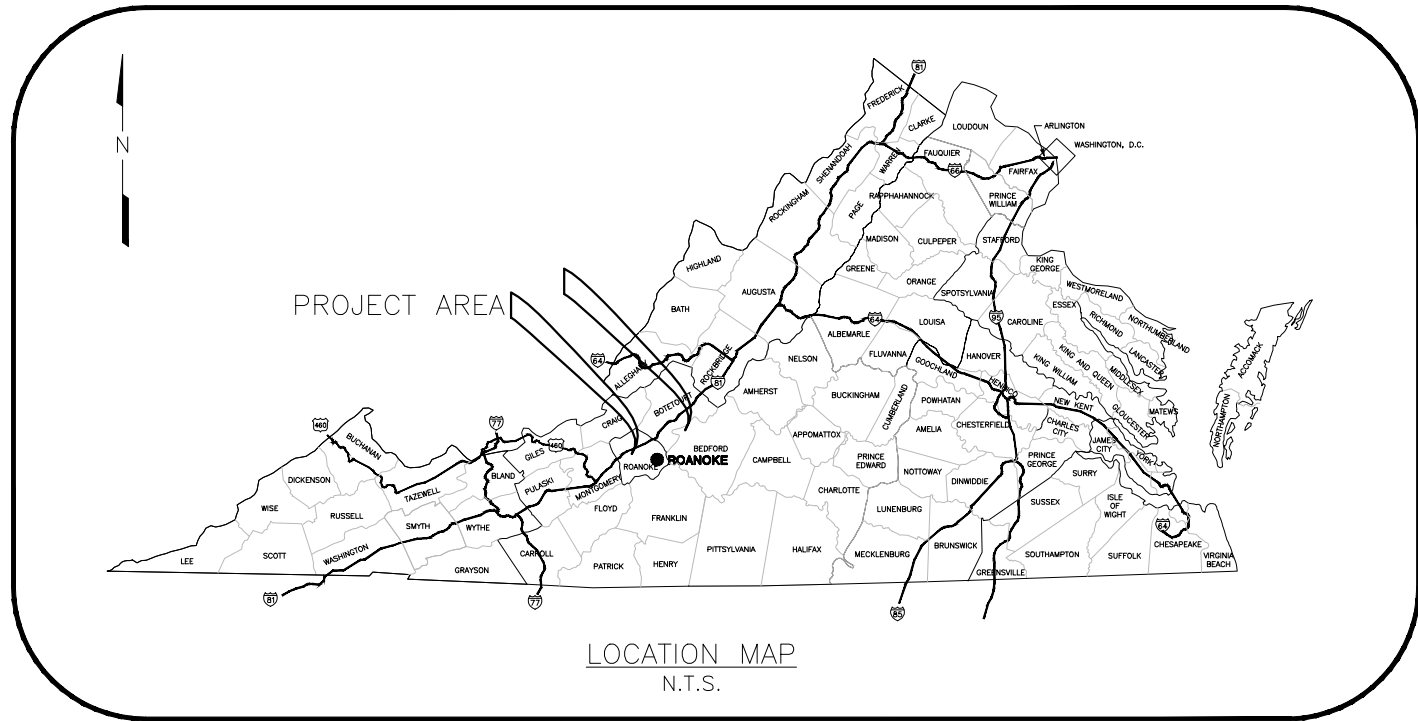
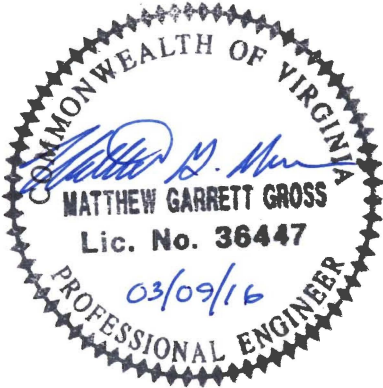
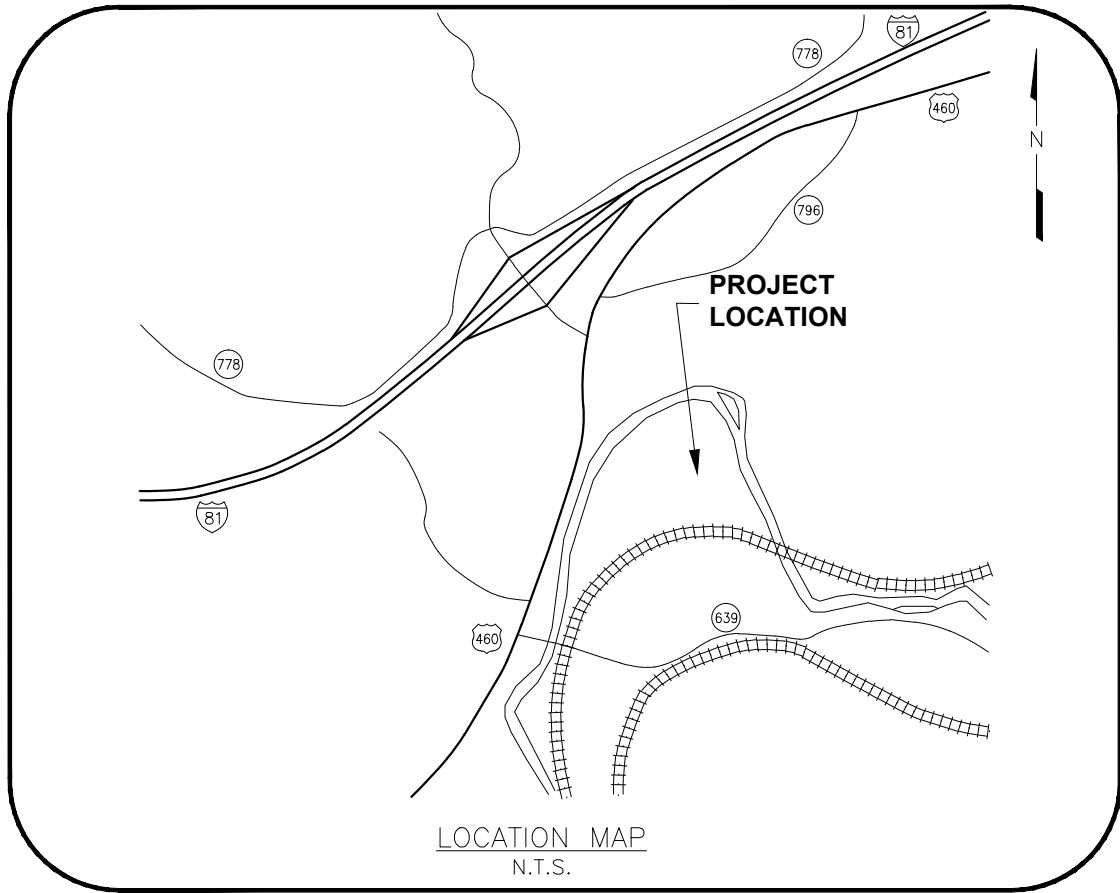




WATER HEATING SYSTEM

PREPARED FOR
**WESTERN VIRGINIA REGIONAL
JAIL AUTHORITY**
SALEM, VA

DESIGNED BY
ANDERSON & ASSOCIATES, INC.
BLACKSBURG, VIRGINIA



Sheet List Table	
Sheet Number	Sheet Title
G1	TITLE SHEET
C1	MECHANICAL ROOM PLUMBING PLAN VIEW
C2	HOT WATER PIPING PLUMBING ISO
C3	HOT WATER PIPING PLAN VIEW
C4	EXISTING HOT WATER PIPING SECTION VIEW
C5	PROPOSED HOT WATER PIPING SECTION VIEW
C6	PIPING TABLE
C7	ADDITIVE BID A – MIXING VALVE REPLACEMENT
C8	ADDITIVE BID B – NON POTABLE HEATER VALVE REPLACEMENT
C9	ADDITIVE BID C – NON POTABLE HEATER PIPING REPLACEMENT

