGN WIND PARAMETERS ARE AS NOTED, ACTUAL EXPOSURE MUST BE VERIFIED FOR THE SITE BY THE PROPER GOVERNING OFFICIAL.

**GEOTECHNICAL PARAMETERS:**  
 ALLOWABLE END BEARING SOIL PRESSURE: 1,500 PSF  
 ALLOWABLE LATERAL SOIL BEARING PRESSURE:  
 0 PSF/FT (GRADE TO -2'-0"); 50 PSF/FT (-2'-0" TO -6'-0"); 150 PSF/FT (BELOW -6'-0")  
 IN ACCORDANCE WITH THE 2020 EDITION OF THE FLORIDA BUILDING CODE, CHAPTER 18.

DESIGN SOIL PARAMETERS ARE AS NOTED. ACTUAL ALLOWABLE SOIL PARAMETERS MUST BE VERIFIED ON SITE. REFERENCE SOILS AND FOUNDATION REPORT, NO. P21-0589, PREPARED BY SOUTHERN EARTH SCIENCES; PANAMA CITY, FL.

A GEOTECHNICAL ENGINEER OR REPRESENTATIVE OF IS RECOMMENDED (NOT REQUIRED) TO BE AVAILABLE AT THE TIME OF THE FOUNDATION INSTALLATION TO VERIFY THE SOIL DESIGN PARAMETERS AND TO PROVIDE ASSISTANCE IF ANY PROBLEMS ARISE IN FOUNDATION INSTALLATION.

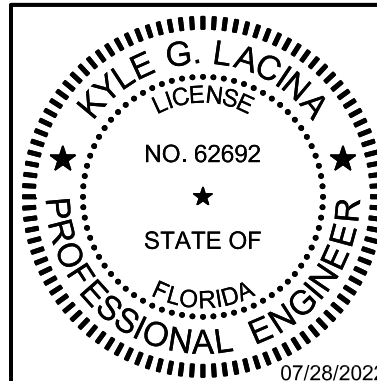
ENCOUNTERING SOIL FORMATIONS THAT WILL REQUIRE SPECIAL DESIGN CONSIDERATIONS OR EXCAVATION PROCEDURES MAY OCCUR. POLE FOUNDATIONS WILL NEED TO BE ANALYZED ACCORDING TO THE SOIL CONDITIONS THAT EXIST. IF ANY DISCREPANCIES OR INCONSISTENCIES ARISE, NOTIFY THE ENGINEER OF SUCH DISCREPANCIES. FOUNDATIONS WILL THEN BE REVISED ACCORDINGLY. REVISIONS WILL BE ANALYZED PER RECOMMENDATIONS DIRECTED BY A REGISTERED ENGINEER.

ALL EXCAVATIONS MUST BE FREE OF LOOSE SOIL AND DEBRIS PRIOR TO FOUNDATION INSTALLATION AND CONCRETE BACKFILL PLACEMENT. TEMPORARY CASINGS OR DRILLERS SLURRY MAY BE USED TO STABILIZE THE EXCAVATION DURING INSTALLATION. CASINGS MUST BE REMOVED DURING CONCRETE BACKFILL PLACEMENT. CONCRETE BACKFILL MUST BE PLACED WITH A TREMIE WHEN SLURRY OR WATER IS PRESENT WITHIN THE EXCAVATION OR WHEN THE FREE DROP EXCEEDS 6'-0".

CONTRACTOR MUST BE FAMILIAR WITH THE COMPLETE SOIL INVESTIGATION REPORT AND BORINGS, AND CONTACT THE GEOTECHNICAL FIRM (IF NECESSARY) TO UNDERSTAND THE SOIL CONDITIONS AND THE POSSIBILITY OF GROUND WATER PUMPING AND EXCAVATION STABILIZATION OR BRACING DURING PRECAST BASE INSTALLATION AND PLACEMENT OF CONCRETE BACKFILL.

**CONCRETE:**  
 CONCRETE SHALL BE AIR-ENTRAINED AND HAVE A MINIMUM COMPRESSIVE DESIGN STRENGTH AT 28 DAYS OF 3,000 PSI. 3,000 PSI CONCRETE SPECIFIED FOR EARLY POLE ERECTION, ACTUAL REQUIRED MINIMUM ALLOWABLE CONCRETE STRENGTH IS 1,000 PSI. ALL PIERS AND CONCRETE BACKFILL MUST BEAR ON AND AGAINST FIRM UNDISTURBED SOIL.

**GENERAL NOTES:**  
 FIXTURES MUST BE LOCATED TO MAINTAIN 10'-0" MINIMUM HORIZONTAL CLEARANCE FROM ANY OBSTRUCTION. ENGINEER MUST BE NOTIFIED IF FOUNDATIONS ARE NEAR ANY RETAINING WALLS OR WITHIN / NEAR ANY SLOPES STEEPER THAN 3H : 1V. POLES, FIXTURES, PRECAST BASES, ELECTRICAL ITEMS AND INSTALLATION PER MUSCO LIGHTING.



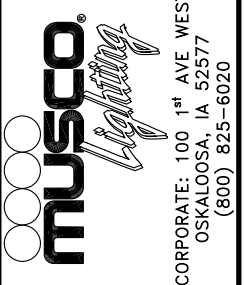
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KYLE G. LACINA - NO. PE 62692  
 LICENSE RENEWAL DATE: FEBRUARY 28, 2023

STRUCTURAL ENGINEERS, P.C. - NO. 26361

DRAWING NO. COVERED BY THIS SEAL: C1

**SOUTHPORT  
 PARK  
 FIELD LIGHTING  
 SOUTHPORT, FL**



**STRUCTURAL  
 ENGINEERS, P.C.**  
 114 NICHOLAS DRIVE  
 MARSHALLTOWN, IOWA 50158  
 PHONE NUMBER: 641-752-6334  
 EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE:  
 POLE AND FOUNDATION  
 SCALE: SEE PLAN  
 NOTES:  
 SCAN #197570C

PROJECT NUMBER  
 197570

DATE  
 28 JULY 2022

DRAWING NUMBER  
**C1**

OF TWO

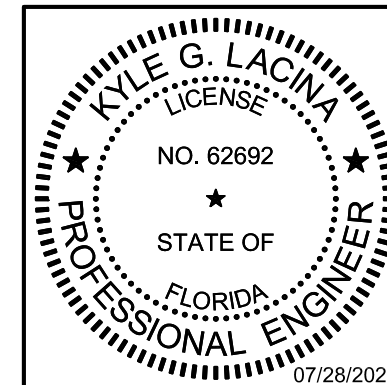
PRECAST BASE IDENTIFICATION					
PRECAST BASE TYPE	PRECAST BASE WEIGHT	PRECAST BASE LENGTH	PROJECTION ABOVE GRADE	STANDARD EMBEDMENT	OUTSIDE DIAMETER
2B	1,690 LBS	17'-3"	7'-3"	10'-0"	12.00"
3B	2,470 LBS	20'-0"	8'-0"	12'-0"	13.38"
4B	3,490 LBS	22'-0"	8'-0"	14'-0"	15.75"
5B	4,580 LBS	23'-11"	7'-11"	16'-0"	18.25"
6B	6,930 LBS	26'-1"	8'-1"	18'-0"	20.56"
7B	10,160 LBS	27'-10"	7'-10"	20'-0"	23.75"

POLE IDENTIFICATION				
POLE DESIGNATION	POLE TYPE	PRECAST BASE TYPE	FIXTURE CONFIGURATION (FIX. PER XARM)	FIXTURE AND ACCESSORIES EPA (FT <sup>2</sup> )
A1	LSS80D	7B	12 (4) / (4)	30.8
A2	LSS80C	6B	11 (4) / (4)	27.3
A3	LSS80C	6B	11 (4) / (3)	26.4
A4	LSS80C	6B	11 (4) / (3)	27.1
A5	LSS50B	2B	4 (4)	8.9
A6	LSS50C	3B	5 (4)	10.7
A7	LSS60D	4B	6 (3) / (2)	12.3
A8	LSS60B	3B	5 (3) / (1)	11.2
B1	LSS80D	7B	17 (7) / (7)	43.2
B2	LSS80D	7B	14 (7) / (5)	35.5
B3	LSS80D	7B	14 (7) / (4)	33.4
B4	LSS80C	6B	12 (5) / (4)	27.4
B5, B6	LSS70C	4B	6 (5)	12.5
C1, C4	LSS70D	5B	9 (4) / (3)	20.2
C2, C3, C5, C6	LSS70D	5B	6 (4)	15.7
C7	LSS60B	3B	8 (3) / (2)	14.5
P1	LSS70C	4B	5 (3) / (2)	9.5

- POLES A1, A3, & A4 HAVE (2) LED FIXTURES AT 50'-0" AGL, INCLUDED ABOVE.
- POLES A2, B1, B3, & B4 HAVE (1) LED FIXTURE AT 50'-0" AGL, INCLUDED ABOVE.
- POLE A6 HAS (1) LED FIXTURE AT 40'-0" AGL, INCLUDED ABOVE.
- POLES B1 - B4 HAVE (2) LED FIXTURES AT 22'-0" AGL, INCLUDED ABOVE.
- POLES A7 & A8 HAVE (1) LED FIXTURE AT 20'-0" AGL, INCLUDED ABOVE.
- POLES A1 - A4 HAVE (2) LED FIXTURES AT 20'-0" AGL, INCLUDED ABOVE.
- POLES B5 & B6 HAVE (1) LED FIXTURE AT 15'-6" AGL, INCLUDED ABOVE.
- POLES C1 - C6 HAVE (2) LED FIXTURES AT 15'-6" AGL, INCLUDED ABOVE.
- POLE C7 HAS (3) LED FIXTURES AT 12'-6" AGL, INCLUDED ABOVE.

POLE FOUNDATION SCHEDULE							
POLE DESIGNATION	FORCES (1.)			DRILLED PIER			
	MOMENT (M) FT-LBS	SHEAR (V) LBS	VERTICAL (P) LBS	DIAMETER INCHES	EMBEDMENT DEPTH	SUSPENSION "Y" (2.)	CONCRETE BACKFILL YD <sup>3</sup> (3.)
A1	199,051	4,042	5,564	48	20'-0"	NA	6.4
A2	177,235	3,555	3,784	48	18'-0"	NA	6.1
A3	170,319	3,488	3,772	48	18'-0"	NA	6.1
A4	170,491	3,480	3,684	48	18'-0"	NA	6.1
A5	41,040	1,279	1,046	42	13'-0"	3'-0"	3.7
A6	52,085	1,541	1,385	36	15'-0"	3'-0"	3.1
A7	67,989	1,824	1,817	36	16'-0"	2'-0"	3.1
A8	55,454	1,515	1,320	36	15'-0"	3'-0"	3.1
B1	250,119	4,687	6,235	48	20'-0"	NA	6.4
B2	224,335	4,340	5,914	48	20'-0"	NA	6.4
B3	213,129	4,210	5,776	48	20'-0"	NA	6.4
B4	179,390	3,587	3,884	48	18'-0"	NA	6.1
B5, B6	87,878	2,089	1,981	36	16'-0"	2'-0"	3.1
C1, C4	111,810	2,619	2,997	48	16'-0"	NA	5.6
C2, C3, C5, C6	97,437	2,401	2,813	48	16'-0"	NA	5.6
C7	55,219	1,613	1,480	36	15'-0"	3'-0"	3.1
P1	82,991	1,978	1,861	36	16'-0"	2'-0"	3.1

- ASD LOAD COMBINATION D + 0.6W. VERTICAL FORCE IS WEIGHT OF DRESSED POLE (DOES NOT INCLUDE PRECAST BASE WEIGHT)
- SUSPEND PRECAST BASE "Y" OFF THE BOTTOM OF THE EXCAVATION DURING MONOLITHIC CONCRETE BACKFILL PLACEMENT AND CURING. NA = NOT APPLICABLE, SUSPENSION NOT REQUIRED.
- MINIMUM CONCRETE BACKFILL VOLUME, SITE CONDITIONS MAY REQUIRE ADDITIONAL BACKFILL.



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KYLE G. LACINA - NO. PE 62692  
 LICENSE RENEWAL DATE: FEBRUARY 28, 2023  
 STRUCTURAL ENGINEERS, P.C. - NO. 26361  
 DRAWING NO. COVERED BY THIS SEAL: C2

SOUTHPORT  
 PARK  
 FIELD LIGHTING  
 SOUTHPORT, FL



STRUCTURAL  
 ENGINEERS, P.C.  
 114 NICHOLAS DRIVE  
 MARSHALLTOWN, IOWA 50158  
 PHONE NUMBER: 641-752-6334  
 EMAIL: MSL.INFO@SEPC.BIZ

DRAWING TITLE:  
 POLE AND FOUNDATION  
 SCALE: SEE PLAN  
 NOTES:  
 SCAN #197570C

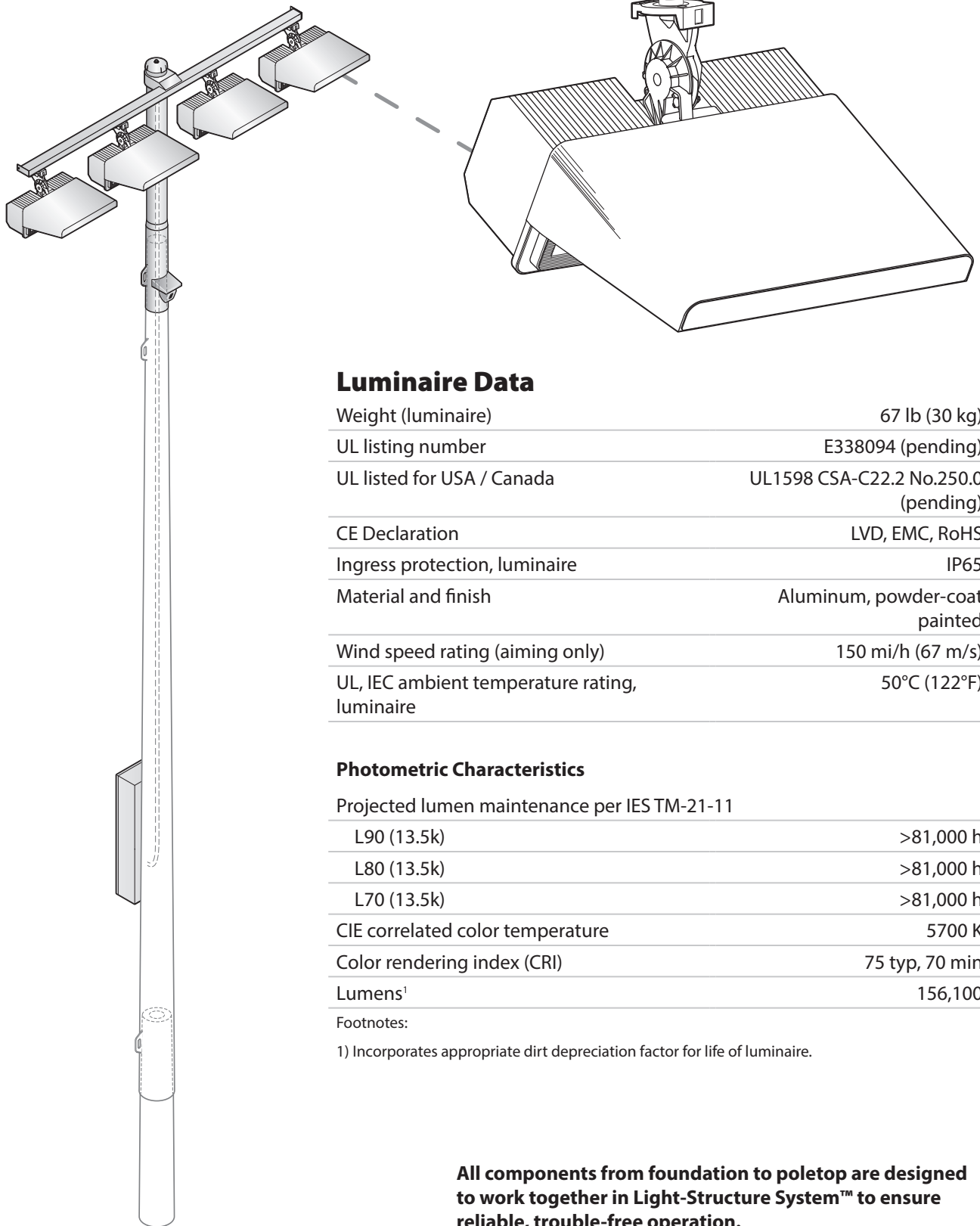
PROJECT NUMBER  
197570

DATE  
28 JULY 2022

DRAWING NUMBER  
C2

OF TWO

**Luminaire and Driver – TLC-LED-1500**



**Luminaire Data**

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

**Photometric Characteristics**

Projected lumen maintenance per IES TM-21-11	
L90 (13.5k)	>81,000 h
L80 (13.5k)	>81,000 h
L70 (13.5k)	>81,000 h
CIE correlated color temperature	5700 K
Color rendering index (CRI)	75 typ, 70 min
Lumens <sup>1</sup>	156,100

Footnotes:

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

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

## Luminaire and Driver – TLC-LED-1500

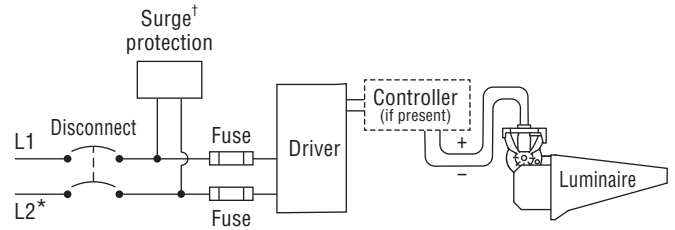
### Driver Data

#### Electrical Data

Rated wattage<sup>1</sup>

Per driver	1500 W
Per luminaire	1500 W
Number of luminaires per driver	1
Starting (inrush) current	<40 A, 256 μs
Fuse rating	15 A
UL, IEC ambient temperature rating, electrical components enclosure	45°C (113°F) - pending
Ingress protection, electrical components enclosure	IP54
Efficiency	95%
Dimming mode	optional
Range, energy consumption	11 – 100%
Range, light output	16 – 100%

### Typical Wiring



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

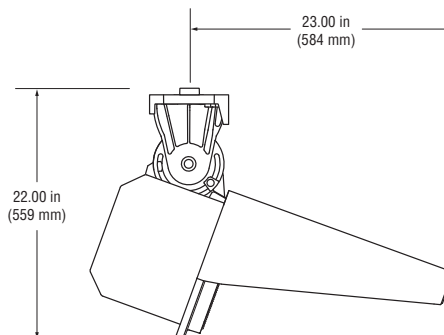
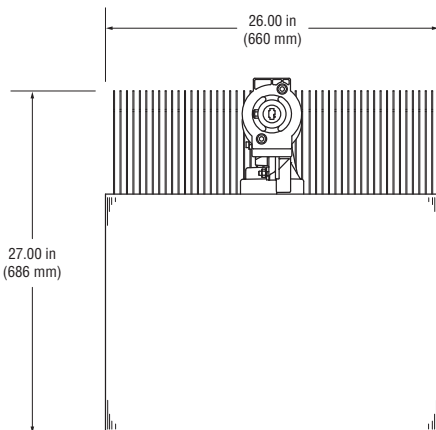
	200 Vac 50/60 Hz	208 Vac 60 Hz	220 Vac 50/60 Hz	230 Vac 50 Hz	240 Vac 50/60 Hz	277 Vac 60 Hz	347 Vac 60 Hz	380 Vac 50/60 Hz	400 Vac 50 Hz	415 Vac 50 Hz	480 Vac 60 Hz
Max operating current per luminaire <sup>2</sup>	9.30 A	8.95 A	8.46 A	8.09 A	7.75 A	6.72 A	5.36 A	4.90 A	4.65 A	4.49 A	3.88 A

#### Footnotes:

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

#### Notes

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





# Control System Summary

## Project Specific Notes:

## Project Information

Project #: 197570  
 Project Name: Southport Park  
 Date: 12/14/21  
 Project Engineer: D.Alexander  
 Sales Representative: Danny Sheldon  
 Control System Type: Control-Link™ Control and Monitoring System  
 Communication Type: PowerLine-ST  
 Scan: 197570B  
 Document ID: 197570P1V2-1214125429  
 Distribution Panel Location or ID: Fields 1-4 / Security  
 Total # of Distribution Panel Locations for Project: 2  
 Design Voltage/Hertz/Phase: 480/60/3  
 Control Voltage: 120

## Equipment Listing

DESCRIPTION	APPROXIMATE SIZE
1.Control and Monitoring Cabinet	24 X 72
2.Control and Monitoring Cabinet	24 X 72

	QTY	SIZE (AMPS)
Total Contactors	26	30 AMP
Total Off/On/Auto Switches:	5	

## Materials Checklist

### Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location
  - If the control voltage is NOT available, a control transformer is required
- Electrical distribution panel to provide overcurrent protection for circuits
  - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring
  - See chart on page 2 for wiring requirements
  - Equipment grounding conductor and splices must be insulated (per circuit)
  - Lightning ground protection (per pole), if not Musco supplied
- Electrical conduit wireway system
  - Entrance hubs rated NEMA 4, must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.

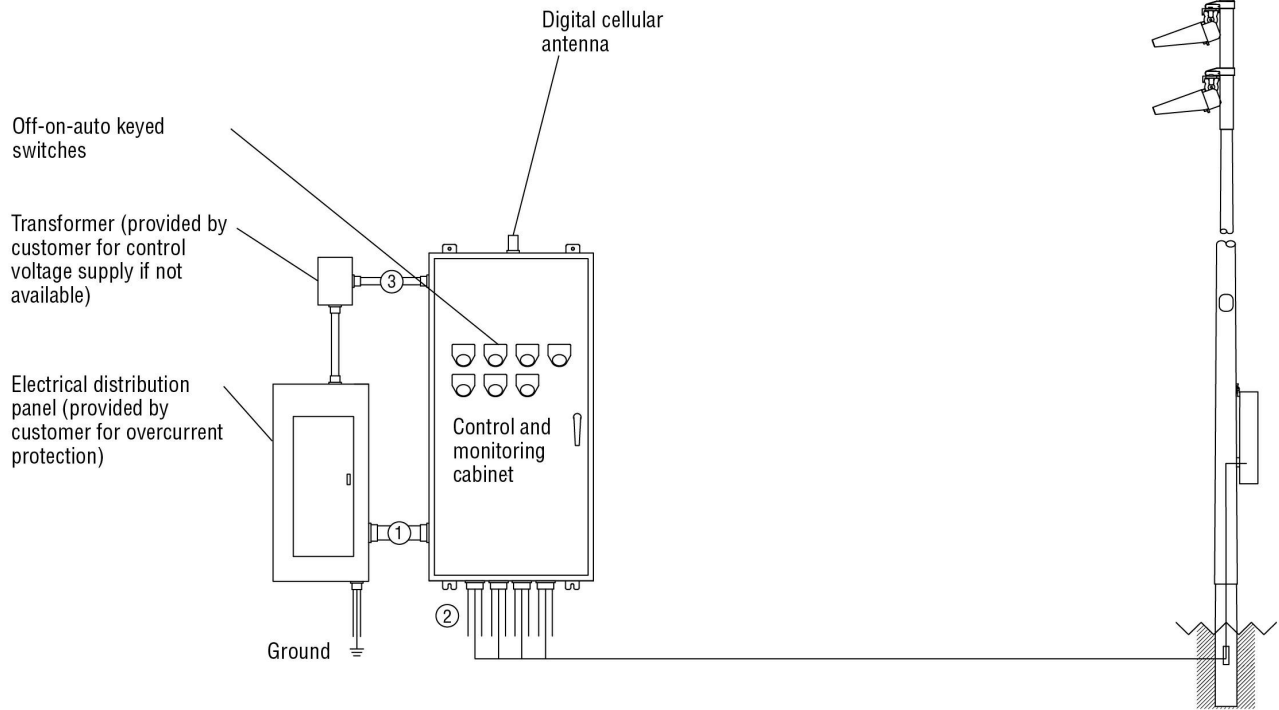
Note: Activation may take up to 1 1/2 hours.

## IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements.

## Control-Link. Control and Monitoring System



Conduit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	MUSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
2	Load power to lighting circuits, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
3	Control power (dedicated, 20A)	3	12	*C	N/A	No	C,E

\* Notes:

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.

R60-100-00\_B

IMPORTANT: Control wires (3) must be in separate conduit from line and load power wires (1, 2).



# Control System Summary

Southport Park / 197570 - 197570B  
Fields 1-4 / Security - Page 3 of 9

## SWITCHING SCHEDULE

Field/Zone Description	Zones
Field 1	1
Field 2	2
Field 3	3
Field 4	4
Security	5

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 6943.0 SEALED: 751.8

## CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
A1	Field 1	5	5	10.9	30	C1	1
A2	Field 1	5	5	10.9	30	C2	1
B1	Field 1	8	8	17.3	30	C3	1
B2	Field 1	8	8	17.3	30	C4	1
C1	Field 1	6	6	10.9	30	C5	1
C2	Field 1	6	6	10.9	30	C6	1
A1	Field 2	5	5	10.9	30	C7	2
A3	Field 2	5	5	10.9	30	C8	2
B1	Field 2	8	8	17.3	30	C9	2
B3	Field 2	8	8	17.3	30	C10	2
C3	Field 2	6	6	10.9	30	C11	2
C4	Field 2	6	6	10.9	30	C12	2
A2	Field 3	5	5	9.1	30	C13	3
A4	Field 3	5	5	9.1	30	C14	3
B2	Field 3	6	6	12.8	30	C15	3
B4	Field 3	6	6	12.8	30	C16	3
C5	Field 3	6	6	10.9	30	C17	3
C6	Field 3	6	6	10.9	30	C18	3
A3	Field 4	4	4	6.5	30	C19	4
A4	Field 4	4	4	6.5	30	C20	4
B3	Field 4	5	5	9.1	30	C21	4
B4	Field 4	5	5	9.1	30	C22	4
C7	Field 4	6	6	6.5	30	C23	4
A1,A2,A3,A4,B1 B3,B4	Security	10	7	6.9	30	C24	5
C1,C4	Security	6	4	6.4	30	C25	5
C7,P1	Security	7	4	7.7	30	C26	5

\*Full Load Amps based on amps per driver.





