

**CITY OF NAPLES
PURCHASING
DIVISION
CITY HALL, 735 8TH STREET
SOUTH NAPLES, FLORIDA 34102
PH: 239-213-7100 FX: 239-213-7102**

ADDENDUM NUMBER 2

NOTIFICATION	SOLICITATION TITLE:	SOLICITATION NUMBER:	BID OPENING DATE & TIME:
DATE: 2/22/2023	Naples Playhouse Parking Garage - Construction Manager at Risk (CMAR) - RFQ	23-007	3/7/2023 2:00PM

**THE FOLLOWING INFORMATION IS HEREBY INCORPORATED INTO,
AND MADE AN OFFICIAL PART OF THE ABOVE REFERENCED BID.**

- 1. NOTE on page 41 of the solicitation is hereby amended with strikethrough wording being deleted in their entirety, and replaced by the wording in underlined red type:**

Page 41- "Qualified firms interested in providing ~~Beach Restoration and Water Quality Improvements (Beach Outfalls)~~ Naples Playhouse Parking Garage - Construction Manager at Risk (CMAR) services are invited to submit a proposal."

- 2. NOTE on page 48 of the solicitation is hereby amended with strikethrough wording being deleted in their entirety, and replaced by the wording in underlined red type:**

Page 48- "City staff will present an agreement to the top ranked firm for ~~Beach Restoration and Water Quality Improvements (Beach Outfalls)~~ - Naples Playhouse Parking Garage Construction Manager at Risk (CMAR) services."

The following answers to written submitted questions:

1. Tab 4 – please clarify if the client references requested in Tab 4 are to be the same listed in Tab 13 (Reference Questionnaire Form)?

ANSWER: Pursuant to Tab 4 Firm Composition, Qualifications and Background page 42 of the RFQ document, references requested in Tab 4 are the same references listed in Tab 13. These are required from the firm submitting the bid.

2. The following forms are listed as requirements, can you clarify where the City would like these included for ease of the reviewers, is an appendix acceptable or should we place behind Tab 3?

- Cover Sheet (Tab 1 – Title Page)
- Submission Checklist
- Reference Questionnaire (Tab 13)
- Signed IRS W9 – OCT 2018
- Sunbiz Report

IMPORTANT MESSAGE

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID COVER SHEET.

- Acknowledgement of Business Type and Certificates of Insurance
- Immigration Law Affidavit

ANSWER: Please include all submitted information in the specified Tabs per instructions on page 41 of the RFQ Document.

3. Regarding the RFQ sent by your office for the proposed Parking Garage on Friday the 3rd; there is a question on section 39, ALTERNATIVE PROPOSALS. The solicitation is for CMAR; will the city accept a delivery method outside of the solicited CMAR? Can an ALTERNATIVE PROPOSAL be submitted and considered for a Design Build delivery method?

ANSWER: Pursuant to Section 39 Alternative Proposals of the General Conditions, "Proposers offering service delivery methods other than those permitted by the scope of work may submit a separate envelope clearly marked "ALTERNATIVE PROPOSAL". Alternative proposals will be deemed non-responsive and will not be considered for award." The evaluation committee will examine the alternative proposal prior to award.

4. Could you please provide the day, time and location for the evaluation meeting?

ANSWER: Please send an email after the proposal opening date for the evaluation committee date and time information.

5. Does the Geotechnical report shown hard rock or water? Can the Geotechnical Report be provided for GC to review prior to the RFQ?

ANSWER: Please reference soil borings in Attached Exhibit A.

EXHIBIT A - GEOTECHNICAL ENGINEERING SERVICES REPORT

###

IMPORTANT MESSAGE

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID COVER SHEET.



GEOTECHNICAL ENGINEERING SERVICES REPORT

Velocity Project Number: 22-143

Date: January 30, 2023

Project:

Naples Playhouse Parking Garage
150 12th Street S.

Naples, Collier County, Florida

Parcel ID #'s: 08570000066 & 08570000082

Prepared For:

BSSW Architects, Inc.

