



**BUILDING CODE ENFORCEMENT  
PLAN REVIEW REQUEST FOR  
DEFERRED SUBMITTAL**

24016565  
REVIEWED FOR COMPLIANCE  
Performance of this review does not relieve the applicant from full responsibility to comply with all applicable code and regulations.  
07/02/24

**NOTE:** Completed Form Must Accompany the Plan Submittal Package

**PROJECT INFORMATION**

Project Address: 4502, 4504, 4506 Terry Street Bldg/Ste. No: \_\_\_\_\_  
 City Project Number: 24016565, 24016566, & 24016567 Occupancy Classification: R-3  
 Construction Type: V-B Engineer of Record: Miguel Mills

**DEFERRED REQUEST**

Indicate items by placing a check in the box which a "Deferred Submittal" is requested. Include the date the plans will be submitted to the City for review.

DEFERRED ITEMS	SUBMITTAL DATE
<input type="checkbox"/> Precast Panels – Non-Fire-Rated Construction Only *	
<input type="checkbox"/> Prefab Metal Building Plans – Non-Fire-Rated Construction Only*	
<input type="checkbox"/> Prefab Access Floor Systems	
<input type="checkbox"/> Prefab Curtain Wall Systems – Not Part of a Fire-Rated Assembly	
<input type="checkbox"/> Interior Retractable Bleachers	
<input type="checkbox"/> Canopies and/or Awnings*	
<input type="checkbox"/> Spires – Non-Fire-Rated Construction Only	
<input type="checkbox"/> Prefab Steel Stairs*	
<input type="checkbox"/> Prefab Steel Storage Racks (No High-Pile Storage)	
<input checked="" type="checkbox"/> Prefab Wood Truss Details & Layout*	5/24/24
<input type="checkbox"/> Texas PE Sealed – Emergency Responder Radio Coverage Plans	
<input type="checkbox"/> Helical Pile Foundation Systems	
<input type="checkbox"/> Other:	
<input type="checkbox"/> Other:	

**\* REQUIRES AN APPROVED FABRICATOR**

**ACKNOWLEDGMENTS** By signing this form, the owner(s) and all responsible parties acknowledge and agree to all of the following statements.

- **Submittal** - All deferred plans will be submitted no later than 90 days from the original plan approval.
- **Inspections Withheld** - A final inspection cannot be scheduled, Certificate of Occupancy (CO) will not be issued, and the final release of the utilities will not be granted until all deferred items have been reviewed, inspected and approved.
- **Holds on Permit** - The project will have "Restrictive Holds" entered in the computer system to identify actions to be accomplished prior to final approval or issuing a CO. Notes will be added to print on the building permit identifying the deferred submittal items.
- **Installation Prohibited** - It is the Owner, the Owner's Project Manager, and the General Contractor's responsibility to coordinate the submittal and approval of all deferred submittal items according to the compliance date. No deferred submittal item may be installed or erected prior to the structural plans being submitted and approved for the deferred items.
- **Engineer of Record Approval** - All deferred submittal items must be reviewed and approved by the engineer of record prior to submitting the documents for plan review. The engineer must include in the structural plans the minimum required design / performance specifications. The manufacturer's title block or approval stamp on the shop drawing sheets must be marked (FOR CONSTRUCTION) and sealed on the structural plans, by the engineer of record.
- **Approved Fabricators** - All items designated with an asterisk (\*) in the table require a City of Houston Approved Fabricator. A list of approved fabricators can be downloaded at <https://www.houstonpermittingcenter.org/media/2146/download>. For information about the Approved Fabricators Program, please contact 832-394-9043 or [maher.khansa@houstontx.gov](mailto:maher.khansa@houstontx.gov).

PRINT NAME OF OWNER OR PROJECT MANAGER Steve Kordish

OWNER'S SIGNATURE  DATE 1-24-24

PRINT NAME OF CONTRACTOR Steve Kordish

CONTRACTOR'S SIGNATURE  DATE 1-24-24



**Appendix J** of the Houston Adopted 2015 International Building Code as Amended specifies permit requirements for grading a lot of any size on private property. Section 1 – Identifies when a separate “*Grading Permit*” is required. Section 2 – Identifies the type of grading permit required, “*Engineered Grading or Regular Grading*”, when a “*Geotechnical Report*” is required in the plans, and when a “*Storm Availability Letter*” is required to be attached to the submittal documents.

**Grading and/or excavation permits is required for any proposed work that includes excavations, grading, or fill, or combination thereof, and includes but is not limited to the following permit types:**

- **Excavation Permit(s)** – Work proposing the mechanical removal or relocation of earth material.
- **Fill Permit(s)** – Work proposing deposit(s) and/or relocation of earth material placed by artificial means.

**NOTE: THERE SHALL BE NO FILL LOCATED WITHIN A PUBLIC RIGHT-OF-WAY**

### SECTION 1: Are Permits and Plans Required?

**A Grading Excavation permit and plans is required if “Yes” is answered to any question 1 through 4.**

- No (1) Does the excavation work affect the lateral support or increase the stresses in, or pressure upon any adjacent or contiguous property?
- No (2) When excavating below finish grade for basements and footings of a building, retaining wall or other structures authorized by a valid building permit, will there be an unsupported excavation height greater than 5-feet after completion of such structure?
- No (3) Will there be any excavation greater than 5-feet in depth?
- No (4) Will the excavation create a cut slope 2-feet or more in height but less than 5-feet, with a slope steeper than 1-unit vertical in 1.5-units horizontal? (66.7% slope)

**A Grading Fill permit and plans is required if “Yes” is answered to any question 5 through 10.**

**(50 cubic yards = 1,350 square feet @ 1-foot depth)**

- No (5) Does the fill work affect the lateral support or increase the stresses in, or pressure upon any adjacent, or contiguous property?
- No (6) Does the scope of work include fill that is 3-feet or more in depth?
- No (7) Does the scope of work include fill greater than 1-foot but less than 3-feet, with a slope that is equal to or greater than 1-unit vertical in 5-units horizontal? (20% slope)
- No (8) Does the scope of work include fill that is greater than 50 cubic yards on any one lot?
- Yes (9) Does the proposed fill obstruct any natural and/or previously constructed drainage course?
- No (10) Is proposed fill greater than 1-foot in depth and intended to support a structure, “now or in the future”?

### SECTION 2: What Type of Permits and Plans Are Required?

**NOTE:** When the building official has cause to believe that site geologic factors exist, grading will be required to conform to recommended grading, inspection, and testing by a *Texas Professional Engineer*.

**Engineered grading plans are required if “Yes” is answered to question 11. Plans shall be designed, sealed, signed, and dated by a Texas professional engineer. These grading permits shall be designated as “Engineered Grading”.**

**(1,000 cubic yards = 27,000 square feet, @ 1-foot depth)**

- No (11) Does the proposed project include an aggregate grading in excess of 1,000 cubic yards?

**Grading plans shall be designated “Regular Grading” if “Yes” is answered on question 12: (no engineered plans required.)**

- Yes (12) Is the grading less than or equal to 1,000 cubic yards?

**A Geotechnical Report is required if “Yes” is answered to any one of questions 13, 14 or 15:**

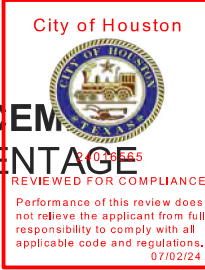
- No (13) Will there be any cut slopes steeper than 1-unit vertical in 2-units horizontal (50% slopes)?
- No (14) Is there any grading that requires an engineered design? (*Reference item 11 above and Chapter 19 of the City Code.*)
- No (15) Does the site include any special geological features and/or considerations?
- No (16) Is the property located in the 100- or 500-year flood plain? Review by Flood Department required!

**A Stormwater information form is required to be included with the submitted documents if “Yes” is answered to questions 16 or 17:**

- No (17) Does the scope of work to lots exceeding 15,000 square feet, include any new impervious cover?
- No (18) Does the project include connection to the city’s public storm sewer system?