# Control System Summary

Southport Park / 197570 - 197570B  
Fields 1-4 / Security - Page 4 of 9

PANEL SUMMARY						
CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
1	1	C1	Pole A1	10.87		
1	1	C2	Pole A2	10.87		
1	1	C3	Pole B1	17.28		
1	1	C4	Pole B2	17.28		
1	1	C5	Pole C1	10.87		
1	1	C6	Pole C2	10.87		
1	1	C7	Pole A1	10.87		
1	1	C8	Pole A3	10.87		
1	1	C9	Pole B1	17.28		
1	1	C10	Pole B3	17.28		
1	1	C11	Pole C3	10.87		
1	1	C12	Pole C4	10.87		
2	1	C13	Pole A2	9.13		
2	1	C14	Pole A4	9.13		
2	1	C15	Pole B2	12.82		
2	1	C16	Pole B4	12.82		
2	1	C17	Pole C5	10.87		
2	1	C18	Pole C6	10.87		
2	1	C19	Pole A3	6.50		
2	1	C20	Pole A4	6.50		
2	1	C21	Pole B3	9.13		
2	1	C22	Pole B4	9.13		
2	1	C23	Pole C7	6.48		
2	1	C24	Pole A1,A2,A3,A4,B1,B3,B4	6.93		
2	1	C25	Pole C1,C4	6.41		
2	1	C26	Pole C7,P1	7.69		

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	Field 1	A1	C1
			A2	C2
			B1	C3
			B2	C4
			C1	C5
			C2	C6
Zone 2	2	Field 2	A1	C7
			A3	C8
			B1	C9
			B3	C10
			C3	C11
			C4	C12
Zone 3	3	Field 3	A2	C13
			A4	C14
			B2	C15

CONTINUED ON NEXT PAGE



# Control System Summary

Southport Park / 197570 - 197570B  
 Fields 1-4 / Security - Page 5 of 9

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 3	3	Field 3	B4	C16
			C5	C17
			C6	C18
Zone 4	4	Field 4	A3	C19
			A4	C20
			B3	C21
			B4	C22
			C7	C23
Zone 5	5	Security	A1	C24
			A2	C24
			A3	C24
			A4	C24
			B1	C24
			B3	C24
			B4	C24
			C1	C25
			C4	C25
			C7	C26
			P1	C26



# Control System Summary

## Project Specific Notes:

## Project Information

Project #: 197570  
 Project Name: Southport Park  
 Date: 12/14/21  
 Project Engineer: D.Alexander  
 Sales Representative: Danny Sheldon  
 Control System Type: Control-Link™ Control and Monitoring System  
 Communication Type: PowerLine-ST  
 Scan: 197570B  
 Document ID: 197570P1V2-1214125429  
 Distribution Panel Location or ID: Fields 5-6 / Security  
 Total # of Distribution Panel Locations for Project: 2  
 Design Voltage/Hertz/Phase: 480/60/3  
 Control Voltage: 120

## Equipment Listing

DESCRIPTION	APPROXIMATE SIZE	
1.Control and Monitoring Cabinet	24 X 72	
	QTY	SIZE (AMPS)
Total Contactors	7	30 AMP
Total Off/On/Auto Switches:	3	

## Materials Checklist

### Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location
  - If the control voltage is NOT available, a control transformer is required
- Electrical distribution panel to provide overcurrent protection for circuits
  - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring
  - See chart on page 2 for wiring requirements
  - Equipment grounding conductor and splices must be insulated (per circuit)
  - Lightning ground protection (per pole), if not Musco supplied
- Electrical conduit wireway system
  - Entrance hubs rated NEMA 4, must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.

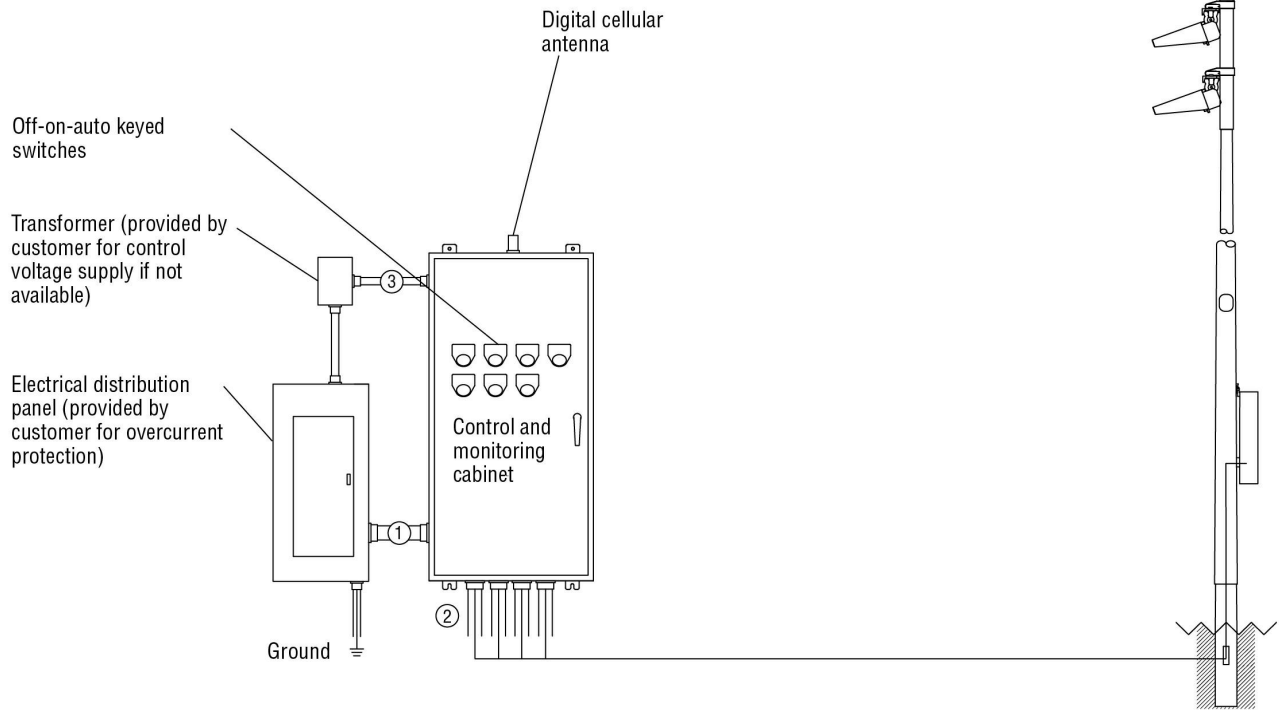
Note: Activation may take up to 1 1/2 hours.

## IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

*NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements.*

## Control-Link. Control and Monitoring System



Conduit ID	Description	# of Wires	Wire (AWG)	Conduit (in)	Max. Wire Length (ft)	MUSCO Supplied	Notes
1	Line power to contactors, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
2	Load power to lighting circuits, and equipment grounding conductor	*A	*B	*C	N/A	No	A-E
3	Control power (dedicated, 20A)	3	12	*C	N/A	No	C,E

\* Notes:

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.

R60-100-00\_B

IMPORTANT: Control wires (3) must be in separate conduit from line and load power wires (1, 2).



# Control System Summary

Southport Park / 197570 -  
Fields 5-6 / Security - Page 8 of 9

## SWITCHING SCHEDULE

Field/Zone Description	Zones
Field 5	1
Field 6	2
Security Service2	3

CONTROL POWER CONSUMPTION	
120V Single Phase	
VA loading of Musco Supplied Equipment	INRUSH: 2288.0
	SEALED: 257.8

## CIRCUIT SUMMARY BY ZONE

POLE	CIRCUIT DESCRIPTION	# OF FIXTURES	# OF DRIVERS	*FULL LOAD AMPS	CONTACTOR SIZE (AMPS)	CONTACTOR ID	ZONE
A5	Field 5	4	4	6.0	30	C1	1
A6	Field 5	4	4	6.0	30	C2	1
A7	Field 6	4	4	5.9	30	C3	2
A8	Field 6	4	4	5.9	30	C4	2
B5	Field 6	6	6	10.5	30	C5	2
B6	Field 6	6	6	10.5	30	C6	2
A6,A7,A8	Security	4	3	3.5	30	C7	3

\*Full Load Amps based on amps per driver.



# Control System Summary

Southport Park / 197570 -  
Fields 5-6 / Security - Page 9 of 9

PANEL SUMMARY						
CABINET #	CONTROL MODULE LOCATION	CONTACTOR ID	CIRCUIT DESCRIPTION	FULL LOAD AMPS	DISTRIBUTION PANEL ID (BY OTHERS)	CIRCUIT BREAKER POSITION (BY OTHERS)
3	2	C1	Pole A5	5.95		
3	2	C2	Pole A6	5.95		
3	2	C3	Pole A7	5.86		
3	2	C4	Pole A8	5.86		
3	2	C5	Pole B5	10.50		
3	2	C6	Pole B6	10.50		
3	2	C7	Pole A6,A7,A8	3.46		

ZONE SCHEDULE				
ZONE	SELECTOR SWITCH	ZONE DESCRIPTION	CIRCUIT DESCRIPTION	
			POLE ID	CONTACTOR ID
Zone 1	1	Field 5	A5	C1
			A6	C2
Zone 2	2	Field 6	A7	C3
			A8	C4
			B5	C5
			B6	C6
Zone 3	3	Security	A6	C7
			A7	C7
			A8	C7

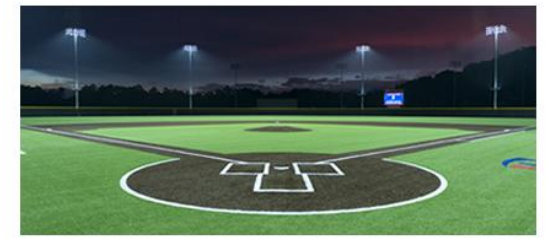
# Southport Park

Southport, FL

## Lighting System

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1	80'	80'	4	TLC-LED-1500	5.72 kW	A
		20'	1	TLC-BT-575	0.58 kW	A
		80'	4	TLC-LED-1500	5.72 kW	B
		20'	1	TLC-BT-575	0.58 kW	B
A2	80'	50'	2	TLC-LED-400	0.80 kW	G
		80'	4	TLC-LED-1500	5.72 kW	A
		20'	1	TLC-BT-575	0.58 kW	A
		80'	4	TLC-LED-1200	4.68 kW	C
		20'	1	TLC-BT-575	0.58 kW	C
A3	80'	50'	1	TLC-LED-400	0.40 kW	G
		80'	4	TLC-LED-1500	5.72 kW	B
		20'	1	TLC-BT-575	0.58 kW	B
		80'	3	TLC-LED-1200	3.51 kW	D
		20'	1	TLC-BT-575	0.58 kW	D
A4	80'	50'	2	TLC-LED-400	0.80 kW	G
		80'	4	TLC-LED-1200	4.68 kW	C
		20'	1	TLC-BT-575	0.58 kW	C
		80'	3	TLC-LED-1200	3.51 kW	D
		20'	1	TLC-BT-575	0.58 kW	D
A5	50'	50'	4	TLC-LED-900	3.56 kW	E
		50'	4	TLC-LED-900	3.56 kW	E
A6	50'	40'	1	TLC-LED-400	0.40 kW	G
		40'	1	TLC-LED-400	0.40 kW	G
A7	60'	60'	1	TLC-LED-1200	1.17 kW	F
		60'	2	TLC-LED-900	1.78 kW	F
		20'	1	TLC-BT-575	0.58 kW	F
		60'	2	TLC-LED-400	0.80 kW	G
A8	60'	60'	1	TLC-LED-1200	1.17 kW	F
		60'	2	TLC-LED-900	1.78 kW	F
		20'	1	TLC-BT-575	0.58 kW	F
		60'	1	TLC-LED-400	0.40 kW	G
B1	80'	80'	7	TLC-LED-1500	10.01 kW	A
		22'	1	TLC-BT-575	0.58 kW	A
		80'	7	TLC-LED-1500	10.01 kW	B
		22'	1	TLC-BT-575	0.58 kW	B
		50'	1	TLC-LED-400	0.40 kW	G
B2	80'	80'	7	TLC-LED-1500	10.01 kW	A
		22'	1	TLC-BT-575	0.58 kW	A
		80'	5	TLC-LED-1500	7.15 kW	C
		22'	1	TLC-BT-575	0.58 kW	C
B3	80'	80'	7	TLC-LED-1500	10.01 kW	B
		22'	1	TLC-BT-575	0.58 kW	B
		80'	4	TLC-LED-1200	4.68 kW	D
		22'	1	TLC-BT-575	0.58 kW	D
		50'	1	TLC-LED-400	0.40 kW	G
B4	80'	80'	5	TLC-LED-1500	7.15 kW	C
		22'	1	TLC-BT-575	0.58 kW	C
		80'	4	TLC-LED-1200	4.68 kW	D
		22'	1	TLC-BT-575	0.58 kW	D
		50'	1	TLC-LED-400	0.40 kW	G
B5-B6	70'	70'	5	TLC-LED-1200	5.85 kW	F
		16'	1	TLC-BT-575	0.58 kW	F
C1	70'	70'	4	TLC-LED-1500	5.72 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
		70'	3	TLC-LED-600	1.74 kW	G

## From Hometown to Professional



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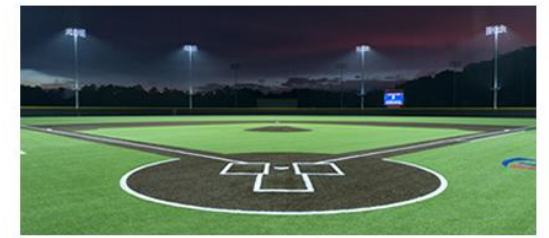
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# Southport Park

Southport, FL

Pole / Fixture Summary						
Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
C2	70'	70'	4	TLC-LED-1500	5.72 kW	A
		16'	2	TLC-BT-575	1.15 kW	A
C3	70'	70'	4	TLC-LED-1500	5.72 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
C4	70'	70'	4	TLC-LED-1500	5.72 kW	B
		16'	2	TLC-BT-575	1.15 kW	B
C5-C6	70'	70'	3	TLC-LED-600	1.74 kW	G
		70'	4	TLC-LED-1500	5.72 kW	C
C7	60'	60'	3	TLC-LED-900	2.67 kW	D
		16'	3	TLC-BT-575	1.73 kW	D
P1	70'	60'	2	TLC-LED-600	1.16 kW	G
		70'	5	TLC-LED-600	2.90 kW	G
<b>22</b>			<b>189</b>		<b>197.94 kW</b>	

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# Southport Park

Southport, FL

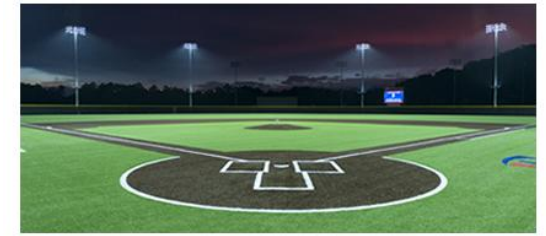
Circuit Summary			
Circuit	Description	Load	Fixture Qty
A	Field 1	47.5 kW	38
B	Field 2	47.5 kW	38
C	Field 3	39.7 kW	34
D	Field 4	23.08 kW	24
E	Field 5	7.12 kW	8
F	Field 6	19.9 kW	20
G	Parking	13.14 kW	27

Fixture Type Summary							
Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1500	LED 5700K - 75 CRI	1430W	160,000	>120,000	>120,000	>120,000	78
TLC-LED-1200	LED 5700K - 75 CRI	1170W	136,000	>120,000	>120,000	>120,000	34
TLC-LED-900	LED 5700K - 75 CRI	890W	89,600	>120,000	>120,000	>120,000	15
TLC-LED-600	LED 5700K - 75 CRI	580W	65,600	>120,000	>120,000	>120,000	13
TLC-LED-400	LED 5700K - 75 CRI	400W	46,500	>120,000	>120,000	>120,000	14
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>120,000	>120,000	>120,000	35

## Light Level Summary

Calculation Grid Summary								
Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Field 1 (Infield)	Horizontal Illuminance	51.4	38	68	1.80	1.35	A	38
Field 1 (Outfield)	Horizontal Illuminance	32.6	21	51	2.40	1.55	A	38
Field 2 (Infield)	Horizontal Illuminance	52.4	36	69	1.90	1.46	B	38
Field 2 (Outfield)	Horizontal Illuminance	32.8	23	51	2.26	1.43	B	38
Field 3 (Infield)	Horizontal Illuminance	50.4	33	64	1.92	1.53	C	34
Field 3 (Outfield)	Horizontal Illuminance	31.3	22	43	1.95	1.42	C	34
Field 4 (Infield)	Horizontal Illuminance	51.9	40	65	1.61	1.30	D	24
Field 4 (Outfield)	Horizontal Illuminance	30.2	20	46	2.36	1.51	D	24
Field 5 (Infield)	Horizontal Illuminance	45.3	27	62	2.28	1.68	E	8
Field 5 (Outfield)	Horizontal Illuminance	30.9	25	34	1.37	1.24	E	8
Field 6 (Infield)	Horizontal Illuminance	50.8	39	66	1.70	1.30	F	20
Field 6 (Outfield)	Horizontal Illuminance	32.7	21	40	1.90	1.56	F	20
Security	Horizontal Illuminance	0.97	0	13	0.00		G	27

## From Hometown to Professional



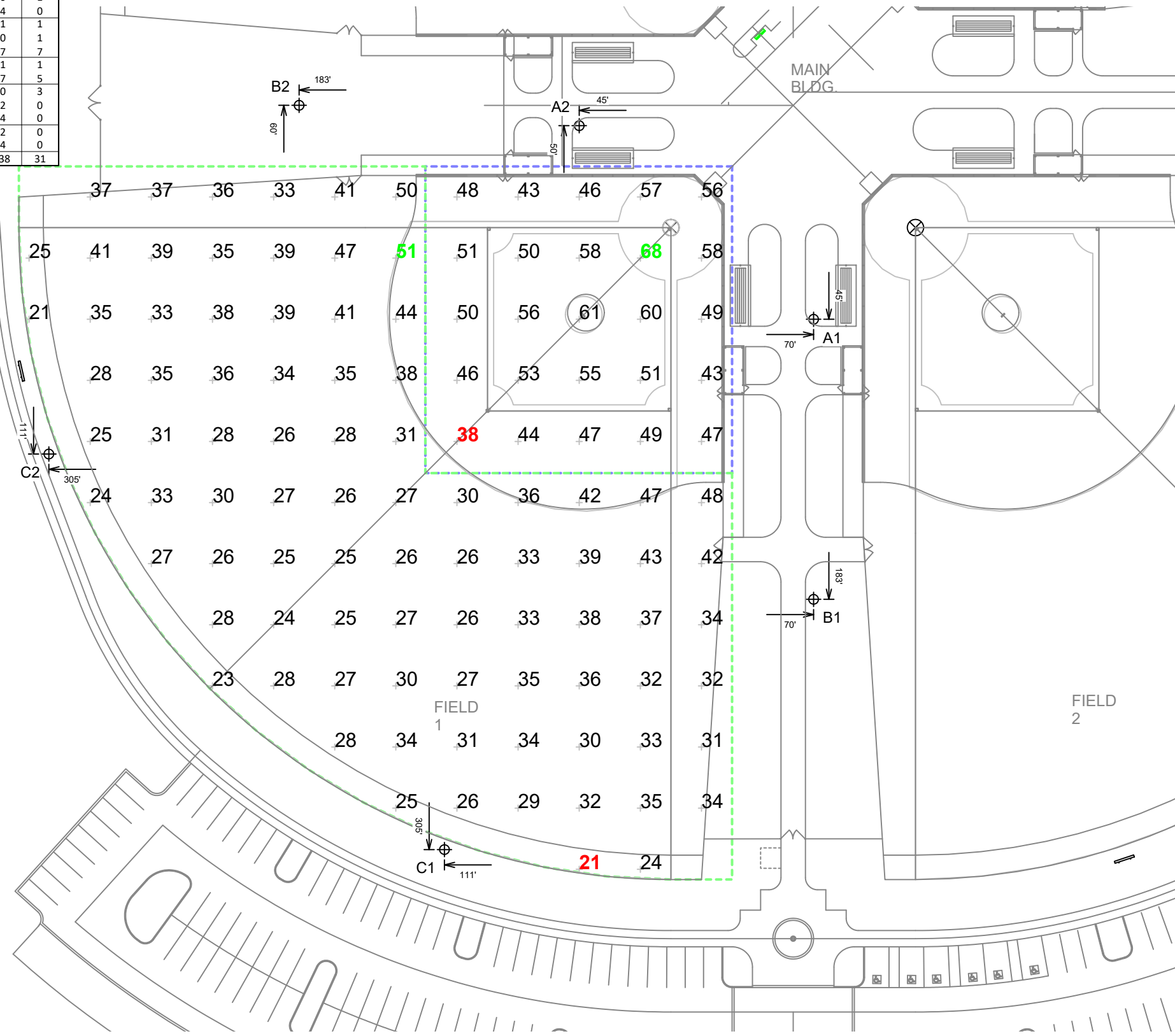
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**EQUIPMENT LIST FOR AREAS SHOWN**

Pole		Luminaires							
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
1	A1	80'	-	20'	TLC-BT-575	1/1*	1	1	
				50'	TLC-LED-400	2	0	2	
				80'	TLC-LED-1500	4/4*	4	4	
1	A2	80'	-	80'	TLC-LED-1200	4*	0	4	
				20'	TLC-BT-575	1/1*	1	1	
				50'	TLC-LED-400	1	0	1	
				80'	TLC-LED-1500	4	4	0	
1	B1	80'	-	22'	TLC-BT-575	1/1*	1	1	
				50'	TLC-LED-400	1	0	1	
				80'	TLC-LED-1500	7/7*	7	7	
1	B2	80'	-	22'	TLC-BT-575	1/1*	1	1	
				80'	TLC-LED-1500	7/5*	7	5	
1	C1	70'	-	70'	TLC-LED-600	3*	0	3	
				15.5'	TLC-BT-575	2	2	0	
				70'	TLC-LED-1500	4	4	0	
1	C2	70'	-	15.5'	TLC-BT-575	2	2	0	
				70'	TLC-LED-1500	4	4	0	
6	TOTALS						69	38	31

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



**Southport Park**  
Southport, FL

GRID SUMMARY	
Name:	Field 1
Size:	320'/320'/320' - basepath 90'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	51.36	32.62
Maximum:	68	51
Minimum:	38	21
Avg / Min:	1.37	1.52
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.80	2.40
UG (adjacent pts):	1.24	1.63
CU:	0.72	
CV:	0.13	0.21
No. of Points:	25	86
LUMINAIRE INFORMATION		
Applied Circuits:	A	
<b>No. of Luminaires:</b>	<b>38</b>	
Total Load:	47.5 kW	

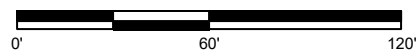
**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

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

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

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

SCALE IN FEET 1 : 60



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

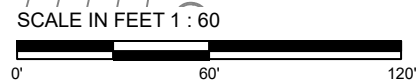
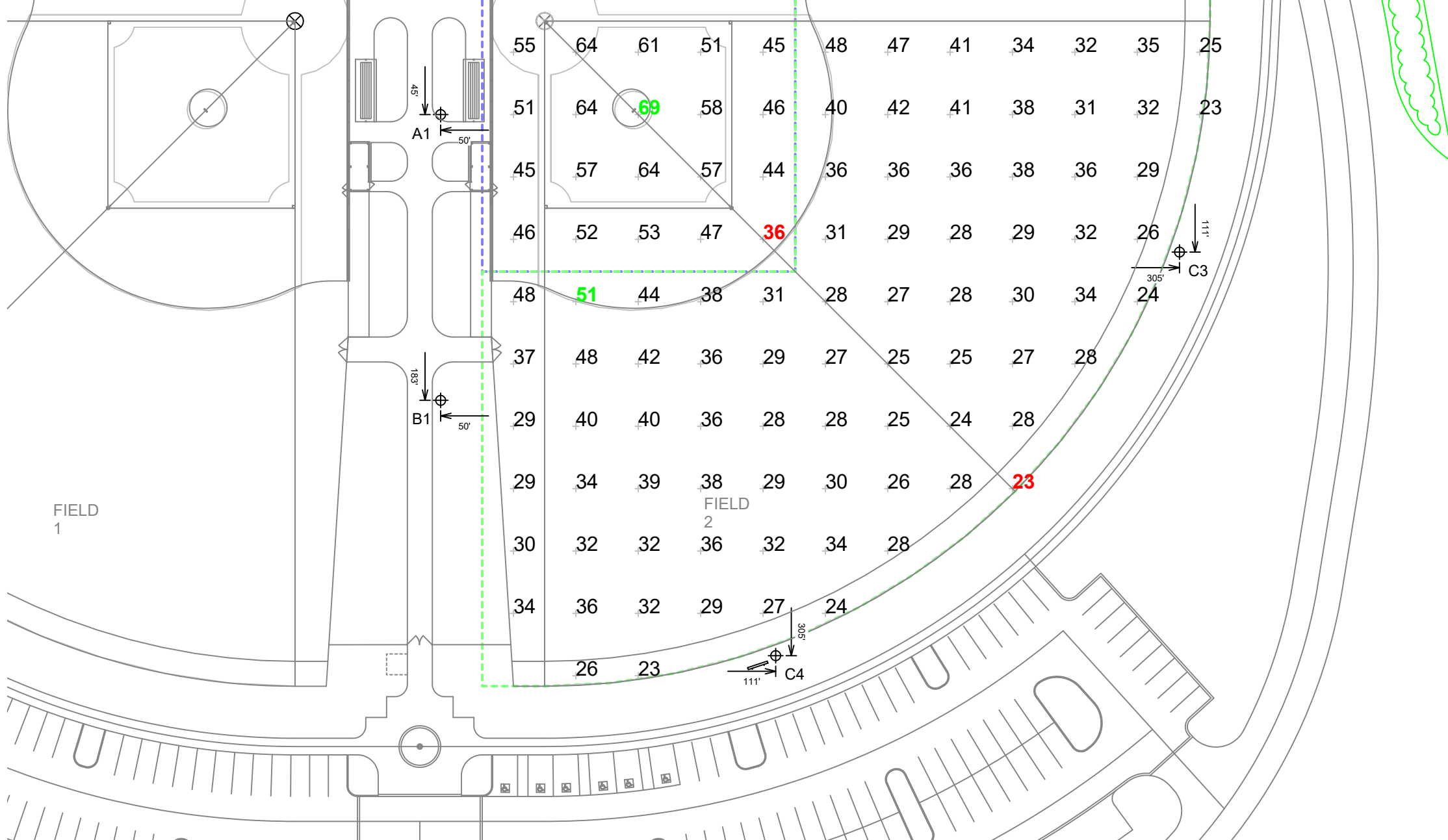


