



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-001

**Contractor** Sauer, Inc.  
**Initiator/Company** (b)(6) Jacobs F  
**Spec./Section** \_\_\_\_\_

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-405/C-513  
**Date** 25 Feb 13

**Description of problem and recommended change:**

**Problem:** Potable water service will be required for area 9000.

**Solution:**

- 1) Install a 14" gate valve in the new 14" HDPE potable water line west of the tee shown in Detail 28 (Connection to Existing 14" Water Main) on C-513 at approximately Station 165+15.
- 2) Prior to installing the flowable fill in this existing A-C pipe section, salvage the new 14" gate valve installed in the existing potable water line and remove the new 14" HDPE cross connection pipe located north of the isolation valve. Install a cap on this isolation valve for future extension.

This work falls within the same type of work on the project. An additional AHA is not required.

**Cost Impact**     No     Yes    **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**     No     Yes    **No. of Days** \_\_\_\_\_  
**Project Manager** \_\_\_\_\_    **Date** \_\_\_\_\_

## DISPOSITION (NASA)

**Evaluation:**

**Construction Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quality Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Safety Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_

CCB Approved for Implementation     Yes     No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

## FIELD CHANGE REQUEST (FCR) INSTRUCTIONS

**PURPOSE:** The Field Change Request (FCR) is used to document, track, and implement changes. The FCR may be initiated by anyone associated with the project.

An FCR is initiated to document the following:

- a. Discrepancies that may exist between the drawings/specifications and field conditions.
- b. Inconsistencies in the drawings and/or specifications.
- c. Recommended design or specification changes that do not affect form, fit, or function (variance).
- d. Changes that are necessary to correct deficiencies in the design or specification.

An FCR may also be initiated by the PMD Office to request that the Contractor evaluate, for cost and schedule impact, proposed changes to the drawings/specifications.

### INSTRUCTIONS:

- INITIATOR -**
1. Provide all information requested at the top of the FCR form.
  2. Describe the recommended change; provide rationale and justification in detail.
  3. List all documentation affected, including revision.
  4. Provide all redlined documentation with the FCR within 2 working days.
  5. FCR number will be given by Configuration Control.

- CONTRACTOR -**
1. Cost/schedule impacts must be determined and noted in the space provided. Attach additional details, if necessary.
  2. All FCRs must be signed by the Project Manager.
  3. Submit the FCR to NASA for evaluation and disposition. NOTE: Change may NOT be implemented until written approval is received from the Contracting Officer.

- NASA -**
1. The designated PMD engineer evaluates the change and determines the appropriate disposition.
  2. Submit the FCR to the CCB/TRG for review and concurrence.
  3. All changes that impact cost or schedule must be submitted to the Contracting Officer for approval.
  4. Submit changes that affect configuration to the Configuration Control Board (CCB) within 5 working days.
  5. Provide a copy of the completed FCR to the Contractor.
  6. Provide the original FCR to Configuration Control.

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National Aeronautics and  
Space Administration  
**John C. Stennis Space Center**  
Stennis Space Center, MS 39529-6000



March 5, 2013

Reply to Attn of: **RA10/13-0218DAW**

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Task Order: NNS12AA95T

The following listed Field Change Request (FCR) is being sent to you for cost and schedule impact:

**FCR NNS12AA95T-001:**

Problem: Potable water service will be required for area 9000.

Solution:

- 1) Install a 14" gate valve in the new 14" HDPE potable water line west of the tee shown in Detail 28 (Connection to Existing 14" Water Main) on C-513 at approximately Station 165+15.
- 2) Prior to installing the flowable fill in this existing A-C pipe section, salvage the new 14" gate valve installed in the existing potable water line and remove the new 14" HDPE cross connection pipe located north of the isolation valve. Install a cap on this isolation valve for future extension.

This work falls within the same type of work on the project. An additional AHA is not required.

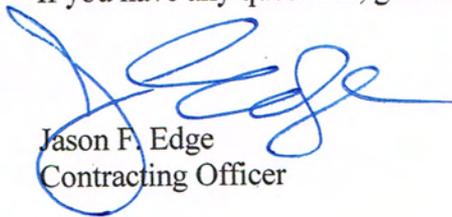
**NOTE: \*\* "ANY COMMENT(S) THAT RESULT IN A CHANGE TO THE CONTRACT COST, SCOPE, OR SCHEDULE YOU MUST NOTIFY THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO IMPLEMENTATION OR ANY COSTS ARE INCURRED."**

This request for pricing does not commit the Government to pay any cost incurred in submitting the price or in making necessary studies or designs for its preparation, nor to contract for service or supplies.

PROPOSALS MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS FCR. THE PENALTY FOR MAKING FALSE STATEMENTS IN PROPOSALS IS PRESCRIBED IN 18 U.S.C. 1001.

In order to expedite these changes, please return a signed copy with cost breakdown to Jason Edge, in the Office of Procurement, DA00, no later than close of business, March 12, 2013.

If you have any questions, give Mr. Dale A. Woolridge a call at ext. 228-688-1655.



Jason F. Edge  
Contracting Officer

cc:

Jacobs-FOSC/ Ms. Johnson  
/ Ms. Smith/Official file



National Aeronautics and  
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John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

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(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

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**Project Manager** \_\_\_\_\_ **Date** \_\_\_\_\_

## DISPOSITION (NASA)

**Evaluation:**

**Construction Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quality Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Safety Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_

CCB Approved for Implementation     Yes     No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
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  5. Provide a copy of the completed FCR to the Contractor.
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## Standalone pricing for FCR-001

Description	Unit	Quantity	Unit Price	Unit Extended
Install 14" Gate Valve Assembly	ea	1	\$9,823.63	\$9,823.63
Install 14" Plug at North Gate Valve	ea	1	\$1,096.78	\$1,096.78
Remove 14" Gate Valve Assembly	ea	1	\$1,007.56	\$1,007.56
Remove 14" HDPE	lf	50	\$15.40	\$770.00

Subtotal:	\$12,697.97
Bond 1.5%	\$190.47
Total FCR-001	<u>\$12,888.44</u>

Summary Page for Proposed Connections Changes

Attachment "B"

Connection Location	Deduct	Add	Delta
501+75	\$ (26,792.32)	\$ 18,418.18	\$ (8,374.14)
164+26	\$ (6,774.15)	\$ 13,265.14	\$ 6,490.99
130+44	\$ (15,877.74)	\$ 15,076.02	\$ (801.72)
921+98	\$ (15,565.13)	\$ 14,517.31	\$ (1,047.82)
947+00	\$ (13,366.58)	\$ 14,226.78	\$ 860.20
976+75	\$ (13,136.73)	\$ 14,538.78	\$ 1,402.05
426+60	\$ (14,144.67)	\$ 14,409.98	\$ 265.31
		Net Cost Change	\$ (1,205.11)

Value Engineering at Tie In  
Sta 501+75, Sheet C421  
Detail 7 - Sheet 505

Description	Unit	Quantity	Unit Price	Unit Extended
<b>DEDUCT</b>				
16 x 16 TEE	EA	-2	\$ 1,202.17	\$ (2,404.34)
16" GATE VALVE	EA	-1	\$ 7,270.27	\$ (7,270.27)
14" GATE VALVE	EA	-1	\$ 7,187.83	\$ (7,187.83)
16 X 14 REDUCER	EA	-1	\$ 714.30	\$ (714.30)
16 X 8 REDUCER	EA	-1	\$ 1,571.30	\$ (1,571.30)
14 45-DEGREE FITTING	EA	-2	\$ 732.85	\$ (1,465.70)
14" TRANSITION FITTING	EA	-1	\$ 1,441.38	\$ (1,441.38)
16" HDPE PIPE	LF	-80	\$ 41.95	\$ (3,356.00)
14" HDPE PIPE	LF	-40	\$ 34.53	\$ (1,381.20)
SUBTOTAL				\$ (26,792.32)

<b>ADD</b>				
16 X 8 TEE	EA	1	\$ 696.60	\$ 696.60
8 x 8 TEE	EA	1	\$ 1,044.99	\$ 1,044.99
8" VALVE	EA	1	\$ 2,060.30	\$ 2,060.30
8 X 4 REDUCER	EA	1	\$ 621.10	\$ 621.10
4" MJ ADAPTOR	EA	1	\$ 96.84	\$ 96.84
14 X 4 TAPPING ASSEMBLY	EA	1	\$ 5,565.20	\$ 5,565.20
4" BACK FLOW DEVICE	EA	1	\$ 6,062.66	\$ 6,062.66
4" MJ CAP	EA	1	\$ 96.84	\$ 96.84
4" MJ 90 DEGREE FITTING	EA	1	\$ 96.84	\$ 96.84
4" C900	LF	40	\$ 12.88	\$ 515.20
8" HDPE	LF	80	\$ 19.52	\$ 1,561.60
SUBTOTAL				\$ 18,418.18

Net Cost Change \$ (8,374.14)

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Value Engineering at Tie In  
 Sta 164+26, Sheet C405  
 Detail 28 - Sheet 513

Description	Unit	Quantity	Unit Price	Unit Extended
<b>DEDUCT</b>				
14 x 14 TEE	EA	-1	\$ 1,044.49	\$ (1,044.49)
14 45-DEGREE FITTING	EA	-2	\$ 732.85	\$ (1,465.70)
14" TRANSITION FITTING	EA	-2	\$ 1,441.38	\$ (2,882.76)
14" HDPE PIPE	LF	-40	\$ 34.53	\$ (1,381.20)
			SUBTOTAL	\$ (6,774.15)
<b>ADD</b>				
14 x 4 tapped cap	EA	1	\$ 734.70	\$ 734.70
4" MJ ADAPTOR	EA	1	\$ 96.84	\$ 96.84
14 X 4 TAPPING ASSEMBLY	EA	1	\$ 5,565.20	\$ 5,565.20
4" BACK FLOW DEVICE	EA	1	\$ 6,062.66	\$ 6,062.66
4" MJ CAP	EA	1	\$ 96.84	\$ 96.84
4" MJ 45 DEGREE FITTING	EA	2	\$ 96.84	\$ 193.69
4" C900	LF	40	\$ 12.88	\$ 515.20
			SUBTOTAL	\$ 13,265.14
			Net Cost Change	\$ 6,490.99

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Value Engineering at Tie In  
Sta 130+44, Sheet C403  
Detail 4 - Sheet C514

Description	Unit	Quantity	Unit Price	Unit Extended
<b>DEDUCT</b>				
16" GATE VALVE	EA	-1	\$ 7,270.27	\$ (7,270.27)
16 X 14 REDUCER	EA	-1	\$ 714.30	\$ (714.30)
16" 90-DEGREE FITTING	EA	-1	\$ 999.97	\$ (999.97)
16" 45-DEGREE FITTING	EA	-4	\$ 838.58	\$ (3,354.32)
14" TRANSITION FITTING	EA	-1	\$ 1,441.38	\$ (1,441.38)
16" HDPE PIPE	LF	-50	\$ 41.95	\$ (2,097.50)
			SUBTOTAL	\$ (15,877.74)
<b>ADD</b>				
16x4 Reducer	EA	1	\$ 1,571.30	\$ 1,571.30
4" MJ VALVE	EA	1	\$ 651.80	\$ 651.80
4" MJ ADAPTOR	EA	1	\$ 96.84	\$ 96.84
14 X 4 TAPPING ASSEMBLY	EA	1	\$ 5,565.20	\$ 5,565.20
4" BACK FLOW DEVICE	EA	1	\$ 6,062.66	\$ 6,062.66
4" MJ CAP	EA	1	\$ 96.84	\$ 96.84
4" MJ 45 DEGREE FITTING	EA	4	\$ 96.84	\$ 387.38
4" C900	LF	50	\$ 12.88	\$ 644.00
			SUBTOTAL	\$ 15,076.02
			Net Cost Change	\$ (801.72)

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Value Engineering at Tie In  
Sta 921+98, Sheet C410  
Detail 25 - Sheet 512

Description	Unit	Quantity	Unit Price	Unit Extended
<b>DEDUCT</b>				
14 x 14 TEE	EA	-1	\$ 1,044.49	\$ (1,044.49)
14" GATE VALVE	EA	-1	\$ 7,187.83	\$ (7,187.83)
14 X 12 REDUCER	EA	-1	\$ 671.63	\$ (671.63)
14 90-DEGREE FITTING	EA	-1	\$ 864.55	\$ (864.55)
14 45-DEGREE FITTING	EA	-4	\$ 732.85	\$ (2,931.40)
12" TRANSITION FITTING	EA	-1	\$ 1,138.73	\$ (1,138.73)
14" HDPE PIPE	LF	-50	\$ 34.53	\$ (1,726.50)
			SUBTOTAL	\$ (15,565.13)
<b>ADD</b>				
14x4 Tee	EA	1	\$ 1,324.59	\$ 1,324.59
4" MJ VALVE	EA	1	\$ 651.80	\$ 651.80
4" MJ ADAPTOR	EA	1	\$ 96.84	\$ 96.84
12 X 4 TAPPING ASSEMBLY	EA	1	\$ 5,253.20	\$ 5,253.20
4" BACK FLOW DEVICE	EA	1	\$ 6,062.66	\$ 6,062.66
4" MJ CAP	EA	1	\$ 96.84	\$ 96.84
4" MJ 45 DEGREE FITTING	EA	4	\$ 96.84	\$ 387.38
4" C900	LF	50	\$ 12.88	\$ 644.00
			SUBTOTAL	\$ 14,517.31
			Net Cost Change	\$ (1,047.82)

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Value Engineering at Tie In  
Sta 947+00, Sheet C412  
Detail 21 - Sheet 511

Description	Unit	Quantity	Unit Price	Unit Extended
<b>DEDUCT</b>				
14 x 14 TEE	EA	-1	\$ 1,044.49	\$ (1,044.49)
14" GATE VALVE	EA	-1	\$ 7,187.83	\$ (7,187.83)
14 X 12 REDUCER	EA	-1	\$ 671.63	\$ (671.63)
14 90-DEGREE FITTING	EA	-1	\$ 864.55	\$ (864.55)
14 45-DEGREE FITTING	EA	-1	\$ 732.85	\$ (732.85)
12" TRANSITION FITTING	EA	-1	\$ 1,138.73	\$ (1,138.73)
14" HDPE PIPE	LF	-50	\$ 34.53	\$ (1,726.50)
SUBTOTAL				\$ (13,366.58)
<b>ADD</b>				
14x4 Tee	EA	1	\$ 1,324.59	\$ 1,324.59
4" MJ VALVE	EA	1	\$ 651.80	\$ 651.80
4" MJ ADAPTOR	EA	1	\$ 96.84	\$ 96.84
14 X 4 TAPPING ASSEMBLY	EA	1	\$ 5,253.20	\$ 5,253.20
4" BACK FLOW DEVICE	EA	1	\$ 6,062.66	\$ 6,062.66
4" MJ CAP	EA	1	\$ 96.84	\$ 96.84
4" MJ 45 DEGREE FITTING	EA	1	\$ 96.84	\$ 96.84
4" C900	LF	50	\$ 12.88	\$ 644.00
SUBTOTAL				\$ 14,226.78
Net Cost Change				\$ 860.20

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Value Engineering at Tie In  
Sta 976+75, Sheet C414  
Detail 23 - Sheet 511

Description	Unit	Quantity	Unit Price	Unit Extended
<b>DEDUCT</b>				
16 x 16 TEE	EA	-1	\$ 1,202.17	\$ (1,202.17)
14" GATE VALVE	EA	-1	\$ 7,187.83	\$ (7,187.83)
16 X 14 REDUCER	EA	-1	\$ 714.30	\$ (714.30)
14 90-DEGREE FITTING	EA	-1	\$ 864.55	\$ (864.55)
14" TRANSITION FITTING	EA	-1	\$ 1,441.38	\$ (1,441.38)
14" HDPE PIPE	LF	-50	\$ 34.53	\$ (1,726.50)
SUBTOTAL				\$ (13,136.73)
<b>ADD</b>				
16x4 TEE	EA	1	\$ 1,324.59	\$ 1,324.59
4" MJ VALVE	EA	1	\$ 651.80	\$ 651.80
4" MJ ADAPTOR	EA	1	\$ 96.84	\$ 96.84
14 X 4 TAPPING ASSEMBLY	EA	1	\$ 5,565.20	\$ 5,565.20
4" BACK FLOW DEVICE	EA	1	\$ 6,062.66	\$ 6,062.66
4" MJ CAP	EA	1	\$ 96.84	\$ 96.84
4" MJ 45 DEGREE FITTING	EA	1	\$ 96.84	\$ 96.84
4" C900	LF	50	\$ 12.88	\$ 644.00
SUBTOTAL				\$ 14,538.78
Net Cost Change				\$ 1,402.05

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Value Engineering at Tie In  
Sta 426+60, Sheet C420  
Detail 22 - Sheet 511

Description	Unit	Quantity	Unit Price	Unit Extended
<b>DEDUCT</b>				
16 x 16 TEE	EA	-1	\$ 1,202.17	\$ (1,202.17)
16" GATE VALVE	EA	-1	\$ 7,270.27	\$ (7,270.27)
16 X 14 REDUCER	EA	-1	\$ 714.30	\$ (714.30)
16" 90-DEGREE FITTING	EA	-1	\$ 999.97	\$ (999.97)
16" 45-DEGREE FITTING	EA	-1	\$ 838.58	\$ (838.58)
14" TRANSITION FITTING	EA	-1	\$ 1,441.38	\$ (1,441.38)
16" HDPE PIPE	LF	-40	\$ 41.95	\$ (1,678.00)
SUBTOTAL				\$ (14,144.67)
<b>ADD</b>				
16x4 TEE	EA	1	\$ 1,324.59	\$ 1,324.59
4" MJ VALVE	EA	1	\$ 651.80	\$ 651.80
4" MJ ADAPTOR	EA	1	\$ 96.84	\$ 96.84
14 X 4 TAPPING ASSEMBLY	EA	1	\$ 5,565.20	\$ 5,565.20
4" BACK FLOW DEVICE	EA	1	\$ 6,062.66	\$ 6,062.66
4" MJ CAP	EA	1	\$ 96.84	\$ 96.84
4" MJ 45 DEGREE FITTING	EA	1	\$ 96.84	\$ 96.84
4" C900	LF	40	\$ 12.88	\$ 515.20
SUBTOTAL				\$ 14,409.98
Net Cost Change				\$ 265.31

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10145 Southpark Drive ♦ Gulfport, MS 39503 ♦ Phone (228) 896-7310 ♦ Fax (228) 896-7312

**Attachment – “A”**

**Purpose**

S. H. Anthony, Inc., (SHA), has further reviewed the temporary connection points at various points in the new water system. There are 7 temporary connections, as per the plans SHA would have to shut down the main loop system to install these connections, additionally the new system would have to be flushed, disinfected and testing prior to making the proposed connections. SHA feels that these connections need to be modified as we have outlined below, to eliminate the system shut down and to provide the proper amount of water flow for flushing, disinfection and testing. The connection points per plan are listed below.

Phase Number	Drawing Sheet No.	Detail Sheet No.	Station Number	Existing Pipe Size
1	C421	Detail 7 – Sheet C505	501+75	14 inch
2	C405	Detail 28 – Sheet C513	164+26	14 inch
3	C403	Detail 4 – Sheet C514	130+44	14 Inch
5	C410	Detail 25 – Sheet C512	921+98	12 inch
5/6	C412	Detail 21 – Sheet C511	947+00	12 inch
5	C414	Detail 23 – Sheet C511	976+75	14 inch
6	C420	Detail 22 – Sheet C511	426+60	14 inch

**Proposed Changes**

**Station 501+75**

Per the plans, the final connection at this location is an 8” connection to an existing 8” A-C water main. The branch size from the new main is a 16” line to accommodate the flow from the temporary connection to the existing 14” A-C water main. SHA proposes to change the branch connection size at the new water main from a 16” to an 8” connection. Additionally in place of a 14” temporary connection SHA proposes to install a 14” x 4” tapping saddle and tapping valve at the existing 14” main. We would then install a 4” cross connection device (back flow preventer) and then connect the 4” main to the 8” main. A 4” connection allows for sufficient flow to flush the 16” new water main. Once the new main and 8” service is in surface, SHA would remove the tapping sleeve, valve and back flow preventer and turn over to the owner for their use.

**Net Cost Change – (\$8,374.14)**

**Station 164+26 – Also location for FCR NNS12AA95T – 001**

Per the plans, this would be a temporary connection point to the existing 14” main. Per the FCR-001 request we would need to add a 14” valve to the new main and salvage the 14” valve at the temporary connection. SHA proposes the following, install a 14” x 4” tapping saddle and valve to the existing main, and install a 4” back flow preventer between the tapping valve and the 14” valve on the North side of the new main, via a tapped plug in the new 14” valve. The 14” valve that was to be installed on the existing main can now be moved to the West side of the new “Tee”.

**Net Cost Change - +\$6,490.99**

**Station 130+44**

Per the plans, this would be a temporary connection on the North side of the new 16” main. SHA proposes to install and 14” x 4” tapping saddle and valve to the existing main, install a 4” back flow preventer between the tapping valve and the North side of the 16” cross to a 4” gate valve which can be shut off and plugged after the new system in in service.

**Net Cost Change – (\$801.72)**

**Station 921+98**

Per the plans, this would be a temporary connection on the North side of the new 14" main. SHA proposes to install and 12" x 4" tapping saddle and valve to the existing main, install a 4" back flow preventer between the tapping valve and the North side of the 14" "Tee" to a 4" gate valve which can be shut off and plugged after the new system in in service.

**Net Cost Change – (\$1,047.82)**

**Station 947+00**

Per the plans, this would be a temporary connection on the North side of the new 14" main. SHA proposes to install and 12" x 4" tapping saddle and valve to the existing main, install a 4" back flow preventer between the tapping valve and the North side of the 14" "Tee" to a 4" gate valve which can be shut off and plugged after the new system in in service.

**Net Cost Change - + \$860.20**

**Station 976+75**

Per the plans, this would be a temporary connection on the North side of the new 14" main. SHA proposes to install and 14" x 4" tapping saddle and valve to the existing main, install a 4" back flow preventer between the tapping valve and the North side of the 14" "Tee" to a 4" gate valve which can be shut off and plugged after the new system in in service.

**Net Cost Change - + \$1,402.05**

**Station 426+60**

Per the plans, this would be a temporary connection on the East side of the new 16" main. SHA proposes to install and 14" x 4" tapping saddle and valve to the existing main, install a 4" back flow preventer between the tapping valve and the East side of the 16" "Tee" to a 4" gate valve which can be shut off and plugged after the new system in in service.

**Net Cost Change - + \$265.31**

**Summary**

The proposed changes will allow the existing system to remain in service without interruption for the flushing, disinfecting and testing of the new system. Cross contamination protection at the connection points will protect the existing system and provide the water supply needed to flush the new system. This proposal includes the FCR-001 work as a part of the requested changes without additional cost, in fact there will be a credit issued.

**Net Proposed Cost Change – (\$1,205.11)**



10145 Southpark Drive ♦ Gulfport, MS 39503 ♦ Phone (228) 896-7310 ♦ Fax (228) 896-7312

March 8, 2013

(b)(6)

Sauer Incorporated  
11223 Phillips Parkway Drive East  
Jacksonville, Fla. 32256

RE: Contract No. NNS12AA83B / NNS12AA95T /  
FCR NNS12AA95T -001  
Potable Water System Upgrade,  
John C. Stennis Space Center, MS

Dear

(b)(6)

Per the referenced Field Change Request (FCR), S. H. Anthony, Inc. (SHA) is submitting a proposal that includes the work associated with this request. In addition, SHA has reviewed the current design for the temporary connection throughout the entire project and submits in this proposal a value engineering request for these temporary connections.

In each phase of the project there is a proposed temporary connection that will in turn have to be removed during the pipe abandonment work. SHA has attached a proposed temporary connection change at each of these locations. (Attachment "A") Per the current design, the temporary connections will require 7-each water shut downs, these shut downs will potentially cause an issue for chlorination and disinfection, in that when a water main is depressurized and drained, sediment build up will be released and when the main is returned to pressure the water can become cloudy and or become non-potable as a result.

SHA has also reviewed the current water source availability for flushing the new lines and have determined that there is not a sufficient number for fire hydrants to properly fill and flush the line. Most of the fire hydrants at SSC are in close proximity to the buildings, the new water mains are mostly along the right-of-ways and a great distance from the existing hydrants.

SHA has attached detail drawings for each proposed new temporary connections. (Attachment "B") In brief summary of these changes, SHA would install a 4-inch hot tap to the existing lines at the temporary connection points. We would also install a 4-inch back flow preventer adjacent to the tap, this would allow for the filling and flushing of the new lines giving the existing system cross connection protection. We would then install 4-inch, C900 PVC pipe from the back flow preventer to the new lines, at the connection point on the new line we would install a valve that will be shut down and plugged as the new lines come into service. All of the 4-inch tapping saddles, valves and back flow preventers will be salvaged and turned over to SSC for future use.

If the proposed changes are incorporated, we can eliminate seven (7) system shut downs, provide an adequate water supply for flushing and disinfection, provide seven (7) each 4-inch hot tap saddles and back flow devices for future use. Also this will include the work associated with the FCR-001 request for credit amount of (\$1,205.11)

**State Certified and Licensed Contractor**

[www.shanthyinc.com](http://www.shanthyinc.com)

Please see the attached detailed price breakdown and proposed change drawing of each temporary connection. Also attached is the product information for the tapping saddle, back flow preventer, C900 PVC pipe and the ductile iron fittings.

The proposed cost for I-CR NNS12AA95T-001 is..... (\$1,205.11)

If you have any questions please feel free to give me a call.

Sincerely,

(b)(6)

Project Manager  
SH Anthony, Inc.



11223 phillips parkway drive. east  
jacksonville. florida 32256

P: 904.262.6444

F: 904.268.6156

www.sauer-inc.com

March 11th, 2013

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: Jason Edge, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-001, Installation of Gate Valve to Facilitate the Potable Water Upgrades**

Mr. Edge,

We herein submit our formal cost proposal covering the cost to furnish, and install all work as detailed in FCR-001 and as indicated in section A-A within the FCR. The work includes the installation of a new 14" gate valve, and then salvaging the new 14" gate valve installed in the existing water line, and removing the new HDPE cross section pipe located north of the isolation valve. A cap will also be installed for future expansion.

We received an official FCR for this work on March 5<sup>th</sup>, 2013.. Our cost proposal contains breakdowns from Sauer and our subcontractor SH Anthony.

We are currently not requesting additional time to complete this work.

If you have any questions or wish to discuss further do not hesitate to call us directly.  
Sincerely,

(b)(6)

Project Manager

CONTRACT TITLE:

NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

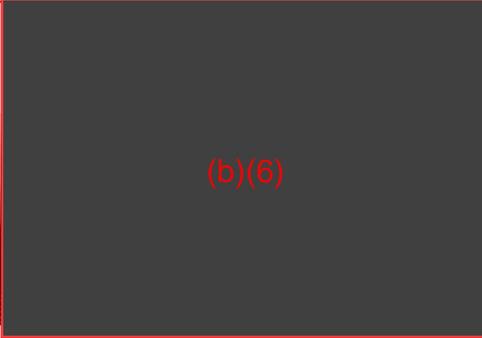
DESCRIPTION:

FCR-001, Installation of Gate Valve to Facilitate the Potable Water Upgrades

PRIME CONTRACTOR'S WORK

Revisions/Comments

- 1. Direct Materials
- 2. Sales Tax on Materials            \_\_% of line 1
- 3. Direct Labor
- 4. Insurance, Taxes, and Fringe Benefits    \_\_% of line 3
- 5. Rental Equipment
- 6. Sales Tax on Rental Equipment        \_\_% of line 5
- 7. Equipment Ownership and Operating Expenses
- 8. SUBTOTAL ( add lines 1 - 7)
- 9. Field Overhead                    \_\_% of line 8
- 10. SUBTOTAL (Add lines 8 & 9)



Prime Remarks:

SUBCONTRACTOR'S WORK

- 11. Direct Materials
- 12. Sales Tax on Materials            \_\_% of line 11
- 13. Direct Labor
- 14. Insurance, Taxes, and Fringe Benefits    \_\_% of line 13
- 15. Rental Equipment
- 16. Sales Tax on Rental Equipment        \_\_% of line 15
- 17. Equipment Ownership and Operating Expenses
- 18. SUBTOTAL ( add lines 11 - 17)
- 19. Field Overhead                    \_\_% of line 18
- 20. SUBTOTAL (Add lines 18 & 19)
- 21. Home Office Overhead            \_\_% of line 20
- 22. Profit                                \_\_% of line 20
- 23. SUBTOTAL (Add Lines 20-22)

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12,888			

Sub's Remarks:                   SH Anthony                   \$12,888.40

SUMMARY

- 24. Prime Contractor's Work (from Line 10)
- 25. Sub-Contractor's Work (from line 23)
- 26. SUBTOTAL (add lines 24 & 25)
- 27. Prime Overhead                    % of Line 25
- 28. Prime Profit                        % of Line 24
- 29. Gross Receipts Tax                % of Line 26
- 30. SUBTOTAL (add lines 26 -29)
- 31. Prime Contractor's Bond Premium    % of Line 30
- 32. TOTAL COST (Add Lines 30 & 31)



Estimated time extension and justification  
None at this time.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
Subcontractor:



*Project Engineer*

Date 3/11/13



10145 Southpark Drive ♦ Gulfport, MS 39503 ♦ Phone (228) 896-7310 ♦ Fax (228) 896-7312

11 March 2013

Mr. (b)(6)  
Sauer Incorporated  
11223 Phillips Parkway Drive East  
Jacksonville, Fla. 32256

RE: Contract No. NNS12AA83B / NNS12AA951  
Reference: FCR-001  
Potable Water System Upgrade,  
John C. Stennis Space Center, MS

Dear Mr. (b)(6)

S.H. Anthony offers the attached proposal to accomplish the work described in the issued Field Change Request (FCR-001).

Description	Unit	Quantity	Unit Price	Unit Extended
Install 14" Gate Valve Assembly	ea	1	\$9,823.63	\$9,823.63
Install 14" Plug at North Gate Valve	ea	1	\$1,096.78	\$1,096.78
Remove 14" Gate Valve Assembly	ea	1	\$1,007.56	\$1,007.56
Remove 14" HDPE	lf	50	\$15.40	\$770.00

Subtotal:	\$12,697.97
Bond 1.5%	\$190.47
<b>Total FCR-001</b>	<b>\$12,888.44</b>

(b)(6)

Project Manager  
SH Anthony, Inc.



11223 phillips parkway drive. east  
jacksonville. florida 32256

P: 904.262.6444

F: 904.268.6156

www.sauer-inc.com

March 11th, 2013

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: Jason Edge, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-001, Installation of Gate Valve to Facilitate the Potable Water Upgrades**

Mr. Edge,

We herein submit our formal cost proposal covering the cost to furnish, and install all work as detailed in FCR-001 and as indicated in section A-A within the FCR. The work includes the installation of a new 14" gate valve, and then salvaging the new 14" gate valve installed in the existing water line, and removing the new HDPE cross section pipe located north of the isolation valve. A cap will also be installed for future expansion.

We received an official FCR for this work on March 5<sup>th</sup>, 2013.. Our cost proposal contains breakdowns from Sauer and our subcontractor SH Anthony.

We are currently not requesting additional time to complete this work.

If you have any questions or wish to discuss further do not hesitate to call us directly.  
Sincerely,

(b)(6)

Project Manager

CONTRACT TITLE:

NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

DESCRIPTION:

FCR-001, Installation of Gate Valve to Facilitate the Potable Water Upgrades

PRIME CONTRACTOR'S WORK

Revisions/Comments

- 1. Direct Materials
- 2. Sales Tax on Materials            \_\_% of line 1
- 3. Direct Labor
- 4. Insurance, Taxes, and Fringe Benefits    \_\_% of line 3
- 5. Rental Equipment
- 6. Sales Tax on Rental Equipment        \_\_% of line 5
- 7. Equipment Ownership and Operating Expenses
- 8. SUBTOTAL ( add lines 1 - 7)
- 9. Field Overhead                    \_\_% of line 8
- 10. SUBTOTAL (Add lines 8 & 9)



Prime Remarks:

SUBCONTRACTOR'S WORK

- 11. Direct Materials
- 12. Sales Tax on Materials            \_\_% of line 11
- 13. Direct Labor
- 14. Insurance, Taxes, and Fringe Benefits    \_\_% of line 13
- 15. Rental Equipment
- 16. Sales Tax on Rental Equipment        \_\_% of line 15
- 17. Equipment Ownership and Operating Expenses
- 18. SUBTOTAL ( add lines 11 - 17)
- 19. Field Overhead                    \_\_% of line 18
- 20. SUBTOTAL (Add lines 18 & 19)
- 21. Home Office Overhead            \_\_% of line 20
- 22. Profit                                \_\_% of line 20
- 23. SUBTOTAL (Add Lines 20-22)

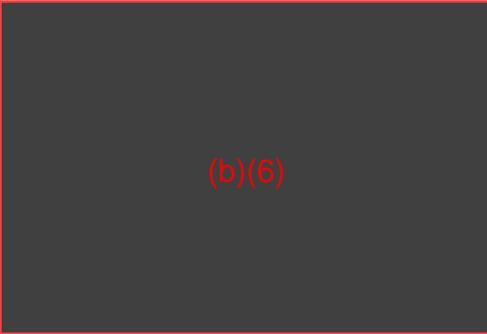
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0.00%	0	0	0
10.00%	0	0	0
12,888			

Sub's Remarks:

SH Anthony                   \$12,888.40

SUMMARY

- 24. Prime Contractor's Work (from Line 10)
- 25. Sub-Contractor's Work (from line 23)
- 26. SUBTOTAL (add lines 24 & 25)
- 27. Prime Overhead                    % of Line 25
- 28. Prime Profit                        % of Line 24
- 29. Gross Receipts Tax                % of Line 26
- 30. SUBTOTAL (add lines 26 -29)
- 31. Prime Contractor's Bond Premium    % of Line 30
- 32. TOTAL COST (Add Lines 30 & 31)



Estimated time extension and justification  
None at this time.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
Subcontractor:



*Project Engineer*

Date 3/11/13



10145 Southpark Drive ♦ Gulfport, MS 39503 ♦ Phone (228) 896-7310 ♦ Fax (228) 896-7312

11 March 2013

Mr. (b)(6)  
Sauer Incorporated  
11223 Phillips Parkway Drive East  
Jacksonville, Fla. 32256

RE: Contract No. NNS12AA83B / NNS12AA951  
Reference: FCR-001  
Potable Water System Upgrade,  
John C. Stennis Space Center, MS

Dear Mr. (b)(6)

S.H. Anthony offers the attached proposal to accomplish the work described in the issued Field Change Request (FCR-001).

Description	Unit	Quantity	Unit Price	Unit Extended
Install 14" Gate Valve Assembly	ea	1	\$9,823.63	\$9,823.63
Install 14" Plug at North Gate Valve	ea	1	\$1,096.78	\$1,096.78
Remove 14" Gate Valve Assembly	ea	1	\$1,007.56	\$1,007.56
Remove 14" HDPE	lf	50	\$15.40	\$770.00

Subtotal:	\$12,697.97
Bond 1.5%	\$190.47
<b>Total FCR-001</b>	<b>\$12,888.44</b>

(b)(6)

Project Manager  
SH Anthony, Inc.

National Aeronautics and  
Space Administration  
**John C. Stennis Space Center**  
Stennis Space Center, MS 39529-6000



May 29, 2013

Reply to Attn of: **RA10/13-0803DAW**

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Task Order: NNS12AA95T

The following listed Field Change Request (FCR) is being sent to you for cost and schedule impact:

**FCR NNS12AA95T-010:**

Problem: The contract documents do not have requirements to label the underground valves.

Solution:

Contractor to label each underground valve as follows: Each valve tag to be stamped according to the attached referenced valve schedule.

- Tags shall be 2x4x1/16" engraved or stamped with the number indicated on the attached schedule.
- Tags and fasteners shall be made of brass or stainless steel.
- Text shall be "sans serif"; font letters shall be 1/2" tall.
- Sample tags shall be provided to the government for approval.

AHA is not required for this work.

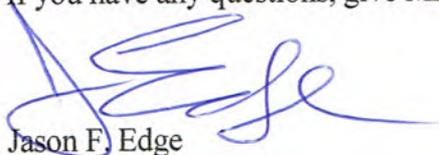
**NOTE: \*\* "ANY COMMENT(S) THAT RESULT IN A CHANGE TO THE CONTRACT COST, SCOPE, OR SCHEDULE YOU MUST NOTIFY THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO IMPLEMENTATION OR ANY COSTS ARE INCURRED."**

This request for pricing does not commit the Government to pay any cost incurred in submitting the price or in making necessary studies or designs for its preparation, nor to contract for service or supplies.

PROPOSALS MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS FCR. THE PENALTY FOR MAKING FALSE STATEMENTS IN PROPOSALS IS PRESCRIBED IN 18 U.S.C. 1001.

In order to expedite these changes, please return a signed copy with cost breakdown to Jason Edge, in the Office of Procurement, DA00, no later than close of business, June 6, 2013.