ADDRESS 4502, 4504, 4506 Terry Street PROJECT # 24016565 - 24016567 DATE 3/7/24

PRINT NAME OF APPLICANT Tonya Powell SIGNATURE Tonya Powell



### PROJECT INFORMATION

City Project Number: 24016567

Date: 3/7/24

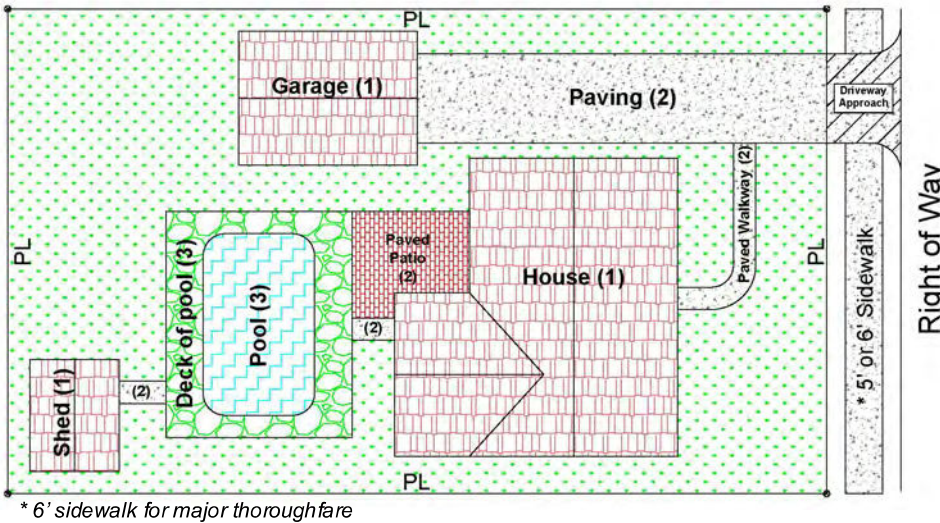
Address: 4502, 4504, 4506 Terry Street

Applicant's Printed Name: Tonya Powell

Applicant's Signature: Tonya Powell

### CALCULATION OF IMPERVIOUS AREA PERCENTAGE

#### A. Total area of impervious cover located on private property.



This diagram is to assist in identifying the various items considered impervious.

#### IMPORTANT NOTES

1. If > 65%, refer the Infrastructure Design Manual (IDM), Chapter 9, Section H for additional provisions and provide calculation in the submitted plans for review.
2. Permeable Paver/Pavement System must be considered impervious in the table below.
3. Stormwater Quality Permit is requested (according to IDM, Ch. 9) for using these Low Impact Development (LID) techniques.
4. All drainage plans will be reviewed by the Storm Review team.

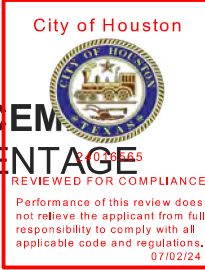
	Existing Sq. Ft		Proposed Sq. Ft		Final Sq. Ft	Disturbed Sq. Ft
1. Building(s) (e.g., house, garage, shed, carport)		+	798	⇒ =	798 ↓+	798 ↓+
2. Paving (e.g., driveway, sidewalk, patio. etc.)		+	136	⇒ =	136 ↓+	136 ↓+
3. Detention Ponds, etc.		+		⇒ =	↓+	↓+
4. Swimming Pool		+		⇒ =	↓+	↓+
5. Others		+		⇒ =	↓+	↓+
<b>Totals</b>		+	<b>934</b>	=	<b>934 sq. ft. (A)</b>	<b>934 sq. ft.</b>

B. Total Area of Lot: 1475 sq. ft.

#### C. Percentage Impervious Area Calculation

$$\left( \frac{934}{1475} \right) \times 100 = \boxed{63.32} \%$$

A                      B                      C



### PROJECT INFORMATION

City Project Number: 24016567

Date: 3/7/24

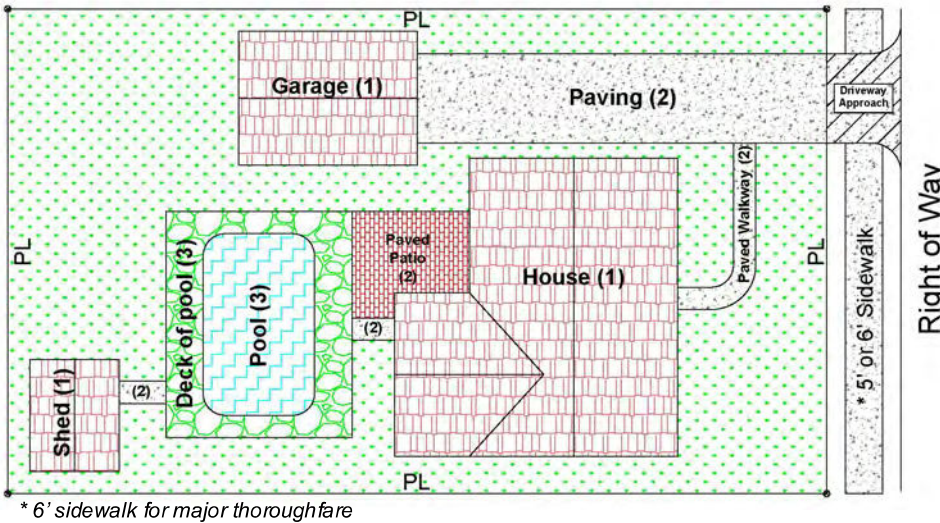
Address: 4502, 4504, 4506 Terry Street

Applicant's Printed Name: Tonya Powell

Applicant's Signature: Tonya Powell

### CALCULATION OF IMPERVIOUS AREA PERCENTAGE

#### A. Total area of impervious cover located on private property.



This diagram is to assist in identifying the various items considered impervious.

#### IMPORTANT NOTES

1. If > 65%, refer the Infrastructure Design Manual (IDM), Chapter 9, Section H for additional provisions and provide calculation in the submitted plans for review.
2. Permeable Paver/Pavement System must be considered impervious in the table below.
3. Stormwater Quality Permit is requested (according to IDM, Ch. 9) for using these Low Impact Development (LID) techniques.
4. All drainage plans will be reviewed by the Storm Review team.

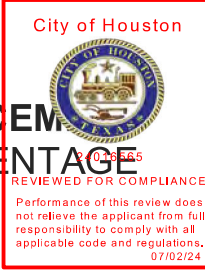
	Existing Sq. Ft		Proposed Sq. Ft		Final Sq. Ft	Disturbed Sq. Ft
1. Building(s) (e.g., house, garage, shed, carport)		+	798	⇒ =	798 ↓+	798 ↓+
2. Paving (e.g., driveway, sidewalk, patio. etc.)		+	136	⇒ =	136 ↓+	136 ↓+
3. Detention Ponds, etc.		+		⇒ =	↓+	↓+
4. Swimming Pool		+		⇒ =	↓+	↓+
5. Others		+		⇒ =	↓+	↓+
<b>Totals</b>		+	<b>934</b>	=	<b>934 sq. ft. (A)</b>	<b>934 sq. ft.</b>

B. Total Area of Lot: 1475 sq. ft.

#### C. Percentage Impervious Area Calculation

$$\left( \frac{934}{1475} \right) \times 100 = \boxed{63.32} \%$$

A                      B                      C



### PROJECT INFORMATION

City Project Number: 24016567

Date: 3/7/24

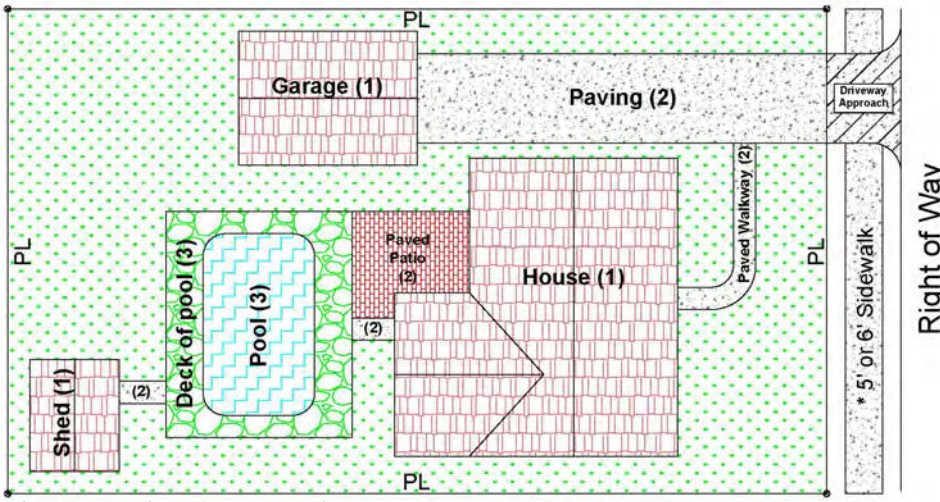
Address: 4502, 4504, 4506 Terry Street

Applicant's Printed Name: Tonya Powell

Applicant's Signature: Tonya Powell

### CALCULATION OF IMPERVIOUS AREA PERCENTAGE

#### A. Total area of impervious cover located on private property.



This diagram is to assist in identifying the various items considered impervious.

