

# ADDENDUM NUMBER 1

Date: November 5, 2014

Re: West Energy Facility - Purchase and Install Water Softeners  
University of South Carolina

A/E Proj. No.: 143142

Submitted By: Danny Wilds, PE  
Mechanical Design, Inc.  
4403 Broad River Road  
Columbia, S.C. 29210  
(803)731-9834 Fax: (803)731-9837

The following items take precedence over referenced portions of the Contract Documents for the referenced project dated October 10, 2014, and, in executing a contract, shall become a part thereof.

Where any item called for in the documents is supplemented hereby, the original requirements shall remain in effect. All supplemental conditions shall be considered as added thereto.

Where any original item is amended, voided, or superseded hereby, the provision of such items not so specifically amended, voided, or superseded shall remain in effect.

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## **General:**

1. A non-mandatory Pre-Bid was held on 11/03/2014 at 10:00 am EST. Attached is a list of the attendees. A site visit was highly recommended and made available immediately following the Pre-Bid meeting.

## **Clarification:**

2. All power wiring required for the scope of this project will be self-performed by USC.
3. Any necessary control wiring between DA/Surge tank, new control valve, and new flow meter shall be included as part of this contract.
4. Questions pertaining to the scope of work or bidding will need to be submitted in writing by 12:00 pm November 6<sup>th</sup>. Questions will be answered through addendum and posted to USC's website [purchasing.sc.edu](http://purchasing.sc.edu).

## **Specifications:**

5. Delete specification section 23 21 13 - Mechanical Piping of the Project Manual included on the website ([purchasing.sc.edu](http://purchasing.sc.edu)) and replace with the attached revised specification.

## **Drawings:**

6. Delete M1, M2, & M3 drawings currently included on the website ([purchasing.sc.edu](http://purchasing.sc.edu)) and replace with the attached drawings M1, M2, & M3 (Addendum No. 1).

END OF ADDENDUM NO. 1



West Energy Facility Purchase & Install Water Softeners  
CP00410586  
Non-Mandatory pre-bid meeting  
November 3, 2014 @ 10:00am at 743 Greene St., Cola, SC 29208

ATTENDEE'S NAME

COMPANY NAME & MAILING ADDRESS

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Troy Nelson EMAIL

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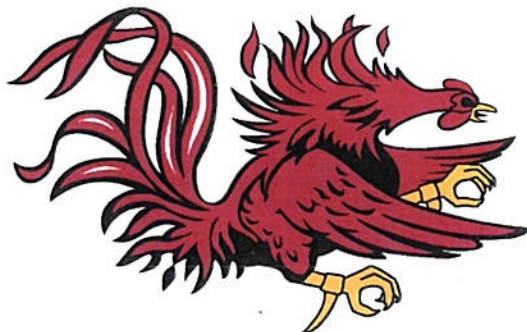
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EMAIL

**PLEASE PRINT CLEARLY**



West Energy Facility Purchase & Install Water Softeners  
CP00410586

Non-Mandatory pre-bid meeting  
November 3, 2014 @ 10:00am at 743 Greene St., Cola, SC 29208

ATTENDEE'S NAME

COMPANY NAME & MAILING ADDRESS

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Carlos Sandoval

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PH#

FAX#

EMAIL

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West Energy Facility Purchase & Install Water Softeners  
CP00410586  
Non-Mandatory pre-bid meeting  
November 3, 2014 @ 10:00am at 743 Greene St., Cola, SC 29208

ATTENDEE'S NAME

COMPANY NAME & MAILING ADDRESS

Justin Varco

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## SECTION 23 21 13 - MECHANICAL PIPING

### PART 1 - GENERAL

- 1.1 Section 23 00 00 Mechanical, General applies to the work specified in this section of specifications.
- 1.2 Pipe locations shown are approximate. Exact location of pipes to be as determined in field to avoid other pipes and maintain access clearances. All existing pipe sizes noted on the drawings shall be field verified before connection.
- 1.3 Piping to comply with best trade practice. Provide clearance between pipe and building structure so pipes can expand without damage to building/manhole structure.

