Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 06/26/2024
Sample: 446801

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Sample Details

Set #:	3	**Technician:**	William Connelly	**Batched:**	11:30 CDT
Specimen Size:	4" X 8"	**Cast By:**	William Connelly	**Sampled:**	12:05 CDT
Specimens In Set:	5	**Date Cast:**	06/13/24	**Cast:**	12:20 CDT
Truck / Ticket #:	424 / 94369	**Sampled From:**	Chute	**Truck Empty:**	12:15 CDT
Contractor:	Connight Construction	**Placement Method:**	Chute	**Placement Time:**	45 (min)

Location

Placement Location: Building Interior - Footing
Location Details: E.5/1-F/1. F/1-F/27. F/27-E.5/27.
Sample Location / Notes: F/2

Batch Log

Supplier:	Geiger	**Mix Design:**	P4MS475V454
Plant:	Lee's Summit		
On-Site Admixtures:	None		

Specifications

Strength: 3500 (psi)

Field Measurements

Weather:	Sunny	**Slump (in):**	3-3/4 (ASTM C143)	**Plastic Unit Weight:**	
Air Temperature (F):	88	**Concrete Temp (F):**	85 (ASTM C1064)	**Air Content:**	
				Load Volume:	10.00 (yd^3)

Lab Test Results

Testing Lab: Alpha Omega Geotech, 1701 State Ave, Kansas City, KS, 66102

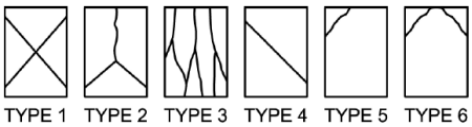
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in^2)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
3-1	7	06/20/24	1 / 6	4.00	12.57	48,480	3,860	2		N
3-2	28	07/11/24	1 / 27							
3-3	28	07/11/24	1 / 27							
3-4	28	07/11/24	1 / 27							
3-5	56 H	08/08/24	1 / 55							

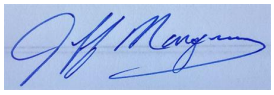
Test Age Average Strengths (psi): 7 Day - **3860**

Tested By: Marquis Gaston (1)
Checked In : 06/14/2024 (1,2,3,4,5)

Capping Methods

N: Neoprene





Reviewed by: Jeff Marquez

06/26/2024

Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 07/16/2024
Sample: 446801

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Sample Details

Set #:	3	**Technician:**	William Connelly	**Batched:**	11:30 CDT
Specimen Size:	4" X 8"	**Cast By:**	William Connelly	**Sampled:**	12:05 CDT
Specimens In Set:	5	**Date Cast:**	06/13/24	**Cast:**	12:20 CDT
Truck / Ticket #:	424 / 94369	**Sampled From:**	Chute	**Truck Empty:**	12:15 CDT
Contractor:	Connight Construction	**Placement Method:**	Chute	**Placement Time:**	45 (min)

Location

Placement Location: Building Interior - Footing
Location Details: E.5/1-F/1. F/1-F/27. F/27-E.5/27.
Sample Location / Notes: F/2

Batch Log

Supplier: Geiger
Plant: Lee's Summit
Mix Design: P4MS475V454
On-Site Admixtures: None

Specifications

Strength: 3500 (psi)

Field Measurements

Weather: Sunny
Air Temperature (F): 88
Slump (in): 3-3/4 (ASTM C143)
Concrete Temp (F): 85 (ASTM C1064)
Plastic Unit Weight:
Air Content:
Load Volume: 10.00 (yd^3)

Lab Test Results

Testing Lab: Alpha Omega Geotech, 1701 State Ave, Kansas City, KS, 66102

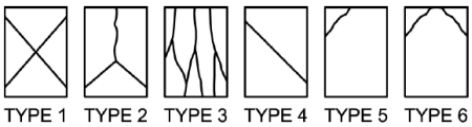
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in^2)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
3-1	7	06/20/24	1 / 6	4.00	12.57	48,480	3,860	2		N
3-2	28	07/11/24	1 / 27	4.00	12.57	62,230	4,950	3		N
3-3	28	07/11/24	1 / 27	4.00	12.57	59,920	4,770	3		N
3-4	28	07/11/24	1 / 27	4.00	12.57	62,770	4,990	3		N
3-5	56 H	08/08/24	1 / 55							

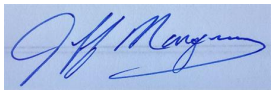
Test Age Average Strengths (psi): 7 Day - **3860**, 28 Day - **4900**

Tested By: Marquis Gaston (1,2,3,4)
Checked In : 06/14/2024 (1,2,3,4,5)

Capping Methods

N: Neoprene





Reviewed by: Jeff Marquez

07/16/2024

Footing Inspection

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Date: 06/13/2024

Inspector: William Connelly

OBSERVATIONS

Location of Footings Inspected: E.5/1-F/1. F/1-F/27. F/27-E.5/27.