949 Central Avenue

Naples, FL 34102

City of Naples

City of Naples Community Redevelopment Agency

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FIGURES

Figure 1 Project Location Plan

Figure 2 Boring Location Plan

BORING LOGS





Mr. Daniel Summers
BSSW Architects, Inc
949 Central Avenue
Naples, FL 34102
(239) 643-3103
Daniels@bsswarchitects.com

January 30, 2023

Subject: Geotechnical Engineering Services Report
Naples Playhouse Parking Garage
150 12th Street S.
Naples, Collier County, Florida
Parcel ID #'s: 08570000066 & 08570000082
Velocity Project Number: 22-143

Dear Mr. Summers:

Velocity Engineering Services, LLC (Velocity) is pleased to submit this Geotechnical Engineering Services Report for the project referenced above. It has been our pleasure to be a part of your design team for this project and we look forward to a continued association.

1.0 INTRODUCTION

1.1 Project Description

Velocity understands that the proposed project will consist of the design and construction of a new approximately 120' x 300' 3-story parking garage at the subject site. The client requested a geotechnical exploration program consisting of test borings to assist with planning for the project.

The client provided Velocity with the following plans and information:

- ✓ City of Naples Request for Proposal (153 pages total) dated 2/25/2022. The RFP includes (but is not limited to) site plans and conceptual design plans, dated April 13, 2021, by MHK Architecture and Planning;
- ✓ Site plan (1 page), dated June 2022, by BSSW Architects;
- ✓ Boundary Survey including the desired boring locations and maximum (unfactored) structural loads, 1 page, dated 9/20/22 by Stantec.
- ✓ Maximum (unfactored) structural loads listed on the Boundary Survey are on the order of 659 kips for columns and 24.3 klf for walls.

No other plans or construction details were available to Velocity at the time of this report.

1.2 Purpose & Scope of Services

The purpose of this exploration program was to evaluate the subsurface soil and groundwater conditions relative to the foundation support and construction of the proposed parking garage. Velocity therefore performed the following scope of services:

- ✓ Obtaining the necessary drilling permits, obtaining utility locates from Sunshine 811, and mobilizing a drill rig and crew to the site.
- ✓ Locating the test borings based on measured or estimated distances from existing structures and/or GPS coordinates.
- ✓ Performing ten (10) Standard Penetration Test (SPT) borings at or near the proposed boring locations pre-selected by the client, within the footprint of the proposed parking garage, to depths of thirty (30) feet below the ground surface (BGS).
- ✓ Grouting the test borings in accordance with regulatory requirements.
- ✓ Visually classifying the soil samples recovered from the test borings.
- ✓ Performing engineering analyses and preparing a Geotechnical Report for the project.

2.0 METHODOLOGY & FINDINGS

2.1 Site Features

The project site consists of two adjacent commercial parcels. The proposed parking garage footprint is currently partially occupied by an existing single story commercial building, associated parking area, and an area of dense vegetation. It should be noted that access paths were cleared by the client within the dense vegetation to allow access to the proposed boring locations. The site is generally level with the exception of various holes where it appears palm trees and their roots were removed. The holes range from 1 to 2 feet in depth relative to the surrounding grade within the vegetated area at the site. The site is bordered by 1st Avenue South to the north, and 12th Street South to the east and single story storage buildings to the south and west.

The approximate site location is depicted in Figure 1, Project Location Plan.

2.2 Field Exploration Program

The test borings were performed in general accordance with ASTM D1586 "*Standard Test Method for Standard Penetration Test (SPT) and Split Barrel Sampling of Soils*". This procedure uses a 140 pound hammer with a 30 inch drop to drive a 2 inch (outside) diameter hollow tube called a "split-spoon". The number of hammer blows required to drive the split-spoon 12 inches is called the "N Value" and is an indication of the relative density of the soil(s). The split-spoon also captures samples of the soil(s) so they can be retrieved.

The approximate boring locations are depicted in Figure 2, Boring Location Plan.



2.3 Laboratory Examination

The soil samples retrieved during the field exploration program were visually examined in general accordance with ASTM D2488 "*Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*". Each soil sample was classified in general accordance with the Unified Soil Classification System (USCS), modified as necessary to describe typical southwest Florida soils. Additional laboratory testing was not included in our scope of services, nor was it deemed necessary at this time.

The soil samples will be retained at Velocity's office for 30 days from the date of this report. The samples will then be disposed of unless other arrangements, such as the client taking possession of them or Velocity retaining them beyond this date, have been agreed upon in writing.

2.4 Subsurface Soil Conditions

The subsurface soil conditions at the site generally consist of very loose to medium dense sand (SP), sand with silt (SP-SM), silty sand (SM) and weathered limestone (WLS) and hard limestone (LS) from the existing ground surface to the boring termination depths of approximately 30 feet BGS. Detailed records of each boring are attached to this report.