### PART 2 - PRODUCTS

#### 2.1 PIPE

Water piping shall be hard drawn Type L copper. Use lead-free hard solder (95/5) for all joints located above slab. Use soldering nipples or couplings between screwed and soldered pipe and fittings.

#### 2.2 VALVES

- A. Provide indicating type lead-free bronze valves where indicated on drgs. Valves shall be sized according to line sizes.
- B. Ball valves shall be two piece with full port, sweat type, chrome plated ball, and blow-out proof stem. The manufacturer name and the working pressure to be cast on valve body. Ball valves to be the product of one of the manufacturers and model numbers shown in the following table:

<u>Ball Valves</u>	<u>Fed Spec. No.</u>	<u>Hammond</u>	<u>Nibco</u>	<u>Apollo</u>
2" and smaller (Bronze, Sweat)	WW-V-35, Class C, Type II, Style 3	UP8311A	S-585-LF	77LF-200

- C. Valve handles shall be malleable iron. Die-cast aluminum handels will not be accepted.
- D. Equal lead-free ball valves as manufactured by Milwaukee will be accepted.
- E. Gate valves shall be rising stem, Class 125 designed for a minimum of 125 PSI steam working pressure. The manufacturer name and the working pressure to be cast on valve body. Install valves with stems upright within 15 degrees of the vertical plane.

- F. Valve handles shall be malleable iron. Die-cast aluminum handwheels will not be accepted. Valves to be type and the product of one of the manufacturers and model numbers shown in the following table:

<u>Gate Valves</u>	<u>MSS Spec. No.</u>	<u>Hammond</u>	<u>Nibco</u>	<u>Apollo</u>
2-1/2" and larger	MSS-SP-80, Class	UP640	T-111-LF	101T-LF

- G. Equal valves by Milwaukee will be accepted.
- E. Provide valves by one manufacturer as specified above.

### 2.3 BACKFLOW PREVENTER

- A. Provide Watts 009-QT 2-1/2" reduced pressure principal backflow prevention device with air gap fitting and locate on lines approximately where noted on drawings. Secure backflow preventer to floor with saddles. Locate in accessible location for testing and maintenance. Provide drain from air gap fitting and route to nearest existing floor drain.
- B. Equal backflow preventers by Febco, Beeco or Wilkens will be accepted.
- C. Provide certification and test of reduced pressure backflow preventer in accordance with SC DHEC. Furnish copy of the test form and place in warranty and maintenance manuals prior to project close-out or acceptance.

### 2.4 PIPE SUPPORTS

- A. Perforated strap hangers, chain or wire will not be permitted on the job. All pipe hangers and supports shall be as required to meet Seismic requirements of the IBC International Building Code.
  - 1. Installation of "Uni-strut" or pipe support channel systems will not be permitted for installation of pipe systems.
  - 2. Installation of hangers for all piping shall be suspended from building structures or supplementary steel as specified.
- B. Support horizontal piping above ground with hangers, threaded rods and turnbuckles as manufactured by M-CO Michigan Hanger, Anvil, PHD Hangers, Holdrite or accepted equal.
  - 1. ERICO hammer-on rod clips and Z purlin rod clips for 3/8" diameter rods will be accepted for suspended pipe sizes up to 2" in accordance with manufacturer instructions.
- C. Support copper pipe with copper or copper plated teardrop hangers, spaced not over 6

feet apart for pipes smaller than 1-1/2" and 8 feet apart for pipes 1-1/2" and larger.

- D. Seismic systems as manufactured by Amber/Booth or Mason Industries will be accepted.

## 2.9 PIPE SLEEVES

- A. Where pipes pass through masonry construction, install sleeves sized to allow 1/2" clearance entirely around the passing pipe and insulation. Provide sealing compound in 1/2" clearance. Install sleeves in a waterproof manner.
- B. Sleeves shall be made of schedule 40 steel pipe.
- C. Where sleeves are cut into existing masonry walls or floors, grout new sleeve into opening in existing wall or floor.

