Statement of Work
West Point Package Boiler Relocation – Phase 1

1. Background and Objectives

Background
WestRock has an approved capital project to relocate a Package Boiler from their WestRock facility in Uncasville CT to West Point VA. The Boiler to be relocated:

- Rentech Boiler with steam capacity of 120,000 pph steam at 450 psi.
- Unit is ~48' long x 9' wide x 16' high and weighs ~180,000 lbs.
- The Boiler was originally installed in 2015.

In addition to the Boiler, WestRock would like to relocate all components that are part of the Boiler System and associated Building, including but not limited to:

- Pre-Engineered Metal Building that houses the Boiler and associated equipment;
- Natural Gas train;
- Natural Gas reducing station;
- Forced draft fan;
- Economizer;
- Exhaust stack;
- Duplex condensate pumps;
- Duplex sump pumps;
- Four gas heaters;
- Two exhaust fans and associated dampers;
- Continuous Emissions Monitoring System (CEMS) and associated building;
- Electrical Equipment;
- Controls, Instrumentation and PLC systems;
- Associated Piping Systems (Process & Utilities)
- Electrical / Instrument Cable Tray, Conduit and Cabling
- Fire Protection and Lighting Systems
- Pipe Rack

Objective
Construction services to:

- Dismantle, package and load all equipment and building systems at Uncasville Mill for transport to West Point VA mill.
- Transport all components from Uncasville CT to West Point VA **.
- Install new Foundation Systems (for relocated Building and Equipment).
- Unload and reassemble all equipment and building systems at the West Point VA mill.

***** WestRock will be responsible for transport of the 'Boiler' from Uncasville to West Point. The contractor will be responsible for loading the Boiler onto a Rail Car in Uncasville, unloading the Boiler in Richmond, reloading onto truck and unloading at mill site.***

2. Deliverables

2.1. Provide all labor, tools, equipment, materials, consumables, etc. necessary to complete the construction work outlined in this document and drawing package (per drawing list and available on FTP site).
2.2. The general contractor is responsible for subcontracting any/all services necessary to complete the project.
2.3. The contractor shall provide a lump sum price proposal with separated line items for labor, material and equipment. Additionally the proposal shall be broken down in three (3) parts:
   i. Dismantling and loading of system in Uncasville.

ii. Transport and loading of all system components and Boiler in Uncasville.
iii. Foundation installation, unloading of all system components and Boiler and reassembly of all building and equipment systems.

2.4. The Contractor shall develop a detailed, man-loaded, construction schedule (in electronic MS Project format) for review and approval by WestRock in conformance with dates outlined below. In conjunction with the construction schedule, a monthly billing schedule is required. Both schedules shall be supplied, within the first week, after the contract is awarded.

2.5. Contractor shall provide a brief written plan of Dismantling, Transport and Reassembly with proposal.

3. Contractor Responsibilities

Contract Requirements

3.1. Contractor shall perform all work per WestRock Terms & Conditions.
3.2. The Contractor shall be licensed in the States of Connecticut and Virginia.
3.3. All work shall be in accordance with all applicable codes and standards.
3.4. The Contractor shall adhere to all of the WestRock safety rules as outlined in the TappiSafe requirements. TappiSafe was implemented to replace the West Point & Uncasville contractor safety orientation. If a company had in the past been required by us to go through the contractor safety orientation, they now are required to take the TappiSafe web training.
3.5. Any work performed by the contractor that is outside this scope of work shall be agreed to, **in advance**, by the Project Manager(s) and the Vendor Request for Change Form must be submitted before proceeding.

General Requirements

3.6. Mobilize and set-up on site for construction. (Uncasville and West Point)
3.7. Supply qualified supervision to oversee mill safety requirements.
3.8. Supply supervision and support personnel to facilitate construction.
3.9. Supply barricade tape, safety cones, saw horses, etc. necessary to secure the work areas.
3.10. Supply tools, equipment, safety supplies and consumables to facilitate construction.
3.11. Supply all temporary materials to facilitate construction (shoring, structural steel, lifting systems etc.).
3.12. Supply qualified QC personnel to coordinate and monitor performance of the work.
3.13. Supply and install all necessary scaffolding and/or man-lifts for removal and/or installation of equipment, building components, piping systems and electrical systems.
3.14. Supply any required cranes or lifting mechanisms to lift Boiler, Boiler equipment and piping systems into place.
3.15. After reassembly in West Point, supply & perform necessary touch-up painting & galvanizing to bring facility to 'new' condition.
3.16. Maintain clean job site.
3.17. Clean-up all contractors demolished materials and debris.
3.18. Demobilize.

Execution

Equipment

3.19. Provide all necessary mechanical work for disassembly (in Uncasville) and reassembly (in West Point) of Boiler and connected equipment as outlined on OEM Equipment Drawings, Installation Manuals and as directed by OEM Representative(s), including:

- Main Rentech Boiler Assembly
- Coen Burner
- Forced Draft Fan
- Intake and Exhaust Ductwork
- Economizer
- Exhaust Stack
- Air Preheater / Air Intake Systems
- Associated Boiler Equipment Support Structures and Platforms

- Duplex condensate pumps;
- Duplex sump pumps;
- Four gas heaters;
- Two exhaust fans and associated dampers;
- Continuous Emissions Monitoring System (CEMS) and associated building;

3.20. At disassembly Contractor to match mark and label all equipment to insure a seamless reassembly.

3.21. Contractor is responsible for proper packaging and bracing of equipment systems to insure no damage of systems during transport. Equipment to be shipped in closed containers or protected with tarps during transport.

3.22. Contractor is responsible for loading and unloading equipment for transportation.

3.23. Contractor to move equipment to final location on drawings, assemble equipment per manufacturers' requirements, level, align and anchor in place per manufactures instructions. (Contractor is responsible to record final alignment numbers and provide WestRock with record documentation).

3.24. Boiler water / steam side is currently drained and has been purged with nitrogen. Contractor is responsible for maintaining nitrogen purge to the extent possible.

Piping Installations

3.25. Provide all necessary piping work for disassembly (in Uncasville) and reassembly (in West Point) of piping systems as outlined in P&ID's and Piping Drawings, including:

- Steam Piping (450#)
- Steam Piping (50#)
- Condensate Piping
- Relief Valve Vent Piping
- Start-up Vent Piping (including Silencer)
- Natural Gas Piping
- Natural Gas Train (inside building)
- Main Natural Gas Reducing Station (outside building)
- Mill Air Piping
- Instrument Air Piping / Tubing
- Mill Water Piping
- Piping Supports / Hangers
- Relief Valves
- Manual Valves
- Inline Control Valves and Instrumentation
- ~70 ft Section of pipe bridge (including steel, piping systems, electrical conduit)

3.26. At disassembly Contractor to match mark and label all piping systems to insure a seamless reassembly.

3.27. Contractor to 'break' piping systems for shipment at flanges / unions where practical to limit re-welding of piping systems at the West Point mill. Where field re-welding is required, contractor to follow WestRock specifications.

3.28. Contractor is responsible for replacing any damaged insulation / jacketing.

3.29. Contractor is responsible for replacing any damaged heat tracing.

3.30. Contractor is responsible for proper packaging and bracing of piping and associated equipment to insure no damage of systems during transport. Piping to be shipped in closed containers or protected with tarps during transport.

3.31. Contractor is responsible for loading and unloading piping systems for transportation.

3.32. Supply all replacement gaskets and hardware for a complete installation

3.33. Contractor to provide necessary equipment, tools and labor to clean and flush all piping systems prior to equipment start-up.

Electrical & Instrumentation Installations

3.34. Provide all necessary electrical and instrumentation work for disassembly (in Uncasville) and reassembly (in West Point) of electrical and instrumentation systems as outlined in P&ID's and Electrical Drawings, including:

- Motors (both in Boiler building and main mill)

- Power distribution panel
- Low voltage switchgear breaker (in main mill)
- Variable Frequency Drives (both in Boiler building and main mill)
- Transformers
- Control Cabinets
- Instrumentation
- Cable tray, conduit and associated support systems
- Cabling and wiring (inside building)
- Interior and exterior lighting
- Alarm systems

3.35. Some electrical equipment is located outside the Boiler Building envelope. Contractor is responsible for removing this electrical equipment from main mill.

3.36. Contractor to disconnect, pull back and 'roll up' all cabling / wiring internal to the building envelope. Cable/wring shall be disconnected at field device and pulled back to power and/or control source. Prior to disconnection, contractor to document and label all terminations insure a seamless reassembly.

3.37. Disconnect ground system from existing building and pipe bridge and abandon. (New grounding grid to be installed at West Point mill site).

3.38. At disassembly Contractor to match mark and label all electrical and instrumentation equipment systems and components to insure a seamless reassembly.

3.39. Contractor is responsible for proper packaging and bracing of electrical equipment and control cabinets and associated equipment to insure no damage of systems during transport. Electrical equipment to be shipped in closed containers during transport.

3.40. Contractor is responsible for loading and unloading electrical systems for transportation.

3.41. Supply all replacement mounting, support systems and hardware for a complete installation.

Building

3.42. Provide all necessary structural / architectural work to prepare for disassembly (in Uncasville) and reassembly (in West Point) of 78ft x 43ft Pre-Engineered Building system outlined in Architectural Drawings and Building Drawings, including:

- Steel framing
- Siding systems
- Roofing systems
- Man doors, overhead doors and louvers
- Gutters and downspouts

3.43. At disassembly Contractor to match mark and label steel, siding and roofing seamless reassembly.

3.44. Contractor is responsible for proper packaging and bracing of equipment systems to insure no damage of systems during transport. Equipment to be shipped in closed containers or protected with tarps during transport.

3.45. Contractor is responsible for loading and unloading equipment for transportation.

3.46. At reassembly, contractor is responsible to insure building siding, roofing, flashing and insulation is installed in an 'as new' condition. All building penetrations shall be properly flashed and sealed.

Site Work (West Point)

3.47. Provide all necessary site work to prepare for installation of new steel building and associated building and equipment foundations, including but not limited to:

- Erosion and sedimentation control
- Saw-cutting, removal and disposal of existing asphalt / concrete surfaces
- Excavation, removal and disposal of existing fill as required
- Backfill, fill and compaction as required to create a uniform building surface
- Pavement / concrete repair / installation after building erection

Deep Foundations / Piles (West Point)

3.48. Contractor shall be responsible for all design, engineering, labor, materials equipment and supervision for the installation of Deep Foundation / Piling system.

3.49. Contractor shall reference GeoTechnical report (provided by WestRock) and loads shown on bid drawings to determine proposed pile design.
3.50. Proposed pile design shall be submitted with contractor proposal.
3.51. Contractor's pile design professional shall submit to WestRock proposed design for approval prior to mobilization and installation.
3.52. Final design, calculations and shop drawings, stamped and signed by a registered professional engineer of the Commonwealth of Virginia, shall be submitted prior to mobilization and installation.
3.53. The contractor shall provide copies of individual pile installation records within 24 hours after each installation is completed.

Foundations – Building & Equipment (West Point)

3.54. Provide all necessary concrete/civil work for new Building and Boiler equipment as outlined in Foundation / Civil Drawings, including:
- Building foundations, walls and pile caps
- Building slabs, ramps, u-drains and sumps
- Equipment foundations and housekeeping pads
- Protection bollards
- New grounding grid

3.55. Contractor is responsible for all formwork, steel reinforcing, concrete, anchor bolts and embedments.

4. WestRock Responsibilities

4.1. WestRock will provide transportation of Boiler from Uncasville CT to Richmond VA.
4.2. WestRock will provide OEM vendor supervision for disassembly and reassembly of Boiler.
4.3. WestRock will provide OEM Drawings, Equipment Manuals and Installation Instructions.
4.4. WestRock shall provide Architectural, Mechanical, Piping, Foundation and Structural drawings.
4.5. WestRock shall provide any pertinent installation Specifications.

5. Project Staffing

5.1. Project Managers – The project managers for the services described in this SOW will be:

	Name and Title	Mailing Address	Phone and E-mail Address
For WestRock:	John Osborne Project Engineer	1901 Main St West Point, VA 23181	O: 804-843-5695 john.osborne@westrock.com
For Contractor:			

6. Project Schedule and Milestone Payments

ID	Task Detail	Beg Date	End Date	Amount	INV DATE	INV DUE DATE	AMOUNT
1	Pre-Bid Meeting	09-20-16	09-20-16				
2	Proposals Due		10-10-16				
3	Award PO		12-05-16				

4	Mobilize for Removal (Uncasville)		12-05-16				
5	Mobilize for Site Work / Foundations (West Point)		12-12-16				
6	Project Complete		04-24-16				
7	Acceptance						

7. Invoicing

Invoices to be submitted to:

WestRock Payment Processing
PO Box 28849
Jacksonville, FL 32226

8. Reports

All reports shall be submitted to John Osborne via email at john.osborne@westrock.com

9. Term of the SOW

The term of this SOW shall begin on the Effective Date and terminates at completion and acceptance of the services.

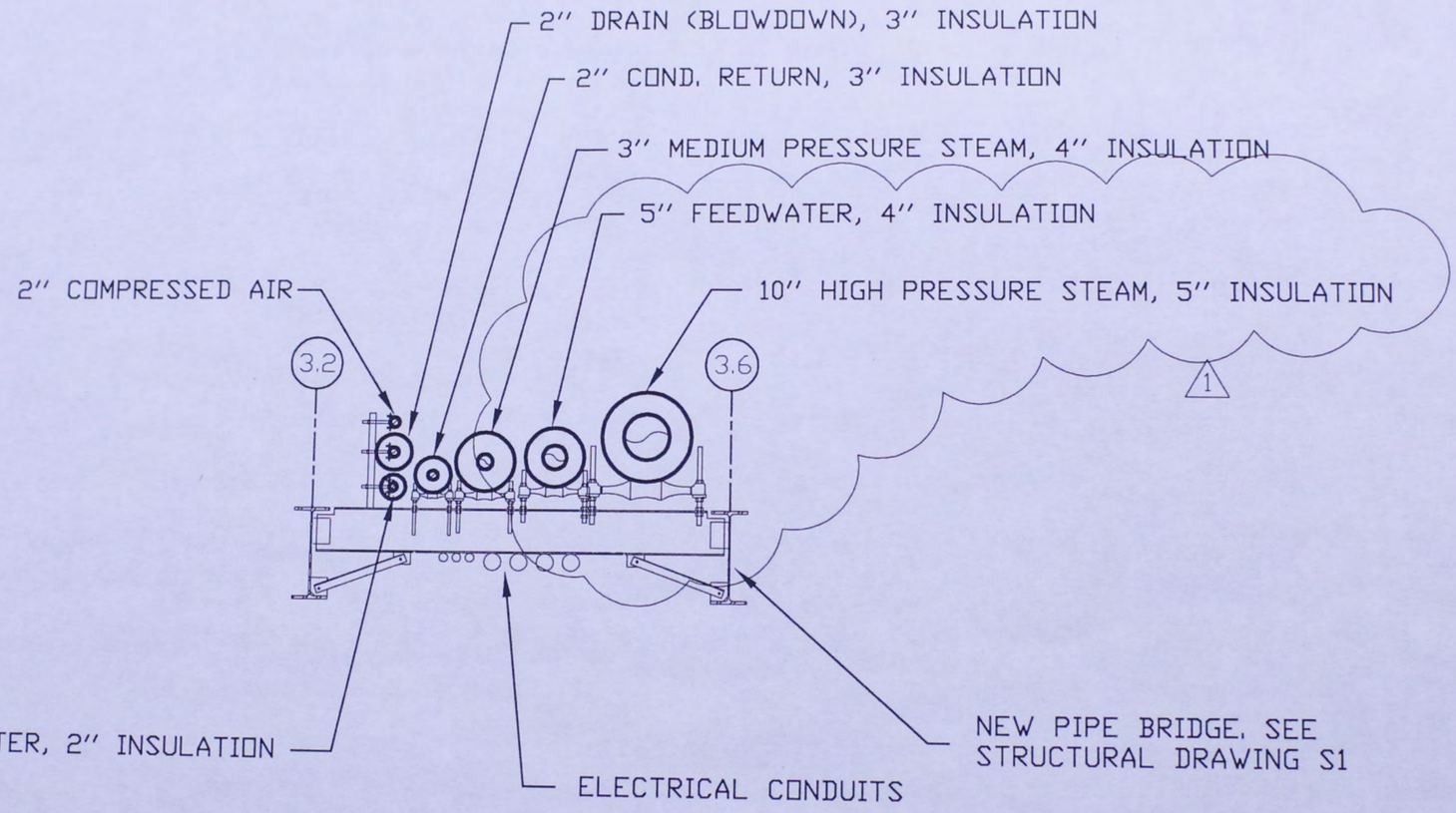
Understood and accepted subject to the terms and conditions of the Agreement referenced above, by:

Contractor

Signed:_____

Printed:_____

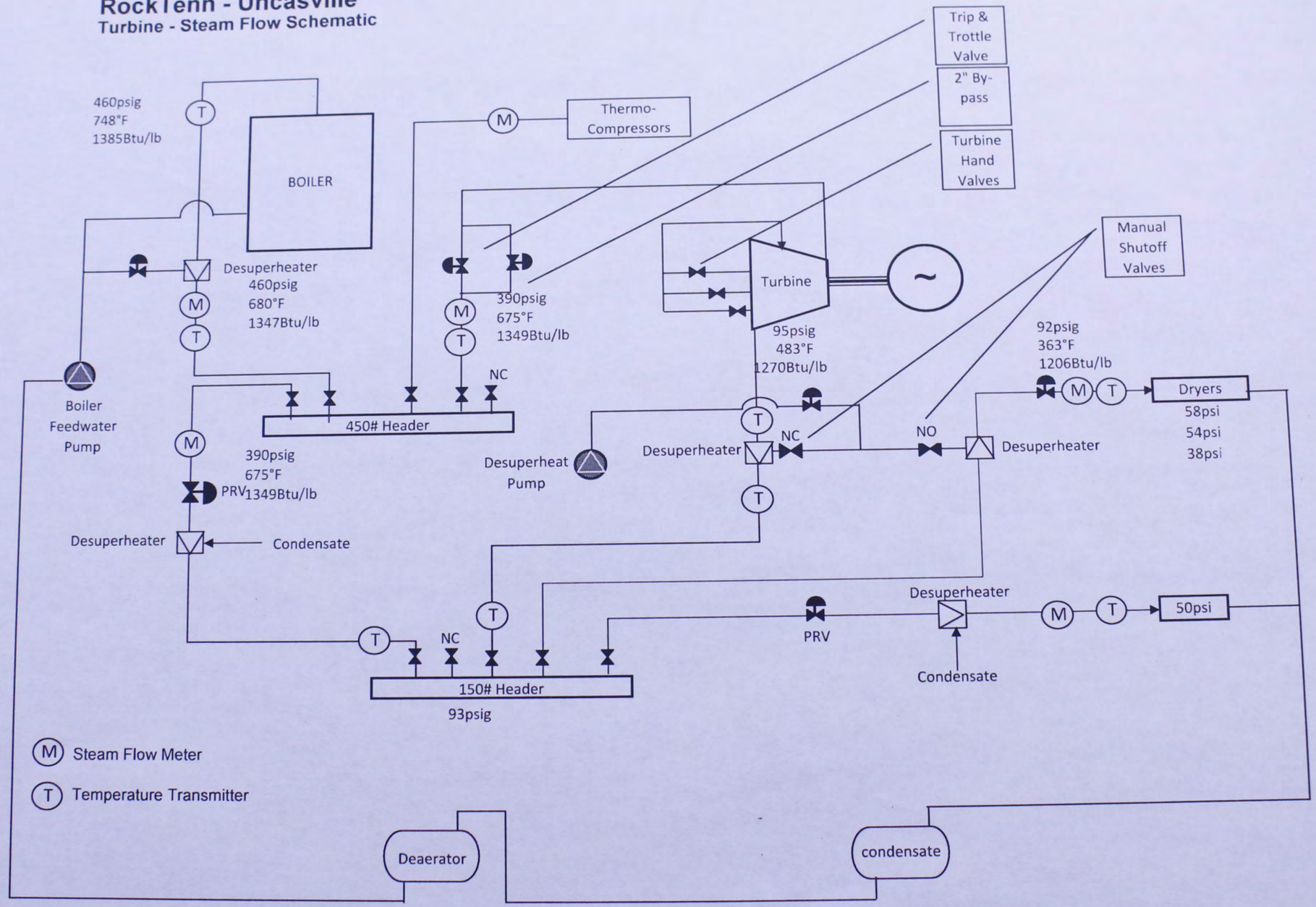
Date: _____

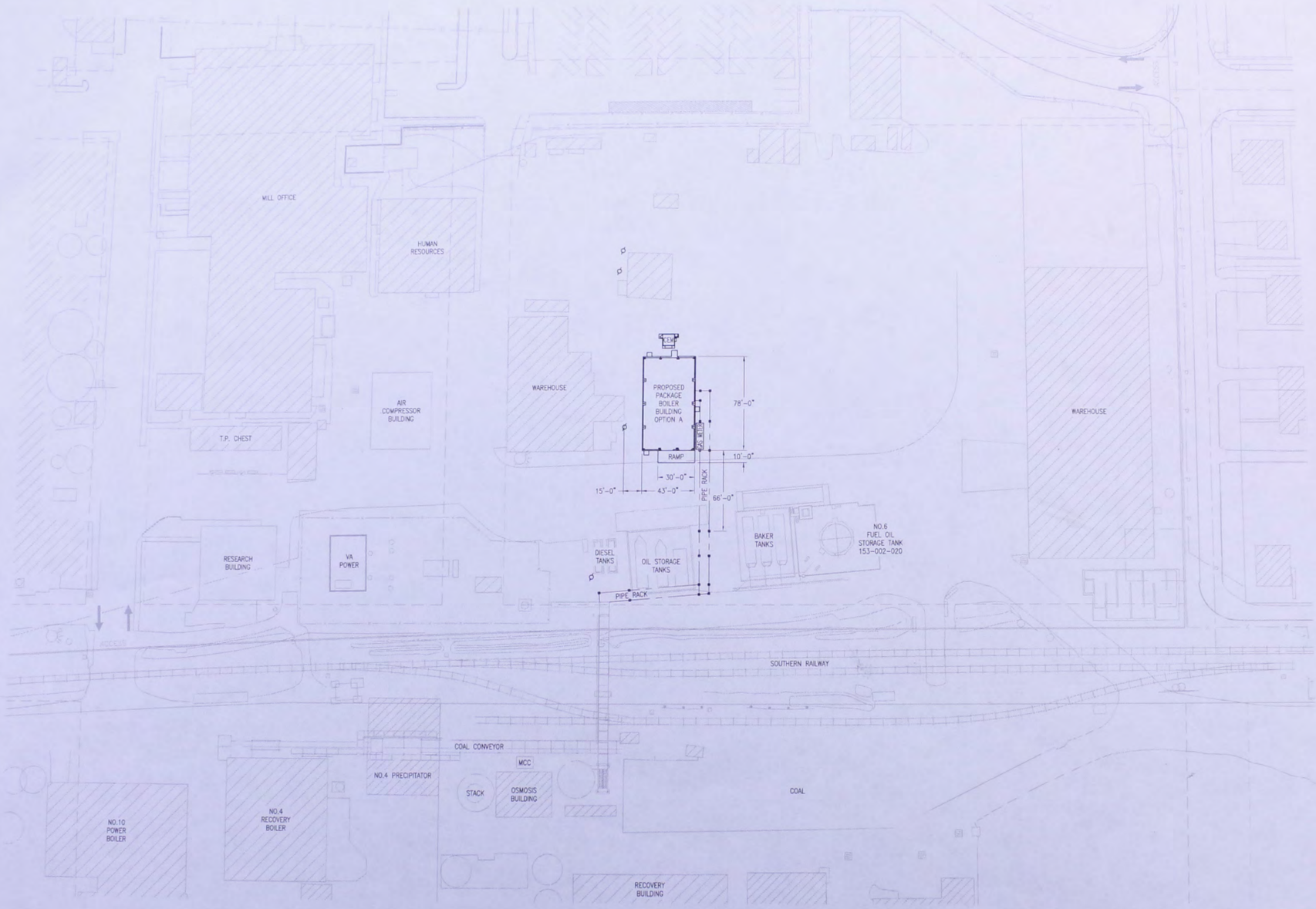


INST
DRAI
WITH

SECTION C-C

RockTenn - Uncasville
Turbine - Steam Flow Schematic





SITE PLAN - OPTION A
SCALE: 1"=40'

HJH DRAWING NO.:
98082-C01A

NO.	DATE	BY	DESCRIPTION
A	09-06-16	HJH	ISSUED FOR REVIEW

REVISIONS

REFERENCE DWGS:
ENGINEER:
DRAWN BY: HJH
DATE: -

WestRock
1901 Main Street, West Point, Virginia

PACKAGE BOILER INSTALLATION
SITE PLAN - OPTION A

SCALE: AS NOTED | EQUIPMENT NO: | DRAWING NO: | NO. A

West Point Package Boiler Installation
Project Schedule

WestRock - West Point Mill
Package Boiler Installation Project
HJH Project# 98082

ID	% Complete	Task Name	Duration	Resource Names	Start	Finish
52	0%	Deliver Instruments & Control Valves	8 wks	Vendor	Mar 21 '17	May 15 '17
53	0%	**Electrical Equipment**	**14 wks**		**Feb 7 '17**	**May 15 '17**
54	0%	Finalize Electrical Equipment Specs	2 wks	HJH / WestRock	Feb 7 '17	Feb 20 '17
55	0%	Issue RFQ's, Receive & Review Proposals	2 wks	HJH / WestRock	Feb 21 '17	Mar 6 '17
56	0%	Issue PO for Electrical Equipment	2 wks	WestRock	Mar 7 '17	Mar 20 '17
57	0%	Deliver Electrical Equipment	8 wks	Vendor	Mar 21 '17	May 15 '17
58	0%	**CONSTRUCTION**	**47 wks**		**Sep 20 '16**	**Aug 14 '17**
59	0%	**BOILER RELOCATION / INSTALLATION**	**31 wks**		**Sep 20 '16**	**Apr 24 '17**
60	0%	Issue Contractor Bid Package	0 wks	WestRock	Sep 20 '16	Sep 20 '16
61	0%	Contractor Proposals	3 wks	Contractor	Sep 20 '16	Oct 10 '16
62	0%	Review Bids / Finalize Constractor Scope	4 wks	WestRock	Oct 11 '16	Nov 7 '16
63	0%	Select Contractor	2 wks	WestRock	Nov 8 '16	Nov 21 '16
64	0%	Issue P.O. for Boiler Relocation	2 wks	WestRock	Nov 22 '16	Dec 5 '16
65	0%	**Boiler Removal / Transport**	**10 wks**		**Dec 6 '16**	**Feb 13 '17**
66	0%	Mobilize / Plan for Boiler Removal	2 wks	Contractor	Dec 6 '16	Dec 19 '16
67	0%	Disassemble Building / Equipment for Relocation	6 wks	Contractor	Dec 20 '16	Jan 30 '17
68	0%	Transport Building / Equipment to West Point	6 wks	Contractor	Jan 3 '17	Feb 13 '17
69	0%	**Boiler Equipment / Building Foundations**	**9 wks**		**Dec 13 '16**	**Feb 13 '17**
70	0%	Mobilize for Foundation Installation	1 wk	Contractor	Dec 13 '16	Dec 19 '16
71	0%	Site Preparation	2 wks	Contractor	Dec 20 '16	Jan 2 '17
72	0%	Deep Foundation / Pile Installation	2 wks	Contractor	Jan 3 '17	Jan 16 '17
73	0%	Building / Equipment Foundation Installation	4 wks	Contractor	Jan 17 '17	Feb 13 '17
74	0%	**Boiler Equipment / Building Installation**	**10 wks**		**Feb 14 '17**	**Apr 24 '17**
75	0%	Install Boiler & Associated Equipment	4 wks	Contractor	Feb 14 '17	Mar 13 '17
76	0%	Install Building	4 wks	Contractor	Feb 28 '17	Mar 27 '17
77	0%	Install Building Piping / Electrical	4 wks	Contractor	Mar 28 '17	Apr 24 '17
78	0%	**PHASE 2 - MECHANICAL CONSTRUCTION**	**19 wks**		**Mar 20 '17**	**Jul 31 '17**
79	0%	Issue Mechanical / Piping Package for Bid	0 wks	WestRock	Mar 20 '17	Mar 20 '17
80	0%	Contractor Proposals	3 wks	Contractor	Mar 21 '17	Apr 10 '17
81	0%	Review Bids / Select Contractor	2 wks	WestRock	Apr 11 '17	Apr 24 '17
82	0%	Issue P.O. For Mechanical / Piping Contractor	2 wks	WestRock	Apr 25 '17	May 8 '17
83	0%	**Mechanical Construction**	**12 wks**		**May 9 '17**	**Jul 31 '17**
84	0%	Order Materials & Pre-Fabricate Piping / Structural Steel	6 wks	Contractor	May 9 '17	Jun 19 '17
85	0%	Contractor Mobilize	1 wk	Contractor	May 23 '17	May 29 '17
86	0%	Install New Pipe Bridge & Equipment Foundations	4 wks	Contractor	May 30 '17	Jun 26 '17
87	0%	Install Pipe Bridge Steel	4 wks	Contractor	Jun 20 '17	Jul 17 '17
88	0%	Install Misc Equipment	2 wks	Contractor	Jun 27 '17	Jul 10 '17
89	0%	Install New Piping Systems	6 wks	Contractor	Jun 20 '17	Jul 31 '17
90	0%	**PHASE 2 - ELECTRICAL CONSTRUCTION**	**19 wks**		**Apr 3 '17**	**Aug 14 '17**
91	0%	Issue Electrical Package for Bid	0 wks	WestRock	Apr 3 '17	Apr 3 '17
92	0%	Contractor Proposals	2 wks	Contractor	Apr 4 '17	Apr 17 '17
93	0%	Review Bids / Select Contractor	2 wks	WestRock	Apr 18 '17	May 1 '17
94	0%	Issue P.O. For Electrical Contractor	2 wks	WestRock	May 2 '17	May 15 '17
95	0%	**Electrical Construction**	**13 wks**		**May 16 '17**	**Aug 14 '17**
96	0%	Order Contstruction Materials	2 wks	Contractor	May 16 '17	May 29 '17
97	0%	Contractor Mobilize	1 wk	Contractor	May 30 '17	Jun 5 '17
98	0%	Pre-Install Electrical Equipment	8 wks	Contractor	Jun 6 '17	Jul 31 '17
99	0%	Install Electrical Cable Tray / Conduit / Cable	8 wks	Contractor	Jun 6 '17	Jul 31 '17
100	0%	Final Instrument Connections	2 wks	Contractor	Aug 1 '17	Aug 14 '17
101	0%	**START-UP & COMMISSIONING**	**4 wks**		**Aug 15 '17**	**Sep 11 '17**
102	0%	Checkout & Commissioning	2 wks	WestRock	Aug 15 '17	Aug 28 '17
103	0%	Start-up	2 wks	WestRock	Aug 29 '17	Sep 11 '17

Date: Sep 10 '16

Task — Split — Milestone — Summary — Project Summary — Progress — Deadline

William Doughty

From: NCSCDimEquip@up.com
Sent: Wednesday, July 08, 2015 2:46 PM
To: Rick Butler
Subject: Clearance Proposal for: Boiler (101876)

7/8/2015 1:45:38 PM

From: Benjamin L. Duvall
Union Pacific Clearance Department
Phone: 1-800-544-0541
Fax: 1-800-228-5976

Proposal Number: 101876

Requester File Number: 14-41(Rick Butler)

We regret to inform you that the dimensions of the proposed load are not within Union Pacific's clearance parameters and cannot clear as proposed. The proposed movement may be handled if reduced to the below maximum clearance size. This notification is in regard to our review of both the "physical" dimensions and equipment parameters only and is not an agreement to accept the proposed load until all of the below conditions have been met.

