CANNONDESIGN

# SUBMITTAL IDENTIFICATION SHEET

## To be completed by Contractor/CM

WEBSTER UNIVERSITY ISB
PROJECT NAME

8274 BIG BEND BLVD
ADDRESS

NUMBER

WEBSTER UNIVERSITY
OWNER

CANNON DESIGN
ARCHITECT / ENGINEER

Joe Voypick
SUBMITTED BY

055000-017
CONTRACTOR / CM SUBMITTAL NO.

CANNON DESIGN SUBMITTAL NO.

DRAWING / DETAIL REFERENCE

055000
SPECIFICATION SECTION / PARAGRAPH

Atlas Iron
MANUFACTURER / SUPPLIER

ITEM / PRODUCT ID

REQUIRED DATE

PRIORITY

◯ CRITICAL

ITEM BEING SUBMITTED (check only one)

- ◉ Shop Drawings
- ◯ Samples ( _____ copies)
- ◯ LEED Submittal
- ◯ Certification / Qualifications
- ◯ Record Documents
- ◯ Product Data
- ◯ Coordination Drawing
- ◯ Calculations
- ◯ Schedules
- ◯ O&M Manuals
- ◯ Other _____

ITEM BEING SUBMITTED FOR (check only one)

- ◉ Action
- ◯ Information Only
- ◯ Record

REMARKS OR DEVIATIONS

CONTRACTOR / CM CERTIFICATION
(SUBMITTALS NOT CERTIFIED WILL BE RETURNED WITHOUT REVIEW)

PARIC

PARIC CORPORATION
SUBMITTAL STAMP

THIS SHOP DRAWING HAS BEEN REVIEWED BY PARIC CORPORATION

Subcontractor remains responsible for dimensions, quantities, coordination with other trades and compliance with contract documents.

By:
Devin D. Gates

Joe Voypick
REVIEWED BY

12/19/16
DATE

## To be completed by Reviewer

05 5000-017
CANNON DESIGN SUBMITTAL NUMBER

12/19/16
RECEIVED DATE

- ◯ A. No Exceptions Taken
  No further review of submittal is required.
- ◉ B. Make Corrections Noted
  Incorporate corrections in work; resubmission is not required.
- ◯ C. Revise and Resubmit
  Revise as noted, and resubmit for review.
- ◯ D. Rejected
  Submittal is not in compliance with Contract Documents; provide new submittal.
- ◯ E. For Record / Information Only
  Submittal was reviewed for Record / Information purposes only.
- ◯ F. Not Required for Review
  Submittal is not required by Contract Documents and has not been reviewed.

Review is for conformance with the design concept of this project and for general compliance with contract documents. Contractor is responsible for quantities, dimensions and compliance with contract documents and for information that pertains to fabrication processes, construction techniques and coordination of this work with all trades which will be affected thereby. This review is null and void if submittal deviates from contract documents and does not indicate or note deviations.

A/E COMMENTS

◯ See attached sheet(s) for additional comments

Kelvin Patel
Digitally signed by Kelvin Patel
DN: C=US, E=kpatel@cannondesign.com, O=Cannon Design, OU=Architect, CN=Kelvin Patel
Date: 2017.01.04 17:12:47-06'00'
REVIEWED BY

1/4/17
DATE

77 Westport Plaza
Suite 250
St. Louis, MO 63146

# TRANSMITTAL

**No. 15051-0391**

*Paric Corporation*

**PROJECT:** 15051-Webster University Interdisciplinary Science Building

**DATE:** 12/19/2016

**TO:** Cannon Design
1100 Clark Ave
St Louis MO 63102

Fax;
314-241-2203

**RE:** HPS Umbilical Trench Shop Drawings

**ATTN:** Kelvin Patel

**JOB: 15051**

| WE ARE SENDING: | SUBMITTED FOR: | ACTION TAKEN: |
|---|---|---|
| ☑ Shop Drawings | ☑ Approval | ☐ Approved as Submitted |
| ☐ Letter | ☐ Your Use | ☐ Approved as Noted |
| ☐ Prints | ☐ As Requested | ☐ Returned After Loan |
| ☐ Change Order | ☐ Review and Comment | ☐ Resubmit |
| ☐ Plans | | ☐ Submit |
| ☐ Samples | **SENT VIA:** | ☐ Returned |
| ☐ Specifications | ☐ Attached | ☐ Returned for Corrections |
| ☐ Other: | ☐ Separate Cover Via: | ☐ Due Date: |

| *Item* | *Package* | *Code* | *Rev.* | *Copies* | *Date* | *Description* | *Status* |
|---|---|---|---|---|---|---|---|
| Submittal | | 055000-017 | 1 | | 12/19/2016 | HPS Umbilical Trench Shop Drawings | Submitted |