## PART 3 - EXECUTION

- 3.1 Run pipes parallel to walls and floors, using a few fittings consistent with required flexibility. Pipe penetrations shall be perpendicular to walls. Wherever pipes change size, use eccentric fittings.
- 3.2 Run cold water piping to point of connection to existing cold water lines approximately where shown on drawings.
  - A. Coordinate with existing conditions prior to start of construction.
  - B. Provide all necessary adaptors and products as required to make final connections to existing water lines.
- 3.3 Final connections to equipment shall be made with unions.
  - A. Provide unions at intervals for convenient disassembly of pipe systems. Unions to match material of adjacent pipe.
  - B. Provide dielectric insulating unions where pipes of dissimilar materials meet and where indicated on drawings.
- 3.4 Provide concrete inserts for hanging pipe from concrete structures. Inserts shall permit adjustment, removal and use of different size hanger rods.

Contractor shall comply with the International Building Code for concrete anchors located in "Cracked Concrete".

- 3.5 Provide supplementary steel required for proper support of suspended piping and installation of pipe hangers. All supplementary steel support bracing shall meet seismic

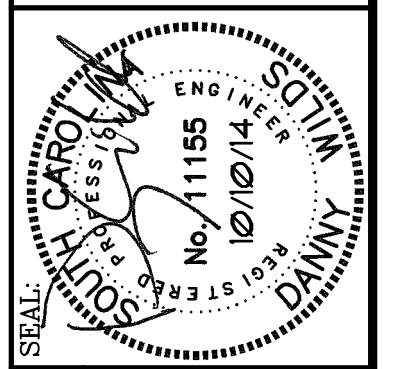
West Energy Facility - Purchase and Install Water Softeners  
University of South Carolina

October 10, 2014

design constraints.