APPROVAL

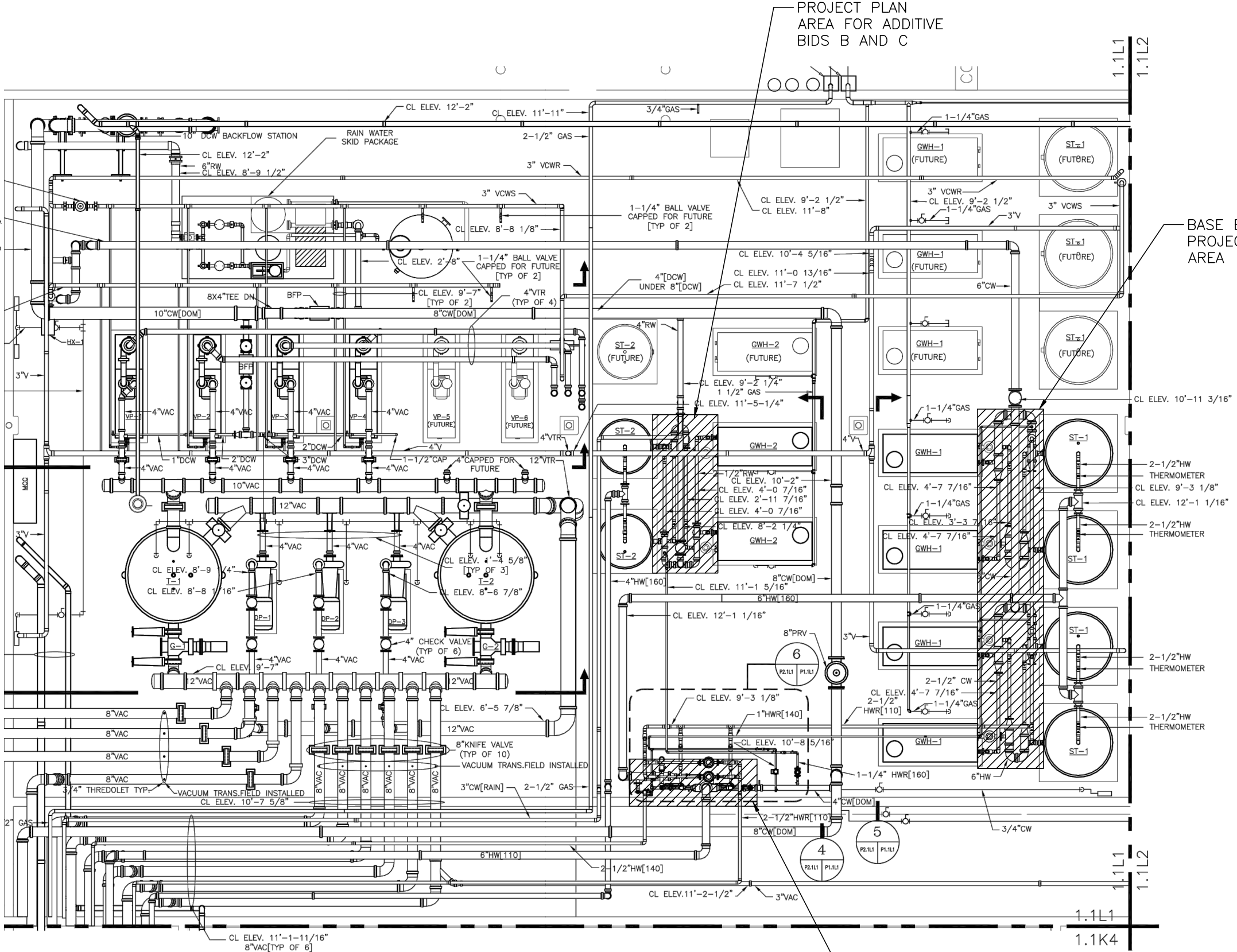
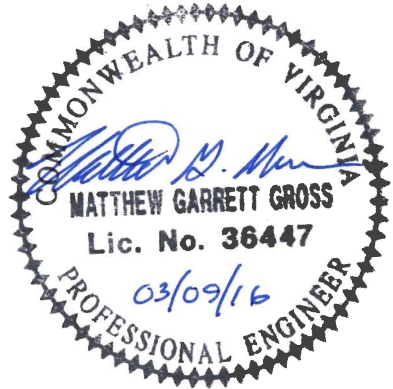
COLONEL BOBBY RUSSELL, SUPERINTENDENT	DATE
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CONSTRUCTION NOTES:

1. COMPLY WITH S59.1-406, ET SEQ. OF THE CODE OF VIRGINIA (OVERHEAD HIGH VOLTAGE LINES SAFETY ACT).
2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
3. CONSTRUCTION TRAILER, FENCING, PARKING, AND STAGING AREAS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
4. MAINTAIN EMERGENCY, SERVICE, AND DELIVERY VEHICLE ACCESS TO THE SURROUNDING AREA AND COORDINATE THIS WITH THE OWNER.
5. THESE PLANS SHALL BE USED IN CONJUNCTION WITH THE TECHNICAL SPECIFICATIONS DATED 01/20/16.
6. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN THE DRAWINGS SHALL BE IMMEDIATELY REPORTED TO THE OWNER'S REPRESENTATIVE, WHO SHALL PROMPTLY CORRECT SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR WITHOUT DIRECTION AFTER HIS DISCOVERY OF SUCH INCONSISTENCIES OR AMBIGUITIES, SHALL BE DONE AT THE CONTRACTOR'S RISK.
7. REPLACE ALL INSULATION AND WRAPPING AFTER CONSTRUCTION.

GENERAL UTILITY NOTES:

1. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE BASED ON AVAILABLE ABOVEGROUND STRUCTURES (VALVES, MANHOLES, ETC.) AND PLANS PROVIDED BY SOUTHERN AIR. FIELD VERIFY ALL EXISTING UTILITIES TO DETERMINE THAT FINAL UTILITY ARRANGEMENTS SHOWN ON THE PLANS ARE FEASIBLE PRIOR TO ORDERING MATERIALS. IF LOCATIONS OF EXISTING UTILITIES ARE FOUND TO BE IN LOCATIONS OTHER THAN THOSE INDICATED ON PLANS, CONTACT THE OWNER IN A TIMELY MANNER TO DETERMINE IF PLAN MODIFICATIONS ARE REQUIRED.
2. UTILITY SERVICE MUST BE MAINTAINED THROUGHOUT CONSTRUCTION. SERVICE SHALL NOT BE INTERRUPTED WITHOUT PRIOR APPROVAL FROM THE OWNER. APPROVED PERIODS OF INTERRUPTED SERVICE SHALL BE MINIMIZED IN DURATION AND SHALL BE COORDINATED WITH THE OWNER AND UTILITY PROVIDER.
3. FIELD VERIFY LOCATION AND SIZE OF EXISTING UTILITIES AT THEIR CONNECTION TO UTILITIES SHOWN ON THE PLANS AS A FIRST STEP TO SITE UTILITY CONSTRUCTION.

