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DLN 012609 SIE.PDF
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SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

SIS 012609 SIE.PDF
VAN 012609 SIE.PDF
THA 012609 SIE
KEL 012609 SIE
BRA 012609 SIE
TIM 012609 SIE
BAR 012609 SIE

February 11, 2009

Mr. Jeffrey Robbins
C & S Engineers
499 Colonel Eileen Collins Boulevard
Syracuse, New York 13212

Re: Limited Additional Asbestos Sampling and Testing
Upgrade Electrical Distribution System – Various Buildings
SUCF Project No. 12290
SUNY Potsdam
Potsdam, New York

Dear Mr. Robbins:

Enclosed please find a copy of the Limited Additional Asbestos Sampling and Testing report for client-defined areas at various buildings on the SUNY Potsdam campus located at 44 Pierrepont Avenue, Potsdam, New York.

A Limited Sampling and Testing for Asbestos-Containing Materials and Lead-based Paint report dated January 20, 2009 was previously completed for client-specified sample locations delineated on drawings of the SUNY Potsdam campus by the client and distributed to Sienna on December 8, 2008. Additional drawings were received by Sienna on January 22, 2009 delineating additional client-specified areas requested for further investigation. Materials previously sampled, analyzed and reported in the report dated January 20, 2009 were not resampled during this investigation.

If after reviewing this report you have any questions, or if we can be of assistance in any other way, please do not hesitate to call. Thank you for the opportunity to be of service to C & S Engineers.

Sincerely,
Sienna Environmental Technologies, LLC

Susanne Kelley
President

Limited Additional Asbestos Sampling and Testing

of

SUNY Potsdam
Upgrade Electrical Distribution System – Various Buildings
SUCF Project No. 12290
Potsdam, New York

Prepared for:

C & S Engineers
499 Colonel Eileen Collins Boulevard
Syracuse, New York 13212

Prepared by:

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

Conditions as of:
January 27, 2009

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

Summary Tabulation

Asbestos Survey

Appendix

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

Limited Asbestos Inspection

1. Introduction

Sienna Environmental Technologies was retained by C & S Engineers to perform supplementary inspection and testing within various buildings on the SUNY Potsdam Campus in Potsdam, New York for the presence of suspect materials that are likely to be disturbed during planned renovations. These suspect materials were not previously tested as part of Sienna Environmental Technologies' Limited Asbestos and Lead-based Paint Inspection dated January 20, 2009.

Sienna was charged with:

* Locating suspect asbestos containing materials throughout client defined areas
* Sampling of these materials to ascertain asbestos content
* Identifying the locations and conditions of confirmed asbestos containing materials

Although the report is a comprehensive analysis of the asbestos inspection work performed, it would be helpful to review all applicable federal, state and local rules, laws and regulations regarding the handling and treatment of asbestos containing building materials (ACBM). The following is a list of suggested reading and information sources relating to asbestos:

* New York State Department of Labor Industrial Code Rule 56
* National Emission Standard for Hazardous Air Pollutants (NESHAPS)
* Occupational Safety and Health Administration
* Environmental Protection Agency rule CFR 763.46 Asbestos Hazard Emergency Response Act

2. Methodology

All work performed by Sienna Environmental Technologies was conducted in accordance with applicable regulations including New York State Department of Labor standards 12 NYCRR Part 56, National Emission Standards for Hazardous Air Pollutants (NESHAPS), and Occupational Safety and Health Administration regulations. All Sienna Environmental Technologies personnel assigned to conduct inspections have completed the Environmental Protection Agency (EPA) required training and New York State Department of Labor Division of Safety and Health certification program.

The floor plan drawings that accompany this report were submitted to Sienna by the client on January 22, 2009. Floor plans were submitted to Sienna with client-specified areas delineated for further investigation.

Based on the homogeneous areas, samples of suspect materials were collected. Techniques used for sample collection were designed to minimize damage to suspected areas, reduce any potential for fiber release, and ensure the safety of the inspector and building occupants. Samples were collected by Sienna's personnel using the following procedures:

1. The surface to be sampled was sprayed with amended water (detergent and water) as necessary
2. A plastic sample bag was held to the surface sampled
3. The sample was collected using tools appropriate to the friability of the material sampled
4. Sample bags were labeled with a unique sample identification number
5. Samples were recorded on a Chain of Custody form, and submitted under strict chain-of-custody procedures to an ELAP and NYSDOH approved and certified laboratory for analysis

Samples were analyzed using PLM, Polarized Light Microscopy in accordance with NYS DOH ELAP Item #198.1 and/or #198.6. For materials classified as non-friable organically bound materials (NOBs), additional analysis was performed under Transmission Electron Microscopy (TEM) in accordance with NYS DOH ELAP Item #198.4. The results of this analysis confirmed whether or not a suspect material actually contained asbestos. The confirmed materials are listed in **SECTION 3 Executive Summary.**

3. Executive summary

The asbestos survey included identification, sampling and analysis of suspect materials within the client specified areas delineated on drawings received by Sienna Environmental Technologies on January 22, 2009. Copies of all laboratory analysis reports and chains of custody listing locations of sample collection are located in Appendix C.

3A. Suspect asbestos-containing materials

Sampling of the following components was conducted on January 26, 2009 and January 27, 2009. The following materials were identified as requiring sampling and analysis:

Crane Music Complex

HAN Number	Description
CRN-400	Mud fitting on fiberglass

Dunn Hall

HAN Number	Description
DUN-400A	Pipe insulation
DUN-400B	Mud fitting on 400A
DUN-500	Duct insulation stick pin mastic

Merritt Hall

HAN Number	Description
MER-400A	Mud fitting on fiberglass
MER-400B	Tar on mud fitting
MER-401	Tarpaper over fiberglass
MER-500	Insulation on air intake duct

Sisson Hall

HAN Number	Description
SIS-100	Cinder block mortar
SIS-400	Mud fitting on fiberglass
SIS-500	Tank insulation

Van Housen Hall

HAN Number	Description
VAN-100	Cinder block mortar
VAN-400	Mud fitting on fiberglass
VAN-500	Tank insulation
VAN-501	Duct insulation stick pin mastic

3A. Suspect asbestos-containing materials (continued)

Thatcher Hall

HAN Number	Description
THA-400	Mud fitting on fiberglass
THA-500	Tank insulation

Kellas Hall

HAN Number	Description
KEL-100	Cinder block mortar
KEL-400	Mud fitting on fiberglass

Brainerd Hall

HAN Number	Description
100	Cinder block mortar

Timmerman Hall

HAN Number	Description
TIM-400	Mud fitting on fiberglass

Barrington Student Union

HAN Number	Description
400	Mud fitting on fiberglass
500	Air duct insulation

3B. Confirmed asbestos-containing materials

Sampling and analysis of the suspect materials under Polarized Light Microscopy, and where necessary under Transmission Electron Microscopy, confirmed that the following building materials sampled as part of this survey are asbestos containing: (See Appendix C for laboratory reports and chains of custody)

Crane Music Complex

- All samples from Crane Music Complex were analyzed as less than 1% asbestos. Materials are considered asbestos-containing when they are analyzed as greater than 1% asbestos.

Dunn Hall

Material #	Description - Location	Condition
DUN-400A	Pipe insulation – Basement mechanical room, 2nd floor mechanical room, 2nd floor fan room, 3rd floor fan room	I
DUN-400B	Mud fitting on 400A – Basement mechanical room, 2nd floor mechanical room, 2nd floor fan room, 3rd floor fan room	I
DUN-500	Duct insulation stick pin mastic – 2nd floor fan room	I

3B. Confirmed asbestos-containing materials (continued)

Merritt Hall

Material #	Description - Location	Condition
MER-400B	Tar on mud fitting – Basement	I
MER-401	Tarpaper over fiberglass – Basement	I
MER-500	Insulation on air intake duct – Attic	I

Sisson Hall

Material #	Description - Location	Condition
SIS-400	Mud fitting on fiberglass – Steam room, Mechanical room	I
SIS-500	Tank insulation – Steam room	SD

Van Housen Hall

Material #	Description - Location	Condition
VAN-400	Mud fitting on fiberglass – Mechanical room E02, Main steam room	I
VAN-501	Duct insulation stick pin mastic – Mechanical room E02	I

Thatcher Hall

Material #	Description - Location	Condition
THA-400	Mud fitting on fiberglass – 1st floor mechanical room	I

Kellas Hall

- All samples from Kellas Hall were analyzed as less than 1% asbestos. Materials are considered asbestos-containing when they are analyzed as greater than 1% asbestos.

Brainerd Hall

- All samples from Brainerd Hall were analyzed as less than 1% asbestos. Materials are considered asbestos-containing when they are analyzed as greater than 1% asbestos.

Timmerman Hall

- All samples from Timmerman Hall were analyzed as less than 1% asbestos. Materials are considered asbestos-containing when they are analyzed as greater than 1% asbestos.

Barrington Student Union

Material #	Description - Location	Condition
BAR-500	Air duct insulation – Attic	I

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429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

Appendix A General conditions of inspection

1. Sienna Environmental Technologies neither accepts nor implies any liability for the implementation of the recommendations found within this report.

2. This inspection was limited to areas accessible to the inspector. Sienna Environmental Technologies neither accepts nor implies any liability for ACBM that may be present in other areas of the building.

3. The results of the laboratory analytical reports that may be contained herein are the product of the knowledge, experience and expertise of the laboratory retained to perform such services. Sienna Environmental Technologies neither accepts nor implies any liability for the sample analysis reports.

4. This report is based on the condition and contents present at the site on the day of the inspection. Sienna Environmental Technologies is not liable for materials, chemicals or other substances of concern that may have been removed from the site, cleaned or disposed of prior to the inspection date or subsequent to that date.

5. An inspection for asbestos relies heavily upon identification of homogeneous areas, with sampling and laboratory analysis then determined by the quantity of surfaces identified, generally accepted inspection protocols, regulatory requirements, and the inspector's judgment. Specific sample locations are determined with the objective of selecting representative samples. As with any type of sampling, the possibility of obtaining a false positive or false negative does exist, is inherent in the sampling process, and can at times result from the fact that both lead and asbestos fibers are not always uniformly distributed throughout suspect surfaces or materials. Although Sienna Environmental Technologies attempts to minimize the risk of a false positive or false negative result through a comprehensive inspection protocol, the possibility does exist, and could only be completely eliminated through testing and analysis of 100% of each suspect surface, which of course is not practical.

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

Appendix B Certifications and licenses

NEW YORK STATE - DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
LICENSE AND CERTIFICATE UNIT
STATE CAMPUS BUILDING 12
ALBANY, NY 12240

ASBESTOS HANDLING LICENSE

Sienna Environmental Technologies LLC
Suite 102
429 Franklin Street
Buffalo, NY 14202

FILE NUMBER: 00-1037
LICENSE NUMBER: 29432
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 01/30/2008
EXPIRATION DATE: 02/28/2009

Duly Authorized Representative: Susanne Kelley

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Maureen A. Cox, Director
FOR THE COMMISSIONER OF LABOR

H 432 (4-07)

STATE OF NEW YORK - DEPARTMENT OF LABOR

ASBESTOS CERTIFICATE

PAUL J MAIER

CLASS (EXPIRES)

C A/E (04/09) D I/SP (04/09)

H P/S (04/09)

CERT# 08-03596

DMV# 356084718

MUST BE CARRIED ON ASBESTOS PROJECTS

EYES BRO
HAIR BLK
HGT 5' 06"

IF FOUND RETURN TO:
NYSDOL - L&C UNIT
ROOM 290A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
RICHARD F. DAINES, M.D.

Expires 12:01 AM April 01, 2009
Issued April 01, 2008

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MS. SUSANNE KELLEY
SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 FRANKLIN STREET SUITE 102
BUFFALO, NY 14202

NY Lab Id No: 11727
EPA Lab Code:

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)

erial No.: 36432

operty of the New York State Department of Health. Valid only at the address shown. Must be nspicuously posted. Valid certificates have a raised seal. Continued accreditation depends on ccessful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to ify laboratory's accreditation status.

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
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Appendix C Laboratory reports

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

LABORATORY REPORT

Attn: Jeffrey Robbins
C & S Engineers
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam - Crane Music Center

Date Received: 1/28/2009
Date Analyzed: 1/30/2009
Sienna ID: P180

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0127-CRN-400-1 P180-1	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	20%	80%	NAD
0127-CRN-400-2 P180-2	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	30%	70%	NAD
0127-CRN-400-3 P180-3	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	20%	80%	NAD

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

Disclaimers: NAD = No asbestos detected. Results relate only to samples provided by client. This report shall not be reproduced, except in full, without written approval by Sienna. Samples analyzed as NAD or Trace (<1%) cannot be guaranteed. Quantitative transmission electron microscopy is currently the only reliable method that can be used to determine if this material can be considered or treated as non-asbestos containing. Analysis performed by Sienna Environmental Technologies, NY ELAP #11727.

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC

429 Franklin Street, Suite 102
Buffalo, NY 14202
Phone 716-332-3134
Fax 716-332-3136

Chain of Custody Document

Fax Report to: _____

Client/Contact: C & S Engineers / Jeffrey Robbins

Building/Location: Crane Music Center / SUNY Potsdam

Job #: SET954 Total # Samples: 3

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM ____ TEM ____ AAS OTHER _____

Sample #	Description of Sample	Location of Sample	Notes
0127-CRN-400-1	Mud fitting on fiberglass	Basement	P160-1
0127-CRN-400-2	Mud fitting on fiberglass	Basement	P160-2
0127-CRN-400-3	Mud fitting on fiberglass	Basement	P160-3

Notes:

Sienna Environmental Technologies
☒ Accept
☐ Reject

Sampled By: Paul J Mauro Date: 1/27/09

Relinquished By: Paul J Mauro Date: 1/28/09

Received By: _____ Date: 1/28/09 1100

P160

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

LABORATORY REPORT

Attn: Jeffrey Robbins
C & S Engineers
499 Col. Eileen Collins Blvd
Syracuse, NY 13212
Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam Dunn Hall

Date Received: 1/28/2009
Date Analyzed: 1/28/2009
Sienna ID: P174

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-DUN-400A-1 P174-1	Gray, Fibrous, Homogenous	Pipe Insulation - Basement Mechanical Room	15%	85%	8.7% Chrysotile
0126-DUN-400A-2 P174-2	Gray, Fibrous, Homogenous	Pipe Insulation - Basement Mechanical Room	20%	80%	7.5% Amosite 3.4% Chrysotile
0126-DUN-400A-3 P174-3	Gray, Fibrous, Homogenous	Pipe Insulation - 2nd Floor Mechanical Room	20%	80%	4.0% Amosite 10.3% Chrysotile
0126-DUN-400B-1 P174-4	Gray, Fibrous, Homogenous	Mud Fittings on 400A - Basement Mechanical Room	20%	80%	16.0% Chrysotile
0126-DUN-400B-2 P174-5	Gray, Fibrous, Homogenous	Mud Fittings on 400A - Basement Mechanical Room	15%	85%	9.1% Chrysotile
0126-DUN-400B-3 P174-6	Gray, Fibrous, Homogenous	Mud Fittings on 400A - 2nd Floor Mechanical Room	30%	70%	23.5% Chrysotile

Tracy Skalski
Analyst(s)

Approved Signatory

Disclaimers: NAD = No asbestos detected. Results relate only to samples provided by client. This report shall not be reproduced, except in full, without written approval by Sienna. Samples analyzed as NAD or Trace (<1%) cannot be guaranteed. Quantitative transmission electron microscopy is currently the only reliable method that can be used to determine if this material can be considered or treated as non-asbestos containing. Analysis performed by Sienna Environmental Technologies, NY ELAP #11727.

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LABORATORY REPORT

Attn: Jeffrey Robbins
C & S Engineers
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam Dunn Hall

Date Received: 1/28/2009
Date Analyzed: 1/28/2009
Sienna ID: P174

Polarized Light Microscopy (PLM) of Non-Friable, Organically Bound Materials by NY State ELAP Method 198.6

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-DUN-500-1 P174-7	Black, Fibrous, Homogenous	Duct Insulation Stick Pin Mastic - 2nd Floor Fan Room	30%	70%	5.2% Chrysotile
0126-DUN-500-2 P174-8	Black, Fibrous, Homogenous	Duct Insulation Stick Pin Mastic - 2nd Floor Fan Room	20%	80%	3.7% Chrysotile

Tracy Skalski
Analyst(s)

Approved Signatory

Disclaimers: Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable, organically-bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing. Results relate only to samples provided by client. This report shall not be reproduced, except in full, without written approval by Sienna. Analysis performed by Sienna Environmental Technologies, NY ELAP #11727.

