BID CLARIFICATION #1
February 20, 2019

DUE DATE:	**March 5, 2019**
TIME:	**2:00 p.m.**
PROJECT:	**Gelfenbien Dining Hall Dish Room Renovation**
PROJECT NO:	**300080**
LOCATION:	**University of Connecticut** **Capital Projects & Facilities Procurement** **3 Discovery Drive, Unit 6076** **Storrs, CT 06269** **Attn: Cesar Alonzo**

Please note the following information must be incorporated into your bid for the Gelfenbien Dining Hall Dish Room Renovation, Project #300080:

1) **Attached are the CT Department of Labor Wage and Workplace Standards division, Minimum Rates and Classifications for Building Construction dated February 8, 2019.**
2) **Enclosed is the Pre-bid Meeting Sign-in Sheet**
3) **Attached is the complete set of Bid Drawings with some revisions incorporated by Maier Design Group, LLC and their consultants. This complete set supersedes the set provided in the original bid package.**

The University of Connecticut Bid Submission Requirements:

- **All bidders must submit their Form of Proposal along with all required forms and any associated bid clarifications as your firm's bid proposal. All required forms must be completed.**
- **All bidders must initial the bottom of each page within their bid proposal and associated Bid Clarifications attesting to the fact that you have reviewed, read, understood, and accepted the information and terms and conditions within, without exception.**
- **YOUR BID PROPOSAL *MAY BE* CONSIDERED NON-RESPONSIVE AND *MAY* NOT BE REVIEWED FOR FAILURE TO SUBMIT ALL OF THE ABOVE DOCUMENTATION (ALONG WITH ANY OTHER DOCUMENTATION DETAILED IN THE BID DOCUMENTS AND SPECIFICATIONS)**
- **All bid awards must be approved by the University of Connecticut. After review of all factors, terms and conditions, including price, the University of Connecticut reserves the right to reject any and all proposal, or any part thereof, or waive defects in same, or accept any proposal deemed to be in the best interest of the University of Connecticut**

University of Connecticut
Cesar Alonzo
Capital Projects & Facilities Procurement

Minimum Rates and Classifications for Building Construction

ID# : B 25671

Connecticut Department of Labor
Wage and Workplace Standards Division

By virtue of the authority vested in the Labor Commissioner under provisions of Section 31-53 of the General Statutes of Connecticut, as amended, the following are declared to be the prevailing rates and welfare payments and will apply only where the contract is advertised for bid within 20 days of the date on which the rates are established. Any contractor or subcontractor not obligated by agreement to pay to the welfare and pension fund shall pay this amount to each employee as part of his/her hourly wages.

Project Number: 300080
Project Town: Mansfield
State#:
FAP#:

Project: Gelfenbien Dining Hall Dish Room Renovation At Uconn

CLASSIFICATION	Hourly Rate	Benefits
1a) Asbestos Worker/Insulator (Includes application of insulating materials, protective coverings, coatings, & finishes to all types of mechanical systems; application of firestopping material for wall openings & penetrations in walls, floors, ceilings	38.25	27.96
1b) Asbestos/Toxic Waste Removal Laborers: Asbestos removal and encapsulation (except its removal from mechanical systems which are not to be scrapped), toxic waste removers, blasters.**See Laborers Group 7**		
1c) Asbestos Worker/Heat and Frost Insulator	40.21	29.30

As of: **Friday, February 08, 2019**

2) Boilermaker	38.34	26.01
3a) Bricklayer, Cement Mason, Concrete Finisher (including caulking), Stone Masons	33.48	32.06 + a
3b) Tile Setter	34.90	25.87
3c) Terrazzo Mechanics and Marble Setters	31.69	22.35
3d) Tile, Marble & Terrazzo Finishers	26.70	21.75
3e) Plasterer	33.48	32.06

As of: **Friday, February 08, 2019**

Project: Gelfenbien Dining Hall Dish Room Renovation At Uconn

------LABORERS------

4) Group 1: Laborers (common or general), acetylene burners, carpenter tenders, concrete specialists, wrecking laborers, fire watchers.	30.05	20.10
4a) Group 2: Mortar mixers, plaster tender, power buggy operators, powdermen, fireproofer/mixer/nozzleman (Person running mixer and spraying fireproof only).	30.30	20.10
4b) Group 3: Jackhammer operators/pavement breaker, mason tender (brick), mason tender (cement/concrete), forklift operators and forklift operators (masonry).	30.55	20.10
4c) **Group 4: Pipelayers (Installation of water, storm drainage or sewage lines outside of the building line with P6, P7 license) (the pipelayer rate shall apply only to one or two employees of the total crew who primary task is to actually perform the mating of pipe sections) P6 and P7 rate is $26.80.	30.55	20.10
4d) Group 5: Air track operator, sand blaster and hydraulic drills.	30.55	20.10

4e) Group 6: Blasters, nuclear and toxic waste removal.	31.80	20.10
4f) Group 7: Asbestos/lead removal and encapsulation (except it's removal from mechanical systems which are not to be scrapped).	31.05	20.10
4g) Group 8: Bottom men on open air caisson, cylindrical work and boring crew.	28.38	20.10
4h) Group 9: Top men on open air caisson, cylindrical work and boring crew.	27.86	20.10
4i) Group 10: Traffic Control Signalman	16.00	20.10
5) Carpenter, Acoustical Ceiling Installation, Soft Floor/Carpet Laying, Metal Stud Installation, Form Work and Scaffold Building, Drywall Hanging, Modular-Furniture Systems Installers, Lathers, Piledrivers, Resilient Floor Layers.	32.60	25.34

As of: **Friday, February 08, 2019**

5a) Millwrights	33.14	25.74
6) Electrical Worker (including low voltage wiring) (Trade License required: E1,2 L-5,6 C-5,6 T-1,2 L-1,2 V-1,2,7,8,9)	40.00	25.97+3% of gross wage
7a) Elevator Mechanic (Trade License required: R-1,2,5,6)	51.71	32.645+a+b
-----LINE CONSTRUCTION----		
Groundman	26.50	6.5% + 9.00
Linemen/Cable Splicer	48.19	6.5% + 22.00

As of: **Friday, February 08, 2019**

8) Glazier (Trade License required: FG-1,2)	37.18	21.05 + a
9) Ironworker, Ornamental, Reinforcing, Structural, and Precast Concrete Erection	35.47	35.14 + a
----OPERATORS----		
Group 1: Crane handling or erecting structural steel or stone, hoisting engineer 2 drums or over, front end loader (7 cubic yards or over), work boat 26 ft. and over and Tunnel Boring Machines. (Trade License Required)	39.55	24.30 + a
Group 2: Cranes (100 ton rate capacity and over); Excavator over 2 cubic yards; Piledriver ($3.00 premium when operator controls hammer); Bauer Drill/Caisson. (Trade License Required)	39.23	24.30 + a
Group 3: Excavator; Backhoe/Excavator under 2 cubic yards; Cranes (under 100 ton rated capacity), Grader/Blade; Master Mechanic; Hoisting Engineer (all types of equipment where a drum and cable are used to hoist or drag material regardless of motive power of operation), Rubber Tire Excavator (Drott-1085 or similar);Grader Operator; Bulldozer Fine Grade. (slopes, shaping, laser or GPS, etc.). (Trade License Required)	38.49	24.30 + a

As of: **Friday, February 08, 2019**

Group 4: Trenching Machines; Lighter Derrick; Concrete Finishing Machine; CMI Machine or Similar; Koehring Loader (Skooper).	38.10	24.30 + a
Group 5: Specialty Railroad Equipment; Asphalt Paver; Asphalt Reclaiming Machine; Line Grinder; Concrete Pumps; Drills with Self Contained Power Units; Boring Machine; Post Hole Digger; Auger; Pounder; Well Digger; Milling Machine (over 24" Mandrell)	37.51	24.30 + a
Group 5 continued: Side Boom; Combination Hoe and Loader; Directional Driller; Pile Testing Machine.	37.51	24.30 + a
Group 6: Front End Loader (3 up to 7 cubic yards); Bulldozer (rough grade dozer).	37.20	24.30 + a
Group 7: Asphalt roller, concrete saws and cutters (ride on types), vermeer concrete cutter, Stump Grinder; Scraper; Snooper; Skidder; Milling Machine (24" and under Mandrell).	36.86	24.30 + a
Group 8: Mechanic, grease truck operator, hydroblaster; barrier mover; power stone spreader; welding; work boat under 26 ft.; transfer machine.	36.46	24.30 + a

Group 9: Front end loader (under 3 cubic yards), skid steer loader regardless of attachments, (Bobcat or Similar): forklift, power chipper; landscape equipment (including Hydroseeder).	36.03	24.30 + a
Group 10: Vibratory hammer; ice machine; diesel and air, hammer, etc.	33.99	24.30 + a
Group 11: Conveyor, earth roller, power pavement breaker (whiphammer), robot demolition equipment.	33.99	24.30 + a
Group 12: Wellpoint operator.	33.93	24.30 + a
Group 13: Compressor battery operator.	33.35	24.30 + a
Group 14: Elevator operator; tow motor operator (solid tire no rough terrain).	32.21	24.30 + a

Group 15: Generator Operator; Compressor Operator; Pump Operator; Welding Machine Operator; Heater Operator.	31.80	24.30 + a
Group 16: Maintenance Engineer/Oiler.	31.15	24.30 + a
Group 17: Portable asphalt plant operator; portable crusher plant operator; portable concrete plant operator.	35.46	24.30 + a
Group 18: Power safety boat; vacuum truck; zim mixer; sweeper; (Minimum for any job requiring a CDL license).	33.04	24.30 + a
------PAINTERS (Including Drywall Finishing)------		
10a) Brush and Roller	33.62	21.05

As of: **Friday, February 08, 2019**

10b) Taping Only/Drywall Finishing	34.37	21.05
10c) Paperhanger and Red Label	34.12	21.05
10e) Blast and Spray	36.62	21.05
11) Plumber (excluding HVAC pipe installation) (Trade License required: P-1,2,6,7,8,9 J-1,2,3,4 SP-1,2)	42.62	31.21
12) Well Digger, Pile Testing Machine	37.26	24.05 + a
13) Roofer (composition)	36.70	19.85

14) Roofer (slate & tile)	37.20	19.85
15) Sheetmetal Worker (Trade License required for HVAC and Ductwork: SM-1,SM-2,SM-3,SM-4,SM-5,SM-6)	37.50	36.79
16) Pipefitter (Including HVAC work) (Trade License required: S-1,2,3,4,5,6,7,8 B-1,2,3,4 D-1,2,3,4, G-1, G-2, G-8 & G-9)	42.62	31.21
------TRUCK DRIVERS------		
17a) 2 Axle	29.13	23.33 + a
17b) 3 Axle, 2 Axle Ready Mix	29.23	23.33 + a

17c) 3 Axle Ready Mix	29.28	23.33 + a
17d) 4 Axle, Heavy Duty Trailer up to 40 tons	29.33	23.33 + a
17e) 4 Axle Ready Mix	29.38	23.33 + a
17f) Heavy Duty Trailer (40 Tons and Over)	29.58	23.33 + a
17g) Specialized Earth Moving Equipment (Other Than Conventional Type on-the-Road Trucks and Semi-Trailers, Including Euclids)	29.38	23.33 + a
18) Sprinkler Fitter (Trade License required: F-1,2,3,4)	43.92	15.84 + a

19) Theatrical Stage Journeyman	25.76	7.34

Welders: Rate for craft to which welding is incidental.

**Note: Hazardous waste removal work receives additional $1.25 per hour for truck drivers.*

***Note: Hazardous waste premium $3.00 per hour over classified rate*

ALL Cranes: When crane operator is operating equipment that requires a fully licensed crane operator to operate he receives an extra $4.00 premium in addition to the hourly wage rate and benefit contributions:

1) Crane handling or erecting structural steel or stone; hoisting engineer (2 drums or over)

2) Cranes (100 ton rate capacity and over) Bauer Drill/Caisson

3) Cranes (under 100 ton rated capacity)

Crane with 150 ft. boom (including jib) - $1.50 extra
Crane with 200 ft. boom (including jib) - $2.50 extra
Crane with 250 ft. boom (including jib) - $5.00 extra
Crane with 300 ft. boom (including jib) - $7.00 extra
Crane with 400 ft. boom (including jib) - $10.00 extra

All classifications that indicate a percentage of the fringe benefits must be calculated at the percentage rate times the "base hourly rate".

Apprentices duly registered under the Commissioner of Labor's regulations on "Work Training Standards for Apprenticeship and Training Programs" Section 31-51-d-1 to 12, are allowed to be paid the appropriate percentage of the prevailing journeymen hourly base and the full fringe benefit rate, providing the work site ratio shall not be less than one full-time journeyperson instructing and supervising the work of each apprentice in a specific trade.

The Prevailing wage rates applicable to this project are subject to annual adjustments each July 1st for the duration of the project.

Each contractor shall pay the annual adjusted prevailing wage rate that is in effect each July 1st, as posted by the Department of Labor.

It is the contractor's responsibility to obtain the annual adjusted prevailing wage rate increases directly from the Department of Labor's website.

The annual adjustments will be posted on the Department of Labor's Web page: www.ct.gov/dol. For those without internet access, please contact the division listed below.

The Department of Labor will continue to issue the initial prevailing wage rate schedule to the Contracting Agency for the project.

All subsequent annual adjustments will be posted on our Web Site for contractor access.

Contracting Agencies are under no obligation pursuant to State labor law to pay any increase due to the annual adjustment provision.

As of: **Friday, February 08, 2019**

Project: Gelfenbien Dining Hall Dish Room Renovation At Uconn

Effective October 1, 2005 - Public Act 05-50: any person performing the work of any mechanic, laborer, or worker shall be paid prevailing wage

All Person who perform work ON SITE must be paid prevailing wage for the appropriate mechanic, laborer, or worker classification.

All certified payrolls must list the hours worked and wages paid to All Persons who perform work ON SITE regardless of their ownership i.e.: (Owners, Corporate Officers, LLC Members, Independent Contractors, et. al)

Reporting and payment of wages is required regardless of any contractual relationship alleged to exist between the contractor and such person.

~~Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clause (29 CFR 5.5 (a) (1) (ii)).

Please direct any questions which you may have pertaining to classification of work and payment of prevailing wages to the Wage and Workplace Standards Division, telephone (860)263-6790.

As of: **Friday, February 08, 2019**

Pre-Bid Meeting Sign In Sheet	University of Connecticut	UCONN PROCUREMENT SERVICES CAPITAL PROJECTS AND CONTRACT ADMINISTRATION	
Project Name:	GELFENBIEN DINING HALL DISH ROOM RENOVATION		
Project #:	300080		
Date:	2/19/2019		

Name	Company	Phone	Email
Cesar Alonzo	UConn - CPFP	860-486-0012	cesar.alonzo@uconn.edu
Veronica Cook	UConn Supplier Diversity Program	860-486-0990	veronica.cook@uconn.edu
Scott Gallo	UConn - UPDC	860-208-2337	scott.gallo@uconn.edu
Jennifer Choquette	Scope Construction	860-832-8335	jchoquette@scopeconstruction.com
John Seremet	Seremet Electric LLC	2039432270	seremetjelectric@AOL.Com
Matt Fenn	Allstate Construction	8602508916	MFENN@AllstateconstructionINC.com
Lucas Girard	Mattern Construction	860-822-8457	lucasg@matternconstruction.com
Carl Rickis	Kittredge Equipment Co	Direct 860-379-4162	crickis@kittredgeequipment.com
Ken Lawler	E3	(978) 314-9097	ken@e3ne.net
Eric Lachapelle	Maier Design Group	860 293 0093	ELACHAPELLE@MDGAI.com
Joe Ruiz	Zlotnick Const., Inc.	860-456-3221	BIDS@ZLOTNICKCONSTRUCTION.COM
Kevin Sullivan	Coleburn Guylette	617-797-1174	KSULLIVAN@COLEURNGUYLETTE.COM
Victoria Novak	Victoria.Novak_Uconn.Ed	860 486 2619	USDP
[illegible]			
Travis Ackert	Ackert Electric	860 742 9506	info@ackertelectric.com

Pre-Bid Meeting Sign In Sheet	University of Connecticut	UCONN PROCUREMENT SERVICES CAPITAL PROJECTS AND CONTRACT ADMINISTRATION	
Project Name:	GELFENBIEN DINING HALL DISH ROOM RENOVATION		
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Scott Gallo	UConn - UPDC	860-208-2337	scott.gallo@uconn.edu
Mike O'Dea	UConn DDS	860-234-2672	mike.odea@uconn.edu
Ron Armes	Precision Mechanical		Rarmes@precisionmechanicalct.com
Pete Burch	TRI STAR	860 312-4[illegible]	Pburch@TRISTARCT.com
Steven Farnham	Custom Ventilation	860 429-2805	customventilation@Gmail.com

STATE OF CONNECTICUT
UNIVERSITY OF CONNECTICUT

SUSAN HERBST
PRESIDENT

GELFENBIEN DINING HALL DISH ROOM RENOVATION

STORRS CAMPUS
GELFENBIEN DINING HALL
3384 TOWERS LOOP ROAD
STORRS, CT 06269

PROJECT NO.: 300080

AREA OF RENOVATION :

PREPARED FOR:

Planning, Architectural and Engineering Services
34 LeDoyt Road UNIT 3038
STORRS, CT 06269
860-486-5930

January 23, 2019

FOOD SERVICE CONSULTANT

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100 Ledgewood Place
Rockland, MA

ARCHITECT

MAIER design group, llc.
architecture & interiors
100 Wells Street, Suite 2k Hartford, CT 06103
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Permit Set
January 23, 2019

CODE INFORMATION

GENERAL

Governing Codes: Connecticut State Building Code (2015 IBC with 2018 CT Supplement and subsequent Amendments), 2015 International Existing Building Code (IEBC), 2016 State Fire Safety Code, ICC/ANSI A117.1-2009.
Code Review based on 2012 IEBC Work Area Compliance Method (Chapters 5-13) per IEBC 301.1.2.
Proposed Use: NO CHANGE OF USE.
Type of Construction: IIB Non-combustible

INTERIOR FINISH REQUIREMENTS

All interior finishes shall comply with CT Fire Rating requirements and ASTM E84 as follows:

1. *Wall Coverings and Ceiling Tile*
   - A. *Required Exits and Passageways: Class A, Flamespread 0-25, Smoke Development 0-450*
   - B. *Exit Access Corridors: Class B, Flamespread 26-75, Smoke Development 0-450*
   - C. *Rooms or Enclosed Spaces: Class C, Flamespread 76-200, Smoke Development 0-450*
   - D. *Wall and Ceiling finishes shall pass NFPA 286 Room Corner Test.*
2. *Floor Finishes*
   - A. *Required Exits and Passageways: NFPA 253, Class II, Average Critical Radiant Flux Greater Than or Equal to 0.22 Watts per Square Centimeter.*
   - B. *Exit Access Corridors: NFPA 253, Class II, Average Critical Radiant Flux Greater Than or Equal to 0.22 Watts per Square Centimeter.*
   - C. *Rooms or Enclosed Spaces: Pass DOC-FF-1 "Pill Test" (CPSC CFR Part 1630).*

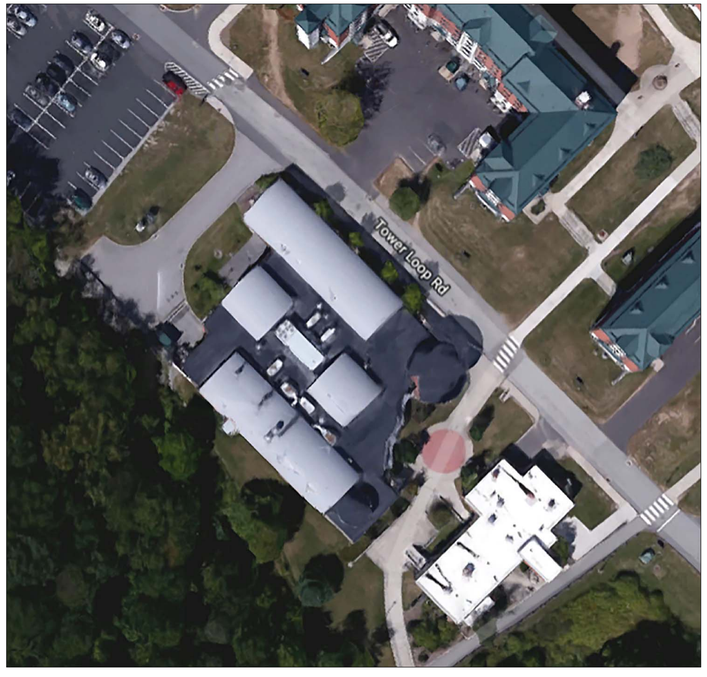
FIRE RESISTANCE RATING OF STRUCTURAL ELEMENTS

Ratings From IBC Table 601 for Construction Type IIB

- *Structural Frame,*
  Including columns, girders, trusses: *0Hours*
- *Bearing Walls*
  Exterior, Separation > 30 FT: *0 Hours*
  Interior: *0 Hours*
- *Non-Bearing Walls*
  Exterior: *0 Hours*
  Interior: *0 Hours*
- *Floor Construction*
  Including supporting beams and joists: *0 Hours*
- *Roof Construction*
  Including supporting beams and joists: *0 Hours*

FIRE PROTECTION SYSTEMS

- *Automatic Sprinkler Systems (IBC 903.2):* *Existing, Maintain*
- *Alternative Automatic Sprinkler Systems (IBC 904.2):* *Not Required*
- *Standpipe System (IBC 905.3):* *Not Required*
- *Fire Extinguishers (IBC 906.1 & NFPA Table 3-2.1):* *Existing, Maintain*
- *Fire Alarm System (IBC 907.2):* *Existing, Maintain*
- *Carbon Monoxide Detectors (IBC 908.7):* *Not Required*



SITE LOGISTICS MAP 1

SCALE: NTS

Colburn & Guyette
100 Ledgewood Place
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Title:

SPECIFICATIONS AND SITE LOGISTICS MAP

Project Number:	Issue Date:
2018.029	*23 JAN 2019*
Scale:	CAD File:
N/A	*18029_T-2.dwg*
Drawn By:	Checked By:
RK	*EAL*

Revisions:

T-2

DEMOLITION NOTES:

Demo 1 Numbered Notes refer to this sheet only unless specifically indicated otherwise.

Demo 2 The Contractor shall thoroughly familiarize himself with the facility and the drawings prior to beginning any demolition. All work shall be coordinated with the designated Project Manager and Building Management.

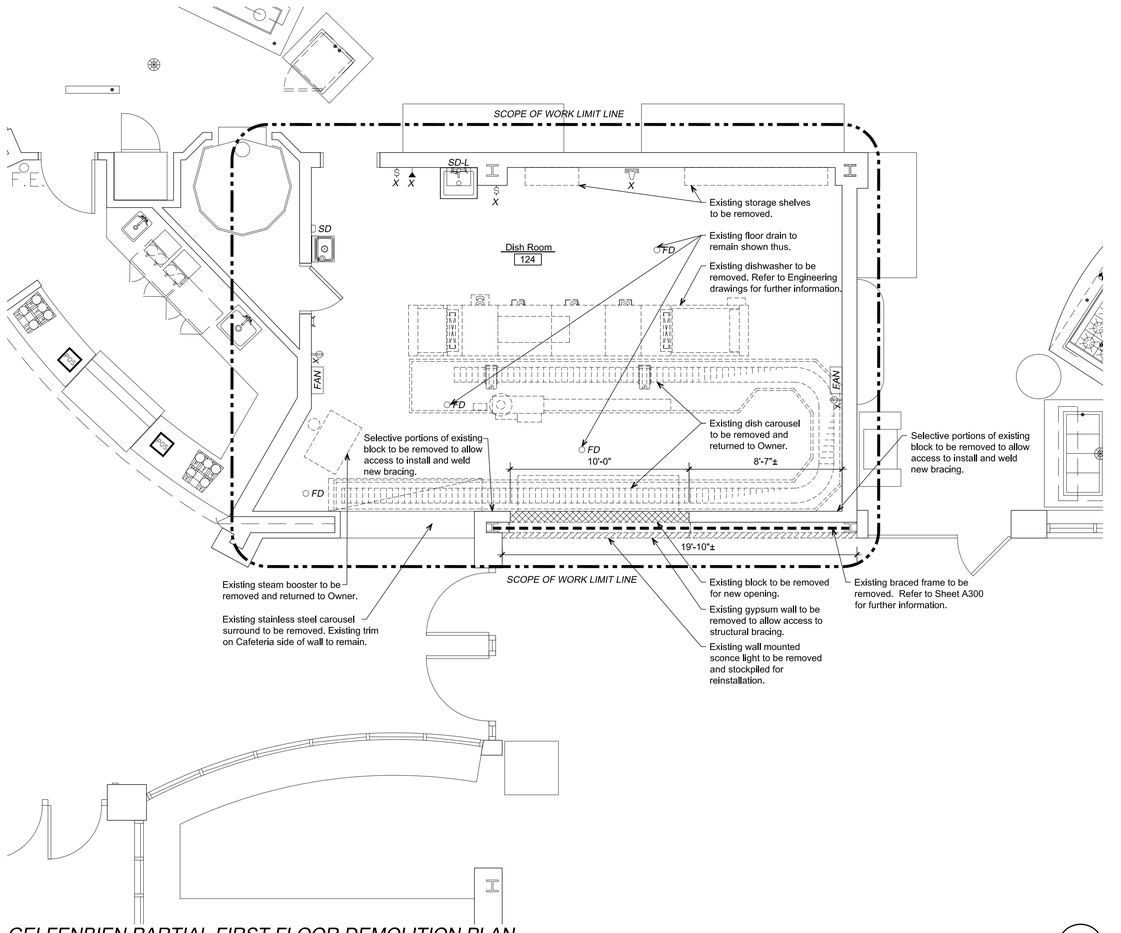
Demo 3 Dashed lines indicate existing construction to be removed or modified. Exercise care during demolition activities to maintain adjacent spaces and construction designated to remain. Take care during selective demolition not to damage or disturb any items to remain.

DEMOLITION KEY

Existing construction to remain shown thus, typical. Refer to Finish Plans and Notes for any required preparation or repairs.

Selective portions of existing construction to be removed or modified shown thus, typical.

Existing door and frame to be removed complete shown thus, typical. (Remove existing frames unless noted otherwise.)

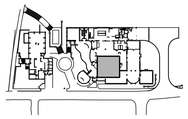


GELFENBIEN PARTIAL FIRST FLOOR DEMOLITION PLAN

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

0 2' 5' 8' 10'

1



GELFENBIEN KEYPLAN

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Title:

GELFENBIEN PARTIAL FIRST FLOOR DEMOLITION PLAN

Project Number:	Issue Date:
2018.029	23 JAN 2019
Scale:	CAD File:
1/8" = 1'-0"	18029_D101.dwg
Drawn By:	Checked By:
RK	EAL

Revisions:

D101

DEMOLITION NOTES:

Demo 1 Numbered Notes refer to this sheet only unless specifically indicated otherwise.

Demo 2 The Contractor shall thoroughly familiarize himself with the facility and the drawings prior to beginning any demolition. All work shall be coordinated with the designated Project Manager and Building Management.

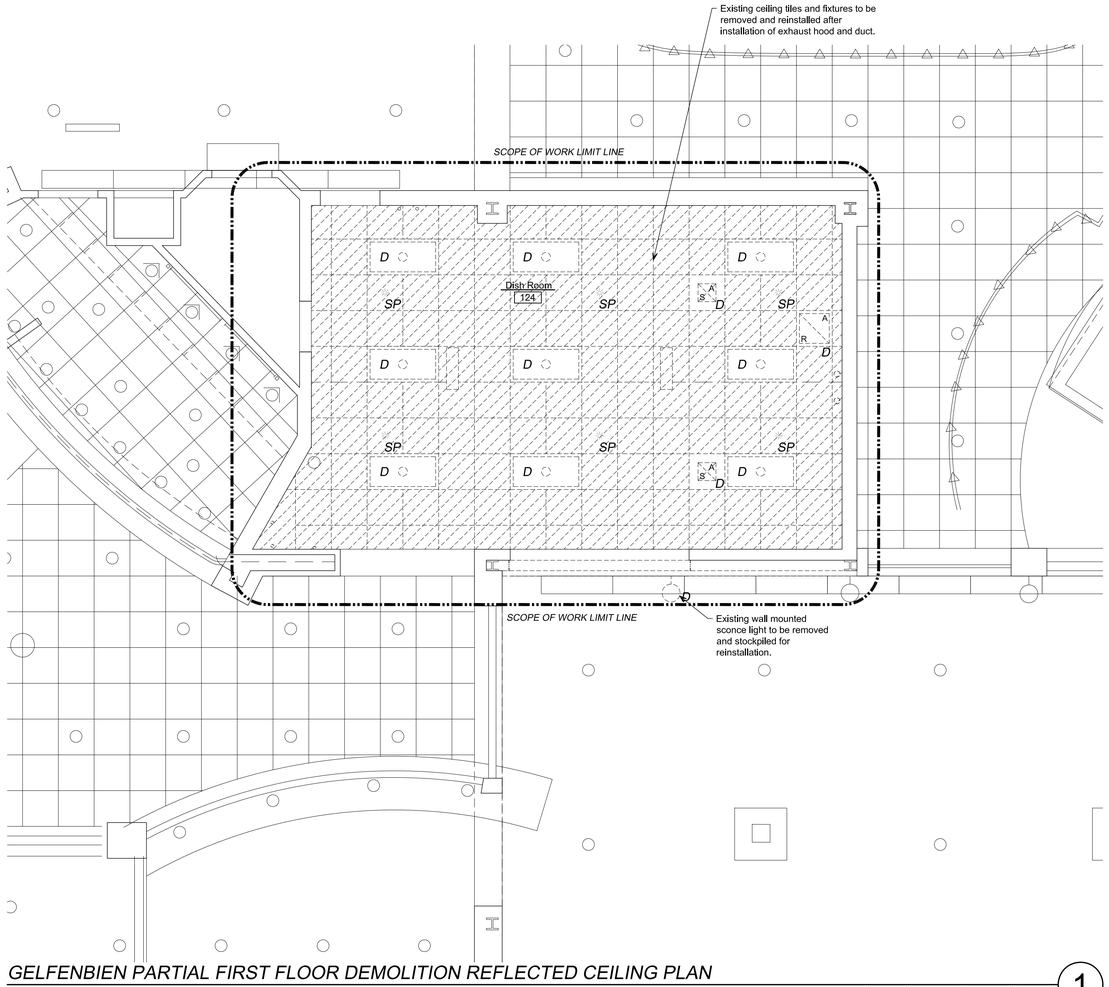
Demo 3 Dashed lines indicate existing construction to be removed or modified. Exercise care during demolition activities to maintain adjacent spaces and construction designated to remain. Take care during selective demolition not to damage or disturb any items to remain.

Demo 4 Existing 2x4 lights to be removed and returned to Owner.

Demo 5 Existing supply and return air grille to be removed and stockpiled for reinstallation in original locations. Existing duct work above to remain unless otherwise noted.