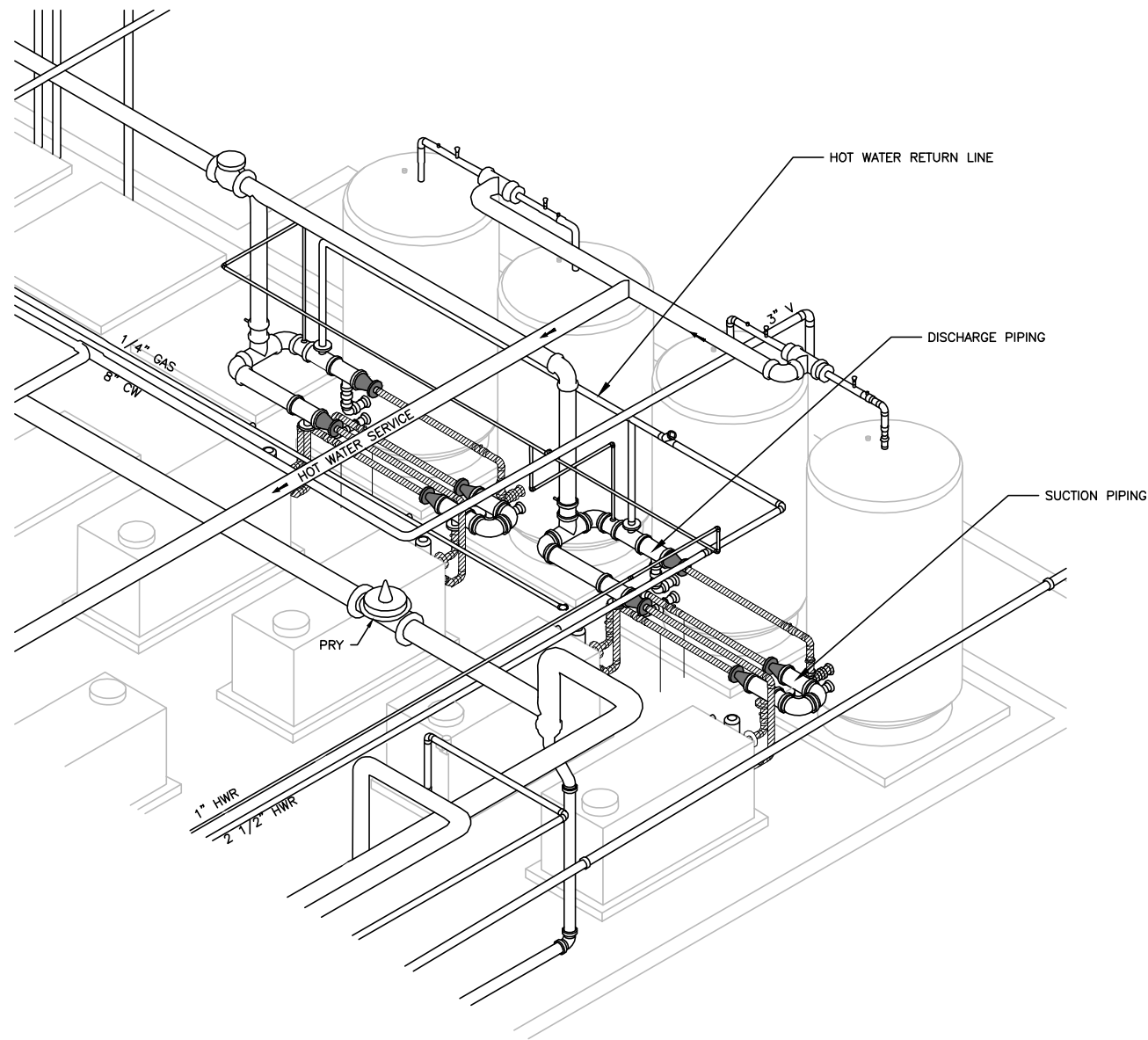


PARTIAL PLUMBING PLAN

SCALE: 1/4"=1'-0"

SCALE: 1/4"=1"

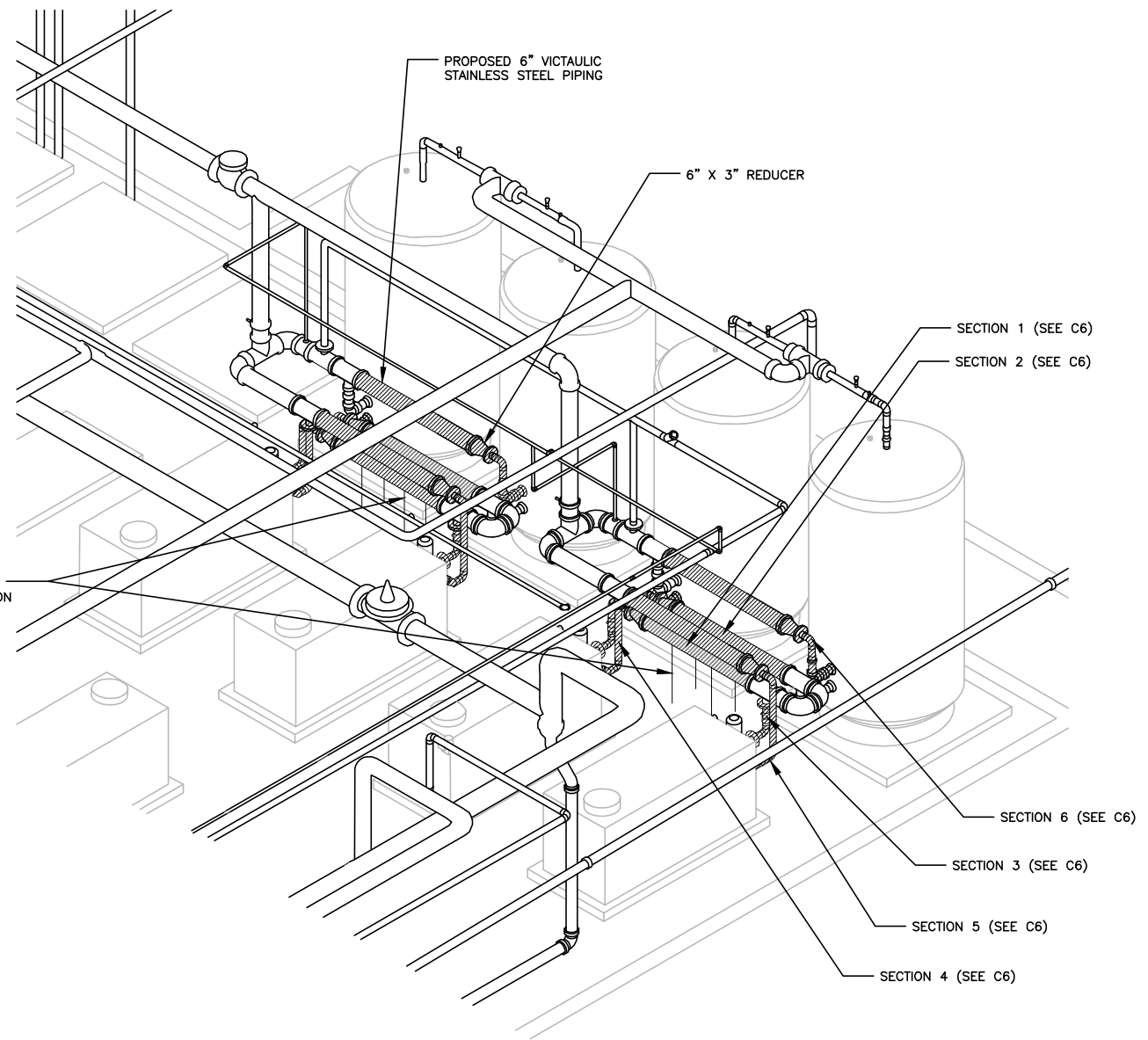
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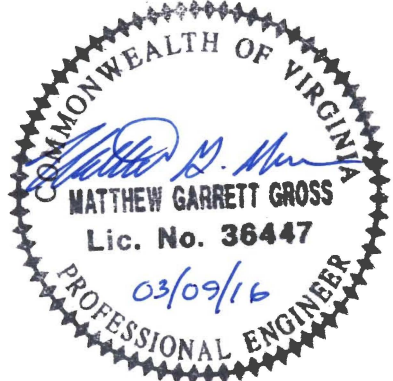
EXISTING