Plans Used: Structural

Drawing Number: S0.0, S1.1

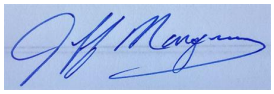
Type Of Footing Inspected: Strip Footings

Allowable Bearing Capacity (psf): 2500

Footing Excavation per Contract Documents: Yes

Reinforcing Steel Per Contract Documents: Yes

Discrepancy: No



Reviewed by: Jeff Marquez

06/16/2024

Reinforcing Steel Inspection

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Date: 06/13/2024

Inspector: William Connelly

OBSERVATIONS

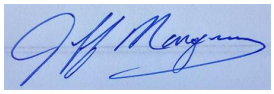
Location of Inspection: E.5/1-F/1. F/1-F/27. F/27-E.5/27.

Plans Used: Structural Plans

Drawing No.: S0.0, S1.1, S2.0, S2.1

Reinforcing Steel in General Accordance with Contract Documents?: Yes

Discrepancy: No



Reviewed by: Jeff Marquez

06/16/2024

Footing Inspection

Alpha Omega Geotech, Inc
1701 State Avenue
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Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Date: 06/13/2024

Inspector: William Connelly

OBSERVATIONS

Location of Footings Inspected: C.5/3,5,7,9,11,13,15,17,19,21,23,25

Plans Used: Structural

Drawing Number: S0.0, S1.1, S2.0, S2.1

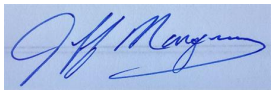
Type Of Footing Inspected: Column Footings

Allowable Bearing Capacity (psf): 3000

Footing Excavation per Contract Documents: Yes

Reinforcing Steel Per Contract Documents: Yes

Discrepancy: No



Reviewed by: Jeff Marquez

06/16/2024

Reinforcing Steel Inspection

Alpha Omega Geotech, Inc
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Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Date: 06/13/2024

Inspector: William Connelly

OBSERVATIONS

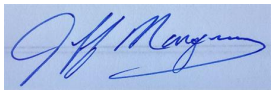
Location of Inspection: C.5/3,5,7,9,11,13,15,17,19,21,23,25

Plans Used: Structural Plans

Drawing No.: S0.0, S1.1, S2.0, S2.1

Reinforcing Steel in General Accordance with Contract Documents?: Yes

Discrepancy: No



Reviewed by: Jeff Marquez

06/16/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Bituminous Density

Report Date: 08/04/2024
Test Method:

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Test Location	Material	Mix Design	Thickness (in)	Max Density (pcf)	Max Density Source	In Place Density (pcf)	Probe Depth (in)	Percent Comp.	Min/Max Comp. (%)	Remark	Gauge SN	Technician
1		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	145.5	Backscatter	98	95 / 103		2115	Jeff Marquez
2		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	144.0	Backscatter	97	95 / 103		2115	Jeff Marquez
3		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	145.0	Backscatter	97	95 / 103		2115	Jeff Marquez
4		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	147.1	Backscatter	99	95 / 103		2115	Jeff Marquez
5		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	149.0	Backscatter	100	95 / 103		2115	Jeff Marquez
6		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	149.4	Backscatter	100	95 / 103		2115	Jeff Marquez
7		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	144.6	Backscatter	97	95 / 103		2115	Jeff Marquez
8		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	148.7	Backscatter	100	95 / 103		2115	Jeff Marquez
9		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	145.6	Backscatter	98	95 / 103		2115	Jeff Marquez
10		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		3	148.8	Supplied Value	145.5	Backscatter	98	95 / 103		2115	Jeff Marquez
11		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	148.0	Backscatter	99	95 / 103		2115	Jeff Marquez
12		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	147.1	Backscatter	99	95 / 103		2115	Jeff Marquez

Alpha Omega Geotech, Inc
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Bituminous Density

Report Date: 08/04/2024
Test Method:

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Test Location	Material	Mix Design	Thickness (in)	Max Density (pcf)	Max Density Source	In Place Density (pcf)	Probe Depth (in)	Percent Comp.	Min/Max Comp. (%)	Remark	Gauge SN	Technician
13		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	149.6	Backscatter	101	95 / 103		2115	Jeff Marquez
14		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	150.0	Backscatter	101	95 / 103		2115	Jeff Marquez
15		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	144.7	Backscatter	97	95 / 103		2115	Jeff Marquez
16		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	148.8	Backscatter	100	95 / 103		2115	Jeff Marquez
17		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	150.2	Backscatter	101	95 / 103		2115	Jeff Marquez
18		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	149.4	Backscatter	100	95 / 103		2115	Jeff Marquez
19		06/04/24	Sub-base Fill: Pavement: NE Maguire Blvd.	Base		2	148.8	Supplied Value	150.6	Backscatter	101	95 / 103		2115	Jeff Marquez
20		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	146.2	Backscatter	99	95 / 103		2115	Jeff Marquez
21		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	146.9	Backscatter	99	95 / 103		2115	Jeff Marquez
22		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	143.9	Backscatter	97	95 / 103		2115	Jeff Marquez
23		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	148.4	Backscatter	100	95 / 103		2115	Jeff Marquez
24		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	144.3	Backscatter	98	95 / 103		2115	Jeff Marquez
25		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	147.2	Backscatter	100	95 / 103		2115	Jeff Marquez
26		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	145.7	Backscatter	99	95 / 103		2115	Jeff Marquez
27		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	146.6	Backscatter	99	95 / 103		2115	Jeff Marquez

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Bituminous Density

Report Date: 08/04/2024
Test Method:

Client:
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1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Test Location	Material	Mix Design	Thickness (in)	Max Density (pcf)	Max Density Source	In Place Density (pcf)	Probe Depth (in)	Percent Comp.	Min/Max Comp. (%)	Remark	Gauge SN	Technician
28		06/05/24	Base Fill: Pavement: NE Maguire Blvd.	Wear		3	147.9	Supplied Value	146.5	Backscatter	99	95 / 103		2115	Jeff Marquez

Remarks

Comments

Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter"
1: 100’ east of Hagen Rd.
East bound lane
2: 300’ east of Hagen Rd.
East bound lane
3: 500’ east of Hagen Rd.
East bound lane
4: 700’ east of Hagen Rd.
East bound lane
5: 900’ east of Hagen Rd.
East bound lane
6: 200’ east of Hagen Rd.
West bound lane
7: 400’ east of Hagen Rd.
West bound lane
8: 400’east of Hagen Rd.
West bound lane
9: 600’east of Hagen Rd.
West bound lane
10: 800’ east of Hagen Rd.
West bound lane
11: 200’ east of Hagen Rd.
West bound lane
Base lift 2
12: 400’ east of Hagen Rd.
West bound lane
Base lift 2
13: 600’ east of Hagen Rd.
West bound lane
Base lift 2
14: 800’ east of Hagen Rd.
West bound lane
Base lift 2

Alpha Omega Geotech, Inc
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Bituminous Density

Report Date: 08/04/2024
Test Method:

Client:
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1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Comments
Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter"
15: 100'east of Hagen Rd. East bound lane Base lift 2
16: 300' east of Hagen Rd. East bound lane Base lift 2
17: 500' east of Hagen Rd. East bound lane Base lift 2
18: 700' east of Hagen Rd. East bound lane Base lift 2
19: 900' east of Hagen Rd. East bound lane Base lift 2
20: 100'east of Hagen Rd. East bound lane Surface
21: 300' east of Hagen Rd. East bound lane Surface
22: 500' east of Hagen Rd. East bound lane Surface
23: 700' east of Hagen Rd. East bound lane Surface
24: 900' east of Hagen Rd. East bound lane Surface
25: 200' east of Hagen Rd. West bound lane Surface
26: 400' east of Hagen Rd. West bound lane Surface
27: 600' east of Hagen Rd. West bound lane Surface

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Bituminous Density

Report Date: 08/04/2024
Test Method:

Client:
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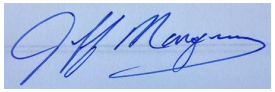
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Comments
Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter"
28: 800' east of Hagen Rd. West bound lane Surface

Gauge Information

Gauge SN	Make	Model	Density Count	Moisture Count	Standard Count Date	Last Calibration Date	Last Calibrated By
2115	Humboldt	5001c	2314	485	06/04/24	04/11/24	Calibration Solutions, LLC
2115	Humboldt	5001c	2306	480	06/05/24	04/11/24	Calibration Solutions, LLC



Reviewed by: Jeff Marquez

08/04/2024

Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 06/26/2024
Sample: 446567

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Sample Details

Set #:	2	**Technician:**	Contractor	**Batched:**	
Specimen Size:	4" X 8"	**Cast By:**	Contractor	**Sampled:**	
Specimens In Set:	5	**Date Cast:**	05/29/24	**Cast:**	
Truck / Ticket #:		**Sampled From:**		**Truck Empty:**	
Contractor:	ESS	**Placement Method:**		**Placement Time:**	

Location

Placement Location: Paving - Curb & Gutter
Location Details: ~30' of curb E end , S side of road; curb inlets along maguire blvd and cargo rd

Batch Log

Supplier: Penny's Concrete, Inc.