**NOTES:**

**CC:**

**Signed:** _____

Devin Gates

## Gates, Devin

**Subject:** FW: Visit to Webster University

**Importance:** High

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**From:** John Hardcastle [mailto:john.hardcastle@cae.com]
**Sent:** Friday, October 7, 2016 8:38 PM
**To:** Craig A. Miller, Sr.
**Cc:** 'Jill Stulce'; Dan Pleasant; Szachnieski, Jason
**Subject:** RE: Visit to Webster University
**Importance:** High

HI Craig,
My sincere apologies for the delay in getting this information to you. Based on my observations at C-STARS in St. Louis, I believe the dimensions as presented in the architectural drawings (*WU-ISB_SIM lab drawings*) are reasonable. Specific details are as follows:

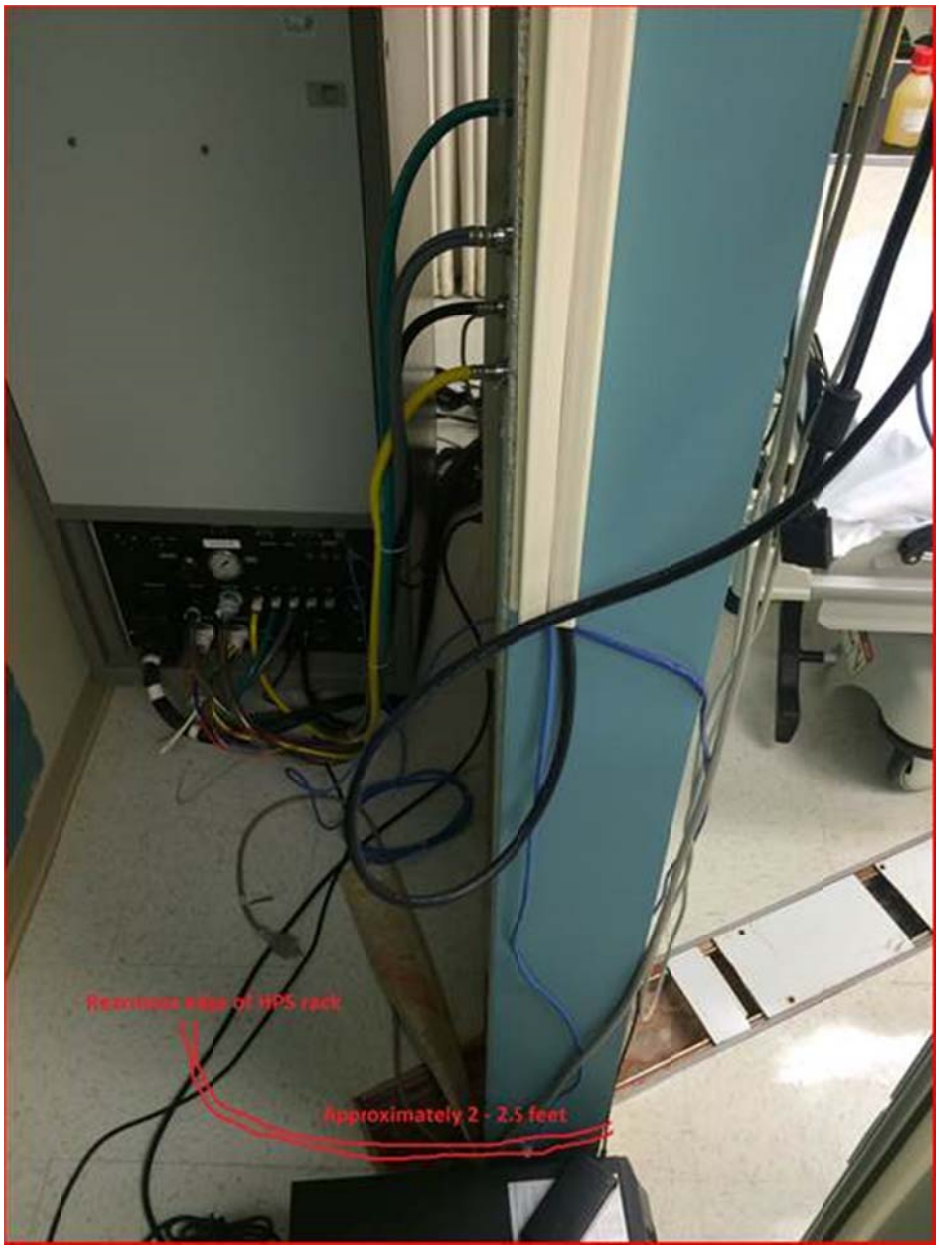
**C-STARS HPS setup:**

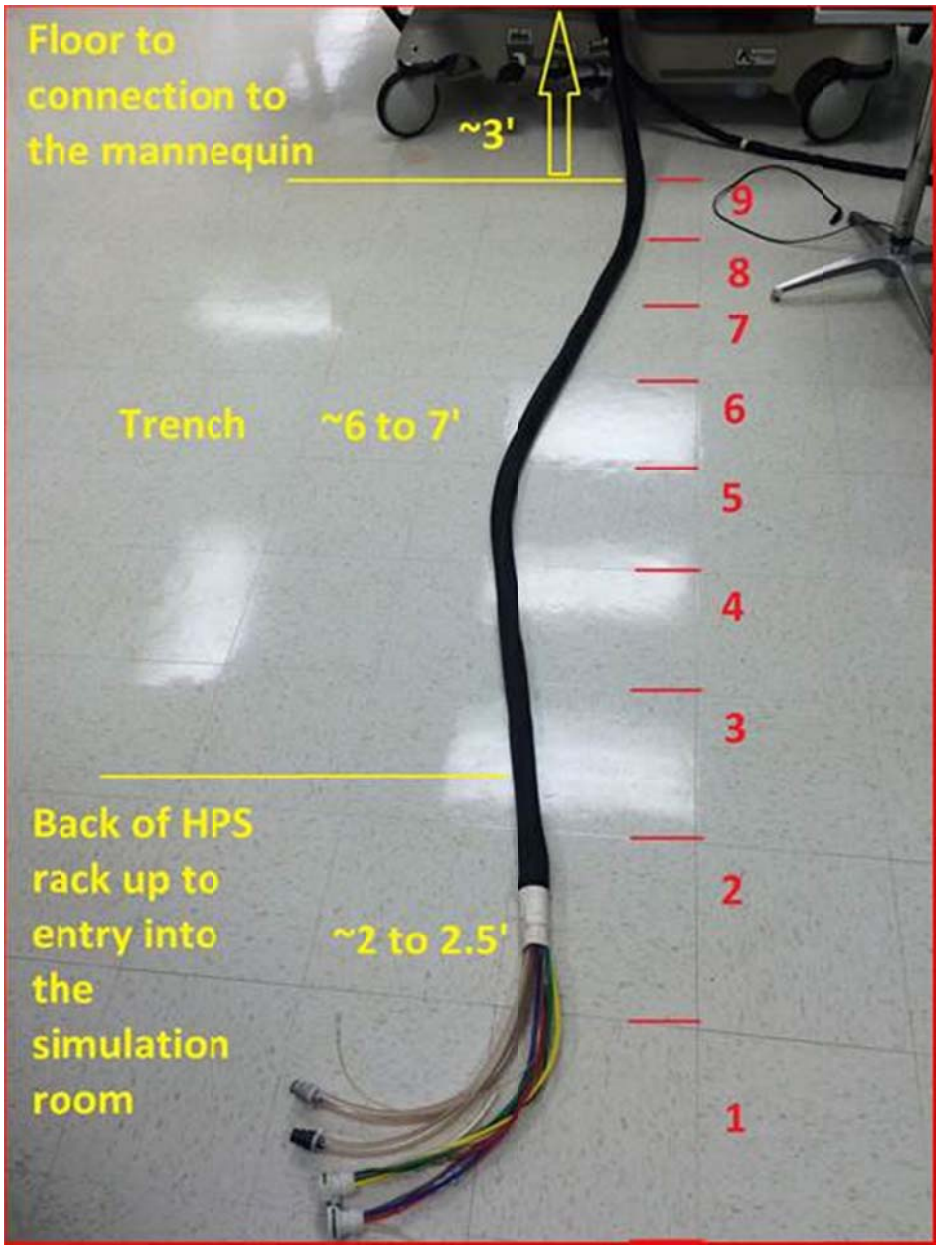
Trench dimensions:
- Length: ~6' – [6" in HPS rack 'closet' + 6" for partition thickness + 5' trench in simulation room]
- Width: ~5"
- Depth: ~2"

Cover dimensions:
- Length: variable segment lengths
- Width: ~6"
- Thickness: ~0.25"