ADDITIONAL 4' 9\"/>

HIGHLIGHTED AREAS
FOR REPLACEMENT



PROPOSED



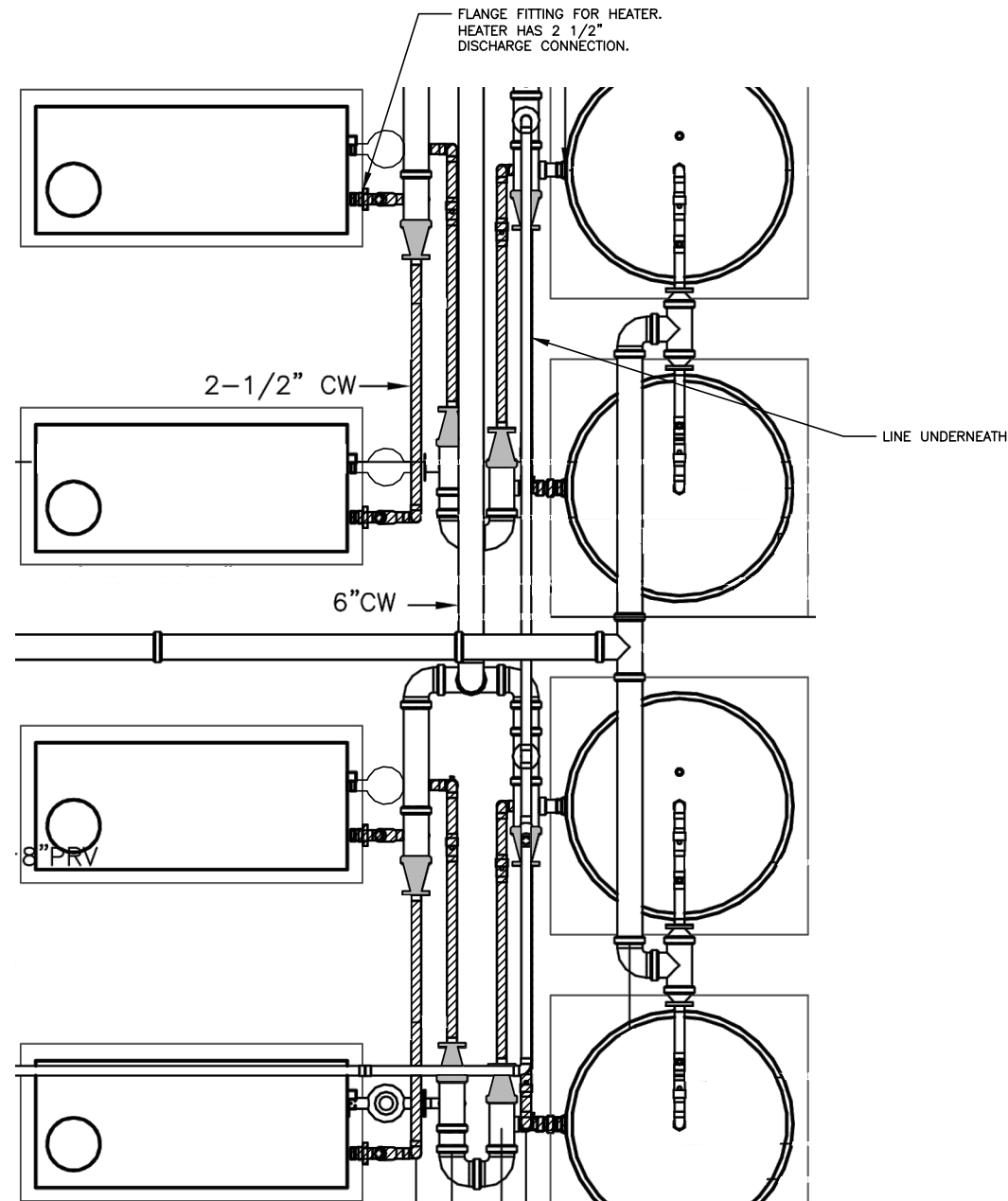
SOURCE: SOUTHERN AIR INC. SHEET: P3.1L

 ANDERSON & ASSOCIATES, INC. Professional Design Services www.andassoc.com 100 Ardmore St. Blacksburg, Va. 24060 540-552-5592	DATE : 20 JAN 16 DESIGNED : MGG DRAWN : JRZ CHECKED : WBK QA / QC :	REV. #	COMMENTS	DATE	WESTERN VIRGINIA REGIONAL JAIL AUTHORITY WATER HEATING SYSTEM SALEM, VA	BASE BID HOT WATER PIPING PLUMBING ISO	DOCUMENT NO. 31933 - 002 SHEET C2
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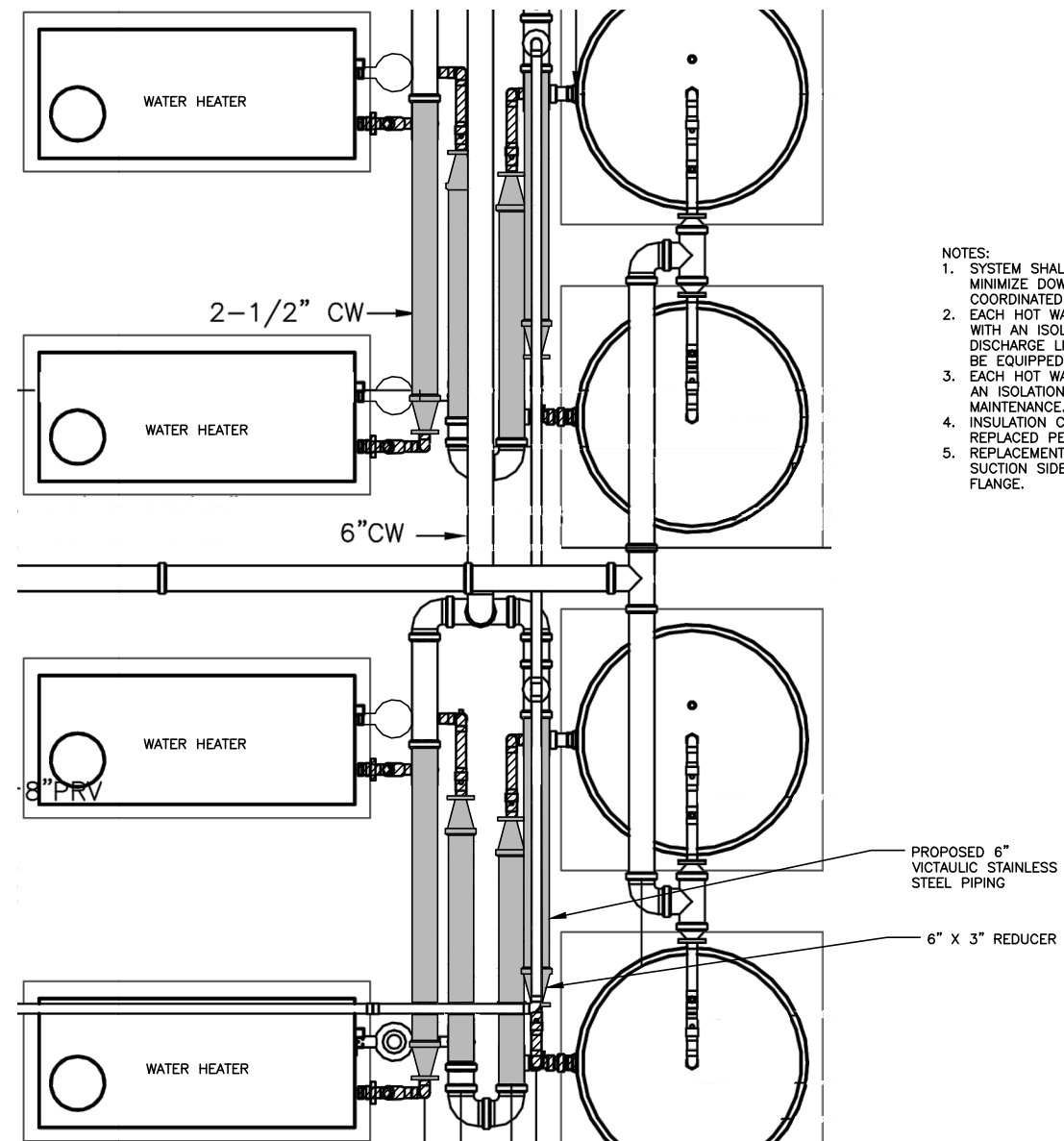
Zook, Jacqueline / 2/4/2016 1:22 PM / \\ap\projects\projects\31\31933\engineering\design\plans\31933_sheet_iso_view.dwg

