



**BOARD OF SUPERVISORS AGENDA ITEM REPORT**  
**CONTRACTS / AWARDS / GRANTS**

Requested Board Meeting Date: December 15, 2015

or Procurement Director Award

**Contractor/Vendor Name (DBA):** KE & G Construction, Inc.

**Project Title/Description:**

Valencia Road: Alvernon Way to Wilmot Road..

**Purpose:**

Change Order No. 10, Contract No. CT-TR-14-048, in the amount of \$37,652.03 is to create a new line item, Miscellaneous Work (Soil Nail Walls).

**Procurement Method:**

Subsequent to Invitation For Bid, Solicitation No. 98592, the Board of Supervisors awarded a contract in the amount of \$22,716,211.00 for this project. Previous Change Orders, totaling \$556,563.36, have been processed to address changes encountered during construction. The cumulative total of these change exceeds the Procurement Director's change order authority set forth in Pima County Procurement Code 11.16.010 (C). Creating this item is necessary to compensate the contractor for additional costs incurred while completing the soil nail walls on the project. The subcontractor encountered drilling conditions that were more difficult than assumed during bidding. While the geotechnical report did give indications that cobbles were likely to be encountered, the limited sampling methods and frequency made it difficult to determine at bid time the extent of the cobbles that were actually encountered.

**Program Goals/Predicted Outcomes:**

To give the contractor compensation for the additional work due to unforeseen conditions.

**Public Benefit:**

The public benefit is a completed project that has improved the driving conditions of the roadway and improved the condition of the Valencia Overpass for the traveling public and improved pedestrian access under the Valencia Overpass.

**Metrics Available to Measure Performance:**

The Contractor and Pima County meet their contractual obligation and complete the project in accordance with the plans and specification.

**Retroactive:**

No

Procure Dept 12-01-15 PM 04:32

To: COB 12-2-15 (1)  
Pgs - 46

**Original Information**

Document Type: \_\_\_\_\_ Department Code: \_\_\_\_\_ Contract Number (i.e., 15-123): \_\_\_\_\_

Effective Date: \_\_\_\_\_ Termination Date: \_\_\_\_\_ Prior Contract Number (Synergen/CMS): \_\_\_\_\_

Expense Amount: \$ \_\_\_\_\_  Revenue Amount: \$ \_\_\_\_\_

Funding Source(s): \_\_\_\_\_

Cost to Pima County General Fund: \$ \_\_\_\_\_

Contract is fully or partially funded with Federal Funds?  Yes  No  Not Applicable to Grant Awards

Were insurance or indemnity clauses modified?  Yes  No  Not Applicable to Grant Awards

Vendor is using a Social Security Number?  Yes  No  Not Applicable to Grant Awards

If Yes, attach the required form per Administrative Procedure 22-73.

**Amendment Information**

Document Type: CT Department Code: TR Contract Number (i.e., 15-123): 14-048

Amendment No.: Change Order # 10 AMS Version No.: 17

Effective Date: 12/15/15 New Termination Date: \_\_\_\_\_

Expense  Revenue  Increase  Decrease Amount This Amendment: \$37,652.03

Funding Source(s): Regional Transportation Authority (RTA) Funds (94%), City of Tucson (4%), 1997 Highway User Revenue Funds (HURF) Bonds (DOT-41) (1%), Pima County RWRD Funds (1%)

Cost to Pima County General Fund: \$0.00

Contact: Anthony V. Schiavone

Department: Procurement, D & C Division

Telephone: 724-3245

Department Director Signature/Date: [Signature] 11-25-15

Deputy County Administrator Signature/Date: [Signature] 12/1/15

County Administrator Signature/Date: [Signature] 12/1/15  
(Required for Board Agenda/Addendum Items)

<b>PIMA COUNTY DEPARTMENT OF TRANSPORTATION</b>		<b>CONTRACT</b>	
<b>PROJECT:</b>	Valencia Road: Alvernon Way to Wilmot Road	<b>NO.</b>	<i>CT-TR-14000000000000000048</i>
<b>CONTRACTOR:</b>	KE & G Construction, Inc. 5100 S. Alvernon Way Tucson, Arizona 85706	<b>CHANGE ORDER NO.</b>	<i>10</i>
<b>CONTRACT NO.:</b>	CT-TR-14000000000000000048	<b>This number must appear on all invoices, correspondence, and documents pertaining to this contract.</b>	
<b>CHANGE ORDER NO.:</b>	Ten (10)		
<b>FUNDING:</b>	RTA, City of Tucson, 1997 HURF, RWRD Funds		

<b>CONTRACT TERM:</b> 08/20/2013 - 08/19/2016	<b>ORIGINAL CONTRACT AMOUNT:</b>	\$ 22,716,211.00
<b>TERMINATION PRIOR AMENDMENT:</b> 08/19/2016	<b>PRIOR CHANGE ORDERS:</b>	\$ 556,563.36
<b>TERMINATION THIS AMENDMENT:</b> 08/19/2016	<b>AMOUNT THIS CHANGE ORDER:</b>	\$ 37,652.03
	<b>REVISED CONTRACT AMOUNT:</b>	\$ 23,310,426.39

**CONSTRUCTION CONTRACT CHANGE ORDER**

**WHEREAS,** COUNTY and CONTRACTOR have entered into the Contract referenced above; and

**WHEREAS,** COUNTY requires modification of the Contract Bid Schedule due to unforeseen conditions that were not apparent on the geotechnical report at the time of bidding; and

**WHEREAS,** these unforeseen conditions made it more difficult for the subcontractor to drill and added unexpected cost to complete the soil nails on the project; and

**WHEREAS,** COUNTY and CONTRACTOR agree to add a line item in the Bid Schedule and to increase funding to provide payment for said modification; and

**WHEREAS,** COUNTY and CONTRACTOR have agreed that no additional days or general conditions are required for this change order; and

**WHEREAS,** COUNTY and CONTRACTOR have agreed to modify this Contract to reflect these changes.

**NOW, THEREFORE,** it is agreed as follows:

**CHANGE:** Exhibit A – Bid Schedule as follows:

- Add Item # 9300130, Miscellaneous Work (Soil Nail Walls)** for a quantity of 1 Lump Sum (L.S.) at a new unit price of \$37,652.03, for a Total Amount of \$37,652.03.

**CHANGE:** The third paragraph in **ARTICLE III – COMPENSATION AND PAYMENT**, as previously amended in Change Order No. 9, as follows:

From: "Total payment for the Contract shall not exceed Twenty-three Million, Two Hundred Seventy-two Thousand, Seven Hundred Seventy-four Dollars and Thirty-six Cents. (\$23,272,774.36)

To: "Total payment for the Contract shall not exceed Twenty-three Million, Three Hundred Ten Thousand, Four Hundred Twenty-six Dollars and Thirty-nine Cents. (\$23,310,426.39)

This Change Order shall be effective on December 15, 2015.

All other provisions of the Contract, not specifically changed by this Change Order, shall remain in effect and be binding upon the Parties.

---

IN WITNESS THEREOF, the parties have affixed their signatures to this Change Order on the dates written below.

APPROVED:

\_\_\_\_\_  
Chair, Board of Supervisors

\_\_\_\_\_  
Date

ATTEST:

\_\_\_\_\_  
Clerk of the Board

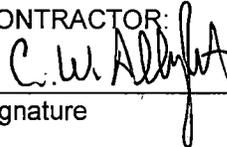
APPROVED AS TO FORM:

  
\_\_\_\_\_  
Deputy County Attorney

**ANDREW FLAGG**

\_\_\_\_\_  
Name (Please Print)

CONTRACTOR:

  
\_\_\_\_\_  
Signature

**Christopher Albright, President**

\_\_\_\_\_  
Name and Title (Please Print)

11/25/15  
\_\_\_\_\_  
Date

**"CHANGE ORDER /AMENDMENT REQUEST"**  
**From**  
**TRANSPORTATION / FIELD ENGINEERING**  
**REQUEST OF 11/18/15 "EXHIBIT A"**

1. Contractor: K E & G Construction  
5100 S Alvernon Way  
Tucson, AZ 85706
2. Contract No.: CT-TR-14\*\*0048  
Project No. W.O. 4VAKDP: Valencia Road: Alvernon Way to Wilmot Road
3. Change Order/Amendment No.: Ten (10)
4. Change in contract working day or calendar day (+/-): (0) Working Days
5. Termination Date: (No Change)
6. Amount of this Change Order/Amendment (+/-): \$37,652.03
7. See detailed description of work and Justification below.

**DESCRIPTION of WORK and JUSTIFICATION:**

**REQUEST:**

1. **Create Item # 9300130, Miscellaneous Work (Soil Nail Walls)** for a quantity of 1 L.S. at a new unit price of \$37,652.03, for a TOTAL AMOUNT of \$37,652.03.

**REASON:**

1. Creating this item, Miscellaneous Work (Soil Nail Walls), is necessary to complete soil nails on the project. The subcontractor encountered drilling conditions that were more difficult than assumed during bidding. While the geotechnical report did give indications that cobbles were likely to be encountered, the limited sampling methods and frequency made it difficult to determine at bid time the extent of the cobbles that were actually encountered. The subcontractor claimed changed conditions but acknowledged some inefficiencies of their own making exact determinations of the responsibility for the additional expenses difficult. A decision was made to settle the dispute for the amount of this change order, resolving all related issues on the project including schedule and overhead.
2. No additional days or general conditions are required for this change. The amount of this request is \$37,652.03 for the subcontract portion of this work including tax and bond. No additional markup for the prime is requested nor implied.

**COST ANALYSIS:**

ITEM No.	DESCRIPTION	UNIT	BID / ADJ QTY	THIS C.O.	PRICE	AMOUNT
9300130	Miscellaneous Work (Soil Nail Walls)	L.S.	0	1	\$37,652.03	\$37,652.03

Desired Effective Date: November 2, 2015

Requested by: James Cunningham 11-03-2015  
James Cunningham, P.E., S.E., R.L.S., Date  
Field Engineering Manager

COPY TO DESIGN ENGINEERING: November 2, 2015

ATTACHMENTS: Letter and analysis from contractor.

