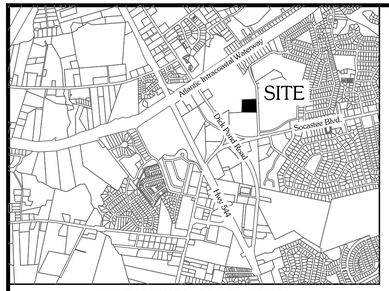
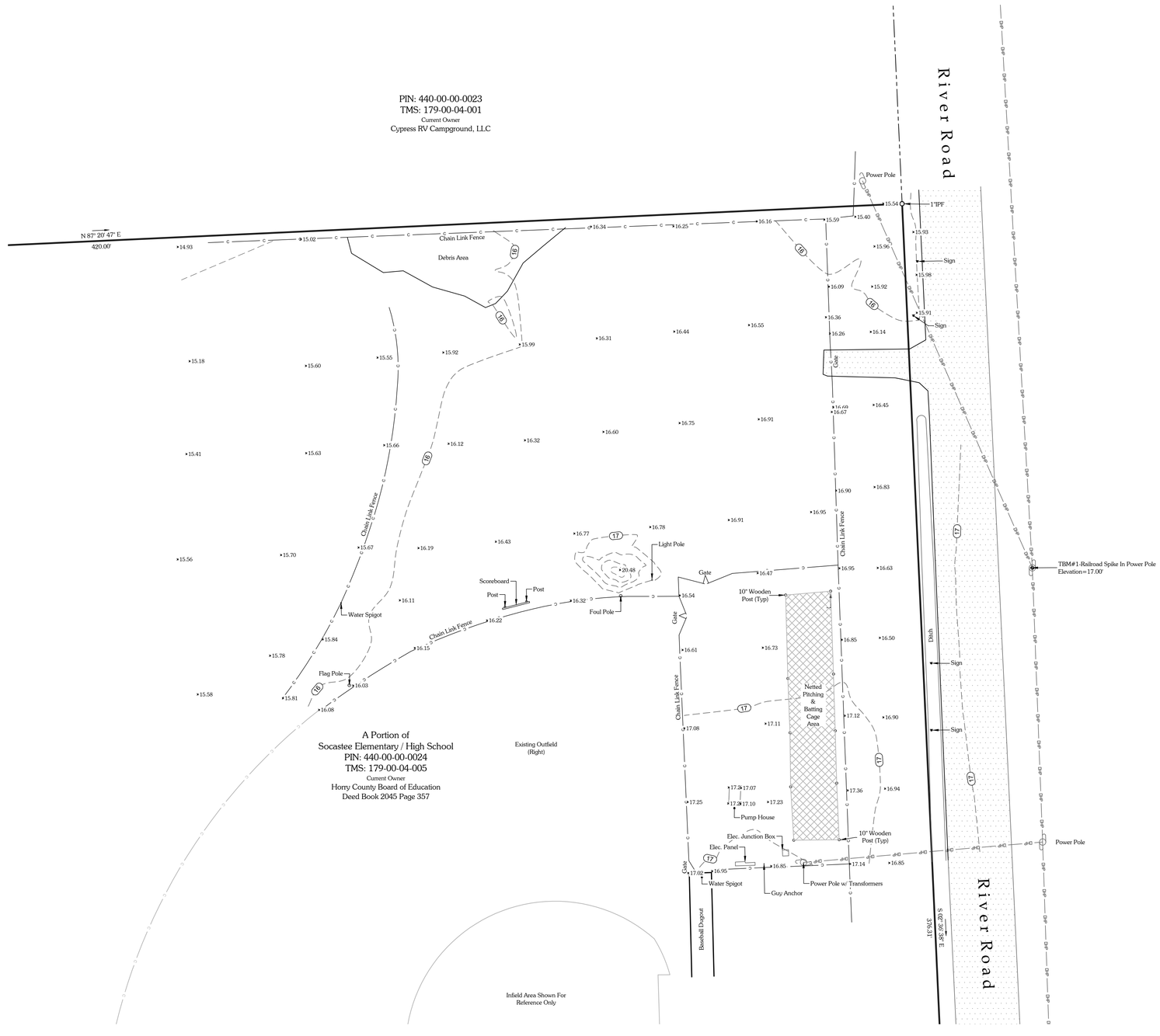


~VICINITY MAP N.T.S.~



LEGEND

- Iron Pipe Found (IPF)
- Iron Rebar Found (IRF)
- Guy Anchore (GA)
- Light Pole (LP)
- Sign
- Overhead Power
- Chain Link Fence
- Asphalt
- Netting

DEVELOPMENT RESOURCE GROUP
DO NOT DISTURB
PNT#001
ELEV = 17.00' DATUM = NAVD88
N = 679282.86 E = 2.608.789.94
CONTROL

Vertical Datum Reference: (NAVD88)
Contour Intervals Major - 5'
Minor - 1'

XX.XX =Spot Elevation

NOTES:

1. Tax Parcel: PIN: 40-00-00-0024
TMS: 179-00-04-005
2. Owner of Record: Horry County Board of Education
PO Box 260005
Conway, SC 29528
3. This property is located in Flood Zone "X" as scaled from F.I.R.M. 45051C XXX H dated Aug. 23, 1999. Flood zone lines shown hereon are scaled and approximate only. This plat is not the basis for flood zone determination or flood zone related issues.
4. Declaration is made to original purchaser of the survey. It is not transferable to additional institutions or subsequent owners.
5. This survey is only valid if print of same has original signature and embossed seal of the surveyor.
6. Surveyor has made no investigation or independent search for easements of record, encumbrances, restrictive covenants, ownership title evidence, or any other facts that an accurate and current title search may disclose.
7. Subsurface and environmental conditions were not examined or considered as a part of this survey. No statement is made concerning the existence of underground or overhead containers or facilities that may affect the use or development of this tract.
8. This property is subject to all easements or restrictions of record.
9. Last property transfer Deed Book 2045, Page 357.
10. 1/2" Iron Pipes Set at all corners unless noted otherwise.
11. All Bearings are based upon the South Carolina State Plane Coordinate System (NAD83)(2011). All distances shown are Horizontal not grid distances.
12. Date of Field Survey: May, 2021

SPACE RESERVED FOR PLANNING APPROVAL ONLY

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

"I hereby state that to the best of my professional knowledge, information, and belief, the survey shown hereon was made in accordance with the requirements of the Standards of Practice Manual for Surveying in South Carolina, and meets or exceeds the requirements as specified therein.

Michael D. Oliver, P.L.S. No. 13520
as agent

drg
Development Resource Group, LLC
4703 Oleander Drive
Myrtle Beach, SC 29577
Telephone: 843-839-3350
www.drgpllc.com

SOUTH CAROLINA DEVELOPMENT RESOURCE GROUP LLC No. 006089 CERTIFICATE OF AUTHORIZATION

JOB No. 21.519
DATE: 05-12-2021
DRAWN BY: D.M.P.
CHECKED BY: M.D.O.
SCALE: 1"= 20'
FILE: P:/21519/SURVEY

TOPOGRAPHIC SURVEY
A PORTION OF
PIN: 440-00-00-0024 / TMS: 179-00-04-005
MYRTLE BEACH, HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR:
HORRY COUNTY BOARD OF EDUCATION

SOUTH CAROLINA PROFESSIONAL No. 13520 LAND SURVEYOR MICHAEL DEAN OLIVER

mike@drgpllc.com

DATE	REVISION

21.519

DWG NAME: P:\21519 – HCS SHS BATTING CAGE\SURVEY_SURVEY CAD DRAWINGS\21519 2021-05-12 TOPOGRAPHIC MAP.DWG

GEOTECHNICAL ENGINEERS
RESOURCE CONSULTANTS
QUALITY CONTROL SPECIALISTS

August 17, 2021

Horry County Schools
335 Four Mile Road
Conway, SC 29526

Attn: Mr. Joe Burch
Coordinator - Planning

RE: ***Geotechnical Investigation and Foundation Recommendation Socastee High School – Batting Cage***
Horry County, South Carolina
GeoMetrics No. SH-HC21-G1M

Mr. Burch:

As authorized, ***GeoMetrics Consulting, LLC,*** has completed a geotechnical investigation and engineering analyses for the above referenced project. This report describes our findings from the geotechnical investigation. Included in this report are a brief description of the soil conditions encountered, the field and laboratory testing procedures and the results of our analysis. GeoMetrics understands that the project consists of the development of a new batting cage located between the existing ball fields at Socastee High School along Rivers Road, Horry County, South Carolina.

INTRODUCTION

A geotechnical investigation was performed within the proposed new Batting Cage at Socastee High School. The primary objectives of this study were to gather information on the subsurface conditions at the site and to develop general recommendations for site preparation and the proposed foundations.

A site plan depicting the soil test boring locations is presented in *Appendix I - Figures.* The soil test boring logs are located in *Appendix II - Soil Test Boring Logs*. The laboratory results are presented in *Appendix III – Laboratory Results.* This report completes the geotechnical investigation outlined in the approved work plan.

FIELD EXPLORATION

Two CPT soundings were performed using a track-mounted, direct-push rig that hydraulically advanced a fifteen (15) cm^2 standard electro-piezocone through the underlying soil sub-strata. The CPT soundings were performed in general accordance with ASTM D 5778. The electro-piezocone directly measures and digitally records the point stress (Q_t), local friction (F_s), and soil pore water pressure (u_2) as the piezocone penetrates continuously through the soil strata during testing. Point stress is the measured stress in tons per square foot (tsf) placed on the tip of the electro-piezocone. The sleeve friction is the measured stress in tons per square foot on a friction sleeve located above the base of the cone tip of the piezocone. The pore water pressure is measured at the pore pressure element located behind the friction sleeve, in tons per square foot (tsf). A total of two

shallow soil test borings were advanced manually with a bucket auger. Soil samples were collected and Dynamic Cone Penetrometer tests (ASTM STP-399) were performed at regular intervals to boring termination depths. The locations of the soundings, borings, and test pits are shown on the boring location plan included in *Appendix I – Figures*. The soil test boring logs are located in *Appendix II - Soil Test Boring Logs*. Collected soil samples were transported to the laboratory for further testing. The soils were visually examined and classified in general accordance with AASHTO M-245, ASTM D-2488 and the Unified Soil Classification System (USCS).

LABORATORY TESTING

Selected soil samples were tested in the laboratory to determine applicable physical and engineering properties. The laboratory testing program included determination of particle-size distribution (ASTM D1140/AASHTO T-88), moisture content (ASTM D2216/AASHTO T-265), and moisture-plasticity relationship (ASTM D4318/AASHTO T-89/90), moisture density relationship (ASTM D698/AASHTO T-99) and California Bearing Ratio (ASTM D1883/AASHTO T-193). The tests were used to determine the behavioral characteristics of the soils as well as to verify field classifications described above. The laboratory results are presented in *Appendix III – Laboratory Results.*

SUBSURFACE CONDITIONS

Based on the geotechnical soundings and associated subsurface tests, soil stratification can be essentially classified by two strata. The upper stratum consists of silty clayey sands with various amounts of fine-grained materials extending to approximately 25 feet below the existing surface. The lower stratum consists of clayey sands to sandy lean clays and extends to depth of exploration of 51 feet below existing grades. Variations in soil composition within each stratum may occur; however, general behavioral characteristics should be similar.

Indicated in the table below are the results of the laboratory testing of selected soil samples.

Laboratory Testing Results

Boring ID	Soil Description	Depth (ft)	AASHTO Class	USCS Class	MC %	% Finer than #200	LL	PL	PI
HA-1	Reddish brown silty clayey SAND	1	A-2-4	SC-SM	11.1	28.8	24	19	5
HA-1	Yellowish brown clayey SAND	4	A-4	SC	17.0	41.8	25	18	7
HA-2	Very dark grayish brown	1	A-2-4	SM	10.7	28.7	22	20	2

MC: Moisture content; LL: Liquid Limit; PL: Plastic Limit; PI: Plasticity Index; NP: Nonplastic.

GROUNDWATER

Ground water level readings were interpreted from the CPTU soundings. The ground water level at the completion of sounding operations was approximately 5 feet beneath the existing ground surface. Ground water elevations will be largely controlled by climatic and seasonal conditions. The ground water surface is subject to rise on a regular basis as a result of precipitation and/or infiltration. Capillary rise within the soil pore spaces will also affect ground water levels. The effects of shallow and/or fluctuating ground water can be minimized by establishing positive site drainage prior to construction and maintaining proper site drainage during and after construction.

SEISMIC CONSIDERATIONS

The southeastern United States has complex geologic history. Fortunately, the southeastern United States does not experience the frequency of damaging earthquakes that occur in Southern California and parts of the western states. Specific geologic structures or faults capable of generating large seismic events have not been well identified. The Charleston Epicentral Area includes the area around Charleston and Bowman, South Carolina. An abnormally high historic seismic activity level distinguishes this area from the remainder of the Coastal Plain, which has virtually no recorded seismic activity. In August, 1886, one of the most destructive seismic events in U.S. history struck the Charleston area. This seismic event had an epicenter approximately seventy-eight miles southwest of the proposed building site. This earthquake of epicentral intensity of Mercalli Magnitude X was perceptible over an area of more than two million square miles. More than four hundred seismic events of lesser intensity have been recorded in the Charleston/Summerville area. The earthquake ground motion parameters used in this report were obtained from maps published by the U.S. Geological Survey which take into consideration the Charleston Epicentral Area seismic history.

According to the International Residential Code 2018 (IRC 2018), a seismic event having a two percent probability of exceedance in fifty years (2%/50yrs) is the design seismic event. Such an event has a return period of approximately 2,500 years. Residential construction in Horry County is subject to the seismic provisions of the International Residential Code (IRC 2018). In accordance with maps published by the South Carolina Building Codes Council, the Seismic Design Category for this site is C. The Short Period Design Spectral Response Acceleration, S_{DS}, for this site is 0.283g and the Design Spectral Response for periods of one second, S_{D1} is 0.118. The S_{DS} and S_{D1} values were determined using procedures contained in Chapter 20 of ASCE 7. Figure 4 in Appendix I shows the design spectral response spectrum.

SITE PREPARATION

Prior to subbase construction, the geotechnical engineer should inspect the subgrade to assess the condition and stability of areas having possible buried organic debris or exhibiting noticeable "pumping" or instability. Proofrolling will be required within construction areas and identifiable unstable areas. The grading contractor should be instructed to provide a tandem-axle dump truck and operator as a part of normal grading operations to accomplish this verification procedure. Any questionable areas identified by the geotechnical engineer will require further excavation/densification at the direction of the engineer. All fill soils should be placed in maximum twelve-inch loose lifts and compacted to 95 percent of the standard proctor maximum dry density (ASTM D698).

Select fill materials should be used to raise the site grades and to replace unsuitable material, if necessary. All fill soils should be placed in compacted lifts of no more than twelve inches in thickness. All fill soil should be compacted to 95% of the standard Proctor maximum dry density (ASTM D-698). The select fill soils should meet the criteria specified in the table below.

Recommended Select Fill Gradation

USCS Classification	Passing #200 Sieve (%)	Liquid Limit (%)	Plasticity Index (%)	Maximum Dry Density (lb/ft^3)	Organic Content (%)
SP	<5	NP	NP	>105	<1
SP-SM	<12	NP	NP	>100	<1

All fill soils should be placed with moisture contents not exceeding three percent (3%) over optimum. It is the responsibility of the grading contractor to select the most appropriate fill soil for the site conditions and time of year. Although a fill criterion has been established, many variations in composition are possible, each having varying characteristics of moisture sensitivity, drying and compaction. It is essential that the grading contractor have extensive experience in using local fill soils in difficult site applications. It will be the responsibility of the contractor to use whatever means and methods are necessary to properly import, place, dry and compact all fill soils. Depending on the location and conditions of the fill placement, the grading contractor should determine whether static or dynamic compacting is appropriate.

GeoMetrics recommends a testing interval of no less than one compaction test for every 2,000 square feet per lift of placed fill. This applies to the select fill materials used to obtain the proposed finished grades. For fill and backfill areas having areas less than 2,000 square feet, a testing frequency of 3 tests per lift should be used. For trenches, a testing interval one test for every 250 linear feet of trench should be used.

ORGANIC MATERIAL

Grass vegetation surface organic soils will typically be encountered across the site. The thickness of topsoil may vary naturally across the site. Localized areas having deeper organic materials may be encountered.

If the removal of buried organic material extends below the ground water table, the excavation should be backfilled with #57 stone or other open graded stone to approximately six (6) inches above ground water table. A soil separation fabric such as TNS R060 or equivalent should be placed on top of the stone. This fabric will prevent granular backfill from entering the void spaces in the stone. Properly compacted backfill meeting the criteria discussed later in this report should be used. Regardless of the extent of organics encountered across the site, all organic soils and debris must be removed from within structural and pavement areas.

If placement of fill is necessary to bring the proposed building area to required grades, such fill should be placed in compacted lifts of no more than twelve inches thickness. Compaction of each lift of fill to 95% of maximum density as determined by ASTM D698 should be verified by testing.

FOUNDATION RECOMMENDATIONS

A shallow foundation system is recommended for support of the proposed structure. The results of the analysis for the allowable bearing capacity and projected settlement magnitudes reveal an average maximum allowable bearing capacity of 2,000 pounds per square foot for the proposed structure, provided soil compaction and drainage recommendations for the site are followed.

The foundation system should consist of a monolithically placed, thickened edge concrete slab-on-grade. The thickened edges should extend at least 12 inches beneath the finished exterior grade and should have a width of at least 16 inches to protect against general and/or punching shear failure of the bearing soils. The turned-down edge foundations should slope upwards into the slab-on-grade at 1V:1H. Reinforcing steel from the foundations should extend into the slab-on-grade for the full development length of the steel.

A representative of the Geotechnical Engineer should perform foundation inspections to confirm that the design allowable soil bearing capacity is applicable. The foundation bearing surface evaluations should be performed using a combination of visual observation, hand rod probing, and Dynamic Cone Penetrometer testing (ASTM STP-399).

If the foundation is constructed during the “wet” weather season, additional excavation may be required. Wet footing subgrade soils should be removed to drier material and the undercut material replaced with either properly compacted backfill or an open-graded aggregate, such as No. 57 or No. 67 stone. If the depth of undercutting is greater than two feet, the foundation excavation should be widened one foot in both directions.

Each foundation excavation should be thoroughly cleaned of loose and deleterious material and compacted using a mechanical tamper prior to placing any steel or concrete. Soft, loose, or otherwise questionable soils should be stabilized by compacting in-place or by removing such unsuitable soil and replacing with a competent material. Prior to placing concrete, longitudinal reinforcing steel should be placed properly within all foundation elements in order to further stabilize the foundation system.

Based on the allowable bearing capacities previously indicated and the use of Schmertmann’s procedure, the total static settlements are anticipated to be less than one inch. Differential settlements will be on the order of one-half the total or one-half inch. This settlement is applicable for contact pressures no greater than 2,000 psf.

It is imperative that the slab-on-grade bearing soils be compacted to the required density in order to provide stability beneath the floor slabs and anticipated live loads. The modulus of subgrade reaction, *k*, was developed by Westergaard as a measure of soil strength beneath slabs-on-grade that do not support column and/or wall loads. The values of *k* beneath the floor slabs increase with additional densification and stability.

Using Beam-on-Elastic foundation theory on the strength of soils beneath floor slabs not supporting structural loads, a Modulus of Subgrade Reaction (*k*) of 150 pounds per cubic inch may be used to design slabs-on-grade. Proper compaction of the fill soils is critical to the performance of these soils as structural support for the slab-on-grade. The required design slab thickness will be a function of the soil k-value. An enhanced k-value would result in a thinner required design slab thickness. Enhanced k-values may be achievable through the placement of properly compacted select fill. The grade slab should be suitably reinforced and jointed in general accordance with requirements of the American Concrete Institute (ACI) and local construction practices. The joints should be flexible enough to allow for a small amount of independent movement between adjoining sections of grade slab without causing damage.