If you have any questions, give Mr. Dale A. Woolridge a call at ext. 228-688-1655.



Jason F. Edge  
Contracting Officer

cc:  
Jacobs-FOSC/  fficial file



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-010

**Contractor** Sauer  
**Initiator/Company** (b)(6) Jacobs  
**Spec./Section** n/a

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** ref. valve schedule  
**Date** 5/17/2013

**Description of problem and recommended change:**  
**Potable Water System Upgrades**

The contract documents do not have requirements to label the underground valves.

Contractor to label each underground valve as follows - each valve tag to be stamped according to the attached referenced valve schedule.

Tags shall be 2x4x1/16" engraved or stamped with the number indicated on the attached schedule. Tags and fasteners shall be made of brass or stainless steel. Text shall be "sans serif" font, letters shall be 1/2" tall. Sample tag shall be provided to the government for approval.

AHA not required for this work.

**Cost Impact**  No  Yes **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**  No  Yes **No. of Days** \_\_\_\_\_  
**Project Manager** \_\_\_\_\_ **Date** \_\_\_\_\_

## DISPOSITION (NASA)

**Evaluation:**

**Construction Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quality Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Safety Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
1.	600 - PW	16	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
2.	601 - PW	14	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
3.	602 - PW	16	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
4.	603 - PW	14	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
5.	604 - PW	8	GV	C-401-	C-504-3	Saturn Drive	GV = Gate Valve
6.	605 - PW	8	GV	C-401-	C-504-3	Saturn Drive	GV = Gate Valve
7.	606 - PW	2	ARV	C-401-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
8.	606 A - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
9.	606 B - PW	1	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
10.	606 C - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
11.	606 D - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
12.	607 - PW	2	ARV	C-401-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
13.	607 A - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
14.	607 B - PW	1	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
15.	607 C - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
16.	607 D - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
17.	608 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
18.	609 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
19.	610 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
20.	611 - PW	2	ARV	C-410-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
21.	611 A - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
22.	611 B - PW	1	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
23.	611 C - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
24.	611 D - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
25.	612 - PW	2	ARV	C-410-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
26.	612 A - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
27.	612 B - PW	1	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
28.	612 C - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
29.	612 D - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
30.	613 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
31.	614 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
32.	615 - PW	8	GV	C-410-	C-513-26	"J" Road	GV = Gate Valve
33.	616 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
34.	617 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
35.	618 - PW	2	ARV	C-411-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
36.	618 A - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
37.	618 B - PW	1	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
38.	618 C - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
39.	618 D - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
40.	619 - PW	2	ARV	C-411-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
41.	619 A - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
42.	619 B - PW	1	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
43.	619 C - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
44.	619 D - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
45.	620 - PW	14	GV	C-411-		"J" Road	GV = Gate Valve
46.	621 - PW	8	GV	C-411-	C-508-15	"J" Road	GV = Gate Valve
47.	622 - PW	12	GV	C-411-	C-508-15	"J" Road	GV = Gate Valve
48.	623 - PW	14	GV	C-412-	C-509-16	"J" Road	GV = Gate Valve
49.	624 - PW	14	GV	C-412-	C-505-36	"J" Road	GV = Gate Valve
50.	625 - PW	14	GV	C-412-	C-518-5	"J" Road	GV = Gate Valve
51.	626 - PW	14	GV	C-412-	C-518-5	"J" Road	GV = Gate Valve
52.	627 - PW	16	GV	C-412-	C-518-5	"J" Road	GV = Gate Valve
53.	628 - PW	2	ARV	C-412-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
54.	628 A - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
55.	628 B - PW	1	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
56.	628 C - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
57.	628 D - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
58.	629 - PW	2	ARV	C-412-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
59.	629 A - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
60.	629 B - PW	1	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
61.	629 C - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
62.	629 D - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
63.	630 - PW	2	ARV	C-412-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
64.	630 A - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
65.	630 B - PW	1	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
66.	630 C - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
67.	630 D - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
68.	631 - PW	2	ARV	C-402-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
69.	631 A - PW	2	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
70.	631 B - PW	1	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
71.	631 C - PW	2	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
72.	631 D - PW	2	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
73.	632 - PW	8	GV	C-402-	C-514-30	Saturn Drive	GV = Gate Valve
74.	633 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
75.	634 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
76.	635 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
77.	636 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
78.	637 - PW	6	GV	C-403-	C-512-37	Saturn Drive	GV = Gate Valve

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
79.	638 - PW	2	ARV	C-403-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
80.	638 A - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
81.	638 B - PW	1	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
82.	638 C - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
83.	638 D - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
84.	639 - PW	2	ARV	C-403-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
85.	639 A - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
86.	639 B - PW	1	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
87.	639 C - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
88.	639 D - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
89.	640 - PW	2	ARV	C-404-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
90.	640 A - PW	2	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
91.	640 B - PW	1	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
92.	640 C - PW	2	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
93.	640 D - PW	2	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
94.	641 - PW	16	GV	C-404-		Saturn Drive	GV = Gate Valve
95.	642 - PW	14	GV	C-404-		Saturn Drive	GV = Gate Valve
96.	643 - PW	12	GV	C-404-	C-514-34	Saturn Drive	GV = Gate Valve
97.	644 - PW	2	ARV	C-405-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
98.	644 A - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
99.	644 B - PW	1	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
100.	644 C - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
101.	644 D - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
102.	645 - PW	2	ARV	C-405-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
103.	645 A - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
104.	645 B - PW	1	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
105.	645 C - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
106.	645 D - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
107.	646 - PW	14	GV	C-405-	C-513-28	Saturn Drive	GV = Gate Valve
108.	647 - PW	14	GV	C-405-	C-513-28	Saturn Drive	GV = Gate Valve
109.	648 - PW	14	GV	C-405-	C-513-28	Saturn Drive	GV = Gate Valve
110.	649 - PW	14	GV	C-405-	C-517-3	Saturn Drive	GV = Gate Valve
111.	650 - PW	16	GV	C-405-	C-517-3	Saturn Drive	GV = Gate Valve
112.	651 - PW	16	GV	C-405-	C-517-3	Saturn Drive	GV = Gate Valve
113.	652 - PW	2	ARV	C-406-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
114.	652 A - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
115.	652 B - PW	1	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
116.	652 C - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
117.	652 D - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
118.	653 - PW	2	ARV	C-406-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
119.	653 A - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
120.	653 B - PW	1	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
121.	653 C - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
122.	653 D - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
123.	654 - PW	14	GV	C-406-		Saturn Drive	GV = Gate Valve
124.	655 - PW	8	GV	C-406-	C-505-8	Saturn Drive	GV = Gate Valve
125.	656 - PW	8	GV	C-406-	C-505-8	Saturn Drive	GV = Gate Valve
126.	657 - PW	8	GV	C-406-	C-506-35	Saturn Drive	GV = Gate Valve
127.	658 - PW	2	ARV	C-407-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
128.	658 A - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
129.	658 B - PW	1	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
130.	658 C - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
131.	658 D - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
132.	659 - PW	2	ARV	C-407-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
133.	659 A - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
134.	659 B - PW	1	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
135.	659 C - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
136.	659 D - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
137.	660 - PW	2	ARV	C-407-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
138.	660 A - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
139.	660 B - PW	1	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
140.	660 C - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
141.	660 D - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
142.	661 - PW	14	GV	C-407-	C-507-12	Saturn Drive	GV = Gate Valve
143.	662 - PW	12	GV	C-407-	C-507-12	Saturn Drive	GV = Gate Valve
144.	663 - PW	8	GV	C-407-	C-507-13	Saturn Drive	GV = Gate Valve
145.	664 - PW	2	ARV	C-408-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
146.	664 A - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
147.	664 B - PW	1	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
148.	664 C - PW	2	ARVE	C-408-	C-501-4		ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
149.	664 D - PW	2	ARVE	C-408-	C-501-4		ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
150.	665 - PW	2	ARV	C-408-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
151.	665 A - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
152.	665 B - PW	1	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
153.	665 C - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
154.	665 D - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
155.	666 - PW	14	GV	C-408-		Saturn Drive	GV = Gate Valve
156.	667 - PW	12	GV	C-408-	C-507-14	Saturn Drive	GV = Gate Valve
157.	668 - PW	2	ARV	C-409-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
158.	668 A - PW	2	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
159.	668 B - PW	1	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
160.	668 C - PW	2	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
161.	668 D - PW	2	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
162.	669 - PW	16	GV	C-413-	C-509-18	"J" Road	GV = Gate Valve
163.	670 - PW	8	GV	C-413-	C-509-18	"J" Road	GV = Gate Valve
164.	671 - PW	14	GV	C-413-	C-509-17	"J" Road	GV = Gate Valve
165.	672 - PW	2	ARV	C-414-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
166.	672 A - PW	2	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
167.	672 B - PW	1	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
168.	672 C - PW	2	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
169.	672 D - PW	2	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
170.	673 - PW	14	GV	C-414-	C-505-7	"J" Road	GV = Gate Valve
171.	674 - PW	8	GV	C-414-	C-505-7	"J" Road	GV = Gate Valve
172.	675 - PW	16	GV	C-414-	C-505-7	"J" Road	GV = Gate Valve
173.	676 - PW	8	GV	C-414-	C-504-5	"J" Road	GV = Gate Valve
174.	677 - PW	14	GV	C-414-	C-511-23	"J" Road	GV = Gate Valve
175.	678 - PW	16	GV	C-414-	C-511-23	"J" Road	GV = Gate Valve
176.	679 - PW	2	ARV	C-415-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
177.	679 A - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
178.	679 B - PW	1	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
179.	679 C - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
180.	679 D - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
181.	680 - PW	2	ARV	C-415-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
182.	680 A - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
183.	680 B - PW	1	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
184.	680 C - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
185.	680 D - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
186.	681 - PW	14	GV	C-415-	C-512-24	Trent Lott Parkway	GV = Gate Valve
187.	682 - PW	14	GV	C-415-	C-512-24	Trent Lott Parkway	GV = Gate Valve
188.	683 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
189.	684 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
190.	685 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
191.	686 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
192.	687 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
193.	688 - PW	14	GV	C-416-		Trent Lott Parkway	GV = Gate Valve
194.	689 - PW	14	GV	C-417-		Trent Lott Parkway	GV = Gate Valve
195.	690 - PW	14	GV	C-417-		Trent Lott Parkway	GV = Gate Valve
196.	691 - PW	16	GV	C-417-	C-504-4	Trent Lott Parkway	GV = Gate Valve
197.	692 - PW	16	GV	C-417-	C-504-4	Trent Lott Parkway	GV = Gate Valve
198.	693 - PW	14	GV	C-417-	C-514A-4	Trent Lott Parkway	GV = Gate Valve
199.	694 - PW	2	ARV	C-418-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
200.	695 A - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
201.	695 B - PW	1	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
202.	695 C - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
203.	695 D - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
204.	696 - PW	2	ARV	C-418-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
205.	696 A - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
206.	696 B - PW	1	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
207.	696 C - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
208.	696 D - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
209.	697 - PW	8	GV	C-418-	C-514-30	Balch Blvd	GV = Gate Valve
210.	698 - PW	6	GV	C-418-	C-510-19	Balch Blvd	GV = Gate Valve
211.	699 - PW	8	GV	C-418-	C-513-29	Balch Blvd	GV = Gate Valve
212.	700 - PW	8	GV	C-418-	C-506-9	Balch Blvd	GV = Gate Valve
213.	701 - PW	16	GV	C-418-	C-518-5	Balch Blvd	GV = Gate Valve
214.	702 - PW	14	GV	C-418-	C-518-5	Balch Blvd	GV = Gate Valve
215.	703 - PW	14	GV	C-418-	C-518-5	Balch Blvd	GV = Gate Valve
216.	704 - PW	2	ARV	C-419-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
217.	704 A - PW	2	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
218.	704 B - PW	1	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
219.	704 C - PW	2	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
220.	704 D - PW	2	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
221.	705 - PW	8	GV	C-419-	C-514-30	Balch Blvd	GV = Gate Valve
222.	706 - PW	8	GV	C-419-	C-514-30	Balch Blvd	GV = Gate Valve
223.	707 - PW	8	GV	C-419-	C-514-30	Balch Blvd	GV = Gate Valve
224.	708 - PW	8	GV	C-419-	C-506-10	Balch Blvd	GV = Gate Valve
225.	709 - PW	6	GV	C-419-	C-510-20	Balch Blvd	GV = Gate Valve
226.	710 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
227.	711 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
228.	712 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
229.	713 - PW	2	ARV	C-420-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
230.	713 A - PW	2	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
231.	713 B - PW	1	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
232.	713 C - PW	2	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
233.	713 D - PW	2	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
234.	714 - PW	16	GV	C-420-	C-511-22	Balch Blvd	GV = Gate Valve
235.	715 - PW	16	GV	C-420-	C-511-22	Balch Blvd	GV = Gate Valve

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
236.	716 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
237.	717 - PW	16	GV	C-420-	C-504-6	Balch Blvd	GV = Gate Valve
238.	718 - PW	8	GV	C-420-	C-504-6	Balch Blvd	GV = Gate Valve
239.	719 - PW	8	GV	C-421-	C-505-7	Balch Blvd	GV = Gate Valve
240.	720 - PW	14	GV	C-421-	C-505-7	Propellant Blvd	GV = Gate Valve
241.	721 - PW	16	GV	C-421-	C-505-7	Propellant Blvd	GV = Gate Valve
242.	722 - PW	2	ARV	C-421-	C-501-4	Propellant Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
243.	722 A - PW	2	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
244.	722 B - PW	1	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
245.	722 C - PW	2	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
246.	722 D - PW	2	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
247.	723 - PW	2	ARV	C-422-	C-501-4	Propellant Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
248.	723 A - PW	2	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
249.	723 B - PW	1	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
250.	723 C - PW	2	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
251.	723 D - PW	2	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
252.	724 - PW	8	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
253.	725 - PW	6	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
254.	726 - PW	8	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
255.	727 - PW	6	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
256.	728 - PW	3	GV	C-422-	C-503-1	Propellant Blvd	GV = Gate Valve
257.	729 - PW	3	GV	C-422-	C-422-B	Propellant Blvd	GV = Gate Valve
258.	730 - PW	14	GV	C-423-	C-517-3	Propellant Blvd	GV = Gate Valve
259.	731 - PW	16	GV	C-423-	C-517-3	Propellant Blvd	GV = Gate Valve
260.	732 - PW	16	GV	C-423-	C-517-3	Propellant Blvd	GV = Gate Valve
261.	733 - PW	2	ARV	C-424-	C-501-4	NDBC	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
262.	733 A - PW	2	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
263.	733 B - PW	1	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
264.	733 C - PW	2	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
265.	733 D - PW	2	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
266.	734 - PW	8	GV	C-424-	C-514-32	NDBC	GV = Gate Valve
267.	735 - PW	12	GV	C-424-	C-514-32	NDBC	GV = Gate Valve
268.	736 - PW	2	ARV	C-425-	C-501-4	NDBC	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
269.	736 A - PW	2	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
270.	736 B - PW	1	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
271.	736 C - PW	2	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
272.	736 D - PW	2	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
273.	737 - PW	8	GV	C-425-	C-514-31	NDBC	GV = Gate Valve
274.	736 - PW	2	ARV	C-426-	C-501-4	NDBC	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
275.	736 A - PW	2	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
276.	736 B - PW	1	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
277.	736 C - PW	2	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
278.	736 D - PW	2	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
279.	737 - PW	14	GV	C-426-	C-505-36	NDBC	GV = Gate Valve
280.	738 - PW	14	GV	C-426-		NDBC	GV = Gate Valve
281.	739 - PW	14	GV	C-427-		"H" ROAD	GV = Gate Valve
282.	740 - PW	14	GV	C-427-		"H" ROAD	GV = Gate Valve
283.	741 - PW	2	ARV	C-427-	C-501-4	"H" ROAD	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
284.	741 A - PW	2	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
285.	741 B - PW	1	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
286.	741 C - PW	2	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
287.	741 D - PW	2	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
288.	742 - PW	2	ARV	C-428-	C-501-4	"H" ROAD	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
289.	742 A - PW	2	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
290.	742 B - PW	1	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
291.	742 C - PW	2	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
292.	742 D - PW	2	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
293.	743 - PW	2	ARV	C-429-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
294.	743 A - PW	2	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
295.	743 B - PW	1	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
296.	743 C - PW	2	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
297.	743 D - PW	2	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
298.	744 - PW	14	GV	C-429-		Trent Lott Parkway	GV = Gate Valve
299.	743 - PW	2	ARV	C-430-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
300.	743 A - PW	2	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
301.	743 B - PW	1	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
302.	743 C - PW	2	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
303.	743 D - PW	2	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
304.	744 - PW	14	GV	C-431-		ENDEAVOUR BLVD	GV = Gate Valve
305.	745 - PW	14	GV	C-431-	C-506-11	ENDEAVOUR BLVD	GV = Gate Valve

(b)(6)

(SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]

From: (b)(6) (SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]  
Sent: Monday, May 20, 2013 12:28 PM  
To:

(b)(6)

[Bastion Technologies, Inc.]; MURRAY, MARIO F. (SSC-QA20); (b)(6)  
(b)(6) (SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)] (b)(6)  
(SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]; (b)(6)  
JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]; Rewis, Mike J. (SSC-QA10);  
(b)(6) (SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]; Wheeler,  
Casey S. (SSC-RA10); Woolridge, Dale A. (SSC-RA10)  
Subject: RE: concurrence

This looks acceptable to me but, a engineer needs to concur.

(b)(6)

NDT Level III Quality Engineer

(b)(6)

-----Original Message-----

From: (b)(6) (SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]  
Sent: Monday, May 20, 2013 12:07 PM

(b)(6)

(b)(6) (SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]; MURRAY, MARIO F. (SSC-QA20);

(b)(6)

TECHNOLOGY INC (SSC FOSC)]; Rewis, Mike J. (SSC-QA10); (b)(6) (SSC-JACOBS)[JACOBS  
TECHNOLOGY INC (SSC FOSC)]; (b)(6) (SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)];  
Wheeler, Casey S. (SSC-RA10); Woolridge, Dale A. (SSC-RA10)  
Subject: concurrence  
Importance: High

I need concurrence for the attached FCR 010 for CCB to get ready to go to contractor for cost and schedule.

Thanks

(b)(6)

(b)(6)

SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]

**From:** (b)(6) SSC-BASTIONTECH][Bastion Technologies, Inc.]  
**Sent:** Monday, May 20, 2013 3:15 PM  
**To:**

(b)(6)

TECHNOLOGY INC (SSC FOSC)]; MURRAY, MARIO F. (SSC-QA20); (b)(6)

(b)(6)

(SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]; Rewis, Mike J. (SSC-QA10);  
(b)(6) SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]; Wheeler,  
Casey S. (SSC-RA10); Woolridge, Dale A. (SSC-RA10)  
**Subject:** RE: concurrence

I concur.

Respectfully,

(b)(6)

-----Original Message-----

**From:** (b)(6) (SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]  
**Sent:** Monday, May 20, 2013 12:07 PM

(b)(6)

(b)(6) (SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]; MURRAY, MARIO F. (SSC-QA20);

(b)(6) (SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]; (b)(6)

(SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]; (b)(6) (SSC-JACOBS][JACOBS  
TECHNOLOGY INC (SSC FOSC)]; Rewis, Mike J. (SSC-QA10); (b)(6) (SSC-JACOBS][JACOBS  
TECHNOLOGY INC (SSC FOSC)]; (b)(6) (SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)];  
Wheeler, Casey S. (SSC-RA10); Woolridge, Dale A. (SSC-RA10)

**Subject:** concurrence

**Importance:** High

I need concurrence for the attached FCR 010 for CCB to get ready to go to contractor for cost and schedule.

Thanks

(b)(6)



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-010

Contractor Sauer

Contract No. NNS12AA95T

Initiator/Company (b)(6) Jacobs

EMI No. 11B315-01

Spec./Section n/a

Drawing No. ref. valve schedule

(b)(6) D. Woolridge

Date 5/17/2013

Description of problem and recommended change:  
**Potable Water System Upgrades**

The contract documents do not have requirements to label the underground valves.

Contractor to label each underground valve as follows - each valve tag to be stamped according to the attached referenced valve schedule.

Tags shall be 2x4x1/16" engraved or stamped with the number indicated on the attached schedule. Tags and fasteners shall be made of brass or stainless steel. Text shall be "sans serif" font, letters shall be 1/2" tall. Sample tag shall be provided to the government for approval.

AHA not required for this work.

Cost Impact  No  Yes

Not to Exceed 0

Schedule Impact  No  Yes

No. of Days 0

Project Manager \_\_\_\_\_

Date \_\_\_\_\_

## DISPOSITION (NASA)

Evaluation: Customer Driven Changes / Customer Request

PROJECT MANAGER CONCUR

(b)(6)

CCB CHAIRMAN

D. Woolridge

Construction Engineer

Date 5/29/12

Quality Engineer

Date 5/29/13

Safety Engineer

Date 5/29/13

CCB Approved for Implementation  Yes  No

COTR

Date 5/20/13

Contracting Officer

Date \_\_\_\_\_



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-010

**Contractor** Sauer  
**Initiator/Company** (b)(6) Jacobs  
**Spec./Section** n/a

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** ref. valve schedule  
**Date** 5/17/2013

**Description of problem and recommended change:**  
**Potable Water System Upgrades**

The contract documents do not have requirements to label the underground valves.

Contractor to label each underground valve as follows - each valve tag to be stamped according to the attached referenced valve schedule.

Tags shall be 2x4x1/16" engraved or stamped with the number indicated on the attached schedule. Tags and fasteners shall be made of brass or stainless steel. Text shall be "sans serif" font, letters shall be 1/2" tall. Sample tag shall be provided to the government for approval.

AHA not required for this work.

**Cost Impact**  No  Yes **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**  No  Yes **No. of Days** \_\_\_\_\_  
**Project Manager** \_\_\_\_\_ **Date** \_\_\_\_\_

## DISPOSITION (NASA)

**Evaluation:**

**Construction Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quality Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Safety Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
1.	600 - PW	16	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
2.	601 - PW	14	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
3.	602 - PW	16	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
4.	603 - PW	14	GV	C-401-	C-515-1	Saturn Drive	GV = Gate Valve
5.	604 - PW	8	GV	C-401-	C-504-3	Saturn Drive	GV = Gate Valve
6.	605 - PW	8	GV	C-401-	C-504-3	Saturn Drive	GV = Gate Valve
7.	606 - PW	2	ARV	C-401-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
8.	606 A - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
9.	606 B - PW	1	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
10.	606 C - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
11.	606 D - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
12.	607 - PW	2	ARV	C-401-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
13.	607 A - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
14.	607 B - PW	1	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
15.	607 C - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
16.	607 D - PW	2	ARVE	C-401-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
17.	608 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
18.	609 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
19.	610 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
20.	611 - PW	2	ARV	C-410-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
21.	611 A - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
22.	611 B - PW	1	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
23.	611 C - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
24.	611 D - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
25.	612 - PW	2	ARV	C-410-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
26.	612 A - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
27.	612 B - PW	1	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
28.	612 C - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
29.	612 D - PW	2	ARVE	C-410-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
30.	613 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
31.	614 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
32.	615 - PW	8	GV	C-410-	C-513-26	"J" Road	GV = Gate Valve
33.	616 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
34.	617 - PW	14	GV	C-410-	C-516-2	"J" Road	GV = Gate Valve
35.	618 - PW	2	ARV	C-411-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
36.	618 A - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
37.	618 B - PW	1	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
38.	618 C - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
39.	618 D - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
40.	619 - PW	2	ARV	C-411-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
41.	619 A - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
42.	619 B - PW	1	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
43.	619 C - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
44.	619 D - PW	2	ARVE	C-411-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
45.	620 - PW	14	GV	C-411-		"J" Road	GV = Gate Valve
46.	621 - PW	8	GV	C-411-	C-508-15	"J" Road	GV = Gate Valve
47.	622 - PW	12	GV	C-411-	C-508-15	"J" Road	GV = Gate Valve
48.	623 - PW	14	GV	C-412-	C-509-16	"J" Road	GV = Gate Valve
49.	624 - PW	14	GV	C-412-	C-505-36	"J" Road	GV = Gate Valve
50.	625 - PW	14	GV	C-412-	C-518-5	"J" Road	GV = Gate Valve
51.	626 - PW	14	GV	C-412-	C-518-5	"J" Road	GV = Gate Valve
52.	627 - PW	16	GV	C-412-	C-518-5	"J" Road	GV = Gate Valve
53.	628 - PW	2	ARV	C-412-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
54.	628 A - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
55.	628 B - PW	1	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
56.	628 C - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
57.	628 D - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
58.	629 - PW	2	ARV	C-412-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
59.	629 A - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
60.	629 B - PW	1	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
61.	629 C - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
62.	629 D - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
63.	630 - PW	2	ARV	C-412-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
64.	630 A - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
65.	630 B - PW	1	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
66.	630 C - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
67.	630 D - PW	2	ARVE	C-412-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
68.	631 - PW	2	ARV	C-402-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
69.	631 A - PW	2	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
70.	631 B - PW	1	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
71.	631 C - PW	2	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
72.	631 D - PW	2	ARVE	C-402-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
73.	632 - PW	8	GV	C-402-	C-514-30	Saturn Drive	GV = Gate Valve
74.	633 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
75.	634 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
76.	635 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
77.	636 - PW	16	GV	C-403-	C-517-4	Saturn Drive	GV = Gate Valve
78.	637 - PW	6	GV	C-403-	C-512-37	Saturn Drive	GV = Gate Valve

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
79.	638 - PW	2	ARV	C-403-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
80.	638 A - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
81.	638 B - PW	1	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
82.	638 C - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
83.	638 D - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
84.	639 - PW	2	ARV	C-403-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
85.	639 A - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
86.	639 B - PW	1	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
87.	639 C - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
88.	639 D - PW	2	ARVE	C-403-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
89.	640 - PW	2	ARV	C-404-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
90.	640 A - PW	2	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
91.	640 B - PW	1	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
92.	640 C - PW	2	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
93.	640 D - PW	2	ARVE	C-404-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
94.	641 - PW	16	GV	C-404-		Saturn Drive	GV = Gate Valve
95.	642 - PW	14	GV	C-404-		Saturn Drive	GV = Gate Valve
96.	643 - PW	12	GV	C-404-	C-514-34	Saturn Drive	GV = Gate Valve
97.	644 - PW	2	ARV	C-405-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
98.	644 A - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
99.	644 B - PW	1	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
100.	644 C - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
101.	644 D - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
102.	645 - PW	2	ARV	C-405-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
103.	645 A - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
104.	645 B - PW	1	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
105.	645 C - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
106.	645 D - PW	2	ARVE	C-405-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
107.	646 - PW	14	GV	C-405-	C-513-28	Saturn Drive	GV = Gate Valve
108.	647 - PW	14	GV	C-405-	C-513-28	Saturn Drive	GV = Gate Valve
109.	648 - PW	14	GV	C-405-	C-513-28	Saturn Drive	GV = Gate Valve
110.	649 - PW	14	GV	C-405-	C-517-3	Saturn Drive	GV = Gate Valve
111.	650 - PW	16	GV	C-405-	C-517-3	Saturn Drive	GV = Gate Valve
112.	651 - PW	16	GV	C-405-	C-517-3	Saturn Drive	GV = Gate Valve
113.	652 - PW	2	ARV	C-406-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
114.	652 A - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
115.	652 B - PW	1	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
116.	652 C - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
117.	652 D - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
118.	653 - PW	2	ARV	C-406-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
119.	653 A - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
120.	653 B - PW	1	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
121.	653 C - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
122.	653 D - PW	2	ARVE	C-406-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
123.	654 - PW	14	GV	C-406-		Saturn Drive	GV = Gate Valve
124.	655 - PW	8	GV	C-406-	C-505-8	Saturn Drive	GV = Gate Valve
125.	656 - PW	8	GV	C-406-	C-505-8	Saturn Drive	GV = Gate Valve
126.	657 - PW	8	GV	C-406-	C-506-35	Saturn Drive	GV = Gate Valve
127.	658 - PW	2	ARV	C-407-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
128.	658 A - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
129.	658 B - PW	1	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
130.	658 C - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
131.	658 D - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
132.	659 - PW	2	ARV	C-407-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
133.	659 A - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
134.	659 B - PW	1	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
135.	659 C - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
136.	659 D - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
137.	660 - PW	2	ARV	C-407-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
138.	660 A - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
139.	660 B - PW	1	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
140.	660 C - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
141.	660 D - PW	2	ARVE	C-407-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
142.	661 - PW	14	GV	C-407-	C-507-12	Saturn Drive	GV = Gate Valve
143.	662 - PW	12	GV	C-407-	C-507-12	Saturn Drive	GV = Gate Valve
144.	663 - PW	8	GV	C-407-	C-507-13	Saturn Drive	GV = Gate Valve
145.	664 - PW	2	ARV	C-408-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
146.	664 A - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
147.	664 B - PW	1	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
148.	664 C - PW	2	ARVE	C-408-	C-501-4		ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
149.	664 D - PW	2	ARVE	C-408-	C-501-4		ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
150.	665 - PW	2	ARV	C-408-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
151.	665 A - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
152.	665 B - PW	1	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
153.	665 C - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
154.	665 D - PW	2	ARVE	C-408-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
155.	666 - PW	14	GV	C-408-		Saturn Drive	GV = Gate Valve
156.	667 - PW	12	GV	C-408-	C-507-14	Saturn Drive	GV = Gate Valve
157.	668 - PW	2	ARV	C-409-	C-501-4	Saturn Drive	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
158.	668 A - PW	2	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
159.	668 B - PW	1	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
160.	668 C - PW	2	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
161.	668 D - PW	2	ARVE	C-409-	C-501-4	Saturn Drive	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
162.	669 - PW	16	GV	C-413-	C-509-18	"J" Road	GV = Gate Valve
163.	670 - PW	8	GV	C-413-	C-509-18	"J" Road	GV = Gate Valve
164.	671 - PW	14	GV	C-413-	C-509-17	"J" Road	GV = Gate Valve
165.	672 - PW	2	ARV	C-414-	C-501-4	"J" Road	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
166.	672 A - PW	2	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
167.	672 B - PW	1	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
168.	672 C - PW	2	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
169.	672 D - PW	2	ARVE	C-414-	C-501-4	"J" Road	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
170.	673 - PW	14	GV	C-414-	C-505-7	"J" Road	GV = Gate Valve
171.	674 - PW	8	GV	C-414-	C-505-7	"J" Road	GV = Gate Valve
172.	675 - PW	16	GV	C-414-	C-505-7	"J" Road	GV = Gate Valve
173.	676 - PW	8	GV	C-414-	C-504-5	"J" Road	GV = Gate Valve
174.	677 - PW	14	GV	C-414-	C-511-23	"J" Road	GV = Gate Valve
175.	678 - PW	16	GV	C-414-	C-511-23	"J" Road	GV = Gate Valve
176.	679 - PW	2	ARV	C-415-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
177.	679 A - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
178.	679 B - PW	1	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
179.	679 C - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
180.	679 D - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
181.	680 - PW	2	ARV	C-415-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
182.	680 A - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
183.	680 B - PW	1	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
184.	680 C - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
185.	680 D - PW	2	ARVE	C-415-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
186.	681 - PW	14	GV	C-415-	C-512-24	Trent Lott Parkway	GV = Gate Valve
187.	682 - PW	14	GV	C-415-	C-512-24	Trent Lott Parkway	GV = Gate Valve
188.	683 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
189.	684 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
190.	685 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
191.	686 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
192.	687 - PW	14	GV	C-415-	C-516-2	Trent Lott Parkway	GV = Gate Valve
193.	688 - PW	14	GV	C-416-		Trent Lott Parkway	GV = Gate Valve
194.	689 - PW	14	GV	C-417-		Trent Lott Parkway	GV = Gate Valve
195.	690 - PW	14	GV	C-417-		Trent Lott Parkway	GV = Gate Valve
196.	691 - PW	16	GV	C-417-	C-504-4	Trent Lott Parkway	GV = Gate Valve
197.	692 - PW	16	GV	C-417-	C-504-4	Trent Lott Parkway	GV = Gate Valve
198.	693 - PW	14	GV	C-417-	C-514A-4	Trent Lott Parkway	GV = Gate Valve
199.	694 - PW	2	ARV	C-418-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
200.	695 A - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
201.	695 B - PW	1	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
202.	695 C - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
203.	695 D - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
204.	696 - PW	2	ARV	C-418-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
205.	696 A - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
206.	696 B - PW	1	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
207.	696 C - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
208.	696 D - PW	2	ARVE	C-418-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
209.	697 - PW	8	GV	C-418-	C-514-30	Balch Blvd	GV = Gate Valve
210.	698 - PW	6	GV	C-418-	C-510-19	Balch Blvd	GV = Gate Valve
211.	699 - PW	8	GV	C-418-	C-513-29	Balch Blvd	GV = Gate Valve
212.	700 - PW	8	GV	C-418-	C-506-9	Balch Blvd	GV = Gate Valve
213.	701 - PW	16	GV	C-418-	C-518-5	Balch Blvd	GV = Gate Valve
214.	702 - PW	14	GV	C-418-	C-518-5	Balch Blvd	GV = Gate Valve
215.	703 - PW	14	GV	C-418-	C-518-5	Balch Blvd	GV = Gate Valve
216.	704 - PW	2	ARV	C-419-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
217.	704 A - PW	2	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
218.	704 B - PW	1	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
219.	704 C - PW	2	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
220.	704 D - PW	2	ARVE	C-419-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
221.	705 - PW	8	GV	C-419-	C-514-30	Balch Blvd	GV = Gate Valve
222.	706 - PW	8	GV	C-419-	C-514-30	Balch Blvd	GV = Gate Valve
223.	707 - PW	8	GV	C-419-	C-514-30	Balch Blvd	GV = Gate Valve
224.	708 - PW	8	GV	C-419-	C-506-10	Balch Blvd	GV = Gate Valve
225.	709 - PW	6	GV	C-419-	C-510-20	Balch Blvd	GV = Gate Valve
226.	710 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
227.	711 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
228.	712 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
229.	713 - PW	2	ARV	C-420-	C-501-4	Balch Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
230.	713 A - PW	2	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
231.	713 B - PW	1	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
232.	713 C - PW	2	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
233.	713 D - PW	2	ARVE	C-420-	C-501-4	Balch Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
234.	714 - PW	16	GV	C-420-	C-511-22	Balch Blvd	GV = Gate Valve
235.	715 - PW	16	GV	C-420-	C-511-22	Balch Blvd	GV = Gate Valve

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
236.	716 - PW	16	GV	C-420-	C-517-4	Balch Blvd	GV = Gate Valve
237.	717 - PW	16	GV	C-420-	C-504-6	Balch Blvd	GV = Gate Valve
238.	718 - PW	8	GV	C-420-	C-504-6	Balch Blvd	GV = Gate Valve
239.	719 - PW	8	GV	C-421-	C-505-7	Balch Blvd	GV = Gate Valve
240.	720 - PW	14	GV	C-421-	C-505-7	Propellant Blvd	GV = Gate Valve
241.	721 - PW	16	GV	C-421-	C-505-7	Propellant Blvd	GV = Gate Valve
242.	722 - PW	2	ARV	C-421-	C-501-4	Propellant Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
243.	722 A - PW	2	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
244.	722 B - PW	1	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
245.	722 C - PW	2	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
246.	722 D - PW	2	ARVE	C-421-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
247.	723 - PW	2	ARV	C-422-	C-501-4	Propellant Blvd	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
248.	723 A - PW	2	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
249.	723 B - PW	1	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
250.	723 C - PW	2	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
251.	723 D - PW	2	ARVE	C-422-	C-501-4	Propellant Blvd	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
252.	724 - PW	8	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
253.	725 - PW	6	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
254.	726 - PW	8	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
255.	727 - PW	6	GV	C-422-	C-503-2	Propellant Blvd	GV = Gate Valve
256.	728 - PW	3	GV	C-422-	C-503-1	Propellant Blvd	GV = Gate Valve
257.	729 - PW	3	GV	C-422-	C-422-B	Propellant Blvd	GV = Gate Valve
258.	730 - PW	14	GV	C-423-	C-517-3	Propellant Blvd	GV = Gate Valve
259.	731 - PW	16	GV	C-423-	C-517-3	Propellant Blvd	GV = Gate Valve
260.	732 - PW	16	GV	C-423-	C-517-3	Propellant Blvd	GV = Gate Valve
261.	733 - PW	2	ARV	C-424-	C-501-4	NDBC	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
262.	733 A - PW	2	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
263.	733 B - PW	1	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
264.	733 C - PW	2	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
265.	733 D - PW	2	ARVE	C-424-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
266.	734 - PW	8	GV	C-424-	C-514-32	NDBC	GV = Gate Valve
267.	735 - PW	12	GV	C-424-	C-514-32	NDBC	GV = Gate Valve
268.	736 - PW	2	ARV	C-425-	C-501-4	NDBC	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
269.	736 A - PW	2	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
270.	736 B - PW	1	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
271.	736 C - PW	2	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
272.	736 D - PW	2	ARVE	C-425-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
273.	737 - PW	8	GV	C-425-	C-514-31	NDBC	GV = Gate Valve
274.	736 - PW	2	ARV	C-426-	C-501-4	NDBC	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
275.	736 A - PW	2	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
276.	736 B - PW	1	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
277.	736 C - PW	2	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
278.	736 D - PW	2	ARVE	C-426-	C-501-4	NDBC	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
279.	737 - PW	14	GV	C-426-	C-505-36	NDBC	GV = Gate Valve
280.	738 - PW	14	GV	C-426-		NDBC	GV = Gate Valve
281.	739 - PW	14	GV	C-427-		"H" ROAD	GV = Gate Valve
282.	740 - PW	14	GV	C-427-		"H" ROAD	GV = Gate Valve
283.	741 - PW	2	ARV	C-427-	C-501-4	"H" ROAD	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
284.	741 A - PW	2	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
285.	741 B - PW	1	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
286.	741 C - PW	2	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
287.	741 D - PW	2	ARVE	C-427-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
288.	742 - PW	2	ARV	C-428-	C-501-4	"H" ROAD	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
289.	742 A - PW	2	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)

Valve Index #	Valve Number	Valve Size INCHES	Valve Type	Drawing	Plan Detail	Street	Notes
290.	742 B - PW	1	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
291.	742 C - PW	2	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
292.	742 D - PW	2	ARVE	C-428-	C-501-4	"H" ROAD	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
293.	743 - PW	2	ARV	C-429-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
294.	743 A - PW	2	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
295.	743 B - PW	1	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
296.	743 C - PW	2	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
297.	743 D - PW	2	ARVE	C-429-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
298.	744 - PW	14	GV	C-429-		Trent Lott Parkway	GV = Gate Valve
299.	743 - PW	2	ARV	C-430-	C-501-4	Trent Lott Parkway	2" Gate Valve - In Valve Box receives Main V# listed in INDEX (Example xxx-PW)
300.	743 A - PW	2	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
301.	743 B - PW	1	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
302.	743 C - PW	2	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
303.	743 D - PW	2	ARVE	C-430-	C-501-4	Trent Lott Parkway	ARVE=Air Release Valve Enclosure (Example xxx-A-PW)
304.	744 - PW	14	GV	C-431-		ENDEAVOUR BLVD	GV = Gate Valve
305.	745 - PW	14	GV	C-431-	C-506-11	ENDEAVOUR BLVD	GV = Gate Valve



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-011

**Contractor** SAUER, INC.  
**Initiator/Company** Jacobs FOSC  
**Spec./Section** 12G00-G020/

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-501,C-515 - 518  
**Date** 6/4/2013

**Description of problem and recommended change:**

**Problem:** Sample Tap Assembly Detail (Detail 3/C-501) indicates to install a riser up to grade; a shut-off valve above the sample tap valve and a valve box above the assembly. Since this Sample Tap will be used only once during construction to verify water quality, the riser, top sample valve and valve box are not necessary after construction is completed.