END OF SECTION 23 21 13



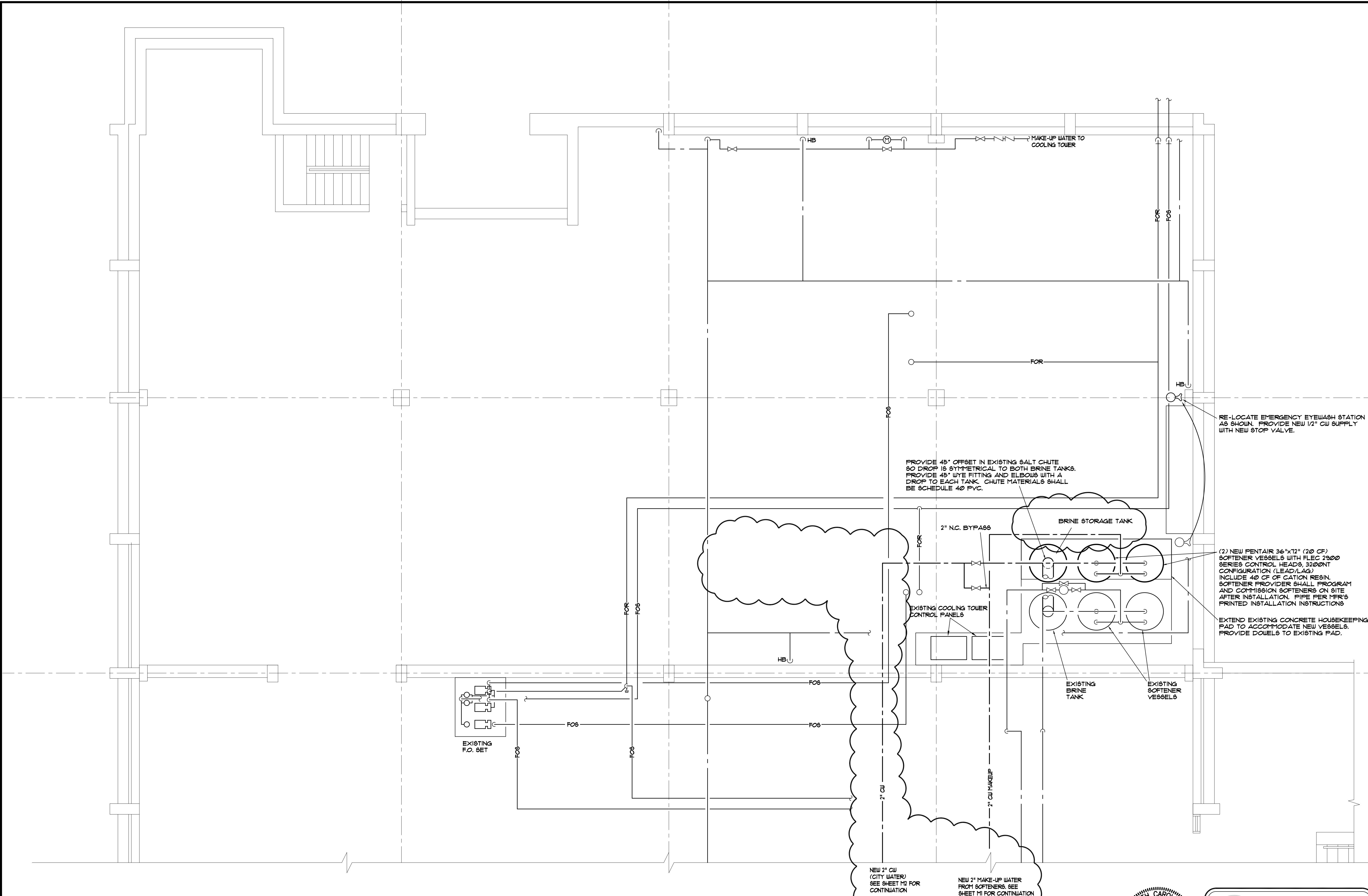


CHECKED BY:	CDW
DATE:	11/04/14
DRAWN BY:	JJV
DATE:	10/10/14
DRAWING:	M1
BUILDING:	140
REV.	1
DESCRIPTION:	APPENDIX NO. 1

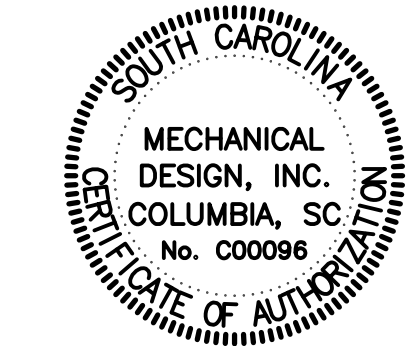
PROJECT TITLE: WEST ENERGY FACILITY - PURCHASE  
and INSTALL WATER SOFTENERS

