

**CONSTRUCTION COMMITTEE**  
**AGENDA**

August 20, 2018

7:00 PM

304 E. Grand River, Conference Room 4, Howell, MI 48843

Pages

1.	CALL MEETING TO ORDER	
2.	APPROVAL OF MINUTES	2
	Minutes of meeting dated: August 13, 2018	
3.	APPROVAL OF AGENDA	
4.	CALL TO THE PUBLIC	
5.	REPORTS	
6.	ACTION ITEMS	
	a. J.S. Vig Change Order #2	8
	Remove & Replace Poor Soils: \$124,193.00	
	b. J.S. Vig Change Order #3	46
	Locate Existing Utilities: \$11,234.00	
7.	NEW BUSINESS	
8.	ADJOURNMENT	

# **CONSTRUCTION COMMITTEE**

## **MEETING MINUTES**

August 13, 2018

6:30 PM

304 E. Grand River, Conference Room 1, Howell, MI 48843

Members Present:

G. Childs, D. Helzerman

Members Absent:

D. Dolan

### **1. CALL MEETING TO ORDER**

The meeting was called to order by Commissioner Gary Childs at 6:30 p.m.

### **2. APPROVAL OF MINUTES**

Minutes of meeting dated: July 9, 2018

Motion to approve the minutes as presented.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

### **3. APPROVAL OF AGENDA**

Motion to approve the Agenda as presented.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**4. CALL TO THE PUBLIC**

None.

**5. REPORTS**

**5.a East Complex Mud Room Renovation**

Jim Rowell, Building Department

Jim Rowell introduced the project and explained the purpose of the renovations for an outdated and underutilized area of the East Complex. This project should be done by the end of year if it is passed by all committees. Chris Folts added that the contractor will be able to complete the project easily. Cindy Catanach mentioned that this was in the budget, but additional funds will require an amendment, all costs are being paid from the Building Fund.

**5.b Sheriff Storage Facility Budget Update**

Lindhout Architects and JS Vig

Brad Alvord passed out the Budget update. Brad explained they were able to reduce the budget by about \$100K.

There are two contingencies in the budget totaling a 10% contingency that is what puts them over \$800K.

Cindy Catanach added that \$800K has been authorized by the Board of Commissioners. This would have to go back to the Board to approve additional funds. Any additional costs would come from capital replacement or general fund.

The increase of price was due to the steel prices increasing.

Changes include single pitch roof and one overhead door to the South was eliminated. Asphalt and paving was reduced with that elimination.

The Sheriff said it will still function without the door on the South side.

Motion to proceed with a resolution for the Public Safety & Infrastructure and Development Committee to request additional funds.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**5.c County Fiber Plan**

Rich Malewicz, Information Technology

Ken Langley introduced John from Amcomm Telecommunications, Inc. and distributed a copy of the fiber plan drawings and quote dated 8/7/2018.

John explained that the existing infrastructure varies and was installed about 15 to 20 years ago. There are distance limitations, the old technology will not handle the capacity. They all run through the Asset Building that will be demolished.

Discussion on route plans.

Rich Malewicz explained that this would be done next year. IT will continue working on this plan and come back in 1-2 months.

**6. ACTION ITEMS**

**6.a Envision Invoice #1948**

East Complex Wall Repairs: \$88,000.00

Chris Folts gave an update on the project.

Motion to approve payment.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**6.b Allied Pay Application #7**

East Complex Parking Lot: \$49,805.00

Mike Kennedy gave a status update on the parking lot, retainage is being held, and some work is still remaining. There will be one more pay app.

Motion to approve payment.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**



**6.c Allied Change Order #CP004**

Carport Footings: \$20,340.00

Mike Kennedy explained the changes to the footings.

Motion to approve change order.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**6.d Lindhout Associates Architects Invoice #2018-0732**

911 Central Dispatch Facility: \$22,059.38

Brad Alvord explained this is for most of the bid work.

Motion to approve payment.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**6.e Lindhout Associates Architects Invoice #2018-0746**

911 Central Dispatch Facility: \$25,621.36

Motion to approve payment.

**Moved By** G. Childs

**Seconded By** D. Helzerman

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**6.f 911 Central Dispatch Fiber Upgrades**

Quote Dated 8/7/2018: \$27,286.51

This quote has been withdrawn by IT as the quote will need to be revised.

**6.g J.S. Vig Change Order #1**

911 Central Dispatch Facility

Brad Alvord explained the change order as an internal switch of funds from supervision to contingency.

Motion to approve the change order.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**6.h J.S. Vig Pay Application #1**

911 Central Dispatch Facility: \$287,330.95

Brad Alvord explained this is for majority of site work that has taken place and preconstruction services.

Motion to approve payment.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

**7. NEW BUSINESS**

General progress on 911 - commissioner Helzerman requested.

Valerie working on mass excavation and utilities. The block is in-hand now, and will be on-site soon. The foundation will start on the 27th of August. Footings were supposed to start 13th, we have lost about 2 weeks.

**7.a Next Meeting**

Tentative: September 10, 2018 at 6:30 p.m.

Natalie Hunt will confirm this schedule with Commissioner Dolan and send out the appointment upon confirmation.

**8. ADJOURNMENT**

Motion to adjourn the meeting at 7:17 p.m.

**Moved By** D. Helzerman

**Seconded By** G. Childs

Yes (2): G. Childs, and D. Helzerman

Absent (1): D. Dolan

**Motion Carried (2-0-1)**

Respectfully submitted by:

Natalie Hunt,  
Recording Secretary

# REQUEST FOR CHANGE ORDER



<b>RFCO Number</b>	<b>2</b>	<b>Description &amp; Reason for Scope Change:</b>	
<b>Date:</b>	<b>August 10, 2018</b>	Remove and Replace Poor Soils	
<b>Project Name:</b>	<b>Livingston County 911 - Dispatch Center</b>		
<b>JS Vig Project #:</b>	<b>1673</b>		
<b>Owner Project #:</b>			
<b>To:</b>	<b>Brad Alvord - Lindhout Associates</b>		
<b>Subcontractors Scope Change</b>			
CSI Code	CSI Description	Contractor	Quantity      Unit Cost      Cost
	Remove and replace poor soils with engineered, compacted fill below 902.00'	Joe Raica Excavating	
			\$ 116,744.00
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
Subtotal			\$ 116,744.00
<b>General Contractors Scope Change</b>			
CSI Code	CSI Description	Quantity	Unit Cost      Total Cost
1-010	Project Management		\$ -
1-020	Superintendent		\$ -
1-024	Builder's Risk		\$ -
1-025	Insurance	0.8%	\$ 933.95
1-030	Laborers		\$ -
1-070	Clean Up		\$ -
1-125	Bond	1.00%	\$ 1,167.44
			\$ -
			\$ -
Subtotal			\$ 118,845
Allowable Fee		4.50%	\$ 5,348
<b>Subcontractor + General Contractor Total</b>			<b>\$ 124,193</b>
Total Proposed Time Increase:			0

 <b>CONTRACTOR</b> J.S. Vig Construction Company	<b>8-12-18</b> DATE	ARCHITECT DATE	 <b>OWNER</b> DATE
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Attach detailed description and subcontractor bids

25282	Out	40						
25283	Out	40						
25322	Out	40						
26631	Out	25						
nt		325						
25226	Out	40						
25227	Out	40						
25228	Out	40						
25229	Out	40						
25273	Out	40						
25274	Out	40		7/24	25238	IN	15	
25275	Out	40		7/24	25239	IN	15	
25284	Out	40		7/24	25240	IN	15	
25285	Out	40		7/24	25241	IN	15	
25286	Out	40		7/24	25242	IN	15	
25287	Out	40		7/24	25243	IN	15	
25288	Out	40		7/24	25244	IN	15	
25289	Out	40		7/24	25245	IN	15	
25290	Out	40		7/24	25246	IN	15	
25323	Out	40		7/24	25247	IN	15	
25324	Out	40		7/24	25248	IN	15	
25325	Out	40		7/24	25249	IN	15	
26576	Out	40		7/24	25250	IN	15	
26577	Out	40		7/24	25291	IN	20	
26578	Out	40		7/24	25292	IN	20	
26579	Out	40		7/24	25293	IN	20	
26580	Out	40		7/24	25294	IN	20	
26581	Out	40		7/24	25295	IN	20	
26601	Out	40		7/24	25296	IN	20	
26602	Out	40		7/24	25297	IN	20	
26603	Out	40		7/24	25298	IN	20	
26604	Out	40		7/24	25299	IN	20	
26626	Out	25		7/24	25300	IN	20	
26627	Out	25		7/24	26568	IN	15	
26628	Out	25		7/24	26569	IN	15	
26629	Out	25		7/24	26570	IN	15	
26630	Out	25		7/24	26571	IN	15	
26632	Out	25		7/24	26572	IN	15	
				7/24	26573	IN	15	
nt		1230		7/24	26583	IN	20	
				7/24	26584	IN	20	
26574	Out	40		7/24	26585	IN	20	
26575	Out	40		7/24	26586	IN	20	
26679	Out	40		7/24	26587	IN	20	
26680	Out	40		7/24	26588	IN	20	
nt		160		7/24	26589	IN	20	
				7/24	26590	IN	20	
26661	Out	40		7/24	26591	IN	20	
26662	Out	40		7/24	26613	IN	20	
26663	Out	40		7/24	26614	IN	20	
26664	Out	40		7/24	26615	IN	20	
26665	Out	40		7/24	26616	IN	20	
26666	Out	40		7/24	26617	IN	20	