**Solution:** Delete the Valve Box. After water samples have been taken and have passed water quality requirements, remove the riser and top valve. Install a plug in the lower sample tap valve to seal and prevent any future contamination of the water main.

A new AHA is not Required for this work.

**Cost Impact**  No  Yes **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**  No  Yes **No. of Days** \_\_\_\_\_  
**Project Manager** \_\_\_\_\_ **Date** \_\_\_\_\_

**DISPOSITION (NASA)**

**Evaluation:**

**Construction Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quality Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Safety Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

## FIELD CHANGE REQUEST (FCR) INSTRUCTIONS

**PURPOSE:** The Field Change Request (FCR) is used to document, track, and implement changes. The FCR may be initiated by anyone associated with the project.

An FCR is initiated to document the following:

- a. Discrepancies that may exist between the drawings/specifications and field conditions.
- b. Inconsistencies in the drawings and/or specifications.
- c. Recommended design or specification changes that do not affect form, fit, or function (variance).
- d. Changes that are necessary to correct deficiencies in the design or specification.

An FCR may also be initiated by the PMD Office to request that the Contractor evaluate, for cost and schedule impact, proposed changes to the drawings/specifications.

### INSTRUCTIONS:

- INITIATOR -**
1. Provide all information requested at the top of the FCR form.
  2. Describe the recommended change; provide rationale and justification in detail.
  3. List all documentation affected, including revision.
  4. Provide all redlined documentation with the FCR within 2 working days.
  5. FCR number will be given by Configuration Control.

- CONTRACTOR -**
1. Cost/schedule impacts must be determined and noted in the space provided. Attach additional details, if necessary.
  2. All FCRs must be signed by the Project Manager.
  3. Submit the FCR to NASA for evaluation and disposition. NOTE: Change may NOT be implemented until written approval is received from the Contracting Officer.

- NASA -**
1. The designated PMD engineer evaluates the change and determines the appropriate disposition.
  2. Submit the FCR to the CCB/TRG for review and concurrence.
  3. All changes that impact cost or schedule must be submitted to the Contracting Officer for approval.
  4. Submit changes that affect configuration to the Configuration Control Board (CCB) within 5 working days.
  5. Provide a copy of the completed FCR to the Contractor.
  6. Provide the original FCR to Configuration Control.

National Aeronautics and  
Space Administration  
**John C. Stennis Space Center**  
Stennis Space Center, MS 39529-6000



June 5, 2013

Reply to Attn of: **RA10/13-0870DAW**

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Task Order: NNS12AA95T

The following listed Field Change Request (FCR) is being sent to you for cost and schedule impact:

**FCR NNS12AA95T-011:**

Problem: Sample Tap Assembly Detail (Detail 3/C-501) indicates to install a riser up to grade; a shut-off valve above the sample tap valve and a valve box above the assembly. Since this Sample Tap will be used only once during construction to verify water quality, the riser, top sample valve and valve box are not necessary after construction is completed.

Solution: Delete the Valve Box. After water samples have been taken and have passed water quality requirements, remove the riser and top valve. Install a plug in the lower sample tap valve to seal and prevent any future contamination of the water main.

AHA is not required for this work.

**NOTE: \*\* "ANY COMMENT(S) THAT RESULT IN A CHANGE TO THE CONTRACT COST, SCOPE, OR SCHEDULE YOU MUST NOTIFY THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO IMPLEMENTATION OR ANY COSTS ARE INCURRED."**

This request for pricing does not commit the Government to pay any cost incurred in submitting the price or in making necessary studies or designs for its preparation, nor to contract for service or supplies.

PROPOSALS MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS FCR. THE PENALTY FOR MAKING FALSE STATEMENTS IN PROPOSALS IS PRESCRIBED IN 18 U.S.C. 1001.

In order to expedite these changes, please return a signed copy with cost breakdown to Jason Edge, in the Office of Procurement, DA00, no later than close of business, June 12, 2013.

If you have any questions, give Mr. Dale A. Woolridge a call at ext. 228-688-1655.

Jason F. Edge  
Contracting Officer

cc:

Jacobs-FOSC



Official file



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-011

**Contractor** SAUER, INC.  
**Initiator/Company** Jacobs FOSC  
**Spec./Section** 12G00-G020/

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-501,C-515 - 518  
**Date** 6/4/2013

## Description of problem and recommended change:

**Problem:** Sample Tap Assembly Detail (Detail 3/C-501) indicates to install a riser up to grade; a shut-off valve above the sample tap valve and a valve box above the assembly. Since this Sample Tap will be used only once during construction to verify water quality, the riser, top sample valve and valve box are not necessary after construction is completed.

**Solution:** Delete the Valve Box. After water samples have been taken and have passed water quality requirements, remove the riser and top valve. Install a plug in the lower sample tap valve to seal and prevent any future contamination of the water main.

A new AHA is not Required for this work.

**Cost Impact**  No  Yes **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**  No  Yes **No. of Days** \_\_\_\_\_  
**Project Manager** \_\_\_\_\_ **Date** \_\_\_\_\_

## DISPOSITION (NASA)

**Evaluation:**

**Construction Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quality Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Safety Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_



11223 phillips parkway drive, east  
jacksonville, florida 32256

P: 904.262.6444

F: 904.268.6156

www.sauer-inc.com

June 14th, 2013

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: Jason Edge, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-011, Deletion of Sample Tap Valve Boxes**

Mr. Edge,

We herein submit our formal cost proposal covering the cost to furnish, and install all work as detailed in FCR-011. The work includes the installation of Sample tap assemblies as required by contract with the exception of the valve boxes. After sampling is completed, we will remove the riser top valve and install a plug in the lower valve to seal and prevent future contamination.

We received an official FCR for this work on June 5th, 2013. Our cost proposal contains breakdowns from Sauer and our subcontractor SH Anthony.

We are currently requesting an additional fourteen (14) calendar day time to complete this work.

If you have any questions or wish to discuss further do not hesitate to call us directly.

Sincerely,

(b)(6)

**SAUER INCORPORATED**

(b)(6)

Project Manager

*Sent on behalf of*

(b)(6)

**CONTRACT TITLE:** NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

**DESCRIPTION:** FCR-011, Deletion of Sample Tap Valve Boxes

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		(b)(6)
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Freight to ship	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		

Prime Remarks:

SUBCONTRACTOR'S WORK			
11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor			0
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment			0
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses			0
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			35,386

Sub's Remarks: SH Anthony \$35,386.00

SUMMARY		
24. Prime Contractor's Work (from Line 10)	(b)(6)	
25. Sub-Contractor's Work (from line 23)		
26. SUBTOTAL (add lines 24 & 25)		
27. Prime Overhead		% of Line 25
28. Prime Profit		% of Line 24
29. Gross Receipts Tax		% of Line 26
30. SUBTOTAL (add lines 26 -29)		
31. Prime Contractor's Bond Premium		% of Line 30
32. TOTAL COST (Add Lines 30 & 31)		

Estimated time extension and justification  
Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
Subcontractor:

(b)(6)

(b)(6)

Project Engineer

Date 6-14-13



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-011

**Contractor** SAUER, INC.  
**Initiator/Company** Jacobs FOSSC  
**Spec./Section** 12G00-G020/

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-501,C-515 - 518  
**Date** 6/4/2013

## Description of problem and recommended change:

**Problem:** Sample Tap Assembly Detail (Detail 3/C-501) indicates to install a riser up to grade; a shut-off valve above the sample tap valve and a valve box above the assembly. Since this Sample Tap will be used only once during construction to verify water quality, the riser, top sample valve and valve box are not necessary after construction is completed.

**Solution:** Delete the Valve Box. After water samples have been taken and have passed water quality requirements, remove the riser and top valve. Install a plug in the lower sample tap valve to seal and prevent any future contamination of the water main.

A new AHA is not Required for this work.

**Cost Impact**  No  Yes **Not to Exceed** (b)(6)  
**Schedule Impact**  (b)(6) **No. of Days** 14  
**Project Manager** (b)(6) *Serd on behalf* **Date** 6/14/13  
**APPROVAL (NASA)** (b)(6)

## Evaluation:

**Construction Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Quality Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Safety Engineer** \_\_\_\_\_ **Date** \_\_\_\_\_

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_



Change Order Request # FCR-011 / SHA CO# 001

CHANGE ORDER REQUEST NAME: Deletion of Sample Tap Valve Boxes

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
FCR-011	\$ 15,106.00	\$ 857.35	\$ -	\$ 7,848.15		\$ 24,811.50
						\$ -
						\$ -
Base Total	\$ 15,106.00	\$ 857.35	\$ -	\$ 7,848.15	\$ -	\$ 24,811.50
Material Tax (9%)			\$ -			\$ -
Tax and Bond (5.97%)						\$ -
Misc Labor Burden 37%						\$ 5,959.22
Fee(15%)						\$ 30,770.72
						\$ 4,815.61
<b>Total</b>						<b>\$ 35,386.33</b>

DESCRIPTION: Install Sample Taps assemblies as required by contract with the exception of the valve boxes. After sampling is completed remove the riser top valve and install a plug in the lower valve to seal and prevent future contamination

ADDITIONAL TIME REQUESTED: 14 Days

SIGNED BY: [Redacted] (b)(6)  
Project Manager: [Redacted] (b)(6)

DATE: 13 June 13





**From:** (b)(6)  
**To:** [Edge, Jason F. \(SSC-DA00\)](#)  
**Cc:** [Woolridge, Dale A. \(SSC-RA10\)](#) (b)(6) SSC-JACOBS][JACOBS TECHNOLOGY INC (SSC FOSC)]; (b)(6)  
**Subject:** FW: NASA Potable Water Upgrade FCR 011 Cost Proposal  
**Date:** Friday, June 14, 2013 4:56:48 PM  
**Attachments:** [1603 FCR 11 Proposal0001.pdf](#)

---

Jason,

Find attached our cost proposal for the above referenced request. Please contact us if you require additional information or if we can assist further.

Thank you

(b)(6)

SENIOR PROJECT MANAGER

Sauer Incorporated

(b)(6)

[www.sauer-inc.com](http://www.sauer-inc.com)

---

**From:** (b)(6)  
**Sent:** Friday, June 14, 2013 4:05 PM  
**To:** (b)(6)  
**Cc:** (b)(6)  
**Subject:** NASA Potable Water Upgrade FCR 011 Cost Proposal

(b)(6)

Attached is the cost proposal for 1603. Please review and submit. Not sure if it goes to Dale or Jason.

Thank you,

(b)(6)

PROJECT ENGINEER

Sauer Incorporated

(b)(6)

[www.sauer-inc.com](http://www.sauer-inc.com)

**From:** (b)(6)  
**Sent:** Friday, June 14, 2013 3:58 PM  
**To:** (b)(6)  
**Subject:**

**From:** [Edge, Jason F. \(SSC-DA00\)](#)  
**To:** [Woolridge, Dale A. \(SSC-RA10\)](#); (b)(6) (SSC-JACOBS)[JACOBS TECHNOLOGY INC (SSC FOSC)]  
**Subject:** FW: Potable Water Systems Upgrade, Stennis Space Center, MS, Revised Cost Proposal FCR-11  
**Date:** Wednesday, June 26, 2013 3:04:02 PM  
**Attachments:** [20130626155031602.pdf](#)

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**From:** (b)(6)  
**Sent:** Wednesday, June 26, 2013 3:00 PM  
**To:** Edge, Jason F. (SSC-DA00)  
**Cc:** (b)(6)  
**Subject:** RE: Potable Water Systems Upgrade, Stennis Space Center, MS, Revised Cost Proposal FCR-11

Jason,

Please find attached the revised cost proposal for FCR- 11. Please let us know if you have any questions.

Thank you,

(b)(6)  
PROJECT ENGINEER

Sauer Incorporated  
(b)(6)

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June 26th, 2013

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: Jason Edge, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-011, Deletion of Sample Tap Valve Boxes Revised Proposal**

Mr. Edge,

We herein submit our formal cost proposal covering the cost to furnish, and install all work as detailed in FCR-011. The work includes the installation of Sample tap assemblies as required by contract with the exception of the valve boxes. After sampling is completed, we will remove the riser top valve and install a plug in the lower valve to seal and prevent future contamination. Revised pricing is the result of leaving the sample tap location open until the time that we need to install the coupling and cap.

We received an official FCR for this work on June 5th, 2013, and the scope was further revised based on meetings with SHA, Sauer, and NASA. Our cost proposal contains breakdowns from Sauer and our subcontractor SH Anthony.

We are currently requesting an additional fourteen (14) calendar day time to complete this work.

If you have any questions or wish to discuss further do not hesitate to call us directly.

Sincerely,

(b)(6)

Project Manager

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**BUILT TO EXCEED**

**CONTRACT TITLE:** NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

**DESCRIPTION:** FCR-011, Deletion of Sample Tap Valve Boxes- Revised 6/26/13

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		
2. Sales Tax on Materials	___ % of line 1	
3. Direct Labor		
4. Restocking fee	___ % of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___ % of line 5	(b)(6)
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Freight to ship	___ % of line 8	
10. SUBTOTAL (Add lines 8 & 9)		

Prime Remarks:

SUBCONTRACTOR'S WORK			
11. Direct Materials		0	
12. Sales Tax on Materials	___ % of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___ % of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___ % of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___ % of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___ % of line 20	0.00%	0
22. Profit	___ % of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			15,838

Sub's Remarks: SH Anthony \$15,838.00

SUMMARY	
24. Prime Contractor's Work (from Line 10)	
25. Sub-Contractor's Work (from line 23)	
26. SUBTOTAL (add lines 24 & 25)	
27. Prime Overhead	% of Line 25
28. Prime Profit	% of Line 24
29. Gross Receipts Tax	% of Line 26
30. SUBTOTAL (add lines 26 -29)	
31. Prime Contractor's Bond Premium	% of Line 30
32. TOTAL COST (Add Lines 30 & 31)	

Estimated time extension and justification  
Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
Subcontractor:

(b)(6) (b)(6) Project Engineer Date 6-26-13



Change Order Request # FCR-011 / SHA CO# 001

CHANGE ORDER REQUEST NAME: Deletion of Sample Tap Valve Boxes

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
FCR-011	\$ 8,512.40	\$ 627.35	\$	\$ 1,483.26		\$ 10,623.01
Base Total	\$ 8,512.40	\$ 627.35	\$	\$ 1,483.26	\$	\$ 10,623.01
Material Tax (9%)			\$			\$
Tax and Bond (5.97%)						\$ 3,149.59
Misc Labor Burden 37%						\$ 13,772.60
Fees (15%)						\$ 2,065.89
<b>Total</b>						<b>\$ 15,838.49</b>

**DESCRIPTION:** Install Sample Taps assemblies as required by contract with the exception of the valve boxes. After sampling is completed remove the riser top valve and install a plug in the lower valve to seal and prevent future contamination. Revised pricing is with SII Anthony leaving the sample tap location open until the time we need to install coupling and cap. We will utilize cones and barricade tape around the open holes. Vac will be utilized to re-excavate any soils or mud that has accumulated while the hole has been left open.

ADDITIONAL TIME REQUESTED: 14 Days

SIGNED BY:   
 (b)(6)  
 Project Manager  
 (b)(6)

DATE: 24 June 2013





Bill To  
 10/691  
 SAUER INC.  
 50 FIFTY FIRST ST.  
 PITTSBURGH, PA 15201

Ship To  
 SAUER  
 STERNING SPACE CENTER, MS

Quote Number	06011656
Quote Date	08/13/19
Expiration Date	08/20/19
Page	1 of 1

Payment Terms NET 30	Customer Job/Project Name	Whom By (b)(6)
Freight Terms PREPAID AND ADD	Contact	Sales Rep (b)(6)
Ship Via Boat Way	Additional Info	

#	Qty	UM	Product	Description	Each	Extended
1	1	EA	53019999	RETURN FREIGHT FOR VALVE BOXES & LIDS	772.50	772.50
2	1	EA	53019999	RESTOCK FEE @ 30% FOR RETURN OF VALVE BOX AND LIDS	1173.00	1,173.00
3	23	EA	53010026	1" IPS COMP X MIPT ADAPTER PP BODY, 200 PSI, CEPEX 21929	18.50	425.50
4	23	EA	53019999	CAP PLUG	6.50	149.50
5	1	EA	53019999	FREIGHT TO SHIP CAP/PLUG & ADAPTER	62.36	62.36

ISCO Standard Terms and Conditions apply. Please visit <http://www.isco-pipe.com/terms-and-conditions.aspx>

Merchandise Total	Tax <sup>1</sup>	Freight <sup>2</sup>	Quote Total
2,573.25	154.39	0.00	US \$ 2,727.64
<sup>1</sup> Sales tax will be charged based on the ship to address at the time of invoice if there is no tax certificate on file.		Accepted By: _____ Printed Name: _____ Date: _____	
<sup>2</sup> Freight amount in this quote is an estimate only. Actual freight terms and charges will be determined at the time the order is placed.			

026 Baxter Avenue • P.O. Box 4545 • Louisville, KY 40204

800-345-4726



Volvo Construction Equipment Rents

RENTAL  
QUOTE

VOLVO RENTS ORDER NUMBER

Volvo Rents, Inc.

Cust. PO \_\_\_\_\_ Proposal No. \_\_\_\_\_ Salesman \_\_\_\_\_ Date 11/15/2012

Customer SH Anthony Ship To \_\_\_\_\_  
 Address \_\_\_\_\_  
 Phone \_\_\_\_\_ Fax \_\_\_\_\_ Phone \_\_\_\_\_ Fax \_\_\_\_\_

F.O.B. Point of Origin - Ship Via  Volvo Rents  C.P.U.

TERMS: Net 30 All Rates are based on a 8 Hour Day, 40 Hour Week & 160 Hour Month Quote good for 80 days  
 TAX RATE: 7%

Freight cost are per truckload

SHIPPING COST: \_\_\_\_\_ LOW:  Y  N

QTY	CAT/CLASS	TYPE	DESCRIPTION	DAY	WEEK	4 WEEK	
1			Vac Trailer FX30-7	\$ 400.00	\$ 1,200.00	\$ 3,600.00	
Freight is a round trip charge							
LOW CHARGE CAN BE WAIVED IF YOU PROVIDE YOUR OWN INSURANCE CERTIFICATE							
*TYPE N=NEW U=USED R=RENTAL PR=PURCHASE OF RENTAL EQUIPMENT A=ACCESSORIES P=PARTS S=SERVICE/REPAIR				Net Price	\$ 400.00	\$ 1,200.00	\$ 3,600.00
Other				Freight			
				LOW	\$ 60.00	\$ 180.00	\$ 540.00
				ENFE	\$ 6.00	\$ 18.00	\$ 54.00
<b>For Quote Purposes Only</b>				Sales Tax	\$ 28.42	\$ 85.26	\$ 255.78
				Total	\$ 494.42	\$ 1,483.26	\$ 4,449.78

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000



June 5, 2013

Reply to Attn of RA10/13-0870DAW

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Task Order: NNS12AA95T

The following listed Field Change Request (FCR) is being sent to you for cost and schedule impact:

**FCR NNS12AA95T-011:**

**Problem:** Sample Tap Assembly Detail (Detail 3/C-501) indicates to install a riser up to grade; a shut-off valve above the sample tap valve and a valve box above the assembly. Since this Sample Tap will be used only once during construction to verify water quality, the riser, top sample valve and valve box are not necessary after construction is completed.

**Solution:** Delete the Valve Box. After water samples have been taken and have passed water quality requirements, remove the riser and top valve. Install a plug in the lower sample tap valve to seal and prevent any future contamination of the water main.

AHA is not required for this work.

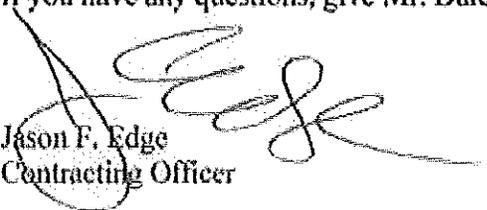
**NOTE: \*\* "ANY COMMENT(S) THAT RESULT IN A CHANGE TO THE CONTRACT COST, SCOPE, OR SCHEDULE YOU MUST NOTIFY THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO IMPLEMENTATION OR ANY COSTS ARE INCURRED."**

This request for pricing does not commit the Government to pay any cost incurred in submitting the price or in making necessary studies or designs for its preparation, nor to contract for service or supplies.

**PROPOSALS MUST SET FORTH FULL, ACCURATE, AND COMPLETE INFORMATION AS REQUIRED BY THIS FCR. THE PENALTY FOR MAKING FALSE STATEMENTS IN PROPOSALS IS PRESCRIBED IN 18 U.S.C. 1001.**

In order to expedite these changes, please return a signed copy with cost breakdown to Jason Edge, in the Office of Procurement, DA00, no later than close of business, June 12, 2013.

If you have any questions, give Mr. Dale A. Woolridge a call at ext. 228-688-1655.



Jason F. Edge  
Contracting Officer

cc:

Jacobs-FOSC

(b)(6)

ial file



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

(IMPLEMENTED BY SSTD 8070-0001-CONFIG)

FCR No NNS12AA95T-011

Contractor	<u>SAUER, INC.</u>	Contract No.	<u>NNS12AA95T</u>
Initiator/Company	<u>Jacobs FOSC</u>	EMI No.	<u>11B315-01</u>
Spec./Section	<u>12G00-G020/</u>	Drawing No.	<u>C-501,C-515 - 518</u>
		Date	<u>6/4/2013</u>

**Description of problem and recommended change:**

**Problem:** Sample Tap Assembly Detail (Detail 3/C-501) indicates to install a riser up to grade; a shut-off valve above the sample tap valve and a valve box above the assembly. Since this Sample Tap will be used only once during construction to verify water quality, the riser, top sample valve and valve box are not necessary after construction is completed.

**Solution:** Delete the Valve Box. After water samples have been taken and have passed water quality requirements, remove the riser and top valve. Install a plug in the lower sample tap valve to seal and prevent any future contamination of the water main.

A new AHA is not Required for this work.

Cost Impact	<input type="checkbox"/> No	<input type="checkbox"/> Yes	Not to Exceed	_____
Schedule Impact	<input type="checkbox"/> No	<input type="checkbox"/> Yes	No. of Days	_____
Project Manager	_____		Date	_____

**DISPOSITION (NASA)**

Evaluation:

Construction Engineer	_____	Date	_____
Quality Engineer	_____	Date	_____
Safety Engineer	_____	Date	_____

CGB Approved for Implementation  Yes  No

OTR	_____	Date	_____
Contracting Officer	_____	Date	_____



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

## FIELD CHANGE REQUEST (FCR)

FCR No NNS12AA95T-015

**Contractor** SAUER, INC.  
**Initiator/Company** S H Anthony  
**Spec./Section** 12G00-G020/33 11 00

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-403  
**Date** 06 September 2013

**Description of problem and recommended change:** Potable Water System Upgrades  
**P:** See RFI 015, attached.

**S:** See attached Sketch.

**Cost Impact**  No  Yes **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**  No  Yes **No. of Days** \_\_\_\_\_  
**Project Manager** (b)(6) CQCM **Date** \_\_\_\_\_

### DISPOSITION (NASA)

**Evaluation:**

<b>NASA Project Manager</b>	_____	<b>Date</b>	_____
<b>Construction Engineer</b>	_____	<b>Date</b>	_____
<b>Quality Engineer</b>	_____	<b>Date</b>	_____
<b>Safety Engineer</b>	_____	<b>Date</b>	_____
<b>Environmental</b>	_____	<b>Date</b>	_____
<b>Design Engineer</b>	_____	<b>Date</b>	_____
<b>CCB Chair</b>	_____	<b>Date</b>	_____

**CCB Approved for Implementation**  Yes  No

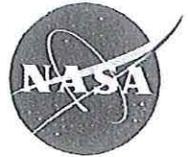
**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

Page 89 redacted for the following reason:

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(b)(7)(F)

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000



August 1, 2013

Reply to Attn of: RA10/13-1254DAW

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following answer is in response to your Requests for Information:

**RFI 015 Questions:**

Please reference Drawing C-403 at Sta. 135+42

On Drawing C-403 at Sta. 135+42, during subsurface investigation, a 6" water main was located; however this line was not shown on the Contract Drawings.

If this line is active, a new connection will need to be installed.

This will require a FCR for the cost and additional time.

Attached C-403 Drawing with newly located water main shown.

Attached is SHA Drawing P3-03, Subsurface Location Drawing, showing the location of the newly located line?

**Answer:**

The 6" line identified is the Fire Main serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be C-900.

An additional 2-1/2" line is located to the east of this line. This is the potable water line serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be PVC.

Both lines shall have isolation valves and valve boxes installed near the connection to the new HDPE line. Current isolation valves for each line exist near the building and at the taps to the existing main water line.

**NOTE: \*\* "Any comment that result in a change to the contract cost, scope, or schedule you must notify the Contracting Officer for approval prior to implementation or any costs are incurred."**

If you have any questions, give me a call at 228-688-1655.

A handwritten signature in blue ink, appearing to read "Dale A. Woolridge".

Dale A. Woolridge  
Contracting Officer's  
Technical Representative

Enclosure

cc:  
Jacobs-FOSC

(b)(6)

Official File



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# REQUEST FOR INFORMATION

(Implemented by SOI-8040-0001-FACENG)

Request For Information (RFI) Number

015 Water Main Installation and Tie In to Existing System

Date

July 24, 2013

Requestor

SAUER, INC

Contract

NNS12AA95T

Question:

Please reference Drawing C-403 at Sta. 135+42

On Drawing C-403 at Sta. 135+42, during subsurface investigation, a 6" water main was located, however this line was not shown on the Contract Drawings.

If this line is active, a new connection will need to be installed.

This will require a FCR for the cost and additional time.

Attached C-403 Drawing with newly located water main shown.

Attached is SHA Drawing P3-03, Subsurface Location Drawing, showing the location of the newly located line.

Answer:

The 6" line identified is the Fire Main serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be C-900.

An additional 2-1/2" line is located to the east of this line. This is the potable water line serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be PVC.

Both lines shall have isolation valves and valve boxes installed near the connection to the new HDPE line.

Current isolation valves for each line exist near the building and at the taps to the existing main water line. CSW



11223 phillips parkway drive, east  
jacksonville, florida 32256

P: 904.262.6444

F: 904.268.6156

www.sauer-inc.com

September 16th, 2013

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: George Piccolo, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-015/17, Fire Main Tie In at Bldg. 1022 and Installation of PVC Connection at  
Building 8200 Cost Proposal**

Mr. Piccolo,

We herein submit our formal cost proposal covering the cost to furnish, and install all work as detailed in FCR's 015 and 17. The work includes the installation of a connection of the fire main serving Bldg. 1022 that was discovered during investigations to the new HDPE water line.

Also FCR 17 includes the installation of a new PVC line to tie into the identified 1" PVC water main at Building 8200.

We received official FCR's for this change condition based on the RFI's from our subcontractor SHA. Our cost proposal contains breakdowns from Sauer and our subcontractor SH Anthony.

We are currently requesting an additional five (5) calendar day time to complete this work.

If you have any questions or wish to discuss further do not hesitate to call us directly.

Signature: [Redacted] sent on behalf of [Redacted]

SAUER INCORPORATED

[Redacted]  
Project Manager

CONTRACT TITLE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

DESCRIPTION: FCR-015/17, Fire Main Tie In at Bldg. 1022 and Installation of PVC Connection at Building 8200  
**Cost Proposal**

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		(b)(6)
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Field Overhead	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		

Prime Remarks:

SUBCONTRACTOR'S WORK			
11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			32,462

SHA Total

Sub's Remarks: SH Anthony \$32,461.53

SUMMARY	
24. Prime Contractor's Work (from Line 10)	
25. Sub-Contractor's Work (from line 23)	
26. SUBTOTAL (add lines 24 & 25)	
27. Prime Overhead	% of Line 25
28. Prime Profit	% of Line 24
29. Gross Receipts Tax	% of Line 26
30. SUBTOTAL (add lines 26 -29)	
31. Prime Contractor's Bond Premium	% of Line 30
32. TOTAL COST (Add Lines 30 & 31)	

Estimated time extension and justification  
 Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
 Subcontractor:

Sig: (b)(6) Date 9-16-13  
 Project Engineer

MSAAP, Phase II Main Line Redesign Extended Overhead Breakdown

Item #	QTY	Field Overhead Description	Daily Rate	Allocated to MSAAP	Total Monthly Rate	Total Extended Overhead
1	1	(b)(4)				
2	1					
3	1					
4	0					
5	1					
6	1					
7	1					
8	1					
9	1					
10	1					
11	1					
12	1					
13	1					
14						
15	1					
16	1					
17	1					
18	1					
19	1					
20	1					
21						
22						
23	1					
24	1					
Rates						
**Labor rates listed above are inclusive of labor burden and fringe benefits						

5

\$3,697.50



Change Order Request # FCR-017 / SHA RFI-014

CHANGE ORDER REQUEST NAME: Install Line to BLD 8200

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
FCR-017 / RFI-014	\$ 7,659.76	\$ 1,957.90	\$ 1,545.00	\$ 2,904.41		\$ 14,067.07
						\$ -
						\$ -
Base Total	\$ 7,659.76	\$ 1,957.90	\$ 1,545.00	\$ 2,904.41	\$ -	\$ 14,067.07
Material Tax (9%)			\$ -			\$ -
Tax and Bond (5.97%)						\$ 880.09
Misc. Labor Burden 37%						\$ 674.88
						\$ 15,622.04
Fee(15%)						\$ 2,343.31
<b>Total</b>						<b>\$ 17,965.35</b>

DESCRIPTION: Additional branch line to Guard House Bld 8200 Station 155+15 OPEN CUT

ADDITIONAL TIME REQUESTED: **3 days**

SIGNED BY:

DATE:

(b)(6)

Project Manager

(b)(6)



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000



August 1, 2013

Reply to Attn of: RA10/13-1254DAW

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following answer is in response to your Requests for Information:

**RFI 015 Questions:**

Please reference Drawing C-403 at Sta. 135+42

On Drawing C-403 at Sta. 135+42, during subsurface investigation, a 6" water main was located; however this line was not shown on the Contract Drawings.

If this line is active, a new connection will need to be installed.

This will require a FCR for the cost and additional time.

Attached C-403 Drawing with newly located water main shown.  
Attached is SHA Drawing P3-03, Subsurface Location Drawing, showing the location of the newly located line?

**Answer:**

The 6" line identified is the Fire Main serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be C-900.

An additional 2-1/2" line is located to the east of this line. This is the potable water line serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be PVC.

Both lines shall have isolation valves and valve boxes installed near the connection to the new HDPE line. Current isolation valves for each line exist near the building and at the taps to the existing main water line.

**NOTE: \*\* "Any comment that result in a change to the contract cost, scope, or schedule you must notify the Contracting Officer for approval prior to implementation or any costs are incurred."**

If you have any questions, give me a call at 228-688-1655.

A handwritten signature in black ink, appearing to read "D. Woolridge".

Dale A. Woolridge  
Contracting Officer's  
Technical Representative

Enclosure

cc:  
Jacobs-FOSC

(b)(6)

Official File



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# REQUEST FOR INFORMATION

(Implemented by SOI-8040-0001-FACENG)

Request For Information (RFI) Number

015 Water Main Installation and Tie In to Existing System

Date

July 24, 2013

Requestor

SAUER, INC

Contract

NNS12AA95T

Question:

Please reference Drawing C-403 at Sta. 135+42

On Drawing C-403 at Sta. 135+42, during subsurface investigation, a 6" water main was located, however this line was not shown on the Contract Drawings.

If this line is active, a new connection will need to be installed.

This will require a FCR for the cost and additional time.

Attached C-403 Drawing with newly located water main shown.

Attached is SHA Drawing P3-03, Subsurface Location Drawing, showing the location of the newly located line.

Answer:

The 6" line identified is the Fire Main serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be C-900.

An additional 2-1/2" line is located to the east of this line. This is the potable water line serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be PVC.

Both lines shall have isolation valves and valve boxes installed near the connection to the new HDPE line.

