WILLIAMS ARCHITECTS
824 Baronne Street
New Orleans, Louisiana 70113
(504) 566-0888

PROJECT: **Multi-Sport Venue in Eastern New Orleans and Lower Ninth Ward**
4290 Almonaster Avenue,
New Orleans, LA 70126

ADDENDUM NO. 3

June 12, 2025

TO: New Orleans Public Schools/Bidders

This Addendum forms a part of the Contract Documents and modifies the Project Manual – Volume 1 and 2, and Drawings dated January 30, 2025. Clarifications and revisions noted below are in response to the project solicitation posted on May 29, 2025.

Bidder Clarifications:

1. There are trench drains in the project, but I couldn't find any specifications on the material needed. Please provide the acceptable manufacturers along with the material specifications, so that we can provide a substitution request, if necessary.
    a. Detail 14 on sheet C28 is based on a plastic channel drain from NDS. Provide equal.

2. At the instructions of the bidding documents for ITB24-FAC-0069, we are requesting the full Geotechnical Soils Report for the project. Please let us know who we should contact for this information or if you will be able to provide us with the information. We are the lighting manufacturer specified for the football field lighting and we are needing to make sure the foundations for the poles and lighting system are designed and stamped accordingly.
    a. Geotechnical Exploration Report (dated September 25, 2024) is attached.

3. The bid form prints on two pages. Should we correct the layout to print on one page, use the two page form, or will another bid form be issued?
    a. The bid form could not fit into one page, therefore leave as is.

4. The unit price form is part of the specifications with the top portions filled in, but there are no unit price descriptions, quantities, and units of measure listed. Will there be unit prices on the project?
    a. There are no unit prices.

5. In the AIA General Provisions section, Article 3.15.1, it is stated that the Contractor lawn mowing & weed control at least once every other week. Is this correct, or can the Contractor use his discretion on how often to provide lawn mowing of the site?
    a. Grass shall be cut every other week during the growing season March 1 through Nov 30. Grass shall be cut at least once monthly during off season.

6. Is this a prevailing wage (Davis Bacon) and certified payroll project?
    a. Yes.

7. Is builder's risk insurance required on the project? If so, please provide specifications for the policy.
    a. Yes, per requirements of AIA 101 Exhibit A in the value of the awarded contract price.

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8. In the AIA General Provisions section, Article 13.4.1 states that the Contractor is responsible for selecting the testing agency and for the cost of material testing. Is this correct?
    a. Yes.

9. I have seen three different on-site work hours listed in the front-end specs. Please provide what work hours will be available for Monday through Friday.
    a. Work hours as allowed by the City of New Orleans.

10. In spec section 013200, part 1.5 A, speaks of a Scheduling Consultant. Is this a requirement or can this scope of work be performed by our Project Manager with decades of experience in construction scheduling?
    a. Contractor to utilize their own experienced personnel to maintain project schedule and provide monthly updates required with each pay app.

Revisions:

1. Section 133416 – Permanent Grandstands
    a. Entire section replaces prior section issued. See attached.

2. Section 265668 – Exterior Athletic Lighting
    a. New section issued. See attached.
    b. Table of Contents, page 6 is revised with added section 265668. See attached.

3. Drawing Sheet M501
    a. Drawing is revised to show the outdoor air ventilation for equipment calculations (dated 06/04/25 - per city permit plan review comments). See attached.

4. Drawing Sheet M601
    a. Drawing is revised to show details for condenser tie down and cassette AHU hanging specifications. (dated 06/04/25 - per city permit plan review comments). See attached.

End of Addendum No. 3

GEOTECHNICAL EXPLORATION REPORT

NOLA PUBLIC SCHOOLS
9th WARD STADIUM
ALMONASTER AVE.
NEW ORELANS, LOUISIANA

FOR

NOLA PUBLIC SCHOOLS
NEW ORLEANS, LA

GULF SOUTH ENGINEERING AND TESTING FILE NO. 24-053

September 25, 2024

GULF SOUTH
ENGINEERING AND TESTING, INC.
15 Veterans Memorial Blvd | Kenner LA 70062
504-305-4401 | www.gulfsoutheng.com

GULF SOUTH
ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants

15 Veterans Memorial Boulevard, Kenner, LA 70062
PN: 504-305-4401 FN: 504-305-4408 E-mail: info@gulfsoutheng.com

September 25, 2024

NOLA Public Schools
2401 Westbend Parkway
New Orleans, LA 70114

Attn: Mr. Greg Narlock, Director of Capital Projects
E-mail: gnarlock@nolapublicschools.com

Re: Geotechnical Exploration Report
NOLA Public Schools
9th Ward Stadium
Almonaster Ave.
New Orleans, LA
Gulf South Engineering & Testing File No. 24-053

Dear Greg,

Please find attached our geotechnical exploration report that was completed for the referenced project. We appreciate the opportunity to serve your geotechnical needs. Please contact us should you have any questions.

Sincerely,
GULF SOUTH ENGINEERING AND TESTING, INC.

CHAD M. POCHE, P.E.
Executive Vice President

BRYSON S. BEARD, E.I.
Associate Geotechnical Engineer

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GEOTECHNICAL EXPLORATION REPORT

NOLA PUBLIC SCHOOLS
9th WARD STADIUM
ALMONASTER AVE.
NEW ORELANS, LOUISIANA

GULF SOUTH ENGINEERING AND TESTING FILE NO. 24-019

1.0 INTRODUCTION & LIMITATIONS

This report contains the results of a geotechnical exploration made at the subject site. Instructions to proceed with the exploration were received from NOLA Public Schools (Client) via approval of our proposal dated April 4, 2024.

The study included drilling soil test borings and the performance of soil mechanics laboratory tests to evaluate the soil's physical characteristics. Engineering analyses were made and based on the field and laboratory test data to develop recommendations for the project.

The analyses and recommendations presented in this report are based on the provided project information and the results of the exploration. While it is not likely that conditions will differ significantly from those observed during the field exploration it is always possible that variations can occur away from the borehole location(s).

If it becomes apparent during construction that subsurface conditions differing significantly from those observed in our boring(s) are encountered, Gulf South should be notified. Also, should the nature of the project change or should any of the stated assumptions be inaccurate, the recommendations provided in this report should be re-evaluated.

This report has been prepared for the exclusive use of our Client. The recommendations provided in this report are site specific and are not intended for use at any other site or for any other project. This report provides recommendations for design and construction and should not be used as construction specifications.

Gulf South considers the materials testing and onsite inspection during construction an extension of our geotechnical exploration and a key component to ensuring the recommendations provided in this report are followed. For this type of project, these services may consist of earthwork testing and monitoring, vibration monitoring, concrete testing and inspection, and steel inspection. Gulf South should be retained to provide the construction inspection services for this project.

2.0 SOIL BORINGS

Six (6) undisturbed soil borings were drilled to depths of 60 feet (Borings B-1 and B-2) and 6 feet (Borings B-3 through B-6) below ground surface between May 29 through July 8, 2024. The borings were drilled with truck and ATV mounted drilling rigs at the designated locations as approximately shown on Figure No. 1. Borings B-2, B-3, and B-6 were offset from their original planned location due to access limitations from fencing.

Undisturbed sampling was performed continuously or on approximate 5 foot centers in all cohesive or semi-cohesive materials with a three inch diameter thin wall tube sampler. The samples were extruded in the field, representative portions of each sample were trimmed and placed in moisture proof containers, the samples were properly labeled, and secured for transport to the laboratory.

When cohesionless material was encountered or when soils could not be adequately sampled by undisturbed methods, the Standard Penetration Test was performed. This test consists of driving a two-inch diameter split spoon sampler a total of approximately 18 inches with a 140 lb. hammer falling 30 inches. The number of blows required to drive the sampler per 6 inch increment is recorded and gives an indication of the density of the material. The blows per foot shown on the boring log are the total of the blow counts for the final 12 inches of penetration.

3.0 LABORATORY TESTING

Soil mechanics laboratory tests were performed on samples obtained from the borings. The testing consisted of natural moisture content, unit weight, Atterberg limits, swell pressure, and unconfined/tri-axial compression strength testing. The results of the laboratory tests are shown on the soil boring logs provided in Appendix A of this report.

4.0 SUBSOIL CONDITIONS

4.1 Subsoil Description

Reference to the borings shows varying layers of very loose to loose sand and clayey sand and very soft to medium stiff, clay, sandy clay, and organic clay are present from the ground surface to the approximate 6 foot depth. Very soft to medium stiff clay follows to the deepest borings' termination depth of 60 feet. Boring B-1 encountered a very soft sandy clay from the approximate 43 to 48 foot depth. Borings B-2 encountered very loose to loose clayey sand from the approximate 53 to 60 foot depth.

4.2 Groundwater

At the time of making the borings, groundwater was first encountered within Borings B-1 and B-2 at the approximate 6 to 8 foot depths below the ground surface. After waiting approximately 15 minutes, it was observed groundwater rose to the approximate 3 to 6 foot depths. Groundwater was not observed in Borings B-3 through B-6. These observations were made during a short period of time and groundwater may not have become fully realized at the time of observation. Groundwater should be expected within the upper 15 to 20 feet and can fluctuate with seasonal precipitation, drainage, and prolonged drought. If the depth to groundwater is important to construction, it should be measured at that time.

5.0 FURNISHED INFORMATION AND FOUNDATION RECOMMENDATIONS

Furnished information indicates the construction of a new stadium for NOLA Public Schools is planned in the 9th Ward along Almonaster Ave. in New

Orleans, LA. The facility will consist of bleachers, CMU structures, parking and driveways. Based on provided information, we understand the bleachers and press box are expected to have a structural load of 112 psf floor loads and 677 per foot line loads. We assume no more than 1 foot of fill will be placed to raise the site. Furnished plans can be found in Appendix B.

With regards to support of proposed structures using shallow foundations, the near surface soils are soft and compressible. Shallow foundations should only be considered for lightly loaded and non-settlement sensitive structures. If shallow foundations are selected, footings should be placed to bear at least 2 feet below the ground surface within firm in-place soils or compacted select fill. Alternatively, should the values provided in this report for bearing and settlement using shallow foundations not be tolerable, deep foundations consisting of driven, treated, timber piles (Class II or Class B) should be used for support. We have included pile recommendations for completeness. Alternatively, helical piles may be an appropriate option for shallow foundations on lightly loaded structures. Helical pile capacities and design recommendations are provided by various manufacturers.

Preliminary laboratory test results indicate the near surface soils have a minimal shrink/swell potential. Care should be taken during and after construction to limit activities that could affect moisture within the soils below and around the foundations. By precluding surface waters from saturating the soils, the resulting volumetric movements will be minimized. In this regard, good roof and surface drainage should be assured with positive collection and runoff of these waters away from foundations.

Structural analyses and the structural adequacy of the foundations are outside our scope of work for the project. Utilities to and from the structure should be attached to the slab using suitable hangers and flexible connections.

6.0 SHALLOW FOUNDATIONS FOR LIGHTLY LOADED STRUCTURES

6.1 Allowable Soil Bearing Capacity

We estimate a net allowable soil bearing capacity of 300 lbs. per sq. ft. is available for design of grade supported footings and mats. This allowable soil

bearing capacity assumes the footings are seated in firm, natural, soils as described and encountered in our borings or compacted, structural, fill.

Foundation excavations should be thoroughly inspected to assure that the footings are seated in firm and well-drained soil. The allowable soil bearing capacities contain a factor of safety of at least 3.0 against failure but do not preclude settlements, as will be discussed.