It should be noted that borings B-1, B-6, B-7 and B-8 were performed within the existing parking area. At these locations, Velocity encountered asphalt ranging from approximately 1 to 5 inches thick overlying concrete that ranged from approximately 3 to 8 inches thick.

2.5 Groundwater

At the time of our field exploration program, the ground water depth was measured at approximately 3 to 5 feet below the existing ground surface in the test borings. The ground water measurements were obtained prior to initiation of mud rotary drilling.

Fluctuation in groundwater depths should be anticipated due to seasonal changes, local rainfall, surface water runoff, and other site-specific considerations. Ponding of storm water should be anticipated after heavy rain events. These ground water depths and possible fluctuations should be considered when planning any excavations at the site. Dewatering may be required to facilitate the proposed construction.

3.0 EVALUATION & RECOMMENDATIONS

3.1 Building Foundations

The evaluation of foundation options is generally governed by 2 primary considerations, bearing capacity and settlement. Bearing capacity is the soil's ability to support the foundation load without experiencing a plunging failure. The selected foundation must be able to provide adequate bearing capacity within an acceptable range of settlement.

Based on the subsurface soils conditions encountered and the anticipated structural loads detailed in Section 1.1, Velocity recommends performing vibro-replacement ground improvement to densify and reinforce these soils so that the proposed structure can be supported on shallow foundations. Recommendations for vibro-replacement and shallow foundations are presented in Section 3.2 of this report. These recommendations are



contingent upon site preparation being performed in accordance with the specifications presented in Section 3.4 of this report.

It should be noted that scattered pockets of organics and buried debris were encountered during construction at a nearby project. **Based on our experience with nearby projects and subsurface conditions in this area of Naples, Velocity Recommends that consideration be given to performing a geophysical survey at the site to determine if similar conditions are present.** A geophysical survey can evaluate a much larger area of the site than can be evaluated using test borings. If any problematic conditions or buried debris are identified, those issues can be addressed prior to project commencement.

3.2 Vibro-Replacement Ground Improvement and Shallow Foundation Systems

Vibro-replacement is a ground improvement process performed by inserting a large vibrating metal probe into the soil by means of water jetting or compressed air. The vibrating probe densifies the surrounding soil while crushed stone is placed around the probe and migrates downward through the void space created by the probe. The process results in densified soils and a column of stone that provides further reinforcement for the soils.

Vibro-replacement is a specialized process, and its successful completion depends on the experience of the vibro-replacement contractor, the size and energy of the equipment used, and the spacing of the probe locations. Because the size and energy of the equipment used is not standardized, the vibro-replacement program is typically provided on a “design-build” basis by the vibro-replacement contractor. The vibro-replacement contractor should prepare a project-specific vibro-replacement plan based upon the vibro-replacement program performance criteria specified herein. The vibro-replacement plan should include, at a minimum, the methods and equipment to be used, a probe location plan, the treatment depth at each probe location, and the resultant settlement projected for every foundation element.

The vibro-replacement plan should be submitted by the vibro-replacement contractor for review and approval by Velocity prior to the initiation of vibro-replacement operations. The approval of the vibro-replacement plan by Velocity is in no way a warranty or guarantee that the intended improvements will be achieved. The responsibility for achieving the required improvement is solely that of the vibro-replacement contractor.

For this project, Velocity recommends the following performance criteria for the vibro-replacement program:

- ✓ Allowable Soil Bearing Pressure (Minimum)5,000 psf
- ✓ Total Settlement (Maximum).....1 inch
- ✓ Differential Settlement (Maximum) 1/2 inch

Velocity recommends that vibro-replacement be performed beneath all foundation elements. However, if performing vibro-replacement beneath lightly loaded foundation elements will result in the maximum differential settlement exceeding the criteria presented herein, then vibro-replacement may be omitted beneath lightly loaded foundation elements, but only to the extent necessary to achieve the specified criteria.

Vibro-replacement beneath the ground floor slab(s) is not recommended at this time. Velocity reserves the right to re-evaluate this recommendation should a geophysical survey reveal conditions that differ from those encountered in this geotechnical investigation.



