KANSAS CITY TESTING & ENGINEERING, LLC

Kansas City Testing & Engineering, LLC
1308 Adams Street
Kansas City, KS 66103
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REPORT OF IN-PLACE DENSITY

CLIENT: REDFORD CONSTRUCTION, INC.
ATTN: THOMAS HUDGENS
P. O. BOX 1065
RAYMORE MO 64083

PROJECT NO.: R20-17-165
REPORT NO.: K19948
DATE OF SERVICE: 09/15/2017
AUTHORIZATION: THOMAS HUDGENS
REPORT DATE: 09/20/2017

PROJECT: MANOR @ STONY CREEK
2ND PLAT
LEE'S SUMMIT MO

SERVICES: Perform in-place density and moisture content tests to determine the degree of field compaction.

PROJECT DATA

CONTRACTOR: REDFORD CONSTRUCTION, INC.

	DENSITY	MOISTURE
METHOD OF TEST:	ASTM D6938	ASTM D3017
SPECIFICATION:	95% Min	±2% of Opt

GAUGE: Troxler 3440
GAUGE SERIAL NO.: 26934
STANDARD COUNTS
MOISTURE - CURRENT: 634 PREVIOUS: 630
DENSITY - CURRENT: 1746 PREVIOUS: 1744
TEST MODE: Direct Transmission
PROBE DEPTH: 6

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS: OPTIMUM MOISTURE %	MOISTURE/DENSITY RELATIONS: MAXIMUM DENSITY pcf	REFERENCE REPORT
1.	STANDARD PROCTOR	GRAY-BROWN SILTY CLAY	19.5	99.2	K18706
2.	STANDARD PROCTOR	GRAY-BROWN SILTY CLAY	22.4	97.4	K18707
3.	STANDARD PROCTOR	BROWN SILTY CLAY	19.9	103.7	K18944

REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
1.	SAN SEWER LINE TRENCH BACKFILL UNDER STREET NEAR: Lot #95, 8' LOC	6	3' bfg	2	23.9	22.4	116.1	93.7	97.4	96
2.	Lot #95, 6' LOC	6	2' bfg	2	23.4	22.4	116.0	94.0	97.4	97
3.	Lot #95, 6' ROC	6	1' bfg	1	20.7	19.5	114.8	95.1	99.2	96
4.	Lot #95, 8' LOC	6	@ fg	2	23.4	22.4	114.6	92.9	97.4	95
5.	Lot #94, 8' LOC	6	3' bfg	2	23.3	22.4	115.0	93.3	97.4	96
6.	Lot #94, 6' LOC	6	2' bfg	2	23.0	22.4	115.4	93.8	97.4	96

Report of Tests continued on page 2

PROJECT NO.: R20-17-165 REDFORD CONSTRUCTION, INC.

DATE OF SERVICE: 09/15/2017

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
7.	Lot #94, 6' ROC	6	1' bfg	1	21.0	19.5	114.7	94.8	99.2	96
8.	Lot #94, 8' ROC	6	fg	2	22.1	22.4	115.6	94.7	97.4	97
11.	Lot #96, 8' LOC	6	3' bfg	2	23.8	22.4	116.0	93.7	97.4	96
12.	Lot #96, 6' LOC	6	2' bfg	2	24.0	22.4	115.2	92.9	97.4	95
13.	Lot #96, 6' ROC	6	1' bfg	1	21.0	19.5	114.7	94.8	99.2	96
14.	Lot #96, 8' ROC	6	fg	2	23.0	22.4	114.3	92.9	97.4	95
15.	Main line @ 12+00 from origin	6	3' bfg	2	23.7	22.4	115.2	93.1	97.4	96
16.	Main line @ 12+00 from origin	6	2' bfg	2	24.1	22.4	116.7	94.0	97.4	97
17.	Main line @ 12+00 from origin	6	1' bfg	2	23.0	22.4	114.8	93.3	97.4	96
18.	Main line @ 12+00 from origin	6	fg	1	20.9	19.5	114.7	94.9	99.2	96

Test results on this report meet project specifications as noted above.

ADDITIONAL COMMENTS:

Technician: MIKE SCHOTT, ENGINEERING TECHNICIAN

Report Distribution:

(1) THOMAS@REDFORDCONSTRUCTION.COM
(1) TRAVIS@SUMMITHOMESKC.COM

KANSAS CITY TESTING & ENGINEERING,

JIM BYRNES, R.G.
PROJECT MANAGER

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REPORT OF IN-PLACE DENSITY

CLIENT: REDFORD CONSTRUCTION, INC.
ATTN: THOMAS HUDGENS
P. O. BOX 1065
RAYMORE MO 64083

PROJECT NO.: R20-17-165
REPORT NO.: K20021
DATE OF SERVICE: 09/21/2017
AUTHORIZATION: THOMAS HUDGENS
REPORT DATE: 09/26/2017

PROJECT: MANOR @ STONY CREEK
2ND PLAT
LEE'S SUMMIT MO

SERVICES: Perform in-place density and moisture content tests to determine the degree of field compaction.

PROJECT DATA

CONTRACTOR: REDFORD CONSTRUCTION, INC.