**Image 1** **Image 2**

**Image 3** **Image 4**


Approximately 2 - 2.5 feet




HPS configuration:
Total HPS pneumatic tether length: **~12 feet**

1. Back of HPS rack to entry into the trench: **~1 foot**
    a. Length of tubing between connections on the rear of the HPS rack to where tubing enters the trench
2. Length of trench in rack closet (including thickness of partition wall): **~2 feet**
    a. Trench begins at midpoint of the back of the rack
    b. HPS rack width – 28 inches, therefore, midpoint of rack to partition wall: ~15 inches (1.5 feet)
    c. Partition wall thickness: ~6 inches
    d. See Images 3 and 4 above
3. Floor to connection to the mannequin: **~3 feet**
    a. Length of tubing between the floor (trench) and entry into the mannequin
    b. Tubing runs from between the mannequin legs down to the floor through a hole or notch in the OR table
    c. Length available should allow for raising or tilting of the OR table
    d. See image 4 above
4. Tubing contained with the trench: ~6 feet (12 – (1+2+3))

HPS Rack dimensions:

1. Width: 27.5 inches
2. Height – hose connections to floor – 10 – 12 inches

**Overview:**
For the C-STARS setup, the trench length within the simulation room was approximately 5 feet. The trench cover consisted of several sections of variable length. The trench was not covered within the room where the rack resides.

**Recommendation:**
Based on the measurements obtained at C-STARS, the 6 foot measurement for the trench (wall partition to the center line of the OR table, as shown in '*WU-ISB_SIM lab drawings*') is appropriate. The lab drawing shows the trench extending 1' -6 3/8" beyond the center line of the OR table which would allow for flexibility with regards to OR table positioning (height or orientation). The overall trench length of 9 feet is appropriate.

The C-STARS trench cover consisted of steel plates of variable lengths, with each segment 6 inches wide and ¼ inch in thickness. This seemed to work well. I would recommend having the cover divided into segment plates of variable lengths to allow for positioning flexibility (as shown in Images 1 and 2). I would also consider having the plates that are easily removable for ease during repositioning, i.e., not fastened to the trench. (Even though the C-STARS plates could be secured with screws they opted not to secure for ease of removal).

For the exit/entry points of the HPS tubing into the trench, I would certainly consider not securing the trench cover in the event the table is raised or repositioned beyond the available tubing length. With the cover unsecured, it would allow the HPS tubing to lift out of the trench as needed without damage to the tubing.

I hope the above is useful information. Please let me know of any questions or concerns,

John

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**From:** Craig A. Miller, Sr. [mailto:craigmiller29@webster.edu]
**Sent:** Thursday, October 06, 2016 3:39 PM
**To:** John Hardcastle
**Cc:** 'Jill Stulce'; Dan Pleasant; 'Szachnieski, Jason'
**Subject:** RE: Visit to Webster University
**Importance:** High

John,

Could you send me the sketch of the HPS trench cover today? I really need to get this info to the contractor. Your immediate response would be greatly appreciated.

CAM Sr.

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**From:** John Hardcastle [mailto:john.hardcastle@cae.com]
**Sent:** Monday, October 03, 2016 10:15 AM
**To:** Dan Pleasant <dan.pleasant@cae.com>; Craig A. Miller, Sr. <craigmiller29@webster.edu>
**Cc:** Jill Stulce <jillstulce02@webster.edu>
**Subject:** RE: Visit to Webster University

Hi Dan, Craig,
Yes, I will provide the information to Craig today. My apologies for the delay.

John

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**From:** Dan Pleasant
**Sent:** Monday, October 03, 2016 11:14 AM
**To:** Craig A. Miller, Sr.; John Hardcastle
**Cc:** Jill Stulce
**Subject:** RE: Visit to Webster University

Craig,

I am waiting for Dr. Stulce's information on the specs of your anesthesia machine. Once I have that information I will provide you a quote.

John,

Can you get the information to Craig today?

Thanks.

Dan Pleasant
402-983-4617

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**From:** Craig A. Miller, Sr. [mailto:craigmiller29@webster.edu]
**Sent:** Monday, October 03, 2016 10:03 AM
**To:** John Hardcastle; Dan Pleasant
**Subject:** FW: Visit to Webster University
**Importance:** High

Good morning Gents,

I look forward to receiving the information regarding the HPS trench cover and the quote for the HPS equipment today if possible. The trench cover info is the most urgent! Have a great day!

Sincerely,

CAM Sr.