26688	Out	40		7/25	25402	IN	40
26670	Out	40		7/25	25403	IN	40
25341	Out	40		7/25	25404	IN	40
25342	Out	40		7/25	25405	IN	40
25343	Out	40		7/25	25406	IN	40
nt		1280		7/25	25426	IN	40
				7/25	25427	IN	40
				7/25	25428	IN	40
26671	Out	40		7/25	25429	IN	40
26672	Out	40		7/25	25430	IN	40
26673	Out	40		7/25	26655	IN	40
26674	Out	40		7/25	26656	IN	40
26675	Out	40		7/25	26657	IN	40
25377	Out	40		7/25	26658	IN	40
25378	Out	40		7/25	26659	IN	40
25379	Out	40		7/25	25331	IN	40
25349	Out	40		Total IN		880	
25348	Out	40					
25347	Out	40		8/1	25109	IN	40
25345	Out	40		8/1	25439	IN	40
25346	Out	40		8/1	25438	IN	40
25344	Out	40		8/1	25437	IN	40
26689	Out	40		8/1	25436	IN	40
26690	Out	40		8/1	25435	IN	40
26691	Out	40		8/1	25434	IN	40
26692	Out	40		8/1	25433	IN	40
26693	Out	40		8/1	25432	IN	40
26694	Out	40		8/1	25081	IN	40
26695	Out	40		8/1	25082	IN	40
26696	Out	40		8/1	25083	IN	40
26697	Out	40		8/1	25080	IN	40
26698	Out	40		8/1	25387	IN	40
26699	Out	40		8/1	25386	IN	40
25101	Out	40		8/1	25385	IN	40
nt		1040		8/1	25384	IN	40
				8/1	25383	IN	40
				8/1	25382	IN	40
				8/1	25381	IN	40
				8/1	25380	IN	40
				8/1	25079	IN	40
				8/1	25108	IN	40
				8/1	25107	IN	40
				8/1	25106	IN	40
				8/1	25105	IN	40
				8/1	25104	IN	40
				8/1	25103	IN	40
				8/1	25102	IN	40
				8/1	25078	IN	40
				8/1	25084	IN	40
				8/1	25076	IN	40
				8/1	25077	IN	40
				Total IN		1320	
						Agenda Page 10 of 52	
				8/2	25442	IN	40
				8/2	25441	IN	40

		7 CY	\$16/CY		(\$112)	
Total as of 8/02/2018					\$116,744	
End = ((90' x 85')/27)*0.58 = 164 CY						
End = ((90'-7" x 120')/27)*0.18= 7 CY						

**DAILY INSPECTION REPORT**
**PROJECT:** Livingston County 911 Dispatch Center

**JOB #:** 17-413 and 18-272

**CONTRACTOR:** J. S. Vlg Construction

**DATE:** 7/20/2018

Arrived: 9:40 am

Left: 11:09 am

Temperature: 74 °F

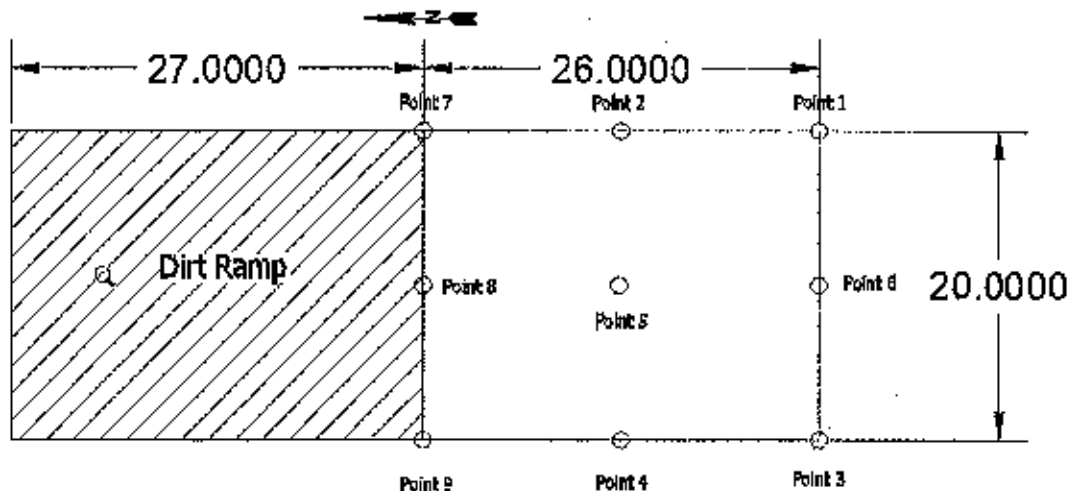
Weather: Cloudy (Chance of Rain)

Foreman: Joe Recka

Number of Workers: 2 (+1 Soil Inspector)

On Arrival, digging was underway for the footing of the building. Hole was dug on the proposed southeast part of the building location. Benchmark was set up on the Iron rod on a power pole on the northern part of the site which has an elevation of 903.50. Elevations in the chart below signify the points shown in the hole to obtain bottom of hole elevation. The figure on the bottom shows the location of these points relative to the hole that was dug. Soil Inspector (Mike) was on site inspecting the soil at the bottom of the hole. Around 11:00 am, Joe Recka shut down the project for the day. The hole that was dug was not filled.

Benchmark Elevation 903.50	Units: Feet
Point Identifier	Elevation
1	898.33
2	898.25
3	897.28
4	897.79
5	897.73
6	898.01
7	898.03
8	897.78
9	897.73


**No Scale**
  
 INSPECTOR





## DAILY INSPECTION REPORT

PROJECT: Livingston County 911 Dispatch Center

JOB #: 17-413 and 18-272

CONTRACTOR: J. S. Vig Construction

DATE: 7/26/2018

Arrived: 2:45 am

Left: 3:15 am

Temperature: 80 °F

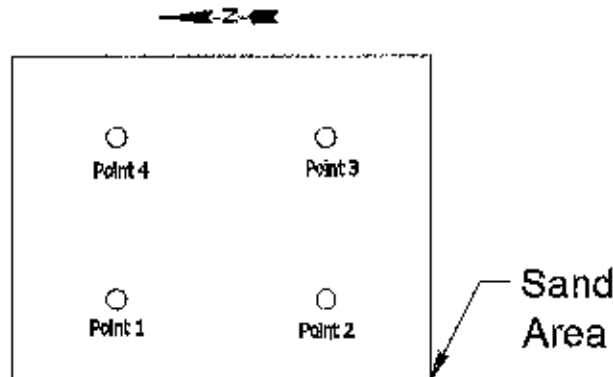
Weather: Partly Cloudy

Contact: Matt (313)-215-6210 (J. S. Vig Construction)

Number of Workers: 1

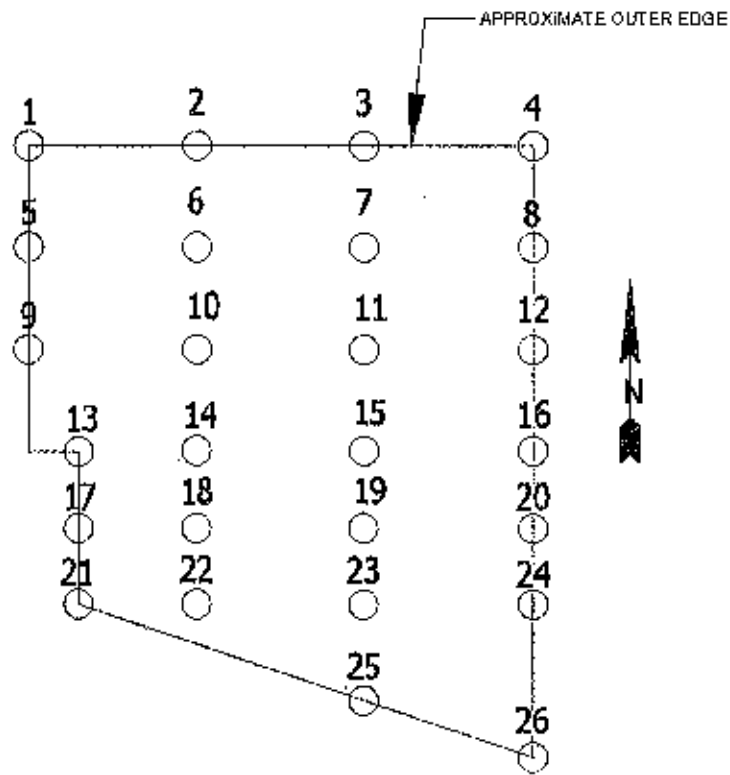
On Arrival, site was done with construction for the day with no workers present. Matt approached me and instructed me to take elevation shots on a sand filled area to determine the elevation of the sand surface. This sand filled area was the same area that was previously dug on 7/20/18. Matt proceeded to stake the area with four different locations and wanted the elevations of these spots. Using the bench mark that was located to the north of the site on a power pole, the elevation of the surface at these stakes were measured (which is stated below). These elevations were then written on the stakes. Matt explained that the elevation of this area should be around 900 ft, so around 2.5 ft of sand needs to be removed.