CEILING DEMOLITION LEGEND

SYMBOL	DESCRIPTION
	Existing 2' x 2' ceiling tiles and grid to remain
	Existing 2' x 2' ceiling tiles to be removed. Grid to removed.
X	Existing 2' x 4' light fixture shown thus. X = Existing to remain, D = Remove existing
	Existing 1' x 4' light fixture shown thus.
	Existing wall mounted sconce light fixture shown thus.
X	Supply air diffuser to remain. X = Existing to remain, D = Remove existing
X	Return air grille to remain. X = Existing to remain, D = Remove existing
EM/NU	Existing emergency fixture shown thus. X = Existing to remain, D = Remove existing
EXIT	Existing emergency fixture shown thus. X = Existing to remain, D = Remove existing
	Existing horn and strobe shown thus. X = Existing to remain, D = Remove existing
SP	Existing ceiling sprinkler shown thus. SP = Sprinkler to remain, D = Remove existing

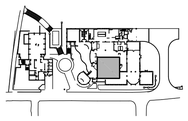


GELFENBIEN PARTIAL FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN

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

0 2' 5' 8' 10'

1



GELFENBIEN KEYPLAN

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Title:
GELFENBIEN PARTIAL FIRST FLOOR DEMOLITION REFLECTED CEILING PLAN

Project Number:	Issue Date:
2018.029	23 JAN 2019
Scale:	CAD File:
1/8" = 1'-0"	18029_D201.dwg
Drawn By:	Checked By:
RK	EAL

Revisions:

D201

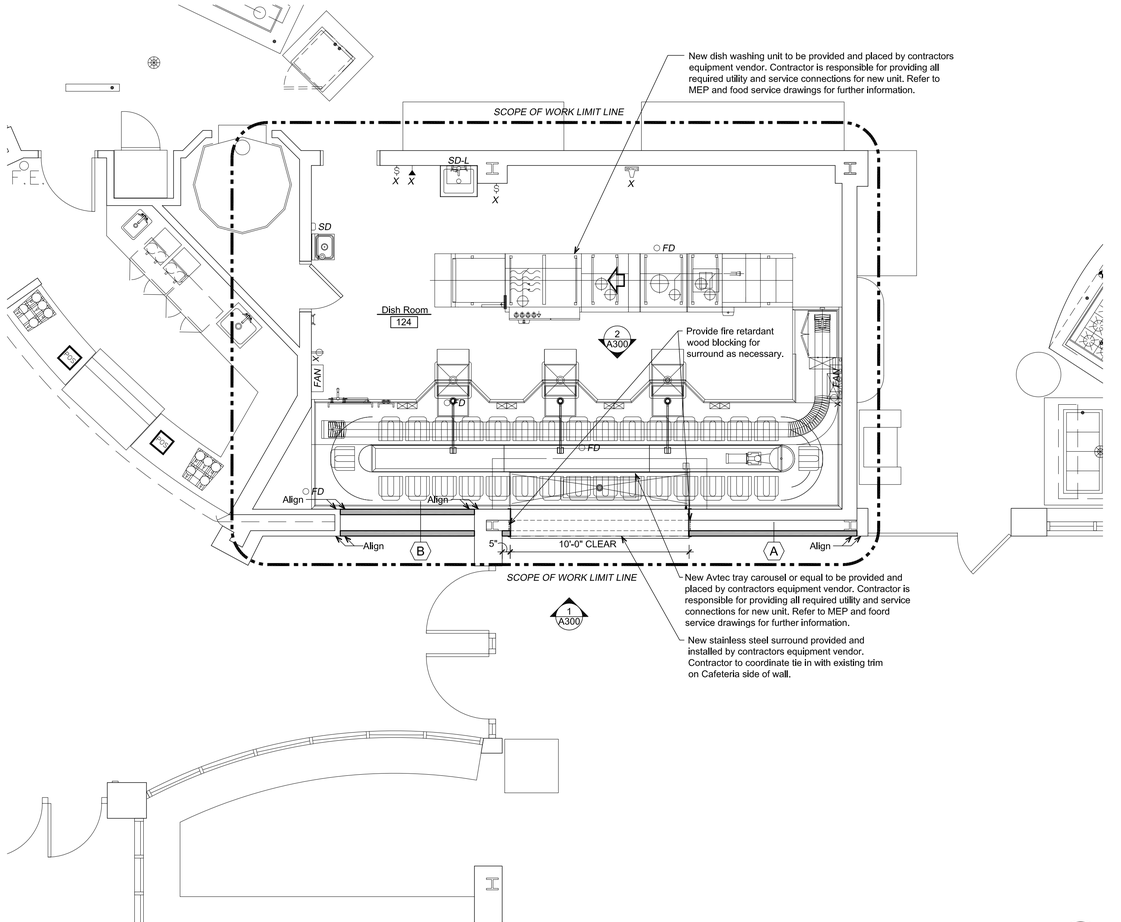
CONSTRUCTION NOTES:

Con 1 Numbered Notes refer to this sheet only unless specifically indicated otherwise.

Con 2 New equipment shown for coordination purposes only. Refer to Engineering Drawings for further information.

CONSTRUCTION KEY

- Existing door and frame to remain shown thus, typical.
- New door and frame shown thus, typical.
- Existing partition to remain, patch and repair as necessary to prepare surface for new finishes scheduled.
- New partition construction shown thus, typical. Refer to wall types on Sheet A400 for further information.
- FEC — Existing recessed fire extinguisher cabinet
- Detail No. / Sheet No. — Interior Elevation Flag
- Door No. / Room No. — Door Opening Tag, refer to Door Schedule for further information
- Wall Type Indicator
- x'-xx" — Denotes dimension from face of framing to face of framing or face of existing finished surface unless specifically noted otherwise.
- x'-xx" — Denotes dimension between two centerlines.
- x'-xx" — Spot elevation indicated thus. Dimensions in parenthesis are negative numbers.

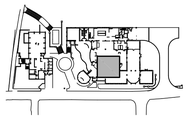


GELFENBIEN PARTIAL FIRST FLOOR CONSTRUCTION PLAN

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

0 2' 5' 8' 10'

1



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GELFENBIEN PARTIAL FIRST FLOOR CONSTRUCTION PLAN

Project Number:	Issue Date:
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RK	EAL

Revisions:

A101

CEILING NOTES:

No. 1 Refer to specification section 09511- Suspended Acoustical Ceilings for information regarding ceiling types.

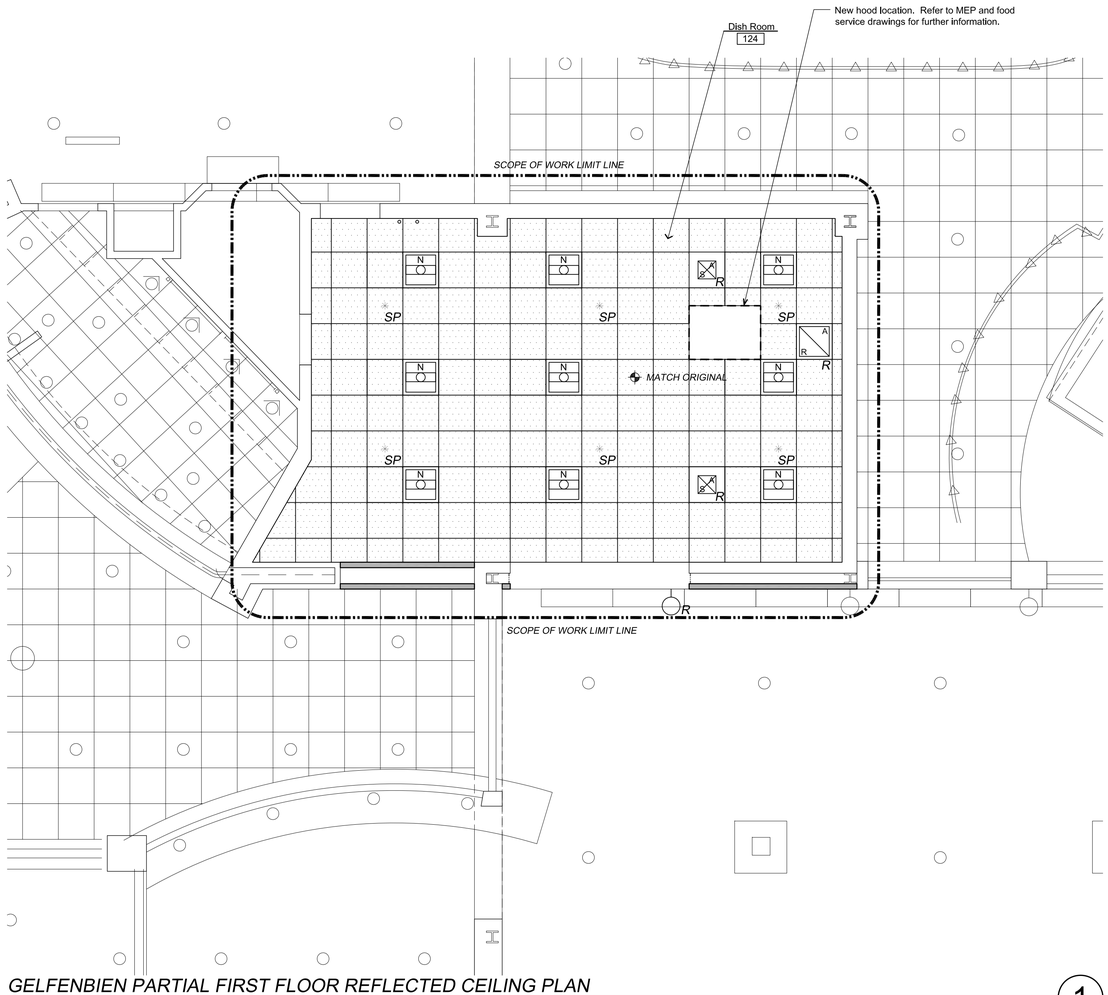
No. 2 Fixtures shown for architectural coordination only. Refer to Mechanical and Electrical drawings for further information.

No. 3 The existing fire alarm detection must remain active during the interior renovation work. The GC shall coordinate with the Owner's vendor for the devices operation, installation and relocation as required.

No. 4 Reinstall stockpiled supply and return air grilles in original locations.

CEILING LEGEND

SYMBOL	DESCRIPTION
	New 2' x 2' Armstrong Kitchen Zone or equal ceiling tiles.
	Existing ceiling tiles and grid to remain.
N	New 2' x 2' LED light fixture as specified.
X	Existing 2' x 4' light fixture shown thus. N = New, X = Existing to remain, R = Relocated.
	Existing 1' x 4' light fixture shown thus.
X	Existing wall mounted sconce light fixture shown thus. N = New, X = Existing to remain, R = Relocated.
X	Supply air diffuser to remain. N = New, X = Existing to remain, R = Relocated.
X	Return air grille to remain. N = New, X = Existing to remain, R = Relocated.
EMRG	Existing emergency fixture shown thus. N = New, X = Existing to remain, R = Relocated.
EXIT	Existing emergency fixture shown thus. N = New, X = Existing to remain, R = Relocated.
	Existing horn and strobe shown thus. N = New, X = Existing to remain, R = Relocated.
SP	Existing ceiling sprinkler shown thus. N = New, X = Existing to remain, R = Relocated.

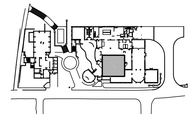


GELFENBIEN PARTIAL FIRST FLOOR REFLECTED CEILING PLAN

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

0 2' 5' 8' 10'

1



GELFENBIEN KEYPLAN

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GELFENBIEN PARTIAL FIRST FLOOR REFLECTED CEILING PLAN

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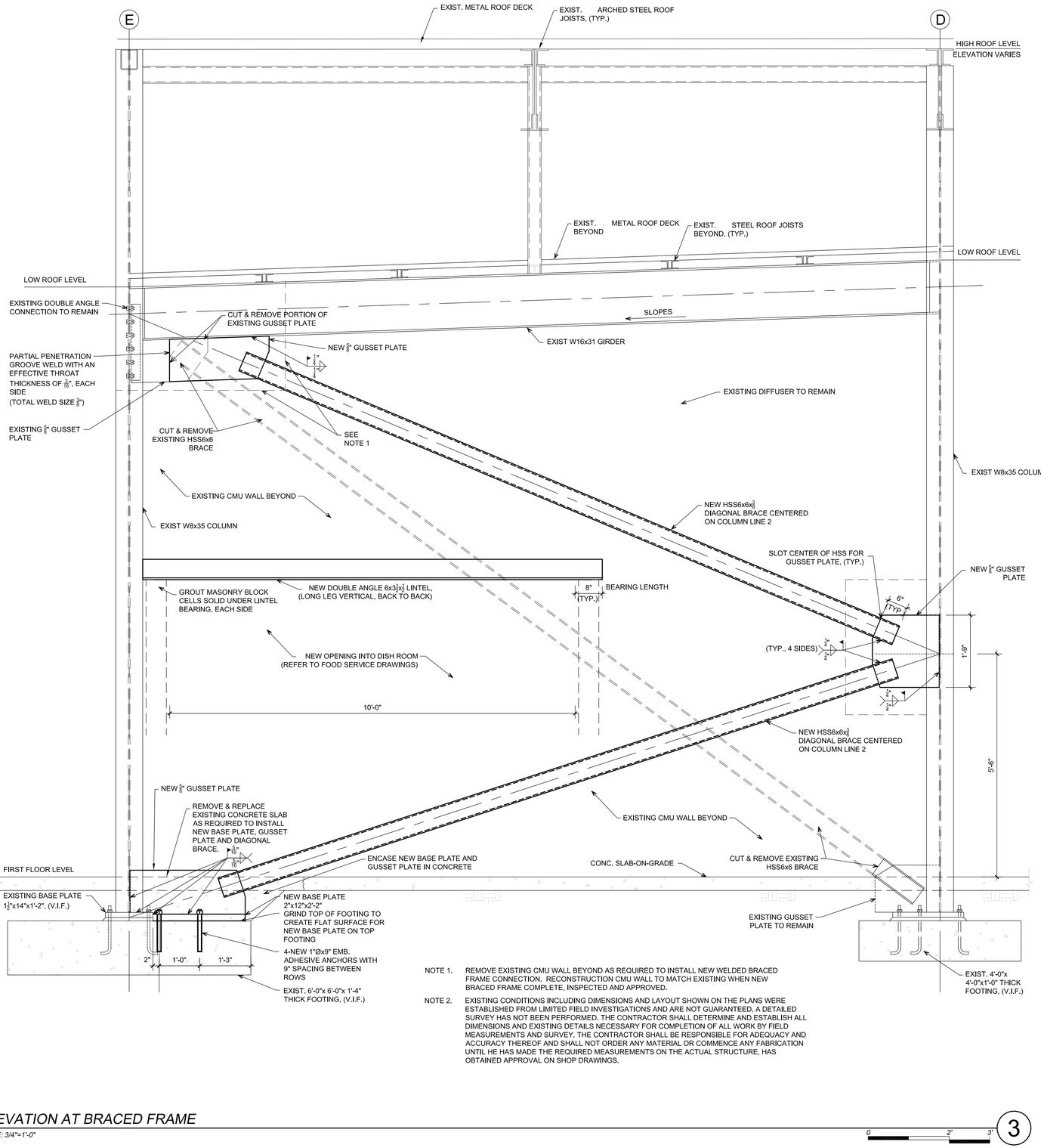
A201



NOTE 1. REMOVE EXISTING CMU WALL BEYOND AS REQUIRED TO INSTALL NEW WELDED BRACED FRAME CONNECTION. RECONSTRUCTION CMU WALL TO MATCH EXISTING WHEN NEW BRACED FRAME COMPLETE, INSPECTED AND APPROVED.

NOTE 2. EXISTING CONDITIONS INCLUDING DIMENSIONS AND LAYOUT SHOWN ON THE PLANS WERE ESTABLISHED FROM LIMITED FIELD INVESTIGATIONS AND ARE NOT GUARANTEED. A DETAILED SURVEY HAS NOT BEEN PERFORMED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND EXISTING DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUACY AND ACCURACY THEREOF AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE, HAS OBTAINED APPROVAL ON SHOP DRAWINGS.

ELEVATION AT BRACED FRAME

SCALE: 3/4"=1'-0"

3

GENERAL NOTES:

BUILDING CODE:

2018 CONNECTICUT STATE BUILDING CODE.

REFERENCED STANDARD:

STEEL: AISC, ALLOWABLE STRESS DESIGN, 360-16.
CONCRETE: ACI, 318-14
MASONRY: ACI 530-13

DESIGN LOADS:

A. LIVE LOADS:
ROOF 30 PSF

B. DEAD LOADS: 26 PSF

C. SNOW LOADS:
GROUND SNOW LOAD 30 PSF

LIVE LOAD REDUCTION WAS NOT USED IN DESIGN

RISK CATEGORY:III
SEISMIC DESIGN CATEGORY: B

Ss: 0.173
S1: 0.062
Sd/s: 0.185
Dd/1: 0.0992

ULTIMATE WIND SPEED: 140 MPH
WIND EXPOSURE CATEGORY: B

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFIRM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
2. COLUMN & BRACE CONNECTION BASE PLATES/GUSSET PLATES SHALL BE PROTECTED BY CAST-IN-PLACE CONCRETE WITH A MINIMUM COVER OF 4".
3. CONCRETE SLAB SHALL HAVE A TROWELED SMOOTH FINISH.
4. SUBMIT CONCRETE MIX DESIGN TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

STRUCTURAL STEEL NOTES:

1. PRIOR TO WELDING CLEAN EXISTING STRUCTURAL STEEL WITH WIRE WHEEL AND GRINDER TO BARE STEEL PER AWS REQUIREMENTS.
6 ALL NEW STEEL ELEMENTS AND FRAMING SHALL BE PRIMED AND PAINTED AFTER INSTALLATION. PRIMER & PAINT SHALL BE LEAD & CHROMATE FREE & RUST INHIBITING.
2. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL INCLUDE ALL DETAILED CONNECTIONS WITH COMPLETE DIMENSIONS.

MATERIAL PROPERTIES:

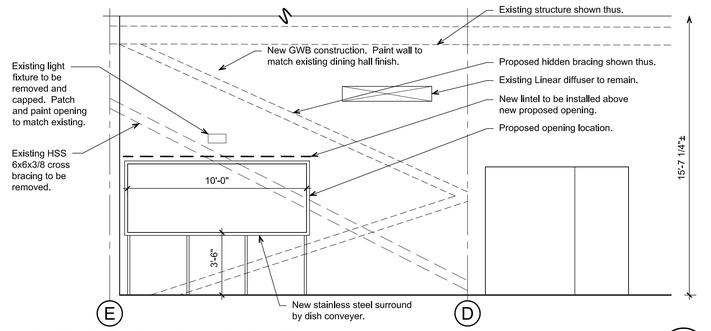
STRUCTURAL STEEL (HSS-SHAPES): ASTM A500, GRADE B

CONNECTION MATERIAL, CHANNELS & ANGLES: ASTM A36, GRADE 36

WELDING ELECTRODES: E70XX

CONCRETE: f'c = 4,000 PSI AT 28 DAYS (NORMAL WEIGHT)

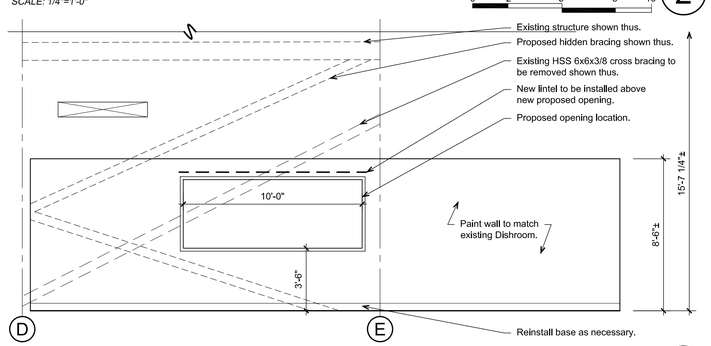
ADHESIVE ANCHORS (THREADED RODS & REINFORCING BARS):HILTI HIT-RE 500-SD EPOXY



GELFENBIEN PARTIAL ELEVATION

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

2



GELFENBIEN PARTIAL ELEVATION

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

1

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DETAILS

Project Number:	Issue Date:
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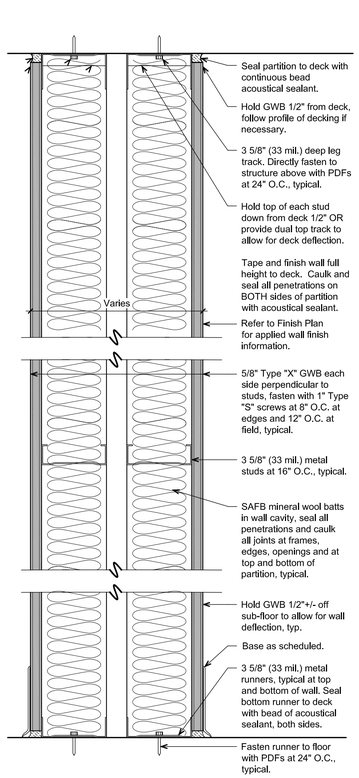
1/8" = 1'-0"	18029_A300.dwg
Drawn By:	Checked By:
RK	EAL

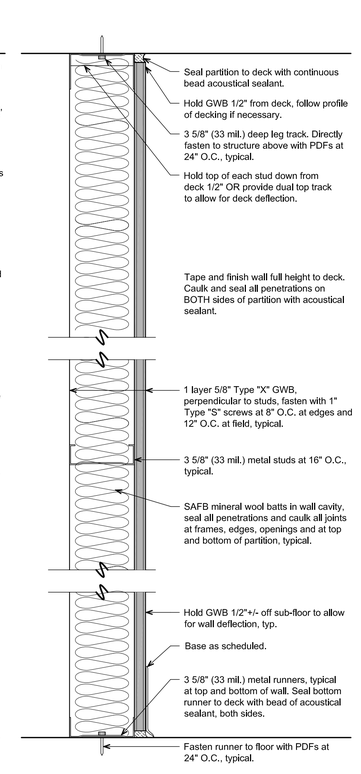
Revisions:

A300



NON-RATED PARTITION B

SCALE: 3"=1'-0"



NON-RATED PARTITION A

SCALE: 3"=1'-0"

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WALL TYPES

Project Number:	Issue Date:
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1/8" = 1'-0"	18029_A301.dwg
Drawn By:	Checked By:
RK	EAL

Revisions:

A301

GENERAL PROVISIONS

A. GENERAL

1. REQUIREMENTS SPECIFIED ON COVER SHEET, ALONG WITH ELECTRICAL SPECIFICATIONS AND ALL ITS SECTIONS, COMPRISE THE CONTRACT DOCUMENTS FOR THE ELECTRICAL CONTRACT. DRAWINGS AND ALL THEIR REVISIONS UP TO THE BID SUBMITTAL DATE BECOME A BINDING PART OF THE CONTRACT, ALONG WITH THESE SPECIFICATIONS AS THOUGH THEY WERE ONE, AND ANYTHING IMPLIED BY THE SPECIFICATIONS SHALL BE INTERPRETED AS ALSO IMPLIED BY THE DRAWINGS AND VICE VERSA. PROVIDE NECESSARY ITEMS FOR A COMPLETE INSTALLATION OF ALL ELECTRICALLY OPERATED EQUIPMENT LISTED IN THE SPECIFICATIONS OR SHOWN ON THE CONTRACT DRAWINGS.
2. THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND EQUIPMENT DRAWINGS AND SPECIFICATIONS ARE INCORPORATED INTO, AND BECOME A PART OF THIS DIVISION. THIS CONTRACTOR SHALL EXAMINE ALL SUCH DRAWINGS AND SPECIFICATIONS AND BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS CONTAINED THEREIN. THE SUBMISSION OF HIS BID SHALL INDICATE SUCH KNOWLEDGE.
3. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC. THEY ARE INTENDED TO SHOW THE APPROXIMATE LOCATIONS OF EQUIPMENT AND CONDUIT. DIMENSIONS GIVEN ON THE PLANS, IN FIGURES, SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND SHALL BE VERIFIED IN THE FIELD. THE ELECTRICAL CONTRACTOR SHALL LAYOUT ALL EQUIPMENT ROOMS TO MAKE SURE THE EQUIPMENT, AS PURCHASED, FITS IN THE ROOM OR SPACE SHOWN. EXACT LOCATION OF ALL EQUIPMENT SHALL BE VERIFIED IN THE FIELD AND ROUTING OF CONDUITS SHALL SUIT FIELD CONDITIONS.
4. UNTIL THE TIME OF INSTALLATION, THE ARCHITECT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF CONDUIT AND EQUIPMENT WITHOUT ADDITIONAL COST TO THE CONTRACT.
5. THE ELECTRICAL DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER. MATERIAL AND LABOR NECESSARY TO THE PROJECT SHALL BE FURNISHED AND INSTALLED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. LABOR AND/OR MATERIALS NEITHER SHOWN NOR SPECIFIED, BUT OBVIOUSLY NECESSARY FOR THE COMPLETION AND PROPER FUNCTIONING OF THE SYSTEM, SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COST.
6. ARRANGE ALL EQUIPMENT SUBSTANTIALLY AS SHOWN ON THE DRAWINGS. MAKE DEVIATIONS ONLY WHERE NECESSARY TO AVOID INTERFERENCE. CHECK ALL EQUIPMENT SIZES AGAINST AVAILABLE SPACE PRIOR TO SHIPMENT TO AVOID INTERFERENCE.
7. EXAMINE THE WORK OF OTHER TRADES INSOFAR AS THEIR WORK COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. IN NO CASE ATTACH TO, OR FINISH AGAINST ANY DEFECTIVE WORK OR INSTALL WORK IN A MANNER WHICH WILL PREVENT PROPER INSTALLATION OF THE WORK OF OTHER TRADES.
8. ELECTRICAL CONTRACTOR SHALL VERIFY WITH OTHER TRADES ALL ELECTRICAL CHARACTERISTICS OF EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS. CONTRACTOR SHALL VERIFY VOLTAGE, PHASE AND HORSEPOWER AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO START OF WORK. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS AND OVERLOAD PROTECTION FOR ALL EQUIPMENT, UNLESS FURNISHED INTEGRAL WITH EQUIPMENT PACKAGE.
9. IT IS THE INTENT OF THESE DRAWINGS THAT THIS BE A COMPLETE ELECTRICAL JOB. ANY ERRORS OR OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BIDDING THE JOB.

B. VISIT TO THE SITE

1. THE CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING HIS WORK. THE SUBMISSION OF HIS PROPOSAL SHALL INDICATE SUCH KNOWLEDGE. NO ADDITIONAL PAYMENT SHALL BE MADE ON CLAIMS THAT ARISE FROM A LACK OF KNOWLEDGE OF THE EXISTING CONDITIONS.

C. CODE AND PERMITS

1. INSTALLATION SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES AND REGULATIONS OF MUNICIPAL, CITY, COUNTY, STATE AND PUBLIC UTILITIES AND ALL OTHER AUTHORITIES HAVING JURISDICTION OVER THE PREMISES.
2. COMPLY WITH ANY SPECIFICATION REQUIREMENTS THAT ARE IN EXCESS BUT NOT IN CONFLICT WITH CODE REQUIREMENTS.
3. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, PLAN REVIEWS AND CERTIFICATES OF INSPECTION IN CONNECTION WITH HIS WORK, REQUIRED BY THE FOREGOING AUTHORITIES. BEFORE FINAL PAYMENT OF THE CONTRACT IS ALLOWED, ALL CERTIFICATES SHALL BE DELIVERED TO THE ARCHITECT IN DUPLICATE.
4. ELECTRICAL MATERIAL AND EQUIPMENT SHALL BEAR THE UL LABEL EXCEPT WHERE UL DOES NOT LABEL SUCH TYPES OF MATERIAL AND EQUIPMENT.

D. SHOP DRAWINGS SUBMITTALS

1. THE ELECTRICAL CONTRACTOR SHALL SUBMIT FIVE (5) SETS OF SHOP DRAWINGS. THE SHOP DRAWINGS OF THE FOLLOWING EQUIPMENT USING THE INDICATED NUMBERING SYSTEM AND TITLES, SHALL BE SUBMITTED THROUGH THE ARCHITECT TO THE ENGINEER AND THEN RESUBMITTED FOR FINAL APPROVAL, IF NECESSARY. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:
   a. WIRING DEVICES
   b. PANELBOARDS AND SAFETY SWITCHES INCLUDING FAULT CURRENT STUDY BASED ON EQUIPMENT BEING SUPPLIED.
2. ALL SUBMITTED SHOP DRAWINGS (MANUFACTURERS "EQUIPMENT DESCRIPTIVE SHEETS OR VENDORS" PREPARED DRAWINGS) SHALL HAVE THE GENERAL CONTRACTOR'S OR SUBCONTRACTOR'S "STAMP OF APPROVAL" INDICATING THAT THE ITEM SUBMITTED IS AS CALLED FOR ON THE PLANS AND SPECIFICATIONS, IS APPROVED BY THE GENERAL CONTRACTOR OR SUBCONTRACTOR, THE DATE OF APPROVAL AND INITIALED BY THE PERSON APPROVING THE SUBMITTAL AND THE NAME OF THE COMPANY SUBMITTING SAID EQUIPMENT FOR APPROVAL.
3. SUBMIT BOUND BROCHURES COMPLETE WITH A TABLE OF CONTENTS. LOOSE OR STAPLED TOGETHER SHEETS ARE NOT ACCEPTABLE. ANY SUBMITTALS NOT IN BROCHURE FORM OR NOT AS SPECIFIED SHALL BE RETURNED AT THE CONTRACTOR'S EXPENSE FOR RESUBMITTAL.
4. ALL DESCRIPTIVE LITERATURE SHALL BE SUBMITTED IN A THREE (3) HOLE BROCHURE WITH A COVER IDENTIFYING THE FOLLOWING:
   a. NAME OF THE JOB.
   b. LOCATION OF THE JOB, ADDRESS, CITY AND STATE.
   c. NAME AND ADDRESS OF THE COMPANY SUBMITTING THE BROCHURES.
   d. DATE OF THE SUBMITTAL.
5. EVERY EFFORT SHALL BE MADE, IN CHECKING THE SHOP DRAWINGS, TO DETECT AND CORRECT ALL ERRORS, OMISSIONS AND INACCURACIES. FAILURE TO DO THIS WILL NOT RELIEVE THE ELECTRICAL CONTRACTOR OF THE RESPONSIBILITY FOR THE PROPER AND COMPLETE INSTALLATION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

E. RECORD DRAWINGS

1. SUBMIT TO THE ARCHITECT ONE SET OF REPRODUCIBLE (MYLARS) ELECTRICAL DRAWINGS SHOWING THE RECORD CONDITIONS.

F. STANDARDS AND SUBSTITUTIONS

1. WHEREVER THE WORDS "APPROVED BY", "APPROVED EQUAL", "AS DIRECTED" OR SIMILAR PHRASES ARE USED IN THE FOLLOWING SPECIFICATIONS, THEY SHALL BE UNDERSTOOD TO REFER TO THE OWNER AS THE APPROVING AGENCY. THE NAME OR MAKE OF ANY EQUIPMENT OR MATERIALS NAMED IN THIS SPECIFICATION (WHETHER OR NOT THE WORDS "OR APPROVED EQUAL" ARE USED) SHALL BE KNOWN AS THE "STANDARD".
2. THESE SPECIFICATIONS ESTABLISH QUALITY STANDARD OF MATERIALS AND EQUIPMENT TO BE PROVIDED. SPECIFIC ITEMS ARE IDENTIFIED BY MANUFACTURER, TRADE NAME OR CATALOG DESIGNATION. THIS CONTRACTOR SHALL SUBMIT HIS BASE BID PRICE BASED UPON STANDARD SPECIFIED EQUIPMENT DESCRIBED HEREIN AND AS DETAILED ON DRAWINGS AND ASSOCIATED CONTRACT DOCUMENTS. THESE SPECIFICATIONS ARE NOT TO BE CONSIDERED PROPRIETARY THE CONTRACTOR MAY SUBMIT INFORMATION ON MATERIALS AND MANUFACTURERS (OTHER THAN THOSE LISTED) FOR REVIEW BY THE ARCHITECT AND ENGINEER NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. IN ADDITION, SAMPLES OF PROPOSED EQUIPMENT MAY BE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW NO LATER THAN TEN (10) DAYS BEFORE BIDS ARE SUBMITTED. MANUFACTURERS OF PRODUCTS ACCEPTED BY THE ARCHITECT AND ENGINEER WILL BE LISTED IN AN ADDENDUM TO THE SPECIFICATIONS AS AN ACCEPTABLE SUBSTITUTION EQUIPMENT ACCEPTED AS DETAILED BELOW AND SHALL BE SHOWN AS A SEPARATE ADD OR DEDUCT PRICE TO BE FACTORED INTO THE BASE BID PRICE BY THE ARCHITECT AND OWNER IF ACCEPTED.
3. SHOULD THE CONTRACTOR PROPOSE TO FURNISH MATERIALS AND EQUIPMENT OTHER THAN THOSE SPECIFIED OR APPROVED BY ADDENDUM, SUBMIT A WRITTEN REQUEST FOR SUBSTITUTIONS TO THE ARCHITECT AT THE BID OPENING. THE REQUEST SHALL BE AN ALTERNATE TO THE ORIGINAL BID; BE ACCOMPANIED WITH COMPLETE DESCRIPTIVE (MANUFACTURER, BRAND NAME, CATALOG NUMBER, ETC.) AND TECHNICAL DATA FOR ALL ITEMS. FAILURE BY THIS CONTRACTOR TO SUBMIT THE REQUISITE DOCUMENTATION DETAILED ABOVE SHALL BE UNDERSTOOD BY THE ARCHITECT AND ENGINEER TO INDICATE THAT SUBSTITUTE EQUIPMENT WILL NOT BE PRESENTED BY THE CONTRACTOR FOR CONSIDERATION. SUCH SUBSTITUTIONS WILL NOT BE CONSIDERED AFTER THE BID OPENING DATE AND DELAY OF PROJECT WILL NOT BE PERMITTED FOR FURTHER INSPECTION AND EVALUATION AFTER THIS DATE.
4. WHERE SUCH SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS INDICATED ON THE DRAWINGS, INCLUDE ALL ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING COST OF ALL ALLIED TRADES INVOLVED.
5. ACCEPTANCE OR REJECTION OF THE PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO APPROVAL OF THE ARCHITECT AND ENGINEER. IF REQUESTED, THE CONTRACTOR SHALL SUBMIT (AT HIS COST) INSPECTION SAMPLES OF BOTH THE SPECIFIED AND PROPOSED SUBSTITUTE ITEMS.
6. IN ALL CASES WHERE SUBSTITUTIONS ARE PERMITTED, THE CONTRACTOR SHALL BEAR ANY EXTRA COST OF EVALUATING THE QUALITY OF THE MATERIAL AND EQUIPMENT TO BE PROVIDED, INCLUDING ALL ARCH/ENGINEER FEES ASSOCIATED WITH CHANGE.