The following must be completed before a car can be ordered, moved or received from Union Pacific. The shipper (or their agent) is responsible for initiating the Rail Access Review process a minimum of 30 days in advance of the loading date. To do so, please contact your Marketing and Sales Representative or call 800-877-0513

Movement must be cleared by all railroads.

Union Pacific's Rail Access Review must be completed and approved.

Final origin & destination zone, track & spot (ZTS) information must be identified (clearance file must match that ZTS).

UP zone, track & spot (ZTS) information must be submitted on the bill of lading.

UPRR Track Agreement must be fully executed.

A freight rate must be obtained by Union Pacific and the rate authority must be submitted on the bill of lading.

- Rates are subject to the rules of Exempt Circular UP 16 series.

- Rail carriers' maximum liability for all losses related to one carload is limited to $25,000..

To order a rail car, fax your request to 800-228-5976. Please place your car order after the above process is complete and at least six (6) weeks in advance of a loading date..

Refer to Maximum clearance below.

ORIGINATION COMPANY NAME and ADDRESS:
OmniTrax Logistics Services, LLC
Sand Springs, OK

DESTINATION COMPANY NAME and ADDRESS:
RockTenn
Uncasville, CT

ROUTE:
SS-TULSA-UP-ESTL-CSXT-PALMR-NECR

COMMODITY and DIMENSIONS PROPOSED:
Commodity: Boiler
STCC#: 3443325
Shape: Rectangular
Net Weight: 200000
Gross Weight: 428400

Overall Length: 47 feet 00 inches
Overall Width: 12 feet 00 inches
Base Length: 47 feet 00 inches
Overall Height: 16 feet 00 inches
Overhang Length: feet inches

CENTER OF GRAVITY:
Longitudinal:
Latitudinal:
Vertical:
Combined Center of Gravity: 87

MAXIMUM DIMENSIONS TOP to BOTTOM of LOAD THAT WILL CLEAR:
On the flatcar

1st HEIGHT: 18 ft 06 in WIDTH: 10 ft 06 in
2nd HEIGHT: 18 ft 02 in WIDTH: 10 ft 11 in
3rd HEIGHT: 17 ft 00 in WIDTH: 12 ft 00 in
4th HEIGHT: 05 ft 06 in WIDTH: 12 ft 00 in
5th HEIGHT: 05 ft 06 in WIDTH: 11 ft 10 in
6th HEIGHT: 04 ft 06 in WIDTH: 11 ft 10 in
7th HEIGHT: 03 ft 11 in WIDTH: 11 ft 00 in
8th HEIGHT: 03 ft 09 in WIDTH: 11 ft 00 in
9th HEIGHT: 02 ft 06 in WIDTH: 08 ft 06 in

LOAD TYPE:
Single Load

CAR NUMBER or SERIES:
1. Specific car or car series: QTTX130502

Outside Length:	105ft 8in
Truck Center:	75ft
Car Capacity:	343,600 Lbs
Loading Area:	47ft
Axles:	8
Load or Idler:	Load
Cushioned:	

SPECIAL REQUIREMENTS and COMMENTS

CSXT notes:

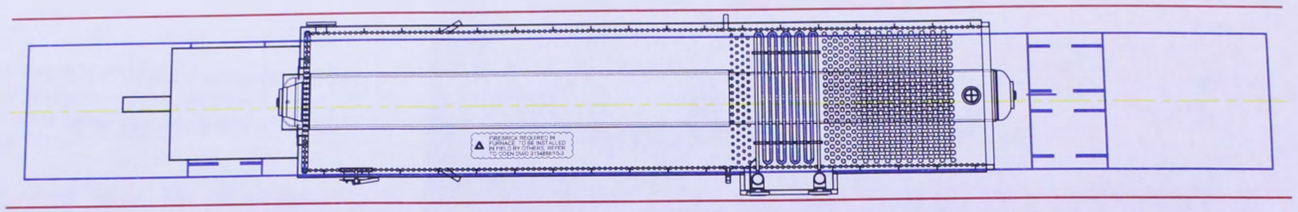
1. THIS LOAD WILL BE SUBJECT TO WEEKEND ONLY MOVEMENT FROM BUFFALO, NY TO PALMER, MA. PLEASE ACCOUNT FOR ADDITIONAL TRANSIT TIME.

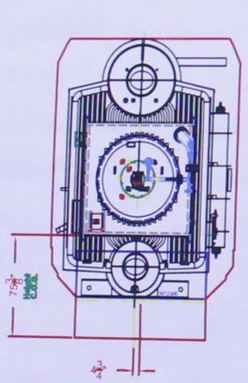
2. LOAD IS NOT SUBJECT TO PUBLIC PRICING, THROUGH RATE WILL NOT APPLY; PLEASE HAVE CUSTOMER CONTACT MIA_BARRINGTON@CSX.COM.

Maximums are based on Union Pacific & NECR clearances.

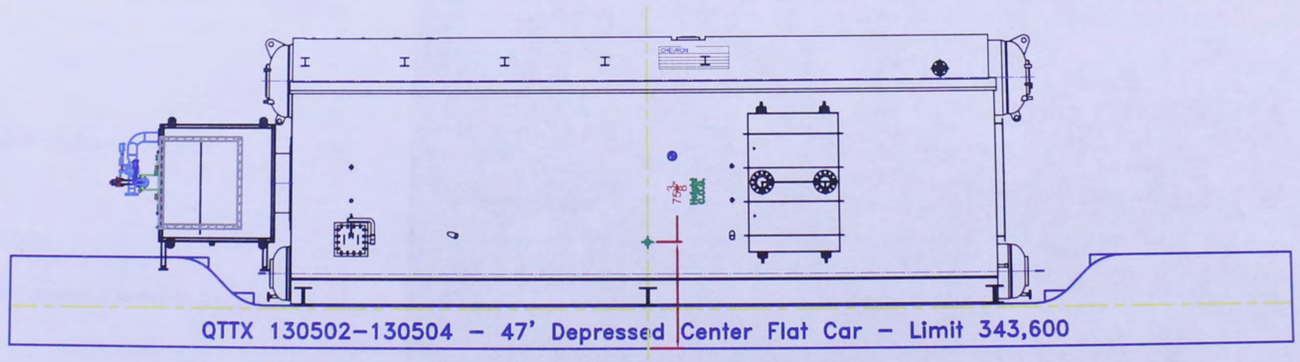
MOVEMENT TERMS AND CONDITIONS


QTCX 30500





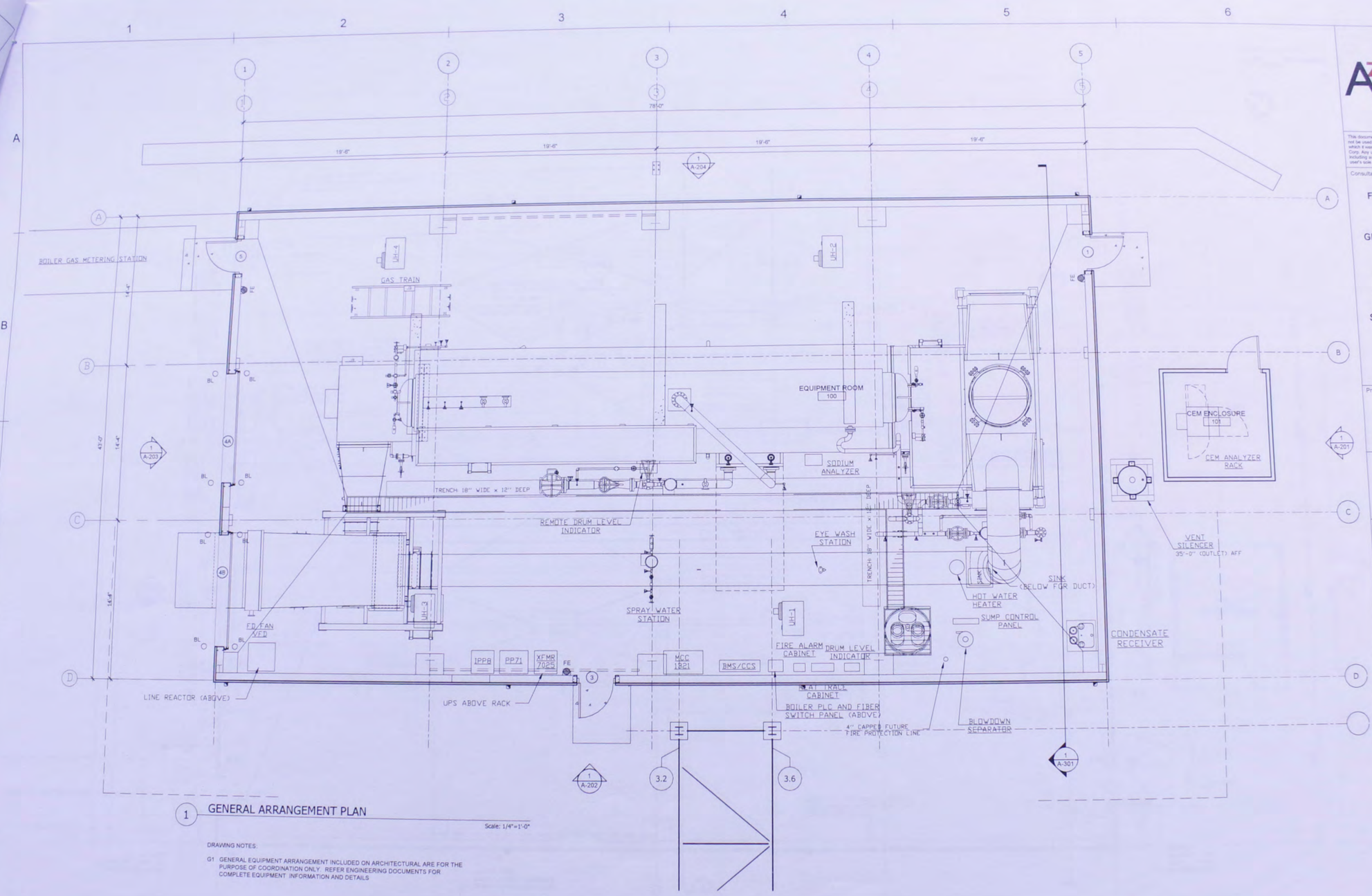
Offset Boiler 4 3/4"



QTTX 130502–130504 – 47' Depressed Center Flat Car – Limit 343,600

QTTX 130500 Railcar Weight Empty 228,400

0 Blocks 3150#'s ea. Left Side
0 Blocks 3150# ea. Right Side
Boiler Weight 180,000#
Counter Balance Weight 0#
Total Approx. Weight 180,000#



1 GENERAL ARRANGEMENT PLAN

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

DRAWING NOTES:

G1 GENERAL EQUIPMENT ARRANGEMENT INCLUDED ON ARCHITECTURAL ARE FOR THE PURPOSE OF COORDINATION ONLY. REFER ENGINEERING DOCUMENTS FOR COMPLETE EQUIPMENT INFORMATION AND DETAILS

NORTH

SCALE: 1/8" = 1'-0"

AZ DESIGN
A/Z Design Services LLC
800.400.2426 | a-zcorp.com
46 Norwich Westerly Road
P.O. Box 370
North Stonington, CT 06359

Consultants

Civil
FREEMAN COMPANIES
36 John Street
Hartford, Connecticut

Structural
GIRARD & COMPANY, LLP
10 Waterchase Drive
Rocky Hill, Connecticut

Mech./Elec./Plumbing/Fire-Protection
N K ENGINEERS INC
755 main Street, Building 4
Monroe, Connecticut

SAREN ENGINEERING INC
270 Farmington Avenue
Farmington, Connecticut

Project

RockTenn

NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

Rev	Description	Date
-	PERMIT	2/27/2015
0	CONSTRUCTION	4/27/2015
1	AS-BUILT	1/18/2016

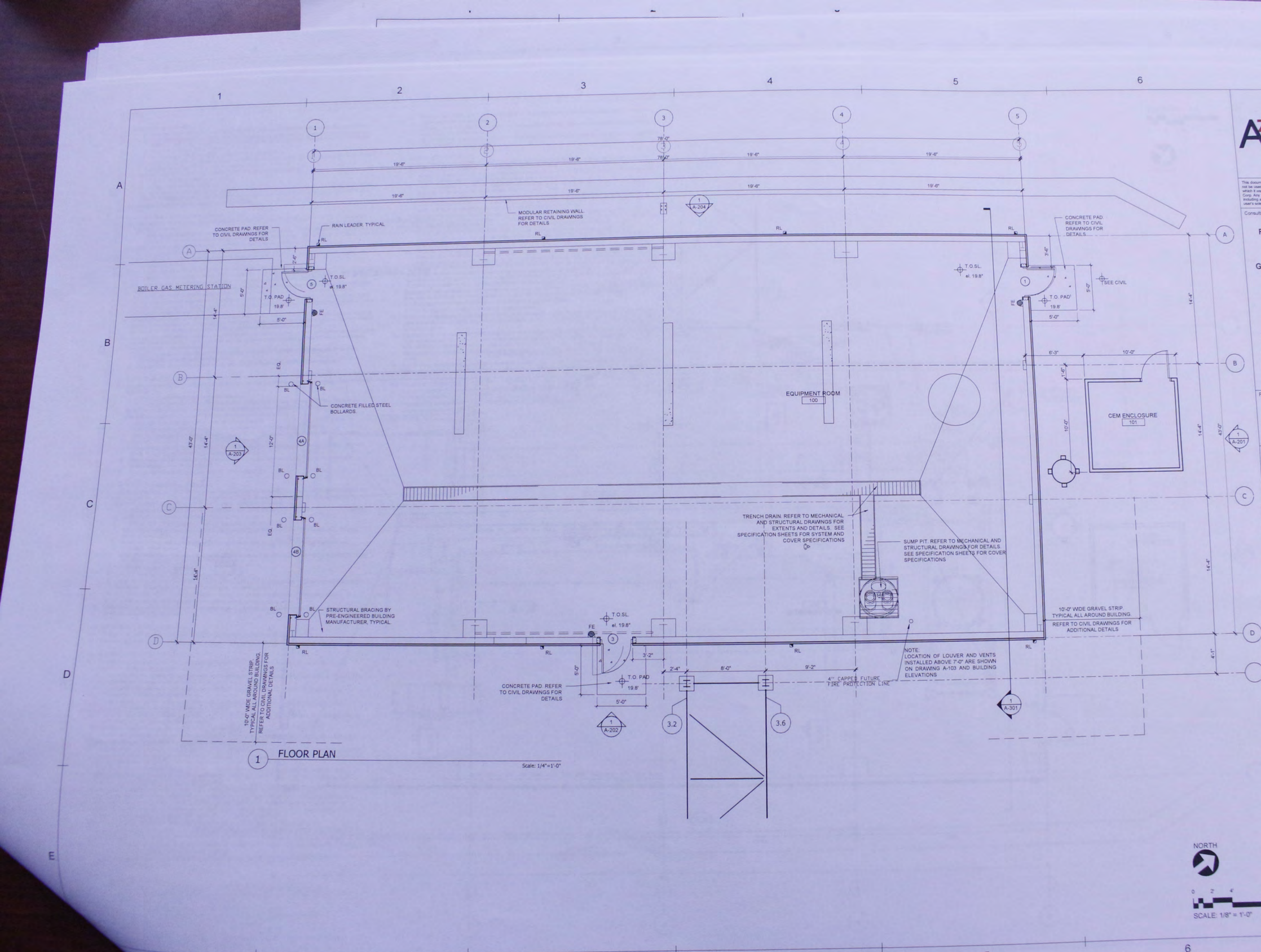
Seal

ARCHITECTURE

GENERAL ARRANGEMENT PLAN

Date:	
Drawn By:	KA
Checked By:	AZ
Scale:	AS NOTED
Project #:	