Benchmark Elevation 903.50	Units: Feet
Point Identifier	Elevation
1	902.38
2	902.52
3	902.75
4	902.67



No Scale

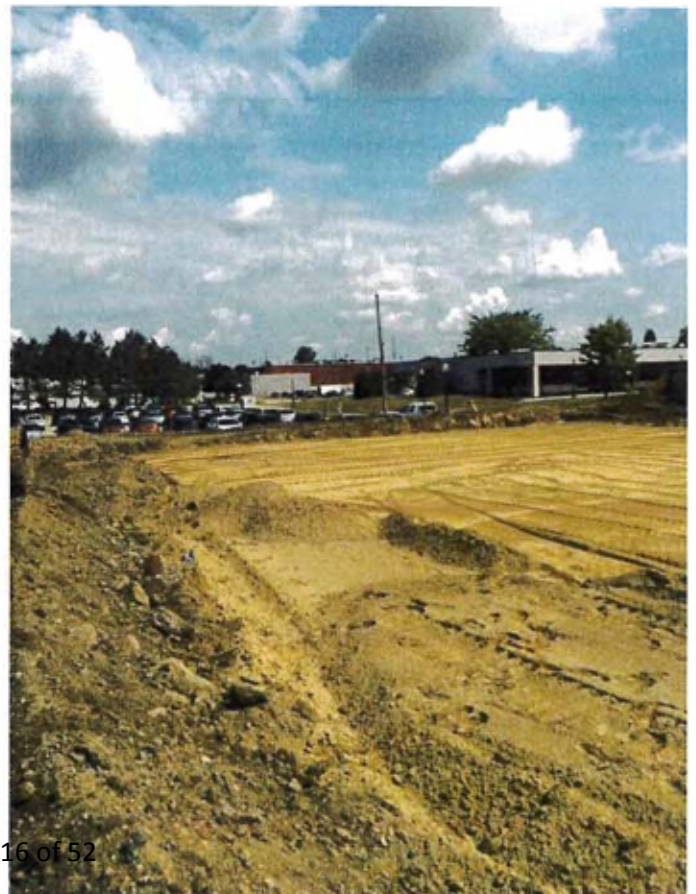
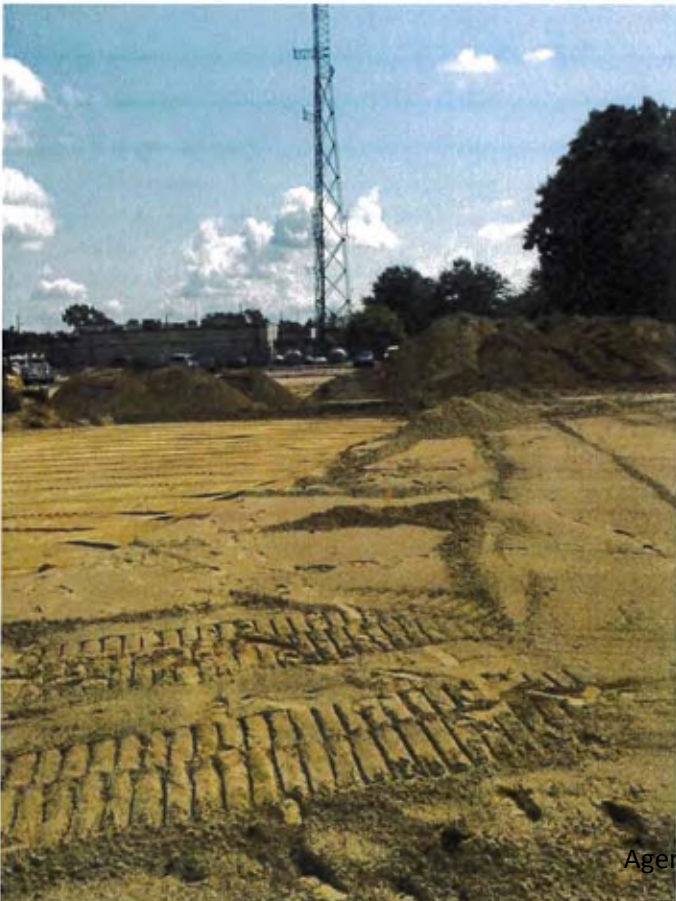
  
INSPECTOR



No Scale

  
\_\_\_\_\_  
INSPECTOR





**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Matt  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe

**G2 Project No.:** 183323  
**Date:** July 23, 2018  
**Weather:** 81°F, Partly Cloudy  
**Page:** 1 of 1

**Progress of Work:**

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 8:30 am, G2 observed Joe Raica Excavating, Inc. beginning to excavate for the undercut to remove the underground layer of organic material. Excavation operations were performed with a CAT 328D excavator. The undercut was cut approximately 2.5 to 5 feet below existing grade elevation, and approximately 90 feet long by 84 to feet wide, with an additional 19 feet by 24 feet section coming north in the north west corner. Please see attached document for undercut location.

The fill soils removed from this undercut consists of varying layers of sand and clay, along with an approximately 1-1/2 foot layer of black organic material. There was also a small amount of rocks and concrete debris that was removed. No groundwater was encountered within the fill material during excavation operations today. The undercut was performed until the layer of black organic material was completely removed, leaving a stiff native gray clay exposed in most areas.

The contractor placed three lifts of backfill into the undercut area using 6 inch lifts. The material used for the backfill appeared to be a mix of light brown sand and silt, with trace gravel that was imported from off-site. A Bomag vibratory roller was used to compact the soil. The first lift was lightly compacted as to avoid pumping from the clay below. The second lift was more heavily compacted, and a density test of 12 inches was used to check both lifts. The final lift of the day was 6 inches and compacted and tested normally.

In-place density tests were performed at select locations using an Instron nuclear moisture/density gauge. Test results indicate the backfill is compact from 98.0 percent to 99.0 percent of the maximum density of 121.4 pcf as determined by the T-99 Field test. Moisture contents at the evaluated test locations ranged from 7.0 percent to 7.4 percent. Please refer to the attached Field Density Test Report for complete test results and additional density information. G2 informed the contractor representative of today's test results. G2 departed the job site at 6:20 pm.

**G2 Field Representative:** Tyler Wolschlager

**Reviewer:** JBS, P.E.





Project No: 183323  
Date: July 23, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
1	4' Below Current Grade	12	314.0	127.7	314.0	8.8	7.4	119.0	121.4	98.0	A	
2	3.5' Below Current Grade	4	1864.0	128.6	1864.0	8.4	7.0	120.2	121.4	99.0	B	

Material: Light Brown Clay/Sand Mix      Maximum Density: 121.8 PCF      Optimum Moisture %:      Minimum Specified Comp: 98 %

T-99 No: \_\_\_\_\_  
Moisture: 8.1 %  
Volume 0.0333 cu. ft.  
Soil/Mold 6260.0 g  
Mold 4282.0 g  
Wet Soil 1986.0 g  
Comp Soil 121.4 PCF

