Report Number:	02191565.0001A
Service Date:	01/09/20
Report Date:	01/14/20
Task:	02 - Laboratory Soil/Aggregate Testing



Client Project DCI - Lee's Summit Axiom Northwest Construction, Inc. Attn: Norm Hellings 2001 Shamrock Rd 2232 Broadway Lee's Summit, MO Suite 101 Everett, WA 98201 Project Number: 02191565 Laboratory Classification: Fat Clay (CH), brown & grayish brown **Material Source:** Off-site borrow Stockpile from off-site borrow at 1905 Shamrock Ave. **Sample Location:**

Proposed Use: Engineered fill

Testing Performed: Standard Proctor & Atterberg Limits

Summary:

Terracon's laboratory completed the requested scope of testing for the above-referenced sample. A report of these test results is attached.

Services:

 Terracon Rep.:
 John D. Martin

 Reported To:
 N/A

 Contractor:
 Axiom Northwest Construction

 Report Distribution:
 (1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By:

Son / Muise

Feras El-Ghusseln Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials. CT0001, 6-30-11, Rev.9 Page 1 of 1

Report Number: 02191565.0001A Service Date: 01/09/20 **Report Date:** 01/14/20 Task: 02 - Laboratory Soil/Aggregate Testing



Client

Axiom Northwest Construction, Inc. Attn: Norm Hellings 2232 Broadway Suite 101 Everett, WA 98201

Material Information

Source of Material: Off-Site Borrow **Proposed Use:** Subgrade Fill

Project

DCI - Lee's Summit 2001 Shamrock Rd Lee's Summit, MO

Project Number: 02191565

Sample Information

Sample Date: Sampled By: Sample Location:

01/09/20 Caleb Brewer Off-Site Borrow Pile at 1905 Shamrock Ave.

Sample Description: Fat Clay (CH), brown & grayish brown

Laboratory Test Data

Optimum Water Content (%):		19.0
Maximum Dry Unit Weight (pcf):		100.3
Rammer Type:	Mechanical	
Sample Preparation:	Dry	
Test Method:	Method A	
Test Procedure:	ASTM D698	

	Result	Specifications
Liquid Limit:	53	
Plastic Limit:	21	
Plasticity Index:	32	
In-Place Moisture (%):		

USCS:



Water Content (%)

Comments:

Services:

Terracon Rep.: John D. Martin Reported To: N/A Axiom Northwest Construction **Contractor:**

Report Distribution:

(1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By: Jun Muise

Feras El-Chussein Project Manager

Test Methods: ASTM D698, ASTM D4318

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02191565.0002A **Report Number:** Service Date: 02/27/20 **Report Date:** 03/11/20 02 - Laboratory Soil/Aggregate Testing Task:



Client Axiom Northwest Construction, Inc. Attn: Norm Hellings 2232 Broadway Suite 101 Everett, WA 98201

Project DCI - Lee's Summit 2001 Shamrock Rd Lee's Summit, MO

Project Number: 02191565

Laboratory Classification:	Weathered Shale trace Gravel, gray
Material Source:	Off-site borrow
Sample Location:	95th and Loiret, Lenexa, KS
Proposed Use:	Structural Fill
Testing Performed:	Standard Proctor

Summary:

Terracon's laboratory completed the requested scope of testing for the above-referenced sample. A report of these test results is attached.

Services:

Terracon Rep.: John D. Martin **Reported To:** N/A **Contractor:** Axiom Northwest Construction **Report Distribution:** (1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By:

Feras El-Shussen

Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials. CT0001, 6-30-11, Rev.9 Page 1 of 1

Report Number: 02191565.0002A Service Date: 02/27/20 **Report Date:** 03/11/20 Task: 02 - Laboratory Soil/Aggregate Testing

Client

Axiom Northwest Construction, Inc. Attn: Norm Hellings 2232 Broadway Suite 101 Everett, WA 98201

Material Information

Source of Material: Off-Site Borrow Structural Fill **Proposed Use:**

Project

DCI - Lee's Summit 2001 Shamrock Rd Lee's Summit, MO

Project Number: 02191565

Sample Information

Sample Date: Sampled By: Sample Location: 02/27/20 Kevin Hollis 95th and Loiret, Lenexa, KS

15620 W 113th St

913-492-7777

Lenexa, KS 66219-5102

rraco

Specifications

Sample Description: Weathered Shale trace Gravel, gray

Result

Laboratory Test Data

Maximum Dry Unit Weight (pcf): Optimum Water Content (%):		15.3
		112.6
Rammer Type:	Mechanical	
Sample Preparation:	Dry	
Test Method:	Method A	
Test Procedure:	ASTM D698	

Liquid Limit: Plastic Limit: Plasticity Index: In-Place Moisture (%):

USCS:



Water Content (%)

Comments:

Services:

Terracon Rep.: John D. Martin **Reported To:** N/A Axiom Northwest Construction **Contractor: Report Distribution:**