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EQUIPMENT LIST FOR AREAS SHOWN									
Pole			Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
1	A1	80'	-	20'	TLC-BT-575	1/1*	1	1	
				50'	TLC-LED-400	2	0	2	
				80'	TLC-LED-1500	4/4*	4	4	
1	A3	80'	-	80'	TLC-LED-1200	3*	0	3	
				20'	TLC-BT-575	1/1*	1	1	
				50'	TLC-LED-400	2	0	2	
1	B1	80'	-	22'	TLC-BT-575	1/1*	1	1	
				50'	TLC-LED-400	1	0	1	
				80'	TLC-LED-1500	7/7*	7	7	
1	B3	80'	-	80'	TLC-LED-1200	4*	0	4	
				22'	TLC-BT-575	1/1*	1	1	
				50'	TLC-LED-400	1	0	1	
1	C3	70'	-	15.5'	TLC-BT-575	2	2	0	
				70'	TLC-LED-1500	4	4	0	
				70'	TLC-LED-600	3*	0	3	
1	C4	70'	-	15.5'	TLC-BT-575	2	2	0	
				70'	TLC-LED-1500	4	4	0	
				70'	TLC-LED-1500	4	4	0	
6	TOTALS					69	38	31	

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



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

## Southport Park Southport, FL

GRID SUMMARY	
Name:	Field 2
Size:	320'/320'/320' - basepath 90'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	52.40	32.80
Maximum:	69	51
Minimum:	36	23
Avg / Min:	1.44	1.45
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.90	2.26
UG (adjacent pts):	1.30	1.40
CU:	0.73	
CV:	0.16	0.20
No. of Points:	25	86
LUMINAIRE INFORMATION		
Applied Circuits:	B	
<b>No. of Luminaires:</b>	<b>38</b>	
Total Load:	47.5 kW	

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

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

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

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



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## ILLUMINATION SUMMARY

**EQUIPMENT LIST FOR AREAS SHOWN**

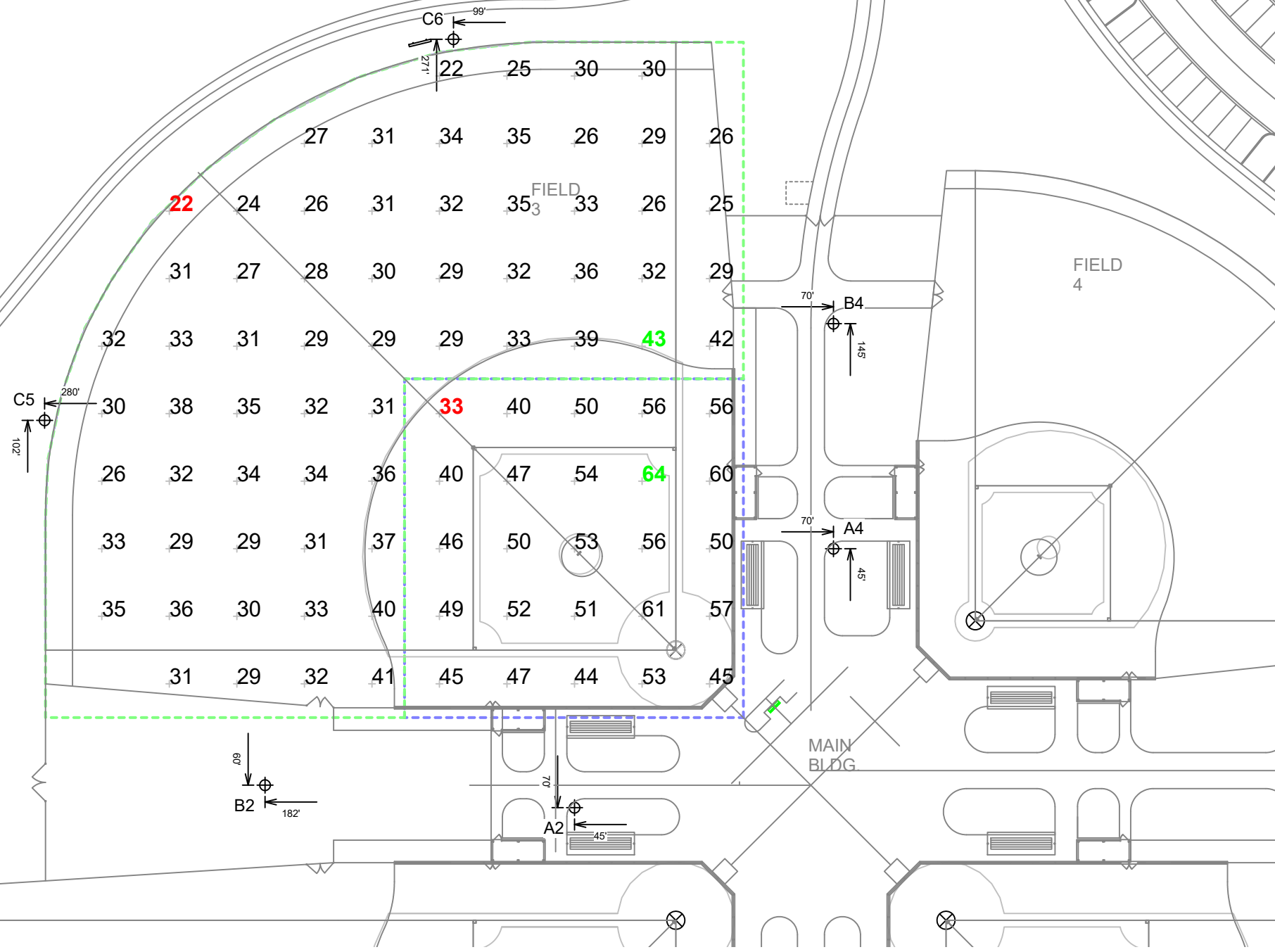
Pole		Luminaires						
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A2	80'	-	80'	TLC-LED-1200	4*	4	0
				20'	TLC-BT-575	1/1*	1	1
				50'	TLC-LED-400	1	0	1
				80'	TLC-LED-1500	4	0	4
1	A4	80'	-	20'	TLC-BT-575	1/1*	1	1
				50'	TLC-LED-400	2	0	2
				80'	TLC-LED-1200	4/3*	4	3
				80'	TLC-LED-1500	4	0	4
1	B2	80'	-	22'	TLC-BT-575	1/1*	1	1
				80'	TLC-LED-1500	7/5*	5	7
1	B4	80'	-	80'	TLC-LED-1200	4*	0	4
				22'	TLC-BT-575	1/1*	1	1
				50'	TLC-LED-400	1	0	1
				80'	TLC-LED-1500	5	5	0
2	C5-C6	70'	-	15.5'	TLC-BT-575	2	2	0
				70'	TLC-LED-1500	4	4	0
<b>TOTALS</b>						<b>60</b>	<b>34</b>	<b>26</b>

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

**Southport Park**  
Southport, FL

GRID SUMMARY	
Name:	Field 3
Size:	Irregular 280' / 298' / 270'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	50.38	31.31
Maximum:	64	43
Minimum:	33	22
Avg / Min:	1.52	1.42
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.92	1.95
UG (adjacent pts):	1.25	1.53
CU:	0.68	
CV:	0.14	0.15
No. of Points:	25	63
LUMINAIRE INFORMATION		
Applied Circuits:	C	
<b>No. of Luminaires:</b>	<b>34</b>	
Total Load:	39.7 kW	

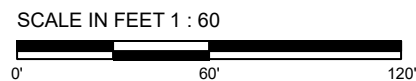


**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

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

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

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



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



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# Southport Park

Southport, FL

GRID SUMMARY	
Name:	Field 4
Size:	200'/200'/200' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	51.93	30.23
Maximum:	65	46
Minimum:	40	20
Avg / Min:	1.29	1.54
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.61	2.36
UG (adjacent pts):	1.22	1.59
CU:	0.56	
CV:	0.14	0.20
No. of Points:	25	73
LUMINAIRE INFORMATION		
Applied Circuits:	D	
<b>No. of Luminaires:</b>	<b>24</b>	
Total Load:	23.08 kW	

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

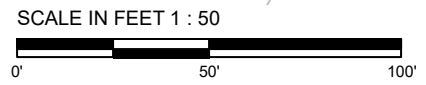
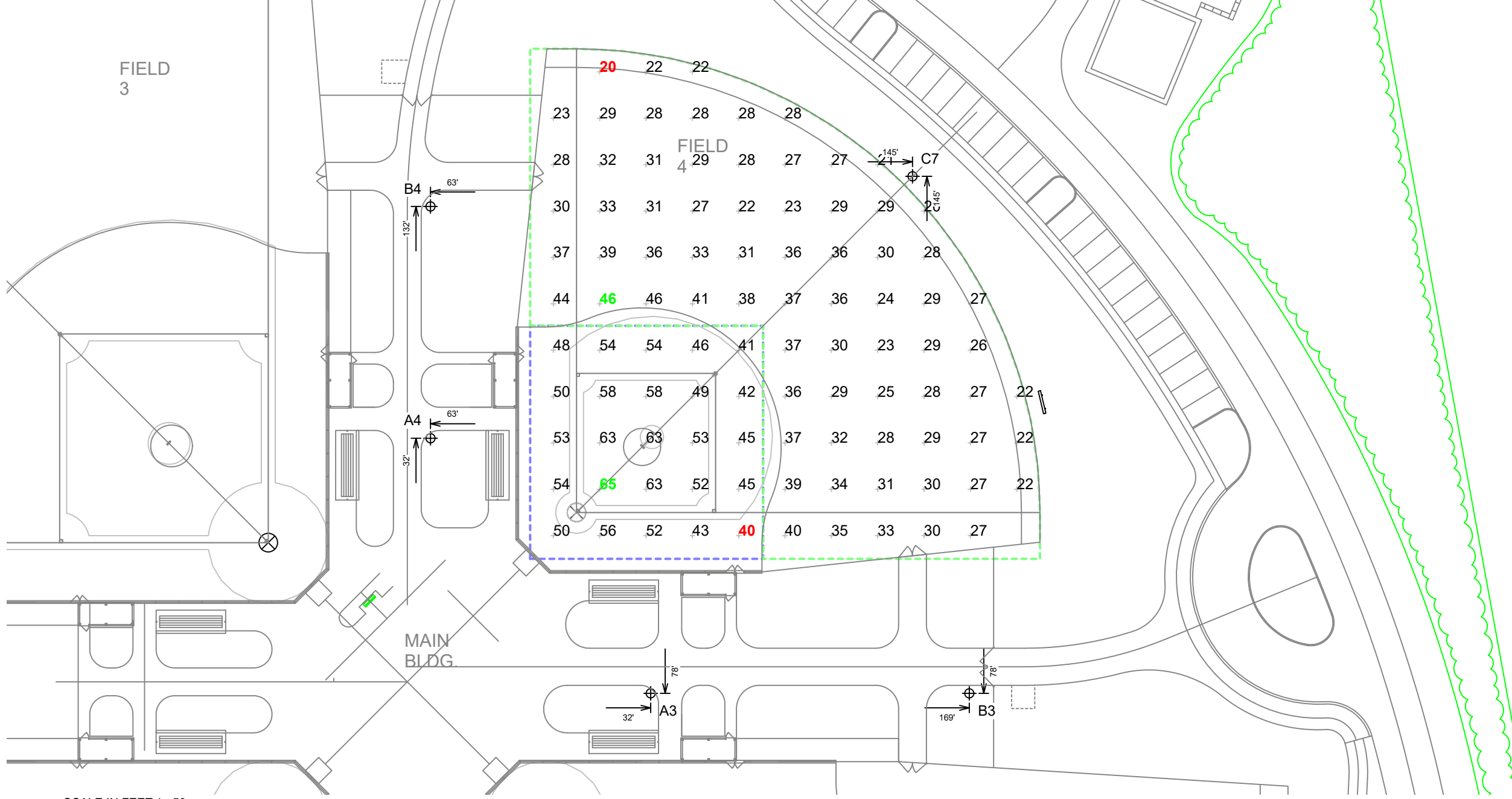
**Field Measurements:** Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

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

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

EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
1	A3	80'	3'	83'	TLC-LED-1200	3*	3	0	0
				23'	TLC-BT-575	1/1*	1	1	1
				53'	TLC-LED-400	2	0	2	2
				83'	TLC-LED-1500	4	0	4	4
1	A4	80'	3'	23'	TLC-BT-575	1/1*	1	1	1
				53'	TLC-LED-400	2	0	2	2
				83'	TLC-LED-1200	4/3*	3	4	4
				83'	TLC-LED-1500	7	0	7	7
1	B3	80'	3'	83'	TLC-LED-1200	4*	4	0	0
				25'	TLC-BT-575	1/1*	1	1	1
				53'	TLC-LED-400	1	0	1	1
				83'	TLC-LED-1500	7	0	7	7
1	B4	80'	3'	83'	TLC-LED-1200	4*	4	0	0
				25'	TLC-BT-575	1/1*	1	1	1
				53'	TLC-LED-400	1	0	1	1
				83'	TLC-LED-1500	5	0	5	5
1	C7	60'	-	60'	TLC-LED-600	2*	0	2	2
				15.5'	TLC-BT-575	3	3	0	0
				60'	TLC-LED-900	3	3	0	0
				TOTALS		56	24	32	

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



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



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EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
1	A5	50'	-	50'	TLC-LED-900	4	4	0
1	A6	50'	-	40'	TLC-LED-400	1	0	1
				50'	TLC-LED-900	4	4	0
2	TOTALS					9	8	1

## Southport Park

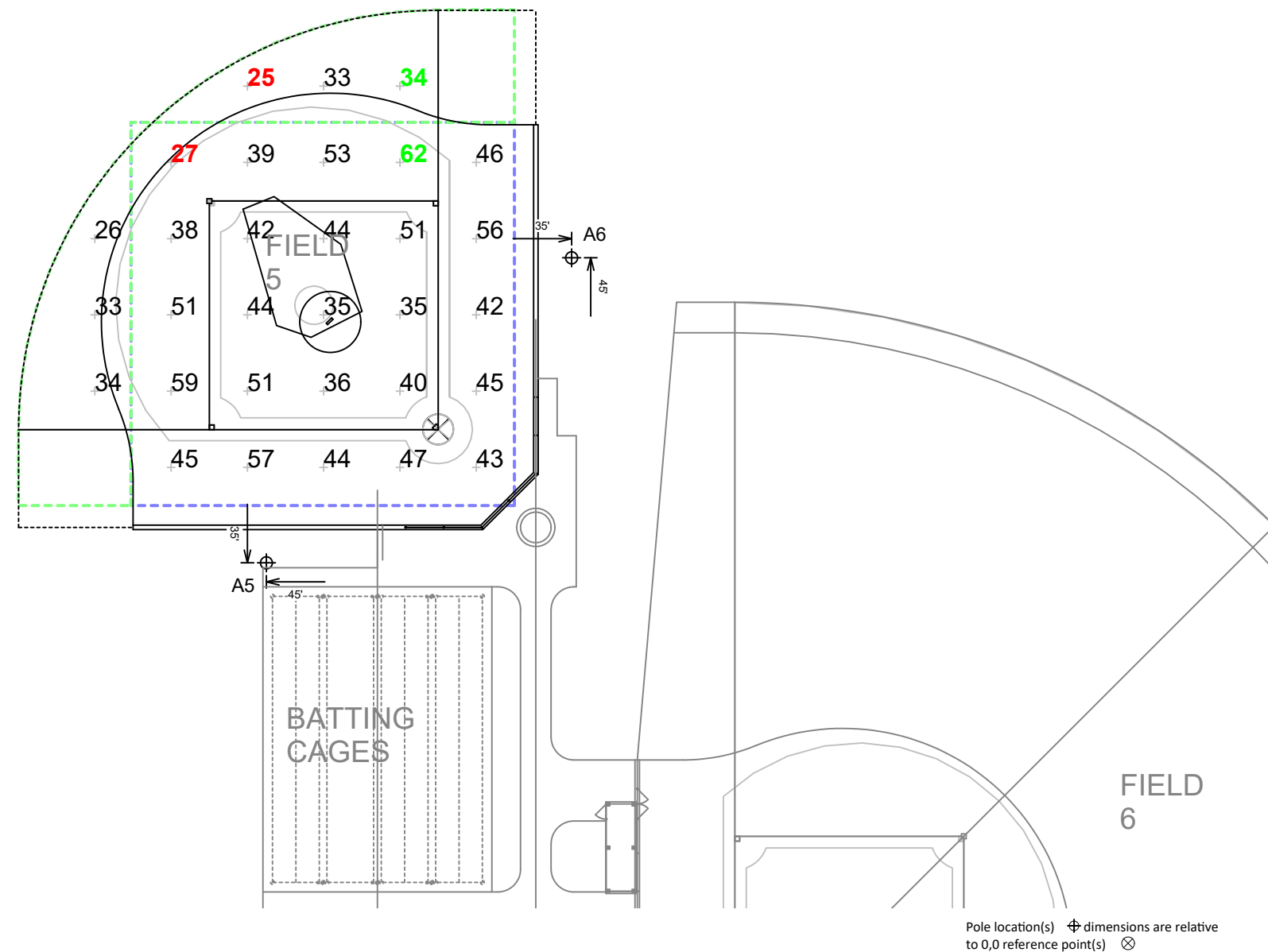
Southport, FL

GRID SUMMARY	
Name:	Field 5
Size:	110'/110'/110' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
Scan Average:	45.33	30.94
Maximum:	62	34
Minimum:	27	25
Avg / Min:	1.67	1.23
Max / Min:	2.28	1.37
UG (adjacent pts):	1.46	1.31
CU:	0.72	
CV:	0.18	0.13
No. of Points:	25	6

LUMINAIRE INFORMATION	
Applied Circuits:	E
No. of Luminaires:	8
Total Load:	7.12 kW



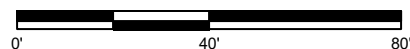
**Guaranteed Performance:** The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

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

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

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

SCALE IN FEET 1 : 40



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EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID / OTHER GRIDS
1	A7	60'	-	60'	TLC-LED-1200	1	1 0
				60'	TLC-LED-400	2*	0 2
				20'	TLC-BT-575	1	1 0
				60'	TLC-LED-900	2	2 0
1	A8	60'	-	60'	TLC-LED-1200	1	1 0
				60'	TLC-LED-400	1*	0 1
				20'	TLC-BT-575	1	1 0
				60'	TLC-LED-900	2	2 0
2	B5-B6	70'	-	15.5'	TLC-BT-575	1	1 0
				70'	TLC-LED-1200	5	5 0
4	TOTALS					23	20 3

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

## Southport Park Southport, FL

GRID SUMMARY	
Name:	Field 6
Size:	200'/200'/200' - basepath 60'
Spacing:	20.0' x 20.0'
Height:	3.0' above grade

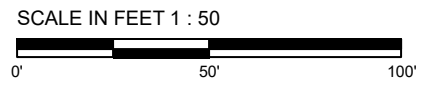
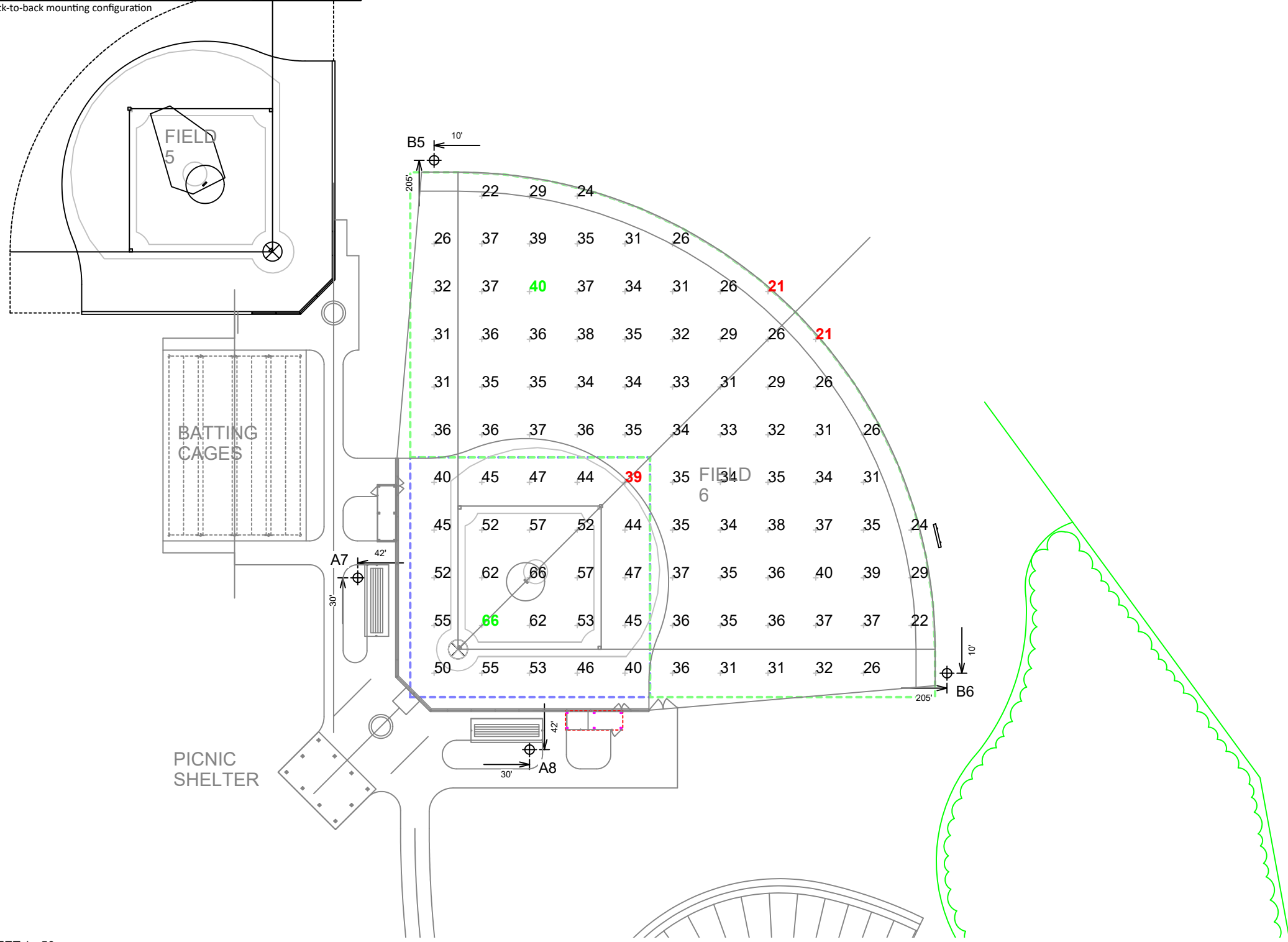
ILLUMINATION SUMMARY		
MAINTAINED HORIZONTAL FOOTCANDLES		
	Infield	Outfield
<b>Guaranteed Average:</b>	<b>50</b>	<b>30</b>
Scan Average:	50.82	32.66
Maximum:	66	40
Minimum:	39	21
Avg / Min:	1.31	1.54
<b>Guaranteed Max / Min:</b>	<b>2</b>	<b>2.5</b>
Max / Min:	1.70	1.90
UG (adjacent pts):	1.21	1.65
CU:	0.68	
CV:	0.15	0.15
No. of Points:	25	73
LUMINAIRE INFORMATION		
Applied Circuits:	F	
<b>No. of Luminaires:</b>	<b>20</b>	
Total Load:	19.9 kW	

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

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

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

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



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



# Southport Park

Southport, FL

GRID SUMMARY	
Name:	Security
Size:	2' x 2'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