G. TESTING AND PLACING IN SERVICE

1. ANY MATERIAL OR EQUIPMENT FAILING A TEST SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
2. TESTS SHALL INCLUDE THE FOLLOWING:
   a. MEASURE THE LOAD ON EACH PHASE OF THE MAIN SERVICE AND EACH PHASE OF EVERY FEEDER UNDER FULL LOAD CONDITIONS.
   b. MEASURE THE NO-LOAD AND FULL-LOAD VOLTAGES (PHASE TO PHASE, PHASE TO NEUTRAL AND PHASE TO GROUND FOR EACH PHASE OF EACH SERVICE, OF EACH SEPARATELY DERIVED SYSTEM, AND AT EACH PANELBOARD OR TRANSFORMER).
   c. MEASURE THE GROUND RESISTANCE OF THE MAIN SERVICE GROUNDING ELECTRODE AND THE GROUND RESISTANCE OF EACH SEPARATELY DERIVED SYSTEM'S GROUNDING ELECTRODE.
   d. MAKE INSULATION RESISTANCE TESTS ON ALL DRY TYPE TRANSFORMERS AND MOTORS.

H. INTERFERENCES

1. BEFORE THE INSTALLATION OF ANY ITEM BEGINS, THE ELECTRICAL CONTRACTOR SHALL CAREFULLY ASCERTAIN THAT IT DOES NOT INTERFERE WITH CLEARANCES FOR THE ERECTION OF FINISH BEAMS, COLUMNS, PILASTERS, WALLS OR OTHER STRUCTURAL OR ARCHITECTURAL MEMBERS AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF ANY WORK IS INSTALLED AND THE ARCHITECTURAL DESIGN CANNOT BE FOLLOWED, THIS CONTRACTOR SHALL, AT HIS OWN EXPENSE, MAKE CHANGES IN HIS WORK AS DIRECTED BY THE ARCHITECT TO PERMIT THE COMPLETION OF THE ARCHITECTURAL WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.
2. IT SHALL BE THE DUTY OF THIS CONTRACTOR TO REPORT ANY INTERFERENCES BETWEEN HIS WORK AND THAT OF ANY OF THE OTHER CONTRACTORS AS SOON AS THEY ARE DISCOVERED. THE ARCHITECT SHALL DETERMINE WHICH EQUIPMENT WILL BE RELOCATED, REGARDLESS OF WHICH WAS INSTALLED FIRST. HIS DECISION WILL BE FINAL.

I. QUALITY ASSURANCE

ALL PRODUCTS SHALL BE NEW AND OF THE TYPE AND QUALITY SPECIFIED. WHERE MATERIALS, EQUIPMENT, APPARATUS OR OTHER PRODUCTS ARE SPECIFIED BY MANUFACTURER, BRAND NAME, TYPE OF CATALOG NUMBER, SUCH DESIGNATION SHALL ESTABLISH THE STANDARDS OF THE DESIRED QUALITY AND STYLE. IT IS THE INTENT OF THESE SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY OF MATERIALS AND EQUIPMENT INSTALLED.

BASIC ELECTRICAL MATERIALS AND METHODS

A. NAMEPLATES

1. GENERAL: FURNISH AND MOUNT ON EACH PANELBOARD, SWITCHBOARD (INCLUDING BRANCH SWITCHES), LARGE JUNCTION BOX, SAFETY SWITCH, STARTER, REMOTE CONTROL, PUSH BUTTON STATION, AND ALL SIMILAR CONTROLS, A NAMEPLATE DESCRIPTIVE OF THE EQUIPMENT OR EQUIPMENT CONTROLLED.
2. PROVIDE BLACK AND WHITE NAMEPLATES CONSTRUCTED FROM LAMINATED PHENOLIC WITH A WHITE CENTER CORE. LETTERS SHALL BE ENGRAVED IN THE PHENOLIC TO FORM WHITE LETTERS 3/8" HIGH. FASTEN THE NAMEPLATES WITH SCREWS AND AN ADHESIVE TYPE FASTENER.

B. MOUNTING ACCESSORIES

1. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL ANGLE IRON, CHANNEL IRON, RODS, SUPPORTS, HANGERS, CONCRETE OR PLYWOOD REQUIRED TO INSTALL, MOUNT AND SUPPORT ANY ELECTRICAL EQUIPMENT OR DEVICE CALLED FOR ON THE PLANS.
2. SUPPORTING MATERIAL SHALL BE COMPLETE WITH HANGERS, CONNECTORS, BOLTS, CLAMPS AND NECESSARY ACCESSORIES TO MAKE A COMPLETE INSTALLATION. SUPPORTING MATERIAL SHALL BE GALVANIZED, PAINTED OR OTHERWISE SUITABLY FINISHED. PRODUCTS BY BRINKLEY, STEEL CITY OR RACO WILL BE ACCEPTABLE.
3. ALL SURFACE-MOUNTED EQUIPMENT ON BLOCK WALLS SHALL BE MOUNTED ON 3/4" PLYWOOD BACKBOARD. ALL FLOOR-MOUNTED EQUIPMENT SHALL BE INSTALLED ON A 4" HIGH CONCRETE HOUSEKEEPING PAD.

C. EXECUTION

1. THE ELECTRICAL WORK FOR CONSTRUCTION PROPOSED SHALL CONFORM TO ALL FEDERAL (OSHA), STATE, ALL SPECIFIC SAFETY REQUIREMENTS AND THE REQUIREMENTS OF THE CURRENT EDITION OF THE NEC.
2. CHECK THE HVAC AND PLUMBING SPECIFICATIONS FOR ELECTRICAL REQUIREMENTS AND INCLUDE THE SAME IN THE CONTRACT COST.
3. EQUIPMENT CONNECTIONS, STARTERS, DISCONNECT SWITCHES, CONTROL TRANSFORMERS AND PUSHBUTTON STATIONS FOR THE EQUIPMENT FURNISHED BY THE OWNER OR UNDER A SEPARATE CONTRACT SHALL BE INSTALLED AND CONNECTED UNDER THIS DIVISION, AS INDICATED ON THE CONTRACT DRAWINGS.
4. ALL CUTTING, PATCHING, EXCAVATING, BACKFILLING AND CONCRETE WORK RELATED TO THIS CONTRACT WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. THIS CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF PROVIDING THE SLEEVES, CHASES AND OPENINGS NECESSARY FOR THE ELECTRICAL INSTALLATION AND FOR THEIR REPAIR IN AN ACCEPTABLE MANNER, AS DETERMINED BY THE ARCHITECT. ALL HOLES SHALL BE CORE-DRILLED. PROVIDE FIRE STOP IN ALL OPENINGS CREATED THROUGH FIRE-RATED WALLS, FLOORS OR CEILINGS.
5. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED ACCESS PANELS NECESSARY FOR HIS WORK, COORDINATE WITH ARCHITECT PRIOR TO INSTALLATION.

D. MATERIALS AND WORKMANSHIP

1. ALL WORK SHALL BE INSTALLED IN A PRACTICAL AND WORKMANLIKE MANNER, BY MECHANICS SKILLED IN THE SEVERAL TRADES NECESSARY.
2. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS AND SHALL BE THE BEST OF THEIR SEVERAL KINDS UNLESS SPECIFIED OR INDICATED ON THE DRAWINGS TO THE CONTRARY.
3. DURING EACH PHASE AND AT THE COMPLETION OF THE CONSTRUCTION, THIS CONTRACTOR SHALL REMOVE ALL DEBRIS AND EXCESS MATERIALS CAUSED BY HIS WORK. HE SHALL LEAVE THE AREA OF OPERATION BROOM CLEAN.
4. ALL ELECTRICAL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OR ETL LABEL.
5. THIS CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIAL (LAMPS EXCEPTED) FOR A PERIOD OF ONE YEAR FROM THE DATE OF BUILDING OPENING AND LEAVE HIS WORK IN PERFECT ORDER AT THE COMPLETION. SHOULD DEFECTS DEVELOP WITHIN THE GUARANTEE PERIOD, THE CONTRACTOR SHALL, UPON NOTICE OF THE SAME, REMEDY THE DEFECTS AND HAVE ALL DAMAGES TO OTHER WORK OR FURNISHINGS CAUSED BY THE REPAIRS CORRECTED AT HIS EXPENSE TO THE CONDITION BEFORE SUCH DAMAGE.

E. SCOPE OF WORK

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, STORAGE, UNPACKING AND PLACEMENT; TO INCLUDE BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:
   a. COMPLETE POWER SYSTEM INCLUDING ALL PANELS AND FEEDERS.
   b. COMPLETE BRANCH CIRCUIT WIRING SYSTEM.
   c. COMPLETE POWER WIRING FOR ALL KITCHEN EQUIPMENT.
   d. TEMPORARY ELECTRICAL POWER AND LIGHTING AS REQUIRED FOR CONSTRUCTION.
   e. TESTING OF ALL CABLES AND CIRCUIT WIRING AFTER INSTALLATION.
   f. WIRING DEVICES.
   g. GROUNDING OF THE ELECTRICAL SYSTEM.

GROUNDING AND BONDING

A. GROUND ALL EQUIPMENT PER N.E.C.
B. ALL CONDUITS SHALL CONTAIN A CODE-SIZED GROUND WIRE SIZED PER N.E.C. IN ADDITION TO THE CONDUCTORS SHOWN ON THE PLANS. WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR VOLTAGE DROP, THE GROUND WIRE SIZE SHALL BE INCREASED PROPORTIONATELY.
C. AFTER INSTALLING GROUNDING SYSTEM BUT BEFORE PERMANENT ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, TEST FOR COMPLIANCE WITH REQUIREMENTS.

WIRE AND CABLE

A. COLOR CODE CONDUCTORS (EXCEPT CONTROL AND INSTRUMENTATION CONDUCTORS) AS FOLLOWS:
   208/120V SYSTEM=PHASE A BLACK; PHASE B RED; PHASE C BLUE; NEUTRAL WHITE; GROUND GREEN.
   1. #12 AND #10 CONDUCTORS SHALL HAVE CONTINUOUS INSULATION COLOR, AS LISTED ABOVE.
   2. COLOR CODE CONDUCTORS LARGER THAN ABOVE, WHICH DO NOT HAVE CONTINUOUS INSULATION COLOR BY APPLICATION OF AT LEAST TWO LAPS OF COLORED TAPE ON EACH CONDUCTOR AT ALL POINTS OF ACCESS INCLUDING JUNCTION BOXES. COLOR TAPE SHALL BE THE EQUAL OF 3M PRODUCTS SCOTCH #35.
   3. CONDUCTORS SHALL BE SOFT ANNEALED COPPER INSULATED FOR 600 VOLTS UNLESS SPECIFICALLY INDICATED OTHERWISE. ALUMINUM CONDUCTORS ARE NOT ALLOWED ON THIS PROJECT.
B. INSULATION TYPE SHALL BE TYPE THWN FOR WIRE SIZES #8 AWG AND LARGER AND THHN OR THWN FOR #10AWG AND SMALLER. THHN SHALL NOT BE USED IN WET OR DAMP LOCATIONS.
C. FLEXIBLE CORD SHALL BE HEAVY DUTY TYPE SO WITH AN EQUIPMENT GROUND CONDUCTOR IN ADDITION TO THE CURRENT CARRYING CONDUCTORS.
D. PROVIDE #12 CONDUCTORS, UNLESS OTHERWISE INDICATED.
   1. CONTROL CONDUCTORS SHALL BE #14 MINIMUM FOR NEC CLASS I AND #16 FOR NEC CLASS II.
E. CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED.
F. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID.
G. INSTALL WIRING IN CONDUIT. CONCEALED WIRING IN WALLS OR ABOVE CEILINGS, OR EXPOSED IN UNFINISHED AREAS (WHERE NOT SUBJECT TO PHYSICAL DAMAGE) MAY BE RUN IN MC OR AC CABLE.
H. CONNECT #10 AND SMALLER WIRES WITH CONSTANT PRESSURE EXPANDABLE SPRING TYPE CONNECTORS, "SCOTCHLOK" BY 3M OR B-CAP BY BUCHANAN.
I. CONNECT #8 AND LARGER WIRES WITH COMPRESSION CONNECTORS OR SPLICES AS MANUFACTURED BY BURNDY OR T&B.
J. INSULATE SPLICING CONNECTORS TO AT LEAST 200% OF THE WIRE INSULATION. USE PRE-STRETCHED TUBING CONNECTOR INSULATORS, 3M PST FOR #2 AND LARGER CONDUCTORS.
K. PULL CONDUCTORS USING RECOGNIZED METHODS AND EQUIPMENT LEAVING AT LEAST 6" WIRE AT ALL JUNCTION BOXES FOR CONNECTIONS.
   1. CLEANOUT EACH CONDUIT SYSTEM BEFORE PULLING WIRE.
L. FORM AND TIE ALL WIRING IN PANELBOARDS.
M. THERE SHALL BE NO WIRENUT JOINTS OR SPLICES MADE INSIDE SWITCHBOARDS/PANELBOARDS.
N. BRANCH CIRCUIT WIRE SIZES (AND CONDUITS) SHALL BE INCREASED FROM THOSE INDICATED ON THE PLANS TO PREVENT EXCESSIVE VOLTAGE DROP. BRANCH CIRCUITS SHALL BE INSTALLED WITH WIRES OF SUFFICIENT SIZE SO THAT VOLTAGE DROP BETWEEN THE PANEL AND THE LOADS DOES NOT EXCEED LIMIT OF 3%.
O. WIRE SIZES SHALL BE BASED ON THE 60 DEGREES C. AMPACITIES FOR WIRE SIZES NO. 14-1 A.W.G., AND 75 DEGREES C. AMPACITIES FOR WIRE SIZES #1/0 A.W.G. AND LARGER.
P. CIRCUITS MAY BE MULTI-PLEXED IN CONDUIT PROVIDED WIRE IS PROPERLY DERATED AND CONDUIT SIZED PER CODE. UNDER NO CIRCUMSTANCE SHALL MORE THAN (8) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT.

RACEWAYS AND BOXES

A. RACEWAYS

1. ALL WIRE SHALL BE RUN IN ACCORDANCE WITH CODE IN CORROSION RESISTANT, RIGID, THREADED, METAL CONDUIT OR ELECTRICAL METALLIC TUBING (E.M.T.) UNLESS OTHERWISE SPECIFICALLY STATED HEREIN.
   a. CONDUIT IN EXTERIOR WALLS, BELOW FLOOR SLAB, OR UNDERGROUND SHALL BE RIGID, THREADED, GALVANIZED, HEAVY WALL TYPE.
   b. CARLON PVC TYPE 40 HEAVY WALL CONDUIT WITH GROUND WIRE MAY BE USED BELOW FLOOR SLAB OR UNDERGROUND IN LIEU OF RIGID, THREADED, GALVANIZED CONDUIT. PVC 40 CONDUIT SHALL NOT BE RUN IN OR ABOVE FLOOR SLAB. PVC CONDUIT SHALL TERMINATE BELOW FLOOR SLAB WITH RIGID, THREADED METAL CONDUIT ADAPTER. CONDUIT ABOVE SLAB SHALL BE METAL.
   c. CONDUIT RUN EXPOSED TO THE WEATHER SHALL BE HEAVY WALL, METAL THREADED TYPE.
   d. PROVIDE BRANCH CIRCUIT CONDUCTORS THAT ARE TYPE THHN OR THWN AS REQUIRED. MC CABLE CAN BE USED FOR LIGHT FIXTURE TO LIGHT FIXTURE.
2. CONDUIT SIZE SHALL BE 3/4" MINIMUM.
3. CONDUIT SHALL BE SECURELY FASTENED IN PLACE.
4. ALL CONDUIT SHALL BE CONCEALED IN WALLS, FLOOR AND CEILINGS WHEREVER POSSIBLE. EXPOSED CONDUIT IN FINISHED AREAS WILL NOT BE PERMITTED. EXPOSED CONDUIT WILL BE PERMITTED IN UNFINISHED AREAS WITH THE SPECIFIC APPROVAL OF THE ARCHITECT.
5. USE LIQUID TIGHT METAL CONDUIT FOR ALL CONNECTIONS TO MOTORS AND OTHER EQUIPMENT SUBJECT TO VIBRATION AND IN AREAS SUBJECT TO MOISTURE.
6. USE WATERTIGHT JOINTS WITH BURIED AND CONCRETE ENCASED CONDUIT. ALL BURIED CONDUITS OUTSIDE OF BUILDINGS SHALL HAVE A MINIMUM OF 24" OF COVER. METAL CONDUITS BURIED IN EARTH SHALL BE PAINTED (TWO COATS) WITH HEAVY ASPHALTUM PAINT.
7. SUPPORT RUNS OF CONDUIT AS DETAILED IN THE APPROPRIATE TABLE OF THE NATIONAL ELECTRICAL CODE (NEC).
8. INSTALL EXPOSED RUNS OF CONDUIT AND CONDUIT ABOVE LAY-IN CEILINGS PARALLEL OR PERPENDICULAR TO THE WALLS, STRUCTURAL MEMBERS OF INTERSECTIONS OF VERTICAL PLANES AND CEILINGS. PROVIDE RIGHT ANGLE TURNS USING FITTINGS OR SYMMETRICAL BENDS. SUPPORT CONDUITS WITHIN 1" OF ALL CHANGES IN DIRECTION.
9. IF A CONDUIT IS SUSPENDED, IT SHALL BE SUPPORTED ON TRAPEZE HANGERS WHICH USE "ALL-THREAD" RODS FROM THE STRUCTURAL STEEL. THE USE OF CEILING SUPPORT WIRE OR SIMILAR MATERIAL WILL NOT BE ACCEPTED.
10. INSTALL EMPTY CONDUIT FOR FUTURE USE AS INDICATED ON THE DRAWINGS. CONDUIT SHALL BE COMPLETE WITH JETLINE OR PULL ROPE, JUNCTION/OUTLET BOXES, TILE RINGS AND APPROPRIATE COVER PLATES.
11. PROVIDE PITCHPOCKETS WHERE CONDUITS PENETRATE THE ROOF.
12. THREAD LUBRICATION/SEALANT IS REQUIRED ON OUTDOOR AND UNDERGROUND THREADED METAL JOINTS.
13. INSTALL FIRE SEAL FITTINGS WHERE CONDUITS PENETRATE CONCRETE FLOOR SLABS OR MASONRY WALLS REQUIRED TO BE FIRE RATED.
14. HORIZONTAL PORTION OF CONDUIT EXPOSED ON THE ROOF AND FEEDING EQUIPMENT SHALL NOT BE MORE THAN 5'-0" UNLESS THE WRITTEN APPROVAL FROM ARCHITECT OR ENGINEER IS OBTAINED.

B. PULL AND JUNCTION BOXES

1. INSTALL PULL AND JUNCTION BOXES WHERE SHOWN ON THE DRAWINGS, AND WHERE REQUIRED FOR CHANGES IN DIRECTION, AT JUNCTION POINTS, AND TO FACILITATE WIRE PULLING. FURNISH BOX SIZES IN ACCORDANCE WITH NEC UNLESS LARGER BOXES ARE INDICATED.
2. PROVIDE STEEL BOXES AND REMOVABLE COVERS OF CODE GAGE, HOT ROLLED SHEET STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, FOR ABOVE GROUND WORK. FURNISH WEATHERPROOF BOXES WHEN INSTALLED ABOVE GROUND OUTSIDE.
3. PROVIDE CAST IRON BOXES, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE WHERE SHOWN ON THE DRAWINGS. FURNISH REMOVABLE COVERS WITH GASKETS AND STAINLESS STEEL, BRASS OR BRONZE SCREWS.
4. PROVIDE CONCRETE BOXES FOR UNDERGROUND WORK UNLESS OTHERWISE INDICATED ON THE DRAWINGS. FURNISH STEEL FRAMES AND COVERS WITH THE COVER ATTACHED TO THE FRAME WITH HEXAGON HEAD, BRASS OR BRONZE CAP SCREWS, 3/8" DIAMETER. PROVIDE A RUBBER GASKET FOR SEALING BETWEEN THE COVER AND THE FRAME. PAINT THE COVER WITH TWO COATS OF HEAVY ASPHALTUM.

C. OUTLET BOXES

1. USE SHEET STEEL BOXES, ZINC COATED OR CADMIUM PLATED, FOR CONCEALED INTERIOR WORK.
2. USE CAST BOXES, ZINC-CADMIUM FINISH MALLEABLE IRON, FOR EXPOSED INTERIOR WORK, AND FOR EXPOSED OR CONCEALED WORK IN WET, DAMP OR EXTERIOR LOCATIONS.
3. WALL BOX SIZES (MINIMUM) SHALL BE 4" SQUARE x 2-1/2" DEEP WHERE WALL CONSTRUCTION PERMITS. WHERE WALL CONSTRUCTION DICTATES, THE WIDTH MAY BE REDUCED TO 2-1/8" OR 1-1/2" UNDER SPECIAL CONDITIONS.
4. FIXTURE OUTLETS IN CEILINGS (MINIMUM) SHALL BE 4" OCTAGONAL x 1-1/2" DEEP (4-11/16" OCTAGONAL x 2-1/2" DEEP WHERE REQUIRED TO ACCOMMODATE LARGER CONDUIT OR LARGER NUMBER OF WIRES).
5. GANG BOXES SHALL BE ONE PIECE (MINIMUM), 2-1/8" DEEP.
6. FLUSH MOUNT BOXES IN ALL FINISHED WALLS. INSTALL THE PLASTER RINGS IN DRYWALLED PLASTERED WALLS AND RAISED COVERS AS REQUIRED IN WALLS WITH OTHER FINISHES SO THAT THE COVER PLATES FIT TIGHTLY AGAINST BOXES OR RINGS, 3/16" MAXIMUM GAPS ARE ALLOWED FOR NONCOMBUSTIBLE WALLS.
7. ADJUST LOCATION OF OUTLETS IN MASONRY OR TILE CONSTRUCTION TO OCCUR IN THE NEAREST JOINT TO THE HEIGHT SPECIFIED. HEIGHTS SHALL MEET A.D.A. REQUIREMENTS.
8. SUPPORT ALL BOXES TO MAINTAIN PROPER ALIGNMENT AND RIGIDITY.
10. CLEAN BOXES OF ALL FOREIGN MATTER PRIOR TO THE INSTALLATION OR WIRING OF DEVICES.
11. MOUNTING HEIGHTS ON THE DRAWINGS ARE TO THE CENTERLINE OF THE BOX UNLESS OTHERWISE NOTED.

WIRING DEVICES

A. WIRING DEVICE COLOR SHALL BE WHITE, UNLESS OTHERWISE INDICATED.
B. GENERAL SWITCHES SHALL BE SPECIFICATION GRADE AS MANUFACTURED BY PASS & SEYMOUR.
C. PROVIDE NEMA CONFIGURATION 5-20R DUPLEX 125 VOLT GROUNDING TYPE RECEPTACLES RATED FOR 20 AMPERES UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
D. RECEPTACLES SHALL BE SPECIFICATION GRADE AS MANUFACTURED BY PASS & SEYMOUR.
E. RECEPTACLES REQUIRING AMPERAGES, VOLTAGES OR CONFIGURATIONS DIFFERENT FROM THE DUPLEX CONVENIENCE RECEPTACLES ABOVE SHALL BE AS INDICATED ON THE DRAWINGS.
F. PROVIDE OTHER RECEPTACLES OF A QUALITY, MATERIAL AND WORKMANSHIP EQUAL TO THAT SPECIFIED FOR DUPLEX CONVENIENCE RECEPTACLES.
G. PROVIDE COVER OR DEVICE PLATES FOR OUTLET BOXES AS FOLLOWS UNLESS OTHERWISE NOTED:
   1. FINISHED AREAS: STAINLESS STEEL.
   2. UNFINISHED AREAS: ZINC COATED SHEET METAL, ALUMINUM, OR CAST METAL, AS APPROPRIATE FOR THE TYPE OF BOX.
   3. EXTERIOR AREAS: COPPER FREE ALUMINUM WITH GRAY, POWDER EPOXY FINISH, GASKET, WEATHERPROOF.
   4. WHERE DEVICES ARE GANGED, THEY SHALL BE INSTALLED UNDER A COMMON COVERPLATE.
I. LOCATE THE SWITCHES APPROXIMATELY 4'-0" ABOVE THE FINISHED FLOOR ELEVATION OR NEAREST BLOCK COURSE (WITHIN A.D.A. REQUIREMENTS), UNLESS OTHERWISE INDICATED. THE LONG DIMENSION OF THE SWITCHES SHALL BE VERTICAL.
J. LOCATE RECEPTACLES APPROXIMATELY 1"-6" ABOVE THE FINISHED FLOOR ELEVATION OR NEAREST BLOCK COURSE (WITHIN A.D.A. REQUIREMENTS), UNLESS NOTED OTHERWISE. THE LONG DIMENSION OF RECEPTACLES SHALL BE VERTICAL.

SAFETY SWITCHES

A. SAFETY SWITCHES SHALL BE THE ENCLOSED HEAVY-DUTY TYPE (TYPE HD) WITH QUICK-MAKE, QUICK-BREAK MECHANISM AND EXTERNAL PAD LOCKABLE OPERATING HANDLE.
B. SAFETY SWITCHES SHALL BE RATED FOR 240 OR 600 VOLTS AS APPLICABLE. THEY SHALL BE HORSEPOWER RATED WHEN USED IN MOTOR CIRCUITS.
C. SAFETY SWITCHES SHALL BE FUSIBLE OR NON-FUSIBLE, 2, 3, OR 4 POLE AS INDICATED ON THE DRAWINGS.
D. SAFETY SWITCHES SHALL BE SINGLE THROW UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
E. ENCLOSURES SHALL BE NEMA 1 INDOORS AND NEMA 3R OUTDOORS UNLESS OTHERWISE INDICATED ON DRAWINGS.
F. MANUFACTURER SHALL BE SQUARE D, SIEMENS, OR CUTLER-HAMMER. ALL SAFETY SWITCHES SHALL BE BY ONE MANUFACTURER.
G. MOUNT THE SAFETY SWITCHES SECURELY BETWEEN 3' & 6' LEVELS ABOVE THE FLOOR UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
H. SWITCHES ON BLOCK WALLS SHALL BE MOUNTED ON A 3/4" PLYWOOD BACKBOARD, WHERE LOCATED INDOORS.

DISTRIBUTION AND PANELBOARDS

A. PANELBOARDS

1. PANELBOARDS SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT AT THE TERMINALS.
2. PANELBOARDS SHALL BE LABELED WITH PHENOLIC NAMEPLATES INSCRIBED AS INDICATED ON THE DRAWINGS. PROVIDE LABELS AFFIXED TO PANELBOARDS AS REQUIRED BY NFPA 70E.
3. PANELBOARDS SHALL BE ENCLOSED DEAD FRONT SAFETY TYPE WITH FEATURES AND RATINGS AS SCHEDULED ON THE DRAWINGS.
4. MOLDED CASE CIRCUIT BREAKERS SHALL BE AS SCHEDULED ON THE DRAWINGS AND SPECIFIED IN THIS DIVISION.
5. ALL BUS BARS SHALL BE RECTANGULAR TIN PLATED ALUMINUM.
6. SPACE, WHERE SHOWN IN PANEL SCHEDULES, DESIGNATES SPACE FOR FUTURE PROTECTIVE DEVICES AND SHALL INCLUDE BUS AND SUPPORT.
7. INSTALL CABINETS SO THAT CENTER OF THE TOP BREAKER DOES NOT EXCEED 6'-6" ABOVE THE FINISHED FLOOR.
8. ENTRIES ON DIRECTORY CARDS SHALL BE TYPED, COMPLETE AND ACCURATE.
9. ALL BOLTED CONNECTIONS SHALL BE TORQUED IN ACCORDANCE WITH MANUFACTURER'S STANDARDS.
10. ELECTRICAL CONTRACTOR SHALL ARRANGE CIRCUITS AS NEAR AS POSSIBLE TO CIRCUIT NUMBERS ON THE DRAWINGS. AT COMPLETION OF JOB, ELECTRICAL CONTRACTOR SHALL TAKE CURRENT READING CHECKS OF RESPECTIVE PHASES. A MINIMUM OF CIRCUIT CONNECTIONS SHALL BE REARRANGED TO BALANCE, AS CLOSELY AS POSSIBLE, THE LOAD IN THE PANEL.
11. ALL BREAKERS SHALL BE BOLT-ON TYPE.
12. MANUFACTURE SHALL BE SQUARE D AS THE PREFERRED SWITCHGEAR.