On-Site Admixtures: None

Specifications

Strength: 4000 (psi)

Field Measurements

Weather:	**Consistency:**	Slump	**Plastic Unit Weight:**
Air Temperature (F):	**Concrete Temp (F):**		**Air Content:**
			Load Volume:

Lab Test Results

Testing Lab: Alpha Omega Geotech, 1701 State Ave, Kansas City, KS, 66102

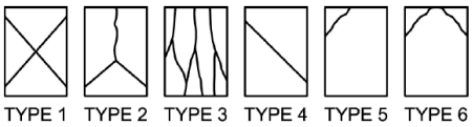
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
2-1	19	06/17/24	16 / 3	4.00	12.57	60,320	4,800	3		N
2-2	28	06/26/24	16 / 12							
2-3	28	06/26/24	16 / 12							
2-4	28	06/26/24	16 / 12							
2-5	56 H	07/24/24	16 / 40							

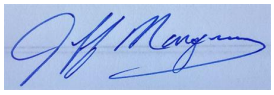
Test Age Average Strengths (psi): 19 Day - **4800**

Tested By: Marquis Gaston (1)
Checked In : 06/14/2024 (1,2,3,4,5)

Capping Methods

N: Neoprene





Reviewed by: Jeff Marquez

06/26/2024

Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 07/10/2024
Sample: 446567

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
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Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Sample Details

Set #:	2	**Technician:**	Contractor	**Batched:**	
Specimen Size:	4" X 8"	**Cast By:**	Contractor	**Sampled:**	
Specimens In Set:	5	**Date Cast:**	05/29/24	**Cast:**	
Truck / Ticket #:		**Sampled From:**		**Truck Empty:**	
Contractor:	ESS	**Placement Method:**		**Placement Time:**	

Location

Placement Location: Paving - Curb & Gutter
Location Details: ~30' of curb E end , S side of road; curb inlets along maguire blvd and cargo rd

Batch Log

Supplier: Penny's Concrete, Inc.

On-Site Admixtures: None

Specifications

Strength: 4000 (psi)

Field Measurements

Weather:	**Consistency:**	Slump	**Plastic Unit Weight:**
Air Temperature (F):	**Concrete Temp (F):**		**Air Content:**
			Load Volume:

Lab Test Results

Testing Lab: Alpha Omega Geotech, 1701 State Ave, Kansas City, KS, 66102

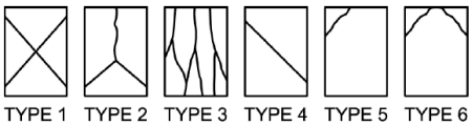
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
2-1	19	06/17/24	16 / 3							
2-2	28	06/26/24	16 / 12	4.00	12.57	59,820	4,760	3		N
2-3	28	06/26/24	16 / 12	4.00	12.57	59,810	4,760	3		N
2-4	28	06/26/24	16 / 12	4.00	12.57	59,670	4,750	3		N
2-5	56 H	07/24/24	16 / 40							

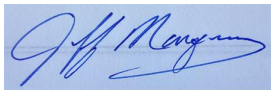
Test Age Average Strengths (psi): 28 Day - **4760**

Tested By: Marquis Gaston (1,2,3,4)
Checked In : 06/14/2024 (1,2,3,4,5)

Capping Methods

N: Neoprene





Reviewed by: Jeff Marquez

07/10/2024

Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 07/10/2024
Sample: 446567

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Sample Details

Set #:	2	**Technician:**	Contractor	**Batched:**	
Specimen Size:	4" X 8"	**Cast By:**	Contractor	**Sampled:**	
Specimens In Set:	5	**Date Cast:**	05/29/24	**Cast:**	
Truck / Ticket #:		**Sampled From:**		**Truck Empty:**	
Contractor:	ESS	**Placement Method:**		**Placement Time:**	

Location

Placement Location: Paving - Curb & Gutter
Location Details: ~30' of curb E end , S side of road; curb inlets along maguire blvd and cargo rd

Batch Log

Supplier: Penny's Concrete, Inc.

On-Site Admixtures: None

Specifications

Strength: 4000 (psi)

Field Measurements

Weather:	**Consistency:** Slump	**Plastic Unit Weight:**
Air Temperature (F):	**Concrete Temp (F):**	**Air Content:**
		Load Volume:

Lab Test Results

Testing Lab: Alpha Omega Geotech, 1701 State Ave, Kansas City, KS, 66102

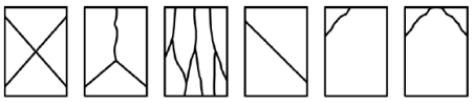
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
2-1	19	06/17/24	16 / 3	4.00	12.57	50,320	4,000	3		N
2-2	28	06/26/24	16 / 12	4.00	12.57	59,820	4,760	3		N
2-3	28	06/26/24	16 / 12	4.00	12.57	59,810	4,760	3		N
2-4	28	06/26/24	16 / 12	4.00	12.57	59,670	4,750	3		N
2-5	56 H	07/24/24	16 / 40							