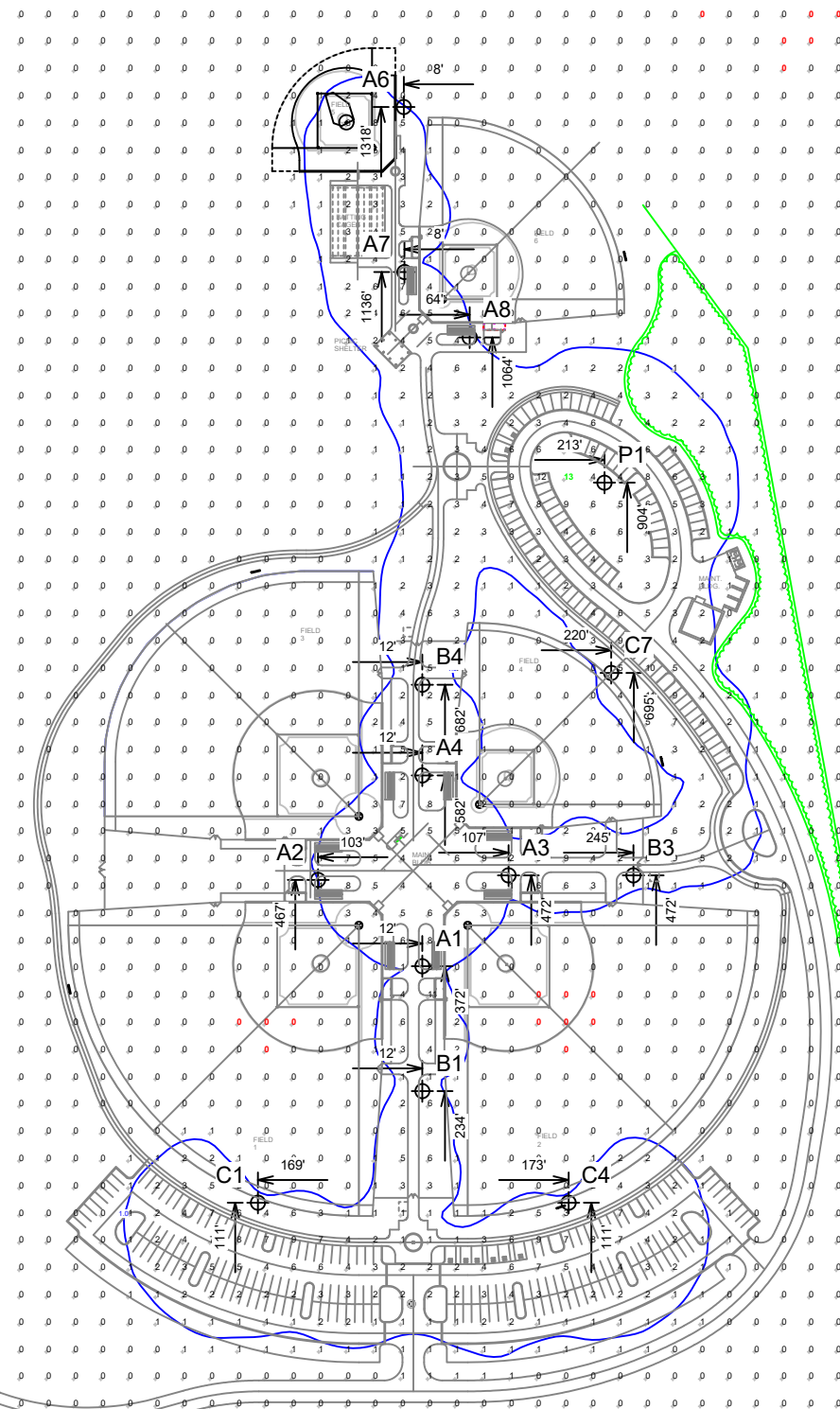
ILLUMINATION SUMMARY	
MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Scan Average:	0.97
Maximum:	13
Minimum:	0
Avg / Min:	-
Max / Min:	-
UG (adjacent pts):	981.82
CU:	0.99
CV:	1.93
No. of Points:	1612
LUMINAIRE INFORMATION	
Applied Circuits:	G
No. of Luminaires:	27
Total Load:	13.14 kW

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

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

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

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



NOTES: BLUE CONTOUR LINE REPRESENTS 1.0FC

SCALE IN FEET 1 : 200



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

ENGINEERED DESIGN By: Logan Schlee · File #197570C · 07-Jun-22



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## ILLUMINATION SUMMARY



# Southport Park

Southport, FL

GRID SUMMARY	
Name:	Property Line
Spacing:	30.0'
Height:	3.0' above grade

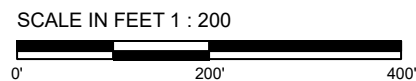
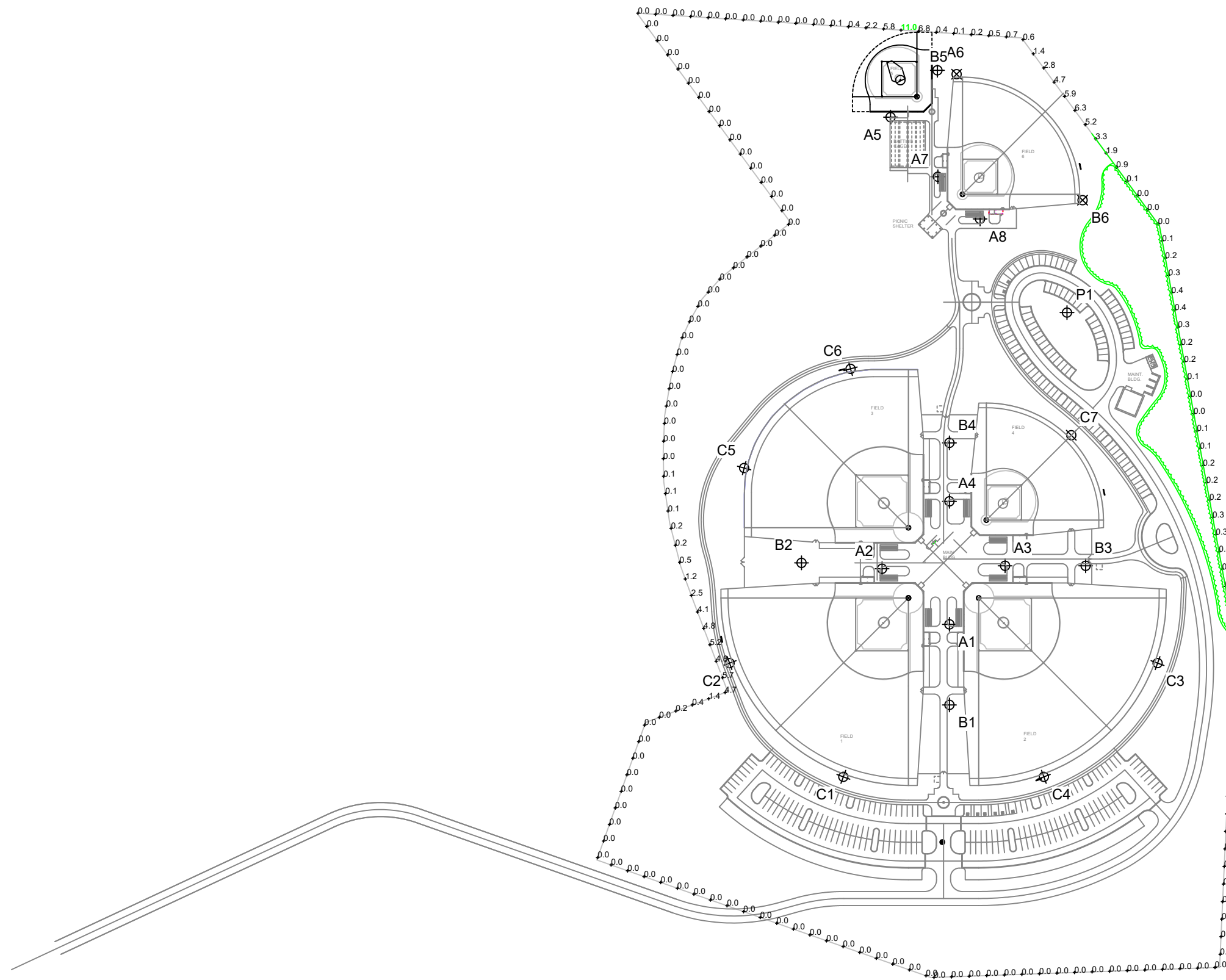
ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Entire Grid	0.6133
Scan Average:	11.00
Maximum:	0.00
Minimum:	173
No. of Points:	
LUMINAIRE INFORMATION	
Applied Circuits:	A, B, C, D, E, F, G
No. of Luminaires:	189
Total Load:	197.93 kW

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

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

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

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



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



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## ILLUMINATION SUMMARY

# Southport Park

Southport, FL

GRID SUMMARY	
Name:	Spill 100' From Property Line
Spacing:	30.0'
Height:	3.0' above grade

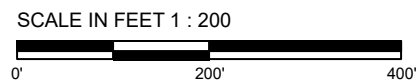
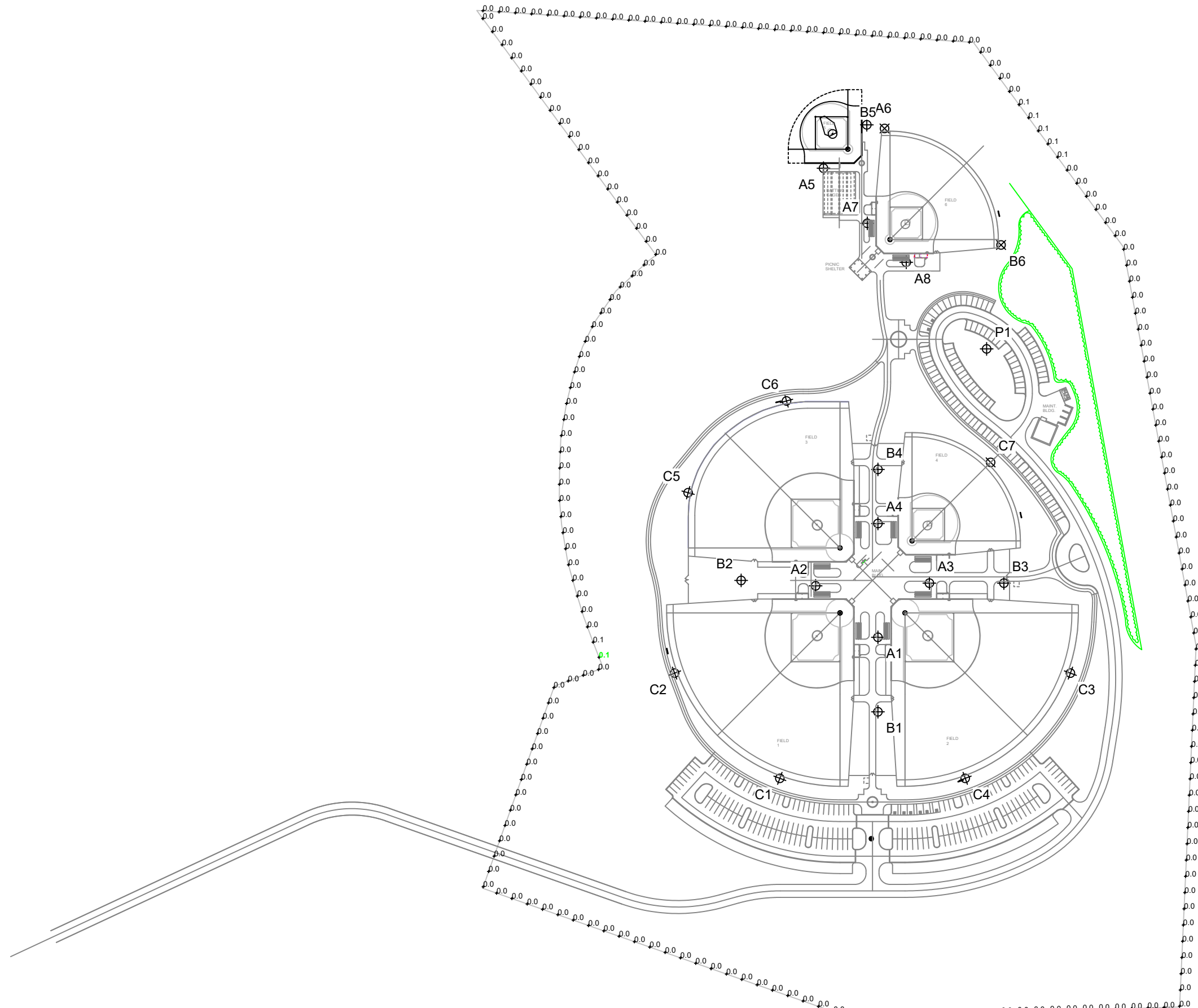
ILLUMINATION SUMMARY	
HORIZONTAL FOOTCANDLES	
Scan Average:	Entire Grid 0.0061
Maximum:	0.08
Minimum:	0.00
No. of Points:	201
LUMINAIRE INFORMATION	
Applied Circuits:	A, B, C, D, E, F, G
No. of Luminaires:	189
Total Load:	197.93 kW

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

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

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

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



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



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# Southport Park

Southport, FL

GRID SUMMARY	
Name:	Spill 100' From Property Line
Spacing:	30.0'
Height:	3.0' above grade

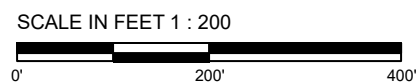
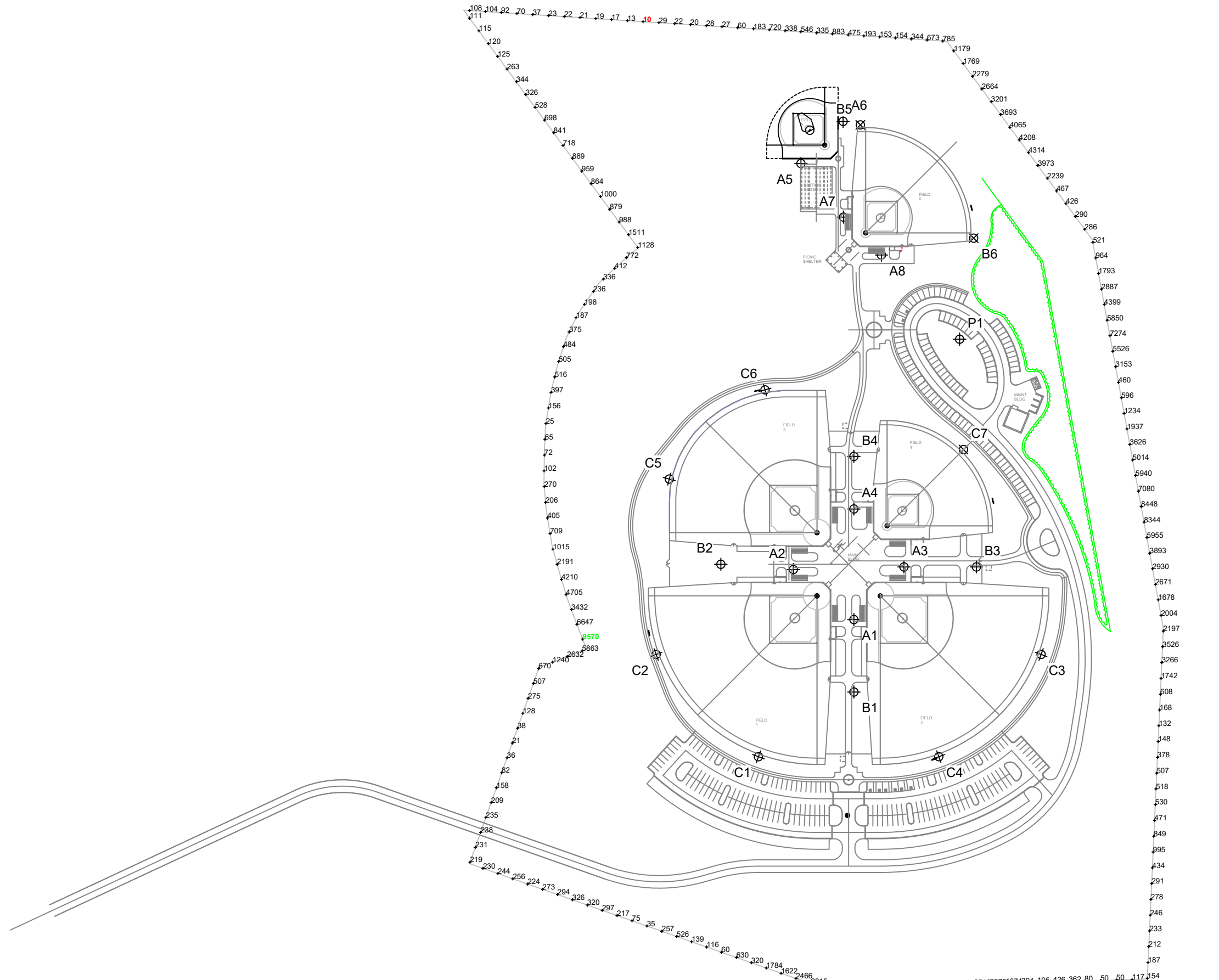
ILLUMINATION SUMMARY	
CANDELA (PER FIXTURE)	
Scan Average:	Entire Grid 1436.0925
Maximum:	9569.60
Minimum:	10.00
No. of Points:	201
LUMINAIRE INFORMATION	
Applied Circuits:	A, B, C, D, E, F, G
No. of Luminaires:	189
Total Load:	197.93 kW

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

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

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

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



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



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**EQUIPMENT LAYOUT**

**INCLUDES:**

- Field 1
- Field 2
- Field 3
- Field 4
- Field 5
- Field 6
- Security

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

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

**EQUIPMENT LIST FOR AREAS SHOWN**

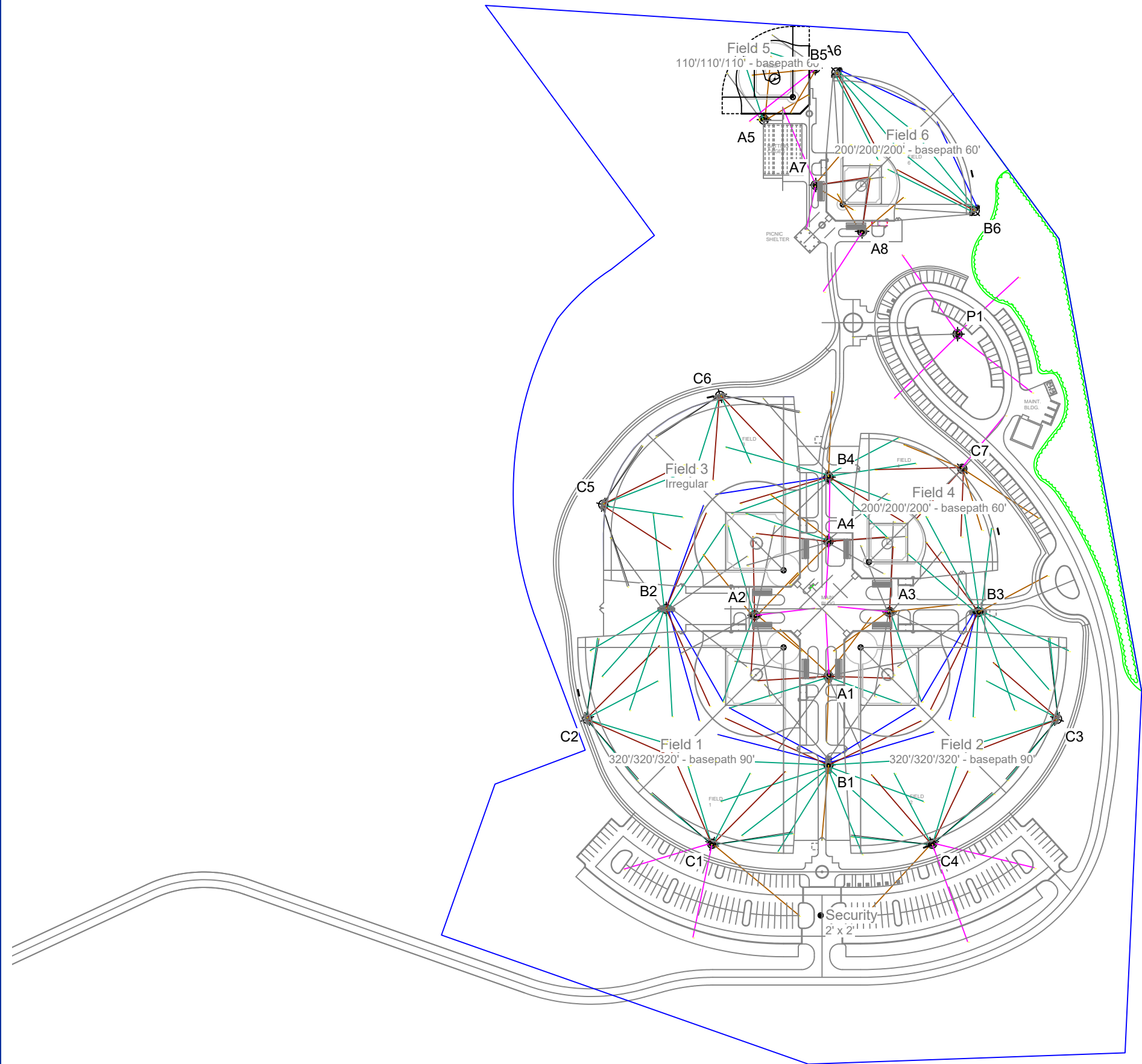
QTY	LOCATION	Pole		Luminaires		
		CLASS	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
1	A1	LSS80D	-	20'	TLC-BT-575	1/1*
				50'	TLC-LED-400	2
				80'	TLC-LED-1500	4/4*
1	A2	LSS80C	-	80'	TLC-LED-1200	4*
				20'	TLC-BT-575	1/1*
				50'	TLC-LED-400	1
				80'	TLC-LED-1500	4
1	A3	LSS80C	-	80'	TLC-LED-1200	3*
				20'	TLC-BT-575	1/1*
				50'	TLC-LED-400	2
				80'	TLC-LED-1500	4
1	A4	LSS80C	-	20'	TLC-BT-575	1/1*
				50'	TLC-LED-400	2
				80'	TLC-LED-1200	4/3*
1	A5	LSS50B	-	50'	TLC-LED-900	4
1	A6	LSS50C	-	40'	TLC-LED-400	1
1	A7	LSS60D	-	50'	TLC-LED-900	4
				60'	TLC-LED-1200	1
				60'	TLC-LED-400	2*
1	A8	LSS60B	-	20'	TLC-BT-575	1
				60'	TLC-LED-900	2
				60'	TLC-LED-1200	1
1	B1	LSS80D	-	22'	TLC-BT-575	1/1*
				50'	TLC-LED-400	1
				80'	TLC-LED-1500	7/7*
1	B2	LSS80D	-	22'	TLC-BT-575	1/1*
				80'	TLC-LED-1500	7/5*
				80'	TLC-LED-1200	4*
1	B3	LSS80D	-	22'	TLC-BT-575	1/1*
				50'	TLC-LED-400	1
				80'	TLC-LED-1500	7
				80'	TLC-LED-1200	4*
				80'	TLC-LED-1500	5
1	B4	LSS80C	-	80'	TLC-LED-1200	4*
				22'	TLC-BT-575	1/1*
				50'	TLC-LED-400	1
				80'	TLC-LED-1500	5
2	B5-B6	LSS70C	-	15.5'	TLC-BT-575	1
				70'	TLC-LED-1200	5
				70'	TLC-LED-600	3*
2	C1, C4	LSS70D	-	15.5'	TLC-BT-575	2
				70'	TLC-LED-1500	4
				70'	TLC-LED-1500	4
4	C2-C3 C5-C6	LSS70D	-	70'	TLC-LED-1500	4
				15.5'	TLC-BT-575	2
1	C7	LSS60B	-	60'	TLC-LED-600	2*
				15.5'	TLC-BT-575	3
				60'	TLC-LED-900	3
1	P1	LSS70C	-	70'	TLC-LED-600	3/2*
22	TOTALS					189

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

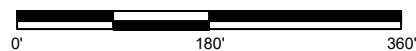
**SINGLE LUMINAIRE AMPERAGE DRAW CHART**

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)					
	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
TLC-LED-1500	8.5	8.7	8.1	5.7	4.7	3.7
TLC-LED-1200	7.0	6.6	6.1	4.2	4.0	3.0
TLC-LED-900	5.3	5.0	4.6	4.0	3.2	2.9
TLC-LED-600	3.6	3.2	2.9	2.0	1.9	1.5
TLC-LED-400	2.3	2.2	2.0	1.7	1.4	1.3
						1.5

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SCALE IN FEET 1 : 180



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

Barge Design Solutions, Inc.  
3535 Grandview Parkway, Suite 500  
Birmingham, AL 35243  
Attn: Mr. Kevin Kennoy / Mr. Lawren Pratt

May 13, 2021  
Project No: P21-0589

**Subject:** Geotechnical Services for the Southport Sports Complex Project in Southport, Bay County, Florida

Dear Mr. Kennoy & Mr. Pratt:

Southern Earth Sciences, Inc., has completed the geotechnical services for the proposed Southport Sports Complex Project in Bay County, Florida. Our services were performed in general accordance with SESI Proposal P19-1294.12, dated December 20, 2019. This report presents the results of our field and laboratory testing and includes recommendations with regard to the design and construction of the foundations and pavement, as well as soil and groundwater conditions for stormwater management areas for the Southport Sports Complex project.

#### **FIELD INVESTIGATIVE PROCEDURES:**

The culvert pipe crossing a drainage ditch along the site access trail was repaired in early 2022 and lane clearing was performed to gain access to test locations. Prior to our field testing, boring locations were staked and Sunshine State One Call of Florida was contacted to locate underground utilities within the area. On March 22, 23, April 1, 4, and 13, 2022 the field testing was performed for this project. For our geotechnical investigation, three cone penetrometer soundings were performed at the field house and pavilion locations. These were performed to a depth of 20 feet below existing ground surface. For the stormwater management, nine borings were performed to a depth of ten feet below existing ground surface. For the pavement and field areas, sixteen hand auger borings were performed to depths ranging from two to five feet below existing ground surface. The samples were placed in air tight containers and delivered back to our laboratory for classification and testing.

Our borings were located using a hand-held GPS as well as a 100-ft tape measuring from existing landmarks, therefore, the boring locations should be considered approximate. See attached Figure for our approximate test locations.