ELECTRICAL LEGEND

N O T E : ALL MOUNTING HEIGHTS GIVEN ARE TO CENTERLINE OF DEVICE UNLESS OTHERWISE NOTED.

SYMBOL	DESCRIPTION
S	SINGLE POLE TOGGLE SWITCH – MOUNT AT 48" A.F.F.
J	JUNCTION BOX
	MOTOR
S_T	THERMAL OVERLOAD SWITCH – MOUNT AT FRACTIONAL HP MOTORS
	DISCONNECT SWITCH
	ELECTRIC PANEL
A	AMPERE
A.F.F.	ABOVE FINISHED FLOOR
C	CONDUIT
CB	CIRCUIT BREAKER
CIR	CIRCUIT
EMT	ELECTRICAL METALLIC TUBING
JB	JUNCTION BOX
P	POLE
U.N.O.	UNLESS NOTED OTHERWISE
	BRANCH CIRCUIT WIRING
	BRANCH CIRCUIT FEEDER
	UNSWITCHED BRANCH CIRCUIT WIRING
	ELECTRICAL GROUND

NOTES:

1. RECEPTACLES LOCATED WITHIN 6' OF A WATER SOURCE, LOCATED OUTSIDE AND WHERE REQUIRED BY CODE SHALL BE PROVIDED WITH A GFI TYPE RECEPTACLE WHETHER INDICATED OR NOT. ADDITIONALLY, THOSE EXTERIOR RECEPTACLES SHALL BE PROVIDED WITH COVERS RATED "WEATHER PROOF WHILE IN USE"
2. ALL BRANCH CIRCUITS TO BE PROVIDED WITH INDIVIDUAL DEDICATED NEUTRAL. MULTI-CIRCUIT FEEDERS UTILIZING COMMON NEUTRALS WILL NOT BE ACCEPTED.
3. ALL SYMBOLS MAY NOT BE USED.

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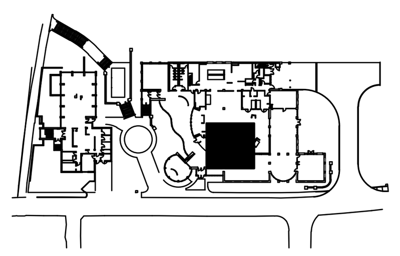

GELFENBIEN KEYPLAN

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ELECTRICAL LEGEND AND SPECIFICATIONS

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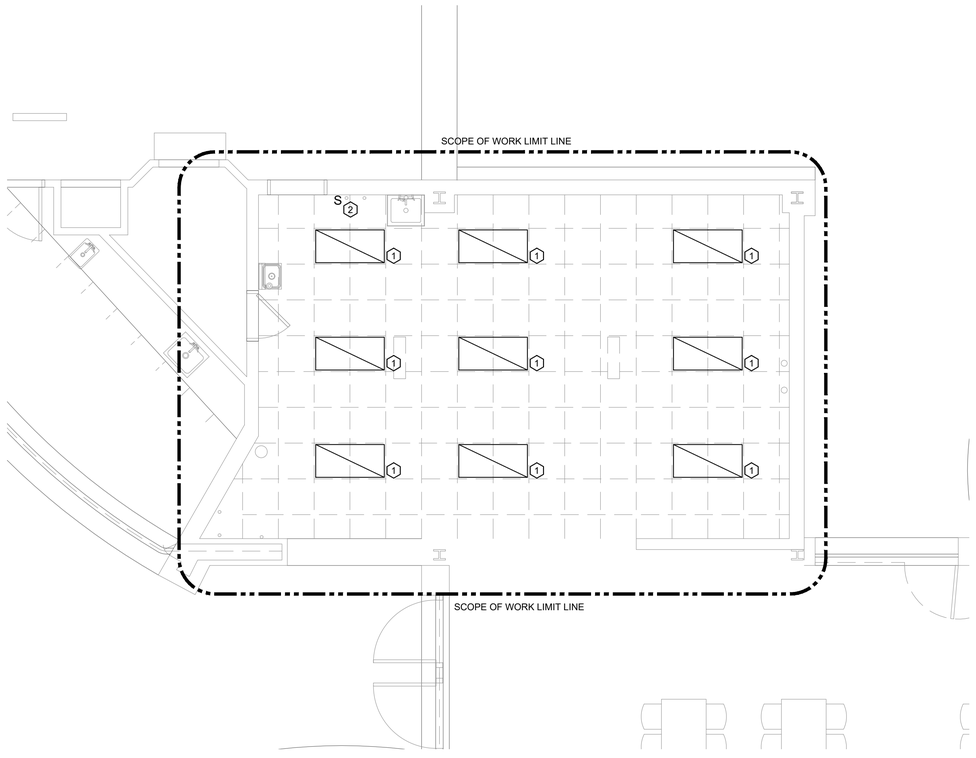
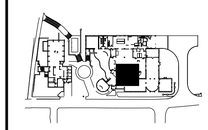


LIGHTING DEMO KEYNOTES:

1. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE. MAINTAIN CIRCUITING FOR CONNECTION TO NEW LIGHT FIXTURES.
2. EXISTING SWITCH TO REMAIN. DISCONNECT FROM EXISTING FIXTURES TO BE REMOVED, AND RECONNECT TO NEW LIGHT FIXTURES.



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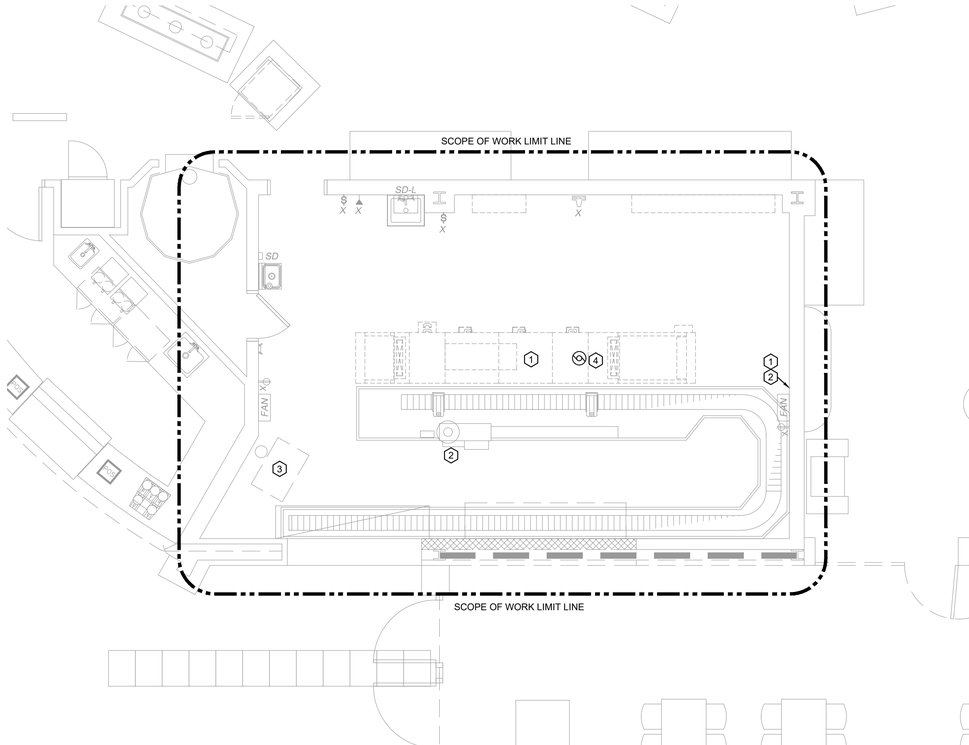
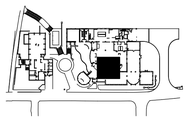


POWER DEMO KEYNOTES:

1. DISCONNECT EXISTING DISH MACHINE AND REMOVE CIRCUITING BACK TO SOURCE. DISCONNECT EXISTING 90A/3P CB IN PANEL KPH SERVING EQUIPMENT, AND RETURN TO OWNER.
2. DISCONNECT EXISTING CONVEYOR. REMOVE CIRCUITING BACK TO POINT OF ENTRY IN DISH ROOM. MAINTAIN EXISTING CIRCUITING AND CIRCUIT BREAKER FOR RECONNECTION TO NEW CONVEYOR.
3. DISCONNECT EXISTING GAS FIRED BOOSTER HEATER. REMOVE WIRING BACK TO SOURCE.
4. EXISTING EXHAUST FAN ON ROOF ABOVE TO BE REPLACED. DISCONNECT AND REMOVE EXISTING CIRCUITING BACK TO SOURCE.



GELFENBIEN KEYPLAN

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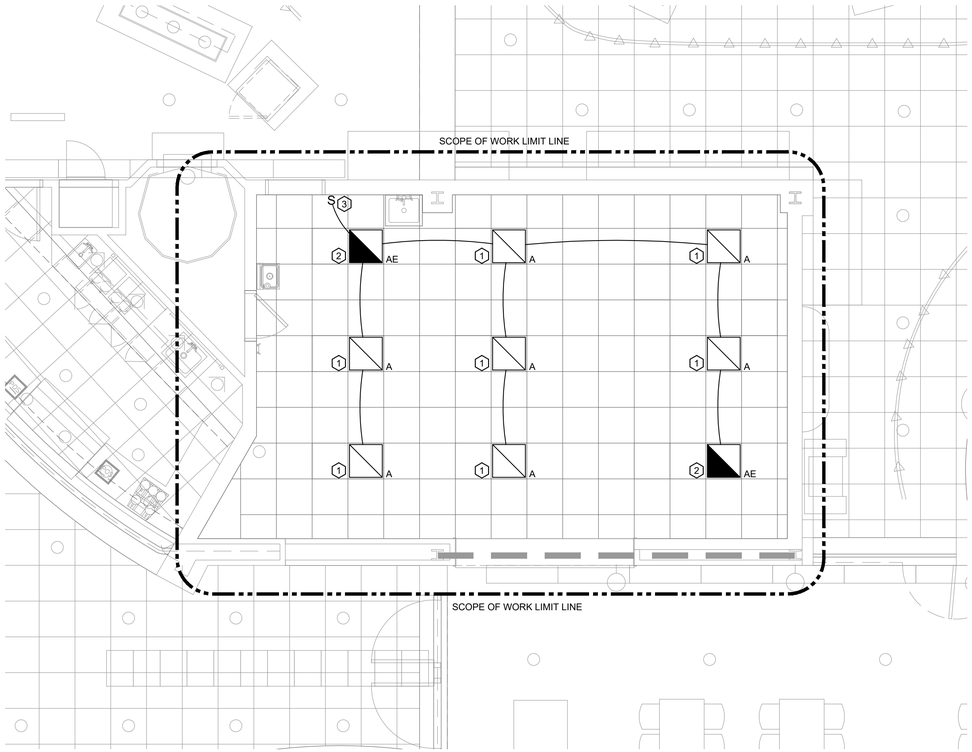
Title:

ELECTRICAL POWER DEMOLITION PLAN

Project Number:	Issue Date:
2018.029	19 JAN 2019
Scale:	CAD File:
1/4"=1'-0"	ED200.dwg
Drawn By:	Checked By:
JJZ	BJZ

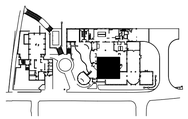
Revisions:

ED200



LIGHTING NEW WORK KETNOTES:

1. TYPE A LIGHT FIXTURE SHALL BE METALUX CAT# 22FP3235C. CONNECT TO EXISTING LIGHTING CIRCUIT MAINTAINED DURING DEMOLITON.
2. TYPE AE LIGHT FIXTURE SHALL BE METALUX CAT# 22FP3235C-EBPLED7W. CONNECT TO EXISTING LIGHTING CIRCUIT MAINTAINED DURING DEMOLITION.
3. EXISTING SWITCH. CONNECT TO NEW LIGHT FIXTURES AS SHOWN.



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Title:
ELECTRICAL LIGHTING NEW WORK PLAN

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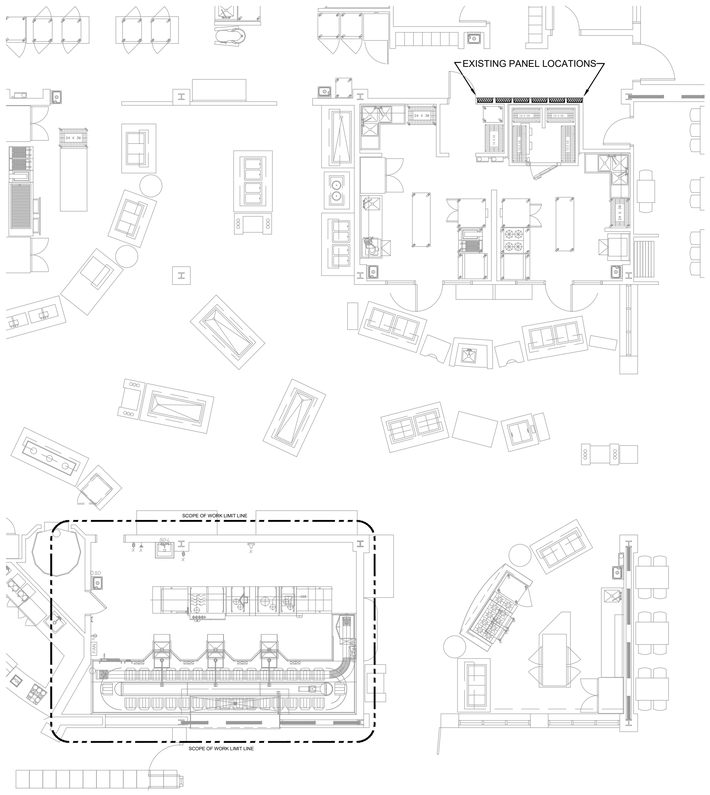
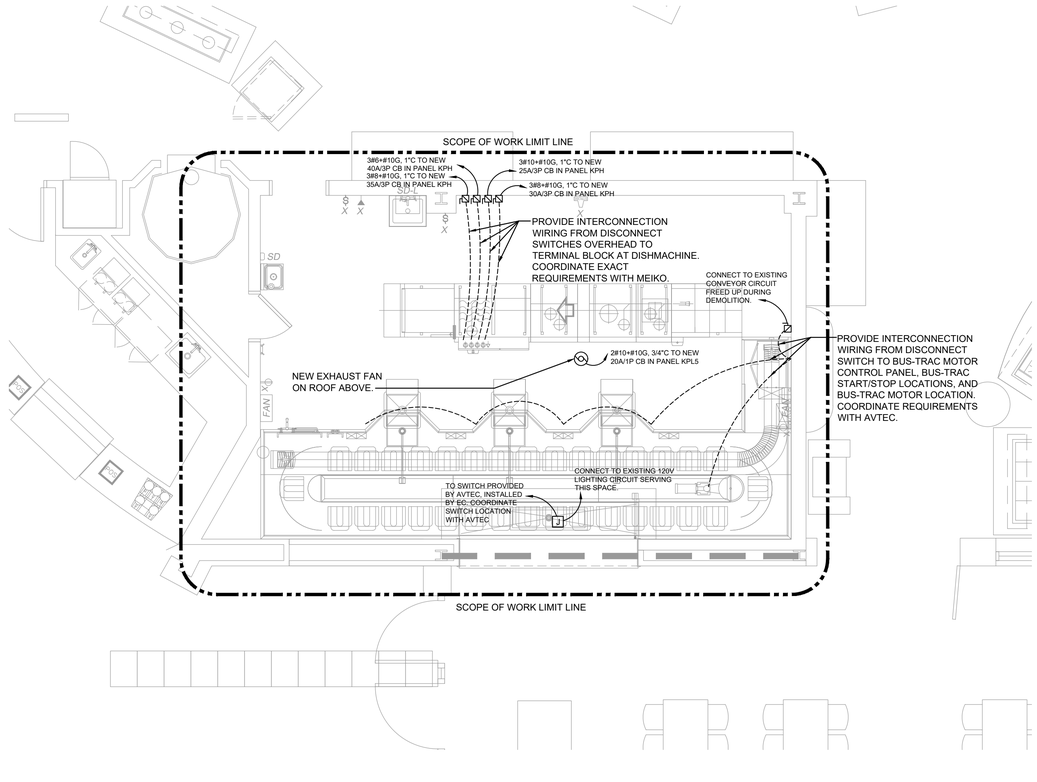
Revisions:

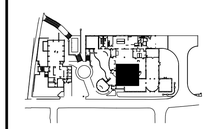
E100



1 E200 POWER OVER ALL PLAN
1/8"=1'-0"



2 E200 POWER PART PLAN
1/4"=1'-0"



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NEW WORK PLAN

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Revisions:

E200

HVAC DEMOLITION GENERAL NOTES

1. BEFORE SUBMITTING BID, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BECOME FULLY FAMILIAR WITH THE EXISTING CONDITIONS AND THE DOCUMENTS OF OTHER TRADES UNDER WHICH THEIR WORK WILL BE ACCOMPLISHED. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS MADE AS A RESULT OF FAILURE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
2. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE ANY DAILY INTERRUPTIONS OR SHUTDOWNS OF THE EXISTING SYSTEMS IN ADVANCE WITH OWNER'S DESIGNATED REPRESENTATIVE. THIS SHALL INCLUDE SERVICES INTERRUPTIONS, CONNECTIONS AND DISRUPTIONS EFFECTING OTHER TRADES (MECHANICAL AND ELECTRICAL). INCLUDE ALL WORK REQUIRED TO ALLOW PHASED CONSTRUCTION WHERE NECESSARY.
3. DEMOLITION DRAWINGS ARE STRICTLY DIAGRAMMATIC AND SHOW GENERAL ARRANGEMENT AND APPROXIMATE LOCATION OF EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT. IT IS NOT THE INTENT OF THESE DRAWINGS TO SHOW ALL EQUIPMENT, PIPING OR CONDUIT TO BE REMOVED. EQUIPMENT NOT BEING REUSED SHALL BE REMOVED, INCLUDING ALL ASSOCIATED HANGERS, SUPPORTS, PIPES, CONDUITS, WIRES, AND CONTROLS BACK TO THE POINT OF ORIGIN.
4. REFER TO THE ARCHITECTURAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS. THE FULL EXTENT OF THE DEMOLITION AND RECONSTRUCTION SCOPE OF WORK SHALL BE DETERMINED BY THE ENTIRE SET OF BID DOCUMENTS.
5. THE CONTRACTORS SHALL COORDINATE THE DEMOLITION SCOPE OF WORK WITH THE GENERAL CONTRACTOR'S OR CONSTRUCTION MANAGER'S PHASING SCHEDULE PRIOR TO COMMENCEMENT OF WORK. CARE MUST BE TAKEN SO AS NOT TO DESTROY, REMOVE OR DEMOLISH ANY EQUIPMENT, APPURTENANCES OR DEVICES INTENDED TO REMAIN. PROVIDE TEMPORARY SERVICES AND SYSTEM MODIFICATIONS TO ACCOMMODATE CONTINUOUS OPERATION OF ACTIVE SYSTEM.
6. THE LOCATION OF EXISTING HVAC SYSTEM SHOWN ON FLOOR PLANS, IS BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD VERIFY PRIOR TO COMMENCEMENT OF CONSTRUCTION, EXACT QUANTITY AND LOCATION(S) OF EXISTING EQUIPMENT, PIPING, DUCTWORK, ETC. TO BE REMOVED AND ADJUST AS NECESSARY.
7. ALL EQUIPMENT, AND ASSOCIATED PIPING INDICATED TO BE REMOVED OR RELOCATED, SHALL BE DISCONNECTED AND REMOVED, INCLUDING HANGERS AND OTHER COMPONENTS, UP TO NEAREST EXISTING ACTIVE MAIN OR BRANCH LINE AND CAPPED AS CLOSE TO THE ACTIVE LINE AS POSSIBLE. NO EQUIPMENT, PIPING, OR CONDUIT SHALL BE ABANDONED IN PLACE, UNLESS SPECIFICALLY NOTED.
8. ALL SYSTEMS TO BE REMOVED SHALL BE REMOVED BACK TO THE POINT OF SOURCE. THE CONTRACTOR SHALL VERIFY WHICH SYSTEMS MUST REMAIN ACTIVE TO SERVE ADJACENT SPACES DURING CONSTRUCTION. SHOULD THE CONTRACTOR ENCOUNTER, DURING DEMOLITION OF EXISTING WALLS OR CHASES, ANY PIPING OR CONDUIT WHICH MUST REMAIN ACTIVE, HE SHALL IMMEDIATELY GIVE NOTICE TO THE ENGINEER, GENERAL CONTRACTOR OR CONSTRUCTION MANAGER.
9. ALL SALVAGEABLE MATERIALS OR EQUIPMENT TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER AT THE END OF EACH DAY. ITEMS REMOVED AND NOT REUSED OR CLAIMED BY THE OWNER SHALL BECOME PROPERTY OF THE TRADE CONTRACTOR AND SHALL BE TRANSPORTED FROM THE SITE. SITE STORAGE OF REMOVED ITEMS WILL NOT BE PERMITTED.
10. PROPERLY DISPOSE OF ALL DEMOLISHED EQUIPMENT IN COMPLIANCE WITH CODES AND REGULATIONS; THIS APPLIES TO HAZARDOUS MATERIALS AND CONTAMINATED ITEMS TO BE DEMOLISHED.
11. THE CONTRACTOR SHALL OBTAIN EXISTING MECHANICAL DRAWINGS FROM THE OWNER IF AVAILABLE TO HELP DETERMINE FULL SCOPE OF WORK.

GENERAL PROCEDURES NOTES

1. PROJECT INCLUDES ACCESS TO AND COORDINATION WITH POSSIBLE OCCUPIED SPACES BELOW THE WORK AREA AND WITHIN OTHER PARTS OF THE BUILDING.
2. NOTICE OF WORK TO BE PERFORMED OUTSIDE THE WORK AREA, OR AFFECTING OTHER TENANTS IS TO BE GIVEN AT LEAST 48 HOURS PRIOR TO SCHEDULED WORK TO ALL PARTIES.
3. THE CONTRACTOR IS TO INCLUDE IN HIS BID, OR MAKE PROVISIONS FOR, THE FOLLOWING SPECIAL CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.
   A. PERFORMANCE OF WORK AFTER HOURS, OR PREMIUM TIME, SUCH AS CORE DRILLING, HAMMER DRILLING, ETC.
   B. "HOT WORKS PERMIT" FOR SOLDERING, BRAZING OR TORCHING. CONTACT BBS ENGINEERING OFFICE AT LEAST 24 HOURS IN ADVANCE OF SCHEDULED WORK.
   C. DISTURBANCE AND CLEARING OF WORK SPACE IN ADJACENT TENANT SPACES. COORDINATE WITH TENANTS,
   D. PROTECTION OF THE ADJACENT OCCUPIED AREAS AND ITEMS IN THESE AREAS FROM DAMAGE.
   E. RESTORATION OF ANY DISTURBED OCCUPIED SPACES TO CONDITION ACCEPTABLE TO THE TENANT AND BUILDING OWNER PRIOR TO THE START OF NEXT DAY'S NORMAL BUSINESS HOURS.
   F. CONTRACTOR TO SUBMIT A PROPOSED SCHEDULE TO OWNER AND LANDLORD INDICATING ANTICIPATED AFTER HOURS WORK AND ACCESS TO ADJACENT TENANT SPACES FOR REVIEW PRIOR TO COMMENCING WORK.

HVAC GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH CURRENT APPLICABLE CODES, ORDINANCES, REGULATORY AGENCIES HAVING JURISDICTION, AND SPECIFICATIONS. SPECIFICATIONS MAY EXCEED REQUIREMENTS OF THE CODE, IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
2. THE INTENT OF THESE DOCUMENTS IS FOR THE MEP TRADES TO FURNISH AND INSTALL COMPLETE MECHANICAL, AND ELECTRICAL SYSTEMS. THE SPECIFIED HVAC SYSTEM SHALL BE COMPLETE IN ALL RESPECTS; OPERATIONAL, TESTED, ADJUSTED, APPROVED BY AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
3. THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING THEIR BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS, AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
4. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST. REFER TO DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES. DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND PIPING. CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EQUIPMENT AND PIPING INSTALLATION WITH ALL TRADES BEFORE COMMENCING WORK.
6. EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS, WHEN EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING (GYP BOARD OR EQUIVALENT), OR BEHIND A WALL, AN APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. IF AN ACCESS DOOR IS REQUIRED, IT SHALL BE OF A RATING APPROPRIATE FOR THE WALL/CEILING IN WHICH IT IS TO BE INSTALLED. CONTRACTOR SHALL COORDINATE LOCATIONS OF ACCESS PANELS FOR ALL VALVES AND DEVICES, REQUIRING ACCESS, WITH THE ARCHITECT, PRIOR TO INSTALLATION OF SUCH DEVICES OR OTHER APPURTENANCES.
7. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHTS OF VARIOUS EQUIPMENT. ALL SUCH EQUIPMENT AND EQUIPMENT COLORS AND FINISHES SHALL BE COORDINATED WITH THE ARCHITECT: MOUNTING HEIGHTS SHALL BE APPROVED BY THE ARCHITECT.
8. WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
9. COORDINATE PIPING AND CONDUITS ENTERING OR LEAVING THE BUILDING WITH THE SITE CONTRACTOR(S) BEFORE INSTALLATION. COORDINATE INVERTS WITH THE STRUCTURE AND SYSTEM REQUIREMENTS, PRIOR TO INSTALLATION.
10. PROVIDE THE REQUIRED/SPECIFIED SLEEVES AND SEALS FOR PIPES OR CONDUIT PENETRATING INTERIOR, AND EXTERIOR WALLS AND FLOOR SLABS.
11. INSTALL FLOOR-MOUNTED EQUIPMENT ON A CONCRETE HOUSEKEEPING PAD.
12. THIS CONTRACT SHALL INCLUDE ALL THE NECESSARY PIPING, FITTINGS, TRANSITIONS ETC. AS REQUIRED TO INSTALL PIPING AND EQUIPMENT, AND TO AVOID ANY CONFLICTS WITH OTHER TRADES AND THE BUILDING STRUCTURE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO COORDINATE WITH OTHER TRADES OR BECOME FULLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES.
13. DO NOT INSTALL ANY PIPING OVER ELECTRICAL PANELS, TRANSFORMERS, SPECIAL EQUIPMENT, OR THROUGH ELECTRICAL ROOMS, DATA ROOMS, ELEVATOR MACHINE ROOM, STAIRWELL OR STAIRWELL WALLS THAT ARE NOT ASSOCIATED WITH OR SERVE THE RESPECTIVE ROOMS. COORDINATE THE LOCATION OF ELECTRICAL EQUIPMENT IN THE FIELD AND ADJUST AS NECESSARY.
14. INSTALL SMOKE DETECTORS IN BOTH SUPPLY & RETURN AIR DUCTS FOR AIR HANDLING EQUIPMENT 2,000 CFM AND GREATER.
15. PROVIDE SMOKE DAMPERS AND DUCT SMOKE DETECTORS IN BOTH SUPPLY & RETURN AIR DUCTS (AT EACH FLOOR) FOR AIR HANDLING EQUIPMENT 15,000 CFM AND GREATER.
16. PROVIDE SMOKE DAMPERS AND SMOKE DETECTORS AT DUCT PENETRATIONS OF SMOKE-BRRIERS, AND AT ELEVATOR SHAFT VENTS PER CODE REQUIREMENTS.
17. PROVIDE FIRE DAMPERS AT DUCT PENETRATIONS OF FIRE-RATED CONSTRUCTION, INCLUDING WALLS, SHAFTS AND FLOOR PENETRATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS.
18. PROVIDE AN AUTOMATIC TEMPERATURE CONTROL SYSTEM COMPLETE IN ALL REGARDS. ALL ZONES, VAV'S AND SYSTEM SHALL BE THERMOSTATICALLY CONTROLLED. REVIEW THE PLANS AND SPECIFICATIONS OF ALL MEP TRADES FOR A COMPLETE SCOPE OF THE WORK.
20. TEST AND BALANCE BOTH AIR AND HYDRONIC SYSTEMS, PROVIDE BALANCING REPORT TO ARCHITECT AND ENGINEER.
21. PIPING SHALL BE SUPPORTED FROM STRUCTURE ABOVE. TO MAXIMIZE HEAD ROOM, INSTALL PIPING TIGHT TO BOTTOM OF BEAMS WHEN RUNNING PERPENDICULAR TO BEAM; INSTALL PIPING TIGHT TO FLOOR SLAB WHEN RUNNING PARALLEL TO BEAM; PROVIDE ALL NECESSARY FITTINGS AND TRANSITIONS.
22. PROVIDE THROTTLING VALVES AND SHUT-OFF VALVES AS INDICATED IN SPECIFICATIONS IN ADDITION TO THOSE INDICATED ON THE DOCUMENTS.
23. INSTALL ALL EQUIPMENT VALVES AS REQUIRED BY MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS AND AS DETAILED.
24. PROVIDE AIR VENTS AT ALL HIGH POINTS AND DRAINS AT ALL LOW POINTS.
25. PROVIDE PRESSURE RELIEF DOORS FOR AIR SYSTEMS, PER THE SPECIFICATIONS.
26. PROVIDE MOTORIZED DAMPERS AT ALL PERMANENT OPENINGS (EXHAUST, SUPPLY, RELIEF, O.A. INTAKES, MAKE-UP AIR, SMOKE VENTS, ETC.) EXCEPT DRYER, KITCHEN, AND FUME EXHAUST AND PROVIDE A MEANS TO CONTROL THE DAMPER OPERATION.
27. ALL SUPPLY RECTANGULAR 90° ELBOWS SHALL HAVE TURNING VANES.
28. PROVIDE DUCT TAKE-OFF TYPES AND VOLUME DAMPERS PER THE SPECIFICATIONS AND DUCT TAKE-OFF DETAILS ON DRAWINGS. TAKE-OFFS SHOWN ON FLOOR PLANS DO NOT REPRESENT THE SPECIFIC TYPE OF TAKE-OFF REQUIRED; CONSULT THE DETAILS AND SPECIFICATIONS.
29. PROVIDE VOLUME DAMPERS ON ALL SUPPLY, EXHAUST, AND RETURN BRANCH DUCTS.
30. COORDINATE AND VERIFY LOCATIONS OF ALL ITEMS REQUIRING ACCESS WITH ARCHITECT IN FIELD., INCLUDING VALVES, VOLUME DAMPERS, FIRE DAMPERS, ETC.
31. ALL EQUIPMENT LOCATED ON THE ROOF THAT REQUIRES SERVICING SHALL BE LOCATED A MINIMUM 10'-0" FROM EDGE OF THE ROOF.
32. ALL EXPOSED DUCTWORK SHALL BE FLAT, OVAL, OR ROUND. COORDINATE WITH ARCHITECT'S CEILING PLANS AND IDENTIFY ON DUCTWORK SHOP DRAWINGS.
33. PROVIDE DUCT TRANSITIONS AT RTU/AHU CONNECTIONS, ADJUST STEEL FRAMING AND SUPPORTS AFTER FINAL AIR HANDLING UNIT APPROVAL.
34. IN TIGHT AREAS ALL DUCTWORK SHALL BE INSTALLED AS HIGH AS POSSIBLE, BETWEEN STEEL & TRUSSES, BRUNCH DUCTWORK SHALL RUN THRU JOIST OPENINGS.
35. ALL THERMOSTATS LOCATED ON OUTSIDE WALL SHALL HAVE INSULATED PAD BEHIND.
36. ALL MOTORIZED DAMPERS SHALL BE WIRED BY ATC CONTRACTOR, COORDINATE VOLTAGE REQUIREMENTS WITH EQUIPMENT.
37. ALL TOILETS & BATHROOMS SHALL HAVE 3/4" UNDERCUT DOORS.
38. ALL LOUVERS ARE SELECTED AND SCHEDULED BY ARCHITECT. LOUVER TAGS ARE SHOWN FOR COORDINATION ONLY.
39. SEISMICALLY SUPPORT THE EQUIPMENT AS REQUIRED BY CODE, THE AUTHORITY HAVING JURISDICTION, AND/OR AS SPECIFIED. SUBMIT ENGINEERED INSTALLATION DETAILS PER THE SPECIFICATIONS. THE CONTRACTOR'S SEISMIC ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A DETAILED REPORT FOR THE RECORD.
38. ALL DUCTWORK AND PIPING CROSSING SEISMIC JOINTS SHALL ACCOMMODATE DIFFERENTIAL MOTION. REFER TO DETAILS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR LOCATIONS.
39. PROVIDE PIPE EXPANSION COMPENSATION FOR THE VARIOUS PIPING SYSTEMS. SUBMIT ENGINEERED DETAILS FOR APPROVAL AND VERIFY INSTALLATION IS IN ACCORDANCE WITH THE CODE. THE CONTRACTOR'S CONSULTING ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A REPORT OF THE FINDINGS.