### Troxler Nuclear Gauge Information

Gauge No: 15991      Calibration Date: 05-18-2018

### Chart Standards

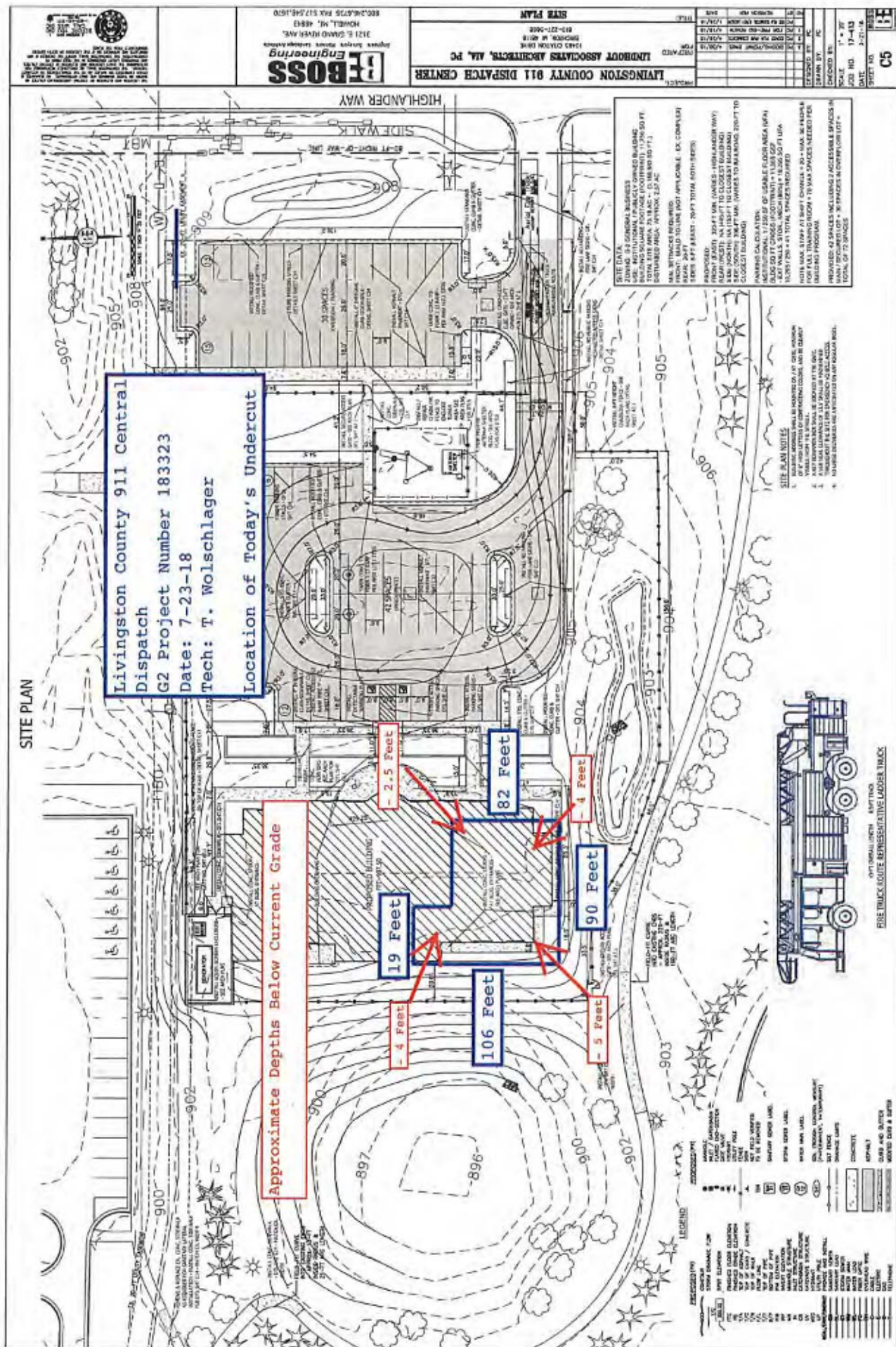
Density: 1633-1666      Density: 1653

Moisture: 644-670      Moisture: 644

### Operating Standards:

G2 Field Representative: Tyler Wolschlager

Reviewed By: JBS, P.E.







## Daily Field Report

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Matt  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** July 24, 2018  
**Weather:** Cloudy/Sunny, 66°F- 78°F  
**Page:** 1 of 1

### Progress of Work:

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:00 am, G2 observed Joe Raica Excavating proceeding to place sand in the undercut areas. The contractor placed and compacted approximately 10-inch lifts of brown sand with trace clay on top of the other previously placed and compacted sand layers already in the undercut. After the undercut was filled, the contractor brought in imported brown sand material to place on top for the remainder of the building pad. They placed and compacted an approximately 10-inch lift on top of the undercut backfill. A CAT Dozer was utilized for placement operations, and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the sand is compact from 97.3 percent to 100.4 percent of the maximum density of 112.5 pcf as determined by the One Point Michigan Cone Test. Moisture content readings at the test locations ranged from 7.0 percent to 9.9 percent today. Test results also indicate the imported brown sand is compact from 95.6 percent to 99.4 percent of the maximum density of 114.8 pcf as determined by the One Point Michigan Cone Test. Moisture content readings at the test locations ranged from 3.4 percent to 5.1 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 6:00 pm.

**G2 Field Representative:** Michael Hume

**Reviewer:** JBS, P.E.





Project No: 183323  
Date: July 24, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
1	- approx 8'1" from top of building pad	8 inches	1583.0	119.5	98.0	8.5	7.7	110.9	112.5	98.6	Site Plan #1	
2	- approx 8'1" from top of building pad	8 inches	1529.0	120.9	97.0	8.4	7.5	112.5	112.5	100.0		
3	- approx 8'1" from top of building pad	8 inches	1528.0	121.0	95.0	8.2	7.3	112.7	112.5	100.2		
4	- approx 8'1" from top of building pad	8 inches	1675.0	117.1	89.0	7.6	7.0	109.5	112.5	97.3		
5	- approx 8'1" from top of building pad	8 inches	1521.0	121.1	97.0	8.4	7.5	112.7	112.5	100.2		
6	- approx 8'1" from top of building pad	8 inches	1493.0	121.9	109.0	9.7	8.6	112.2	112.5	99.7		
7	- approx 8'1" from top of building pad	8 inches	1528.0	120.9	102.0	8.9	8.0	112.0	112.5	99.6		
8	- approx 7'3" from top of building pad	8 inches	1535.0	120.8	94.0	8.1	7.2	112.6	112.5	100.1		
9	- approx 7'3" from top of building pad	8 inches	1485.0	122.1	104.0	9.2	8.1	113.0	112.5	100.4		
10	- approx 7'3" from top of building pad	8 inches	1450.0	123.0	123.0	11.1	9.9	111.9	112.5	99.5		
11	- approx 7'3" from top of building pad	8 inches	1554.0	120.2	100.0	8.7	7.8	111.5	112.5	98.1		
12	- approx 7'3" from top of building pad	8 inches	1569.0	119.8	100.0	8.7	7.9	111.1	112.5	98.8		
13	- approx 7'3" from top of building pad	8 inches	1470.0	122.5	108.0	9.6	8.5	113.0	112.5	100.4		
14	- approx 7'3" from top of building pad	8 inches	1551.0	120.3	108.0	9.6	8.6	110.7	112.5	98.4		

### Troxler Nuclear Gauge Information

Gauge No: 33279 Calibration Date: 03-16-2018

### Chart Standards Operating Standards:

Density: 2138-2181 Density: 2120  
Moisture: 585-609 Moisture: 587

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.



Project No: 183323  
Date: July 24, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report (Continued)

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
15	- approx 6'5" from top of building pad	8 inches	1533.0	120.8	108.0	9.6	8.6	111.2	112.5	98.8		
16	- approx 6'5" from top of building pad	8 inches	1535.0	120.7	105.0	9.3	8.3	111.5	112.5	99.1		
17	- approx 6'5" from top of building pad	8 inches	1526.0	121.0	107.0	9.5	8.5	111.5	112.5	99.1		
18	- approx 6'5" from top of building pad	8 inches	1469.0	122.5	109.0	9.7	8.6	112.9	112.5	100.4		
19	- approx 6'5" from top of building pad	8 inches	1550.0	120.3	97.0	8.4	7.5	111.9	112.5	99.5		
20	- approx 6'5" from top of building pad	8 inches	1535.0	120.7	105.0	9.3	8.3	111.5	112.5	99.1		
21	- approx 6'5" from top of building pad	8 inches	1469.0	122.5	109.0	9.7	8.6	112.9	112.5	100.4		
22	- approx 5'7" from top of building pad	8 inches	1572.0	119.4	71.0	5.8	5.1	114.1	114.8	99.4		
23	- approx 5'7" from top of building pad	8 inches	1812.0	113.9	55.0	4.2	3.8	109.7	114.8	95.6		
24	- approx 5'7" from top of building pad	8 inches	1624.0	118.6	59.0	4.6	4.0	114.0	114.8	98.3		
25	- approx 5'7" from top of building pad	8 inches	1685.0	117.0	61.0	4.8	4.3	112.2	114.8	97.7		
26	- approx 5'7" from top of building pad	8 inches	1704.0	116.5	61.0	4.8	4.3	111.7	114.8	97.3		
27	- approx 5'7" from top of building pad	8 inches	1815.0	113.9	51.0	3.8	3.4	110.1	114.8	95.9		



**Project No:** 183323  
**Date:** July 24, 2018  
**Project Name:** Livingston County 911 Central Dispatch  
**Location:** Howell, MI  
**Contractor:** Joe Raica Excavating, Inc.