## LABORATORY TESTING PROCEDURES:

Laboratory investigative work consisted of physical examination of samples obtained during the soil boring operation. Soil samples were visually classified in the laboratory in accordance with the Unified Soil Classification System. Evaluation of these samples, in conjunction with penetration resistances, have been used to estimate soil characteristics.

**Natural Moisture Contents:** Twenty (20) samples were selected for the determination of their natural moisture content. In the laboratory, each sample was weighed, dried, and its moisture content computed in accordance with ASTM D-2216.

**Percent Passing 200 Mesh Sieve:** Seventeen (17) sample was selected to determine the percent of materials, by dry weight, finer than the U.S. No. 200 mesh sieve. This test was performed in accordance with ASTM D-1140.

**Organic Content:** Seven (7) samples were selected to determine their organic content. The samples were dried to constant moisture and placed in a muffle furnace to burn off organic matter. The loss in weight is the organic content in percent.

The laboratory test results are shown on the boring logs at the depth of the tested sample. Abbreviations for laboratory data are shown below.

NM = Natural Moisture Content (%)  
-200 = Percent finer than the U.S. No. 200 mesh sieve  
ORG = Organic Content in percent

## SITE AND SOIL CONDITIONS:

The Southport Sports Complex site is approximately 32.95 acres and has an access road on SR 77. The site is wooded with trees and dense underbrush. As mentioned previously there is an existing trail from SR 77 extending into the property, however, this is part of the adjacent parcel. There is a drainage ditch near the entrance to the site. The culvert crossing the drainage ditch was severely eroded, however, has since been repaired. Once the culvert crossing was repaired, site access was gained and lanes were cleared through the site for access to drilling equipment. Based upon the provided plan, there are wetlands on the western side of the site, on the eastern property boundary and the southern boundary near the drainage ditch. Based upon the provided topographic information the site ranges from approximately +32 to +38 Feet. Within the drainage ditch the property drops to +30 Feet. The logs of our borings are attached. The elevations of our test locations have been interpolated from the provided topographic information and should be considered approximate.

At some of our test locations, P-4, P-10, and SW-5, we encountered debris at these test locations consisting mostly of wood, brick, glass, and gravel. These were encountered typically within the top four (4) feet and were generally one foot thick, or less. Generally, these locations are along the southern side of the property, however, are a considerable distance from one another. No debris was encountered within the remaining test locations, however, may be present. Prior to any construction on the south side, we recommend excavating test pits to observe the subsurface conditions and determine the extent of the debris, particularly near any proposed structures.

The soils encountered within the depth of our borings were predominantly sands. Based upon the results of our borings, the sands varied in color and texture, which ranged from slightly silty to silty, slightly clayey to clayey, and clean sands. At one location, P-11, we encountered silts, silty sands, and clays beyond one foot. Typically, the sands within the top few feet are loose, the sands then become medium dense to an average depth of approximately 8 feet. The sands then become medium dense to dense throughout the remaining extent. Generally, near wetland/low areas we encountered varying amounts of organics and slightly silty to silty sands near the surface. Outside of the wetland/low areas we typically encounter slightly silty sands to clean sands with varying amounts of topsoil near the surface. The topsoil and roots typically were encountered within the top 6 to 12-inches of our borings.

On the date of our field testing (mentioned above), the groundwater level was measured at the depths shown on the attached logs, which ranged from 0.4 feet to 4.5 feet below existing ground surface. Fluctuations in the water table depths will occur due to changes in gradient, seasonal precipitation/evapotranspiration differences, and neighboring drainage/swale influences. We are currently below average annual rainfall. Therefore, it is highly recommended that the groundwater levels be verified prior to any excavations on the site.

#### **STRUCTURAL INFORMATION:**

The new park will consist of three baseball fields, three softball fields, covered batting cages, dugouts, a concession/restroom building, maintenance building, pavilion, as well as the associated parking and stormwater management. The concession/restroom building will be roughly 2500 square feet, the maintenance building will be roughly 1000 square feet. Finished floor elevation will likely be one to two feet above existing grade. The bottoms of footings will be near existing grade elevation. For shallow foundation evaluation we have assumed wall loads of less than three kips per lineal foot. For the fields and pavement areas, we anticipate roughly two to three feet of fill soils and minimal cutting in few areas. At this time stormwater management is in development, however, will likely be wet detention. Pond bottom is currently unknown.

**SHALLOW FOUNDATION RECOMMENDATIONS:  
Concession / Restroom Building & Maintenance Shed**

Our evaluation of foundation conditions has been based on structural information presented in this report and subsurface data obtained during our investigation. In evaluating cone soundings, we have used correlations that were previously made between penetration resistances and foundation stabilities observed in soil conditions similar to those encountered at your site.

Any organics, organic laden sands, organic soils, or deleterious materials should be removed prior to filling. Based upon the results of our field testing, the soils are generally loose within the top two feet. In order to gain a uniform compaction below the entire building footprints, prior to the placement of fill soils, we recommend compacting the existing soils to a depth of one foot below existing grade. Further detail of these recommendations follow.

If soft or yielding areas are encountered during construction, we should be contacted to observe the existing conditions. If the yielding conditions are due to shallow groundwater, appropriate means and methods should be incorporated to lower the groundwater to a moisture condition where the soils are workable. If the soft conditions are encountered with unsuitable soils, they should be over-excavated and replaced with dry, suitable fill soils as described below.

Any glass, wood, brick, debris or any other deleterious material encountered should be removed and replaced with suitable fill soils. Fill soil suitability is discussed below. The fill soils should be placed in thin, level lifts, not exceeding 12-inches and compacted each lift. As mentioned above, these materials were encountered at locations P-4, P-10 and SW-5. However, these materials may be encountered at shallower depths between these test locations. We recommend performing test pits across structural areas prior to construction.

Based upon the results of our field and laboratory testing, it is our opinion, with the proper compaction of the surficial sands as described above, the proposed concession building and maintenance shed may be supported on a conventionally designed shallow foundation system. We recommend footings be designed for an allowable soil contact pressure of 1500 psf, or less. Based upon the assumed structural information noted above, we have calculated settlements of less than one inch. We recommend continuous footings have a minimum width of 18-inches and a minimum embedment depth of 18-inches from the bottom of the footings to the outside finished grade.



Prior to foundation construction we anticipate the following site and soil preparations:

1. Clear and grub the surface soils within the building perimeter and extend at least five (5) feet beyond the building perimeter to remove all topsoil, organics laden sands, and other deleterious materials. Based upon the results of our borings, organic laden sands and organic soils may extend to a depth ranging from 6 to 12 inches below the existing ground surface.
2. At each building footprint, prior to the addition of fill soils, compact the existing soils until a density of 95% of the Modified Proctor (ASTM D-1557) maximum dry density is achieved to a depth of twelve (12) inches below existing grade. Moisture conditioning of the soils including the addition of water may be required to achieve optimum moisture conditions for compaction. At this time, there are no adjacent structures, however, it should be noted, we do not recommend vibratory compaction within 50 feet of existing structures. Vibratory compaction should not be performed within one to two feet of the groundwater level.
3. Fill/Backfill soils used to raise the building area to finished grade shall be sands to slightly silty sands containing no more than 12%, by dry weight, finer than the U.S. No. 200 mesh sieve. Fill should be placed in thin level lifts not to exceed twelve (12) inches, loose, and compacted to a density of 95% of the Modified Proctor maximum dry density throughout its full depth.
4. Once footings are excavated, compact the soils at the bottom of footings until a density of 95% of the Modified Proctor maximum dry density is achieved to a depth of twelve (12) inches below the bottom of footings.
5. Laboratory moisture-density relationships (Proctors) and in-place density tests should be performed to verify compliance with the foregoing compaction recommendations. We recommend one density test per 50 lineal feet of wall footing, one density test per isolated column footing, and one density test per 1500 square feet of existing soils and for each foot of fill soils.

#### **FLEXIBLE PAVEMENT RECOMMENDATIONS:**

Any organics, organic laden sands, organic soils, or deleterious materials should be removed prior to filling. Based upon the results of our field testing, the soils are generally loose within the top two feet. In order to gain a uniform compaction below the entire building footprints, prior to the placement of fill soils, we recommend compacting the existing soils to a

depth of one foot below existing grade. Further detail of these recommendations follow.

If soft or yielding areas are encountered during construction, we should be contacted to observe the existing conditions. If the yielding conditions are due to shallow groundwater, appropriate means and methods should be incorporated to lower the groundwater to a moisture condition where the soils are workable. If the soft conditions are encountered with unsuitable soils, they should be over-excavated and replaced with dry, suitable fill soils as described below.

Any glass, wood, brick, debris or any other deleterious material encountered should be removed and replaced with suitable fill soils. Fill soil suitability is discussed below. The fill soils should be placed in thin, level lifts, not exceeding 12-inches and compacted each lift. As mentioned above, these materials were encountered at locations P-4, P-10 and SW-5. However, these materials may be encountered at shallower depths between these test locations. We recommend performing test pits across structural areas prior to construction.

Based upon the existing conditions, we anticipate minor cutting and filling will be required to achieve final pavement grades. Pavement recommendations are based upon a 15-year life. It should be noted that pavement maintenance and rehabilitation, including an overlay, might be required within the life of the pavement. We have assumed automobiles and light trucks as the primary traffic for this pavement, however, construction traffic will likely be the heaviest volume of traffic. If this assumption is incorrect, we should be notified to provide revisions to our pavement recommendations.

Fill soils, shall be sands to slightly silty sands (non-plastic) containing no more than 12%, by dry weight, finer than the U.S. No. 200 mesh sieve and shall be free of organics, organic laden sands, rubble, clay balls, and other deleterious materials. Fill soils shall be placed in thin level lifts and compacted to a density of 95% of the Modified Proctor (AASHTO T-180) maximum dry density throughout its full depth.

**Subgrade Preparation:** Clear and grub the surface soils within the pavement perimeter, extending at least five (5) feet beyond the curblines, to remove all topsoil, organic laden sands, and other deleterious materials. Based upon these materials were encountered within 6 to 12 inches. However, these soils may extend to greater depths than our borings indicate.

Prior to the addition of fill soils or once the soils have been excavated to the bottom of the base, compact the existing soils until a density of 95% of the Modified Proctor (AASHTO T-180) maximum dry density to a depth of twelve (12) inches. Fill soils described above should be placed to achieve final pavement grades. If there are no adjacent

structures within 50 feet, a vibratory roller may be used. Again, we do not recommend vibratory compaction within one to two feet of the groundwater level. We also recommend that the top twelve (12) inches of subgrade soils be stabilized to achieve a Limerock Bearing Ratio of 40. Where shallow groundwater conditions are present, we do not recommend clay for stabilization.

**Base:** We recommend either a limerock or graded aggregate base with a minimum thickness of six (6) inches in light duty areas and eight (8) inches in heavy duty areas. Crushed concrete may be used if it meets the FDOT specifications requirements for a graded aggregate base. In areas where shallow groundwater conditions are present, a graded aggregate or crushed concrete base should be utilized rather than crushed limerock.

**Wearing Surface:** We recommend a SP-9.5 asphaltic concrete wearing surface having a minimum thickness of two (2) inches in light traffic areas and two and a half (2.5) inches in heavy traffic areas. We also recommend the asphalt be compacted to a minimum density of 92% of the laboratory maximum density ( $G_{mm}$ )

All materials and methods of placement shall be in accordance with applicable sections of the Florida Department of Transportation's "Standard Specifications for Road and Bridge Construction", (Latest Edition).

#### **Rigid (Concrete) Pavement:**

In areas where concrete pavement will be utilized, the subgrade soils should be prepped in the same manner as mentioned above for flexible pavement. We recommend either a limerock or graded aggregate base with a minimum thickness of 6-inches, in heavy duty areas. As mentioned above, crushed concrete may be used if it meets the FDOT specification requirements for graded aggregate. For the concrete pavement, we recommend 6-inches of concrete having a compressive strength of 4000 psi (700 flexural). Construction joints should be keyed or dowelled to provide shear transfer between slabs. Joint spacings should be placed no further than fifteen feet on centers.

#### **Gravel Pavement Areas:**

In areas where gravel pavement will be utilized, the subgrade soils should be prepared in the same manner as mentioned above for flexible pavement. Fill soils, if needed, should also meet the criteria mentioned above.

**Subgrade Preparation:** Clear and grub the surface soils within the gravel parking perimeter, extending at least five (5) feet beyond the curblines, to remove all topsoil, organic laden sands, and other deleterious materials. Based upon these materials were encountered within 6 to 12 inches. However, these soils may extend to greater depths than our borings indicate.

Prior to the addition of fill soils or once the soils have been excavated to the bottom of the base, compact the existing soils until a density of 95% of the Modified Proctor (AASHTO T-180) maximum dry density to a depth of twelve (12) inches. Fill soils described above should be placed to achieve final pavement grades. If there are no adjacent structures within 50 feet, a vibratory roller may be used. We also recommend that the top twelve (12) inches of subgrade soils be stabilized to achieve a Limerock Bearing Ratio of 40. Where shallow groundwater conditions are present, we do not recommend clay for stabilization. If the soils beneath the gravel base are not stabilized material, a filter fabric should be used to prevent the migration of rock into the subgrade sands.

**Gravel Base:** We recommend either a graded aggregate base or crushed concrete with a minimum thickness of six (6) inches in light duty areas and eight (8) inches in heavy duty areas. Crushed concrete should meet the FDOT specifications requirements for a graded aggregate base. We typically do not recommend using limerock for an open gravel pavement since the fines will erode over time and can also become moisture sensitive.

#### **FIELD TESTING FOR STORMWATER DESIGN:**

While the borings performed for this project are representative of soil conditions at its respective locations/depths and for their respective vertical reaches, local variations of the subsurface materials and seasonal high groundwater levels are anticipated. Soil descriptions and seasonal groundwater levels represent subsurface conditions at the designated locations.

It is our understanding there will be wet detention systems installed around the perimeter of the site. At this time, the size and depth of the ponds are in development. It should also be considered we are currently below average annual rainfall and current groundwater conditions are fairly close to normal groundwater levels.

At test locations SW-1 through SW-9, seasonal high groundwater levels were estimated by characteristics such as natural vegetation, soil color, soil mottles, and depth to root zone. At our test locations, the seasonal high groundwater level ranges from at/near existing ground surface to depths of approximately 1.5 feet ( $\pm 0.5$  feet) below the existing ground surface. See the individual boring logs attached. We anticipate normal groundwater levels to be within six to twelve inches below the measured groundwater levels. It may be advisable to have a

Professional Surveyor obtain the elevations of the test locations. During periods of above average rainfall, groundwater levels may rise above the seasonal high depths indicated above.

**TESTING:**

The effectiveness of the foundation will depend significantly on the proper preparation of the soils, as indicated previously. Therefore, we recommend the owner employ Southern Earth Sciences, Inc., as the testing laboratory to perform construction testing services. If we are not employed to provide construction testing services, Southern Earth Sciences, cannot accept any responsibility for any conditions, which deviate from those described in this geotechnical report. Southern Earth Sciences, should be invited to the pre-con meeting to discuss the project with all interested parties so that the project may be completed expeditiously and to the intent of our geotechnical report. We would be pleased to review the plans/specs as they relate to the soil preparation and provide a proposal for construction testing.

**GENERAL COMMENTS:**

Professional judgments on design criteria are presented in this letter. These are based partly on our evaluations of technical information provided, partly on our understanding of the characteristics of the project being planned, and partly on our general experience with subsurface conditions in the area. We do not guarantee performance of the project in any respect, only that our judgments meet the standard of care of our profession.

This information is exclusively for the use and benefit of the addressee(s) identified on the first page of this report and is not for the use or benefit of, nor may it be relied upon by any other person or entity. The contents of this letter may not be quoted in whole or in part or distributed to any person or entity other than the addressee(s) hereof without, in each case, the advance written consent of the undersigned.

This report has been prepared in order to aid in the evaluation of this property and to assist the architects and engineers in the foundation design. It is intended for use with regard to the specific project discussed herein, and any substantial changes in the buildings, loads, locations, or assumed (or reported) grades shall be brought to our attention immediately so that we may determine how such changes may effect our conclusions and recommendations. We would appreciate the opportunity to review the plans and specifications for the foundation and floor construction to verify that our conclusions and recommendations are interpreted correctly. Our report does not address environmental issues which may be associated with the subject property.

While the borings performed for this project are representative of subsurface soil conditions at their respective locations and for their respective vertical reaches, local variations of the subsurface materials are anticipated and may be encountered. The boring logs and related information are based on the driller's logs and visual examination of selected samples in the laboratory. Delineation between soil types shown on the boring logs is approximate, and soil descriptions represent our interpretation of subsurface conditions at the designated boring location on the particular date drilled.

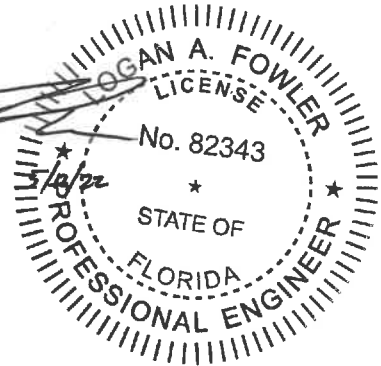
We appreciate the opportunity to assist you. If you have any questions or if we may be of further assistance, please call at your convenience.

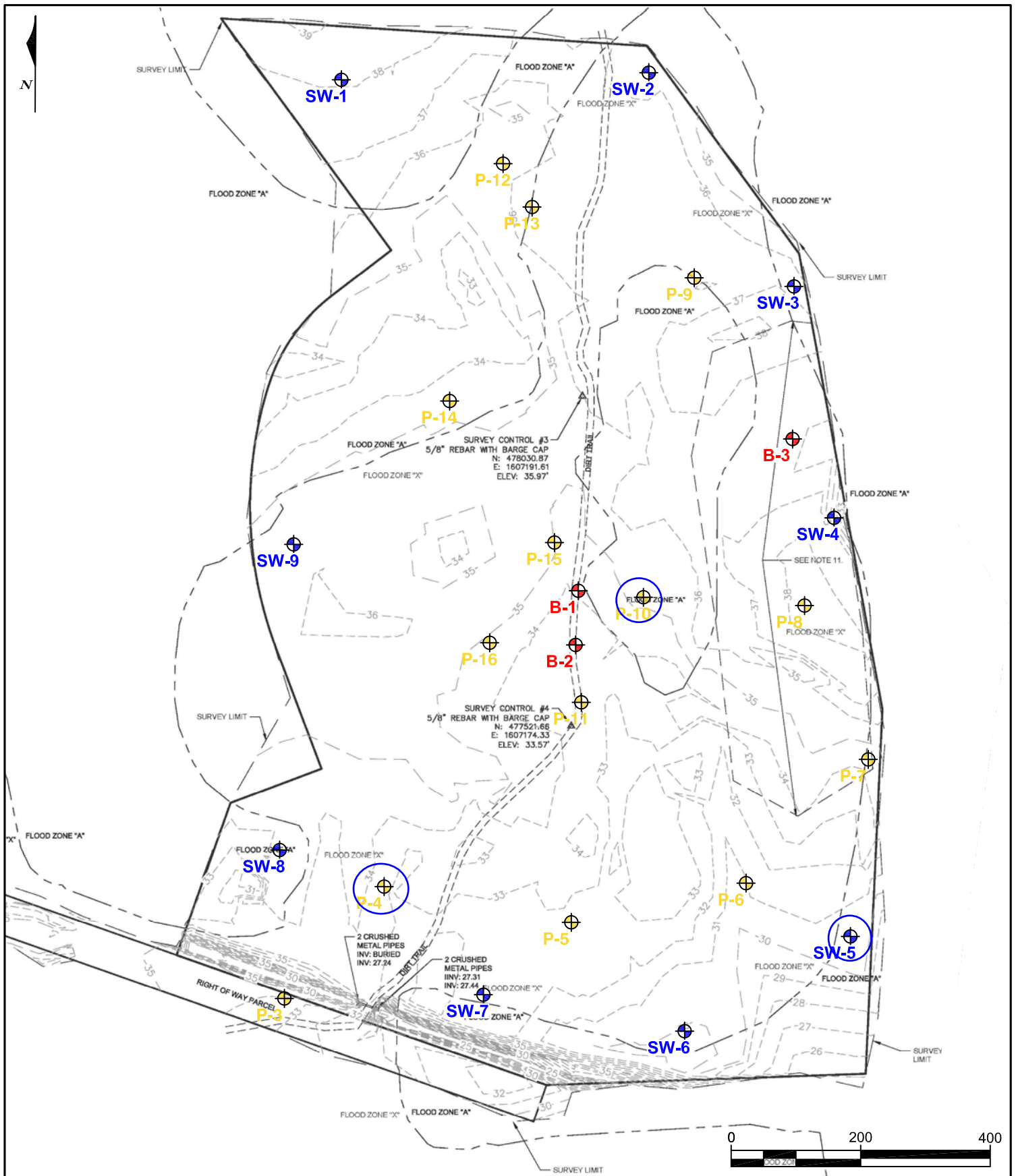
Sincerely,

**SOUTHERN EARTH SCIENCE, INC.**



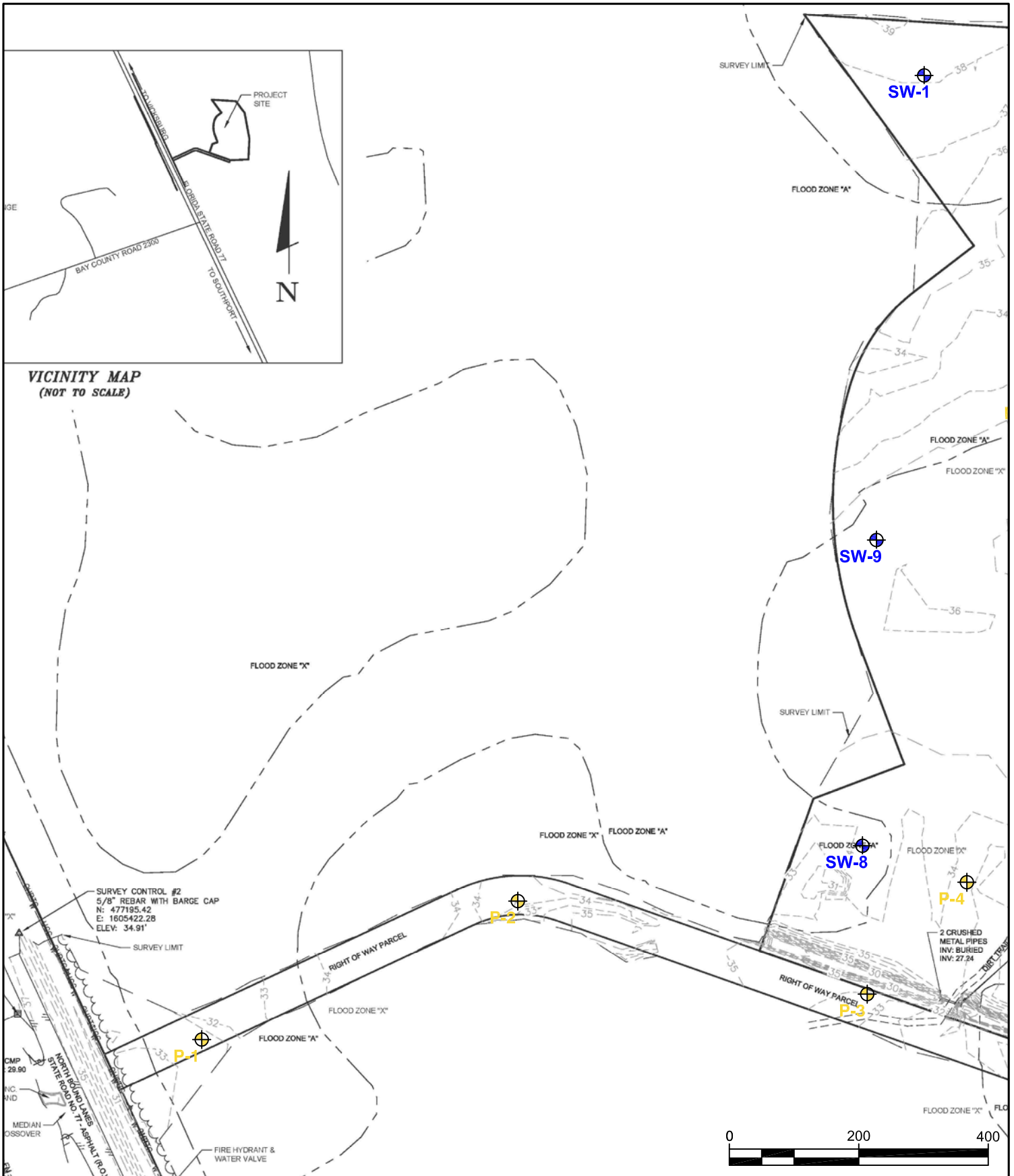
Logan A. Fowler, P.E.  
Eng. Reg. No. 82343  
State of Florida





SESI FILE NO: P21-0589		DRAWN BY: RB	FIGURE 1
		CHECKED BY: LF	
Southport Sports Complex Bay County, FL		DATE: 2/15/22	APPROXIMATE TEST LOCATIONS
		SCALE: 1:200	