**PIMA COUNTY DEPARTMENT OF TRANSPORTATION  
FIELD ENGINEERING CHANGE ORDER / AMENDMENT**

stamp here

PROJECT NAME: Valencia Road: Alvernon Way to Wilmot Road  
 CONTRACT NO: CT-TR-14\*0048  
 PROJECT NO: 4VAKDP  
 FUNDING: RTA: COT: 1997 HURF: RWRD

CONTRACTOR:  
 K E & G Construction  
 5100 S. Alvernon Way  
 TUCSON, AZ 85706

PH: (520) 748-0188

**Change Order / Amendment # 10**

Original Contract Time:  
 400 Working days

Total Adjusted Time:  
 423 Working Days

Contract Termination Date: 19-Aug-16

NTP Date: 6-Jan-14

The following modification(s) are to be made to elements of the work:

ITEM No.	DESCRIPTION	UNIT	QUANTITIES		UNIT PRICE	AMOUNT	BID / ADJ ITEM VARIATION	CATEGORY
			BID / ADJ QTY	THIS C.O.				
9300130	Miscellaneous Work (Soil Nail Walls)	LS	0	1	\$37,652.03	\$37,652.03	0.00%	UC
						<b>\$37,652.03</b>		

Previous Change Orders / Amendments: \$556,563.36

**This Change Order / Amendment \$37,652.03**

0.17%

Total Change Orders / Amendments: \$594,215.39

2.62%

Original Contract Amount: \$22,716,211.00

Current Contract Amount: \$23,310,426.39

Adjusted Contract Time: 23 Work Days

**CATEGORY KEY:**

OR = Owner-Requested Changes	VE = Value Engineering
DE = Design E/O	UI = Utility Impacts
UC = Unforeseen or Changed Conditions	QA = Quantity Adjustment

# E. R. S.

Earth Reinforcement Specialists LLC

9134 W Happy Valley Rd, Peoria, AZ 85383

Excavation Support, Soil nailing, Shotcrete, Tiebacks

PHONE(623)486-6820 FAX(623)486-8874

November 2, 2015

To: KE&G Construction

Attention: Adam Sedgeman & Ed Anderson

Re: Valencia Road – Soil Nail Wall (South Abutment) – Change Order

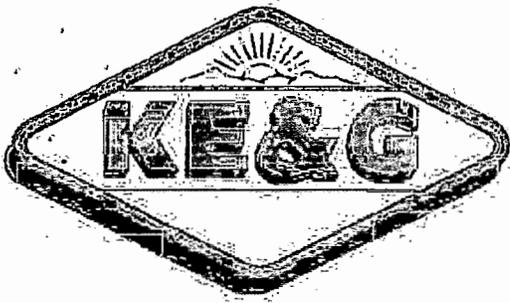
Gentlemen,

We understand that Pima County has accepted our Change Order in the amount of \$35,590.85. ERS is in full acceptance of this amount and will consider the issue resolved and will take no further action regarding this matter.

Please let us know if you need anything further at this time.

Sincerely,

Chris Blindheim  
Owner  
Earth Reinforcement Specialist LLC  
623-764-4780 cell  
[chris@earthreinforcement.com](mailto:chris@earthreinforcement.com)



# LETTER OF TRANSMITTAL

KE&G CONSTRUCTION, INC.  
 5100 SOUTH ALVERNON WAY  
 TUCSON, ARIZONA 85706  
 (520) 748-0188 FAX (520) 748-8975

TRANSMITTAL NO: 130288 - 442  
 SUBMITTAL NO: 130288 - XXX  
 DATE: 10/20/2015

To: Pima County Field Engineering  
 1313 S. Mission Road  
 Tucson, Arizona 85713

RE: Valencia - Alvernon to Wilmot  
 WO 4VAKDP

Attn: Jim Cunningham, P.E.  
 Field Engineering Division Manager

WE ARE SENDING YOU:  Attached  Under separate cover via \_\_\_\_\_ the following items:  
 Shop Drawings  Prints  Plans  Samples  Specifications  Copy of letter  
 Change Order  Copy of Permit

COPIES	DATE	DESCRIPTION
1	10/20/15	L036.04 ERS Claim Compensation Request

**THESE ARE TRANSMITTED AS CHECKED BELOW:**

- For approval
- For your use
- As requested
- For review and comment
- Approved as submitted
- Approved as noted
- Returned for corrections
- Resubmit \_\_\_\_\_ copies for approval
- Submit \_\_\_\_\_ copies for distribution
- Return \_\_\_\_\_ corrected prints

REMARKS \_\_\_\_\_

COPY TO: 130288.7.442 Trans.

SIGNED: 



1601 PASEO SAN LUIS, SUITE 202  
SIERRA VISTA, ARIZONA 85635  
(520) 458-9594  
FAX (520) 458-2362

5100 S. ALVERNON WAY  
TUCSON, ARIZONA 85706  
(520) 748-0188  
FAX (520) 748-8975

October 20<sup>th</sup>, 2015

Pima County Department of Transportation  
1313 S. Mission Rd.  
Tucson, AZ 85713

Attn: Jim Cunningham, P.E.  
Field Engineering Division Manager

Valencia – Alvernon to Wilmot  
PCDOT Project No: W.O. 4VAKDP  
KE&G Project No. 130288  
PCDOT – L036.04

**RE: Soil Nail Wall Differing Site Conditions – Claim Compensation Request**

Mr. Cunningham,

KE&G is transmitting this fifth letter that we have received from our subcontractor Earth Reinforcement Specialists LLC (ERS) requesting compensation in the amount of \$35,590.85 pertaining to the claim they are filing regarding the existing soil conditions on the south side soil nail wall under I-10 on Valencia Road. Further documentation and cost breakdowns are attached for further clarification. ERS is requesting a meeting with Pima County and KE&G in an attempt to settle this matter once and for all. Please let us know once you have had time to review the letter and associated cost breakdowns.

If you have any questions or concerns about the information contained in this letter, please do not hesitate to contact me at (520) 468-9618. Thank you for your consideration.

Regards,

KE&G Construction, Inc.

Adam Sedgeman  
Project Manager

# **E. R. S.**

**Earth Reinforcement Specialists LLC**

9134 W Happy Valley Rd, Peoria, AZ 85383

Excavation Support, Soil nailing, Shotcrete, Tiebacks

PHONE(623)486-6820 FAX(623)486-8874

October 13, 2015

To: KE&G Construction

Attention: Adam Sedgeman, Ed Anderson

Re: Valencia Road – Soil Nail Wall Differing Site Conditions & Response to PCDOT letter dated 4/13/2015

Gentlemen,

This letter is in response to the letter from Mr. Kilargis dated April 13, 2015.

As a drilling contractor we rely on the information in the soils report 100%. It is in essence our window into the earth, and the way we are to determine what our working conditions are going to be. The fact that Mr. Kilargis makes the statement in his second paragraph that "The geotechnical investigation is not designed for the purpose of determining the drilling conditions for the contractor" is so ludicrous. It is the only thing that we have to go by at bid time, and years of litigation have showed that through countless judgements based solely on geotechnical report.

As I have stated before, the comment that a visual inspection of the existing side slopes, which show the presence of cobbles laying on the surface, should lead to the conclusion that the embankment fills under the bridge would have cobbles present is Mr. Kilargis's attempt to discount the Geotechnical Reports importance. There are statements within the Geotechnical Report regarding site visual observations, nothing however regarding that.

As a bidding contractor we can only make assumptions based on the information we are provided by the owner.

We look forward to meeting with Pima County and reaching an agreement regarding compensation.

Please let us know if you need anything further at this time.

Sincerely,

Chris Blindheim  
Owner  
Earth Reinforcement Specialist LLC  
623-764-4780 cell  
[chris@earthreinforcement.com](mailto:chris@earthreinforcement.com)

# E. R. S.

## Earth Reinforcement Specialists LLC

9134 W Happy Valley Rd, Peoria, AZ 85383

Excavation Support, Soil nailing, Shotcrete, Tiebacks

PHONE (623) 486-6820 FAX (623) 486-8874

March 27, 2015

To: KE&G Construction

Attention: Adam Sedgeman

Re: Valencia Road – Soil Nail Wall Differing Site Conditions  
Response to PCDOT letter dated 10/07/2014

Gentlemen,

This letter is being written in response to a letter received by Pima County on October 7<sup>th</sup>, 2014, regarding the differing site conditions near the soil nail walls on the Valencia Road Project. ERS understands that Pima County is doing their job in attempting to refute our claim; however, the response letter received was not written by Pima County's Geotechnical Engineer nor was this individual on site supervising the work documenting how difficult the drilling conditions actually were. Therefore, in this letter you will find ERS's response to the letter received from Pima County on October 7<sup>th</sup>, 2014 as well as two letters from well-established third party Geotechnical Engineers giving their honest professional opinions on the interpretation of the geotechnical report that was provided at bid time. Both Don Clark, P.E. and Scott Merry, PhD, P.E., G.E. conclude that based upon the information provided there is no indication of difficult drilling conditions because of the presence of cobbles/boulders or any other possible hard dig soil conditions in the areas surrounding the soil nail wall drilling that was performed on the south side soil nail wall.

One of the comments in the letter received from Pima County states, "It is clear that the soil nail walls, both the south and north sides, are to be installed against a conventionally constructed roadway embankment. In such embankments, local soils of all types and compositions are incorporated in the embankment. Cobbles and boulders are visually evident on the embankment slopes. Also, it can be reasonably concluded that both the north and south side embankments were constructed with similar materials." This statement is intended to prove that the subsurface conditions that ERS would be drilling through would have boulders and cobbles as well; this statement is false and without merit due to the fact that if it were true, there would have been no need for any further soil boring or geotechnical investigation in order to design and build this wall. The in depth geotechnical research and investigation which took place in order to determine the soil conditions throughout the project shows that subsurface conditions do not directly mirror the project surface soil conditions, nor do they even closely resemble them.