A vapor retarder such as a high-density polyethylene sheet or similar material should be placed over the granular mat. The vapor retarder should be a Class A material. This material will aid in the reduction of moisture migration.

STANDARD OF CARE

GeoMetrics Consulting, LLC, has performed this engineering study in a manner consistent with the degree of care and skill ordinarily exercised by members of the profession currently practicing under similar circumstances. The design recommendations in this report incorporate industry standards and procedures and are based on the *in-situ* soil conditions encountered in the test borings, the laboratory testing program, the analysis of the site and subsurface conditions, and previous experience. If subsurface conditions are discovered during construction that differ from the soils encountered during the field investigation, GeoMetrics should be contacted to evaluate the impact of the identified conditions on the foundations and pavements. This report has been prepared for the exclusive use of Horry County Schools and its design team for the specific application to the proposed development of a new batting cage at Socastee High School located along River Road in Horry County, South Carolina.

Sincerely,

GeoMetrics Consulting, LLC

Jeremy Cox

Jeremy D. Cox, E.I.T.
Associate Geotechnical Engineer

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 30711
JERRY CASHER BISHOP

SOUTH CAROLINA
GEOMETRICS CONSULTING, LLC
No. C03881
CERTIFICATE OF AUTHORIZATION

J.C. Bishop, P.E.
Principal

Encl

APPENDIX I

Figures

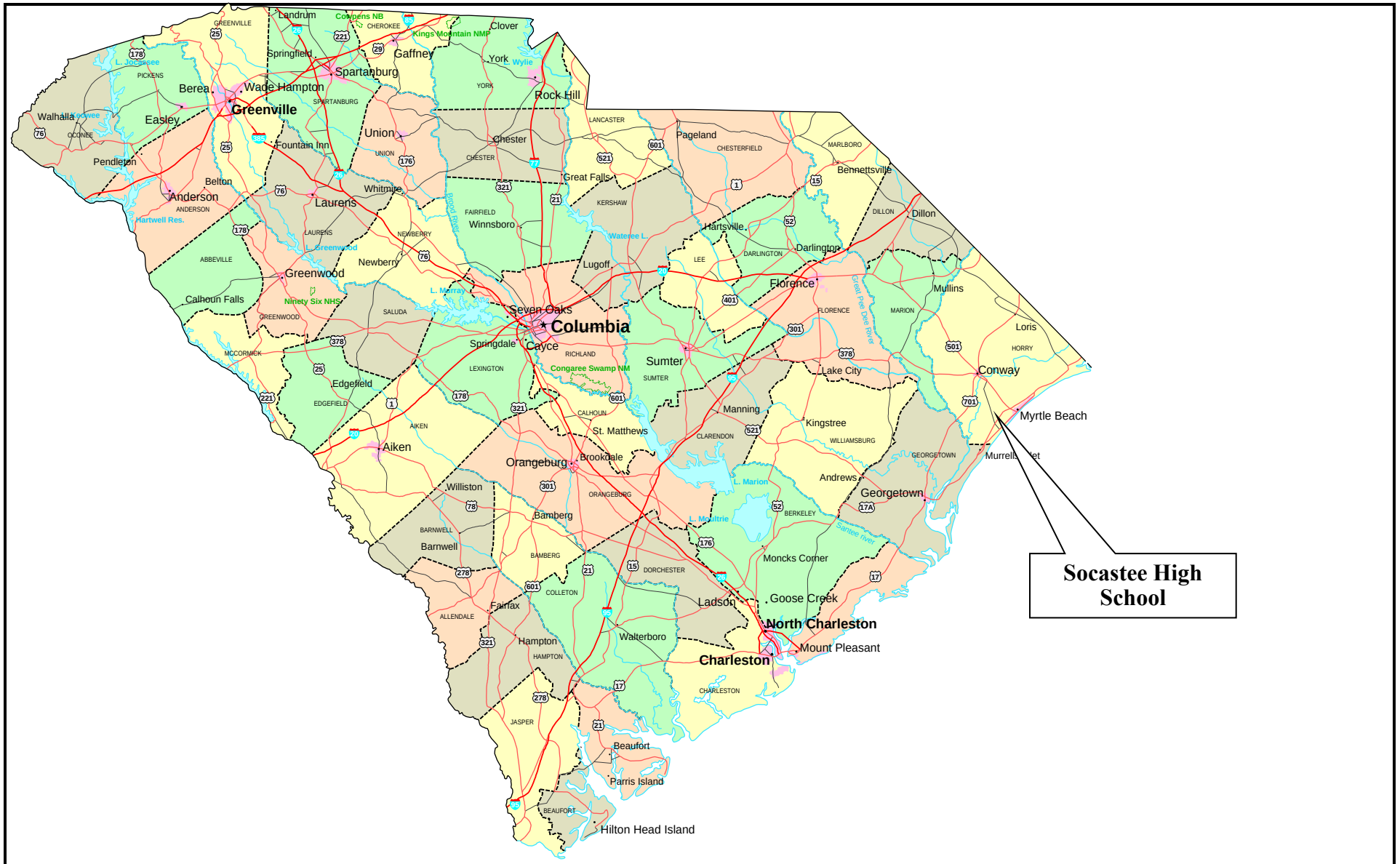


Figure 1	**Vicinity Map Socastee High School Batting Cage Horry County, South Carolina**	GeoMetrics No. **SH-HC21-G1M**	
GEOMETRICS CONSULTING	*Prepared For:* **Horry County Schools Conway, South Carolina**	**August 10, 2021**	

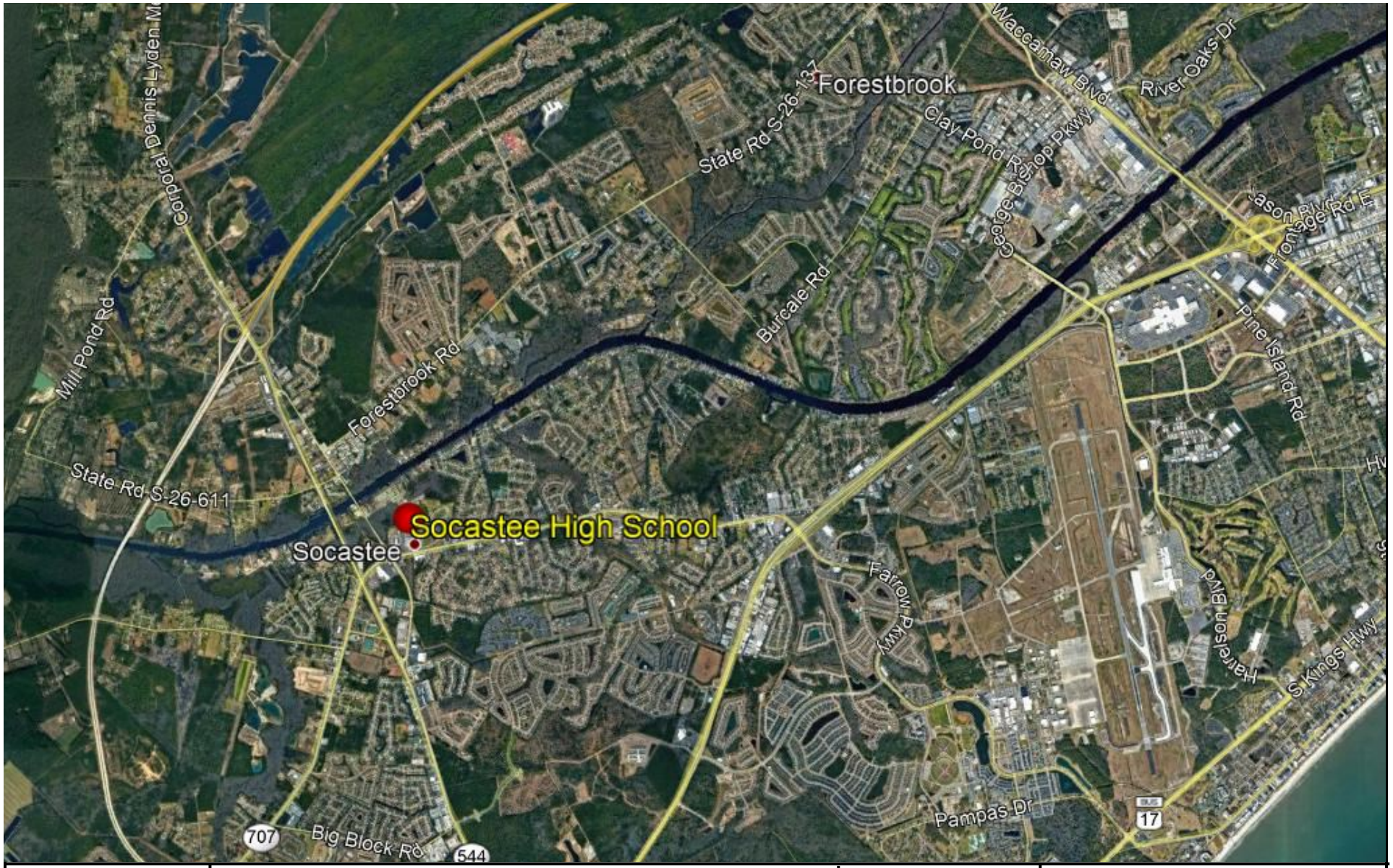


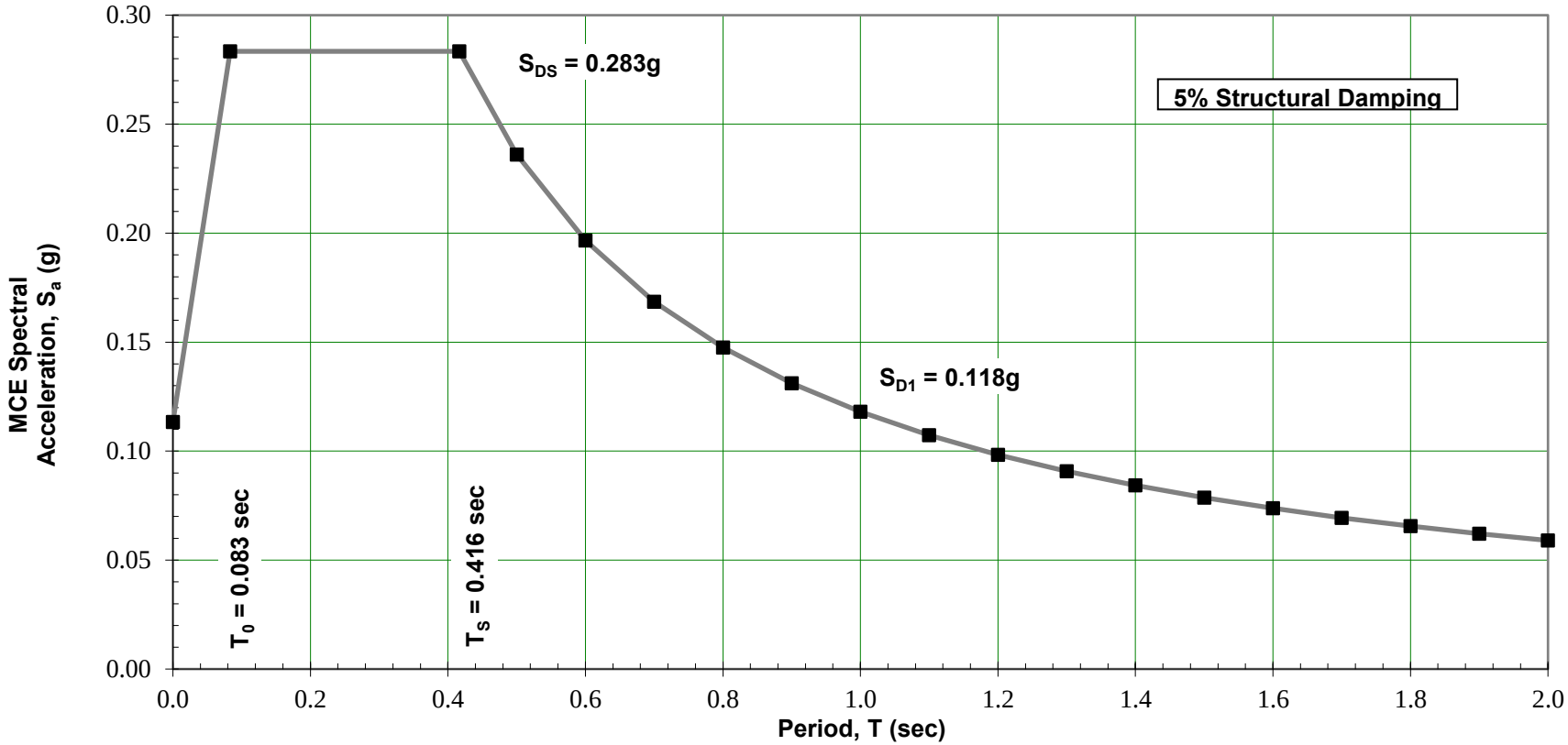
Figure 2	**Vicinity Map** **Socastee High School Batting Cage** **Horry County, South Carolina**	GeoMetrics No. **SH-HC21-G1M**	N W E S
GEOMETRICS CONSULTING	***Prepared For:*** **Horry County Schools** **Conway, South Carolina**	**August 10, 2021**	

Figure 3	**Boring Location Plan** **Socastee High School Batting Cage** **Horry County, South Carolina**	GeoMetrics No. **SH-HC21-G1M**	N W E S
GEOMETRICS CONSULTING	***Prepared For:*** **Horry County Schools** **Conway, South Carolina**	**August 10, 2021**	

Maximum Considered Earthquake Ground Motion

Site Class C F_a = 1.300 F_v = 1.500[3]

Latitude = 33.68573° N Longitude = 78.99888° W



NOTES:
1. 2% Probability of Exceedance in 50-Year Seismic Event;
2. Spectral Acceleration Curve reduced by $^1/_3$ per IBC 1615.2.4
3. F_a and F_v determined as permitted by Note b, Table 1615.2 (vibration period taken as < 0.5 sec)

Figure No: 4	**Design Response Spectrum** **Socastee High School - Batting Cage** **Horry County, South Carolina**	GeoMetrics No: **SH-HC21-G1M**
GEOMETRICS CONSULTING	**Horry County Schools** **Conway, South Carolina**	**August 17, 2021** spect accel.xls

APPENDIX II

Soil Boring Logs

CAROLINA EXPLORATION

Socastee High School
Horry County, South Carolina
Project Number :SH-HC21-G1M

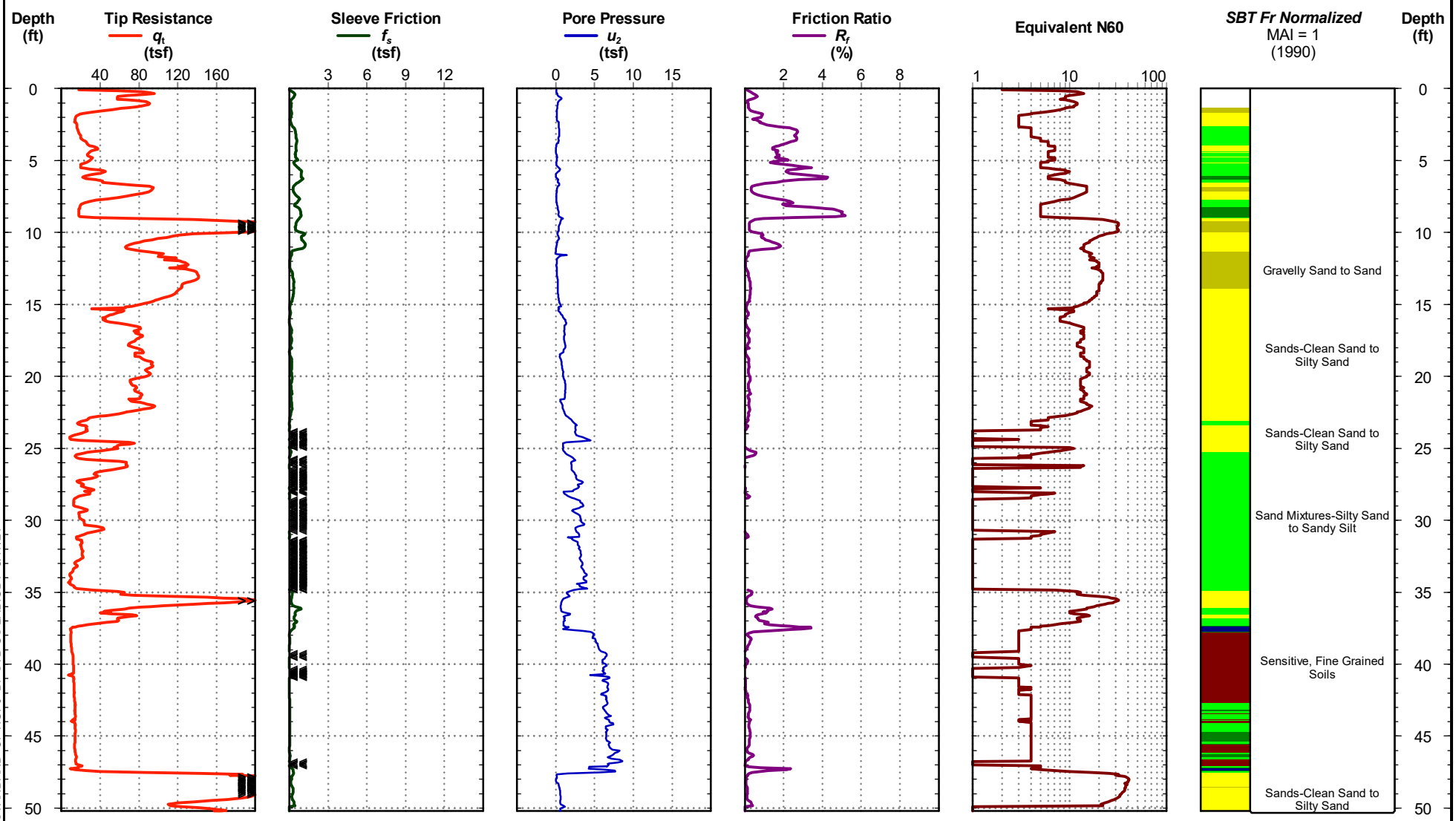
Cone Penetration Test

C-1

Date: Aug. 9, 2021
Estimated Water Depth: 5 ft
Rig/Operator: Josh Tucker

Northing:
Easting:
Elevation:

Total Depth: 50.2 ft
Termination Criteria: Target Depth
Cone Size:



CPT REPORT - STANDARD CPT.GPJ DF STD US LAB.GDT 8/17/21

Electronic File Name: e1.ecp

CAROLINA EXPLORATION

Socastee High School
Horry County, South Carolina
Project Number :SH-HC21-G1M

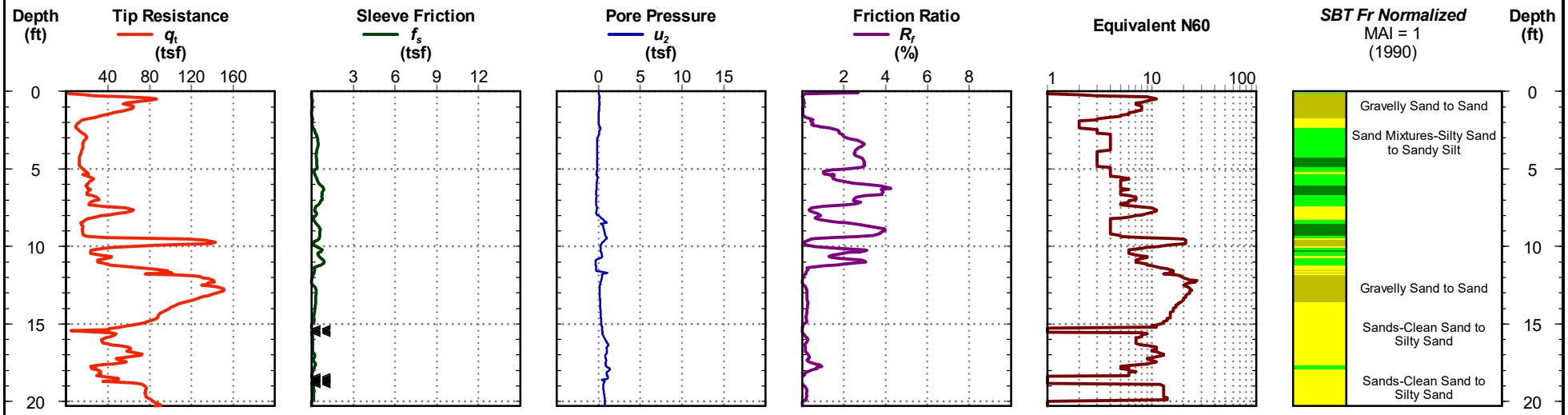
Cone Penetration Test

C-2

Date: Aug. 9, 2021
Estimated Water Depth: 5 ft
Rig/Operator: Josh Tucker

Northing:
Easting:
Elevation:

Total Depth: 20.3 ft
Termination Criteria: Target Depth
Cone Size:



CPT REPORT - STANDARD CPT.GPJ DF STD US LAB.GDT 8/17/21

Electronic File Name: e2.ecp

C-2

Socastee High School Batting Cage Horry County, Myrtle Beach SH-HC21-G1M		LOG OF BORING No. HA-1 Location: 33.68566° N, 78.99882° W Offset:
Date Drilled: August 9, 2021	Supervisor: Fred Grant	Ref:
Casing Length: N/A	Ground Elevation (msl):	Dynamic Cone Penetrometer For Shallow In-situ Testing (Sowers & Hedges)
Drilling Method: Manual Auger with Continuous Sampling		
Water Level: Not encountered		

Elevation (msl)	Depth (ft)	MATERIAL DESCRIPTION	Graphic Log	Sample Depth (ft)	Sample Type	1st incr.	2nd incr.	3rd incr.	N Value	COMMENTS
		Gavel/Asphalt								
	0.3	Medium dense silty clayey SAND, reddish brown, SC-SM		0.5		24	20	20	17	28.8% passing #200
	1.0	Loose silty SAND, dark grayish brown, SM		1.5		8	7	6	7	
				2.5		7	8	9	9	
	3.0	Loose clayey SAND, yellowish brown, SC		3.5		5	6	7	7	41.8% passing #200
				4.5		5	5	5	5	
	5.0	Boring terminated at 5 ft								

PENELOG GINT.GPJ 8/17/21

2025 Highway 378
Conway, South Carolina 29527

GEOMETRICS CONSULTING

Phone: (843) 438-8253
FAX: (843) 438-8255

Socastee High School Batting Cage Horry County, Myrtle Beach SH-HC21-G1M		LOG OF BORING No. HA-2 Location: 33.68577° N, 78.99893° W Offset:
Date Drilled: August 9, 2021	Supervisor: Fred Grant	Ref:
Casing Length: N/A	Ground Elevation (msl):	Dynamic Cone Penetrometer For Shallow In-situ Testing (Sowers & Hedges)
Drilling Method: Manual Auger with Continuous Sampling		
Water Level: Not encountered		

Elevation (msl)	Depth (ft)	MATERIAL DESCRIPTION	Graphic Log	Sample Depth (ft)	Sample Type	1st incr.	2nd incr.	3rd incr.	N Value	COMMENTS
		Graval/Asphalt								
	0.3	Medium dense silty SAND, very dark grayish brown, SM		0.5		9	12	23	16	28.8% passing #200
				1.5		14	17	22	17	
	2.0	Clayey SAND, dark grayish brown, SC		2.5		17	25	25	19	
				3.5		25	25	25	19	
				4.5		25	25	25	19	
	5.0	Boring terminated at 5 ft								

PENELOG GINT.GPJ 8/17/21

2025 Highway 378
Conway, South Carolina 29527

GEOMETRICS CONSULTING

Phone: (843) 438-8253
FAX: (843) 438-8255

SOIL CLASSIFICATION CHART

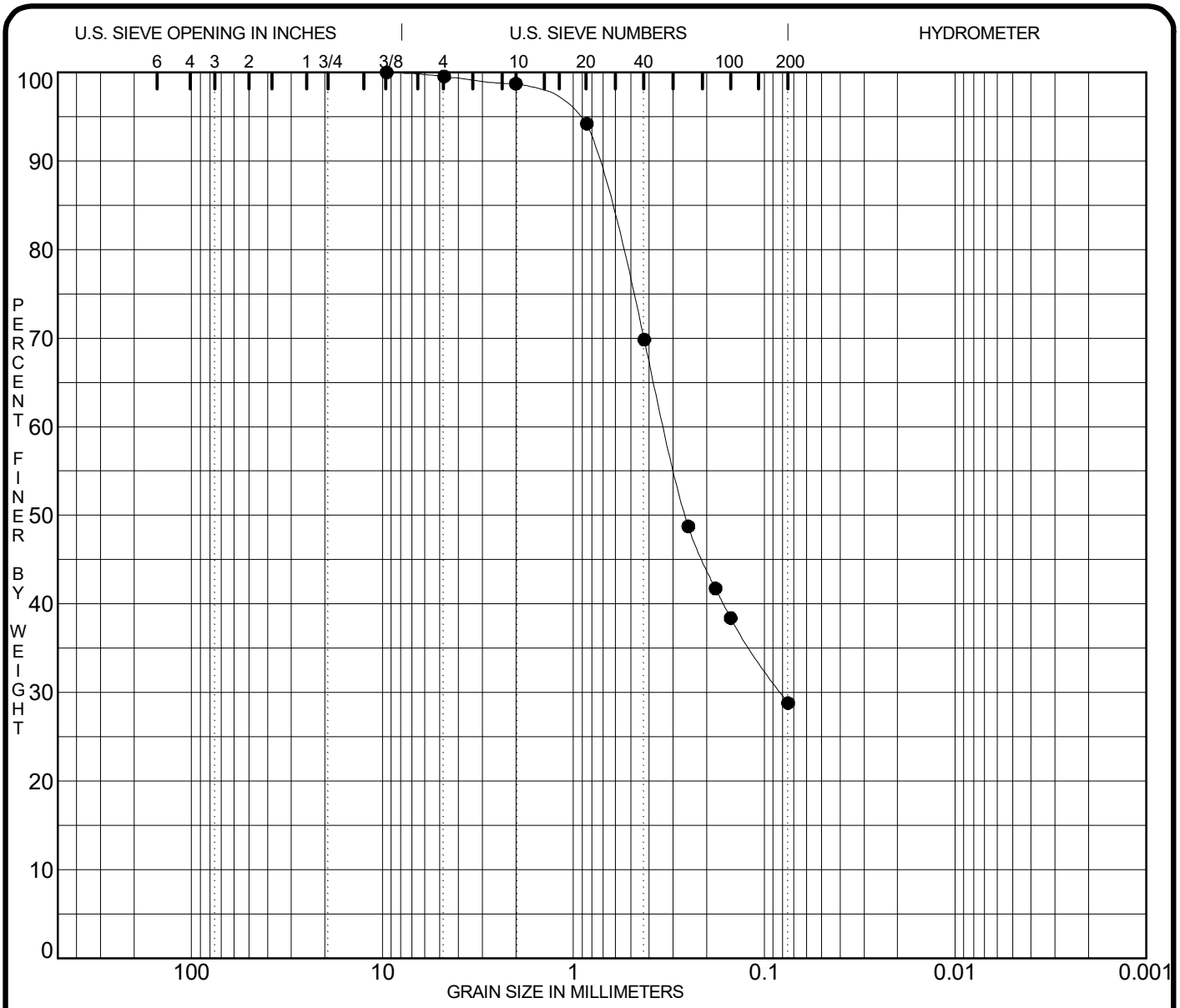
MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

USCS_LEGEND 01/03/11

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

APPENDIX III

Laboratory Analysis



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	MC%	LL	PL	PI	Cc	Cu
●	**HA-1**	**1.0**	**Reddish brown silty clayey SAND, SC-SM**	**11.1**	**24**	**19**	**5**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**HA-1**	**1.0**	**9.50**	**0.33**	**0.082**		**0.5**	**70.7**	**28.8**	

PROJECT **Socastee High School Batting Cage - Horry County, Myrtle Beach**

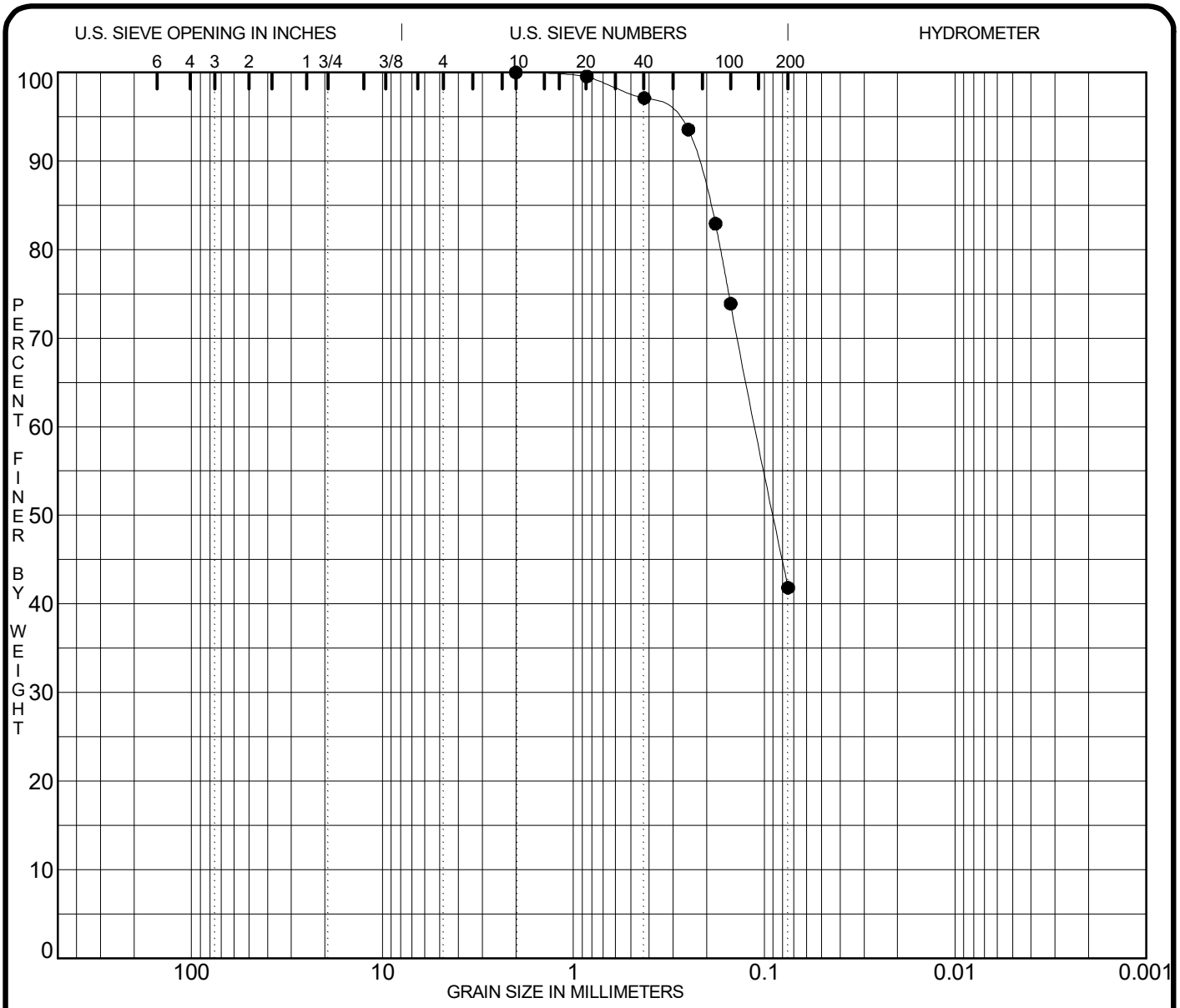
JOB NO. **SH-HC21-G1M**

DATE **8/17/21**

2025 Highway 378
Conway, South Carolina 29527

GEOMETRICS CONSULTING

Phone: (843) 438-8253
FAX: (843) 438-8255



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	MC%	LL	PL	PI	Cc	Cu
●	**HA-1**	**4.0**	**Yellowish brown clayey SAND, SC**	**17.0**	**25**	**18**	**7**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**HA-1**	**4.0**	**2.00**	**0.11**			**0.0**	**58.2**	**41.8**	

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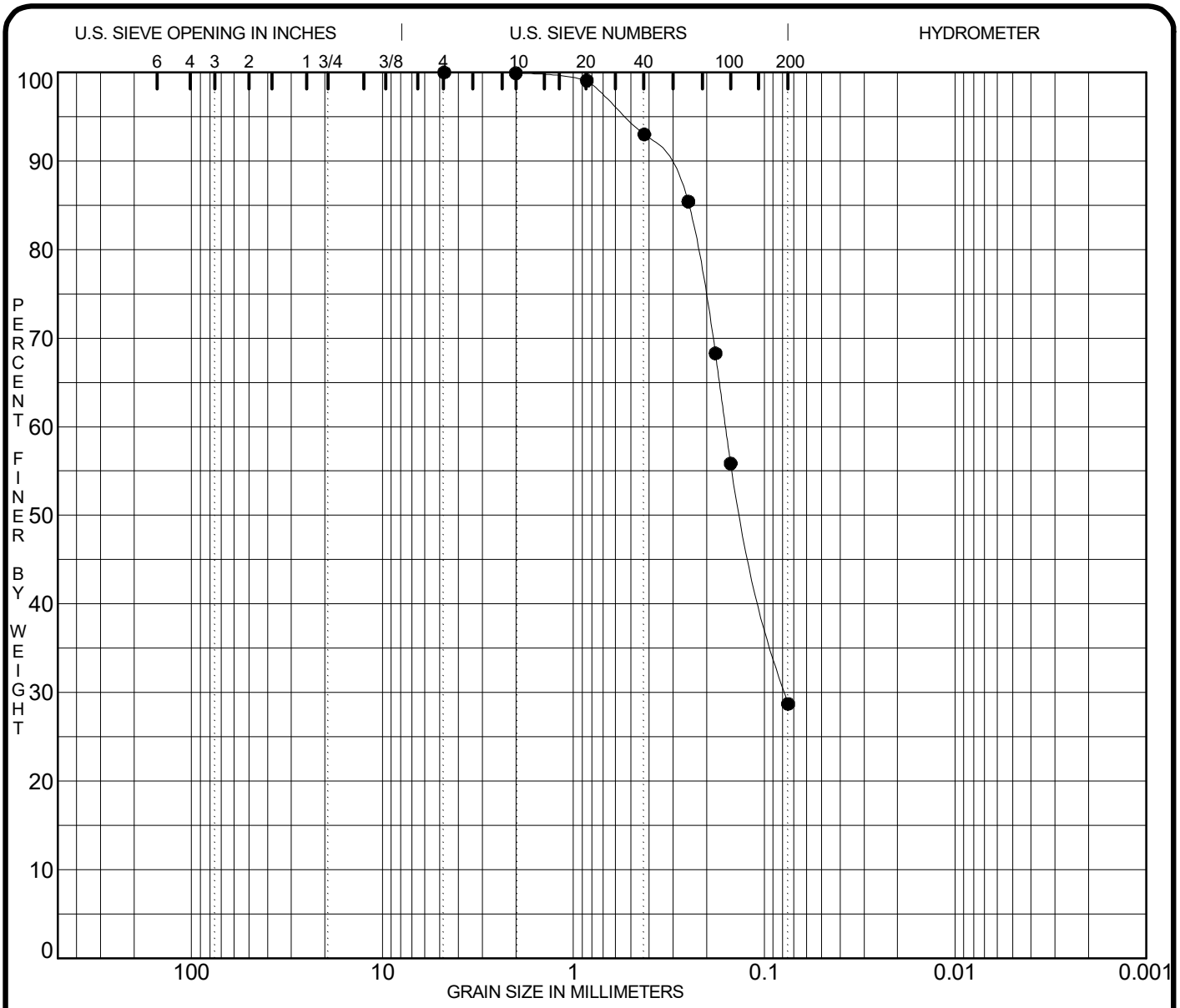

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Classification	MC%	LL	PL	PI	Cc	Cu
●	**HA-2**	**1.0**	**Very dark grayish brown silty SAND, SM**	**10.7**	**22**	**20**	**2**		

	Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**HA-2**	**1.0**	**4.75**	**0.16**	**0.078**		**0.0**	**71.3**	**28.7**	

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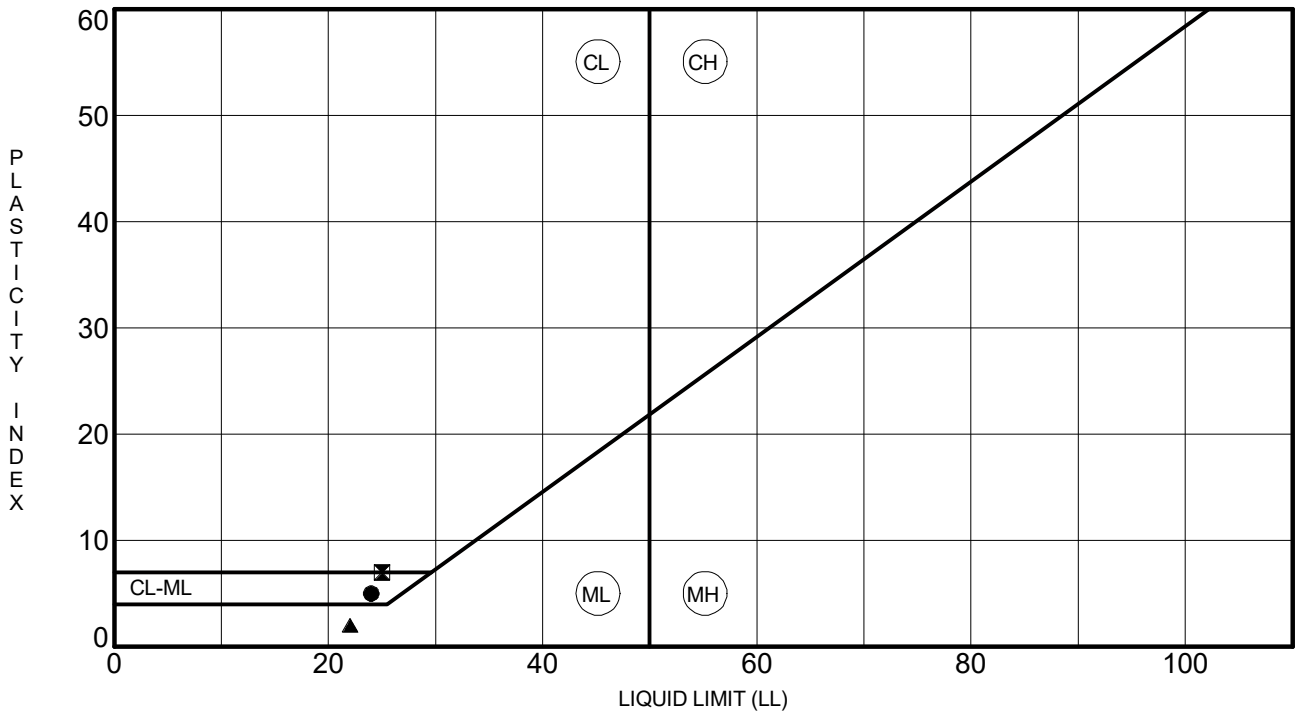
ATTERBERG LIMITS RESULTS