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429 Franklin Street, Suite 102
Buffalo, NY 14202
Phone 716-332-3134
Fax 716-332-3136

Chain of Custody Document

Fax Report to: _____

Client/Contact: C&S Engineers / Jeffrey Robbins

Building/Location: Dunn Hall / SUNY Potsdam

Job #: SET954 Total # Samples: 8

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM X TEM ____ AAS OTHER Neg NOBs to TEM

Sample #	Description of Sample	Location of Sample	Notes
0126-DUN-400A-1	Pipe insulation	Basement mechanical room	P174-1
0126-DUN-400A-2	Pipe insulation	Basement mechanical room	-2
0126-DUN-400A-3	Pipe insulation	2nd floor mechanical room	-3
0126-DUN-400B-1	Mud fittings on 400A	Basement mechanical room	-4
0126-DUN-400B-2	Mud fitting on 400A	Basement mechanical room	-5
0126-DUN-400B-3	Mud fitting on 400A	2nd floor mechanical room	-6
0127-DUN-500-1	Duct insulation stick pin mastic	2nd floor fan room	-7
0127-DUN-500-2	Duct insulation stick pin mastic	2nd floor fan room	P174-8

Sienna Environmental Technologies
☒ Accept
☐ Reject

Notes:

Sampled By: Paul J Mauro Date: 1/26/09

Relinquished By: Paul J Mauro Date: 1/28/09

Received By: Stacy P174 0930 Date: 1/28/09

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
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LABORATORY REPORT

Attn: Jeffrey Robbins
C & S Engineers
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam Merritt Hall

Date Received: 1/28/2009
Date Analyzed: 1/29/2009
Sienna ID: P175

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-MER-400A-1 P175-1	Brown, Fibrous, Homogenous	Mud Fitting on Fiberglass - Merritt Basement	15%	85%	0.26% Chrysotile
0126-MER-400A-2 P175-2	Brown, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	30%	70%	NAD
0126-MER-400A-3 P175-3	Brown, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	25%	75%	NAD
0126-MER-500-1 P175-10	Brown, Fibrous, Homogenous	Insulation on Air Intake Duct - Attic	20%	80%	2.3% Chrysotile
0126-MER-500-2 P175-11	Brown, Fibrous, Homogenous	Insulation on Air Intake Duct - Attic	25%	75%	NAD
0126-MER-500-3 P175-12	Brown, Fibrous, Homogenous	Insulation on Air Intake Duct - Attic	20%	80%	NAD

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

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LABORATORY REPORT

Attn: Jeffrey Robbins
C & S Engineers
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam Merritt Hall

Date Received: 1/28/2009
Date Analyzed: 1/29/2009
Sienna ID: P175

Polarized Light Microscopy (PLM) of Non-Friable, Organically Bound Materials by NY State ELAP Method 198.6

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-MER-400B-1 P175-4	Black, Fibrous, Homogenous	Tar on Mud Fitting - Basement	20%	80%	3.9% Chrysotile
0126-MER-400B-2 P175-5	Black, Fibrous, Homogenous	Tar on Mud Fitting - Basement	25%	75%	5.4% Chrysotile
0126-MER-400B-3 P175-6	Black, Fibrous, Homogenous	Tar on Mud Fitting - Basement	20%	80%	5.0% Chrysotile
0126-MER-401-1 P175-7	Black, Fibrous, Homogenous	Tarpaper over Fiberglass - Basement	10%	90%	0.59% Chrysotile
0126-MER-401-2 P175-8	Black, Fibrous, Homogenous	Tarpaper over Fiberglass - Basement	20%	80%	0.85% Chrysotile
0126-MER-401-3 P175-9	Black, Fibrous, Homogenous	Tarpaper over Fiberglass - Basement	10%	90%	1.2% Chrysotile

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

AmeriSci Job #: 509011235

Client Name: Sienna Environmental Technologies, LLC

Table I
Summary of Bulk Asbestos Analysis Results

SET 954; C&S Engineers; Merritt Hall / Suny Potsdam

AmeriSci Sample #	Client Sample# Location	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	0126-MER-401-1 Basement		0.237	92.5	6.1	1.4	NA	NAD
02	0126-MER-401-2 Basement		0.231	91.0	8.7	0.3	NA	NAD

Reviewed by: _____ Date Reviewed: _____ Analyzed By: Sandhya Gunasekara _____ Date Analyzed:2/2/2009

Semi-Quantitative Analysis: NAD = no asbestos detected; NA = not analyzed; NA/PS = not analyzed due to positive stop; Trace = <1%;
PLM analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP Lab #102079-0) or NY ELAP 198.6 for New York NOB samples (NY ELAP Lab # 10982);
TEM analysis by EPA 600/R-93/116 (not covered by NVLAP Bulk accreditation) or NY ELAP 198.4 for New York NOB samples (NY ELAP Lab # 10982);

** Warning Notes: Consider PLM fiber diameter limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris, soils or other heterogeneous materials for which a combination PLM/TEM evaluation is recommended; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only.

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC

429 Franklin Street, Suite 102
Buffalo, NY 14202
Phone 716-332-3134
Fax 716-332-3136

Chain of Custody Document

x Report to: _____

Client/Contact: C & S Engineers / Jeffrey Robbins

Building/Location: Merritt Hall / SUNY Potsdam

Job #: SET954 Total # Samples: 12

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM X TEM ____ AAS OTHER Neg NOBs to TEM

Sample #	Description of Sample	Location of Sample	Notes
0126-MER-400A-1	Mud fitting on fiberglass	Merritt Basement	P175-1
0126-MER-400A-2	Mud fitting on fiberglass	Basement	-2
0126-MER-400A-3	Mud fitting on fiberglass	Basement	-3
0126-MER-400B-1	Tar on mud fitting	Basement	-4
0126-MER-400B-2	Tar on mud fitting	Basement	-5
0126-MER-400B-3	Tar on mud fitting	Basement	-6
0126-MER-401-1	Tarpaper over fiberglass	Basement	-7
0126-MER-401-2	Tarpaper over fiberglass	Basement	-8
0126-MER-401-3	Tarpaper over fiberglass	Basement	-9
0126-MER-500-1	Insulation on air intake duct	Attic	-10
0126-MER-500-2	Insulation on air intake duct	Attic	-11
0126-MER-500-3	Insulation on air intake duct	Attic	P175-12

Sienna Environmental Technologies
☒ Accept
☐ Reject

Notes:

Sampled By: Paul J Mauer Date: 1/26/09

Relinquished By: Paul J Mauer Date: 1/28/09

Received By: A Sadosky 0830 P175 Date: 1/28/09

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

LABORATORY REPORT

Attn: Jeffrey Robbins
C & S Engineers
499 Col. Eileen Collins Blvd
Syracuse, NY 13212

Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam - Sisson Hall

Date Received: 1/28/2009
Date Analyzed: 1/30/2009
Sienna ID: P181

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0127-SIS-100-1 P181-1	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Basement	0%	100%	NAD
0127-SIS-100-2 P181-2	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Basement	0%	100%	NAD
0127-SIS-400-1 P181-3	Gray, Fibrous, Homogenous	Mud Fitting On Fiberglass - Steam Room	30%	70%	23.5% Chrysotile
0127-SIS-400-2 P181-4	Gray, Fibrous, Homogenous	Mud Fitting On Fiberglass - Steam Room	20%	80%	12.9% Chrysotile
0127-SIS-400-3 P181-5	Gray, Fibrous, Homogenous	Mud Fitting On Fiberglass - Mechanical Room	30%	70%	23.5% Chrysotile
0127-SIS-500-1 P181-6	Brown, Fibrous, Homogenous	Tank Insulation - Steam Room	20%	80%	6.7% Chrysotile 3.8% Amosite
0127-SIS-500-2 P181-7	Brown, Fibrous, Homogenous	Tank Insulation - Steam Room	20%	80%	6.5% Chrysotile 4.6% Amosite
0127-SIS-500-3 P181-8	Brown, Fibrous, Homogenous	Tank Insulation - Steam Room	20%	80%	6.2% Chrysotile 3.6% Amosite

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC

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Buffalo, NY 14202
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Fax 716-332-3136

Chain of Custody Document

Fax Report to: ______________________

Client/Contact: C &S Engineers / Jeffrey Robbins

Building/Location: Sisson Hall / SUNY Potsdam

Job #: SET954 Total # Samples: 8

Turn around (circle): RUSH 48 Hour 24 Hour 72 Hour

X PLM ____ TEM ____ AAS OTHER ______

Sample #	Description of Sample	Location of Sample	Notes
0127-515-100-1	Cinder block mortar	Basement	P181-1
0127-515-100-2	Cinder block mortar	Basement	-2
0127-515-400-1	Mud fitting on fiberglass	Steam room	-3
0127-515-400-2	Mud fitting on fiberglass	Steam room	-4
0127-515-400-3	Mud fitting on fiberglass	Mechanical room	-5
0127-515-500-1	Tank insulation	Steam room	-6
0127-515-500-2	Tank insulation	Steam room	-7
0127-515-500-3	Tank insulation	Steam room	P181-8

Notes:

Sienna Environmental Technologies
☑ Accept
☐ Reject

Sampled By: [signature] Date: 1/27/09

Relinquished By: [signature] Date: 1/28/09

Received By: [signature] Date: 1/28/09 [initials]

[initials]

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Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam Van Hansen Hall

Date Received: 1/28/2009
Date Analyzed: 1/29/2009
Sienna ID: P176

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-VAN-100-1 P176-1	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Mechanical Room E02	0%	100%	NAD
0126-VAN-100-2 P176-2	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Main Steam Room	0%	100%	NAD
0126-VAN-400-1 P176-3	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Mechanical Room E02	10%	90%	5.5% Chrysotile
0126-VAN-400-2 P176-4	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Mechanical Room E02	10%	90%	NAD
0126-VAN-400-3 P176-5	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Main Steam Room	10%	90%	8.5% Chrysotile
0126-VAN-500-1 P176-6	Brown, Fibrous, Homogenous	Tank Insulation - Mechanical Room E02	30%	70%	NAD
0126-VAN-500-2 P176-7	Gray, Fibrous, Homogenous	Tank Insulation - Mechanical Room E02	60%	40%	NAD
0126-VAN-500-3 P176-8	Gray, Fibrous, Homogenous	Tank Insulation - Main Steam Room	30%	70%	NAD

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

Disclaimers: NAD = No asbestos detected. Results relate only to samples provided by client. This report shall not be reproduced, except in full, without written approval by Sienna. Samples analyzed as NAD or Trace (<1%) cannot be guaranteed. Quantitative transmission electron microscopy is currently the only reliable method that can be used to determine if this material can be considered or treated as non-asbestos containing. Analysis performed by Sienna Environmental Technologies, NY ELAP #11727.

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LABORATORY REPORT

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Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam Van Hansen Hall

Date Received: 1/28/2009
Date Analyzed: 1/29/2009
Sienna ID: P176

Polarized Light Microscopy (PLM) of Non-Friable, Organically Bound Materials by NY State ELAP Method 198.6

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-VAN-501-1 P176-9	Black, Non-Fibrous, Homogenous	Duct Insulation Stick Pin Mastic - Mechanical Room E02	30%	70%	11.8% Chrysotile
0126-VAN-501-2 P176-10	Black, Non-Fibrous, Homogenous	Duct Insulation Stick Pin Mastic - Mechanical Room E02	30%	70%	10.0% Chrysotile

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

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Chain of Custody Document

ax Report to: _____

Client/Contact: C & S Engineers / Jeffrey Robbins

Building/Location: Van Hausen Hall / SUNY Potsdam

Job #: SET954 Total # Samples: 10

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM X TEM ____ AAS OTHER Neg NOBs to TEM

Sample #	Description of Sample	Location of Sample	Notes
0126-VAN-100-1	Cinder block mortar	Mechanical room E02	P1760-1
0126-VAN-100-2	Cinder block mortar	Main steam room	-2
0126-VAN-400-1	Mud fitting on fiberglass	Mechanical room E02	-3
0126-VAN-400-2	Mud fitting on fiberglass	Mechanical room E02	-4
0126-VAN-400-3	Mud fitting on fiberglass	Main steam room	-5
0126-VAN-500-1	Tank insulation	Mechanical room E02	-6
0126-VAN-500-2	Tank insulation	Mechanical room E02	-7
0126-VAN-500-3	Tank insulation	Main steam room	-8
0126-VAN-501-1	Duct insulation stick pin mastic	Mechanical room E02	-9
0126-VAN-501-2	Duct insulation stick pin mastic	Mechanical room E02	P1760-10

Sienna Environmental Technologies
☑ Accept
☐ Reject

Notes:

Sampled By: Paul J. Mauer Date: 1/26/09

Relinquished By: Paul J. Mauer Date: 1/28/09

Received By: [signature] 0930 P1760 Date: 1/28/09

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Syracuse, NY 13212

Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam - Thatcher Hall

Date Received: 1/28/2009
Date Analyzed: 1/30/2009
Sienna ID: P183

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-THA-400-1 P183-1	Gray, Fibrous, Homogenous	Mud Fitting On Fiberglass - 1st Floor Mechanical Room	20%	80%	14.8% Chrysotile
0126-THA-400-2 P183-2	Gray, Fibrous, Homogenous	Mud Fitting On Fiberglass - 1st Floor Mechanical Room	20%	80%	16.7% Chrysotile
0126-THA-400-3 P183-3	Gray, Fibrous, Homogenous	Mud Fitting On Fiberglass - 1st Floor Mechanical Room	20%	80%	13.8% Chrysotile
0126-THA-500-1 P183-4	Gray, Fibrous, Homogenous	Tank Insulation - 1st Floor Mechanical Room	40%	60%	NAD
0126-THA-500-2 P183-5	Gray, Fibrous, Homogenous	Tank Insulation - 1st Floor Mechanical Room	30%	70%	NAD
0126-THA-500-3 P183-6	Gray, Fibrous, Homogenous	Tank Insulation - 1st Floor Mechanical Room	20%	80%	NAD

Julia McKenzie
Analyst(s)

Approved Signatory

Disclaimers: NAD = No asbestos detected. Results relate only to samples provided by client. This report shall not be reproduced, except in full, without written approval by Sienna. Samples analyzed as NAD or Trace (<1%) cannot be guaranteed. Quantitative transmission electron microscopy is currently the only reliable method that can be used to determine if this material can be considered or treated as non-asbestos containing. Analysis performed by Sienna Environmental Technologies, NY ELAP #11727.

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Chain of Custody Document

.x Report to: _____

Client/Contact: C & S Engineers / Jeffrey Robbins

Building/Location: Thatcher Hall / SUNY Potsdam

Job #: SET954 Total # Samples: 6

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM ____ TEM ____ AAS OTHER _____

Sample #	Description of Sample	Location of Sample	Notes
0126-THA-400-1	Mud fitting on fiberglass	1st floor mechanical room	P183-1
0126-THA-400-2	Mud fitting on fiberglass	1st floor mechanical room	-2
0126-THA-400-3	Mud fitting on fiberglass	1st floor mechanical room	-3
0126-THA-500-1	Tank insulation	1st floor mechanical room	-4
0126-THA-500-2	Tank insulation	1st floor mechanical room	-5
0126-THA-500-3	Tank insulation	1st floor mechanical room	P183-6

Notes:

Sienna Environmental Technologies
☒ Accept
☐ Reject

Sampled By: Paul J. Maciuj Date: 1/26/09

Relinquished By: Paul J. Maciuj Date: 1/28/09

Received By: _____ Date: 1/28/09 1130

P183

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LABORATORY REPORT

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Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 Kellas Hall

Date Received: 1/28/2009
Date Analyzed: 1/30/2009
Sienna ID: P177

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-KEL-100-1 P177-1	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Switchgear - B10	0%	100%	NAD
0126-KEL-100-2 P177-2	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Signal Room - B7	0%	100%	NAD
0126-KEL-400-1 P177-3	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Mechanical Equipment Room - B8	30%	70%	NAD
0126-KEL-400-2 P177-4	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Mechanical Equipment Room - B8	20%	80%	NAD
0126-KEL-400-3 P177-5	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Mechanical Equipment Room - B8	20%	80%	NAD

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

Disclaimers: NAD = No asbestos detected. Results relate only to samples provided by client. This report shall not be reproduced, except in full, without written approval by Sienna. Samples analyzed as NAD or Trace (<1%) cannot be guaranteed. Quantitative transmission electron microscopy is currently the only reliable method that can be used to determine if this material can be considered or treated as non-asbestos containing. Analysis performed by Sienna Environmental Technologies, NY ELAP #11727.

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Chain of Custody Document

Fax Report to: _____

Client/Contact: C & S Engineers / Jeffrey Robbins

Building/Location: Kellas Hall

Job #: SET954 Total # Samples: 5

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM ____ TEM ____ AAS OTHER _____

Sample #	Description of Sample	Location of Sample	Notes
0126-KEL-100-1	Cinder block mortar	Switchgear - B10	P177-1
0126-KEL-100-2	Cinder block mortar	Signal room - B7	-2
0126-KEL-400-1	Mud fitting on fiberglass	Mechanical equipment room - B8	-3
0126-KEL-400-2	Mud fitting on fiberglass	Mechanical equipment room - B8	-4
0126-KEL-400-3	Mud fitting on fiberglass	Mechanical equipment room - B8	P177-5

Sienna Environmental Technologies
☒ Accept
☐ Reject

Notes: Page 1 of 1

Sampled By: Paul J Mauer Date: 1/26/09

Relinquished By: Paul J Mauer Date: 1/28/09

Received By: C Scalzi 0930 P177 Date: 1/28/09

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Attn: Jeffrey Robbins
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Syracuse, NY 13212

Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam - Brainerd Hall

Date Received: 1/28/2009
Date Analyzed: 1/29/2009
Sienna ID: P182

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-BRA-100-1 P182-1	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Basement Mechanical Room	0%	100%	NAD
0126-BRA-100-2 P182-2	Gray, Non-Fibrous, Homogenous	Cinder Block Mortar - Basement Mechanical Room	0%	100%	NAD

Julia McKenzie
Analyst(s)

Approved Signatory

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Chain of Custody Document

Fax Report to: _____

Client/Contact: C&S Engineers / Jeffrey Robbins

Building/Location: Brainerd Hall / SUNY Potsdam

Job #: SET954 Total # Samples: 2

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM ____ TEM ____ AAS OTHER _____

Sample #	Description of Sample	Location of Sample	Notes
0126-BRA-100-1	Cinder block mortar	Basement mechanical room	P182-1
0126-BRA-100-2	Cinder block mortar	Basement mechanical room	P182-2

Notes:

Sienna Environmental Technologies
☒ Accept
☐ Reject

Sampled By: Paul J Maus Date: 1/26/09

Relinquished By: Paul J Maus Date: 1/28/09

Received By: [signature] Date: 1/28/09 1100

10182

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
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LABORATORY REPORT

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Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam - Timerman Hall

Date Received: 1/28/2009
Date Analyzed: 1/30/2009
Sienna ID: P179

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0126-TIM-400-1 P179-1	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement Mechanical Room	20%	80%	NAD
0126-TIM-400-2 P179-2	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement Mechanical Room	10%	90%	NAD
0126-TIM-400-3 P179-3	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement Mechanical Room	20%	80%	NAD

Tracy Skalski
Analyst(s)

Approved Signatory

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Chain of Custody Document

Fax Report to: _____

Client/Contact: C&S Engineers / Jeffrey Robbins

Building/Location: Timerman Hall / SUNY Potsdam

Job #: SET954 Total # Samples: 3

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM ____ TEM ____ AAS OTHER _____

Sample #	Description of Sample	Location of Sample	Notes
0126-TIM-400-1	Mud fitting on fiberglass	Basement mechanical room	P179-1
0126-TIM-400-2	Mud fitting on fiberglass	Basement mechanical room	P179-2
0126-TIM-400-3	Mud fitting on fiberglass	Basement mechanical room	P179-3
~~0126-TIM-500-1~~			

Notes:

Sampled By: Paul T Mauro

Relinquished By: Paul T Mauro

Received By:

Sienna Environmental Technologies
☒ Accept
☐ Reject

Date: 1/26/09

Date: 1/28/09

Date: 1/28/09 1100

P179

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Phone: 315-455-2000 Fax: 315-455-9667

Project: SET954 SUNY Potsdam - Barrington Student Union

Date Received: 1/28/2009
Date Analyzed: 1/30/2009
Sienna ID: P178

Polarized Light Microscopy (PLM) by NY State ELAP Method 198.1

Sample	Description	Location	% Fibrous	% Non-Fibrous	% Asbestos Type
0127-BAR-400-1 P178-1	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	20%	80%	NAD
0127-BAR-400-2 P178-2	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	10%	90%	NAD
0127-BAR-400-3 P178-3	Gray, Fibrous, Homogenous	Mud Fitting on Fiberglass - Basement	10%	90%	NAD
0127-BAR-500-1 P178-4	Gray, Fibrous, Homogenous	Air Duct Insulation - Attic	25%	75%	8.2% Amosite 12.9% Chrysotile
0127-BAR-500-2 P178-5	Gray, Fibrous, Homogenous	Air Duct Insulation - Attic	10%	90%	4.9% Amosite 2.8% Chrysotile
0127-BAR-500-3 P178-6	Gray, Fibrous, Homogenous	Air Duct Insulation - Attic	20%	80%	6.6% Amosite 9.8% Chrysotile