Current isolation valves for each line exist near the building and at the taps to the existing main water line. CSW



Change Order Request # FCR-015 / SHA RFI-015

CHANGE ORDER REQUEST NAME: Provide Tie in for 6" and 2.5" going to BLD 1022

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
FCR-015 / RFI-015	\$ 5,233.84	\$ 3,121.87	\$ -	\$ 3,060.00		\$ 11,415.71
						\$ -
						\$ -
Base Total	\$ 5,233.84	\$ 3,121.87	\$ -	\$ 3,060.00	\$ -	\$ 11,415.71
Material Tax (9%)			\$ -			\$ -
Tax and Bond (5.97%)						\$ 710.15
Misc. Labor Burden 37%						\$ 479.52
						\$ 12,605.38
Fee(15%)						\$ 1,890.81
						\$ -
<b>Total</b>						<b>\$ 14,496.18</b>

DESCRIPTION:	RFI-015 Station 135+42 Drawing Sheet C403	6" Fire Main and 2.5" Potable Water to Building 1022
--------------	---	--

ADDITIONAL TIME REQUESTED: 2 days

SIGNED BY:

DATE:

(b)(6)  
Project Manager  
(b)(6)



\* All Rates Match Original Cost Breakdown Sheet

Labor	Qty of Men	Hrs	Straight Time Rate	Straight Time	OT Hrs	Overtime Rate	Over Time	TOTAL
Sr. Project Manager	1	2	76.60	153.2		95.75	\$ -	\$ 153.20
Project Manager	1	6	73.80	442.8		92.25	\$ -	\$ 442.80
Sr. Superintendent	1		66.30	0		82.88	\$ -	\$ -
Superintendent	1	16	62.92	1006.72	0	88.09	\$ -	\$ 1,006.72
Safety Manager	1	8	73.80	590.4	8	92.25	\$ 738.00	\$ 1,328.40
Quality Control	1	16	62.92	1006.72	0	88.09	\$ -	\$ 1,006.72
Operator - Equipment	1	15	15.00	225	8	22.50	\$ 180.00	\$ 405.00
Pipelayer			14.00	0		21.00	\$ -	\$ -
Skilled Laborer	2	15	13.50	405.00	8	20.25	\$ 324.00	\$ 729.00
Skilled Laborer	1	0	13.50	0	8	20.25	\$ 162.00	\$ 162.00
							\$ -	\$ -
							\$ -	\$ -
							\$ -	\$ -
							\$ -	\$ -
							\$ -	\$ -
							\$ -	\$ -
							\$ -	\$ -
							\$ -	\$ -
							\$ -	\$ -

1296.00  
Mgmt 3937.84  
5233.84

Materials	Units	Qty	Unit Price	Total
16x10 DR11 DIPS reduce T Fab	Ea	1	625.00	625.00
10x3 DR11 Red T w/ 3" FLG	Ea	1	160.40	160.40
10x6 DIPS DR11 conc Reduc	Ea	1	168.50	168.50
6 MJ C509 RW Gate Valve	Ea	1	425.00	425.00
6 DIPS DR11 90	Ea	2	52.86	105.72
6 DIPS MJ Adapter DR11	Ea	2	250.00	500.00
3 FxF C509 Gate Valve	Ea	1	335.00	335.00
3 FF Accessory Pack	Ea	1	17.50	17.50
3x2.5 Companion Flange	Ea	1	55.00	55.00
2.5 Sch40 PVC Male Adapter	Ea	1	4.25	4.25
2.5 Sch40 PVC PE Pipe	lf	20	4.75	95.00
2.5 Sch40 PVC 90	Ea	1	4.50	4.50
2.5 Sch40 Coupling	Ea	1	3.25	3.25
6X12 MJ Long Sleeve C153	Ea	1	98.75	98.75
6 MJ Restraint Kit w/ SS bolts	Ea	2	75.00	150.00
6 Stiffners	Ea	2	42.00	84.00
5 .25x27x37 2pc Valve Box	Ea	2	145.00	290.00
				<u>3,121.87</u>

Subcontractors	Units	Qty	Price	Total
				0
				0
				0

Equipment	Units	Qty	Price	Total
Kubota 121 Excavator (MINI)	HRS	9	60	540
Kubota KX80 Excavator (mini)	HRS	8	90	720
Case 450 skid steer	HRS	3	75	225
Case 210 Excavator	HRS	3	150	450
Kobelco 210	HRS	3	150	450
Compactor	Day	1	95	95
Case 160 Excavator	HRS	3	165	495
Grade/Laser Equipment				0
Dewatering Equipment	DAY	1	85	85
Misc. Equipment (saws/generators/pressure washer)				0
Boring Equipment				0
Response and Testing Equipment				0
Confined Space Equipmnet				0
Vacuum Truck & Jetting Equipment	WK	0	1483.26	0
Video Inspection Equipment				0
				<u>3,060.00</u>

National Aeronautics and  
Space Administration  
**John C. Stennis Space Center**  
Stennis Space Center, MS 39529-6000



August 1, 2013

Reply to Attn of: **RA10/13-1253DAW**

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following answer is in response to your Requests for Information:

**RFI 014 Questions:**

Please reference Drawing C-404 at Sta. 155+15

Per a comment on Transmittal 049, a 1" PVC water Main that would service Building 8200 is not shown on the design. After field verification of this line it has been confirmed that it is a 1" PVC line. The location of the line is under concrete between the valve and the Building; however, the size was determined inside the Building. The Building has one bathroom.

Information needed:

1. Will the new line need to be installed via open cut which will require the removal and replacement of approximately 80LF of asphalt and limestone base material or will the line need to be installed via HDD?
2. Will the use of a 16"x1" Tapping Saddle be allowed at the 16" HDPE line?
3. What type of pipe is required for the service?

**Answer:**

1. Install the new line by open cut. Patch cut through parking area and road with limestone base material and concrete in lieu of the asphalt topping.
2. A stainless steel tapping saddle shall be used to make connection. Within 5' of the tap, install an isolation valve and valve box.
3. The line shall be PVC to match the existing line.

**NOTE: \*\* "Any comment that result in a change to the contract cost, scope, or schedule you must notify the Contracting Officer for approval prior to implementation or any costs are incurred."**

If you have any questions, give me a call at 228-688-1655.

A handwritten signature in black ink, appearing to read "Dale A. Woolridge".

Dale A. Woolridge  
Contracting Officer's  
Technical Representative

Enclosure

cc:  
Jacobs-FOSC



(b)(6)

Official File



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# REQUEST FOR INFORMATION

(Implemented by SOI-8040-0001-FACENG)

Request For Information (RFI) Number

014 Installation of PVC Connection to Building 8200

Date

July 24, 2013

Requestor

SAUER, INC

Contract

NNS12AA95T

Question:

Please reference Drawing C-404 at Sta. 155+15

Per a comment on Transmittal 049, a 1" PVC water Main that would service Building 8200 is not shown on the design. After field verification of this line it has been confirmed that it is a 1" PVC line. The location of the line is under concrete between the valve and the Building, however, the size was determined inside the Building. The Building has one bathroom.

Information needed:

1. Will the new line need to be installed via open cut which will require the removal and replacement of approximately 80LF of asphalt and limestone base material or will the line need to be installed via HDD?
2. Will the use of a 16"x1" Tapping Saddle be allowed at the 16" HDPE line?
3. What type of pipe is required for the service?

Answer:

1. Install the new line by open cut. Patch cut through parking area and road with limestone base material and concrete in lieu of the asphalt topping.
2. A stainless steel tapping saddle shall be used to make connection. Within 5' of the tap, install an isolation valve and valve box.
3. The line shall be PVC to match the existing line. CSW

Page 103 redacted for the following reason:

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(b)(7)(F)



# RENTAL QUOTE

## HERTZ EQUIPMENT RENTAL CORPORATION

Office: [Redacted]  
 Fax: (b)(6)  
 Cell: [Redacted]  
 Email: [Redacted]

Branch #: 9430

Sales Rep: (b)(6)

Date: 9/6/2013

### Customer Information

Name: **SH Anthony**  
 Contact: (b)(6)  
 Address: PO Box 3719  
 City, State: Gulfport, MS  
 Zip: 39505  
 Phone: (228) 896-7310  
 Fax:

### Job Site Information

Name: **Stennis Space Center**  
 Contact: (b)(6)  
 Address: 1000 Trent Lott  
 City, State: Stennis, Ms  
 Zip:  
 Phone: (b)(6)  
 Fax:

Qty	Description	Rental Rates			Rental Term	Estimated Total
		Day	Week	4 Week		
1	Concrete Vibrator 2 HP Electric	63.00	153.00	441.00	1 D	63.00

Sub Total	63.00
Transportation Charges	100.00
Loss Damage Waiver	N Declined
Environmental Recovery Fee	0.00
Estimated Taxes	7.00% 11.41
<b>Estimated Total</b>	<b>\$174.41</b>

Rental Quote is valid through: 09/30/13

### Comments :

Thanks (b)(6) let me know if you have any questions or concerns!

*This price quote is for information purposes only and does not constitute an offer to rent or sell goods or equipment. All rentals or sales shall be subject to the terms and conditions of Hertz's Rental Contract or Sales Invoice.*

THANK YOU FOR CHOOSING HERTZ EQUIPMENT RENTAL

# All Around Concrete Cutting, Inc.

P.O. Box 2094  
Kenner, Louisiana 70063

---

Office (504) 739-9166

• Watts 1-888-CUT4U56

• Fax (504) 739-9163

## QUOTE

September 9, 2013

VIA E-MAIL:

(b)(6)

Company: SH Anthony

Attention:

(b)(6)

Job Location: Stennis

Quote for the above referenced job:

### SAW CUTTING:

- (2) 100' x 4" asphalt

\$ 720.00

Minimum per day charge.

Price includes hitting typical steel.

Additional charge will be incurred for any stand-by time.

The customer must provide all **lay-out**.

Any adjustments of footage, greater or lesser, the price will be adjusted accordingly.

Monday - Friday day work only.

**JOB QUOTE MUST BE SIGNED, DATED AND FAXED BACK BEFORE WE CAN SCHEDULE THE JOB.**

Signed: \_\_\_\_\_

Approved by:

(b)(6)

All Around Concrete Cutting, Inc.

*Please Note: This quotation is valid for ten (10) days from the submission date.*

Email: [allaroundconcrete@yahoo.com](mailto:allaroundconcrete@yahoo.com)

• Website: [www.allaroundconcretecutting.com](http://www.allaroundconcretecutting.com)



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No. NNS12AA95T-017

**Contractor** SAUER, INC.  
**Initiator/Company** S H Anthony  
**Spec./Section** 12G00-G020/33 11 00

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-404  
**Date** 06 September 2013

**Description of problem and recommended change:** Potable Water System Upgrades  
**P:** See RFI 014, attached.

**S:** We propose to install a 1" gate valve and connect. We will maintain 10-foot separation between the pipes. We will install a 16x1 tapping sleeve and a 1" corporation stop and a 1" gate valve.

**Cost Impact**  No  Yes **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**  No  Yes **No. of Days** \_\_\_\_\_  
**Project Manager** (b)(6) CQCM **Date** 06 September 2013

## DISPOSITION (NASA)

Evaluation:

NASA Project Manager	_____	Date	_____
Construction Engineer	_____	Date	_____
Quality Engineer	_____	Date	_____
Safety Engineer	_____	Date	_____
Environmental	_____	Date	_____
Design Engineer	_____	Date	_____
CCB Chair	_____	Date	_____

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

Page 107 redacted for the following reason:

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(b)(7)(F)

National Aeronautics and  
Space Administration  
**John C. Stennis Space Center**  
Stennis Space Center, MS 39529-6000



August 1, 2013

Reply to Attn of: **RA10/13-1253DAW**

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following answer is in response to your Requests for Information:

**RFI 014 Questions:**

Please reference Drawing C-404 at Sta. 155+15

Per a comment on Transmittal 049, a 1" PVC water Main that would service Building 8200 is not shown on the design. After field verification of this line it has been confirmed that it is a 1" PVC line. The location of the line is under concrete between the valve and the Building; however, the size was determined inside the Building. The Building has one bathroom.

Information needed:

1. Will the new line need to be installed via open cut which will require the removal and replacement of approximately 80LF of asphalt and limestone base material or will the line need to be installed via HDD?
2. Will the use of a 16"x1" Tapping Saddle be allowed at the 16" HDPE line?
3. What type of pipe is required for the service?

**Answer:**

1. Install the new line by open cut. Patch cut through parking area and road with limestone base material and concrete in lieu of the asphalt topping.
2. A stainless steel tapping saddle shall be used to make connection. Within 5' of the tap, install an isolation valve and valve box.
3. The line shall be PVC to match the existing line.

**NOTE: \*\* "Any comment that result in a change to the contract cost, scope, or schedule you must notify the Contracting Officer for approval prior to implementation or any costs are incurred."**

If you have any questions, give me a call at 228-688-1655.

A handwritten signature in blue ink, appearing to read "Dale A. Woolridge".

Dale A. Woolridge  
Contracting Officer's  
Technical Representative

Enclosure

cc:  
Jacobs-FOSC

(b)(6)

Official File



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# REQUEST FOR INFORMATION

(Implemented by SOI-8040-0001-FACENG)

Request For Information (RFI) Number  
014 Installation of PVC Connection to Building 8200

Date July 24, 2013	Requestor SAUER, INC	Contract NNS12AA95T
-----------------------	-------------------------	------------------------

Question:  
Please reference Drawing C-404 at Sta. 155+15

Per a comment on Transmittal 049, a 1" PVC water Main that would service Building 8200 is not shown on the design. After field verification of this line it has been confirmed that it is a 1" PVC line. The location of the line is under concrete between the valve and the Building, however, the size was determined inside the Building. The Building has one bathroom.

Information needed:

1. Will the new line need to be installed via open cut which will require the removal and replacement of approximately 80LF of asphalt and limestone base material or will the line need to be installed via HDD?
2. Will the use of a 16"x1" Tapping Saddle be allowed at the 16" HDPE line?
3. What type of pipe is required for the service?

Answer:

1. Install the new line by open cut. Patch cut through parking area and road with limestone base material and concrete in lieu of the asphalt topping.
2. A stainless steel tapping saddle shall be used to make connection. Within 5' of the tap, install an isolation valve and valve box.
3. The line shall be PVC to match the existing line.CSW



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No 015A/017A

**Contractor** SAUER, INC.  
**Initiator/Company** Sauer, Inc.  
**Spec./Section** 12G00-G020/

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** \_\_\_\_\_  
**Date** 18 December 2013

**Description of problem and recommended change:**  
 Revised FCR 015A/017A Attached.

**Cost Impact**       No       Yes      **Not to Exceed** \_\_\_\_\_  
**Schedule Impact**       No       Yes      **No. of Days** \_\_\_\_\_  
**Project Manager**      (b)(6)      **Date** 18 December 2013

## DISPOSITION (NASA)

**Evaluation:**

<b>NASA Project Manager</b>	_____	<b>Date</b>	_____
<b>Construction Engineer</b>	_____	<b>Date</b>	_____
<b>Quality Engineer</b>	_____	<b>Date</b>	_____
<b>Safety Engineer</b>	_____	<b>Date</b>	_____
<b>Environmental</b>	_____	<b>Date</b>	_____
<b>Design Engineer</b>	_____	<b>Date</b>	_____
<b>CCB Chair</b>	_____	<b>Date</b>	_____

CCB Approved for Implementation       Yes       No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

## FIELD CHANGE REQUEST (FCR) INSTRUCTIONS

**PURPOSE:** The Field Change Request (FCR) is used to document, track, and implement changes. The FCR may be initiated by anyone associated with the project.

An FCR is initiated to document the following:

- a. Discrepancies that may exist between the drawings/specifications and field conditions.
- b. Inconsistencies in the drawings and/or specifications.
- c. Recommended design or specification changes that do not affect form, fit, or function (variance).
- d. Changes that are necessary to correct deficiencies in the design or specification.

An FCR may also be initiated by the PMD Office to request that the Contractor evaluate, for cost and schedule impact, proposed changes to the drawings/specifications.

### INSTRUCTIONS:

- INITIATOR -**
1. Provide all information requested at the top of the FCR form.
  2. Describe the recommended change; provide rationale and justification in detail.
  3. List all documentation affected, including revision.
  4. Provide all redlined documentation with the FCR within 2 working days.
  5. FCR number will be given by Configuration Control.

- CONTRACTOR -**
1. Cost/schedule impacts must be determined and noted in the space provided. Attach additional details, if necessary.
  2. All FCRs must be signed by the Project Manager.
  3. Submit the FCR to NASA for evaluation and disposition. NOTE: Change may NOT be implemented until written approval is received from the Contracting Officer.

- NASA -**
1. The designated PMD engineer evaluates the change and determines the appropriate disposition.
  2. Submit the FCR to the CCB/TRG for review and concurrence.
  3. All changes that impact cost or schedule must be submitted to the Contracting Officer for approval.
  4. Submit changes that affect configuration to the Configuration Control Board (CCB) within 5 working days.
  5. Provide a copy of the completed FCR to the Contractor.
  6. Provide the original FCR to Configuration Control.

CONTRACT TITLE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

DESCRIPTION: **REVISED---FCR-015/17, Fire Main Tie In at Bldg. 1022 and Installation of PVC Connection at Building 8200 Cost Proposal**

PRIME CONTRACTOR'S WORK Revisions/Comments

1. Direct Materials		(b)(6)
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Field Overhead	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		

Prime Remarks:

SUBCONTRACTOR'S WORK

11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			32,687

Sub's Remarks: SH Anthony \$32,687.00

SUMMARY

24. Prime Contractor's Work (from Line 10)		(b)(6)
25. Sub-Contractor's Work (from line 23)		
26. SUBTOTAL (add lines 24 & 25)		
27. Prime Overhead	% of Line 2	
28. Prime Profit	% of Line 2	
29. Gross Receipts Tax	% of Line 2	
30. SUBTOTAL (add lines 26 -29)		
31. Prime Contractor's Bond Premium	% of Line 3	
32. TOTAL COST (Add Lines 30 & 31)		

Estimated time extension and justification  
Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast

Subcontractor:

(b)(6)

Project Engineer

Date 12/19/13



Change Order Request # FCR-017 / SHA RFI-014

CHANGE ORDER REQUEST NAME: Install Line to BLD 8200

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
FCR-017 / RFI-014	\$ 6,334.16	\$ 1,957.90	\$ 1,921.00	\$ 2,970.83		\$ 13,183.89
						\$ -
						\$ -
Base Total	\$ 6,334.16	\$ 1,957.90	\$ 1,921.00	\$ 2,970.83	\$ -	\$ 13,183.89
Tax and Bond (5.97%)						\$ 832.40
Misc. Labor Burden 37%						\$ 759.24
Fee(15%)						\$ 2,216.33
<b>Total</b>						<b>\$ 16,991.87</b>

DESCRIPTION: Additional branch line to Guard House Bld 8200 Station 155+15 OPEN CUT

ADDITIONAL TIME REQUESTED: **5 days**

SIGNED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
**(b)(6)**

Project Manager  
**(b)(6)**



Daily Rates Extended

Equipment Type:	Delivery/Pick up Fee	Rental Company	Day	DEQ Fee 1.5%	LDW 15%	Tax 7%	Total
<u>Vac Trailer Net</u>		Volvo	\$400.00				
LDW		Volvo	\$60.00				
ENFE		Volvo	\$6.00				
Tax		Volvo	\$28.42				
Sub-Total		Volvo	\$494.42				
Freight	\$320.00	Volvo	\$320.00				
<u>Total:</u>		<u>Volvo</u>	<u>\$814.42</u>				
10kw Generator	\$320.00	Volvo	\$160.00	\$2.40	\$24.00	\$13.05	\$519.45
	\$400.00	Sunbelt	\$160.00	\$2.40	\$24.00	\$13.05	\$599.45
24" Plate Tamp	\$320.00	Volvo	\$275.00	\$4.13	\$41.25	\$22.43	\$662.80
	\$400.00	Sunbelt	\$280.00	\$4.20	\$42.00	\$22.83	\$749.03
Case 135	\$320.00	Volvo	\$650.00	\$9.75	\$97.50	\$53.01	\$1,130.26
	\$300.00	Hertz	\$785.00	\$11.78	\$117.75	\$64.02	\$1,278.54
	\$800.00	H&E	\$636.00	\$9.54	\$95.40	\$51.87	\$1,592.81
Case 160	\$320.00	Volvo	\$875.00	\$13.13	\$131.25	\$71.36	\$1,410.73
	\$300.00	Hertz	\$925.00	\$13.88	\$138.75	\$75.43	\$1,453.06
	\$800.00	H&E	\$680.00	\$10.20	\$102.00	\$55.45	\$1,647.65
Case 210	\$320.00	Volvo	\$1,200.00	\$18.00	\$180.00	\$97.86	\$1,815.86
	\$300.00	Hertz	\$1,275.00	\$19.13	\$191.25	\$103.98	\$1,889.35
	\$800.00	H&E	\$1,000.00	\$15.00	\$150.00	\$81.55	\$2,046.55
Case 721 Loader	\$320.00	Volvo	\$750.00	\$11.25	\$112.50	\$61.16	\$1,254.91
	\$300.00	Hertz	\$725.00	\$10.88	\$108.75	\$59.12	\$1,203.75
	\$800.00	H&E	\$936.00	\$14.04	\$140.40	\$76.33	\$1,966.77
KX 80	\$320.00	Volvo	\$500.00	\$7.50	\$75.00	\$40.78	\$943.28
	\$400.00	H&E	\$504.00	\$7.56	\$75.60	\$41.10	\$1,028.26

Daily Rates Extended

KX 121	\$320.00	Volvo	\$350.00	\$5.25	\$52.50	\$28.54	\$756.29
	\$400.00	Hertz	\$400.00	\$6.00	\$60.00	\$32.62	\$898.62
	\$400.00	H&E	\$296.00	\$4.44	\$44.40	\$24.14	\$768.98
Highway Sweeper	\$320.00	Volvo	\$400.00	\$6.00	\$60.00	\$32.62	\$818.62
	\$400.00	Hertz	\$345.00	\$5.18	\$51.75	\$28.13	\$830.06
	\$400.00	H&E	\$406.00	\$6.09	\$60.90	\$33.11	\$906.10
450 Skidsteer	\$320.00	Volvo	\$320.00	\$4.80	\$48.00	\$26.10	\$718.90
	\$400.00	H&E	\$312.00	\$4.68	\$46.80	\$25.44	\$788.92
2hp Conc Vibrator	\$100.00	Volvo	\$65.00	\$0.98	\$9.75	\$5.30	\$181.03
	\$100.00	Hertz	\$63.00	\$0.95	\$9.45	\$5.14	\$178.53
Dewatering Equip	\$100.00	Volvo	\$95.00	\$1.43	\$14.25	\$7.75	\$218.42



Volvo Construction Equipment Rents

RENTAL QUOTE

VOLVO RENTS ORDER NUMBER

Volvo Rents, Inc.

Cust. PO \_\_\_\_\_ Proposal No. \_\_\_\_\_ Salesman **(b)(6)** Date 12/13/2013

Customer SH ANTHONY	Ship To _____
Address _____	_____
_____	_____
Phone <b>(b)(6)</b>	Phone _____ Fax _____

F.O.B. Point of Origin - Ship Via \_\_\_\_\_  Volvo Rents  C.P.U

TERMS: Net 30 All Rates are based on a 8 Hour Day, 40 Hour Week & 160 Hour Month Quote good for 60 days  
 TAX RATE: 7%

Freight cost are per truckload

SHIPPING COST: Delivery 160 Each way LDW:  Y  N

QTY	CAT/CLASS	TYPE	DESCRIPTION	DAY	WEEK	4 WEEK	
1			10 KW Generator	\$ 160.00	\$ 405.00	\$ 975.00	
1			24" plate tamp	\$ 275.00	\$ 695.00	\$ 1,930.00	
1			Case 135/ EC145 Excavator	\$ 650.00	\$ 1,850.00	\$ 4,025.00	
1			Case 210/ EC210 Excavator	\$ 1,200.00	\$ 2,900.00	\$ 7,500.00	
1			Case 160/ EC160 Excavator	\$ 875.00	\$ 2,100.00	\$ 5,150.00	
1			Case 721Loader/ L90	\$ 750.00	\$ 2,150.00	\$ 5,950.00	
1			Kubota KX 80/Mini/EC 88	\$ 500.00	\$ 1,250.00	\$ 3,145.00	
1			Kubota KX121 Mini/EC55	\$ 350.00	\$ 1,100.00	\$ 2,500.00	
1			Highway Sweeper	\$ 400.00	\$ 930.00	\$ 1,875.00	
1			Concrete Vibrator 2HP	\$ 65.00	\$ 160.00	\$ 450.00	
			Dewatering Pump & Hose	\$ 95.00	\$ 245.00	\$ 689.00	
			450 Skidsteer	\$ 320.00	\$ 915.00	\$ 2,290.00	
* TYPE N = NEW U = USED R = RENTAL PR = PURCHASE OF RENTAL EQUIPMENT				Net Price	\$ 5,640.00	\$ 14,700.00	\$ 36,479.00
A = ACCESSORIES P = PARTS S = SERVICE/REPAIR				Other			
				Freight			
				LDW	\$ 846.00	\$ 2,205.00	\$ 5,471.85
				ENFE	\$ 84.60	\$ 220.50	\$ 547.19
<b>For Quote Purposes Only</b>				Sales Tax	\$ 400.72	\$ 1,044.44	\$ 2,591.83
				Total	\$ 6,971.32	\$ 18,169.94	\$ 45,089.87



BRANCH: 430	BILL TO CUSTOMER: 2833536	SHIPPING ADDRESS
HERC BILOXI 9291 WEST OAKLAWN ROAD BILOXI, MS 39532 228-396-6441	S H ANTHONY INC PO BOX 3719 GULFPORT, MS 39505	STENNIS POT WATER 1037 MARS RD STENNIS SPACE CENTER, MS 39520  228-297-6885

DESCRIPTION/CHARGES									
EST START: 11/11/13 11:16			EST RETURN: 12/09/13 11:16			DROP DATE: _____			
SHIPPED BY:			ORDERED BY: <span style="background-color: red; color: white;">[REDACTED]</span>			DROP TIME: _____			
ORDER DATE: 11/11/13			SALESPERSON: 487			SALES COORDINATOR:			
PO# / JOB#:			QUOTE FOR CHANGE ORDER			/ 1 - STENNIS POT WATE			
<b>Rates subject to availability</b> <b>Rates include maintenance service</b>									
Qty	Equipment #	Hrs/ Min	Hour	Day	Week	4 Week	Amount		
1	EXCAVATOR/4-6 METRIC TON/CRAWLER/DSL 2460040 / 21	8/ 400.00	66.67	400.00	1199.00	2830.00	2830.00		
							EMISSIONS & ENV SURCHARGE	EMISSIONS	38.77
1	EXCAVATOR/14-16 METRIC TON/CRAWLER/DSL 2460070 Case 131	8/ 785.00	130.83	785.00	2035.00	5399.00	5399.00		
							EMISSIONS & ENV SURCHARGE	EMISSIONS	73.97
1	EXCAVATOR/19-21 METRIC TON/CRAWLER/DSL 2460100 Case 160	8/ 925.00	154.17	925.00	2250.00	6250.00	6250.00		
							EMISSIONS & ENV SURCHARGE	EMISSIONS	65.63
1	EXCAVATOR/24-28 METRIC TON/CRAWLER/DSL 2460160 Case 210	8/ 1275.00	212.50	1275.00	3350.00	8150.00	8150.00		
							EMISSIONS & ENV SURCHARGE	EMISSIONS	111.66
1	WHEEL LOADER/3 1/2YD/GEN BKT/DSL 2610350 Case 721	8/ 725.00	120.83	725.00	2100.00	5750.00	5750.00		
							EMISSIONS & ENV SURCHARGE	EMISSIONS	78.78
1	SWEEPER/RIDE ON/3 WHEEL 7580200	8/ 345.00	57.50	345.00	905.00	1855.00	1855.00		

CONTINUED

For GREAT DEALS on USED EQUIPMENT - visit us on-line at [www.hortzequip.com](http://www.hortzequip.com)  
**CAREFULLY READ THE TERMS AND CONDITIONS ON REVERSE SIDE OF THIS PAGE**

Notwithstanding payment of the LDW fee, Customer is liable for all damage to the Equipment and expense of HERC caused by the Equipment being used or operated in violation of the terms and conditions on the Reverse Side of this page or in violation of the LOSS AND DAMAGE WAIVER GUIDE.  
PARAGRAPH 12. ON THE REVERSE SIDE OF THIS PAGE IS IN LIEU OF (i) ALL WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; AND (ii) ALL OBLIGATIONS ON THE PART OF HERC TO CUSTOMER FOR DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE LEASING, MAINTENANCE, USE, OPERATION, STORAGE, ERECTION, DISMANTLING OR TRANSPORTATION OF THE EQUIPMENT. CUSTOMER REPRESENTS THAT HE HAS FULLY INSPECTED THE EQUIPMENT AND THAT SAME IS IN GOOD CONDITION AND REPAIR. CUSTOMER IS LIABLE FOR ALL VIOLATIONS OF LAW ARISING OUT CUSTOMER'S USE, POSSESSION OR OPERATION OF THE EQUIPMENT. THE EQUIPMENT DESCRIBED HEREIN IS RENTED PURSUANT TO AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS SET FORTH ABOVE AND ON THE REVERSE SIDE OF THIS PAGE. CUSTOMER REPRESENTS HAVING READ AND AGREED TO SAME.

\* Environmental Recovery Fee - If an Environmental Recovery Fee is charged, it is a recovery by HERC to offset its expense and costs, including its overhead, for handling, managing, and/or disposing of waste materials associated with the rented equipment that contain hazardous substances, such as motor oil, grease, and/or hydraulic fluid, as well as related administrative cost. THIS IS NOT A GOVERNMENT MANDATED CHARGE.

LOSS AND DAMAGE WAIVER (LDW) IS NOT INSURANCE. The Charge for LDW is 14.20 % of gross rental charges. Customer accepts or declines LDW. If Customer accepts LDW, in consideration of the charge shown above, Lessor agrees to waive certain claims against customer for loss of or damage to Equipment, in accordance with the terms and conditions set forth in Paragraph 8, on the Reverse Side of this page and in the LOSS AND DAMAGE WAIVER GUIDE which Customer hereby acknowledges receiving.  
Customer acknowledges that the Equipment will be returned in a good, clean and uncluttered condition, free of any and all hazardous substances.

Print Customer Name: \_\_\_\_\_ Title: \_\_\_\_\_  
Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Terms are Net 10 Days      Not valid without



Carefully read the terms and conditions on reverse side of this page



PC#: 106  
 3412 BIENVILLE BLVD  
 OCEAN SPRINGS, MS 39564-5732  
 228-872-6022

**SUNBELT RENTALS, INC.**

Salesman: [REDACTED]  
 Typed By: (b)(6)

**QUOTE**



Job Site:  
 S.H. ANTHONY, INC.  
 SATURN DR  
 STENNIS SPACE CENTER, MS 39529

(b)(6)

Contract #.. 43360982  
 Contract dt. 12/06/13  
 Date out.... 12/06/13 12:40 PM  
 Est return.. 1/03/14 12:40 PM  
 Job Loc..... SATURN DR, STENNIS SPACE CENTER  
 Job No..... 7 - S.H. ANTHONY, IN  
 P.O. #..... NR  
 Ordered By.. (b)(6)  
 NET DUE UPON RECEIPT

Customer: 542230  
 S.H. ANTHONY, INC.  
 P.O. BOX 3719  
 GULFPORT, MS 39503

QTY	EQUIPMENT #	Min	Day	Week	4 Week	Amount
1.00	10,000 WATT GENERATOR 0080020	63.00	160.00	410.00	980.00	980.00
1.00	1900LB TRACK SKIDSTEER 0480510	325.00	325.00	920.00	2295.00	2295.00
1.00	PLATE TAMPER REVERSIBLE 900LB 24" WIDE 0640250	135.00	280.00	700.00	1935.00	1935.00
1.00	SKIDSTEER LOADER BUCKET					N/C
SALES ITEMS:						
Qty	Item number	Unit	Price			
1	DLPKSRCHG	EA	38.000			38.00
1	TRANSPORTATION SURCHARGE					
1	ENVIRONMENTAL ENVIRONMENTAL	EA	72.940			72.94
1	RENTAL PROTECTION PLAN	EA				781.50
	DELIVERY CHARGE					200.00
	PICKUP CHARGE					200.00

Rate your rental experience [www.sunbeltrentals.com/survey](http://www.sunbeltrentals.com/survey)

**IF THE EQUIPMENT DOES NOT WORK PROPERLY, NOTIFY THE OFFICE AT ONCE**

**MULTIPLE SHIFTS OR OVERTIME RATES MAY APPLY**

**CUSTOMER IS RESPONSIBLE FOR REFUELING, DAMAGES AND REPAIRS**

- The total charges are an estimate based on the estimated rental period provided by Customer.
- Customer assumes all risks associated with the Equipment during the Rental Period, including injury and damage to persons, property and the Equipment.
- Customer is responsible for and shall only permit properly trained, authorized individuals, who are not impaired (under the influence of drugs or alcohol), to use the Equipment.
- If the Equipment does not operate properly, is not suitable for Customer's intended use, does not have operating and safety instructions or Customer has any questions regarding use of the Equipment, Customer shall not use the Equipment and shall contact Sunbelt immediately.
- Misuse of the Equipment or using damaged or malfunctioning Equipment may result in serious bodily injury or death.
- Customer has received, read, understands and agrees to the estimated charges herein and all the terms and conditions of this Contract, including the Release and Indemnification provision in Section 7 and the Environmental Fee in Section 14, which can also be found at [www.sunbeltrentals.com/rentalcontract](http://www.sunbeltrentals.com/rentalcontract). \* Delivery/Pickup Surcharge fee explanation is available at [www.sunbeltrentals.com/surcharge](http://www.sunbeltrentals.com/surcharge)
- Customer must contact Sunbelt to request pickup of Equipment, retain the Pick Up Number given by Sunbelt and will be responsible for Equipment until actually retrieved by Sunbelt.
- For operations in California: Customer is renting equipment registered under the California Air Resources Board (CARB) Portable Equipment Registration Program (PERP). The operator of the Equipment is subject to the requirements of the PERP regulation and local Air Pollution Control District rules. Under the PERP Regulation, the Customer is required to keep a copy of the rental agreement and CARB registration certificate, including operating conditions and notification requirements, with the Equipment at all times. Customer must also complete the log provided with the Equipment as

**Continued on the next page...**

# H&E EQUIPMENT SERVICES, INC.

QUOTE

TO: (b)(6)	FROM: (b)(6)
FAX NUMBER:	DATE: 12/13/13
COMPANY: SH ANTHONY	TOTAL NO. OF PAGES INCLUDING COVER: 1
PHONE NUMBER: (b)(6)	QUOTE NUMBER:
RE:	YOUR REFERENCE NUMBER:

URGENT   
  FOR REVIEW   
  PLEASE COMMENT   
  PLEASE REPLY   
  PLEASE RECYCLE

Thanks for the opportunity to quote on your equipment needs. If you have any questions please give me a call @ (b)(6)

	Month	week	day
1-pc45 mini excavator	1850.00	740.00	296.00
121 - Freight 200.00 each way			
1-pc78-88 excavator	3150.00	1260.00	504.00
80 - Freight 200.00 each way			
1-pc130 excavator	3975.00	1590.00	636.00
Freight 400.00 each way			
1-pc160 excavator	4250.00	1700.00	680.00
Freight 400.00 each way			
1-pc 210 excavator	6250.00	2500.00	1000.00
Freight 400.00 each way			
1-ride on street sweeper	1900.00	935.00	406.00
Freight 200.00 each way			
1-wa380 wheel loader	5850.00	2340.00	936.00
721 - Freight 400.00 each way			
1-tl240 skid loader	1950.00	780.00	312.00
450 - Freight 200.00 each way			

Extra fee Environmental 1.5 % of rental  
 Damage Waiver is 15 % of rental + Tax  
 Thank you (b)(6)



# RENTAL QUOTE

## HERTZ EQUIPMENT RENTAL CORPORATION

Office: (b)(6)  
 Fax: (b)(6)  
 Cell: (b)(6)  
 Email: (b)(6)

Branch #: 9430

Sales Rep: (b)(6)

Date: 9/6/2013

### Customer Information

Name: **SH Anthony**  
 Contact: (b)(6)  
 Address: PO Box 3719  
 City, State: Gulfport, MS  
 Zip: 39505  
 Phone: (b)(6)  
 Fax:

### Job Site Information

Name: **Stennis Space Center**  
 Contact: (b)(6)  
 Address: 1000 Front Loop  
 City, State: Stennis, Ms  
 Zip:  
 Phone: (b)(6)  
 Fax:

Qty	Description	Rental Rates			Rental Term	Estimated Total
		Day	Week	4 Week		
1	Concrete Vibrator 2 HP Electric	63.00	153.00	441.00	1 D	63.00

Sub Total	63.00
Transportation Charges	100.00
Loss Damage Waiver	N Declined
Environmental Recovery Fee	0.00
Estimated Taxes	7.00% 11.41
<b>Estimated Total</b>	<b>\$174.41</b>

Rental Quote is valid through: 09/30/13

### Comments :

Thanks (b)(6) let me know if you have any questions or concerns!