(1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By: July Muis

Feras El-Ghussein Project Manager

Test Methods: ASTM D698

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Standard Proctor

LABORATORT COMPACTION CHARACTERISTICS OF SOIL REPORT				
Report Number:	02191565.00	02B		IICIIJLUII
Service Date:	02/27/20			15620 W 113th St
Report Date:	03/11/20			Lenexa, KS 66219-5102
Task:	02 - Laborato	ory Soil/Aggregate Testing		913-492-7777
Client			Project	
Axiom Northwest	t Constructior	ı, Inc.	DCI - Lee's Summ	uit
Attn: Norm Hellin	ngs		2001 Shamrock R	d
2232 Broadway			Lee's Summit, MC)
Suite 101				
Everett, WA 9820)1		Project Number:	02191565
Laboratory Classi	fication:	Weathered Shale trace Grave	l, yellowish brown	
Material Source:		Off-site borrow		
Sample Location:		81st and Flint, Lenexa, KS		
Proposed Use:		Structural Fill		

Summary:

Testing Performed:

Terracon's laboratory completed the requested scope of testing for the above-referenced sample. A report of these test results is attached.

Services:

Terracon Rep.: John D. Martin **Reported To:** N/A **Contractor:** Axiom Northwest Construction **Report Distribution:** (1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By:

Feras El-Ghussen

Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials. CT0001, 6-30-11, Rev.9 Page 1 of 1

Report Number: 02191565.0002B Service Date: 02/27/20 **Report Date:** 03/11/20 Task: 02 - Laboratory Soil/Aggregate Testing

Client

Axiom Northwest Construction, Inc. Attn: Norm Hellings 2232 Broadway Suite 101 Everett, WA 98201

Material Information

Laboratory Test Data

Source of Material: Off-Site Borrow **Proposed Use:** Structural Fill

Project

DCI - Lee's Summit 2001 Shamrock Rd Lee's Summit, MO

Project Number: 02191565

Sample Information

Sample Date: Sampled By: Sample Location: 02/27/20 Kevin Hollis 81st and Flint, Lenexa, KS

15620 W 113th St

913-492-7777

Lenexa, KS 66219-5102

Sample Description: Weathered Shale trace Gravel, yellowish brown

Result

Specifications

Test Procedure: ASTM D698 Test Method: Method A Sample Preparation: Dry **Rammer Type:** Mechanical Maximum Dry Unit Weight (pcf): 103.5 **Optimum Water Content (%):** 19.8

Liquid Limit: Plastic Limit: Plasticity Index: In-Place Moisture (%):

USCS:



Comments:

Services:

Terracon Rep.: John D. Martin **Reported To:** N/A Axiom Northwest Construction **Contractor:**

Report Distribution:

(1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By: July Muis

Feras El-Ghussein Project Manager

Test Methods: ASTM D698

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

Report Number:	02191565.0025A
Service Date:	05/04/20
Report Date:	05/10/20
Task:	02 - Laboratory Soil/Aggregate Testing



Axiom Northwest Construction, Inc. Attn: Norm Hellings 2232 Broadway

Project DCI - Lee's Summit 2001 Shamrock Rd Lee's Summit, MO

Project Number: 02191565

Laboratory Classification:	Limestone Screenings, dark gray
Material Source:	Quarry
Sample Location:	On-site stockpile
Proposed Use:	Low Volume Change Fill
Testing Performed:	Standard Proctor

Summary:

Client

Suite 101

Everett, WA 98201

Terracon's laboratory completed the requested scope of testing for the above-referenced sample. A report of these test results is attached.

Services:

Terracon Rep.: John D. Martin **Reported To:** N/A **Contractor:** Axiom Northwest Construction **Report Distribution:** (1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By:

Feras El-Gnussen

Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials. CT0001, 6-30-11, Rev.9 Page 1 of 1

Report Number: 02191565.0025A Service Date: 05/04/20 **Report Date:** 05/10/20 Task: 02 - Laboratory Soil/Aggregate Testing

Client

Axiom Northwest Construction, Inc. Attn: Norm Hellings 2232 Broadway Suite 101 Everett, WA 98201

Material Information

Source of Material: Ouarry LVC Fill **Proposed Use:**

suaco 15620 W 113th St Lenexa, KS 66219-5102 913-492-7777

Project

DCI - Lee's Summit 2001 Shamrock Rd Lee's Summit, MO

Project Number: 02191565

Sample Information

Sample Date: Sampled By: Sample Location:

05/05/20 John D. Martin **On-site Stockpile**

Sample Description: Limestone Screenings, dark gray

Result

Specifications

Laboratory Test Data

Maximum Dry Unit Weight (pcf): Optimum Water Content (%):		10.3
		129.2
Rammer Type:	Mechanical	
Sample Preparation:	Dry	
Test Method:	Method B	
Test Procedure:	ASTM D698	

Liquid Limit: Plastic Limit: Plasticity Index: In-Place Moisture (%):

USCS:



Comments:

Services:

Terracon Rep.: John D. Martin **Reported To:** N/A Axiom Northwest Construction **Contractor:**

Report Distribution:

(1) Axiom Northwest Construction, Inc., norm@axiomnw.com

Reviewed By: Jun Muie

Feras El-Chussein Project Manager

Test Methods: ASTM D698

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