6.2 Estimated Settlement

Slabs. We have estimated long term settlement for the proposed bleachers, press box, and CMU structures.

Table 1 – Settlement Estimates for proposed Bleachers

Net Applied Soil Pressure (psf)	**Estimated Center Settlement (inches)**
	Bleacher Slab Founded at Grade 52 ft. Wide by 262 ft. Long (13,600 sq feet)
Up to 100	1 inch or less
100 to 200	3 to 4
200 to 300	6 to 7

Table 2 – Settlement Estimates for proposed Press Box

Net Applied Soil Pressure (psf)	**Estimated Center Settlement (inches)**
	Press Box Slab Founded at Grade 50 ft. Wide by 50 ft. Long (2,500 sq feet)
Up to 100	1 inch or less
100 to 200	2 to 3
200 to 300	3 to 4

Table 3 – Settlement Estimates for proposed CMU Building

Net Applied Soil Pressure (psf)	**Estimated Center Settlement (inches)**
	Concrete Masonry Unit (CMU) Building Slab Founded at Grade 26 ft. Wide by 105 ft. Long (2,730 sq feet)
Up to 100	1 inch or less
100 to 200	1 to 2
200 to 300	3 to 4

Fill. We have calculated the estimated long-term settlement of the ground surface due to the placement of up to 1 foot of fill over an approximate 100 ft. by 100 ft. area to be on the order of 1 inch or less. Our analyses are based on a unit weight of 110 pounds per cubic foot (pcf) for the fill material. Settlement due to fill placement should be quick (within 2 months of placement). Fill should be placed as far in advance of construction as possible.

Footings. Settlement analyses were made using applied pressures equal to 100% of the allowable soil bearing value. Long-term settlement of square footings no larger than 6 feet in width and strip footings no wider than 3 feet in width is estimated to be on the order of ½ to 1 inch. Settlement will increase with the size of the footing and/or loading and if larger footings are needed for support, revised settlement analyses should be made.

In view of the magnitude of the estimated settlement and to bridge any undetected soft or loose areas, good rigidity should be assured in the foundations to minimize the effects of differential settlements. Adequate steel reinforcement should be designed and included within the foundations. If the estimated settlements for shallow footings are considered prohibitive, driven piles should be used for support of the structures.

6.3 Site Preparation and Fill Materials

Prior to construction, the foundation area should be stripped of all debris, vegetation, tree roots, deleterious materials, etc. and should be proof rolled using a heavy wheeled vehicle. Any "soft" soils noted during the proof rolling or observed within excavations should be removed to a depth where stiffer soils are encountered or to a minimum depth of 2 feet. Excavated soils and organic matter should be replaced with controlled-compacted, structural, fill.

A lean, silty or sandy clay (CL - USCS Classification) may be used for fill. The clay fill should have a Liquid Limit of less than 40 and a Plasticity Index (PI) of less than 20. Fill should be a clean, select, fill material free from debris or organic matter.

6.4 Fill Placement and Compaction

Fill should be placed in 10 to 12 inch loose lifts. Minimum compaction criteria of a dry density at least equal to 95% of its maximum, as determined by the Standard Proctor compaction test (ASTM D698), should be used for fill that will support foundations.

6.5 Vibrations

Vibrations due to construction activities should be expected and they should be monitored during all construction activities. In general, vibrations should be limited to about 0.25 inch/sec. (average peak particle velocity) at all existing nearby sensitive structures. Construction should be stopped if peak values exceed about 0.5 in./sec.

7.0 DEEP FOUNDATIONS FOR HEAVILY LOADED STRUCTURES

If shallow foundations are not feasible, a deep foundation system consisting of driven, treated, timber piles (Class 5 or Class B) should be used to support the structures. All loads (e.g. column, wall, and slab) from the structures should be supported on piles if deep foundations are selected.

7.1 Pile Load Capacities

Analyses were made to estimate the load carrying capacity of several types and lengths of treated timber piles (ASTM D-25; Class 5 and Class B). Piles installed for this project will receive their support primarily through skin friction.

Estimated pile load capacities are provided on Figure No. 2. The given pile lengths are as measured from the existing ground surface and contain factors of safety of 2.0 and 3.0 against failure in compression and tension, respectively. Pile lengths above the ground surface should be added to the lengths provided on Figure No. 2 to obtain a total pile length.

7.2 Drag Load

When fill is placed on the site, the underlying compressible soils consolidate, resulting in surface settlement. As the compressible soils consolidate, "negative skin friction" or downdrag can be imparted on piles. This can result in a load that is additive to structural loads on the piles and will increase settlement of the piles and structure.

Drag load is dependent on the thickness of fill, compressibility of the soils, time-rate of consolidation, and pile size and length. Gulf South should be notified if more than 2 feet of fill is expected to be placed on site.

7.3 Group Effect

The effects of pile grouping on single pile load capacities is dependent on pile spacing, pile lengths, and soil characteristics throughout the pilet length and below the pile tip. Assuming a minimum center to center spacing of 3 ft., group effect should be unimportant for pile clusters of up to 6 piles. Group effect may become important for larger clusters and should be evaluated when actual pile layouts are known using the criteria provided on Figure No. 3.

7.4 Estimated Settlement

Settlement of pile supported footings and slabs constructed in single, widely, spaced rows, or in clusters of up to 4 to 6 piles is estimated to be 1 inch or less for the provided capacities and tip depths. These values assume piles

are driven to the specified tip depths and not loaded greater than the stated allowable carrying capacities.

7.5 Pile Driving

In general, driving of treated timber piles having 6 to 7 inch diameter tips and 8 to 12 inch diameter butts (Class 5 and Class B piles) should be limited to the rate of 25 blows per foot using a hammer energy rating of 15,000 ft-lbs. (e.g. Vulcan No. 01 hammer or equivalent).

Predrilling for pile installation does not appear to be necessary. An experienced pile driving contractor should be consulted. Predrilling may also be used to reduce vibrations. If necessary, predrilling should be made with a bit that is no larger than 85% of the pile's tip diameter and should not penetrate to within 10 feet of the pile's design tip depth.

7.6 Probe Piles and Pile Load Tests

It is recommended that probe type piles be installed at the site to establish installation characteristics and pile lengths. The probe piles should be of the same type and size as the job piles and should be installed with the same equipment and techniques that will be used to install the job piles.

We recommend the probe piles be allowed to set for a period of 14 days and at least one of the probe piles be tested to failure in accordance with ASTM D 1143. Gulf South should be retained to evaluate and verify the estimated pile load capacities.

8.0 PAVEMENTS

Flexible (asphalt) or rigid (concrete) surface paving for parking and driveways will be constructed at the site. Based upon our understanding of the proposed facility usage, we anticipate that the paved areas will be used primarily by automobiles and light trucks with an occasional passage of a delivery type vehicle and/or garbage collection vehicle. The recommendations provided are for a 20 year design E18 value of 275,000. Our design does not account for construction traffic. Concrete paving should be used at any dumpster pads.

The subgrade should first be prepared in accordance with the recommendations of this report. Base course and pavement materials should conform to the requirements of LA DOTD Standard Specifications, latest edition.

8.1 Flexible Pavement

For flexible pavements, an asphalt surface thickness of at least three (3) inches is recommended for parking areas. The thickness should be increased to at least five (5) inches for driveways. The base course beneath the asphalt surface should consist of at least twelve (12) inches of crushed stone. A geotextile paving fabric is recommended between base materials and the natural subgrade.

We recommend the asphalt courses be placed as late as possible in the project so that the effects of settlement can be reduced. Proper drainage during and after construction is essential to the success of flexible asphaltic pavement systems.

Flexible pavements are susceptible to failures due to poor surface and subsurface drainage. Asphalt pavement generally requires surface sealing with a thin (½ inch) hot mix asphaltic concrete or an asphalt slurry seal at a 4 to 5 year interval to maintain a good pavement system because the local climate tends to weaken and oxidize the surface.

8.2 Rigid Pavement

For rigid pavements, the pavement surface for parking areas should consist of at least five (5) inches of concrete. The pavement surface for driveways, including dumpster pads, should consist of at least seven (7) inches of concrete.

Upon completion of subgrade preparation, a minimum eight (8) inch thick layer of sand is recommended for the base course. A geotextile fabric should be placed beneath the pavement joints, at a minimum.

The provided concrete thickness assumes an ultimate flexural strength for the concrete of at least 600 psi or 4,000 psi compressive strength. Expansion and construction joints should be doweled or keyed for good transfer of load and should be well sealed to prevent the intrusion or surface waters into the pavement base and natural subgrade. The use of wire mesh is left up to the designer.

8.3 Pavement Materials and Construction

Poor site conditions will develop unless good drainage is provided throughout the project duration. Proper site drainage should be maintained prior to, during, and after construction. Providing drainage during the construction process will facilitate construction by reducing the potential for compaction problems. Maintaining the drainage after construction will improve the life of the pavement by avoiding water softening of the foundation soils.

Prior to pavement construction, the site should be stripped of all debris, vegetation, etc., and proof rolled with a heavy wheeled vehicle to detect any "soft" spots. Any soft spots should be undercut at least 1 foot in parking areas and 2 feet in structure areas and backfilled with a structural fill. The geotextile fabric should be a nonwoven fabric with an apparent opening size (AOS) smaller than a U.S. No. 70 sieve.

The sand or stone should be compacted to a dry density at least equal to 95 percent of its maximum as determined by the Modified Proctor compaction test (ASTM D1557), or to a minimum relative density of 75 percent in accordance with ASTM D4253 and D4254. In-place density measurements should be taken to assure that this degree of compaction is achieved. The base may be placed and compacted in maximum 8 inch loose lifts and it should meet LA DOTD specifications for base course.

The methods, means, and sequence of construction are the responsibility of the contractor. It should be noted that our recommendations regarding concrete and material thicknesses are based on the assumed traffic loading conditions. Appropriate measures should be taken by the contractor to assure the integrity and performance of the pavements during and after construction.

9.0 INFILTRATION TESTS

We understand that green infrastructure features will be constructed onsite. These features are for stormwater management to aid in site drainage and to prevent ponding of water onsite. Gulf South proposed to perform four (4) percolation tests for the project. Only two (2) percolation tests were completed as is be discussed.

9.1 Guelph Permeameter

The Guelph Permeameter is an in-hole Constant-Head Permeameter. The permeameter uses the Marriotte Principle that involves measuring the steady state rate of water recharge into unsaturated soil from a cylindrical well hole, in which a constant depth (head) of water is maintained (Guelph Permeameter Operating Instructions, 2012). A constant head level in the well hole is established and maintained at the level of the bottom of the air tube. As the reservoir falls, a vacuum is created in the air space above the water. The vacuum is then partially relieved and water from the reservoir replenishes water in the well.

When a constant well height of water is established in a bored hole in soil, a "bulb" of saturated soil with specific dimensions is quickly established. Once the unique "bulb" shape is established, the outflow of water from the well reaches a steady-state flow rate, which is then measured and considered the hydraulic conductivity.

9.2 Discussion of Results

Four (4) percolation tests were proposed for this project. Only one (1) test yielded acceptable results. The locations of the percolation tests were also offset from the original spots due to encountered impenetrable debris in the upper 2 feet. Readings were taken in 2-minute and 5-minute intervals for a maximum time of 60 minutes.

Multiple attempts were made but water filled up when digging the holes, or had no change in water level height, or an increase in water height resulting in an invalid tests. We believe this is due to the shallow groundwater table

encountered onsite. Each well hole encountered groundwater at the approximate 2 foot depth below the ground surface.