University of South Carolina

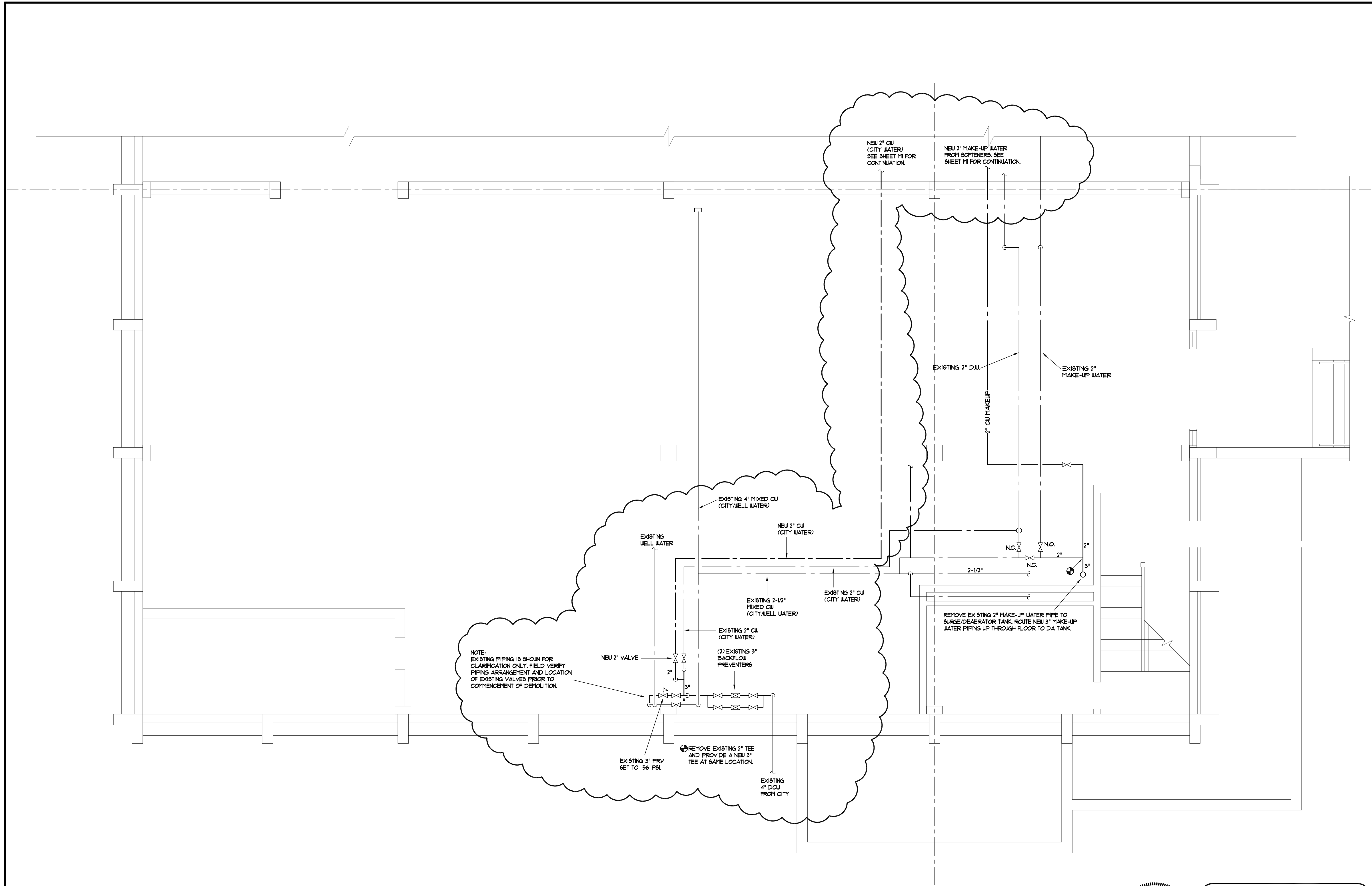
SHEET:	APPENDIX NO. 1
	M1
	OF 3
SHEET IN SET:	
	OF



**WEST ENERGY FACILITY**  
**LOWER LEVEL PARTIAL MECHANICAL PLAN**  
SCALE: 1/4" = 1'-0"



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(803) 731-9837 FAX  
CONTACT: Danny Wilds  
DATE: 10/10/14 COMM. NO. 143142



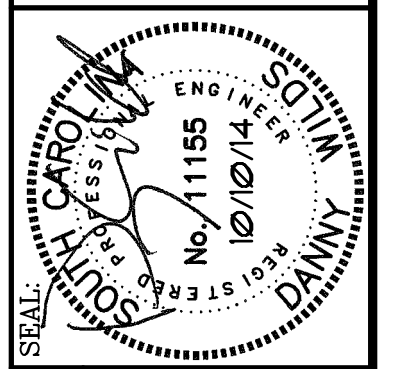
NOTE:  
EXISTING PIPING IS SHOWN FOR  
CLARIFICATION ONLY. FIELD VERIFY  
PIPING ARRANGEMENT AND LOCATION  
OF EXISTING VALVES PRIOR TO  
COMMENCEMENT OF DEMOLITION.