\* 6' sidewalk for major thoroughfare

#### IMPORTANT NOTES

1. If > 65%, refer the Infrastructure Design Manual (IDM), Chapter 9, Section H for additional provisions and provide calculation in the submitted plans for review.
2. Permeable Paver/Pavement System must be considered impervious in the table below.
3. Stormwater Quality Permit is requested (according to IDM, Ch. 9) for using these Low Impact Development (LID) techniques.
4. All drainage plans will be reviewed by the Storm Review team.

	Existing Sq. Ft		Proposed Sq. Ft		Final Sq. Ft	Disturbed Sq. Ft
1. Building(s) (e.g., house, garage, shed, carport)		+	798	=	798	798
2. Paving (e.g., driveway, sidewalk, patio. etc.)		+	136	=	136	136
3. Detention Ponds, etc.		+		=		
4. Swimming Pool		+		=		
5. Others		+		=		
<b>Totals</b>		+	<b>934</b>	=	<b>934 sq. ft. (A)</b>	<b>934 sq. ft.</b>

B. Total Area of Lot: 1475 sq. ft.

#### C. Percentage Impervious Area Calculation

$$\left( \frac{934}{1475} \right) \times 100 = \boxed{63.32} \%$$



**GEOTECHNICAL STUDY  
FOR THE  
PROPOSED THREE NEW TOWNHOMES AT  
1501 AMUNDSEN STREET  
HOUSTON, TEXAS 77009**

**PREPARED FOR**

**MR. STEVE KORDISH  
TREEHOUSE DEVELOPMENT LLC  
FRIENDSWOOD, TEXAS**

**PREPARED BY**

**ARM SOIL TESTING LLC  
CYPRESS, TEXAS**

**PROJECT NO: G23-552**

**October 9, 2023**




---



---

**ARM SOIL TESTING LLC**

Texas Registered Engineering Firm F-10790

17240 Huffmeister Road, Suite 102, Cypress, Texas 77429 • (832) 593-7510 • Cell 832-755-9941

Web: [www.ArmSoilTesting.com](http://www.ArmSoilTesting.com)

---



---

October 9, 2023

Project Number: G23-552

Mr. Steve Kordish  
Treehouse Development LLC  
1903 Blue Quail Drive  
Friendswood, Texas 77546

Reference: GEOTECHNICAL INVESTIGATIONS FOR THE PROPOSED NEW TOWNHOMES AT AMUNDSEN STREET IN HOUSTON, TEXAS

Dear Mr. Kordish:


*ARM Soil Testing LLC* is pleased to submit the results of the geotechnical exploration study for the above-referenced project. This report briefly presents the findings of the study along with our conclusions and recommendations for the design of the foundation for the proposed new townhomes at Amundsen Street in Houston, Texas.

We appreciate the opportunity to serve you and look forward to working with you in other future projects.


Should you have any questions regarding this report, please do not hesitate to email us at [info@armsoiltesting.com](mailto:info@armsoiltesting.com) or call us at (832) 593-7510 at any time.

Respectfully submitted,

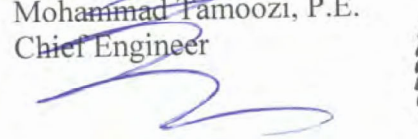
ARM SOIL TESTING LLC



Sam Mohammad  
Graduate Engineer



Mohammad Tamoozi, P.E.  
Chief Engineer




Texas Registered Engineering  
Firm F-10790



**TABLE OF CONTENTS**

Page No.

INTRODUCTION ..... 1

PURPOSE & SCOPE ..... 1

SUBSURFACE EXPLORATION..... 1

LABORATORY TESTING ..... 2

SITE CONDITIONS.....2

    Site Description.....2

    Soil Stratigraphy ..... 2

    Groundwater Conditions.....4

    Perched Water Conditions .....4

ANALYSIS AND RECOMMENDATIONS .....5

    Suitable Building Foundation .....5

    Drilled and Underreamed Piers.....5

    Floor Slabs .....6

    Grade Beams.....6

    Stiffened Slab on-Grade.....6

    Maintenance Considerations.....7

    Pavement Recommendations .....8

        General.....8

        Pavement Sections .....8

        Subgrade Stabilization .....9

        Hot Mixed Asphaltic Concrete (HMAC).....10

        Portland Cement Concrete .....10

CONSTRUCTION GUIDELINES.....11

    Site Preparation.....11

    Vegetation Control.....12

        Existing Trees .....12

        New Trees .....13

    Low Swell Potential Structural Fill.....13

    Drainage.....13

    Footing Construction .....13

    Groundwater Control ..... 14

LIMITATIONS..... 14



LIST OF FIGURES

Plate No.

Site Plan

1

Boring Logs

2 through 4

Key to Soil Classifications and Symbols

5



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

## **INTRODUCTION**

Planning is underway for construction of three new townhomes at 1501 Amundsen Street in Houston, Texas. Information on this project was supplied by the client. The project consists of three new townhomes. Structural details such as column and wall loads are not known at this time but are not expected to exceed 50 kips and 2.0 kips per foot.

## **PURPOSE AND SCOPE**

A geotechnical study was performed for the purposes of (1) exploring the subsurface conditions of the site (2) evaluating the pertinent engineering properties of the subsurface materials (3) providing recommendations concerning suitable types of foundation systems for support of the planned structure and (4) providing geotechnical construction guidelines.

Analyses of slope stability, bulkhead or any other features at the site is not within the scope of this investigation and, therefore, ARM is not responsible for any problems caused by these features. The settlement analysis was not within the scope of this study.

Narrative descriptions of our findings and recommendations are contained in the body of the report. A Boring Location Plan and the boring logs are included in Plates 1 through 5 of the report.

## **SUBSURFACE EXPLORATION**

Conditions at this site were explored with three (3) borings located approximately as shown on the Location of Borings plan found in the Plate 1 of this report. The borings were drilled to the depths of 20 and 15 feet each below existing site grades on October 2, 2023. After the soil samples were obtained and the borings completed, final groundwater levels were measured in the boreholes and they were backfilled with soil cuttings prior to leaving the site.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

Undisturbed and disturbed sampling procedures were performed at selected depths during the field exploration phase to obtain samples for laboratory testing and stratigraphy identification. Three-inch diameter thin-wall tube samplers for cohesive materials and two-inch diameter split samplers for cohesionless soils were utilized to obtain undisturbed samples. Thin-wall tube samples were mechanically extruded in the field, visually classified, labeled according to boring number and depth, then packaged in protective boxes for transport back to the laboratory.

## **LABORATORY TESTING**

Upon completion of drilling operations, the soil samples were transported to the laboratory for testing and further study. The laboratory testing was performed in order to evaluate the strengths, classifications and volume change characteristics of the major soil strata. Atterberg limits tests and minus 200 sieve analyses were performed using selected soil samples to determine the index properties of the subsurface materials. Results of laboratory classification tests, in-situ moisture contents and strength tests are presented on the boring log included in the Appendix of the report.

## **SITE CONDITIONS**

### **Site Description**

The project site is relatively flat. The project site is vacant and covered with grass and few large size trees. All trees and root system within the building and pavement area should be removed and the soils compacted as specified in the report.