Percolation test P-3 resulted in a valid test with an estimated hydraulic conductivity of **$3.35x10^{-5}$** inches/second.

10.0 CLOSING

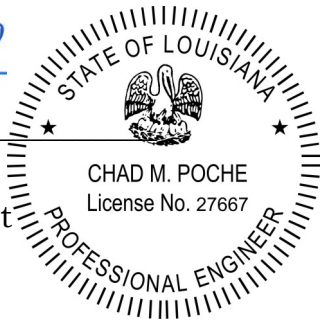
Gulf South is available to answer any questions you may have concerning this report. Should additional analyses be required or requested, additional fees may be necessary.

As previously discussed, Gulf South considers the materials testing and onsite inspection during construction an extension of our geotechnical exploration. Gulf South should be retained to provide the construction inspection services.

The issuance of this report completes the geotechnical exploration scope and Gulf South's involvement on the project. Retaining Gulf South as a vital member of the design team can add considerable value. Over the next few months, the project will incur many changes, challenges, and opportunities – all of which will occur without our knowledge and in some cases render our recommendations compromised or irrelevant. Gulf South's additional involvement will be a small price to pay for the peace of mind that any foundation, earthwork, and paving components of the project are fully integrated during design, resulting in potential cost savings and efficient construction. Please consider including Gulf South as a full member of your design team and throughout the project duration.

We appreciate the opportunity to provide this report and look forward to working with you again in the future.

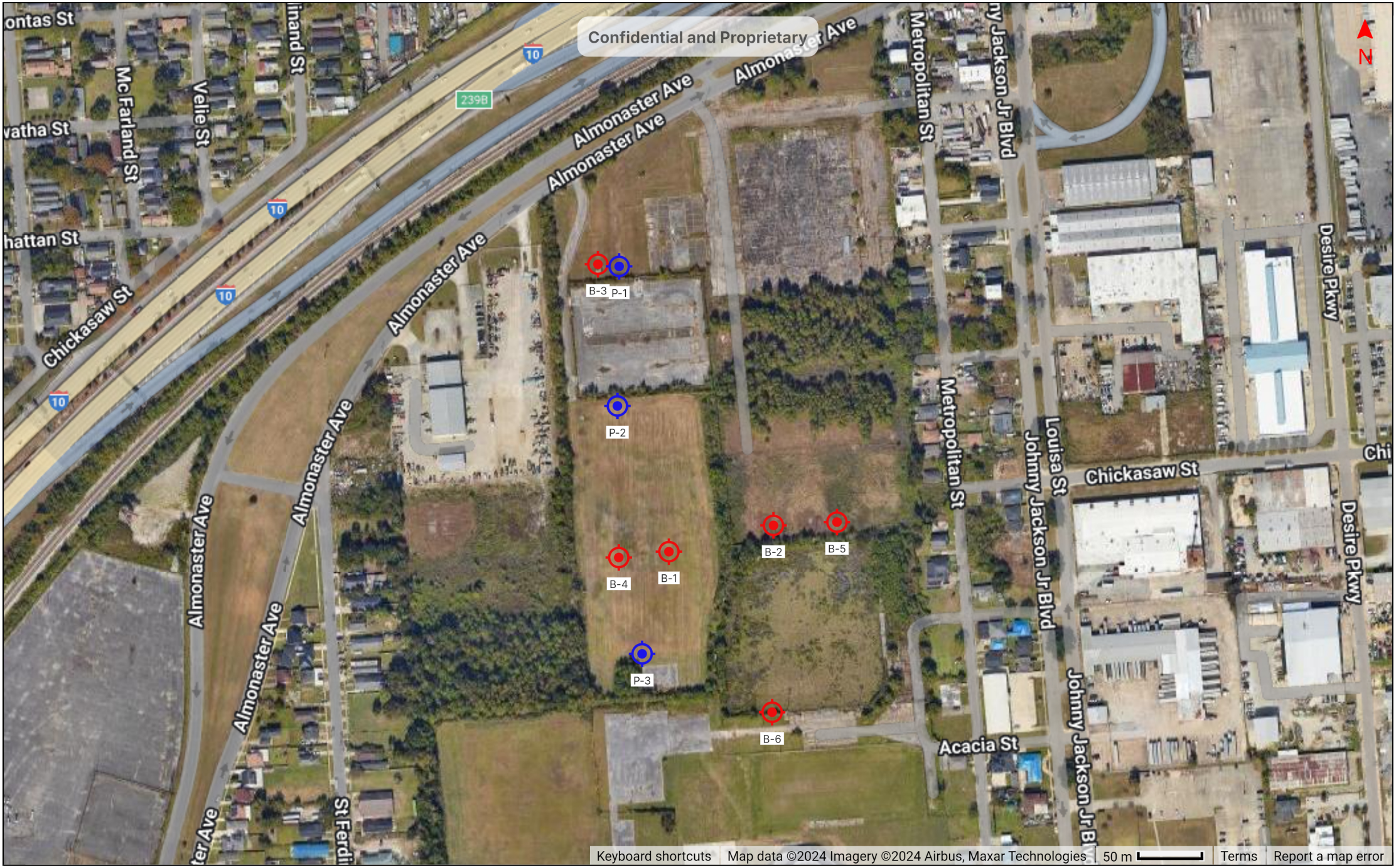
Sincerely,
GULF SOUTH ENGINEERING AND TESTING, INC.



CHAD M. POCHE, P.E
Executive Vice President

BRYSON S. BEARD, E.I.
Associate Geotechnical Engineer

FIGURES



GULF SOUTH ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants

FIGURE NO. 1

PROJECT
Name: 9th Ward Stadium - Almonaster Ave.
Number: 24-053

LOCATION
29.997833, -90.038097
New Orleans, LA

SYMBOL KEY
- Soil Borings
- Percolation Tests

GEOTECHNICAL EXPLORATION

NOLA PUBLIC SCHOOLS
9TH WARD STADIUM
ALMONASTER AVENUE
NEW ORLEANS, LA

GULF SOUTH ENGINEERING AND TESTING PROJECT NO. 24-053

ALLOWABLE PILE LOAD CAPACITIES

DRIVEN, TREATED, TIMBER PILES

(ASSUMES THE EFFECTS OF NO MORE THAN 2 FEET OF FILL)

PILE TYPE AND SIZE (ASTM D25)	PILE LENGTH BELOW EXISTING GROUND SURFACE	ESTIMATED ALLOWABLE SINGLE PILE LOAD CAPACITIES IN TONS COMPRESSION FACTOR OF SAFETY = 2 TENSION FACTOR OF SAFETY = 3	
		COMPRESSION	TENSION
6-Inch Tip Diameter (8-inch Butt Diameter) Timber Piles	35 40 45	5 6 7	4 4 ½ 5
7-Inch Tip Diameter (12-inch Butt Diameter) Timber Piles	45 50 55 60	8 10 11 12	6 7 8 9

GULF SOUTH
ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants

FIGURE NO. 2

Minimum Pile/Shaft Spacing

$SP = 0.05\ L_1 + 0.025\ L_2 + 0.0125\ L_3$

SP (ft.) = Center to center spacing of piles/shafts = (Min. 3.0 ft.)

L_1 = Pile/Shaft penetration in ft. up to 100 ft.

L_2 = Pile/Shaft penetration in ft. from 101 to 200 ft.

L_3 = Pile/Shaft penetration in ft. from 201 to 300 ft.

Allowable Group Capacity*

$$Q_a = \frac{P * L * c}{FSF} + \frac{2.6 * q_u * (1 + 0.2\ {}^{w}/_{b}) * A}{FSB}$$

P = Average perimeter of pile/shaft group (ft.)

L = Length of piles/shafts in group (ft.)

c = Average (weighted) shear strength (½ q_u) of soil throughout pile/shaft length (lbs./sq. ft.)

q_u = Unconfined compressive strength of soils below pile tips (lbs./sq.ft.)

w = Width of pile/shaft group at tip (ft.)

b = Length of pile/shaft group at tip (ft.)

A = Area of pile/shaft group at tip (sq. ft.)

FSF = Factor of safety for friction area = 2

FSB = Factor of safety for tip area = 3

*In no case should the cumulative single pile/shaft load capacity of the group be exceeded.

APPENDIX A

BORING LOGS

GULF SOUTH ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants
15 Veterans Memorial Blvd,
Kenner, LA
Office: +1 (504) 305-4401

9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.997833/-90.038097

SOIL BORING: B-1

Date Started:	05/29/2024	Date Completed:	05/29/2024	Lat Lng:	29.997833, -90.038097
Location Accuracy:	Tablet GPS	Project No:	24-053	Client Name:	NOLA Public Schools
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing, Inc.
Figure Number:	24-053	Hammer Drop:	30	Hammer Type:	Auto
Hammer Weight:	140	Logged By:	Ian Poche	Method:	Mud Rotary
Depth:	60'				

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: Truck; Tooling: Rotary Drill; Surface Elevation: 0.0'
			2-3-5 (8)			20.5			11.4		**FILL**, Loose, gray, **POORLY GRADED SAND** (**SP**), with trace organics — 2.0
			5-3-3 (6)			31.8			55.2		**FILL**, Medium Stiff, gray, **SANDY CLAY** (**CL**), with trace organics — 4.0
5			WOR (0)			23.1			22		**FILL**, Very Loose, gray, **CLAYEY SAND** (**SC**), with trace organics and gravel — 6.0
		0.50		0.119		56.3	104				Very Soft to Soft, gray, **FAT CLAY** (**CH**)
		0.50		0.359		59.8	103				- with trace sand and gravel
10		0.25		0.22	4	56.4	106	97-25-72			- with wood
		0.25		0.226	5	80.7	94				- with trace organics
15											- with trace organics
		0.25		0.088	6.7	60.9	96				
20											
		0.25				56.4			99.6		
25											
		0.25		0.146	10	72.2	99				
30											
		0.25		0.333	11.7	51.0	108		99.9		
35											
		0.25		0.361	13.3	79.6	97				40.0

Graphics Legend

- After waiting approx. 15 minute
- At Time of Drilling (ATD)
- SP
- CL
- SC
- CH
- SPT - Standard Penetration Tes
- ST - Shelby Tube

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

GULF SOUTH ENGINEERING AND TESTING, INC.
Geotechnical & Materials Consultants
15 Veterans Memorial Blvd,
Kenner, LA
Office: +1 (504) 305-4401

9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.997833/-90.038097

SOIL BORING: B-1

Date Started:	05/29/2024	Date Completed:	05/29/2024	Lat Lng:	29.997833, -90.038097
Location Accuracy:	Tablet GPS	Project No:	24-053	Client Name:	NOLA Public Schools
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing, Inc.
Figure Number:	24-053	Hammer Drop:	30	Hammer Type:	Auto
Hammer Weight:	140	Logged By:	Ian Poche	Method:	Mud Rotary
Depth:	60'				

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: Truck Tooling: Rotary Drill Surface Elevation: 0.0'
											Very Soft to Soft, gray, **FAT CLAY** (**CH**)
											43.0
45		0.25				40.5			66.9		Very Soft, gray, **SANDY CLAY** (**CL**)
											48.0
50		0.25		0.504	16.7	59.2	106				Medium Stiff, gray, **FAT CLAY** (**CH**), with trace shell and sand
											53.0
55		0.25		0.174	18.3	67.1	99		85.6		Very Soft, gray, **FAT CLAY** (**CH**), with sand
60		0.25		0.144		44.1	106				60.0
											Boring completed 60 feet below the ground surface.