**WEST ENERGY FACILITY**  
**LOWER LEVEL PARTIAL MECHANICAL PLAN**  
SCALE: 1/4" = 1'-0"



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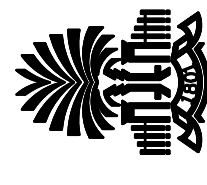
OFFICE OF FACILITIES MANAGEMENT COLUMBIA, SC 29208	
PROJECT TITLE: WEST ENERGY FACILITY – PURCHASE and INSTALL WATER SOFTENERS	UNIVERSITY OF SOUTH CAROLINA
SHEET: M2	OF 3
APPENDIX NO. 1	SHEET IN SET:
REV. 1	DESCRIPTION
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DATE: 10/10/14	DATE: 11/04/14
ORIG. BY: JUV	ORIG. DATE: 11/04/14



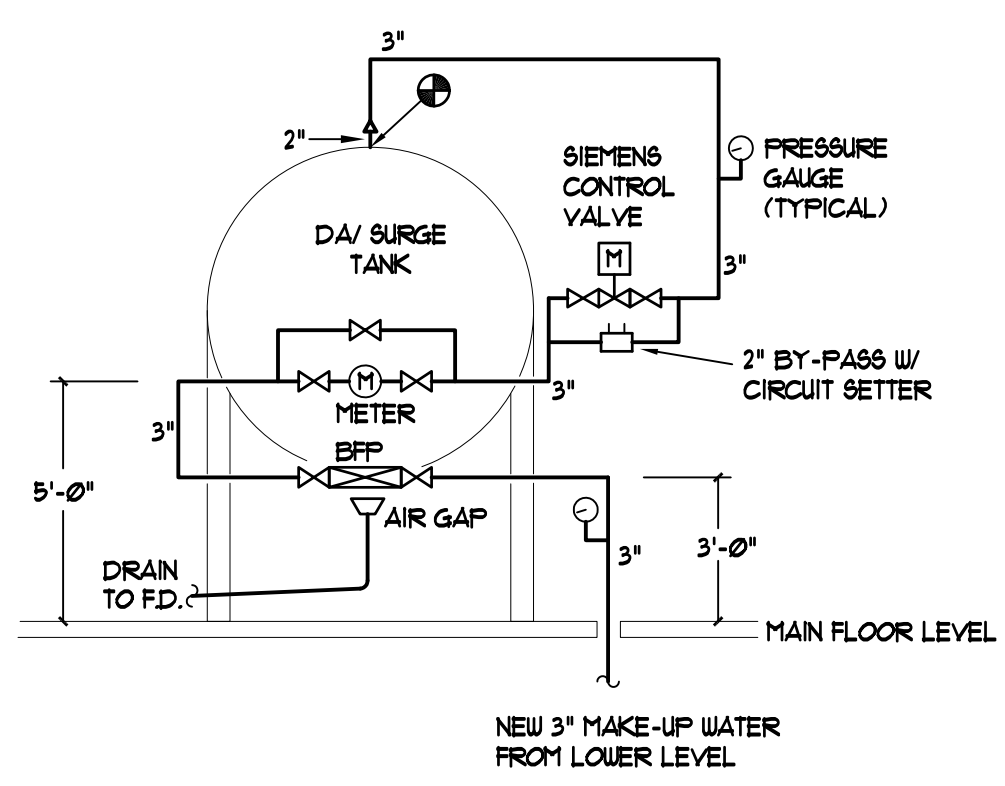