### **Soil Stratigraphy**

The subsurface conditions present at the boring location are presented on the Log of Borings. A summary of the various strata and their approximate depths and thicknesses which were encountered in the borings are presented on the following TABLE 1. SUMMARY OF SUBSURFACE CONDITIONS. Note that depths on the log and in the following table are referenced from the ground surface, which existed at the time of the field exploration.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

**TABLE 1  
SUMMARY OF SUBSURFACE CONDITIONS**

Stratum	Description	First Encountered (ft)	Bottom of Stratum (ft)
SAND (SP)	Medium dense gray sand	Ground Surface	2
SANDY CLAY (CL)	Very stiff to hard gray to light gray and tan sandy clays	2	12 to 13
SAND (SP)	Medium dense gray sand	12 to 13	20

The sands of stratum I are medium dense. The Standard Penetration Test (SPT) counts ranges from 12 to 15 blows per foot. These soils are relatively permeable and may become susceptible to perched groundwater conditions. At present conditions, these soils are not suitable for support of floor slabs. Please refer to Perched Groundwater Section for details.

The sandy clays of stratum II are considered moderate clays. The sandy clays are moderate to high plastic with plasticity indices ranging from 24 to 29. The sandy clays are very stiff to hard in consistency.

The sands of stratum III are medium dense. The Standard Penetration Test (SPT) count is 10 to 12 blows per foot.

The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and materials characteristics. The boring logs included in Plates 2 through 5 should be reviewed for specific information at the boring locations. These records include soil /rock descriptions, stratifications, penetration resistances, and locations of the samples and laboratory test data. The stratifications shown on the boring logs represent the conditions only at the actual boring location.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

## **Groundwater Conditions**

The borings were monitored at the time of drilling for evidence of groundwater. At the time of drilling, groundwater was not encountered within the upper 20 feet.

Water traveling through the soil (subsurface water) is often unpredictable and may be present at other locations and depths at the site. Due to the seasonal changes in groundwater and the unpredictable nature of groundwater paths, groundwater levels will also fluctuate. Therefore, it is necessary during construction to be aware of groundwater in excavations in order to determine if any changes are necessary in the construction procedures due to the presence of the water.

## **Perched Water Conditions**

Approximately 2 feet of relatively permeable sands were encountered at the boring locations. Less permeable clays underlie these soils. During inclement weather, it is possible that water may become trapped in the upper sandy soils. As a result, these soils may lose strength and become unsuitable to provide adequate support for floor slabs as well as any foundations. Either of the following two options can be utilized to minimize the perched groundwater conditions:

- ◆ Undercut upper 2 feet of existing permeable sands and replace with compacted low plasticity structural fill.
- ◆ Stabilize the upper 2 feet of these soils with 10% cement or lime-fly ash.

If none of these options is feasible, use drilled piers with a structural slab.



Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
 Project Number: G23-552

## ANALYSIS AND RECOMMENDATIONS

### Suitable Building Foundation

The foundation for the proposed structure must satisfy two independent criteria. First, the maximum design pressure exerted at the foundation level should not exceed the allowable bearing pressure based on an adequate factor of safety with respect to soil shear strength. Secondly, the magnitude of slab-on-grade and foundation movement due to soil volume changes or settlement must be such that structural movement is within tolerable limits. Considering the subsurface conditions encountered at the boring locations, the proposed structure may be supported on drilled and underreamed piers foundation.

### Drilled and Underreamed Piers

The structural loads for the proposed structure may be supported on the foundation system in the table below.

Foundation recommendations are presented as follows:

Foundation Type	Depth, below existing grade (feet)	Allowable Bearing Capacity (psf) Dead Plus Sustained Live Load Factor of Safety = 3	Allowable Bearing Capacity (psf) Total Load Factor of Safety = 2
Drilled and Underreamed Piers	10	3,000	4,500

The drilled and underreamed piers should be founded at least two (2) bell diameters measured center to center and the bell/shaft ratio for the piers can be 3:1.

The ultimate capacity of under reamed footings to resist uplift loads can be determined from the following equation provided the ratio of footing depth to bell diameter is greater than 1.5:

$$Q_u = 5.8 c (D^2 - d^2)$$

where:  $Q_u$  = ultimate uplift capacity, pounds



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas*  
*Project Number: G23-552*

---

c= Average shear strength above the footing grade, pounds per square foot. (use  $c = 800$  PSF)

D= underream diameter, feet.

d= shaft diameter, feet.

A minimum factor of safety of 2.0 is recommended for final design.

The settlement analysis was not within the scope of this study.

### **Floor Slabs**

The surficial soils within the proposed building lines consist of permeable sandy soils that are susceptible to perched groundwater conditions. A structurally supported floor slab with a void space would be most suitable floor system for the proposed construction. However, a grade-supported floor system may also be used by undercutting upper 2 feet of existing permeable sands and replace with compacted low plasticity structural fill or the stabilizing at least upper 2 feet of surficial soils with cement (10% by dry weight) or lime-fly ash (2% lime and 8% fly-ash by dry weight).

### **Grade Beams**

Grade beams used in conjunction with drilled shafts should be placed beneath all load bearing walls. Grade beams should be founded at a depth of 24 inches below the final grades and should be designed to support the imposed loads.

### **Stiffened Slab on-Grade**

The stiffened slab on-grade may consist of either post-tensioned slab or conventional slab on-grade. Post-tensioned slab design parameters were obtained from the third edition of the Post-Tensioning Institute Design Manual. The conventional slab on-grade design parameters were based on BRAB design manual entitled "Criteria for Selection and Design of Residential Slabs on Ground".

The criteria for the slab-on-grade, in accordance with Post Tensioning Institute (P.T.I.) is given:



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas*  
*Project Number: G23-552*

A minimum of 24 inches of compacted select fill material pad should be used with post-tensioned slab system. All soft area must be excavated and replaced with compacted select fill.

Allowable soil bearing capacity	1000 PSF
Weighted average plasticity index (P.I.)	25
Atterberg Limits:	LL = 43      PL = 18      PI = 25
Clay Percent:	50 % (assumed)*
Depth to Constant Suction:	7 ft.
Thornwaite Moisture Index:	Im = 20
Cation Exchange Activity:	CEAc = 0.59
Clay Activity Ratio:	Ac = 0.50
Principal Clay Mineral:	Montmorillonite
Constant Suction Value:	PF = 3.4
Estimated Velocity of Moisture Flow:	c = 0.7 inch/month
Edge Moisture Variation:	em = 8.9 ft. (Center lift)
	em = 4.8 ft. (Edge lift)
Estimated Differential Swell:	Ym = 1.4 inch (Center lift)
	Ym = 1.2 inch (Edge lift)

\* Clay percent is approximate and assumed based on past experience.

### **Maintenance Considerations**

The site should be graded in such a manner to shed all rainwater away from the structure. Water should not be allowed to pond around the structure. Positive site drainage will reduce the exposure of the on-site clays to a moisture source thus eliminating swelling of the on-site clays.

Due to the presence of sandy clay soils, it is imperative to install a watertight plumbing system. Water leakage due to poor plumbing will have detrimental effects on the performance of the structure.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

Roof gutters should be utilized to direct roof runoff away from the structure. Downspouts should not be allowed to discharge near the structure. Downspout extensions should be used to facilitate rapid rainwater drainage away from the structure.

Trees should be planted at a distance equaling the anticipated height of the mature tree. If trees are planted in close proximity to the structure, the roots will extend below the slab area causing distress to the slab. Root barriers should be constructed around the perimeter of the building in the event that trees are located less than the maximum anticipated height of the mature tree. Root barrier should extend at least four feet below grade.

The floor slabs should be provided with a moisture barrier to prevent migration of the capillary moisture through the slab. Six-mill Visqueen can be used. In addition, a two-inch layer of sand can be used for leveling purposes.

## **Pavement Recommendations**

### General

We were not provided with traffic type nor with traffic frequency for the drives and parking areas associated with this facility. As a result, we have provided general guidelines for pavement thicknesses.

Flexible asphaltic concrete pavement or rigid Portland cement pavement can be used at this site for automobile traffic use. Pavement subject to light truck traffic can also be rigid or flexible pavement. However, pavement design recommendations presented herein are not applicable for streets or major thoroughfares.