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**From:** John Hardcastle [mailto:john.hardcastle@cae.com]
**Sent:** Saturday, September 10, 2016 9:48 AM
**To:** Craig A. Miller, Sr. <craigmiller29@webster.edu>
**Cc:** Dan Pleasant <dan.pleasant@cae.com>; 'Szachnieski, Jason' <JRSzachnieski@paric.com>; 'Stephanie Schroeder' <schroeds@webster.edu>; jillstulce02@webster.edu; 'Ray, Steve' <sray@paric.com>
**Subject:** RE: Visit to Webster University

Hi Craig,
Thanks for your quick response. My cell number is 941-504-1054.
On Monday I will attempt to arrive on the earlier flight – 9AM – so that Jason could possibly attend the meeting as well. I won't know until Monday morning as I would be flying Standby. I will update accordingly.

Looking forward to meeting you.

John

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**From:** Craig A. Miller, Sr. [mailto:craigmiller29@webster.edu]
**Sent:** Saturday, September 10, 2016 10:39 AM
**To:** John Hardcastle
**Cc:** Dan Pleasant; 'Szachnieski, Jason'; 'Stephanie Schroeder'; jillstulce02@webster.edu; 'Ray, Steve'
**Subject:** RE: Visit to Webster University

John,

The meeting location is as follows:

470 East Lockwood Avenue
Loretto Hall, 2nd Floor, Room 257
Webster Groves, MO 63119
314-246-7773 (office)
314-603-9549 (cell)

Loretto Hall is connected to Webster Hall and they have the same address. Loretto Hall is directly adjacent to Emmanuel Episcopal Church. Send me your cell number. See you on Monday.

CAM Sr.

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**From:** John Hardcastle [mailto:john.hardcastle@cae.com]
**Sent:** Saturday, September 10, 2016 7:56 AM
**To:** Craig A. Miller, Sr. <craigmiller29@webster.edu>
**Cc:** Dan Pleasant <dan.pleasant@cae.com>; Szachnieski, Jason <JRSzachnieski@paric.com>; Stephanie Schroeder <schroeds@webster.edu>; jillstulce02@webster.edu; Ray, Steve <sray@paric.com>
**Subject:** Re: Visit to Webster University

Craig,
Could you please send me the meeting location and any relevant information? I have yet to receive this.
Thank you,
John

Sent from my iPhone

On Sep 8, 2016, at 5:33 PM, Craig A. Miller, Sr. <craigmiller29@webster.edu> wrote:

> John,
>
> You and I can meet; however, Jason will be unable to attend. I will see if he can ask one of the job site superintendents to attend the meeting at 11:30 am on 9/12/16. A meeting invite with the meeting location, date, and time is forthcoming tomorrow.
>
> CAM Sr.
>
> ---
>
> Jason,
>
> Can someone else from Paric attend the 9/12/16 meeting with John at 11:30 am?

CAM Sr.

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**From:** John Hardcastle [mailto:john.hardcastle@cae.com]
**Sent:** Thursday, September 08, 2016 4:15 PM
**To:** Craig A. Miller, Sr. <craigmiller29@webster.edu>
**Cc:** Dan Pleasant <dan.pleasant@cae.com>; 'Szachnieski, Jason' <JRSzachnieski@paric.com>; 'Stephanie Schroeder' <schroeds@webster.edu>; jillstulce02@webster.edu; 'Ray, Steve' <sray@paric.com>
**Subject:** RE: Visit to Webster University

Hi Craig,
Thanks for the update. Unfortunately, the ticket options for the earlier flight into STL are not available at this time, and so I cannot confirm the earlier arrival (9AM). At present I am scheduled to arrive into STL at ~10:30AM, with the plan to arrive at Webster University as soon as possible after my arrival.

I will continue to see if I can make the earlier arrival, possibly by flying Standby on the Monday. I will update accordingly as soon as I have additional information.

In the meantime, can we confirm for a meeting time of 11:30 on the Monday? Could you please send me information on the meeting location and best parking options.

Thank you,
John

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**From:** Craig A. Miller, Sr. [mailto:craigmiller29@webster.edu]
**Sent:** Thursday, September 08, 2016 1:09 PM
**To:** John Hardcastle
**Cc:** Dan Pleasant; 'Szachnieski, Jason'; 'Stephanie Schroeder'; jillstulce02@webster.edu; 'Ray, Steve'
**Subject:** RE: Visit to Webster University

John,

9/12 at 10:00 AM will work. I will send you a meeting invite including the meeting location, date, and time.

CAM Sr.