	Specimen Identification		LL	PL	PI	Fines	Classification
●	HA-1	1.0	24	19	5	28.8	Reddish brown silty clayey SAND, SC-SM
⧗	HA-1	4.0	25	18	7	41.8	Yellowish brown clayey SAND, SC
▲	HA-2	1.0	22	20	2	28.7	Very dark grayish brown silty SAND, SM

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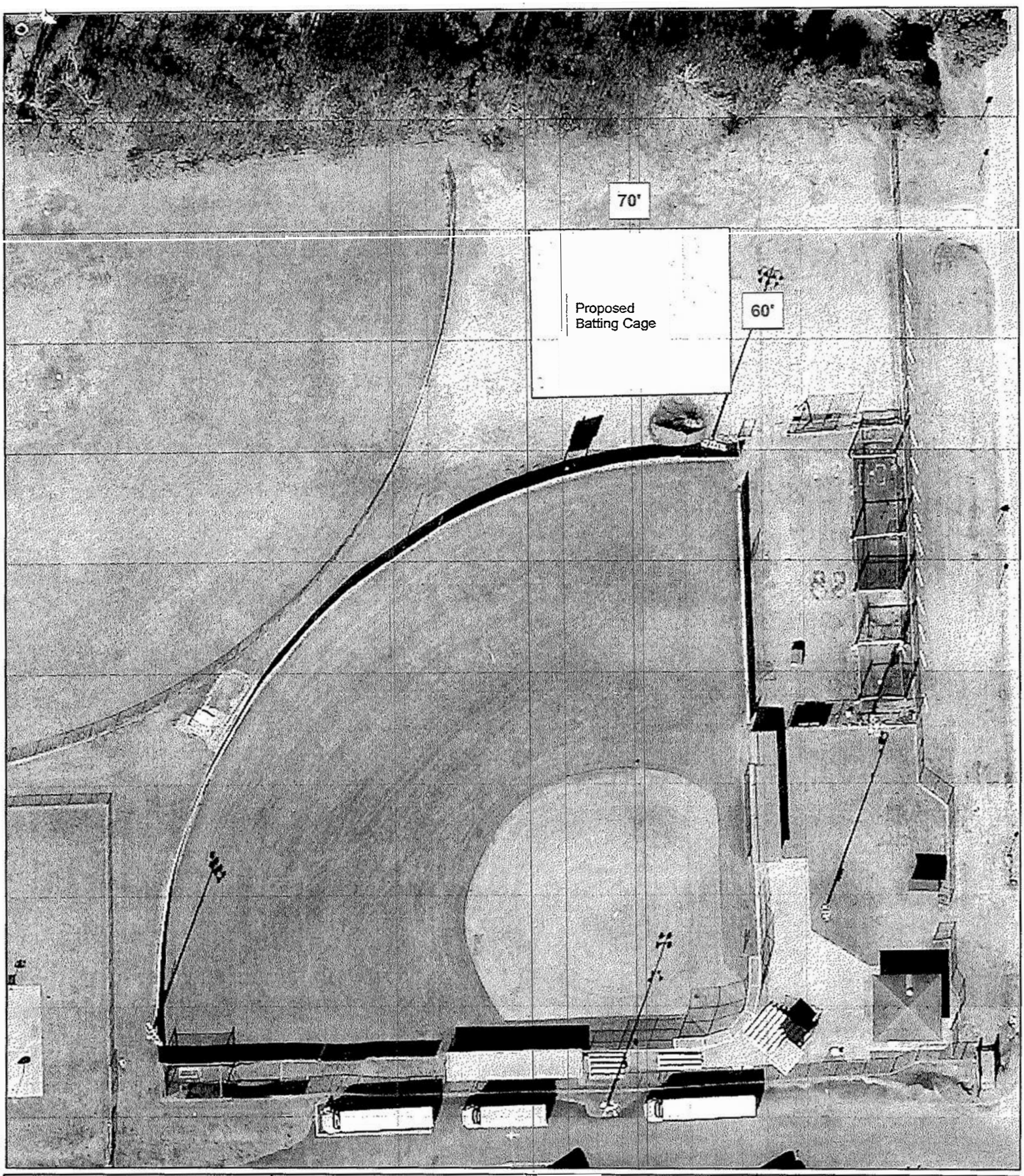


N
W E

Location Map
Proposed Covered Batting Cage
Socastee High School

1 inch = 44 feet

CODE ANALYSIS

OCC. GROUP: A3 (303.4)
CONSTRUCTION CL: 11B (T601)
SEISMIC RISK CAT: II (T1604.5)

OCCUPANCY LOAD (T1004.5)
60' x 70' = 4200 SF
4200 / 50 = 84 PERSONS MAX
20 PERSONS PROPOSED

EGRESS (1005.3.2)
STRUCTURE: OPEN
5'-0" CENTER EGRESS AISLE PROVIDED
20 x .2 = 4 INCHES, 60 PROVIDED
60" / .2 = 300 PERSONS CAPACITY

TRAVEL DISTANCE (T1017.2)
200' W/O SPRINKLERS
70' MAX IN ANY DIRECTION PROPOSED

SPRINKLER (903.2.1.3)
< 1200 SF , < 300 OCCUPANT LOAD, LOC. AT GRADE
∴ NOT REQUIRED
FIRE ALARM (907.2.1)
< 300 OCCUPANT LOAD, LOC. AT GRADE
∴ NOT REQUIRED

BATHROOM/FIXTURES (T29.02.1)
WC: 1/125 MALE - 1/65 FEMALE -------- ∴ 1/SEX REQ'D
LAVS : 1/200 ---------- ∴ 1/SEX REQ'D
DRINKING FOUNTAIN: 1/500 ---------- ∴ 1 REQ'D
SERVICE SINK : ---------- ∴ 1 REQ'D

ALL ITEMS IN BRACKETS EXIST IN/ AT EXISTING FIELD HOUSE. SEE KEY PLAN

ALLOWABLE AREA OF WALL OPENINGS
(705.8.1) (T705.8)
30' SEPARATION, UNPROTECTED, NON-SPR.
NO LIMIT

FIRE RESISTANCE RATINGS (T601)
STEEL FRAME "0"
ROOF "0"

ALLOWABLE HEIGHT (T504.3)
55' ALLOWED 13'-3 3/4" PROPOSED TO RIDGE
ALLOWABLE STORIES (T504.4)
2-ALLOWED 1-PROPOSED
ALLOWABLE AREA (T506.2)
950 SF ALLOWED 4200 SF PROPOSED

REQUIRED PERMITS

1) OSF (ONLY)

DRAWING LIST

MARTINEZ & ASSOCIATES
STRUCTURAL ENGINEERS, P.A.
PHONE 843.839.1620
FAX 843.839.1623
1107 48TH AVENUE NORTH 310C
MYRTLE BEACH, SC

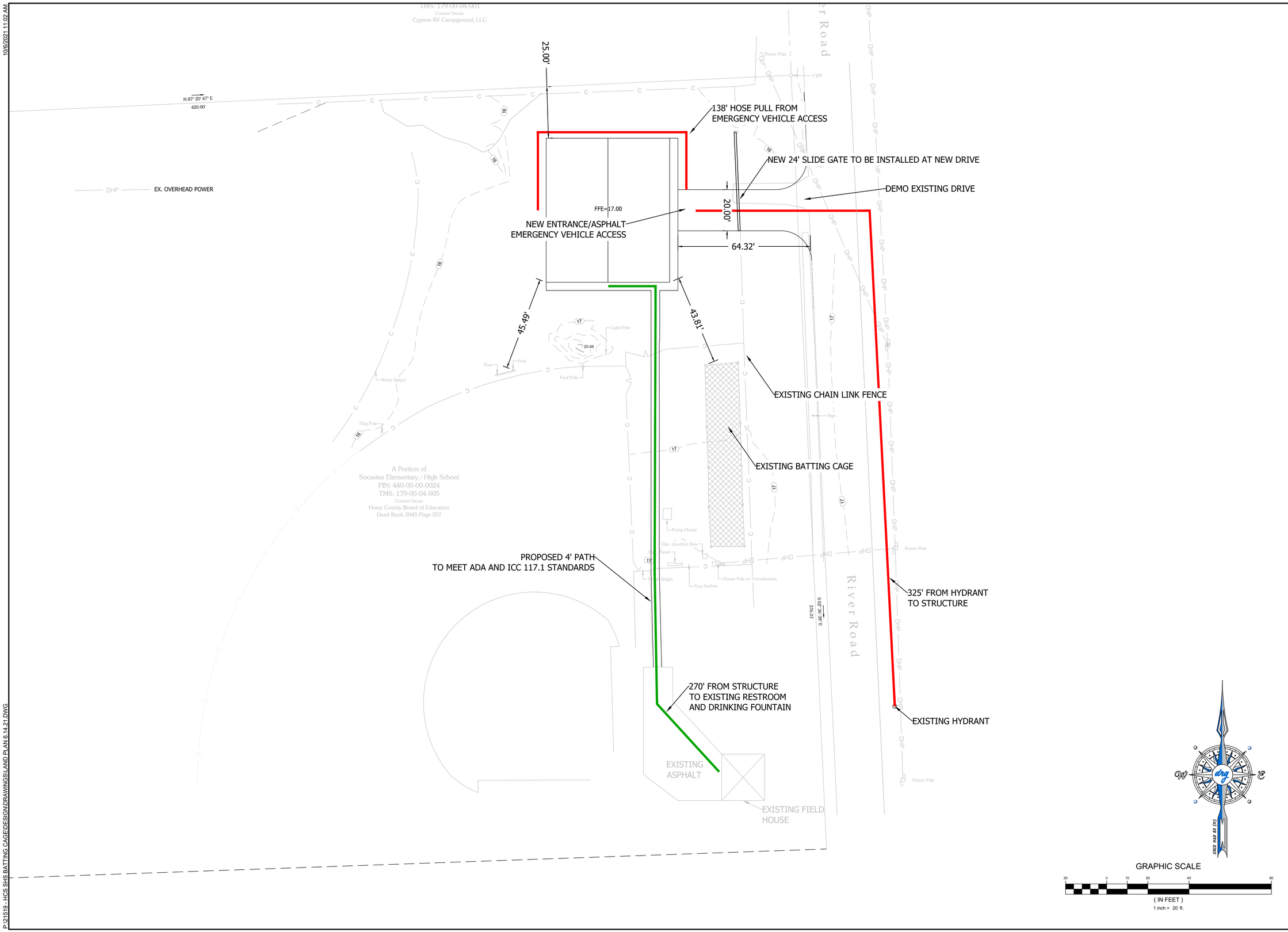
. METAL BUILDING FOR BATTING CAGE .
. SOCASTEE HIGH SCHOOL.
. 4900 SOCASTEE BOULEVARD.
. MYRTLE BEACH, SOUTH CAROLINA .

JOB NUMBER: 21-212
OWNER:
DRAWN BY: B.HOLMES
CHECKED BY: S. MARTINEZ
REVISION - DATE:
DRAWING DESCRIPTION: TITLE SHEET
DRAWING SCALE: 3/32"=1'-0"
CURRENT DRAWING ISSUE: CONSTRUCTION SET

T.0

FEBRUARY 9, 2021

10/6/2021 11:02 AM



P:\21519 - HCS SHS BATTING CAGE\DESIGN\DRAWINGS\LAND PLAN 6.14.21.DWG

drg
DEVELOPMENT RESOURCE GROUP, LLC
4703 OLEANDER DRIVE
MYRTLE BEACH, SC 29577
843-839-3350 | DRGPLLC.COM

SOUTH CAROLINA
DEVELOPMENT RESOURCE GROUP, LLC
No.6089
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
Austin Graham
NO. 22541
10/06/2021
AUSTIN GRAHAM

SITE PLAN

SHS BATTING CAGES

PREPARED FOR:
HORRY COUNTY SCHOOLS
3355 FOUR MILE ROAD
CONWAY, SC 29528

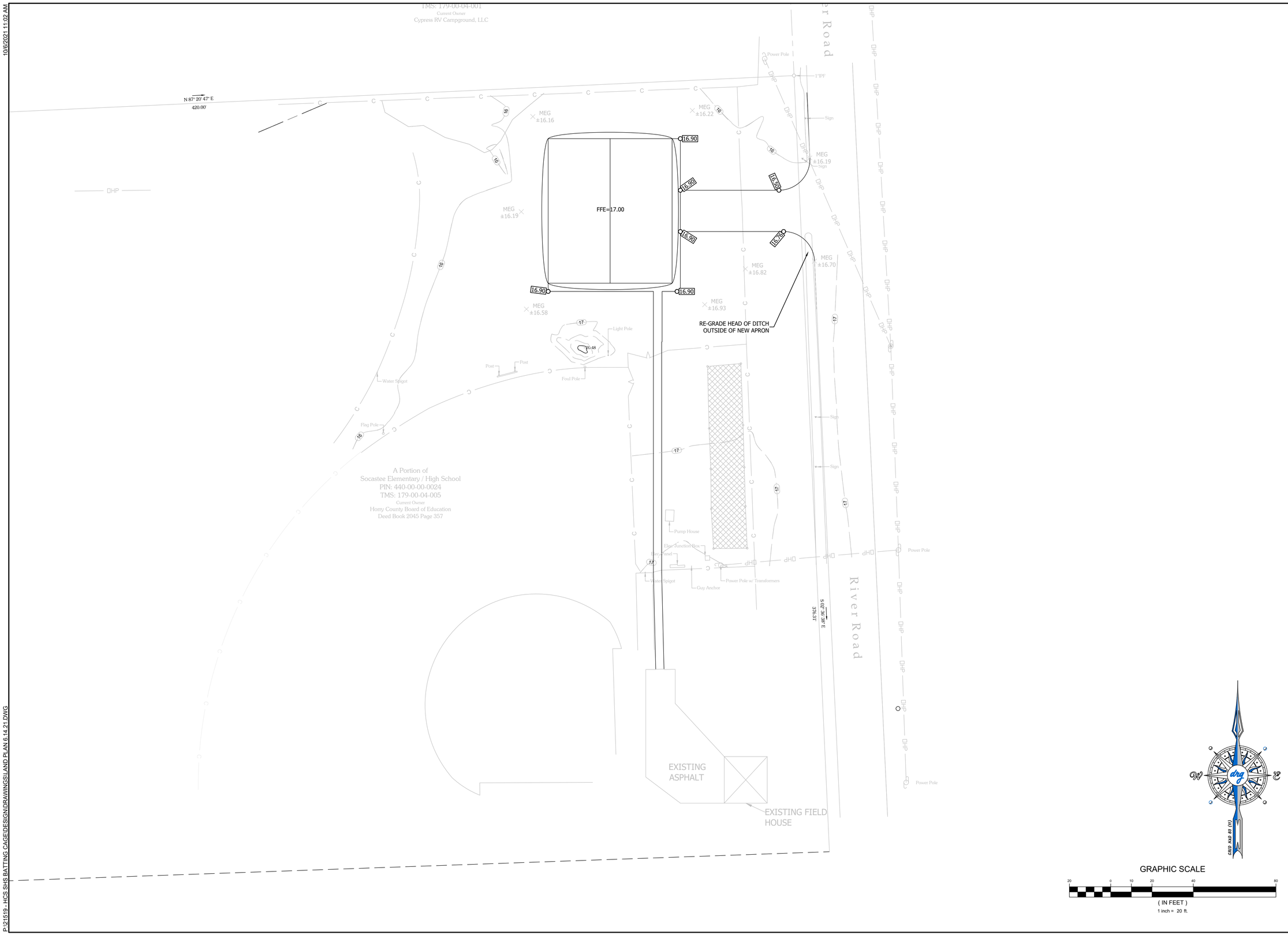
PLANS FOR PERMITTING

JOB NO:	21.519
SCALE:	1"=20'
DRAWN BY:	SH
CHECKED BY:	WAG
APPROVED BY:	WAG
DATE:	10/6/2021

SHEET NUMBER:

C1.0

10/6/2021 11:02 AM



P:\21519 - HCS SHS BATTING CAGE\DESIGN\DRAWINGS\LAND PLAN 6.14.21.DWG

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MYRTLE BEACH, SC 29577
843-839-3350 | DRGPLLC.COM

SOUTH CAROLINA
DEVELOPMENT RESOURCE GROUP, LLC
No.6089
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
NO. 32541
WILLIAM AUSTIN GRAHAM
10/6/2021

GRADING PLAN

SHS BATTING CAGES

PREPARED FOR:
HORRY COUNTY SCHOOLS
3355 FOUR MILE ROAD
CONWAY, SC 29528

PLANS FOR PERMITTING

JOB NO:	21.519
SCALE:	1"=20'
DRAWN BY:	WAG
CHECKED BY:	WAG
APPROVED BY:	WAG
DATE:	7/26/2021

SHEET NUMBER:

C2.0

SITE KEY
N.T.S.

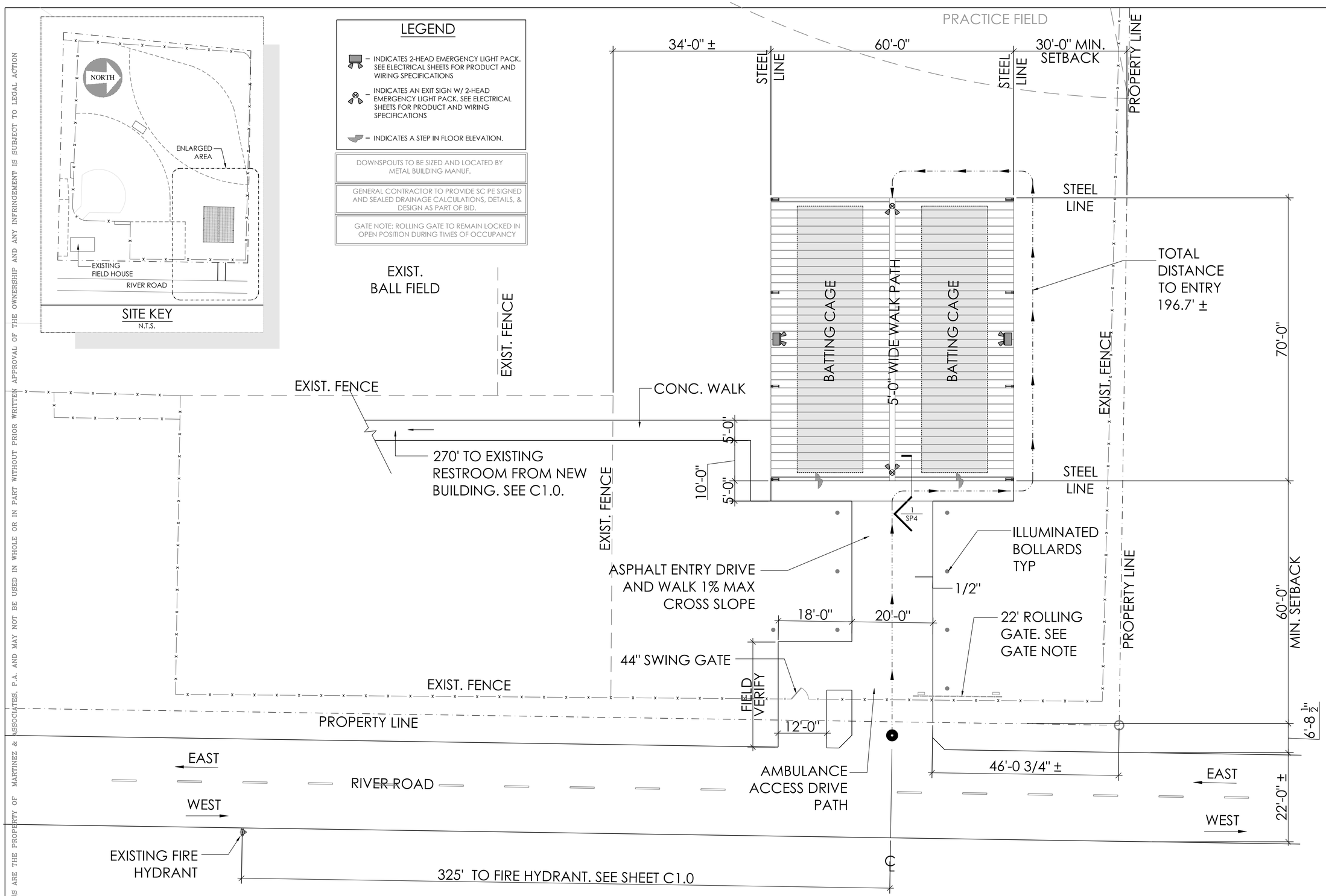
LEGEND

- INDICATES 2-HEAD EMERGENCY LIGHT PACK. SEE ELECTRICAL SHEETS FOR PRODUCT AND WIRING SPECIFICATIONS
- INDICATES AN EXIT SIGN W/ 2-HEAD EMERGENCY LIGHT PACK. SEE ELECTRICAL SHEETS FOR PRODUCT AND WIRING SPECIFICATIONS
- INDICATES A STEP IN FLOOR ELEVATION.