For initial planning purposes only, it is typical for vibro-replacement to be performed to depths of at least twice the width of isolated column footings and four times the width of continuous wall footings. However, actual depths will vary based upon the vibro-replacement plan. Additionally, due to zones of hard drilling encountered between 14.5 and 30 feet BGS in borings B-1, B-2, B-4 and B-7, “hang-up” or refusal of the vibro-replacement probe may occur at some locations. This should be anticipated by the vibro-replacement contractor.

Velocity should be retained to monitor the performance of the vibro-replacement program. A post-improvement verification program consisting of standard penetration test (SPT) borings or piezocone penetration test (PCPT) soundings should be performed to verify the effectiveness of the vibro-improvement process. Post improvement testing should not be initiated until a period of at least 72 hours has elapsed following the completion of vibro-replacement to allow time for excess pore water pressure to dissipate.

Following the successful completion of vibro-replacement ground improvement, an allowable soil bearing pressure of 5,000 psf may be used for shallow spread footing foundation design. Isolated column footings should have a minimum dimension of 36 inches and should bear at a depth of at least 24 inches below the lowest adjacent grade. Continuous wall footings should have a minimum width of at least 24 inches and should bear at a depth of at least 24 inches below the lowest adjacent grade. All footing elements should be constructed directly upon the vibro-replacement stone columns.

Vibrations from vibro-replacement may disturb nearby adjacent structures. Velocity can provide vibration monitoring services for the project if desired.

3.3 Ground Floor Slab(s)

Traditionally reinforced concrete ground floor slabs may be designed as slabs-on-grade using a modulus of subgrade reaction (“K”) of 150 pci. The ground floor slab should be structurally separated from all footings, walls, and columns unless a monolithic “thickened edge” slab foundation is utilized. If a monolithic “thickened edge” slab is utilized, it should be properly reinforced to resist the bending moments that will occur due to the loading differences between the thickened foundation elements and the remainder of the slab.

A moisture vapor barrier should be placed beneath the ground floor slab to minimize vapor intrusion in accordance with the Florida Building Code. Care should be taken to ensure that all seams, penetrations, and punctures in the barrier are properly sealed prior to the slab being poured.

3.4 Site Preparation

The building pad should be stripped and cleared of all organic material, roots, topsoil, and any other deleterious materials to a distance of at least 5 feet beyond the building limits. The stripped surface should be proof rolled and tested for compaction prior to any structural fill being placed. Structural fill may then be placed in lifts of not more than 12 inches and each lift should be compacted and tested prior to placement of the next lift. Fill should be placed prior to the initiation of vibro-replacement operations to maximize the amount of confining pressure acting upon the soils in the improvement zone.

Velocity recommends the following compaction requirements for this project. The specified compaction percentages are based upon the maximum dry density as determined by a “modified proctor test” in accordance with ASTM D1557 “*Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))*”.



- ✓ Proof Roll.....95%
- ✓ Structural Fill.....95%
- ✓ Bottom of Footings.....95%

All density testing should be performed in accordance with ASTM D6938 “*Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)*”. Tests should be performed to a depth of 12 inches below the surface being tested, or the thickness of the soil layer if thinner than 12 inches, unless specified otherwise. Any areas not in compliance with the compaction requirements should be reworked and retested prior to placement of the next lift of fill.

It is not possible to perform density testing in the stone columns themselves or in soils with highly variable amounts of rock/stone. In such situations, static cone penetrometer testing may be utilized to verify that adequate relative density of the soils has been achieved.

The following testing frequencies are recommended:

- ✓ Building Pad Proof Roll & Fill 1 test per 2,500 sq.ft. (minimum 4) per lift
- ✓ Isolated Column Footings 1 test per footing
- ✓ Continuous Wall Footings..... 1 test per each 50 lineal feet
- ✓ Paved Areas..... 1 test per 5,000 sq.ft. (minimum 4) per lift

All structural fill material placed should be well graded and conform to the following requirements:

- ✓ Fines Content per ASTM D1140..... 12% maximum
- ✓ Organic Content per ASTM D2974..... 5% maximum
- ✓ Plasticity per ASTM D4318..... Non Plastic
- ✓ Maximum Particle Size..... 2 inches

Using vibratory compaction equipment at the site may disturb nearby structures. We recommend that vibration levels reaching any nearby structures be monitored during any operations utilizing vibratory equipment.

4.0 LIMITATIONS

4.1 Unanticipated Conditions

Velocity cannot be responsible for any unanticipated conditions that may be discovered on the site that were not encountered in our test borings. However, should any such unanticipated conditions be discovered, Velocity should be notified of them immediately in writing so that we may observe them and review their impact upon our recommendations presented herein.