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**From:** John Hardcastle [mailto:john.hardcastle@cae.com]
**Sent:** Thursday, September 08, 2016 11:28 AM
**To:** Craig A. Miller, Sr. <craigmiller29@webster.edu>
**Cc:** Dan Pleasant <dan.pleasant@cae.com>; 'Szachnieski, Jason' <JRSzachnieski@paric.com>; 'Stephanie Schroeder' <schroeds@webster.edu>; jillstulce02@webster.edu; 'Ray, Steve' <sray@paric.com>
**Subject:** Re: Visit to Webster University

Hi Craig,
Hope all is well on your end. Jason has asked to move the meeting to Monday, 9/12 @10AM as he cannot make the afternoon time. Can you confirm on your end that you are available to meet at 10AM on Monday?

Thanks,

John

**From:** "craigmiller29@webster.edu" <craigmiller29@webster.edu>
**Date:** Tuesday, September 6, 2016 5:17 PM
**To:** Administrator <john.hardcastle@cae.com>
**Cc:** Dan Pleasant <dan.pleasant@cae.com>, Jason' 'Szachnieski <JRSzachnieski@paric.com>, 'Stephanie Schroeder' <schroeds@webster.edu>, "jillstulce02@webster.edu" <jillstulce02@webster.edu>, Steve' 'Ray <sray@paric.com>
**Subject:** RE: Visit to Webster University

John,

Jason Szachnieski of Paric Corporation and I am available to meet with you on Monday, September 12, 2016 at 1:30 pm. If this time and date works for you, please respond, and I'll send you a meeting invite. Thanks and have a great day!

Sincerely,

Craig A. Miller Sr.

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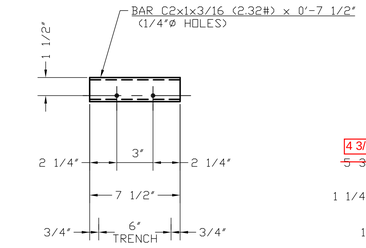
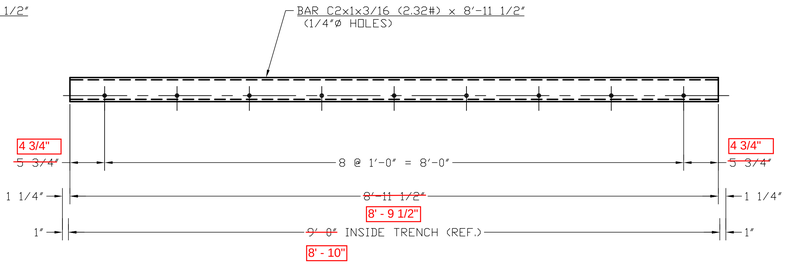
**From:** John Hardcastle [mailto:john.hardcastle@cae.com]
**Sent:** Tuesday, September 06, 2016 8:14 AM
**To:** craigmiller29@webster.edu
**Cc:** Dan Pleasant <dan.pleasant@cae.com>
**Subject:** Visit to Webster University

Hi Craig,
I am writing to you to coordinate a visit to Webster University on Monday, September 12th. If possible, I thought it would be helpful to discuss the plans for your HPS installation. I am scheduled to arrive into STL mid-morning on the Monday and could be at your facility around noon or in the early afternoon if this works on your end. Please let me know as soon as possible if this date/time work well on your end.