### Pavement Sections

The following pavement sections are recommended for the project site. In parking lots and drives servicing only automobile traffic, 5 inches of asphalt concrete should provide adequate service. It is recommended that this be increased to a minimum of 6 inches in main drives and any areas subject to occasional light truck traffic. The section should consist of a 2-inch surface course meeting the requirements of THD Type D with a base course meeting the requirements of THD Type A or B. The coarse aggregate in the surface layer should be crushed limestone rather than gravel.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

Portland Cement concrete pavements are recommended in areas subject to any heavy truck traffic such as garbage pickup and/or dumpster trucks and any heavy delivery trucks. We recommend the use of 5 inches of Portland Cement Concrete for general area pavements, which are not subject to truck traffic. A minimum 6-inch thick section is recommended in areas subject to truck traffic. The required thickness will depend on the number of truck passes per day. A minimum 7-inch thick Portland cement pavement thickness is recommended in areas subject to loading of dumpster type garbage trucks. We recommend that the Portland cement concrete in light duty pavement areas should have a minimum 28-day compressive strength of 3,500 pounds per square inch and in heavy duty pavement areas, a 28 day compressive strength of 4,000 psi.

### Subgrade Stabilization

Based on the results of laboratory testing, the subgrade performance of the on-site soils can be improved by stabilization with cement or lime-fly ash. Stabilization is recommended below both pavement systems. It is estimated that the near surface clayey sandy soils below the future pavements will require 10% cement by dry unit weight. The subgrade can also be stabilized with 2% lime and 8% fly-ash by dry weight instead of cement. This assumes soil properties of the subgrade soils will be similar to the soils existing in the areas where the borings were drilled. The stabilized clays should be compacted to a minimum of ninety-five (95) percent of the maximum density in a moisture content range of -1% to +4% of the soil/lime mixture's optimum moisture content as determined by ASTM D-698.

A minimum stabilized subgrade depth of 6 inches is recommended below the bottom of the proposed pavement. We recommend that the depth of stabilized subgrade be increased to 8-inch for heavy traffic areas. It is to be noted that the actual amount of lime required be determined after stripping of the subgrade.

The prepared subgrade should be protected and moist cured or sealed with a bituminous material until the pavement materials are placed. Finished pavement subgrade areas should be graded at all times to prevent ponding and infiltration of excessive moisture on or adjacent to the pavement subgrade surface.

It is recommended to extend the pavement stabilization five feet beyond the perimeter of the pavement in order to preclude edge failure. It is also highly recommended to maintain positive drainage away from the pavement throughout the life of the pavement.

---



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

### Hot Mixed Asphaltic Concrete (HMAC)

All hot mix asphaltic concrete used on this project for new construction shall comply in all respects to Item 340 of the current edition of the Texas Department of Highways and Public Transportation's Standard Specifications (TSDHPT) except as modified for this project. The paving mixture for the wearing surface for new pavement for this project is recommended to be a Fine Graded Surface Course (Type D). The paving mixture for the HMAC base course for this project should be a coarse graded or fine graded Base Course (Type A or Type B). The coarse aggregate in the surface layer should be a crushed limestone rather than gravel.

### Portland Cement (Rigid) Concrete

The Portland cement concrete (PCC) used on this project should comply in all respects with Item 360 of the current edition of the TSDHPT Standard Specifications except as may be modified for this project. Type I cement is recommended for use in the concrete pavement.

The concrete in light duty pavement areas should have a minimum 28 day compressive strength of 3,500 pounds per square inch and in heavy duty pavement areas, a 28 day compressive strength of 4,000 psi is recommended. Assuming a nominal maximum aggregate size of 1 to 1 1/2 inches, it is recommended that the concrete have entrained air of 5 percent ( $\pm 1\%$ ) with a maximum water cement ratio of 0.50.

Portland cement concrete pavement types for standard or heavy duty traffic pavements in this area are generally jointed reinforced concrete pavements (JRCP). Due to construction over swelling clays, unreinforced pavement is not recommended. Reinforcing steel and joint systems for the pavement should be properly designed.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas*  
*Project Number: G23-552*

---

## CONSTRUCTION GUIDELINES

### Site Preparation

Soft soils should be removed until firm soil is reached. The soft soils can be aerated and placed back in eight-inch loose lifts and compacted to 95% as specified by ASTM D-698. Tree stumps, tree roots, old slabs, old foundations and existing pavements should be removed from the structure area. If the tree stumps and roots are left in place, settlement and termite infestation may occur. Once a root system is removed, a void is created in the subsoil. It is recommended to fill these voids with structural fill or cement-stabilized sand and compact to 95% as specified by ASTM D-698.

Any low-lying areas including ravines, ditches, swamps, etc. should be filled with structural fill and placed in eight-inch lifts. Each lift should be compacted to 95% of the maximum dry density as specified by ASTM D-698.

The exposed subgrade should be scarified to a minimum depth of six (6) inches in the driveway and slab areas. The subgrade should then be compacted to 95% of the maximum density as determined by the Standard Moisture Density Relationship (ASTM D-698). In the event that the upper six (6) inches cannot be compacted due to excessive moisture, we recommend that these soils be excavated and removed or chemically stabilized to provide a firm base for fill placement. Proof rolling should be performed using a heavy tired loaded truck or pneumatic rubber-tired weighting about 15 to 20 tons equipment.

The fill soils should extend at least five feet beyond the perimeter of the structure. In addition, the floor slab should be placed as soon as possible after the building pad is prepared. If the building pad is left exposed to rainfall, perched groundwater conditions may develop which will undermine the integrity of the floor slab. All trenches (water, cable, electrical) should be properly backfilled and compacted to 95% of the maximum dry densities. Sand or permeable materials should not be used as backfill. Improperly backfilled and improperly compacted trench, if left exposed will also be another source for perched groundwater conditions. In general perched water tends to be trapped within the fill. The trapped groundwater tends to soften the subgrade. Positive drainage should be maintained across the entire building pad.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

A qualified soil technician should monitor all earthwork operations. Field density tests should be conducted on each lift using a nuclear density gauge. The gauge should be calibrated every day. Prior to field density tests, a 50-pound sample from the subgrade soils should be obtained. A similar sample should be obtained from the fill soils. A Standard Moisture Density Relationship (ASTM D-698) should be performed on each sample in order to obtain an optimum moisture content and a maximum dry density. The field density tests should be compared to these results every time the soils are tested in the field.

The above recommendations are applicable to slabs, driveways, pavements and any structures that are supported directly on-grade.

## **Vegetation Control**

### **Existing Trees**

Existing tree roots absorb moisture from their surrounding soils. This results in formation of pockets of isolated dry soils around the tree roots with a moisture content significantly lower than the soil moisture contents away from these roots. When the trees are cut, the roots die and stop absorbing moisture from their surrounding soils. With time and seasonal rainfall as well as by capillary action, these dry pockets of soils will undergo increases in moisture content and as a result heave. If the tree is cut and a building or paving is immediately constructed on it, then these isolated areas of dry soils will have more than the soils at other areas of the building/paving or site. This will result in differential heaving under the structure of pavement. Where large trees are cut and building built over it, the slab should be stiffened to resist the higher differential heave. Alternatively, a safer option would be to structurally support the building slab on deeper footings with a void space larger than the anticipated maximum heave of the drier soils. Positive drainage should be developed and maintained all around the building at all times.



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

## **New Trees**

New trees should be avoided near the building slab especially larger trees. No tree should be planted closer than 20 feet or half the canopy diameter of fully matured trees. Alternatively, root barriers may be used to prevent the migration of tree roots underneath the buildings. Use of large shrubs should be avoided immediately adjacent to the building slab.

## **Low Swell Potential Structural Fill**

Low swell potential select fill should consist of cohesive soils free of organics or other deleterious materials and should have a plasticity index not less than 10 or more than 20. Sandy clays are recommended for use.

The low swell potential select fill should be cleaned and free of organic matter or other deleterious material. The fill should be placed in maximum 9-inch loose lifts and compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D 698 (Standard Proctor). The moisture content at the time of compaction should be at, or above the optimum value as defined by ASTM D 698. The referenced moisture content and density should be maintained until construction is complete.

## **Drainage**

Roof drainage should be collected by a system of gutters and down spouts and transmitted to a paved surface where water can drain rapidly away from the structure. Sidewalks, parking areas, building access drives, and the general ground surface should be sloped so that water will drain away from the structure. Water should not be allowed to pond near the building foundations.