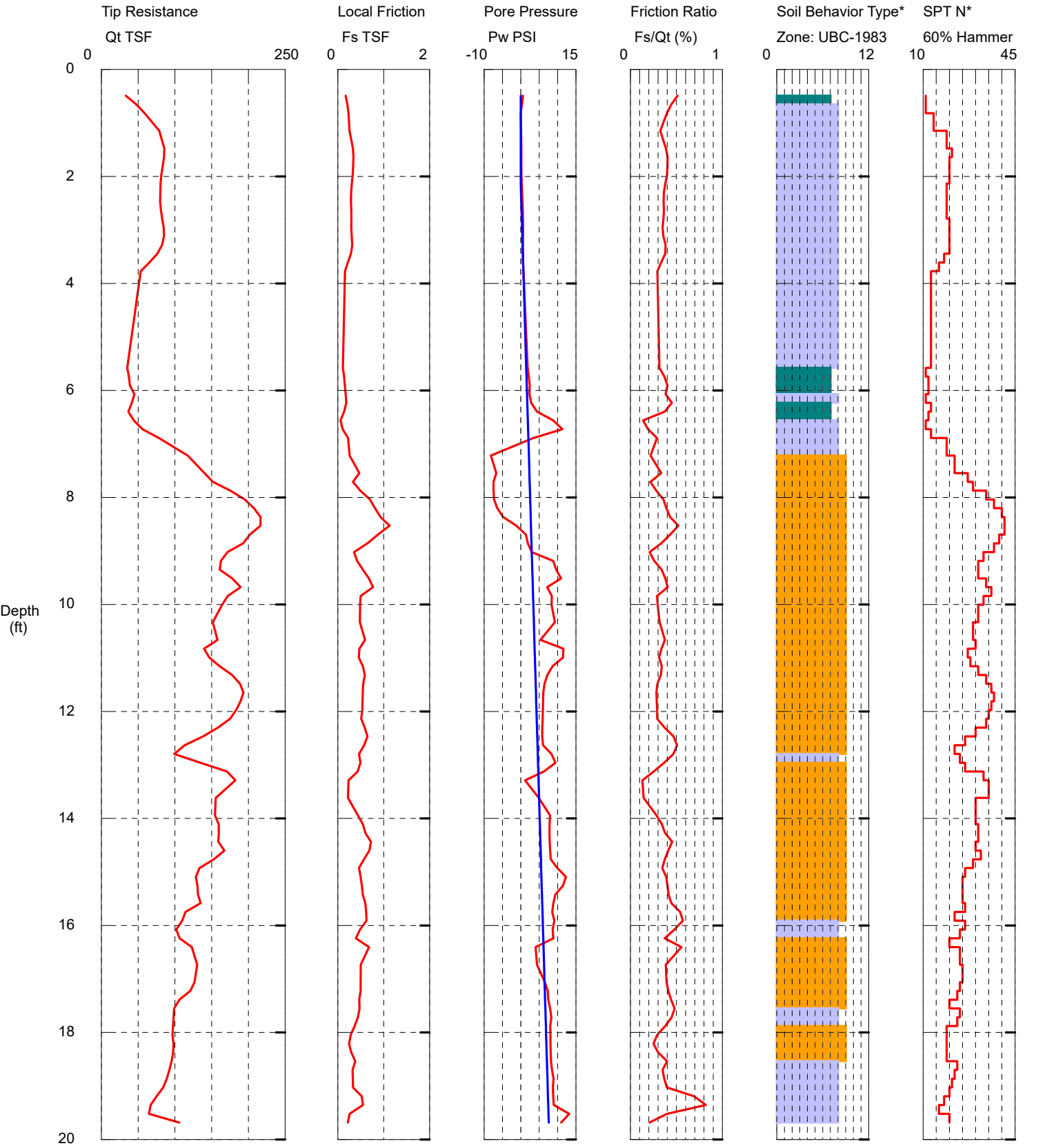


SESI FILE NO: P21-0589		DRAWN BY: RB	FIGURE 2
		CHECKED BY: LF	
Southport Sports Complex Bay County, FL		DATE: 2/15/22	APPROXIMATE TEST LOCATIONS
		SCALE: 1:200	

# SOUTHERN EARTH SCIENCES

Operator: DUSTIN THOMPSON  
 Sounding: CPT-B-1  
 Cone Used: DSG1034  
 Groundwater Depth: 2.1 ft

CPT Date/Time: 3/22/2022 1:24:03 PM  
 Location: Southport Sports Complex  
 Job Number: P21-0589  
 Elevation: +34 Ft (Approx)



Maximum Depth = 19.69 feet

Depth Increment = 0.164 feet

- 1 sensitive fine grained
- 2 organic material
- 3 clay

- 4 silty clay to clay
- 5 clayey silt to silty clay
- 6 sandy silt to clayey silt

- 7 silty sand to sandy silt
- 8 sand to silty sand
- 9 sand

- 10 gravelly sand to sand
- 11 very stiff fine grained (\*)
- 12 sand to clayey sand (\*)

Filter: 2002 Addendum 2

Auto Enhance On

VETTIN

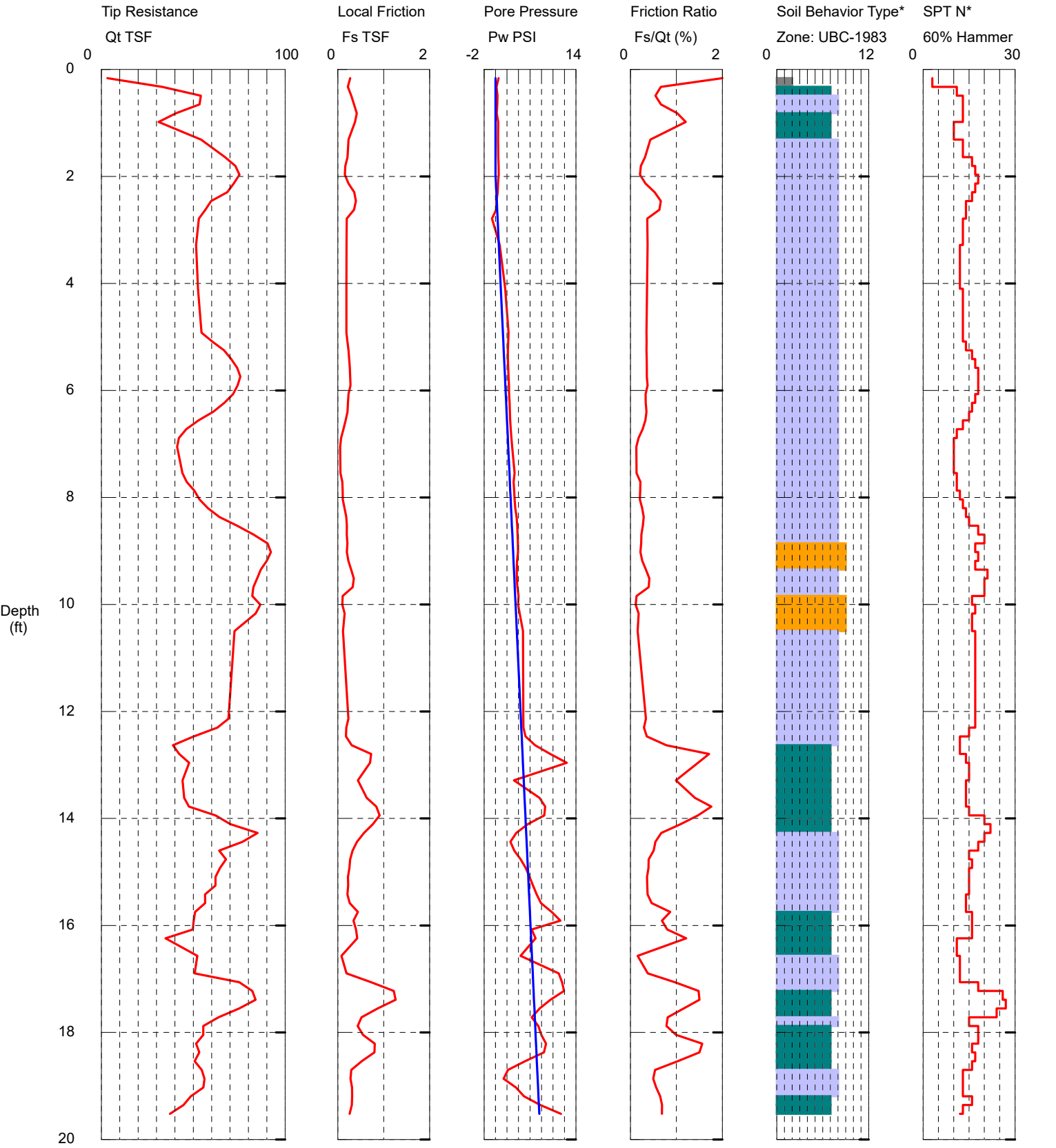
Page 58 of 91

\*Soil behavior type and SPT based on data from UBC-1983

# SOUTHERN EARTH SCIENCES

Operator: DUSTIN THOMPSON  
 Sounding: CPT-B-2  
 Cone Used: DSG1034  
 Groundwater Depth: 1.8 ft

CPT Date/Time: 3/22/2022 2:42:59 PM  
 Location: Southport Sports Complex  
 Job Number: P21-0589  
 Elevation: +34 Ft (Approx)



Maximum Depth = 19.52 feet

Depth Increment = 0.164 feet

- 1 sensitive fine grained
- 2 organic material
- 3 clay

- 4 silty clay to clay
- 5 clayey silt to silty clay
- 6 sandy silt to clayey silt

- 7 silty sand to sandy silt
- 8 sand to silty sand
- 9 sand

- 10 gravelly sand to sand
- 11 very stiff fine grained (\*)
- 12 sand to clayey sand (\*)

Filter: 2002 Addendum 2

Auto Enhance On

VETTIN

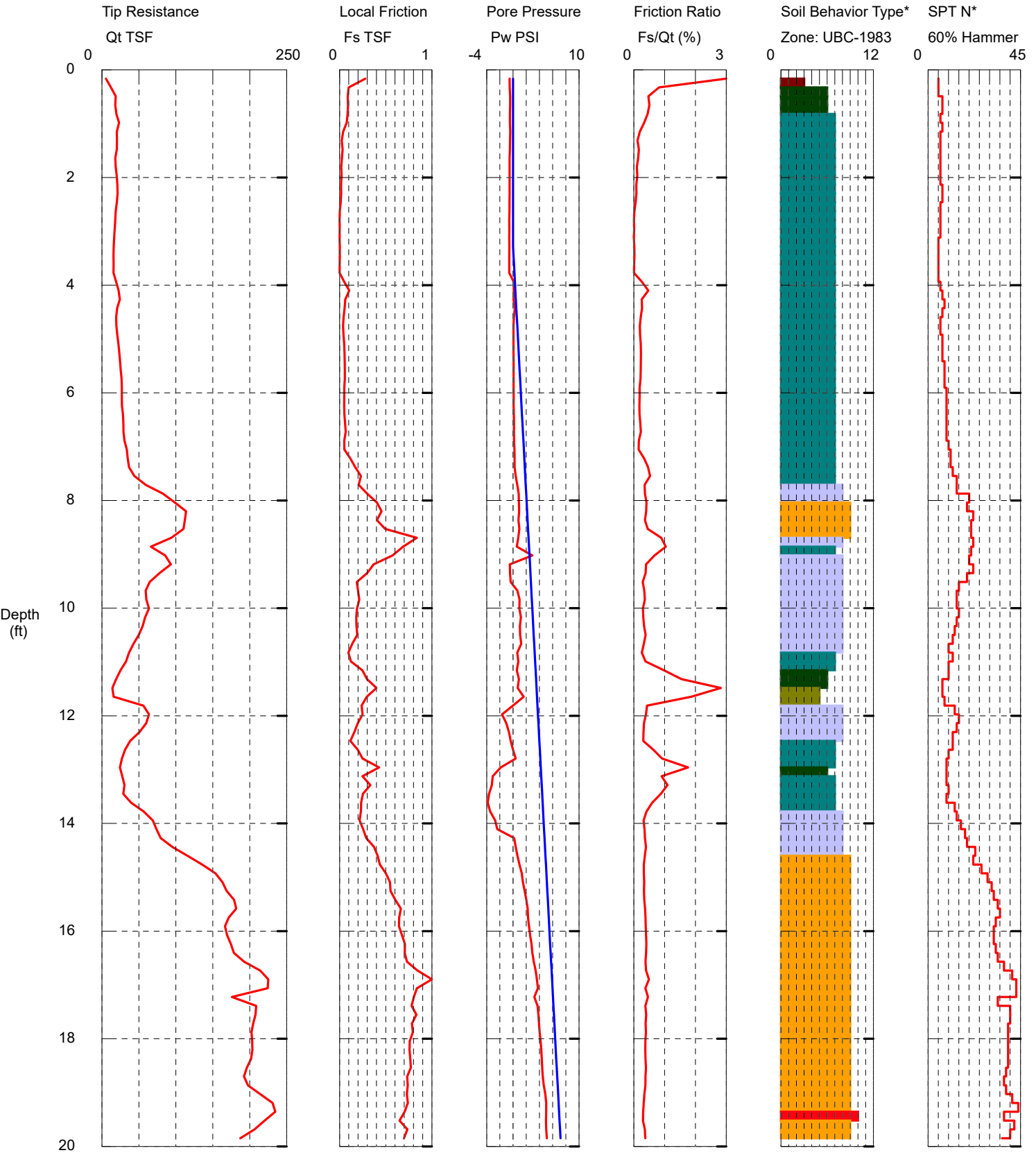
Page 59 of 91

\*Soil behavior type and SPT based on data from UBC-1983

# SOUTHERN EARTH SCIENCES

Operator: DUSTIN THOMPSON  
 Sounding: CPT-B-3  
 Cone Used: DSG1034  
 Groundwater Depth: 3.2 ft

CPT Date/Time: 3/22/2022 12:13:26 PM  
 Location: Southport Sports Complex  
 Job Number: P21-0589  
 Elevation: +36 Ft (Approx)



Maximum Depth = 20.18 feet

Depth Increment = 0.164 feet

- |                          |                             |                            |                                |
|--------------------------|-----------------------------|----------------------------|--------------------------------|
| 1 sensitive fine grained | 4 silty clay to clay        | 7 silty sand to sandy silt | 10 gravelly sand to sand       |
| 2 organic material       | 5 clayey silt to silty clay | 8 sand to silty sand       | 11 very stiff fine grained (*) |
| 3 clay                   | 6 sandy silt to clayey silt | 9 sand                     | 12 sand to clayey sand (*)     |

Filter: 20#02 Addendum 2

VETTIN

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\*Soil behavior type and SPT based on data from UBC-1983

# LOG OF BORING P-1

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +32 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL		LL	PL	PI	
32.0 0.0		SM	Dark Brown Silty Fine SAND	●	48				18
31.5 0.5									
31.0 1.0	▼								
30.5 1.5		SP-SM	Tan Slightly Silty Fine SAND						
30.0 2.0									
29.5 2.5									
29.0 3.0									

Water Level Est. Seasonal High GWL: Measured: Perched: **Notes:**  
 Water Observations: Groundwater Measured at 1.0 Feet -Elevation Should Be Considered Approximate  
 Below Existing Ground Surface

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)

Sample Key: SPT Shelby Tube

**SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

# LOG OF BORING P-2

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +34 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)	
			Per Plan					▲ N Value (blows/ft)	LIQUID LIMIT	PLASTIC LIMIT		PLASTICITY INDEX
			MATERIAL DESCRIPTION					Atterberg Limits Natural Moisture				
			20	40	60	80		PL	MC	LL		
34.0 0.0	[Soil Symbols]	SP-SM	Dark Brown Slightly Silty Fine SAND				●	9			11	
33.5 0.5												
33.0 1.0												
32.5 1.5												
32.0 2.0	[Soil Symbols]	SM	Dark Gray Silty Fine SAND				●	18		20		
31.5 2.5		SM	Gray Silty Fine SAND									
31.0 3.0		SP	Tan and Gray Fine SAND									
30.5 3.5	[Soil Symbols]	SP-SM	Brown Slightly Silty Fine SAND									
30.0 4.0												
29.5 4.5												
29.0 5.0												

Water Level Est. Seasonal High GWL: ▽ Measured: ▽ Perched: ▽ **Notes:**  
 Water Observations: Groundwater Measured at 3.5 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: [Symbol] SPT [Symbol] Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

# LOG OF BORING P-3

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
35.0 0.0		SP-SM	Brown and Gray Slightly Silty Fine SAND with Trace Organics	●	10				11
34.5 0.5		SP-SM	Gray Slightly Silty Fine SAND						
34.0 1.0		SP-SM	Light Brown and Gray Slightly Silty Fine SAND						
33.5 1.5		SP	Tan and Light Orange Fine SAND						
33.0 2.0		SP	Light Tan Fine SAND						
32.5 2.5									
32.0 3.0									
31.5 3.5	▼								
31.0 4.0									
30.5 4.5									
30.0 5.0									

Water Level Est. Seasonal High GWL: Measured: Perched: **Notes:**  
 Water Observations: Groundwater Measured at 3.4 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

# LOG OF BORING P-4

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +34 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)		
			Per Plan					▲ N Value (blows/ft)		LIQUID LIMIT		PLASTIC LIMIT	PLASTICITY INDEX
								20	40				
			MATERIAL DESCRIPTION					Atterberg Limits Natural Moisture		PL		MC	LL
			20	40	60	80							
34.0 0.0	[Symbol]	SP-SM	Brown Slightly Silty Fine SAND										
33.5 0.5	[Symbol]	SP	Tan Fine SAND										
33.0 1.0													
32.5 1.5	[Symbol]	SP	Tan, Light Gray and Light Orange Fine SAND										
32.0 2.0	[Symbol]	SP-SM	Tan and Gray Slightly Silty Fine SAND										
31.5 2.5													
31.0 3.0	[Symbol]	SP-SM	Gray Slightly Silty Fine SAND with Debris, Brick and Glass										
30.5 3.5													
30.0 4.0													
29.5 4.5													
29.0 5.0													

SHWT = 1.5' BG



Water Level Est. Seasonal High GWL: Measured: Perched: **Notes:**  
 Water Observations: Groundwater Measured at 2.0 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22



# LOG OF BORING P-5

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +33 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		Atterberg Limits Natural Moisture			
			MATERIAL DESCRIPTION	PL MC LL		LL	PL	PI	
33.0 0.0		SP-SM	Gray Slightly Silty Fine SAND	●	19				8
32.5 0.5		SP-SM	Brown Slightly Silty Fine SAND						
32.0 1.0		SP-SM	Tan and Brown Slightly Silty Fine SAND						
31.5 1.5									
31.0 2.0									
30.5 2.5									
30.0 3.0									

LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

Water Level Est. Seasonal High GWL: ▾ Measured: ▾ Perched: ▾ **Notes:**  
 Water Observations: Groundwater Measured at 1.0 Feet -Elevation Should Be Considered Approximate  
 Below Existing Ground Surface

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING P-6

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +31 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL					
31.0 0.0		SP-SM	Brown Slightly Silty Fine SAND						
30.5 0.5		SP-SM	Dark Brown Slightly Silty Fine SAND						
30.0 1.0		SP-SM	Brown Slightly Silty Fine SAND						
29.5 1.5									
29.0 2.0									
28.5 2.5									
28.0 3.0									
27.5 3.5									
27.0 4.0									

SHGW=1.7' BG



LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

Water Level Est. Seasonal High GWL: Measured: Perched: **Notes:**  
 Water Observations: Groundwater Measured at 2.2 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING P-7

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +34 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL		LL	PL	PI	
34 0	[Symbol]	SP-SM	Brown and Gray Slightly Silty Fine SAND						
	[Symbol]	SP	Tan and Light Brown Fine SAND with Trace Organics						
	[Symbol]	SP	Light Brown and Tan Fine SAND						
33 1									
32 2									
31 3	▼								
30 4	[Symbol]	SP	Tan and Light Tan Fine SAND						
	[Symbol]	SP	Tan and Gray Fine SAND						
29 5									
28 6									

SHGW=3.0 BG

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 3.5 Feet -Elevation Should Be Considered Approximate  
 Below Existing Ground Surface

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING P-8

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +38 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL		LL	PL	PI	
38 0		SP-SM	Brown Slightly Silty Fine SAND						
37 1		SP	Light Brown and Tan Fine SAND						
36 2									
35 3									
34 4		SP	Tan Fine SAND						
33 5									
32 6									

SHGW=4.0' B.G.



Water Level Est. Seasonal High GWL: Measured: Perched: **Notes:**  
 Water Observations: Groundwater Measured at 4.5 Feet -Elevation Should Be Considered Approximate  
 Below Existing Ground Surface

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

# LOG OF BORING P-9

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/04/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +36 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL		LL	PL	PI	
36 0	[Dashed Box]	SP-SM	Dark Brown Slightly Silty Fine SAND						
35 1	[Dashed Box]	SP-SM	Brown, Gray and Tan Slightly Silty Fine SAND	●	16				11
34 2	[Dashed Box]								
33 3	[Dashed Box]								
32 4	[Dashed Box]								
31 5	[Dashed Box]								
30 6	[Dashed Box]								

Water Level Est. Seasonal High GWL: ▾ Measured: ▾ Perched: ▾ **Notes:**  
 Water Observations: Groundwater Measured at 3.7 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

# LOG OF BORING P-10

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL		LL	PL	PI	
35.0 0.0		SP-SM	Brown Slightly Silty Medium to Fine SAND	●	12				11
34.5 0.5									
34.0 1.0									
33.5 1.5									
33.0 2.0	▼								
32.5 2.5		SM	Dark Brown Silty Fine SAND with Debris, Wood and Glass						
32.0 3.0									
31.5 3.5									
31.0 4.0									

SHWL = 1.6'  
DEPTH

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 2.1 Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

# LOG OF BORING P-11

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +33 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL		LL	PL	PI	
33 0	[Symbol]	SM	Gray Silty Fine SAND with Trace Organics (ORG=2.2%)	●	17				22
32 1	[Symbol]	ML	Dark Gray Sandy SILT	●	25				59
31 2	[Symbol]	CL	Tan and Light Gray Sandy CLAY	●	13				57
30 3	[Symbol]								
29 4	[Symbol]	CL	Tan and Gray Sandy CLAY	●	16				61
28 5	[Symbol]								
27 6	[Symbol]								

Water Level Est. Seasonal High GWL: [Symbol] Measured: [Symbol] Perched: [Symbol] **Notes:**  
 Water Observations: Groundwater Measured at 1.3 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: [Symbol] SPT [Symbol] Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

# LOG OF BORING P-12

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/04/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)	
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX		
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture						
				PL MC LL		LL	PL	PI		
35.0 0.0		SM	Dark Brown Silty Fine SAND with Organics (ORG=5.6%)	●	34					
34.5 0.5										
34.0 1.0										
33.5 1.5										

ASSUME SHGWL  
AT SURFACE

LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

Water Level Est. Seasonal High GWL: ▾ Measured: ▾ Perched: ▾ **Notes:**  
 Water Observations: Groundwater Measured at 0.3 Feet -Elevation Should Be Considered Approximate  
 Below Existing Ground Surface

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**



# LOG OF BORING P-13

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/04/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +36 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		Atterberg Limits Natural Moisture			
			MATERIAL DESCRIPTION	PL MC LL		20 40 60 80	LL	PL	
36.0 0.0	[Symbol]	SP-SM	Brown Slightly Silty Fine SAND						
35.5 0.5	[Symbol]	SP	Tan and Brown Fine SAND						
35.0 1.0	[Symbol]	SP	Tan Fine SAND						
34.5 1.5	[Symbol]	SP	Tan Fine SAND						
34.0 2.0	[Symbol]	SP	Tan Fine SAND						
33.5 2.5	[Symbol]	SP	Tan Fine SAND						
33.0 3.0	[Symbol]	SP	Tan Fine SAND						
32.5 3.5	[Symbol]	SP	Tan Fine SAND						
32.0 4.0	[Symbol]	SP	Tan Fine SAND						

ASSUM SHGWL= 1.0 BG



LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▽ Perched: ▽ **Notes:**  
 Water Observations: Groundwater Measured at 1.5 Feet -Elevation Should Be Considered Approximate  
 Below Existing Ground Surface

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: [Symbol] SPT [Symbol] Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING P-14

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/13/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
35.0 0.0		SM	Dark Gray Silty Fine SAND with Organics (ORG=5.1%)	●	31				
34.5 0.5			SP-SM	Gray Slightly Silty Fine SAND	●	20			10
34.0 1.0		SP-SC	Light Brown Slightly Clayey Fine SAND						
33.5 1.5									
33.0 2.0									
32.5 2.5									

SHGW=0.7 BG



Water Level Est. Seasonal High GWL: Measured: Perched: **Notes:**  
 Water Observations: Groundwater Measured at 1.2 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)

Sample Key: SPT Shelby Tube

**SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

# LOG OF BORING P-15

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/04/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)				
			Per Plan						20	40	60		80	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
			MATERIAL DESCRIPTION						Atterberg Limits Natural Moisture							
			PL	MC	LL				LL	PL	PI					
35.0 — 0.0	[Dashed Box]	SP-SM	Brown and Gray Slightly Silty Fine SAND				●	9				9				
34.5 — 0.5	[Dotted Box]	SP	Tan and Gray Fine SAND													
34.0 — 1.0																
33.5 — 1.5																
33.0 — 2.0	▼	SP	Tan Fine SAND													
32.5 — 2.5		SP	Tan and Orange Fine SAND													
32.0 — 3.0																
31.5 — 3.5																
31.0 — 4.0																
30.5 — 4.5																
30.0 — 5.0																

SH GW = 1.7' DEPTH

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 2.2 Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING P-16

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 04/01/22

**METHOD:** Hand Auger  
**DRILLER:** PC/MB  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
35.0 0.0	[Symbol]	SP-SM	Brown and Gray Slightly Silty Fine SAND	●	9				8
34.5 0.5									
34.0 1.0									
33.5 1.5		SP	Tan Medium to Fine SAND						
33.0 2.0	▼								
32.5 2.5		SP	Light Tan Fine SAND						
32.0 3.0									
31.5 3.5									
31.0 4.0									

Water Level Est. Seasonal High GWL: [Symbol] Measured: [Symbol] Perched: [Symbol] **Notes:**  
 Water Observations: Groundwater Measured at 2.0 Feet Below Existing Ground Surface -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: [Symbol] SPT [Symbol] Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