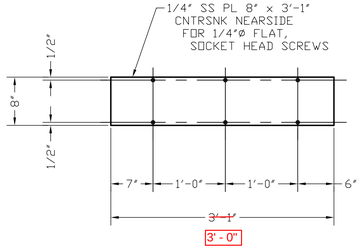
John
941-504-1054



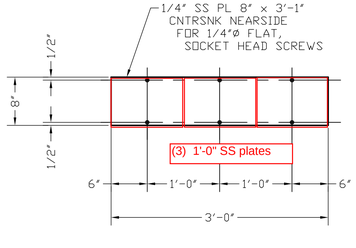

2 - CHANNELS REQ'D 13A




2 - CHANNELS REQ'D 13B



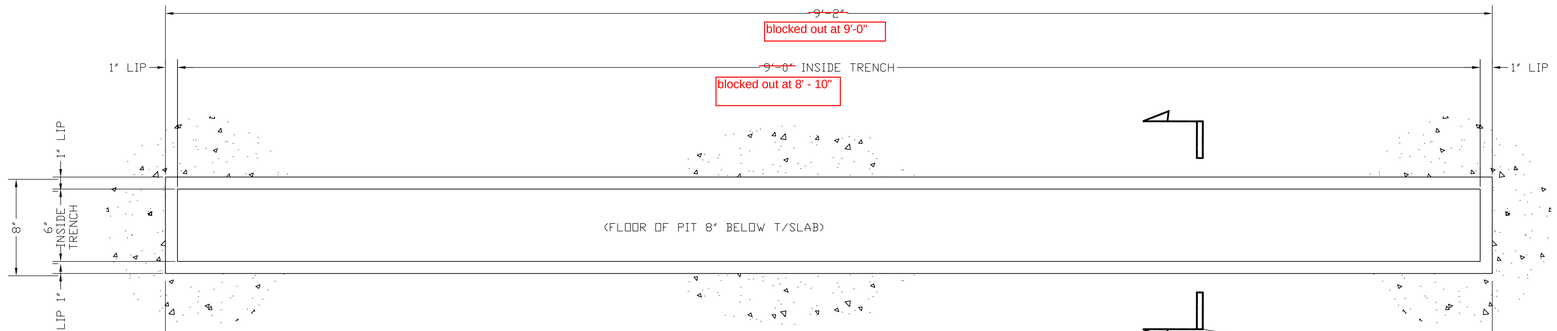

2 - PLATES REQ'D 13D




ONE - PLATE REQ'D 13E

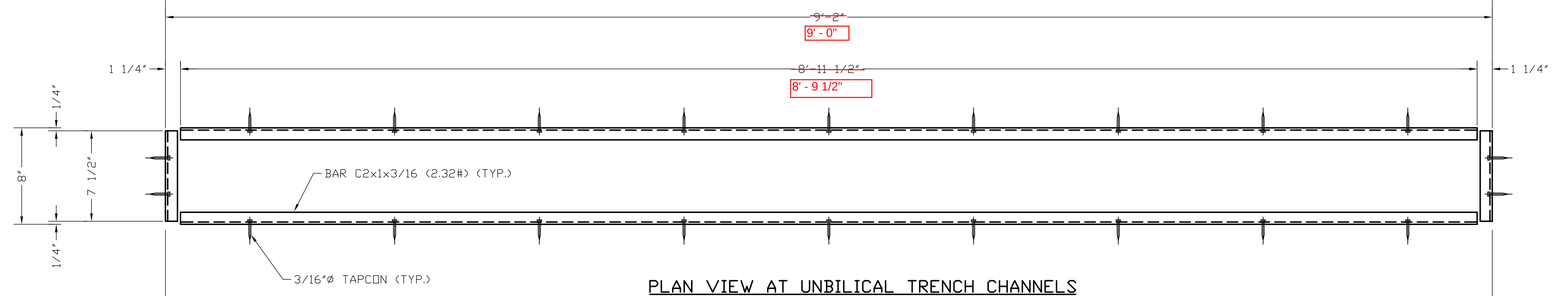
## MATERIAL LIST

| QTY | MARK | DESCRIPTION | LENGTH | NOTES |
|---|---|---|---|---|
| | | | | |
| 2 | 13A | C2x1x3/16 | 0'-7 1/2" | 2.32#/FT |
| | | | | |
| | | | | |
| 2 | 13B | C2x1x3/16 | 8'-11 1/2" | 2.32#/FT |
| | | | | |
| | | | | |
| 2 | 13D | 1/4" SS PL 8" | 3'-1" | CNTRSNK |
| | | | | |
| | | | | |
| ONE | 13E | 1/4" SS PL 8" | 3'-0" | CNTRSNK |
| | | | | |
| | | | | |
| ONE | 13E | FIELD BOLTS | | |
| 30 | 13FBA | 3/16 HEX TAPCONS | 2 1/4" | |
| 30 | 13FBB | 1/4-20 SELF DRILL/TAP SCREWS | | |
| 30 | 13FBD | 1/4-20 x 3/4" FLAT, SCKT HEAD SCREWS | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