## **Footing Construction**

Concrete should be placed in footings immediately following drilling and inspection. Significant seepage into excavations from groundwater is anticipated if excavations remain too long. If water collects in excess of 1-inch depth at the bottom of the footing excavations, it should be pumped out prior to concrete placement or the concrete should be tremied in place. We recommend that footing installations be monitored by the testing laboratory.

---



*Proposed three new townhomes at 1501 Amundsen Street in Houston, Texas  
Project Number: G23-552*

---

## **Groundwater Control**

In general, the highest groundwater level during construction should be at least three (3) feet below the bottom of the excavation to ensure excavation stability. Presence of groundwater above the excavation depths may require de-watering. However, it is the contractor's responsibility to select the proper de-watering systems for the proposed constructions.

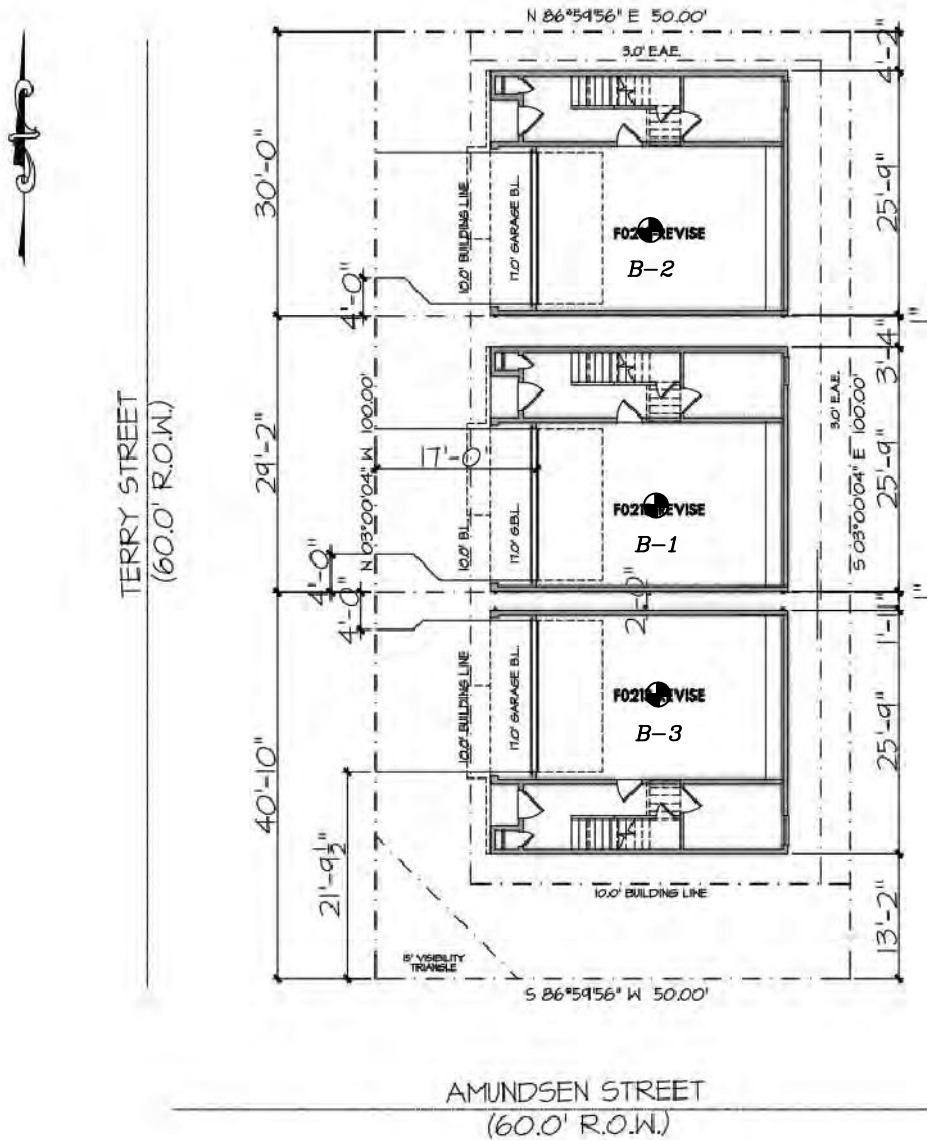
## **LIMITATIONS**

The conclusions reached in this report are based on the conditions at the boring location. In any subsurface exploration, it is necessary to assume that the subsoil conditions between exploratory borings do not change significantly. Therefore, careful observations must be made during excavation to detect significant deviations from conditions encountered in the test borings. If such deviations are detected, this office should be contacted immediately.

In the event that any changes in the nature, design or location of the structures are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report are modified and verified in writing.

We have conducted this geotechnical study using the standard of care and diligence normally practiced by recognized engineering firms now performing services of a similar nature under similar circumstances. Unless specifically stated otherwise, any environmental or contaminant assessment efforts are beyond the scope of work for this report. We intend for this report, including all illustrations, to be used in its entirety. If this report is made available to potential contractors, it should be for information only and not as a warranty of subsurface conditions.

This report has been prepared for the specific application to the proposed three new townhomes at 1501 Amundsen Street in Houston, Texas.



# SITE PLAN

A.R.M. SOIL TESTING  
17240 HUFFMEISTER ROAD, SUITE 102  
CYPRESS, TEXAS 77429

PROPOSED THREE NEW TOWNHOMES  
1501 AMUNDSEN  
HOUSTON, TEXAS

SCALE: N.T.S.  
PROJECT NO.: G23-552

DRAWN BY: OA  
PLATE NO. 1



REVIEWED FOR COMPLIANCE  
 Reference of this review does not relieve the applicant from full responsibility to comply with all applicable code and regulations.  
 07/02/24

### LOG OF BORING B- 1

PROJECT NAME: PROPOSED THREE NEW TOWNHOMES										PROJECT NUMBER: G23-552				
PROJECT LOCATION: 1501 AMUNDSEN IN HOUSTON, TEXAS										DATE DRILLED: 10/2/2023				
DEPTH, FT.	SAMPLE TYPE	STANDARD PENETRATION TEST	LEGEND	POCKET PENETROMETER (tsf)	UNCONFINED COMP. (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT (%)	PLASTIC LIMIT	PLASTICITY INDEX	#200 SIEVE (%)	Type of Boring: Auger		GROUP SYMBOL
												Boring Location: See Plan of Borings		
												MATERIAL DESCRIPTION		
						8						Medium dense gray	<b>SAND</b>	SP
2.0		15												
4.0				4.5+	4.10	12	128	44	18	26		Hard gray	<b>SANDY CLAY</b>	CL
6.0				4.5+		13						.. light gray and tan with roots and calcareous nodules below 4 feet		
8.0				4.50		14						.. very stiff below 6 feet		
10.0				4.00	2.50	15	122	45	18	27				
12.0				4.5+		14						.. hard below 10 feet		
15.0		10				12						Medium dense gray	<b>SAND</b>	SP
20.0		12				10					6			
25.0												Boring Was Terminated at 20 feet		

Water Level Measurements:  
 Initial Reading: Dry      Final Reading: Dry

Drilled by: TXDC  
 Logged by: David



24016565

REVIEWED FOR COMPLIANCE  
 Presence of this review does not relieve the applicant from full responsibility to comply with all applicable code and regulations.  
 07/02/24

## LOG OF BORING B- 2

PROJECT NAME: PROPOSED THREE NEW TOWNHOMES										PROJECT NUMBER: G23-552				
PROJECT LOCATION: 1501 AMUNDSEN IN HOUSTON, TEXAS										DATE DRILLED: 10/2/2023				
DEPTH, FT.	SAMPLE TYPE	STANDARD PENETRATION TEST	LEGEND	POCKET PENETROMETER (tsf)	UNCONFINED COMP. (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT (%)	PLASTIC LIMIT	PLASTICITY INDEX	#200 SIEVE (%)	Type of Boring: Auger		GROUP SYMBOL
												Boring Location: See Plan of Borings		
												MATERIAL DESCRIPTION		
2.0		14	[Dotted Pattern]			10						Medium dense gray	SAND	SP
4.0			[Diagonal Lines]	4.5+	4.40	14	126	43	18	25		Hard gray	SANDY CLAY	CL
6.0				4.5+		12						.. light gray and tan below 4 feet		
8.0				4.5+	4.00	13	128	47	18	29				
10.0				4.50		14						.. very stiff below 8 feet		
12.0				4.00	2.50	16	120	42	18	24				
15.0		11	[Dotted Pattern]			11						Medium dense gray	SAND	SP
20.0												Boring Was Terminated at 15 feet		
25.0														