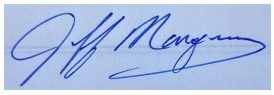
Test Age Average Strengths (psi): 19 Day - **4000**, 28 Day - **4760**

Tested By: Marquis Gaston (1,2,3,4)
Checked In : 06/14/2024 (1,2,3,4,5)

Capping Methods

N: Neoprene





Reviewed by: Jeff Marquez

07/10/2024

Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 06/04/2024
Sample: 446542

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Sample Details

Set #:	1	**Technician:**	Caleb Armstrong	**Batched:**	09:05 CDT
Specimen Size:	4" X 8"	**Cast By:**	Caleb Armstrong	**Sampled:**	10:05 CDT
Specimens In Set:	5	**Date Cast:**	05/28/24	**Cast:**	10:10 CDT
Truck / Ticket #:	279 / 4060013	**Sampled From:**	Chute	**Truck Empty:**	10:20 CDT
Contractor:	ESS	**Placement Method:**	Chute	**Placement Time:**	75 (min)

Location

Placement Location: Paving - Curb & Gutter
Location Details: Both lanes of New NE maguire blvd, between NE Hagan Rd and old NE maguire blvd
Sample Location / Notes: N lane between NE hagan rd and MH G3

Batch Log

Supplier: Penny's Concrete, Inc.
Plant: Grain Valley-Plant #4
Mix Design: KCMMB4K
On-Site Admixtures: None

Specifications

Strength: 4000 (psi)

Field Measurements

Weather:
Air Temperature (F):
Slump (in): 1/2 (ASTM C143)
Concrete Temp (F): 83 (ASTM C1064)
Plastic Unit Weight:
Air Content: 5.2 (ASTM C231)
Load Volume: 10.00 (yd^3)

Lab Test Results

Testing Lab: Alpha Omega Geotech, 1701 State Ave, Kansas City, KS, 66102

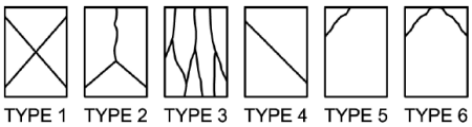
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in^2)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
1-1	7	06/04/24	1 / 6	4.00	12.57	51,140	4,070	3		N
1-2	28	06/25/24	1 / 27							
1-3	28	06/25/24	1 / 27							
1-4	28	06/25/24	1 / 27							
1-5	56 H	07/23/24	1 / 55							

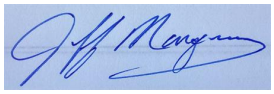
Test Age Average Strengths (psi): 7 Day - **4070**

Tested By: Marquis Gaston (1)
Checked In : 05/29/2024 (1,2,3,4,5)

Capping Methods

N: Neoprene





Reviewed by: Jeff Marquez

06/04/2024

Compressive Strength of Concrete

Test Method: ASTM C 39

Report Date: 06/26/2024
Sample: 446542

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Sample Details

Set #:	1	**Technician:**	Caleb Armstrong	**Batched:**	09:05 CDT
Specimen Size:	4" X 8"	**Cast By:**	Caleb Armstrong	**Sampled:**	10:05 CDT
Specimens In Set:	5	**Date Cast:**	05/28/24	**Cast:**	10:10 CDT
Truck / Ticket #:	279 / 4060013	**Sampled From:**	Chute	**Truck Empty:**	10:20 CDT
Contractor:	ESS	**Placement Method:**	Chute	**Placement Time:**	75 (min)

Location

Placement Location: Paving - Curb & Gutter
Location Details: Both lanes of New NE maguire blvd, between NE Hagan Rd and old NE maguire blvd
Sample Location / Notes: N lane between NE hagan rd and MH G3

Batch Log

Supplier:	Penny's Concrete, Inc.	**Mix Design:**	KCMMB4K
Plant:	Grain Valley-Plant #4		
On-Site Admixtures:	None		

Specifications

Strength: 4000 (psi)

Field Measurements

Weather:		**Slump (in):**	1/2 (ASTM C143)
Air Temperature (F):		**Concrete Temp (F):**	83 (ASTM C1064)
Plastic Unit Weight:			
Air Content:	5.2 (ASTM C231)		
Load Volume:	10.00 (yd^3)		

Lab Test Results

Testing Lab: Alpha Omega Geotech, 1701 State Ave, Kansas City, KS, 66102

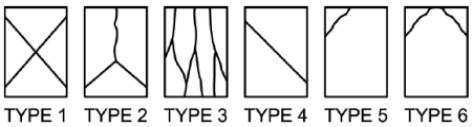
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in^2)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
1-1	7	06/04/24	1 / 6	4.00	12.57	51,140	4,070	3		N
1-2	28	06/25/24	1 / 27	4.00	12.57	67,030	5,330	3		N
1-3	28	06/25/24	1 / 27	4.00	12.57	66,420	5,280	3		N
1-4	28	06/25/24	1 / 27	4.00	12.57	66,340	5,280	3		N
1-5	56 H	07/23/24	1 / 55							