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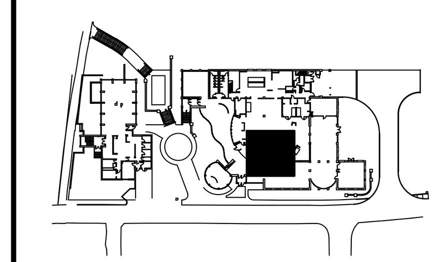

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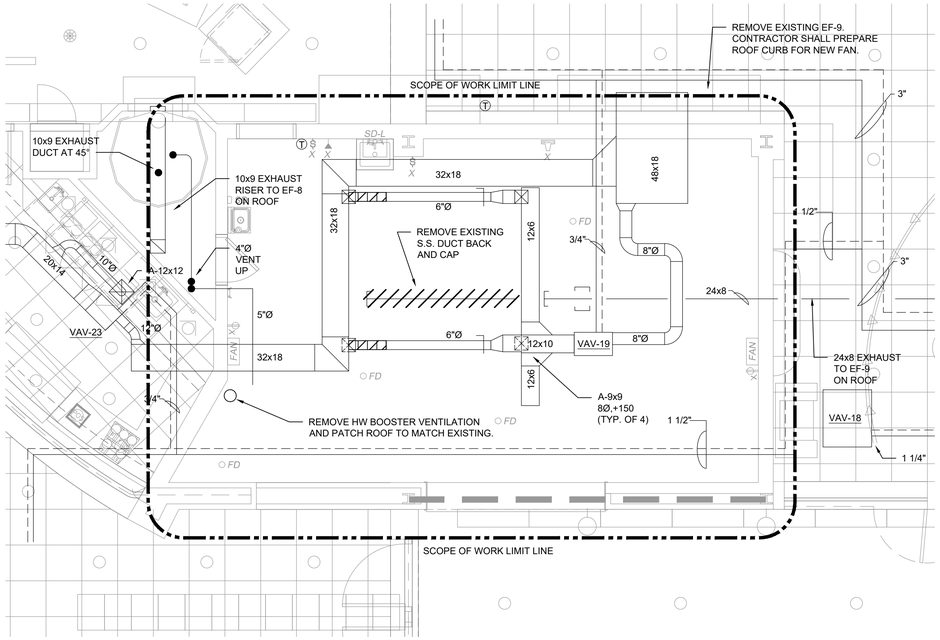
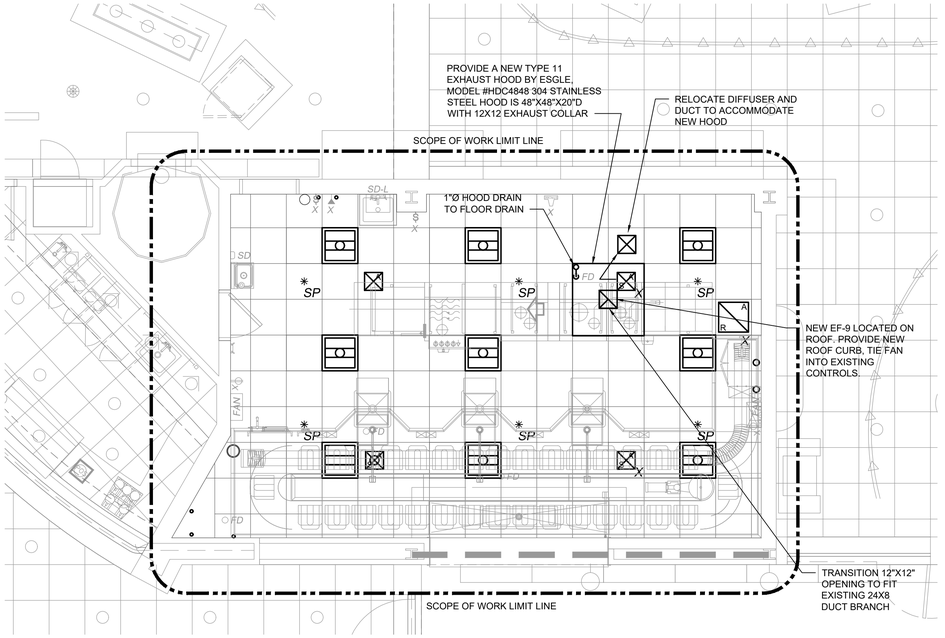


1 M100 MECHANICAL DEMOLITION PLAN
SCALE: 1/4"=1'-0"



2 M100 MECHANICAL NEW WORK PLAN
SCALE: 1/4"=1'-0"

EXHAUST - FAN SCHEDULE

TAG	MFR	MODEL NUMBER	TYPE	DRIVE	CFM	ESP (IN WC)	RPM	MOTOR HP	SPEED CONTROL
EF-9	COOK	HDC4848	UPBLAST	BELT	800	2.5	1037	1/6	-

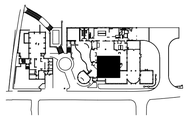
TAG	VOLTS/ PHASE	SERVICES	FLOOR	SONES	REMARKS
EF-9	115 / 1 / 60	DISH ROOM	MAIN	13.9	

GENERAL NOTES/ACCESORIES:

1. ACCEPTABLE MANUFACTURERS BY: COOK, TWIN CITY FANS, GREENHECK
2. ALL CONTROLS INCLUDING ALL END SWITCHES AND DAMPERS SHALL BE PURCHASED & INSTALLED BY CONTROLS CONTRACTOR. COORDINATE CONTROLS VOLTAGE.
3. PROVIDE HEAVE DUTY CAST IRON REGREASABLE BEARINGS
4. PROVIDE STAINLESS STEEL QUICK RELEASE LATCHES
5. PROVIDE ALUMINUM BIRD SCREEN.
6. PROVIDE CURB ADAPTOR.

SCHEDULE REMARKS

1. RC = ROOF CURB 18" ABOVE FINISH ROOF
2. MD = MOTORIZED DAMPER
3. VERI-GREEN ECM MOTOR
4. BG = BELT GUARD
5. AC = ACCESS DOOR
6. REVERSE ACTING T'STAT WITH MANUAL OVERRIDE
7. DISCHARGE GUARD
8. INLET GUARD
9. SWITCH W/PILOT LIGHT
10. SELF-CLEANING DRYER DUCT PRESSURE SENSING TUBE (DRYER FAN)
11. RUBBER ISOLATED MOUNTING BRACKET (DRYER FAN)
12. PROVIDE NON-STICKCOATED WHEEL (TEFLON), HOOD HASPS, STAINLESS STEEL FASTENERS, ALUMINUM BIRD SCREEN, GREASE TRAP & CLEAN-OUT PORT (GREASE EXH. FAN)



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RJ	RJ

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GENERAL

1. WHEN A CONFLICT BETWEEN THE DRAWINGS, NOTES AND/OR SPECIFICATIONS OCCUR, THE MORE STRINGENT, AND/OR LARGER QUANTITY AND/OR MORE EXPENSIVE SHALL APPLY. THE REQUIREMENTS LISTED WITHIN NOTES OR SPECIFICATIONS SHALL BE REQUIRED, PROVIDED AND INSTALLED WHETHER SPECIFICALLY INDICATED ON THE DRAWINGS OR NOT.

2. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO PROVIDE FOR FINISHED WORK, TESTED AND READY FOR OPERATION.

3. ITEMS AND SERVICES NOT SHOWN ON DRAWINGS OR SPECIFICATIONS BUT REQUIRED TO RENDER THE WORK COMPLETE AND READY FOR OPERATION, SHALL BE PROVIDED WITHOUT ADDITIONAL COST.

4. WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

5. DRAWINGS ARE DIAGRAMMATIC AND INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUB-CONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR. GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED. THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES AND EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION. DO NOT SCALE DRAWINGS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

6. PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT GENERAL CONDITIONS AND IN COORDINATION WITH ALL OTHER TRADES. ALL WORK SHALL BE DONE IN CONFORMANCE AND PROVISIONS OF ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND LAWS.

CODES AND STANDARDS:
IBC 2015 INTERNATIONAL BUILDING CODE / CONNECTICUT BUILDING CODE 2018 AND ALL SUPPLEMENTS.
IMC 2015 INTERNATIONAL MECHANICAL CODE
IMP 2015 INTERNATIONAL PLUMBING CODE
IECC 2015 INTERNATIONAL ENERGY CONSERVATION CODE
NEC 2017 NATIONAL ELECTRICAL CODE / NFPA 70
NFPA NFPA-101 FIRE SAFETY CODE
ICC/ANSI ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES A117.1-2003

7. WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIALS, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS, FEES, LICENSES, AND ADMINISTRATIVE TASKS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.

8. STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE.

9. THIS CONTRACTOR SHALL PROVIDE AND INSTALL ALL POWER AND CONTROL WIRING REQUIRED FOR ALL EQUIPMENT OPERATION NOT SPECIFICALLY PROVIDED BY OTHERS BUT REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. THIS CONTRACTOR SHALL PROVIDE MOTOR STARTERS FOR INSTALLATION BY OTHERS. COORDINATE REQUIREMENTS.

ALTERATION WORK AND DEMOLITION

1. ALL EQUIPMENT, DUCTWORK, PIPING, CONTROL DEVICES ETC... TO BE REMOVED, SHALL BE DISPOSED OF, TURNED OVER TO THE OWNER, OR SALVAGED AS DIRECTED BY THE OWNER. EQUIPMENT, DUCTWORK, PIPING, CONTROL DEVICES, ETC... SHALL NOT BE REMOVED FROM THE PREMISES WITHOUT THE OWNERS APPROVAL.

2. UPON COMPLETION OF REMOVALS AND MODIFICATIONS, ALL DUCTWORK AND PIPING TO REMAIN SHALL BE PROPERLY PLUGGED, VALVED, CAPPED AND/OR BYPASSED SUCH THAT UPON COMPLETION OF WORK ALL SYSTEMS TO REMAIN, REMAIN OPERATIONAL.

3. NO DEAD ENDS SHALL BE LEFT ON ANY DUCTWORK AND PIPING SYSTEMS UPON COMPLETION OF WORK.

4. EXISTING EXPOSED PIPING SYSTEMS NOT TO BE REUSED, AND NOT SPECIFICALLY NOTED FOR REMOVAL SHALL BE COMPLETELY REMOVED.

5. ALL SYSTEMS SHALL BE LEFT IN WORKING ORDER TO THE SATISFACTION OF THE OWNER UPON COMPLETION OF ALL NEW WORK.

6. ALL EXISTING EXPOSED, UNNECESSARY DUCTWORK AND PIPING NOT RELATE TO NEW WORK SHALL BE COMPLETELY REMOVED.

7. RE-ROUTE OR REMOVE ALL EXISTING DUCTWORK, PIPING AND SYSTEMS WHERE NECESSARY TO AVOID NEW EQUIPMENT, STRUCTURAL OR MASONRY WORK AS REQUIRED BY THE PROPOSED ALTERATIONS.

COORDINATION DRAWINGS

1. DEVELOP AND SUBMIT COORDINATION DRAWINGS AS OUTLINED.

A. SHEET METAL AND PLUMBING SHOP DRAWINGS THAT HAVE BEEN COORDINATED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. DRAWINGS MUST BE RETURNED FROM ENGINEER EITHER "REVIEWED" OR "FURNISHED AS DIRECTED" PRIOR TO BEING USED AS BASIS FOR COORDINATION DRAWINGS. PRIOR TO THE SUBMISSION AND REVIEW OF SHEET METAL SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR REVIEW SHEET METAL SHOP STANDARDS. ANY SHEET METAL SHOP DRAWINGS SUBMITTED PRIOR TO THE SUBMISSION OF THE SHOP STANDARDS SHALL BE RETURNED "NOT REVIEWED".

B. AFTER SHEET METAL AND PIPING DRAWINGS HAVE BEEN REVISED PER ENGINEERS COMMENTS, REPRODUCIBLE COPIES SHALL BE SENT TO THE OTHERS TRADES IN THE FOLLOWING SEQUENCE FOR THE INCLUSION OF THERE WORK:
-MECHANICAL SHEET METAL
-PLUMBING CONTRACTOR
-FIRE PROTECTION PIPING
-ELECTRICAL WORK
-MECHANICAL PIPING

2. AFTER ALL TRADES HAVE INCLUDED THEIR WORK ON THE COORDINATION DRAWINGS AND NOTED CONFLICTS, ALL TRADES SHALL MEET TO RESOLVE CONFLICTS AND AGREE TO ACCEPTABLE SOLUTIONS. EACH TRADE SHALL SIGN COORDINATION DRAWINGS. ITEMS NOT SHOWN ON COORDINATION DRAWING IS RESPONSIBILITY OF OMITTING CONTRACTOR AND CONTRACTOR IS SUBJECT TO ADDITIONAL COSTS INCURRED BY OTHER TRADES.

3. THE ARCHITECT AND THE ENGINEER ARE NOT PART OF THE COORDINATION DRAWING PROCESS. THE ENGINEER WILL PROVIDE ASSISTANCE FOR NOTED CONFLICTS ONLY. COORDINATION DRAWINGS ARE NOT TO BE CONSIDERED PIPING OR DUCT SHOP DRAWINGS. THE CONTRACTOR IS REQUIRED TO SUBMIT PIPING AND DUCTWORK SHOP DRAWINGS FOR REVIEW BY THE ENGINEER. PIPING AND DUCTWORK SHOP DRAWINGS SHALL FOLLOW THE DESIGN INTENT OF THE CONTRACT DOCUMENTS.

4. SUBMIT FINAL SIGNED COORDINATION DRAWING TO ENGINEER FOR REVIEW. ENGINEER WILL REVIEW FOR ACCEPTABILITY OF INSTALLATIONS.

5. ANY WORK FABRICATED OR INSTALLED PRIOR TO SIGN OFF BY ALL TRADES SHALL BE REMOVED AND RE-INSTALLED IN CONFORMANCE WITH COORDINATION DRAWINGS.

6. EACH CONTRACTOR (MENTIONED ABOVE) IS RESPONSIBLE FOR THE COORDINATION OF HIS SUB-CONTRACTORS.

7. THE OVERALL COORDINATION OF THE COORDINATION PROCESS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR THE COORDINATION PROCESS. THE ENGINEER WILL RESPOND TO QUESTIONS THAT ARISE FROM THE COORDINATION PROCESS. DRAWINGS SUBMITTED WILL BE REVIEWED FOR CLEARLY IDENTIFIED CONFLICTS ONLY. SOLUTIONS TO CONFLICTS WILL NOT BEAR ADDITIONAL COST.

AS BUILT DRAWINGS

1. PROVIDE A COMPLETE SET OF AS -BUILT DRAWINGS REFLECTING AS INSTALLED CONDITIONS. AS-BUILT DRAWINGS SHALL INDICATE ALL INSTALLED CONDITIONS OF SYSTEMS WITHIN THIS DISCIPLINE. DRAWINGS SHALL BE OF SIMILAR SCALE AS THE CONSTRUCTION DOCUMENTS AND INCLUDE DETAILS AS NECESSARY TO CLEARLY REFLECT THE INSTALLED CONDITION. DRAWINGS SHALL BE BOUND IN A COMPLETE AND CONSECUTIVE SET. SUPPLEMENTAL SKETCHES AND LOOSE PAPERWORK WILL NOT BE ACCEPTABLE AND WILL BE RETURNED FOR REVISION. THE CONTRACTOR SHALL COMPLY WITH THE ENGINEERS COMMENTS TO PRODUCE A CLEAR AND CONCISE SET OF DRAWINGS. DRAWINGS SHALL BE SUBMITTED IN BOTH HARD COPY AND ELECTRONIC (AUTO-CAD VERSION AS REQUIRED BY THE OWNER) VERSION. NUMBER OF COPIES OF EACH AS REQUESTED BY THE OWNER.

2. PROVIDE "AS-BUILT DRAWINGS" INDICATING IN A NEAT AND ACCURATE MANNER A COMPLETE RECORD OF ALL REVISIONS OF THE ORIGINAL DESIGN OF THE WORK. INDICATE THE FOLLOWING INSTALLED CONDITIONS:

3. INCLUDE ALL CHANGES AND AN ACCURATE RECORD, ON REPRODUCTIONS OF THE CONTRACT DRAWINGS OR APPROPRIATE SHOP DRAWINGS, OF ALL DEVIATIONS, BETWEEN THE WORK SHOWN AND THE WORK INSTALLED.

4. MAINS AND BRANCHES OF PIPING SYSTEMS, WITH VALVES AND CONTROL DEVICES LOCATED AND NUMBERED, CONCEALED UNIONS LOCATED, AND WITH ITEMS REQUIRING MAINTENANCE LOCATED (I.E. TRAPS, STRAINERS, EXPANSION COMPENSATORS, TANKS, ETC…) VALVE LOCATION DIAGRAMS, COMPLETE WITH VALVE TAG CHART.

5. EQUIPMENT LOCATIONS (EXPOSED AND CONCEALED), DIMENSIONED FROM PROMINENT BUILDING LINES.

6. APPROVED SUBSTITUTIONS, CONTRACT MODIFICATIONS, AND ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

7. CONTRACT MODIFICATIONS, ACTUAL EQUIPMENT AND MATERIALS INSTALLED.

8. SUBMIT FOR REVIEW BOUND SETS OF THE REQUIRED DRAWINGS, MANUALS AND OPERATING INSTRUCTIONS.

9. SUBMIT A COMPLETE MAINTENANCE MANUAL OF ALL EQUIPMENT INSTALLED UNDER THIS CONTRACT.

HANGERS AND SUPPORT

1. SEISMIC RESTRAINT: PROVIDE SEISMIC RESTRAINT AND EXPANSION OF ALL MECHANICAL EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH STATE AND FEDERAL BUILDING CODE REQUIREMENTS. SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT INDICATING ALL NECESSARY COMPONENT CUTS, PLAN LOCATIONS AND CALCULATIONS FOR A COMPLETE SYSTEM.

2. PROVIDE ALL NECESSARY STRUCTURAL MEMBERS INCLUDING ADDITIONAL STRUCTURAL SUPPORT TO SUPPORT PIPING AND EQUIPMENT. HANGERS AND SUPPORTS SHALL BE OF AN APPROVED DESIGN NECESSARY TO SUPPORT DUCTWORK, PIPING EQUIPMENT AND TO KEEP IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC… ARE SUPPORTED FROM CONCRETE CONSTRUCTION. DO NOT WEAKEN CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS, AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL ADJUSTMENT PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION. ALL SUCH HANGERS SHALL BE FINALLY ADJUSTED BOTH IN THE VERTICAL AND HORIZONTAL DIRECTION, AS REQUIRED. HANGERS IN CONTACT WITH COPPER OR BRASS PIPE SHALL BE DIELECTRIC, COMPATIBLE WITH COPPER AND BRASS ALLOY OR PROVIDED WITH FELT SLEEVE.

3. PROVIDE ADDITIONAL SUPPORT FOR DUCTWORK, PIPING AND EQUIPMENT WHEN DECK IS NOT CAPABLE OF SUPPORT.

4. BEAM CLAMPS - HANGERS SUPPORTED FROM STEEL SHALL BE CENTER LOADING BEAM CLAMPS FOR HANGERS SUPPORTING PIPING 2 INCHES FOR 2-1/2 INCHES AND LARGER, I BEAM CLAMPS SHALL BE FORGED STEEL. "C" CLAMPS ARE NOT TO BE USED.

DUCTWORK

1. DUCTWORK SHALL BE FABRICATED FROM HOT-DIPPED GALVANIZED STEEL SHEET CONFORMING TO ASTM A653, WITH G60 COATING.

2. MANUFACTURED METAL DUCTWORK AND FITTINGS SHALL BE BY LINDAB, SEMCO OR UNITED McGILL CORP. FLAT OVAL AND ROUND DUCTS: MACHINE MADE FROM SPIRAL LOCKSEAM DUCT WITH LIGHT REINFORCING CORRUGATIONS; FITTINGS MANUFACTURED OF AT LEAST TWO GAGES HEAVER THAN METAL DUCT.

3. FABRICATE, SUPPORT, INSTALL AND SEAL IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE, AND AS INDICATED. PROVIDE DUCT MATERIAL, GAUGES, REINFORCING AND SEALING FOR 1" PRESSURE CLASS.

4. INSULATED FLEXIBLE DUCTS SHALL BE FABRICATED FROM MULTIPLE LAYERS OF ALUMINUM LAMINATE SUPPORTED BY HELICALLY WOUND SPRING STEEL WIRE WITH FIBERGLASS INSULATION AND POLYETHYLENE VAPOR BARRIER. PRESSURE RATING SHALL BE 10 INCH W.G. POSITIVE AND 1.0 INCH W.G. NEGATIVE.

5. JOINT SEALERS AND SEALANTS SHALL BE NON-HARDENING, WATER, MILDEW AND MOLD RESISTANT. FLAME SPREAD OF 0, SMOKE DEVELOPED OF 0 WHEN TESTED IN ACCORDANCE WITH ASTM E84.

6. PROVIDE AIR FOIL TURNING VANES WHEN RECTANGULAR ELBOWS MUST BE USED.

PIPING

1. HOT WATER SUPPLY AND RETURN

A. PIPE: SCHEDULE 40 BLACK STEEL PIPE CONFORMING TO ASTM A53, WITH WELDED, THREADED OR GROOVED JOINTS.

B. FITTINGS: ASTM A234 WROUGHT STEEL WELDING TYPE FITTINGS, ASTM B16.3 MALLEABLE IRON THREADED FITTINGS, OR GROOVED FITTINGS AND MECHANICAL COUPLINGS.

C. FITTINGS 2" AND UNDER SHALL BE THREADED, FITTINGS 2-1/2" AND OVER SHALL BE WELDED OR GROOVED.

D. PIPING 2" AND SMALLER MAY BE ASTM B88 TYPE K DRAWN COPPER WITH SOLDERED FITTINGS OR COPPER PRESS FITTINGS.

E. INSULATION: PROVIDE RIGID MOLDED, NONCOMBUSTIBLE FIBERGLASS PIPE INSULATION WITH WHITE KRAFT PAPER VAPOR BARRIER JACKET. FITTINGS SHALL BE COVERED WITH FLEXIBLE FIBERGLASS INSULATION AND ZESTON PVC FITTING COVERS. INSULATION THICKNESS SHALL BE 1 1/2" IN CONFORMANCE WITH THE 2015 INTERNATIONAL ENERGY CODE.

2. PIPING INSTALLATION

A. REMOVE SCALE AND DIRT ON INSIDE AND OUTSIDE OF PIPE BEFORE ASSEMBLY.

B. AFTER COMPLETION, FILL, CLEAN AND TREAT SYSTEM. VENT AIR FROM SYSTEM.

C. INSTALL HOT WATER TO ASME B31.9 REQUIREMENTS.

D. ROUTE PIPING IN AN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE, AND MAINTAIN GRADIENT. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS. SLEEVE PIPING PASSING THROUGH PARTITIONS, WALLS AND FLOORS. SLOPE PIPING AND ARRANGE TO DRAIN AT LOW POINTS.

REFRIGERANT PIPING

1. DRAWN (RIGID) COPPER TUBE SHALL BE TYPE ACR, R410 RATED, ASTM B280, H58 TEMPER, CLEAN, DRY AND CAPPED. FITTINGS SHALL BE ASME B16.22 WROUGHT COPPER. JOINTS SHALL BE BRAZED WITH AWS A5.8 BCUP SILVER / PHOSPHORUS / COPPER ALLOY.

2. ANNEALED (SOFT) COPPER TUBE SHALL BE TYPE ACR, R410 RATED, ASTM B280, O60 TEMPER, CLEAN, DRY AND CAPPED. FITTINGS SHALL BE ASME 16.22 WROUGHT COPPER. JOINTS SHALL BE FLARED OR BRAZED WITH AWS A5.8 BCUP SILVER / PHOSPHORUS / COPPER ALLOY.

3. INSULATION SHALL BE FLEXIBLE ELASTOMERIC. INSULATION THICKNESS SHALL BE IN CONFORMANCE WITH THE 2015 INTERNATIONAL ENERGY CODE.

4. PIPING INSTALLATION

A. INSTALL REFRIGERATION PIPING IN ACCORDANCE WITH SPLIT SYSTEM MANUFACTURER'S INSTRUCTIONS AND ASME B31.5.

B. ROUTE PIPING IN AN ORDERLY MANNER, PARALLEL TO BUILDING STRUCTURE, AND MAINTAIN GRADIENT. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS. SLEEVE PIPING PASSING THROUGH PARTITIONS, WALLS AND FLOORS. SLOPE PIPING AND ARRANGE TO DRAIN AT LOW POINTS.

C. ALL EXPOSED REFRIGERANT AND CONDENSATE PIPING SHALL BE CONCEALED WITH TRANE'S LINE-HIDE LINE SET COVER SYSTEM OR EQUIVALENT.

CONDENSATE PIPING:

1. CONDENSATE PIPING SHALL BE ASTM B88 TYPE M DRAWN COPPER WITH SOLDERED FITTINGS OR COPPER PRESS FITTINGS.

2. INSULATION: PROVIDE RIGID MOLDED, NONCOMBUSTIBLE FIBERGLASS PIPE INSULATION WITH KRAFT PAPER VAPOR BARRIER JACKET. FITTINGS SHALL BE COVERED WITH FLEXIBLE FIBERGLASS INSULATION AND ZESTON PVC FITTING COVERS. INSULATION THICKNESS SHALL BE 1/2".

TESTING, ADJUSTING AND BALANCING

1. AFTER COMPLETION OF THE WORK, BUT BEFORE SUBSTANTIAL COMPLETION, TEST, ADJUST AND BALANCE ALL AIR AND WATER SYSTEMS IN ACCORDANCE WITH EITHER AABC, NEBB, OR TABB STANDARDS.

2. TESTING AND BALANCING CONTRACTORS SHALL BE CERTIFIED BY EITHER AABC, NEBB OR TABB.

3. AIR HANDLING SYSTEMS SHALL BE BALANCED TO WITHIN PLUS OR MINUS 5 PERCENT OF DESIGN FOR SUPPLY SYSTEMS AND PLUS OR MINUS 10 PERCENT FOR RETURN AND EXHAUST SYSTEMS.

4. AIR OUTLETS AND INLETS SHALL BE BALANCED TO WITHIN PLUS 10 PERCENT AND MINUS 5 PERCENT OF DESIGN TO SPACE. ADJUST OUTLETS AND INLETS IN SPACE TO WITHIN PLUS OR MINUS 10 PERCENT OF DESIGN.

5. PERMANENTLY MARK SETTINGS OF VALVES, DAMPERS, AND OTHER ADJUSTMENT DEVICES ALLOWING SETTINGS TO BE RESTORED. SET AND LOCK MEMORY STOPS.

6. SUBMIT FINAL REPORT INDICATING DESIGN VERSUS FINAL PERFORMANCE; NOTABLE CHARACTERISTICS OF THE SYSTEM; DESCRIPTION OF SYSTEMS OPERATION SEQUENCE; TEST CONDITIONS; AND A LIST OF INSTRUMENTS USED. FINAL REPORT SHALL BE SUBMITTED PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT.

HVAC INSTRUMENTATION AND CONTROLS

1. FURNISH AND INSTALL COMPLETE TEMPERATURE CONTROL FOR ALL HVAC SYSTEMS CONNECTED TO THE EXISTING **TRANE BUILDING MANAGEMENT SYSTEM**.

2. PROVIDE NEW CONTROL DEVICES INCLUDING THERMOSTATS, TEMPERATURE SENSORS AND OTHER RELATED DEVICES FOR A COMPLETE OPERATIONAL SYSTEM PER THE SEQUENCE OF OPERATION AND INDUSTRY STANDARDS.

3. MOUNT ALL CONTROLS FURNISHED AS ACCESSORIES TO EQUIPMENT AND PROVIDE ALL CONTROL WIRING REQUIRED FOR PROPER OPERATION.

4. SEQUENCE OF OPERATION

A. THE ATC CONTRACTOR SHALL INTEGRATE THE HEAT PUMPS INTO THE BMS VIA BACNET MSTP. THE BMS SHALL BE ABLE TO ADJUST THE HEAT PUMP SET POINT AND OPERATING MODE. THE HEAT PUMPS SHALL OPERATE ON THEIR RETURN AIR SENSORS TO MAINTAIN TEMPERATURE SET POINT.

B. WHEN THE OUTSIDE AIR TEMPERATURE IS ABOVE 45°F, THE HEAT PUMPS SHALL BE THE PRIMARY SOURCE OF HEAT. WHEN THE OUTSIDE AIR TEMPERATURE IS BELOW 45°F, THE FIN TUBE RADIATION SHALL BE THE PRIMARY SOURCE IF HEAT. FOR THE PRINCIPALS OFFICE, THE FIN TUBE SHALL OPERATE TO MAINTAIN THE SPACE TEMPERATURE WITHIN THE PRINCIPALS OFFICE AND THE HEAT PUMP WITHIN THE ADMINISTRATIVE OFFICE SHALL SUPPLEMENT AS NECESSARY TO MAINTAIN SPACE TEMPERATURE.

C. THE ATC CONTRACTOR SHALL UPDATE THE BMS GRAPHIC, INCLUDING THE COURTYARD CONSTRUCTION AREA (REFER TO ARCHITECTURAL PLANS) TO REFLECT THE NEW ARCHITECTURAL LAYOUT. DISPLAYED INFORMATION SHALL MATCH THE EXISTING DISPLAY.