Julia McKenzie, Tracy Skalski
Analyst(s)

Approved Signatory

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Chain of Custody Document

x Report to: _____

Client/Contact: C & S Engineers / Jeffrey Robbins

Building/Location: Barrington Student Union / SUNY Potsdam

Job #: SET954 Total # Samples: 6

Turn around (circle)

RUSH 48 Hour 24 Hour 72 Hour

X PLM ____ TEM ____ AAS OTHER _____

Sample #	Description of Sample	Location of Sample	Notes
0127-BAR-400-1	Mud fitting on fiberglass	Basement	P178-1
0127-BAR-400-2	Mud fitting on fiberglass	Basement	-2
0127-BAR-400-3	Mud fitting on fiberglass	Basement	-3
0127-BAR-500-1	Air duct insulation	Attic	-4
0127-BAR-500-2	Air duct insulation	Attic	-5
0127-BAR-500-3	Air duct insulation	Attic	P178-6

Sienna Environmental Technologies
☒ Accept
☐ Reject

Notes:

Sampled By: Paul J Mauro Date: 1/27/09

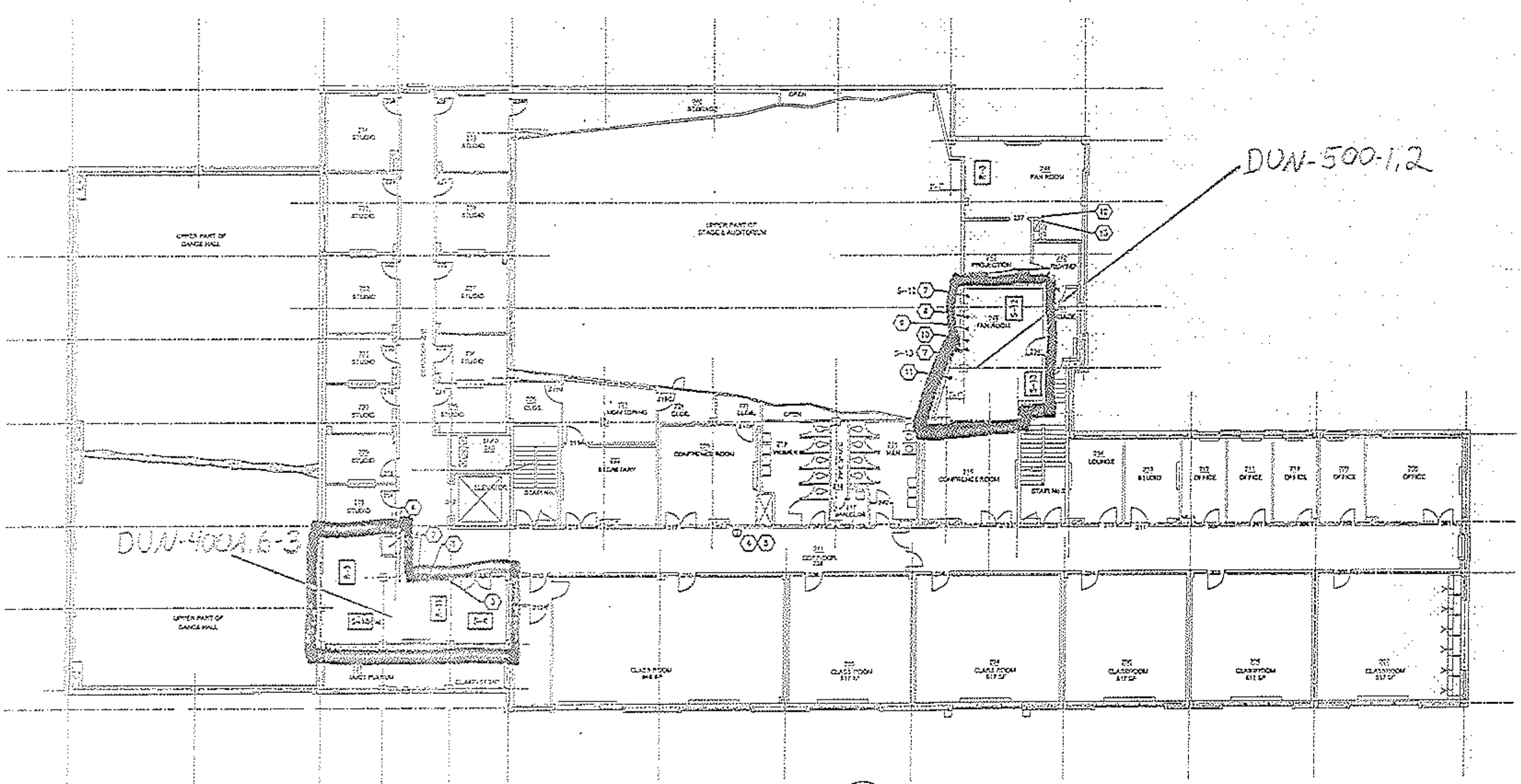
Relinquished By: Paul J Mauro Date: 1/28/09

Received By: _____ Date: 1/28/09

P178

SIENNA ENVIRONMENTAL TECHNOLOGIES, LLC
429 Franklin St. · Suite 102 · Buffalo, NY 14202 · Ph: 716-332-3134 · Fax: 716-332-3136

Appendix D Asbestos sample plans



SECOND FLOOR PLAN

SCALE: [illegible]

GENERAL NOTES:

1. REMOVE ALL EXISTING PNEUMATIC CONTROLLERS, SIGNAL LINES, ELECTRIC RELAYS, ETC. NOT BEING REUSED.
2. RUN SURFACE MOUNTED WIREMOLD RACEWAY ALONG WALL AND IN CEILING WALL CORNER THROUGH CORRIDOR. COORDINATE COLOR AND FINISH WITH EXISTING WIREMOLD IN CORRIDOR. RUN TIGHT TO CORNER AND EXISTING WIREMOLD.

(#) RENOVATION KEYNOTES:

1. EXISTING STARTERS FOR S-8, R-9, S-10, R-11. REMOTE START CIRCUIT ALREADY WIRED TO DELTA RELAY CABINET. PROVIDE NEW CURRENT SWITCH FOR EACH. RE-USE EXISTING WIRING.
2. EXISTING DAMPER PNEUMATIC SIGNAL LINES WITH EP VALVES TO BE REUSED.
3. EXISTING LOCATION OF REMOTE START H-O-A RELAY CABINETS FOR MOTORS IN KEYNOTE #1. UTILIZE FOR START/STOP SIGNAL. PROVIDE STATUS POINTS FOR EACH H-O-A SELECTOR SWITCH.
4. REMOVE EXISTING PNEUMATIC WALL SENSOR. PATCH EXISTING HOLES IN BLOCK AFTER REMOVAL.
5. PROVIDE NEW DDC WALL SENSOR ON BLOCK WALL.
6. SUGGESTED LOCATION FOR DDC PANEL. PROVIDE 2-#12 AND 1-#12 GROUND IN 3/4" EMT CONDUIT. PROVIDE 20A, 1P CIRCUIT BREAKER IN EXISTING SPARE SPACE IN PANEL. PROVIDE 3/4" EMT CONDUIT WITH 1-#22 UTP TO NEW DDC PANEL LOCATED IN BASEMENT.
7. EXISTING S12 AND S13 STARTER. PROVIDE NEW CURRENT SWITCH IN EACH WITH WIRING TO NEW DDC PANEL IN KEYNOTE #6. TRANSFER EXISTING WIRING CONNECTED TO THIRD FLOOR DDC PANEL TO NEW DDC PANEL IN KEYNOTE #6.
8. REMOVE EXISTING S12 TEMPERATURE CONTROLLER IN ITS ENTIRETY, ALONG WITH PNEUMATIC LINES AND PNEUMATIC DEVICES.
9. SUGGESTED LOCATION FOR DDC PANEL. PROVIDE 2-#12 AND 1-#12 GROUND IN 3/4" EMT CONDUIT WITH 20A, 1P CIRCUIT BREAKER IN EXISTING SPARE SPACE IN PANEL LOCATED IN FANROOM 244. PROVIDE 3/4" EMT CONDUIT WITH 1-#22 UTP TO DDC PANEL IN KEYNOTE #6.
10. REMOVE EXISTING S13 TEMPERATURE CONTROLLER IN ITS ENTIRETY, ALONG WITH PNEUMATIC LINES AND PNEUMATIC DEVICES.
11. LOCATION OF EXISTING H-O-A SELECTOR SWITCHES AND RELAYS FOR S12, S13 AND S14 ALREADY WIRED BACK TO DELTA PANEL ON THIRD FLOOR. TRANSFER WIRING TO NEW DDC PANEL IN KEYNOTE #9 AND PROVIDE H-O-A SELECTOR SWITCH STATUS FOR EACH.
12. LOCATION OF EXISTING EXTERIOR LIGHTING TIMECLOCK. REMOVE AND REPLACE WITH DDC RELAY.
13. EXISTING S-[illegible] STARTER. PROVIDE H-O-A SELECTOR SWITCH ON COVER OF STARTER. PROVIDE WIRING FOR START/STOP CAPABILITIES AND STATUS POINT FOR H-O-A SWITCH TO NEW DDC IN KEYNOTE #1. PROVIDE CURRENT SWITCH WITH WIRING TO DDC PANEL IN KEYNOTE #6.

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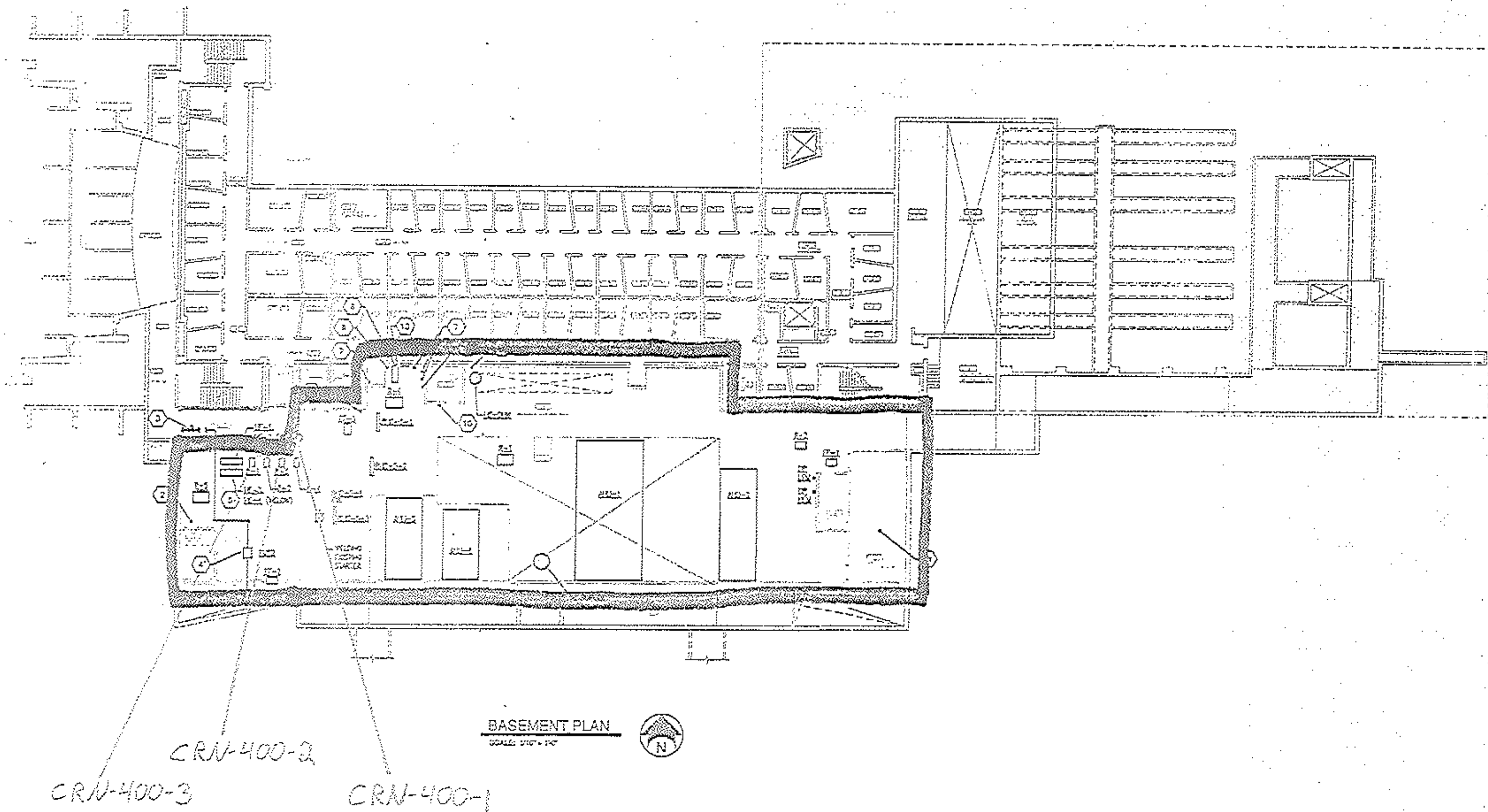

BASEMENT PLAN

SCALE: 1/16" = 1'-0"

RENOVATION KEYNOTES:

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2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
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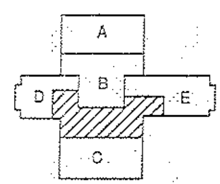
11. [illegible]
12. [illegible]
13. [illegible]
14. [illegible]



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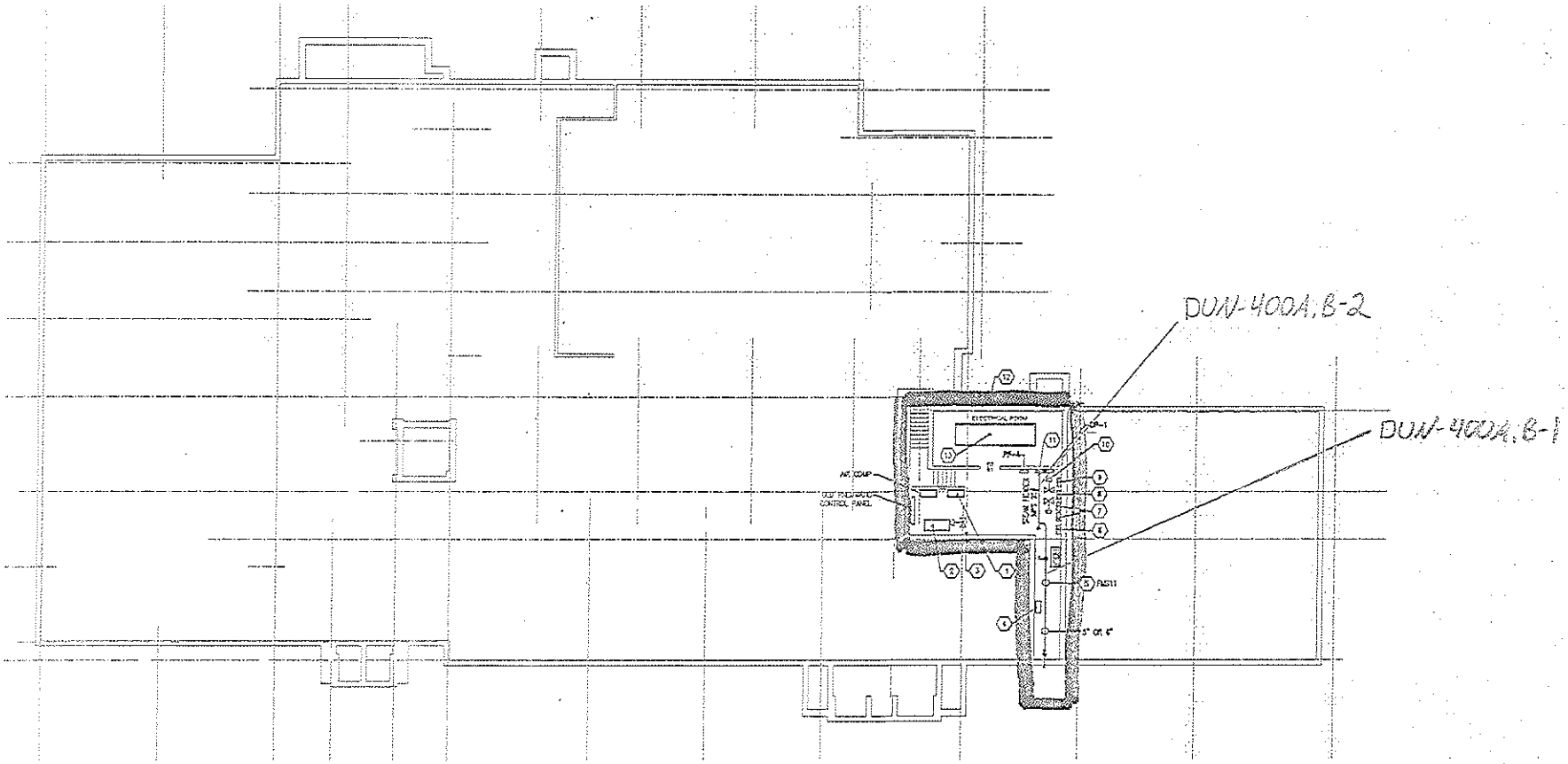

BASEMENT PLAN

GENERAL NOTES:

1.

RENOVATION KEYNOTES:

1. EXISTING MDH ROOM 1901 WATER ALARM, ALREADY WIRED BACK TO DELTA PANEL.
2. EXISTING DRY STATION, REFER TO FLOW DIAGRAM FOR DETAILS.
3. EXISTING DUPLEX PUMP WITH HOA TOGGLE SWITCH AND STATUS, DISCONNECT WIRING TO NEW DDC PANEL IN KEYNOTE #1. PROVIDE H-O-A STATUS POINT.
4. EXISTING OA MTR, REPLACE REGISTER WITH HOA AND CONNECT TO DDC.
5. LOCATION OF STEAM METER, FM-11. REFER TO DETAIL. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #1.
6. POTENTIAL LOCATION OF NEW DDC PANEL. TRANSFER 110V POWER WIRING FROM ADVANCE CONTROL PANELS. PROVIDE 3/4" EMT CONDUIT WITH 2 MULTI-MODE FIBER OPTIC CABLES FROM FREQ. DRIVES PANEL.
7. EXISTING DELTA PANEL. TRANSFER DIGITAL POINTS TO NEW PANEL. REMOVE ALL ASSOCIATED WIRES, DEVICES AND HARDWARE.
8. EXISTING DEVICE PANEL. TRANSFER POINTS TO NEW PANEL. (DUCT, AIR ALARM, PEV, FAN S-14)
9. STEAM PEV PNEUMATIC CONTROLLER, REPLACE WITH DDC TRANSDUCER, AND ASSOCIATED SENSOR.
10. EXISTING SYSTEM POWERED PEV TO REMAIN.
11. EXISTING OA LIGHTING RELAY, ALREADY WIRED BACK TO DELTA KEYNOTE 7 PANEL. PROVIDE STATUS POINT.
12. EXISTING QUAD LIGHT CONTACTOR, ALREADY WIRED BACK TO DELTA. PROVIDE AUX RELAY IN NEW DDC PANEL FOR REMOTE START/STOP OPERATION.
13. EXISTING POWER QUALITY METER. PROVIDE TB-315 TO DDC PANEL. REFER TO WIRING DIAGRAM #20 ON DRAWING ATC-604.