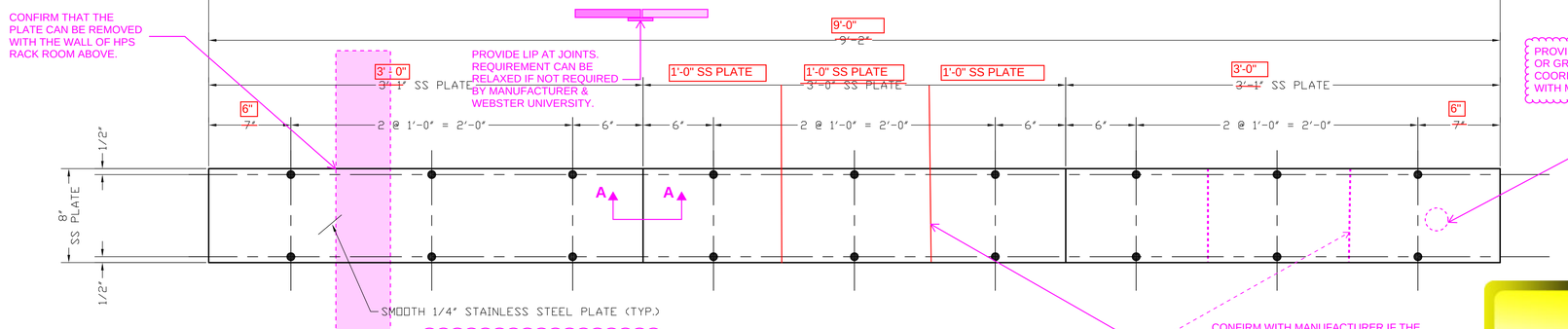

PLAN VIEW AT UNBILICAL TRENCH PIT

(LEVEL 1, NEAR B - 1.6 SEE A0101.B & S0101)



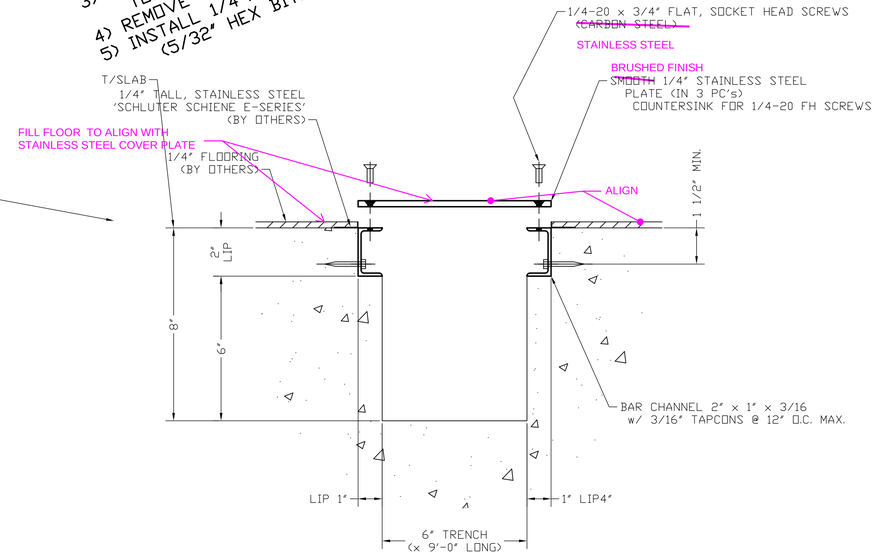

PLAN VIEW AT UNBILICAL TRENCH CHANNELS

SECTION - AA




PLAN VIEW AT UNBILICAL TRENCH SS PLATES

ERECTOR NOTE:
1) INSTALL CHANNELS W/ TAPCONS (5/52" BIT)
2) LOCATE SS PLATES OVER CHANNELS
3) USE 1/4"ø SELF DRILL/TAP SCREWS TO CREATE HOLES IN CHANNEL FLGS
4) REMOVE SELF DRILL/TAP SCREWS
5) INSTALL 1/4"ø FLAT HEAD SCREWS (5/32" HEX BIT)




TYP. SECTION THRU UNBILICAL TRENCH

CONTRACTOR TO FIELD VERIFY ROUGH OPENING BEFORE FABRICATING.

FOR APPROVAL

Romac By: _____ Checked By: _____

Beamline By: _____ Checked By: _____

△

A FOR APPROVAL 12-15-16

ATLAS IRON WORKS
ST. LOUIS, MO.

Sequence: - Ref. E-Plans: -

Material: ASTM A-36 U.N.O. Edge Dist.: 1 1/4" U.N.O.

Holes: 13/16"ø UNO Bolts: NOTED

Cleaning: SSPC-SP2 & SP3

Paint: SHOP COAT ATLAS STD GREY PRIMER
(DO NOT PAINT STAINLESS STEEL)

Project: WEBSTER ISB

Customer: PARIC CORP

Owner: WEBSTER UNIVERSITY

Location: WEBSTER GROVES, MO

Dwn: DC Date: 12/15/16 Ckd: _____ Date: _____

Job No. A16013 BAT: _____ DWG#: 13