Another comment contained in the letter from Pima County states, "Larger SPT N-Values are obtained when the sampler encounters soils with larger particle sizes. SPT N-values in the range of 40s to 50s or larger indicate larger particle sizes whose size cannot be determined by the size of the split-spoon sampler with an inside diameter of 1.375". Cobbles and boulders represent the large particle sizes that cannot be sampled by conventional split-spoon samplers." The information contained in bore log B10 is all the information that ERS had to review in determining the soil conditions adjacent to the south side soil nail wall. The information shown within the elevations of the soil nails that were placed only show sandy lean clay, clayey sand, and silty sand with maximum particle sizes of .25" and SPT N-Values less than 40. This information designates that no boulders or cobbles should be encountered in this region of the bore. Also, as the bore only needed to be 25' deep to verify existing soil conditions for this wall. ERS believes it may have been more beneficial to bidding contractors had Pima County completed multiple 25' deep bores in this area instead of a single 80.8' bore. In addition, plan sheet 461 of 548 directs all bidding contractors to, "assume 6" minimum hole diameter with drill and grout

March 27, 2015

installation method" and page 19 of the geotechnical report states, "the minimum soil nail drill-hole diameter shall be 6". Due to the fact that this method was directed by Pima County, representative samples larger than those capable of being retrieved by split- spoon samplers (1.375") should have been performed by Pima County prior to recommending to contractors that this would be the most productive and efficient method of installing the soil nails.

Further, the letter from Pima County goes on to read, "given that both the south and north embankments are constructed with similar materials, the test values in B10 and B09 are also representative of what could be found in both the south and north embankments, which based on the elevated SPT N-values corroborates well with the clearly evident presence of cobbles and boulders on the embankment slopes." The fact to refute this point is shown on page 10 of the geotechnical report which states, "Therefore, to evaluate the effect of cementation/induration on construction activities, contractors are advised to review the boring logs carefully with respect to the qualitative description of a sample's reaction with HCL acid and the qualitative description of degree of cementation (if noted) in conjunction with its SPT N-value." This statement is recommending that each contractor review each bore log and depth of each bore log independently for cementation and SPT N-values. The soil information from bore log B10 within the elevations where the nails were installed on the south wall show no N-values greater than 39 and are stated to have weak cementation, therefore hard dig conditions in this location would not have been anticipated.

ERS understands that section 4.1.3 Drilling, Sampling and Testing Methods states, "Refusal N-values may also be indicative of the presence of cobbles or boulders whose size cannot be determined by the exploratory techniques used on this project. Therefore, cobbles and/or boulders should be anticipated in excavations." However, this section is relating to the average interpretation of the 63 borings that took place for the entire geotechnical investigation and is not specifically directed toward the 2 soil nail borings. If all of the borings on this project were to be taken as a representative sample and averaged across the entire job then all of the dirt on this project would either be suitable or unsuitable, however, this is not the case and the geotechnical information from each bore was evaluated on an individual basis to make this design determination.

In addition, section 7.0 Recommendations for Retaining Walls does not include a subsurface conditions subsection like section 8.0 Recommendations for Bridge Foundations does. Had section 7.0 Recommendations for Retaining Walls included a subsection describing the embankment fills under I-10 we would not be in this same position.

In conclusion ERS believes more attention to detail should have been placed on the soil conditions surrounding the soil nail walls during design and the determination of the most suitable drilling practices. As a contractor we can only make educated assumptions based on the information provided by the Owner, and our interpretation of the information provided is that it clearly shows that within the zones that the soil nails are to be installed there is no reason to assume difficult drilling conditions.

Please review this letter and respond at your earliest convenience. Should you need any further information please feel free to contact me at any time.

Sincerely,



Chris Blindheim  
Owner  
Earth Reinforcement Specialist LLC  
623-764-4780 cell  
[chris@earthreinforcement.com](mailto:chris@earthreinforcement.com)

**Don R. Clark**

4685 South Ash Avenue, Suite H4  
Tempe, AZ 85282  
Phone: 480-897-8200

**Chris Blindheim**

9134 W. Happy Valley Rd., Peoria, AZ 85383  
Phone: 623-764-4780

---

Chris:

Based on a quick review, there is no mention of any cobbles being encountered in either Boring B09 or B10. Additionally, under Section 7.0 of the report, there is definitely no mention of potential difficult drilling conditions for soil nail retaining walls because of the presence of cobbles. Then again, I would not have necessarily expected the report to mention that since the borings apparently did not encounter the cobbly material. If this subsurface information was provided to you as a basis for preparing a bid and for doing the work, the photos you sent in the email don't appear to match the expected condition as evidenced by the test borings.

**Donald R. Clark, P.E.**

**Senior Principal**

**Senior Consultant**

**Terracon**

4685 South Ash Avenue, Suite H4 | Tempe, AZ 85282

P (480) 897 8200 | M (480) 226 8218 | F (480) 897 1133

**[drclark@terracon.com](mailto:drclark@terracon.com) | [terracon.com](http://terracon.com)**

---

**Scott Merry**

4285 Pebble Beach Drive  
Stockton, CA 95219  
Phone: 520-404-4888

**Chris Blindheim**

9134 W. Happy Valley Rd., Peoria, AZ 85383  
Phone: 623-764-4780

---

Chris:

I've reviewed those sections that you referred to, namely Section 4.1.3, the key to boring logs, and borings B-09 and B-10. Here are my thoughts.

- A) I read the paragraph in Section 4.1.3, particularly the paragraph at the top of page 8. I read this to mean that refusal of the sampler can be for a myriad of reasons, which I completely agree with. One of those reasons may be cobbles and hence, if you see refusal N values, it may be more than hard (cemented) soil, but may also be cobbles. So where you see refusal values, assume/expect cobbles to be encountered.
  - B) The converse of this is not explicitly stated. That is, it is not stated that if you don't see an N of refusal, that you should expect the layer to be free of cobbles. I suspect that this was your interpretation, which I would submit is the interpretation of a reasonable person.
  - C) Boring B-09: I'm not sure what depth you ended up at, but I see no evidence (refusal N values or soil types that often also have cobbles in them) that cobbles should be expected in the upper 24 feet. Below 24 feet, yes, there is some evidence. In fact, each of the geologic units in the upper 24 feet include some form of clay. Short of being in QLS (landslide material), clays and cobbles generally don't go together and it is usually pretty obvious when you find them together (lots of refusal).
  - D) Boring B-10: The upper-most unit looks suspect until you see the statement "max. particle size 1.5 inches". The legend (page 76 of 283) defines cobbles as 3 to 12-inch particles, which is the standard definition. That definition of cobbles is at least twice the size of the 1.5 inch maximum particle size in the upper unit, so I'd have to deduce that the uppermost layer has no cobbles. Overall, the upper 23 feet appears to be free of cobbles based both on the descriptions
-

and N-values in the context of Section 4.1.3. At depths below 23 feet, you should certainly expect cobbles.

- E) A bit of an editorial here: The standard of practice in southern California is to use a bucket auger for sampling soils where the potential for cobbles can have adverse consequences on a project. I've never seen one in southern Arizona, but the great thing about a bucket auger is that it will find these cobble layers. I would argue that (once again), the SPT was a poor choice and here, is causing hardship for all parties (owner, contractor, and consultant). Southern Arizona should take the time (and money) to catch up with better sampling techniques. End my editorial.

Let me know if I can be of further service.

Regards,

Scott

Scott Merry, PhD, PE, GE

4285 Pebble Beach Drive

Stockton, CA 95219

Cell: 520-404-4888

AZ PE (Civil) #34152

CA Geotechnical Engineer (#2893)

Job #:2013-15  
Name: Valencia Road

	Estimated Cost			Actual Costs			Profit/(Loss)		
	South Wall	North Wall	Total Estimate	South Wall	North Wall	Total Actual	South Wall	North Wall	Total Profit/(Loss)
Labor	\$ 13,635.00	\$ 13,635.00	\$ 27,270.00	\$ 44,490.23	\$ 25,141.90	\$ 69,632.13	\$ (30,855.23)	\$ (11,506.90)	\$ (42,362.13)
Materials	\$ 58,159.00	\$ 58,159.00	\$ 116,318.00	\$ 69,067.17	\$ 42,607.04	\$ 111,674.21	\$ (10,908.17)	\$ 15,551.96	\$ 4,643.79
Subcontract Costs	\$ 1,250.00	\$ 1,250.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ 1,250.00	\$ 1,250.00	\$ 2,500.00
Equipment In House	\$ 6,775.00	\$ 6,775.00	\$ 13,550.00	\$ 39,150.00		\$ 39,150.00	\$ (32,375.00)	\$ 6,775.00	\$ (25,600.00)
Equipment Out House	\$ 2,265.00	\$ 2,265.00	\$ 4,530.00	\$ 15,681.32	\$ 3,275.64	\$ 18,956.96	\$ (13,416.32)	\$ (1,010.64)	\$ (14,426.96)
Fuel	\$ 3,000.00	\$ 3,000.00	\$ 6,000.00	\$ 9,604.74	\$ 3,099.90	\$ 12,704.64	\$ (6,604.74)	\$ (99.90)	\$ (6,704.64)
Small Tool & Supplies	\$ 2,750.00	\$ 2,750.00	\$ 5,500.00	\$ 7,091.47	\$ 10,319.00	\$ 17,410.47	\$ (4,341.47)	\$ (7,569.00)	\$ (11,910.47)
Burden	\$ 4,772.50	\$ 4,772.50	\$ 9,545.00	\$ 15,571.58	\$ 8,799.67	\$ 24,371.25	\$ (10,799.08)	\$ (4,027.17)	\$ (14,826.25)
Bonds	\$ -	\$ -	\$ -			\$ -	\$ -	\$ -	\$ -
Per Diem	\$ 4,050.00	\$ 4,050.00	\$ 8,100.00	\$ 10,075.75	\$ -	\$ 10,075.75	\$ (6,025.75)	\$ 4,050.00	\$ (1,975.75)
Other	\$ 100.00	\$ 100.00	\$ 200.00	\$ -	\$ -	\$ -	\$ 100.00	\$ 100.00	\$ 200.00
	\$ -	\$ -				\$ -	\$ -	\$ -	
<b>Total</b>	<b>\$ 96,756.50</b>	<b>\$ 96,756.50</b>	<b>\$ 193,513.00</b>	<b>\$ 210,732.26</b>	<b>\$ 93,243.15</b>	<b>\$ 303,975.41</b>	<b>\$ (113,975.76)</b>	<b>\$ 3,513.36</b>	<b>\$ (110,462.41)</b>