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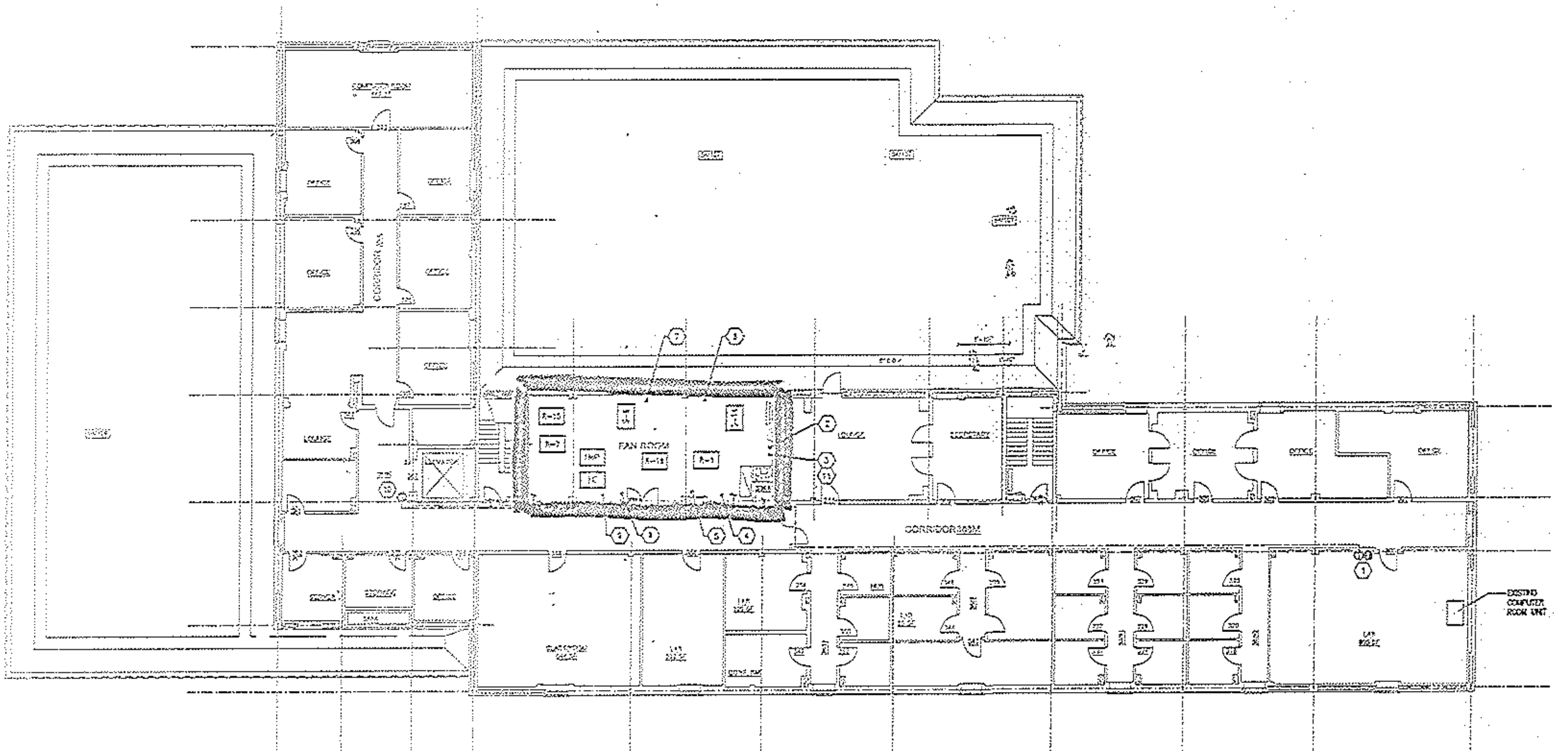

THIRD FLOOR PLAN

GENERAL NOTES:

1. REMOVE ALL EXISTING PNEUMATIC CONTROLLERS, SIGNAL LINES, EXISTING RELAYS, ETC. NOT BEING REUSED.
2. RUN SURFACE MOUNTED WIREMOLD RACEWAY ALONG WALL AND IN CEILING WALL CORNER THROUGH CORRIDOR, COORDINATE COLOR AND FINISH WITH EXISTING WIREMOLD IN CORRIDOR. RUN TIGHT TO CORNER AND EXISTING WIREMOLD.

RENOVATION KEYNOTES:

1. PROVIDE WALL MOUNTED TEMPERATURE AND HUMIDITY SENSOR IN RECORDS ROOM.
2. EXISTING STARTERS FOR R-3, S-5, R-7, S-14, R-15 AND R-16. PROVIDE NEW CURRENT SWITCH FOR EACH. PROVIDE FAN STATUS WIRING TO NEW DDC PANEL IN KEYNOTE /5.
3. EXISTING DAMPER PNEUMATIC SIGNAL LINES WITH EP VALVES TO BE REUSED.
4. EXISTING LOCATION OF REMOTE START H-O-A RELAY CABINETS FOR R-1, S-5, R-7, R-15 AND R-16. RECONNECT WIRING FOR START/STOP SIGNAL. PROVIDE H-O-A STATUS POINTS AND WIRING TO NEW LOCATION OF DDC PANEL IN KEYNOTE /5.
5. SUGGESTED LOCATION FOR DDC MASTER PANEL. TRANSFER EXISTING POINTS AND PROVIDE 2-#12 AND 1-#12 GROUND IN 3/4" EMT CONDUIT. PROVIDE 20A, 1P CIRCUIT BREAKER IN NEXT AVAILABLE SPARE SPACE IN PANEL LOCATED WITHIN ROOM. PROVIDE 3/4" EMT CONDUIT WITH 1-#22 UTP TO DDC PANEL LOCATED ON SECOND FLOOR.
6. REMOVE S-14 DISCHARGE CONTROLLER. PROVIDE NEW SENSOR IN 2ND FLOOR HALLWAY.
7. REMOVE S-5 DISCHARGE CONTROLLER. PROVIDE NEW SENSOR IN 3RD FLOOR HALLWAY.
8. REMOVE TC CONTROLLER AND DISCHARGE SENSOR. REPLACE WITH NEW DDC CONTROL.
9. EXISTING LOCATION OF 1HP STARTER. RECONNECT REMOTE START CIRCUIT AND PROVIDE H-O-A STATUS POINT TO NEW DDC PANEL IN KEYNOTE /5. PROVIDE NEW CURRENT SWITCH AND RECONNECT WIRING TO NEW DDC PANEL LOCATION IN KEYNOTE /5.
10. EXISTING PNEUMATIC THERMOSTAT TO BE REPLACED WITH NEW DDC SENSOR.
11. PROVIDE H-O-A SELECTOR SWITCH FOR S-14 IN SEPARATE ENCLOSURE WITH STATUS WIRING TO DDC PANEL IN KEYNOTE /5.

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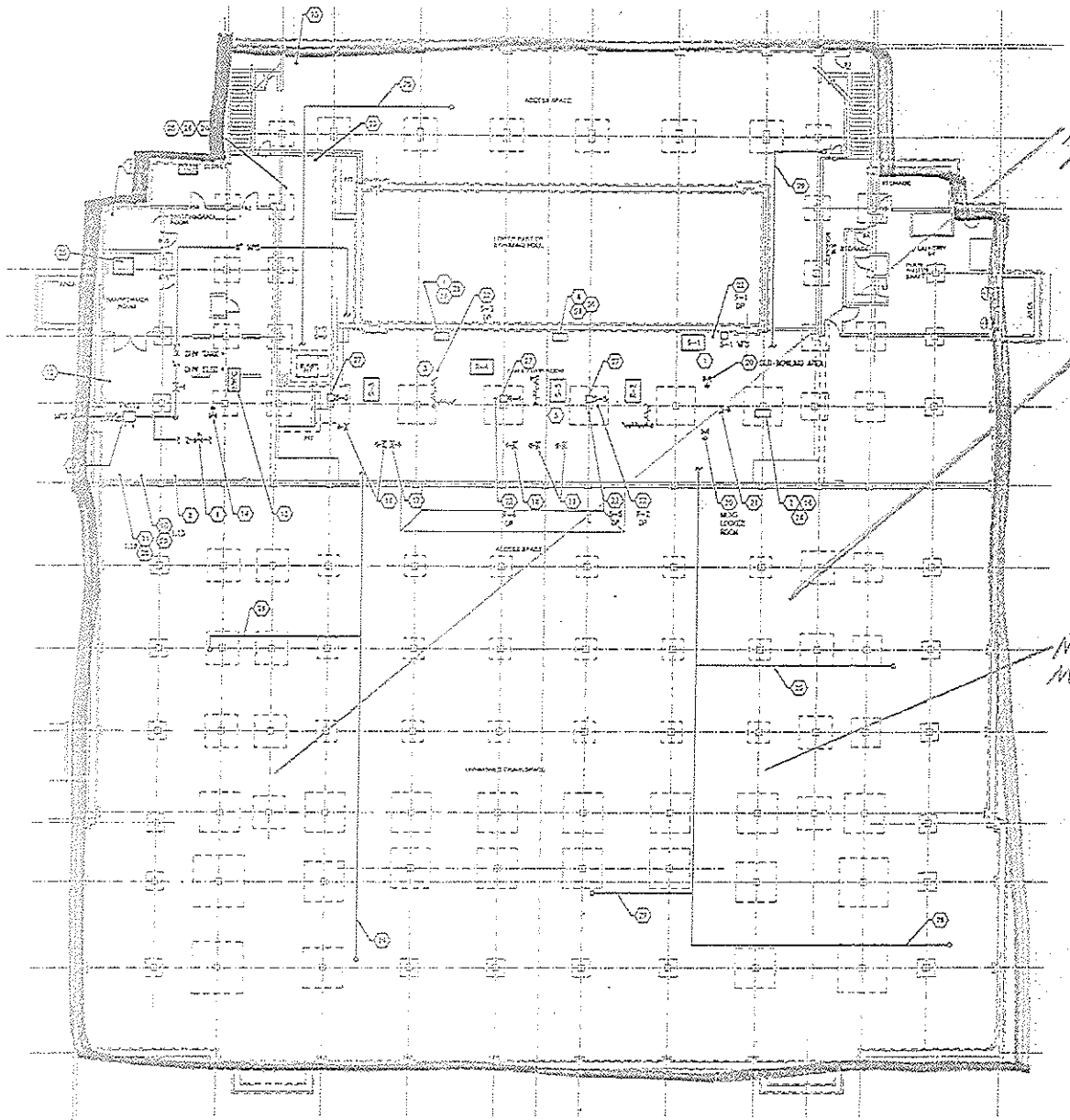

BASEMENT PLAN

GENERAL NOTES:

1.

RENOVATION KEYNOTES:

1. REMOVE ALL EXISTING PNEUMATIC CONTROLS FOR S-1/R-2. INSTALL NEW DDC SENSORS THROUGHOUT. REUSE EXISTING DAMPER ACTUATORS AND VALVE ACTUATORS. PATCH HOLES IN DUCTWORK LEFT BY REMOVALS. CLEAN-UP ABANDONED CONTROLS. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
2. LOCATE S-1/R-2 CONTROLLER HERE. PROVIDE H-O-A SELECTOR SWITCHES ON EACH CONTROLLER COVER WITH STATUS WIRING TO NEW DDC PANEL. PROVIDE CURRENT SWITCH FOR R-2 WITH WIRING TO NEW DDC PANEL. RECONNECT STATUS FOR S-1.
3. REMOVE ALL EXISTING PNEUMATIC CONTROLS FOR S-3/R-4. INSTALL NEW DDC SENSORS THROUGHOUT. REUSE EXISTING DAMPER ACTUATORS AND VALVE ACTUATORS. PATCH HOLES IN DUCTWORK LEFT BY REMOVALS. CLEAN-UP ABANDONED CONTROLS. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
4. LOCATE S-3/R-4 CONTROLLER HERE. PROVIDE H-O-A SELECTOR SWITCHES ON CONTROLLER COVER WITH STATUS WIRING TO NEW DDC PANEL. RECONNECT STATUS POINTS FOR S-3 AND R-4.
5. REMOVE ALL EXISTING PNEUMATIC CONTROLS FOR S-5. INSTALL NEW DDC SENSORS THROUGHOUT. REUSE EXISTING DAMPER ACTUATORS AND VALVE ACTUATORS. PATCH HOLES IN DUCTWORK LEFT BY REMOVALS. CLEAN-UP ABANDONED CONTROLS. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
6. LOCATE S-5 CONTROLLER HERE. PROVIDE H-O-A SELECTOR SWITCH ON CONTROLLER COVER WITH STATUS WIRING TO NEW DDC PANEL. RECONNECT STATUS POINTS.
7. EACH LOCATION – WIRES ALREADY PULLED TO DELTA PANEL.
8. STEAM PRV PNEUMATIC CONTROLLER, REPLACE WITH DDC EP TRANSDUCER, AND PRESSURE SENSOR.
9. STEAM PRESSURE REDUCING VALVE TO REMAIN AND REUSED. CHECK SPRING RANGE.
10. HONEYWELL PANELS TO BE REMOVED AND REPLACED WITH NEW. REFER TO POINTS LIST FOR EXISTING POINTS TO BE TRANSFERED TO NEW PANEL. RECONNECT 110V POWER WIRING.
11. HONEYWELL PANELS TO BE REMOVED AND REPLACED WITH NEW. REFER TO POINTS LIST FOR EXISTING POINTS TO BE TRANSFERED TO NEW PANEL. RECONNECT 110V POWER WIRING.
12. EXISTING AIR COMP PRESSURE SWITCH LOCATED. WIRES ALREADY PULLED TO PANEL 1.13.
13. WATER METER NOT IN USE, FEED FROM KELLAS.
14. REPLACE EXISTING DDC CONTROLS FOR CONDENSATE HEATER. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS. REMOVE ALL CONTROLS NOT REUSED. STEAM VALVE TO BE REUSED.
15. CONVERT EXISTING CONDENSATE PUMP TO DDC PER DETAIL AND POINTS LIST. PROVIDE CONDENSATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE WIRING TO NEW DDC FOR START/STOP CAPABILITIES AND SELECTOR SWITCH STATUS. PROVIDE CURRENT SWITCH AND WIRING TO NEW DDC PANEL.
16. LOCATION OF S-3 PERIMETER VALVES. VALVES TO BE CONTROLLED FROM S-3 PANEL. EXTEND PNEUMATIC SIGNAL LINES TO NEW PANEL LOCATION. REUSE VALVES AND ACTUATORS. REMOVE ALL ABANDONED BOXES AND PNEUMATICS.
17. LOCATION OF S-3 PERIMETER VALVES. VALVES TO BE CONTROLLED FROM S-3 PANEL. EXTEND PNEUMATIC SIGNAL LINES TO NEW PANEL LOCATION. REUSE VALVES AND ACTUATORS. REMOVE ALL ABANDONED BOXES AND PNEUMATICS.
18. LOCATION OF S-5 PERIMETER VALVES. VALVES TO BE CONTROLLED FROM S-5 PANEL. EXTEND PNEUMATIC SIGNAL LINES TO NEW PANEL LOCATION. REUSE VALVES AND ACTUATORS. REMOVE ALL ABANDONED BOXES AND PNEUMATICS.
19. LOCATION OF S-5 PERIMETER VALVES. VALVES TO BE CONTROLLED FROM S-5 PANEL. EXTEND PNEUMATIC SIGNAL LINES TO NEW PANEL LOCATION. REUSE VALVES AND ACTUATORS. REMOVE ALL ABANDONED BOXES AND PNEUMATICS.
20. LOCATION OF S-1 PERIMETER VALVES. VALVES TO BE CONTROLLED FROM S-1 PANEL. EXTEND PNEUMATIC SIGNAL LINES TO NEW PANEL LOCATION. REUSE VALVES AND ACTUATORS. REMOVE ALL ABANDONED BOXES AND PNEUMATICS.
21. LOCATION OF S-1 PERIMETER VALVES. VALVES TO BE CONTROLLED FROM S-1 PANEL. EXTEND PNEUMATIC SIGNAL LINES TO NEW PANEL LOCATION. REUSE VALVES AND ACTUATORS. REMOVE ALL ABANDONED BOXES AND PNEUMATICS.
22. LOCATION OF EXISTING DP SWITCH TO BE USED FOR FAN STATUS.
23. LOCATION OF SENSUS SYMATRIX, IMPACT ACOUSTIC MANAGEMENT SYSTEM. PROVIDE COMMUNICATION LINK TO THIS CONTROLLER.
24. POTENTIAL LOCATION OF DDC MASTER PANEL. PROVIDE 3/4" EMT CONDUIT WITH 2 MULTI-MODE FIBER OPTIC CABLES TO FIBER PATCH PANEL.
25. EXISTING POWER QUALITY METER. PROVIDE TIE-INS TO DDC PANEL. REFER WIRING DIAGRAM #20 ON DRAWING #DD-004.
26. PROVIDE 2-#12 AND 1-#12 GROUND WIRING TO EXTEND EXISTING 110V POWER WIRING IN KEYNOTES #10 AND #11 TO THE CONTROL PANELS INDICATED IN KEYNOTES 2, 4, AND 6 AND NEW DDC PANEL IN KEYNOTE #24.
27. EXISTING STARTERS FOR S-3, R-4 AND S-5. PROVIDE CURRENT SWITCH AND STATUS POINTS.
28. PROVIDE 3/4" EMT CONDUIT WITH 1-#12 GTH FROM THE MASTER DDC PANEL IN KEYNOTE #24 TO THE DEVICES BY THE FOLLOWING KEYNOTES: 2,4,6,10,11.
29. FOR WIRING IN NEW SPECIALTIES IN EXPOSED SPACES, CONNECT TO NEW EP TRANSDUCER SYSTEM OF DDC IN ACCESS SPACE AND NEW DDC PANEL IN MECHANICAL ROOM. REFER TO DETAIL FD-010-12.
30. LOCATION OF STEAM METER FM312. REFER TO DETAIL. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #24.