	DENSITY	MOISTURE
METHOD OF TEST:	ASTM D6938	ASTM D3017
SPECIFICATION:	95% Min	±2% of Opt

GAUGE: Troxler 3440
GAUGE SERIAL NO.: 26934
STANDARD COUNTS
MOISTURE - CURRENT: 632 PREVIOUS: 630
DENSITY - CURRENT: 1746 PREVIOUS: 1740
TEST MODE: Direct Transmission
PROBE DEPTH: 6

M/D #	TEST OF	MATERIALS	MOISTURE/DENSITY RELATIONS: OPTIMUM MOISTURE %	MOISTURE/DENSITY RELATIONS: MAXIMUM DENSITY pcf	REFERENCE REPORT
1.	STANDARD PROCTOR	GRAY-BROWN SILTY CLAY	19.5	99.2	K18706
2.	STANDARD PROCTOR	GRAY-BROWN SILTY CLAY	22.4	97.4	K18707
3.	STANDARD PROCTOR	BROWN SILTY CLAY	19.9	103.7	K18944

REPORT OF TESTS

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
1.	BACKFILL OF SAN SEWER TRENCH UNDER ROAD AT STATION: LINE A - 15+00: 6' LOC	6	6' bfg	1	20.6	19.5	114.6	95.0	99.2	96
2.	4' LOC	6	5' bfg	1	21.0	19.5	114.6	94.7	99.2	95
3.	2' LOC	6	4' bfg	1	20.5	19.5	114.7	95.2	99.2	96
4.	2' ROC	6	2' bfg	1	21.1	19.5	114.8	94.8	99.2	96
5.	4' ROC	6	1' bfg	1	20.4	19.5	115.0	95.5	99.2	96

Report of Tests continued on page 2

REPORT OF TESTS (continued)

PROJECT NO.: R20-17-165 REDFORD CONSTRUCTION, INC.

DATE OF SERVICE: 09/21/2017

TEST NO	LOCATION	PROBE DEPTH	LIFT/ ELEV	M/D NO	FIELD MOISTURE (%)	OPTIMUM MOISTURE (%)	FIELD DENSITY (pcf) WET	FIELD DENSITY (pcf) DRY	MAXIMUM DENSITY (pcf)	DENSITY (% max)
6.	6' ROC	6	fg	1	21.0	19.5	116.0	95.9	99.2	97
7.	LINE A - 16+00: 6' LOC	6	6' bfg	1	20.5	19.5	114.2	94.8	99.2	96
8.	4' LOC	6		1	19.7	19.5	114.1	95.3	99.2	96
9.	2' LOC	6	4' bfg	1	19.0	19.5	113.3	95.2	99.2	96
10.	2' ROC	6	3' bfg	1	19.2	19.5	113.2	95.0	99.2	96
11.	2' ROC	6	2' bfg	1	20.2	19.5	114.3	95.1	99.2	96
12.	4' ROC	6	1' bfg	1	21.1	19.5	116.0	95.8	99.2	97
13.	6' ROC	6	fg	1	19.0	19.5	112.7	94.7	99.2	95
14.	LINE B - 00+07: 8' LOC	6	5' bfg	1	19.7	19.5	113.6	94.9	99.2	96
15.	6' LOC	6	4' bfg	1	21.0	19.5	115.0	95.0	99.2	96
16.	4' LOC	6	3' bfg	1	20.9	19.5	114.9	95.0	99.2	96
17.	2' ROC	6	2' bfg	1	20.1	19.5	114.8	95.6	99.2	96
18.	2' ROC	6	1' bfg	1	20.7	19.5	114.4	94.8	99.2	96
19.	4' ROC	6	fg	1	21.1	19.5	115.2	95.1	99.2	96
21.	LOT 97: 8' LOC	6	6' bfg	2	23.1	22.4	115.3	93.7	97.4	96
22.	6' LOC	6	5' bfg	2	23.0	22.4	115.4	93.8	97.4	96
23.	4' LOC	6	4' bfg	2	22.7	22.4	114.2	93.1	97.4	96
24.	2' LOC	6	3' bfg	2	23.4	22.4	114.5	92.8	97.4	95
25.	2' LOC	6	2' bfg	2	21.9	22.4	113.4	93.0	97.4	95
26.	4' LOC	6	1' bfg	2	21.8	22.4	114.4	93.9	97.4	96
27.	6' LOC	6	fg	2	20.6	22.4	112.6	93.4	97.4	96
31.	LINE B - 1+34: 6' LOC	6	5' bfg	1	20.1	19.5	113.3	94.3	99.2	95
32.	4' LOC	6	4' bfg	1	21.0	19.5	114.7	94.8	99.2	96
33.	2' LOC	6	3' bfg	1	20.0	19.5	114.0	95.0	99.2	96
34.	2' ROC	6	2' bfg	1	19.9	19.5	114.1	95.2	99.2	96
35.	4' ROC	6	1' bfg	1	19.0	19.5	112.9	94.9	99.2	96
36.	6' ROC	6	fg	1	19.4	19.5	113.9	95.4	99.2	96

Test results on this report meet project specifications as noted on page 1.

ADDITIONAL COMMENTS:

Technician: MIKE SCHOTT, ENGINEERING TECHNICIAN

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