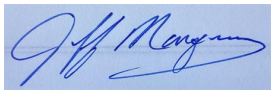
Test Age Average Strengths (psi): 7 Day - **4070**, 28 Day - **5300**

Tested By: Marquis Gaston (1,2,3,4)
Checked In : 05/29/2024 (1,2,3,4,5)

Capping Methods

N: Neoprene





Reviewed by: Jeff Marquez

06/26/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 05/08/2024
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

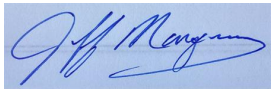
Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
40		05/08/24	446351		GP-GM	6.4	143.7	7.4	137.1	147.2	6	95	95 / 102	-3 / 3	DP/MP
41		05/08/24	446351		GP-GM	6.4	143.7	6.7	139.8	149.2	6	97	95 / 102	-3 / 3	DP/MP
42		05/08/24	446351		GP-GM	6.4	143.7	4.4	142.0	148.3	6	99	95 / 102	-3 / 3	DP/MP
43		05/08/24	446351		GP-GM	6.4	143.7	5.7	139.2	147.1	6	97	95 / 102	-3 / 3	DP/MP
44		05/08/24	446351		GP-GM	6.4	143.7	7.9	138.9	149.9	6	97	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
40	Base Fill: Pavement: Continuation of NE Maguire blvd	968.1		Humboldt / 5001c / 1669 / 04/07/2023	Marcus Barnes
41	Base Fill: Pavement: 35 meters NW of previous test	968.1		Humboldt / 5001c / 1669 / 04/07/2023	Marcus Barnes
42	Base Fill: Pavement: 35 meters NW of previous test	968.1		Humboldt / 5001c / 1669 / 04/07/2023	Marcus Barnes
43	Base Fill: Pavement: 35 meters NW of previous test	968.1		Humboldt / 5001c / 1669 / 04/07/2023	Marcus Barnes
44	Base Fill: Pavement: 35 meters NW of previous test	968.1		Humboldt / 5001c / 1669 / 04/07/2023	Marcus Barnes

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.



Reviewed by: Jeff Marquez

05/08/2024

Site Observation

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Date: 05/01/2024

Inspector: Chase Behler

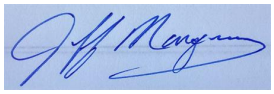
OBSERVATIONS

Location: Maguire roadway density testing

Report Narrative:

Failed density testing on base rock fill, possibly due to heavy rainfall. Retrieved a sample for proctor testing. Lift seemed compacted and rolled tight with vibrating drum roller, but was unable to achieve density and moisture specifications.

Discrepancy: No



Reviewed by: Jeff Marquez

05/01/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 04/24/2024
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

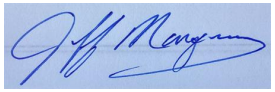
Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
31		04/24/24	446186		CH	21.1	101.2	21.2	101.7	123.2	2	100	95 / 102	-3 / 3	DP/MP
32		04/24/24	446186		CH	21.1	101.2	21.0	102.3	123.8	2	101	95 / 102	-3 / 3	DP/MP
33		04/24/24	446186		CH	21.1	101.2	20.7	103.7	125.2	2	102	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
31	Structural Fill: Cement Stabilization for Street. Test taken at West end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly
32	Structural Fill: Cement Stabilization for Street. Test taken at West end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly
33	Structural Fill: Cement Stabilization for Street. Test taken at West end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.



Reviewed by: Jeff Marquez

04/24/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 04/25/2024
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

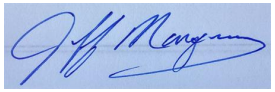
Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
34		04/24/24	446186		CH	21.1	101.2	18.6	102.9	122.0	2	102	95 / 102	-3 / 3	DP/MP
35		04/24/24	446186		CH	21.1	101.2	18.5	101.3	120.0	2	100	95 / 102	-3 / 3	DP/MP
36		04/24/24	446186		CH	21.1	101.2	18.6	98.9	117.3	2	98	95 / 102	-3 / 3	DP/MP
37		04/24/24	446186		CH	21.1	101.2	18.6	100.8	119.6	2	100	95 / 102	-3 / 3	DP/MP
38		04/24/24	446186		CH	21.1	101.2	21.0	96.5	116.8	2	95	95 / 102	-3 / 3	DP/MP
39		04/24/24	446186		CH	21.1	101.2	22.1	96.6	118.0	2	95	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
34	Structural Fill: Cement Stabilization for Street. Test taken at West end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly
35	Structural Fill: Cement Stabilization for Street. Test taken at West end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly
36	Structural Fill: Cement Stabilization for Street. Test taken at East end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly
37	Structural Fill: Cement Stabilization for Street. Test taken at East end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly
38	Structural Fill: Cement Stabilization for Street. Test taken at East end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly
39	Structural Fill: Cement Stabilization for Street. Test taken at East end.			Humboldt / 5001c / 1670 / 04/07/2023	William Connelly

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.