Graphics Legend

CH

CL

ST - Shelby Tube

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

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9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.998017/-90.03725 SOIL BORING: B-2

Date Started:	07/08/2024	Date Completed:	07/08/2024	Lat Lng:	29.998017, -90.03725
Location Accuracy:	Tablet GPS	Project No:	24-053	Client Name:	NOLA Public Schools
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing
Logged By:	Kevin Daigle	Method:	Mud Rotary	Depth:	60'

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: buggy; Tooling: Rotary Drill; Surface Elevation: ~0.0'
		N/A				9.9			18.9		**FILL**, gray, **CLAYEY SAND** (**SC**), with shells, gravel, organics — 2.0
		1.25		0.947		54.1	107				Medium Stiff, gray, **FAT CLAY** (**CH**), with trace gravel and shells — 4.0
5		0.25		0.151		122.1	85	149-39-110			Very Soft, dark gray, **ORGANIC CLAY** (**OH**), with shells -with trace gravel and shell — 6.0
		0.25		0.144		73.0	99	111-20-91			Very Soft to Soft, gray, **FAT CLAY** (**CH**), with organics
		0.50				62.3					
10		0.25		0.27		81.3	95				
		0.25		0.318		79.1	100				
15											— 18.0
		0.25				46.5					Very Soft to Soft, gray, **FAT CLAY** (**CH**), with silt, trace sand
20											
		0.25		0.199		39.3	114				- with silt trace sand
25											
		0.25		0.212		54.6	106				
30											
		0.25		0.318		61.7	102				
35											
		0.25				65.9					- with trace silt — 40.0

Graphics Legend

- After waiting approx. 15 minutes
- At Time of Drilling (ATD)
- SC
- CH
- OH
- Auger - Auger Sample
- ST - Shelby Tube

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

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9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.998017/-90.03725 **SOIL BORING: B-2**

Date Started:	07/08/2024	Date Completed:	07/08/2024	Lat Lng:	29.998017, -90.03725
Location Accuracy:	Tablet GPS	Project No:	24-053	Client Name:	NOLA Public Schools
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing
Logged By:	Kevin Daigle	Method:	Mud Rotary	Depth:	60'

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: buggy Tooling: Rotary Drill Surface Elevation: ~0.0'
											Very Soft to Soft, gray, **FAT CLAY** (**CH**), with silt, trace sand
45		0.25		0.28		52.7	108				- with sand layers
50		0.50		0.449		44.4	112				- with sand seams
											53.0
55		0.50		0.345		33.7	118		40.4		Very Loose to Loose, gray, **CLAYEY SAND** (**SC**)
60		0.25		0.364	20	26.4	124		26.3		60.0
											Boring completed 60 feet below the ground surface.

Graphics Legend

CH

SC

ST - Shelby Tube

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

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9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.999847/-90.038672

SOIL BORING: B-3

Date Started:	05/29/2024	Lat Lng:	29.999847, -90.038672	Location Accuracy:	Tablet GPS
Project No:	24-053	Client Name:	NOLA Public Schools	Boring Diameter:	4 in
Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing, Inc.	Figure Number:	24-053
Hammer Drop:	18	Hammer Type:	Auto	Hammer Weight:	140
Logged By:	Ian Poche	Method:	Mud Rotary		

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: Truck; Tooling: Rotary Drill; Surface Elevation: ~0.6'
		N/A				12.6			25.1		**FILL**, gray and tan, **CLAYEY SAND** (**SC**), with trace gravel and shells
		N/A				8.3			18.9		4.0
5		1.00		0.794		42.6	110	78-21-57			Medium Stiff, gray, **FAT CLAY** (**CH**)
											6.0

Boring completed 6 feet below the ground surface.

Graphics Legend

SC

CH

ST - Shelby Tube

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

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9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.997792/-90.038503 **SOIL BORING: B-4**

Date Started:	05/29/2024	Date Completed:	05/29/2024	Lat Lng:	29.997792, -90.038503
Location Accuracy:	Tablet GPS	Project No:	24-053	Client Name:	NOLA Public Schools
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing, Inc.
Figure Number:	24-053	Hammer Drop:	18	Hammer Type:	Auto
Hammer Weight:	140	Logged By:	Ian Poche	Method:	Mud Rotary
Depth:	6'				

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: Truck; Tooling: Rotary Drill; Surface Elevation: ~0.0'
		N/A				11.1			4.9		**FILL**, tan, **POORLY GRADED SAND** (**SP**), with trace organics
		N/A				17.9			10		4.0
5		1.00		0.364		57.1	101	94-29-65			Soft, light gray, **FAT CLAY** (**CH**) 6.0

Boring completed 6 feet below the ground surface.

Graphics Legend

SP

ST - Shelby Tube

CH

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

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9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.99804/-90.036736 **SOIL BORING: B-5**

Date Started:	07/08/2024	Date Completed:	07/08/2024	Lat Lng:	29.99804, -90.036736
Location Accuracy:	Tablet GPS	Project No:	24-053	Client Name:	NOLA Public Schools
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing
Logged By:	Kevin Daigle	Method:	Auger	Depth:	6'

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: Buggy Tooling: 14" Continuous Flight Auger Surface Elevation: ~0.1'
		N/A				12			22.7		**FILL**, gray, **CLAYEY SAND** (**SC**), with shell 2.0
		1.00				68.1		108-43-65			Soft, gray, **FAT CLAY** (**CH**), with organics
5		1.00		0.366		71.3	100	112-31-81			6.0

Boring completed 6 feet below the ground surface.

Graphics Legend

SC

CH

Auger - Auger Sample

ST - Shelby Tube

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

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15 Veterans Memorial Blvd,
Kenner, LA
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9th Ward Stadium - Almonaster Ave.

Lat/Lon: 29.996708/-90.037261

SOIL BORING: B-6

Date Started:	05/29/2024	Date Completed:	05/29/2024	Lat Lng:	29.996708, -90.037261
Location Accuracy:	Tablet GPS	Project No:	24-053	Client Name:	NOLA Public Schools
Boring Diameter:	4 in	Driller:	Ross White	Drilling Firm:	Gulf South Engineering and Testing, Inc.
Figure Number:	24-053	Hammer Drop:	18	Hammer Type:	Auto
Hammer Weight:	140	Logged By:	Kevin Daigle	Method:	Mud Rotary
Depth:	6'				

Depth (ft)	Sample Type	Lab: Pocket Penetrometer (tsf)	Lab: Blow Counts (N/Refusal)	Lab: Compressive Strength (tsf)	Lab: Confining Pressure (PSI)	Lab: Moisture Content (%)	Lab: Wet Density (PCF)	Lab: Atterberg Limits (LL-PL-PI)	Lab: % Fines	Soil Graphic	Visual Classification and Remarks
											Rig Type: Truck; Tooling: Rotary Drill; Surface Elevation: ~0.0'
		0.25				5.9			5.7		**FILL**, tan, **POORLY GRADED SAND** (**SP**), with trace organics — 2.0
		0.25		0.385		76.1	96	140-40-100			Very Soft to Soft, dark gray, **FAT CLAY** (**CH**), with organics and wood
5		0.25		0.201		92.8	89	131-32-99			6.0

Boring completed 6 feet below the ground surface.

Graphics Legend

SP

ST - Shelby Tube

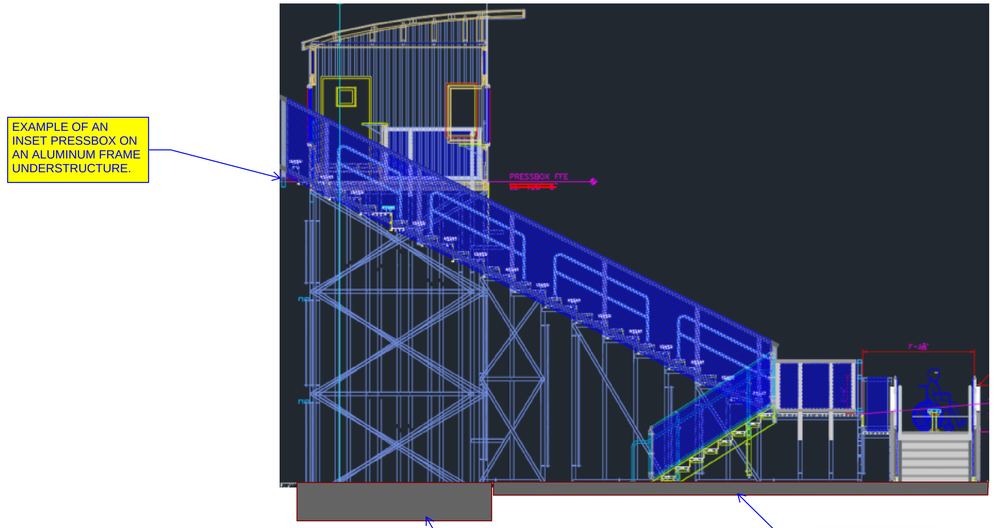
CH

REMARKS

-Boring backfilled per LA DEQ/DOTD requirements.

APPENDIX B

FURNISHED PLANS



EXAMPLE OF AN INSET PRESSBOX ON AN ALUMINUM FRAME UNDERSTRUCTURE.

SLAB FOR BLEACHER

MAT FOUNDATION UNDER PB (HIGHER LOADS, MORE OVERTURNING, SIZE TBD BASED ON FINAL LOADS AND SOIL CONDITIONS.

POSSIBLY USE TIMBER PILES UNDER PB

PRELIMINARY FRAME LOADING @ BLEACHER:

DL = 12 PSF
LL = 100 PSF
WIND +/- 40 PSF

FRAMES SPACED AT 6 FT OC

EQUATE TO LINE LOAD ON SLAB:

DL = 72 PLF
LL = 600 PLF
WL = +/- 240 PLF

PRELIMINARY FRAME LOADING @ PBU:

DL = 60 PSF
LL = 50 PSF floor + 50 PSF roof (filming platform) = 100 PSF
WIND +/- 40 PSF

FRAMES SPACED AT 6 FT OC

EQUATE TO LINE LOAD ON SLAB:

DL = 360 PLF
LL = 600 PLF
WL = +/- 240 PLF

1 / A–3 SECTION THRU BLEACHER
SCALE:

PRELIMINARY - NOT FOR CONSTRUCTION

PROJECT NAME:

DANT CLAYTON CORPORATION
1500 Bernheim Lane
Louisville, KY 40210
Telephone (502) 634-3626
www.DANTCLAYTON.COM

REVISIONS

REV. NO.	DATE	DESCRIPTION	INITIALS	ECO NUMBER
A				
B				
C				
D				
E				

NAME: MSWERLY
SCALE: AS NOTED
RELEASE DATE:

PRODUCT: ALS
SHEET #: A-2
VER.: 15

STRUCTURE: Stand
DESIGN: 40

TYPE: Section
MONTH:

CLASS: Elevation
DECK TYPE:

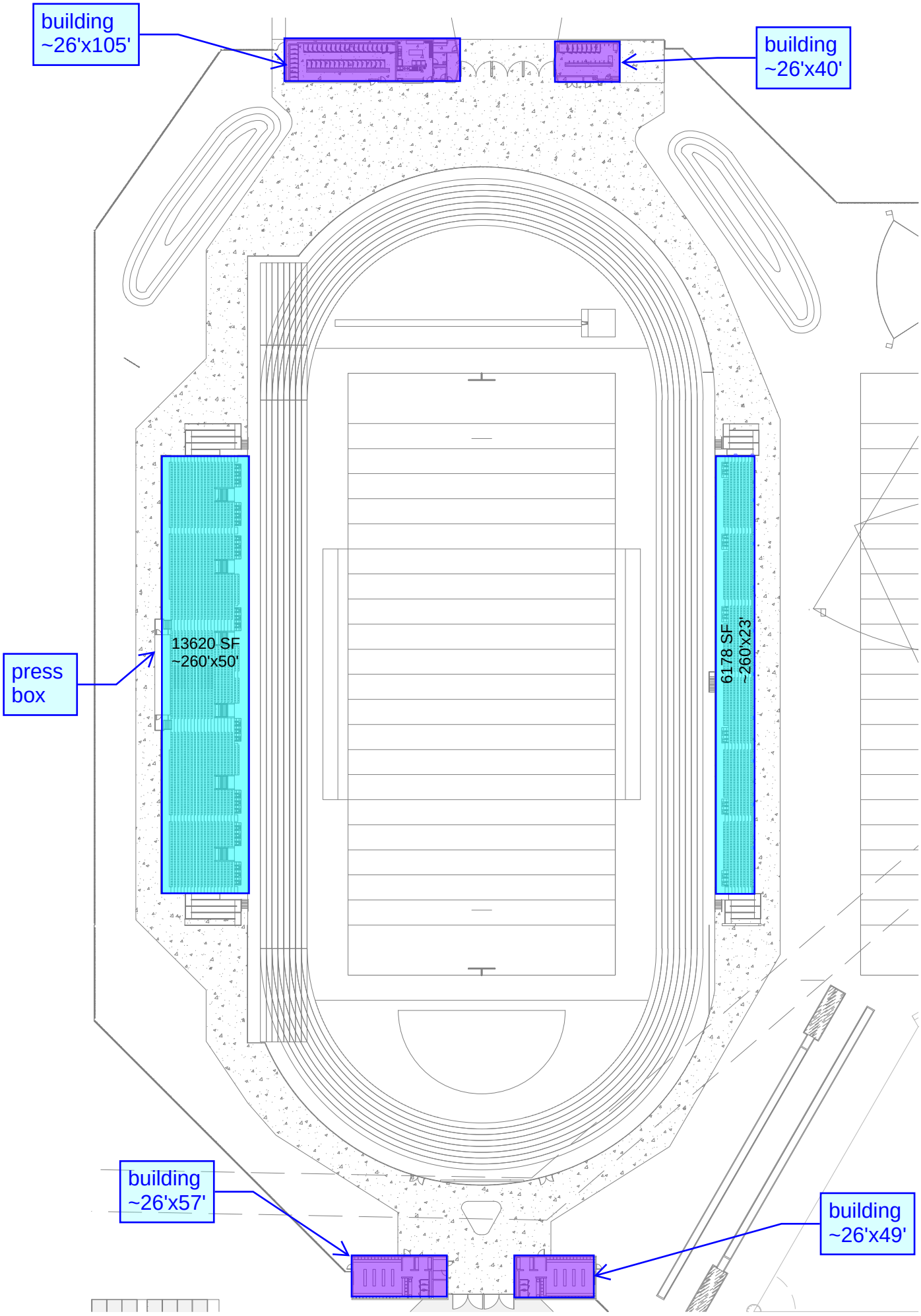
OPERATION: End

	PRIMARY	SECONDARY
FIGURE 1		
FIGURE 2		
FIGURE 3		
FIGURE 4		
RISE		12.0000
RUN		24.0000

SHEET NUMBER
A–3

PART NUMBER
0247463

0247463


building
~26'x105'
building
~26'x40'
press
box
13620 SF
~260'x50'
6178 SF
~260'x23'
building
~26'x57'
building
~26'x49'

GULF SOUTH

ENGINEERING AND TESTING, INC.

Geotechnical & Materials Consultants

15 Veterans Memorial Boulevard | Kenner LA 70062

p 504-305-4401

3121 S Darla Avenue | Gonzales LA 70737

p 225-450-3361

info@**gulfsoutheng.com**

DIVISION 24 - DIVISION 25 - NOT USED

DIVISION 26 - ELECTRICAL

DIVISION 27 - COMMUNICATIONS

DIVISION 28 - DIVISION 30 - NOT USED

DIVISION 31 - EARTHWORK

SECTION 133416 – PERMANENT GRANDSTANDS

PART 1 - GENERAL

1.1 GENERAL

A. Drawings and general provisions of the contract, including General and Supplementary Conditions and Division 1 - Specification sections, apply to work of this section.

1.2 SCOPE

A. These Specifications cover the requirements for the design, fabrication, delivery and installation of the permanent all aluminum grandstand system, including the following:

1. **Grandstands**
    a) **Home - 56" Elevated Grandstand, 15 Row x 303'**
    b) **Visitor - 56" Elevated Grandstand, 12 Row x 159'**
2. Aluminum treads and risers,
    a) **Home - 12"/24" Rise/Run, Fully Closed Deck**
    b) **Visitor - 8"/24" Rise/Run, Fully Closed Deck**
3. Aluminum Aisle steps
4. Guardrails and handrails
5. Seating
6. Ramps, stairs, and landings
7. Grandstand finishes
8. Vertical closure

1.3 RELATED SECTIONS AND DOCUMENTS

A. Section 033000 "Cast-in-Place Concrete" for foundation slab.

B. Section 133419 for press box to be installed at top of grandstands on home side.

1.4 CODES AND STANDARDS

A. Perform all work in accordance with the latest editions and revisions of the following standards, which hereby become part of this section.

1. ICC 300 – Standard for Bleachers, Folding and Telescopic Seating and Grandstands
2. International Building Code, Edition 2021
3. Local Building Code Amendments for **Louisiana**
4. AWS D1.2 – Structural Welding Code – Aluminum
5. Aluminum Design Manual (ADM), 2015

6. ACI 318 - Building Code Requirements for Structural Concrete
7. The Society for Protective Coatings (SSPC)

1.5 GRANDSTAND CONTRACTOR QUALIFICATIONS

A. Manufacturer/Fabricator Qualifications:

1. Experience: Manufacturer/fabricator with not less than 10 years experience with successful production of products and systems to the specified scope of Work, with a record of successful in-service performance and completion of similar projects for a period of not less than 10 years, and with sufficient production capability, facilities, and personnel to produce required Work.

2. Approved manufacturers:

   a) Dant Clayton Corporation
   b) GT Grandstands

B. Installer Qualifications:

1. Experience: Installer with not less than 5 years experience in performing specified scope of Work, with a record of successful in-service performance and completion of projects for a period of not less than 2 years, and with sufficient production capability, facilities, and personnel to produce required Work.
2. Manufacturer/Fabricator Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer/fabricator to install products.

C. Delegated Engineering Responsibility: Contractor shall employ a qualified professional engineer licensed in the state where the project is located to provide engineering for products and systems as required.

1.6 PERFORMANCE REQUIREMENTS

A. Design Loads: Delegated Design Engineer to provide design to withstand design loads including but not limited to gravity, wind, seismic, and erection design loads and shrinkage/thermal movements as established by authorities having jurisdiction, applicable local building codes, and as indicated.

1.	Superimposed Dead Load	6 psf
2.	Live Load	100 psf
3.	Sway Load	24 plf per row parallel to row
4.	Sway Load	10 plf per row perpendicular to row
5.	Wind Load	Design per local building code
6.	Seismic Load	Design per local building code
7.	Guardrail Loads	Design per local code

B. Grandstand System Self Weight: Self-weight of the grandstand system shall be incorporated into the project calculations for both foundations and framing. Due to soil conditions, all grandstands to be 100% aluminum framed.

C. Structural Deflections: Limit live load deflections of aluminum footboards, aluminum seatboards and structural steel framing and any other flexural members to L/200 of the span.

D. Structural Drift: Limit the horizontal frame drift of the grandstand system to H/200 of the frame height under sway, wind and seismic loads.

E. Dimensional Tolerances: Engineer and detail products, systems and connections back to primary structural elements to accommodate fabrication tolerances and dimensional tolerances of framing members and adjacent construction.

1.7 SUBMITTALS

A. Approval Drawings: Submit for review detailed approval drawings as follows:

1. Drawings shall include at a minimum:

   a) All dead, live and other applicable loads used in the design.
   b) Detailed and dimensioned foundation, framing, layout, and seating plans.
   c) Foundation sizes, locations and elevations shall be shown in compliance with surrounding Work and relationships to finish grade.
   d) Seating plan indicating all aisles, walkways, seating sections and exits.
   e) Sections and details showing complete methods of assembly and anchorage:

      i. Show riser heights and platform widths
      ii. Show stair and ramp sections including railings
      iii. Show overall sections showing railings systems, sightlines (when required by scope)

   f) Connection details showing size, type, and grade of all plates, bearings, inserts and anchors.
   g) Finishes.
   h) Joint covers.

2. All approval drawings submitted shall be sealed by a professional engineer who is licensed in the state where the project is located.

3. Equipment Hung From Seating Units: No pipe, ducts or other equipment shall be hung from the seating units without written approval of the Delegated Design Engineer. Coordinate all attachment methods and fastener types with the Delegated Design Engineer to ensure they are suitable for the selected system.

B. Delegated Design Engineering Calculations: Calculations submittal for products indicated to demonstrate conformance with specified design loads, element stiffness and performance requirements including structural analysis data signed and sealed by the professional engineer responsible for their preparation licensed in the state where the project is located.

C. Qualification Data: For firms and persons specified in "Quality Assurance" to demonstrate their capabilities, experience and qualifications. Submit for record lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified

1. Manufacturer qualifications
2. Professional Engineer qualifications

D. Samples for Verification: For each type of exposed material, color, finish and texture.

E. Warranty: Sample of standard warranty.

1.8 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver grandstand components in such quantities and at such times to sufficient for construction activities to occur without delay.

B. Storage: Store components with adequate dunnage.

C. Handling: Handle and transport components in a position consistent with their shape and design to avoid excessive stresses which would cause damage.

1.9 QUALITY CONTROL BY CONTRACTOR

A. For grandstand members furnished under this Section, quality control inspection and testing shall occur during the manufacture of the components, and the components are subject to the approval of the engineered seating bowl supplier's Quality Control Manager.

B. Plant Quality Control: Provide copies of plant quality control program describing procedures for the following:

1. Overall quality control measures
2. Verifying sizes and critical dimensions of members.
3. Verifying position of plates, inserts, and other embedded items.
4. Final inspecting of products prior to shipment.

1.10 WARRANTY

A. Special Warranty: Manufacturer’s standard 1-year warranty is required in which manufacturer agrees to repair finish or replace components that fail in materials or workmanship within specified warranty period.

PART 2 - PRODUCTS

2.1 PERMANENT ALL ALUMIMINUM GRANDSTAND SYSTEM COMPONENTS

A. Single Source Responsibility: Furnish each type of product from a single manufacturer/fabricator. Provide secondary materials only as recommended by manufacturer/fabricator of primary materials.

B. Basis of Design: The design for permanent all aluminum grandstand is based on a system designed and engineered by Dant Clayton. Provide basis of design or comparable by approved comparable manufacturer.

C. Concrete Foundations and Slabs: Refer to structural drawings and section 033000 Cast In Place Concrete for foundation and slab requirements. Design of concrete foundations shall be based on an assumed 750 psf minimum bearing capacity and validated by the project geotechnical engineer

1. All design, detailing, fabrication and installation shall be in accordance with ACI 318.
2. Cast-in-place concrete shall have a minimum compressive strength of 4,500 psi with air entrainment of 6% +/- 1%.
3. All reinforcing steel shall be in accordance with ASTM A615 with a minimum yield strength of 60,000 psi.
4. Provide a minimum 6” thick layer of free draining compacted granular fill beneath the concrete slab.