DOWNSPOUTS TO BE SIZED AND LOCATED BY METAL BUILDING MANUF.

GENERAL CONTRACTOR TO PROVIDE SC PE SIGNED AND SEALED DRAINAGE CALCULATIONS, DETAILS, & DESIGN AS PART OF BID.

GATE NOTE: ROLLING GATE TO REMAIN LOCKED IN OPEN POSITION DURING TIMES OF OCCUPANCY



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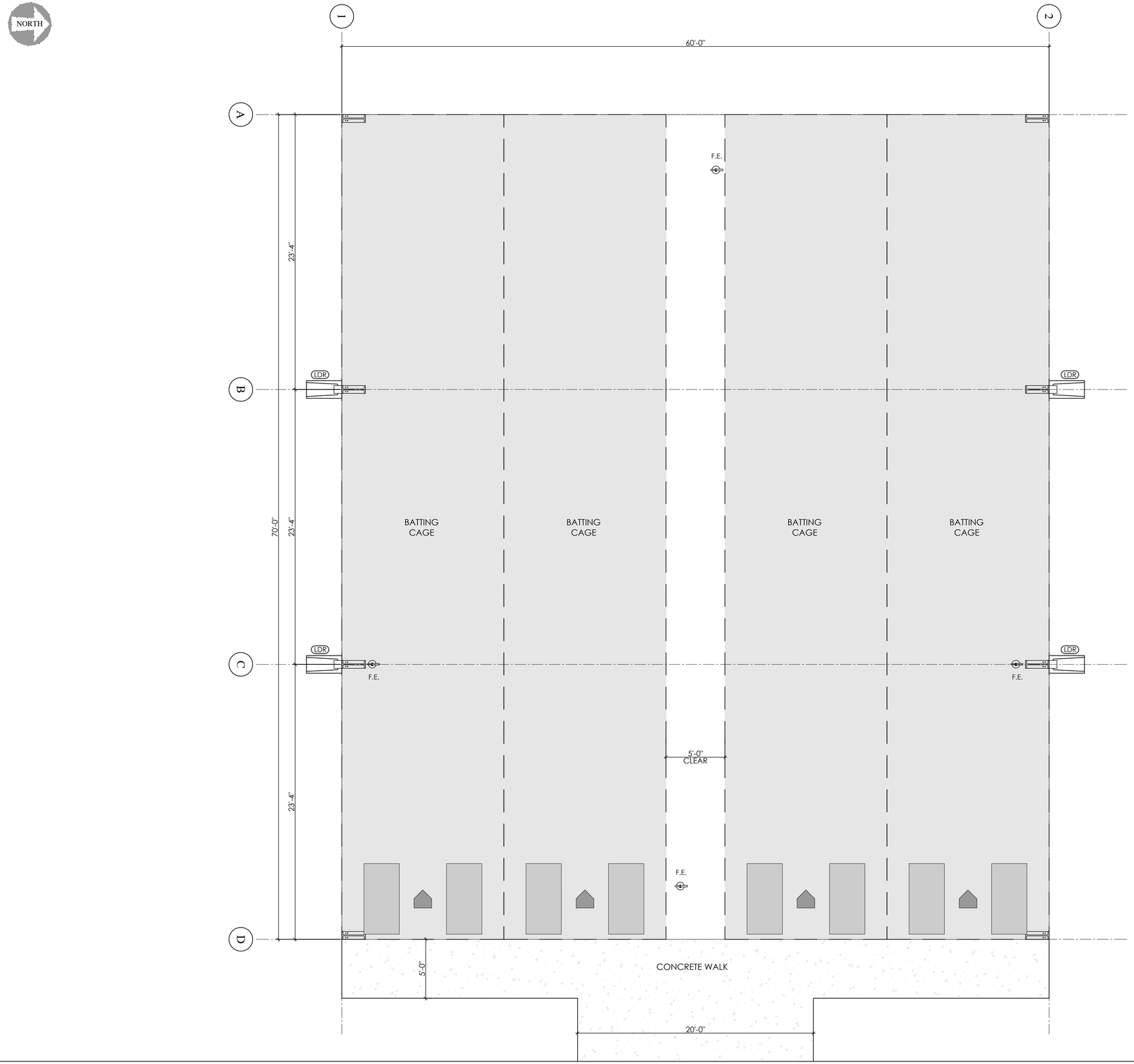
. METAL BUILDING FOR BATTING CAGE .
. SOCASTEE HIGH SCHOOL.
. 4900 SOCASTEE BOULEVARD.
. MYRTLE BEACH, SOUTH CAROLINA .

JOB NUMBER: 21-212
OWNER:
DRAWN BY: B.HOLMES
CHECKED BY: S. MARTINEZ
REVISION - DATE:
DRAWING DESCRIPTION: SITE PLAN
DRAWING SCALE: 3/32"=1'-0"
CURRENT DRAWING ISSUE: CONSTRUCTION SET

SP1

FEBRUARY 9, 2021



LEDGEND

F.E.- INDICATES LOCATION OF FIRE EXTINGUISHERS PER SECTION 906.1 & 906.3

LDR- INDICATES LOCATION OF LEADER TO SPLASH BLOCK

OCCUPANCY LOAD (T1004.5)

60' x 70' = 4200 SF

4200 / 50 = 84 PERSONS MAX

20 PERSONS PROPOSED

EGRESS (1005.3.2)

STRUCTURE: OPEN

5'-0" CENTER EGRESS AISLE PROVIDED

20 x .2 = 4 INCHES. 60 PROVIDED

60" / .2 = 300 PERSONS CAPACITY

TRAVEL DISTANCE (T1017.2)

200' W/O SPRINKLERS

70' MAX IN ANY DIRECTION PROPOSED

CAPACITY SIGN PER CODE TO BE POSTED @ PRIMARY ENTRY POINT AND VISIBLE TO OCCUPANTS

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JOB NUMBER: 21-212

OWNER:

DRAWN BY: B.HOLMES

CHECKED BY: S. MARTINEZ

REVISION - DATE:

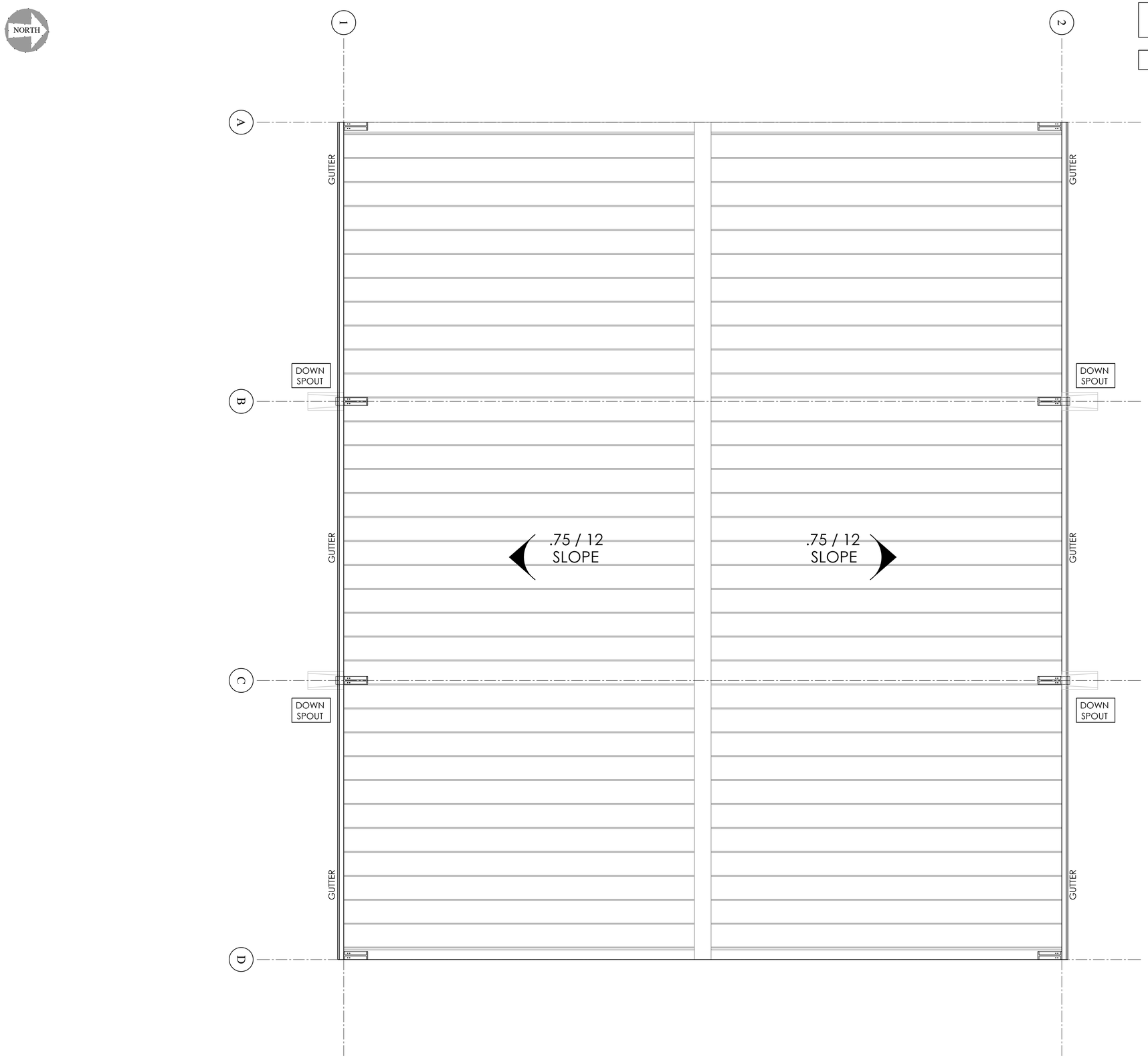
DRAWING DESCRIPTION: FLOOR PLAN

DRAWING SCALE: 1/4"=1'-0"

CURRENT DRAWING ISSUE: CONSTRUCTION SET

SP2

FEBRUARY 9, 2021



REFERENCE METAL BUILDING MANUF. DRAWINGS FOR METAL BUILDING COMPONENTS

STANDING SEAM METAL ROOFING TYP

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JOB NUMBER:
21-212

OWNER:

DRAWN BY:
B.HOLMES

CHECKED BY:
S. MARTINEZ

REVISION - DATE:

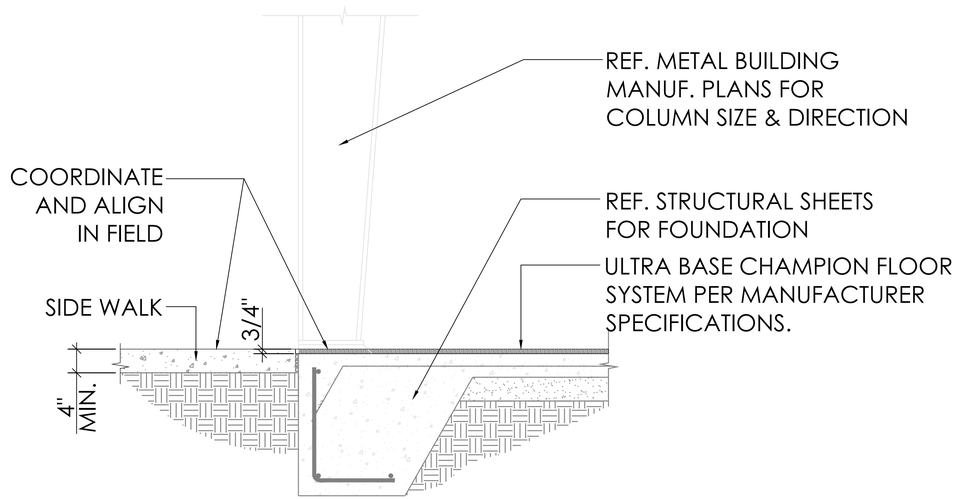
DRAWING DESCRIPTION:
ROOF PLAN

DRAWING SCALE:
1/4"=1'-0"

CURRENT DRAWING ISSUE:
CONSTRUCTION SET

SP3

FEBRUARY 9, 2021



SECTION 1 / SP4

N.T.S.

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. MYRTLE BEACH, SOUTH CAROLINA .

JOB NUMBER:
21-212

OWNER:

DRAWN BY:
B.HOLMES

CHECKED BY:
S. MARTINEZ

REVISION - DATE:

DRAWING DESCRIPTION:
SITE PLAN DETAILS

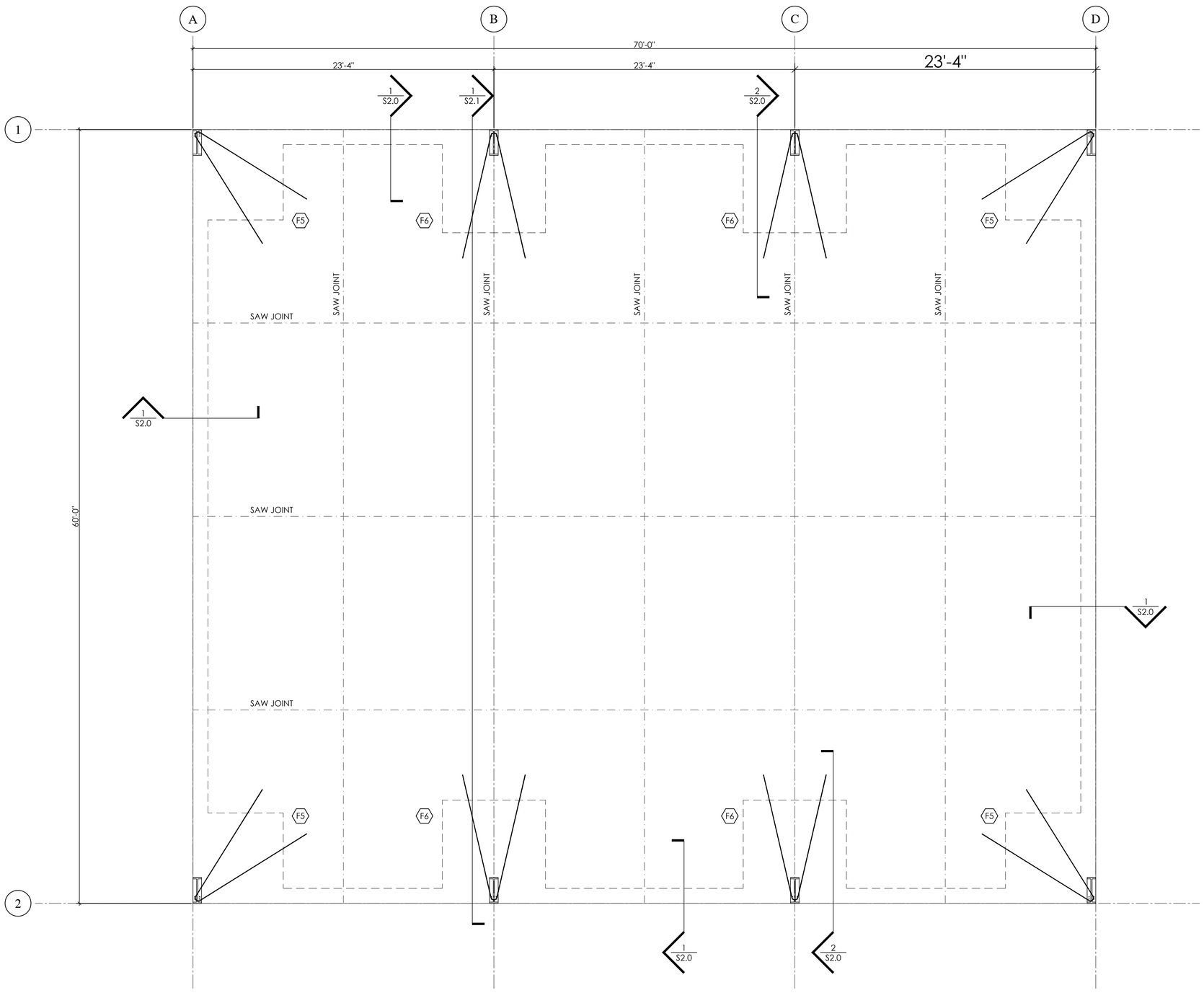
DRAWING SCALE:
3/32"=1'-0"

CURRENT DRAWING ISSUE:
CONSTRUCTION SET

SP4

FEBRUARY 9, 2021

NORTH



LEGEND

— INDICATES A 1'-6"W x 2'-0"D GRADE BEAM.

F2 — INDICATES FOUNDATION SIZE. REFERENCE FOUNDATION SCHEDULE FOR SIZE & REINFORCEMENT.

FOOTING SCHEDULE

MARK	SIZE	FOOTING SPECIFICATIONS REINFORCEMENT
F1	3'-0" x 3'-0" x 1'-8"	(4)-#5 BARS EA. WAY / BOTTOM
F2	4'-0" x 4'-0" x 1'-8"	(5)-#5 BARS EA. WAY / BOTTOM
F3	5'-0" x 5'-0" x 2'-0"	(6)-#5 BARS EA. WAY / BOTTOM
F4	6'-0" x 6'-0" x 1'-8"	(7)-#5 BARS EA. WAY / BOTTOM
F5	7'-0" x 7'-0" x 2'-0"	(8)-#5 BARS EA. WAY / BOTTOM
F6	8'-0" x 8'-0" x 2'-0"	(9)-#5 BARS EA. WAY / BOTTOM
F7	9'-0" x 9'-0" x 2'-0"	(10)-#8 BARS EA. WAY / BOTTOM

F2 DENOTES FOOTING DESIGNATION ON PLAN

METAL BUILDING MANUFACTURER TO PROVIDE ALL BUILDING COMPONENTS STRUCTURAL DRAWINGS PROVIDED FOR FOUNDATION ONLY.

5" THICK CONCRETE REINFORCED W/ W6x6 - W2.1xW2.1 WWF ON VAPOR BARRIER ON COMPACTED FILL

SHERWIN WILLIAMS.

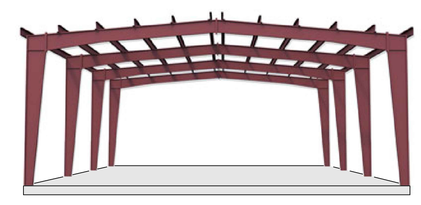
APPLY THE FOLLOWING SHERWIN WILLIAMS EPOXY COATING TO EACH COLUMN. SEE SHEET S2.0 FOR APPLICATION SPECIFICATIONS

PRIMER: B58T00101 MACROPOXY 920 (TRANSPARENT) PRE-PRIMER

PRIMER (PART A): B67V00005 RECOATABLE EPOXY PRIMER HARDENER (GRAY)

INTERMEDIATE COAT: (PART B): B58W00610 646 FAST CURE EPOXY (MILL WHITE)

(2) - TOP COATS: B65W00611 - ACROLON 218 HS POLYURETHANE -GLOSS (EXTRA WHITE)



CONCEPTUALIZATION. REFERENCE METAL BUILDING MANUFACTURER DOCUMENTS FOR FRAME CONSTRUCTION.