Reviewed by: Jeff Marquez

04/25/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 03/21/2024
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

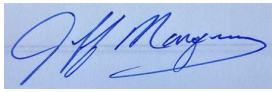
Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
30		03/20/24	444788		CL	19.5	106.1	19.0	105.0	125.0	6	99	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
30	Utility Trench Backfill: Storm Sewer: Between MH-A4 & MH-A5			Humboldt / 5001c / 2115 / 04/07/2023	Jeff Marquez

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. **30:** 50' east of road/ @ subgrade



Reviewed by: Jeff Marquez

03/21/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 03/21/2024
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

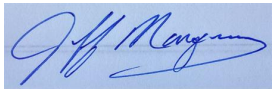
Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
29		03/20/24	444788		CL	19.5	106.1	17.0	107.7	126.0	6	102	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
29	Utility Trench Backfill: Storm Sewer: Between MH-A4 & MH-A5			Humboldt / 5001c / 2115 / 04/07/2023	Jeff Marquez

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. **29:** 25' east of road/ @ subgrade



Reviewed by: Jeff Marquez

03/21/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 03/20/2024
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
26		03/19/24	444788		CL	19.5	106.1	20.0	102.5	123.0	6	97	95 / 102	-3 / 3	DP/MP
27		03/19/24	444788		CL	19.5	106.1	20.0	100.8	121.0	6	95	95 / 102	-3 / 3	DP/MP
28		03/19/24	444788		CL	19.5	106.1	21.0	101.7	123.0	6	96	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
26	Utility Trench Backfill: Storm Sewer: Between MH-A4 & MH-A4			Humboldt / 5001c / 2115 / 04/07/2023	Jeff Marquez
27	Utility Trench Backfill: Storm Sewer: Between MH-A4 & MH-A4			Humboldt / 5001c / 2115 / 04/07/2023	Jeff Marquez
28	Utility Trench Backfill: Storm Sewer: Between MH-A4 & MH-A4			Humboldt / 5001c / 2115 / 04/07/2023	Jeff Marquez

Remarks

DP/MP: Density Pass / Moisture Pass

Comments

Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.

26: 75’ east of road/2’bsg

27: 100’ east of rd./ 1’bsg

28: Approximately 125’ east of road/ @ subgrade

Reviewed by: William Connelly,
03/20/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 02/10/2024
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
22		02/09/24	444788		CL	19.5	106.1	21.2	101.9	123.5	6	96	95 / 102	-3 / 3	DP/MP
23		02/09/24	444788		CL	19.5	106.1	22.1	103.4	126.2	6	97	95 / 102	-3 / 3	DP/MP
24		02/09/24	444788		CL	19.5	106.1	21.8	100.7	122.6	6	95	95 / 102	-3 / 3	DP/MP
25		02/09/24	444788		CL	19.5	106.1	21.7	102.0	124.1	6	96	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
22	Utility Trench Backfill: Storm Sewer: Test taken 10ft South of Box AA2		-18in from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
23	Utility Trench Backfill: Storm Sewer: Test taken 10ft North of Box AA3		-18in from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
24	Utility Trench Backfill: Storm Sewer: Test taken 10ft North of Box AA3		-6in from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
25	Utility Trench Backfill: Storm Sewer: Test taken 10ft South of Box AA2		-6in from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.

Reviewed by: ,
02/10/2024

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 12/07/2023
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
15		12/07/23	444788		CL	19.5	106.1	21.2	101.3	122.8	6	95	95 / 102	-3 / 3	DP/MP
16		12/07/23	444788		CL	19.5	106.1	20.3	101.2	121.7	6	95	95 / 102	-3 / 3	DP/MP
17		12/07/23	444788		CL	19.5	106.1	20.2	101.8	122.4	8	96	95 / 102	-3 / 3	DP/MP
18		12/07/23	444788		CL	19.5	106.1	20.1	101.1	121.4	8	95	95 / 102	-3 / 3	DP/MP
19		12/07/23	444788		CL	19.5	106.1	21.1	102.8	124.5	4	97	95 / 102	-3 / 3	DP/MP
20		12/07/23	444788		CL	19.5	106.1	20.2	101.2	121.6	6	95	95 / 102	-3 / 3	DP/MP
21		12/07/23	444788		CL	19.5	106.1	20.9	102.2	123.6	4	96	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
15	Structural Fill: Fill for Road. Test taken at West Road.		-1ft from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
16	Structural Fill: Fill for Road. Test taken at West Road.		-1ft from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
17	Structural Fill: Fill for Road. Test taken at West Road.		-1ft from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
18	Structural Fill: Fill for Road. Test taken at West Road.		-1ft from Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
19	Structural Fill: Fill for Road. Test taken at West Road.		At Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
20	Structural Fill: Fill for Road. Test taken at West Road.		At Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly
21	Structural Fill: Fill for Road. Test taken at West Road.		At Grade	Humboldt / 5001c / 1669 / 04/07/2023	William Connelly

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.