*This price quote is for information purposes only and does not constitute an offer to rent or sell goods or equipment. All rentals or sales shall be subject to the terms and conditions of Hertz's Rental Contract or Sales Invoice.*

THANK YOU FOR CHOOSING HERTZ EQUIPMENT RENTAL



926 Baxter Ave.  
PO Box 4545  
Louisville, KY 40204

## Stennis Space Center - Potable Water

Attn: (b)(6)

Estimator:

Sales Person: (b)(6)

Bid Date: September 9, 2013

Bid Time: 4:00 PM

Revision: 1

Plans Dated:

Addenda:

Quote Expiration Date:

### Note:

Please Review Notes Below And At The Bottom Of This Quotation

- 1 This material estimate is for bidding purposes only. This is not a guaranteed list of materials, this is our interpretation of the contract documents. Customer shall verify all quantities & estimated materials prior to bidding, pricing and ordering.
- 2 This quotation is limited to material listed within, items not listed shall not be assumed as being included.
- 3 All prices are good 7 days from bid date and are based on shipments of truck load quantities.
- 4 Orders less than a truck load are subject to a price change and additional freight charges
- 5 Material order is based upon customer approval & receipt of approved submittals
- 6 All special order items may not be cancelled after order has been placed
- 7 Returned materials may be assessed a restocking/handling/freight charge
- 8 MJ DI fittings are quoted as AWWA C153 L/A (unless noted otherwise)
- 9 DI pipe, fittings & spools are quoted w/cement lining and bituminous coating (unless noted otherwise)
- 10 Pipe Drawings/Lay schedules & startup are not included in quotation, but can be provided for an additional charge
- 11 All material is quoted as F.O.B shipping point (unless noted otherwise)
- 12 All pipe will be sold in full length quantities
- 13 Per ISCO'S standard terms and conditions
- 14 Prices in effect at time of shipment

QTY	SIZE	DESCRIPTION	UNIT PRICE	UNIT TOTAL
<b>Station 135+42</b>				
1 ea		16x10 DIPS DR11 Reducing Tee Fabbed	\$ 625.00	\$ 625.00
1 ea		10x3 DIPS DR11 Red Tee W/3" FLNG & TING FUSED	\$ 160.40	\$ 160.40
1 ea		10x6 DIPS DR11 Conc Reducer	\$ 168.50	\$ 168.50
1 ea		6 MJ C509 RW Gate Vlv, OL, Op Nut	\$ 425.00	\$ 425.00
2 ea		6 DIPS DR11 90 Ell	\$ 52.86	\$ 105.72
2 ea		6 DIPS MJ Adapter DR11	\$ 250.00	\$ 500.00
1 ea		3 FxF C509 RW Gate Vlv, OL, OP Nut	\$ 335.00	\$ 335.00
1 ea		3 FF Flange Accessory Pack	\$ 17.50	\$ 17.50
1 ea		3 x 2 1/2 Companion flange	\$ 55.00	\$ 55.00
1 ea		2 1/2 Sch40 PVC Male Adapter	\$ 4.25	\$ 4.25
20 lf		2 1/2 Sch40 PVC PE Pipe	\$ 4.75	\$ 95.00
1 ea		2 1/2 Sch40 PVC 90 Bend	\$ 4.50	\$ 4.50
1 ea		2 1/2 Sch40 Coupling	\$ 3.25	\$ 3.25
1 ea		6x12 MJ Long Sleeve C153 CL/Bit	\$ 98.75	\$ 98.75
2 ea		6 MJ Restraint Kit - PVC w/316ss bolts	\$ 75.00	\$ 150.00
2 ea		6 SS Stiffeners	\$ 42.00	\$ 84.00
2 ea		5 1/4x27x37 2pc HD Screw Valve Box	\$ 145.00	\$ 290.00
1 ea		3 roll, Detect Tape - Blue/Water	\$ 30.00	\$ 30.00
25 lf		12 gauge wire, Blue, Solid	\$ 0.15	\$ 3.75
			<b>Estimated Subtotal</b>	<b>\$ 3,155.62</b>

<b>Station 155+15</b>				
1 ea		16x1 Service Saddle	\$ 130.00	\$ 130.00
200 lf		1 CTS DR9 HDPE 4710	\$ 0.45	\$ 90.00
1 ea		1 Corp Stop CC x CTS	\$ 65.00	\$ 65.00
2 ea		1 Ball Curb CTS x CTS	\$ 83.95	\$ 167.90
5 ea		1 SS Stiffener	\$ 2.25	\$ 11.25
2 ea		2 1/2x30-42 92D Curb Box	\$ 55.00	\$ 110.00
1 ea		3 roll, Detect Tape - Blue/Water	\$ 30.00	\$ 30.00
125 lf		12 gauge wire, Blue, Solid	\$ 0.15	\$ 18.75
			<b>Estimated Subtotal</b>	<b>\$ 622.90</b>

<b>Estimated Project Total:</b>	<b>\$ 3,778.52</b>
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Project Notes:

TO: SH Anthony, Inc.

FROM: Micro-Methods, Inc.  
6-Dec-13

Stennis Water Main  
2 Consecutive Days

<u>PARAMETERS</u>	<u>UNIT PRICE</u>	<u>QUANTITY</u>	<u>EXTENDED COST</u>
2 - samples pulled/2 consecutive days	\$ 376.00	2	\$ 752.00

This price quote does include overtime, weekends, or holidays. 24 hr. notification for scheduling sampling event required.

# All Around Concrete Cutting, Inc.

P.O. Box 2094  
Kenner, Louisiana 70063

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Office (504) 739-9166

• Watts 1-888-CUT4U56

• Fax (504) 739-9163

## QUOTE

September 9, 2013

VIA E-MAIL:

(b)(6)

Company: SH Anthony

Attention:

(b)(6)

Job Location: Stennis

Quote for the above referenced job:

### SAW CUTTING:

- (2) 100' x 4" asphalt

\$ 720.00

Minimum per day charge.

Price includes hitting typical steel.

Additional charge will be incurred for any stand-by time.

The customer must provide all **lay-out**.

Any adjustments of footage, greater or lesser, the price will be adjusted accordingly.

Monday - Friday day work only.

**JOB QUOTE MUST BE SIGNED, DATED AND FAXED BACK BEFORE WE CAN SCHEDULE THE JOB.**

Signed: \_\_\_\_\_

Approved by:

(b)(6)

All Around Concrete Cutting, Inc.

*Please Note: This quotation is valid for ten (10) days from the submission date.*

Email: [allaroundconcrete@yahoo.com](mailto:allaroundconcrete@yahoo.com)

• Website: [www.allaroundconcretecutting.com](http://www.allaroundconcretecutting.com)

(b)(6)

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From:

(b)(6)

Sent:

Monday, September 09, 2013 2:59 PM

To:

(b)(6)

Subject:

RE: Stennis Potable Water Quote needed

Total for one (1) one-hour visit of soil testing - \$250.00

Total for one (1) concrete pour with separate one (1) concrete pickup and 1 set of 5 test cylinders - \$575

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National Aeronautics and  
Space Administration  
**John C. Stennis Space Center**  
Stennis Space Center, MS 39529-6000



August 1, 2013

Reply to Attn of: **RA10/13-1253DAW**

Sauer Incorporated  
Attn: **(b)(6)**  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following answer is in response to your Requests for Information:

**RFI 014 Questions:**

Please reference Drawing C-404 at Sta. 155+15

Per a comment on Transmittal 049, a 1" PVC water Main that would service Building 8200 is not shown on the design. After field verification of this line it has been confirmed that it is a 1" PVC line. The location of the line is under concrete between the valve and the Building; however, the size was determined inside the Building. The Building has one bathroom.

Information needed:

1. Will the new line need to be installed via open cut which will require the removal and replacement of approximately 80LF of asphalt and limestone base material or will the line need to be installed via HDD?
2. Will the use of a 16"x1" Tapping Saddle be allowed at the 16" HDPE line?
3. What type of pipe is required for the service?

**Answer:**

1. Install the new line by open cut. Patch cut through parking area and road with limestone base material and concrete in lieu of the asphalt topping.
2. A stainless steel tapping saddle shall be used to make connection. Within 5' of the tap, install an isolation valve and valve box.
3. The line shall be PVC to match the existing line.

**NOTE: \*\* "Any comment that result in a change to the contract cost, scope, or schedule you must notify the Contracting Officer for approval prior to implementation or any costs are incurred."**

If you have any questions, give me a call at 228-688-1655.

A handwritten signature in black ink, appearing to read "Dale A. Woolridge".

Dale A. Woolridge  
Contracting Officer's  
Technical Representative

Enclosure

cc:  
Jacobs-FOSC

**(b)(6)**

Official File



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

## REQUEST FOR INFORMATION

(Implemented by SOI-8040-0001-FACENG)

Request For Information (RFI) Number

014 Installation of PVC Connection to Building 8200

Date

July 24, 2013

Requestor

SAUER, INC

Contract

NNS12AA95T

Question:

Please reference Drawing C-404 at Sta. 155+15

Per a comment on Transmittal 049, a 1" PVC water Main that would service Building 8200 is not shown on the design. After field verification of this line it has been confirmed that it is a 1" PVC line. The location of the line is under concrete between the valve and the Building, however, the size was determined inside the Building. The Building has one bathroom.

Information needed:

1. Will the new line need to be installed via open cut which will require the removal and replacemnet of approximately 80LF of asphalt and limestone base material or will the line need to be installed via HDD?
2. Will the use of a 16"x1" Tapping Saddle be allowed at the 16" HDPE line?
3. What type of pipe is required for the service?

Answer:

1. Install the new line by open cut. Patch cut through parking area and road with limestone base material and concrete in lieu of the asphalt topping.
2. A stainless steel tapping saddle shall be used to make connection. Within 5' of the tap, install an isolation valve and valve box.
3. The line shall be PVC to match the existing line.CSW

Page 130 redacted for the following reason:

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(b)(7)(F)



Change Order Request # FCR-015 / SHA RFI-015

CHANGE ORDER REQUEST NAME: Provide Tie in for 6" and 2.5" going to BLD 1022

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
FCR-015 / RFI-015	\$ 5,379.76	\$ 3,155.62	\$ 376.00	\$ 3,448.42		\$ 12,359.80
						\$ -
						\$ -
<b>Base Total</b>	\$ 5,379.76	\$ 3,155.62	\$ 376.00	\$ 3,448.42	\$ -	\$ 12,359.80
Tax and Bond (5.97%)						\$ 768.89
Misc. Labor Burden 37%						\$ 519.48
						\$ 13,648.17
Fee(15%)						\$ 2,047.23
						\$ -
<b>Total</b>						<b>\$ 15,695.40</b>

DESCRIPTION:	RFI-015 Station 135+42 Drawing Sheet C403	6" Fire Main and 2.5" Potable Water to Building 1022
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ADDITIONAL TIME REQUESTED: **4 days**

SIGNED BY:

DATE:

(b)(6)  
Project Manager  
(b)(6)



Daily Rates Extended

Equipment Type:	Delivery/Pick up Fee	Rental Company	Day	DEQ Fee 1.5%	LDW 15%	Tax 7%	Total
<b><u>Vac Trailer Net</u></b>		Volvo	\$400.00				
LDW		Volvo	\$60.00				
ENFE		Volvo	\$6.00				
Tax		Volvo	\$28.42				
Sub-Total		Volvo	\$494.42				
Freight	\$320.00	Volvo	\$320.00				
<b><u>Total:</u></b>		<b><u>Volvo</u></b>	<b><u>\$814.42</u></b>				
10kw Generator	\$320.00	Volvo	\$160.00	\$2.40	\$24.00	\$13.05	\$519.45
	\$400.00	Sunbelt	\$160.00	\$2.40	\$24.00	\$13.05	\$599.45
24" Plate Tamp	\$320.00	Volvo	\$275.00	\$4.13	\$41.25	\$22.43	\$662.80
	\$400.00	Sunbelt	\$280.00	\$4.20	\$42.00	\$22.83	\$749.03
Case 135	\$320.00	Volvo	\$650.00	\$9.75	\$97.50	\$53.01	\$1,130.26
	\$300.00	Hertz	\$785.00	\$11.78	\$117.75	\$64.02	\$1,278.54
	\$800.00	H&E	\$636.00	\$9.54	\$95.40	\$51.87	\$1,592.81
Case 160	\$320.00	Volvo	\$875.00	\$13.13	\$131.25	\$71.36	\$1,410.73
	\$300.00	Hertz	\$925.00	\$13.88	\$138.75	\$75.43	\$1,453.06
	\$800.00	H&E	\$680.00	\$10.20	\$102.00	\$55.45	\$1,647.65
Case 210	\$320.00	Volvo	\$1,200.00	\$18.00	\$180.00	\$97.86	\$1,815.86
	\$300.00	Hertz	\$1,275.00	\$19.13	\$191.25	\$103.98	\$1,889.35
	\$800.00	H&E	\$1,000.00	\$15.00	\$150.00	\$81.55	\$2,046.55
Case 721 Loader	\$320.00	Volvo	\$750.00	\$11.25	\$112.50	\$61.16	\$1,254.91
	\$300.00	Hertz	\$725.00	\$10.88	\$108.75	\$59.12	\$1,203.75
	\$800.00	H&E	\$936.00	\$14.04	\$140.40	\$76.33	\$1,966.77
KX 80	\$320.00	Volvo	\$500.00	\$7.50	\$75.00	\$40.78	\$943.28
	\$400.00	H&E	\$504.00	\$7.56	\$75.60	\$41.10	\$1,028.26

Daily Rates Extended

KX 121	\$320.00	Volvo	\$350.00	\$5.25	\$52.50	\$28.54	\$756.29
	\$400.00	Hertz	\$400.00	\$6.00	\$60.00	\$32.62	\$898.62
	\$400.00	H&E	\$296.00	\$4.44	\$44.40	\$24.14	\$768.98
Highway Sweeper	\$320.00	Volvo	\$400.00	\$6.00	\$60.00	\$32.62	\$818.62
	\$400.00	Hertz	\$345.00	\$5.18	\$51.75	\$28.13	\$830.06
	\$400.00	H&E	\$406.00	\$6.09	\$60.90	\$33.11	\$906.10
450 Skidsteer	\$320.00	Volvo	\$320.00	\$4.80	\$48.00	\$26.10	\$718.90
	\$400.00	H&E	\$312.00	\$4.68	\$46.80	\$25.44	\$788.92
2hp Conc Vibrator	\$100.00	Volvo	\$65.00	\$0.98	\$9.75	\$5.30	\$181.03
	\$100.00	Hertz	\$63.00	\$0.95	\$9.45	\$5.14	\$178.53
Dewatering Equip	\$100.00	Volvo	\$95.00	\$1.43	\$14.25	\$7.75	\$218.42

# H&E EQUIPMENT SERVICES, INC.

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## QUOTE

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TO: (b)(6) FROM: (b)(6)  
FAX NUMBER: DATE: 12/13/13  
COMPANY: SH ANTHONY TOTAL NO. OF PAGES INCLUDING COVER: 1  
PHONE NUMBER: (b)(6) QUOTE NUMBER:  
RE: (b)(6) YOUR REFERENCE NUMBER:

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URGENT     FOR REVIEW     PLEASE COMMENT     PLEASE REPLY     PLEASE RECYCLE

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Thanks for the opportunity to quote on your equipment needs. If you have any questions please give me a call @ (b)(6)

	Month	week	day
1-pc45 mini excavator	1850.00	740.00	296.00
121 - Freight 200.00 each way			
1-pc78-88 excavator	3150.00	1260.00	504.00
80 - Freight 200.00 each way			
1-pc130 excavator	3975.00	1590.00	636.00
Freight 400.00 each way			
1-pc160 excavator	4250.00	1700.00	680.00
Freight 400.00 each way			
1-pc 210 excavator	6250.00	2500.00	1000.00
Freight 400.00 each way			
1-ride on street sweeper	1900.00	935.00	406.00
Freight 200.00 each way			
1-wa380 wheel loader	5850.00	2340.00	936.00
721 - Freight 400.00 each way			
1-tl240 skid loader	1950.00	780.00	312.00
450 - Freight 200.00 each way			

Extra fee Environmental 1.5 % of rental

Damage Waver is 15 % of rental + Tax

Thank you (b)(6)





Volvo Construction Equipment Rents

RENTAL  
QUOTE

VOLVO RENTS ORDER NUMBER

Volvo Rents, Inc.

Cust. PO \_\_\_\_\_ Proposal No. \_\_\_\_\_ Salesman **(b)(6)** Date 12/13/2013

Customer <u>SH ANTHONY</u>	Ship To _____
Address _____	_____
_____	_____
Phone <b>(b)(6)</b> Fax _____	Phone _____ Fax _____

F.O.B. Point of Origin - Ship Via \_\_\_\_\_  Volvo Rents  C.P.U

TERMS: Net 30 All Rates are based on a 8 Hour Day, 40 Hour Week & 160 Hour Month Quote good for 60 days  
TAX RATE: 7%

Freight cost are per truckload

SHIPPING COST: Delivery 160 Each way LDW:  Y  N

QTY	CAT/CLASS	TYPE	DESCRIPTION	DAY	WEEK	4 WEEK	
1			10 KW Generator	\$ 160.00	\$ 405.00	\$ 975.00	
1			24" plate tamp	\$ 275.00	\$ 695.00	\$ 1,930.00	
1			Case 135/ EC145 Excavator	\$ 650.00	\$ 1,850.00	\$ 4,025.00	
1			Case 210/ EC210 Excavator	\$ 1,200.00	\$ 2,900.00	\$ 7,500.00	
1			Case 160/ EC160 Excavator	\$ 875.00	\$ 2,100.00	\$ 5,150.00	
1			Case 721Loader/ L90	\$ 750.00	\$ 2,150.00	\$ 5,950.00	
1			Kubota KX 80/Mini/EC 88	\$ 500.00	\$ 1,250.00	\$ 3,145.00	
1			Kubota KX121 Mini/EC55	\$ 350.00	\$ 1,100.00	\$ 2,500.00	
1			Highway Sweeper	\$ 400.00	\$ 930.00	\$ 1,875.00	
1			Concrete Vibrator 2HP	\$ 65.00	\$ 160.00	\$ 450.00	
			Dewatering Pump & Hose	\$ 95.00	\$ 245.00	\$ 689.00	
			450 Skidsteer	\$ 320.00	\$ 915.00	\$ 2,290.00	
*TYPE N = NEW U = USED R = RENTAL PR = PURCHASE OF RENTAL EQUIPMENT				Net Price	\$ 5,640.00	\$ 14,700.00	\$ 36,479.00
A = ACCESSORIES P = PARTS S = SERVICE/REPAIR				Freight			
Other				LDW	\$ 846.00	\$ 2,205.00	\$ 5,471.85
				ENFE	\$ 84.60	\$ 220.50	\$ 547.19
<b>For Quote Purposes Only</b>				Sales Tax	\$ 400.72	\$ 1,044.44	\$ 2,591.83
				Total	\$ 6,971.32	\$ 18,169.94	\$ 45,089.87

BRANCH: 430  HERC BILOXI 9291 WEST OAKLAWN ROAD BILOXI, MS 39532 228-396-6441	BILL TO CUSTOMER: 2833536  S H ANTHONY INC PO BOX 3719 GULFPORT, MS 39505	SHIPPING ADDRESS  STENNIS POT WATER 1037 MARS RD STENNIS SPACE CENTER, MS 39520  228-297-6885
--	---	---

DESCRIPTION/CHARGES										
EST START: 11/11/13 11:16			EST RETURN: 12/09/13 11:16			DROP DATE: _____				
SHIPPED BY:			ORDERED BY: <b>GVA</b>			DROP TIME: _____				
ORDER DATE: 11/11/13			SALESPERSON: 487			SALES COORDINATOR:				
PO# / JOB#:			QUOTE FOR CHANGE ORDER			<b>Rates subject to availability</b>				
			// - STENNIS POT WATE			<b>Rates include maintenance service</b>				
Qty	Equipment #	Hrs/	Min	Hour	Day	Week	4 Week	Amount		
1	EXCAVATOR/4-6 METRIC TON/CRAWLER/DSL 2460340 <i>Case 121</i>	8/	400.00	66.67	400.00	1199.00	2830.00	2930.00		
EMISSIONS & ENV SURCHARGE		EMISSIONS								38.77
1	EXCAVATOR/14-16 METRIC TON/CRAWLER/DSL 2460070 <i>Case 131</i>	8/	765.00	130.83	785.00	2035.00	5399.00	5399.00		
EMISSIONS & ENV SURCHARGE		EMISSIONS								73.97
1	EXCAVATOR/19-21 METRIC TON/CRAWLER/DSL 2460100 <i>Case 160</i>	8/	925.00	154.17	925.00	2350.00	6250.00	6250.00		
EMISSIONS & ENV SURCHARGE		EMISSIONS								55.63
1	EXCAVATOR/24-28 METRIC TON/CRAWLER/DSL 2460160 <i>Case 210</i>	8/	1275.00	212.50	1275.00	3350.00	8150.00	8150.00		
EMISSIONS & ENV SURCHARGE		EMISSIONS								111.66
1	WHEEL LOADER/J 1/2XD/GEN BKT/DSL 2610350 <i>Case 721</i>	8/	725.00	120.83	725.00	2100.00	5750.00	5750.00		
EMISSIONS & ENV SURCHARGE		EMISSIONS								78.78
1	SWEEPER/RIDE ON/3 WHEEL 7580200	8/	345.00	57.50	345.00	905.00	1955.00	1855.00		

CONTINUED

For GREAT DEALS on USED EQUIPMENT - visit us on-line at [www.hartzequip.com](http://www.hartzequip.com)

**CAREFULLY READ THE TERMS AND CONDITIONS ON REVERSE SIDE OF THIS PAGE**

Notwithstanding payment of the LDW fee, Customer is liable for all damage to the Equipment and expense of HERC caused by the Equipment being used or operated in violation of the terms and conditions on the Reverse Side of this page or in violation of the LOSS AND DAMAGE WAIVER GUIDE.

PARAGRAPH 12 ON THE REVERSE SIDE OF THIS PAGE IS IN LIEU OF (i) ALL WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY AND THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; AND (ii) ALL OBLIGATIONS ON THE PART OF HERC TO CUSTOMER FOR DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE LEASING, MAINTENANCE, USE, OPERATION, STORAGE, ERECTION, DISMANTLING OR TRANSPORTATION OF THE EQUIPMENT, CUSTOMER REPRESENTS THAT HE HAS FULLY INSPECTED THE EQUIPMENT AND THAT SAME IS IN GOOD CONDITION AND REPAIR. CUSTOMER IS LIABLE FOR ALL VIOLATIONS OF LAW ARISING OUT OF CUSTOMER'S USE, POSSESSION OR OPERATION OF THE EQUIPMENT. THE EQUIPMENT DESCRIBED HEREIN IS RENTED PURSUANT TO AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS SET FORTH ABOVE AND ON THE REVERSE SIDE OF THIS PAGE. CUSTOMER REPRESENTS HAVING READ AND AGREED TO SAME.

\* Environmental Recovery Fee - If an Environmental Recovery Fee is charged, it is a recovery by HERC to offset its expenses and costs, including its overhead, for handling, managing, and/or disposing of waste materials associated with the rented equipment that contain hazardous substances, such as motor oil, grease, and/or hydraulic fluid, as well as related administrative cost. THIS IS NOT A GOVERNMENT MANDATED CHARGE.

LOSS AND DAMAGE WAIVER (LDW) IS NOT INSURANCE. The Charge for LDW is 14.00 % of gross rental charges. Customer accepts or declines LDW. If Customer accepts LDW, in consideration of the charge shown above, Lessor agrees to waive certain claims against customer for loss of or damage to Equipment, in accordance with the terms and conditions set forth in Paragraph 8, on the Reverse Side of this page and in the LOSS AND DAMAGE WAIVER GUIDE which Customer hereby acknowledges receiving.

Customer acknowledges that the Equipment will be returned in a good, clean, and uncorroded condition, free of any and all hazardous substances.

Print Customer Name \_\_\_\_\_ Title \_\_\_\_\_

Customer Signature \_\_\_\_\_ Date \_\_\_\_\_

Terms are Net 10 Days      Not valid without .

Carefully read the terms and conditions on reverse side of this page





PC#: 106  
 3412 BIENVILLE BLVD  
 OCEAN SPRINGS, MS 39564-5732  
 228-872-6022

**SUNBELT RENTALS, INC.**  
 Salesman: [REDACTED]  
 Typed By: [REDACTED]

**Job Site:**  
 S.H. ANTHONY, INC.  
 SATURN DR  
 STENNIS SPACE CENTER, MS 39529  
 [REDACTED]

**QUOTE**  
  
 Contract #.. 43360982  
 Contract dt. 12/06/13  
 Date out.... 12/06/13 12:40 PM  
 Est return.. 1/03/14 12:40 PM  
 Job Loc..... SATURN DR, STENNIS SPACE CENTER  
 Job No..... 7 - S.H. ANTHONY, IN  
 P.O. #..... NR  
 Ordered By: [REDACTED]  
 NET DUE UPON RECEIPT

**Customer:** 542230  
 S.H. ANTHONY, INC.  
 P.O. BOX 3719  
 GULFPORT, MS 39503

QTY	EQUIPMENT #	Min	Day	Week	4 Week	Amount
1.00	10,000 WATT GENERATOR 0080020	63.00	160.00	410.00	980.00	980.00
1.00	1900LB TRACK SKIDSTEER 0480510	325.00	325.00	920.00	2295.00	2295.00
1.00	PLATE TAMPER REVERSIBLE 900LB 24" WIDE 0640250	135.00	280.00	700.00	1935.00	1935.00
1.00	SKIDSTEER LOADER BUCKET					N/C

SALES ITEMS:		Unit	Price	Amount
Qty	Item number			
1	DLPKSRCHG	EA	38.000	38.00
1	TRANSPORTATION SURCHARGE			
1	ENVIRONMENTAL ENVIRONMENTAL	EA	72.940	72.94
1	RENTAL PROTECTION PLAN	EA		781.50
	DELIVERY CHARGE			200.00
	PICKUP CHARGE			200.00

Rate your rental experience [www.sunbeltrentals.com/survey](http://www.sunbeltrentals.com/survey)

IF THE EQUIPMENT DOES NOT WORK PROPERLY, NOTIFY THE OFFICE AT ONCE	MULTIPLE SHIFTS OR OVERTIME RATES MAY APPLY	CUSTOMER IS RESPONSIBLE FOR REFUELING, DAMAGES AND REPAIRS
1. The total charges are an estimate based on the estimated rental period provided by Customer. 2. Customer assumes all risks associated with the Equipment during the Rental Period, including injury and damage to persons, property and the Equipment. 3. Customer is responsible for and shall only permit properly trained, authorized individuals, who are not impaired (under the influence of drugs or alcohol), to use the Equipment. 4. If the Equipment does not operate properly, is not suitable for Customer's intended use, does not have operating and safety instructions or Customer has any questions regarding use of the Equipment, Customer shall not use the Equipment and shall contact Sunbelt immediately. 5. Misuse of the Equipment or using damaged or malfunctioning Equipment may result in serious bodily injury or death. 6. Customer has received, read, understands and agrees to the estimated charges herein and all the terms and conditions of this Contract, including the Release and Indemnification provision in Section 7 and the Environmental Fee in Section 14, which can also be found at <a href="http://www.sunbeltrentals.com/rentalcontract">www.sunbeltrentals.com/rentalcontract</a> . * Delivery/Pickup Surcharge fee explanation is available at <a href="http://www.sunbeltrentals.com/surcharge">www.sunbeltrentals.com/surcharge</a> . 7. Customer must contact Sunbelt to request pickup of Equipment, retain the Pick Up Number given by Sunbelt and will be responsible for Equipment until actually retrieved by Sunbelt. 8. For operations in California: Customer is renting equipment registered under the California Air Resources Board (CARB) Portable Equipment Registration Program (PERP). The operator of the Equipment is subject to the requirements of the PERP regulation and local Air Pollution Control District rules. Under the PERP Regulation, the Customer is required to keep a copy of the rental agreement and CARB registration certificate, including operating conditions and notification requirements, with the Equipment at all times. Customer must also complete the log provided with the Equipment as		

**Continued on the next page...**

TO: SH Anthony, Inc.

FROM: Micro-Methods, Inc.  
6-Dec-13

Stennis Water Main  
2 Consecutive Days

PARAMETERS	UNIT PRICE	QUANTITY	EXTENDED COST
2 - samples pulled/2 consecutive days	\$ 376.00	2	\$ 752.00

This price quote does include overtime, weekends, or holidays. 24 hr. notification for scheduling sampling event required.



926 Baxter Ave.  
PO Box 4545  
Louisville, KY 40204

# Stennis Space Center - Potable Water

Attn: (b)(6)

Estimator:

Sales Person: (b)(6)

Bid Date: September 9, 2013

Bid Time: 4:00 PM

Revision: 1

Plans Dated:

Addenda:

Quote Expiration Date:

**Note:** Please Review Notes Below And At The Bottom Of This Quotation

- 1 This material estimate is for bidding purposes only. This is not a guaranteed list of materials, this is our interpretation of the contract documents. Customer shall verify all quantities & estimated materials prior to bidding, pricing and ordering.
- 2 This quotation is limited to material listed within, items not listed shall not be assumed as being included.
- 3 All prices are good 7 days from bid date and are based on shipments of truck load quantities.
- 4 Orders less than a truck load are subject to a price change and additional freight charges
- 5 Material order is based upon customer approval & receipt of approved submittals
- 6 All special order items may not be cancelled after order has been placed
- 7 Returned materials may be assessed a restocking/handling/freight charge
- 8 MJ DI fittings are quoted as AWWA C153 L/A (unless noted otherwise)
- 9 DI pipe, fittings & spools are quoted w/cement lining and bituminous coating (unless noted otherwise)
- 10 Pipe Drawings/Lay schedules & startup are not included in quotation, but can be provided for an additional charge
- 11 All material is quoted as F.O.B shipping point (unless noted otherwise)
- 12 All pipe will be sold in full length quantities
- 13 Per ISCO'S standard terms and conditions
- 14 Prices in effect at time of shipment

QTY	SIZE	DESCRIPTION	UNIT PRICE	UNIT TOTAL
<b>Station 135+42</b>				
1 ea		16x10 DIPS DR11 Reducing Tee Fabbed	\$ 625.00	\$ 625.00
1 ea		10x3 DIPS DR11 Red Tee W/3" FLNG & TING FUSED	\$ 160.40	\$ 160.40
1 ea		10x6 DIPS DR11 Conc Reducer	\$ 168.50	\$ 168.50
1 ea		6 MJ C509 RW Gate Vlv, OL, Op Nut	\$ 425.00	\$ 425.00
2 ea		6 DIPS DR11 90 Ell	\$ 52.86	\$ 105.72
2 ea		6 DIPS MJ Adapter DR11	\$ 250.00	\$ 500.00
1 ea		3 FxF C509 RW Gate Vlv, OL, OP Nut	\$ 335.00	\$ 335.00
1 ea		3 FF Flange Accessory Pack	\$ 17.50	\$ 17.50
1 ea		3 x 2 1/2 Companion flange	\$ 55.00	\$ 55.00
1 ea		2 1/2 Sch40 PVC Male Adapter	\$ 4.25	\$ 4.25
20 lf		2 1/2 Sch40 PVC PE Pipe	\$ 4.75	\$ 95.00
1 ea		2 1/2 Sch40 PVC 90 Bend	\$ 4.50	\$ 4.50
1 ea		2 1/2 Sch40 Coupling	\$ 3.25	\$ 3.25
1 ea		6x12 MJ Long Sleeve C153 CL/Bit	\$ 98.75	\$ 98.75
2 ea		6 MJ Restraint Kit - PVC w/316ss bolts	\$ 75.00	\$ 150.00
2 ea		6 SS Stiffeners	\$ 42.00	\$ 84.00
2 ea		5 1/4x27x37 2pc HD Screw Valve Box	\$ 145.00	\$ 290.00
1 ea		3 roll, Detect Tape - Blue/Water	\$ 30.00	\$ 30.00
25 lf		12 gauge wire, Blue, Solid	\$ 0.15	\$ 3.75
			<b>Estimated Subtotal</b>	<b>\$ 3,155.62</b>

<b>Station 155+15</b>				
1 ea		16x1 Service Saddle	\$ 130.00	\$ 130.00
200 lf		1 CTS DR9 HDPE 4710	\$ 0.45	\$ 90.00
1 ea		1 Corp Stop CC x CTS	\$ 65.00	\$ 65.00
2 ea		1 Ball Curb CTS x CTS	\$ 83.95	\$ 167.90
5 ea		1 SS Stiffener	\$ 2.25	\$ 11.25
2 ea		2 1/2x30-42 92D Curb Box	\$ 55.00	\$ 110.00
1 ea		3 roll, Detect Tape - Blue/Water	\$ 30.00	\$ 30.00
125 lf		12 gauge wire, Blue, Solid	\$ 0.15	\$ 18.75
			<b>Estimated Subtotal</b>	<b>\$ 622.90</b>

<b>Estimated Project Total:</b>	<b>\$ 3,778.52</b>
---------------------------------	--------------------

Project Notes:

Page 143 redacted for the following reason:

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(b)(7)(F)

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000



August 1, 2013

Reply to Attn of: RA10/13-1254DAW

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following answer is in response to your Requests for Information:

**RFI 015 Questions:**

Please reference Drawing C-403 at Sta. 135+42

On Drawing C-403 at Sta. 135+42, during subsurface investigation, a 6" water main was located; however this line was not shown on the Contract Drawings.

If this line is active, a new connection will need to be installed.

This will require a FCR for the cost and additional time.

Attached C-403 Drawing with newly located water main shown.  
Attached is SHA Drawing P3-03, Subsurface Location Drawing, showing the location of the newly located line?

**Answer:**

The 6" line identified is the Fire Main serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be C-900.

An additional 2-1/2" line is located to the east of this line. This is the potable water line serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be PVC.

Both lines shall have isolation valves and valve boxes installed near the connection to the new HDPE line. Current isolation valves for each line exist near the building and at the taps to the existing main water line.

**NOTE: \*\* "Any comment that result in a change to the contract cost, scope, or schedule you must notify the Contracting Officer for approval prior to implementation or any costs are incurred."**

If you have any questions, give me a call at 228-688-1655.

A handwritten signature in black ink, appearing to read "D. Woolridge".

Dale A. Woolridge  
Contracting Officer's  
Technical Representative

Enclosure

cc:  
Jacobs-FOSC

(b)(6)

Official File



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# REQUEST FOR INFORMATION

(Implemented by SOI-8040-0001-FACENG)

Request For Information (RFI) Number  
015 Water Main Installation and Tie In to Existing System

Date  
July 24, 2013

Requestor  
SAUER, INC

Contract  
NNS12AA95T

**Question:**

Please reference Drawing C-403 at Sta. 135+42

On Drawing C-403 at Sta. 135+42, during subsurface investigation, a 6" water main was located, however this line was not shown on the Contract Drawings.

If this line is active, a new connection will need to be installed.

This will require a FCR for the cost and additional time.

Attached C-403 Drawing with newly located water main shown.

Attached is SHA Drawing P3-03, Subsurface Location Drawing, showing the location of the newly located line.

**Answer:**

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An additional 2-1/2" line is located to the east of this line. This is the potable water line serving Building 1022. This line is active and requires connection to the new HDPE water line. This line is believed to be PVC.

Both lines shall have isolation valves and valve boxes installed near the connection to the new HDPE line.

Current isolation valves for each line exist near the building and at the taps to the existing main water line. CSW



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No 042

**Contractor** Sauer, Inc..  
**Initiator/Company** Sauer, Inc.  
**Spec./Section** 12G00-G020

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** \_\_\_\_\_  
**Date** March 4, 2014

**Description of problem and recommended change:**

**Problem Statement:**

On February, 22, 2014, while attempting to make the final connection at this location, it was determined that the field conditions are different for the original scope. The construction drawings and FCR 4 showed the final connection being made outside the security fence for building 3305.

**Solution:**

After investigation of the existing system, it was determined the shut off valve is inside the security fence area and tie in will need to occur there. Per the attached FCR, we have adjusted the final connection to Building 3305. Also, there are a number of utilities in the area that will need to be traversed to install the final connection. We recommend a specialized shoring system to complete this work.

**Cost Impact**  No  Yes **Not to Exceed** (b)(6)  
**Schedule Impact** \_\_\_\_\_ **of Days** 1  
**Project Manager** (b)(6) **Date** 3/4/14

**Evaluation:**

NASA Project Manager	_____	Date	_____
Construction Engineer	_____	Date	_____
Quality Engineer	_____	Date	_____
Safety Engineer	_____	Date	_____
Environmental	_____	Date	_____
Design Engineer	_____	Date	_____
CCB Chair	_____	Date	_____

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_

**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_



11223 phillips parkway drive, east  
jacksonville, florida 32256

P: 904.262.6444

F: 904.268.6156

www.sauer-inc.com

March 4, 2014

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: Jason Edge, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-42, Revised Final Connection at Building 3305 Cost Proposal**

Mr. Edge,

We herein submit our formal cost proposal covering the cost to furnish, and install all work as detailed in FCR 42. On February 22, 2014, while attempting to make the final connection at this location, it was determined that the field conditions are different from the original scope. The construction drawings and FCR 4 showed the final connection being made outside the security fence for building 3305.

After investigation of the existing system, it was determined the shut off valve is inside the security fence area and tie-in will need to occur at that location. Per the attached FCR, we have adjusted the final connection to Building 3305. Also, there are a number of utilities in the area that will need to be traversed to install the final connection. We recommend a specialized shoring system to protect the existing infrastructure.

We are currently requesting a seven (7) calendar day time to complete this work since the outage will be delayed from the original date of March 8<sup>th</sup>, 2014.

If you have any questions or wish to discuss further do not hesitate to call us directly.

(b)(6)

(b)(6)

Project Manager

**CONTRACT TITLE:** NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

**DESCRIPTION:**

**FCR-42, Revised Final Connection at Building 3305 Cost Proposal**

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Field Overhead- freight	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		



Prime Remarks:

SUBCONTRACTOR'S WORK			
11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			21,154

Sub's Remarks: SH Anthony 21,154

SUMMARY	
24. Prime Contractor's Work (from Line 10)	
25. Sub-Contractor's Work (from line 23)	
26. SUBTOTAL (add lines 24 & 25)	
27. Prime Overhead	% of Line 25
28. Prime Profit	% of Line 24
29. Gross Receipts Tax	% of Line 26
30. SUBTOTAL (add lines 26 -29)	
31. Prime Contractor's Bond Premium	% of Line 30
32. TOTAL COST (Add Lines 30 & 31)	



Estimated time extension and justification  
Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
Subcontractor:



Date 3/4/14



Field Change Request - 042

Field Change Request Name - Additional Scope of Work at Final Connection to Bldg. 3305

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
	\$ 9,147.66	\$ 840.00	\$ -	\$ 6,019.47		\$ 16,007.13
						\$ -
						\$ -
Base Total	\$ 9,147.66	\$ 840.00	\$ -	\$ 6,019.47	\$ -	\$ 16,007.13
Material Tax (9%)						\$ -
Tax and Bond (5.97%)						\$ 955.63
Misc. Labor Burden 37% - Hourly Pesonnell Only						\$ 1,434.68
<b>Sub-total</b>						<b>\$ 18,397.43</b>
Fee(15%)						\$ 2,759.61
<b>Total</b>						<b>\$ 21,157.04</b>

DESCRIPTION: This FCR request for an additional scope of work for the installation of the final connection to building 3305. On 2/22/14 while attempting to make the connection it was determined that the field conditions had significantly changed for this scope of work. The original drawing detail and FCR 004 show the final connection to be made outside the security fence for building 3305. After further investigation of the existing system, the shut off valve is inside the security fence area, additionally there is multiple utilities that will have to be traversed to install the final connection and due to the depth and proximity to existing utilities and the asphalt driveway, a specialized shoring system will be used to protect personal and existing infrastructure.