## Field Density Test Report (Continued)

Material: Imported brown sand with trace clay		Maximum Density:	112.5	PCF	Optimum Moisture %:	14.3	Minimum Specified Comp:	95	%
Material: Imported brown sand		Maximum Density:	114.8	PCF	Optimum Moisture %:	13.5	Minimum Specified Comp:	95	%
MI Cone No:	1	MI Cone No:	1						
Moisture:	7.7	%	Moisture:	5.1	%				
Volume	0.0444	cu. ft.	Volume	0.0444	cu. ft.				
Soil/Mold	4385.0	g	Soil/Mold	4357.0	g				
Mold	1961.0	g	Mold	1958.0	g				
Wet Soil	2424.0	g	Wet Soil	2399.0	g				
Comp Soil	120.4	PCF	Comp Soil	119.1	PCF				

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.



### SITE PLAN

Michael Hume

Approximate backfitting with density testing locations.

17-27

TABLE 1. TRUCK ROUTE REPRESENTATIVE LADDER TRUCK

CURD AND BUTTER  
SCOPED CURD & BUTTER

Subject	Case	Notes
1	1	...
2	2	...
3	3	...

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## Daily Field Report

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Matt Sangster  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** July 25, 2018  
**Weather:** Cloudy/Sunny, 63°F-86°F  
**Page:** 1 of 1

### Progress of Work:

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:45 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted approximately 10-inch lifts of imported brown sand on top of the other previously placed and compacted sand layers already in the building pad area. A CAT Dozer was utilized for placement operations, and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.7 percent to 99.5 percent of the maximum density of 114.8 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 3.0 percent to 5.5 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 3:30 pm.

**G2 Field Representative:** Michael Hume

**Reviewer:** JDC, P.E.





Project No: 183323  
Date: July 25, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
1	- approx 4'9" from top of building pad	8 inches	1808.0	115.0	54.0	3.9	3.5	111.1	114.8	96.8	Site Plan #1	
2	- approx 4'9" from top of building pad	8 inches	1813.0	114.9	57.0	4.2	3.8	110.7	114.8	96.4		
3	- approx 4'9" from top of building pad	8 inches	1738.0	116.7	55.0	4.0	3.6	112.7	114.8	98.2		
4	- approx 4'9" from top of building pad	8 inches	1745.0	116.5	54.0	3.9	3.5	112.6	114.8	98.1		
5	- approx 4'9" from top of building pad	8 inches	1750.0	116.4	59.0	4.4	3.9	112.0	114.8	97.6		
6	- approx 4'9" from top of building pad	8 inches	1654.0	118.8	61.0	4.6	4.0	114.2	114.8	99.5		
7	- approx 4'9" from top of building pad	8 inches	1852.0	114.0	48.0	3.3	3.0	110.7	114.8	96.4		
8	- approx 4'9" from top of building pad	8 inches	1764.0	116.0	61.0	4.6	4.1	111.4	114.8	97.0		
9	- approx 3'11" from top of building pad	8 inches	1759.0	116.2	61.0	4.6	4.1	111.5	114.8	97.1		
10	- approx 3'11" from top of building pad	8 inches	1659.0	118.6	77.0	6.2	5.5	112.4	114.8	97.9		
11	- approx 3'11" from top of building pad	8 inches	1779.0	115.7	52.0	3.7	3.3	112.0	114.8	97.6		
12	- approx 3'11" from top of building pad	8 inches	1730.0	116.8	69.0	5.4	4.8	111.4	114.8	97.0		
13	- approx 3'11" from top of building pad	8 inches	1790.0	115.4	70.0	5.5	5.0	109.9	114.8	95.7		
14	- approx 3'11" from top of building pad	8 inches	1739.0	116.6	68.0	5.3	4.8	111.3	114.8	97.0		

### Troxler Nuclear Gauge Information

Gauge No: 33279 Calibration Date: 03-16-2018

### Chart Standards Operating Standards:

Density: 2138-2181 Density: 2169  
Moisture: 585-609 Moisture: 605

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.



Project No: 183323  
Date: July 25, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report (Continued)

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
15	- approx 3'11" from top of building pad	8 inches	1826.0	114.6	59.0	4.4	4.0	110.2	114.8	96.0		
16	- approx 3'1" from top of building pad	8 inches	1671.0	118.4	57.0	4.2	3.7	114.1	114.8	99.4		
17	- approx 3'1" from top of building pad	8 inches	1691.0	117.8	67.0	5.2	4.6	112.6	114.8	98.1		
18	- approx 3'1" from top of building pad	8 inches	1767.0	116.0	60.0	4.5	4.0	111.5	114.8	97.1		
19	- approx 3'1" from top of building pad	8 inches	1787.0	115.5	51.0	3.6	3.2	111.9	114.8	97.5		
20	- approx 3'1" from top of building pad	8 inches	1636.0	119.2	70.0	5.5	4.8	113.7	114.8	99.0		
21	- approx 3'1" from top of building pad	8 inches	1785.0	115.6	55.0	4.0	3.6	111.5	114.8	97.1		
22	- approx 3'1" from top of building pad	8 inches	1769.0	116.0	50.0	3.5	3.1	112.4	114.8	97.9		

Material: Imported brown sand      Maximum Density: 114.8 PCF      Optimum Moisture %: 13.5      Minimum Specified Comp: 95 %

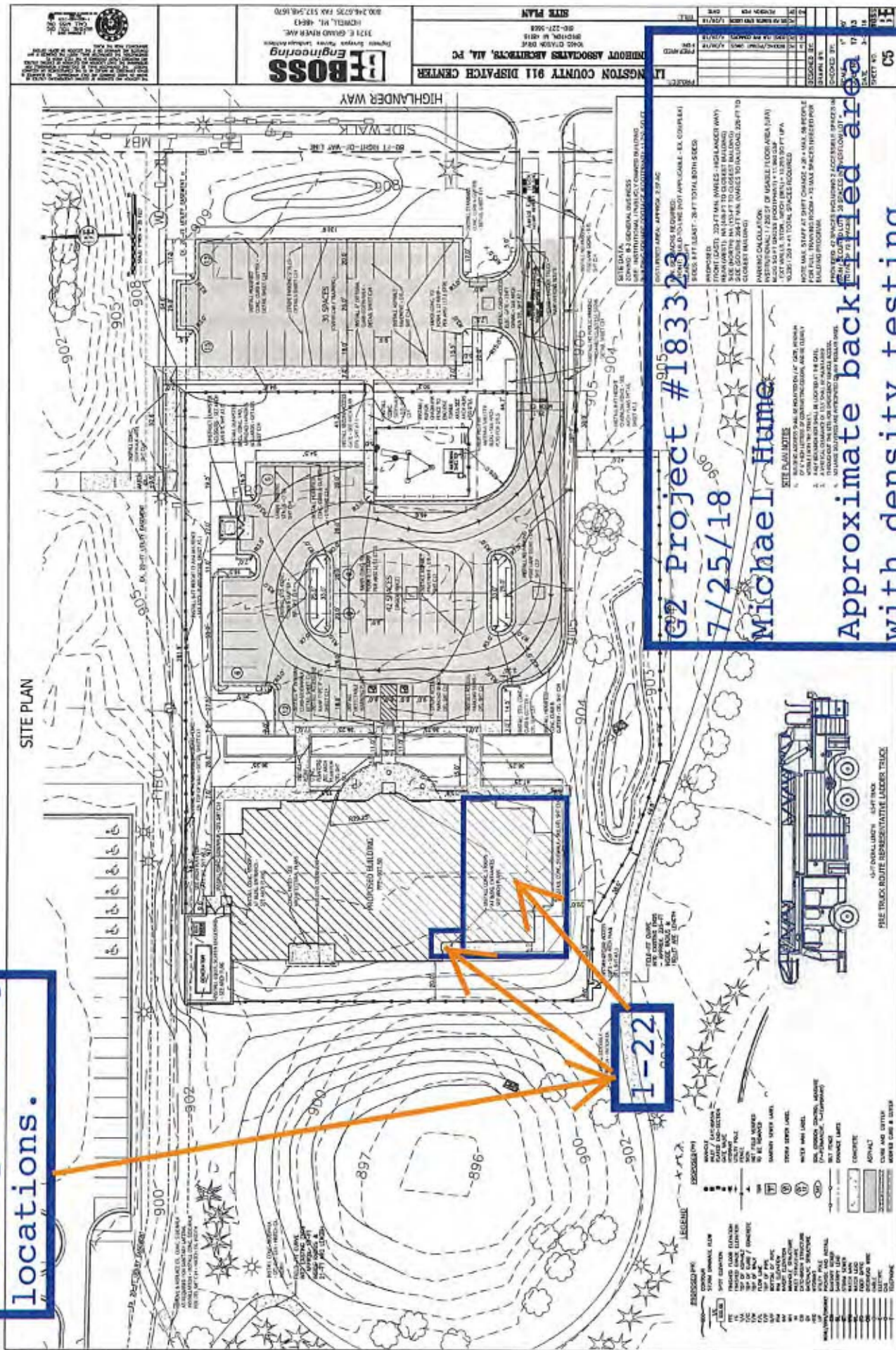
Cone No: \_\_\_\_\_      Cone No: \_\_\_\_\_  
Moisture: \_\_\_\_\_ %      Moisture: \_\_\_\_\_ %  
Volume \_\_\_\_\_ cu. ft.      Volume \_\_\_\_\_ cu. ft.  
Soil/Mold \_\_\_\_\_ g      Soil/Mold \_\_\_\_\_ g  
Mold \_\_\_\_\_ g      Mold \_\_\_\_\_ g  
Wet Soil \_\_\_\_\_ g      Wet Soil \_\_\_\_\_ g  
Comp Soil \_\_\_\_\_ PCF      Comp Soil \_\_\_\_\_ PCF

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.