D. Aluminum: Provide aluminum components at locations as shown on drawings, noted below and in compliance with the following:

1. All detailing, fabrication, and erection shall be in accordance with the code required edition of the Aluminum Design Manual.

E. Understructure

1. Understructure shall be fabricated from 6061-T6 alloy aluminum extrusions
2. Vertical members shall be 2 7/8” O.D. tubing
3. Horizontal braces and footrest supports shall be 3” x 2 7/8” channel.
4. Cross braces and diagonals shall be 2 ¼” x 7/8” channel
5. Handrail support shall be 2 5/8” O.D. tubing.
6. The understructure shall be assembled from the above items in an interlocking design using 7/16” x 3 ½” hot-dipped galvanized bolts
7. The structure shall be a bolted design so that in the event of accidental damage the sub-component parts may be replaced using common hand tools. Field welding for repair purposes shall not be considered
8. Aluminum angle understructure is an acceptable substitution provided 3” x 3” x ¼” aluminum angles are used for vertical and horizontal members. Smaller sizes are specifically prohibited. Understructure will be a bolted assembly.

9. Primary structural members shall be bolted together, or calculations must be submitted verifying that the structure has taken into account the weakening of aluminum associated with welding per AA ADMI.

F. Decking System

1. Footboards

a) The deck planking shall be maintenance free, corrosion resistant all aluminum decking
b) Decking shall be 6063-T6 extruded aluminum with fluted surface. Extrusions shall have a minimum actual vertical support rib height of 1.75” and a nominal wall thickness of 0.080”
c) There will be no gaps between the longitudinal joints of the planking.
d) All aluminum extrusions shall be directly attached to the aluminum support structure without the use of hardware. Attachment shall be positive snap and interlock design. The use of bolt clips, bolt runners, or other friction type fastening devices are not acceptable.
e) 1.75” (height) Filler Board must be used to close decking under seat board. Angled joint cover is not acceptable due to its tendency to rip/tear as the aluminum expands and contracts in changing weather conditions.

G. Risers

1. The decking riser system shall be extruded aluminum; alloy 6063-T6 with a fluted surface and a wall thickness of 0.78”.
2. Fluted opening in the decking and risers system for attachment of seats, seat brackets and railing systems are not acceptable due to their tendency to collect debris and require excessive owner maintenance.

H. Seating

1. Aluminum Bench Seats:

a) Seats shall be 6063-T6 extruded aluminum with a fluted surface and a wall thickness of 0.078". Seatboards shall be a minimum of 9 1/2" wide actual, with outside legs of 1 3/4" actual vertical height and shall have two internal legs with a vertical height of 2 5/8".
b) Seatboards shall attach with one 3/8" diameter bolt and shall be designed for positive physical fastening. Bolt clips, bolt runners or other friction type fastening devices are not acceptable.

2. Handicap Seating as shown on drawings. Deviations from handicap seating design are not allowed.

I. Aisle Steps

1. Aisle step units are to be provided at all intermediate aisle locations as shown on the architectural drawings and be made from 1.75" aluminum extrusions and plate material.
2. Aisle step units shall be mounted to the stadia system with pop rivets or galvanized hardware.
3. Aisle steps will be designed to satisfy row depth with vertical closure panels at the ends of the intermediate steps. No cavity or recessed closure is allowed in area of foot travel.
4. Provide a finish and texture matching that of the stadia tread and riser system to which they are installed. See Finishes.
5. Provide stair nosing at steps and treads.
6. Shall be designed to resist loads imposed from any step mounted rails.

J. Guardrail & Handrail System

1. Chain Link Fence Guardrail System:

   a) Guardrails shall be anodized aluminum extruded channel, 3" x 2 7/8", 6061-T6 alloy, anodized to clear 204R1
   b) The guardrail system shall be of interlocking design with positive through-bolt fastening. The top rail shall be designed to fully cover the rail support posts for a totally snag-free area and eliminate the potential of sharp edge contact with spectators.
   c) Chain link Fence shall be 2" mesh, 9 gauge galvanized

2. Handrail System

   a) Aluminum handrails shall be provided in all areas required by building code and as indicated on the architectural drawings at all locations of new aluminum stadia treads and risers.
   b) Handrails shall be 1 15/16" O.D. extruded aluminum pipe. Straight pipe shall be 6061-T6 aluminum alloy with minimum yield strength of 35 ksi. Bent pipe shall be 6061-T4 aluminum alloy with minimum yield strength of 21 ksi.
   c) Aisle handrails shall be two-line and feature internal fittings for both lines of rail. External fittings are not permitted.
   d) Aisle handrails shall be mounted to the aisle steps with connecting bracket or floor flange.
   e) Handrails on all ramps and stairs shall provide 1-1/2" clearance from the guardrail material and shall extend 12" past the last riser with a return. Newel posts will not interrupt handrails. Handrails will not project more than 4.5" into the width of a stair or ramp.

K. Stairs

1. Shall conform to all above pertinent criteria consistent with the component design of the grandstand.
2. Shall be self-supporting and shall not attach to or be suspended from any footboard or decking member.
3. Stairs shall be fully closed deck tread and riser.
4. Handrail will be inset from guardrail 1 ½" to 3".

L. Ramps

1. Frames shall be 9" x 1.40 extruded aluminum mill finish channel with 3" x 1.4" extruded aluminum mill finish vertical channel columns.
2. Treads shall be 6063-T6 extruded aluminum with a fluted surface and a minimum wall thickness of .078". Minimum vertical height of treads shall be 1.75" actual.
3. Handrail will be inset from guardrail 1½" to 3". Guardrail will not be used for handrail.
4. Guardrailing to match grandstand design unless otherwise noted.
5. Decking aluminum extrusions will run perpendicular to the direction of traffic. Deck aluminum extrusions shall interlock for additional rigidity.
6. Anti-skid tape is not allowable to correct for deviations to paragraph 4 above.

M. End Caps

1. All end caps shall be one-piece cast aluminum and shall be friction fit to the plank without the use of mechanical fasteners.

N. Hardware

1. Bolts used for field installation shall be galvanized
2. Primary connections, i.e. seat, cross-brace, handrail (rail and posts) shall be made with minimum of 3/8" diameter hardware
3. Stainless steel expansion anchors

O. Vertical Closure System

1. Flat Stackable Riser

   a) Riser closure shall consist of a stackable snap-in 1" x 6" 6063-T6 aluminum extrusion with 0.100" wall thickness. Stacked risers to provide a flat finish front
   b) Riser closure to span between rail post spaced at 6'-0" c/c.
   c) Aluminum top cap to be provided where gaps are created between top of closure and decking walking surface.
   d) Closure to be attached to rail post with stainless steel mechanical screws.

P. Finishes

1. Aluminum:

a) Aluminum Finish Descriptions:

i. Mill Finish: natural appearance of the aluminum as it comes from the rolling mill with no further surface treatment.
ii. Anodized Finish: Anodized aluminum provided shall meet or exceed AAMA 611-14 specifications for Anodized Architectural Aluminum
iii. Powder Coat Finish: Powder coat system provided shall meet or exceed AAMA 2604 specification for Super Durable Polyester TGIC
iv. Slip Resistant Deck – SRD: Mill finish aluminum that has a sandblasted walking surface to meet the textured finish noted below
v. Stain and Slip Resistant Deck – SSRD: Powder coat and textured finish meeting the textured finish noted below, and the powder coat finish above

b) Footboards and Walkways

i. Mill

c) Risers

i. Anodized

d) Seat boards

i. Anodized

e) Vertical Closure

i. Anodized

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas and conditions with installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the work

B. Before installation proceeds, installer shall prepare written report, endorsed by installer, listing conditions detrimental to performance of the work. This includes survey of elevations and locations of concrete foundations or pads and anchor bolts to verify compliance with the requirements of the grandstand manufacturers' specified tolerances.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install grandstand and all components according to manufacturer's written instruction and the approved shop drawings.

B. Do no field cut, drill or alter structural members without written approval from grandstand system manufacturers' engineer.

3.3 CLEANING

A. Clean all surfaces according to manufacturer's recommendations.

B. Use cleaning solutions and methods that do not damage finishes or the adjacent surfaces.

C. Mill finish aluminum surfaces are unprotected from oxidation. All mill finished aluminum will oxidize at various rates during the manufacturing, shipping, installation and usage of the grandstand as it is exposed to various weather conditions. Oxidation is natural and expected, and in no way impacts the life cycle or structural performance of the grandstand. Grandstand manufacturer is not responsible for repair, replacement or cleaning of oxidized aluminum.

D. Remove all metal burrs, sharp edges or other cutting, unsafe, conditions.

E. Touch up finishes as recommended by manufacturer.

END OF SECTION 133416

SECTION 265668 – 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 using an LED Lighting source. The manufacturer / contractor shall supply lighting equipment to be functionally equivalent and/or of equal utility or appearance to the standards set forth in these specifications.

C. The sports lighting will be for the following venues:
   1. Football

D. The primary goals of this sports lighting project are:
   A. Guaranteed Light Levels: Selection of appropriate light levels impact the safety of the players and the enjoyment of spectators. Therefore light levels are guaranteed to not drop below specified target values for a period of 10 years.
   B. Environmental Light Control: It is the primary goal of this project to minimize spill light and glare to the players and spectators.
   C. 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.
   D. 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 10-year life cycle. All communication and monitoring costs for 10-year period shall be included in the bid.
   E. Hardened Lighting System: Lighting system to be capable of withstanding wind loading per current building code.

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 drop below desired target values in accordance to IES RP- 6-20, Maintained Average Illuminance and shall be guaranteed for the full warranty period.

B. All luminaire beam types shall comply with IES RP-6-20.

Area Type	Average Target Illumination Levels	Max to Min Uniformity Ratio	Grid Points	Grid Spacing
Football Field	50 foot-candles	2.5:1		30’ x 30’

C. Color: The lighting system shall have a minimum color temperature of 5700K and a CRI of 75.

D. 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
2	F1, F2	80’
2	F3, F4	100’

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. Spill Light and Glare Control: To minimize impact on adjacent properties, spill light and candela values must not exceed the levels suggested in IES RP-6-20, Annex A, Table A.2.

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.

D. The 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 independent 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. Candela is the industry standard being used as a measurement for glare as suggested in IES RP-6-20 Section 2.3.

1.4 COST OF OWNERSHIP

A. Manufacturer shall submit a 10-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 – PRODUCTS

2.1 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 will not be accepted due to potential for internal and external corrosive reaction to the soils and long-term performance concerns.
3. Galvanized steel poles shall be either embedded directly into the concrete foundation or secured to the concrete foundation by a baseplate and anchor bolt system. See Section 2.4 for further foundation details.
4. The manufacturer will supply all drivers and supporting electrical equipment.
    a. Remote supporting electrical equipment shall be mounted approximately 10 feet above grade in aluminum enclosures. The enclosures shall be touch-safe and include circuit breakers or fusing for each luminaire, surge protection, and disconnect per pole.
    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 147 mi/h winds and maintain luminaire aiming alignment.
7. Control cabinet to provide remote on-off control and monitoring features of the lighting system. See Section 2.3 for further details. Contactor cabinet shall utilize electrically held contactors and shall completely deenergize circuit when field lighting is off.

8. 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.

D. Safety: All system components shall be UL listed for the appropriate application. All manufactures must provide a UL certificate of compliance for their LED lighting fixture, remote enclosure, contactor cabinet and control system.