HATCHED AREAS INDICATE
COPPER TUBING TO BE
REPLACED

SHADED AREAS INDICATE
STAINLESS FITTINGS TO BE
REPLACED TO ACCOMMODATE
CHANGED PIPES

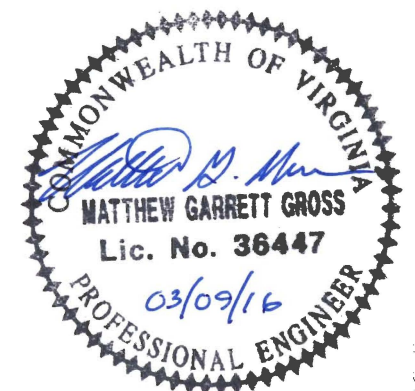


EXISTING



PROPOSED

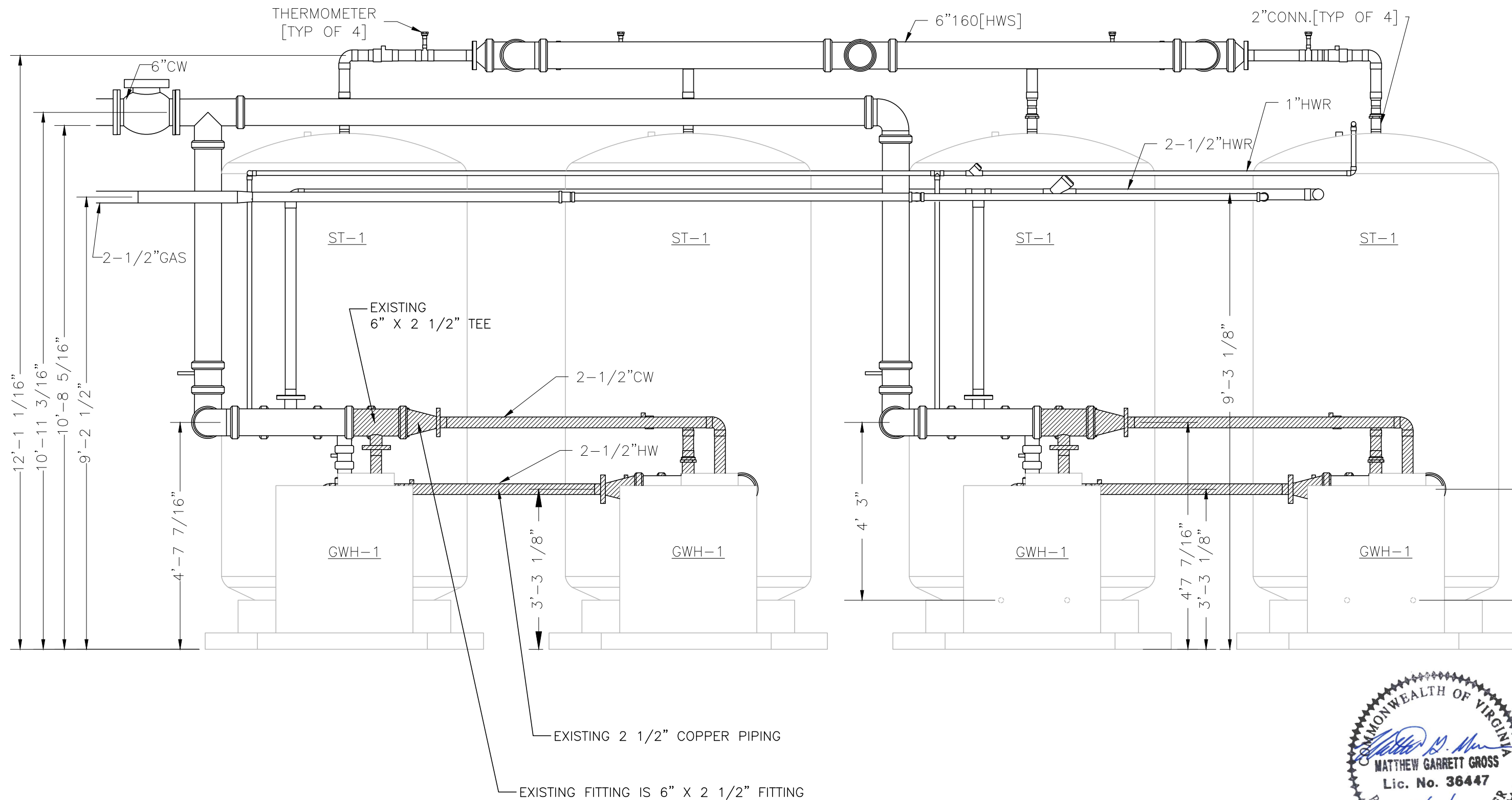
- NOTES:
1. SYSTEM SHALL BE ISOLATED AND WORKED ON TO MINIMIZE DOWN TIME. ALL SHUT DOWNS SHALL BE COORDINATED WITH WVRJA STAFF.
 2. EACH HOT WATER FURNACE SHALL BE EQUIPPED WITH AN ISOLATION VALVE ON SUCTION AND DISCHARGE LINES. DISCHARGE LINES SHALL ALSO BE EQUIPPED WITH CHECK VALVES.
 3. EACH HOT WATER TANK SHALL BE EQUIPPED WITH AN ISOLATION VALVE TO ALLOW FOR FUTURE MAINTENANCE.
 4. INSULATION COVERING TO BE PUT BACK OR REPLACED PER SPECIFICATION.
 5. REPLACEMENT PIPING SHALL CONNECT TO HEATER SUCTION SIDE PUMP CONNECTION AND DISCHARGE FLANGE.



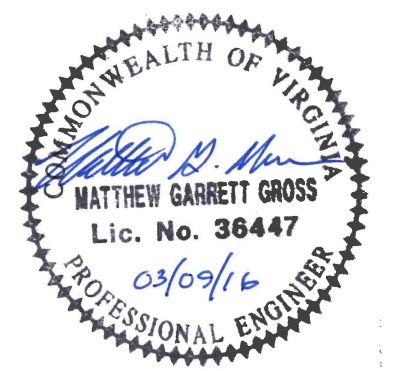
SCALE: 1/2"=1'
SOURCE: SOUTHERN AIR INC. SHEET: P9.05L