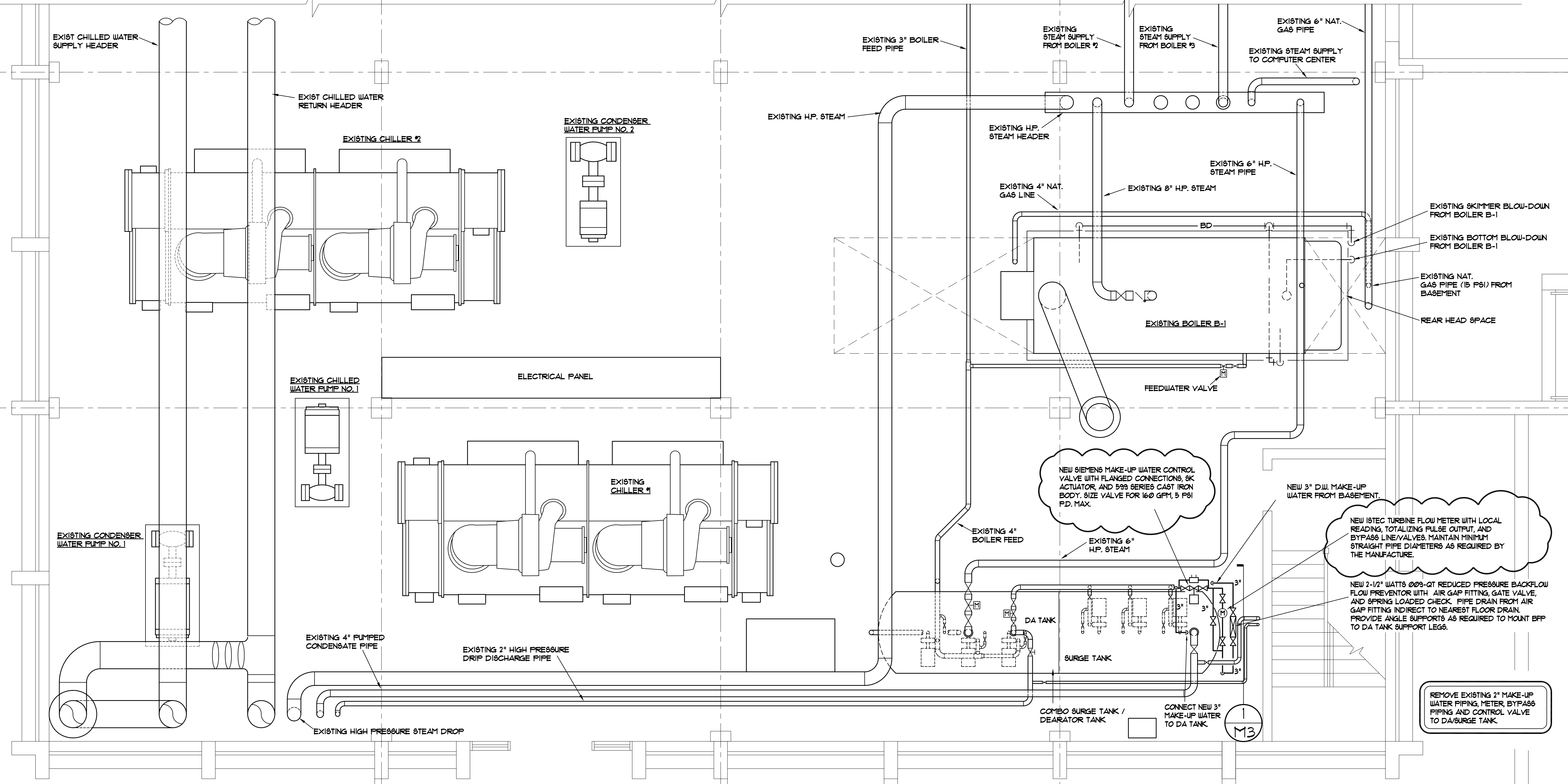
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11/04/14	10/10/14	JUV	11/04/14
DRAWN BY:	DATE:	DESCRIPTION:	APPENDIX NO. 1
M3	10/10/14		
BUILDING:	140		
REV.	1		

PROJECT TITLE: WEST ENERGY FACILITY - PURCHASE and INSTALL WATER SOFTENERS

University of South Carolina

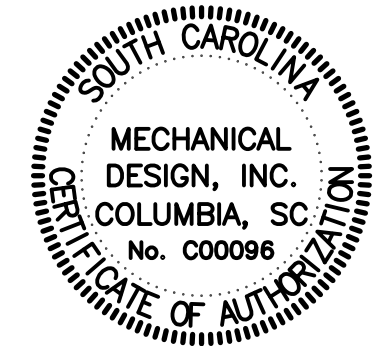


SHEET:	APPENDIX NO. 1
M3	OF 3
SHEET IN SET:	OF



1 ELEVATION  
M3  
NT6

**WEST ENERGY FACILITY**  
**MAIN LEVEL PARTIAL MECHANICAL PLAN**  
SCALE: 1/4" = 1'-0"



**MECHANICAL DESIGN INC.**  
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