A-101



AZ DESIGN
A/Z Design Services LLC
800.406.2420 | a-zzorg.com
46 Norwich Westerly Road
P.O. Box 370
North Stonington, CT 06359

Consultants

Civil
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36 John Street
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Structural
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10 Waterchase Drive
Rocky Hill, Connecticut

Mech./Elec./Plumbing/Fire-Protection
N K ENGINEERS INC
755 main Street, Building 4
Monroe, Connecticut

SAREN ENGINEERING INC
270 Farmington Avenue
Farmington, Connecticut

Project
RockTenn

NEW BOILER INSTALLATION
125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

Rev	Description	Date
-	PERMIT	2/27/2015
0	CONSTRUCTION	4/27/2015
1	AS-BUILT	1/18/2016

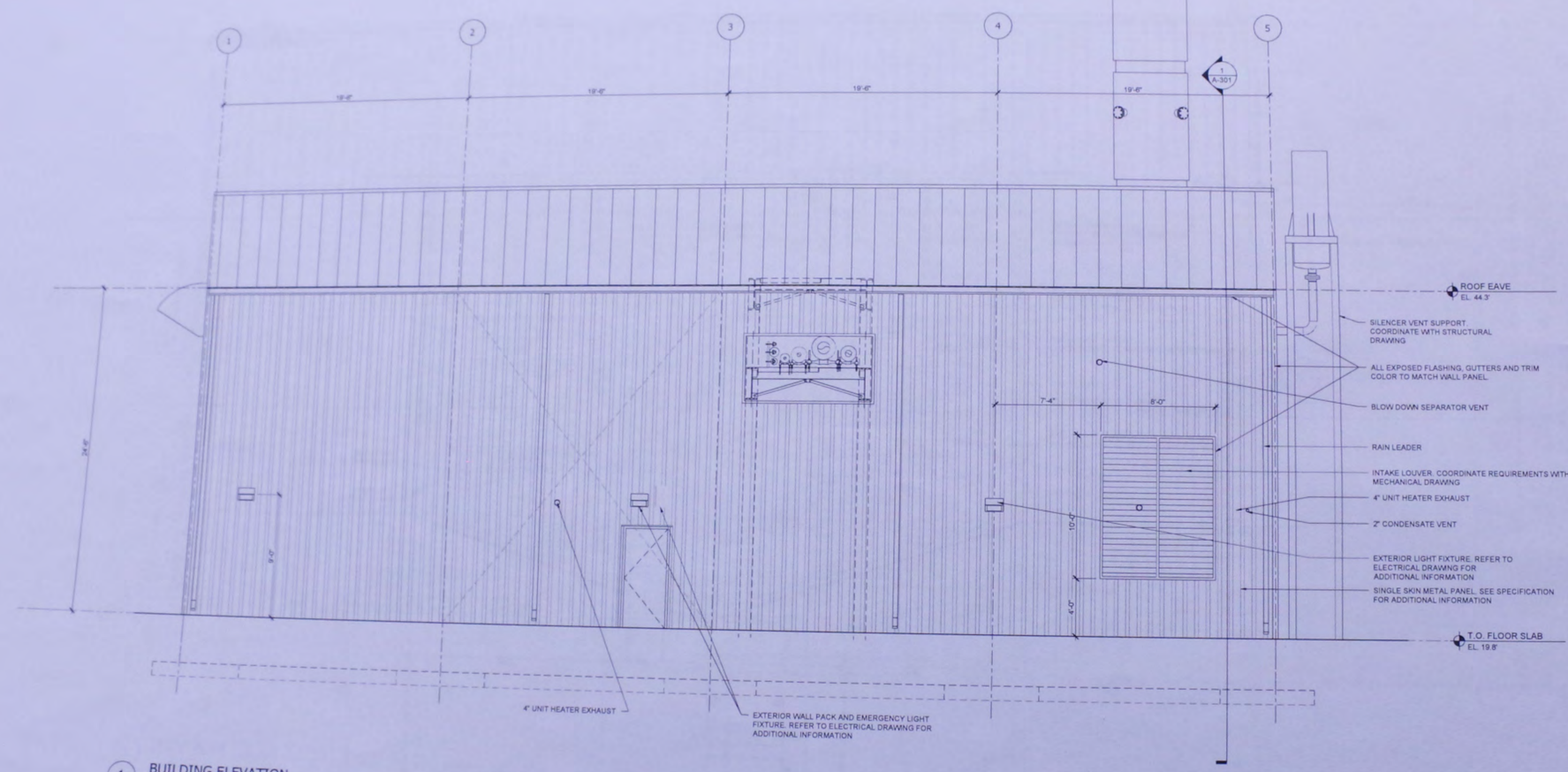
Seal

ARCHITECTURE

FLOOR PLAN

Date:	
Drawn By:	KN
Checked By:	AZ
Scale:	AS NOTED
Project #:	

A-102



1 BUILDING ELEVATION

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

AZ DESIGN
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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

Rev	Description	Date
-	PERMIT	2/27/2015
0	CONSTRUCTION	4/27/2015
1	AS-BUILT	1/18/2016

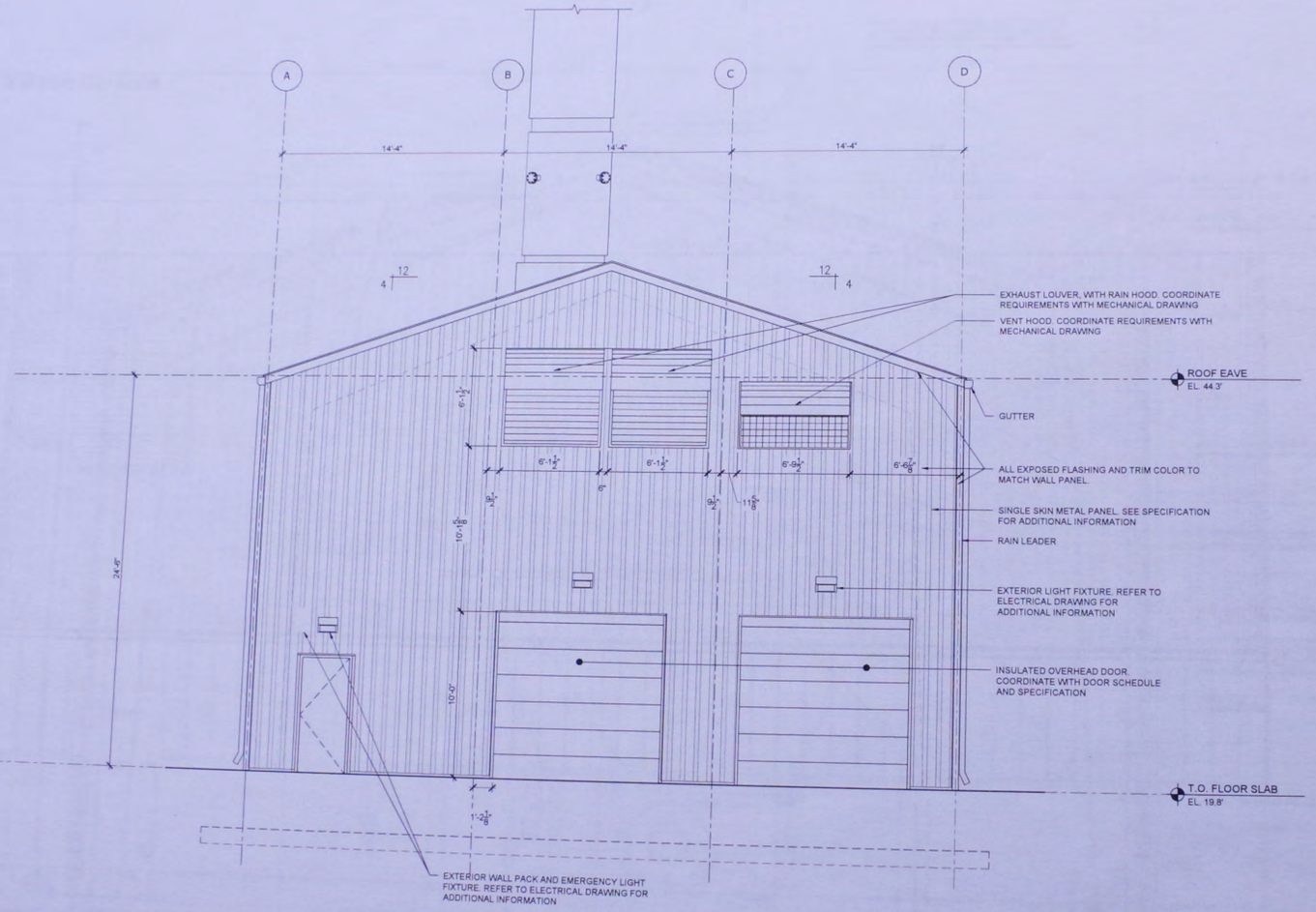
Seal

ARCHITECTURE

BUILDING ELEVATION

Date:	
Drawn By:	KA
Checked By:	AZ
Scale:	AS NOTED
Project #:	

A-202



1 BUILDING ELEVATION

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

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

Rev	Description	Date
-	PERMIT	2/27/2015
0	CONSTRUCTION	4/27/2015
1	AS-BUILT	1/18/2016

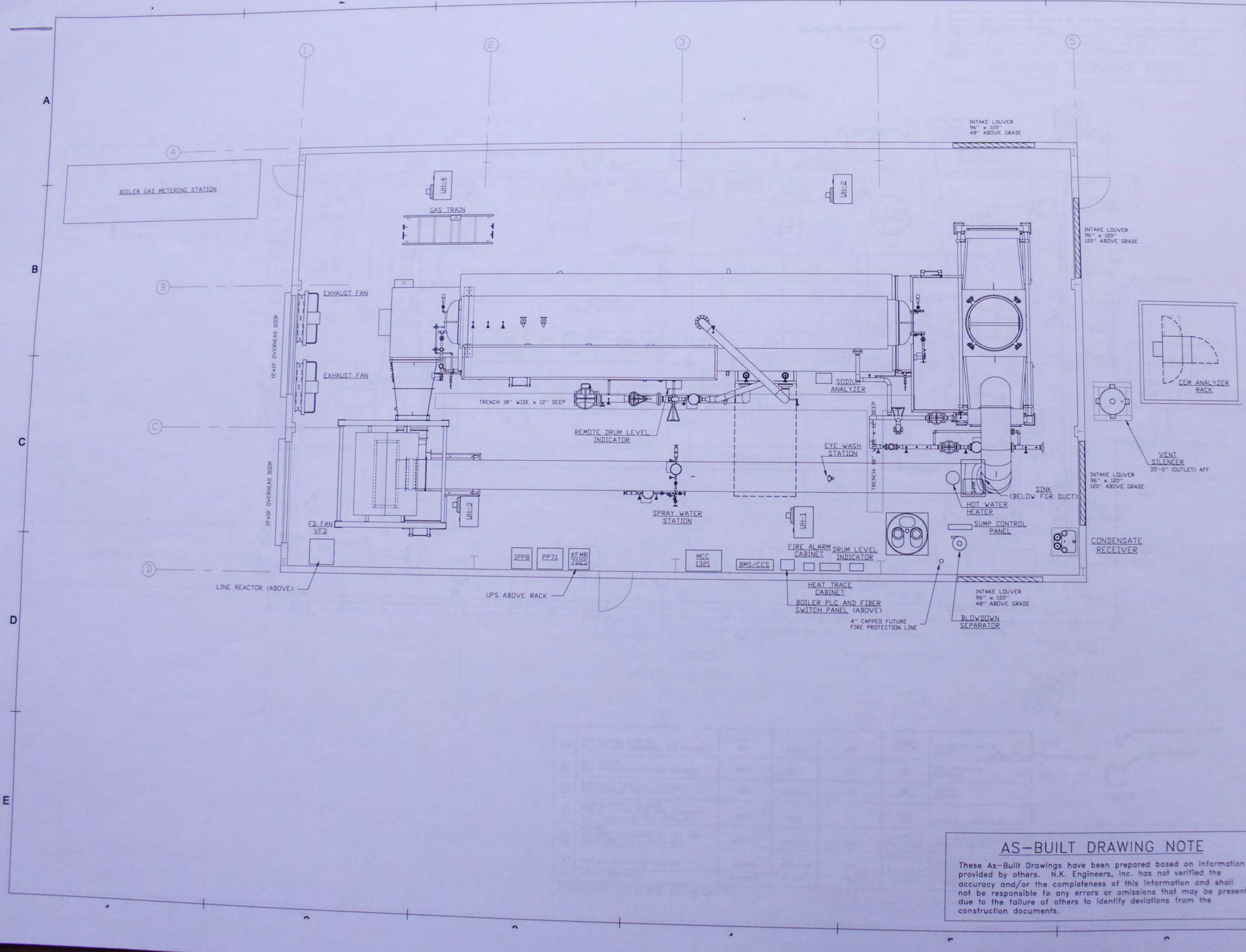
Seal

ARCHITECTURE

BUILDING ELEVATION

Date:	
Drawn By:	KA
Checked By:	AZ
Scale:	AS NOTED
Project #:	

A-203



AS-BUILT DRAWING NOTE

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

STATE OF CONNECTICUT · HAVEEN C. KAHUT · #13671 · LICENSED PROFESSIONAL ENGINEER

Rev	Description	Date
A	ISSUED FOR PERMIT	2/25/2015
B	REVISED GA	4/21/2015
0	ISSUED FOR CONSTRUCTION	4/22/2015
1	AS BUILT	12/30/2015

Seal

ELECTRICAL
GENERAL ARRANGEMENT

Date: 4/1/2014
Drawn By: ECL
Checked By: NCK
Scale: 1/4"=1'-0"
Project #:

E.101

LIGHTING FIXTURE SCHEDULE

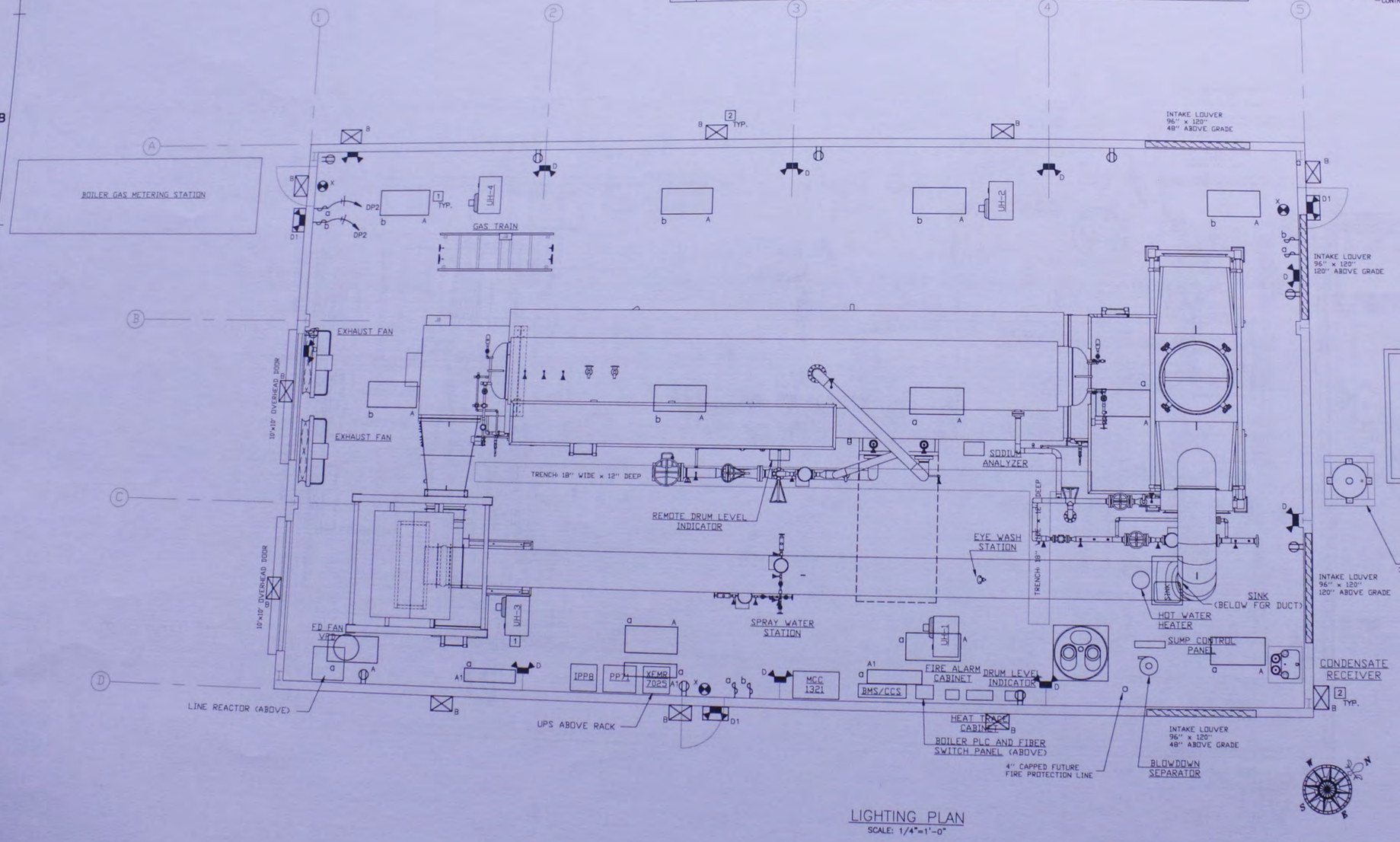
TYPE	FIXTURE DESCRIPTION	MOUNTING	VOLTAGE	LAMPS	SYMBOL	MFR. & CATALOG NO.
A	HIGH BAY CEILING MTD. FIXTURE	PENDANT	120/277V	LED		DONGBU LIGHTEC INC. SLH-100-UM-12-DD
A1	CEILING MTD. LED FIXTURES ABOVE ELECTRICAL EQUIPMENTS ON EAST SIDE OF BUILDING	PENDANT	120/277V	LED		METALUX, 4BCLED-LD4-48HL-F-UNV-L840-CD1
B	WALL MOUNTED OUTDOOR HEAVY DUTY LIGHTING FIXTURE WITH SELF CONTAINED PHOTOELECTRIC CONTROLS	WALL	208V	LED		LUMARK, XTOR5A-PC2
D	WALL MOUNTED DUAL HEAD EMERGENCY LIGHT WITH BATTERY	WALL	120/277V	LED		BEGHELLI PEH-1
X	WALL MOUNTED EMERGENCY EXIT SIGN WITH BATTERY	WALL	120V	LED		BEGHELLI BRZ-LE1-W-AT
D1	WET LOCATION EMERGENCY LED FIXTURE WITH BATTERY BACK UP	WALL	120/277V	LED		BEGHELLI TA-LED_SE-UNV-AT

NOTES:

1. 20' A.F.F.
2. 10' A.F.F.

LEGEND

- e — SWITCH DESIGNATION
- b — CONTROLS FIXTURES - DESIGNAED



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

1/4" = 1'-0"
0 1' 5' 10'

AS-BUILT DRAWING NOTE

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

STATE OF CONNECTICUT — KEVEEN C. KAUGH — #13571 — LICENSED PROFESSIONAL ENGINEER

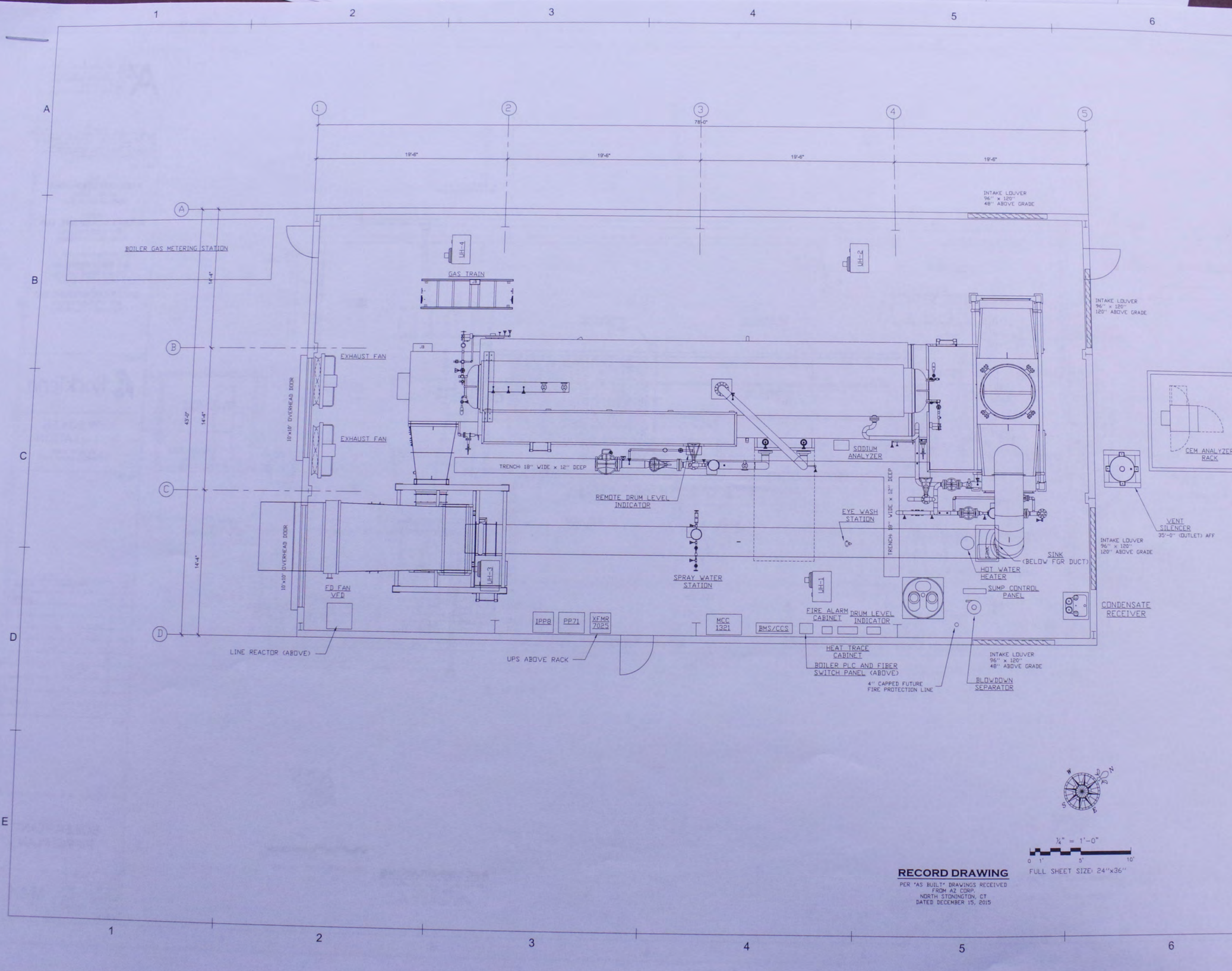
Rev	Description	Date
A	REV PER NEW GEN. ARRGMT	3/22/2015
B	ISSUED FOR PERMIT	3/26/2015
C	ADDED EXTERIOR EXIT LTS.	3/21/2015
D	REVISED GA	4/21/2015
0	ISSUED FOR CONSTRUCTION	4/22/2015
1	AS BUILT	12/30/2015

Seal

ELECTRICAL LIGHTING PLAN

Date: 4/1/2014
Drawn By: BCL
Checked By: MCK
Scale: 1/4"=1'-0"
Project #:

E.103



RECORD DRAWING

PER "AS BUILT" DRAWINGS RECEIVED FROM AZ CORP, NORTH STONINGTON, CT DATED DECEMBER 15, 2015

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

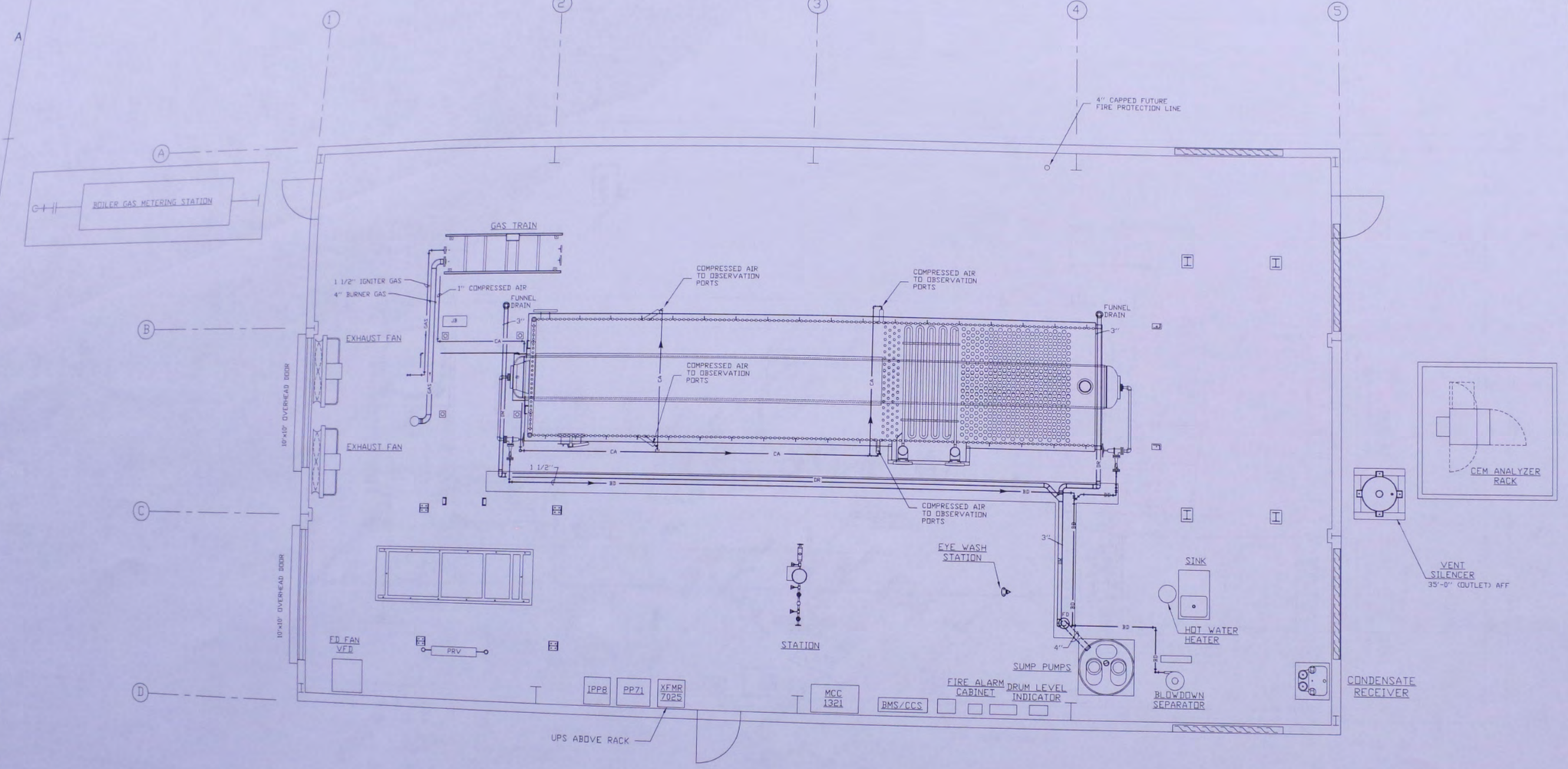
Rev	Description	Date
#	descr	2/15/2015
1	MOVED SINK AND PANELS	07-01-15

Seal

BOILER PLANT GENERAL ARRANGEMENT

Date:	04-22-15
Drawn By:	RDC
Checked By:	ROJ
Scale:	1/4"=1'-0"
Project #:	

GA-1



RECORD DRAWING
PER "AS BUILT" DRAWINGS RECEIVED FROM AZ CORP. NORTH STONINGTON, CT DATED DECEMBER 15, 2015

¼" = 1'-0"
0 1' 5' 10'
FULL SHEET SIZE: 24"x36"

AZ CORP
AZ Design Services, LLC
800.466.2426 | Worldwide
46 Norwich Westerly Road
P.O. Box 370
North Stonington, CT 06359

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

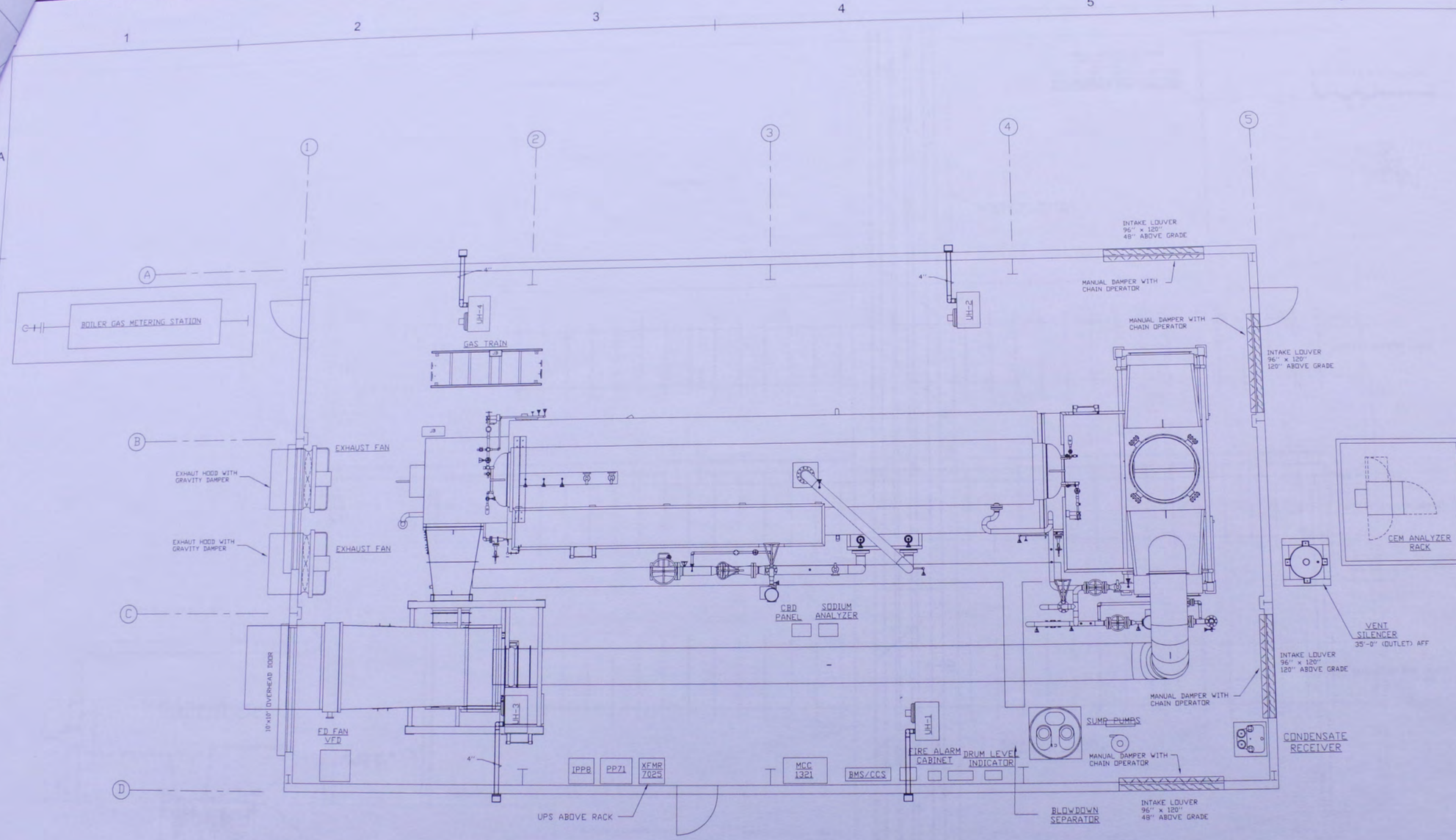
Rev	Description	Date
#	descr	2/15/2015

Seal

BOILER PLANT PIPING PLAN

Date:	04-22-15
Drawn By:	RDC
Checked By:	ROJ
Scale:	1/4"=1'-0"
Project #:	