LOG OF BORING P21-0589.GPJ SES PC FL GDT 5/3/22

# LOG OF BORING SW-1

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL 20 MC 60 LL 80					
35 0		SP-SM	Gray Slightly Silty Fine SAND with Trace Organics						
34 1	▽ ▼								
33 2		SP	Tan and Light Orange Fine SAND						
32 3		SP	Light Gray Fine SAND						
31 4			No Recovery						
30 5		SP-SM	Gray and Dark Gray Slightly Silty Fine SAND with Trace Organics						
29 6		SP	Gray Fine SAND						
29 6		PT	Dark Brown Peaty Fine SAND (ORG=6.6%)	●	40				
28 7		SC	Gray and Dark Gray Clayey Fine SAND with Some Organics						
27 8									
26 9									
25 10									

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 1.7 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater 1.3 (+/-0.5) Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING SW-2

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +36 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
				PL MC LL		LL	PL	PI	
36 0	▽	SP-SM	Gray Slightly Silty Fine SAND with Trace Organics						
35 1	▽	SP	Gray Fine SAND						
	▽	SM	Brown and Gray Silty Fine SAND						
	▽	SM	Brown Silty Fine SAND						
34 2	▽	SP	Tan and Light Brown Fine SAND						
	▽	SP	Light Tan and Light Gray Fine SAND						
33 3									
32 4									
31 5									
30 6									
29 7									
28 8									
27 9									
26 10									

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▽ Perched: ▽ **Notes:**  
 Water Observations: Groundwater Measured at 1.8 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater 1.2 (+/-0.5) Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING SW-3

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +36 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTEBERG LIMITS (%)			PASSING #200 SIEVE (%)				
			Per Plan						20	40	60		80	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
			MATERIAL DESCRIPTION						Atterberg Limits Natural Moisture							
			PL	MC	LL				LL	PL	PI					
36 0		SP-SM	Brown and Gray Slightly Silty Fine SAND with Organics													
35 1		SP-SM	Light Brown, Tan and Gray Slightly Silty Fine SAND													
34 2		SP	Gray and Tan Fine SAND													
33 3		SP	Light Tan, Gray and Orange Fine SAND													
32 4		SP	Light Orange and Tan Fine SAND													
31 5		SP	Tan Fine SAND													
30 6		SP	Light Brown and Gray Fine SAND													
29 7		SP-SC	Gray Slightly Clayey Medium to Fine SAND													
28 8		SP-SC														
27 9		SP-SC														
26 10		SP-SC														

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: Measured: Perched: **Notes:**  
 Water Observations: Groundwater Measured at 2.0 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater 1.3 (+/-0.5) Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING SW-4

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +36 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)				
			Per Plan						20	40	60		80	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
			MATERIAL DESCRIPTION						Atterberg Limits Natural Moisture				PL			
36 0		SP-SM	Brown and Gray Slightly Silty Fine SAND with Organics													
35 1		SM	Dark Gray Silty Fine SAND with Organics													
34 2		SP-SM	Light Brown and Tan Slightly Silty Fine SAND													
34 2		SP-SM	Gray Slightly Silty Fine SAND													
33 3		SP	Tan Fine SAND													
32 4																
31 5		SP	Tan and Light Tan Fine SAND													
30 6		SP-SC	Tan Slightly Clayey Medium to Fine SAND													
29 7		SC	Light Brown, Tan and Gray Clayey Medium to Fine SAND				●	15				17				
28 8																
27 9																
26 10																

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: Measured: Perched:

Water Observations: Groundwater Measured at 2.0 Feet Below Existing Ground Surface

**Notes:**  
 -Estimated Seasonal High Groundwater 1.5 (+/-0.5) Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: SPT Shelby Tube

**SOUTHERN EARTH SCIENCES, inc.**



# LOG OF BORING SW-5

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +30 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)				
			Per Plan						20	40	60		80	LIQUID LIMIT LL	PLASTIC LIMIT PL	PLASTICITY INDEX PI
			MATERIAL DESCRIPTION						Atterberg Limits Natural Moisture							
						PL	MC	LL								
30 0		SP-SM	Brown and Gray Slightly Silty Fine SAND with Trace Organics													
29 1		SM	Brown Silty Fine SAND with Organics													
28 2	▽	SP-SC	Brown and Light Brown Slightly Clayey Fine SAND													
27 3	▼	SM	Clay Seam at 26" Brown Silty Fine SAND with Debris, Wood and Glass													
26 4		SM	Gray and Light Gray Silty Fine SAND with Mica and Trace Organics													
25 5		SM	Gray and Light Gray Silty Fine SAND with Mica													
24 6		SM	Gray and Light Gray Silty Fine SAND with Mica and Clay Seams				●	22				40				
23 7		SM	Gray Silty Fine SAND with Mica													
22 8		SP-SM	Gray Slightly Silty Medium to Fine SAND with Trace Clay Balls													
21 9																
20 10																

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 2.0 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater 1.5 (+/-0.5) Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING SW-6

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +30 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTEBERG LIMITS (%)			PASSING #200 SIEVE (%)				
			Per Plan						20	40	60		80	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
			MATERIAL DESCRIPTION						Atterberg Limits Natural Moisture							
			PL	MC	LL				LL	PL	PI					
30 0		SP-SM	Brown and Gray Slightly Silty Fine SAND with Organics													
29 1	▽															
28 2	▼	SP-SM	Brown, Gray and Tan Slightly Silty Fine SAND													
			Debris at 2'													
27 3			No Recovery													
26 4																
25 5			Wood													
24 6		SP-SC	Light Brown Slightly Clayey Medium to Fine SAND													
23 7		SP-SC	Light Brown and Brown Slightly Clayey Medium to Fine SAND													
22 8		SP	Gray and Light Gray Medium to Fine SAND													
21 9																
20 10																

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 1.8 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater 1.3 (+/-0.5) Feet Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING SW-7

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +31 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION				▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)				
			Per Plan						20	40	60		80	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX
			MATERIAL DESCRIPTION						Atterberg Limits Natural Moisture							
			PL	MC	LL				LL	PL	PI					
31 0	▽ ▼	SP-SM	Brown Slightly Silty Fine SAND with Trace Organics													
30 1		SP	Tan and Light Brown Fine SAND													
29 2		SP	Light Tan Fine SAND													
29 2		SP	Tan and Orange Fine SAND													
28 3		SP-SM	Gray and Brown Slightly Silty Fine SAND													
28 3		SM	Gray and Dark Gray Silty Fine SAND													
27 4			No Recovery													
26 5		SC	Dark Brown Clayey Fine SAND with Organics													
25 6		SP-SC	Light Brown Slightly Clayey Fine SAND with Dark Brown Clayey Fine SAND Layers													
24 7		SP-SC	Light Brown Slightly Clayey Medium to Fine SAND													
23 8		SC	Brown Clayey Medium to Fine SAND													
22 9																
21 10																

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 0.6 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater 0.2 Feet (+/- 0.5 Feet) Below Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING SW-8

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +33 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION		▲ N Value (blows/ft)				NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan		20	40	60	80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION		Atterberg Limits Natural Moisture								
33 0	▽												
32 1	▽	SP-SM	Brown and Gray Slightly Silty Fine SAND with Organics										
31 2		SP-SC	Gray and Light Brown Slightly Clayey Medium to Fine SAND										
30 3		SP	Tan and Light Gray Medium to Fine SAND										
29 4		SP	Light Tan and Orange Medium to Fine SAND										
28 5		SP-SC	Gray Medium to Fine SAND Brown Clayey Medium to Fine SAND						19			15	
27 6		SP-SC	Light Brown and Gray Slightly Clayey Medium to Fine SAND										
26 7													
25 8		PT SP-SC	Dark Gray Peaty Fine SAND Light Brown and Gray Slightly Clayey Medium to Fine SAND										
24 9													
23 10													

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▼ **Notes:**  
 Water Observations: Groundwater Measured at 0.4 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater At/Near Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT ▣ Shelby Tube **SOUTHERN EARTH SCIENCES, inc.**

# LOG OF BORING SW-9

**PROJECT:** Southport Sports Complex  
**LOCATION:** Bay County, FL  
**PROJECT NO.:** P21-0589  
**DATE:** 03/23/22

**METHOD:** Direct Push  
**DRILLER:** DT  
**ENGR / GEOL:** LF  
**SURFACE ELEVATION:** +35 ft

Elevation / Depth	Soil Symbols Sampler Symbols and Field Test Data	USCS	LOCATION	▲ N Value (blows/ft)	NATURAL MOISTURE (%)	ATTERBERG LIMITS (%)			PASSING #200 SIEVE (%)
			Per Plan	20 40 60 80		LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
			MATERIAL DESCRIPTION	Atterberg Limits Natural Moisture					
35 0	▽			PL      MC      LL 20      40      60      80		LL	PL	PI	
	▼	SP-SM	Brown and Gray Slightly Silty Fine SAND with Organics						
34 1		SP	Light Brown and Tan Fine SAND						
33 2		SP	Light Tan and Orange Fine SAND						
32 3		SP	Tan and Orange Fine SAND						
31 4		SP	Tan Fine SAND						
30 5									
29 6		SP-SC	Gray and Light Brown Slightly Clayey Medium to Fine SAND						
		SP-SC	Light Brown Slightly Clayey Medium to Fine SAND						
28 7		SP-SC	Brown and Gray Slightly Clayey Medium to Fine SAND						
27 8									
26 9									
25 10									

LOG OF BORING P21-0589.GPJ SES PC FL.GDT 5/3/22

Water Level Est. Seasonal High GWL: ▽ Measured: ▼ Perched: ▽ **Notes:**  
 Water Observations: Groundwater Measured at 0.5 Feet Below Existing Ground Surface  
 -Estimated Seasonal High Groundwater At/Near Existing Ground Surface  
 -Elevation Should Be Considered Approximate

N - SPT Data (Blows/Ft) P - Pocket Penetrometer (tsf)  
 Sample Key: ▣ SPT    ▣ Shelby Tube    **SOUTHERN EARTH SCIENCES, inc.**

# Important Information About Your Geotechnical Engineering Report

*Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.*

*The following information is provided to help you manage your risks.*

## Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply the report for any purpose or project except the one originally contemplated.*

## Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

## A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,

- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

## Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

## Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

## A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's recommendations if that engineer does not perform construction observation.*

## A Geotechnical Engineering Report Is Subject to Misinterpretation

Other design team members' misinterpretation of geotechnical engineering reports has resulted in costly problems. Lower that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Contractors can also misinterpret a geotechnical engineering report. Reduce that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing construction observation.

## Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

## Give Contractors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make contractors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give contractors the complete geotechnical engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise contractors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure contractors have sufficient time* to perform additional study. Only then might you be in a position to give contractors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

## Read Responsibility Provisions Closely

Some clients, design professionals, and contractors do not recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that

have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations" many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

## Geoenvironmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform a *geoenvironmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical engineering report does not usually relate any geoenvironmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own geoenvironmental information, ask your geotechnical consultant for risk management guidance. *Do not rely on an environmental report prepared for someone else.*

## Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, a number of mold prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention. Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.*

## Rely on Your ASFE-Member Geotechnical Engineer for Additional Assistance

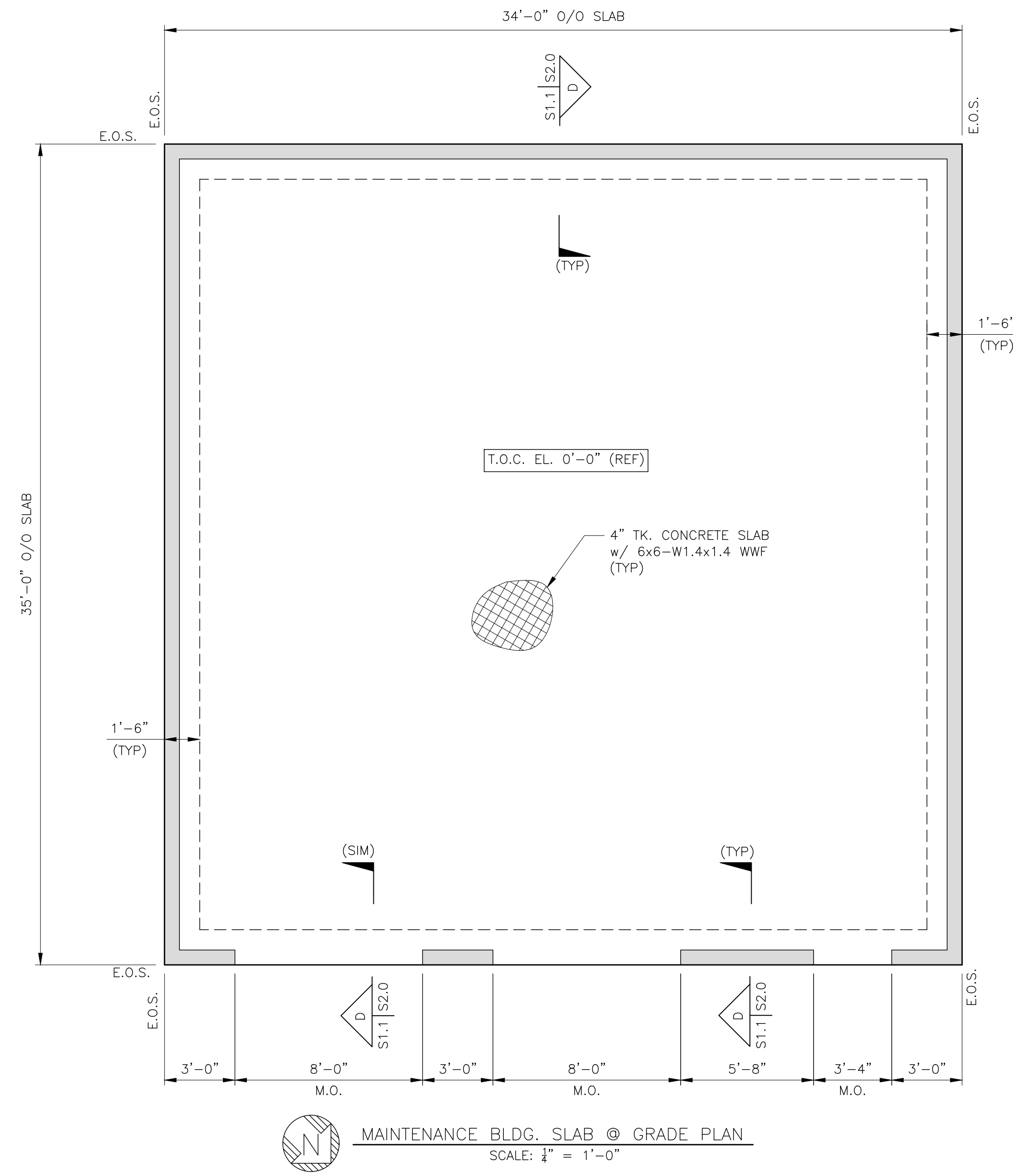
Membership in ASFE/The Best People on Earth exposes geotechnical engineers to a wide array of risk management techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your ASFE-member geotechnical engineer for more information.



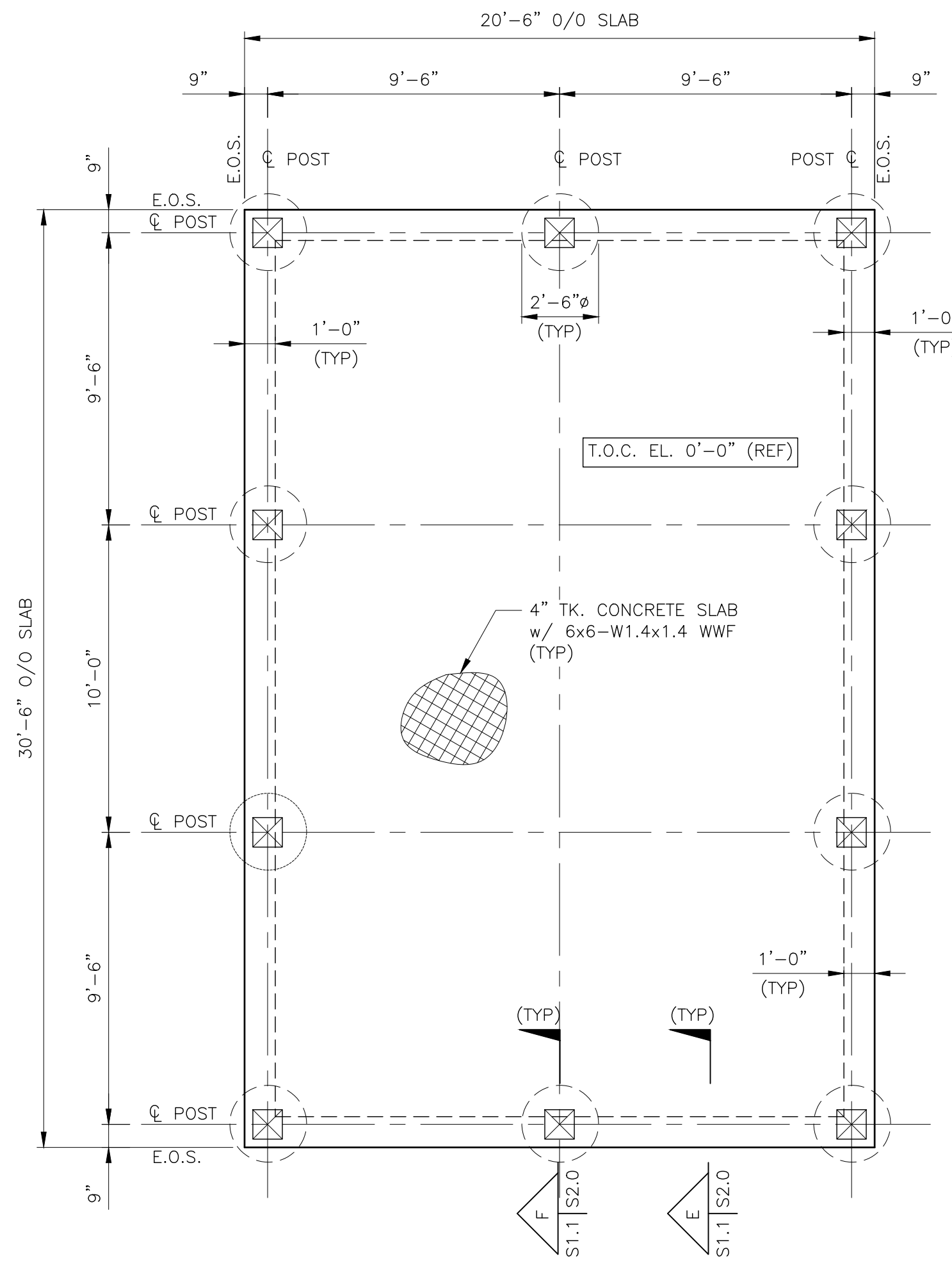
8811 Colesville Road/Suite G106, Silver Spring, MD 20910  
Telephone: 301/565-2733 Facsimile: 301/589-2017  
e-mail: [info@asfe.org](mailto:info@asfe.org) [www.asfe.org](http://www.asfe.org)

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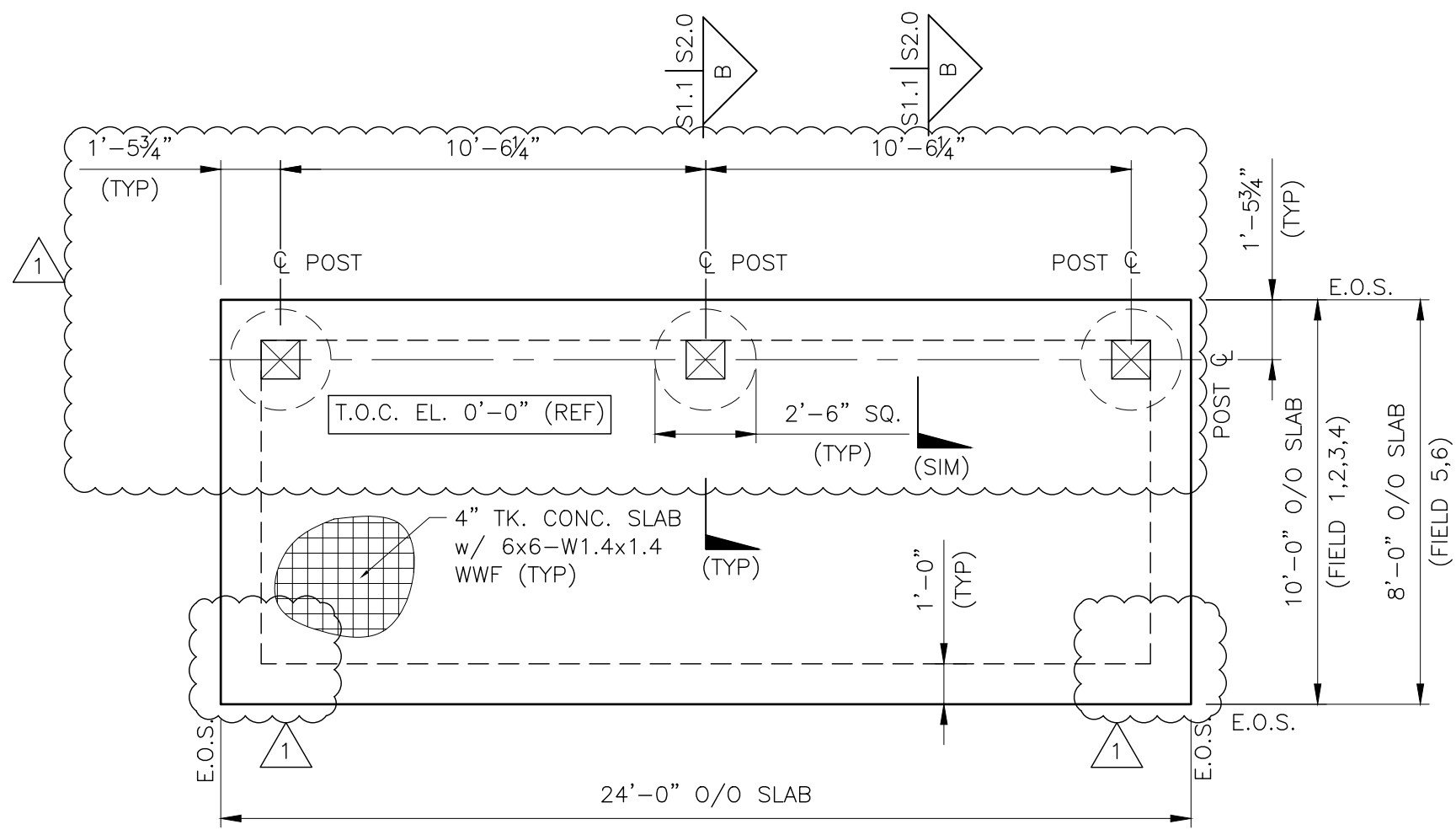
**MAINTENANCE BLDG. SLAB @ GRADE PLAN**  
 SCALE: 1/4" = 1'-0"



**PAVILION SLAB @ GRADE PLAN**  
 SCALE: 1/4" = 1'-0"

**LEGEND**

- = 8" CMU w/ #5 @ 32" c.c.
- = P.T. 12x12 POST
- = EDGE OF SLAB

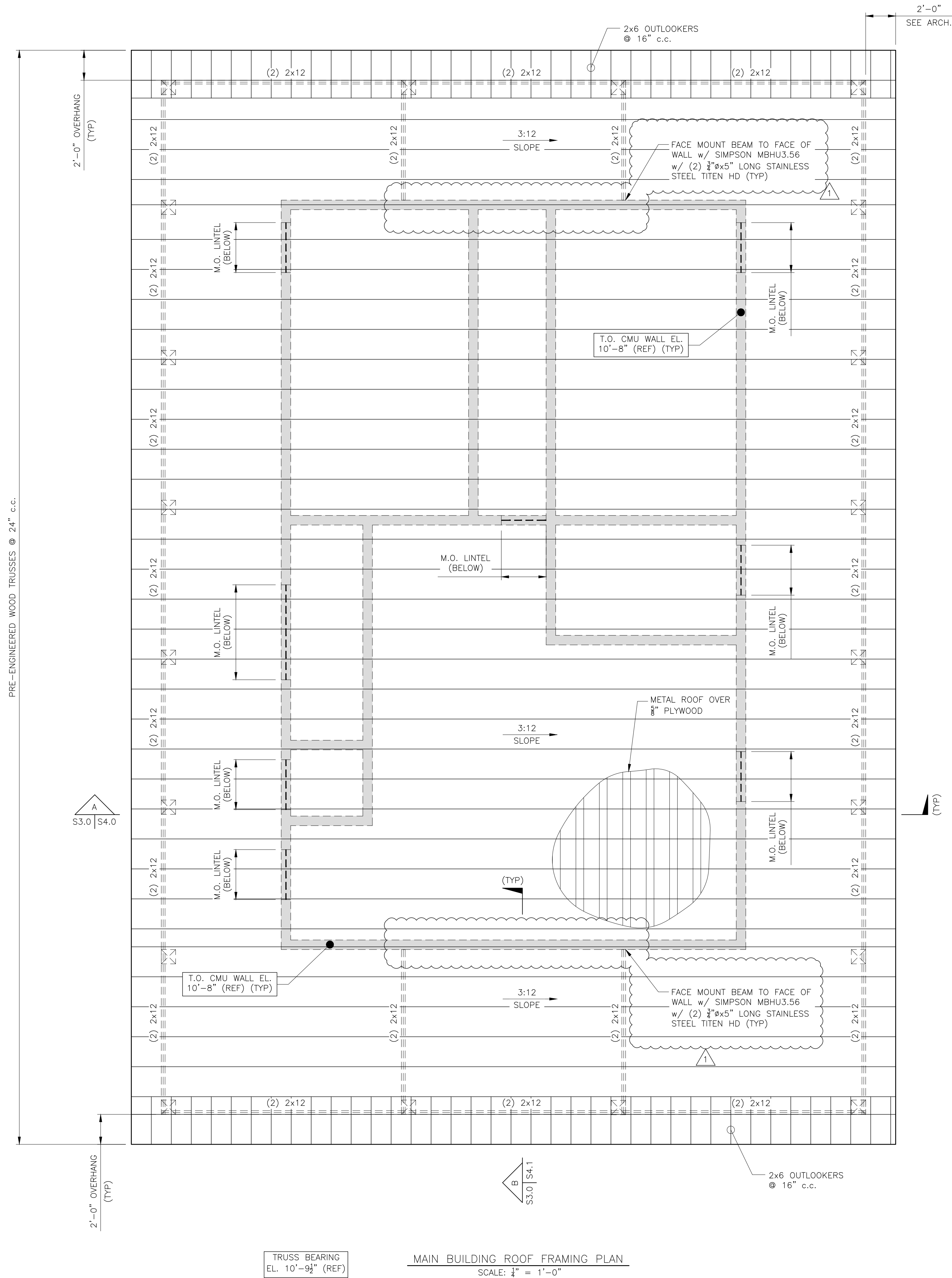


**TYPICAL DUGOUT SLAB @ GRADE PLAN**  
 SCALE: 1/4" = 1'-0"

REV.	DR.	CHK.	DATE	DESCRIPTION
0	WS	WS	7/11/2024	ISSUED FOR PERMIT
1	WS	WS	10/15/2024	REVISED POST SIZE FOR DUGOUT

**811** Know what's below  
 Call before you dig.  
 811  
 www.call811.com





TRUSS BEARING  
 EL. 10'-9 1/2" (REF)