ADDITIONAL TIME REQUESTED: 7 Days

SIGNED BY:

DATE:

2/27/2014

(b)(6)

Project Manager

(b)(6)



From: (b)(6)  
Sent: Friday, February 28, 2014 8:34 AM  
To: (b)(6)  
Subject: FW: SH Anthony

Please see below.

(b)(6)  
ISCO Industries

(b)(6)

-----Original Message-----

From: (b)(6)  
Sent: Friday, February 28, 2014 8:26 AM  
To: (b)(6)  
Subject: SH Anthony

Send (b)(6) a quote

50' 8" dr 11 dips- 40' JOINTS IN STOCK TAMPA, FL SHIPS IN 20' JOINTS  
\$9.80 FT BLUE STRIPE  
2 - 8" dr 11 dips 90s- \$112.00 EA STOCK TAMPA, FL  
2 - 8" dr 11 dips 45s- \$112.00 EA NONE IN STOCK 2 WEEKS

(b)(6)  
Regional Sales Manager  
ISCO Industries, LLC  
Crestview, FL

(b)(6)

Www.isco-pipe.com



Quote: 32438A

Date: 2/26/2014

Time: 11:59 AM

Customer: 4467

Job Info:

S. H. ANTHONY

Stennis Space Center Miss

PO BOX 3719

GULF PORT MS, 39505

Shoring Desc: Rental quote for 8- man hole braces 10' to 13' long with 10- sheets of fin from

Salesman: 03 (b)(6)

Equipment Contact:

Rental Contact: (b)(6)

Equipment Contact Phone:

Ext:

Rental Contact Phone: (228) 896-7310 Ext: 0

Equipment Contact Pager:

Rental Contact Fax: (228) 896-7312

Equipment Contact Mobile:

PO:

Delivery Fee: \$450.00

Pickup Fee: \$450.00

Day: \$217.00

Freight Fee: \$0.00

Week: \$671.00

Material and Labor: \$0.00

Month: \$2,015.50

Engineer Fee: \$0.00

PLEASE NOTE:

Weight: 920 pounds

- (1) Rental begins on the day the equipment is delivered and ends on the day that the customer calls the equipment off rent.
- (2) Supply of equipment is based upon availability.
- (3) The pickup charges are based on the assumption that the quoted equipment will be picked up all at one time. In the event of a partial pick-up, the customer will be billed based on the weight of the equipment picked-up.
- (4) Equipment must be maintained by the customer while on-rent. All damage to rental equipment will be billed to the customer's account. Cleaning fees may also be incurred.
- (5) All quotes must be accepted within 30 days (of the date filled in above) and quotes are subject to confirmation to the time of the order.
- (6) There will be no charge for engineering unless site specific engineering is necessary.

Taxes Not Included in Quote Price

Entered By: Admin

**SPEED**  **SHORE**<sup>®</sup>  
PIONEERING TRENCH SAFETY

---

SPEED SHORE  
TABULATED DATA

---

---

MANHOLE BRACES

---

*January 1, 1995*

COPYRIGHT, U.S.A., SPEED SHORE CORPORATION, 1995  
7002 Easthaven, P.O. Box 262591, Houston, Texas 77207  
(713) 943-0750 U.S.A. Toll Free: (800) 231-6662 Fax: (713) 943-8483

# WARNING

## EXCAVATION PROCEDURES MAY BE VERY DANGEROUS.

- A TRAINED *COMPETENT PERSON* SHALL: SUPERVISE ALL EXCAVATION OPERATIONS; ENSURE THAT ALL PERSONNEL ARE WORKING IN SAFE CONDITIONS; AND HAVE THOROUGH KNOWLEDGE OF THIS TABULATED DATA. THE *COMPETENT PERSON* SHALL HAVE THE AUTHORITY TO STOP WORK WHEN IT IS UNSAFE FOR WORKERS TO ENTER AN EXCAVATION.
- ALL PERSONNEL SHALL BE TRAINED IN CORRECT EXCAVATION PROCEDURES, PROPER USE OF THE PROTECTIVE SYSTEM AND ALL SAFETY PRECAUTIONS.
- EXCAVATIONS AND PROTECTIVE SYSTEMS SHALL BE INSPECTED A MINIMUM OF ONCE EACH WORKING DAY AND WHENEVER THERE IS A CHANGE OF SOIL, WATER OR OTHER JOB SITE CONDITIONS.
- ALL LIFTING AND PULLING EQUIPMENT, INCLUDING CABLES, SLINGS, CHAINS, SHACKLES AND SAFETY HOOKS SHALL BE EVALUATED FOR SUITABILITY AND CAPACITY, AND SHALL BE INSPECTED FOR DAMAGE OR DEFECTS PRIOR TO USE.
- ALL INSTALLATION AND REMOVAL OF SHORING AND SHIELDING SHALL BE FROM ABOVE GROUND ONLY.
- DO NOT ALLOW PERSONNEL TO ENTER AN EXCAVATION THAT IS NOT PROPERLY SHORED, SHIELDED OR SLOPED.
- PERSONNEL SHALL ALWAYS WORK WITHIN THE SHORING AND SHIELDING. PERSONNEL SHALL NOT STAND ON THE EDGE OF AN UNSHORED EXCAVATION.
- ALL PERSONNEL SHALL ENTER AND EXIT EXCAVATIONS ONLY WITHIN SHIELDED OR SHORED AREAS.

THIS SPEED SHORE TABULATED DATA IS A GENERAL SET OF GUIDELINES AND TABLES TO ASSIST THE *COMPETENT PERSON* IN SELECTING A SAFETY SYSTEM AND THE PROPER SHORING OR SHIELDING EQUIPMENT. THE *COMPETENT PERSON* HAS SOLE RESPONSIBILITY FOR JOB SITE SAFETY AND THE PROPER SELECTION AND INSTALLATION AND REMOVAL OF THE SHORING OR SHIELDING EQUIPMENT. THIS TABULATED DATA IS NOT INTENDED TO BE USED AS A JOB SPECIFIC EXCAVATION SAFETY PLAN, BUT SHALL BE USED BY THE *COMPETENT PERSON* TO SUPPLEMENT HIS TRAINING, HIS EXPERIENCE AND HIS KNOWLEDGE OF THE JOB CONDITIONS AND SOIL TYPE.

January 1, 1995

## SPEED SHORE TABULATED DATA

### 1.0 SCOPE

1.1 Speed Shore's Tabulated Data complies with the O.S.H.A. standards as stated in the Code of Federal Regulations 29, Part 1926, Subpart P - Excavations, Section 1926.652 (c)(2). This data shall only be used by the contractor's *competent person* in the selection of Speed Shore Manhole Braces, spacing, size of cylinders, size of sleeves and sheeting requirements. The *competent person* shall be experienced and knowledgeable in trenching and excavation procedures, soil identification and in the use of Manhole Braces.

1.2 All personnel involved in the installation, removal or use of Manhole Braces shall be trained in their use and advised of appropriate safety procedures. All operating instructions must be followed.

1.3 This data is based, in whole or in part, upon requirements stated in CFR 29, Part 1926 and applicable portions of CFR 29, Part 1910. The *competent person* shall know and understand the requirements of those parts before using this data.

1.4 Whenever there is a variance between this Tabulated Data and CFR 29, Part 1926, Subpart P - Excavations, this Tabulated Data shall take precedence. Whenever a topic or subject is not contained in this Tabulated Data, the *competent person* shall refer to CFR 29, Part 1926, Subpart P - Excavations.

1.5 Table MHB-2 shall be used only in typical excavations with soil conditions as noted. For other soil and excavation conditions and depths, site-specific engineered designs are required. Contact Speed Shore Corporation for assistance.

1.6 This Tabulated Data is applicable for standard products manufactured exclusively by Speed Shore Corporation and may only be used with Speed Shore manufactured products. Any modification or repair of Speed Shore products not specifically authorized by Speed Shore Corporation voids this data.

1.7 This data refers to the Code of Federal Regulations, 29, Parts 1910 and 1926. In states that have their own state O.S.H.A. refer to similar regulations in the current construction rules published by the state office of Occupational Safety and Health.

### 2.0 DEFINITIONS (RE: CFR 29, Part 1926.32 Definitions) - RESTATED FOR EMPHASIS.

2.1 1926.32 (f) "*Competent Person*" means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

2.2 1926.32 (p) "Shall" means mandatory.

### 3.0 SOIL CLASSIFICATIONS

3.1 In order to use the data presented in Table MHB-2 the soil type or types, in which the excavation is cut must first be determined by the *competent person* according to the O.S.H.A. soil classification as set forth in CFR 29, Part 1926, Subpart P, Appendix A.

3.2 Table MHB-2 is for soil Types A, B, C and C-60. See 3.3 for definition of C-60 Soil.

3.3 Type C-60 soil is a moist, cohesive soil or a dense granular soil which does not fit into Type A or Type B classifications, and is not flowing or submerged. This material can be cut with near vertical sidewalls and will stand unsupported long enough to allow the Manhole Braces to be properly installed. The *competent person* must monitor the excavation for signs of deterioration of the soil as indicated by, but not limited to, freely seeping water or flowing soil entering the excavation around or below the sheeting. An alternate design for less stable Type C soil may be required where there is evidence of deterioration.

3.4 Water flowing into an excavation, from either above or below ground, will cause a decrease in the stability of the soil. Therefore, the *competent person* shall take action to prevent water from entering the excavation and promptly remove any water that accumulates in the excavation. Closer monitoring of the soil is required under wet conditions, particularly in the less cohesive (weaker) soil conditions. A small amount of water, or flowing conditions, may downgrade the soil classification to a less stable classification. A large amount of water, or flowing conditions, may downgrade all soils to O.S.H.A. Type C. Speed Shore shoring and shielding systems may be used safely in wet conditions when the excavation is monitored by the *competent person*. Example: When repairing a leak in utility lines, it is often difficult or even impossible, to keep water out of the excavation.

#### 4.0 PRESENTATION OF INFORMATION

4.1 Information is presented on tabular form in Table MHB-2. Table MHB-2 presents the maximum allowable depth that the Manhole Braces may be used in O.S.H.A. Type A, B, Type C-60 and C soils (Type C-60 soil is defined in Note 3.3).

4.2 Table MHB-2 is not considered adequate when loads imposed by structures or by stored material adjacent to the excavation weigh in excess of the load imposed by a 3 feet soil surcharge. The term "adjacent" as used here means the area within a horizontal distance from the edge of the excavation equal to the depth of the excavation.

4.3 The column, "Model" lists the leg length of the long side. For models with unequal leg lengths find the maximum depth for the longest leg.

#### 5.0 BASIS AND LIMITATIONS OF THE DATA

5.1 Maximum excavation depth is 25 feet.

5.2 The following sheeting materials, or approved equal, may be used:

Aluminum: Speed Shore's Aluminum Sheeting

Timber: 2 x 6 (S4S) Douglas Fir with a minimum bending strength ( $F_b$ ) of 1,500 p.s.i. or Oak with a  $F_b$  of 850 p.s.i.

Steel: 1/2 inch or thicker Steel Plate

Plywood: 3/4 inch Finn Form

3/4 inch Omni Form

3/4 inch Combi Exterior Plywood

3/4 inch 14 Ply Arctic White Birch

3/4 inch American Plywood Association, B-B, Plyform, Class I, Exterior

3/4 inch American Plywood Association, High Density Overlay, Exterior

1 1/8 inch CDX

Two sheets of 3/4 inch CDX

5.3 Sheeting shall extend up to the top of the excavation and down within 2 feet of the bottom of the excavation.

5.4 The spacings are measured from center to center of the members.

- 5.5 The center line of the top Manhole Brace shall be a minimum of 1 foot and a maximum of 4 feet below the top of the excavation.
- 5.6 The center line of the bottom Manhole Brace shall be a maximum of 4 feet above the bottom of the excavation.
- 5.7 A minimum of 2 Manhole Brace rings are required for excavations over 6 feet deep. One Manhole Brace ring is required for excavations less than 6 feet deep.
- 5.8 The ends of each Manhole Brace leg must bear firmly against the sheeting, which must bear on firm soil or a solid and stable filler to distribute the cylinder load to the face of the excavation.
- 5.9 The faces of the excavation must be cut near vertical and straight.
- 5.10 All corners of the Manhole Braces shall be connected vertically with safety chains to adequately maintain the Manhole Braces in alignment. Safety chains shall connect the top Manhole Brace to the sheeting.

## 6.0 INSPECTION

- 6.1 The *competent person* must evaluate the soils to assure the rated capacity of the Manhole Braces is not exceeded by the lateral pressure of the soil. Soils shall be evaluated in accordance with Part 3.0.
- 6.2 The *competent person* shall monitor all phases of the assembly, installation and use of this product to evaluate and eliminate methods which could endanger employees utilizing this product.
- 6.3 Daily inspections of the Manhole Brace and accessories must be performed by the *competent person* and deficiencies corrected.
- 6.4 Inspections shall be conducted as necessary for hazards associated with: water accumulation, changing soil conditions or changing site weather conditions.

## 7.0 EXAMPLE TO ILLUSTRATE THE USE OF TABLE MHB-2

**Problem:** Design a trench safety system using a Speed Shore Manhole Brace system for a square shaft-type excavation with an opening 13 feet x 13 feet and 10 feet deep in C-60 soil (see note 3.3 for definition).

**Study** Table MHB-2 and read down column "Span." Select a minimum-maximum range of 11 to 14 feet so that the Manhole Brace system retains additional stroke capability past the 13 feet dimension. Read left and find a 3 inch hydraulic cylinder size and model "3-MHB-6-11". Read right under column C-60 and determine that the maximum depth for this model is 11 feet, therefore adequate for this job.

**Conclusion:** Model "3-MHB-6-11" is selected. Install the first Manhole Brace within 2 feet of the top of the shaft and the second Manhole Brace four feet below the top Manhole Brace. Note the bottom Manhole Brace will be four feet above the bottom of the excavation. Note 5.1 requires timber, plywood or equal sheeting. Model "3 MHB-8-11" will also shore the excavation.

TABLE MHB-2

MODEL	CYL. DIA. INCH	SPAN		MAXIMUM DEPTH OF EXCAVATION (FEET)					
		FEET		4 FT. O.C. VERT. SPACING			3 FT. O.C. VERT. SPACING		
		MIN.	MAX.	A&B	C-60	C	A&B	C-60	C
2-MHB-4-5	2	5	8	25	20	10	25	25	12
2-MHB-4-6	2	6	9	25	20	10	25	25	12
2-MHB-4-7	2	7	10	25	20	10	25	25	12
3 MHB-6-6	3	6	9	25	25	12	25	25	16
3 MHB-6-7	3	7	10	25	25	12	25	25	16
3 MHB-6-8	3	8	11	25	25	12	25	25	16
3 MHB-6-9	3	9	12	19	14	7	25	20	9
3 MHB-6-10	3	10	13	17	13	6	23	18	8
3 MHB-6-11	3	11	14	15	11	5	21	16	7
3 MHB-6-12	3	12	15	14	10	-	19	14	6
3 MHB-6-13	3	13	16	13	9	-	17	13	5
3 MHB-6-14	3	14	17	11	8	-	15	11	-
3 MHB-6-15	3	15	18	9	7	-	13	10	-
3 MHB-6-16	3	16	19	8	6	-	12	9	-
3 MHB-6-17	3	17	20	7	5	-	10	8	-
3 MHB-8-8	3	8	11	25	25	18	25	25	20
3 MHB-8-9	3	9	12	25	25	16	25	25	20
3 MHB-8-10	3	10	13	25	25	14	25	25	19
3 MHB-8-11	3	11	14	25	25	12	25	25	16
3 MHB-8-12	3	12	15	25	23	10	25	25	14
3 MHB-8-13	3	13	16	25	20	9	25	25	12
3 MHB-8-14	3	14	17	23	17	8	25	23	11
3 MHB-8-15	3	15	18	20	15	7	25	20	10
3 MHB-8-16	3	16	19	18	13	6	24	18	8
3 MHB-8-17	3	17	20	16	12	5	21	16	7
3 MHB-8-18	3	18	21	14	10	-	19	14	-
3 MHB-8-19	3	19	22	12	9	-	16	12	-
3 MHB-8-20	3	20	23	11	8	-	15	11	-
3 MHB-8-21	3	21	24	10	7	-	14	10	-

(Note 1: For unequal leg lengths in rectangular Manhole Braces see explanation Note 4.3.)



# MANHOLE BRACES

## INSTALLATION PROCEDURES

### GENERAL NOTES

Manhole Braces combine the benefits of aluminum hydraulic cylinders with the ruggedness of steel box tubing. The system is designed specifically for the shoring of square and rectangular excavations. This perimeter support system provides for an unobstructed shaft and is used most often in the installation of manholes, operation of boring equipment, and placement of vaults.

### Installation Procedures

In stable soils that will stand throughout excavation, the following procedure is appropriate:

1. The contractor's competent person shall monitor the excavation and construction at all times to insure that proper safety procedures are followed, and that the shoring equipment is in good condition and working properly. The competent person shall be trained in the proper use of manhole braces.
2. All workers shall be trained in the proper use of manhole braces and sheeting, and in excavation safety practices.
3. Excavations must be dug in a neat rectangle or square with vertical walls and 90 degree corners.
4. The excavation must be dug to dimensions that are less than the full stroke of the hydraulic cylinders.
5. No workers shall enter the excavation until the manhole rings are in place and pressurized.
6. The sheeting may be driven before the excavation is started, or may be placed after the excavation is completed if the soil will stand long enough.
7. Sheeting may be wood timber, plywood, steel sheet piling, aluminum or fiberglass.
8. The depth of the excavation may be dug before sheeting and manhole braces are placed will depend on upon how long the excavation will stand.
9. If the excavation face will stand the full depth before sheeting and manhole braces are placed, the sheeting is put in place and the lower manhole brace is then placed. The remaining manhole braces are placed from the bottom up.
10. If the excavation face will only stand for a portion of the height, excavate down four feet from the top and place sheeting four feet high. Then place a manhole brace two feet down from the top to pressurize the hydraulic cylinders. Then excavate down four more feet and repeat the procedure with manhole braces at a maximum of four feet on center.
11. A minimum of two manhole braces are required to make a complete unit.
12. There must always be sheeting at the corners of all legs of the manhole braces to distribute the load of the hydraulic to the soil. The soil must be solid behind the corners of all of the legs to insure that the hydraulic cylinders remain pressurized.

M379

Page 160 redacted for the following reason:

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(b)(7)(F)

National Aeronautics

Space Administration

Stennis Space Center

Stennis Space Center 38823-8800

Marsh

RA10 14738208W

Incorporated

(b)(6)

Phillips Hwy Drive

Jacksonville 32256

Subject: Updates Portable System NASA Order NA95T

ICR NNS12AA95C Disapproved. Building insufficient information provided. Approved. Provides drawing proposed changes offering conditions. Management Supervision. Approval relative laborer hours. Provide comparison between requested routing connection. routing connection approved under installing approximately additional fittings.

NOTE:	COMMENT(S) THAT RESULT	CHANGE	CONTRACT
COST SCOPE	SCHEDULE	MUST NOTIFY	CONTRACTING OFFICE
APPROV	PHASE	IMPLEMENTATION	COSTS INCURRED

If you questions. Casey Wheeler: 228,688.

*[Handwritten signature]*  
Casey Wheeler  
Contracting Officer

Jacobs

(b)(6)

Project Management Division Official

Project Management Division C. Wheeler



State of Texas  
 Statewide  
 Construction

FIELD HAND-HELD (FCR)

Contractor: [Redacted] State: [Redacted] Contact: [Redacted] 2AASBT  
 Initiator/Company: [Redacted] State: [Redacted]  
 Spec./Section: 2600-0070 Drawing: [Redacted]  
 Date: March 4, 2014

Description: problem recommended changes:

Problem Statement:

February, while attempting make connection location, [Redacted] determined conditions different original scope, construction drawings showed connection being made outside security fence building 3305.

Solution:

After investigation existing system, [Redacted] determined valve inside security fence there, attached FCR, adjusted connection Building 3305. Also, there number utilities [Redacted] traversed install connection, recommend specialized shoring system complete work.

Impact: [Redacted] [Redacted] [Redacted] (b)(4)

Schedule Impact: [Redacted] [Redacted] [Redacted]

Project Manager: [Redacted] (b)(6) [Redacted] [Redacted]

Evaluation:

Project Manager	[Redacted]
Construction Engineer	[Redacted]
Quality Engineer	[Redacted]
Safety Engineer	[Redacted]
Environmental	[Redacted]
Design Engineer	[Redacted]
[Redacted]	[Redacted]
Approved	Implementation

COIR: [Redacted]  
 Contracting Officer: [Redacted]



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No 042A

**Contractor** Sauer, Inc..  
**Initiator/Company** Sauer, Inc.  
**Spec./Section** 12G00-G020

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-505  
**Date** 3/12/14

**Description of problem and recommended change:**

**Problem Statement:**

On February, 22, 2014, while attempting to make the final connection at this location, it was determined that the field conditions are different for the original scope. The construction drawings and FCR 4 showed the final connection being made outside the security fence for building 3305.

**Solution:**

After investigation of the existing system, it was determined the shut off valve is inside the security fence area and tie in will need to occur there. Per the attached FCR, we have adjusted the final connection to Building 3305. Also, there are a number of utilities in the area that will need to be traversed to install the final connection. We recommend a specialized shoring system to complete this work. Please see the attached revised pricing data and detailed drawings of the proposed change.

**Cost Impact**  No  Yes **Not to Exceed** (b)(6)  
**Schedule Impact** (b)(6) **Number of Days** 7  
**Project Manager** (b)(6) **Date** 3/12/14

**DISPOSITION (NASA)**

**Evaluation:**

NASA Project Manager	_____	Date	_____
Construction Engineer	_____	Date	_____
Quality Engineer	_____	Date	_____
Safety Engineer	_____	Date	_____
Environmental	_____	Date	_____
Design Engineer	_____	Date	_____
CCB Chair	_____	Date	_____

CCB Approved for Implementation  Yes  No

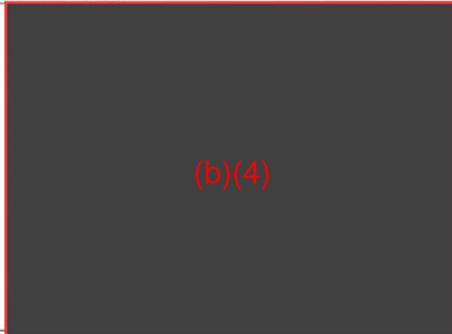
**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

**CONTRACT TITLE:** NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

**DESCRIPTION:**

**FCR-42, Revised Final Connection at Building 3305 Cost Proposal**

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Field Overhead- freight	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		



Prime Remarks:

**SUBCONTRACTOR'S WORK**

11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			18,391

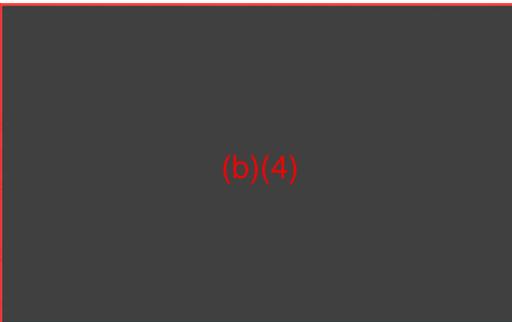
Sub's Remarks: SH Anthony

18,391

SHA Total

**SUMMARY**

24. Prime Contractor's Work (from Line 10)		
25. Sub-Contractor's Work (from line 23)		
26. SUBTOTAL (add lines 24 & 25)		
27. Prime Overhead	% of Line 25	
28. Prime Profit	% of Line 24	
29. Gross Receipts Tax	% of Line 26	
30. SUBTOTAL (add lines 26 -29)		
31. Prime Contractor's Bond Premium	% of Line 30	
32. TOTAL COST (Add Lines 30 & 31)		



Estimated time extension and justification

Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast

Subcontractor:



Date 3-12-14



March 12, 2014

(b)(6)

Sauer Inc.  
11223 Phillips, Dr. East  
Jackson, Fla. 32256

Subject: Task Order NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS  
FCR 042 Narrative Descriptions and Additional Information Requested

Roman,

Please accept this letter as SHA's narrative description for the additional scope of work required by FCR-042, which is for the final connection at station 177+67 to building 3305.

In the original SHA estimate for the project, SHA utilized the contract drawings and details of the final connections. Per the original detail (Detail 8-sheet C-505); the detail shows the final connection point located outside the fenced area surrounding building 3305, (See Attachment A). The detail also shows an 8" valve located at a tee connection to the existing valve and the average depth at the tie point approximately 4.5" to top of pipe. The 8" valve located at the existing main is also depicted on the NASA as build drawings numbers this valve as 240-PW, (See Attachment B), this valve could not be located by on site locator and after consulting with the plumbing shop in our outage meetings, it was determined that the actual location of the valve was inside the fence line at building 3305.

SHA has performed an additional subsurface investigation of the area inside the fence at building 3305 and have found numerous utilities that were not part of the original drawings, (See Attachment C). The existing line drops in elevation from 4.5' of depth to top of pipe to a depth of 9' to top of pipe at the new tie in location. This elevation change was obviously made to avoid existing underground utilities inside the fence line, however, are not shown on the Contract Drawings. SHA has located an unknown 4" PVC line, a communication duct bank, an unknown 3" galvanized line and an electrical duct bank. SHA has included these utilities in the Attached "C" drawing.

The additional scope of work to complete this final connection is as follows.

1. Installation of an additional 30 LF of 8" HDPE pipe.
2. Installation of 3-each additional 8" 90-degree fittings.
3. Installation of 3-each additional 8" 45-degree fittings.
4. Deepen the excavation from 4.5' to 10'.
5. Installation and removal of a 10' x 13' hydraulic shoring system, which included 2-each 10' x 13' expandable braces and using 3/4" Fin Form sheeting as the protective side and end shields.

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10145 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39505 \* Web: [www.shanthonyninc.com](http://www.shanthonyninc.com)

SHA will spend additional time and monies to excavate the area and with the close proximity of the existing utilities, the use of the hydraulic vacuum unit will be needed for the removal of materials from underneath the communications duct bank and the two unknown PVC/Galv., pipe. SHA will also have to purchase additional pipe and fittings to complete the installation and lastly SHA will have to install a shoring system that will allow a full opening and adjustable bracing and sheeting. The original tie in location was at a depth and site location that would have allowed sloping; therefore no shoring would have been required. The new tie in location is in close proximity to the asphalt drive, (See Attachment E). SHA is also attaching additional information for the shoring package proposed for the work, (See Attachment F).

SHA has taken into consideration the need for additional supervision and safety personnel, both who have experience in working with hydraulic vacuums and shoring.

Additionally, SHA is absorbing the cost of haul off of unsuitable soils, import of additional sand and density testing.

SHA has also reviewed the original FCR 042 price estimate and adjusted the price to include credit for the original scope of work and the additional labor, materials and equipment to perform the new scope of work. SHA has reduced the cost from the original FCR Estimate, (See Attachment G).

We hope that this explains SHA's position as it pertains to this work, please contact me if you have any questions or need further information.

Sincerely,

(b)(6)

S.H. Anthony, Inc.  
10145 Southpark Drive  
Gulfport, MS. 39503

Cc/ file

(b)(6)

– VP Construction  
resident

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10145 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39505 \* Web: [www.shanthonyinc.com](http://www.shanthonyinc.com)

Pages 167 through 171 redacted for the following reasons:

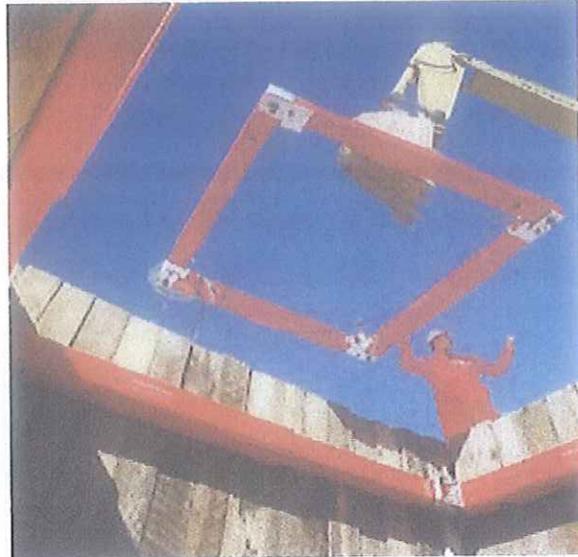
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(b)(7)(F)

(Attachment F)

# SPEED SHORE®

PIONEERING TRENCH SAFETY

**Speed Shore Manhole Braces** combine the benefits of aluminum hydraulic shoring with the ruggedness of steel box tubing in the most effective support system ever developed for shaft excavations. Specifically designed for shoring square and rectangular excavations, this perimeter support system provides for an unobstructed shaft, and is generally used to secure pits for pump stations, the installation or rehabilitation of manholes, tanks and vaults, or the operation of trenchless technology equipment.



Manhole Braces, used in conjunction with appropriate sheeting, provide the active support necessary to secure safe excavations in less stable soils. Available in a wide variety of sizes and capacities, Manhole Braces are composed of modular sections for ease of assembly and transport. Manhole Braces feature 4-way hydraulic support with high-yield telescoping steel sections, and 4-way hose bridles for simultaneous

**Additional Standard Manhole Brace Features:**

- 4-Way hydraulic support with high strength, telescoping steel tubing over-sleeves.
- Non-rigid corner brackets.
- Individual legs for on site assembly and easy transportation.
- Quick connect pins and keepers.
- Flexibility to fit square or rectangular excavations.
- 4-Way hose bridle for simultaneous cylinder pressurization
- 4-corner lifting eye for installation and removal.
- HVP-2000 high volume hand pump or HP-200 electric pump.



# SPEED SHORE®

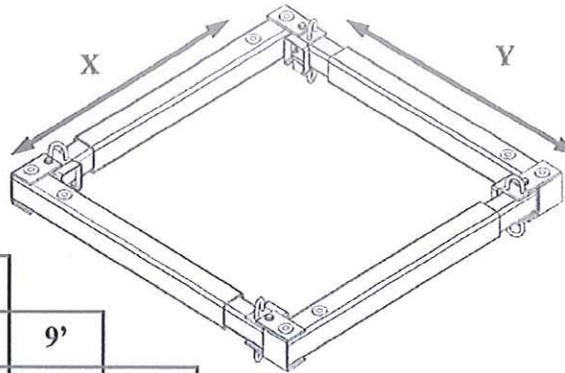
## PIONEERING TRENCH SAFETY

### 3" MANHOLE BRACE

- Notes:**
1. Figures in the chart below are collapsed (retracted) leg dimensions.
  2. All legs have a 3" internal cylinder with a 3' stroke.
  3. "X" and "Y" in the chart below denote the collapsed length of each side.
  4. 3" Manhole Braces have 6" steel box tubing oversleeves.

**Example:** Model Number: MHB-3-0810

A complete 8' X 10' MHB assembly comes with:  
 4 Legs with a maximum expansion to 11' X 13' (3' Cylinder stroke)  
 Weight is 1,595 lbs.



WEIGHT	Y																							
X	6'																							
6'	1,265	7'																						
7'	1,320	1,375	8'																					
8'	1,375	1,430	1,485	9'																				
9'	1,430	1,485	1,540	1,595	10'																			
10'	1,485	1,540	1,595	1,650	1,705	11'																		
11'	1,540	1,595	1,650	1,705	1,760	1,815	12'																	
12'	1,595	1,650	1,705	1,760	1,815	1,870	1,925	13'																
13'	1,650	1,705	1,760	1,815	1,870	1,925	1,980	2,035	14'															
14'	1,705	1,760	1,815	1,870	1,925	1,980	2,035	2,090	2,145	15'														
15'	1,760	1,815	1,870	1,925	1,980	2,035	2,090	2,145	2,200	2,255	16'													
16'	1,815	1,870	1,925	1,980	2,035	2,090	2,145	2,200	2,255	2,310	2,365	17'												
17'	1,870	1,925	1,980	2,035	2,090	2,145	2,200	2,255	2,310	2,365	2,420	2,475												

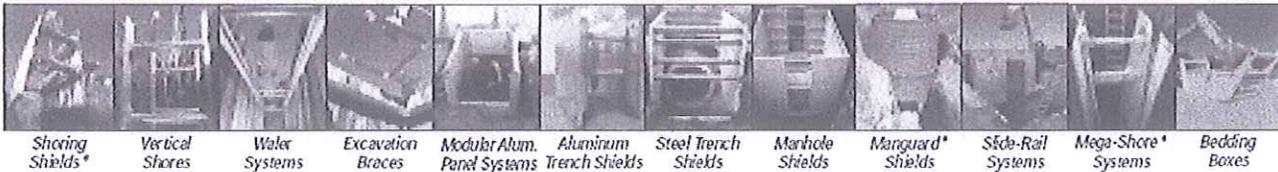


HVP-2000



HP-200

### Pioneer of the World's Most Advanced Trench Safety Systems



Shoring Shields\* Vertical Shores Water Systems Excavation Braces Modular Alum. Panel Systems Aluminum Trench Shields Steel Trench Shields Manhole Shields Manguard\* Shields Side-Rail Systems Mega-Shore\* Systems Bedding Boxes







Attachment G



Field Change Request - 042

Field Change Request Name - Additional Scope of Work at Final Connection to Bldg. 3305

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
	\$ 6,754.60	\$ 581.00	\$ -	\$ 7,039.50		\$ 14,375.10
						\$ -
						\$ -
Base Total	\$ 6,754.60	\$ 581.00	\$ -	\$ 7,039.50	\$ -	\$ 14,375.10
Material Tax (9%)						\$ -
Tax and Bond (5.97%)						\$ 859.19
Misc Labor Burden 37% - Hourly Personnel Only						\$ 759.24
Sub-total						\$ 15,992.63
Fee(15%)						\$ 2,398.88
<b>Total</b>						<b>\$ 18,391.41</b>

DESCRIPTION: This FCR request for an additional scope of work for the installation of the final connection to building 3305. On 2/22/14 while attempting to make the connection it was determined that the field conditions had significantly changed for this scope of work. The original drawing detail and FCR 004 show the final connection to be made outside the security fence for building 3305. After further investigation of the existing system, the shut off valve is inside the security fence area, additionally there is multiple utilities that will have to be traversed to install the final connection and due to the depth and proximity to existing utilities and the asphalt driveway, a specialized shoring system will be used to protect personal and existing infrastructure.

ADDITIONAL TIME REQUESTED: 7 Days

SIGNED BY: (b)(6) DATE: 2/27/2014  
(b)(6)  
Project Manager  
(b)(6)





11223 phillips parkway drive, east  
jacksonville, florida 32256

P: 904.262.6444

F: 904.268.6156

www.sauer-inc.com

July 1, 2014

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: Jason Edge, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-44, Final Connection at Building 3219 Cost Proposal**

Mr. Edge,

We herein submit our formal cost proposal covering the cost to furnish, and install all work as detailed in FCR 44. During the execution of the work we discovered that building 3219 had a two (2) inch connection that is serviced by the existing main. Per the RFI 23 response, we have priced the addition of this connection. Attached is the proposal from our subcontractor SHA and Sauer Inc. cost summary.

We are currently requesting a seven (7) calendar day time extension to complete this work.

If you have any questions or wish to discuss further do not hesitate to call us directly.

(b)(6)

(b)(6)

Project Manager



**CONTRACT TITLE:** NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

**DESCRIPTION:**

**FCR-44 Building 3219 Final Connection**

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		(b)(4)
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Field Overhead	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		

Prime Remarks:

SUBCONTRACTOR'S WORK			
11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			26,631

Sub's Remarks: SH Anthony 26,631

SUMMARY		
24. Prime Contractor's Work (from Line 10)	(b)(4)	
25. Sub-Contractor's Work (from line 23)		
26. SUBTOTAL (add lines 24 & 25)		
27. Prime Overhead		% of Line 25
28. Prime Profit		% of Line 24
29. Gross Receipts Tax		% of Line 26
30. SUBTOTAL (add lines 26 -29)		
31. Prime Contractor's Bond Premium		% of Line 30
32. TOTAL COST (Add Lines 30 & 31)		

Estimated time extension and justification  
Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
Subcontractor:

(b)(6)

Date 7-1-14





June 30, 2014

(b)(6)

Sauer Inc.  
11223 Phillips, Dr. East  
Jackson, Fla. 32256

Subject: Task Order NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS  
FCR 044 – Building 3219 Final Connection

(b)(6)

The response to RFI 023 for the connection to building requested an FCR for the work; this letter is the narrative scope for this work.