Production Days	Total Estimated	Total Actual	South Wall	North Wall
	27		59	

Employee		June																														Total	Total
Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Hours	Days	
Rey																														9.0	9		
Chris																														9.0	9		
Lou																														9.0	9		
																June Totals														27	1		

Employee		July																															Total	Total
Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Hours	Days	
Rey	8.0	8.0	8.0				8.0	9.0	9.0	10.0																						60		
Chris	8.0	8.0	8.0				8.0	9.0	9.0	10.0												14.0	10.0	11.0	12.0		8.0	9.0			124			
Lou	8.0	8.0	8.0				8.0	9.0	9.0	10.0							10.0					14.0	10.0	11.0	12.0		8.0	9.0			134			
																July Totals															318	14		

Employee		August																															Total	Total
Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Hours	Days	
Jorge												8.0	8.0	8.0	8.0			8.0	8.0	8.0	8.0	8.0			8.0	8.0	8.0	8.0	8.0			112		
Rey												11.5	12.0	12.0	8.0			8.0	8.0	5.0	9.0	8.0			9.5	9.5	12.0	11.0	8.0			131.5		
Chris	5.0						11.0	11.0					11.5	12.0				8.0	8.0	5.0	9.0	8.0										88.5		
Cesar											10.0	11.5	12.0	12.0	8.0			8.0	8.0	5.0	9.0	8.0			9.5	9.5	12.0	11.0	8.0			141.5		
Oscar											12.0	11.5	12.0	12.0	8.0			8.0	8.0	5.0	9.0	8.0			9.5	9.5	12.0	11.0	8.0			143.5		
Matthew																		8.0	8.0	5.0	9.0	8.0			9.5	9.5	12.0	11.0	8.0			88		
Lou	5.0						11.0	11.0																									27	
Oscar							11.0	11.0																									22	
																August Totals															754	18		

Employee		September																														Total	Total	
Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Hours	Days		
Jorge		8.0	8.0	8.0	8.0			8.0	8.0	8.0	8.0	8.0			8.0	8.0	8.0	8.0	8.0	8.0		8.0	8.0	8.0	8.0	8.0	8.0		8.0	8.0			184	
Rey		10.5	11.0	10.0	8.0			5.0	9.0	9.0	12.0	10.0			12.0	6.0	4.0	9.0	11.0	8.0		8.0	12.0	9.0	10.0	12.0	12.0		10.0	10.0			217.5	
Cesar		10.5	11.0	10.0	8.0			5.0	11.0	9.0	12.0	10.0			12.0	6.0	4.0	9.0	11.0	8.0		8.0	11.0	9.0	10.0	12.0	12.0		10.0	10.0			218.5	
Oscar		10.5	11.0	10.0	8.0				9.0	9.0	12.0	10.0			12.0	2.0	4.0	9.0	11.0	8.0		8.0	11.0	9.0	10.0	12.0	12.0		10.0	9.0			206.5	
Matthew		10.5	11.0	10.0	8.0			5.0	12.0	9.0	12.0	10.0			12.0	6.0	4.0	9.0	11.0	8.0		8.0	12.0	9.0	10.0	12.0	12.0		10.0	10.0			220.5	
																September Totals															1047	23		

Employee Name	October																															Total	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Hours	Days
Jorge	8.0	8.0	8.0																													24	
Rey	8.0	8.0	8.0																													24	
Chris																																0	
Cesar	8.0	8.0	6.0																													22	
Oscar	8.0	8.0	6.0																													22	
Matthew	8.0	8.0	6.0																													22	
																	<b>October Totals</b>		<b>114</b>	<b>3</b>													

Date	Work
06/30/14	Wait for the excavation to be completed haul some material to the job site
07/01/14	Set wire mesh for drain ditch all the wire mesh has to be removed because it wasn't level
07/02/14	Set wire mesh for draining ditch, pour the floor
07/03/14	Spray drain wall
07/07/14	Bult nails
07/08/14	Set mesh on draining channel
07/09/14	Shotcrete the draining channel
07/10/14	Install 2 test nails
07/18/14	Start drilling, 2- 10' augers stuck in hole
07/22/14	Augers stuck in hole, waiting on retrieval tool.
07/23/14	Drilling. Low production due to cobbles.
07/24/14	Drilling. Low production due to cobbles. Drill head breakdown.
07/25/14	No Drilling. Hydraulic motor damage at repair shop.
07/28/14	Repace hydraulic motor. Drilling. Issues with drill head again.
07/29/14	Drilling. Low production due to cobbles. Drill overheating.
07/30/14	Repair drill head. Start drilling. Still having issues with drill head.
07/31/14	No Drilling. Hydraulic motor being repaired.
08/01/14	Drill repaired. Install new verification test nail using air, open hole.
08/04/14	No Drilling. Waiting for grout cure.
08/05/15	No Drilling. Verification Test conducted.
08/06/15	No Drilling. Waiting for part for drill.
08/07/14	Drilling. Low production due to cobbles.
08/08/14	Drilling. Low production due to cobbles.
08/11/14	Drilling. Low production due to cobbles.
08/12/14	Drilling. Low production due to cobbles.
08/13/14	Drilling. Low production due to cobbles. Set mesh and shotcrete
08/14/14	Set mesh and work on hydraulic pump
08/15/14	Drill rig hydraulic pump replacement. Shotcrete placement.
08/18/14	Drilling. Low production due to cobbles.
08/19/14	Shotcrete. Rain delay.
08/20/14	Test and work on the plates KE&G take day off for rain
08/21/14	4CY of shotcrete. Working on plates and set wire mesh
08/22/14	Shotcrete and finish work on the plates

08/25/14 KE&G start excavation second lift. Started drilling at 10:40am, drilled 5 holes, flash coat. Hit rocks bigger than 3" from start to end of hole. 5 nails

08/26/14 Hit big rocks ,slowed our drilling time. Pulled out rocks up to 7". 8 nails

08/27/14 Hit big rocks ,slowed our drilling time. 11 nails

08/28/14 Hit big rocks, slowed our drilling time. Drive chain broke. 6 nails. Shotcrete

08/29/14 Hit big rocks, slowed our drilling time. 5 nails

09/02/14 Hit big rocks, slowed our drilling time, drive chain broke, hydraulic hose blew, auger got stuck in hole and left. 5 nails.

09/03/14 Hit big rocks, slowed our drilling time, shotcrete top of slope, Need to charge Pima County for TM, KE&G helped pull auger back. 3 nails

09/04/14 Hit big rocks, slowed our drilling time, work on the wall chip by hand. 7 nails.

09/05/14 No drilling. Shotcrete.

09/08/14 Nail Testing. Built nails and cleaning. Rain delay.

09/09/14 Work on drill rig, hydraulic pump and built more nails. Rain day for KE&G

09/10/14 Did test nail and shotcrete

09/11/14 Drill 8 holes and shotcrete 6 panels

09/12/14 Drill 8 holes and shotcrete 4 panels, hit one big rock and broke the pull chain from the drill

09/15/14 Had to wait for excavation started drilling at noon. 11 nails

09/16/14 Rain day, maintenance grout plant

09/17/14 Rain day, clean job site

09/18/14 Started drilling at 11am due to rain, 12 nails

09/19/14 Drilling 13 nails, pull chain broke twice, shotcrete 4 panels

09/20/14 Set wire mesh and shotcrete

09/22/14 Drill 11 nails, shotcrete 3CY

09/23/14 Drill 10 nails, shotcrete 3CY. Test nail

09/24/14 Shotcrete 3CY

09/25/14 Drill 8 nails, shotcrete 3 CY

09/26/14 Drill 14 nails

09/27/14 Drill 10 nails, grout plant broke

09/29/14 Drill 4 nails, set drain pipes and work on the grout pump

09/30/14 Shotcrete and grout rest of the holes

10/01/14 Testing and shotcrete

10/02/14 Clean and punch list

10/03/14 Clean at KE&G yard



**MATERIAL COSTS**

MATERIAL DESCRIPTION	Invoice #	Invoice Amount
<b>MATERIAL TOTAL=</b>		<b>\$0.00</b>

**SUBCONTRACTED WORK COSTS**

SUBCONTRACTED WORK DESCRIPTION	SUBCONTRACTOR	Invoice #	Invoice Amount
<b>MARKUP:</b>		<b>0.00%</b>	
<b>SUBCONTRACTOR TOTAL=</b>			<b>\$0.00</b>

**FORCE ACCOUNT SUMMARY**

Force Account Number: NA Date: 10/19/2015  
 Description: Soil Nail Wall Differing Site Conditions Daily Cost Breakdown

Labor Total		\$1,260.64
Owned Equipment Total		\$636.72
Rented Equipment Total		\$427.24
Material Total		\$0.00
Subcontractor Total		\$0.00
<b>Subtotal</b>		<b>\$2,324.60</b>
Allowable Markup	15.00%	\$348.69
<b>Force Account Total</b>		<b>\$2,673.29</b>

**EARTH REINFORCEMENT SPECIALIST LLC**  
**Payroll Register**  
**For the Period From Jul 1, 2014 to Sep 30, 2014**

Filter Criteria Includes: 1) Employee IDs: Multiple IDs. Report order is by Check Date. Report is printed in Detail Format.