M-1.1



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PER "AS BUILT" DRAWINGS RECEIVED
FROM AZ CORP.
NORTH STONINGTON, CT
DATED DECEMBER 15, 2015

1/4" = 1'-0"

0 1' 5' 10'

FULL SHEET SIZE: 24"x36"

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46 Norwich Westerly Road
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North Stonington, CT 06359

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

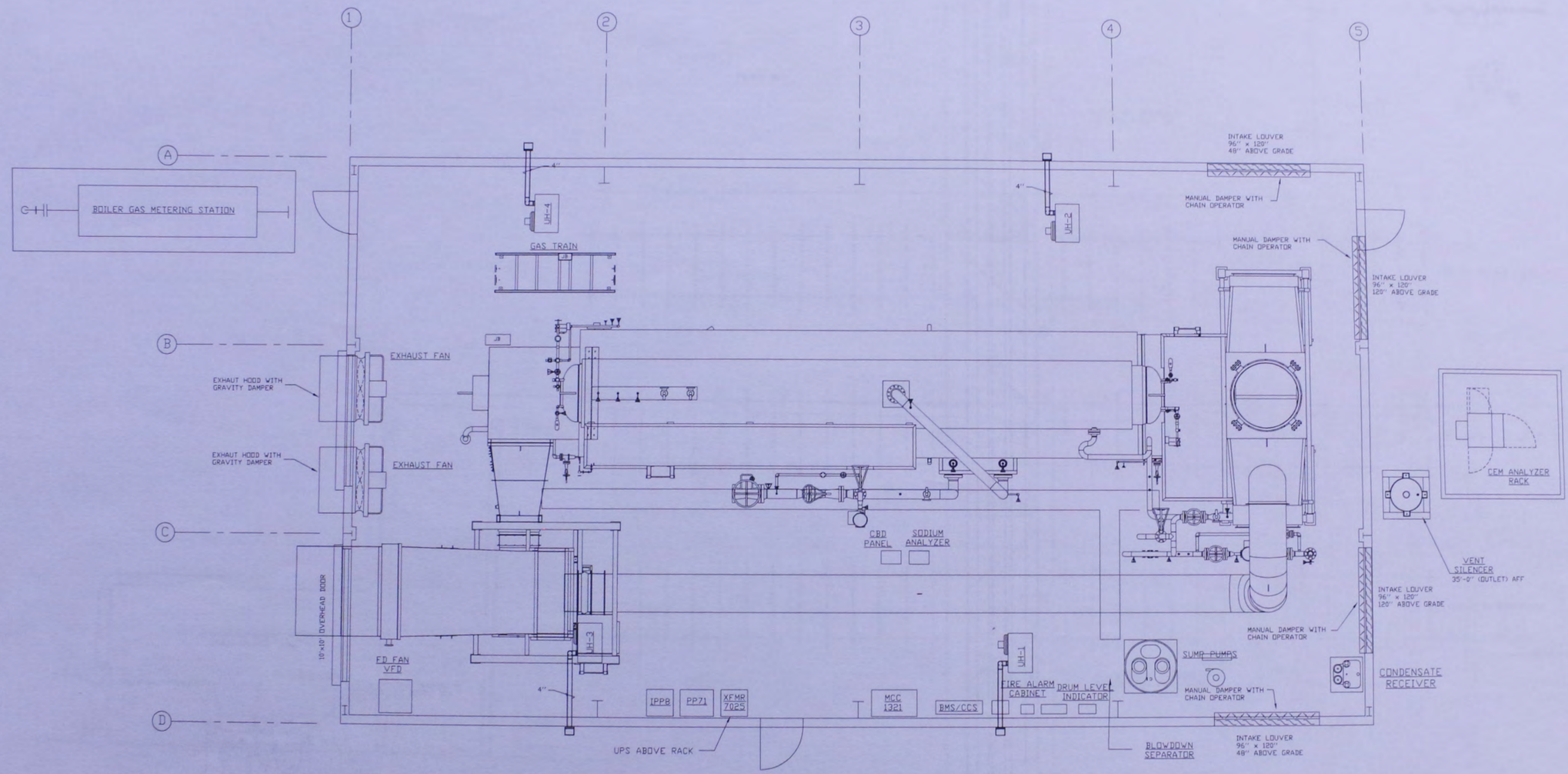
Rev	Description	Date
#	descr	2/15/2015

Seal

BOILER PLANT HEATING AND VENTILATION

Date:	04-22-15
Drawn By:	RDC
Checked By:	ROJ
Scale:	1/4"=1'-0"
Project #:	

M-1.2



RECORD DRAWING

PER 'AS BUILT' DRAWINGS RECEIVED FROM AZ CORP. NORTH STONINGTON, CT DATED DECEMBER 15, 2015

¼" = 1'-0"

FULL SHEET SIZE: 24"x36"

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A/Z Design Services LLC
800.400.2420 | a-zcorp.com
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755 main Street, Building 4
Monroe, Connecticut

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270 Farmington Avenue
Farmington, Connecticut

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

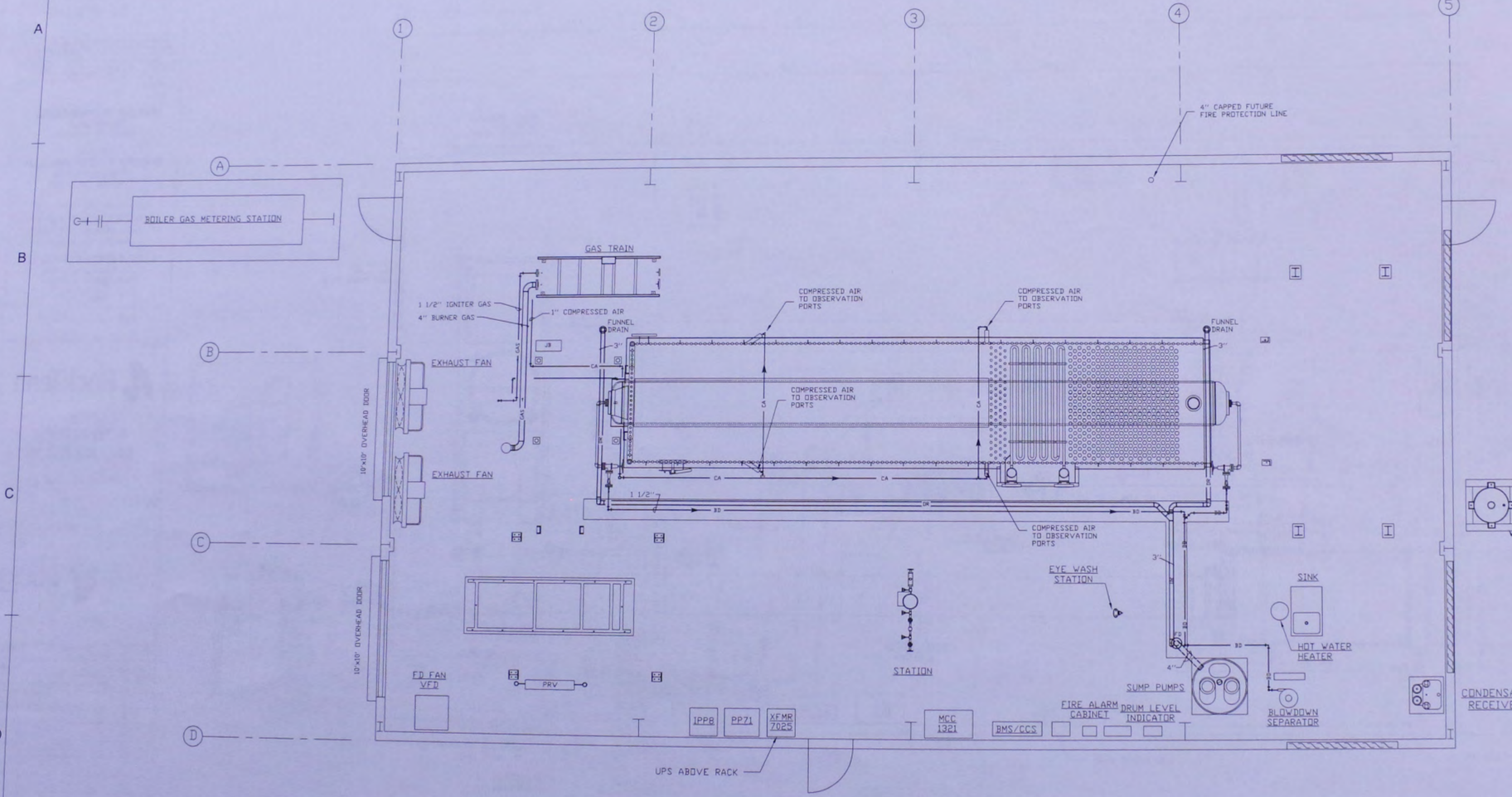
Rev	Description	Date
#	descr	2/15/2015

Seal

BOILER PLANT HEATING AND VENTILATION

Date:	04-22-15
Drawn By:	RDC
Checked By:	ROJ
Scale:	1/4"=1'-0"
Project #:	

M-1.2



RECORD DRAWING

PER "AS BUILT" DRAWINGS RECEIVED FROM AZ CORP. NORTH STONINGTON, CT DATED DECEMBER 15, 2015

¼" = 1'-0"

0 1' 5' 10'

FULL SHEET SIZE: 24"x36"

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

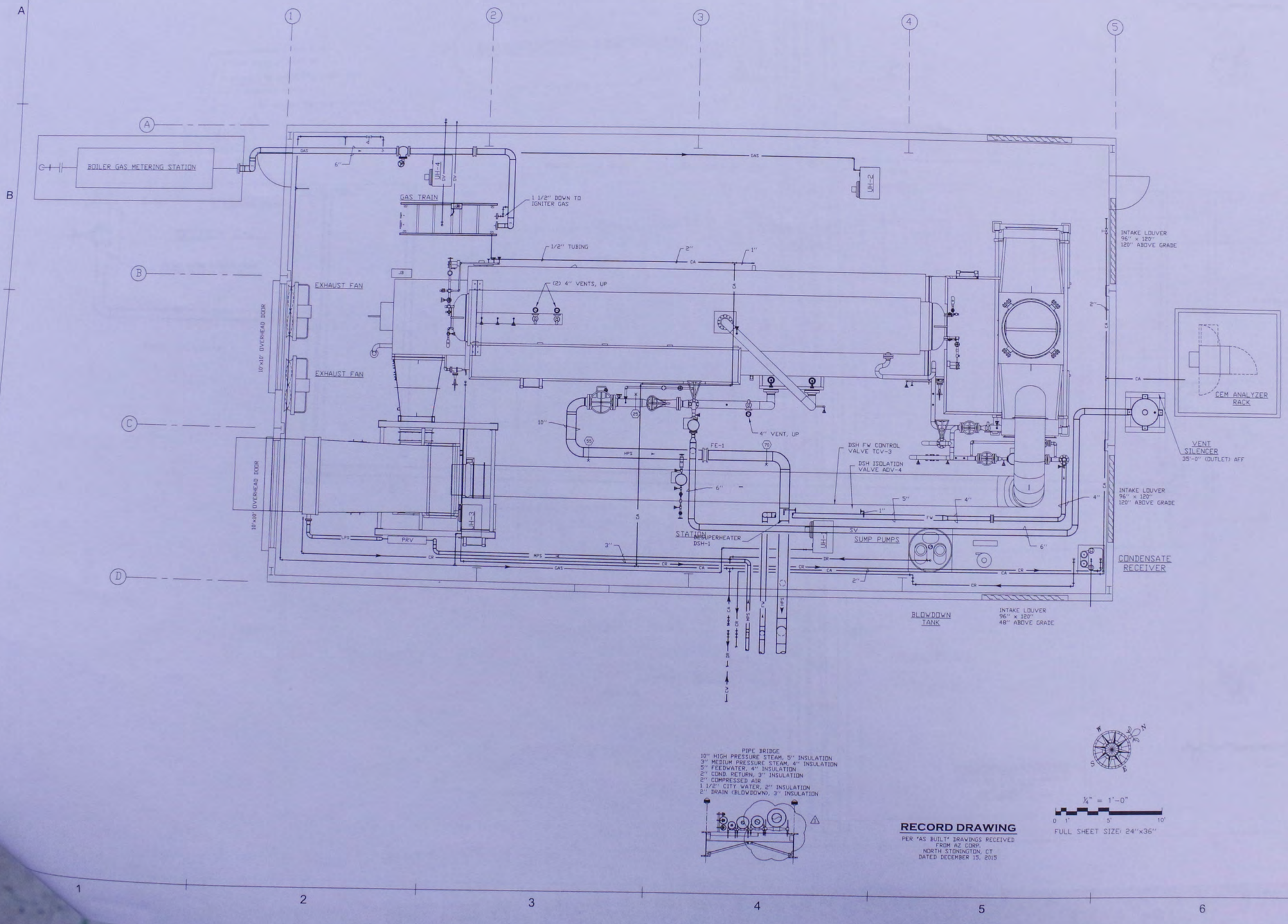
Rev	Description	Date
#	descr	2/15/2016

Seal

BOILER PLANT PIPING PLAN

Date:	04-22-15
Drawn By:	RDC
Checked By:	RDJ
Scale:	1/4"=1'-0"
Project #:	

M-1.1



PIPE BRIDGE
10" HIGH PRESSURE STEAM, 5" INSULATION
3" MEDIUM PRESSURE STEAM, 4" INSULATION
5" FEEDWATER, 4" INSULATION
2" COND RETURN, 3" INSULATION
2" COMPRESSED AIR
1 1/2" CITY WATER, 2" INSULATION
2" DRAIN (BLOWDOWN), 3" INSULATION

RECORD DRAWING
PER "AS BUILT" DRAWINGS RECEIVED FROM AZ CORP, NORTH STONINGTON, CT DATED DECEMBER 15, 2015

1/4" = 1'-0"
FULL SHEET SIZE: 24"x36"

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AZ Design Services LLC
860.406.2425 | ik-tzcps.com
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NEW BOILER INSTALLATION
125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