S. H. Anthony, Inc. (SHA) has reviewed the installation requirements and has included the scope of work as described below.

#### Scope of Work – Building 3219 Connection

- Excavate and expose the new water main at station +- 947+00.
- Install 14" x 2" tapping saddle, with 2" brass corporation stop.
- Hot tap the existing main.
- Install 2" shut off valve no greater than 5-feet from the hot tap connection.
- Install approximately 500 linear feet of 2-inch HDPE pipe to building 3219 from the hot tap location.
- Install a 2" shut off valve no greater than 5-feet from the existing building 3219 connection point.
- Flush new line, following all approved flushing procedures, to include, back flow protection, metering of water use and flow rate, SHA will use a third party metering company (CC Lynch).
- Hydrostatic test of the new line.
- Perform the disinfection procedures, chlorination and de-chlorination of the new line.
- Retrieve bacteriological samples, two consecutive days.
- Perform final tie in for building 3219.
- Remove and replace concrete as needed to make final tie in.
- Remove and replace section of stone driveway at building 3219 during installation process.
- Provide traffic control during installation across stone drive.
- Install erosion control measures at excavation areas.
- Install grass and maintain until accepted by the Owner.

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10146 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39506 \* Web: [www.shanthonyinc.com](http://www.shanthonyinc.com)

This FCR has been derived from existing site conditions and includes labor, materials and equipment. Please see the attached FCR breakdown for the cost. Due to material supplier quotation, this quote is valid for 30-days.

Sincerely,

(b)(6)

S.H. Anthony, Inc.  
10145 Southpark Drive  
Gulfport, MS. 39503

Cc/

file

(b)(6) - VP Construction  
(b)(6) President (b)(6)

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10145 Southpark Drive, Gulfport, MS. 39603 \* P.O. Box 3719, Gulfport, MS 39505 \* Web: [www.shanthonyinc.com](http://www.shanthonyinc.com)



Field Change Request - 043

Field Change Request Name - Additional Scope of Work fro new connection at building 3219

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
	\$ 7,986.80	\$ 2,828.14	\$ 2,355.00	\$ 6,737.92		\$ 19,907.86
						\$ -
						\$ -
Base Total	\$ 7,986.80	\$ 2,828.14	\$ 2,355.00	\$ 6,737.92	\$ -	\$ 19,907.86
Material Tax (9%)						\$ -
Tax and Bond (5.97%)						\$ 1,188.50
Misc. Labor Burden 37% - Hourly Personnel Only						\$ 2,060.99
<b>Sub-total</b>						<b>\$ 23,167.34</b>
Fee(15%)						\$ 3,473.60
<b>Total</b>						<b>\$ 26,630.94</b>

DESCRIPTION: This FCR request is for the installation of a new 2" HDPE water line to building 3219. The original contract drawings did not show the connection for this building. Per RFI 023, SHA is submitting this cost for the FCR change a detailed description of the scope of work required to complete this FCR per contract drawings and specifications.

ADDITIONAL TIME REQUESTED: 7 Days

SIGNED BY:

DATE:

6/30/2014

(b)(6)

Project Manager

(b)(6)

(b)(6)





National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 38529-6000

## FIELD CHANGE REQUEST (FCR)

FCR No 044

Contractor Sauer, Inc..  
Initiator/Company Sauer, Inc.  
Spec./Section 12G00-G020

Contract No. NNS12AA95T  
EMI No. 11B315-01  
Drawing No. \_\_\_\_\_  
Date \_\_\_\_\_

### Description of problem and recommended change:

**Problem Statement:** During the execution of the work, we discovered that building 3219 had a two (2) inch connection that is being serviced by the existing main. This connection is not detailed in the construction drawings. **Solution:** Per the RFI 23 response, we have priced the addition of this connection. **Scope of Work – Building 3219 Connection** 1.) Excavate and expose the new water main at station +- 947+00 2.) Install 14" x 2" tapping saddle, with 2" brass corporation stop. Hot tap the existing main. 3.) Install 2" shut off valve no greater than 5-feet from the hot tap connection. 4.) Install approximately 500 linear feet of 2-inch HDPE pipe to building 3219 from the hot tap. 5.) Install a 2" shut off valve no greater than 5-feet from the existing building 3219 connect point. 6.) Flush new line, following all approved flushing procedures, to include, back flow protection, metering of water use and flow rate, SHA will use a third party metering company (CC Lynch). 7.) Hydrostatic test of the new line. 8.) Perform the disinfection procedures, chlorination and de-chlorination of the new line. 9.) Retrieve bacteriological samples, two consecutive days. 10.) Perform final tie in for building 3219. 11.) Remove and replace concrete as needed to make final tie in. 12.) Remove and replace section of stone driveway at building 3219 during installation process.

Cost Impact  No  Yes Not to Exceed (b)(4)  
Schedule Impact  No  Yes No. of Days 7  
Project Manager Roman Rudzik  Date 7/1/14

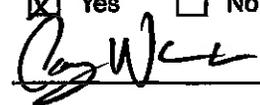
### DISPOSITION (NASA)

### Evaluation:

*Design Deficiency; Design Omission*  
*Approved 7-16-14*

NASA Project Manager		Date	<u>7/16/14</u>
Construction Engineer		Date	<u>7/16/14</u>
Quality Engineer		Date	_____
Safety Engineer		Date	<u>7/16/2014</u>
Environmental		Date	<u>7/16/14</u>
Design Engineer		Date	<u>7/16/14</u>
CCB Chair		<u>Madonna R. Snyder</u>	Date

CCB Approved for Implementation  Yes  No 16

COTR  Date 7/16/14  
Contracting Officer \_\_\_\_\_ Date \_\_\_\_\_



11223 phillips parkway drive, east  
jacksonville, florida 32256

P: 904.262.6444

F: 904.268.6156

www.sauer-inc.com

July 29, 2014

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

Attn: Jason Edge, Contracting Officer

RE: NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No.  
1603

**SUBJECT: FCR-46, Trent Lott Horizontal Directional Drilling**

Mr. Edge,

We herein submit our formal proposal covering costs to install the 16" HDPE pipe at Trent Lott using a horizontal directional drilling (HDD) method in lieu of the jack and bore method prescribed in the plans and specifications. SH Anthony has provided credits for the original scope of work less expenses incurred during the original attempt to install using jack and bore. This includes the geotechnical investigations performed to substantiate their position.

Please note this request includes a fifteen (15) calendar day time extension to complete the work; however, no extended field overhead costs are being sought assuming we receive notice to proceed on or before August 12, 2014. If you have any questions or wish to discuss further do not hesitate to call us directly.

Sincerely,

**SAUER INCORPORATED**

(b)(6)

(b)(6) PE

Senior Project Manager

**CONTRACT TITLE:** NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

**DESCRIPTION:**

**FCR-46, Trent Lott Horizontal Directional Drilling**

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		(b)(4)
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Field Overhead- freight	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		
Prime Remarks:		

SUBCONTRACTOR'S WORK			
11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			10,047
Sub's Remarks: SH Anthony		10,047	SHA Total

SUMMARY		
24. Prime Contractor's Work (from Line 10)	(b)(4)	
25. Sub-Contractor's Work (from line 23)		
26. SUBTOTAL (add lines 24 & 25)		
27. Prime Overhead		% of Line 2
28. Prime Profit		% of Line 2
29. Gross Receipts Tax		% of Line 2
30. SUBTOTAL (add lines 26 -29)		
31. Prime Contractor's Bond Premium		% of Line 3
32. TOTAL COST (Add Lines 30 & 31)		
Estimated time extension and justification Please see attached cover letter.		

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
 Subcontractor:

Signature & Title of preparer

(b)(5) PE

Date \_\_\_\_\_

Page 190 redacted for the following reason:

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(b)(7)(F)

Page 187 redacted for the following reason:

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(b)(7)(F)



July 28, 2014

(b)(6)

Sauer Inc.  
11223 Phillips, Dr. East  
Jackson, Fla. 32256

Subject: Task Order NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS  
FCR 046 – Installation of 16” HDPE pipe via HDD vs Jack and Bore

(b)(6)

Please accept this letter as SHA’s Field Change Request for the installation of the 16” HDPE pipe at Trent Lott using the HDD method and deleting the Jack and Bore method. Per the request of the NASA – COTR, Mr. Casey Wheeler, SHA is providing a detailed plan/profile drawing of the proposed location of the HDD installation and pricing to include credits for the jack and bore, casing spacers, carrier pipe and end seals. The 30” steel casing and stainless steel casing spacers and 16” DR17 pipe are non-returnable items and therefore the unit pricing reflects installation only. Please see below for the detailed credits/additions of the scope of work. Attached is a detailed breakdown of all cost associated with this FCR. SHA is asking for a 15 day time extension for the work, with no extended overhead cost applied, which would put the contract end date to October 15, 2014. However if this FCR is not approved by August 12, 2014, SHA feels that the contract end date would be extended past the October 15, 2014 date, therefore SHA would request additional overhead day for day, until all items affected by this FCR are completed. **The total price for FCR 046 is an additional \$10,046.81**

**The following list includes the credits and additional cost items per this FCR;**

- Delete 30” Jack and Bore, includes casing spacers and end seals 150 linear feet
- Delete 16” DR17 Carrier Pipe 150 linear feet
- Add installation of 16” DR11 Pipe HDD 150 linear feet
- Add shoring cost from previous J&B attempt 1 lump sum
- Add shoring delivery cost of shoring (return cost N/A) 1 lump sum
- Add dewatering of drive pit from previous J&B attempt 1 lump sum
- Add Mob/DE mob of dewatering equipment 1 lump sum
- Add Mob/DE mob of HDD drill equipment 2 each
- Add Geotechnical Report 1 lump sum

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10145 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39505 \* Web: www.shanthonyinc.com

SHA has reviewed the soils report, existing site utility locations, has verified the location and depth of the utilities and the connections per the contract drawings and documents. SHA submits this proposal for review and acceptance. If any additional information is required please do not hesitate to contact me.

Sincerely,

(b)(6)

Project Manager  
S.H. Anthony, Inc.  
10145 Southpark Drive  
Gulfport, MS. 39503

Cc/ file

(b)(6)

VP Construction

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10145 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39505 \* Web: [www.shanthonyinc.com](http://www.shanthonyinc.com)



Field Change Request - 048 Field Change Request Name - Installation of HDD Pipe at Trent Lott in place of Jack and Bore Casing

Job # 1037

\* All Rates Match Original Cost Breakdown Sheet

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL	City of Men	Hrs	Straight Time Rate	Straight Time	OT Hrs	Overtime Rate	Over Time	TOTAL
	\$ 3,194.96	\$ -	\$ 4,858.50	\$ -	\$ -	\$ 8,053.46	1	8	75.09	600.72		93.86	\$ -	600.72
Base Total	\$ 3,194.96	\$ -	\$ 4,858.50	\$ -	\$ -	\$ 8,053.46	1	40	51.20	2048		64.00	\$ -	2,048.00
Material Tax (9%)						\$ -			54.61	0		88.26	\$ -	0.00
Tax and Bond (5.97%)						\$ -			47.10	0		65.94	\$ -	0.00
Misc. Labor Burden 37% - Hourly Personnel Only						\$ 490.79	1	16	34.14	546.24		42.68	\$ -	546.24
Sub-total						\$ 202.11			51.20	0		71.68	\$ -	0.00
Fee (15%)						\$ 3,736.38			15.00	0		22.50	\$ -	0.00
						\$ 1,310.45			13.50	0		20.25	\$ -	0.00
<b>Total</b>						<b>\$ 10,046.81</b>			15.00	0			\$ -	0.00

DESCRIPTION: This FCR is for the installation of the 16" main at Trent Lott. Original design was to install a Jack and Bore casing at this location, based on the geotechnical information per the soil boring report generated by Burns Cooley Dennis, the soil conditions are not suitable for a Jack and bore installation. The FCR cost is based on credits of Jack and bore installation (ONLY) the steel casing and casing spacers are non-returnable and the material has been paid for. The pricing reflects subcontractor (MP Nesivel) cost incurred for snoring, equipment, dewatering at the drive pit location. Also included is the subcontractors cost for mobilization/de-mobilization, and installation of pipe via HDD.

ADDITIONAL TIME REQUESTED: 14 Days

SIGNED BY:

Project Manager

DATE:

7/25/2014

Unit Price Credits	Units	Qty	Unit Price	Total
Jack and Bore Steel Casing	LF	-150	\$ 245.37	\$ (36,805.50)
Installation of Casing Spacers	EA	-15	\$ -	\$ -
Installation of End Seals	EA	-2	\$ -	\$ -
Installation of 16" HDPE Carrier Pipe	LF	-150	\$ 33.77	\$ (5,065.50)
<b>Unit Price Additions</b>				
Well point system for reciever	DAY	5	\$ 400.00	\$ 2,000.00
Installation of 16" HDPE via HDD	LF	150	\$ 53.53	\$ 8,029.50
Shoring for drive pit from previous	LS	1	\$ 8,750.00	\$ 8,750.00
Job attempt (MP)	LS	1	\$ 500.00	\$ 500.00
Shoring delivery fee (MP)	LS	1	\$ 4,750.00	\$ 4,750.00
Dewatering for drive pit from previous Job attempt (MP)	LS	1	\$ 600.00	\$ 600.00
Delivery & Pickup of dewatering equipment (MP)	LS	2	\$ 8,000.00	\$ 16,000.00
Mobilization/Demobilization HDD Drill (MP)	LS	1	\$ 6,100.00	\$ 6,100.00
Geotech Report (Burns Cooley Dennis)	LS	1	\$ 4,858.50	\$ 4,858.50
<b>Sub Contractor Total</b>				<b>\$ -</b>

Mannt Hourly  
2648.72  
546.24  
3194.96



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No. 046

**Contractor** SAUER, INC.  
**Initiator/Company** Sauer, Inc.  
**Spec./Section** 12G00-G020/

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-417 & C-515  
**Date** 29 July 2014

**Description of problem and recommended change:**

See attached Letter dated 29 July 2014.

We submit our formal proposal covering cost to install the 16" HDPE pipe at Trent Lott using a horizontal directional drilling (HDD) method in lieu of the jack and bore method prescribed in the plans and specifications.

This request includes a fifteen (15) calendar day extension to complete the work; however, no extended field overhead cost are being sought assuming we receive notice to proceed on or before August 12, 2014.

**Cost Impact**  No  Yes **Not to Exceed** (b)(4)  
**Schedule Impact**  No  Yes **Number of Days** 15  
**Project Manager** (b)(6) **PE** (b)(6) **Date** 29 July 2014

**Evaluation:**

NASA Project Manager	_____	Date	_____
Construction Engineer	_____	Date	_____
Quality Engineer	_____	Date	_____
Safety Engineer	_____	Date	_____
Environmental	_____	Date	_____
Design Engineer	_____	Date	_____
CCB Chair	_____	Date	_____

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

National Aeronautics and  
Space Administration  
**John C. Stennis Space Center**  
Stennis Space Center, MS 39529-6000



August 1, 2014

Reply to Attn of: **RA10/14-1417CSW**

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Task Order: NNS12AA95T

**FCR-NNS12AA95T-046 – Disapproved.**

The FCR contains insufficient engineering content to evaluate the proposal as a viable alternative to requirements contained in contract documents. A complete FCR shall incorporate engineered product consistent with content contained in and developed to product the contract documents.

- Engineered revision to contract drawings, including C-401, C-417, C-515, and C-504.
- Associated revision to Contractor submitted Shop Drawings.
- Appropriate engineering design supporting data, calculations at a minimum.
- Engineered products shall be sealed by an MS PE in good standing.

Issues to resolve include items listed below.

- Location/Dimensions. The plan view of proposed re-route of the 16" main under Trent Lott Parkway at Sta 334+50 is not consistent with content contained in the supplied HDD profile. Plan appears to show a 20 ft length of pipe west of the new pipe construction. The profile shows approximately 70 ft of proposed HDD west of the new pipe shown at Sta. 96+78. A further length is expected as the profile does not show extension of the pipe to ground surface.
- Location/Preservation of existing infrastructure. Routing shown on the plan with rough dimensions shown on the profile put the re-routed HDPE surfacing at or near the pump house, B2312, and too close to a potable water supply well. Routing under B2312 and within 50 ft of the well provides unacceptable risk to existing infrastructure.
- Preserving existing pipe material/Separation of proposed HDD HDPE from existing transite and new HDPE. Any HDD must maintain a 5 ft or more separation from existing active transite pipe and a 5 ft separation is recommended from new HDPE to minimize risk of damage from drilling and pipe pulling operations.

- Update connection details & appurtenances. Revisions shall address line sizes, dimensions, connection locations/details, and various appurtenances, such as sample tap assemblies and air release valves.

Preserving & operating new construction. Submit calculations and other design data as required by NASA to demonstrate that the HDD installation and HDPE pipe shall be installed to bear all critical stresses from installation and operation for the 50 year minimum design life with adequate factor of safety. Satisfactory design shall meet applicable content of AWWA MOP for PE pipe, Plastic Pipe Institute handbook of PE pipe, MDOH minimum design criteria, and NASA requirements.

**NOTE: \*\* "ANY COMMENT(S) THAT RESULT IN A CHANGE TO THE CONTRACT COST, SCOPE, OR SCHEDULE YOU MUST NOTIFY THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO IMPLEMENTATION OR ANY COSTS ARE INCURRED."**

If you have any questions, give Casey Wheeler a call at 228-688-1179.



Jason Edge  
Contracting Officer

cc:

Jacobs/

(b)(6)

Project Management Division/Official File/11B315-01

Project Management Division/C. Wheeler



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No 046A

**Contractor** SAUER, INC.  
**Initiator/Company** \_\_\_\_\_  
**Spec./Section** 12G00-G020/

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-417 & C-515  
**Date** 15 September 2014

**Description of problem and recommended change:**

See attached Proposal dated 15 September 2014.  
See attached Letter from S. H. Anthony Construction Company dated 10 September 2014.  
See attached NASA response to RFI 022C dated 08 September 2014  
See attached RFI 022C dated 27 August 2014.

Due to the unstable soil conditions discovered, we submit our formal proposal covering cost to install the 16" HDPE pipe at Trent Lott using a horizontal directional drilling (HDD) method in lieu of the jack and bore method prescribed in the plans and specifications.

**Cost Impact**  No  Yes **Not to Exceed** (b)(4)  
**Schedule Impact**  No  Yes **No. of Days** 45  
**Project Manager** (b)(6) **PE** (b)(6) **Date** 15 September 2014

**DISPOSITION (NASA)**

**Evaluation:**

NASA Project Manager	_____	Date	_____
Construction Engineer	_____	Date	_____
Quality Engineer	_____	Date	_____
Safety Engineer	_____	Date	_____
Environmental	_____	Date	_____
Design Engineer	_____	Date	_____
CCB Chair	_____	Date	_____

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_

**CONTRACT TITLE:** NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS; Sauer Job No. 1603

**DESCRIPTION:**

**FCR-46B, Trent Lott Horizontal Directional Drilling**

PRIME CONTRACTOR'S WORK		Revisions/Comments
1. Direct Materials		(b)(4)
2. Sales Tax on Materials	___% of line 1	
3. Direct Labor		
4. Restocking fee	___% of line 3	
5. Rental Equipment		
6. Sales Tax on Rental Equipment	___% of line 5	
7. Equipment Ownership and Operating Expenses		
8. SUBTOTAL ( add lines 1 - 7)		
9. Field Overhead- freight	___% of line 8	
10. SUBTOTAL (Add lines 8 & 9)		

Prime Remarks:

**SUBCONTRACTOR'S WORK**

11. Direct Materials		0	
12. Sales Tax on Materials	___% of line 11	0.00%	0
13. Direct Labor		0	
14. Insurance, Taxes, and Fringe Benefits	___% of line 13	0.00%	0
15. Rental Equipment		0	
16. Sales Tax on Rental Equipment	___% of line 15	0.00%	0
17. Equipment Ownership and Operating Expenses		0	
18. SUBTOTAL ( add lines 11 - 17)			
19. Field Overhead	___% of line 18	0.00%	0
20. SUBTOTAL (Add lines 18 & 19)			0
21. Home Office Overhead	___% of line 20	0.00%	0
22. Profit	___% of line 20	10.00%	0
23. SUBTOTAL (Add Lines 20-22)			181,179

Sub's Remarks: SH Anthony 181,179

**SUMMARY**

24. Prime Contractor's Work (from Line 10)		(b)(4)
25. Sub-Contractor's Work (from line 23)		
26. SUBTOTAL (add lines 24 & 25)		
27. Prime Overhead	% of Line 25	
28. Prime Profit	% of Line 24	
29. Gross Receipts Tax	% of Line 26	
30. SUBTOTAL (add lines 26 -29)		
31. Prime Contractor's Bond Premium	% of Line 30	
32. TOTAL COST (Add Lines 30 & 31)		

Estimated time extension and justification  
Please see attached cover letter.

Prime Contractor: Sauer Incorporated, d/b/a Sauer Southeast  
Subcontractor:

Signature & Title of preparer

(b)(6) PE

Date \_\_\_\_\_







September 10, 2014

(b)(6)

Sauer Inc.  
11223 Phillips, Dr. East  
Jackson, Fla. 32256

Subject: Task Order NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS  
FCR 046B – Installation of 16” HDPE pipe via HDD vs Jack and Bore

(b)(6)

Please accept this letter as SHA’s Field Change Request for the installation of the 16” HDPE pipe at Trent Lott using the HDD method and deleting the Jack and Bore method. Per the request of the NASA – COTR, Mr. Casey Wheeler, SHA/Sauer has provided detailed plan/profile drawing of the proposed location of the HDD installation and pricing to include credits for the jack and bore, casing spacers, carrier pipe and end seals. The 30” steel casing and stainless steel casing spacers and 16” DR17 pipe are non-returnable items and therefore the unit pricing reflects installation only. Please see below for the detailed credits/additions of the scope of work. Attached is a detailed breakdown of all cost associated with this FCR. SHA is asking for a 45 day time extension for the work, with extended overhead cost applied for 32 working days, which would put the contract end date to November 15, 2014. However if this FCR is not approved by October 1, 2014, SHA feels that the contract end date would be extended past the November 15, 2014 date, then SHA would request additional overhead day for day, until all items affected by this FCR are completed. **The total price for FCR 046 is an additional - \$181,178.76**

**The following list includes the credits and additional cost items per this FCR;**

- Delete 30” Jack and Bore, includes casing spacers and end seals 150 linear feet
- Delete 16” DR17 Carrier Pipe 150 linear feet
- Add installation of 16” DR11 Pipe HDD 280 linear feet
- Add shoring cost from previous J&B attempt 1 lump sum
- Add shoring delivery cost of shoring (return cost N/A) 1 lump sum
- Add dewatering of drive pit from previous J&B attempt 1 lump sum
- Add Mob/DE mob of dewatering equipment 1 lump sum
- Add Mob/DE mob of HDD drill equipment 2 each
- Add Geotechnical Report 1 lump sum

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10145 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39505 \* Web: www.shanthyinc.com

- Installation of 12" Hot Tap in phase 5 to flush, test, disinfect and make final connections for phase 4 and 5 1 lump sum
- Installation of 114 additional pipe to move to the South Labor and Equipment
- Installation of additional dewatering and shoring to make connections at the West side of the HDD segment of the new line. Labor and Equipment

These items are per the cost of unit price, lump sum and labor/equipment cost. The time frame for this work is 3-weeks – 21 calendar days.

The additional time requested is to complete the following items.

- Fusion of pipe and fittings per base contract items.
- Installation of pipe and fittings per base contract items.
- Flushing, testing and disinfection of base contract items.
- Outage for connection to 12" main at station 340+68 per base contract item.
- Final connection of Trent Lott water tower per base contract items.
- Installation of valve and ARV concrete pads per base contract items.
- Installation of flow fill for abandoned pipe from station 333+00 to 340+68
- Installation of seed and fertilizer per effected area surrounding tower.

The timeline for base contract items is +/- 3.42 weeks – 24 calendar days. The total number of calendar days requested is 45-days.

SHA has reviewed the soils report, existing site utility locations, has verified the location and depth of the utilities and the connections per the contract drawings and documents. SHA submits this proposal for review and acceptance. If any additional information is required please do not hesitate to contact me.

(b)(6)

Project Manager  
S.H. Anthony, Inc.  
10145 Southpark Drive  
Gulfport, MS. 39503

Cc/ file

(b)(6)

President - SHA

Phone: (228) 896-7310 \* Fax: (228) 896-7312

**State Certified and Licensed Contractor**

10145 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39505 \* Web: [www.shanthonyinc.com](http://www.shanthonyinc.com)



Field Change Request - 046A      Field Change Request Name - Installation of HDD Pipe at Trent Lott in place of Jack and Bore Casing

Job # 1037

SCOPE OF WORK	SHA LABOR	MATERIAL	SUBCONTRACT	EQUIPMENT	OTHER	TOTAL
	\$ 45,778.88	\$ -	\$ 15,335.68	\$ 84,386.19		\$ 145,500.75
Base Total	\$ 45,778.88	\$ -	\$ 15,335.68	\$ 84,386.19	\$ -	\$ 145,500.75
Material Tax (9%)						\$ -
Tax and Bond (5.97%)						\$ 8,686.39
Misc. Labor Burden 37% - Hourly Personnel Only						\$ 3,359.60
<b>Sub-total</b>						<b>\$ 157,546.75</b>
Fee(15%)						\$ 23,632.01
<b>Total</b>						<b>\$ 181,178.76</b>

DESCRIPTION: This FCR is for the installation of the 16" main at Trent Lott, original design was to install a Jack and Bore casing at this location, based on the geotechnical information per the soil boring report generated by Burns Cooley Dennis, the soil conditions are not suitable for a jack and bore installation. The FCR cost is based on credits of jack and bore installation (ONLY) the steel casing and casing spacers are non-returnable and the material has been paid for. The pricing reflects subcontractor (MP Nexlevel) cost incurred for shoring, equipment, dewatering at the drive pit location. Also included is the subcontractors cost for mobilization/de-mobilization, and installation of pipe via HDD.

ADDITIONAL TIME REQUESTED: 45 Days  
 SIGNED BY: (b) (6)      DATE: 9/10/2014

Project Manager  
(b) (6)





Unit Price Credits	Units	Qty	Unit Price	Total
Jack and Bore Steel Casing	LF	-150	\$ 245.37	\$ (36,805.50)
Installation of Casing Spacers	EA	-15		\$ -
Installation of End Seals	EA	-2		\$ -
Installation of 16" HDPE Carrier Pipe	LF	-150	\$ 33.77	\$ (5,065.50)
<b>Unit Price Additions</b>				
Well point system for receiver	DAY	5	\$ 400.00	\$ 2,000.00
Installation of 16" HDPE via HDD	LF	280	\$ 53.53	\$ 14,988.40
Shoring for drive pit from previous J&B attempt (MP)	LS	1	\$ 8,750.00	\$ 8,750.00
Shoring delivery fee (MP)	LS	1	\$ 500.00	\$ 500.00
Dewatering for drive pit from previous J&B attempt (MP)	LS	1	\$ 4,750.00	\$ 4,750.00
Delivery & Pickup of dewatering equipment (MP)	LS	1	\$ 600.00	\$ 600.00
Mobilization/Demobilization HDD Drill (MP)	LS	2	\$ 8,000.00	\$ 16,000.00
Geotech Report (Burns Cooley Dennis)	LS	1	\$ 6,100.00	\$ 6,100.00
Hot tap - Materials	LS	1	\$ 1,800.36	\$ 1,800.36
Hot Tap-Installation	LS	1	\$ 1,717.92	\$ 1,717.92
Sub Contractor Total				\$ 15,335.68

Equipment	Units	Qty	Rate	Price	DEQ 1.5%	LDW 15%	Tax 7%	Fuel @ 4.50	Total
Crew Truck (fuel included)	Day	32	\$ 65.00	\$ 2,080.00					\$ 2,080.00
Crew Truck (fuel included)	Day	32	\$ 65.00	\$ 2,080.00					\$ 2,080.00
Crew Truck (fuel included)	Day	32	\$ 65.00	\$ 2,080.00					\$ 2,080.00
Crew Truck (fuel included)	Day	32	\$ 65.00	\$ 2,080.00					\$ 2,080.00
Dump Truck (fuel included)	Day	16	\$ 520.00	\$ 8,320.00					\$ 8,320.00
Kubota KX121 Excavator	MTH	1.5	\$ 1,850.00	\$ 2,775.00	\$ 41.63	\$ 416.25	\$ 194.25	\$ 645.12	\$ 4,072.25
CX 135 Excavator	MTH	1.5	\$ 3,975.00	\$ 5,962.50	\$ 89.44	\$ 894.38	\$ 417.38	\$ 1,267.20	\$ 8,630.89
Case 160 Excavator	MTH	1.5	\$ 4,250.00	\$ 6,375.00	\$ 95.63	\$ 956.25	\$ 446.25	\$ 2,419.20	\$ 10,292.33
Case 210 Excavator	MTH	1.5	\$ 6,250.00	\$ 9,375.00	\$ 140.63	\$ 1,406.25	\$ 656.25	\$ 4,032.00	\$ 15,610.13
Case 721 Loader	MTH	1.5	\$ 5,750.00	\$ 8,625.00	\$ 129.38	\$ 1,293.75	\$ 603.75	\$ 2,764.80	\$ 13,416.68



618 Fusion Rig w/data logger	Week	4	\$ 1,250.00	\$ 5,000.00	\$ 75.00	\$ 750.00	\$ 350.00	\$ 792.00	\$ 6,967.00
Vacuum Jetting Rig	Day	5	\$ 400.00	\$ 2,000.00	\$ 30.00	\$ 300.00	\$ 140.00	\$ 1,216.00	\$ 3,686.00
10' x 13' Hydraulic Shoring	Week	1	\$ 671.00	\$ 671.00	\$ 10.07	\$ 100.65	\$ 46.97		\$ 828.69
Shoring delivery and pick up fee	Each	2	\$ 450.00	\$ 900.00	\$ 13.50	\$ 135.00	\$ 63.00		\$ 1,111.50
Dewatering Equipment	Day	10	\$ 95.00	\$ 950.00	\$ 14.25	\$ 142.50	\$ 66.50		\$ 1,173.25
Office Trailer (Rent)	Day	45	\$ 15.00	\$ 675.00					\$ 675.00
Printer	Day	45	\$ 12.00	\$ 540.00					\$ 540.00
Computers (3)	Day	45	\$ 7.50	\$ 337.50					\$ 337.50
Internet (2)	Day	45	\$ 2.50	\$ 112.50					\$ 112.50
Port-O-lets (4)	Day	45	\$ 4.00	\$ 180.00					\$ 180.00
Phone Service	Day	45	\$ 2.50	\$ 112.50					\$ 112.50
Sub Total Equipment									\$ 84,386.19

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000



September 8, 2014

Reply to Attn of: RA10/14-1664CSW

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following answer is in response to your Requests for Information:

**RFI 022C Question:**

SHA proposes to relocate the water main under Trent Lott +/- 144 linear feet south of the plan location as shown on C-401 and C-417. SHA proposes the change from Jack and Bored casing to HDD based on the Geotechnical Report dated 7/1/14 from Burns Cooley Dennis, LLC. (Attached Xmtl 177). The new crossing location has been relocated south to mitigate potential conflicts with the existing infrastructure per the contract drawings. SHA has provided plan and profile drawings depicting the proposed location and pipe stress calculations per the use of the Plastic Pipe Institute "Bore Aid" software, which is available for free on the [www.ppi.org](http://www.ppi.org) website.

**Answer:**

The concept is acceptable. The contractor shall submit this, along with a cost proposal, in the form of an FCR.

**NOTE: \*\* "Any comment that result in a change to the contract cost, scope, or schedule you must notify the Contracting Officer for approval prior to implementation or any costs are incurred."**

If you have any questions, give me a call at 228-688-1655.

**Original Signed by:**

Casey S. Wheeler  
Contracting Officer's  
Technical Representative

cc:  
Jacobs-FOSC



Official File



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

## REQUEST FOR INFORMATION

(Implemented by SOI-8040-0001-FACENG)

Request For Information (RFI) Number

022C Phase 3, Sta. 100+00, Jack & Bore at Trent Lott

Date

27 August 2014

Requestor

SAUER, INC

Contract

NNS12AA95T

Question:

SHA proposes to relocate the water main under Trent Lott + - 144 linear feet south of the plan location as shown on drawing C-401 and C-417. SHA proposes the change from Jack and Bored casing to HDD based on the Geotechnical Report dated 7/1/14 from Burns Cooley Dennis, LLC. (Attached Transmittal 33 05 23.13-177) The new crossing location has been relocated South to mitigate potential conflicts with the existing infrastructure per the contract drawings. SHA has provided plan and profile drawings depicting the proposed location and pipe stress calculations per the use of the Plastic Pipe Institute "Bore Aid" software, which is available for free on the [www.ppi.org](http://www.ppi.org) website.

Reply: ASAP

Schedule Impact: YES

Cost Impact: YES

(b)(6)

Answer:

National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

33 05 23-13



July 31, 2014

Reply to Attn of: RA10/14-1408CSW

Sauer Incorporated  
Attn: (b)(6)  
11223 Phillips Pkwy, Drive East  
Jacksonville, FL 32256-1574

Subject: EMI: 11B315-01 Upgrades to Potable Water System. NASA Contract: NNS12AA95T

The following listed contractually required submittal is being returned to your office:

Transmittal 177: Geotechnical Report Phase 3 Saturn Drive at Trent Lott Pkwy - "Receipt Acknowledged."

**NOTE: \*\* "ANY COMMENT(S) THAT RESULT IN A CHANGE TO THE CONTRACT COST, SCOPE, OR SCHEDULE YOU MUST NOTIFY THE CONTRACTING OFFICER FOR APPROVAL PRIOR TO IMPLEMENTATION OR ANY COSTS ARE INCURRED."**

If you have any questions, give me a call at 228-688-1179.

Original Signed by:

Casey S. Wheeler  
Contracting Officer's Representative

cc:  
Jacobs-FOSC (b)(6) icial file



**BURNS COOLEY DENNIS, INC.**  
**GEOTECHNICAL AND MATERIALS ENGINEERING CONSULTANTS**

Branch Office  
14140 Dedeaux Road, Suite C  
Gulfport, MS 39503  
Phone: (228) 832-0690  
Fax: (228) 832-0930

Corporate Mailing Address  
Post Office Box 12828  
Jackson, MS 39236  
www.bcdgeo.com

Corporate Office  
551 Sunnybrook Road  
Ridgeland, MS 39157  
Phone: (601) 856-9911  
Fax: (601) 856-9774

July 1, 2014

S. H. Anthony, Inc.  
10145 Southpark Drive  
Gulfport, Mississippi 39503

Report No. 140409

Attention: Mr. Tom Rice

Geotechnical Study  
Stennis Potable Water Upgrades  
NASA Project No. NNS12AA95T  
Hancock County, Mississippi

Gentlemen:

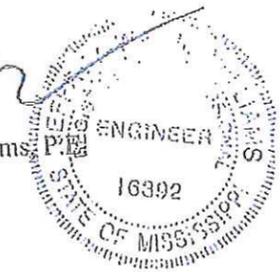
Submitted here is the report of our geotechnical study for the above-captioned project. Mr. Tom Rice authorized this study through acceptance of our proposal and S. H. Anthony P.O. # 015102 dated June 12, 2014.

We appreciate the opportunity to be of service. If you should have any questions concerning this report, please do not hesitate to call us.

Very truly yours,

BURNS COOLEY DENNIS, INC.

  
Jeffrey W. Williams, P.E.  
Principal



JWW/aet/tgr  
Copies Submitted: (3)

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## 1.0 INTRODUCTION AND PURPOSE

We understand that S. H. Anthony, (SHA) is subcontracted to Sauer Construction for the installation of utilities for the Potable Water Upgrades project at Stennis Space Center in Hancock County, Mississippi. At the jack and bore location along Saturn Drive south of the intersection with Trent Lott Parkway, water-bearing sands were discovered during the initial efforts at the plan elevation. SHA is concerned that the soils would enter the head during the welding of the casing and could potentially cause subsidence under the roadway. The jack and bore operations will be at a depth of about 10 ft below existing grade. A 30-in. diameter steel casing will be installed so that a 16-in. diameter HDPE pipe can be placed beneath Trent Lott Parkway. We were asked to make soil borings to investigate the soil conditions at the jack and bore location.