Employee ID Employee Masked SS No Reference Date	Pay Type	Pay Hr	Pay Amt	Amount	Gross St_Income Other St_Unemp_C	Fed_Income Advance Soc_Sec_C	Soc_Sec CourtOrder Medicare_C	MEDICARE Insurance Fed_Unemp
CPALMA PALMA, CESAR E. XXX-XX-7220 DD 7/4/14	Field FieldOT	40.00 19.50	540.00 394.88	680.88 <i>13.5/HR</i>	934.88 -39.26 -18.70	-143.22 -57.96	-57.96 -13.56	-13.56 -5.61
JPALMA PALMA, JORGE R. XXX-XX-3066 DD 7/4/14	Salary	40.00	1,228.85	982.28 <i>30.72/HR</i>	1,228.85 -44.24	-108.32 -76.19	-76.19 -17.82	-17.82
RGARCIA GARCIA, REYDECEL A XXX-XX-9857 DD 7/4/14	Field FieldOT Yard	32.00 7.00 8.00	544.00 178.50 138.00	671.79 <i>17/HR</i>	858.50 -6.87	-64.16 -50.00 -53.23	-53.23 -12.45	-12.45
PMORGAN MORGAN, PRESTON R XXX-XX-8393 DD 7/4/14	Field FieldOT	40.00 20.00	740.00 555.00	902.82 <i>18.5/HR</i>	1,295.00 -16.84	-176.27 -100.00 -80.29	-80.29 -18.78	-18.78
CCORNETT CORNETT, CHRISTOP XXX-XX-1314 DD 7/4/14	Field FieldOT Yard	33.00 5.00 7.00	495.00 112.50 105.00	578.69 <i>15/HR</i>	712.50 -25.65	-53.65 -44.18	-44.18 -10.33	-10.33
LWALLS WALLS, LARRY J. XXX-XX-0298 DD 7/4/14	Field FieldOT Yard	33.00 10.00 7.00	363.00 165.00 77.00	432.76 <i>11/HR</i>	605.00 -4.84	-29.06 -37.51	-37.51 -8.77	-8.77
LLAMANNA LAMANNA, LOUIS XXX-XX-8548 DD 7/4/14	Yard	40.00	440.00	400.82 <i>11/HR</i>	440.00 -5.72	-27.28	-6.38	-6.38 -2.64
CPALMA PALMA, CESAR E.	Field	35.50	479.25	365.79 <i>13.5/HR</i>	479.25 -20.13	-56.67	-29.71	-8.95



**Rental Rate Blue Book®**

October 19, 2015

**Leroi CDR12E/LD45 (disc. 1986)**

Air Track Drills

Size Class:

Hole Size 4" & Under

Weight:

11,560 lbs.

**Configuration for CDR12E/LD45**

Drill Type	Drifter	Maximum Hole Size	3-1/2" in
------------	---------	-------------------	-----------

Equipment Notes: With Drill & Feed

**Blue Book Rates**

\*\* FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Operating Costs Hourly	Hourly
Published Rates	\$4,850.00	\$1,360.00	\$340.00	\$51.00	\$21.30	\$48.86
<b>Adjustments</b>						
Region (100%)	-	-	-	-		
Model Year (1986: 100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
<b>Total:</b>	<b>\$4,850.00</b>	<b>\$1,360.00</b>	<b>\$340.00</b>	<b>\$51.00</b>	<b>\$21.30</b>	<b>\$48.86</b>

**Rate Element Allocation**

Element	Percentage	Value
Depreciation (ownership)	37%	\$1,794.50 / mo
Overhaul (ownership)	55%	\$2,667.50 / mo
CFC (ownership)	3%	\$145.50 / mo
Indirect (ownership)	5%	\$242.50 / mo
Fuel (operating)		Fuel cost data is not available for these rates.

Revised Date: 1st Half 2015



## Rental Rate Blue Book®

October 19, 2015

### On-Highway Light Duty Trucks

Miscellaneous Models

Size Class:

Net Hp 100 - 199 HP

### Configuration for On-Highway Light Duty Trucks (Dodge 3500)

Power Mode	Diesel	Cab Type	Crew
Axle Configuration	4X4	Ton Rating	3/4
Horsepower	160.0		

### Blue Book Rates

\*\* FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs Hourly	FHWA Rate** Hourly
	Monthly	Weekly	Daily	Hourly		
Published Rates	\$950.00	\$265.00	\$66.00	\$10.00	\$9.65	\$15.05
<b>Adjustments</b>						
Region (100%)	-	-	-	-		
Model Year (2003: 90.9%)	(\$86.45)	(\$24.12)	(\$6.01)	(\$0.91)		
Ownership (100%)	-	-	-	-		
Operating (100%)	-	-	-	-		
<b>Total:</b>	<b>\$863.55</b>	<b>\$240.88</b>	<b>\$59.99</b>	<b>\$9.09</b>	<b>\$9.65</b>	<b>\$14.56</b>

### Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	58%	\$551.00 / mo
Overhaul (ownership)	28%	\$266.00 / mo
CFC (ownership)	4%	\$38.00 / mo
Indirect (ownership)	10%	\$95.00 / mo
Fuel (operating) @ \$3.46	69%	\$6.64 / hr

Revised Date: 2nd Half 2015



## Rental Rate Blue Book®

October 19, 2015

### On-Highway Light Duty Trucks

Miscellaneous Models

Size Class:

Net Hp 100 - 199 HP

### Configuration for On-Highway Light Duty Trucks (F-250)

Power Mode	Gasoline	Cab Type	Crew
Axle Configuration	4X2	Ton Rating	1/2
Horsepower	143.0		

### Blue Book Rates

\*\* FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$600.00	\$170.00	\$43.00	\$6.00	\$10.15	\$13.56
<b>Adjustments</b>						
Region (100%)	-	-	-	-		
Model Year (2014: 100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)	-	-	-	-		
<b>Total:</b>	<b>\$600.00</b>	<b>\$170.00</b>	<b>\$43.00</b>	<b>\$6.00</b>	<b>\$10.15</b>	<b>\$13.56</b>

### Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	58%	\$348.00 / mo
Overhaul (ownership)	28%	\$168.00 / mo
CFC (ownership)	4%	\$24.00 / mo
Indirect (ownership)	10%	\$60.00 / mo
Fuel (operating) @ \$2.82	75%	\$7.66 / hr

Revised Date: 2nd Half 2015

# United Rentals

BRANCH J91  
1770 WEST PRINCE ROAD  
TUCSON AZ 85705  
520-888-5582  
520-888-6901 FAX

## 4 WEEK BILLING INVOICE

# 120646329-005

Job Site

KE&G YARD  
5100 S ALVERNON WAY  
TUCSON AZ 85706-1976

Office: 623-486-6820 Cell: 623-764-4780

Customer # : 1168388  
Invoice Date : 10/03/14  
Date Out : 06/24/14 02:00 PM  
Billed Through : 10/14/14 00:00  
UR Job Loc : 5100 S ALVERNON WAY,  
UR Job # : 8  
Customer Job ID:  
P.O. # :  
Ordered By : GEORGE  
Written By : JOHN HERTZOG  
Salesperson : JOHN BLAKE

61.18561 MB0432 89807521 d10 292850 1-1 0



EARTH REINFORCEMENT SPEC  
BLINDHEIM SW INC DBA  
PO BOX 2899  
PEORIA AZ 85180-2899

Invoice Amount: \$4,128.72

Terms: Due Upon Receipt  
Payment options: Contact our credit office 760-846-2401  
REMIT TO: UNITED RENTALS (NORTH AMERICA) INC.  
FILE 51122  
LOS ANGELES CA 90074-1122

RENTAL ITEMS:							
Qty	Equipment	Description	Minimum	Day	Week	4 Week	Amount
1	71293SRA	FORKLIFT VARIABLE REACH 10000# 50' & UP Make: GEHL Model: DL10L-55 Serial: 10L55JY2745365 Meter out: 2272.80 Meter in: .00		360.00	1259.00	3270.00	3,270.00
						Rental Subtotal:	3,270.00
SALES/MISCELLANEOUS ITEMS:			Price		Unit of Measure		Extended Amt.
Qty	Item						
1	PROPERTY TAX SURCHARGE	[DRSURAZ/MCI]	49.050		EACH		49.05
1	ENVIRONMENTAL CHARGE	[ENV/MCI]	42.510		EACH		42.51
						Sales/Misc Subtotal:	91.56
						Agreement Subtotal:	3,361.56
						Rental Protection:	427.80
						Tax:	309.36
						Total:	4,128.72

COMMENTS/NOTES:

\*\* ATTENTION \*\* Amount uncollected: 4,128.72

BILLED FOR FOUR WEEKS 9/16/14 THRU 10/14/14 02:00 PM

TO SCHEDULE EQUIPMENT FOR PICKUP, CALL 800-UR-RENTS (800-877-3687)  
WE ARE AVAILABLE 24/7 TO SUPPLY YOU WITH A CONFIRMATION #  
IN ORDER TO CLOSE THIS CONTRACT

THIS 4 WEEK BILLING INVOICE IS ISSUED SUBJECT TO THE TERMS AND CONDITIONS OF THE RENTAL AGREEMENT, WHICH ARE INCORPORATED HEREIN BY REFERENCE.

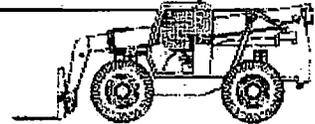
A COPY OF THE RENTAL AGREEMENT IS AVAILABLE UPON REQUEST



## Adjustments for 3021 in Inventory

October 19, 2015

**Caterpillar TH103 (disc. 2003)**  
Telescoping Boom Rough Terrain Lift Trucks



Size Class:  
Lift Capacity 4.5 - 4.9 MTons  
Weight:  
26,570 lbs.