MAIN BUILDING ROOF FRAMING PLAN  
 SCALE: 1/4" = 1'-0"

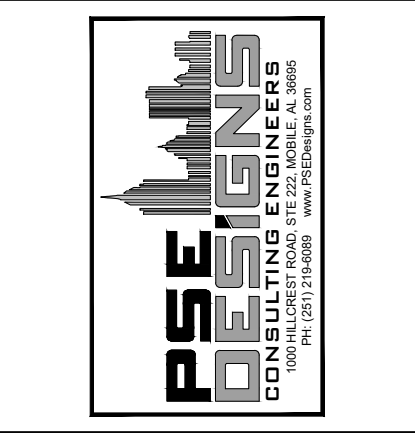
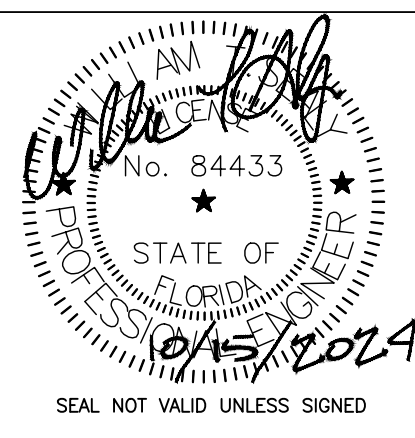
LEGEND

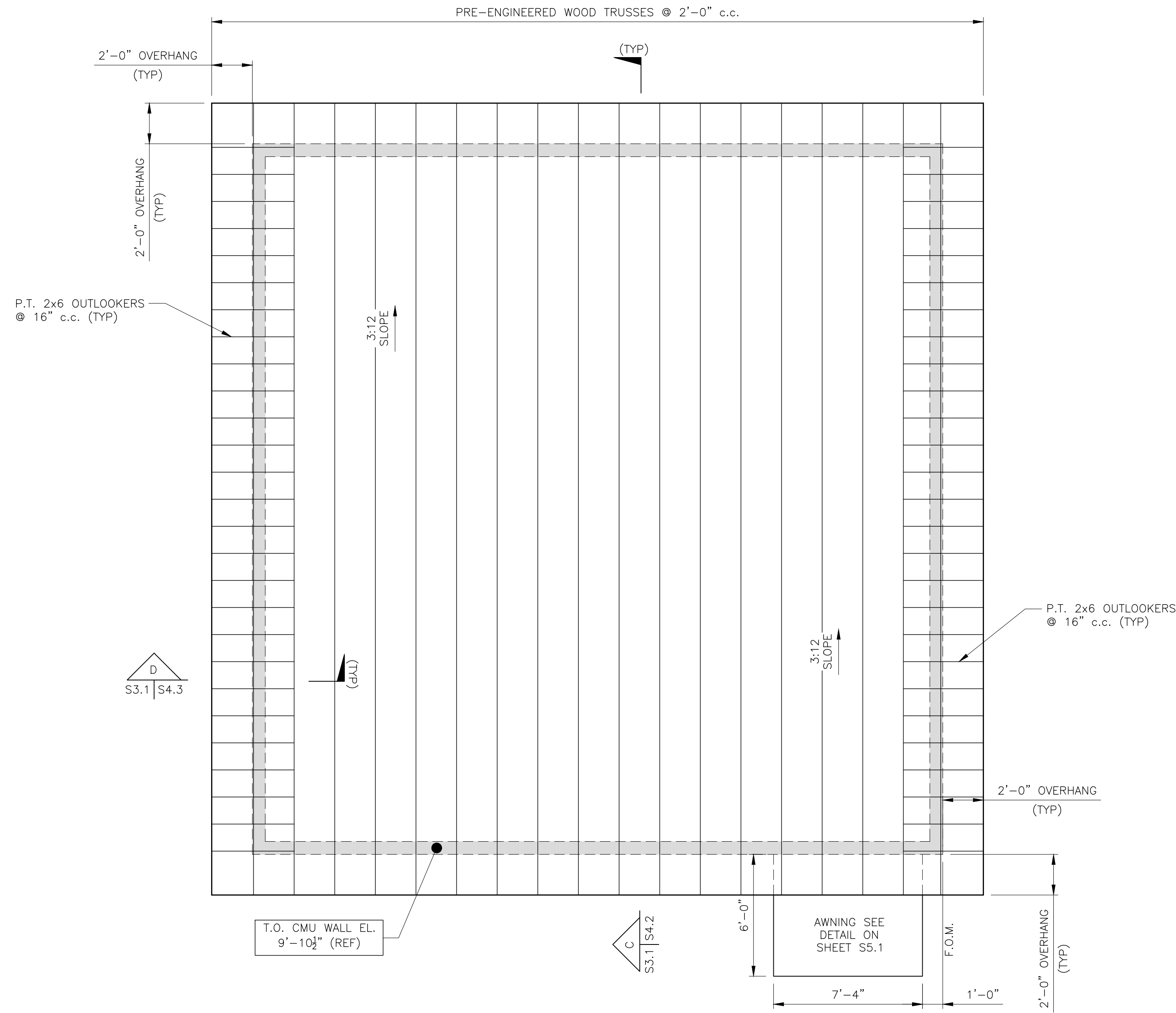
	= 8" CMU w/ #5 @ 32" c.c.
	= P.T. 12x12 POST

**811** Know what's below  
 Call before you dig.  
 811  
 www.call811.com

REV.	DR.	CHK.	DATE	DESCRIPTION
0	WS	WS	7/17/2022	ISSUED FOR PERMIT
1	WS	WS	10/15/2024	REVISED BEAM CONNECTION

MAIN BLDG. ROOF FRAMING PLAN  
 SITE IMPROVEMENTS FOR  
 SOUTHPORT SPORTS COMPLEX  
 SOUTHPORT, FL



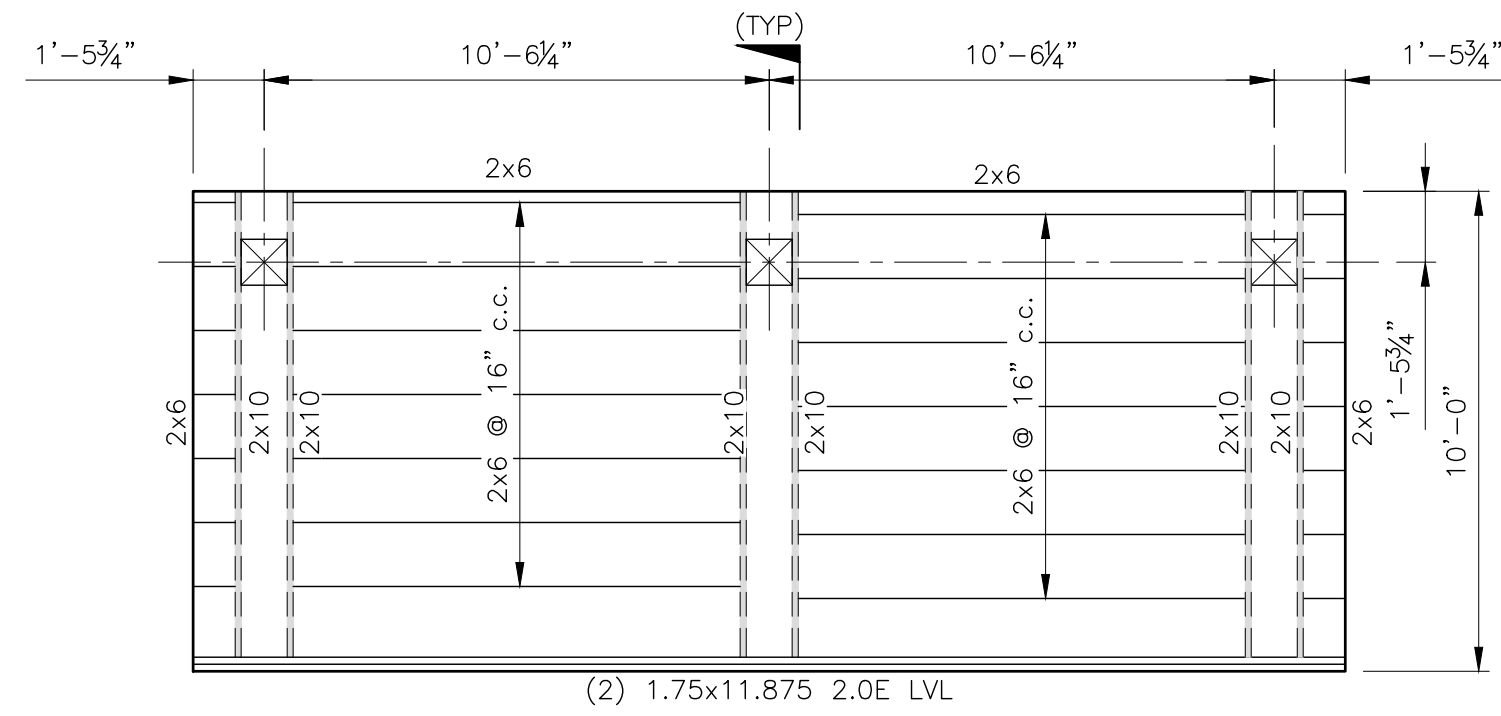


**MAINTENANCE BLDG. ROOF FRAMING PLAN**  
 SCALE: 1/4" = 1'-0"

**LEGEND**

[Hatched Box] = 8" CMU w/ #5 @ 32" c.c.

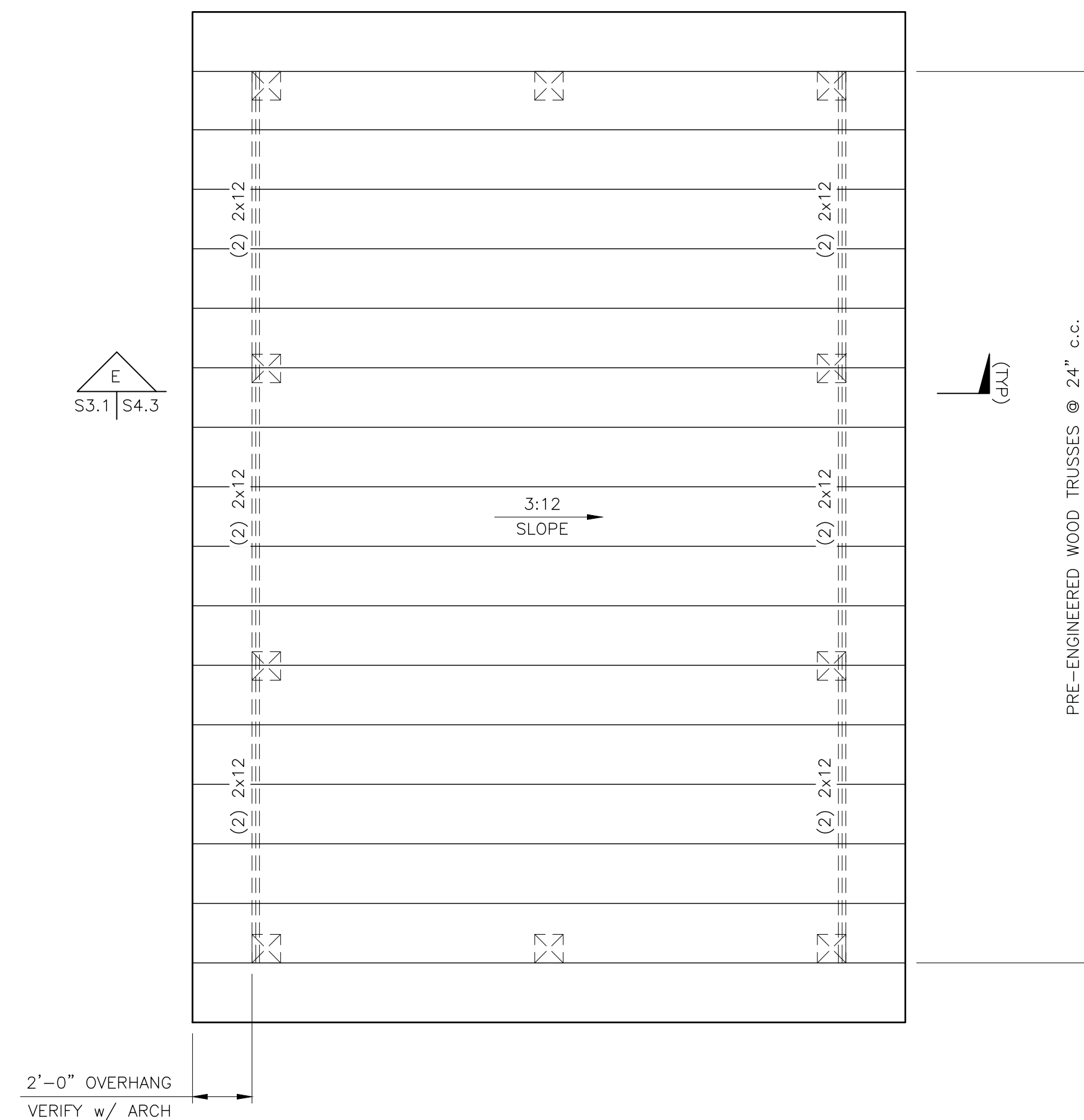
[Box with X] = P.T. 12x12 POST



**TYPICAL DUGOUT ROOF FRAMING PLAN**  
 SCALE: 1/4" = 1'-0"

**LEGEND**

[Box with X] = P.T. 12x12 POST

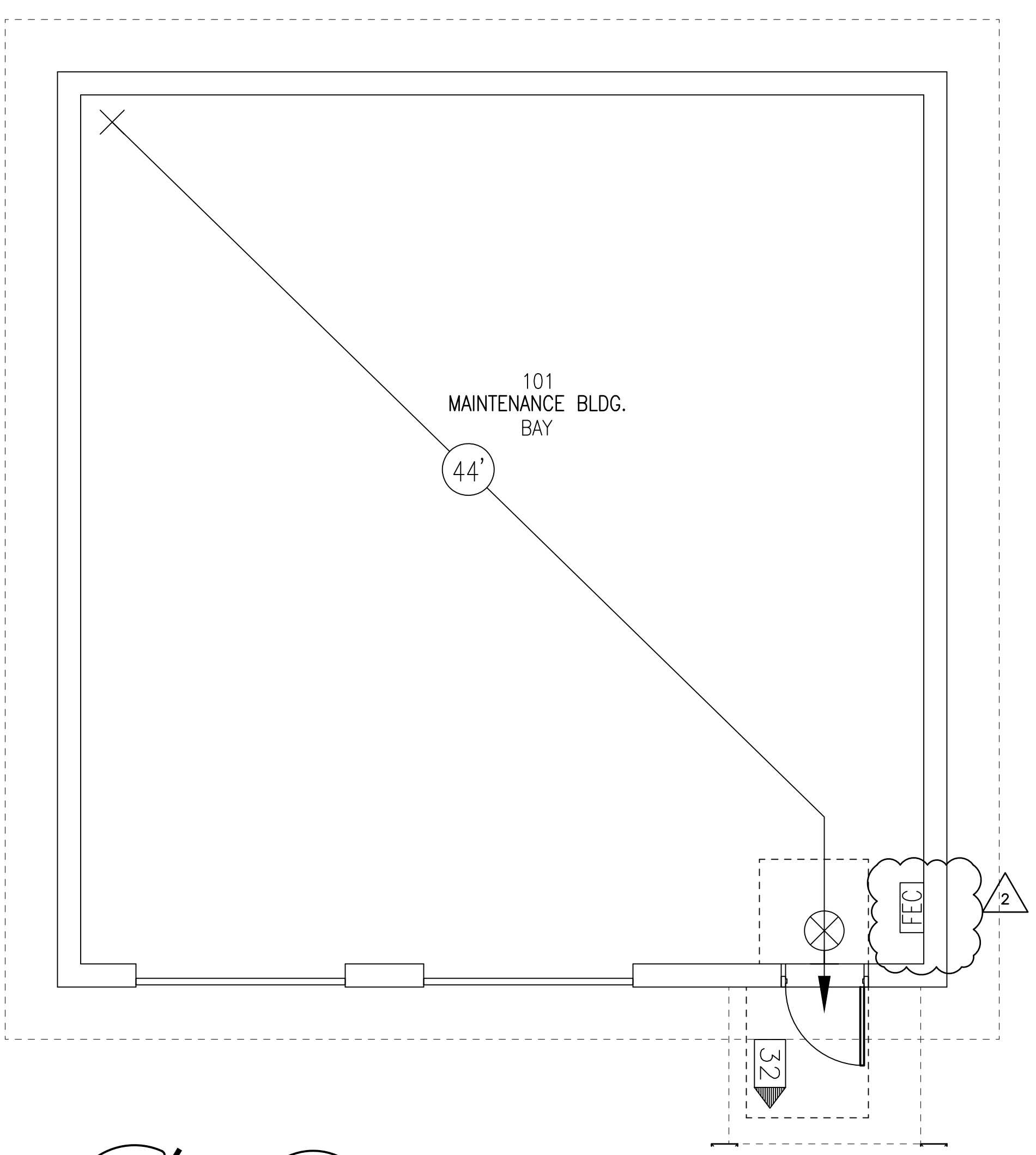
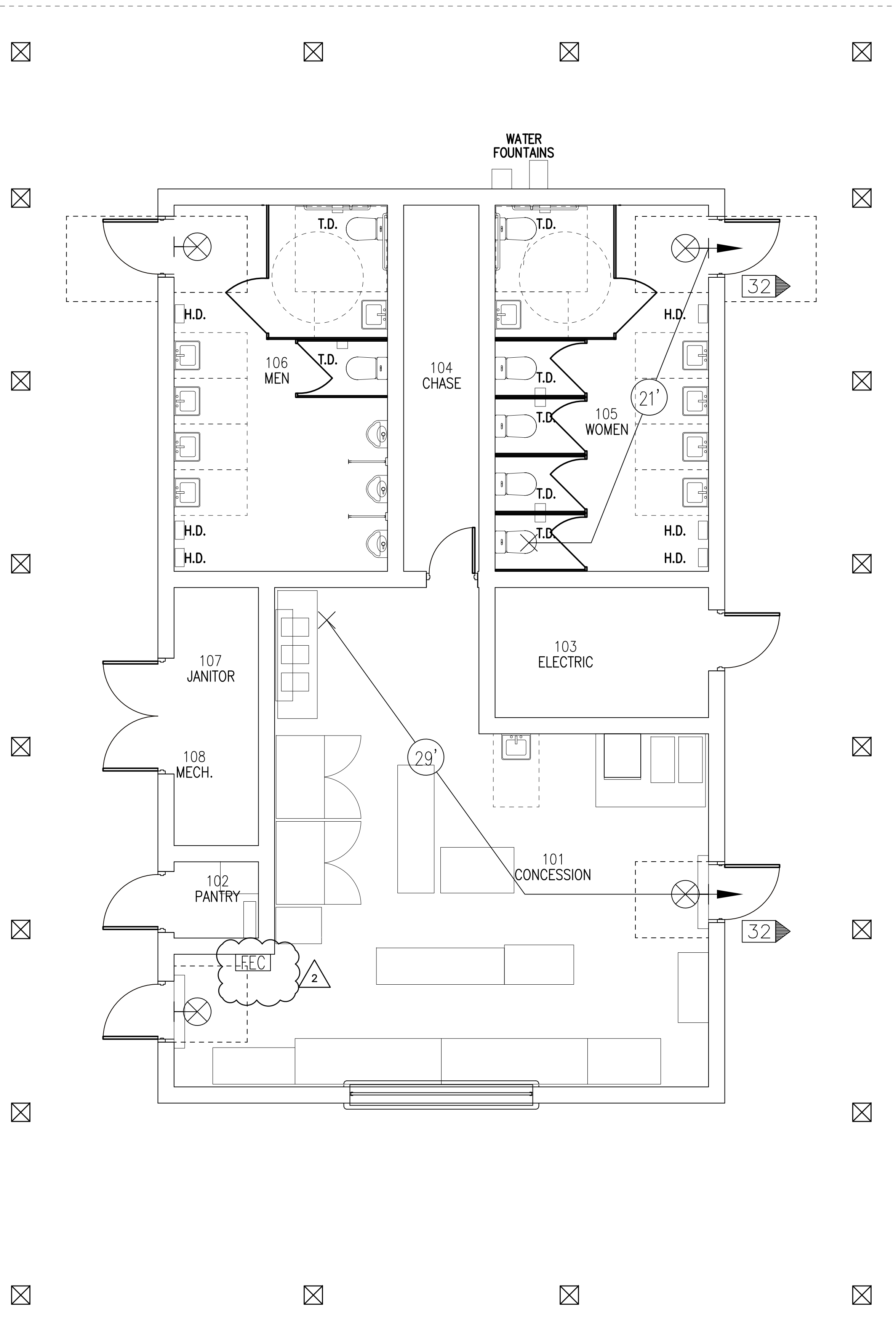


**PAVILION ROOF FRAMING PLAN**  
 SCALE: 1/4" = 1'-0"

**LEGEND**

[Box with X] = P.T. 12x12 POST

REV.	OR	CHK.	DATE	DESCRIPTION
0	RK	WS	7/11/2022	ISSUED FOR PERMIT
1	RK	WS	10/15/2024	REVISED POST SIZE FOR DUGOUT



- ### NOTES
1. LIFE SAFETY PLANS ARE INTENDED TO HIGHLIGHT FIRE WALLS AND EGRESS ACCESSORIES.
  2. REFER TO ELECTRICAL FOR DETAILS ON EMERGENCY LIGHTING.
  3. REFER TO MECHANICAL FOR DETAILS ON FIRE DAMPERS; FIRE DAMPERS REQUIRED IN FIRE WALLS AND FIRE RATED CEILING ASSEMBLIES.

- ### LIFE SAFETY LEGEND
- FIRE EXTINGUISHER CABINET
  - EXIT SIGN FACE & DIRECTION
  - EXIT CAPACITY (CLEAR INCHES)
  - TRAVEL DISTANCE
  - WALL MOUNTED EXIT LIGHT
  - 1 HOUR SHAFT WALL - HORIZ WITH 1 HOUR WALL UL #U423 FRIE TEST WH1651 -306.1
  - 1 HOUR FIRE RATED WALL TO ROOF DECK
  - 2 HOUR FIRE RATED WALL TO ROOF DECK

### PROJECT DATA

CONCESSION BUILDING OCCUPANCY  
Occupancy(ies) / Group Classification:  
BUSINESS GROUP B Occupant/ Sq. Ft.: 150 GROSS  
Total Net Floor Area: 1,550 SF Total Occupants: 11

MAINTENANCE BUILDING OCCUPANCY  
ACCESSORY/STORAGE Occupant/ Sq. Ft.: 300 GROSS  
Total Gross Floor Area: 1,190 SF Total Occupants: 4

Type of Construction: TYPE VB CONSTRUCTION  
Protected or Unprotected: UNPROTECTED  
Sprinklered or Non-Sprinklered: NON-SPRINKLERED  
Max. Building Height: 40' Max. Number of Stories: 2  
Max. Floor Area: 9,000 SF

EXITS  
Minimum Number of Exits: 1 PER STORY  
Maximum Travel Distance: 100 FT  
Maximum Dead End Corridor: 20 FT  
Min. Corridor/ Aisle Width: 36 IN

NOTE 44" if serving 50 or more people  
36" if serving less than 50 people  
Egress Width, Level: (No. of persons) 449 x .2 in. = 89.8

FIRE PROTECTION  
FIRE PROTECTION REQUIREMENTS  
Interior Bearing: 0 HOUR  
Columns: 0 HOUR  
Floor/ Ceiling: 0 HOUR  
Interior Non-bearing: 0 HOUR  
Beams, Girders, Trusses: 0 HOUR  
Roof/ Ceiling: 0 HOUR

MAINTENANCE BLDG. LIFE SAFETY PLAN  
SCALE: 1/4" = 1'-0"

CONCESSION BLDG. LIFE SAFETY PLAN  
SCALE: 1/4" = 1'-0"

REV	DATE	DESCRIPTION
2	10/10/2024	ADDENDUM #2
DR		
EB		
CHK		
WV		