The specific purposes of this study were:

- 1) to explore the subsurface conditions at the jack and bore location by advancing and sampling three borings;
- 2) to verify field classifications and evaluate pertinent physical properties of the soils encountered in the borings by means of visual examination of soil samples and testing in the laboratory;
- 3) to prepare a geotechnical report summarizing the results of our study and presenting our comments on utility installation methods.

## 2.0 FIELD INVESTIGATION

### 2.1 General

Subsurface soil conditions within the jack and bore location were explored by means of three borings. The borings were made with a truck-mounted drill rig. Each boring was made to a depth of 25 ft. The boring locations were selected by S. H. Anthony personnel. The approximate locations of the borings are illustrated on Figure 1 of this report.

All soils were classified in general accordance with the Unified Soil Classification System. A legend is shown on Figure 2, which presents a summary of the Unified Soil Classification System, and the symbols and terminology typically utilized on the graphic logs. Graphical logs of the borings are presented on Figures 3 through 5. The graphical logs illustrate the types of soil encountered with depth below the ground surface at the boring locations. The ground surface elevation at the location of the borings was not determined. Approximate GPS coordinates were recorded for Borings 1 and 3 and are presented on the boring logs.

## 2.2 Drilling Methods and Groundwater Observations

The borings were made by a truck-mounted drilling rig utilizing a 6-in. continuous-flight auger to the depth of 3 ft to 6 ft then rotary wash to completion. Observations were made continuously during dry auger drilling to detect any groundwater seepage emerging in the open boreholes. We also installed temporary piezometers at the locations of Borings 2 and 3 to record the water levels later in the day after sampling was completed. Notes pertaining to observed groundwater conditions are indicated in the lower right corner of the graphic logs.

## 2.3 Sampling Methods

Disturbed samples of the soils were obtained at selected depths in the borings by driving a standard 2-in. OD split-spoon sampler 18 in. into the soil with a 140-lb hammer falling freely a distance of 30 inches. The standard penetration test blow counts resulting from split-spoon sampling is recorded under the "Blows Per Ft" column of the graphic logs. Split-spoon samples were obtained utilizing an automatic hammer. Automatic hammers operate more efficiently than standard safety hammers, which results in greater energy per blow. Studies indicate that SPT N-values obtained using an automatic hammer are on the order of 75 percent of N-values recorded using the older style manually-operated hammer. The N-values presented on the logs have been adjusted for this increased energy.

Relatively undisturbed samples were also obtained from selected depths in the borings by pushing a 3-in. OD thin-wall Shelby tube sampler approximately 2 ft into the soil. The actual depths

at which the split-spoon and Shelby tube samples were obtained are indicated by the appropriate symbols under the "Samples" column of the graphic boring logs.

#### 2.4 Field Classification, Sample Preparation, and Borehole Completion

All soils encountered during drilling were carefully examined and classified by a geotechnical engineering technician. Representative portions of the split-spoon samples were placed in jars to provide material for later visual examination, classification, and testing in the laboratory. Unless other disposition is requested, we routinely discard soil samples after about six months of storage. Upon completion of drilling and sampling and recording the water level in the temporary piezometers, the piezometers were removed and the borings were plugged with soil cuttings.

### 3.0 LABORATORY INVESTIGATION

An evaluation of the strength, compressibility, and classification properties of the subsurface soils encountered in the borings was considered to be of primary importance for this study. These properties were evaluated through consideration of penetration tests, by visual examination of samples, and from results of the routine laboratory index tests described in the following paragraphs.

The classifications and volume change properties of the soils encountered in the borings were investigated by the means of Atterberg liquid and plastic limit tests performed on selected samples. In accordance with the Unified Soil Classification System (USCS), fine-grained soils are classified as either clays or silts of low or high plasticity based on the results of liquid and plastic limit tests. The numerical difference between the liquid limit and plastic limit is defined as the plasticity index (PI). The magnitudes of the liquid limit and plasticity index and the proximity of the natural water content to the plastic limit are indicators of the potential for a clay to shrink or swell upon changes in moisture content or to consolidate under loading. The proximity of the water content to the plastic limit is also an indicator of soil strength. The results of the liquid and plastic limit tests are shown on the graphic boring logs.

To assist in classifying soils which include sand, tests were performed to determine the percent fines passing the No. 200 sieve. The percentage of fines resulting from each test is tabulated at the appropriate depth under the far right column of the graphic logs.

Water content tests were performed on selected samples to corroborate field classifications and to extend the usefulness of the strength, plasticity, and SPT blow count data. The results of the water content tests are shown on the graphic boring logs.

#### 4.0 GENERAL SUBSURFACE CONDITIONS

##### 4.1 General

A general description of subsurface soils and groundwater conditions encountered in the borings made for this study are provided in the following paragraphs. The graphical logs shown on Figures 3 through 5 should be referred to for specific soil conditions encountered at the boring locations.

##### 4.2 Soil Stratification

The subsurface conditions encountered in the borings consist of alternating layers of silty sands (SM) and clays (CL, CH). The generalized soil conditions are as follows:

Approximate Depth	Soil Type
Surface to 4.5 ft	Loose to medium dense silty sands (SM)
4.5 ft to 10 ft	Very soft to very stiff sandy clays (CL)
10 ft to 17 ft <i>Note 1</i>	Loose to medium dense silty sands (SM)
17 ft to 25 ft	Soft to medium stiff clays (CH)
<i>Note 1: Encountered to depth of 22.5 ft in Boring 3.</i>	

The loose to medium dense silty sands (SM) are considered to have low-moderate to moderate strength and low-moderate to low compressibility, and are nonexpansive. The very soft to medium stiff sandy clays (CL) and clays (CH) are considered to have very low to low strength and

very high to high compressibility. The stiff to very stiff sandy clays (CL) are considered to have moderate to high strength and moderate to low compressibility. The sands (SM) are nonexpansive, the sandy clays (CL) have low shrink/swell potential, and the clays (CH) have high shrink/swell potential.

#### 4.3 Groundwater

Free water was initially encountered at a depth of 3 ft, 3 ft, and 5 ft in Borings 1, 2, and 3, respectively. After a brief 15-minute waiting period, the free water was observed in Borings 1, 2, and 3 at depths of 1.8 ft, 1.8 ft, and 2.3 ft, respectively. Free water was observed in the temporary piezometers installed at Borings 2 and 3 at a depth of about 1.5 ft after periods of about 6 hrs to 7 hrs. It should be noted that groundwater conditions will mainly be affected by the water levels in the adjacent channels and will also fluctuate seasonally with rainfall and surface drainage. Surficial soils can become saturated and weak to some depth during periods of prolonged and heavy rainfall.

### 5.0 DISCUSSION

Groundwater was encountered as shallow as 1.5 ft beneath the ground surface. The groundwater will have to be controlled and the side slopes of the jack and bore excavations will have to be shored. The weak water-bearing soils, especially the silty sands (SM) and the very soft to medium stiff sandy clays (CL), will have a tendency to cave in excavations and the soils in the bottom of the excavations may "heave" from hydrostatic pressures forcing groundwater up through the bottom of the excavation. The groundwater level can be lowered to reduce this potential.

We also expect that the water-bearing sands will "flow" into the open end of the pipe during jack and bore operations, which will undermine the existing road and can lead to significant settlement. We recommend that the utility installation methods utilized accommodate the presence of these weak, water-bearing soils.

## 6.0 REPORT LIMITATIONS

The analyses, conclusions, and recommendations discussed in this report are based on conditions as they existed at the time of our field investigation and further on the assumption that the exploratory borings are representative of subsurface conditions throughout the areas investigated. It should be noted that actual subsurface conditions beyond the borings might differ from those encountered at the boring locations. If subsurface conditions are encountered during construction that vary from those discussed in this report, Burns Cooley Dennis, Inc. should be notified immediately in order that we may evaluate the effects, if any, on design and construction.

Burns Cooley Dennis, Inc. should be retained for a general review of final design drawings and specifications. It is advised that we be retained to observe construction for the project in order to help confirm that our recommendations are valid or to modify them accordingly. Burns Cooley Dennis, Inc. cannot assume responsibility or liability for the adequacy of recommendations if we do not observe construction.

This report has been prepared for the exclusive use of S. H. Anthony, Inc. for specific application to the geotechnical aspects of design and construction for the Stennis Potable Water Upgrades at Stennis Space Center in Hancock County, Mississippi. The only warranty made by us in connection with the services provided is we have used that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. No other warranty, express or implied, is made or intended.

## FIGURES

Page 218 redacted for the following reason:

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(b)(7)(F)

# UNIFIED SOIL CLASSIFICATION SYSTEM

	MAJOR DIVISIONS	SYMBOL & LETTER	DESCRIPTION
COARSE-GRAINED SOILS More than half of material larger than No. 200 sieve size	GRAVELS More than half of coarse fraction larger than No. 4 sieve size	Clean Gravels (Little or no fines)	GW WELL GRADED GRAVEL, GRAVEL-SAND MIXTURE
		Gravels with fines (Appreciable amount of fines)	GP POORLY GRADED GRAVEL, GRAVEL-SAND MIXTURE
		Clean Sands (Little or no fines)	GM SILTY GRAVEL, GRAVEL-AND-SILT MIXTURE
		Sands with fines (Appreciable amount of fines)	GC CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURE
	SANDS More than half of coarse fraction smaller than No. 4 sieve size	Clean Sands (Little or no fines)	SW WELL GRADED SAND, GRAVELLY SAND
		Sands with fines (Appreciable amount of fines)	SP POORLY GRADED SAND, GRAVELLY SAND
		Silty Sand, Sand Silty Mixture	SM
		Clayey Sand, Sand-Clay Mixtures	SC
		Silt, with little or no plasticity	ML
		Clayey silt, silt with slight to medium-plasticity	ML
FINE-GRAINED SOILS More than half of material smaller than No. 200 sieve size	SILTS AND CLAYS Liquid Limit (LL) less than 50	Sandy silt	ML
		Silty clay, low to medium-plasticity	CL
		Sandy clay, low to medium-plasticity (30% to 50% sand)	CL
		Silt, fine sandy or silty soil with high-plasticity	MH
		Clay, high-plasticity	CH
	SILTS AND CLAYS Liquid Limit (LL) greater than 50	Organic clay, medium to high-plasticity	OH
		Peat, humus, swamp soil	PT

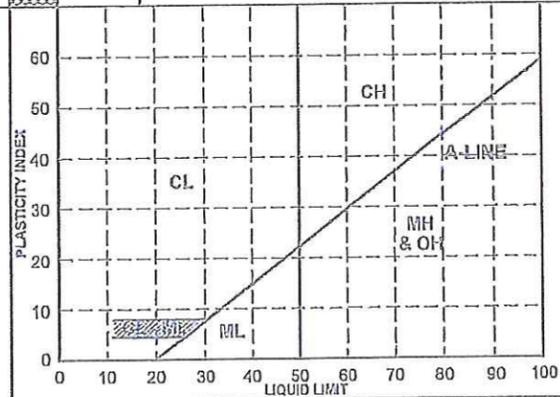
### HIGHLY ORGANIC SOILS

#### TERMS CHARACTERIZING SOIL STRUCTURE

- Stickensided** - Clays with polished and striated planes created as a result of volume changes related to shrinking, swelling and/or changes in overburden pressure.
- Fissured** - Clays with a blocky or jointed structure generally created by seasonal shrinking and swelling.
- Laminated** - Composed of thin alternating layers of varying color and texture.
- Calcareous** - Containing appreciable quantities of calcium carbonate.
- Parting** - Paper thin (less than 1/8 inch).
- Seam** - 1/8 inch to 3 inches in thickness.
- Layer** - Greater than 3 inches in thickness.

#### DENSITY AND CONSISTENCY

COARSE-GRAINED SOILS		FINE-GRAINED SOILS	
PENETRATION RESISTANCE, N	CONSISTENCY	COHESION Kips/Sq. Ft	PENETRATION RESISTANCE, N
Blows/Ft			Blows/Ft
Very Loose 0 - 4	Very Soft	<0.25	0 - 1
Loose 5 - 10	Soft	0.25 - 0.50	2 - 4
Medium Dense 11 - 30	Medium Stiff	0.50 - 1.00	5 - 8
Dense 31 - 50	Stiff	1.00 - 2.00	9 - 15
Very Dense >50	Very Stiff	2.00 - 4.00	16 - 30
	Hard	>4.00	>30



PLASTICITY CHART  
(FOR CLASSIFICATION OF FINE-GRAINED SOILS)

#### PARTICLE SIZE IDENTIFICATION

- Cobbles** - Greater than 3 inches
- Gravel** - Coarse - 3/4 inch to 3 inches  
Fine - 4.75 mm to 3/4 inch
- Sand** - Coarse - 2 mm to 4.75 mm  
Medium - 0.42 mm to 2 mm  
Fine - 0.074 mm to 0.42 mm
- Silt & Clay** - Less than 0.074 mm

#### RELATIVE COMPOSITION

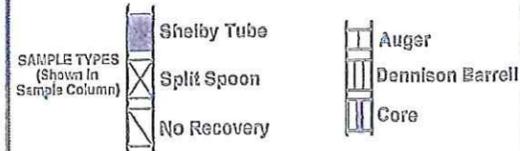
- Slightly Silty 8 - 15%
- Slightly Clayey 18 - 29%
- Sandy (or gravelly) 30% - 60%

## CLASSIFICATION, SYMBOLS AND TERMS USED ON GRAPHICAL BORING LOGS

BURNS COOLEY DENNIS, INC.  
1402 CORINNE STREET  
HATTIESBURG, MISSISSIPPI 39401

REVISED 8/15/05 | DRAWN BY: ALR | CHECKED BY: BCD

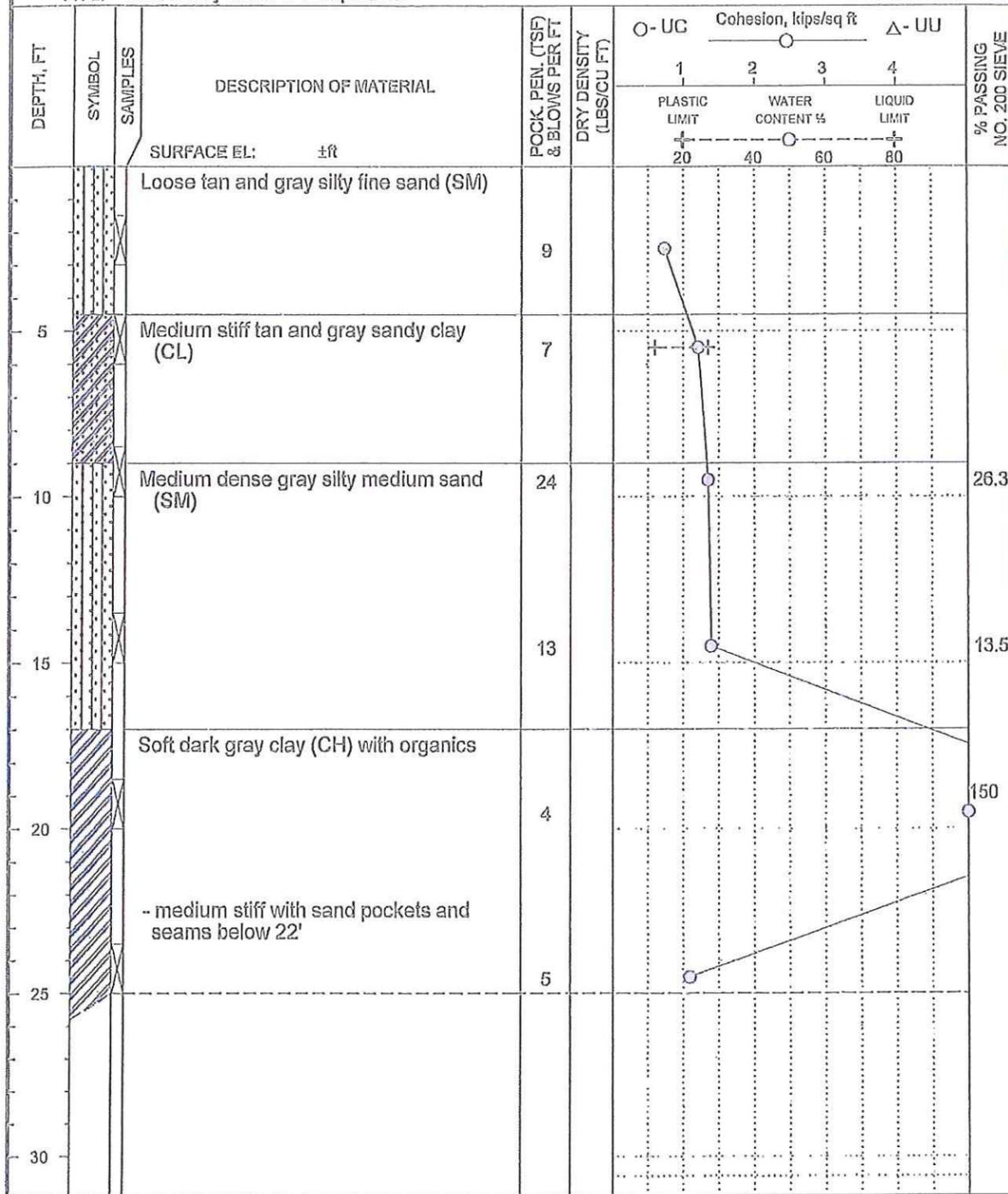
PROJECT NO. ALL | SCALE: N.T.S. | FIGURE 2



**LOG OF BORING NO. 1**  
**STENNIS POTABLE WATER UPGRADES**  
**NASA PROJECT NO. NNS12AA95T**  
**HANCOCK COUNTY, MISSISSIPPI**

TYPE: 6" Short-flight auger to 3', then rotary wash to completion.

LOCATION: See Figure 1



BORING DEPTH: 25 ft  
 DATE: 06/20/14

COMMENTS:  
 GPS Coordinates  
 N 30° 22' 32.5"  
 W 89° 37' 26.2"

GROUNDWATER DATA: Free water encountered at an approximate depth of 3' during auger drilling. Water level at an approximate depth of 1.8' after about 15 minutes.

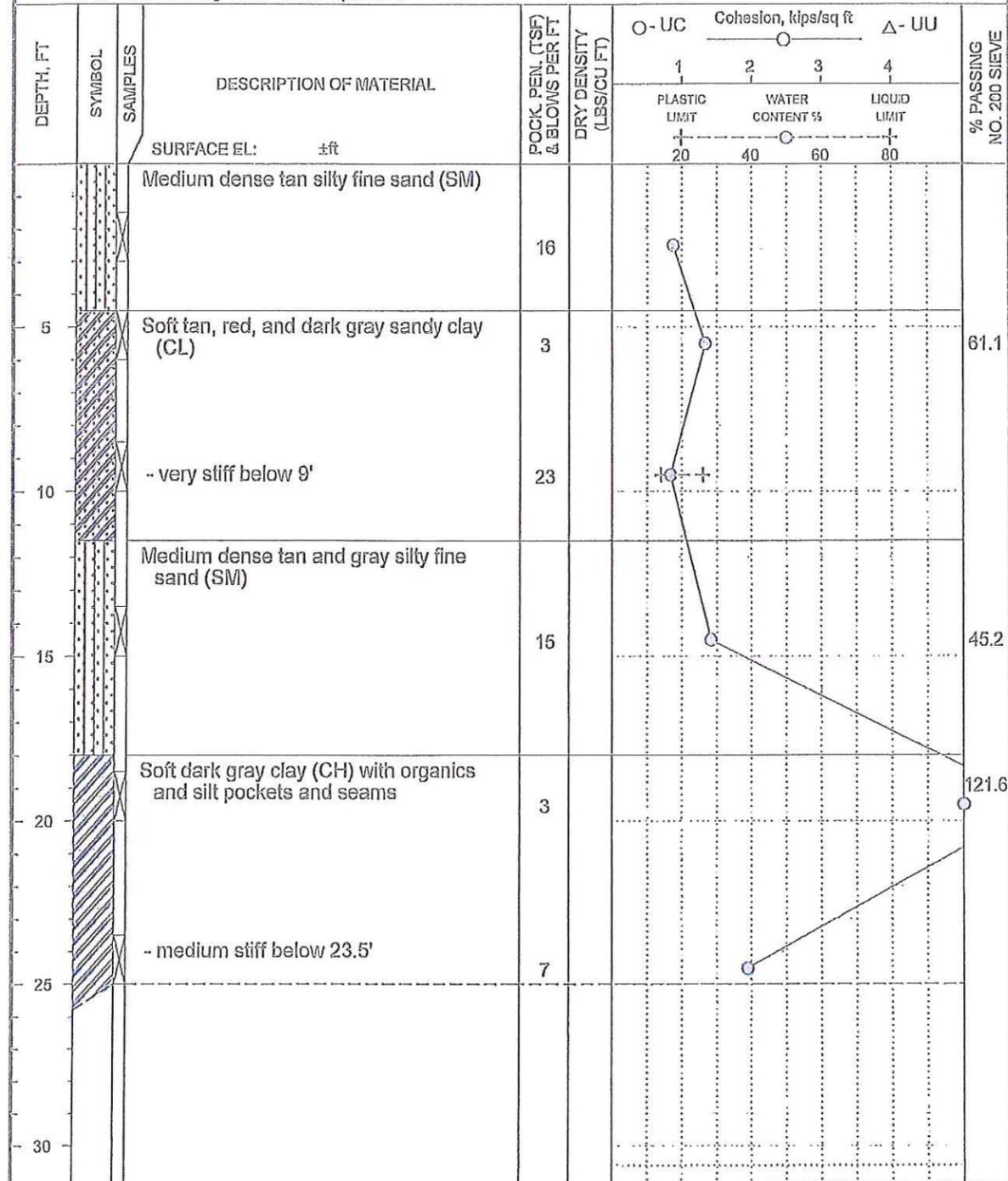
140400

FIGURE 3

**LOG OF BORING NO. 2**  
**STENNIS POTABLE WATER UPGRADES**  
**NASA PROJECT NO. NNS12AA95T**  
**HANCOCK COUNTY, MISSISSIPPI**

TYPE: 6" Short-flight auger to 3',  
then rotary wash to completion.

LOCATION: See Figure 1



BORING DEPTH: 25 ft

COMMENTS:

GROUNDWATER DATA: Free water encountered at an approximate depth of 3' during auger drilling. Water level at an approximate depth of 1.8' after about 15 minutes and 1.5' after 24 hours.

DATE: 06/20/14

140409

FIGURE 4

**LOG OF BORING NO. 3**  
**STENNIS POTABLE WATER UPGRADES**  
**NASA PROJECT NO. NNS12AA95T**  
**HANCOCK COUNTY, MISSISSIPPI**

TYPE: 6" Short-flight auger to 6',  
then rotary wash to completion.

LOCATION: See Figure 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	POCK. PEN. (TSF) & BLOWS PER FT	DRY DENSITY (LBS/CU FT)	Cohesion, kips/sq ft				% PASSING NO. 200 SIEVE
						1	2	3	4	
						PLASTIC LIMIT	WATER CONTENT %	LIQUID LIMIT		
			SURFACE EL: ±ft							
5			Medium dense tan and gray silty fine sand (SM) with trace of gravel and organics	13						27.3
5			Very soft tan and red sandy clay (CL)	1						
10			- stiff below 8'	1.75						55.7
10			Loose light gray silty medium sand (SM)							
15				8						
20			- with trace of wood fragments below 19'	5						156.4
25			Soft dark gray clay (CH) with sand pockets and seams	4						
30										

BORING DEPTH: 25 ft

COMMENTS:  
GPS Coordinates  
N 30° 22' 32.2"  
W 89° 37' 27.7"

GROUNDWATER DATA: Free water encountered at an approximate depth of 5' during auger drilling. Water level at an approximate depth of 2.3' after about 15 minutes and 1.5' after 24 hours.

DATE: 06/20/14

140000

### Product Pipe

Pipe Type: HDPE-PE4710  
Pipe Application: M&I - Pressure Pipe  
Pipe Classification: Ductile Iron Pipe Size (DIPS)  
Pipe Nominal Diameter: 16 in  
Pipe Dimension Ratio: 11

~~RFI  $\phi$  22A~~  
~~RFI  $\phi$  22B~~  
RFI  $\phi$  22C

### Bore Construction Inputs

Project Length: 250 ft  
Pipe Entry Angle: 10 degrees  
Pipe Exit Angle: 12 degrees  
Depth of Cover: 10 ft  
Depth to Water Table: 2 ft  
Extra Length of Pipe: 50 ft

### Bore Construction Calculated Values

Length to Reach Depth of Cover: 114.6 ft  
Length Traversed at Depth: 39.9 ft  
Length to Rise from Depth: 95.5 ft  
Bending Radius, Pipe Entry: 656.6 ft  
Bending Radius, Pipe Exit: 455.9 ft

### Site Stratigraphy

Soil Layer 1 Type: Silty-Sand  
Layer 1 Thickness: 50 ft  
Soil Layer 2 Type: Silty-Sand

Many design and material parameters are assumed in these calculations based upon suggested values from ASCE F1982 - see <http://ppi.boreaid.com> for a complete list of values.

### Calculation Procedure Assumptions

- The earth pressure coefficient used in the calculations is based upon Stein's theory.
- The operational critical collapse calculation displays the result for a water filled pipe (i.e., pressure pipe) and empty pipe (i.e., conduit, gravity-sewer).
- Operational compressive wall stress and buoyant deflection during installation are not shown.
- $\frac{3}{4}$  of the maximum calculated tensile stress is used in the installation critical collapse calculation since the maximum depth is typically not encountered past three-quarters of the bore distance.
- Entry and exit elevations are assumed equal and additional loads due to variation in topography are not considered (topography is flat).
- The silo width is assumed equal to the bore diameter for calculation of the arching factor during determination of the earth pressure.
- The 1-hr installation critical collapse pressure includes the drag pressure but the 10-hr calculation does not.
- For bores in lithified rock, the earth pressure and deflection is not calculated but an ovality deflection of 3% is assumed for collapse calculations.
- These are preliminary calculations only. Qualified professionals should be contracted to consider all aspects of the design for horizontal directional drilling.

For more information contact [info@ppi.boreaid.com](mailto:info@ppi.boreaid.com)

Note: This analysis was downloaded from the PPI-BoreAid website and is for general information only. This information is offered without any warranty, expressed or implied, and is not a substitute for competent professional assistance as required by local and national authorities. Anyone making use of this information, does so at his or her own risk and assumes any resulting liability.

*RFI 022A*  
*RFI 022B*  
*RFI 022C*

Calculated Design Values

HDPE-PE4710		OPERATIONAL		INSTALLATION				Status
DIPS Nom. OD	DIPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	
inches		% OD	psi	psi	psi	lbs	lbs	
16	9	0.4	128	284	236	10,712	122,123	PASS
16	11	0.8	66	145	121	11,042	102,190	PASS
16	13.5	1.6	34	74	62	11,329	84,807	PASS
16	9	0.4	128	285	238	9,740	122,123	PASS
16	11	0.8	66	146	121	10,229	102,190	PASS
16	13.5	1.6	34	74	62	10,655	84,807	PASS
16	9	0.4	128	287	239	4,605	122,123	PASS
16	11	0.8	66	147	122	4,546	102,190	PASS
16	13.5	1.6	34	75	63	4,495	84,807	PASS

Calculated Factors of Safety

HDPE-PE4710		OPERATIONAL		INSTALLATION				Status
DIPS Nom. OD	DIPS DR	Deflection	Collapse - Full (pressure pipe)	Critical Collapse 1-hr	Critical Collapse 10-hr	Pullback Force	Allowable Pullback	
inches		% OD						
16	9	0.4	59.1	17.2	36.4	PASS	-	PASS
16	11	0.8	30.3	8.8	18.6	PASS	-	PASS
16	13.5	1.6	15.5	4.5	9.5	PASS	-	PASS
16	9	0.4	59.1	17.3	36.6	PASS	-	PASS
16	11	0.8	30.3	8.8	18.7	PASS	-	PASS
16	13.5	1.6	15.5	4.5	9.5	PASS	-	PASS
16	9	0.4	59.1	23.6	110.3	PASS	-	PASS
16	11	0.8	30.3	12.1	56.4	PASS	-	PASS
16	13.5	1.6	15.5	6.2	28.9	PASS	-	PASS

Note: This analysis was downloaded from the PPI-BoreAid website and is for general information only. This information is offered without any warranty, expressed or implied, and is not a substitute for competent professional assistance as required by local and national authorities. Anyone making use of this information, does so at his or her own risk and assumes any resulting liability.

Pages 225 through 231 redacted for the following reasons:

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(b)(6)

(b)(7)(F)



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No 046A

**Contractor** SAUER, INC.  
**Initiator/Company** \_\_\_\_\_  
**Spec./Section** 12G00-G020/

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-417 & C-515  
**Date** 15 September 2014

**Description of problem and recommended change:**

See attached Proposal dated 15 September 2014.  
See attached Letter from S. H. Anthony Construction Company dated 10 September 2014.  
See attached NASA response to RFI 022C dated 08 September 2014  
See attached RFI 022C dated 27 August 2014.

Due to the unstable soil conditions discovered, we submit our formal proposal covering cost to install the 16" HDPE pipe at Trent Lott using a horizontal directional drilling (HDD) method in lieu of the jack and bore method prescribed in the plans and specifications.

**Cost Impact**  No  Yes **Not to Exceed** (b)(4)  
**Schedule Impact**  No  Yes **No. of Days** 45  
**Project Manager** (b)(6) **PE** (b)(6) **Date** 15 September 2014

**Evaluation:**

NASA Project Manager	_____	Date	_____
Construction Engineer	_____	Date	_____
Quality Engineer	_____	Date	_____
Safety Engineer	_____	Date	_____
Environmental	_____	Date	_____
Design Engineer	_____	Date	_____
CCB Chair	_____	Date	_____

CCB Approved for Implementation  Yes  No

**COTR** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Contracting Officer** \_\_\_\_\_ **Date** \_\_\_\_\_



National Aeronautics and  
Space Administration  
John C. Stennis Space Center  
Stennis Space Center, MS 39529-6000

# FIELD CHANGE REQUEST (FCR)

FCR No 047

**Contractor** SAUER, INC.  
**Initiator/Company** S H Anthony  
**Spec./Section** 12G00-G020/33 11 00

**Contract No.** NNS12AA95T  
**EMI No.** 11B315-01  
**Drawing No.** C-410  
**Date** 30 September 2014

**Description of problem and recommended change:**

**Final Connection at Station 916+00 (Phase 5)**

We have discovered that the existing A-C WM has a varying OD range - oval. Please see the attached S. H. Anthony Letter dated 30 Sept. 2014 for a detail explanation.

A custom connection has been ordered that will fit the 12" HDEP Pipe on one end and the oval A-C pipe on the other end.

Please see the attached Product Data, Drawing, S/N 0105-LF005-6900 with back-up.

**Cost Impact**  No  Yes **Cost Exceed** (b)(4)  
**Schedule Impact**  No  Yes **Days** 0  
**Project Manager** (b)(5) (b)(6) **Date** 30 September 2014

**Evaluation:**

Approved by (b)(6) Differing Site Conditions; Field Fit

NASA Project Manager	<u>(b)(6)</u>	Date	<u>10/1/14</u>
Construction Engineer		Date	<u>10/1/14</u>
Quality Engineer		Date	<u>10/1/14</u>
Safety Engineer		Date	
Environmental		Date	<u>10-1-14</u>
Design Engineer		Date	<u>10/1/14</u>
CCB Chair		<u>Kelbina K. Snyder</u>	Date

CCB Approved for Implementation  Yes  No

**COTR** (Signature) **Date** 10/1/14  
**Contracting Officer** (Signature) **Date** \_\_\_\_\_



September 30, 2014

(b)(6)

Sauer Inc.  
11223 Phillips, Dr. East  
Jackson, Fla. 32256

Subject: Task Order NNS12AA95T, Potable Water System Upgrades, Stennis Space Center, MS  
FCR 047 – Installation of Custom Built Coupling – Station 916+00 – Phase 5

(b)(6)

This FCR is for the installation of a custom fabricated transition coupling at the final connection located at station 916+00 in phase 5. The existing asbestos concrete pipe has an OD outside the range of all nominal transition coupling sizes. SHA mad an attempt to connect using the approved submitted coupling. This coupling would not fit the OD of the existing A/C pipe. In an attempt a JCM - Extended range coupling and a Romac Industries, extended range coupling. In order to facilitate the connection a custom built coupling is currently being manufactured by Romac Industries and is schedule for delivery on 10/6/14. This FCR includes 1.5 day of work to make the connection with labor and equipment and the cost of the coupling.

SHA has attached an itemized cost breakdown of the FCR, the daily reports for 9/25/14 and 9/26/14, the material quote (to include freight) and a manufacturers drawing of the coupling, including the bolt materials (316L Stainless) and the Fusion Bonded Epoxy coating.

The lump sum price for FCR-047 is-

~~\$7,985.78~~ 5072

All other scopes of work will apply per the previous narrative scope of work. If you have any questions please feel free to give me a call at 228-297-6885.

(b)(6)

S.H. Anthony, Inc.  
10145 Southpark Drive  
Gulfport, MS. 39503

Cc/ file  
(b)(6)

President

Phone: (228) 896-7310 \* Fax: (228) 896-7312

State Certified and Licensed Contractor

10145 Southpark Drive, Gulfport, MS. 39503 \* P.O. Box 3719, Gulfport, MS 39606 \* Web: www.shanthonyinc.com

**FCR NNS12AA95T-047  
UPGRADE TO POTABLE  
WATER SYSTEM  
11B315-01  
REVISED COUPLING  
1 OCTOBER 14**

FCR 047 Cost Estimate Revised Coupling  
J-Road Trent Lott

Item	Description	QTY	Unit	Mat'l \$/Unit	Mat'l \$	Labor \$/Unit	Labor \$	Equip. \$/Unit	Equip. \$	Item Total
1		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
2	Special Order Coupling	1	EA	\$1,485.00	\$1,485.00	\$0.00	\$0	\$0.00	\$0	\$1,485
3	Freight	1	EA	\$700.00	\$700.00	\$0.00	\$0	\$0.00	\$0	\$700
4		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
5		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
6		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
7		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
8		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
9	Excav & BF (Labor)	8	HR	\$0.00	\$0.00	\$31.56	\$252	\$0.00	\$0	\$252
10	Excav Equipment(3/4 CY BH)	1	Day	\$0.00	\$0.00	\$0.00	\$0	\$250.00	\$250	\$250
11		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
12	Add Labor(new coupling)	4	HR	\$0.00	\$0.00	\$25.00	\$100	\$0.00	\$0	\$100
13	Deduct Labor(old coupling)	-2	HR	\$0.00	\$0.00	\$25.00	-\$50	\$0.00	\$0	-\$50
14		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
15		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
16		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
17		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
18		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
19		0		\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0	\$0
20	Safety	1	HR	\$0.00	\$0.00	\$50.00	\$50	\$0.00	\$0	\$50
21	Superintendent	2	HR	\$0.00	\$0.00	\$55.00	\$110	\$0.00	\$0	\$110
22	Project Management	4	HR	\$0.00	\$0.00	\$55.00	\$220	\$0.00	\$0	\$220
<b>BARE COST TOTALS</b>					<b>2,185</b>		<b>682</b>		<b>250</b>	<b>3,117</b>
Safety Supplies & Small Tools @ 6.3% Raw Labor					-		43		-	43
On-Site Rentals @ 8% Raw Labor					-		55		-	55
Fuel @ 3.4% Raw Labor					-		23		-	23
<b>SUB TOTAL</b>					<b>2,185</b>		<b>803</b>		<b>250</b>	<b>3,238</b>
Material Tax (9%)					197		-		-	197
Tax & Bond (5.97%)					130		48		15	193
Labor Burden (37%)					18		252.34		-	270
Fee (15%)					379.45		165.45		39.74	585
<b>SUB CONTRACTOR TOTAL</b>					<b>\$2,909</b>		<b>\$1,268</b>		<b>\$305</b>	<b>\$4,482</b>
Prime Contractor Labor										
1	Safety	1	HR	\$0.00	\$0.00	\$50.00	\$50	\$0.00	\$0	\$50
2	Superintendent	2	HR	\$0.00	\$0.00	\$50.00	\$100	\$0.00	\$0	\$100
3	Project Management	2	HR	\$0.00	\$0.00	\$55.00	\$110	\$0.00	\$0	\$110
<b>SUB TOTAL</b>					<b>-</b>		<b>260</b>		<b>-</b>	<b>260</b>
<b>PRIME CONTRACTOR OVERHEAD 6.22%</b>					<b>180.95</b>		<b>95.07</b>		<b>18.95</b>	<b>295</b>
<b>PRIME CONTRACTOR PROFIT 10%</b>					<b>291</b>		<b>153</b>		<b>30</b>	<b>474</b>
Gross Receipts Tax (3.5%)					101.82		53.49		10.66	166
Prime Bond (0.63%)					219		115		23	358
<b>PRIME CONTRACTOR TOTAL</b>					<b>\$793</b>		<b>\$677</b>		<b>\$83</b>	<b>\$1,553</b>
<b>CONTRACT TOTAL</b>					<b>\$3,702</b>		<b>\$2,205</b>		<b>\$388</b>	<b>\$6,295</b>