### Configuration for TH103

Power Mode	Diesel	Base Capacity	10,000 lbs
Maximum Reach	346 in	Maximum Lift Height	528 in
Horsepower	101.0		

### Blue Book Rates

\*\* FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	\$4,515.00	\$1,265.00	\$315.00	\$47.00	\$27.60	\$53.25
<b>Adjustments</b>						
Region (100%)	-	-	-	-		
Model Year (1998: 100%)	-	-	-	-		
Ownership (100%)	-	-	-	-		
Operating (100%)					-	
<b>Total:</b>	<b>\$4,515.00</b>	<b>\$1,265.00</b>	<b>\$315.00</b>	<b>\$47.00</b>	<b>\$27.60</b>	<b>\$53.25</b>

### Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	30%	\$1,354.50 / mo
Overhaul (ownership)	58%	\$2,618.70 / mo
CFC (ownership)	4%	\$180.80 / mo
Indirect (ownership)	8%	\$361.20 / mo
Fuel (operating) @ \$3.73	38%	\$10.59 / hr

Revised Date: 1st Half 2015

Valencia Rd. - Alvernon Way to Wilmot Road

Pima County Project Number: 4VAKDP

KE&G Project No. 130288

Subject: Earth Reinforcement Specialists - Unforeseen Soil Conditions Claim

Original Anticipated Production:  Nails/Day **\*\*100% Efficiency 4 weeks anticipated drilling and 2 weeks of shotcrete, 204 nails total in south wall so 51 nails/week or approximately 10 nails/day.\*\***

Average Daily Cost:  See Daily Cost Breakdown

Date:

Actual Production:  Nails/Day

Estimated Production:  Nails/Day

Efficiency:

Average Daily Cost:

Requested Compensation:

ERS Responsibility:

Reasoning for Responsibility: 0% responsibility due to the hard soil conditions and cobbles.

PC Notes: Started production nails at 7:00am and stopped at 10:00am when auger/bit came unpinned and stuck in excavation

ERS Notes: Strong soils and auger was stuck in rocks

Date:

Actual Production:  Nails/Day

Estimated Production:  Nails/Day

Efficiency:

Average Daily Cost:

Requested Compensation:

ERS Responsibility:

Reasoning for Responsibility: 0% responsibility due to the fact that auger broken/came unpinned due to hard soil conditions.

PC Notes: No activity - auger bit still stuck

ERS Notes: Auger stuck

Date:

Actual Production:  Nails/Day

Estimated Production:  Nails/Day

Efficiency:

Average Daily Cost:

**Requested Compensation:** \$1,336.65  
**ERS Responsibility:** 0.00% \$1,336.65  
**Reasoning for Responsibility:** 0% Started late but worked late, slow production drilling due to hard soils.  
**PC Notes:** Started drilling nails at 9:20am, finished drilling nails at approximately 3:30, finished grouting at 7:00pm  
**ERS Notes:** Strong Clay

**Date:** 7/23/15  
**Actual Production:** 5 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 50.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$1,336.65  
**ERS Responsibility:** 0.00% \$1,336.65  
**Reasoning for Responsibility:** 0% responsibility, simply hard drilling conditions as stated by Pima County, no other problems.  
**PC Notes:** No equipment down time, finished grout at 4:30pm.  
**ERS Notes:** Strong Clay

**Date:** 7/24/15  
**Actual Production:** 1 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 10.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,405.96  
**ERS Responsibility:** 0.00% \$2,405.96  
**Reasoning for Responsibility:** 0% responsibility, equipment malfunction and breakdown due to extremely difficult conditions.  
**PC Notes:** Started drilling at 7:30am, finished drilling nail at approximately 9:30am, track drill broke down, hydraulic auger motor, no grout  
**ERS Notes:** Strong Clay

**Date:** 7/25/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 0.00% \$2,673.29  
**Reasoning for Responsibility:** 0% responsibility, only grouted 1 hole, no drilling activity. Equipment still broke down, drill head from hard drilling.

PC Notes: Grouted 1 hole, not other activity

ERS Notes: None

Date: 7/28/15  
Actual Production: 0 Nails/Day  
Estimated Production: 10 Nails/Day  
Efficiency: 0.00%  
Average Daily Cost: \$2,673.29  
Requested Compensation: \$2,673.29  
ERS Responsibility: 0.00%

\$2,673.29

Reasoning for Responsibility: hydraulic motor breakdown due to drilling conditions.

PC Notes: Started drilling nails at 8:30am track drill broke down at 8:45am, worked on hydraulic auger motor till 12:30

ERS Notes: None

Date: 7/29/15  
Actual Production: 5 Nails/Day  
Estimated Production: 10 Nails/Day  
Efficiency: 50.00%  
Average Daily Cost: \$2,673.29  
Requested Compensation: \$1,336.65  
ERS Responsibility: 0.00%

\$1,336.65

Reasoning for Responsibility: 0% overheating of drill was most likely caused by difficult drilling conditions and slow production.

PC Notes: Started drilling at 8:30, finished drilling at 1:00pm, track drill overheated and stopped for the day.

ERS Notes: Strong Clay

Date: 7/29/15  
Actual Production: 0 Nails/Day  
Estimated Production: 10 Nails/Day  
Efficiency: 0.00%  
Average Daily Cost: \$2,673.29  
Requested Compensation: \$2,673.29  
ERS Responsibility: 0.00%

\$2,673.29

Reasoning for Responsibility: hydraulic motor breakdown due to drilling conditions.

PC Notes: Started drilling nails at 6:30am, stopped drilling at 8:30am track drill broke down, hydraulic motor for auger not working properly.

ERS Notes: None

**Date:** 7/31/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 0.00%

\$2,673.29

**Reasoning for Responsibility:** hydraulic motor breakdown due to drilling conditions.  
**PC Notes:** None activity - track drill broke down, auger hydraulic motor.  
**ERS Notes:** None

**Date:** 8/1/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00%

\$0.00

**Reasoning for Responsibility:** 100% responsibility, equipment breakdowns and attempting new method at ERS risk to improve production.  
**PC Notes:** None activity - track drill broke down, auger hydraulic motor. Air track drilling test started at 2:00pm.  
**ERS Notes:** Test nail for air track drilling installed.

**Date:** 8/4/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00%

\$0.00

**Reasoning for Responsibility:** 100% responsibility, attempting new method at ERS risk to improve production.  
**PC Notes:** Waiting on 3 day grout break for air drilling verification.  
**ERS Notes:** None

**Date:** 8/5/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%

<b>Average Daily Cost:</b>	\$2,673.29	
<b>Requested Compensation:</b>	\$2,673.29	
<b>ERS Responsibility:</b>	100.00%	\$0.00
<b>Reasoning for Responsibility:</b>	100% responsibility, attempting new method at ERS risk to improve production.	
<b>PC Notes:</b>	Verification test V-#3 done this afternoon. 12:00pm to 4:00pm no other activity.	
<b>ERS Notes:</b>	Verification test.	

<b>Date:</b>	8/9/14	
<b>Actual Production:</b>	0 Nails/Day	
<b>Estimated Production:</b>	10 Nails/Day	
<b>Efficiency:</b>	0.00%	
<b>Average Daily Cost:</b>	\$2,673.29	
<b>Requested Compensation:</b>	\$2,673.29	
<b>ERS Responsibility:</b>	100.00%	\$0.00
<b>Reasoning for Responsibility:</b>	100% responsibility, waiting on parts for equipment.	
<b>PC Notes:</b>	No activity, waiting on parts for air track drill not available till noon in Phoenix, AZ	
<b>ERS Notes:</b>	None	

<b>Date:</b>	8/11/15	
<b>Actual Production:</b>	6 Nails/Day	
<b>Estimated Production:</b>	10 Nails/Day	
<b>Efficiency:</b>	60.00%	
<b>Average Daily Cost:</b>	\$2,673.29	
<b>Requested Compensation:</b>	\$1,069.32	
<b>ERS Responsibility:</b>	100.00%	\$0.00
<b>Reasoning for Responsibility:</b>	100% responsibility due to multiple equipment failures.	
<b>PC Notes:</b>	Started drilling at 7:30am, equipment broke down, 1) the water to the air drill would not operate, 2) the air compressor would not restart after the air track drill repairs. Resumed drilling at 11:00am, resumed drilling at 11:00am, finished drilling operations at 1:30pm 5 holes completed, (nail log shows 6 completed)	
<b>ERS Notes:</b>	Clay/Strong Soils	

<b>Date:</b>	8/18/15	
<b>Actual Production:</b>	6 Nails/Day	
<b>Estimated Production:</b>	10 Nails/Day	
<b>Efficiency:</b>	60.00%	
<b>Average Daily Cost:</b>	\$2,673.29	
<b>Requested Compensation:</b>	\$1,069.32	

ERS Responsibility:

25.00%

\$801.99

Reasoning for Responsibility:

25% of nails redrilled this day were due to equipment breakdown the day before.

PC Notes:

Partial redrill of holes 319 and 325, started at 7:45am and finished at 9:00am. Started drilling holes 326-331 at 9:00am and finished drilling and grouting at approximately 3:30pm, 8 holes completed. (nail log shows 6 completed)

ERS Notes:

Clay/Strong Soils

Date:

8/11/15

Actual Production:

4 Nails/Day

Estimated Production:

10 Nails/Day

Efficiency:

40.00%

Average Daily Cost:

\$2,673.29

Requested Compensation:

\$1,603.97

ERS Responsibility:

20.00%

\$1,283.18

Reasoning for Responsibility:

20% ERS delayed production of the nails by 1.5-2 hours due to fuel issues.

PC Notes:

Started drilling holes at 8:20am, completed drilling at approximately 3:30pm, air track drill ran out of fuel delaying production 1.5 hours. 4-holes completed.

ERS Notes:

clay/strong soils/some rock

Date:

8/12/15

Actual Production:

4 Nails/Day

Estimated Production:

10 Nails/Day

Efficiency:

40.00%

Average Daily Cost:

\$2,673.29

Requested Compensation:

\$1,603.97

ERS Responsibility:

0.00%

\$1,603.97

Reasoning for Responsibility:

0% responsibility, simply hard drilling conditions as stated by Pima County, no other problems.

PC Notes:

Started drilling at 7:00am, finished drilling and grouting at 4:00pm, 4-holes completed, drilled by 6" auger and air track drilling combination.