If any of the project details stated herein are modified or changed, Velocity must be notified in writing so that we may review the applicability of our recommendations.

4.2 Boring Logs & Figures

The soil and groundwater conditions shown in the boring logs and reported herein reflect the conditions at the specific boring locations at the time of our exploration only. Conditions will vary across the site and will also vary with time. Soil layer transitions depicted on the boring logs should be considered approximate and variations in depth should be anticipated. The boring locations indicated were not surveyed and should be considered approximate.

4.3 Reliance

This report has been prepared for the exclusive use of the client, the project owner, and the design team for the indicated project only. No other parties are entitled to rely upon this report. Contractors should not rely upon this report for preparation of their bids and should perform their own investigations to confirm any details that may impact their bids. This report should not be relied upon to plan any other project at this site, or the same project at any other site.

4.4 Standard of Care

These geotechnical engineering services have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the location where the Work was performed. No other warranty, expressed or implied, is made including, without limitation, any warranty of fitness for a particular purpose other than those expressly stated herein.

4.5 Reproduction

No portion of this report should be reproduced or used unless the entire report is reproduced in full.

4.6 Out of Scope Considerations

The depths of the test borings performed herein were limited to the depths to which the anticipated foundation loads are likely to influence. Evaluation of potential hazards at deeper depths, such as karst (sinkhole) activity, is beyond the scope of this investigation.

The following items are considered out of scope considerations and have not been evaluated by Velocity: examination or testing of the soil samples recovered for chemical contamination or other environmental hazards; determination or evaluation of the seasonal high water table; and constructability review.



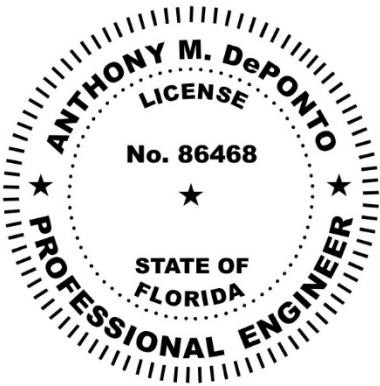
5.0 CLOSING & CERTIFICATION

We appreciate the opportunity to be of service to you on this project. Please do not hesitate to contact us if you have any questions or if we may further assist you.

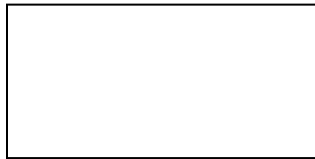
Sincerely,

Velocity Engineering Services, LLC
12821 Commerce Lakes Drive, Suite 7
Fort Myers, FL 33913
FBPE CA# 30362

Anthony M. DePonto, P.E.
Vice President



This item has been digitally signed and sealed by



on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

A handwritten signature in cursive script that reads "Felipe Compean".