 ANDERSON & ASSOCIATES, INC. Professional Design Services www.andassoc.com 100 Ardmore St. Blacksburg, Va. 24060 540-552-5592	DATE : 20 JAN 16 DESIGNED : MGG DRAWN : JRZ CHECKED : WBK QA / QC :	REV.# COMMENTS DATE	WESTERN VIRGINIA REGIONAL JAIL AUTHORITY WATER HEATING SYSTEM SALEM, VA	HOT WATER PIPING PLAN VIEW	DOCUMENT NO. 31933 - 002 SHEET C3
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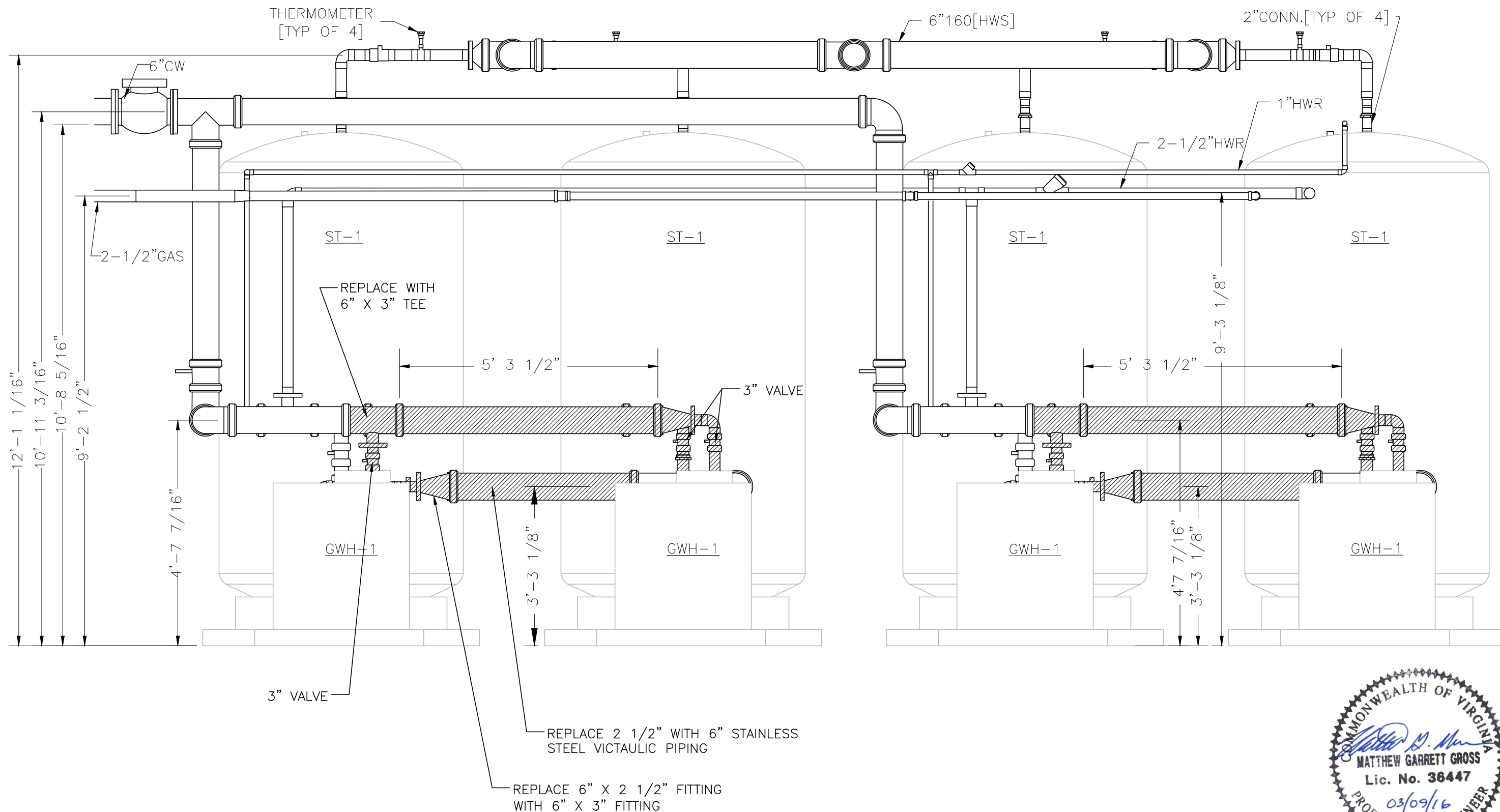


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 SOURCE: SOUTHERN AIR INC. SHEET: P2.1L1



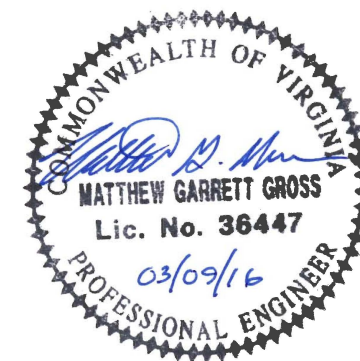
ANDERSON & ASSOCIATES, INC. Professional Design Services www.andassoc.com Virginia - North Carolina - Tennessee 100 Ardmore St. Blacksburg, Va. 24060 540-552-5592	DATE : 20 JAN 16 DESIGNED : MGG DRAWN : JRZ CHECKED : WBK QA / QC :	REV. #	COMMENTS	DATE	WESTERN VIRGINIA REGIONAL JAIL AUTHORITY WATER HEATING SYSTEM SALEM, VA	EXISTING HOT WATER PIPING SECTION VIEW	DOCUMENT NO. 31933 - 002 SHEET C4
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SCALE 1/2"=1'
SOURCE: SOUTHERN AIR INC. SHEET: P2.1L1

 ANDERSON & ASSOCIATES, INC. Professional Design Services www.andassoc.com 100 Ardmore St. Blacksburg, Va. 24060 540-552-5592	DATE : 20 JAN 16 DESIGNED : MGG DRAWN : JRZ CHECKED : WBK QA / QC :	REV.# COMMENTS DATE WESTERN VIRGINIA REGIONAL JAIL AUTHORITY WATER HEATING SYSTEM SALEM, VA	PROPOSED HOT WATER PIPING SECTION VIEW	DOCUMENT NO. 31933 - 002 SHEET C5
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SECTION 1 – SUCTION				
PIPE	SIZE	MATERIAL	LENGTH	DESCRIPTION
1	3" X 2.5"	BRASS	–	REDUCER AT PUMP
2	3"	PEX	2.5"	
3	3"	PEX FITTING	–	90° ELBOW
4	3"	PEX	28"	
5	3"	BRASS	–	BRASS BALL VALVE
6	3"	PEX FITTING	–	90° ELBOW
7	3"	PEX	13"	
8	3"	PEX FITTING	–	90° ELBOW
9	6" X 3"	SS	–	VICTAULIC REDUCER
10	6"	SS	67.5"	VICTAULIC SS

SECTION 2 – SUCTION				
PIPE	SIZE	MATERIAL	LENGTH	DESCRIPTION
1	3"	PEX	18"	
2	3"	PEX FITTING	–	90° ELBOW
3	3"	PEX	17"	
4	3"	BRASS	–	BRASS BALL VALVE
5	3"	PEX FITTING	–	90° ELBOW
6	6" X 3"	SS	–	VICTAULIC REDUCER
7	6"	SS	67.5"	VICTAULIC SS

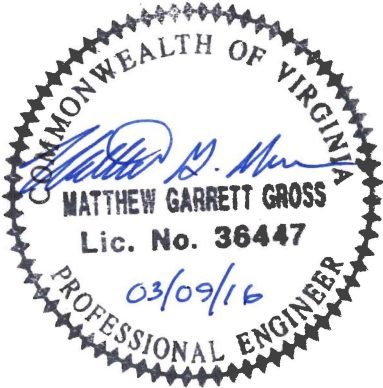
SECTION 3 – SUCTION				
PIPE	SIZE	MATERIAL	LENGTH	DESCRIPTION
1	3" X 2.5"	BRASS	–	REDUCER AT PUMP
2	3"	PEX	2.5"	
3	3"	PEX FITTING	–	90° ELBOW
4	3"	PEX	19"	
5	3"	PEX FITTING	–	90° ELBOW
6	3"	PEX	15"	
7	3"	PEX FITTING	–	90° ELBOW
8	3"	PEX	8"	
9	3"	BRASS	–	BRASS BALL VALVE
10	6" X 3"	SS	–	VICTAULIC TEE

SECTION 4 – DISCHARGE				
PIPE	SIZE	MATERIAL	LENGTH	DESCRIPTION
1	3" X 2.5"	BRASS	–	REDUCER
2	3"	BRASS	–	BALL CHECK VALVE
3	3"	PEX FITTING	–	90° ELBOW
4	3"	PEX	20"	
5	3"	PEX FITTING	–	90° ELBOW
6	3"	PEX	13"	
7	3"	PEX FITTING	–	90° ELBOW
8	3"	PEX	19"	
9	3"	BRASS	–	BRASS BALL VALVE
10	6" X 3"	SS	–	VICTAULIC TEE

SECTION 5 – DISCHARGE				
PIPE	SIZE	MATERIAL	LENGTH	DESCRIPTION
1	3" X 2.5"	BRASS	–	REDUCER
2	3"	BRASS	–	BALL CHECK VALVE
3	3"	PEX FITTING	–	90° ELBOW
4	3"	PEX	19"	
5	3"	PEX FITTING	–	90° ELBOW
6	3"	PEX	15"	
7	3"	PEX FITTING	–	90° ELBOW
8	3"	PEX	25"	
9	3"	BRASS	–	BRASS BALL VALVE
10	3"	PEX FITTING	–	90° ELBOW
11	6" X 3"	SS	–	VICTAULIC REDUCER
12	6"	SS	73.5"	VICTAULIC SS

SECTION 6 – DISCHARGE				
PIPE	SIZE	MATERIAL	LENGTH	DESCRIPTION
1	3"	PEX	18"	
2	3"	PEX FITTING	–	90° ELBOW
3	3"	PEX	20"	
5	3"	BRASS	–	BRASS BALL VALVE
6	3"	PEX FITTING	–	90° ELBOW
7	6" X 3"	SS	–	VICTAULIC REDUCER
8	6"	SS	73.5"	VICTAULIC SS

- NOTES:
- FITTINGS AND DISTANCES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL VERIFY IN FIELD PRIOR TO INSTALLATION.
 - NOTED SECTION FITTINGS AND PIPE LENGTHS ARE PER PAIR OF WATER HEATERS. TWO OF EACH SECTION SHALL BE REQUIRED FOR THE POTABLE WATER HEATING SYSTEM.