ERS Notes:

clay/strong soils/some rock

Date:

8/13/15

Actual Production:

3 Nails/Day

Estimated Production:

10 Nails/Day

Efficiency:

30.00%

Average Daily Cost:

\$2,673.29

Requested Compensation:

\$1,871.30

ERS Responsibility:

40.00%

\$1,871.30

**Reasoning for Responsibility:** 0% responsibility, simply hard drilling conditions as stated by Pima County, no other problems.  
**PC Notes:** Started drilling at 7:00am, finished drilling and grouting at 4:00pm, 4-holes completed. Drilled by 6" auger, wall structural concrete was also being placed in the afternoon  
**ERS Notes:** clay/strong soils/some rock

<b>Date:</b>	18/11/15		
<b>Actual Production:</b>	0	Nails/Day	
<b>Estimated Production:</b>	10	Nails/Day	
<b>Efficiency:</b>	0.00%		
<b>Average Daily Cost:</b>	\$2,673.29		
<b>Requested Compensation:</b>	\$2,673.29		
<b>ERS Responsibility:</b>	100.00%		\$0.00
<b>Reasoning for Responsibility:</b>	100% only shotcrete was being placed on this day.		
<b>PC Notes:</b>	No drilling activity today, track drill would stay running. Wall structural shotcrete placement. 0-holes completed.		
<b>ERS Notes:</b>	Shotcrete		

<b>Date:</b>	18/11/15		
<b>Actual Production:</b>	0	Nails/Day	
<b>Estimated Production:</b>	10	Nails/Day	
<b>Efficiency:</b>	0.00%		
<b>Average Daily Cost:</b>	\$2,673.29		
<b>Requested Compensation:</b>	\$2,673.29		
<b>ERS Responsibility:</b>	100.00%		\$0.00
<b>Reasoning for Responsibility:</b>	100% only shotcrete was being placed on this day and bearing plate adjustments.		
<b>PC Notes:</b>	Track drill repaired by 10:00am but no drilling activity today. Bearing plate adjustments being done, work not completed. ERS personnel left at noon. 0-holes completed.		
<b>ERS Notes:</b>	Shotcrete		

<b>Date:</b>	18/11/15		
<b>Actual Production:</b>	3	Nails/Day	
<b>Estimated Production:</b>	10	Nails/Day	
<b>Efficiency:</b>	30.00%		
<b>Average Daily Cost:</b>	\$2,673.29		
<b>Requested Compensation:</b>	\$1,871.30		
<b>ERS Responsibility:</b>	100.00%		\$1,871.30
<b>Reasoning for Responsibility:</b>	0% responsibility, simply hard drilling conditions as stated by Pima County, no other problems.		
<b>PC Notes:</b>	Started drilling at 6:50am, finished drilling and grouting by 12:15pm. 3-holes completed, drilled with 6" auger.		

No other activity.  
Clay/Strong Soils/Some Rock

ERS Notes:

Date: 8/19/15  
Actual Production: 0 Nails/Day  
Estimated Production: 10 Nails/Day  
Efficiency: 0.00%  
Average Daily Cost: \$2,673.29  
Requested Compensation: \$2,673.29  
ERS Responsibility: 100.00%  
Reasoning for Responsibility: 100% responsibility, only shotcrete being placed this day.  
PC Notes: structural shotcrete placement, work stopped at 12:00pm due to weather. 0-Holes completed.  
ERS Notes: Shotcrete

\$0.00

Date: 8/20/15  
Actual Production: 0 Nails/Day  
Estimated Production: 10 Nails/Day  
Efficiency: 0.00%  
Average Daily Cost: \$2,673.29  
Requested Compensation: \$2,673.29  
ERS Responsibility: 100.00%  
Reasoning for Responsibility: 100% responsibility, proof testing being completed.  
PC Notes: Proof test at nail 337 began, had to be terminated due to inadequate nail coupler to perform test. No other activity.  
ERS Notes: Proof testing.

\$0.00

Date: 8/21/15  
Actual Production: 0 Nails/Day  
Estimated Production: 10 Nails/Day  
Efficiency: 0.00%  
Average Daily Cost: \$2,673.29  
Requested Compensation: \$2,673.29  
ERS Responsibility: 100.00%  
Reasoning for Responsibility: 100% responsibility, structural shotcrete placement.  
PC Notes: structural shotcrete placement. No delays, 0 holes completed  
ERS Notes: Shotcrete.

\$0.00

Date: 8/22/15

**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00%  
**Reasoning for Responsibility:** 100% responsibility, structural shotcrete placement and drainage swale.  
**PC Notes:** No drilling operations today. ERS personnel completed the shotcrete drainage swale back wall. No other activity.  
**ERS Notes:** Shotcrete.

\$0.00

**Date:** 8/25/15  
**Actual Production:** 5 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 50.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$1,336.65  
**ERS Responsibility:** 83.30%  
**Reasoning for Responsibility:** 83.3% responsibility, only worked half a day but had OK production for the 4 hours of drilling, could have had 10 if they had worked a whole day which would out to 83.3% production.  
**PC Notes:** Started drilling at 10:40am, finished drilling at 2:00pm. 5 holes completed, no other activity.  
**ERS Notes:** Hard Soil/Rock 4"-5"

\$223.22

**Date:** 8/26/15  
**Actual Production:** 8 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 80.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$534.66  
**ERS Responsibility:** 20.00%  
**Reasoning for Responsibility:** 0% responsibility, decent drilling but still encountered several large rocks and old steel pipe.  
**PC Notes:** Started drilling at 7:35am, finished drilling at 1:45pm, 8-holes completed, no other activity, drilled by 6" auger.  
**ERS Notes:** Hard soil/Big rocks

\$534.66

**Date:** 8/27/15  
**Actual Production:** 12 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 120.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$0.00

**ERS Responsibility:**

100.00%

\$0.00

**Reasoning for Responsibility:**

100% responsibility, hit their average anticipated and actual production.

**PC Notes:**

started drilling at 7:35 am and finished at 5:30pm, drilled with 6" Auger, 10 Hour day.

**ERS Notes:**

start drilling at 7:00, drill between the bridge slowed down the drilling, we are still hitting rocks that slow down the drilling as well.

**Date:**

8/28/15

**Actual Production:**

5 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

60.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$1,069.32

**ERS Responsibility:**

0.00%

\$1,069.32

**Reasoning for Responsibility:**

equipment broke down while drilling in cobbles.

**PC Notes:**

Finished drilling, grouting, and slot flashing at 3:00pm 6-Holes completed, drilled with 6" auger.

**ERS Notes:**

Rocks still slow down the drilling time, small 2" rock fell thru the chain sprocket and broke the drive chain. We replaced the drill bit and flashed 19 nails.

**Date:**

8/29/15

**Actual Production:**

5 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

50.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$1,336.65

**ERS Responsibility:**

50.00%

\$668.32

**Reasoning for Responsibility:**

50% responsibility, equipment broke down while drilling.

**PC Notes:**

Started drilling at 6:15am, finished drilling at 9:30am, finished grouting at 10:00am, 5-holes completed, drilled with 6" auger.

**ERS Notes:**

Clay/Strong Soils

**Date:**

9/1/15

**Actual Production:**

0 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

0.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00%  
**Reasoning for Responsibility:** Holiday  
**PC Notes:** Holiday  
**ERS Notes:** Holiday

\$0.00

**Date:** 9/2/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 60.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$1,069.32  
**ERS Responsibility:** 0.00%

\$1,069.32

**Reasoning for Responsibility:** several equipment breakdowns/malfunctions due to drilling conditions  
**PC Notes:** ERS on site at 5:30, started drilling at 6:50, chain broke and were down for 1 hour and 50 minutes, drilled 4 more holes and chain broke again, they were down for 1 hour and then lost auger in the hole, worked till 3:25pm.  
**ERS Notes:** Hard soil/clay/rock: Drive chain broke 2 times, replaced drill bit because many rocks at hole 385. We hit something big and it broke the drive chain and our auger got stuck.

**Date:** 9/3/15  
**Actual Production:** 3 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 30.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$1,871.30  
**ERS Responsibility:** 0.00%

\$1,871.30

**Reasoning for Responsibility:** large amount of rocky material.  
**PC Notes:** ERS on site at 5:30am, continued to try to remove the auger from hole 385, tried numerous times to pull auger out, finally got the auger out at 8:40am, redrilling of hole 385 started at 9:10 and continued drilling till 12:15, grouting of the holes was complete by 2:00pm, placed wire mesh/drains/rebar, and placed shotcrete.  
**ERS Notes:** ERS pulled the auger from hole 385, there was too many big rocks up to 8", had to redrill the hole and it took 2 hours to redrill due to the rocks.

**Date:** 9/4/15  
**Actual Production:** 7 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 70.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$801.99

**ERS Responsibility:**

100.00%

\$0.00

**Reasoning for Responsibility:**

100% responsibility; had problems with the shotcrete wall being plumb.

**PC Notes:**

ERS on site at 5:30, started drilling at 7:30, drilled 7 holes and finished drilling at 1:00pm, finished grouting at 3:00pm finally got the auger out at 8:40am, redrilling of hole 385 started at 9:10 and continued drilling till 12:15, grouting

**ERS Notes:**

Had some problems with the face of wall being plumb, had to set check points to control the wall and had to cancel the shotcrete order.

**Date:**

9/8/15

**Actual Production:**

0 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

0.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$2,673.29

**ERS Responsibility:**

100.00%

\$0.00

**Reasoning for Responsibility:**

100% responsibility, shotcrete only.

**PC Notes:**

ERS on site at 5:30, shotcrete 2nd row of nails.

**ERS Notes:**

Placed Shotcrete

**Date:**

9/8/15

**Actual Production:**

0 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

0.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$2,673.29

**ERS Responsibility:**

100.00%

\$0.00

**Reasoning for Responsibility:**

100% responsibility; rain delay.

**PC Notes:**

ERS on site at 6:15, set up for proof test but hydraulic jack was not working, brought repaired jack back at 12:00 but were shut down due to rain.

**ERS Notes:**

Rain Delay

**Date:**

9/8/15

**Actual Production:**

0 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

0.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00% \$0.00  
**Reasoning for Responsibility:** 100% responsibility, rain delay.  
**PC Notes:** ERS on site at 6:00am, KE&G shut ERS down due to the mud, came back with new Jack at 10:00am, started the proof test but the new jack also didn't work, brought out another jack and restarted test but jack topped out at 2,000lbs (Test needs to go to 2,725lbs) so they stated working on bearing plates instead.  
**ERS Notes:** Rain Delay

**Date:** 9/10/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00% \$0.00  
**Reasoning for Responsibility:** 100% responsibility, placed shotcrete.  
**PC Notes:** ERS on site at 6:00am, proof tested nail and placed shotcrete.  
**ERS Notes:** Placed Shotcrete.