Felipe Compean, P.E.
Project Manager

EXHIBIT A



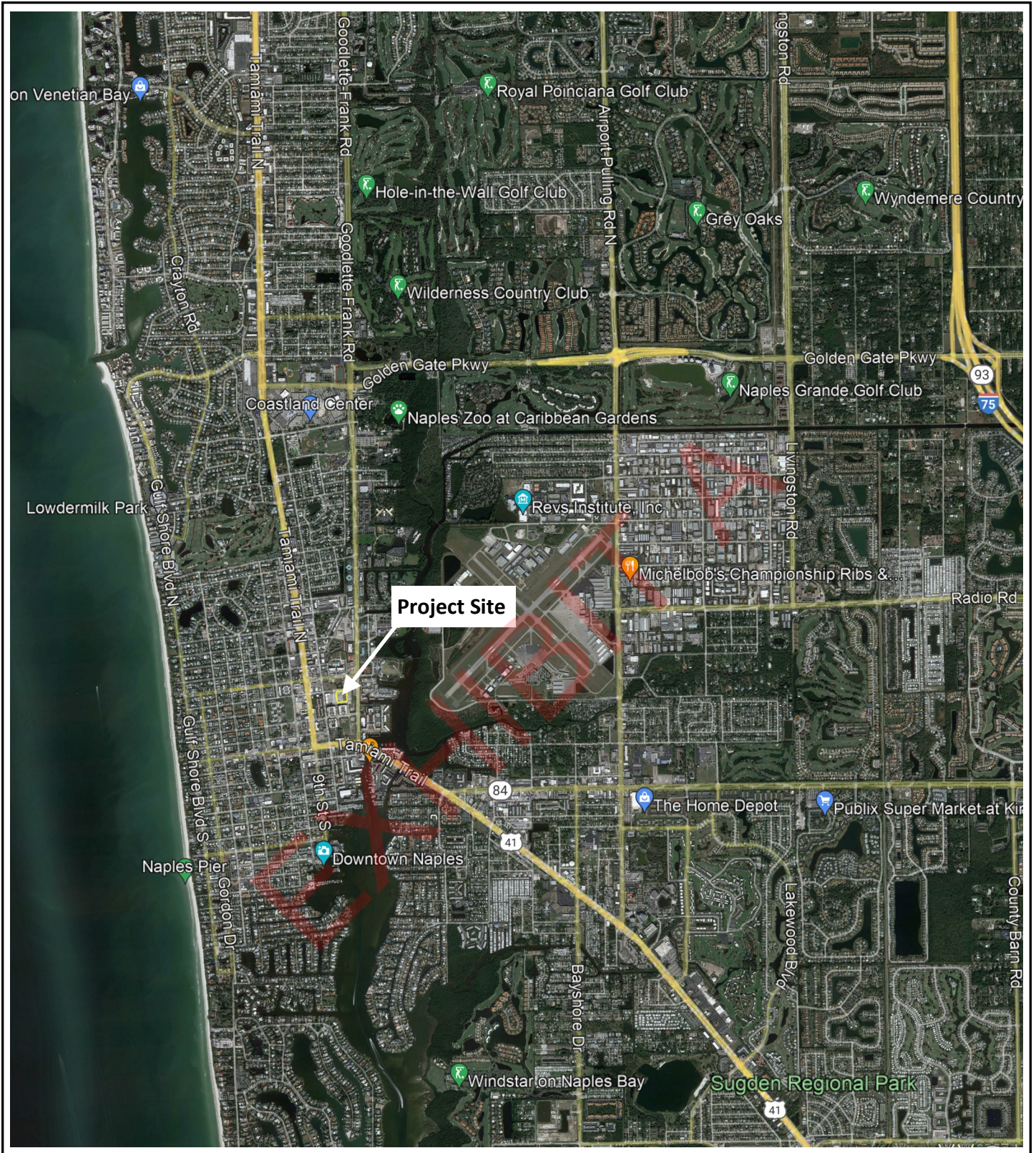


FIGURE 1 — PROJECT LOCATION PLAN

Naples Playhouse Parking Garage
 150 12th Street S.
 Naples, Collier County, Florida
 Velocity Project Number: 22-143





KEY TO BORING LOGS

Major Division		Group Symbols	Typical Names
COARSE-GRAINED SOILS (50% of the material retained on No. 200 sieve)	Gravels (>50% retained on No. 4 sieve)	Clean Gravel	GW Well-graded gravels, gravel-sand mixtures, little or no fines
		Gravel w/Fines	GP Poorly-graded gravels, gravel-sand mixtures, little or no fines
			GM Silty gravels, gravel-sand-silt mixtures
		GC Clayey gravels, gravel-sand-silt mixtures	
	Sands (<50% passes No. 4 sieve)	Clean Sands	SW Well-graded sands, gravelly sands, little or no fines
		Sand w/ Fines	SP Poorly-graded sands, gravelly sands, little or no fines
			SM Silty sands, sand-silt mixtures
		SC Clayey sands, sand clay mixtures	
FINE-GRAINED SOILS (>50% of the material passes No. 200 sieve)	Sils and Clays (Liquid limit < 60)	ML Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
		CL Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		OL Organic silts and organic silty clays of low plasticity	
	Sils and Clays (Liquid limit > 60)	MH Inorganic silts micaceous or distomaceous fine sandy or silty soils, organic silts	
		CH Inorganic clays of high plasticity, fat clays	
		OH Organic clays of medium to high plasticity, organic silts	
Highly Organic Soils	PT	Peat and other highly organic soils	
Limestones	LS	Limestone layer	
	WLS	Weathered and/or deteriorated limestone	

DENSITY of SANDS, GRAVELS, and WEATHERED LIMESTONE	
<u>N Value</u>	<u>Density</u>
0-4	Very Loose
5-10	Loose
11-30	Medium Dense
31-50	Dense
50+	Very Dense