NEW ISOLATION VALVES

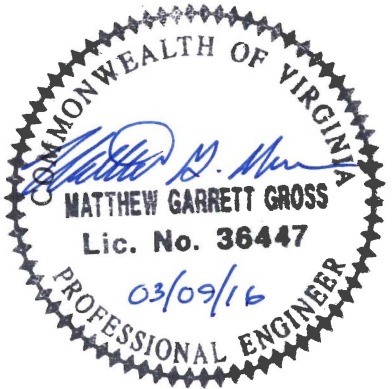
REPLACE LEONARD HIGH-LOW
MANIFOLDS (5)

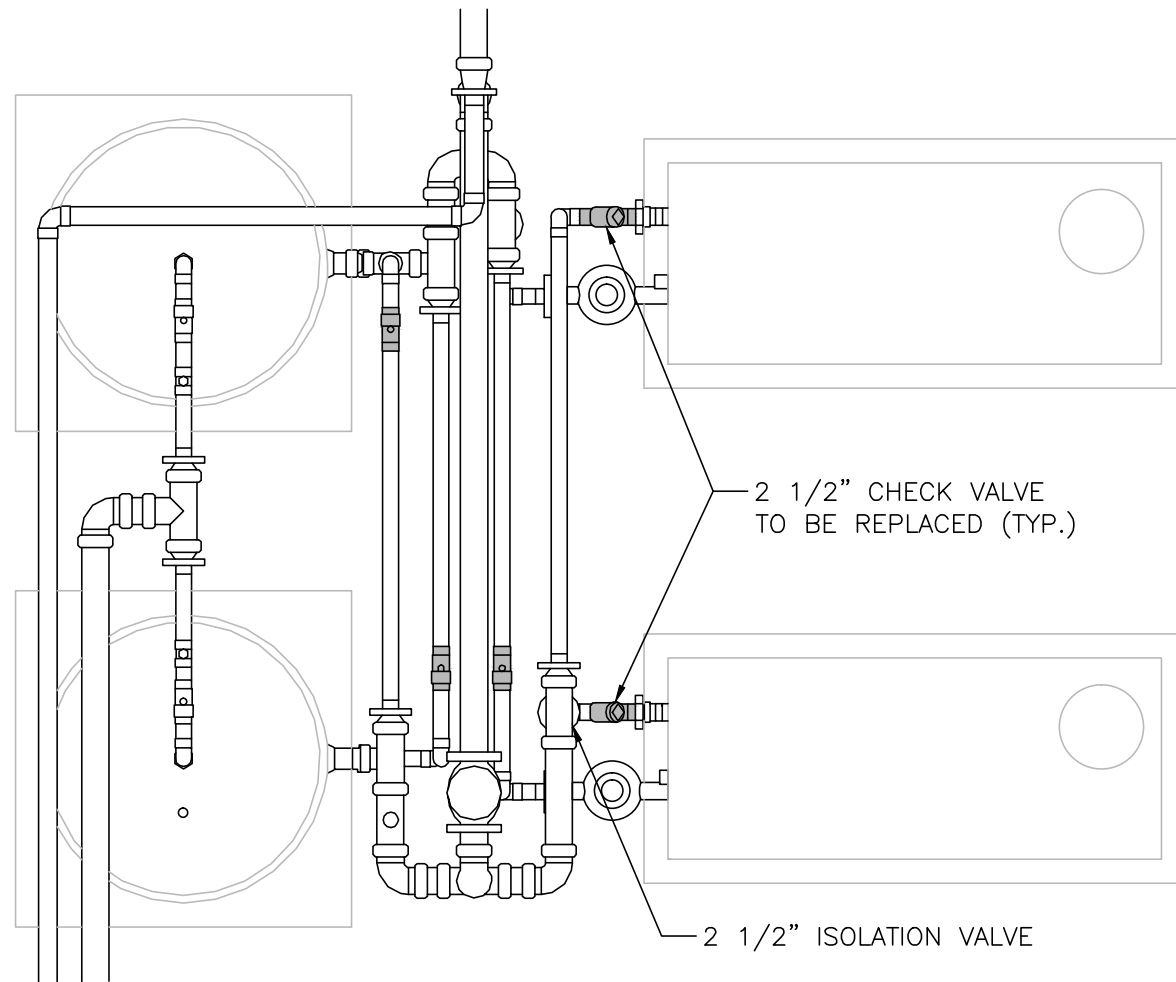
- SEQUENCE OF CONSTRUCTION – ADDITIVE A
1. COORDINATE SHUTDOWN OF HOT WATER SYSTEM WITH MAINTENANCE STAFF. WE ANTICIPATE THIS WILL BE DONE BETWEEN 10 PM AND 5 AM.
 2. INSTALL ISOLATION VALVES AS SHOWN, COORDINATED IN FIELD WITH MAINTENANCE STAFF.
 3. REPLACE MIXING SYSTEM VALVES IN COORDINATION WITH MAINTENANCE STAFF TO KEEP HOT WATER SYSTEM OPERATION.
 4. REPLACE INSULATION ON DISTURBED PIPING.