**Date:** 9/11/15  
**Actual Production:** 8 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 80.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$534.66  
**ERS Responsibility:** 0.00% \$534.66  
**Reasoning for Responsibility:** 0% responsibility, nothing mentioned that inhibited production other than soil conditions  
**PC Notes:** ERS on site at 6:00am, drilled holes.  
**ERS Notes:** Hard soils, sand, rock, boulders.

**Date:** 9/22/15  
**Actual Production:** 8 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 80.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$534.66  
**ERS Responsibility:** 100.00% \$0.00

**Reasoning for Responsibility:** 100% responsibility, ERS states slow drilling due to bridge piles, should have been anticipated.  
**PC Notes:** ERS on site at 6:00am, chain broke at 9:15am and they were down for 45 minutes, grout machine clogged and they were down for 1 hour.  
**ERS Notes:** Started drilling at 7:10, drilling between piles under the bridge which slowed drilling time.

<b>Date:</b>	9/15/15		
<b>Actual Production:</b>	11	Nails/Day	
<b>Estimated Production:</b>	10	Nails/Day	
<b>Efficiency:</b>	110.00%		
<b>Average Daily Cost:</b>	\$2,673.29		
<b>Requested Compensation:</b>	\$0.00		
<b>ERS Responsibility:</b>	100.00%		\$0.00
<b>Reasoning for Responsibility:</b>	100% responsibility, didn't start drilling till 11:40am		
<b>PC Notes:</b>	ERS on site at 6:00am, drilled 11 holes		
<b>ERS Notes:</b>	Hard soil/rocks/sand: Start drilling at 11:40am wait for excavation, hit rocks bigger than 3"-5"		

<b>Date:</b>	9/16/15		
<b>Actual Production:</b>	0	Nails/Day	
<b>Estimated Production:</b>	10	Nails/Day	
<b>Efficiency:</b>	0.00%		
<b>Average Daily Cost:</b>	\$2,673.29		
<b>Requested Compensation:</b>	\$2,673.29		
<b>ERS Responsibility:</b>	100.00%		\$0.00
<b>Reasoning for Responsibility:</b>	100% responsibility, rain delay		
<b>PC Notes:</b>	Rained out.		
<b>ERS Notes:</b>	Rained out.		

<b>Date:</b>	9/17/15		
<b>Actual Production:</b>	0	Nails/Day	
<b>Estimated Production:</b>	10	Nails/Day	
<b>Efficiency:</b>	0.00%		
<b>Average Daily Cost:</b>	\$2,673.29		
<b>Requested Compensation:</b>	\$2,673.29		
<b>ERS Responsibility:</b>	100.00%		\$0.00
<b>Reasoning for Responsibility:</b>	100% responsibility, rain delay		
<b>PC Notes:</b>	ERS on site at 6:00am but KE&G called them off due to impending		

**ERS Notes:**

Rained out.

**Date:**

09/18/15

**Actual Production:**

12 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

120.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$0.00

**ERS Responsibility:**

100.00%

\$0.00

**Reasoning for Responsibility:**

100% responsibility, good production.

**PC Notes:**

ERS on site at 9:30 (arrived late to give KE&amp;G time to remove retaining wall), started drilling at 10:10, continued drilling holes, 12-holes complete.

**ERS Notes:**

hard soil, few rocks

**Date:**

09/19/15

**Actual Production:**

13 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

130.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$0.00

**ERS Responsibility:**

100.00%

\$0.00

**Reasoning for Responsibility:**

100% responsibility, good production, a few equipment issues.

**PC Notes:**

ERS on site at 6:00am, started drilling at 6:45, hydraulic hose broke at 7:10 and fixed at 8:20, chain broke at 8:30 and was repaired by 10:30 (total down time 3 hours 10 min.), 13 holes complete.

**ERS Notes:**

hard soil, few rocks: pull chain on drill rig broke, drilled through good soil with few rocks 3"-4", shotcrete 5 panels and installed a test nail, finished drilling 3rd row of nails.

**Date:**

09/20/15

**Actual Production:**

0 Nails/Day

**Estimated Production:**

10 Nails/Day

**Efficiency:**

0.00%

**Average Daily Cost:**

\$2,673.29

**Requested Compensation:**

\$2,673.29

**ERS Responsibility:**

100.00%

\$0.00

**Reasoning for Responsibility:**

100% responsibility, shotcrete only.

**PC Notes:**

ERS on site at 6:00am, shotcrete.

**ERS Notes:**

Shotcrete

**Date:** 9/22/15  
**Actual Production:** 11 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 110.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$0.00  
**ERS Responsibility:** 100.00% \$0.00  
**Reasoning for Responsibility:** 100% responsibility, good soil and good production  
**PC Notes:** ERS on site at 6:00am, drilled 11 holes.  
**ERS Notes:** hard soil, sand

**Date:** 9/23/15  
**Actual Production:** 10 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 100.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$0.00  
**ERS Responsibility:** 100.00% \$0.00  
**Reasoning for Responsibility:** 100% responsibility, good soil and good production  
**PC Notes:** ERS on site at 6:00am, started drilling and drilled 10 holes  
**ERS Notes:** hard soil, sand: completed 1 test on 3rd row

**Date:** 9/24/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00% \$0.00  
**Reasoning for Responsibility:** 100% responsibility, Shotcrete  
**PC Notes:** ERS on site at 7:00am, built nails and shotcrete.  
**ERS Notes:** Shotcrete.

**Date:** 9/25/15  
**Actual Production:** 8 Nails/Day  
**Estimated Production:** 10 Nails/Day

**Efficiency:** 80.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$534.66  
**ERS Responsibility:** 100.00%

\$0.00

**Reasoning for Responsibility:** 100% responsibility, equipment issues caused down time.  
**PC Notes:** ERS on site at 6:00am, started drilling at 7:50, hydraulic hose broke at 10:30 and was fixed at 11:25 (down 55 min.), grout machine broke down at 12:45 (down until the next day), shotcreted the rest of the day.  
**ERS Notes:** strong soils/some rock: grout plant broke, drilled 8 holes.

**Date:** 9/26/15  
**Actual Production:** 14 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 140.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$0.00  
**ERS Responsibility:** 100.00%

\$0.00

**Reasoning for Responsibility:** 100% responsibility, good production.  
**PC Notes:** ERS on site at 6:00am, drill head came off at 8:00am and fixed at 8:20 (down 20 min.), chain broke at 1:45 and was fixed at 2:20 (down 35 min.), drilled 14 holes.  
**ERS Notes:** Strong soils/sand/few rocks.

**Date:** 9/27/15  
**Actual Production:** 10 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 100.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$0.00  
**ERS Responsibility:** 100.00%

\$0.00

**Reasoning for Responsibility:** 0% responsibility, hit large rock on the last few holes  
**PC Notes:** None.  
**ERS Notes:** Strong soil/Clay/Rock

**Date:** 9/29/15  
**Actual Production:** 4 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 40.00%  
**Average Daily Cost:** \$2,673.29

**Requested Compensation:**

**\$1,603.97**

**ERS Responsibility:**

**100:00%**

**\$0.00**

**Reasoning for Responsibility:**

100% responsibility, multiple equipment issues, last day of drilling, normal soils.

**PC Notes:**

ERS on site at 6:00am, started drilling at 7:30 when chain broke at 7:40, repaired at 9:00am (down 1 hour and 20 min.) continued drilling and blew hydraulic hose at 9:30 and repaired at 10:30 (down 1 hour), grout pump broke down.

**ERS Notes:**

normal soil and some sand.

**Date:**

**9/30/15**

**Actual Production:**

**0 Nails/Day**

**Estimated Production:**

**10 Nails/Day**

**Efficiency:**

**0.00%**

**Average Daily Cost:**

**\$2,673.29**

**Requested Compensation:**

**\$2,673.29**

**ERS Responsibility:**

**100:00%**

**\$0.00**

**Reasoning for Responsibility:**

100% responsibility, shotcrete/grout

**PC Notes:**

ERS on site at 6:00am, repaired pump, placed nails and grouted, placed shotcrete

**ERS Notes:**

Shotcrete.

**Date:**

**10/1/15**

**Actual Production:**

**0 Nails/Day**

**Estimated Production:**

**10 Nails/Day**

**Efficiency:**

**0.00%**

**Average Daily Cost:**

**\$2,673.29**

**Requested Compensation:**

**\$2,673.29**

**ERS Responsibility:**

**100:00%**

**\$0.00**

**Reasoning for Responsibility:**

100% responsibility, shotcrete.

**PC Notes:**

ERS on site at 6:00am, shotcreted.

**ERS Notes:**

Shotcrete.

**Date:**

**10/2/15**

**Actual Production:**

**0 Nails/Day**

**Estimated Production:**

**10 Nails/Day**

**Efficiency:**

**0.00%**

**Average Daily Cost:**

**\$2,673.29**

**Requested Compensation:**

**\$2,673.29**

**ERS Responsibility:**

**100:00%**

**\$0.00**

**Reasoning for Responsibility:**

100% responsibility, shotcrete.

**PC Notes:** ERS on site at 6:00am, shotcreted, punch list items.  
**ERS Notes:** Shotcrete/punch list.

**Date:** 10/3/15  
**Actual Production:** 0 Nails/Day  
**Estimated Production:** 10 Nails/Day  
**Efficiency:** 0.00%  
**Average Daily Cost:** \$2,673.29  
**Requested Compensation:** \$2,673.29  
**ERS Responsibility:** 100.00%

**Reasoning for Responsibility:** 100% responsibility, cleanup/demobilization  
**PC Notes:** ERS on site at 6:15am, cleaned up and demobilized.  
**ERS Notes:** Punch list/demobilization

\$0.00

**Total Requested Compensation:** \$35,590.85