CONSISTENCY of SILTS & CLAYS	
<u>N Value</u>	<u>Density</u>
0-2	Very Soft
3-4	Soft
5-8	Firm
9-15	Stiff
16-30	Very Stiff
30+	Hard

HARDNESS OF LIMESTONE	
<u>N Value</u>	<u>Density</u>
50-99	Soft
100+	Hard

PROPORTIONS	
<u>Content</u>	<u>Description</u>
0-10%	With a Trace
10-25%	With Some
25-50%	With
*Recovery is 100% unless noted otherwise	

ORGANIC SOIL PROPORTIONS	
<u>Organic Content</u>	<u>Description</u>
0-2%	With a Trace of Organics
2-5%	With Some Organics
5-20%	With Organics / Peat
20-100%	Highly Organic / Peat

ABBREVIATIONS			
WT	Water table at time of boring	Moisture	Moisture Content per ASTM D2216
HA	Boring advanced using Hand Auger	-200	% passing #200 sieve per ASTM D1140
~	Approximated N value due to refusal	Organics	Organic Content per ASTM D2974
		LL, PL, PI	Atterberg Limits per ASTM D4318



BORING LOG NUMBER: B-1

PROJECT: Naples Playhouse Parking Garage
 PROJECT No.: 22-143 DATE: 12/12/22 GROUNDWATER: 5.0 ft
 NOTES:

DEPTH (FEET) & Water Table	SAMPLE	BLOWS / 6"	"N" VALUE BLOWS / FT.	SYMBOL	SOIL DESCRIPTION	NOTES
0					ASPHALT	5 inches thick
					CONCRETE	3 inches thick
			N/A		SAND WITH SILT (SP-SM)	Gray with rock
						Gray
			19			Gray
5			17			Gray with a trace of rock
			12		SAND (SP)	Brown
			7			Brown with a trace of weathered limestone
10					Very Loose to Medium Dense	
			4			
15					SAND WITH SILT (SP-SM)	Brown with a trace of weathered limestone
			100+			Brown Hard drilling from 19 to 30 feet
20					LIMESTONE (LS)	Loss of circulation of the drilling fluid at 22 feet
			100+			Brown
25					Hard	
			100+			Brown with a trace of shell
30						Boring terminated at 30 feet



BORING LOG NUMBER: B-4

PROJECT: Naples Playhouse Parking Garage
 PROJECT No.: 22-143 DATE: 12/12/22 GROUNDWATER: 4.0 ft
 NOTES:

DEPTH (FEET) & Water Table	SAMPLE	BLOWS / 6"	"N" VALUE BLOWS / FT.	SYMBOL	SOIL DESCRIPTION	NOTES		
0		4	8		SAND (SP)	Dark gray with rock		
		4						Dark gray with a trace of root
		4						Dark gray with a trace of root
		5	12		SAND (SP)	Dark gray with a trace of root		
		4						Dark gray with a trace of root
		5						Dark gray
WT		7	17		SAND (SP)	Dark gray with a trace of root		
		9						Dark gray
		8						Brown
5		8	14		SAND (SP)	Dark gray		
		6						Dark gray
		7						Brown
		7	6		SAND (SP)	Dark gray		
		4						Dark gray
		3						Brown
10		3	100+		SAND (SM)	Dark gray with a trace of root		
		3						Dark gray with a trace of root
		3						Dark gray with a trace of root
		1	100+		SAND (SM)	Dark gray with a trace of root		
		2						Dark gray with a trace of root
15		50/1"	100+		LIMESTONE (LS)	Dark gray with a trace of root		
		50/1"						Dark gray with a trace of root
		1	100+		LIMESTONE (LS)	Dark gray with a trace of root		
		2						Dark gray with a trace of root
20		50/1"	100+		LIMESTONE (LS)	Dark gray with a trace of root		
		50/1"						Dark gray with a trace of root
		49	100+		WEATHERED LIMESTONE (WLS)	Dark gray with a trace of root		
		50/2"						Dark gray with a trace of root
25		50/2"	100+		LIMESTONE (LS)	Dark gray with a trace of root		
		50/2"						Dark gray with a trace of root
		49	100+		LIMESTONE (LS)	Dark gray with a trace of root		
		50/2"						Dark gray with a trace of root
30		50/5"	100+		LIMESTONE (LS)	Dark gray with a trace of root		



BORING LOG NUMBER: B-5

PROJECT: Naples Playhouse Parking Garage
 PROJECT No.: 22-143 DATE: 12/14/22 GROUNDWATER: 4.0 ft
 NOTES:

DEPTH (FEET) & Water Table	SAMPLE	BLOWS / 6"	"N" VALUE BLOWS / FT.	SYMBOL	SOIL DESCRIPTION	NOTES
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0		2 1 2	3			Dark gray with a trace of shell and root
		6 7 7	14			Light gray
WT		6 5 5	10			Black with a trace of root
5		6 6 7 7	13			Dark brown
		5 7 8 6	15			Dark brown
10					SAND (SP)	
					Very Loose to Medium Dense	
		8 8 8	16			Gray with a trace of shell
15						
		1 1 1	2			Brown
20					SILTY SAND (SM)	
					Very Loose	
		2 2 2	4			Light brown
25						
		5 5 7	12			Tan with some silt
30					WEATHERED LIMESTONE (WLS)	
					Medium Dense	Boring terminated at 30 feet



BORING LOG NUMBER: B-8

PROJECT: Naples Playhouse Parking Garage
 PROJECT No.: 22-143 DATE: 12/1/22 GROUNDWATER: 3.0 ft
 NOTES:

DEPTH (FEET) & Water Table	SAMPLE	BLOWS / 6"	"N" VALUE BLOWS / FT.	SYMBOL	SOIL DESCRIPTION	NOTES
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0					ASPHALT	1 inch thick
					CONCRETE	8 inches thick
			N/A			Dark gray with some rock and a trace of shell
						Light gray
WT			17			
						Dark brown
5			10		SAND (SP)	
						Brown
			8			
						Brown
			8			
10					Loose to Medium Dense	
						Light gray
			12			
15						
			2		SILTY SAND (SM)	Gray
20					Very Loose	
						Loss of circulation of the drilling fluid at 21 feet
			4		SAND (SP)	Brown
25					Very Loose	The drill string advanced from 23.5 to 24.5 feet under the weight of the hammer
			17		WEATHERED LIMESTONE (WLS)	Tan with a trace of silty sand
30					Medium Dense	Boring terminated at 30 feet



BORING LOG NUMBER: B-9

PROJECT: Naples Playhouse Parking Garage
 PROJECT No.: 22-143 DATE: 12/14/22 GROUNDWATER: 4.0 ft
 NOTES:

DEPTH (FEET) & Water Table	SAMPLE	BLOWS / 6"	"N" VALUE BLOWS / FT.	SYMBOL	SOIL DESCRIPTION	NOTES
0		3	7		SAND (SP)	Dark gray with traces of shell and root
		3				
		4				
		3				
		5	17		Loose to Medium Dense	Gray
		9				
		8				
WT		7	12		SAND WITH SILT (SP-SM)	Dark brown with a trace of root
5		6				
		6				
		6	13		SAND (SP)	Brown
		6				
		7				
		6	14		SAND (SP)	Brown
		6				
		8				
10		8	10		Loose to Medium Dense	Light gray
		4				
		4				
15		6	2		SAND WITH SILT (SP-SM)	Gray
		1				
		1				
20		1	24		SAND (SP)	Loss of circulation of the drilling fluid at 23 feet
		5				
		8				
25		16	22		WEATHERED LIMESTONE (WLS)	Tan
		5				
		8				
		9	22		WEATHERED LIMESTONE (WLS)	Tan with silt
		10				
		12				
30		12				Boring terminated at 30 feet



BORING LOG NUMBER: B-10

PROJECT: Naples Playhouse Parking Garage
 PROJECT No.: 22-143 DATE: 12/14/22 GROUNDWATER: 4.0 ft
 NOTES:

DEPTH (FEET) & Water Table	SAMPLE	BLOWS / 6"	"N" VALUE BLOWS / FT.	SYMBOL	SOIL DESCRIPTION	NOTES
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0		2 4 4 4	8			Dark gray with a trace of rock
		5 7 7 7	14			Gray
WT		6 5 5 7	10			Gray
5		6 5 5 7	10		SAND (SP)	Dark gray with a trace of root
		2 2 2 2	4			Dark gray
10						
		4 5 5	10		Very Loose to Medium Dense	Gray
15						
		2 1 1	2			Gray
20						
		1 4 5	9		SAND WITH SILT (SP-SM)	Gray
25					Loose	
		4 4 5	9		WEATHERED LIMESTONE (WLS)	Tan with silt
30					Loose	Boring terminated at 30 feet