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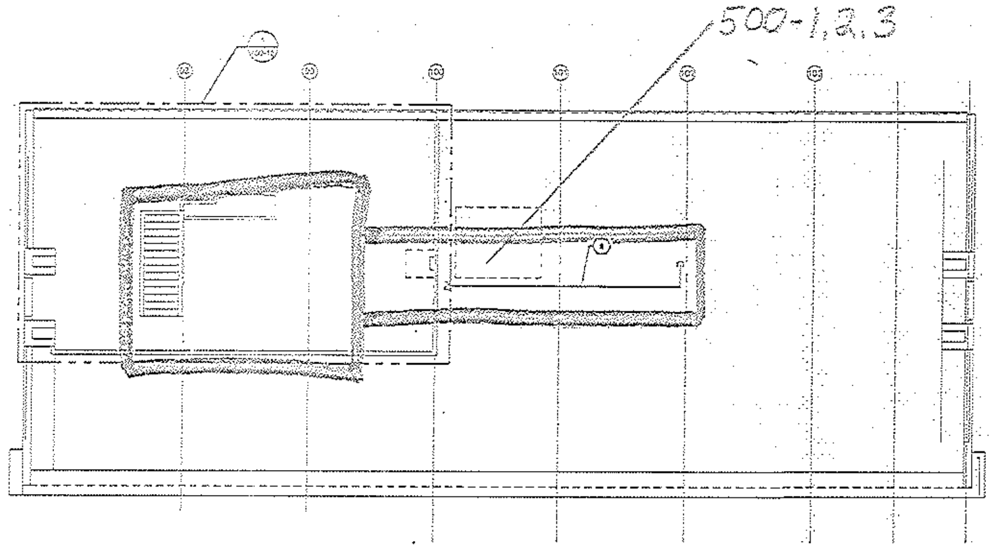
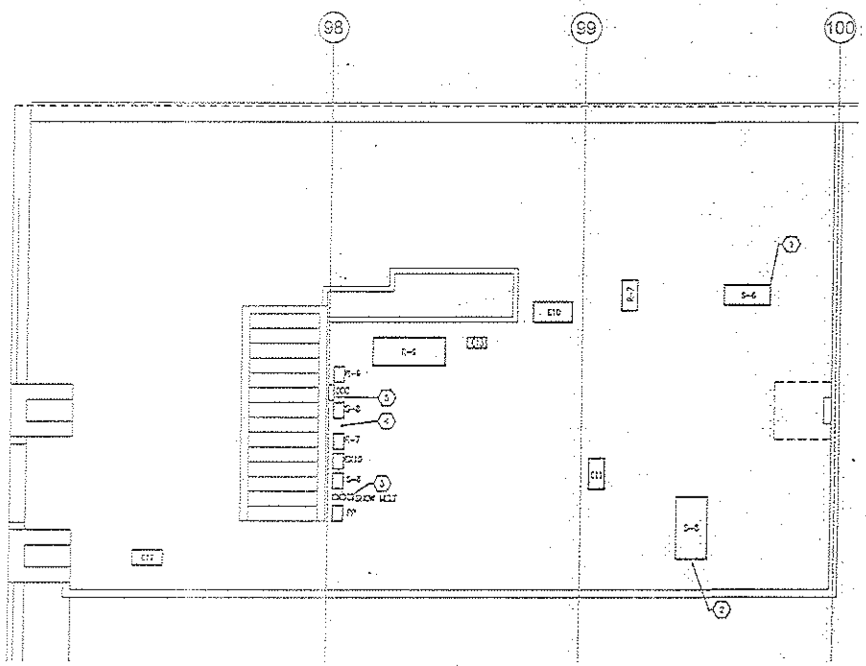


ATTIC PLAN
SCALE: 1/8" = 1'-0"



ATTIC PARTIAL PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EXISTING PNEUMATIC CONTROLLERS, SIGNAL LINES, ELECTRIC RELAYS, ETC. NOT TO BE REUSED.

RENOVATION KEYNOTES:

1. EXISTING SUPPLY FAN S-6. REUSE EXISTING FAN STATUS DP SWITCH, ALREADY WIRED TO DDC JUNCTION BOX. REUSE STEAM CONTROL VALVES. PROVIDE NEW MIXED AIR AND DISCHARGE AIR TEMPERATURE SENSORS. PROVIDE NEW FREEZE PROTECTION THERMOSTAT WITH AUXILIARY CONTACT WIRED BACK TO DDC. PROVIDE H-O-A STATUS POINT.
2. EXISTING SUPPLY FAN S-5. REUSE EXISTING FAN STATUS DP SWITCH, ALREADY WIRED TO DDC JUNCTION BOX. REUSE STEAM CONTROL VALVES. PROVIDE NEW MIXED AIR AND DISCHARGE AIR TEMPERATURE SENSORS. PROVIDE NEW FREEZE PROTECTION THERMOSTAT WITH AUXILIARY CONTACT WIRED BACK TO DDC. PROVIDE H-O-A STATUS POINT.
3. SNOW/ICE MELT CONTROLS LOCATION. ALREADY WIRED BACK TO DDC PANEL IN BASEMENT. PROVIDE CURRENT SWITCH AND WIRING FOR ROOF SNOW MELT SYSTEM.
4. EXISTING FAN STARTER RACK. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH FOR EACH. PROVIDE REMOTE START/STOP CAPABILITIES AND STATUS POINTS. PROVIDE CURRENT SWITCH. REFER TO POINTS LIST FOR QUANTITIES.
5. EXISTING DDC WIRING JUNCTION BOX. NEW LOCATION OF DDC PANEL. TRANSFER EXISTING POINTS AND 110V POWER. PROVIDE 3/4" EMT CONDUIT WITH 1-#22 UTP TO MASTER DDC PANEL IN KEYNOTE #24 LOCATED IN BASEMENT. RELOCATE STARTERS AS REQUIRED TO MAKE ROOM FOR NEW PANEL.
6. ROUTE NEW WIRING FROM MECHANICAL ROOM AND DOWN TO NEW TEMPERATURE SENSOR LOCATED ON THE 3RD FLOOR DANCE STUDIO.

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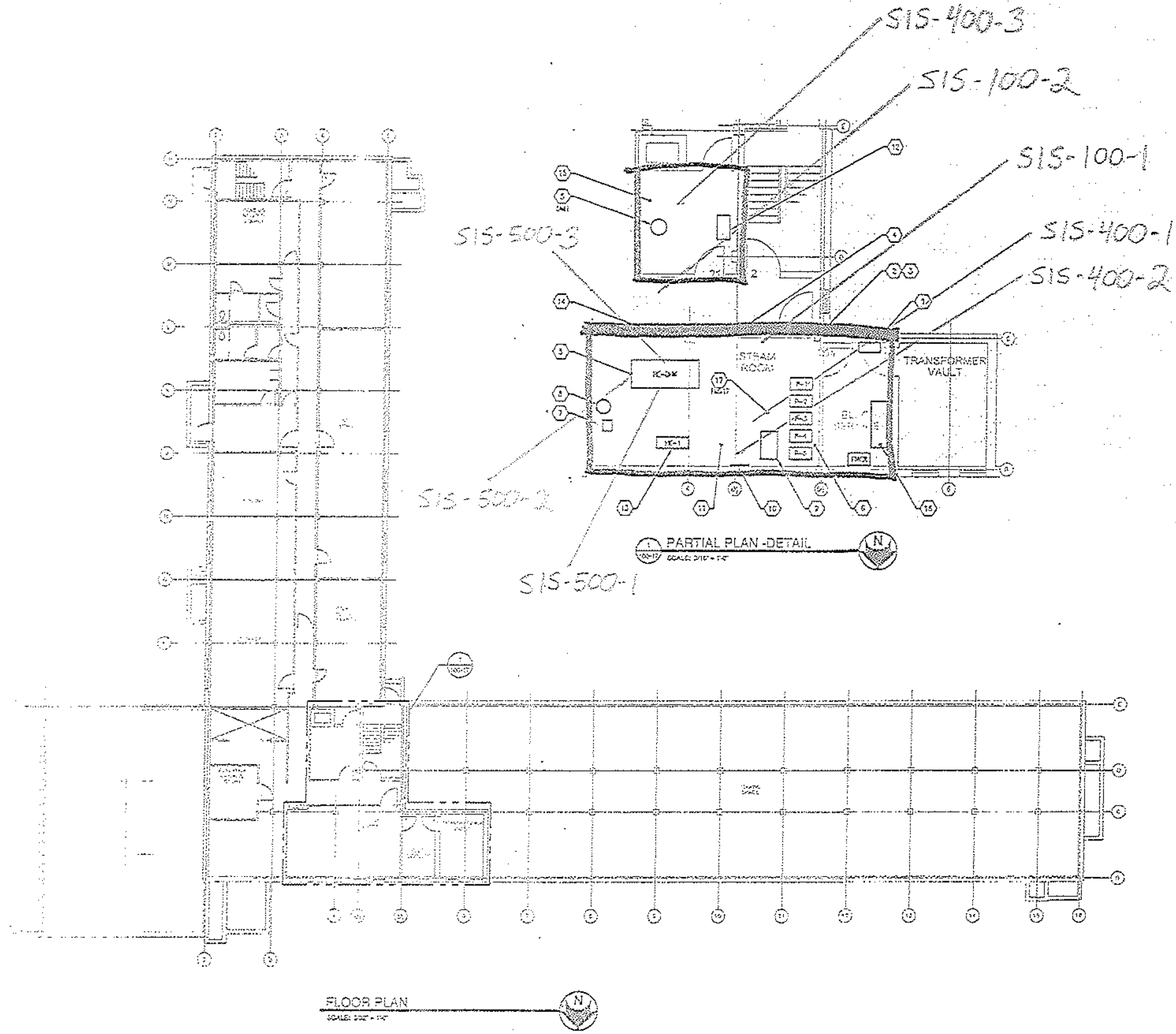

PARTIAL PLAN - DETAIL

FLOOR PLAN

RENOVATION KEYNOTES:

1. HONEYWELL DELTA XL CLASSIC PANEL TO BE REMOVED AND REPLACED WITH NEW PANEL. TRANSFER POINTS AND 110V POWER WIRING TO NEW PANEL. PROVIDE 3/4" EMT CONDUIT WITH 2 MULTI-MODE FIBER OPTIC CABLES TO FIBER OPTIC PATCH PANEL.
2. RADIATION SYSTEM HE-1, STEAM AND ZONE VALVE RECEIVER CONTROLLERS. TRANSFER POINTS TO NEW PANEL.
3. BUILDING AIR ALARM IN EXISTING PANEL. TRANSFER POINT TO NEW PANEL.
4. PROVIDE COMBINATION MOTOR STARTERS FOR PUMPS P-1 THRU P-3 WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POWER LIST FOR QUANTITIES.
5. DOMESTIC HOT WATER SYSTEM. REMOVE EXISTING SENSORS AND PNEUMATIC CONTROLS. REFER TO FLOW DIAGRAM AND POINTS LIST FOR NEW SENSORS AND POINTS.
6. EXISTING ZONE SUPPLY AND RETURN PIPE TEMPERATURE SENSORS. REPLACE WITH NEW SENSORS USING THE SAME WELL AND WIRE TO NEW PANEL AS REQUIRED BY POINTS LIST. (TYP. OF 5)
7. EXISTING WATER METER LOCATION.
8. EXISTING SUMP PIT.
9. STEAM ENTRY AND PIT WITH EXISTING HIGH LEVEL ALARM WIRED TO EXISTING PANEL.
10. EXISTING EXHAUST FAN IN WALL FOR MECHANICAL ROOM WITH ON/OFF WALL SWITCH.
11. STEAM CONTROL VALVES, (1/3, 2/3) FOR HE-1.
12. BUILDING AIR COMPRESSOR.
13. EXISTING PIPE SENSORS FOR HE-1 HOT WATER SUPPLY AND RETURN. REMOVE DEVICES AND PROVIDE NEW SENSORS, USING EXISTING WELLS, AS REQUIRED BY POINTS LIST.
14. PROVIDE COMBINATION MOTOR STARTER FOR PUMP P-DHW1 WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
15. PROVIDE COMBINATION MOTOR STARTER FOR PUMP P-DHW2 WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
16. EXISTING POWER QUALITY METER. PROVIDE TIE-INS TO DDC PANEL. SEE WIRING DIAGRAM #23 ON DRAWING ATC-05A.
17. LOCATION OF NEW STEAM FLOW METER FMS12. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #1.

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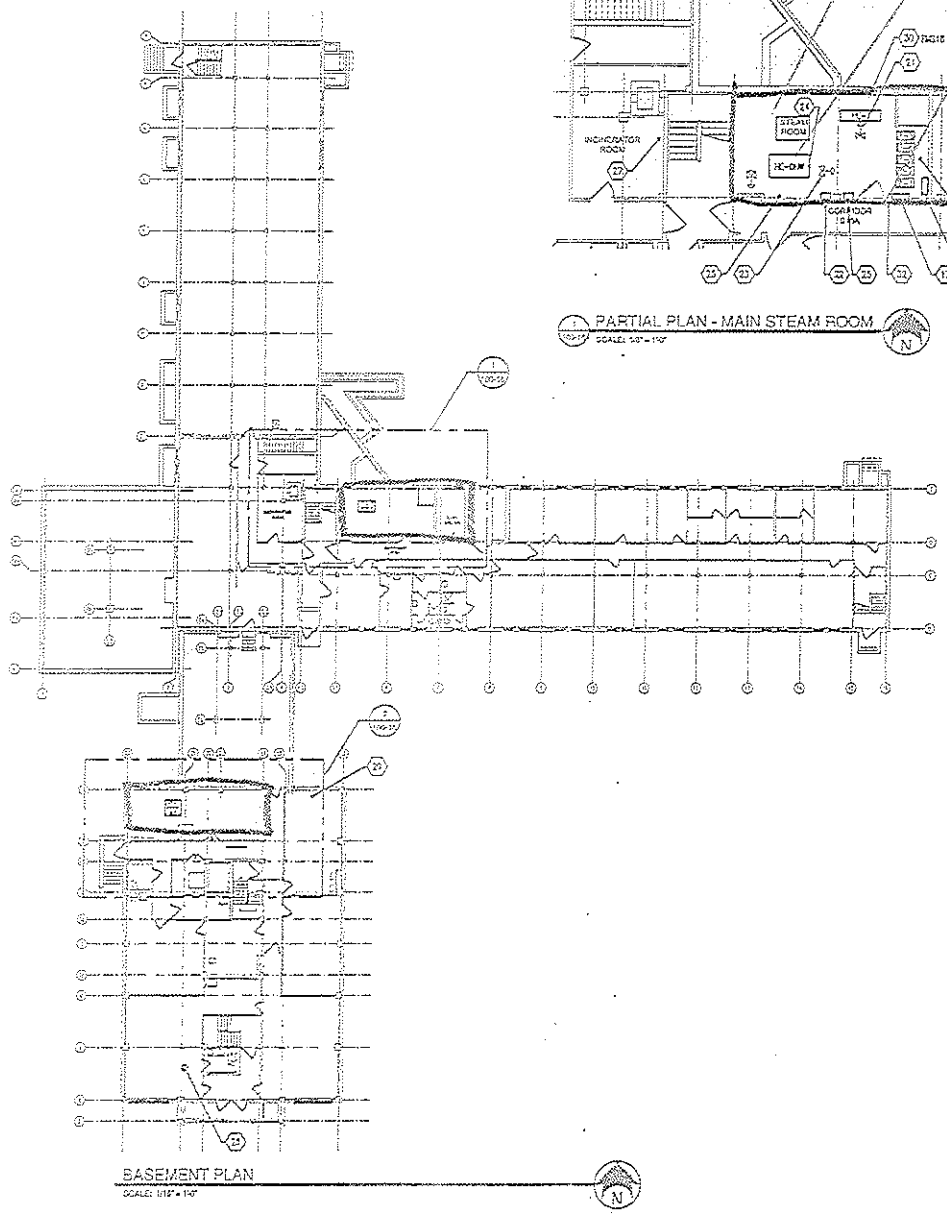

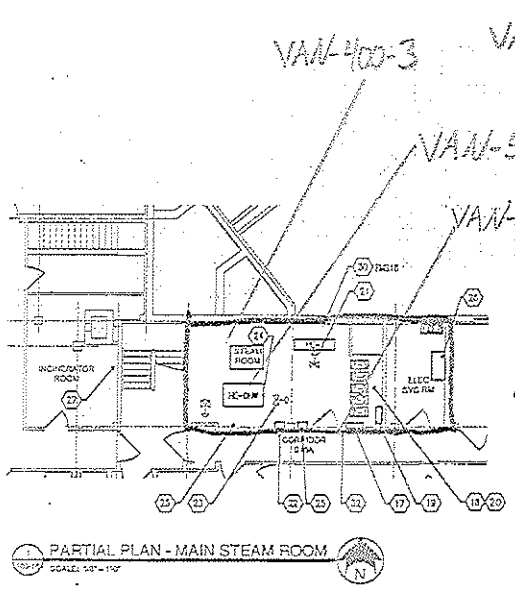

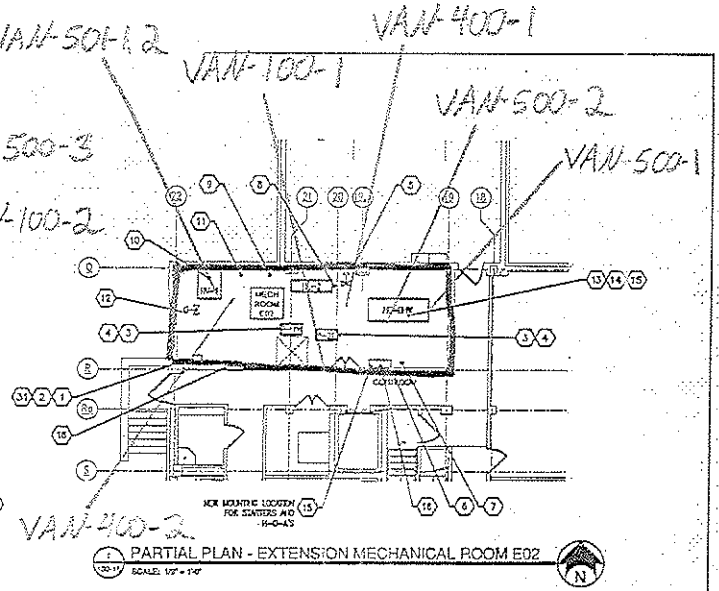

RENOVATION KEYNOTES:

1. HONEYWELL DELTA XL CLASSIC PANEL TO BE REMOVED AND REPLACED WITH NEW PANEL. TRANSFER POINTS AND 110V POWER WIRING TO NEW PANEL.
2. RADIATION SYSTEM RECEIVER CONTROLS IN EXISTING PANEL FOR HC-2 ZONE MIXING VALVES, HV-1 DAMPERS, HV-1 STEAM VALVE AND DHW STEAM VALVE. RELOCATE ALL DEVICES IN NEW PANEL AND RECONNECT.
3. EXISTING ZONE SUPPLY AND RETURN PIPE TEMPERATURE SENSORS. REPLACE WITH NEW SENSORS USING THE SAME WELL AND WIRE TO NEW PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
4. EXISTING ZONE MIXING VALVE SIGNAL TO RECEIVER CONTROLS.
5. EXISTING HC-1 STEAM VALVE SIGNAL TO RECEIVER CONTROLS.
6. EXISTING HONEYWELL CONTROL PANEL, TO BE REMOVED.
7. EXISTING MOTOR STARTERS FOR EF-1 AND EF-2, PROVIDE H-O-A SELECTOR SWITCH IN EXISTING STARTERS. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
8. MAIN RADIATION SYSTEM SUPPLY AND RETURN WATER PIPE SENSORS. REPLACE WITH NEW SENSORS USING THE SAME WELL AND WIRE TO NEW PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
9. EXISTING MOTOR STARTER FOR SV-1 SUPPLY FAN. PROVIDE STATUS FOR EXISTING H-O-A SELECTOR SWITCH.
10. REMOVE EXISTING SENSORS AND PNEUMATIC CONTROLS FOR HV-1 AND REPLACE WITH DDC CONTROLS. REFER TO FLOW DIAGRAM AND POINTS LIST OF DETAILS.
11. EXISTING DAMPER ACTUATOR SIGNAL FOR HV-1 TO RECEIVER CONTROLS.
12. EXISTING STEAM PRESSAT VALVE SIGNAL FOR HV-1 TO RECEIVER CONTROLS.
13. EXISTING SIGNAL FROM STEAM VALVE FOR HC-DHW TO RECEIVER CONTROLS.
14. TEMPERATURE SENSOR ON HC-DHW AND ON DHW SUPPLY PIPE. REPLACE WITH NEW SENSORS USING SAME WELLS AND CONNECT TO NEW PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
15. EXISTING DHW ELECTRIC PUMPS, P-DHW1 AND P-DHW2, PROVIDE COMBINATION MOTOR STARTERS WITH H-O-A SELECTOR SWITCHES. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
16. EXISTING MOTOR STARTERS FOR P-1W AND P-2C. RELOCATE WIRING FROM EXISTING H-O-A SELECTOR SWITCHES. PROVIDE NEW H-O-A SELECTOR SWITCHES IN EXISTING MOTOR STARTERS. PROVIDE STATUS POINTS. SEE POINTS LIST FOR QUANTITIES.
17. EXISTING RECEIVER CONTROL PANEL FOR ZONE 1 THRU 5 MIXING VALVES AND EXIST. STEAM VALVE. CONNECT ALL SIGNALS TO NEW CONTROL PANEL IN SAME LOCATION. TRANSFER 110V POWER WIRING. PROVIDE 3/4" EXT CONDUIT WITH 2 MULTI-MODE FIBER OPTIC CABLES FROM FIBER PATCH PANEL.
18. NOT USED.
19. MOTOR STARTERS FOR P-1 THRU P-5. PROVIDE COMBINATION MOTOR STARTERS WITH H-O-A SELECTOR SWITCHES. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
20. ZONE SUPPLY AND RETURN PIPE SENSORS. REPLACE WITH NEW SENSORS USING SAME WELL. CONNECT TO NEW PANEL IN THIS ROOM. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
21. HC-1 STEAM VALVE SIGNAL TO RECEIVER CONTROL PANEL. TRANSFER POINT TO NEW CONTROL PANEL IN THIS ROOM.
22. EXISTING DHW SYSTEM RECEIVER CONTROLS. CONNECT ALL SIGNALS FOR DHW SYSTEM TO NEW CONTROL PANEL IN SAME ROOM.
23. HC-DHW STEAM CONTROL VALVE AND MIXING VALVE SIGNAL TO EXISTING DHW RECEIVER PANEL. TRANSFER POINT TO NEW CONTROL PANEL.
24. TEMPERATURE SENSOR FOR HC-DHW AND MAIN DHW SUPPLY LINE. REPLACE WITH NEW SENSORS USING SAME WELL AND CONNECT TO NEW DHW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
25. MOTOR STARTER FOR P-DHW1. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
26. EXISTING POWER QUALITY METER. PROVIDE DDC TIE-INS. SEE WIRING DIAGRAM #20 ON DRAWING ATC-004.
27. MOTOR STARTER FOR P-DHW2. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE FLOW DIAGRAM.
28. REMOVE EXISTING TEMPERATURE SENSOR AND REPLACE WITH NEW SENSOR. WIRE BACK TO NEW CONTROL PANEL IN MECH ROOM.
29. EXISTING WATER METER. REPLACE WITH NEW METER.
30. EXISTING STEAM ENTRY AND TUNNEL. PROVIDE NEW MOTOR FOR HV-10. PROVIDE 3/4" EXT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #17.
31. PROPOSED LOCATION OF NEW CONTROL PANEL. PROVIDE 3/4" EXT CONDUIT WITH 1-#22 UTP TO DDC PANEL IN KEYNOTE #17.
32. PROPOSED LOCATION OF REMOTE STEAM METER DISPLAY AND FLOW PROCESSOR. PROVIDE 3/4" EXT CONDUIT BETWEEN REMOTE METER AND STEAM ENTRY IN KEYNOTE #30. INSTALL FACTORY SUPPLIED CABLE.

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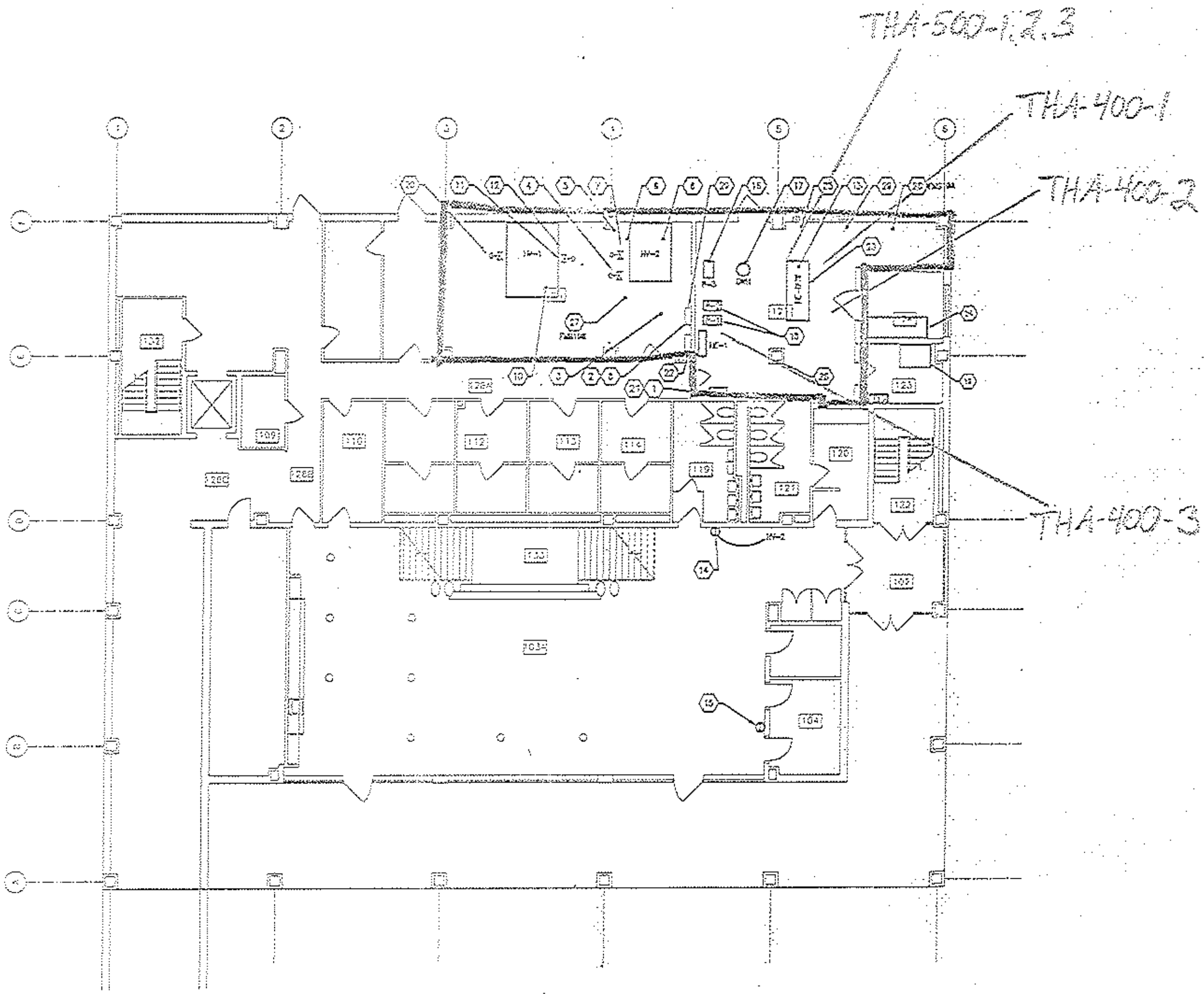

FIRST FLOOR PLAN

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

RENOVATION KEYNOTES:

1. HONEYWELL DELTA CONTROL PANEL TO BE REMOVED AND REPLACED W/ NEW PANEL. TRANSFER EXISTING POINTS AND 110V POWER WIRING TO NEW PANEL. PROVIDE 3/4" EMT CONDUIT WITH 2 MULTI-MODE FIBER OPTIC CABLES TO FIBER PATCH PANEL.
2. EXISTING MOTOR STARTERS FOR EXHAUST FANS EF-1, EF-2 AND EF-3. PROVIDE START/STOP AND H-O-A STATUS AS REQUIRED BY POINTS LIST.
3. EXISTING DISCHARGE AIR TEMPERATURE SENSOR FOR HV-2. REPLACE SENSOR WITH NEW AND CONNECT TO NEW CONTROL PANEL.
4. HV-2 CHILLED WATER VALVE SIGNAL TO NEW TRANSDUCER IN NEW CONTROL PANEL.
5. DAMPER RECEIVER CONTROLS FOR HV-1 AND HV-2 TO BE REMOVED. INSTALL EP TRANSDUCER AND CONNECT TO NEW CONTROL PANEL. REUSE DAMPER ACTUATORS.
6. FREEZESTAT FOR HV-2. REPLACE WITH NEW SENSOR AND CONNECT TO NEW CONTROL PANEL.
7. HV-2 STEAM VALVE FOR PREHEAT COIL, SIGNAL TO NEW TRANSDUCER IN NEW CONTROL PANEL.
8. EXISTING HV-2 SUPPLY FAN MOTOR STARTER. PROVIDE START/STOP AND H-O-A STATUS AS REQUIRED BY POINTS LIST.
9. EXISTING MIXED AIR TEMPERATURE SENSOR FOR HV-2. REPLACE SENSOR WITH NEW AND CONNECT TO NEW CONTROL PANEL.
10. EXISTING DISCHARGE AIR TEMPERATURE SENSOR FOR HV-1. REPLACE SENSOR WITH NEW AND CONNECT TO NEW CONTROL PANEL.
11. HV-1 CHILLED WATER VALVE SIGNAL TO NEW TRANSDUCER IN NEW CONTROL PANEL.
12. FREEZESTAT FOR HV-1. REPLACE WITH NEW SENSOR AND CONNECT TO NEW CONTROL PANEL.
13. DOMESTIC HOT WATER SYSTEM. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
14. EXISTING TEMPERATURE SENSOR ON WALL. REPLACE WITH NEW SENSOR AND CONNECT TO NEW CONTROL PANEL. REUSE EXISTING WIRE MOLD FOR NEW WIRING.
15. PROVIDE NEW TEMPERATURE SENSOR ON WALL FOR RADIANT ZONE. CONNECT TO NEW CONTROL PANEL. PROVIDE WIREMOLD FOR NEW WIRING.
16. PROVIDE COMBINATION MOTOR STARTER FOR PUMP P-3 WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
17. PROVIDE COMBINATION MOTOR STARTER FOR PUMP P-[illegible] WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE POINTS LIST FOR QUANTITIES.
18. PROVIDE STATUS FOR MOTORS AND STATUS FOR H-O-A SELECTOR SWITCHES FOR PUMPS P-1 AND P-2.
19. EXISTING POWER QUALITY METER. PROVIDE TE-[illegible] TO DDC SYSTEM. SEE WIRING DIAGRAM #19 ON DRAWING ATC-[illegible].
20. HV-1 STEAM VALVE FOR PREHEAT COIL, SIGNAL TO NEW TRANSDUCER IN NEW CONTROL PANEL.
21. SUGGESTED LOCATION FOR NEW MASTER DDC PANEL.
22. HONEYWELL CONTROL PANEL TO BE REMOVED. TRANSFER EXISTING POINTS TO NEW CONTROL PANEL IN MECH ROOM 125.
23. PROVIDE STATUS FOR PUMP P-[illegible] AND STATUS FOR H-O-A SELECTOR SWITCH.
24. EXISTING 3 PHASE TEMPERATURE MONITOR. PROVIDE TE-[illegible] TO DDC PANEL.
25. EXISTING WATER METER. REPLACE WITH NEW METER.
26. EXISTING STEAM ENTRY. PROVIDE NEW FLOW METER FMS-1[illegible]. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #1.
27. EXISTING STEAM LINE TO KITCHEN. PROVIDE FLOW METER FMS-1[illegible]. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #1.
28. EXISTING BUILDING AIR ALARM.
29. PROPOSED LOCATION OF BOTH REMOTE STEAM METER DISPLAYS AND FLOW PROCESSOR. PROVIDE 3/4" EMT CONDUIT BETWEEN REMOTE METERS AND STEAM ENTRIES IN KEYNOTE #26 AND #27. INSTALL FACTORY SUPPLIED CABLING.

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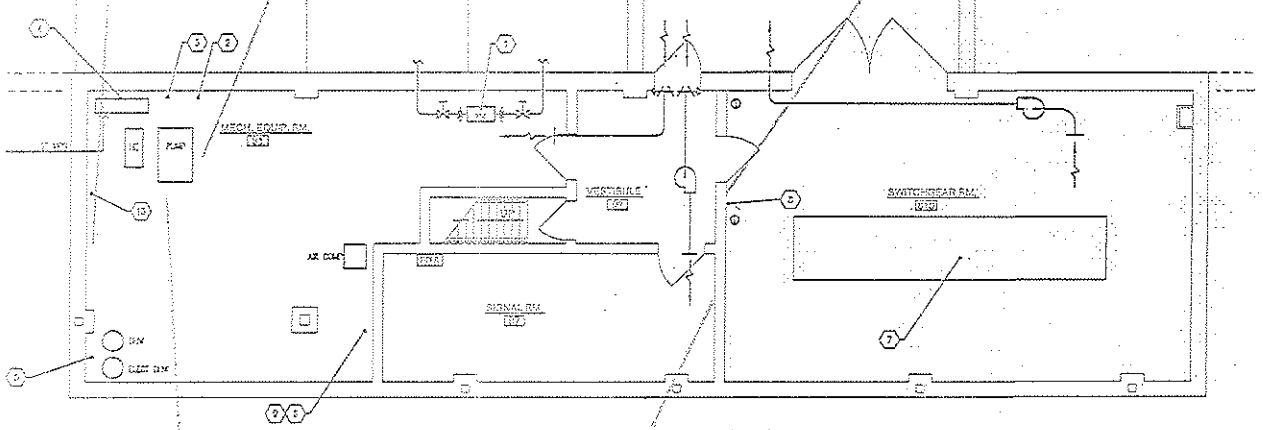


KEL-100-2

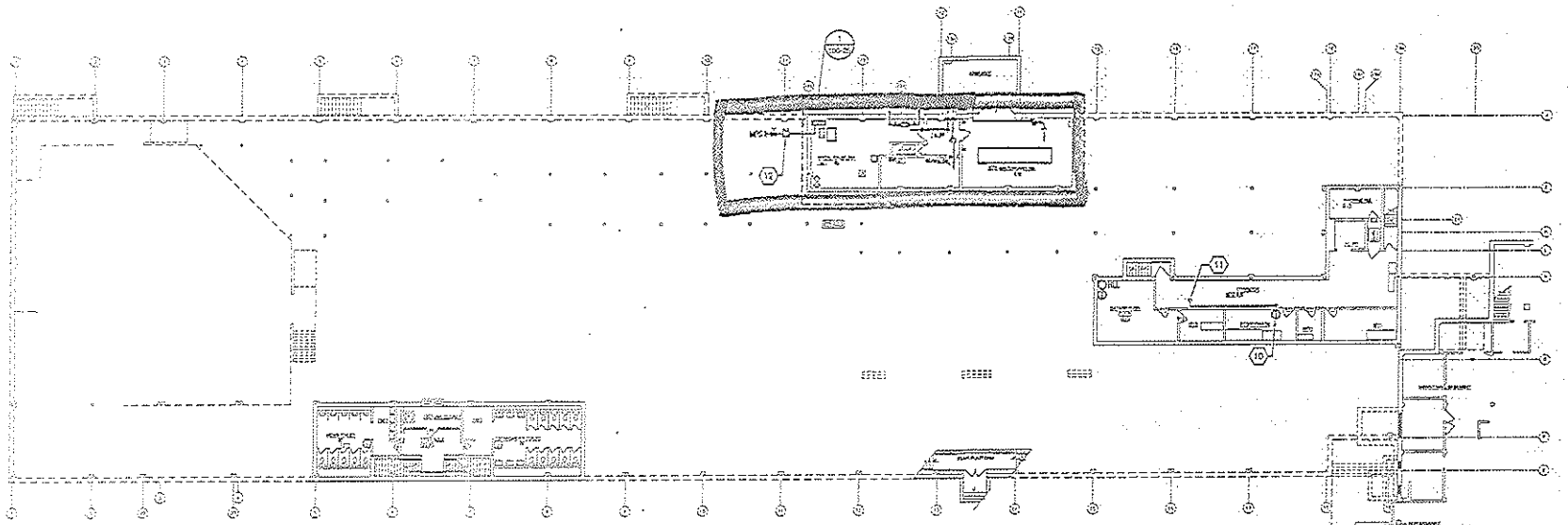
KEL-400-3

PARTIAL BASEMENT PLAN

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

RENOVATION KEYNOTES:

1. DOMESTIC WATER METER, EX 6" TURBINE METER. REPLACE WITH NEW PER WTR SCHEDULE, INCLUDE NEW ISOLATION VALVES.
2. REMOVE EX BM CONTROLLER AND ALL ASSOCIATED PNEUMATICS.
3. EXISTING PUMP RELAY FOR P-1 ALREADY WIRED BACK TO DELTA SYSTEM. PROVIDE COMBINATION MOTOR STARTERS WITH H-O-A SELECTOR SWITCHES FOR PUMPS P-1 AND P-2. PROVIDE START/STOP CAPABILITY, STATUS POINTS AND CURRENT SWITCHES FOR EACH. SEE POINTS LIST FOR QUANTITIES.
4. EXISTING STEAM POWERED PRV'S TO REMAIN.
5. BMS CONTROLLER TO BE REMOVED AND ALL ASSOCIATED PNEUMATICS. REFER TO DETAIL FOR NEW MODE. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE REMOTE START/STOP CAPABILITIES, STATUS POINTS AND CURRENT SWITCH. SEE POINTS LIST FOR QUANTITIES.
6. EXISTING DELTA 1000 PANEL. TRANSFER 110V POWER WIRING AND EXISTING POINTS TO NEW DDC IN KEYNOTE #9.
7. EXISTING POWER BURGLY METER. PROVIDE TIE-INS TO NEW DDC. SEE WIRING DIAGRAM #19 ON DRAWING A60-004.
8. STARTER FOR HIGH VOLTAGE ROOM EXHAUST FAN. PROVIDE STATUS POINTS AND CURRENT SWITCH. SEE POINTS LIST FOR QUANTITIES.
9. PROPOSED LOCATION OF NEW DDC PANEL. PROVIDE 3/4" EMT CONDUIT WITH 2 MULTI MODE FIBER OPTIC CABLES TO EMCR PATCH PANEL.
10. EXISTING TEMPERATURE SENSOR FOR SPACE. REMOVE AND REPLACE WITH NEW SENSOR. RUN WIRING IN NEW WIREMOLD IN FINISHED SPACES. CONNECT TO NEW 24 TSM-SENSOR AT BOTTOM OF DESK AND NEW DDC PANEL IN MECHANICAL ROOM. REFER TO DETAIL #5-070-13.
11. ROUTE NEW TEMP/HUMIDITY SENSOR WIRING UP THROUGH FLOOR ABOVE.
12. EXISTING STEAM METER. PROVIDE NEW FLOW METER FMG-FM2000. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #9.
13. PROPOSED LOCATION OF REMOTE STEAM METER DISPLAY AND FLOW PROCESSOR. PROVIDE 3/4" EMT CONDUIT BETWEEN REMOTE METER AND STEAM ENTRY IN KEYNOTE #12. INSTALL FACTORY SUPPLIED CABLING.