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. MYRTLE BEACH, SOUTH CAROLINA .

SOUTH CAROLINA MARTINEZ & ASSOCIATES STRUCTURAL ENGINEERS MURRELLS INLET, S.C. COA No. C02845 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 22809 SAM JOSEPH MARTINEZ

JOB NUMBER: 21-212

OWNER:

DRAWN BY: B.HOLMES

CHECKED BY: S. MARTINEZ

REVISION - DATE:

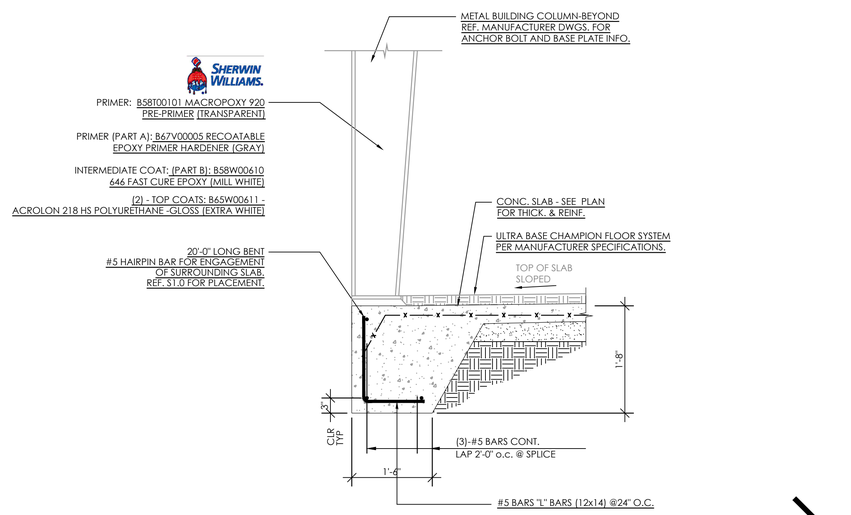
DRAWING DESCRIPTION: FOUNDATION PLAN

DRAWING SCALE: 1/4"=1'-0"

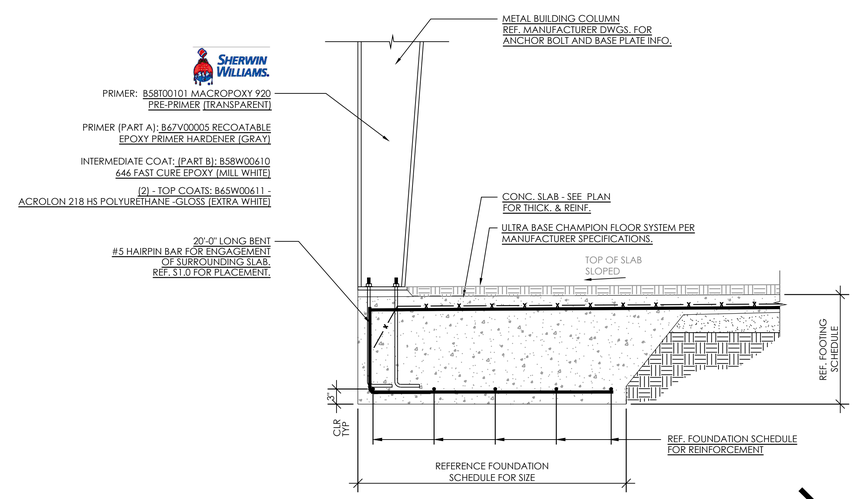
CURRENT DRAWING ISSUE: CONSTRUCTION SET

S1.0

FEBRUARY 9, 2021



SECTION 1 / S2.0



SECTION 2 / S2.0

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1107 48TH AVENUE NORTH 310C
MYRTLE BEACH, SC

. METAL BUILDING FOR BATTING CAGE .
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. MYRTLE BEACH, SOUTH CAROLINA .

SOUTH CAROLINA
MARTINEZ & ASSOCIATES
STRUCTURAL ENGINEERS
MURRELLS INLET, S.C.
COA No. C02845
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 22809
REGISTERED
SAMUEL JOSEPH MARTINEZ

JOB NUMBER: 21-212

OWNER:

DRAWN BY: B.HOLMES

CHECKED BY: S. MARTINEZ

REVISION - DATE:

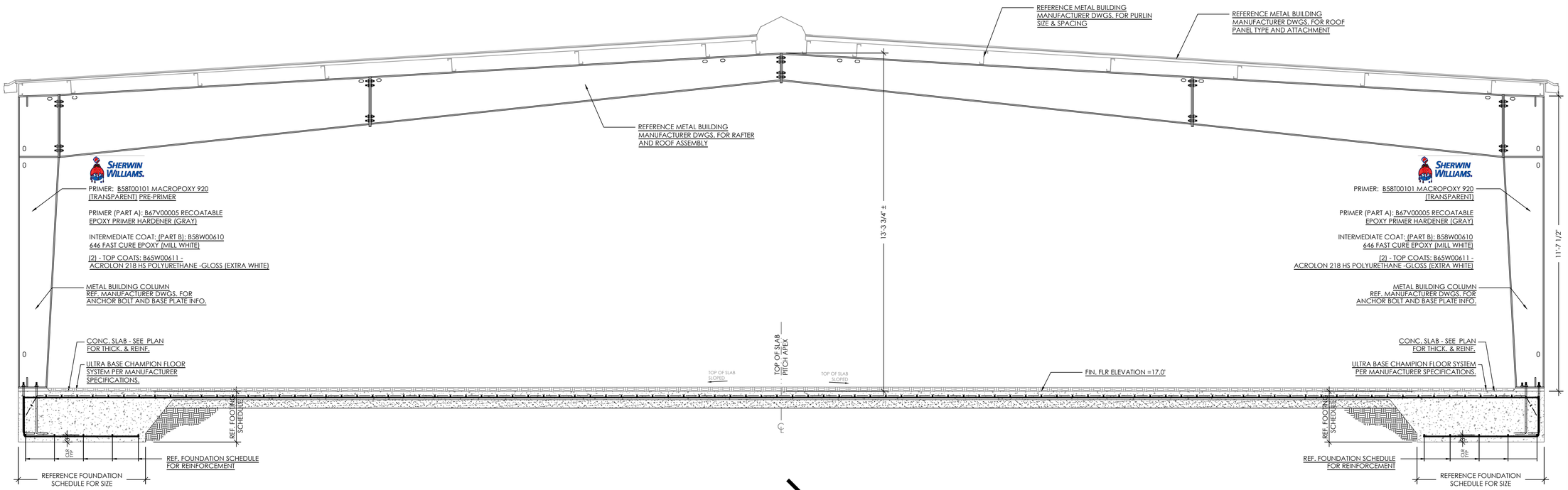
DRAWING DESCRIPTION: BUILDING SECTIONS

DRAWING SCALE: 3/4" = 1'-0"

CURRENT DRAWING ISSUE: CONSTRUCTION SET

S2.0

FEBRUARY 9, 2021



SECTION 1 / S2.1

MARTINEZ & ASSOCIATES
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1107 48TH AVENUE NORTH 310C
MYRTLE BEACH, SC

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. SOCASTEE HIGH SCHOOL.
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. MYRTLE BEACH, SOUTH CAROLINA .

SOUTH CAROLINA MARTINEZ & ASSOCIATES STRUCTURAL ENGINEERS MURRELLS INLET, S.C. COA No. C02845 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA PROFESSIONAL ENGINEER No. 22809 REGISTERED JOSEPH MARTINEZ

JOB NUMBER: 21-212

OWNER:

DRAWN BY: B.HOLMES

CHECKED BY: S. MARTINEZ

REVISION - DATE:

DRAWING DESCRIPTION: BUILDING SECTIONS

DRAWING SCALE: 1/2" = 1'-0"

CURRENT DRAWING ISSUE: CONSTRUCTION SET

S2.1

FEBRUARY 9, 2021

LOAD TABLE

STRUCTURAL DESIGN BASED ON AND DESIGNED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE

LIVE LOADS:

1. FLOOR LOADS:
   - A. Rooms - 40 p.s.f.
   - B. Offices - 50 p.s.f.
   - C. Decks - 60 p.s.f.
   - D. Balconies - 100 p.s.f.
   - E. Other loads per IBC 2018
2. ROOF LOADS:
   - A. Basic roof live load = 15 p.s.f.
3. PARTITIONS:
   - A. Partition load - 12 p.s.f.

DEAD LOADS:

1. USE ACTUAL DEAD LOADS OF MATERIALS

SNOW LOADS:

FLAT-ROOF SNOW LOAD - Pf = 10psf

SNOW EXPOSURE FACTOR - Ce = 1.0

SNOW LOAD IMPORTANCE FACTOR - Is = 1.0

THERMAL FACTOR - Ct = 1.0

NOTE:
IT SHALL BE UNLAWFUL TO PLACE, OR CAUSE OR PERMIT TO BE PLACED, ON ANY FLOOR OR ROOF OF A BUILDING, STRUCTURE, OR PORTION THEREOF, A LOAD GREATER THAN IS PERMITTED BY THESE REQUIREMENTS. (PER IBC CHAPTER 16/ASCE 7-10)

WIND LOADS:

BUILDING CLASSIFICATION: ENCLOSED

WINDOW PROTECTION: IMPACT GLAZING FOR LARGE MISSILE TEST ASTM E 1996 (BELOW 30 FEET)
SMALL MISSILE TEST ASTM E 1996 (ABOVE 30 FEET)

DESIGN WIND SPEED (mph)=141 ULTIMATE / 116 NOMINAL

WIND IMPORTANCE FACTOR - Iw = 1.0

BUILDING RISK CATEGORY = II

WIND EXPOSURE = C

INTERNAL PRESSURE COEFICIENT = +/- 0.18

REQUIRED WINDOW/DOOR DESIGN PRESSURE RATING = 55 PSF

SEISMIC LOADS:

SEISMIC USE GROUP - I

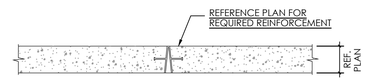
SPECTRAL RESPONSE COEFFICIENTS -
Sds =0.53 Sd1 = 0.29

SITE CLASS - D

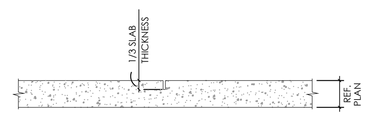
BASIC SEISMIC-FORCE RESISTING SYSTEM -
BEARING WALL SYSTEM

DESIGN BASE SHEAR - LESS THAN 5 KIPS

ANALYSIS PROCEDURE - EQUIVALENT FORCE METHOD



TYPICAL KEY-WAY CONTROL JOINT DETAIL



TYPICAL SAW JOINT DETAIL

CONSTRUCTION NOTES

1. ALL THE NOTES, DRAWINGS, AND DETAILS SHALL BE PROPERLY INTERPRETED BY THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS RESPONSIBLE FOR WORK OUTLINED BY THESE DRAWINGS. THE STRUCTURAL ENGINEER OF RECORD FOR THESE DOCUMENTS WILL PROVIDE THE NECESSARY INFORMATION FOR THE PROPER INTERPRETATION OF STRUCTURAL DATA.

2. THE CONTRACTOR SHALL FIELD VERIFY ALL DRAWING DIMENSIONS AND NOTIFY THE LEAD ARCHITECT AND/OR STRUCTURAL ENGINEER OF ANY NOTED DISCREPANCIES BETWEEN DRAWINGS.

3. UNLESS SPECIFIC DETAILS ARE PROVIDED BY THE STRUCTURAL ENGINEER, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROPER CONFIGURATION AND ERECTION OF TEMPORARY SHORING AND BRACING. THE CONTRACTOR SHOULD TAKE CONSIDERABLE CARE IN MAINTAINING THE INTEGRITY OR STABILITY OF THE STRUCTURE THROUGHOUT THE DURATION OF THE CONSTRUCTION.

4. THE CONTRACTOR MUST MAINTAIN AND DISTRIBUTE SHOP DRAWINGS TO THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. FAILURE OF THE CONTRACTOR TO SUBMIT SHOP DRAWINGS MAY RESULT IN THE REMOVAL AND REPLACEMENT OF NON-APPROVED BUILDING ELEMENTS AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHOULD ALLOW 10 WORKING DAYS FOR THE APPROVAL OF SHOP DRAWINGS.

5. THE ORIGINATORS OF SHOP DRAWINGS MAY NOT REPRODUCE DESIGN DRAWINGS FOR THE PURPOSE OF SHOP DRAWING APPROVAL UNLESS GRANTED PERMISSION TO DO SO BY THE STRUCTUAL ENGINEER OF RECORD.

6. ALL HANDRAILS, STAIRS, OR BUILDING ELEMENT DESIGNED BY INTERESTS OTHER THAN THE STRUCTURAL ENGINEER OF RECORD, MUST BE SEALED BY THE RESPONSIBLE ENGINEER AND SUBMITTED TO THE CONTRACTOR FOR RECORDING PURPOSES.

7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT ALL BUILDING ELEMENTS ARE NOT SUBJECT TO LOADS GREATER THAN THOSE ALLOWED BY THE DESIGN LOAD TABLE.

8. THE CONTRACTOR MUST OBTAIN WRITTEN PERMISSION BY THE STRUCTURAL ENGINEER BEFORE DEVIATING FROM INSTRUCTIONS PROVIDED BY THE DESIGN DOCUMENTS.

9. DETAILS PROVIDED IN THESE DOCUMENTS MAY BE TYPICAL TO MULTIPLE LOCATIONS THROUGHOUT THE BUILDING AND SHOULD BE REPEATED AS APPLICABLE.

10. THE ENGINEER RESERVES THE AUTHORITY TO MODIFY THE BUILDING STRUCTURAL ELEMENTS AS NEEDED WHEN LOADING CONDITIONS ARE ALTERED FOLLOWING THE DESIGN PROCESS.

11. ALL EXISTING PROJECT CONDITIONS MUST BE VERIFIED BY THE CONTRACTOR INCLUDING DIMENSIONS AND CONDITIONS. DESIGN DRAWING SPECIFICATIONS FOUND TO BE IN CONFLICT WITH EXISTING CONDITIONS MUST BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER.

12. QUESTIONS RELATING TO THE INCLUDED STRUCTURAL DRAWINGS MAY BE DIRECTED TO:

MARTINEZ & ASSOCIATES STRUCTURAL ENGINEERS, P.A.
1107 48th AVENUE NORTH 310C
MYRTLE BEACH, SOUTH CAROLINA 29577
(843) 839-1620 OFFICE
(843) 241-2826 MOBILE
(843) 839-1623 FAX

CONCRETE:

1. ALL CONCRETE AND REINFORCING STEEL MUST BE INSTALLED PER THE CURRENT ADOPTED ISSUE OF THE AMERICAN CONCRETE INSTITUTE BUILDING CODE AND COMMENTARY 318.

2. THE CONTRACTOR IS RESPONSIBLE FOR ALL REINFORCING BARS TO BE SECURED DURING THE PLACEMENT OF CONCRETE. REBAR CHAIRS ARE RECOMMENDED FOR BOTH REINFORCING BARS AND WIRE WELDED MESH REINFORCEMENT IN ORDER TO MAINTAIN THE REQUIRED CLEAR DISTANCE AS REQUIRED BY ACI-318.

3. UNDER NO CIRCUMSTANCES MAY WATER BE ADDED TO THE CONCRETE MIX DURING PLACEMENT WITHOUT THE WRITTEN PERMISSION OF THE STRUCTURAL ENGINEER OF RECORD.

4. UNDER NO CIRCUSTANCES MAY CALCIUM CHLORIDE BE ADDED TO THE CONCRETE MIX.

5. SPECIAL PRECAUTIONS MUST BE TAKEN PER ACI-318 WHEN PLACING CONCRETE DURING HOT (ABOVE 90 DEGREES FAHRENHEIT) OR COLD (BELOW 45 DEGREES FAHRENHEIT) TEMPERATURES. THE CONTRACTOR SHOULD CONSULT THE STRUCTURAL ENGINEER WHEN PLACING CONCRETE IN THESE CONDITIONS.

6. REINFORCING STEEL SHOULD CONFORM TO ASTM A615, GRADE 60.

7. A MINIMUM LAP OF 1'-4" SHOULD BE ACHIEVED WHEN PLACING WELDED WIRE FABRIC.

8. 28 DAY MINIMUM CONCRETE COMPRESSIVE STRENGTHS MUST BE AS FOLLOWS:

FOOTINGS 3000 PSI
SLABS ON GRADE 3000 PSI

9. TROWEL FINISH AT SLABS ON GRADE WILL BE REQUIRED.

COLD-FORMED STEEL AND LIGHT-FRAMED SHEAR WALLS

1. STUDS SHALL BE A MINIMUM $1\frac{5}{8}$" BY $3\frac{5}{8}$" WITH A $\frac{3}{8}$" RETURN LIP. AS A MINIMUM, STUDS SHALL BE DOUBLE (BACK TO BACK) AT SHEAR WALL ENDS.

2. TRACK SHALL BE A MINIMUM $1\frac{1}{4}$" BY $3\frac{1}{8}$" AND SHALL BE EQUAL IN GAUGE THICKNESS TO THAT OF THE METAL STUD(S) WITHIN THAT TRACK.

3. BOTH STUDS AND TRACK SHALL HAVE A MINIMUM UNCOATED BASE METAL THICKNESS OF 33 MILS AND SHALL BE OF THE FOLLOWING GRADES OF STRUCTURAL QUALITY STEEL: ASTM A653 SS GRADE 33, ASTM A792 SS GRADE 33, OR ASTM A875 SS GRADE 33.

4. FASTENERS ALONG THE EDGES IN SHEAR PANELS SHALL BE PLACED NOT LESS THAN $\frac{3}{8}$" IN FROM PANEL EDGES.

5. WHERE HORIZONTAL STRAP BLOCKING IS USED TO PROVIDE EDGE BLOCKING, IT SHALL BE A MINIMUM $1\frac{1}{2}$" WIDE AND OF THE SAME MATERIAL AND EQUAL OR GREATER THICKNESS AS THE TRACK AND STUDS.

6. SCREWS SHALL BE ATTACHED TO INTERMEDIATE SUPPORTS AT 12" ON CENTER UNLESS OTHERWISE NOTED.

7. GYPSUM BOARD ATTACHED TO DESIGNATED SHEAR OR LOAD BEARING WALL SHALL BE FULLY BLOCKED WITH SCREW SPACING AT 6" O.C. AT BOARD EDGES AND 6" O.C. WITHIN BOARD FIELD.

8. WOOD STRUCTURAL PANELS SHALL BE ATTACHED TO STEEL FRAMING WITH FLAT-HEAD SELF-DRILLING TAPPING SCREWS WITH A MINIMUM HEAD DIAMETER OF 0.292 INCH.

9. STRUCTURAL PANELS ARE PERMITTED TO BE APPLIED EITHER PARALLEL OR PERPENDICULAR TO FRAMING.

10. SCREWS USED TO ATTACH GYPSUM BOARD SHALL BE A MINIMUM NO. 6 IN ACCORDANCE WITH ASTM C954.

11. ATTACH TRACK TO CONCRETE BASE WITH A MINIMUM OF (2) 0.177 POWDER ACTUATED FASTENERS AT 16" ON CENTER.

12. ATTACH STUDS TO TRACK LEGS WITH A MINIMUM OF (2) #8 TAP SCREWS.

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MYRTLE BEACH, SC

. METAL BUILDING FOR BATTING CAGE .
. SOCASTEE HIGH SCHOOL.
. 4900 SOCASTEE BOULEVARD .
. MYRTLE BEACH, SOUTH CAROLINA .