Reviewed by: William Connelly,
12/07/2023

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 11/20/2023
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
1		11/15/23	444789		CL	17.6	109.2	16.1	111.0	128.9	4	102	95 / 102	-3 / 3	DP/MP
2		11/15/23	444788		CL	19.5	106.1	21.9	101.4	123.6	4	96	95 / 102	-3 / 3	DP/MP
3		11/15/23	444788		CL	19.5	106.1	20.1	102.5	123.1	4	97	95 / 102	-3 / 3	DP/MP
4		11/15/23	444788		CL	19.5	106.1	22.1	101.1	123.4	4	95	95 / 102	-3 / 3	DP/MP
5		11/15/23	444788		CL	19.5	106.1	21.6	102.7	124.9	4	97	95 / 102	-3 / 3	DP/MP
6		11/15/23	444788		CL	19.5	106.1	22.1	101.6	124.0	4	96	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
1	Mass Grading: Southwest corner of building pad, on edge of roadway	968.1		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
2	Mass Grading: 50' South from Northwest corner of building pad, on edge of roadway	965.7		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
3	Mass Grading: 25' North from Southeast corner of building pad	968.6		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
4	Mass Grading: 25' South from Northeast corner of building pad	967.4		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
5	Mass Grading: Northwest side of roadway on west side of site	967.5		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
6	Mass Grading: 100' East from Northwest side of roadway on west side of site	965.5		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.

Reviewed by: Cody Curtis,
11/20/2023

ALPHA-OMEGA GEOTECH

Alpha Omega Geotech, Inc
1701 State Avenue
Kansas City, KS 66102
Phone: 913-371-0000

Soil Nuclear Gauge

Report Date: 12/01/2023
Test Method: ASTM D 6938

Client:
Ward Development
1120 NW Eagle Ridge Blvd
Grain Valley, MO 64029

Project:
230529
Lakewood Business Center Lot 1
NE Maguire Blvd
Lee's Summit, MO 64064

Test Results

Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min/Max Comp. (%)	Optimum Moisture Tolerance (%)	Remark
7		11/30/23	444789		CL	17.6	109.2	17.5	107.7	126.5	4	99	95 / 102	-3 / 3	DP/MP
8		11/30/23	444788		CL	19.5	106.1	21.7	101.0	122.9	4	95	95 / 102	-3 / 3	DP/MP
9		11/30/23	444788		CL	19.5	106.1	22.0	102.8	125.4	4	97	95 / 102	-3 / 3	DP/MP
10		11/30/23	444788		CL	19.5	106.1	22.3	101.7	124.4	4	96	95 / 102	-3 / 3	DP/MP
11		11/30/23	444788		CL	19.5	106.1	22.4	103.4	126.6	4	97	95 / 102	-3 / 3	DP/MP
12		11/30/23	444789		CL	17.6	109.2	19.7	105.7	126.5	4	97	95 / 102	-3 / 3	DP/MP
13		11/30/23	444788		CL	19.5	106.1	18.3	102.9	121.7	4	97	95 / 102	-3 / 3	DP/MP
14		11/30/23	444788		CL	19.5	106.1	20.3	101.6	122.2	4	96	95 / 102	-3 / 3	DP/MP

Test Information

Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
7	Structural Fill: Building Pad: 5' East from Northeast corner of building pad	970.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
8	Structural Fill: Building Pad: Northeast corner of site (parking lot)	968.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
9	Structural Fill: Building Pad: 50' North from Southeast corner of site (parking lot)	971.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
10	Structural Fill: Building Pad: 25' West from Southwest corner of building pad (parking lot)	967.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
11	Structural Fill: Building Pad: 25' West from Northwest corner of building pad (parking lot)	967.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
12	Structural Fill: Building Pad: 15' East from West center of building pad	972.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
13	Structural Fill: Building Pad: 50' East from West center of building pad	972.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis
14	Structural Fill: Building Pad: 75' East from West center of building pad	973.0		Humboldt / HS-5001EZ / 10047 / 04/07/2023	Cody Curtis

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency.

Reviewed by: William Connelly,
12/01/2023