BASEMENT PLAN

SCALE: 1/16"=1'-0"

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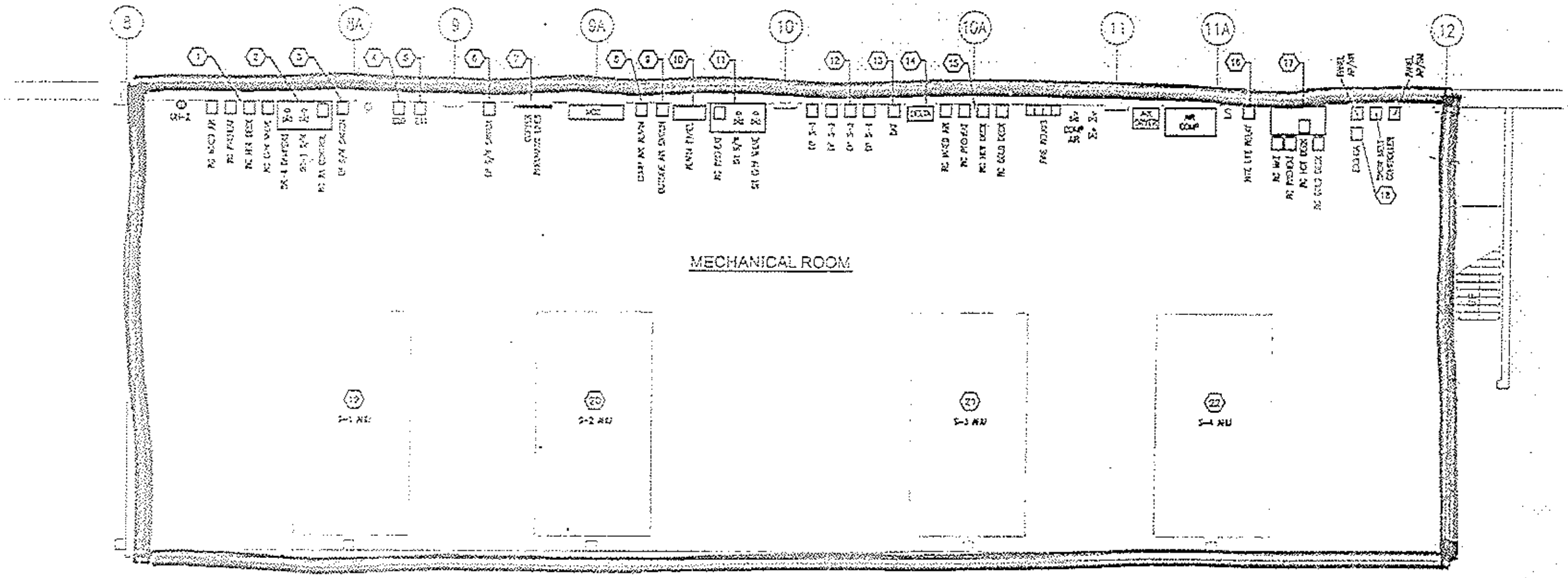

MEZZANINE FLOOR PLAN

RENOVATION KEYNOTES:

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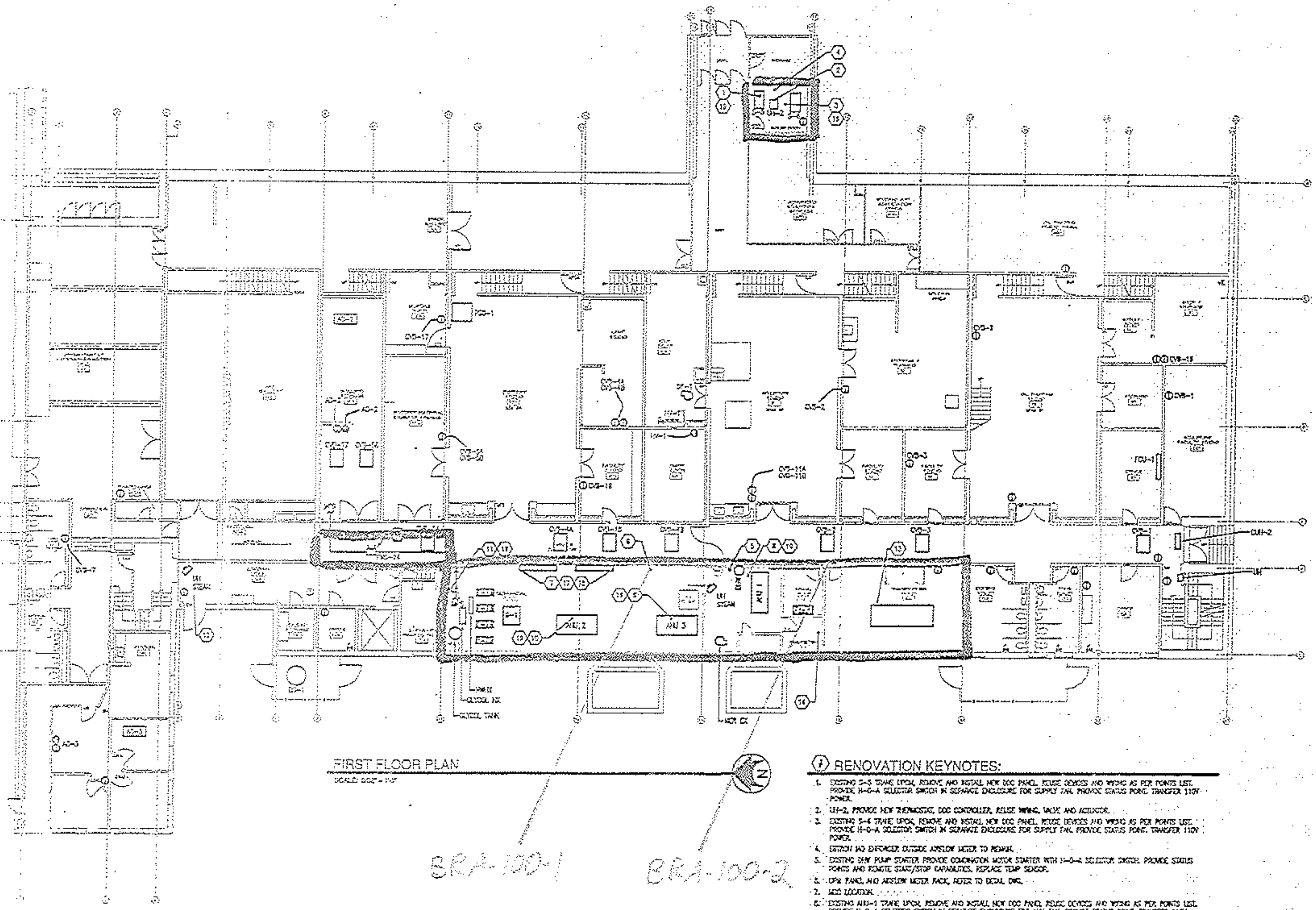

FIRST FLOOR PLAN

RENOVATION KEYNOTES:

1. EXISTING S-5 TRANE UPCM, REMOVE AND INSTALL NEW DDC PANEL. REUSE DEVICES AND WIRING AS PER POINTS LIST. PROVIDE H-O-A SELECTOR SWITCH IN SEPARATE ENCLOSURE FOR SUPPLY FAN. PROVIDE STATUS POINT. TRANSFER 110V POWER.
2. UH-2, PROVIDE NEW THERMOSTAT, DDC CONTROLLER, REUSE WIRING, VALVE AND ACTUATOR.
3. EXISTING S-4 TRANE UPCM, REMOVE AND INSTALL NEW DDC PANEL. REUSE DEVICES AND WIRING AS PER POINTS LIST. PROVIDE H-O-A SELECTOR SWITCH IN SEPARATE ENCLOSURE FOR SUPPLY FAN. PROVIDE STATUS POINT. TRANSFER 110V POWER.
4. EBTRON IAQ EXTRACER OUTSIDE AIRFLOW METER TO REMAIN.
5. EXISTING SAW PUMP STARTER. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND REMOTE START/STOP CAPABILITIES. REPLACE TEMP SENSOR.
6. UPS PANEL AND AIRFLOW METER RACK, REFER TO DETAIL DWG.
7. MCC LOCATION.
8. EXISTING AHU-1 TRANE UPCM, REMOVE AND INSTALL NEW DDC PANEL. REUSE DEVICES AND WIRING AS PER POINTS LIST. PROVIDE H-O-A SELECTOR SWITCH IN SEPARATE ENCLOSURE FOR AHU FAN. PROVIDE STATUS POINT. TRANSFER 110V POWER.
9. EXISTING AHU-3 TRANE UPCM, REMOVE AND INSTALL NEW DDC PANEL. REUSE DEVICES AND WIRING AS PER POINTS LIST. PROVIDE H-O-A SELECTOR SWITCH IN SEPARATE ENCLOSURE FOR AHU FAN. PROVIDE STATUS POINT. TRANSFER 110V POWER.
10. EXISTING AHU-2 TRANE UPCM, REMOVE AND INSTALL NEW DDC PANEL. REUSE DEVICES AND WIRING AS PER POINTS LIST. PROVIDE H-O-A SELECTOR SWITCH IN SEPARATE ENCLOSURE FOR AHU FAN. PROVIDE STATUS POINT. TRANSFER 110V POWER.
11. EXISTING DELTA PANEL #3 EXCEL 5000 INCLUDES: BLDG STM PRESSURE, OUT AIR ALARM, ELEVATOR RM IR WATER ALARM, FIRE ALARM, FIRE ALARM TROUBLE, LAB AIR ALARM, PHONE CELL STATUS, ROADWAY LITES STATUS, ROADWAY LITES. – ALL TO REMAIN. PROVIDE 3/4" EMT CONDUIT WITH 2-MULTIMODE FIBER OPTIC CABLES TO FIBER PATCH PANEL.
12. REPLACE TEMP SENSOR WITH NEW, REUSE VALVE ACTUATOR, ADJUSTAT.
13. EXISTING POWER QUALITY METER. PROVIDE TX-RS TO DDC PANEL. REFER TO WIRING DIAGRAM #20 ON DRAWING ATC-004.
14. LOCATION OF NEW STEAM SENSOR FLS02. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #11.
15. PROVIDE START/STOP RELAY FOR BOILER B-1. PROVIDE ALARM WIRING TO DDC PANEL AND CONNECT TO ALARM CONTACT IN BOILER CONTROL BOARD.
16. CW METER, REPLACE REGISTER WITH NEW PULSE TYPE, REFER TO METER SCHEDULE.
17. PROVIDE CURRENT SWITCH AND STATUS POINTS FOR P-1A, P-1B, P-2A AND P-2B. EXISTING VFD'S AND H-O-A SELECTOR SWITCHES ARE LOCATED IN MCC. REFER TO POINTS LIST FOR QUANTITIES.
18. RECONNECT WIRING FOR EXHAUST FANS LOCATED IN MCC. REFER TO POINTS LIST FOR QUANTITIES.
19. PROVIDE 3/4" EMT CONDUIT WITH 1-#22 UTP TO INDIVIDUAL CONTROL PANELS.

GENERAL NOTES:

1. EXISTING SENSORS ARE NOT COMPATIBLE WITH NEW DDC, REPLACE ALL SENSORS WITH NEW, REUSE WIRING UNLESS OTHERWISE INDICATED. VERIFY INTEGRITY OF WIRING BEFORE REUSE. SENSOR LOCATIONS SHOWN BASED ON AS-BUILT DRAWINGS, ACTUAL LOCATION MAY VARY SLIGHTLY.
2. EXISTING POINT UPM POINT IDS ARE BASED ON AS BUILT DRAWINGS. FIELD VERIFICATION HAS SHOWN MOST TO BE ACCURATE HOWEVER APPROXIMATELY 10% WERE FOUND TO BE INACCURATE LOCATIONS. EACH POINT WILL REQUIRE VERIFICATION PRIOR TO REUSE, ADVISE IF DEVICE IS INOPERABLE OR WIRING CANNOT BE REUSED.

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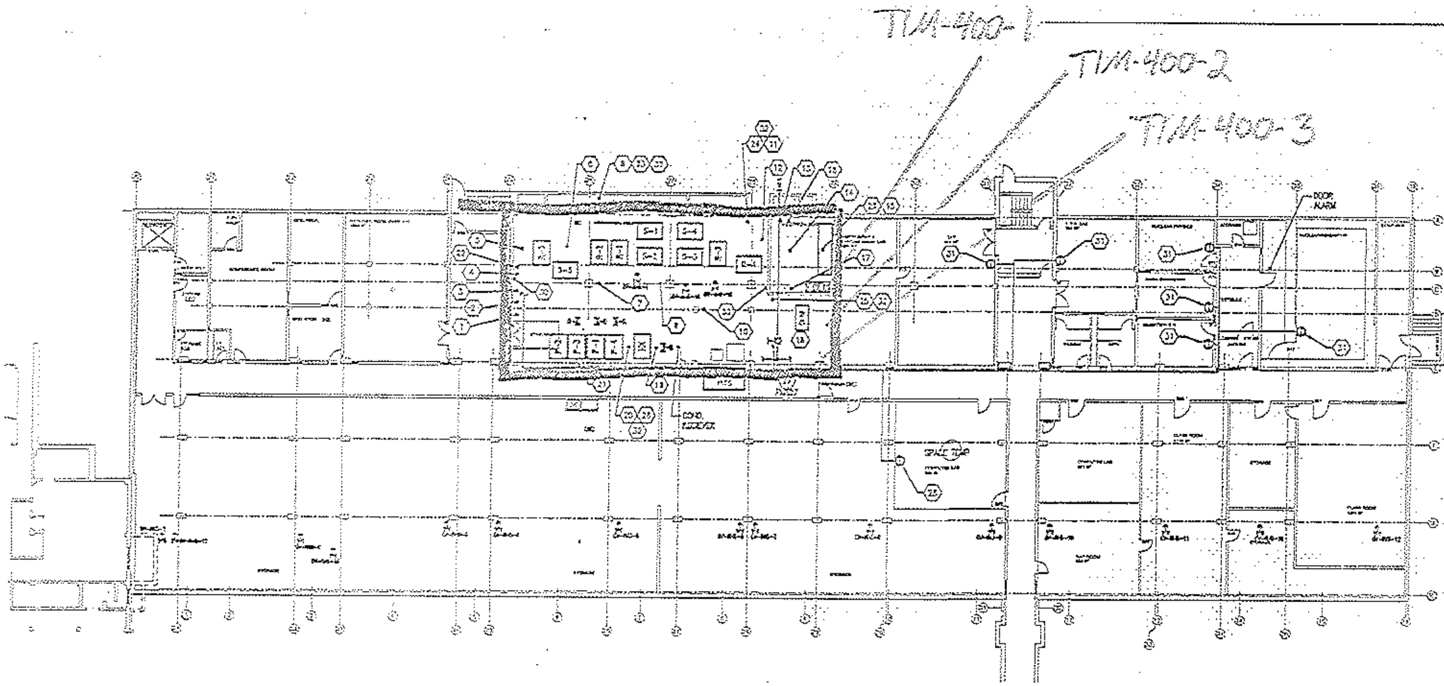

BASEMENT PLAN

SCALE: 1/16" = 1'-0"

GENERAL NOTES:

1.