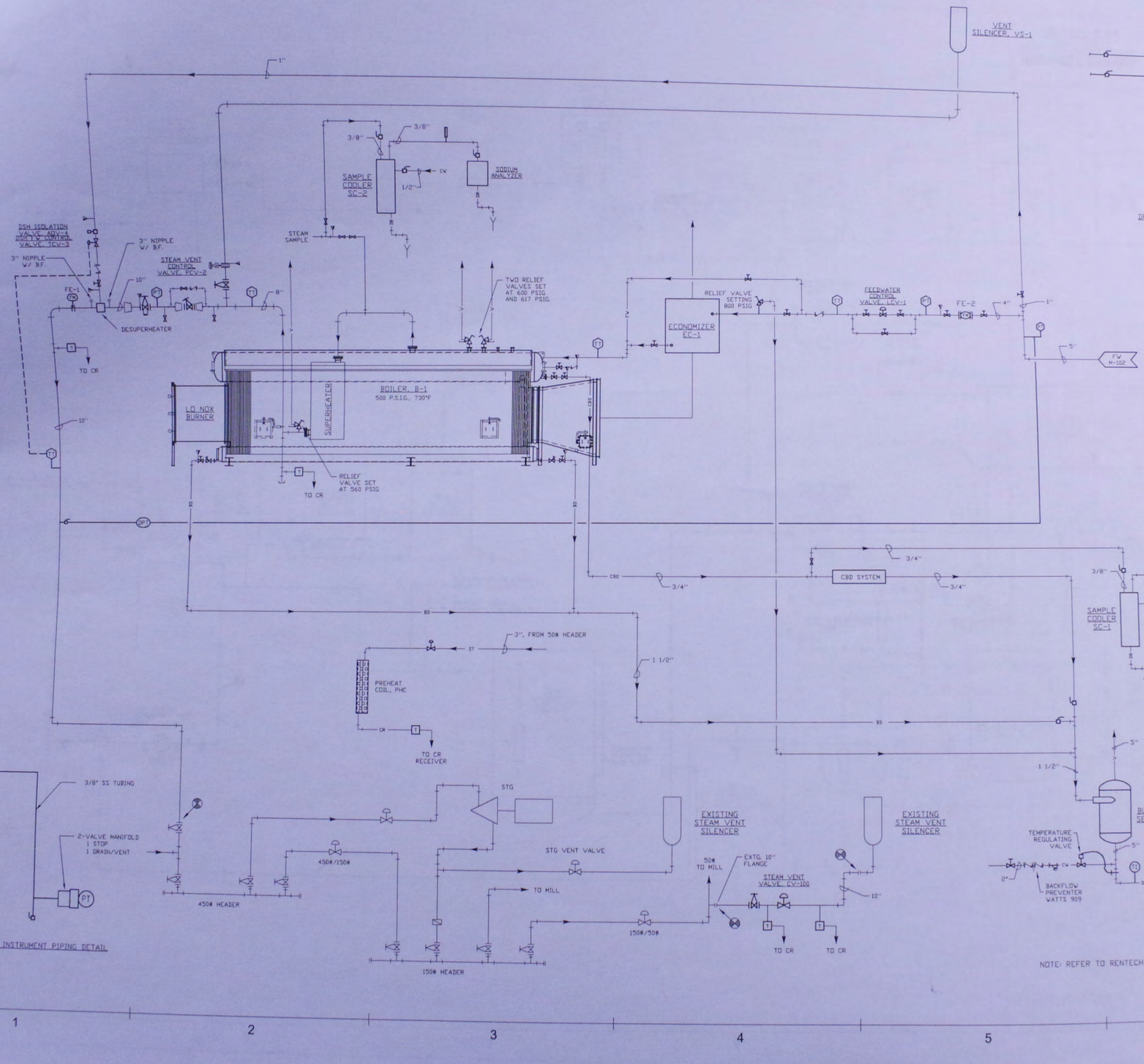
Rev	Description	Date
#	descr	2/15/2015
⚠	RELOCATED HPS AND FW PIPE	06/04/15

Seal

BOILER PLANT PIPING PLAN

Date:	04-22-15
Drawn By:	RDC
Checked By:	ROJ
Scale:	1/4"=1'-0"
Project #:	

M-1



RECORD DRAWING

PER "AS BUILT" DRAWINGS RECEIVED FROM AZ CORP. NORTH STONINGTON, CT DATED DECEMBER 15, 2015

NOTE: REFER TO RENTECH DRAWING 14-41-21 LATEST REVISION

FULL SIZE SHEET: 24"x36"

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

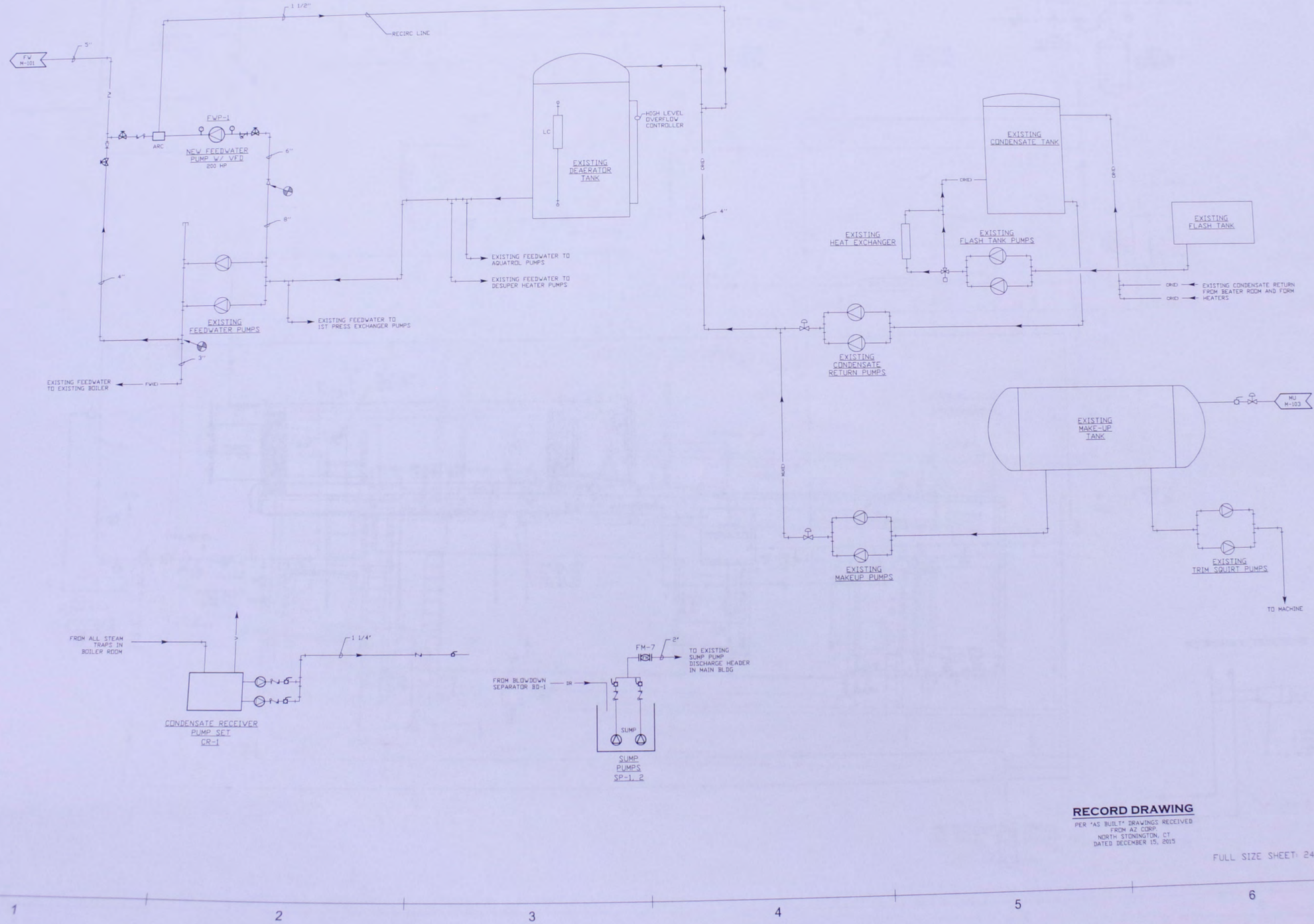
Rev	Description	Date
#	descr	2/15/2013

Seal

STEAM AND FEEDWATER PIPING SCHEMATIC

Date:	08-17-15
Drawn By:	MRM
Checked By:	ROJ
Scale:	NONE
Project #:	

M-101



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DATED DECEMBER 15, 2015

FULL SIZE SHEET: 24"x36"

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NEW BOILER
INSTALLATION
125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

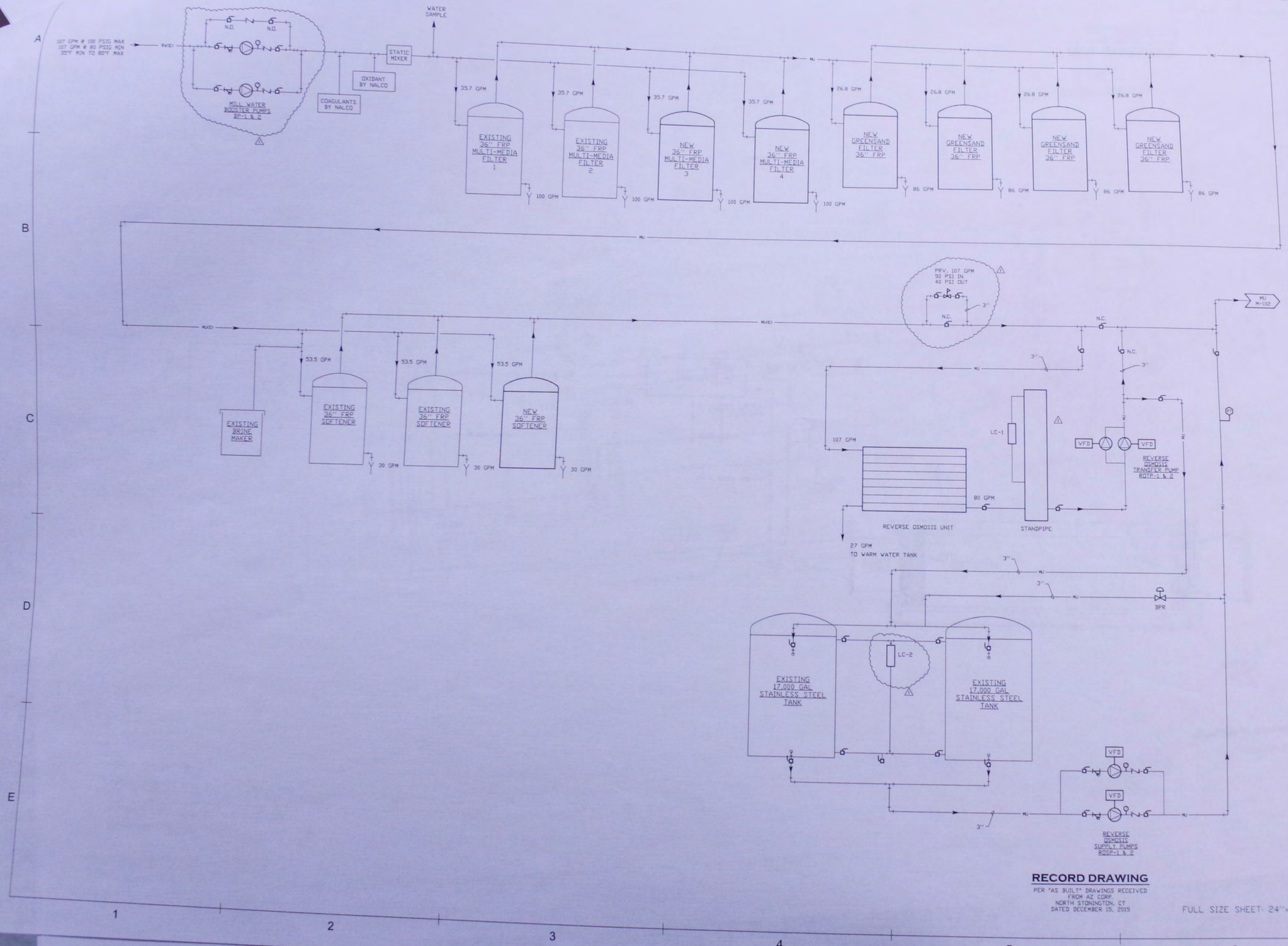
Rev.	Description	Date
#	descr	2/15/2015

Seal

MAKEUP CONDENSATE
TRANSFER SYSTEM
PIPING SCHEMATIC

Date:	08-17-15
Drawn By:	RDC / MRM
Checked By:	ROJ
Scale:	NONE
Project #:	

M-102



RECORD DRAWING

PER "AS BUILT" DRAWINGS RECEIVED
FROM AZ CORP.
NORTH STONINGTON, CT
DATED DECEMBER 15, 2015

FULL SIZE SHEET: 24"x36"

AZ CORP
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Farmington, Connecticut

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NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

Rev	Description	Date
#	descr	2/15/2015
1	ADDED PRV, PUMPS BP-1&2	08-11-15

Seal

MAKEUP PIPING SCHEMATIC

Date:	08-17-15
Drawn By:	MRM
Checked By:	ROJ
Scale:	NONE
Project #:	

M-103

STRUCTURAL NOTES

A. GENERAL

A1. UNLESS OTHERWISE NOTED WITHIN THE STRUCTURAL DRAWINGS, THE SECTIONS AND DETAILS SHOWN SHALL BE CONSIDERED TYPICAL AND CONTIGUOUS AND SHALL BE APPLICABLE TO SIMILAR CONDITIONS WITHIN THE PROJECT SCOPE.

A2. THE STRUCTURAL DRAWINGS, INCLUDING ALL PLANS, SECTIONS, DETAILS AND SPECIFICATIONS, SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS, SITE/CIVIL/LANDSCAPE DRAWINGS, MECHANICAL/ELECTRICAL/PLUMBING DRAWINGS AND VENDOR CERTIFIED DIMENSION DRAWINGS TO PREPARE SHOP DRAWINGS WITH SUFFICIENT DETAIL AND DIMENSIONS TO COMPLETE THE WORK.

A3. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTORS SHALL VERIFY ALL EXISTING CONDITIONS THAT WILL EFFECT THE LAYOUT AND SEQUENCING OF THERE WORK.

A4. EXISTING BUILDING INFORMATION, DIMENSIONS AND ELEVATIONS ARE TAKEN FROM OWNER PROVIDED DRAWINGS AND SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTORS. INCONSISTENCIES BETWEEN EXISTING CONDITIONS AND THE INFORMATION PROVIDED IN THESE DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR INTERPRETATION AND DIRECTION.

A5. ATTACHMENT AND SUPPORT OF MECHANICAL EQUIPMENT SHALL FOLLOW THE MANUFACTURER INSTALLATION INSTRUCTIONS.

A6. THE STRUCTURE HAS BEEN ENGINEERED TO BE SELF SUPPORTING ONCE THE WORK IS COMPLETE. THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE STRUCTURES STABILITY DURING CONSTRUCTION INCLUDING MEANS METHODS OF ERECTION, TEMPORARY SHORING AND TEMPORARY BRACING.

A7. THE CONTRATOR SHALL PROVIDE AND BE RESPONSIBLE FOR FOLLOWING ALL APPLICABLE SAFTEY CODES AND REGULATIONS DURING ALL PHASES OF THE WORK.

A8. INSPECTION AND MATERIALS TESTING SHALL BE AS SPECIFIED IN THE DRAWINGS AND THE "SCHEDULE OF SPECIAL INSPECTIONS" DOCUMENT.

A9. ALL MECHANICAL OR ADHESIVE ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTALLATION REQUIREMENTS.

A10. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL ROOF AND FLOOR OPENINGS WITH ARCHITECTURAL AND MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS.

B. DESIGN INFORMATION

B1. ALTERATIONS TO THE BUILDING STRUCTURE HAVE BEEN ENGINEERED IN ACCORDANCE WITH THE APPLICABLE STRUCTURAL PROVISIONS IN THE BUILDING CODE LISTED IN THE DESIGN DATA TABLE.

B2. REFER TO THE DESIGN DATA TABLE FOR THE APPICABLE CODES AND DESIGN REFERENCES USED IN THE ENGINEERING OF WORK PRESENTED IN THESE DOCUMENTS.

B3. REFER TO THE DESIGN DATA TABLE FOR LIVE LOADS, SNOW LOADS, WIND LOADS, SEISMIC LOADS AND RELATED DESIGN PARAMETERS.