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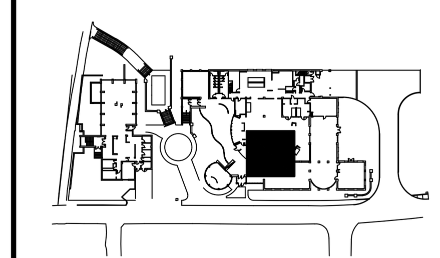

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MECHANICAL SPECIFICATIONS

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AS NOTED	M300.dwg
Drawn By:	Checked By:
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ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
ABV.	ABOVE
AFF	ABOVE FINISHED FLOOR
BEL.	BELOW
BFP	BACKFLOW PREVENTER DEVICE
BV	BALANCE VALVE
CW	COLD WATER
HW	HOT WATER
CO	CLEANOUT
ECO	CLEANOUT, EXISTING
CLG	CEILING
CP	CIRCULATOR PUMP
CFH	CUBIC FEET PER HOUR
CND	CONDENSATE DRAIN PIPING
DF	DRINKING FOUNTAIN
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX., EXIST.	EXISTING
FD	FLOOR DRAIN (ADD "E" FOR EXISTING)
FL	FLOOR
FS	FLOOR SINK
G	GAS
GPM	GALLONS PER MINUTE
GSV	GAS SOLENOID VALVE
HW	HOT WATER
HB	HOSE BIBB
HC	HANDICAPPED ACCESSIBLE
HWR	HOT WATER RECIRCULATION
IW	INDIRECT WASTE
INV. ELEV.	INVERT ELEVATION
LAV	LAVATORY
LPG	LIQUID PETROLEUM GAS
ORD	OVERFLOW ROOF DRAIN
OST	OVERFLOW STORM
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
RPZ OR RPD	REDUCED PRESSURE BACKFLOW PREVENTER
RL	RAIN LEADER
S	SOIL
SP	SUMP PUMP/SEWAGE PUMP
SS	SOIL STACK
SI	SOLIDS INTERCEPTOR
SD	SHOWER DRAIN
ST	STORM
SAN	SANITARY
T&P	TEMPERATURE & PRESSURE RELIEF VALVE
TP	TRAP PRIMER
TMV	THERMOSTATIC MIXING VALVE
UR	URINAL
V	VENT
VIF	VERIFY IN FIELD
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WS	WASTE STACK
WH	WALL HYDRANT
WCO	WALL CLEANOUT
YH	YARD HYDRANT
WHA	WATER HAMMER ARRESTOR

PLUMBING SYMBOL LEGEND

	BALL VALVE
	BUTTERFLY VALVE
	GATE VALVE
	CHECK VALVE
	BACKFLOW PREVENTER ASSEMBLY (RPZ)
	BALANCING VALVE (CALIBRATED)
	GAS VALVE, (BALL OR PLUG)
	PRESSURE REDUCING VALVE
S	SOLENOID VALVE
	THERMOSTATIC MIXING VALVE
	HOT WATER RETURN PUMP
	HOSE BIBB (HB) OR DRAIN VALVE
	WALL HYDRANT (WH) (EXTERIOR)
	GLOBE VALVE
M	MOTORIZED VALVE
	UNION
	STRAINER
	PIPE DROP WITH VALVE
	PIPE ELBOW DOWN OR DROP
	PIPE ELBOW UP
	WALL CLEANOUT
	PIPE CAP
	P-TRAP
	OVERFLOW DOWNSPOUT NOZZLE (ODN)
	T&P RELIEF VALVE
W	WATER METER ASSEMBLY
GM	GAS METER ASSEMBLY
	GAS PRESSURE REGULATOR
	PRESSURE GAUGE
	THERMOMETER
TP	TRAP PRIMER
ETP	ELECTRONIC TRAP PRIMER
	FLOOR CLEANOUT
	FLOOR DRAIN (FD)
	FLOOR SINK (FS)
	ROOF DRAIN (RD)
	BACKWATER VALVE
	WATER HAMMER ARRESTER (WHA)
HT	HEAT TRACE WIRING
HC	HEAT CABLE WIRING
A	COMPRESSED AIR OUTLET (GENERAL SERVICE)
	ADA ACCESSIBLE FIXTURE
XX	FIXTURE DESIGNATION (REFER TO SCHEDULE)

PLUMBING PIPING SYMBOL LEGEND

F	FIRE SERVICE
W	WATER SERVICE
	COLD WATER
	HOT WATER
	HOT WATER RECIRCULATION
	VENT PIPING
S	SANITARY OR WASTE ABOVE GRADE
SS	SANITARY OR WASTE BURIED
WV	COMBINATION WASTE & VENT ABOVE GRADE
WV	COMBINATION WASTE & VENT BURIED
IW	INDIRECT WASTE
SD	STORM DRAIN BURIED
RL	RAIN LEADER (ABOVE GRADE)
ORL	OVERFLOW RAIN LEADER
SD	STORM DRAIN BURIED
C	CONDENSATE DRAIN (ABOVE GRADE)
C	CONDENSATE DRAIN BURIED
PC	PUMPED CONDENSATE DRAIN
GW	GREASE WASTE (ABOVE GRADE)
BURIED GW	GREASE WASTE BURIED
LG	LIQUID PETROLEUM GAS
G	NATURAL GAS
TW	TEMPERED WATER SUPPLY
TWR	TEMPERED WATER RETURN
FW	FILTER WATER
NP	NON-POTABLE WATER
RV	RADON VENT
AV	ACID VENT
AW	ACID WASTE (ABOVE GRADE)
AW	ACID WASTE BURIED
A	COMPRESSED AIR (GENERAL SERVICE)
	PIPING WITH HEAT TRACE or HEAT CABLE

PLUMBING GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH CURRENT APPLICABLE CODES, ORDINANCES, THE REGULATORY AGENCIES HAVING JURISDICTION AND THE SPECIFICATIONS. THE SPECIFICATIONS MAY EXCEED THE REQUIREMENTS OF THE CODE, IN WHICH CASE, THE SPECIFICATION MUST BE FOLLOWED.
2. THE INTENT OF THESE DOCUMENTS IS FOR THE MEP TRADES TO FURNISH AND INSTALL COMPLETE MECHANICAL AND ELECTRICAL SYSTEMS. THE SPECIFIED PLUMBING SYSTEM SHALL BE COMPLETE IN ALL RESPECTS; OPERATIONAL, TESTED, ADJUSTED, APPROVED BY THE AUTHORITIES HAVING JURISDICTION AND READY FOR BENEFICIAL USE BY THE OWNER.
3. THE TRADES SHALL OBTAIN AND REVIEW ALL CONTRACT DOCUMENTS BEFORE SUBMITTING A BID. INFORMATION IS PROVIDED ON THE VARIOUS DRAWINGS, SCHEDULES, SPECIFICATIONS AND ALL OF THE VARIOUS DOCUMENTS IN THE BIDDING PACKAGE. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND FORM A TOTAL PROJECT DESIGN AND INFORMATION SOURCE FOR CONSTRUCTION PURPOSES.
4. THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. COORDINATE LOCATIONS OF EQUIPMENT WITH OTHER TRADES BEFORE AND DURING CONSTRUCTION. ANY MODIFICATION TO THE EQUIPMENT LAYOUT, REQUIRED FOR INSTALLATION, IS TO BE PERFORMED UNDER THE CONTRACT AGREEMENT, AT NO ADDITIONAL COST. REFER TO DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. THE CONTRACTOR SHALL BECOME THOROUGHLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES. THE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT OF EQUIPMENT AND PIPING. THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF EQUIPMENT AND PIPING INSTALLATION WITH ALL THE TRADES BEFORE COMMENCING WORK.
6. EQUIPMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS, WHEN EQUIPMENT MUST BE LOCATED ABOVE AN INACCESSIBLE CEILING (GYP BOARD OR EQUIVALENT), OR BEHIND A WALL, AN APPROPRIATE ACCESS DOOR SHALL BE PROVIDED. IF AN ACCESS DOOR IS REQUIRED, IT SHALL BE OF A RATING APPROPRIATE FOR THE WALL/CEILING IN WHICH IT IS TO BE INSTALLED. THE CONTRACTOR SHALL COORDINATE LOCATIONS OF ACCESS PANELS FOR ALL VALVES AND DEVICES, REQUIRING ACCESS, WITH THE ARCHITECT, PRIOR TO INSTALLATION OF SUCH DEVICES OR OTHER APPURTENANCES.
7. WHERE A CONFLICT OCCURS BETWEEN THE DOCUMENTS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. CARRY AS PART OF THE BID THE LARGER QUANTITY AND/OR MORE EXPENSIVE ITEM(S).
8. THIS CONTRACT SHALL INCLUDE ALL THE NECESSARY PIPING, FITTINGS, TRANSITIONS, OFFSETS, ETC. AS REQUIRED TO INSTALL PIPING, EQUIPMENT, MAINTAINING PROPER CLEARANCES AND TO AVOID ANY CONFLICTS WITH OTHER TRADES, AND THE BUILDING STRUCTURE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS, OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO COORDINATE WITH OTHER TRADES OR BECOME FULLY FAMILIAR WITH THE PROJECT DOCUMENTS OF ALL TRADES.
9. DO NOT INSTALL ANY PIPING OVER ELECTRICAL PANELS, TRANSFORMERS, SPECIAL EQUIPMENT, OR THROUGH ELECTRICAL ROOMS, DATA ROOMS, ELEVATOR MACHINE ROOM, STAIRWELL OR STAIRWELL WALLS THAT ARE NOT ASSOCIATED WITH OR SERVE THE RESPECTIVE ROOMS. COORDINATE THE LOCATION OF ELECTRICAL EQUIPMENT IN THE FIELD AND ADJUST AS NECESSARY.
10. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW INDIVIDUAL BRANCH PIPING TO EACH PLUMBING FIXTURE; ONLY THE BRANCH PIPING TO GROUPS OF FIXTURES IS INDICATED. EACH AND EVERY FIXTURE SHALL BE PROPERLY PIPED TO WATER, WASTE, AND VENT PIPING SYSTEMS. REFER TO THE PLUMBING SCHEDULES FOR INDIVIDUAL PIPE SIZES TO EACH FIXTURE.
11. PROVIDE PROPER PIPING SYSTEM IDENTIFICATION LABELS, SLOPES FOR DRAIN PIPING, CLEANOUTS, HANGERS, ETC. IN ACCORDANCE WITH THE PLUMBING CODE.
12. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES OR EQUIPMENT. ALL SUCH EQUIPMENT AND EQUIPMENT COLORS AND FINISHES SHALL BE COORDINATED WITH THE ARCHITECT. MOUNTING HEIGHTS SHALL BE APPROVED BY THE ARCHITECT.
13. INSTALL WATER HAMMER ARRESTORS (WHA) AT ALL QUICK CLOSING VALVES (FLUSH VALVES, SOLENOID VALVES, ETC.); SIZE SHALL BE BASED ON FIXTURE UNITS PER PDI STANDARDS AND INSTALLED PER MANUFACTURER'S RECOMMENDATION.
14. ALL PIPING, DRAINS, STRAINERS, FAUCETS, FAUCET AERATORS, FILTERS, ETC. SHALL BE THOROUGHLY CLEANED AND FLUSHED IMMEDIATELY BEFORE PROJECT COMPLETION. PROVIDE CERTIFICATION ON CONTRACTOR'S LETTER HEAD THAT THIS WORK HAS BEEN COMPLETED.
15. DOMESTIC WATER DROPS AND RISERS INSTALLED IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF INSULATION AND THE LOCATION SHALL BE MADE INFILTRATION FREE.
16. BEFORE INSTALLATION, COORDINATE THE WORK WITH OWNER-FURNISHED EQUIPMENT, INCLUDING REQUIRED SERVICE CONNECTIONS, FACTORY START UPS AND INSTALLATION OF FIELD DEVICES.
17. PIPE ALL CONDENSATE DRAINS FROM MECHANICAL EQUIPMENT COOLING COILS, BY GRAVITY (INTERIOR AIR HANDLING UNITS, FAN COIL UNITS, AC UNITS, ETC.) TO FLOOR DRAINS, JANITOR'S SINKS OR OTHER APPROVED LOCATION THROUGH AN AIR GAP. EACH CONDENSATE DRAIN SHALL BE TRAPPED AT THE EQUIPMENT DRAIN OUTLET, REFER TO TRAP DETAILS ON DRAWINGS. COORDINATE EXACT LOCATION OF EQUIPMENT WITH THE HVAC CONTRACTOR AND ADJUST AS NECESSARY.
18. INSULATE ALL WASTE ABOVE SLAB RECEIVING CONDENSATE FROM EQUIPMENT INCLUDING "P" TRAPS AND BRANCH WASTE PIPING
19. ALL INDIRECT WASTE DRAINS SHALL BE PIPED TO FLOOR DRAINS, FUNNELS OR FIXED AIR GAP FITTINGS, THROUGH AIR GAP OR TO A SINK DRAIN TAILPIECE.
20. INSTALL TRAP PRIMERS OR TRAP GUARD SEALER FOR FLOOR DRAINS, HUB DRAINS AND FIXED AIR GAP FITTINGS, WHERE TRAP IS SUBJECT TO LOSS OF SEAL BY EVAPORATION, CONNECT TRAP PRIMER TO COLD WATER LINE. PROVIDE ISOLATION VALVES AND EXTEND SLOPED PRIMING LINE TO DRAIN TRAPS.
21. COORDINATE ALL PLUMBING EQUIPMENT REQUIRING POWER, FOR EXACT LOCATION AND POWER REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR.
22. ALL EXTERIOR EXPOSED GAS PIPING SHALL BE PRIMED AND PAINTED.
23. FLOOR MOUNTED PLUMBING EQUIPMENT SHALL BE INSTALLED ON A 6" CONCRETE HOUSE-KEEPING PAD. COORDINATE SIZE AND FINAL LOCATION OF ALL CONCRETE PADS WITH THE STRUCTURAL ENGINEER. PADS SHALL BE MINIMUM 6" LARGER THAN THE EQUIPMENT IN BOTH HORIZONTAL DIRECTIONS.
24. COORDINATE EXACT LOCATION OF PLUMBING SERVICES ENTERING THE BUILDING WITH THE SITE CONTRACTOR AND UTILITY DRAWINGS PRIOR TO INSTALLATION. COORDINATE ALL FOUNDATION WALL PENETRATIONS AND INVERT ELEVATIONS WITH THE GENERAL CONTRACTOR AND/OR CONSTRUCTION MANAGER BEFORE COMMENCING WORK.
25. SEISMICALLY SUPPORT THE EQUIPMENT AS REQUIRED BY CODE, THE AUTHORITY HAVING JURISDICTION, AND/OR AS SPECIFIED. SUBMIT ENGINEERED INSTALLATION DETAILS PER THE SPECIFICATIONS. THE CONTRACTOR'S SEISMIC ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A DETAILED REPORT FOR THE RECORD.
26. PROVIDE PIPE EXPANSION COMPENSATION FOR THE VARIOUS PIPING SYSTEMS. SUBMIT ENGINEERED DETAILS FOR APPROVAL AND VERIFY INSTALLATION IS IN ACCORDANCE WITH THE CODE. THE CONTRACTOR'S CONSULTING ENGINEER SHALL REVIEW THE INSTALLATION AND PROVIDE A REPORT OF THE FINDINGS.

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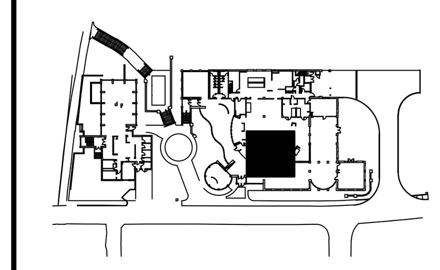

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Title:
PLUMBING ABBREVIATIONS NOTES AND SYMBOL LIST

Project Number:	Issue Date:
2018.029	19 JAN 2019
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Drawn By:	Checked By:
RJ	RJ

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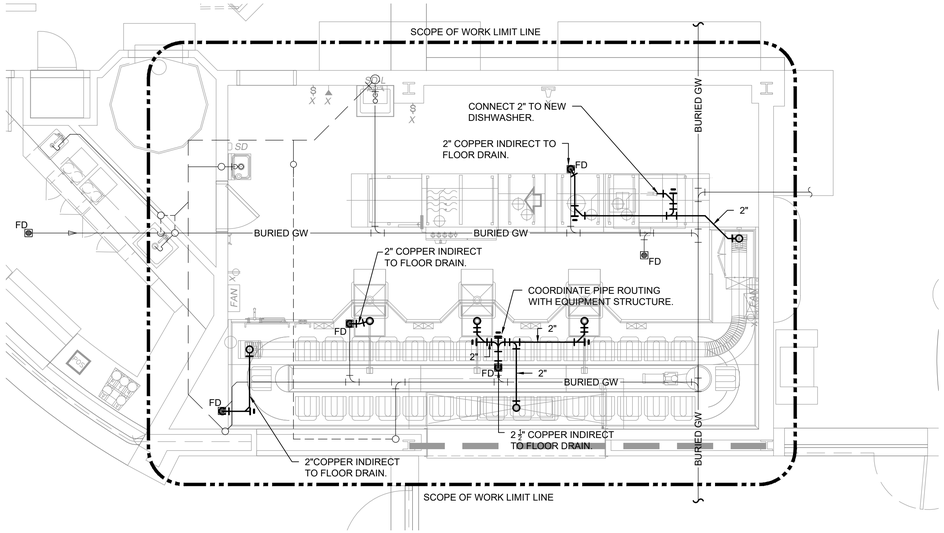
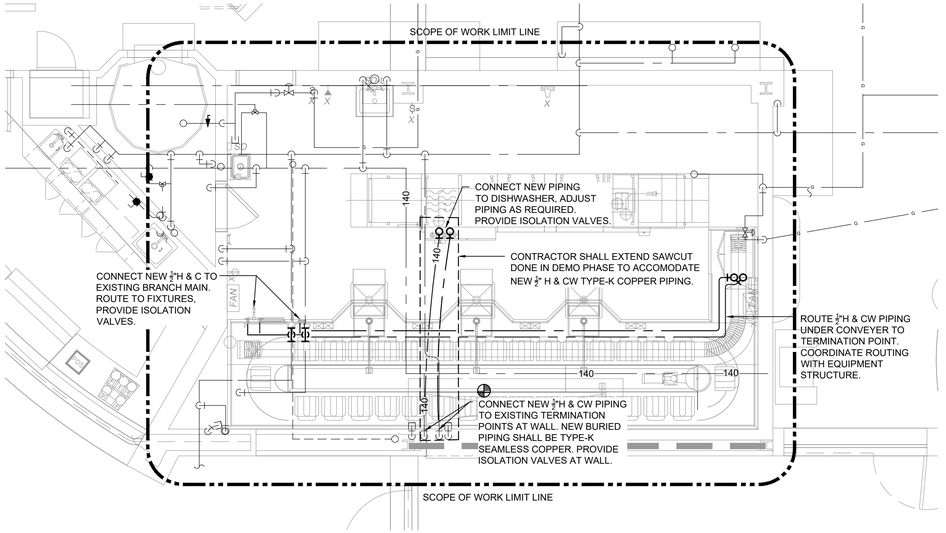
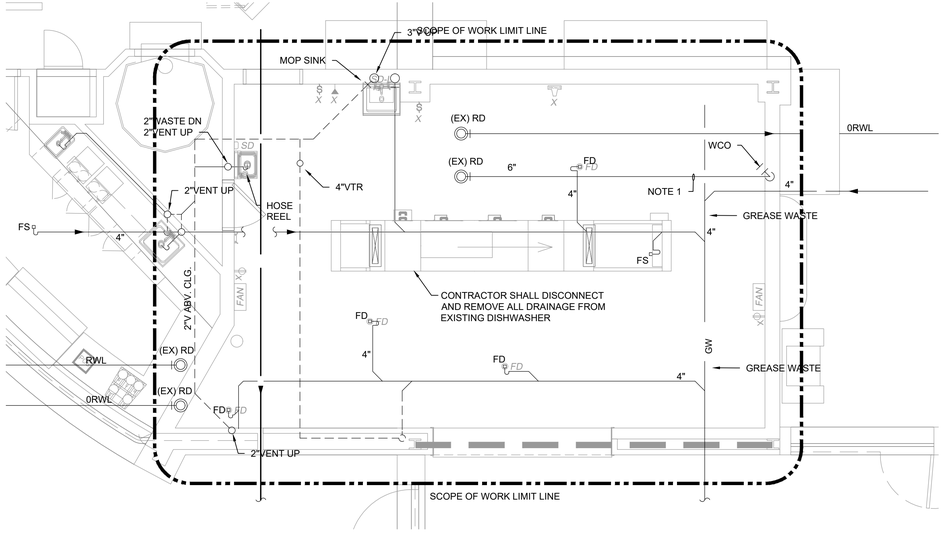


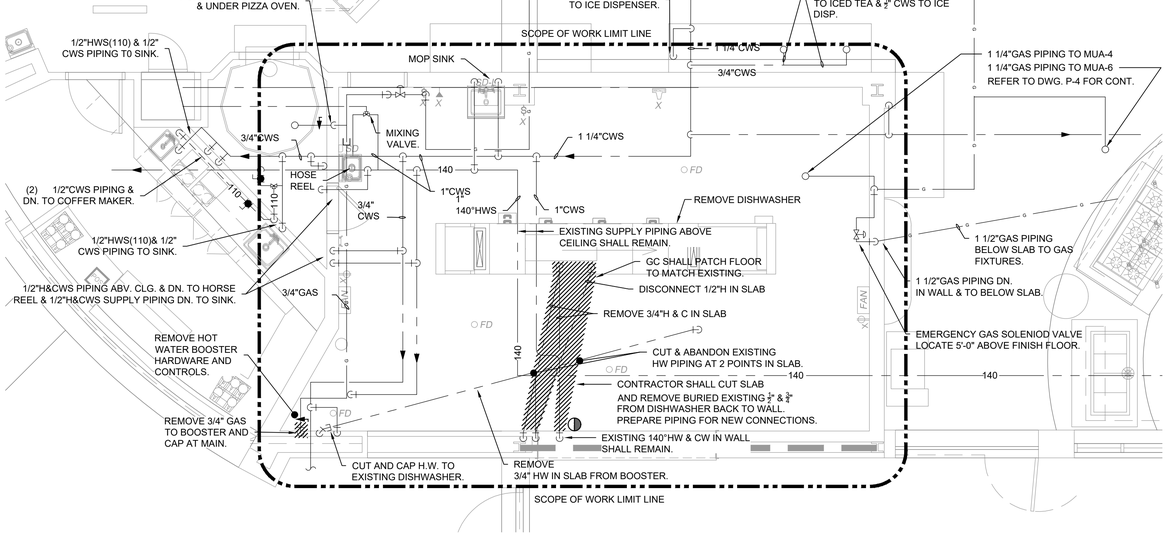
3 P100 PLUMBING SANITARY NEW WORK PLAN
SCALE: 1/4"=1'-0"



4 P100 PLUMBING SUPPLY NEW WORK PLAN
SCALE: 1/4"=1'-0"



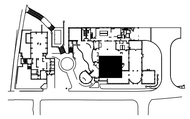
1 P100 PLUMBING SANITARY DEMOLITION PLAN
SCALE: 1/4"=1'-0"



2 P100 PLUMBING SUPPLY DEMOLITION PLAN
SCALE: 1/4"=1'-0"

NOTES:

1. PLUMBING CONTRACTOR TO PROVIDE ALL LABOR TO INSTALL ALL AVTEC EQUIPMENT PROPERLY.
2. CONTRACTOR SHALL COORDINATE ALL PIPING TERMINATIONS PRIOR TO START OF WORK.
3. CONTRACTOR TO COORDINATE ALL NEW WORK PRIOR TO START.



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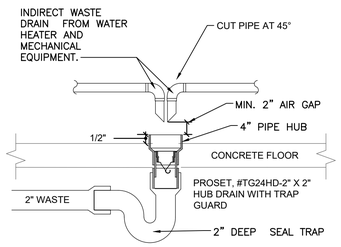
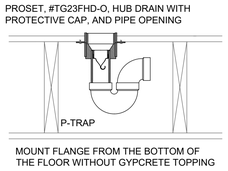
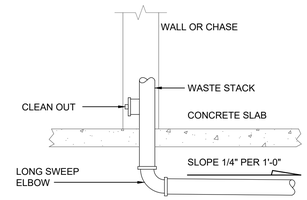


GROUND FLOOR-CONCRETE

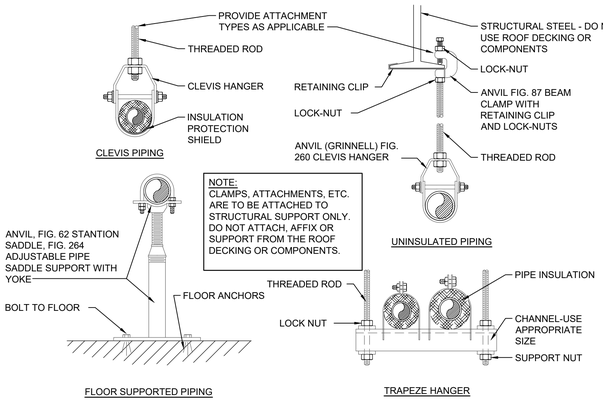


UPPER FLOORS-WOOD CONSTRUCTION

1 P200 TYPICAL INDIRECT (HUB) DRAIN DETAIL
SCALE: NOT TO SCALE



4 P200 BOTTOM OF SANITARY RISER DETAIL
SCALE: NOT TO SCALE

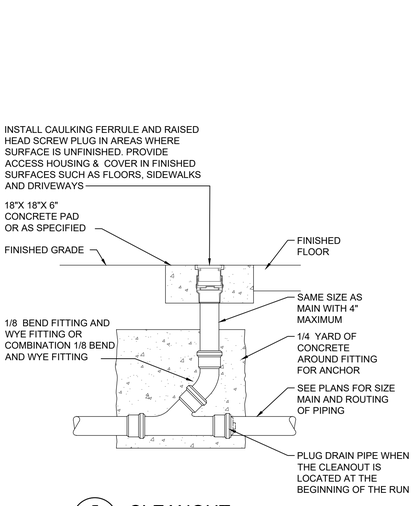


FLOOR SUPPORTED PIPING

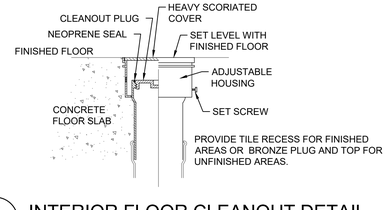
TRAPEZE HANGER

NOTES:
1. SIZE HANGER RODS AND ANCHORS TO ADEQUATELY SUPPORT LOADS. REFER TO MANUFACTURERS RECOMMENDATIONS.
2. PROVIDE HANGERS SUITABLE FOR AWWA DUCTILE IRON PIPE FOR SANITARY AND STORM PIPING.
3. INSULATION SHIELDS TO BE GALVANIZED STEEL.

2 P200 TYPICAL PIPE HANGER AND SUPPORT DETAIL
SCALE: NOT TO SCALE



5 P200 CLEANOUT
N.T.S.



3 P200 INTERIOR FLOOR CLEANOUT DETAIL
SCALE: NOT TO SCALE

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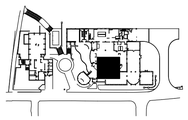

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Revisions:

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PLUMBING SPECIFICATIONS

GENERAL CONDITIONS OF THE CONTRACT

IT IS THE INTENT OF THE SPECIFICATIONS AND DRAWINGS TO PROVIDE FOR FINISHED WORK, TESTED AND READY FOR OPERATION.

WORK OF THIS SECTION SHALL BE GOVERNED BY THE CONTRACT DOCUMENTS. PROVIDE MATERIALS, LABOR, EQUIPMENT AND SERVICES NECESSARY TO FURNISH, DELIVER AND INSTALL ALL WORK AS SPECIFIED AND AS REQUIRED BY JOB CONDITIONS. WHERE A CONFLICT EXISTS BETWEEN THESE NOTES, THE DRAWINGS AND THE FOLLOWING SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

ITEMS AND SERVICES NOT SHOWN ON THE DRAWINGS OR STATED IN THE SPECIFICATIONS, BUT REQUIRED TO RENDER THE WORK COMPLETE AND READY FOR OPERATION, SHALL BE PROVIDED WITHOUT ADDITIONAL COST.

DRAWINGS ARE DIAGRAMMATIC AND ARE NOT TO BE SCALED. DRAWINGS INDICATE A GENERAL ARRANGEMENT OF WORK AND ARE NOT TO BE CONSIDERED SUB-CONTRACTOR DOCUMENTS. IT IS THE INTENT OF THESE DOCUMENTS TO INCLUDE THE PROVISION AND INSTALLATION OF ALL NECESSARY WORK AND MATERIALS FOR COMPLETE, OPERATIONAL AND CODE COMPLIANT SYSTEMS BY THE CONTRACTOR.

GENERAL DESIGN CONCEPTS INDICATED MUST BE FOLLOWED OR BETTERED.

THE BID SHALL INCLUDE OFFSETS, ADDITIONAL PIPING, VALVES, EQUIPMENT AND COMPONENTS AS REQUIRED TO MEET CONSTRUCTION CONDITIONS FOR PROPER OPERATION.

THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED AND PAY ALL APPLICABLE FEES. INCLUDED SHALL BE ANY UTILITY COST ASSOCIATED WITH ANY NEW OR MODIFIED SERVICES.

CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR SPACE CONDITIONS AND ADDITIONAL REQUIREMENTS.

PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT'S GENERAL CONDITIONS AND IN COORDINATION WITH ALL OTHER TRADES. ALL WORK SHALL BE DONE IN CONFORMANCE AND PROVISIONS OF ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES AND LAWS AS REFERENCED OR STATED.

CONNECTICUT CODES AND STANDARDS:
- 2005 CONNECTICUT SUPPLEMENT WITH 2009 AMENDMENT
- 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH AMENDMENTS
- 2015 INTERNATIONAL BUILDING CODE
- 2015 INTERNATIONAL MECHANICAL CODE
- 2015 INTERNATIONAL PLUMBING CODE
- 2017 INTERNATIONAL ELECTRICAL CODE (NFPA 70)
- 1CC/ANSI A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

WORK SHALL INCLUDE ALL INCIDENTALS, LABOR, MATERIAL, EQUIPMENT, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPPORTS, TOOLS, CONSUMABLE ITEMS,AND ADMINISTRATIVE TASKS/DUTIES REQUIRED TO COMPLETE AND MAKE OPERABLE WORK SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN.

STORE MATERIALS INSIDE AND PROTECTED FROM DEBRIS, WEATHER AND MOISTURE.

SEISMIC RESTRAINTS

THE PROJECT IS IN A SEISMIC ZONE AND ALL WORK SHALL BE INSTALLED, SUPPORTED, AND SEISMICALLY RESTRAINED IN ACCORDANCE WITH CURRENT SEISMIC REQUIREMENTS.

COORDINATION

CONTRACTOR IS REQUIRED TO OBTAIN COMPLETE SETS OF THE CONTRACT DOCUMENTS FOR COORDINATION WITH ALL OTHER TRADES.

SHOP DRAWINGS

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER INITIAL REVIEW AND APPROVAL, REVISED IF REQUIRED AND RESUBMITTED AS PER ENGINEER'S COMMENTS PRIOR TO CONSTRUCTION.

ACCEPTANCE OF DEVIATIONS OR SUBSTITUTIONS FROM BASE SPECIFIED ITEMS OR EQUIPMENT SHALL BE AT THE ENGINEERS DISCRETION. ANY CHANGES REQUIRED FOR ACCOMMODATION SHALL BE AT NO ADDITIONAL COST.

OWNER'S MANUAL AND AS BUILT DRAWINGS

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE AN OWNER'S MANUAL WITH AS-BUILT DRAWINGS REFLECTING INSTALLED CONDITIONS.