RENOVATION KEYNOTES:

1. EXISTING BUILDING AIR PRESSURE ALARM, ALREADY WIRED TO DELTA PANEL.
2. EXISTING DELTA 115.00 PANEL TO BE REMOVED AND REPLACED WITH NEW. EXISTING POINTS IN PANEL TO BE TRANSFERRED TO NEW PANEL.
3. EXISTING FREEZESTAT ALARM PANEL TO BE REMOVED AND POINTS TRANSFERRED TO NEW PANEL.
4. EXISTING DELTA 102.00 PANEL TO BE REMOVED AND POINTS TRANSFERRED TO NEW PANEL.
5. EXISTING MOTOR STARTERS FOR HVAC SYSTEMS 1 THROUGH 4. PROVIDE H-O-A SELECTOR SWITCHES AND CURRENT SWITCHES. PROVIDE STATUS POINTS TO NEW DDC. REFER TO POINTS LIST FOR QUANTITIES.
6. S-5/R-5 BASEMENT VENTILATION – NOT IN SERVICE – NIC.
7. OUTSIDE AIR MASTER – TO BE REMOVED AND ALL ASSOCIATED TUBING.
8. S-1/R-1 AND S-2/R-2 RECEIVER CONTROLLER PANEL. REMOVE PANEL AND ALL ABANDONED DEVICES. PROVIDE NEW PANEL FOR EP TRANSDUCERS. REUSE VALVE AND DAMPER ACTUATORS AND PNEUMATIC SIGNAL LINES.
9. EXISTING FAN STATUS DP SWITCHES FOR S-1/R-1 AND S-2/R-2 ALREADY WIRED TO DELTA PANEL.
10. EXISTING FAN STATUS DP SWITCHES FOR S-3/R-3 AND S-4/R-4 ALREADY WIRED TO DELTA PANEL.
11. S-3/R-3 AND S-4/R-4 RECEIVER CONTROLLER PANEL. REMOVE PANEL AND ALL ABANDONED DEVICES. PROVIDE NEW PANEL FOR EP TRANSDUCERS. REUSE VALVE AND DAMPER ACTUATORS AND PNEUMATIC SIGNAL LINES.
12. EXISTING WATER METER REPLACE WITH NEW.
13. EXISTING SUMP PIT HIGH WATER LEVEL RELAYS, ALREADY WIRED BACK TO DELTA PANEL.
14. EMERGENCY GENERATOR. RECONNECT EXISTING WIRING TO NEW DDC.
15. PROVIDE CUTLER HAMMER POWER QUALITY METER IN EXISTING SWITCHGEAR. PROVIDE TIC-MS TO NEW DDC. REFER TO WIRING DIAGRAM #19 ON DRAWING ATC-004.
16. HIGH VOLTAGE ROOM EXHAUST FAN AND STARTER. PROVIDE CURRENT SWITCH AND STATUS POINTS AS PER POINTS LIST.
17. PROVIDE HIGH VOLTAGE ROOM TEMPERATURE SENSOR AT THIS LOCATION.
18. DOMESTIC HOT WATER SYSTEM. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH FOR PUMP. PROVIDE STATUS POINTS. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
19. EXISTING HTG SYSTEM STEAM VALVE AND ACTUATOR TO BE REUSED.
20. HC P-1(RADIATORS), P-4(REHEATS) RECEIVER CONTROLLERS. REMOVE ALL DEVICES, INSTALL NEW DDC PANEL, REUSE PNEUMATIC SIGNAL LINES. PROVIDE H-O-A STATUS POINTS P-1 THROUGH P-4. REFER TO POINTS LIST FOR QUANTITIES.
21. VALVE FOR P-3 TO BE CONTROLLED FROM S-3 PANEL. EXTEND PNEUMATICS NEW DDC PANEL.
22. SUGGESTED LOCATION FOR MASTER DDC PANEL. TRANSFER 110V POWER FROM REMOVED PANEL IN KEYNOTE #2. PROVIDE 3/4" EMT CONDUIT WITH 2 MULTI-MODE FIBER OPTIC CABLES TO FIBER PATCH PANEL.
23. SUGGESTED LOCATION FOR S-1/R-1, S-2/R-2 PANEL.
24. SUGGESTED LOCATION FOR S-3/R-3, S-4/R-4 PANEL.
25. SUGGESTED LOCATION FOR SGM PANEL.
26. SUGGESTED LOCATION FOR HEATING PANEL.
27. NEW LOCATION OF STEAM METER FLOW AND PRESSURE SENSOR. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND TO 110V POWER SUPPLY IN KEYNOTE #22.
28. PROVIDE SURFACE MOUNTED TEMPERATURE SENSOR ON BLOCK WALL. RUN SURFACE MOUNTED WIREWAY FOR WIRING. ROUTE TO DDC PANEL LOCATED IN MECHANICAL ROOM.
29. EXISTING 3 PHASE TEMPERATURE MONITOR. PROVIDE TIC-MS TO DDC PANEL.
30. ROUTE NEW TEMPERATURE SENSOR WIRING FROM NEW DDC PANEL UP THROUGH 1ST FLOOR.
31. EXISTING TEMPERATURE SENSOR FOR SPACE. REMOVE AND REPLACE WITH NEW SENSOR. RUN WIRING IN NEW WIREMOLD IN FINISHED SPACES. CONNECT TO NEW EP TRANSDUCER ABOVE CEILING OR AT BOTTOM OF DECK AND NEW DDC PANEL IN MECHANICAL ROOM. REFER TO DETAIL FD-STD-15.
32. PROVIDE 3/4" EMT CONDUIT WITH 1-#22 UTP FROM KEYNOTE #22 TO INDIVIDUAL CONTROL PANELS IN KEYNOTES #23, #24, #25 AND #26. EXTEND 110V SUPPLY IN KEYNOTE #22 WITH 3/4" EMT CONDUIT, 2-#12 AND 1-#12 GROUND TO PANELS IN KEYNOTES #23, #24, #25 AND #26.
33. PROPOSED LOCATION OF REMOTE STEAM METER DISPLAY. PROVIDE 3/4" EMT CONDUIT BETWEEN REMOTE METER AND STEAM ENTRY IN KEYNOTE #27. INSTALL FACTORY SUPPLIED CABELING.

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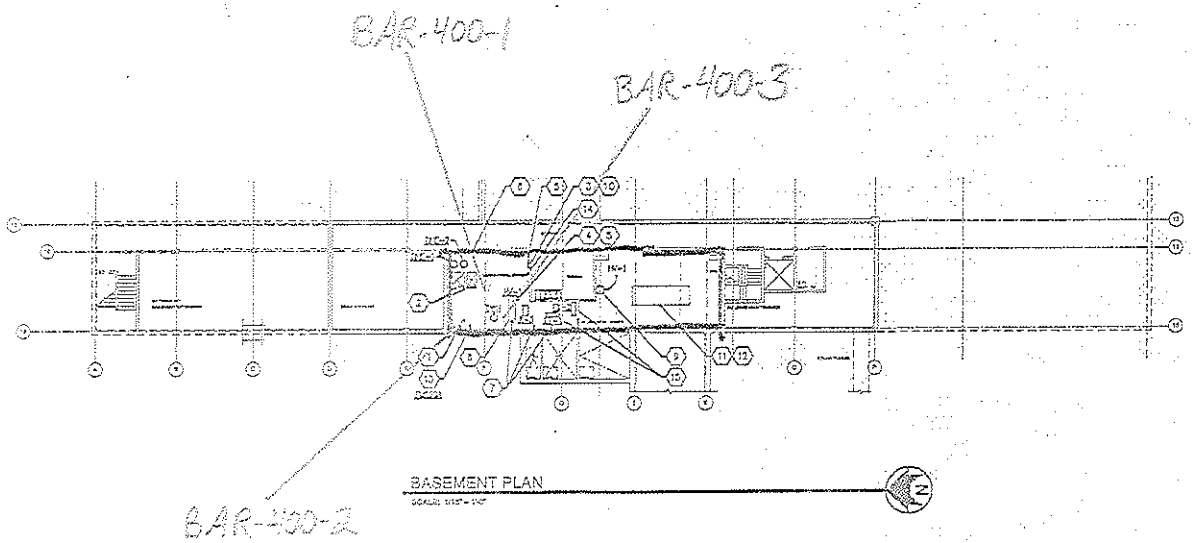

BASEMENT PLAN

SCALE: 1/16" = 1'-0"

(1) RENOVATION KEYNOTES:

1. EXISTING WATER METER.
2. EXISTING SUMP PITS.
3. HONEYWELL CONTROL PANEL TO BE REMOVED. TRANSFER 110V POWER TO NEW PANEL IN SAME LOCATION. PROVIDE 3/4" EMT CONDUIT WITH (2) MULTI-MODE FIBER OPTIC CABLES FROM FIBER PATCH PANEL TO NEW CONTROL PANEL.
4. HV-1 HEATING COIL CONTROL VALVES, MIXING VALVE ACTUATORS. INSTALL I/P TRANSDUCERS AND LOCATE IN NEW CONTROL PANEL.
5. RECIRCULATION PUMP P-HV1 FOR PREHEAT COIL. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE FLOW DIAGRAM.
6. REMOVE EXISTING SENSORS AND INSTALL NEW TEMPERATURE, HUMIDITY AND LOW LIMIT SENSORS FOR HV-1. REFER TO FLOW DIAGRAM AND POINTS LIST. CONNECT TO NEW CONTROL PANEL IN THIS ROOM. PATCH HOLES IN SOUTHWALL FROM SENSOR REMOVALS.
7. EXISTING DAMPERS FOR HV-1 SYSTEM. PROVIDE ACTUATORS. INSTALL TRANSDUCERS AS REQUIRED BY POINTS LIST AND LOCATE IN NEW CONTROL PANEL IN THIS ROOM.
8. DOMESTIC HOT WATER SYSTEM. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH FOR P-DHW1. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. SEE FLOW DIAGRAM.
9. EXISTING TEMPERATURE SENSOR ON WALL. REMOVE AND REPLACE WITH NEW SENSOR AND WIRE TO NEW CONTROL PANEL.
10. SUGGESTED LOCATION FOR NEW CONTROL PANEL.
11. EXISTING 3 PHASE TEMPERATURE MONITOR. PROVIDE TIE-INS TO DDC PANEL.
12. PROVIDE OUTLET HARMONIC POWER QUALITY METER. PROVIDE TIE-INS TO DDC PANEL. SEE WIRING DIAGRAM #18 ON DRAWING ATC-004.
13. EXISTING STEAM ENTRY. PROVIDE NEW FLOW METER FMS-2W. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND FROM 110V POWER SUPPLY IN KEYNOTE #3.
14. PROPOSED LOCATION OF REMOTE STEAM METER DISPLAY AND FLOW PROCESSOR. PROVIDE 3/4" EMT CONDUIT BETWEEN REMOTE METER AND STEAM ENTRY IN KEYNOTE #13. INSTALL FACTORY SUPPLIED CABLING.
15. PROVIDE COMBINATION MOTOR STARTERS WITH H-O-A SELECTOR SWITCH FOR DEVICES EAHU EX-1 AND EX-2. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.

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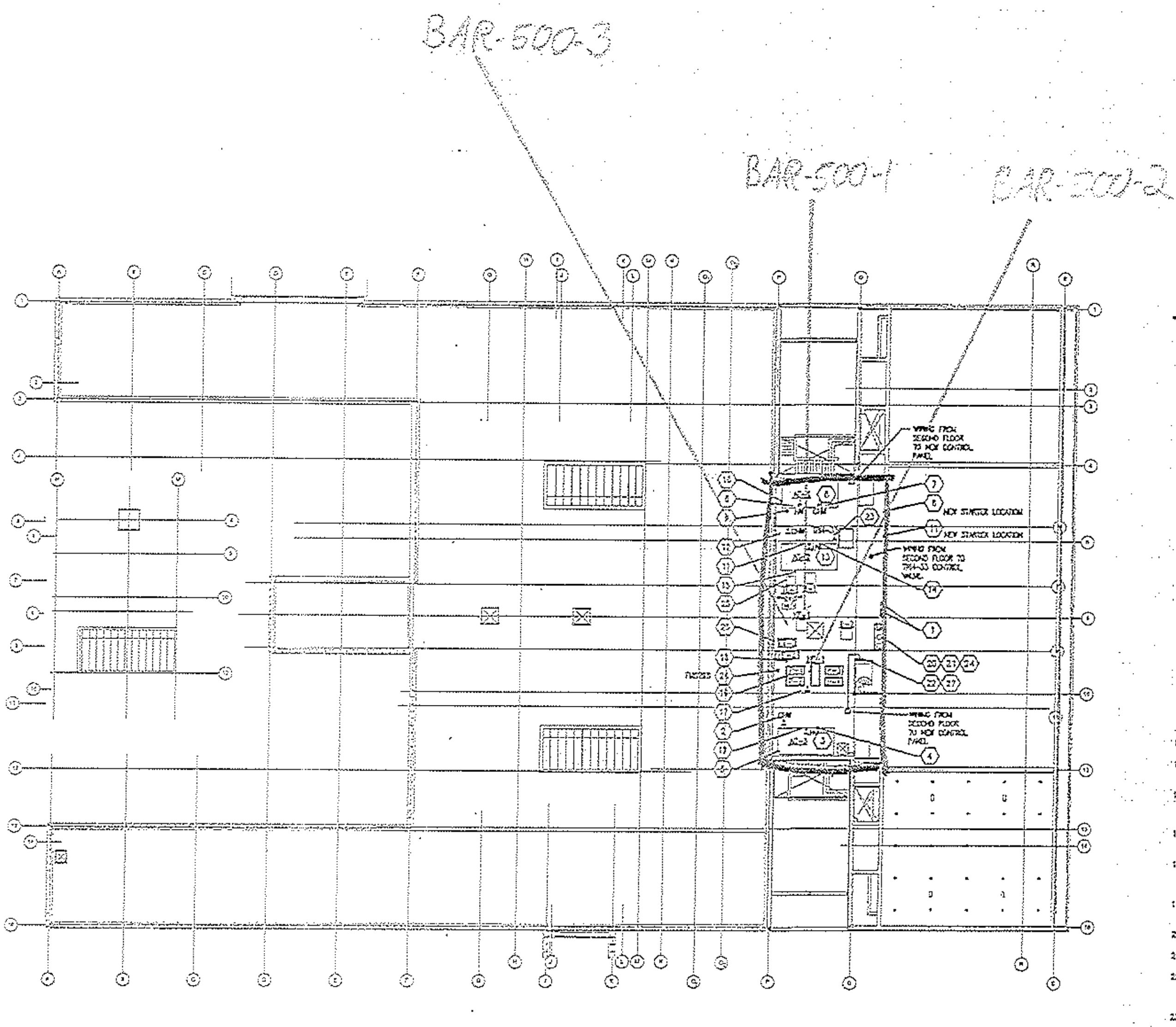

ATTIC PLAN

SCALE: 1/16" = 1'-0"

⑦ RENOVATION KEYNOTES:

1. HONEYWELL ENCLOSURES AND DEVICES TO BE REMOVED. REPLACE DEVICES WITH E/P TRANSDUCERS AS PER POINTS LIST.
2. AC-3 CHILLED WATER CONTROL VALVE. REUSE VALVE ACTUATOR. INSTALL EP TRANSDUCERS AND LOCATE IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
3. PROVIDE NEW TEMPERATURE SENSORS FOR AC-3 AS REQUIRED BY POINTS LIST AND FLOW DIAGRAM. USE EXISTING WELL LOCATIONS WHEN POSSIBLE AND CONNECT TO NEW CONTROL PANEL.
4. PROVIDE NEW LOW LIMIT SENSOR FOR AC-3 AND CONNECT WIRING TO NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
5. OUTSIDE AIR AND RETURN AIR DAMPERS FOR AC-3. REUSE VALVE ACTUATORS. PROVIDE EP TRANSDUCERS AND LOCATE IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
6. 3W CONTROL VALVE AND PUMP P-PH1 FOR AC-1 PREHEAT COIL. REUSE VALVE ACTUATOR. PROVIDE EP TRANSDUCER AND LOCATE IN NEW CONTROL PANEL. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
7. AC-1 CHILLED WATER CONTROL VALVE. REUSE VALVE AND PROVIDE EP TRANSDUCER AND WIRE TO NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
8. PROVIDE NEW TEMPERATURE SENSORS FOR AC-1 AS REQUIRED BY FLOW DIAGRAM AND POINTS LIST. USE EXISTING WELL LOCATIONS WHERE POSSIBLE AND CONNECT TO NEW CONTROL PANEL.
9. PROVIDE NEW LOW LIMIT SENSOR FOR AC-1 AND CONNECT WIRING TO NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
10. OUTSIDE AIR AND RETURN AIR DAMPERS FOR AC-1. REUSE VALVE ACTUATORS. PROVIDE EP TRANSDUCERS AND LOCATE IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
11. 3W CONTROL VALVE AND PUMP P-PH2 FOR AC-2 PREHEAT COIL. REUSE VALVE ACTUATOR. PROVIDE EP TRANSDUCER AND LOCATE IN NEW CONTROL PANEL. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH. PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
12. AC-2 CHILLED WATER CONTROL VALVE. REUSE VALVE AND PROVIDE EP TRANSDUCER AND LOCATE IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
13. PROVIDE NEW TEMPERATURE SENSORS FOR AC-2 AS REQUIRED BY FLOW DIAGRAM AND POINTS LIST. USE EXISTING WELL LOCATIONS WHERE POSSIBLE AND CONNECT TO NEW CONTROL PANEL.
14. PROVIDE NEW LOW LIMIT SENSOR FOR AC-2 AND CONNECT WIRING TO NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
15. OUTSIDE AIR AND RETURN AIR DAMPERS FOR AC-2. REUSE VALVE ACTUATORS. PROVIDE EP TRANSDUCERS AND LOCATE IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
16. REHEAT HOT WATER SYSTEM (HE-1, P-1, P-2). PROVIDE TEMPERATURE SENSORS IN HE-1 MAIN SUPPLY AND RETURN PIPING. REUSE EXISTING PIPE SENSOR WELLS. REUSE STEAM VALVE ACTUATOR AND PROVIDE EP TRANSDUCER IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
17. REHEAT SYSTEM MIXING VALVE. REUSE VALVE ACTUATOR AND PROVIDE EP TRANSDUCER IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
18. RADIATION HOT WATER SYSTEM (HE-2, P-3, P-4). PROVIDE TEMPERATURE SENSORS IN HE-2 MAIN SUPPLY AND RETURN PIPING. REUSE EXISTING PIPE SENSOR WELLS. REUSE STEAM VALVE ACTUATOR AND PROVIDE EP TRANSDUCER IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
19. 3W CONTROL VALVE FOR AC-3 PREHEAT COIL. REUSE VALVE ACTUATOR. PROVIDE EP TRANSDUCER AND LOCATE IN NEW CONTROL PANEL. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
20. PROVIDE CURRENT SENSING SWITCH AND AUX CONTACT IN EXISTING STARTERS WITHIN MCC FOR S-1, S-2, S-3, R-1 AND R-2.
21. PROVIDE CURRENT SENSING SWITCH AND AUX CONTACT IN EXISTING STARTERS WITHIN MCC FOR PUMPS P-1, P-2, P-3 AND P-4.
22. PROPOSED LOCATION OF NEW DDC CONTROL PANEL. TRANSFER EXISTING CONTROL POINTS AND 110V POWER TO NEW CONTROL PANEL IN SAME LOCATION. PROVIDE 3/4" EMT CONDUIT WITH 1-#22 UTP TO CONNECT TO OTHER CONTROL PANEL LOCATED IN BASEMENT.
23. EXISTING REHEAT VALVE FOR COIL. REUSE EXISTING ACTUATOR. INSTALL EP TRANSDUCER AND CONNECT TO NEW CONTROL PANEL IN THIS ROOM.
24. PROVIDE H-O-A SELECTOR SWITCH IN EXISTING STARTER FOR EXHAUST FAN (X) LOCATED IN MCC. PROVIDE STATUS POINTS. REFER TO POINTS LIST FOR DETAILS.
25. PROVIDE COMBINATION MOTOR STARTER WITH H-O-A SELECTOR SWITCH FOR (X). PROVIDE STATUS POINTS AND DDC START/STOP CAPABILITIES. REFER TO FLOW DIAGRAM AND POINTS LIST FOR DETAILS.
26. EXISTING 1" STEAM TO KITCHEN. BEHIND STEAM LINE. LOCATION OF NEW FLOW METER FMS-200. PROVIDE 3/4" EMT CONDUIT WITH 2-#12 AND 1-#12 GROUND TO 110V POWER SUPPLY IN KEYNOTE #22.
27. PROPOSED LOCATION OF REMOTE STEAM METER DISPLAY. PROVIDE 3/4" EMT CONDUIT BETWEEN REMOTE METER AND STEAM ENTRY IN KEYNOTE #26. INSTALL FACTORY SUPPLIED CABLING.

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