Water Level Measurements:  
 Initial Reading: Dry      Final Reading: Dry

Drilled by: TXDC  
 Logged by: David



REVIEWED FOR COMPLIANCE  
 Performance of this review does not relieve the applicant from full responsibility to comply with all applicable code and regulations.  
 07/02/24

### LOG OF BORING B- 3

**PROJECT NAME: PROPOSED THREE NEW TOWNHOMES**      **PROJECT NUMBER: G23-552**  
**PROJECT LOCATION: 1501 AMUNDSEN IN HOUSTON, TEXAS**      **DATE DRILLED: 10/2/2023**

DEPTH, FT.	SAMPLE TYPE	STANDARD PENETRATION TEST	LEGEND	POCKET PENETROMETER (tsf)	UNCONFINED COMP. (tsf)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	LIQUID LIMIT (%)	PLASTIC LIMIT	PLASTICITY INDEX	#200 SIEVE (%)	Type of Boring: Auger Boring Location: See Plan of Borings Surface Elevation: Existing	GROUP SYMBOL
MATERIAL DESCRIPTION													
2.0		12				9						Medium dense gray SAND	SP
4.0				4.5+	4.50	14	125	45	18	27		Hard gray SANDY CLAY	CL
6.0				4.5+		12						.. light gray and tan below 4 feet	
8.0				4.5+		13							
10.0				4.5+	4.10	14	123	44	18	26		.. with calcareous nodules and roots below 8 feet	
12.0				3.00		16						.. very stiff below 10 feet	
15.0		10				13					7	Medium dense gray SAND	SP
20.0												Boring Was Terminated at 15 feet	
25.0													

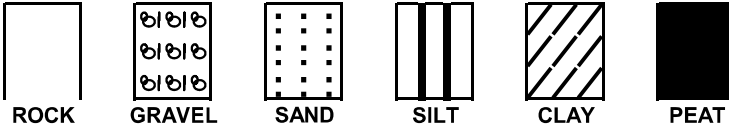
**Water Level Measurements:**      **Drilled by: TXDC**  
**Initial Reading: Dry      Final Reading: Dry**      **Logged by: David**



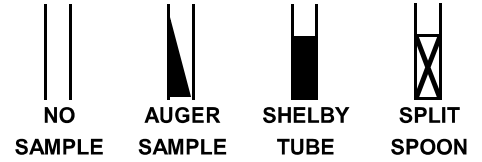
REVIEWED FOR COMPLIANCE  
Performance of this review does not relieve the applicant from full responsibility to comply with all applicable code and regulations.  
07/02/24

## KEY TO LOG TERMS AND SYMBOLS

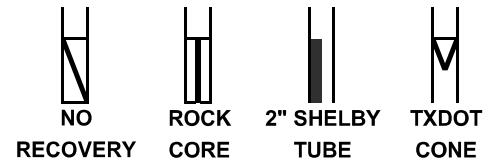
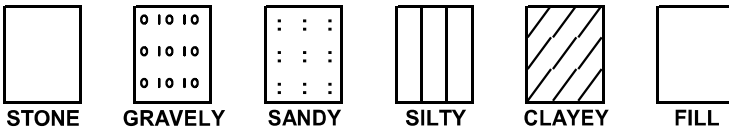
### SOIL TYPE



### SAMPLER TYPE



### MODIFIERS



### UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D 2487

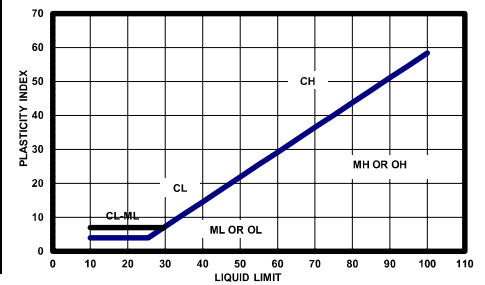
MAJOR DIVISIONS		LETTER SYMBOL	TYPICAL DESCRIPTIONS	
COARSE GRAINED SOILS LESS THAN 50% PASSING NO. 200 SIEVE	GRAVEL & CLEAN GRAVELS (LITTLE OR NO FINES)	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES	
	GRAVELLY SOILS (LITTLE OR NO FINES)		POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES	
	50% PASSING NO. 4 SIEVE	WI APPRECIATE-BLE FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
		SANDS	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	50% PASSING NO. 200 SIEVE	CLEAN SANDS (LITTLE FINES)	SW	WELL GRADED SAND, GRAVELY SAND (LITTLE FINES)
		SANDS WITH APPREA. FINES	SP	POORLY GRADED SANDS, GRAVELY SAND (L.FINES)
FINE GRAINED SOILS LESS THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50	ML	INORGANIC SILTS & VERY FINE SANDS, ROCK FLOUR SILTY OR CLAYEY FINE SANDS OR CLAYEY SILT W/PI	
		CL	INORGANIC CLAY OF LOW TO MEDIUM PI LEAN CLAY GRAVELY CLAYS, SANDY CLAYS, SILTY CLAYS	
		OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PI	
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
		CH	INORGANIC CLAYS OF HIGH PLASTICITY FAT CLAYS	
		OH	ORGANIC CLAYS OF MED TO HIGH PI, ORGANIC SILT	
HIGHLY ORGANIC SOIL	PT	PEAT AND OTHER HIGHLY ORGANIC SOILS		
UNCLASSIFIED FILL MATERIALS		ARTIFICIALLY DEPOSITED AND OTHER UNCLASSIFIED SOILS FILL MATERIALS		

### CONSISTENCY OF COHESIVE SOILS

CONSISTENCY	UNCONFINED COMP. STRENGTH IN TSF
VERY SOFT	0 TO 0.25
SOFT	0.25 TO 0.5
FIRM	0.5 TO 1.5
STIFF	1.75 TO 2.75
VERY STIFF	3.0 TO 4.5
HARD	4.5+

### RELATIVE DENSITY - GRANULAR SOILS

CONSISTENCY	N-VALUE (BLOWS PER FT)
VERY LOOSE	0-4
LOOSE	4-9
MEDIUM DENSE	10-29
DENSE	30-49
VERY DENSE	> 50 OR 50+



### CLASSIFICATION OF GRANULAR SOILS

U.S. STANDARD SIEVE SIZE(S)

6"		3"		3/4"		4		10		40		200	
BOUL- -DERS	COBBLES	GRAVEL				SAND			SILT OR CLAY		CLAY		
		COARSE	FINE	COARSE	MEDIUM	FINE							
		152	76.2	19.1	4.76	2.0	0.42	0.074					0.002
GRAIN SIZE IN MM													





3. Maintenance Access Easement.

3.1 Applicability. The Maintenance Access Easement set forth herein applies to any property, including any lot or common area, upon which any new building or addition to an existing building, including any residence or garage, is or will be constructed within three feet of adjacent property to be used for or which is restricted to single-family residential use. The property upon which a new building or addition to an existing building is to be constructed is herein referred to as the "**Accessing Property.**" The adjacent property to be accessed pursuant to the Maintenance Access Easement (as herein defined and provided) includes any lot or common area, or any part thereof, which is adjacent to the Accessing Property and the aforesaid building or addition thereon, all of which is herein referred to as the "**Access Easement Property.**" The area of land on the Access Easement Property to which the Maintenance Access Easement applies is herein referred to as the "**Access Area.**"

3.2 Purposes; Access Area. Each Access Easement Property is subject to a non-exclusive access easement upon, over and across the Access Easement Property for the purposes hereafter stated (the "**Maintenance Access Easement**"). The Maintenance Access Easement also includes all necessary rights of ingress, egress and regress thereto and there from. The Maintenance Access Easement is for the use and benefit of the owner of the Accessing Property, and their agents, contractors or employees, for the purposes of inspection, construction, maintenance, repair or replacement of any building, including any residence or garage, or any addition to a building which is located on the Accessing Property within three feet of the Access Easement Property. The Access Area consists of a strip of land on the Access Easement Property abutting and extending along the entire common boundary line of the Accessing Property and the Access Easement Property which is adjacent to the building or addition thereto on the Accessing Property and which is located within three feet to the said common boundary line. Subject to paragraph 3.4, the Access Area extends from the said common boundary line, inward on the Access Easement Property for a distance of not less than three feet or more than six feet, as may be reasonably required.