THE OWNER'S MANUAL SHALL CONSIST OF ALL DOCUMENTATION PROVIDED AS SHOP DRAWINGS, MANUALS PACKED WITH EQUIPMENT AND COMPLETE PARTS BREAKDOWN WITH PART NUMBERS AND DIAGRAMS. THE OWNER'S MANUALS SHALL BE IN A THREE RING BINDER. PROVIDE NAMES AND PHONE NUMBERS OF SUPPLY HOUSES WHERE PARTS MAY BE PURCHASED.

AS-BUILT DRAWINGS SHALL CONSIST OF FIELD MARK-UPS TO THE CONSTRUCTION DRAWINGS AND INCLUDE ANY ADDITIONAL DETAILS TO CLEARLY REFLECT INSTALLED CONDITIONS. ANY ISSUED OR SUPPLEMENTAL SKETCHES OR DIRECTIVES SHALL BE INCORPORATED INTO THE FINAL CONSTRUCTION MARK-UPS.

CONTRACTOR SHALL MAINTAIN, ON-SITE, A FIELD MARK-UP SET OF DOCUMENTS WHICH SHALL BE KEPT CURRENT WITH ANY CHANGES FROM THE ORIGINAL CONTRACT DOCUMENTS. THESE MARK-UPS ARE TO BE PROVIDED AS AS-BUILT DRAWINGS FOR COMPARISONS.

BASES, HANGERS AND SUPPORTS

THE CONTRACTOR SHALL PROVIDE, OR CAUSE TO BE PROVIDED BY ANOTHER CONTRACTOR, ALL REQUIRED BASES AND SUPPORTS FOR PIPING AND EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS.

PROVIDE ADJUSTABLE CLEVIS HANGERS FOR ALL SINGLE RUN PIPING. WHERE REQUIRED, OVERSIZE TO ACCOMMODATE INSULATION TO PASS THROUGH. PROVIDE INSULATION SHIELDS. WHERE POSSIBLE, GROUP PIPING TO ALLOW TRAPEZE HANGERS TO BE USED.

PROVIDE ALL ANCHORS, INSERTS AND BEAM CLAMPS REQUIRED FOR HANGERS AND SUPPORTS. IF ADDITIONAL STRUCTURAL MEMBERS OR SUPPORTS ARE REQUIRED, THE CONTRACTOR IS TO COORDINATE WITH THE STRUCTURAL CONTRACTOR FOR PROVISION OF THESE MEMBERS. ALL PIPING AND EQUIPMENT IS TO BE SECURELY FASTENED TO THE BUILDING STRUCTURE IN AN ACCEPTABLE MANNER.

ALL PIPING PASSING THROUGH WALLS AND FLOORS SHALL BE SLEEVED. THE SLEEVES SHALL HAVE AN INSIDE DIAMETER 1" LARGER THAN THE PIPE AND INSULATION, IF INSULATED. INSULATION SHALL PASS CONTINUOUS THROUGH THE SLEEVE.

PIPE SEALS AND FIRE-STOPS

SEAL ALL PIPING PASSING THROUGH FIRE AND/OR SMOKE RATED PARTITIONS, WALLS AND FLOORS WITH A UL LISTED, APPROVED AND TESTED FIRE AND/OR SMOKE SEALING MATERIAL EQUIVALENT TO THE RATING OF THE WALL, PARTITION OR FLOOR. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR COMPATIBILITY WITH WALL AND FLOOR CONSTRUCTION.

FOR INTERIOR PARTITIONS, WALLS AND FLOORS, SLEEVES SIZED TO ALLOW INSULATION TO PASS THROUGH CONTINUOUS WITH A MAXIMUM 1" ANNULAR SPACE BETWEEN THE INSULATION AND SLEEVE. SLEEVES TO BE CUT SMOOTH AND INSTALLED FLUSH WITH FINISHED WALLS AND 2" ABOVE FINISHED FLOORS. FILL THE ANNULAR SPACE WITH UL SEALING MATERIAL.

EQUIPMENT ACCESSIBILITY

LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED OR MAINTAINED IN FULLY ACCESSIBLE POSITION WITH ADEQUATE CLEARANCES TO PROVIDE SERVICE OR REPAIR.

ACCESS DOORS OR PANELS IN WALLS, CEILINGS OR FLOORS SHALL BE FIELD COORDINATED AND INSTALLED FOR ACCESS TO CONCEALED VALVES, EQUIPMENT OR DEVICES.

CLEANING AND PROTECTION AGAINST FOREIGN MATTER

THE JOBSITE SHALL BE KEPT CLEAN AT ALL TIMES. CAP EXPOSED PIPING AND COVER FLOOR DRAINS TO INSURE ADEQUATE PROTECTION AGAINST THE ENTRANCE OF FOREIGN MATTER.

AT COMPLETION OF THE PROJECT, ALL EQUIPMENT, FIXTURES, ETC. SHALL BE CLEANED.

OPERATING INSTRUCTIONS

UPON THE COMPLETION OF ALL WORK, TESTING AND ADJUSTING THE CONTRACTOR SHALL FURNISH PERSONNEL TO INSTRUCT THE OWNER'S REPRESENTATIVES IN THE OPERATION, ADJUSTMENT AND MAINTENANCE OF THE EQUIPMENT AND SYSTEMS FURNISHED.

GUARANTEES

IN ADDITION TO THE CONTRACTOR'S GUARANTEE, PROVIDE ALL APPLICABLE EXTENDED GUARANTEES FOR EQUIPMENT.

PLUMBING PIPING INSULATION

PROVIDE 1" GLASS FIBER INSULATION FOR ALL NEW COPPER PIPING (HOT AND COLD WATER), INCLUDES INSULATION FOR FITTINGS AND VALVES. INSULATION TO BE AS MANUFACTURED BY KNAUF, MANVILLE, OWENS-CORNING OR CERTAIN-TEED.

INSULATION TO HAVE A "K" VALUE OF 0.24 AT 75°F, FLAME SPREAD/SMOKE OF 25/50, MAX. 850°F RATING, VAPOR BARRIER WHITE KRAFT PAPER WITH GLASS FIBER YARN BONDED TO ALUMINIZED FILM.

AT ALL FITTINGS AND VALVES PROVIDE PRE-MOLDED PVC JACKET BY ZESTON.

BEFORE INSTALLING INSULATION, ALL REQUIRED PIPING IS TO BE TESTED AND APPROVED.

INSULATION IS TO PASS CONTINUOUSLY THROUGH HANGERS, WALLS, SLEEVES AND OTHER PIPE PENETRATIONS.

PLUMBING PIPING

PIPING MATERIAL SHALL BE AS FOLLOWS:

SANITARY/WASTE PIPING ABOVE AND BELOW FLOOR SLAB - CAST IRON, HUBLESS, NEOPRENE GASKET, STAINLESS STEEL HEAVY DUTY CLAMP AND SHIELD COUPLING. CISPI 301.

VENT PIPING ABOVE AND BELOW FLOOR SLAB - CAST IRON, HUBLESS, NEOPRENE GASKET, STAINLESS STEEL HEAVY DUTY CLAMP AND SHIELD COUPLING, CISPI 301.

WATER PIPING - COPPER, TYPE L, ASTM B88, SOLDER OR PRESS CONNECTIONS.

BALL VALVES SHALL BE BRONZE, TWO PIECE, FULL PORT, EXTENDED LEVER HANDLE FOR INSULATION, CLASS 150-400 PSI WOG, AS MANUFACTURED BY MILWAUKEE, NIBCO OR APOLLO.

NO PIPING SHALL BE COVERED UNTIL TESTED AND APPROVED BY THE AUTHORITIES HAVING JURISDICTION.

INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS OR CONNECTED EQUIPMENT.

CONCEALED PIPING AND ACCESSORIES SHALL BE ARRANGED TO USE THE MINIMUM AMOUNT OF ACCESS DOORS AND PANELS.

PIPING SHALL BE RUN CONCEALED IN FURRED SPACES, CHASES, WALLS, ETC. CONTRACTOR SHALL OBTAIN PERMISSION TO RUN EXPOSED PIPING.

PROVIDE ISOLATION AND SHUT-OFF VALVES AT ALL BRANCH LINES AND EQUIPMENT.

PROVIDE LISTED AND APPROVED DIELECTRIC FITTINGS WHEN JOINING DISSIMILAR METALS.

RUN ALL SANITARY AND WASTE PIPING AT A MINIMUM OF 1/8" PER FOOT FOR PIPING. SLOPE VENT PIPING TO DRAIN.

PIPE HANGERS SHALL BE PLACED ADJACENT TO MOTOR DRIVEN EQUIPMENT. HANGERS AND SUPPORTS SHALL BE AS FOLLOWS:

COPPER PIPING
- 1/2" TO 1-1/4" AT MAXIMUM 6'-0" SPACING
- 1-1/2" TO 3" AT MAXIMUM 10'-0" SPACING

CAST IRON PIPING
- 1-1/2" TO 2" AT MAXIMUM 10'-0" SPACING
- 2-1/2" AND ABOVE AT MAXIMUM 5'-0" SPACING

WATER PIPING IS TO BE FLUSHED AND DISINFECTED IN ACCORDANCE WITH LOCAL AND STATE HEALTH REGULATIONS. AFTER FLUSHING AND DISINFECTING, THE WATER IS TO BE TESTED BY THE CONTRACTOR THROUGH AN INDEPENDENT LAB WITH A WRITTEN REPORT.

ALL NEW WATER, SANITARY, WASTE, AND VENT PIPING SHALL BE PRESSURE TESTED AS FOLLOWS:

SANITARY, WASTE, AND VENT PIPING - HYDROSTATIC TEST AT 10 FT HEAD FOR A MINIMUM 4 HOURS. SUBMIT WRITTEN/SIGNED TEST RESULTS.

WATER PIPING - HYDROSTATIC TEST AT 125 PSI OR 1-1/2 TIMES OPERATING PRESSURE (WHICHEVER IS GREATER)FOR A MINIMUM 4 HOURS WITH MAXIMUM LOSS OF 2 PSI. SUBMIT WRITTEN/SIGNED TEST RESULTS. AIR TESTING WILL NOT BE ACCEPTABLE.

PLUMBING PIPING SPECIALTIES

CLEANOUTS IN INTERIOR FINISHED FLOORS SHALL HAVE A CAST IRON BODY WITH ANCHOR FLANGE, THREADED TOP ASSEMBLY AND ROUND GASKETED SCORED COVER. FOR FINISHED FLOORS PROVIDE DEPRESSED COVER TO ACCEPT FLOOR FINISH.

WATER HAMMER ARRESTORS SHALL BE STAINLESS STEEL CONSTRUCTION, BELLOWS TYPE, PRECHARGED. AIR CHAMBERS ARE NOT ACCEPTABLE. INSTALL WATER HAMMER ARRESTORS AT ALL QUICK CLOSING VALVES, ON HOT AND/OR COLD WATER SUPPLIES TO NEW INDIVIDUAL FIXTURES OR IN BANKS OF FIXTURES.

PLUMBING EQUIPMENT AND FIXTURES

ALL PLUMBING EQUIPMENT AND FIXTURES SHALL BE NEW, COMPLETE WITH ALL TRIM AS SPECIFIED. APPROVAL CERTIFICATION BY MASSACHUSETTS IS REQUIRED.

FOR ALL EQUIPMENT AND FIXTURES, INSTALL AS PER MANUFACTURER'S INSTRUCTIONS, AS REQUIRED BY CODE, AND IN COMPLIANCE WITH CONDITIONS FOR CERTIFICATION (IF ANY). RETAIN ALL INFORMATION, MANUALS AND PARTS DIAGRAMS PACKAGED WITH THE UNITS.

COORDINATE ALL RELATED ELECTRICAL WORK AND REQUIRED CONNECTIONS TO ACHIEVE AN OPERATIONAL SYSTEM. VERIFY THAT ELECTRICAL POWER HAS PROPER CHARACTERISTICS.

ALL EQUIPMENT SHALL BE UL TESTED AND APPROVED AND IF APPLICABLE SHALL HAVE NSF CERTIFICATION.

PLUMBING FIXTURES SHALL BE INSTALLED WITH TRIM, INCLUDING BUT NOT LIMITED TO, FAUCETS, CARRIERS, WATER SUPPLIES, SUPPLY STOPS, TRAPS, TAILPIECES, HARDWARE, HANGERS/SUPPORTS, AND FASTENING DEVICES.

PLUMBING FIXTURES AND TRIM SHALL BE OF THE MANUFACTURER LISTED ON THE DRAWINGS OR AN APPROVED EQUAL MEETING THE OPERATIONAL CHARACTERISTICS, FUNCTION, SIMILAR APPEARANCE AND QUALITY OF THE SPECIFIED ITEMS.

FOR ALL EXPOSED PIPING TO FIXTURES, PROVIDE CHROME PLATED PIPES, ESCUTCHEONS AT WALLS, SUPPLY TUBES AND SUPPLY STOPS. DRAIN PIPING SHALL BE MINIMUM 17 GA, CHROME PLATED CAST BRASS, P-TRAPS SHALL HAVE CLEANOUT PLUGS.

SEAL FIXTURES TO WALLS AND FLOOR WITH APPROVED SILICONE SEALANT, COLOR TO MATCH FIXTURE COLOR OR CLEAR.

UPON COMPLETION OF INSTALLATION OF PLUMBING EQUIPMENT AND FIXTURES, TEST TO DEMONSTRATE CAPABILITY AND COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND CODES. FOR ALL EQUIPMENT, REPAIR OR REPLACE ANY MALFUNCTIONING EQUIPMENT OR FIXTURES AND RETEST.

ADJUST WATER PRESSURES THROUGH VALVES OR STOPS TO OBTAIN PROPER FLOW RATES AND PRESSURES REQUIRED.

UPON COMPLETION OF INSTALLATION OF EQUIPMENT OR FIXTURES, THOROUGHLY CLEAN ALL EXPOSED SURFACES, TRIM AND PIPING, FLUSH STRAINERS AND VERIFY FINAL OPERATION.

PROVIDE ALL WARRANTIES AND GUARANTEES TO THE OWNER WITH ALL NAMES, ESTABLISHED DATES, AND ANY ADDITIONAL INFORMATION REQUIRED FOR ENFORCEMENT.

NATURAL GAS PIPING SYSTEM

UNLESS OTHERWISE NOTED ON THE PLANS, GAS PIPING SHALL BE AS FOLLOWS:

GAS PIPING TO BE SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS, ASTM A53.

PIPE THREADS TO BE TAPERED AND PIPING SHALL SLOPE TOWARDS EQUIPMENT WITH DRIPS AT LOW POINTS AND EQUIPMENT. ASME B1.20.1

ALL PIPING SHALL BE TESTED IN COMPLIANCE WITH THE NEW YORK STATE GAS CODE AND NFPA 54 WITH ALL DOCUMENTATION OF TESTS SIGNED BY CONTRACTOR. TEST WITH COMPRESSED AIR OR OTHER INERT GAS.

SLOPE PIPING UPWARDS AT A MINIMUM OF 1/4" IN 15'-0" HORIZONTAL PIPE RUN.

HANGERS AND SUPPORT SPACING SHALL BE AS FOLLOWS:
ALL PIPE SIZES AT MAXIMUM 6'-0" SPACING

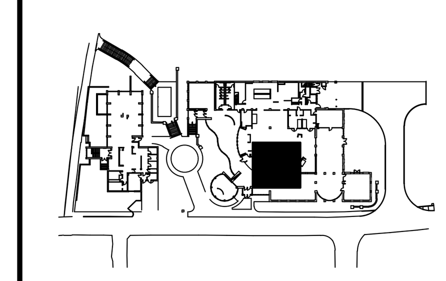
GAS CONNECTORS TO EQUIPMENT SHALL BE MADE WITH CCST OR OTHER CSA CERTIFIED/UL LISTED FLEXIBLE CONNECTORS.

ALL PIPING UP TO 2" SHALL BE THREADED, 2-1/2" AND LARGER SHALL BE WELDED.

VALVING SHALL BE BALL VALVES (BRONZE BODY, BRASS STEM PTFE SEAT) FOR PIPING UP TO 2" AND IRON BODY GAS COCKS (BRASS PLUG AND WASHER) FOR PIPING 2-1/2" AND LARGER. CSA CERTIFIED/UL LISTED.

ALL NEW GAS PIPING SHALL BE PAINTED WITH PRIMER AND TWO COATS YELLOW ENAMEL WITH PIPE LABELS SPACED AT MAXIMUM 6'-0" INTERVALS. LABELS TO INDICATE NATURAL GAS AND GAS PRESSURE.

..\..\..\..\RZDA Logos\RHR PE SEALS\RHR S&S CT.jpg



GELFENBIEN KEYPLAN

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Title:
PLUMBING SPECIFICATIONS

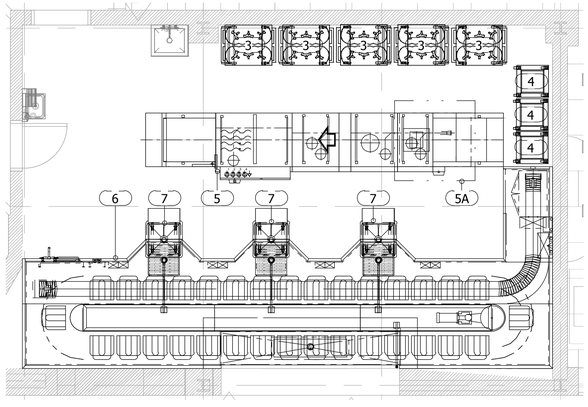
Project Number:	Issue Date:
2018.029	*19 JAN 2019*
Scale:	CAD File:
1/4"=1'-0"	P300.dwg
Drawn By:	Checked By:
RJ	RJ

Revisions:

P300

Equipment Utility Schedule 1-100

No.	Qty.	Description	HVAC Utilities			Plumbing Utilities						Electrical Utilities									No.	Comment
			ECFM	Collar Size	SP	HW	CW	DW	IW	MBTUS	Gas Size	Voltage	Phase	HP	Amperage	KW	Hard Connection	Plug	NEMA Config	Electrical Height		
1	1	Spare Number																			1	
2	1	Spare Number																			2	
3	5	Dishcart																			3	
4	3	Glass Rack Cart																			4	
5	1	Flight Type Dishmachine				1/2"	1/2"		2"			(4) 460	3		95.4 total		X			VFY	5	EC - T1 motors, controls, dryer heat 25.6A, T2 tank heat 28.8A, T3 tank heat 19.4A, T4 tank heat, built in booster 21.6A, total amp load 95.4A
5A	1	Condensate Hood	500	8"x8"					1/2"												5A	
6	1	Tray Conveyor				(3) 1/2"	(3) 1/2"		(6) 1-1/2"			(3) 120	1	1.0 & 0.5	20.0 & (2) 15.0		X			VFY	6	
7	3	Silver Soak Sink																			7	
8	1	Spare Number																			8	
9	1	Spare Number																			9	
10	1	Spare Number																			10	



1 1 Equipment Layout - Gelfenbein Hall
1/4" = 1'-0"

UConn Dishrooms

Gelfenbein Hall

ColburnGuyette foodservice design

Revision Schedule

No.	Description	Date

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

Sheet Name:

Foodservice Equipment Layout and Utility Schedule

Issued: 02/11/19

Drawn By: LK

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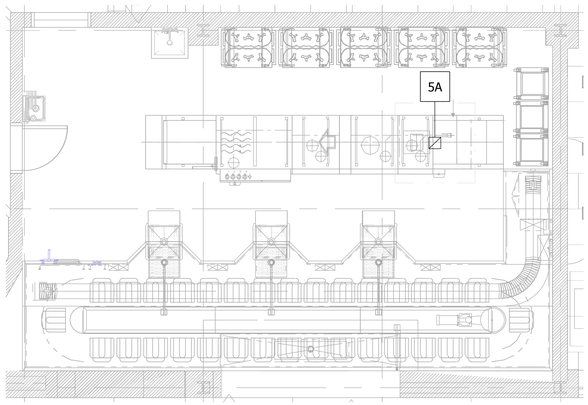
Drawing No.:

K1.1



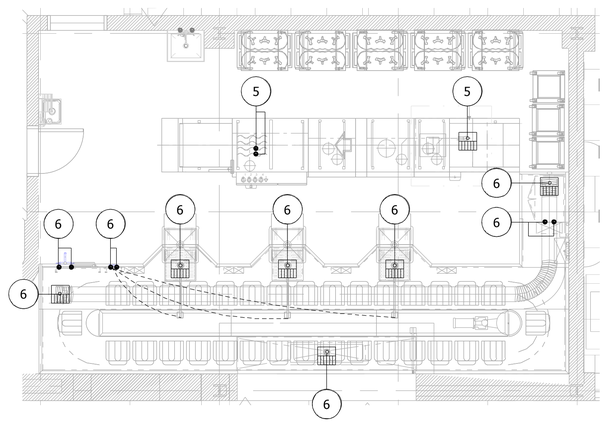
1 1 Building Conditions - Gelfenbein Hall
1/4" = 1'-0"

BUILDING CONDITIONS/HVAC SYMBOLS

- EXHAUST DUCT/GRILL
- EXHAUST DUCT/GRILL
- SUPPLY DUCT/GRILL
- FLOOR DEPRESSION
- WALL BLOCKING BY GENERAL CONTRACTOR.
- VENTILATION REQUIRED FOR UNIT BELOW

GENERAL NOTES

1. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL VERIFY AND COORDINATE ALL WALL BLOCKING LOCATIONS AND HEIGHTS WITH THE GENERAL CONTRACTOR /CONSTRUCTION MANAGER.
2. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL VERIFY AND COORDINATE FLOOR DEPRESSIONS FOR FOODSERVICE EQUIPMENT IN THE FIELD BY GENERAL CONTRACTOR /CONSTRUCTION MANAGER.
3. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL PROVIDE CORNER GUARDS AS PER DETAIL F2-43A AND F2-43B.
4. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL PROVIDE WALL FLASHING AS PER DETAIL F2-39.
5. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL VERIFY AND COORDINATE REFRIGERATION LINE RUNS FOR WALK-IN COOLER AND FREEZER WITH GENERAL CONTRACTOR. VERIFY CONDENSING UNIT LOCATION WITH ARCHITECT AND GENERAL CONTRACTOR /CONSTRUCTION MANAGER.
6. WHEN INSTALLING CONCRETE SUB-FLOOR IN WALK-IN BOX, FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL PROVIDE ADEQUATE VENTILATION PER MANUFACTURERS SPECIFICATION.



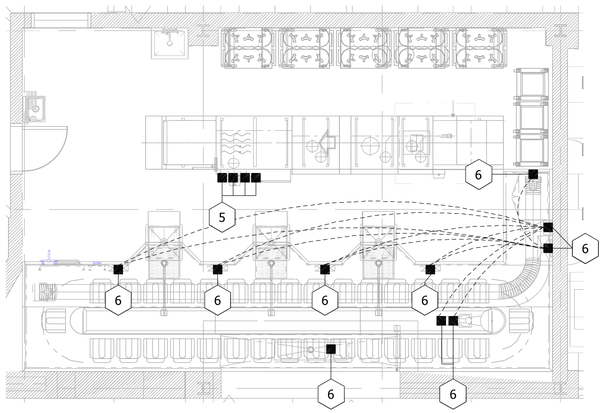
3 1 Plumbing - Gelfenbein Hall
1/4" = 1'-0"

PLUMBING SYMBOLS

- HOT/COLD WATER
- WASTE
- CHILLED COLD WATER SUPPLY
- CHILLED COLD WATER RETURN
- INDIRECT WASTE
- HOSE BIBB (HOT OR COLD WATER)
- FUEL GAS
- FLOOR SINK W/ HALF GRATE (W/ MINIMUM CONN. SIZE)
- FLOOR SINK W/ 3/4 GRATE (W/ MINIMUM CONN. SIZE)
- FLOOR (AREA) DRAIN
- FUNNEL FLOOR DRAIN
- STEAM SUPPLY
- STEAM CONDENSATE RETURN
- AUXILIARY STEAM SUPPLY

PLUMBING NOTES

1. ALL FLOOR SINKS AND FLOOR DRAINS PROVIDED AND INSTALLED BY PLUMBING SUBCONTRACTOR. FOODSERVICE EQUIPMENT SUBCONTRACTOR TO VERIFY & COORDINATE FLOOR SINK LOCATIONS IN THE FIELD WITH THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER.
2. FOODSERVICE EQUIPMENT SUBCONTRACTOR SHALL PROVIDE REFRIGERTATION LINE RUNS BETWEEN FREEZER/ COOLER CONDENSING UNIT(S) AND COIL(S). COORDINATE IN THE FIELD WITH THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER.
3. ALL HORIZONTAL PIPING EXTENDED AND CONNECTED TO EQUIPMENT SHOULD BE RUN AT THE HIGHEST POSSIBLE ELEVATION ABOVE THE FLOOR. NO LINES SHOULD LAY DIRECTLY ON THE FLOOR AT ANY TIME.
4. RECOMMENDED FLOOR SINKS SHALL BE SQUARE TYPE INDIRECT WASTE RECEPTORS WITH REMOVABLE GRATE. PERCENTAGE OF GRATE AS INDICATED ON PLAN.
5. ALL PLUMBING FIXTURES FURNISHED FOR FOODSERVICE EQUIPMENT TO BE PROVIDED BY FOODSERVICE EQUIPMENT SUBCONTRACTOR AND INSTALLED BY THE PLUMBING SUBCONTRATOR.
6. ALL WASTES, DIRECT OR INDIRECT, TO BE FURNISHED AND INSTALLED BY THE PLUMBING SUBCONTRACTOR.
7. AUTOMATIC FIRE SYSTEM GAS LINE SHUT-OFF VALVES SUPPLIED BY FOODSERVICE EQUIPMENT SUBCONTRACTOR AND INSTALLED BY PLUMBING SUBCONTRACTOR.
8. PROVIDE 110 DEGREE INCOMING WATER TO ALL HAND SINKS.



2 1 Electrical - Gelfenbein Hall
1/4" = 1'-0"

ELECTRICAL SYMBOLS

- DUPLEX ELECTRICAL OUTLET (DEO)
- SINGLE ELECTRICAL OUTLET (SEO)
- DUPLEX ELECTRICAL OUTLET (INSTALLED IN EQUIP. BY FOODSERVICE EQUIPMENT SUBCONTRACTOR OR MANUFACTURER.)
- SINGLE ELECTRICAL OUTLET (INSTALLED IN EQUIP. BY FOODSERVICE EQUIPMENT SUBCONTRACTOR OR MANUFACTURER.)
- ELECTRICAL CONNECTION
- JUNCTION BOX INSTALLED BY ELECTRICIAN
- JUNCTION BOX W/ FINAL CONNECTION TO EQUIPMENT
- C.P. CONTROL PANEL BY FOODSERVICE EQUIPMENT SUBCONTRACTOR / INTERCONNECTED BY ELECTRICAL SUBCONTRACTOR.
- VAPOR-PROOF LIGHT FIXTURE
- FLOOR MOUNTED RECEPTACLE
- D.F.A. RETRACTABLE RECEPTACLE (DOWN FROM ABOVE)
- TELE/DATA

UConn Dishrooms

Gelfenbein Hall

ColburnGuyette foodservice design

Revision Schedule

No.	Description	Date

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

Sheet Name:

Foodservice Point of Connection Plans

Issued: 02/11/19

Drawn By: LK

Checked By: BT/KS

Drawing No.:

K2.2

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UConn Dishrooms

Gelfenbein Hall

ColburnGuyette foodservice design

INSTALLATION REQUIREMENTS

FOODSERVICE EQUIPMENT CONTRACTOR'S REQUIREMENTS

F1 PROVIDE DRAWINGS TO APPROPRIATE TRADES REFERENCING UTILITY SERVICE AND COORDINATE FINAL CONNECTION.

F2 DELIVER, ASSEMBLE AND INSTALL AVTEC SYSTEM PER DRAWING.

F3 FURNISH WIRING (AND PLUMBING) DIAGRAMS TO END USER.

F4 THE K.E.C. MUST INFORM AVTEC OF ANY CHANGES IN EQUIPMENT OR BUILDING STRUCTURE. FIELD MODIFICATIONS DUE TO INSUFFICIENT INFORMATION ARE THE RESPONSIBILITY OF THE KEC.

ELECTRICAL SERVICE EQUIPMENT CONTRACTOR'S REQUIREMENTS

BUILDING SERVICES

INSTALL ELECTRICAL SERVICE K.O., CONDUIT, WIRING, AND OVERCURRENT PROTECTION DEVICE RATED AT A CONTINUOUS OPERATING LOAD OF:

E1 20 AMPS, 120 VAC, 1ø, 60Hz (BUS TRAC MOTOR: 1 HP) FROM STUB IN LOCATION IN WALL TO BUS TRAC MAIN CONTROLS.

E5 15 AMPS, 120 VAC, 1ø, 60Hz (1/2 HP CONVEYOR MOTOR REQ'D) FROM STUB IN LOCATION AT FLOOR APPROXIMATELY 12" A.F.F. TO CONTROL BOX SERVICE LEADS.

FIELD INTERCONNECTIONS

E2 BUS TRAC: PROVIDE AND INSTALL 2-WIRE CIRCUIT FROM MAIN CONTROLS TO SYSTEM DRIVE MOTOR. (POWER FROM CONTROLS IS 100 VDC)

E2A CONVEYOR: PROVIDE AND INSTALL CIRCUIT FROM MAIN CONTROLS TO SYSTEM DRIVE MOTOR.

E3 BUS TRAC: PROVIDE AND INSTALL 3-WIRE CIRCUIT FROM REMOTE START/STOP STATIONS TO MAIN CONTROL PANEL (120 VAC).

E3A CONVEYOR: PROVIDE AND INSTALL CIRCUIT FROM REMOTE STOP/START STATIONS TO MAIN CONTROL PANEL (120 VAC).

E4 BUS TRAC: PROVIDE AND INSTALL 3-WIRE CIRCUIT FROM MAIN CONTROLS TO LIMIT SWITCH. (120 VAC)

E4A CONVEYOR: PROVIDE AND INSTALL CIRCUIT FROM MAIN CONTROLS TO LIMIT SWITCH. (120 VAC)

PLUMBING CONTRACTOR'S REQUIREMENTS

BUILDING SERVICES

PROVIDE AND INSTALL SERVICE SUPPLY PIPES FROM ROUGH IN LOCATION AT FLOOR TO PIPES APPROX. 12" A.F.F.

P1 1-1/2" NPT WASTE REQUIRED AS SHOWN IN PLAN VIEW AND UTILITY ROUGH IN DETAIL BELOW.

P2 1/2" NPT HOT WATER SUPPLY, 40 psig MAX.

P3 1/2" NPT COLD WATER SUPPLY, 40 psig MAX.

VE4 Provide 120 volt 3-wire circuit through light switch (provided by AVTEC, installed by E.C.) to Soffit Light connection box.