## Density testing locations.



Approximate backfilled area  
with density testing  
locations.





## Daily Field Report

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Matt Sangster  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** July 26, 2018  
**Weather:** Cloudy/Sunny, 66°F  
**Page:** 1 of 1

### Progress of Work:

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:30 am, G2 observed Joe Raica Excavating preparing to begin undercut operations and move out unsuitable/fill material within the old parking lot area. However, the client and contractor informed G2 that proper contracts and authorization for the project still weren't finalized per the county, and contractor pay items for operations weren't finalized so until further notice, the project is on hold. G2 prepared field reports and departed site at 8:15 am.

**G2 Field Representative:** Michael Hume

**Reviewer:** JDC, P.E.



## Daily Field Report

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Matt Sangster/ Darryl  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** July 30, 2018  
**Weather:** Cloudy/Sunny, 56°F- 77°F  
**Page:** 1 of 1

### Progress of Work:

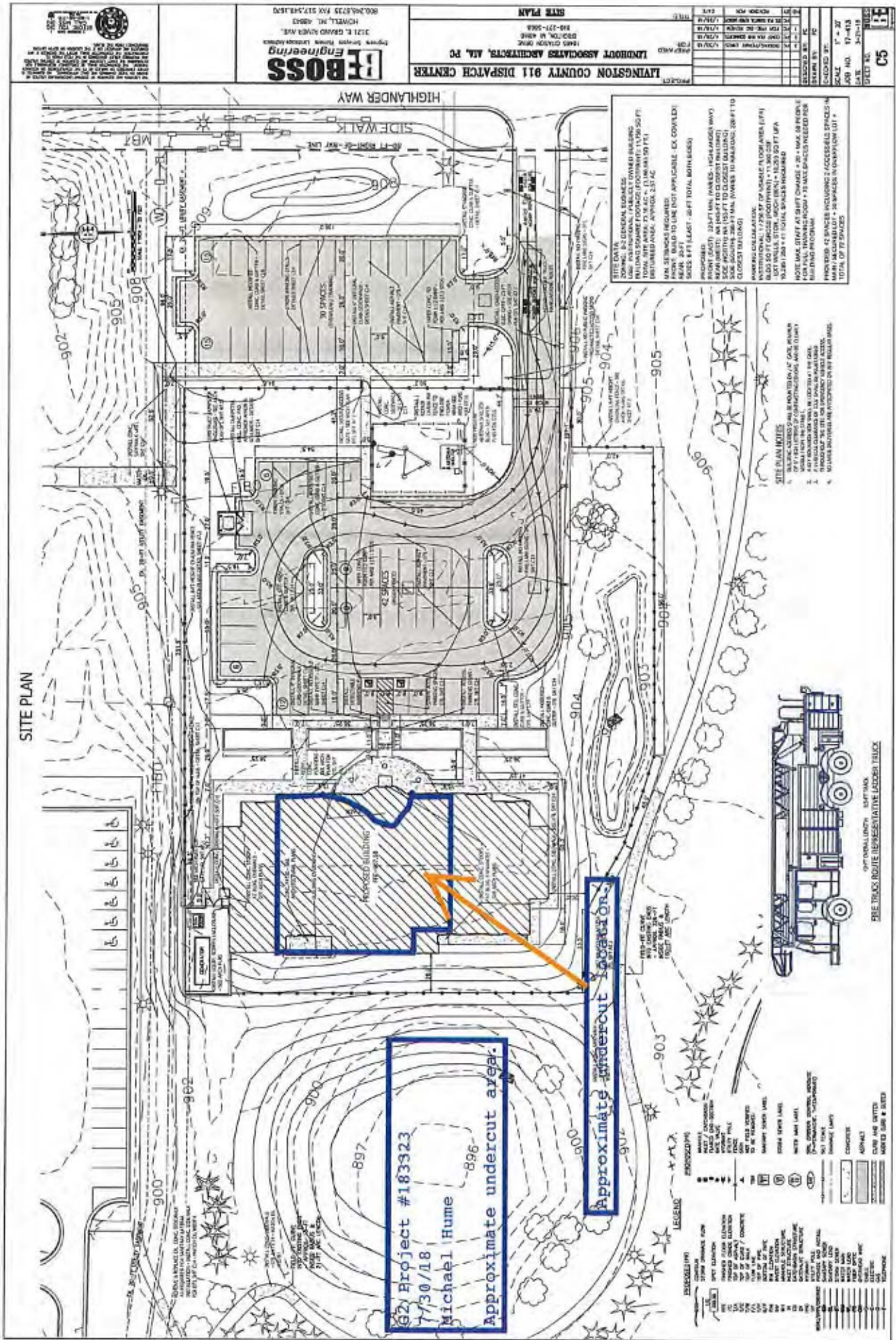
A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:15 am, G2 observed Joe Raica Excavating preparing to begin undercut operations and move out unsuitable fill material within the old parking lot area. Excavation operations were performed with a CAT 328D excavator and 3 quad axle dump trucks.

The fill soils removed from this undercut consists of approximately 3 to 6 feet of loose brown and dark brown sand, brown gravelly sand, brown clayey sand, brown clay, buried topsoil, and small amounts of debris such as plastic hoses, wood, etc. No groundwater seepage was encountered within the undercut during excavation operations. The undercut was generally performed until stable native soils consisting of gray and brown silty sand and sandy clay soils were encountered. However, some undercut areas were not yet fully excavated by the end of field operations for today. The client and contractor representatives were informed of G2's observations today. G2 prepared field reports and departed site at 5:30 pm.

**G2 Field Representative:** Michael Hume

**Reviewer:** JDC, P.E.







## Daily Field Report

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Darryl  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** July 31, 2018  
**Weather:** Cloudy/ Sunny/ Rainy 58°F  
**Page:** 1 of 1

### Progress of Work:

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:30 am, G2 observed Joe Raica Excavating preparing to begin undercut operations and move out unsuitable fill material within the old parking lot area. Excavation operations were performed with a CAT 328D excavator and 4 quad axle dump trucks. G2 was not on site from 12:45pm to 3:15pm.

The fill soils removed from this undercut consists of approximately 3 to 6 feet of loose brown and dark brown sand, brown gravelly sand, brown clayey sand, brown clay, buried topsoil, and small amounts of debris such as plastic hoses, wood, etc. After excavating operations, the undercut was cut approximately 3 to 8 feet below proposed existing grade elevation, and approximately 132 feet long by 83 feet wide. The undercut was generally performed until stable native soils consisting of gray and brown silty sand and sandy clay soils were encountered.

Groundwater seepage was encountered during excavation operations within one undercut area of approximately 10 feet by 6 feet which extended to a depth of 8 feet below existing grade. This area was temporarily filled with sand and compacted in order to prevent additional water from permeating into the undercut. G2 informed the contractor to backfill the area with 6A open graded aggregate. The contractor said this would be re-excavated and backfilled with 6A open graded aggregate at a later date when stone was acquired. The undercut was generally performed until stable native soils consisting of gray and brown silty sand and sandy clay soils were encountered. The client and contractor representatives were informed of G2's observations today. G2 prepared field reports and departed site at 6:45 pm.

**G2 Field Representative:** Michael Hume

**Reviewer:** JDC, P.E.







## Daily Field Report

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Darryl  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** August 1, 2018  
**Weather:** P. Cloudy/Rainy, 68°F-70°F  
**Page:** 1 of 1

### Progress of Work:

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:00 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted approximately 12 inch lifts of imported brown sand on top of native soils in the building pad area. A CAT Dozer was utilized for placement operations and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.3 percent to 99.8 percent of the maximum density of 118.0 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 4.8 percent to 7.4 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 5:30 pm.

**G2 Field Representative:** Michael Hume

**Reviewer:** JDC, P.E.





**Project No:** 183323  
**Date:** August 1, 2018

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** Howell, MI  
**Contractor:** Joe Raica Excavating, Inc.