SOUTH CAROLINA
MARTINEZ & ASSOCIATES
STRUCTURAL ENGINEERS
MURRELLS INLET, S.C.
COA No. C02845
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 22809
REGISTERED
SAMUEL JOSEPH MARTINEZ

JOB NUMBER: 21-212

OWNER:

DRAWN BY: B.HOLMES

CHECKED BY: S. MARTINEZ

REVISION - DATE:

DRAWING DESCRIPTION: BUILDING SECTION CONSTRUCTION NOTES

DRAWING SCALE: 3/4" = 1'-0"

CURRENT DRAWING ISSUE: CONSTRUCTION SET

S3.0

FEBRUARY 9, 2021

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

REFERENCE TABLE 1704.3 OF 2018 INTERNATIONAL BUILDING CODE

INSPECTION TASK	FREQUENCY OF INSPECTION			
	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	-	X	ACI 318: 3.5, 7.1-7.7	1910.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2, ITEM 2B.	-	-	AWS D1.4 ACI 318: 3.5.2	-
3. INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	-	X	ACI 318:8.1.3, 21.1.8	1908.5, 1909.1
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	-	X	ACI 318: 3.8.6, 8.1.3, 21.1.8	1909.1
5. VERIFYING USE OF REQUIRED DESIGN MIX.	-	X	ACI 318: CH. 4, 5.2-5.4	1904.2, 1910.2, 1910.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1910.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	ACI 318: 5.9, 5.10	1910.6, 1910.7, 1910.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	ACI 318: 5.11-5.13	1910.9
9. INSPECTION OF PRESTRESSED CONCRETE:				
A. APPLICATION OF PRESTRESSING FORCES.	X	-	ACI 318: 18.20 ACI 318: 18.18.4	-
B. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.	X	-		
10. ERECTION OF PRECAST CONCRETE MEMBERS.	-	X	ACI 318: CH. 16	-
11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.		X	ACI 318: 6.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		X	ACI 318: 6.1.1	-

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

REFERENCE TABLE 1704.3 OF 2018 INTERNATIONAL BUILDING CODE

INSPECTION TASK	FREQUENCY OF INSPECTION			
	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
1. MATERIAL VERIFICATION OF HIGH STRENGTH BOLT, NUTS, AND WASHERS:				
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X	APPLICABLE ASTM MATERIAL SPECS; AISC 335, SECTION A3.4; AISC LRFD, SECTION A3.3	-
B. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	-	X		-
2. INSPECTION OF HIGH-STRENGTH BOLTING:				
A. BEARING-TYPE CONNECTIONS:	-	X	AISC LRFD SECTION M2.5	1705.2
B. SLIP-CRITICAL CONNECTIONS.	X	X		
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:				
A. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	-	ASTM A 6 OR ASTM A 568	1705.2
B. MANUFACTURER'S CERTIFIED MILL TEST REPORTS.	-	-	ASTM A 6 OR ASTM A 568	
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:				
A. IDENTIFACTION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	-	AISC, ASD, SECTION A3.6; AISC LRFD, SECTION A3.5	-
B. MANUFACTURER'S CERIFICATE OF COMPLIANCE RECORD.	-	-	-	
5. INSPECTION OF WELDING:	-	-		1705.2.2.1
A. STRUCTURAL STEEL:	-	-		
1. COMPLETE AND PARTIAL PENTRATION GROOVE WELDS.	X	-	AWS D1.1	1705.2.1
2. MULTIPASS FILLET WELDS.	X	-		
3. SINGLE-PASS FILLET WELDS > $\frac{5}{16}$"	X	-		
4. SINGLE-PASS FILLET WELDS <= $\frac{5}{16}$"	-	X		
5. FLOOR AND DECK WELDS.	-	X	AWS D1.3	-
B. REINFORCING STEEL:	-	-	AWS D1.4 ACI 318: 3.5.2	1705.2.2.1.2
1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706.	-	X		
2. REINFORCING STEEL-RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS AND SHEAR REINFORCEMENT.	-	X		
3. SHEAR REINFORCEMENT.	-	X		
4. OTHER REINFORCING STEEL.	-	X		
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:	-	X	-	1705.2.1
A. DETAILS SUCH AS BRACING AND STIFFENING.	-	-		
B. MEMBER LOCATIONS.	-	-		
C. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	-			

QUALITY ASSURANCE FOR SEISMIC RESISTANCE

REFERENCE SECTION 1705.11 OF THE 2018 INTERNATIONAL BUILDING CODE

A QUALITY ASSURANCE PLAN FOR SEISMIC REQUIREMENTS SHALL BE PROVIDED FOR THE FOLLOWING SYSTEMS RESISTING SEISMIC FORCES:

1. SPECIALLY REINFORCED CONCRETE MASONRY.
2. SPECIALLY REINFORCED CONCRETE.
3. ANCHORAGE OF ELECTRICAL EQUIPMENT USED FOR EMERGENCY OR STANDBY POWER SYSTEMS.
4. ANCHORAGE OF EXTERIOR WALL PANELS COMPRISED OF MATERIALS LISTED ABOVE.

QUALITY ASSURANCE PLAN PREPARATION

THE DESIGN OF EACH DESIGNATED SEISMIC SYSTEM SHALL INCLUDE A QUALITY ASSURANCE PLAN PREPARED BY A REGISTERED DESIGN PROFESSIONAL (THIRD PARTY OR OTHERWISE). THE QUALITY ASSURANCE PLAN SHALL IDENTIFY THE FOLLOWING.

1. THE TYPE AND FREQUENCY OF TESTING REQUIRED.
2. THE TYPE AND FREQUENCY OF SPECIAL INSPECTIONS REQUIRED.
3. THE REQUIRED FREQUENCY AND DISTRIBUTION OF TESTING AND SPECIAL STRUCTURAL INSPECTION REPORTS TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.

CONTRACTOR RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND TO THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN THE FOLLOWING:

1. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
2. ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE BUILDING OFFICIAL.
3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGAINIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF THE REPORTS.
4. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) WITHIN THE ORGANIZATION.

QUALITY ASSURANCE FOR WIND RESISTANCE

REFERENCE SECTION 1705.10 OF THE 2018 INTERNATIONAL BUILDING CODE

A QUALITY ASSURANCE PLAN FOR WIND REQUIREMENTS SHALL BE PROVIDED FOR THE FOLLOWING SYSTEMS SUBJECT TO RESISTING FORCES WITHIN WIND EXPOSURE CATEGORIES A AND B (WHERE THE ULTIMATE WIND SPEED IS 150 MILES PER HOUR AND NOMINAL WIND SPEED IS 116 MILES PER HOUR) AND CATEGORIES C AND D (WHERE THE ULTIMATE WIND SPEED IS 150 MILES PER HOUR AND NOMINAL WIND SPEED IS 116 MILES PER HOUR):

1. ROOF CLADDING AND ROOF FRAMING CONNECTIONS.
2. WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING.
3. ROOF AND FLOOR DIAPHRAGM SYSTEMS, INCLUDING COLLECTORS, DRAG STRUTS AND BOUNDARY ELEMENTS.
4. ANCHORAGE OF EXTERIOR WALL PANELS DESIGNED TO RESIST WIND SHEAR.

QUALITY ASSURANCE PLAN PREPARATION

THE DESIGN OF EACH DESIGNATED SEISMIC SYSTEM SHALL INCLUDE A QUALITY ASSURANCE PLAN PREPARED BY A REGISTERED DESIGN PROFESSIONAL (THIRD PARTY OR OTHERWISE) OR BY A QUALIFIED PERSON APPROVED BY THE BUILDING OFFICIAL. THE QUALITY ASSURANCE PLAN SHALL IDENTIFY THE FOLLOWING.

1. THE TYPE AND FREQUENCY OF TESTING REQUIRED.
2. THE TYPE AND FREQUENCY OF SPECIAL INSPECTIONS REQUIRED.
3. THE REQUIRED FREQUENCY AND DISTRIBUTION OF TESTING AND SPECIAL STRUCTURAL INSPECTION REPORTS TO ARCHITECT AND STRUCTURAL ENGINEER OF RECORD.

CONTRACTOR RESPONSIBILITY

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MARTINEZ & ASSOCIATES
STRUCTURAL ENGINEERS
MURRELLS INLET, S.C.
COA No. C02845
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
PROFESSIONAL ENGINEER
No. 22809
REGISTERED
SAMUEL JOSEPH MARTINEZ

JOB NUMBER:
21-212

OWNER:

DRAWN BY:
B.HOLMES

CHECKED BY:
S. MARTINEZ

REVISION - DATE:

DRAWING DESCRIPTION:
SPECIAL INSPECTIONS

DRAWING SCALE:
3/4" = 1'-0"

CURRENT DRAWING ISSUE:
CONSTRUCTION SET

S4.0

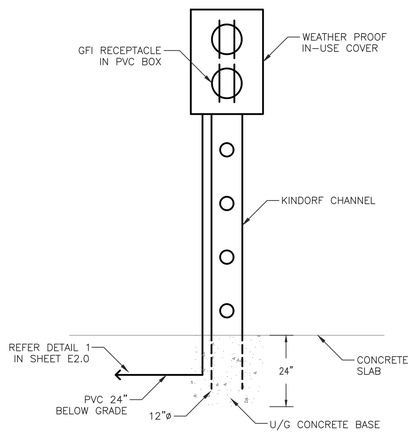
FEBRUARY 9, 2021

LIGHTING FIXTURE SCHEDULE

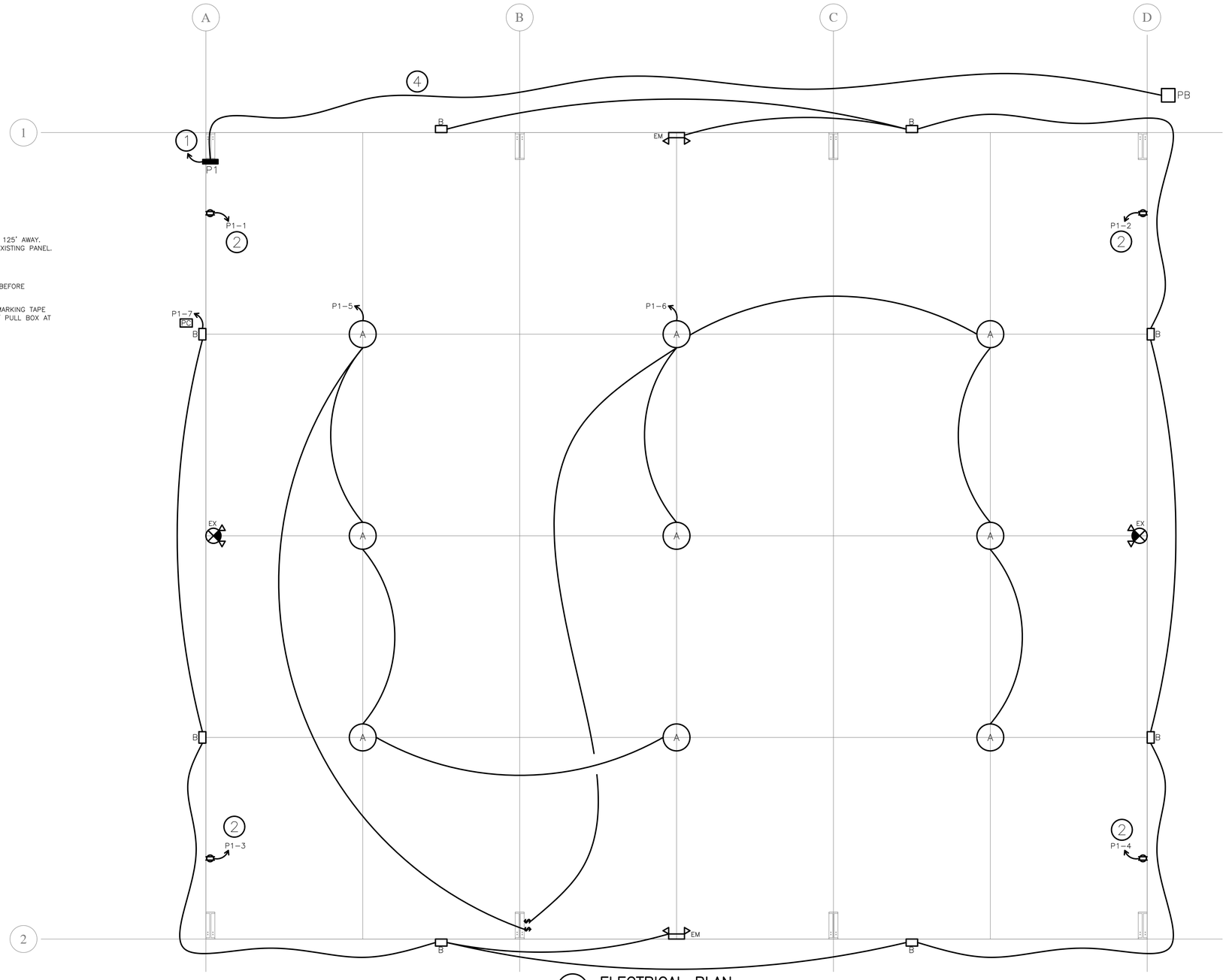
TAG	FIXTURE TYPE	DIFFUSER	COLOR	MTG	LAMP NO.	LAMP TYPE	LAMP WATTS	VOLTS	MANUFACTURER/MODEL	LOCATION/REMARKS
A	LED HIGH BAY LIGHT FIXTURE	ACRYLIC	WHITE	SURFACE	1	LED	197	120	INDUSTRIAL LIGHTING RB3-25L-U-50	
B	EXTERIOR WALL PACK	ACRYLIC	WHITE	WALL	1	LED	39	120	INDUSTRIAL LIGHTING SWP-5L-U-40-BRZ	
EM	EMERGENCY LIGHT	ACRYLIC	WHITE	WALL	1	LED	9	120	HUBBELL LIGHTING CUWZ-PC	
EX	EXIT SIGN	NONE	WHITE	WALL	2	LED	7.5	120	EMERGI-LITE ELXC-LPR	

ELECTRICAL KEY NOTES:

1. PROVIDE UNDERGROUND HOME RUN TO PANEL ISB APPROXIMATELY 125' AWAY. PROVIDE 3-1/0 W/GND IN 2"C. PROVIDE 2 POLE 100A C/B IN EXISTING PANEL.
2. MOUNT ON KINDORF RACK 18" A.F.F. – SEE DETAIL.
3. HAVE ALL THE UNDERGROUND ITEMS MARKED IN THE WORK AREA BEFORE COMMENCING.
4. PROVIDE 3/4" PVC 24" UNDER GROUND WITH PULL STRING AND MARKING TAPE CIRCUIT BREAKER PANEL TO INCOMING ROADWAY. PROVIDE 12"x12" PULL BOX AT END. COORDINATE WITH SITE CONTRACTOR.



DET 1 / E1.0 RECEPTACLE MOUNTING DETAIL
SCALE: N.T.S.



A / E1.0 ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

BEST ENGINEERING, LLC

BEST Engineering, LLC

MECHANICAL & ELECTRICAL CONSULTING ENGINEERS

24 Bobcat Dr
Pawleys Island, SC 29585
843.235.8280

brian@bestengineering.us

STAMPS

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO: 17729 BRIAN E. SELL

SOUTH CAROLINA BEST ENGINEERING NO: C02536 CERTIFICATE OF AUTHORIZATION

PROJECT AND LOCATION:

ELECTRICAL PLANS FOR:

A METAL BUILDING BATTING CAGE FOR

SOCASTEE HIGH SCHOOL

HORRY COUNTY, SOUTH CAROLINA

REVISIONS:

NUM	DESCRIPTION

DATE:

JUN 16, 2021

DRAWING TITLE:

ELECTRICAL PLAN, NOTES, DETAIL & SCHEDULES

DWG. NO.:

E1.0

GENERAL ELECTRICAL NOTES

A. THIS CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO INSTALL AND TEST A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

B. THIS SUBCONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND/OR FEES REQUIRED FOR THE EXECUTION OF THIS WORK.

C. THIS SUBCONTRACTOR SHALL REFER TO THE GENERAL, SPRINKLER PLUMBING AND HVAC DRAWINGS AND CLOSELY COORDINATE ALL WORK BEING INSTALLED.

D. ALL WORK SHALL MEET THE REQUIREMENTS OF ALL GOVERNING AGENCIES (STATE, COUNTY, LOCAL, UTILITIES, ETC.) HAVING JURISDICTION.
   1. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO OBTAIN AND PAY FOR ALL FEES, INSPECTIONS, LICENSES, PERMITS ETC., EITHER TEMPORARY OR PERMANENT, REQUIRED BY THESE AGENCIES.

E. THIS CONTRACTOR SHALL BE REQUIRED TO FAMILIARIZE HIMSELF WITH THE PROPOSED WORK SCHEDULE AND SHALL COORDINATE HIS WORK WITH OTHER TRADES, SO THAT CONSTRUCTION CAN PROGRESS IN A SYSTEMATIC FASHION.

F. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SUPPLIED BY REPUTABLE MANUFACTURER HAVING CONFORMED TO THE DESIGN, RATINGS, STANDARDS AND TEST OF THE FOLLOWING ORGANIZATIONS:
   1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
   2. NATIONAL ELECTRICAL MANUFACTURERS (NEMA)
   3. UNDERWRITERS LABORATORIES, INC. (UL)
   4. EDISON ELECTRIC INSTITUTE (EEI)
   5. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)

G. ALL INSTALLATION WORK SHALL BE PERFORMED BY EXPERIENCED JOURNEYMEN AND COMPLY WITH THE FOLLOWING ASSOCIATIONS:
   1. NATIONAL ELECTRIC CODE (NEC)
   2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
   3. NATIONAL ELECTRIC SAFETY CODE (NESC)
   4. OCCUPATIONAL SAFETY & HEALTH ACT (OSHA)
   5. ALL APPLICABLE STATE AND LOCAL CODES

H. CONDUIT AND FITTINGS:
   1. ELECTRIC METALLIC TUBING (EMT) SHALL BE GALVANIZED (INSIDE & OUT) METAL WITH UNIFORM WALL THICKNESS AND CONTINUOUSLY WELDED SEAMS.
      A. CAN BE USED IN ALL APPLICATIONS EXCEPT IN HAZARDOUS AREAS, WHERE ABUSE MAY DAMAGE IT, OR UNDERGROUND.
   2. RIGID & INTERMEDIATE METAL CONDUIT (IMC) SHALL BE HOT DIPPED GALVANIZED WITH CROSS-SECTION, UNIFORM WALL THICKNESS, AND CHAMPHERED/THREADED ENDS.
      A. CAN BE USED IN ALL APPLICATIONS EXCEPT UNDER GROUND.
   3. FLEXIBLE CONDUIT SHALL BE GALVANIZED STEEL STRIPS SHAPED INTO INTERLOCKING CONVOLUTIONS CREATING A CONTINUOUS FLEXIBLE CONDUIT WITH SMOOTH INTERIOR & EXTERIOR SURFACES.
      A. CAN BE USED IN UP TO SIX (6) FEET LENGTHS FOR CONNECTION TO LIGHTS OF EQUIPMENT. A GROUNDING CONDUCTOR SHALL BE INSERTED THROUGH EACH INSTALLATION.
   4. PVC CONDUIT SHALL BE SCHEDULE 40 HEAVY WALL.
      A. CAN BE USED UNDERGROUND OR UNDER SLAB. ALL OTHER INSTALLATION SHALL BE APPROVED BY THE ELECTRICAL INSPECTOR AND THE ARCHITECT.
   5. CONDUIT SIZE: MINIMUM CONDUIT SIZE 3/4" EXCEPT WHERE OTHER SIZES ARE SPECIFICALLY INDICATED.
   6. WHERE CONDUIT PASS THROUGH FIRE RATED WALLS AND/OR FLOORS, THE SPACE BETWEEN THE CONDUIT AND THE OPENING SHALL BE FIRE STOPPED WITH A NON-COMBUSTIBLE MATERIAL.
      A. MATERIAL SHALL BE APPROVED BY LOCAL BUILDING CODE INSPECTORS.
   7. EQUIPMENT, PIPING, DUCTWORK, ETC. SHALL NOT BE SUPPORTED FROM ANY CEILINGS, OTHER PIPING, CONDUIT, DUCTWORK, ROOF DECK, OR JOIST BRIDGING. ITEMS SHALL BE SUPPORTED FROM ACCEPTABLE STRUCTURAL BUILDING COMPONENTS.