RELOCATE THERMOMETER

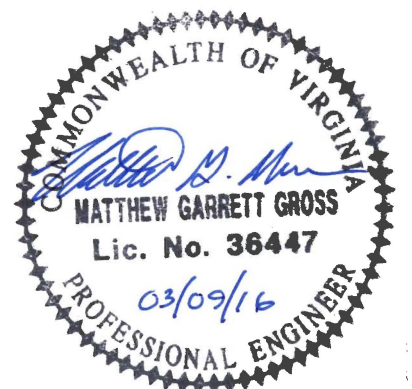
INSTALL 3” ISOLATION
BALL VALVE





SHADED AREAS INDICATE
VALVES TO BE REPLACED

REPLACE 2 - 2 1/2" CHECK
VALVES AND 4 - 2 1/2" VALVES

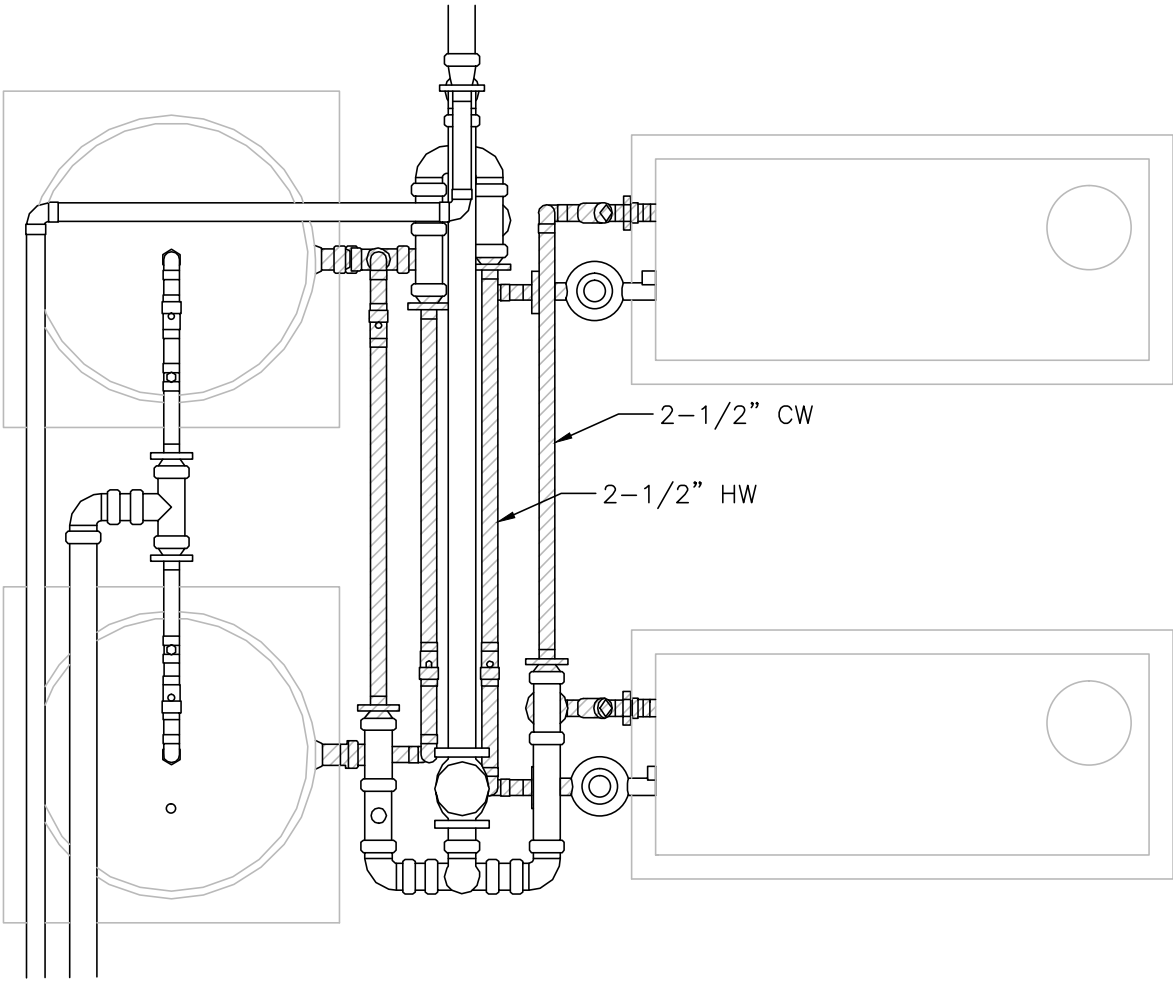


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SOURCE: SOUTHERN AIR INC. SHEET: P1.1L1

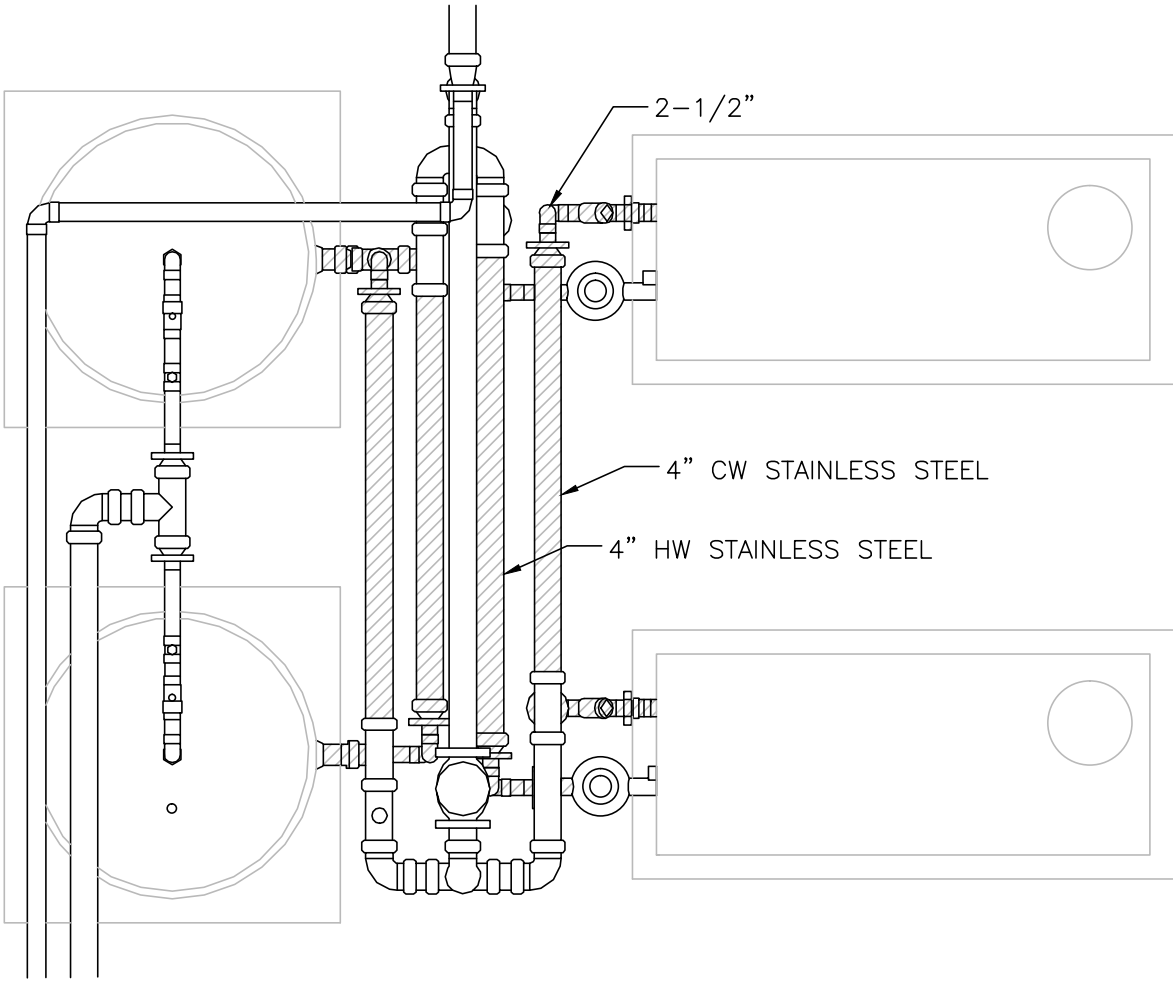
 ANDERSON & ASSOCIATES, INC. Professional Design Services www.andassoc.com 100 Ardmore St. Blacksburg, Va. 24060 540-552-5592	DATE : 20 JAN 16 DESIGNED : MGG DRAWN : JRZ CHECKED : WBK QA / QC :	REV. # COMMENTS DATE	WESTERN VIRGINIA REGIONAL JAIL AUTHORITY WATER HEATING SYSTEM SALEM, VA	ADDITIVE BID B - REPLACEMENT OF VALVES	DOCUMENT NO. 31933 - 002 SHEET C8
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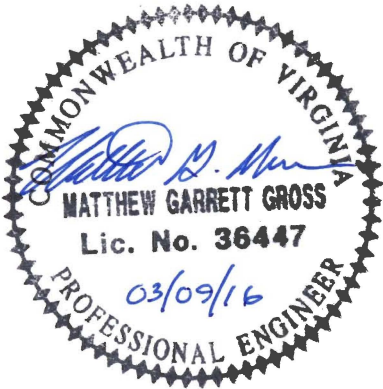
HIGHLIGHTED AREAS FOR REPLACEMENT



EXISTING



PROPOSED



SCALE 3/4"=1'
SOURCE: SOUTHERN AIR INC. SHEET: P1.1L1



ANDERSON & ASSOCIATES, INC.
Professional Design Services
www.andassoc.com
Virginia - North Carolina - Tennessee

100 Ardmore St.
Blacksburg, Va. 24060
540-552-5592

DATE	REV. #	COMMENTS	DATE
20 JAN 16			
DESIGNED : MGG			
DRAWN : JRZ			
CHECKED : WBK			
QA / QC :			

WESTERN VIRGINIA REGIONAL JAIL AUTHORITY
WATER HEATING SYSTEM
SALEM, VA

ADDITIVE BID C - REPLACE NON-POTABLE PIPING

DOCUMENT NO. 31933 - 002
SHEET C9

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