## Field Density Test Report

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
2	- approx 9 feet from top of building pad area	10	985.0	119.9	78.0	6.5	5.7	113.4	118.0	96.1		
4	- approx 9 feet from top of building pad area	10	957.0	120.2	78.0	6.5	5.7	113.7	118.0	96.4		
6	- approx 9 feet from top of building pad area	10	972.0	119.6	77.0	6.4	5.6	113.3	118.0	96.0		
8	- approx 9 feet from top of building pad area	10	856.0	124.2	85.0	7.2	6.1	117.1	118.0	99.2		
10	- approx 9 feet from top of building pad area	10	862.0	124.0	82.0	6.9	5.9	117.1	118.0	99.2		
12	- approx 9 feet from top of building pad area	10	960.0	120.1	83.0	7.0	6.2	113.1	118.0	95.8		
13	- approx 8 feet from top of building pad area	10	888.0	122.9	85.0	7.2	6.2	115.7	118.0	98.1		
14	- approx 8 feet from top of building pad area	10	931.0	121.2	77.0	6.4	5.5	114.9	118.0	97.4		
15	- approx 8 feet from top of building pad area	10	864.0	123.9	81.0	6.8	5.8	117.2	118.0	99.3		
16	- approx 8 feet from top of building pad area	10	897.0	122.6	80.0	6.7	5.7	115.9	118.0	98.2		
17	- approx 8 feet from top of building pad area	10	920.0	121.7	72.0	5.9	5.1	115.8	118.0	98.1		
18	- approx 8 feet from top of building pad area	10	906.0	122.2	79.0	6.6	5.7	115.6	118.0	98.0		
19	- approx 8 feet from top of building pad area	10	936.0	121.0	81.0	6.8	5.9	114.2	118.0	96.8		
20	- approx 7 feet from top of building pad area	10	1008.0	118.3	72.0	5.9	5.2	112.5	118.0	95.3		

### Troxler Nuclear Gauge Information

**Gauge No:** 33279 **Calibration Date:** 03-16-2018

### Chart Standards Operating Standards:

**Density:** 2134-2177 **Density:** 2171  
**Moisture:** 585-609 **Moisture:** 591

**G2 Field Representative:** Michael Hume

**Reviewed By:** JBS, P.E.



Project No: 183323  
Date: August 1, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report (Continued)

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
21	- approx 7 feet from top of building pad area	10	947.0	120.6	79.0	6.6	5.8	114.0	118.0	96.6		
22	- approx 7 feet from top of building pad area	10	930.0	121.3	69.0	5.6	4.8	115.7	118.0	98.1		
23	- approx 7 feet from top of building pad area	10	927.0	121.4	79.0	6.6	5.7	114.8	118.0	97.3		
24	- approx 7 feet from top of building pad area	10	866.0	123.8	88.0	7.5	6.4	116.3	118.0	98.6		
25	- approx 7 feet from top of building pad area	10	865.0	123.9	76.0	6.3	5.3	117.6	118.0	99.7		
26	- approx 7 feet from top of building pad area	10	884.0	123.1	80.0	6.7	5.7	116.4	118.0	98.6		
27	- approx 6 feet from top of building pad area	10	888.0	122.9	91.0	7.8	6.8	115.1	118.0	97.5		
28	- approx 6 feet from top of building pad area	10	809.0	126.4	100.0	8.7	7.4	117.8	118.0	99.8		
29	- approx 6 feet from top of building pad area	10	818.0	125.8	96.0	8.3	7.0	117.6	118.0	99.7		

Material: Imported brown sand  
Material: \_\_\_\_\_  
Material: \_\_\_\_\_  
MI Cone No: 1 MI Cone No: \_\_\_\_\_  
Moisture: 5.6 % Moisture: \_\_\_\_\_ %  
Volume 0.0444 cu. ft. Volume \_\_\_\_\_ cu. ft.  
Soil/Mold 4442.0 g Soil/Mold \_\_\_\_\_ g  
Mold 1961.0 g Mold \_\_\_\_\_ g  
Wet Soil 2481.0 g Wet Soil \_\_\_\_\_ g  
Comp Soil 123.2 PCF Comp Soil \_\_\_\_\_ PCF  
Maximum Density: 118.0 PCF  
Maximum Density: \_\_\_\_\_ PCF  
Maximum Density: \_\_\_\_\_ PCF  
Optimum Moisture %: 12.5  
Optimum Moisture %: \_\_\_\_\_  
Optimum Moisture %: \_\_\_\_\_  
Minimum Specified Comp: 95 %  
Minimum Specified Comp: 95 %  
Minimum Specified Comp: 95 %

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.







**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Darryl  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** August 2, 2018  
**Weather:** Cloudy/Sunny, 65°F  
**Page:** 1 of 1

**Progress of Work:**

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:30 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted 12-inch lifts of imported brown sand overlying native soils in the building pad area. A CAT Dozer was utilized for placement operations and a Bomag Roller was utilized to compact the sand backfill.

In-place density tests were performed on the compacted sand backfill at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.1 percent to 100.1 percent of the maximum density of 121.3 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 4.4 percent to 7.0 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information.

In addition, G2 observed Joe Raica Excavating undercut three areas and move out unsuitable fill material within the building pad area. Excavation operations were performed with a CAT 328D excavator. One of the undercut areas included the previously backfilled undercut performed on July 31, 2018, where groundwater was encountered. This area was re-excavated to backfill with open aggregate to the measured groundwater depth.

The fill soils removed from undercutting operations consists of approximately 4 to 8 feet of loose brown and dark brown sand, brown gravelly sand, brown clayey sand, brown clay, buried topsoil, and small amounts of debris such as plastic hoses, wood, etc. These areas were excavated roughly 4 to 8 feet until native soils were encountered and backfilled with imported sand in lifts of approximately 12 inches. Groundwater seepage was encountered within one undercut excavation which extended to a depth of 7 feet below existing grade. This area, along with the undercut area where groundwater was encountered on July 31, was backfilled with 6A open graded aggregate to the observed groundwater seepage depth. Imported brown sand was placed on top of the aggregate in lift sizes of approximately 12 inches. G2 prepared field reports and departed the job site at 6:15 pm.

**G2 Field Representative:** Michael Hume

**Reviewer:** JDC, P.E.



Project No: 183323  
Date: August 2, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
1	- approx 5 feet from top of building pad area	10	812.0	126.0	90.0	7.5	6.3	118.5	121.3	97.7	Site Plan #1	
2	- approx 5 feet from top of building pad area	10	798.0	126.6	91.0	6.6	5.5	120.0	121.3	98.9		
3	- approx 5 feet from top of building pad area	10	847.0	124.5	85.0	7.0	6.0	117.5	121.3	96.9		
4	- approx 5 feet from top of building pad area	10	860.0	124.0	72.0	5.7	4.8	118.3	121.3	97.5		
5	- approx 5 feet from top of building pad area	10	797.0	126.7	85.0	7.0	5.9	119.7	121.3	98.7		
6	- approx 5 feet from top of building pad area	10	838.0	124.9	85.0	7.0	5.9	117.8	121.3	97.1		
7	- approx 5 feet from top of building pad area	10	751.0	128.8	89.0	7.4	6.1	121.4	121.3	100.1		
8	- approx 4 feet from top of building pad area	10	873.0	123.5	67.0	5.2	4.4	118.2	121.3	97.4		
9	- approx 4 feet from top of building pad area	10	937.0	120.9	68.0	5.3	4.6	115.5	121.3	95.2		
10	- approx 4 feet from top of building pad area	10	892.0	122.6	72.0	5.7	4.9	116.9	121.3	96.4		
11	- approx 4 feet from top of building pad area	10	775.0	127.8	98.0	8.3	7.0	119.3	121.3	98.4		
12	- approx 4 feet from top of building pad area	10	906.0	122.1	76.0	6.1	5.3	115.9	121.3	95.5		
13	- approx 4 feet from top of building pad area	10	904.0	122.1	83.0	6.8	5.9	115.3	121.3	95.1		
14	- approx 4 feet from top of building pad area	10	917.0	121.6	76.0	6.1	5.3	115.5	121.3	95.2		

### Troxler Nuclear Gauge Information

Gauge No: 33279 Calibration Date: 03-16-2018

### Chart Standards Operating Standards:

Density: 2134-2177 Density: 2168  
Moisture: 585-609 Moisture: 602

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.





Project No: 183323  
Date: August 2, 2018  
Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report (Continued)

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
15	- approx 4 feet from top of building pad area	10	884.0	122.9	78.0	6.3	5.4	116.6	121.3	96.1		
16	- approx 4 feet from top of building pad area	10	928.0	121.2	68.0	5.3	4.6	115.9	121.3	95.5		

Material: Imported brown sand  
Material: \_\_\_\_\_  
Material: \_\_\_\_\_  
Maximum Density: 121.3 PCF  
Maximum Density: \_\_\_\_\_ PCF  
Maximum Density: \_\_\_\_\_ PCF  
Optimum Moisture %: 11.5  
Optimum Moisture %: \_\_\_\_\_  
Optimum Moisture %: \_\_\_\_\_  
Minimum Specified Comp: 95 %  
Minimum Specified Comp: 95 %  
Minimum Specified Comp: 95 %

MI Cone 1 MI Cone No: \_\_\_\_\_  
Moisture: 6.3 % Moisture: \_\_\_\_\_ %  
Volume 0.0444 cu. ft. Volume \_\_\_\_\_ cu. ft.  
Soil/Mold 4538.0 g Soil/Mold \_\_\_\_\_ g  
Mold 1962.0 g Mold \_\_\_\_\_ g  
Wet Soil 2576.0 g Wet Soil \_\_\_\_\_ g  
Comp Soil 127.9 PCF Comp Soil \_\_\_\_\_ PCF

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.