2.2 ELECTRICAL

A. Electric Power Requirements for the Sports Lighting Equipment:
    1. Electric power: Per Plans
    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.

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 or wireless manual on/off pushbutton controls shall be provided.

C. 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.

D. 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 contractor status (open or closed).

E. 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.

F. Communication Costs: Manufacturer shall include communication costs for operating the control and monitoring system for a period of 10 years. Wi-Fi charges shall be included for communication costs for a period of 10 years.

2.4 STRUCTURAL PARAMETERS

A. Wind Loads: Wind loads shall be based on the 2021 International Building Code. Wind loads to be calculated using ASCE 7-16, an ultimate design wind speed of 147 mph for Thibodaux, LA.

B. Pole Structural Design: The stress analysis and safety factor of the poles shall conform to 2021 AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (LTS-6).

C. The foundation design shall be a minimum of reinforced concrete, drilled pier foundation as shown on the foundation design detail included in the contract documents.

D. All foundations designs and pole calculation criteria must meet the minimum design requirements indicated here and in the foundation design detail included in the contract documents, must be based on the specific geotechnical information included in the contract documents and shall be stamped/sealed by a licensed structural engineer in the State of Louisiana.

PART 3 – EXECUTION

3.1 SOIL QUALITY CONTROL

A. It shall be the contractor's responsibility to notify the owner of soil conditions that differ significantly from the information included in the geotechnical information provided in the contract documents.

B. The contractor shall be responsible for providing excavation, shoring, and dewatering as necessary for the construction of the light pole foundations.

C. The contractor may elect to provide a timber pile/pile cap foundation in lieu of a reinforced concrete drilled pier foundation. This determination shall be made by the contractor prior to bidding and associated costs included in the bids. Change order requests for revised foundation design will not be accepted after bidding.

3.2 DELIVERY TIMING

A. Delivery Timing Equipment On-Site: The equipment must be on-site 8 – 10 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 10 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. 10-Year Warranty: manufacturer shall supply a signed warranty covering the entire system and controls for 10 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. The warranty shall cover weather conditions events such as lightning or hail damage, improper installation, unauthorized repairs or alterations, or product made by other manufacturers. The warranty does not cover vandalism or abuse.

B. Maintenance: Manufacturer shall monitor the performance of the lighting system, including on/off status, hours of usage and luminaire outage for 10 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

4.1 PRE-BID SUBMITTALS

A. Design Approval: If any bidder desires pre-bid review of its proposed lighting design to determine compliance with the specifications, the bidder may submit the information described below no

later than 10 days prior to the bid opening, and the engineer will review the same. The engineer will review pre-bid submittals from all the manufacturers and, if the submitted design meets the design requirements of the specifications, an addendum will be issued indicating approval for the specific design submitted. Required submittal information is listed below in Paragraph 4.3 "REQUIRED SUBMITTAL INFORMATION".

NOTE: The specifications and addendum are used to denote the quality and utility of the desired product and do not restrict bidders to a specific brand, make or manufacturer. Products may be acceptable if determined by the design professional to be functionally equivalent and/or of equal utility and appearance to the criteria stated herein in accordance with the Public Bid Law. The "REQUIRED SUBMITTAL INFORMATION" assists the design professional to make such a determination.

4.2 POST-BID SUBMITTAL REQUIREMENTS

A. For any manufacturers not pre-approved, the apparent low bidder shall submit "REQUIRED SUBMITTAL INFORMATION" within 10 days after the bids are opened. If the apparent low bidder does not submit the proper and complete information or documentation as required by the bidding documents within the ten-day period, such bidder shall be declared non-responsive.

END OF SECTION 265668

YKH - VRF AHU SCHEDULE

MARK	AREA SERVED	TYPE	MANUFACTURER	MODEL NUMBER	EAT (DB/WB)	COOLING CAPACITY TOTAL (BTUH)	COOLING CAPACITY SENSIBLE (BTUH)	HEATING CAPACITY (BTUH)	VOLTS/PH/HZ	MCA	MOP	PAIR W/ CONDENSING UNIT	ELECTRICAL COMMENTS
AHU-01	WOMENS RR	CEILING CASSETTE	MITSUBISHI	PLA-A24EA7	75.0 / 66.0	24000	24000	26000	---	---	---	CU-01	POWERED FROM CU
AHU-01A	WOMENS RR	CEILING CASSETTE	MITSUBISHI	PLA-A24EA7	75.0 / 66.0	24000	24000	26000	---	---	---	CU-01	POWERED FROM CU
AHU-02	WOMENS RR	CEILING CASSETTE	MITSUBISHI	PLA-A24EA7	75.0 / 66.0	24000	24000	26000	---	---	---	CU-02	POWERED FROM CU
AHU-03	CONCESSION COOKING	CEILING CASSETTE	MITSUBISHI	PLA-A60EA7	75.0 / 66.0	60000	60000	64000	---	---	---	CU-03	POWERED FROM CU
AHU-04	CONCESSION SERVING	CEILING CASSETTE	MITSUBISHI	PLA-A60EA7	75.0 / 66.0	60000	60000	64000	---	---	---	CU-04	POWERED FROM CU
AHU-05	NORTH TICKETING	CEILING CASSETTE	MITSUBISHI	PLA-A06EA7	75.0 / 66.0	6000	6000	7000	---	---	---	CU-05	POWERED FROM CU
AHU-06	MENS RR	CEILING CASSETTE	MITSUBISHI	PLA-A36EA7	75.0 / 66.0	36000	36000	38000	---	---	---	CU-06	POWERED FROM CU
AHU-07	HOME LOCKERS	CEILING CASSETTE	MITSUBISHI	PLA-A36EA7	75.0 / 66.0	36000	36000	38000	---	---	---	CU-07	POWERED FROM CU
AHU-08	HOME LOCKERS	CEILING CASSETTE	MITSUBISHI	PLA-A36EA7	75.0 / 66.0	36000	36000	38000	---	---	---	CU-08	POWERED FROM CU
AHU-09	HOME LOCKERS	CEILING CASSETTE	MITSUBISHI	PLA-A36EA7	75.0 / 66.0	36000	36000	38000	---	---	---	CU-09	POWERED FROM CU
AHU-10	AWAY LOCKERS	CEILING CASSETTE	MITSUBISHI	PLA-A36EA7	75.0 / 66.0	36000	36000	38000	---	---	---	CU-10	POWERED FROM CU
AHU-11	AWAY LOCKERS	CEILING CASSETTE	MITSUBISHI	PLA-A36EA7	75.0 / 66.0	36000	36000	38000	---	---	---	CU-11	POWERED FROM CU
AHU-12	AWAY LOCKERS	CEILING CASSETTE	MITSUBISHI	PLA-A36EA7	75.0 / 66.0	36000	36000	38000	---	---	---	CU-12	POWERED FROM CU
AHU-13	SOUTH TICKET	CEILING CASSETTE	MITSUBISHI	PLA-A06EA7	75.0 / 66.0	6000	6000	7000	---	---	---	CU-13	POWERED FROM CU

YKH - VRF CU SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	COOLING CAPACITY TOTAL (BTUH)	HEATING CAPACITY (BTUH)	VOLTS/PH/HZ	MCA	MOP	COMMENTS
CU-01	MITSUBISHI	PUZ-A24NKA7	24000	26000	208/1/60	19.0	26	
CU-02	MITSUBISHI	PUZ-A24NKA7	24000	26000	208/1/60	19.0	26	
CU-03	MITSUBISHI	PUZ-A60NKA7	60000	64000	208/1/60	25.0	31.0	
CU-04	MITSUBISHI	PUZ-A60NKA7	60000	64000	208/1/60	25.0	31.0	
CU-05	MITSUBISHI	PUZ-A06NKA7	6000	7000	208/1/60	11.0	28.0	
CU-06	MITSUBISHI	PUZ-A36NKA7	36000	38000	208/1/60	25.0	31.0	
CU-07	MITSUBISHI	PUZ-A36NKA7	36000	38000	208/1/60	25.0	31.0	
CU-08	MITSUBISHI	PUZ-A36NKA7	36000	38000	208/1/60	25.0	31.0	
CU-09	MITSUBISHI	PUZ-A36NKA7	36000	38000	208/1/60	25.0	31.0	
CU-10	MITSUBISHI	PUZ-A36NKA7	36000	38000	208/1/60	25.0	31.0	
CU-11	MITSUBISHI	PUZ-A36NKA7	36000	38000	208/1/60	25.0	31.0	
CU-12	MITSUBISHI	PUZ-A06NKA7	6000	7000	208/1/60	11.0	28.0	

EXHAUST FAN SCHEDULE

NOTES FOR ALL FANS:

- PROVIDE VFD FOR ALL 3 PHASE EQUIPMENT
- SEE SPECIFICATIONS FOR APPROVED EQUALS

1 - FAN TO RUN CONTINOUSLY WHILE BUILDING IS OCCUPIED
2 -FAN TO RUN CONTINOUSLY
3 - PROVIDE NEMA 3R DISCONNECT SWITCH
4 - PROVIDE WITH BACKDRAFT DAMPER
5 - FAN AND ROOF CURB TO BE WIND RATED FOR 150 MPH WITHOUT GUY WIRES
6 - FAN TO HAVE ALL STAINLESS STEEL FASTENERS AND DRAIN CONNECTION
7 - ALUMINUM HOUSING, CURB CAP AND DRAIN TROUGH
8 - BACKWARD CURVED ALUMINUM WHEEL

MARK	MANUFACTURER	Model Number	SERVICE	DRIVE TYPE	FAN AIRFLOW	TOTAL S.P.	VOLTS/PH/HZ	FULL LOAD AMPS	HORSE POWER	COMMENTS
EF-01	GREENHECK	G-095-VG	GENERAL EXHAUST	DIRECT	850 CFM	0.25 in-wg	115/60/1	2.8	0.16	1, 3, 4, 5, 6, 7
EF-02	GREENHECK	G-095-VG	GENERAL EXHAUST	DIRECT	850 CFM	0.25 in-wg	115/60/1	2.8	0.16	1, 3, 4, 5, 6, 7
EF-03	GREENHECK	G-095-VG	GENERAL EXHAUST	DIRECT	850 CFM	0.25 in-wg	115/60/1	2.8	0.16	1, 3, 4, 5, 6, 7
EF-04	GREENHECK	G-090-VG	GENERAL EXHAUST	DIRECT	550 CFM	0.25 in-wg	115/60/1	2	0.10	1, 3, 4, 5, 6, 7
EF-05	GREENHECK	G-060-VG	GENERAL EXHAUST	DIRECT	75 CFM	0.25 in-wg	115/60/1	1.3	0.06	1, 3, 4, 5, 6, 7
EF-06	GREENHECK	G-095-VG	GENERAL EXHAUST	DIRECT	850 CFM	0.25 in-wg	115/60/1	2.8	0.16	1, 3, 4, 5, 6, 7
EF-07	GREENHECK	G-095-VG	GENERAL EXHAUST	DIRECT	850 CFM	0.25 in-wg	115/60/1	2.8	0.16	1, 3, 4, 5, 6, 7
EF-08	GREENHECK	G-070-VG	GENERAL EXHAUST	DIRECT	250 CFM	0.25 in-wg	115/60/1	1.3	0.06	1, 3, 4, 5, 6, 7
EF-09	GREENHECK	G-070-VG	GENERAL EXHAUST	DIRECT	225 CFM	0.25 in-wg	115/60/1	1.3	0.06	1, 3, 4, 5, 6, 7
EF-10	GREENHECK	G-070-VG	GENERAL EXHAUST	DIRECT	225 CFM	0.25 in-wg	115/60/1	1.3	0.06	1, 3, 4, 5, 6, 7
EF-11	GREENHECK	G-070-VG	GENERAL EXHAUST	DIRECT	250 CFM	0.25 in-wg	115/60/1	1.3	0.06	1, 3, 4, 5, 6, 7
EF-12	GREENHECK	G-060-VG	GENERAL EXHAUST	DIRECT	75 CFM	0.25 in-wg	115/60/1	1.3	0.06	1, 3, 4, 5, 6, 7

MINIMUM OUTDOOR AIR VENTILATION

INTERNATIONAL MECHANICAL CODE SECTION 402 - NATURAL VENTILATION.
- 402.1 NATURAL VENTILATION: NATURAL VENTILATION OF AN OCCUPIED SPACE SHALL BE THROUGH WINDOWS, DOORS, LOUVERS, OR OTHER OPENINGS TO OUTDOORS. THE OPERATING MECHANISM FOR SUCH OPENING SHALL BE PROVIDED WITH READY ACCESS SO THAT THE OPENINGS ARE READILY CONTROLLABLE BY THE BUILDING OCCUPANTS.