3.3 Exclusions and Limitations. NOTWITHSTANDING PARAGRAPH 3.2 OR ANY OTHER PROVISIONS HEREOF, EACH MAINTENANCE ACCESS EASEMENT IS SUBJECT TO THE FOLLOWING EXCLUSIONS AND LIMITATIONS:

3.3.1 THE MAINTENANCE ACCESS EASEMENT DOES NOT EXTEND TO, AND THE ACCESS AREA DOES NOT INCLUDE, ANY AREAS UNDER THE FOOTPRINT OF OR TO ANY OTHER PART OF ANY SINGLE FAMILY RESIDENCE, GARAGE OR OTHER BUILDING LOCATED ON THE ACCESS EASEMENT PROPERTY, OR TO ANY ADDITION THERETO, AS PRESENTLY OR AS HEREAFTER CONSTRUCTED UPON THE ACCESS EASEMENT PROPERTY.

3.3.2 THE ACCESS AREA MAY BE UTILIZED ONLY WHEN AND TO THE EXTENT THE APPLICABLE INSPECTION, CONSTRUCTION, MAINTENANCE, REPAIR OR REPLACEMENT CANNOT BE REASONABLY CONDUCTED WITHIN THE BOUNDARIES OF THE ACCESSING PROPERTY.

3.4 Obstructions Prohibited; Supplementation. The Access Area must remain unobstructed, and no improvements of any kind are permitted to be placed, constructed or maintained upon or within the Access Area except for a lawn and other usual and customary landscaping which will not unreasonably interfere with the Maintenance Access Easement. The Access Area may be increased in particular instances upon written request and by written approval as may be provided in, and all Maintenance Access Easements are subject to such notice, duration, usage, restoration and other requirements and conditions as may be provided in, applicable covenants, conditions, restrictions, easements, rules and regulations as may hereafter be imposed by Declarant and/or a property owners' association established for the Subdivision.



4. Restrictions; Plat Changes. The provisions hereof are subject to covenants, conditions, restrictions, easements, rules and regulations as may hereafter be imposed by Declarant or a property owners' association established for the Subdivision. In the event of filing of any maps or plats of the Subdivision, or filing of any modifications, amendments, or replats thereof, this instrument will be deemed to be amended to the extent necessary to reference and include any such maps or plats, and any such modifications, amendments or replats, as applicable.

5. Amendment. The easements established hereby will continue for so long as continued maintenance thereof is reasonably necessary to the purposes thereof, and during such period of duration no easement rights once established may be materially and adversely affected by any subsequent amendment hereof, or by any subsequent covenants, conditions, restrictions, easements, rules or regulations applicable to the Subdivision. The foregoing does not limit subsequent abandonment, amendment, modification or termination of any such easement as otherwise permitted by law, or any rights of Declarant or a property owners' association as provided in paragraph 3.4. Subject to the foregoing, Declarant reserves the right to amend this instrument at any time and from time to time to the extent Declarant may deem necessary for the orderly development of the Subdivision.

Executed this 21 day of February, 2024.

Treehouse Development, LLC,  
A Texas limited liability company  
"Declarant"

10R  
1ll

By:   
Steve Kordish, Officer

**ACKNOWLEDGEMENT**

STATE OF TEXAS            §  
  §  
COUNTY OF HARRIS       §

This instrument was acknowledged before me on the 21 day of February, 2024, by Steve Kordish, as Officer of Treehouse Development, LLC, a Texas limited liability company, on behalf of the company.



Notary Public, State of Texas  
Printed Name: Susan Richards  
My Commission Expires: 1/27/2025

**AFTER RECORDING RETURN TO:**

✓  
Treehouse Development, LLC  
1903 Blue Quail Drive  
Friendswood TX 77546



FILED FOR RECORD

2:23:47 PM

Monday, February 26, 2024

COUNTY CLERK, HARRIS COUNTY, TEXAS

ANY PROVISION HEREIN WHICH RESTRICTS THE SALE RENTAL, OR USE OF THE DESCRIBED REAL PROPERTY BECAUSE OF COLOR OR RACE IS INVALID AND UNENFORCEABLE UNDER FEDERAL LAW.

THE STATE OF TEXAS  
COUNTY OF HARRIS

I hereby certify that this instrument was FILED in File Number Sequence on the date and at the time stamped hereon by me; and was duly RECORDED, in the Official Public Records of Real Property of Harris County Texas

Monday, February 26, 2024

COUNTY CLERK  
HARRIS COUNTY, TEXAS





## Jaime-Leon, Ramon - PD

**From:** IT - Houstontxdotgov  
**Sent:** Tuesday, April 23, 2024 4:50 PM  
**To:** Tonya@Powell-Permitting.com  
**Subject:** Application for Modification of Sidewalk / Safety Buffer Standards Form Results

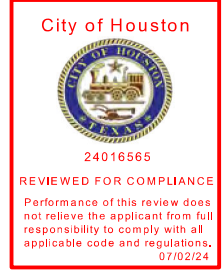
**Importance:** Low

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** New Item

Thank you for completing the form at <https://www.houstontx.gov/planning/sidewalk-modification-of-standards.html>.  
 Below are your form results:

1. Date ... 2024-04-23
2. Project Number ... 24016565
3. Site Address ... 4502, 4504 & 4506 Terry Street
5. City Council District ... H
6. Neighborhood Association ... N/A
7. Contact Person Name ... Tonya Powell
8. Contact Person Phone ... 281-380-7794
9. Your Email ... Tonya@Powell-Permitting.com
10. Modification Fee Applicability ... Maintain full width of sidewalk, but modify width of the safety buffer (fee does not apply)
11. Street 1 Street Name ... Terry Street
12. Street 1 Required Sidewalk Width ... 5'
13. Street 1 Required Safety Buffer Width ... 4'
14. Street 1 Proposed Sidewalk Width ... 5'
15. Street 1 Proposed Safety Buffer Width ... 2'-7" around power pole
16. Street 2 Street Name ... Amundsen Street
17. Street 2 Required Sidewalk Width ... 5'



18. Street 2 Required Safety Buffer Width ... 4'
19. Street 2 Proposed Sidewalk Width ... 5'
20. Street 2 Proposed Safety Buffer Width ... 4'
21. Street 3 Street Name ...
22. Street 3 Required Sidewalk Width ...
23. Street 3 Required Safety Buffer Width ...
24. Street 3 Proposed Sidewalk Width ...
25. Street 3 Proposed Safety Buffer Width ...
26. The proposed standard modification meets one or more of the following: (Sec. 40-559(e)) ... b. The characteristics of existing lawfully permitted development, land uses, or other physical conditions within the immediate vicinity of the public street create unsafe conditions related to the practical use of the sidewalk that is otherwise contrary to sound public policy; OR (Sec. 40-559 (e)(1)(b))
27. Please explain how the proposed modification meets the criteria. ... The sidewalk buffer meets the 4' requirements along Terry Street and reduces to 2'-7" to get get around the power pole.
28. The circumstances supporting the approval are not the result of hardship created or imposed by the applicant. ... YES
29. Please explain your answer to Question 28 ... The sidewalk impairment is an existing Centerpoint power pole in the ROW, which is not the result of hardship created or imposed by the applicant.
30. The granting of the approval would create an alternative that furthers the intent and purposes of this article. ... YES
31. Please explain your answer to Question 30 ... Reducing the the required buffer around the power pole allows the sidewalk to consistently maintain the 5' width required without creating and unsafe pathway.

Questions? Contact the Planning Department at 832.393.6600 or email us at [planningdepartment@houstontx.gov](mailto:planningdepartment@houstontx.gov).