B4. THE ALLOWABALE SOIL BEARING CAPACITY HAS BEEN ASSUMMED TO BE x,xxx POUNDS PER SQUARE FOOT FOR SHALLOW FOUNDATION DESIGN. THIS BEARING CAPACITY SHALL BE VERIFIED IN THE FIELD BY A QUALIFIED GEOTECHNICAL ENGINEER ENGAGED BY THE OWNER. FOOTINGS SHALL NOT BE PLACED WITHOUT APPROVAL FROM THE GEOTECHNICAL ENGINEER.

B5. THE DESIGN LOADING FOR MECHANICAL EQUIPMENT SPECIFIED IN THE WORK IS BASED ON THE OPERATIONAL WEIGHT AND DYNAMIC FORCES PUBLISHED IN MANUFACTURERS CUT SHEET DATA AT THE TIME OF THE DESIGN.

C. BUILDING EARTHWORK

C1. ALL AREAS WITHIN THE STRUCTURE WILL BE STRIPPED OF EXISTING FILL MATERIALS AND REPLACED WITH CONTROLLED STRUCTURAL FILL TO REQUIRED ELEVATIONS.

C3. EXCAVATIONS IN WET AREAS SHALL BE PROTECTED FROM MODELING OF THE SOIL WITH A 6 INCH LAYER OF BROKEN STONE PLACED OVER A GEOTEXTILE FABRIC AT THE EXCAVATED SUBGRADE ELEVATION. SOIL BEARING CAPACITY OF THE SUBGRADE SHALL BE VERIFIED PRIOR TO THE PLACEMENT OF THE GEOTEXTILE AND STONE.

C2. FLOW OF GROUND WATER THROUGH EXCAVATIONS SHALL BE CONTROLLED BY THE CONTRACTOR DURING THE FOUNDATION AND EARTHWORK CONSTRUCTION TO ELIMINATE DISTURBANCE OF THE EXCAVATED SURFACES.

C3. ALL CONTROLLED STRUCTURAL FILL SHALL BE PLACED IN 8"-12" LAYERS AND COMPACTED WITH MECHANICAL VIBRATORS TO A MINIMUM OF 95% PROCTOR DENSITY AS DEFINE BY ASTM D1557. REFER TO GEOTECHNICAL ENGINEERING REPORT FOR ADDITIONAL REQUIREMENTS AND GUIDELINES.

C4. FOUNDATION WALLS ARE NOT TO BE BACKFILLED UNTIL CONCRETE HAS BEEN IN PLACE A MINIMUM OF SEVEN (7) DAYS AND TOP OF WALLS ARE PROPERLY BRACED WITH PERMANENT FRAMING OR TEMPORARY SHORING. UNLESS BACKFILLED EVENLY BOTH SIDES TO TOP OF FINISH GRADE.

D. FOOTINGS

D1. ELEVATION OF BOTTOM OF FOOTINGS TO BE VERIFIED WITH FIELD CONDITIONS.

D2. FOOTINGS ARE TO BE PLACED ON NATURAL INORGANIC SOILS OR ON CONTROLLED STRUCTURAL FILLS OVER NATURAL INORGANIC SOILS HAVING A MINIMUM SOIL BEARING CAPACITY AS STATED IN THE DESIGN INFORMATION.

D3. ALL BOTTOM OF FOOTING ELEVATIONS SHALL EXTEND A MINIMUM OF 3'-6" BELOW FINISH GRADES FOR FROST PROTECTION.

D4. ALL FOOTINGS SHALL BE A MINIMUM OF 12 INCHES THICK AND EXTEND 4 INCHES BEYOND EACH FACE OF THE SUPPORTED WALL OR 9 INCHES BEYOND EACH FACE OF THE SUPPORTED PIER, UNLESS DIMENSIONED OTHERWISE.

D5. ALL FOOTINGS, CONTINUOUS AND SPREAD TYPE, SHALL BE REINFORCED.

D6. FOOTING GEOMETRY AND REINFORCING SHALL BE CENTERED ON WALLS AND/OR PIERS, UNLESS DIMENSIONED OTHERWISE.

E. CONCRETE

E1. CONCRETE STRENGTH AT 28 DAYS SHALL BE AS INDICATED IN DESIGN DATA.

E2. PROTECTIVE COVER, SPLICE LAP AND EMBEDMENT FOR REINFORCING STEEL SHALL BE PER LATEST ACI SPECIFICATION AS NOTED IN THE DESIGN DATA SCHEDULE.

E3. CONTINUOUS WALL POURS SHALL NOT EXCEED 60 FEET IN ONE DIRECTION.

E4. ALL CONCRETE WALLS ARE TO BE REINFORCED. IF NOT SPECIFICALLY SHOWN OR SIMILARLY DETAILED, PROVIDE 2 # 5 BARS TOP AND BOTTOM CONTINUOUS AND # 4 BARS AT 12" ON CENTER BOTH WAYS BOTH FACES.

E5. ALL SLABS ON GRADE SHALL BE REINFORCED WITH 6x6-W2.1xW2.1 WELDED WIRE FABRIC MINIMUM. ALL WELDED WIRE FABRIC SHALL BE SUPPLIED IN FLAT SHEETS ONLY. UNLESS OTHERWISE DETAILED LOCATE WELDED WIRE FABRIC AT THE MID DEPTH OF THE SLAB.

E6. THE SIZE OF A SINGLE SLAB ON GRADE PLACEMENT SHALL BE LIMITED TO AN AREA THAT CAN BE SAW-CUT AT THE PROPER TIME WITHOUT EXTENSIVE DELAY. AREA BETWEEN SAW-CUTS SHALL BE ROUGHLY SQUARE AND NOT EXCEED 144 SQUARE FEET, OR 36 TIMES THE DEPTH OF THE SLAB.

E7. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. ALL CONCRETE SHALL BE MOISTURE (WET) CURED FOR SEVEN DAYS IN ACCORDANCE WITH ACI-308.1

F. STRUCTURAL STEEL

F1. ALL CONNECTIONS SHALL BE DETAILED BY THE STEEL FABRICATOR TO SUPPORT THE UNIFORM LOAD TABLE'S MAXIMUM UNIFORM LOAD AS CALLED FOR IN THE A.I.S.C. UNLESS THE REACTIONS ARE INDICATED ON THE PLANS.

F2. WELDING TO EXISTING STEEL SURFACES SHALL BE CONDUCTED IN ACCORDANCE WITH AWS D1.1 REQUIREMENTS. WHEN WELDING SURFACE PREPARATION REQUIRES THE REMOVAL OF PAINT THE OWNER SHALL PROVIDE APPROPRIATE DOCUMENTATION AS TO THE IDENTIFICATION OF ANY LEAD BASED PAINT AND SHALL PROVIDE THE REMOVAL OR ABATEMENT OF LEAD BASED PAINT IN THE AREA TO BE WELDED. REMOVAL AND DISPOSAL OF LEAD BASED PAINT SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

F3. ALL BOLTED CONNECTIONS SHALL USE HIGH STRENGTH A325 OR A490 BOLTS

F4. ALL WELDED CONNECTIONS SHALL USE E70-XX ELECTRODES

F5. STAIR FRAMING ARRANGEMENT SHOWN FOR GENERAL LOAD PATH ONLY. SEE SPECIFICATIONS FOR ENGINEERING REQUIREMENTS. REFER TO ARCHITECTS DRAWINGS FOR RAILINGS, STRINGERS, RISERS, TREADS, HANDRAILS, MISCELLANEOUS STEEL.

F6. ALL STEEL AND CONNECTING HARDWARE EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123, ASTM 153, OR ASTM A653 AS APPLICABLE.

G. PRE-ENGINEERED METAL BUILDING

G1. FRAMING PLANS SHOWING DIAGRAMTIC LAYOUTS FOR ROOF PURLINS, BRACING, GIRTS AND RIGID FRAME LOCATIONS HAVE BEEN PROVIDED TO FORM A BASIS FOR DESIGN AND INCORPORATE ADDITIONAL SUB-SYSTEMS THAT INTERFACE WITH THE METAL BUILDING SYSTEM. THE METAL BUILDING SYSTEMS MANUFACTURER SHALL REVIEW ALL DETAILS SPECIFICATIONS, AND DESIGN DATA PRIOR TO PRODUCING ENGINEERING DRAWINGS FOR REVIEW.

H. SUBMITTALS

H1. SHOP DRAWINGS SHALL BE PROVIDED IN ELECTRONIC PDF FORMAT. ONE PAPER COPY OF THE FOLLOWING SUBMITTALS SHALL BE PROVIDED TO THE REVIEWING ENGINEER FOR THEIR USE.

- CONCRETE REBAR
- ANCHOR BOLT PLANS
- STRUCTURAL STEEL
- METAL BUILDING SYSTEM DRAWINGS

H2. PRODUCT DATA, DESIGN MIXES, ENGINEERING CALCULATIONS SHALL BE SUBMITTED IN ELECTRONIC PDF FORMAT ONLY.

H3. ELECTRONIC PDF SUBMITTALS WILL BE RETURNED WITHIN 14 DAYS

COMPONENTS AND CLADDING DESIGN WALL PRESSURES

HEIGHT ABOVE GROUND LEVEL	ZONE 4		ZONE 5	
	(+) PSF	(-) PSF	(+) PSF	(-) PSF
0-15 FT.	(+) 20.9	(-) 31.4	(+) 20.9	(-) 30.7
20 FT.	(+) 30.6	(-) 33.2	(+) 30.6	(-) 40.9
25 FT.	(+) 32.0	(-) 34.7	(+) 32.0	(-) 42.0
30 FT.	(+) 33.3	(-) 36.1	(+) 33.3	(-) 44.6
35 FT.	(+) 34.3	(-) 37.2	(+) 34.3	(-) 45.9
40 FT.	(+) 35.4	(-) 30.4	(+) 35.4	(-) 47.4

NOTES:
1. VALUES BASED ON ASCE7-02 AND THE WIND LOAD PARAMETERS LISTED IN THE DESIGN DATA FOR WALL COMPONENT AREAS LESS THAN 10 SF AND Kzt=1.0
2. REFER TO ASCE7-02 FIGURE 6-11A FOR WALL ZONE LOCATIONS NOTED 4 AND 5 IN THE CHART ABOVE.
3. NEGATIVE VALUES (-) INDICATE WIND PRESSURES ACTING AWAY FROM WALL SURFACE.
4. POSITIVE VALUES (+) INDICATE WIND PRESSURES ACTING TOWARDS WALL SURFACE.

ABBREVIATIONS

ARCH.	ARCHITECTURAL
B.	BOTTOM
B.F.	BOTTOM OF FOOTING
BP	BEARING PLATE
C.C.	CENTER TO CENTER
C.J.	CONTROL JOINT
CANTIL.	CANTILEVER
CONC.	CONCRETE
DIA.	DIAMETER
DWG.	DRAWING
EA.	EACH
E.J.	EXPANSION JOINT
ELEV.	ELEVATION
HD	HOLD DOWN
HKP	HOUSEKEEPING PAD
K	KIP
K/FT.	KIP-FOOT
LBS.	POUNDS
LGMF	LIGHT GAGE METAL FRAMING
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MEP	MECHANICAL, ELECTRICAL, PLUMBING
O.C.	ON CENTER
P.A.F.	POWDER ACTUATED FASTENER
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
P/C	PRE-CAST
REINF.	REINFORCED
S.F.	STEP FOOTING
SIM.	SIMILAR
STL.	STEEL
SW	SHEAR WALL
T.	TOP
T.F.	TOP OF PIER
T.S.	TOP OF SHELF
T.W.	TOP OF WALL
TYP.	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
W/	WITH
W.W.F.	WELDED WIRE FABRIC
WD.	WOOD
WF	WIDE FLANGE

DESIGN DATA

CODES USED

2003 INTERNATIONAL BUILDING CODE
2005 CONNECTICUT STATE SUPPLEMENT WITH 2009, 2011 AND 2013 AMENDMENTS

ASCE/SEI 7-02
A.I.S.C. 335-04b1
A.C.I. 318-02

STRESSES USED

SOIL BEARING CAPACITY:
CONTROLLED FILL 5,000 p.s.f.

CONCRETE AND MASONRY:
FOUNDATION FOOTINGS F'_c = 3,000 p.s.i.
INTERIOR WALLS F'_c = 3,000 p.s.i.
EXTERIOR WALLS F'_c = 3,500 p.s.i.
SLAB ON GRADE F'_c = 3,000 p.s.i.
REINFORCING STEEL A.S.T.M. GR. 60

STRUCTURAL STEEL
BEAMS, GIRDERS & PIP COLUMNS A992 F_y = 50.0 k.s.i.
TUBE STEEL COLUMNS & BEAMS A500 GR. B F_y = 50.0 k.s.i.
MISC. SHAPES A36 F_y = 36.0 k.s.i.

LOCATION \ LOAD (PSF)	LIVE LOAD	SLAB -OR- DECK	ROOFING -OR- FINISH	CEILING	FRAMING	MISC.	DEAD TOTAL
SLOPED ROOF AREAS + DRIFT	30 [1]	3	4	0	8	5	20 / 50

1. LOADING TO BE INCREASED IN AREAS OF SNOW DRIFTING AS REQUIRED BY CONNECTICUT STATE BUILDING CODE.

DESIGN PARAMETERS - WIND, SNOW, AND EARTHQUAKE

SNOW DATA

BUILDING OCCUPANCY CATEGORY	CATEGORY II
GROUND SNOW LOAD	P_g = 30 p.s.f.
FLAT ROOF SNOW LOAD	P_f = 30 p.s.f.
SNOW EXPOSURE FACTOR	C_e = 0.9
THERMAL FACTOR	C_t = 1.0
SNOW IMPORTANCE FACTOR	I_s = 1.0

WIND DATA

BUILDING OCCUPANCY CATEGORY	CATEGORY II
BASIC WIND SPEED	115 M.P.H.
WIND EXPOSURE CATEGORY	C
WIND IMPORTANCE FACTOR	I_w = 1.0
INTERNAL PRESSURE COEFFICIENT	GCpi = +/- 0.10
COMPONENTS AND CLADDING DESIGN WIND PRESSURE	REFER TO SCHEDULE ON DRAWING S0

SEISMIC DATA

BUILDING OCCUPANCY CATEGORY	CATEGORY II
SEISMIC IMPORTANCE FACTOR	I_E = 1.0
SEISMIC USE GROUP	II
SEISMIC DESIGN CATEGORY	B
SOIL SITE CLASS	D
MAPPED SPECTRAL RESPONSE ACCELERATIONS	S_S = 0.210 S_1 = 0.059
SPECTRAL RESPONSE COEFFICIENTS	S_{DS} = 0.233 S_{D1} = 0.094
BASIC SEISMIC - FORCE RESISTING SYSTEM	STRUCTURAL STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
RESPONSE MODIFICATION FACTOR	R = 3
DEFLECTION AMPLIFICATION FACTOR	C_d = 3
ANALYSIS PROCEDURE UTILIZED	EQUIVALENT LATERAL FORCE
SEISMIC BASE SHEAR	V = 12.5 kips FOR METAL BUILDING V = 3.0 kips FOR FOR PIPE BRIDGE

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10 Waterchase Drive
Rocky Hill, Connecticut

Mech./Elec./Plumbing/Fire-Protection:
N K ENGINEERS INC
755 main Street, Building 4
Monroe, Connecticut

SAREN ENGINEERING INC
270 Farmington Avenue
Farmington, Connecticut

Project

RockTenn

NEW BOILER INSTALLATION

125 DEPOT ROAD
UNCASVILLE CONNECTICUT

Key Plan

Rev	Description	Date
0	ISSUED FOR PERMIT	3/27/2015
1	ISSUED FOR RAIL PERMIT	3/23/2015
2	ISSUED FOR 90% CD	4/21/2015
3	ISSUED FOR CONSTRUCTION	4/27/2015

Seal

STRUCTURAL DESIGN DATA

Date:	02-27-2015
Drawn By:	KB
Checked By:	KA
Scale:	As indicated
Project #:	14-304

S0