- 402.2 THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4 PERCENT OF THE FLOOR AREA BEING VENTILATED.

SOUTH BUILDING:

LOCKER ROOM - 116:
- NO REQUIREMENT FOR OUTSIDE AIR.

ENTRY VESTIBULE - 115, FIRST AID 118:
- 214 FT²
- 4% = 8.56 FT²
- DOOR = 28 FT²

RESTROOM - 113:
- NO REQUIREMENT FOR OUTSIDE AIR.

TICKETING - 119:
- 117 FT²
- 4% = 4.56 FT²
- DOOR = 21 FT²

REF CHANGING ROOM:
- 81 FT²
- 4% = 3.24 FT²
- DOOR = 21 FT²

LOCKER ROOM - 112:
- NO REQUIREMENT FOR OUTSIDE AIR.

ENTRY VESTIBULE - 111, FIRST AID 114:
- 209 FT²
- 4% = 8.36 FT²
- DOOR = 28 FT²

RESTROOM - 113:
- NO REQUIREMENT FOR OUTSIDE AIR.

NORTH BUILDING:

WOMENS RR - 104:
- NO REQUIREMENT FOR OUTSIDE AIR.

PREP KITCHEN - 103, CONCESSION - 102:
- 522 FT²
- 4% = 20.88 FT²
- DOOR = 21 FT²

FAMILY RR - 106:
- NO REQUIREMENT FOR OUTSIDE AIR.

JANITOR - 105:
- NO REQUIREMENT FOR OUTSIDE AIR.

TICKETING 101:
- 105 FT²
- 4% = 4.2 FT²
- DOOR = 21 FT²

STORAGE - 107:
- 112 FT²
- 4% = 4.48 FT²
- DOOR = 21 FT²

MENS RR RR - 108:
- NO REQUIREMENT FOR OUTSIDE AIR.

JANITOR - 110:
- NO REQUIREMENT FOR OUTSIDE AIR.

STORAGE - 109:
- 63 FT²
- 4% = 2.52 FT²
- DOOR = 21 FT²

1

WILLIAMS ARCHITECTS + multistudio

9TH WARD STADIUM

OPSB Project Number: ITB24-FAC-0069

4290 Almonaster Avenue
New Orleans, LA 70126

owner:
Orleans Parish School Board
2401 Westbend Parkway
New Orleans, LA 70114
504.304.5612
nolapublicschools.com

Project Number: WA-523012/MS-1323-1080

architect of record:
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New Orleans, LA 70113
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williamsarchitects.com

architect:
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civil engineer:
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landscape architect:
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Arlington, Texas 76010
216.965.5929
designjonesllc.com

mep engineer:
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Metairie, LA 70002
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985.874.5710
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Issue Date: January 30, 2025

Revisions

NUMBER	DESCRIPTION	DATE
	PERMIT COMMENTS	6/4/2025

STATE OF LOUISIANA — GENE L. KELLY — License No. 21523 — PROFESSIONAL ENGINEER IN MECHANICAL ENGINEERING — 12/16/24

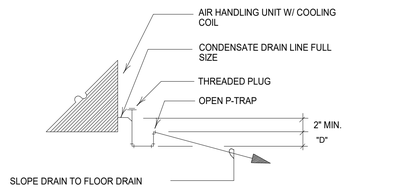
YKH Consulting
YENARI • KELLY • HADAWAY
Mechanical • Electrical • Plumbing
3500 N. Causeway Blvd. Suite 1500, Metairie, LA. 70002
ykmconsulting.com 504.264.5111

Job No.: 2405201 Designed By: RLL
Drawn By: MJL Checked By: GY

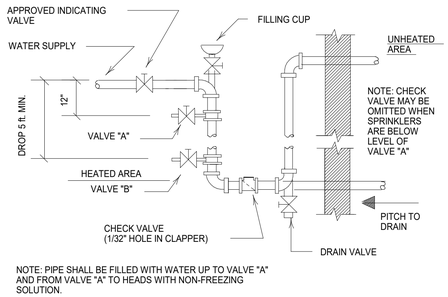
MECHANICAL SCHEDULES

M501

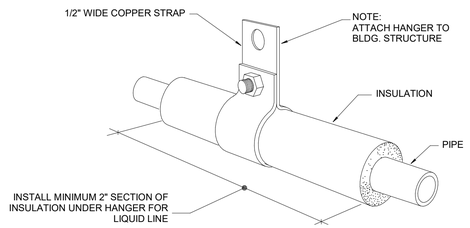
100% Construction Set



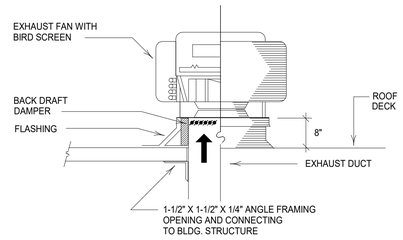
1 AIR HANDLING UNIT DRAIN PIPING DIAGRAM



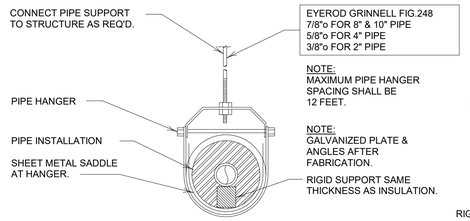
2 ANTIFREEZE SPRINKLER PIPING DIAGRAM

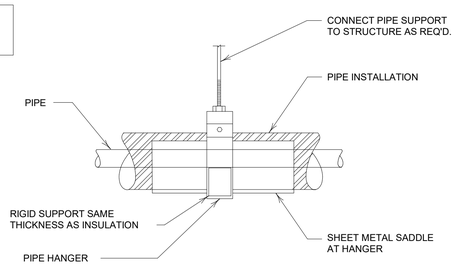


8 REFRIGERANT PIPING HANGER

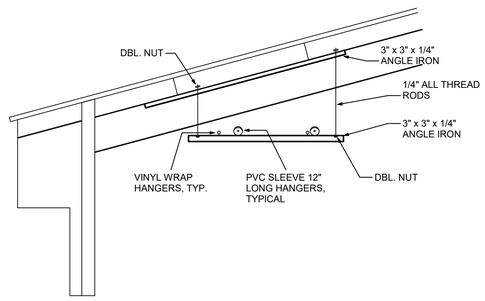


4 CURB MOUNTED EXHAUST FAN DETAIL 2

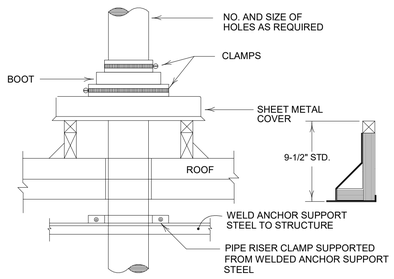




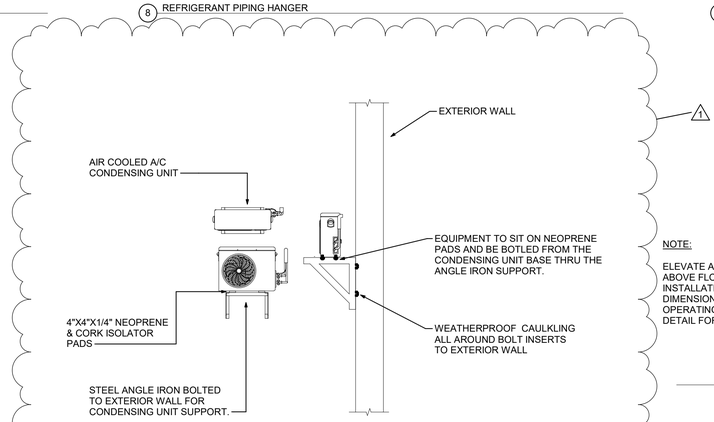
5 INSULATED PIPE HANGER DETAIL



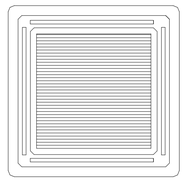
7 Refrigerant Pipe Hanging Detail



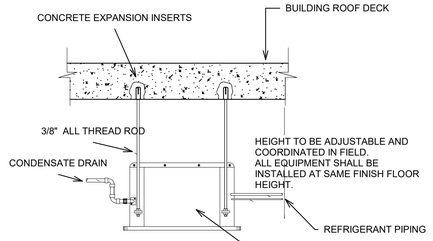
6 PIPE PENETRATION THRU ROOF DETAIL



10 CONDENSING UNIT DETAIL



FLOOR PLAN VIEW

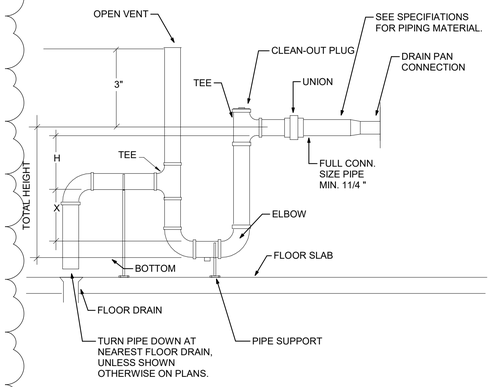


SIDE VIEW

9 CEILING CASETTER DETAIL

NOTE:

ELEVATE A/C UNIT SUFFICIENT DISTANCE ABOVE FLOOR OR ROOF TO ALLOW FOR INSTALLATION OF TRAP WITH ADEQUATE DIMENSIONS TO WITHSTAND SYSTEM OPERATING PRESSURE. COORDINATE WITH DETAIL FOR A UNIT MOUNTING.



TOTAL HEIGHT OF TRAP= X+H+ (1 1/2 x PIPE DIAMETER)

FOR DRAW THRU UNITS	FOR BLOW THRU UNITS
X= MIN. 1/2" H (PREFERRED X=H)	X= FAN STATIC PRESSURE +1"
H= NEGATIVE STATIC PRESSURE +1"	H= MIN. 1"

3 COOLING COIL CONDENSATE DRAIN

YKH Consulting
YENARI • KELLY • HADAWAY
Mechanical • Electrical • Plumbing
3500 N. Causeway Blvd. Suite 1500, Metairie, LA. 70002
ykmconsulting.com 504.264.5111

Job No.:	2405201	Designed By:	RLL
Drawn By:	MJL	Checked By:	GY

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GENE L. LOWN
License No. 28523
PROFESSIONAL ENGINEER
IN
MECHANICAL ENGINEERING
12/16/24

MECHANICAL DETAILS

M601

100% Construction Set