I. CONDUCTOR TYPES:
   1. TYPE THWN – 75C RATING, FOR LIGHTING, POWER AND CONTROL, NO. 8 AWG AND SMALLER STRANDED WIRE FOR NO. 10 AWG AND LARGER.
   2. TYPE XHHW – 90C RATING, DRY LOCATIONS – 75C RATING, WET LOCATIONS, USE WHERE INDICATED. STRANDED WIRE FOR NO. 10 AWG AND LARGER.
   3. TYPE AVA – 110C RATING, FOR WIRING IN TROUGHS OF CONTINUOUS RUNS OF FLUORESCENT LUMINARIES AND FOR LUMINAIRE HEAT LOOPS, WHERE TEMPERATURE DOES NOT EXCEED 110C.
   4. TYPES AF, PF, PFF, SFF – 150C RATING, FIXTURE WIRING, FOR WIRING IN TROUGHS OF CONTINUOUS RUNS OF FLUORESCENT LUMINARIES AND FOR LUMINAIRE HEAT LOOPS, SUBJECT TO VOLTAGE LIMITATIONS, AND WHERE TEMPERATURE DOES NOT EXCEED 150C.
   5. TYPE SF – 200C RATING, FIXTURE WIRING, FOR WIRING TROUGHS OF CONTINUOUS RUNS OF FLUORESCENT LUMINARIES & FOR LUMINAIRE HEAT LOOPS, SUBJECT TO VOLTAGE LIMITATIONS, AND WHERE TEMPERATURE DOES NOT EXCEED 200C.
   6. TYPE TA – 90C RATING, FOR SWITCHBOARD AND PANELBOARD WIRING.
   7. TYPE SO OR W, FOR CORD CONNECTION TO EQUIPMENT, 600 VOLT HEAT-RESISTANT, RUBBER-INSULATED WITH NEOPRENE JACKET AND EXTRA-FLEXIBLE, STRANDED WIRE.

J. POWER DISTRIBUTION PANELBOARDS:
   1. MANUFACTURERS SHALL BE G.E., SIEMENS, SQUARE D OR CUTLER HAMMER/WESTINGHOUSE. COMPLETELY FACTORY BUILT AND TESTED, TOTALLY ENCLOSED, DEAD FRONT TYPE PANELBOARDS NEATLY TYPED DIRECTORY, WITH CLEAR PLASTIC COVER, IN FRAME INSIDE EACH PANELBOARD DOOR. FULL – CAPACITY INSULATED SOLID NEUTRAL. SEPARATE GROUND BUS WITH LUGS AS REQUIRED IN ADDITION TO NEUTRAL BUS.

K. CIRCUIT BREAKER PANELBOARDS:
   1. MOLDED CASE CIRCUIT BREAKERS, THERMAL MAGNETIC, QUICK-MAKE, AMBIENT COMPENSATED OR FACTORY – CALIBRATED FOR PANELBOARD INSTALLATION. HANDLES ARRANGED FOR PADLOCKING IN OFF POSITION. ALL MULTIPLE BREAKERS TO BE COMMON TRIP. HANDLE TIES WILL NOT BE ACCEPTED. SPACES TO BE COMPLETE WITH BUSES AND HARDWARE READY FOR CIRCUIT BREAKER INSTALLATION. ALL CIRCUIT BREAKERS PLUG-IN TYPE.

L. SAFETY AND DISCONNECT SWITCHES:
   1. SAFETY AND DISCONNECT SWITCHES SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, SQUARE D OR CUTLER HAMMER/WESTINGHOUSE. FRONT-OPERATED, TYPE GD, SINGLE THROW, QUICK-MAKE, QUICK-BREAK, HP RATED, VISIBLE BLADE, SWITCHING UNIT. FUSIBLE TYPE TO BE PROVIDED WITH FUSE TERMINALS TO ACCOMMODATE TYPE OF FUSES INDICATED. INCLUDE PROVISION FOR UP TO THREE PADLOCKS TO LOCK THE SWITCH IN OPEN POSITION.

M. PHOTOELECTRIC CONTROL:
   1. INTERMATIC SERIES K11000, OR EQUIVALENT TORK, PARAGON OR SANGAMO, WITH ADJUSTABLE MOUNTING STEM MODEL, TO SUIT LOADS CONTROLLED.

N. DEVICES:
   1. WALL SWITCHES:
      A. STANDARD, SPEC GRADE, 20 AMP SWITCH SHALL BE A LEVITON #5621-2I W/ A #80301-I PLATE.
      B. ILLUMINATED, SPEC GRADE, 20 AMP SWITCH SHALL BE A LEVITON #5631-2I W/ A #80301-I PLATE.
   2. RECEPTACLES:
      A. GROUND FAULT RECEPTACLE SHALL BE A LEVITON #6899-I W/ A #80301-I PLATE.
      B. WEATHERPROOF RECEPTACLE COVER SHALL BE A LEVITON #4990
      C. OCCUPANCY SENSOR/ CEILING SHALL BE A LEVITON #ODC20-MOW
      D. OCCUPANCY SENSOR/ WALL SHALL BE A LEVITON #ODS10-IDI W/ A #8030-I PLATE.
      E. COMBINATION I.G. & SURGE SUPPRESSION RECEPTACLE SHALL BE A LEVITON #5380-IGB W/ A #80301-B PLATE.
      F. DATA RECEPTACLE SHALL BE A LEVITON (2)#5G108-RI5 W/ A #41080-I PLATE OVER A SINGLE GANG BOX AND RUN 2 PAIR, 24 GAUGE WIRE BACK TO TELEPHONE SERVICE ENTRANCE LOCATION.
      G. STANDARD, SPEC GRADE, 20 AMP RECEPTACLE SHALL BE A LEVITON #5352-I W/ A #80703-I PLATE.
      H. TELEVISION RECEPTACLE SHALL BE LEVITON #40682 W/ A #80301-IP PLATE.
      I. RUN COAXIAL CABLE BACK TO TELEVISION SERVICE ENTRANCE LOCATION.
      J. COMBINATION MULTI-CONNECT 'DATA BOX': (INDICATED ON DRAWING WITH A DASHED BOX AROUND DEVICES)
         (1) COMBINATION I.G. & SURGE SUPPRESSION RECEPTACLE (#5380-IGB)
         (1) STANDARD, SPEC GRADE, 20 AMP RECEPTACLE (#5352-I)
         (1) 2-PORT "DECORA-PLUS" INSERT (#41642-I)
         (2) DATA RECEPTACLES "QUICKPORT" 5E GIGAMAX (#5G109-RI5) [RUN 'CAT-5' CABLE (PLENUM RATED) BACK TO SERVER LOCATION] (RUN COAXIAL CABLE BACK TO TELEVISION SERVICE ENTRANCE LOCATION)
         (1) 3-GANG BOX W/ DIVIDERS
         (1) RECEPTACLE PLATE (#80411-I)

O. MOUNTING HEIGHTS: UNLESS OTHERWISE INDICATED, THE FOLLOWING OUTLET HEIGHTS APPLY:

OUTLET	ELEVATION TO CENTERLINE
TOGGLE SWITCHES	/ 4'-0" ABOVE FINISHED FLOOR
RECEPTACLE OUTLETS IN OFFICES AND FINISHED AREAS	/ 1'-6" ABOVE FINISHED FLOOR
RECEPTACLE OUTLETS ABOVE COUNTERS (MOUNTED HORIZONTALLY)	/ 3'-6" ABOVE FINISHED FLOOR
RECEPTACLE OUTLETS IN OTHER LOCATIONS	/ 4'-2" ABOVE FINISHED FLOOR
LIGHTING PANELBOARDS	/ 6'-8" FROM TOP OF PANELBOARD TO FINISHED FLOOR
PUSH BUTTON OUTLETS	/ 4'-0" ABOVE FINISHED FLOOR
FIRE ALARM STATION OUTLETS	/ 4'-0" ABOVE FINISHED FLOOR
FIRE ALARM BELL OUTLETS	/ 7'-4" ABOVE FINISHED FLOOR
EMERGENCY LIGHT OUTLETS	/ 7'-4" ABOVE FINISHED FLOOR
EXIT LIGHT OUTLETS	/ 7'-4" ABOVE DOOR
TELEVISION CABLE OUTLETS (FLOOR MOUNTED)	/ 1'-6" ABOVE FINISHED FLOOR
TELEVISION CABLE OUTLETS (WALL MOUNTED)	/ 7'-0" ABOVE FINISHED FLOOR
TELEPHONE OUTLETS (WALL MOUNTED)	/ 4'-2" ABOVE FINISHED FLOOR
TELEPHONE OUTLETS (DESK MOUNTED)	/ 1'-6" ABOVE FINISHED FLOOR
BRACKET AND SPECIAL OUTLETS	/ AS INDICATED

P. GROUNDING & GROUND RODS:
   1. COPPERWELD STEEL COMPANY. CONNECT-ORS-BURNDY, THOMAS & BETTS OR O.Z. THERMITE WELDING-CADWELD OR THERMOWELD.
   A. GROUND THE FOLLOWING:
      I. NEUTRAL LUMINARIES AND OTHER ELECTRICAL DEVICES AS REQUIRED BY NEC. CONNECT GROUNDING SYSTEM TO WATER SERVICE AS NEAR AS PRACTICAL TO SERVICE ENTRANCE.(AHEAD OF METER)

Q. TEST:
   1. CABLE TEST: MAKE MEGGER TESTS ON CABLES BETWEEN EACH CONDUCTOR AND GROUND WITH OTHER CONDUCTORS IN A CABLE OR CONDUIT TIED TO GROUND. PERFORM OPERATIONAL TESTS ONLY ON ALL LIGHTING AND 120 VOLT RECEPTACLE CIRCUITS. PERFORM CONTINUITY TESTS ON ALL POWER AND CONTROL CIRCUITS. TEST CABLES FOR 480 VOLT SERVICE WITH A 1000 VOLT MEGGER BETWEEN EACH PHASE AND GROUND, WITH TEST MAINTAINED UNTIL READINGS ARE STEADY FOR 3 MINUTES.
   2. GROUND TEST: INSPECT ALL GROUND CONNECTIONS FOR CONTINUITY AND TIGHT ELECTRICAL AND MECHANICAL CONNECTIONS. TEST RESISTANCE AT VARIOUS POINTS USING BIDDLE GROUND OHMER, OR ANOTHER STANDARD METHOD. MAXIMUM PERMISSIBLE GROUND RESISTANCE IS 5 OHMS. CONNECT SYSTEM GROUND TO WATER METER AHEAD OF MAIN.

R. TEMPORARY POWER AND LIGHTING:
   1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY LIGHT AND POWER AS MAY BE REQUIRED. THIS SERVICE IS TO CONSIST OF DISTRIBUTION SYSTEMS, PANEL BOARDS, GROUNDING, BRANCH CIRCUITS, SWITCHES, RECEPTACLE OUTLETS.
      A. MINIMUM POWER PROVIDED SHALL BE 200A, 208V, 3 PHASE.
   2. CIRCUIT WIRING WITH "PIGTAIL" MEDIUM BASE LAMPS WILL DISTRIBUTE LIGHTING ON THE BASIS OF ½ WATT PER SQUARE FOOT AVERAGE FOR THE CONSTRUCTION AREA.
      A. AS INTERIOR PARTITIONS ARE ERECTED, THE ELECTRICAL CONTRACTOR SHALL REVISE THE TEMPORARY LIGHTING ARRANGEMENTS SO THAT NO LESS THAN ONE LAMP IS PROVIDED IN EACH SPACE.

S. CLOSE – OUT:
   1. ALL EQUIPMENT SHALL BE CLEANED AND MADE CERTAIN THAT EACH APPARATUS IS IN PROPER WORKING ORDER.
   2. SUBMIT (2) TWO SETS OF MAINTENANCE MANUALS INCLUDING COMPLETE OPERATION & MAINTENANCE INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT.
   3. SUBMIT (1) ONE SET OF CLEAN PRINTS, MARKED TO ACCURATELY SHOW CHANGES TO THE ORIGINAL DRAWING.
   4. SUBMIT A WRITTEN GUARANTEE THAT THE WORK PERFORMED, AND EQUIPMENT INSTALLED SHALL BE FREE FROM DEFECT FOR A PERIOD OF (1) YEAR. IF ANY DEFECT SHOULD DEVELOP WITHIN THAT TIME FRAME THIS CONTRACTOR SHALL CORRECT THEM AT NO COST TO THE OWNER.
   5. COMPLETE ALL TESTS SPECIFIED ELSEWHERE IN THIS SPECIFICATION.
   6. INSTRUCT OWNER AS TO THE SYSTEM'S PROPER OPERATION & MAINTENANCE PROCEDURE.

ELECTRICAL LEGEND

	120V DUPLEX RECEPTACLE COMMERCIAL GRADE 15A HUBBLE CR-151 OR EQUAL
P1	ELECTRICAL PANEL, NEW
A	LIGHT FIXTURE SEE SCHEDULE
	HOME RUN TO PANEL 2 #12 W/ GND. U.N.O. OR AS REQUIRED BY LOAD
	BRANCH CIRCUIT WIRING 2 #12 IN 1/2" C. OR AS REQUIRED BY LOAD
$	WALL SWITCH
PC	PHOTOCELL
EX	EXIT SIGN – EXTERIOR RATED
EM	EMERGENCY LIGHT – EXTERIOR RATED
PB	PULL BOX IN GROUND

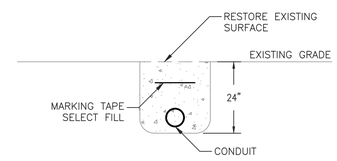
PANELBOARD DESIGNATION P1 LOCATION BATTING CAGE
120/240 VOLTS 1 PH. 3 WIRE SOLID NEUTRAL MOUNTING: FLUSH ___ SURFACE ✓
125 AMPERE BUS 100 AMPERE MAIN C/B FED FROM: TOP ✓ BOTTOM ___
10K AMPERE INT.CAP. SPECIAL NEMA 3R

No	KVA	DESCRIPTION	A	B	DESCRIPTION	KVA	No
1	1.0	RECEPTACLES	2.0		RECEPTACLES	1.0	2
3	1.0	RECEPTACLES		2.0	RECEPTACLES	1.0	4
5	1.0	LIGHTING	2.0		LIGHTING	1.0	6
7	1.0	EXTERIOR LIGHTING		1.0			8
9							10
11							12
13							14
15							16
17							18
19							20
21		SURGE ARRESTOR					22
23			40				24

KVA SUB TOTALS 4.0 3.0 DEMAND FACTOR 1.0
CONN'D LOAD KVA 7.0 DEMAND LOAD KVA 7.0 DEMAND AMPERES 29.2

PANEL NOTES

1. ALL BREAKERS SHALL BE 1P 20A U.N.O. UN LESS OTHER WISE NOTED.
2. PROVIDE LOCKING COVER.



DET 1 E2.0 UNDER GROUND CONDUIT DETAIL
SCALE: N.T.S.

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STAMPS

PROJECT AND LOCATION:

ELECTRICAL PLANS FOR:

A METAL BUILDING BATTING CAGE FOR

SOCASTEE HIGH SCHOOL

HORRY COUNTY, SOUTH CAROLINA

REVISIONS:

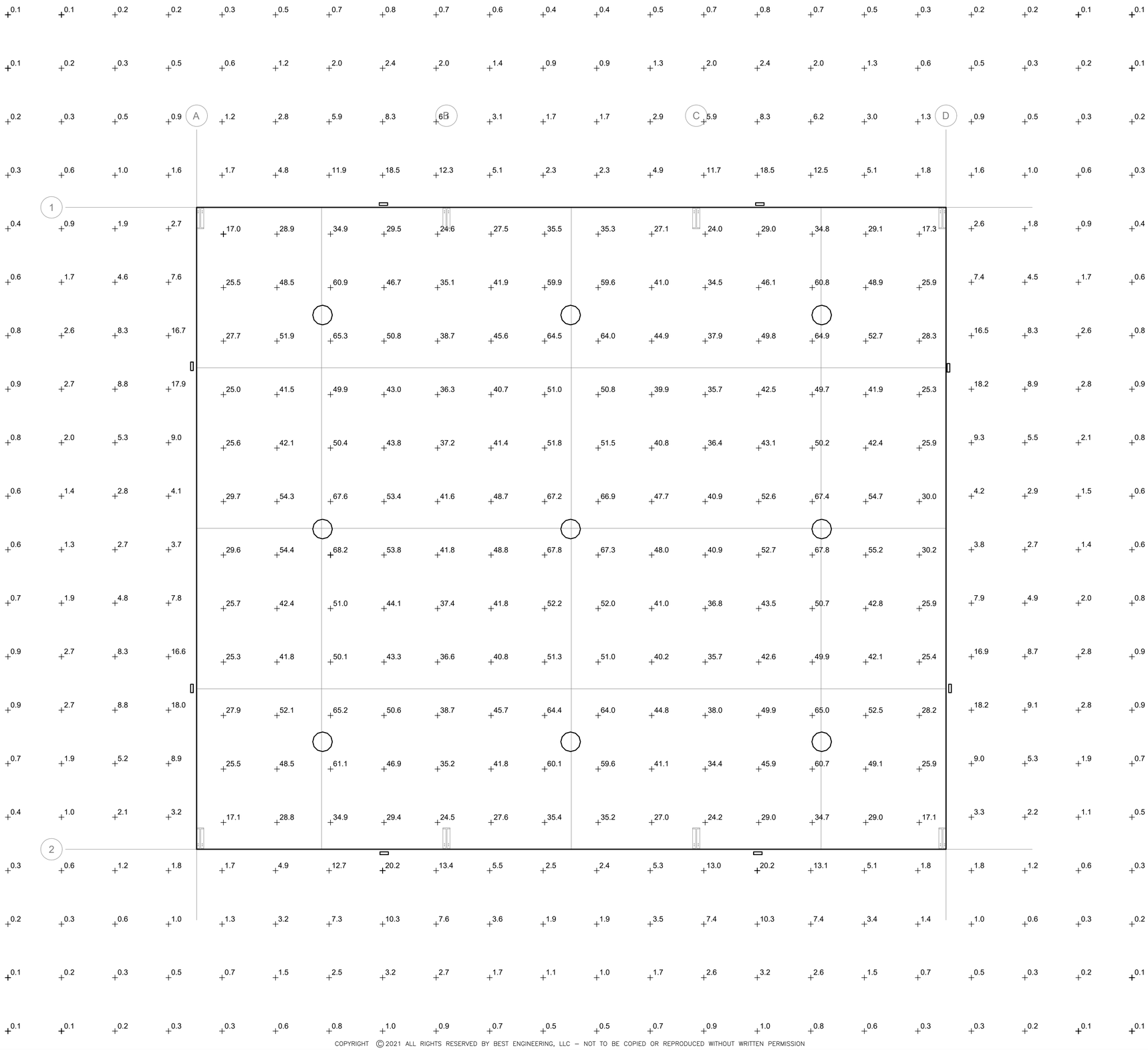
NUM	DESCRIPTION

DATE:
JUN 16, 2021

DRAWING TITLE:

ELECTRICAL NOTES, LEGEND & SCHEDULES

DWG. NO.:
E2.0



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STAMPS

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NO: C02536
CERTIFICATE OF AUTHORIZATION NO.

PROJECT AND LOCATION:

ELECTRICAL PLANS FOR:

A METAL BUILDING BATTING CAGE FOR

SOCASTEE HIGH SCHOOL

HORRY COUNTY, SOUTH CAROLINA

REVISIONS:

NUM	DESCRIPTION

DATE:

JUN 16, 2021

DRAWING TITLE:

ELECTRICAL LIGHTING PHOTOMETRIC

DWG. NO.:

E3.0