## Daily Field Report

**Project Name:** Livingston County 911 Central Dispatch  
**Location:** 300 S. Highlander Way, Howell, MI 48843  
**Client:** J.S. Vig Construction  
**Client Rep:** Darryl  
**Contractor:** Joe Raica Excavating, Inc.  
**Contractor Rep:** Joe Raica

**G2 Project No.:** 183323  
**Date:** August 3, 2018  
**Weather:** Cloudy/Sunny, 64°F- 75°F  
**Page:** 1 of 1

### Progress of Work:

A visit was made to the above referenced job site to observe the contractor's construction operations and perform field testing. Upon arrival on site at 7:45 am, G2 observed Joe Raica Excavating proceeding to place sand in the building pad areas. The contractor placed and compacted approximately 12 inch lifts of imported brown sand on top of other previously placed and compacted sand layers already in the building pad area. A CAT Dozer was utilized for placement operations and a Bomag Roller was utilized to compact the sand backfill. G2 was not on site from 11:15am to 11:45am.

In-place density tests were performed on the compacted sand subgrade at select locations using a Troxler nuclear moisture/density gauge. Test results indicate the imported brown sand is compact from 95.9 percent to 100.2 percent of the maximum density of 120.8 pcf as determined by the One-Point Michigan Cone Test. Moisture content readings at the test locations ranged from 5.1 percent to 9.0 percent today. Please refer to the attached Field Density Test Report for complete test results and related density information. G2 prepared field reports and departed the job site at 3:00 pm.

**G2 Field Representative:** Michael Hume

**Reviewer:** JDC, P.E.





Project No: 183323  
Date: August 3, 2018

Project Name: Livingston County 911 Central Dispatch  
Location: Howell, MI  
Contractor: Joe Raica Excavating, Inc.

## Field Density Test Report

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
1	- approx 3 feet from top of building pad area	10	877.0	126.1	82.0	6.8	5.7	119.3	120.8	98.8	Site Plan #1	
2	- approx 3 feet from top of building pad area	10	753.0	128.8	121.0	10.6	9.0	118.2	120.8	97.8		
3	- approx 3 feet from top of building pad area	10	875.0	123.6	78.0	6.4	5.4	117.2	120.8	97.0		
4	- approx 3 feet from top of building pad area	10	920.0	121.8	74.0	6.0	5.1	115.8	120.8	95.9		
5	- approx 3 feet from top of building pad area	10	754.0	128.9	93.0	7.8	6.5	121.1	120.8	100.2		
6	- approx 3 feet from top of building pad area	10	842.0	124.9	90.0	7.5	6.4	117.9	120.8	97.6		
7	- approx 3 feet from top of building pad area	10	715.0	130.7	114.0	9.9	8.2	120.8	120.8	100.0		
8	- approx 3 feet from top of building pad area	10	752.0	129.0	94.0	7.9	6.6	121.1	120.8	100.2		
9	- approx 2 feet from top of building pad area	10	890.0	123.0	83.0	6.9	5.9	116.1	120.8	96.1		
10	- approx 2 feet from top of building pad area	10	772.0	128.1	88.0	7.3	6.1	120.7	120.8	99.9		
11	- approx 2 feet from top of building pad area	10	806.0	126.5	96.0	8.1	6.9	118.3	120.8	97.9		
12	- approx 2 feet from top of building pad area	10	830.0	125.4	99.0	8.4	7.2	117.0	120.8	98.9		
13	- approx 2 feet from top of building pad area	10	775.0	128.0	88.0	7.3	6.1	120.8	120.8	100.0		
14	- approx 2 feet from top of building pad area	10	783.0	127.5	102.0	8.7	7.4	118.8	120.8	98.3		

### Troxler Nuclear Gauge Information

Gauge No: 33279 Calibration Date: 03-16-2018

### Chart Standards Operating Standards:

Density: 2134-2177 Density: 2185  
Moisture: 585-609 Moisture: 599

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.



**Project No:** 183323  
**Date:** August 3, 2018  
**Project Name:** Livingston County 911 Central Dispatch  
**Location:** Howell, MI  
**Contractor:** Joe Raica Excavating, Inc.

### Field Density Test Report (Continued)

Test No.	Test Elevation	Probe Depth	Density Count	Wet Density PCF	Moisture Count	Moisture PCF	Moisture Percent	Dry Density PCF	Maximum Density PCF	Percent Compaction	Location of Density Tests	Remarks
15	- approx 2 feet from top of building pad area	10	745.0	129.3	98.0	8.3	6.9	121.0	120.8	100.2		
16	- approx 2 feet from top of building pad area	10	774.0	128.0	88.0	7.3	6.3	120.6	120.8	99.8		
17	- approx 2 feet from top of building pad area	10	775.0	1279.0	91.0	7.6	6.4	120.3	120.8	99.6		

Material: Imported brown sand  
Material: \_\_\_\_\_  
Material: \_\_\_\_\_  
Maximum Density: 120.8 PCF  
Optimum Moisture %: 11.6  
Minimum Specified Comp: 95 %  
Maximum Density: \_\_\_\_\_ PCF  
Optimum Moisture %: \_\_\_\_\_  
Minimum Specified Comp: 95 %  
Maximum Density: \_\_\_\_\_ PCF  
Optimum Moisture %: \_\_\_\_\_  
Minimum Specified Comp: 95 %

MI Cone No: 1 MI Cone No: \_\_\_\_\_  
Moisture: 6.5 % Moisture: \_\_\_\_\_  
Volume 0.0444 cu. ft. Volume \_\_\_\_\_  
Soil/Mold 4531.0 g Soil/Mold \_\_\_\_\_  
Mold 1962.0 g Mold \_\_\_\_\_  
Wet Soil 2569.0 g Wet Soil \_\_\_\_\_  
Comp Soil 127.6 PCF Comp Soil \_\_\_\_\_

G2 Field Representative: Michael Hume

Reviewed By: JBS, P.E.







# REQUEST FOR CHANGE ORDER



<b>RFCO Number</b>	<b>3</b>	<b>Description &amp; Reason for Scope Change:</b>			
<b>Date:</b>	<b>August 10, 2018</b>	Exploratory Digging			
<b>Project Name:</b>	<b>Livingston County 911 - Dispatch Center</b>				
<b>JS Vig Project #:</b>	<b>1673</b>				
<b>Owner Project #:</b>					
<b>To:</b>	<b>Brad Alvord - Lindhout Associates</b>				
<b>Subcontractors Scope Change</b>					
CSI Code	CSI Description	Contractor	Quantity	Unit Cost	Cost
	Exploratory digging for locating existing utilities	Joe Raica Excavating			\$ 10,560.00
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
					\$ -
<b>Subtotal</b>					\$ 10,560.00
<b>General Contractors Scope Change</b>					
CSI Code	CSI Description		Quantity	Unit Cost	Total Cost
1-010	Project Management				\$ -
1-020	Superintendent				\$ -
1-024	Builder's Risk				\$ -
1-025	Insurance		0.8%		\$ 84.48
1-030	Laborers				\$ -
1-070	Clean Up				\$ -
1-125	Bond		1.00%		\$ 105.60
					\$ -
					\$ -
<b>Subtotal</b>					\$ 10,750
<b>Allowable Fee</b>			4.50%		\$ 484
<b>Subcontractor + General Contractor Total</b>					<b>\$ 11,234</b>
<b>Total Proposed Time Increase:</b>					<b>0</b>

*V-94. 8-15-18*

CONTRACTOR \_\_\_\_\_ DATE

J.S. Vig Construction Company

ARCHITECT \_\_\_\_\_ DATE

*By [Signature] 8-16-18*

OWNER \_\_\_\_\_ DATE

Attach detailed description and subcontractor bids

# Joe Raica Excavating, Inc

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3640 Nicholson Rd  
Fowlerville, Mi 48836  
[jenn@joeraicaexc.com](mailto:jenn@joeraicaexc.com)

Phone 517-521-4508  
Fax 517-521-4393

## Field Work Order 02

August 10, 2018  
Livingston County 911 Central Dispatch Center  
Howell, Mi

### Exploratory Digging for Locating Existing Utilities

7/19/2018- Vac trailer w/ operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00
7/20/2018- Vac trailer w/operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00
7/23/2018- Vac trailer w/operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00
7/24/2018- Vac trailer w/operator 8 hours @ \$200/hr	\$1,600.00
2- Labors 8 hours @ \$65/hr/labor	\$1,040.00

**Total** **\$10,560.00**

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Approved by JS VIG for payment

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Date

Thank You

Jennifer Raica  
Joe Raica Excavating, Inc