SYMBOL KEY

PLUMBING INSTALLATION — LEGEND
ELECTRIC INSTALLATION — REVISION
HANGER BRACKET

NOTES TO KEC

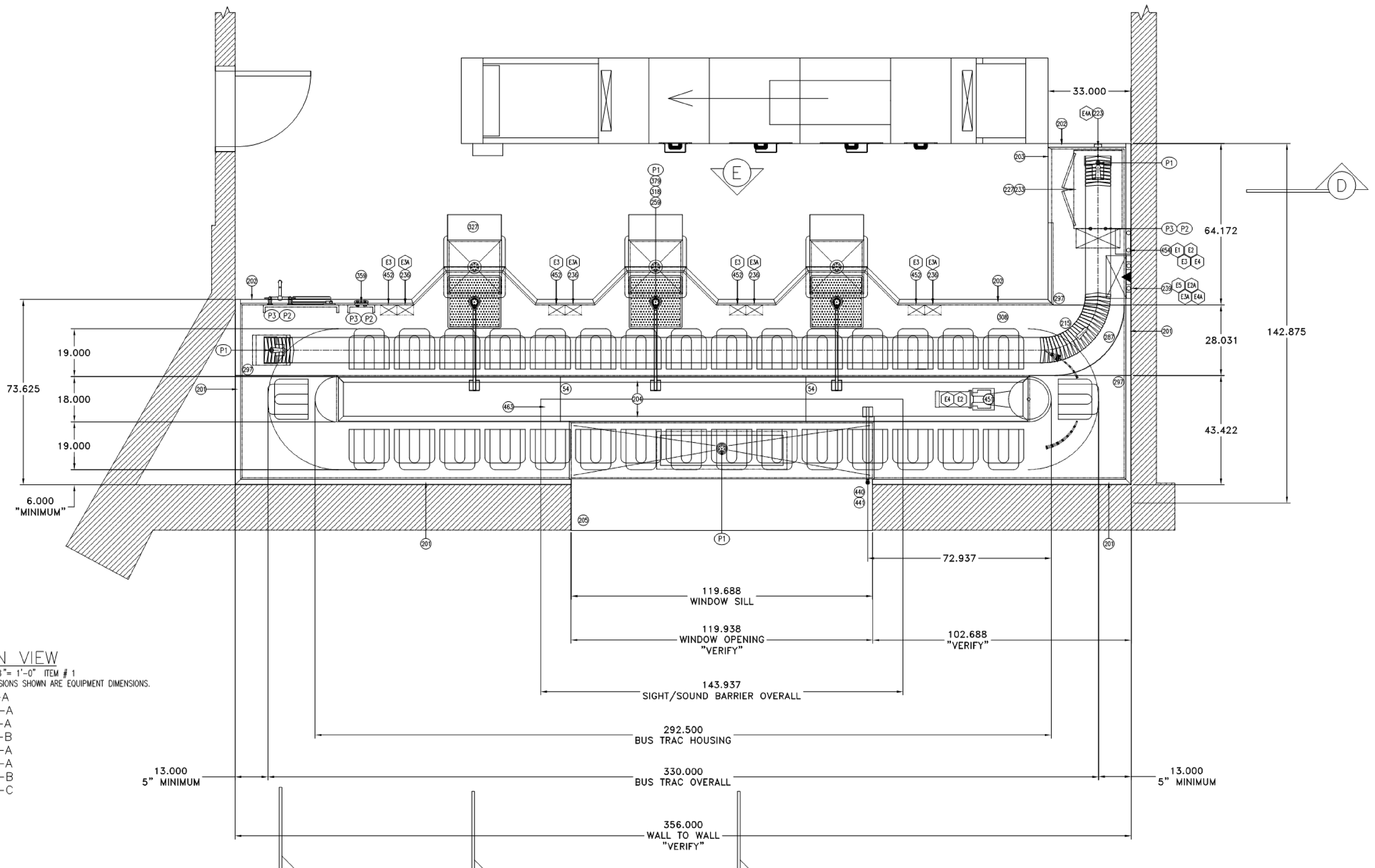
THE INFORMATION PROVIDED ON THIS DRAWING HAS BEEN GENERATED BASED ON THE LATEST INFORMATION SENT TO AVTEC. AVTEC MUST BE NOTIFIED IN WRITING OF ANY DEVIATION FROM THE INFORMATION SHOWN ON THIS DRAWING, AND OR NOTES BELOW. ANY MODIFICATION TO AVTEC PRODUCT DURING OR AFTER FABRICATION WILL BE THE RESPONSIBILITY OF THE KEC. ALSO NOTE THAT ANY DEVIATION DURING FABRICATION MAY RESULT IN A CHANGE TO THE SCHEDULED SHIP DATE.

- MAKE, MODEL, UTILITY REQUIREMENTS, AND LOCATION OF ALL ANCILLARY EQUIPMENT IS AS SHOWN.
- ALL WALL-TO-WALL DIMENSIONS ARE AS SHOWN.
- SIZE AND LOCATION OF COLUMN(S) ARE AS SHOWN.
- EQUIPMENT SECTIONS AS DIMENSIONED WILL ACCESS MOST POINTS OF INSTALLATION. IF ADDITIONAL FIELD JOINTS ARE REQUIRED THE KEC MUST NOTIFY AVTEC PRIOR TO FABRICATION.
- PRIOR TO RELEASE FOR FABRICATION: PROVIDE MODEL NUMBER AND MANUFACTURER OF ANY INTERFACING EQUIPMENT. SHIP PARTS TO BE INSTALLED BY AVTEC TO OUR FACTORY. OTHERWISE, FIELD INSTALLATION AND FIT UP IS THE RESPONSIBILITY OF THE K.E.C.
- LOCATION AND SPACE REQUIREMENTS OF ANY EQUIPMENT (SOAK SINKS, BOOSTER HEATER, ETC.) THAT REQUIRE TABLE AND/OR LEG CLEARANCE AS SHOWN IN PLAN VIEW.
- AVTEC WILL PUNCH HOLES FOR PLUMBING COMPONENTS AS SHOWN. IF ADDITIONAL REQ'D KEC TO NOTIFY AVTEC.
- VERIFY: COLOR OF LAMINATE REQUIRED ON PANELS.
- VERIFY: MAXIMUM TRAY/RACK SIZE TO BE ACCUMULATED AND/OR CONVEYED.
- ALL DIMENSIONS SHOWN ARE EQUIPMENT DIMENSIONS. OVERALL EQUIPMENT DIMENSIONS ARE ± 1/4". CONSTRUCT WALLS TO SUIT EQUIPMENT DIMENSIONS.
- ALL PLUMBING LINES (DRAIN OR WATER) ARE PROVIDED AND INSTALLED IN FIELD BY THE P.C.
- ALL MOTOR CONTROL HOUSINGS MEET OR EXCEED NEMA 4 CONSTRUCTION.
- TROUGH NOZZLE(S) PROVIDED BY DISPOSER/PULPER MANUFACTURER, INSTALLED BY P.C.
- WAREWASHER DRAWINGS MUST BE SENT TO AVTEC PRIOR TO RELEASE FOR FABRICATION.
- FIELD JOINTS ARE FULLY WELDED AND POLISHED IN FIELD BY K.E.C.
- MECHANICAL FIELD JOINTS ARE BOLTED TOGETHER AND SEALED IN FIELD BY K.E.C.
- RACK OVERSHELVES ARE TO BE INSTALLED IN THE FIELD BY THE K.E.C. IT IS THE REPONSIBILITY OF THE K.E.C. TO LOCATE THE SHELF SO IT DOES NOT INTERFERE WITH THE OPERATION OF ADJACENT EQUIPMENT.
- BELT WASH SYSTEM REQUIRES OPERATING WATER PRESSURE OF 20 TO 40 PSIG. IF WATER PRESSURE EXCEEDS 40 PSIG A PRESSURE REDUCING VALVE IS PROVIDED AND INSTALLED BY THE P. C.
- PROVIDE CLEAR ACCESS TO DRIVE HOUSING AND DRAIN LOCATIONS ON AT LEAST ONE SIDE. VERIFY WHICH SIDE WILL BE ACCESSIBLE FOR EACH DRAIN LOCATION.
- MAXIMUM BELT SPEED TO BE 30 F.P.M.
- MAXIMUM UNIT LENGTH OF 25' FOR FABRIC BELT CONVEYORS.

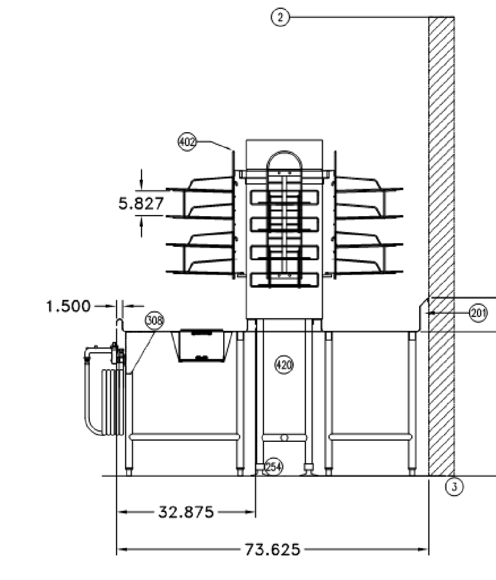
ENGINEERING/MANUFACTURING NOTES

- AVTEC TO PROVIDE FACTORY WIRE WIPS WITH WIRE WHEN CONTROL BOXES FOR CONVEYOR AND BUS TRACS ARE MOUNTED TO THE DISH TABLES
- AVTEC TO PROVIDE ALL PLUMBING TO PRE-RINSE STATIONS AND MIXING VALVE

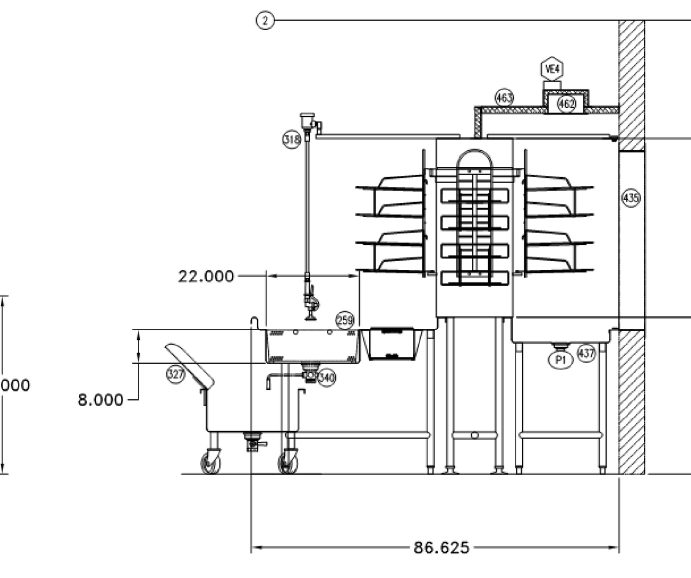
"VERIFY" TOTAL OF (3) JOINTS REQUIRE (297) WELDING/POLISHING IN FIELD LOCATIONS SHOWN ARE RECOMMENDED



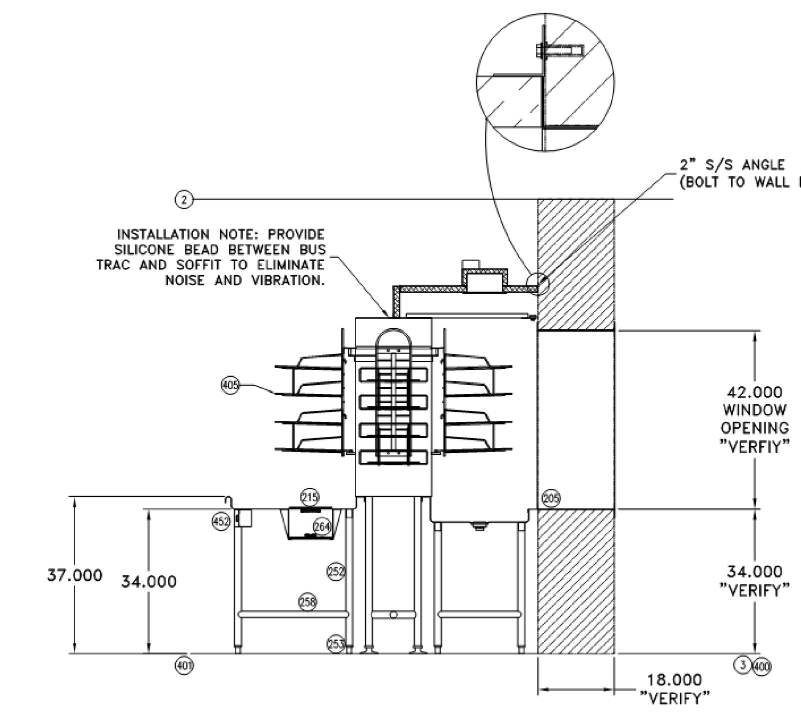
PLAN VIEW
SCALE: 3/8"= 1'-0" ITEM # 1
ALL DIMENSIONS SHOWN ARE EQUIPMENT DIMENSIONS.
BT02-A
CBSW-A
DT00-A
DT00-B
SSB0-A
SS00-A
SS00-B
SS00-C



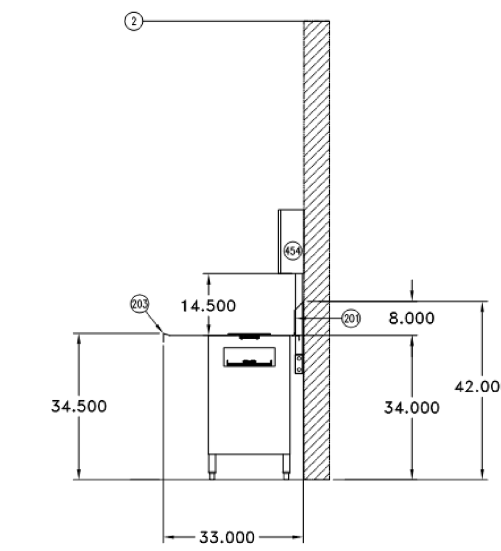
SECTION VIEW (A)
SCALE: 3/8"= 1'-0"
ALL DIMENSIONS SHOWN ARE EQUIPMENT DIMENSIONS.



SECTION VIEW (B)
SCALE: 3/8"= 1'-0"
ALL DIMENSIONS SHOWN ARE EQUIPMENT DIMENSIONS.



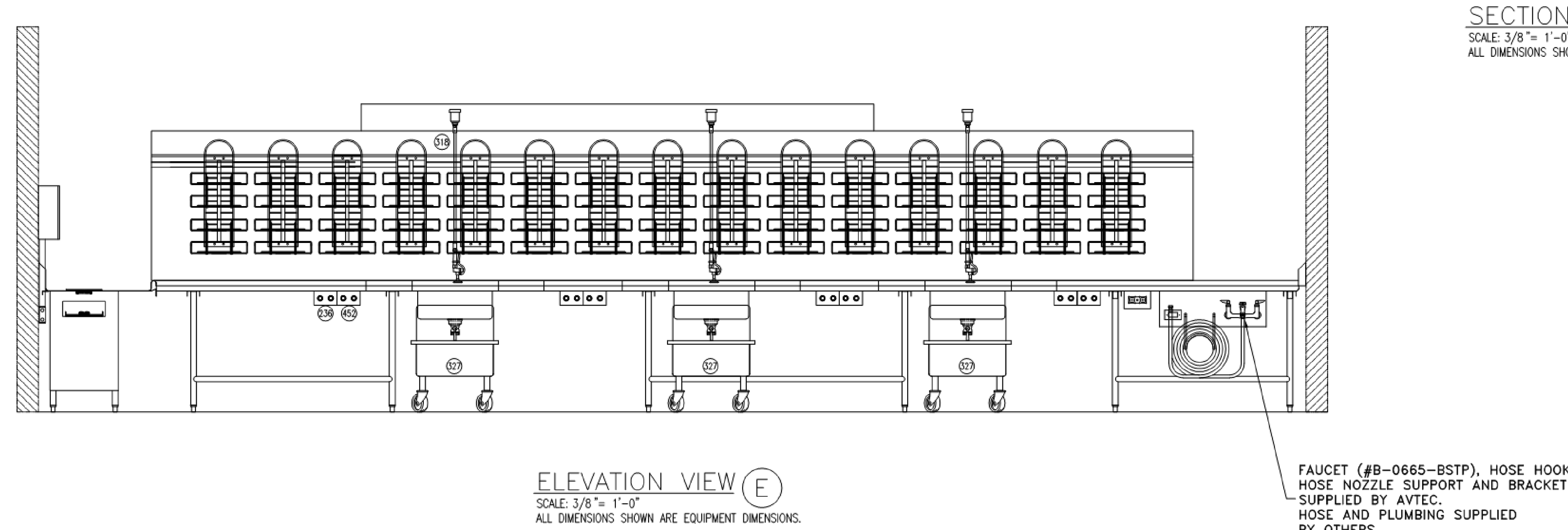
SECTION VIEW (C)
SCALE: 3/8"= 1'-0"
ALL DIMENSIONS SHOWN ARE EQUIPMENT DIMENSIONS.



SECTION VIEW (D)
SCALE: 3/8"= 1'-0"
ALL DIMENSIONS SHOWN ARE EQUIPMENT DIMENSIONS.

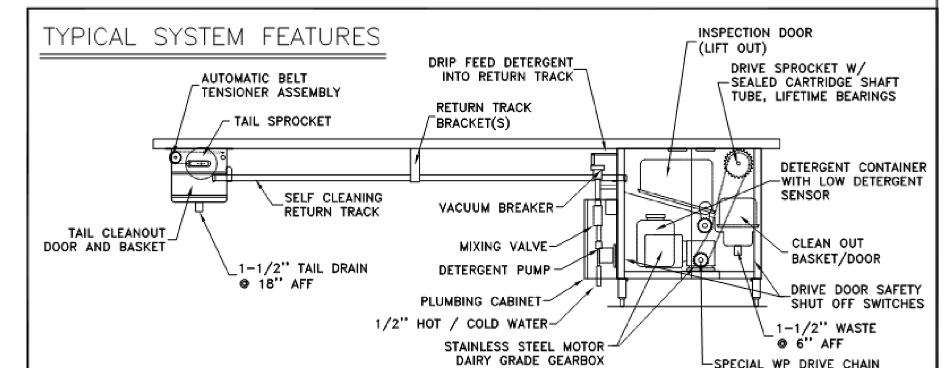
LEGEND

2 FINISHED CEILING
3 FINISHED FLOOR
54 MECHANICAL FIELD JOINT
201 2" BACKSPLASH
202 1-1/2" ROLLED EDGE
203 MARINE EDGE
204 FLAT EDGE
205 S/S WINDOW SILL (BY AVTEC)
215 10" OVERLAPPING CHAIN BELT
223 PROXIMITY-TYPE LIMIT SWITCH
227 S/S MOTOR/WASH HOUSING
233 2 GAL. DETERGENT TANK (BEHIND ACCESS DOOR)
236 CONVEYOR START/STOP STATION (PRE-WIRED BY AVTEC)
239 CONVEYOR CONTROLS (SEE DETAIL)
252 1 5/8" DIA. S/S LEGS (TYPICAL)
253 ADJUSTABLE BULLET FEET
254 ADJUSTABLE FLANGE FEET (BOLT TO FLOOR)
258 1 1/2" DIA. S/S CROSS MEMBERS (TYPICAL)
259 REMOVABLE SCRAP BASKET
264 SLIDER RETURN PAN: 16 GA. S/S
287 S/S REMOVABLE GUIDE RAIL
297 FIELD JOINT (FULLY WELDED & POLISHED BY K.E.C.)
308 14 GA. #304 S/S TOP W/ #4 FINISH
318 PRE-RINSE STATION (BY AVTEC)
327 SILVER SOAK SINK (BY AVTEC) (SEE DETAIL)
340 2" NPT WASTE VALVE W/ HANDLE & STRAINER
359 MIXING VALVE AND BRACKET BY AVTEC
379 21" X 21" X 8"D SINK W/DRAIN BASKET
400 CUSTOMER SIDE
401 DISHROOM SIDE
402 TRAY HANGER
405 4-TIER, S/S TRAY CARRIERS W/ GREY COLORED PLASTIC INSERTS ON BOTTOM TIER
420 1-5/8" S/S BUS-TRAC LEG BASE
435 TRAY DROP-OFF WINDOW SILL & TRIM (BY AVTEC)
437 TRAY DROP-OFF TABLE (BY AVTEC)
440 PHOTOELECTRIC LIMIT SWITCH (SEE DETAIL)
441 LIMIT SWITCH REFLECTOR
451 BUS-TRAC MOTOR LOCATION
452 BUS-TRAC START/STOP STATION
454 BUS-TRAC MOTOR CONTROL PANEL (SEE DETAIL BELOW)
462 4"-0" DUAL LAMP, RECESSED FLUORESCENT LIGHT
463 S/S DOUBLE-PAN, INSULATED SIGHT & SOUND BARRIER (BY AVTEC)

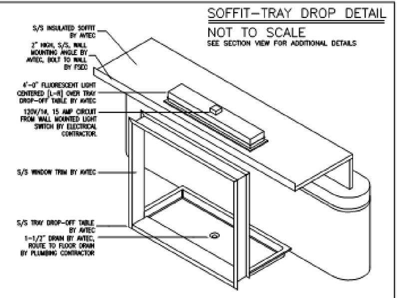


ELEVATION VIEW (E)
SCALE: 3/8"= 1'-0"
ALL DIMENSIONS SHOWN ARE EQUIPMENT DIMENSIONS.

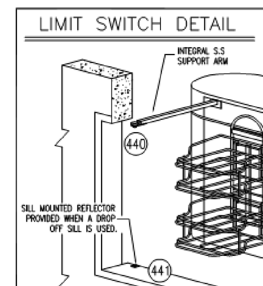
TYPICAL SYSTEM FEATURES



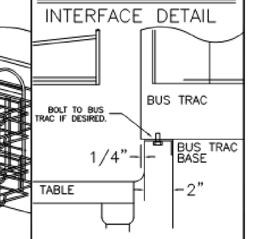
SOFFIT-TRAY DROP DETAIL
NOT TO SCALE
SEE SECTION VIEW FOR ADDITIONAL DETAILS



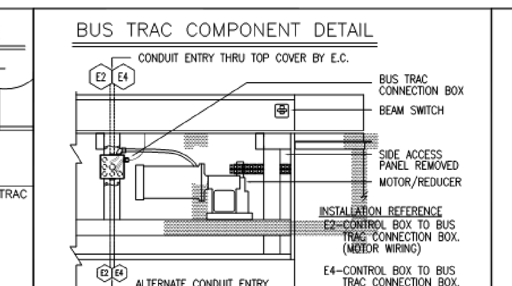
LIMIT SWITCH DETAIL



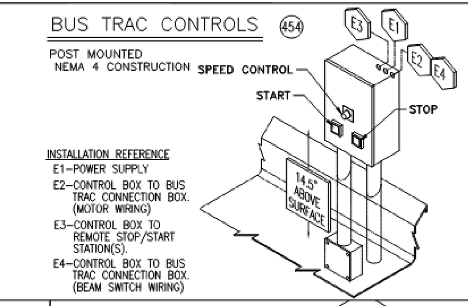
BUS TRAC/TABLE INTERFACE DETAIL



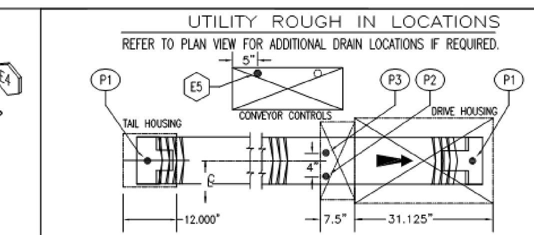
BUS TRAC COMPONENT DETAIL



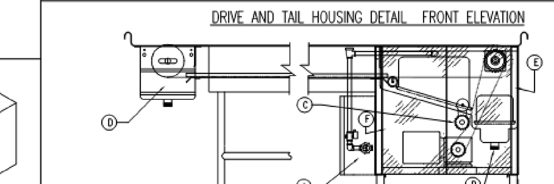
BUS TRAC CONTROLS (454)



UTILITY ROUGH IN LOCATIONS
REFER TO PLAN VIEW FOR ADDITIONAL DRAIN LOCATIONS IF REQUIRED.

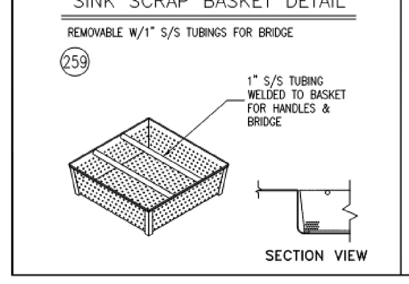


DRIVE AND TAIL HOUSING DETAIL FRONT ELEVATION

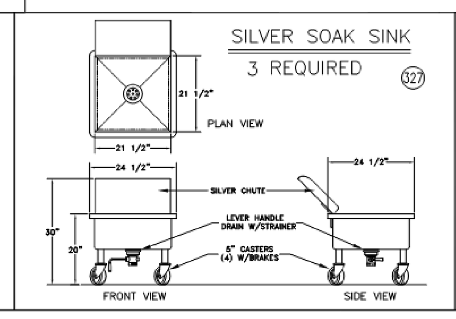


(A) WASH MANIFOLD INCLUDES: MIXING VALVE, DETERGENT INJECTOR TEE, LINE STRAINER, VACUUM BREAKER, AND WATER SOLENOID.
(B) DRIVE HOUSING DRAIN SUMP WITH REMOVABLE SCRAP BASKET AND 1-1/2" DRAIN.
(C) CONVEYOR DRIVE INCLUDES AUTOMATIC CHAIN TENSIONER.
(D) TAIL HOUSING DRAIN SUMP WITH REMOVABLE SCRAP BASKET AND 1-1/2" DRAIN (ONLY PROVIDED WITH SIDE FLEXING BELT (MODELS CB*W OR CI*W) CONVEYORS
(E) REMOVABLE SERVICE ACCESS PANEL, MECHANICALY FASTENED.
(F) HINGED DOUBLE PAN DOORS WITH DRIVE CUT OUT SAFETY SWITCH.

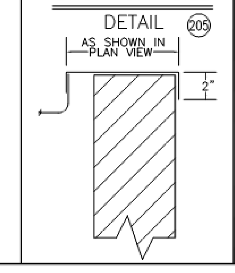
SINK SCRAP BASKET DETAIL
REMOVABLE W/1" S/S TUBINGS FOR BRIDGE (259)



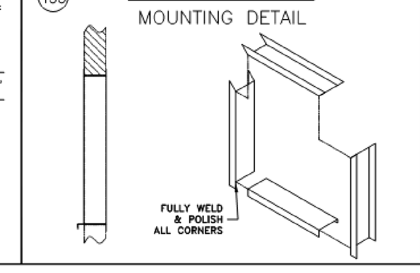
SILVER SOAK SINK
3 REQUIRED (327)



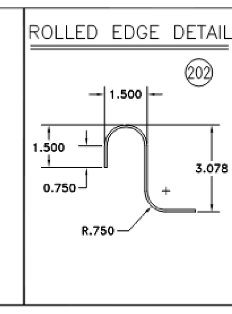
DROP-OFF SILL DETAIL (205)



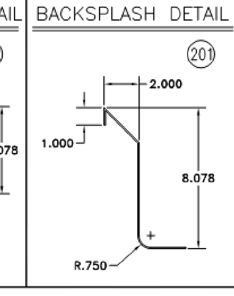
(435) WINDOW TRIM MOUNTING DETAIL



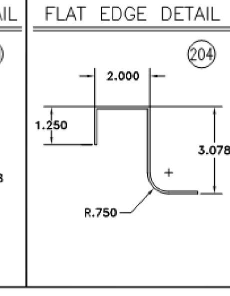
ROLLED EDGE DETAIL (202)



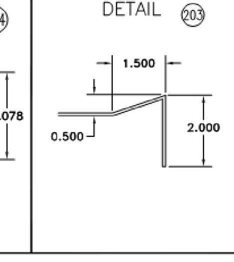
BACKSPLASH DETAIL (201)



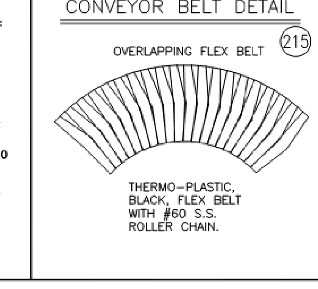
FLAT EDGE DETAIL (204)



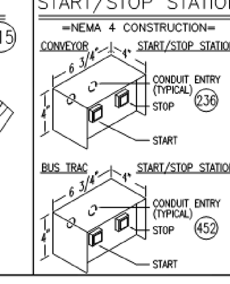
MARINE EDGE DETAIL (203)



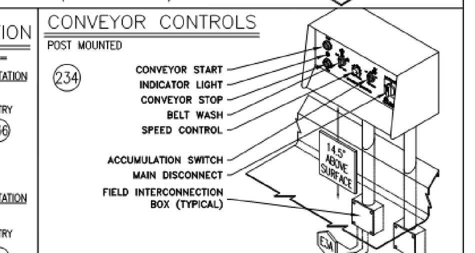
CONVEYOR BELT DETAIL (215)



START/STOP STATION
=NEMA 4 CONSTRUCTION=



CONVEYOR CONTROLS
POST MOUNTED (234)



(NEMA 4 CONSTRUCTION REQUIRED)

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CONVEYOR SYSTEMS — UL BUS TRAC ONLY — NSF

REVISIONS

SYM	DATE	DESCRIPTION	BY
A	12/21/18	REVISED PRELIMINARY	RAJ
B	02/06/19	REVISED PRELIMINARY	RAJ

DRAWN BY: RAJ	DATE: 11/09/18	SALES CONTACT: KENNEY	EXTENSION: 6492
SCALE: 3/8" = 1'-0"		ORDER NUMBER:	
ENGINEERING NUMBER: 2077087		SHEET: 1 OF 1	

PROJECT NAME: GELFENBEIN HALL UNIV. CONNECTICUT STORRS, CT

DESIGNER: E3 PAWTUCKET, RI

CONTRACTOR:

STATUS: REVISED PRELIMINARY NOT FOR CONSTRUCTION USE Date: 02/06/19 ☐Project File

avtec
525 SOUTH COLDWATER RD, WEIDMAN, MI 48893 (800) 621-8560 (800) 634-5369 (FAX)

Revision Schedule

No.	Description	Date

Drawing Scale:

Sheet Name: Foodservice Details

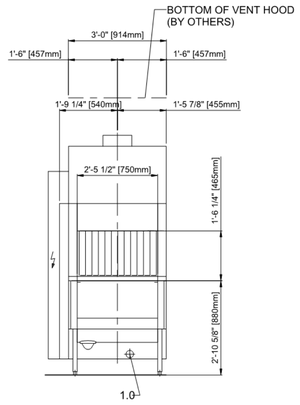
Issued: 02/11/19

Drawn By: LK

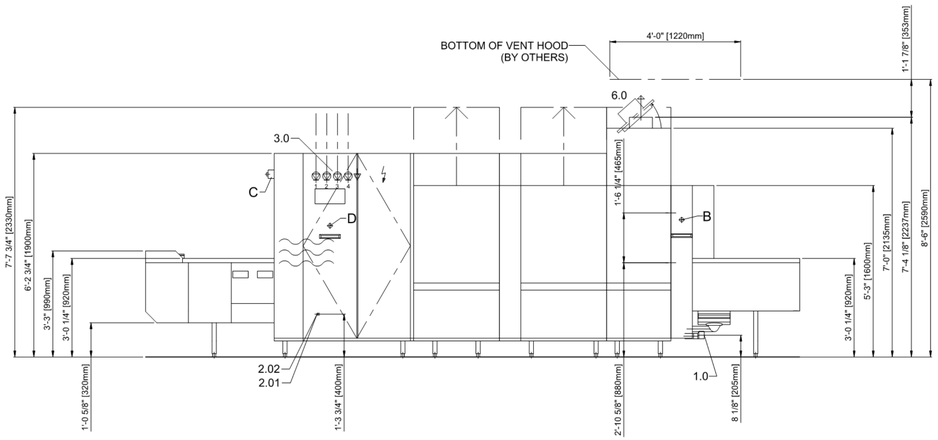
Checked By: BT/KS

Drawing No.: K6.1

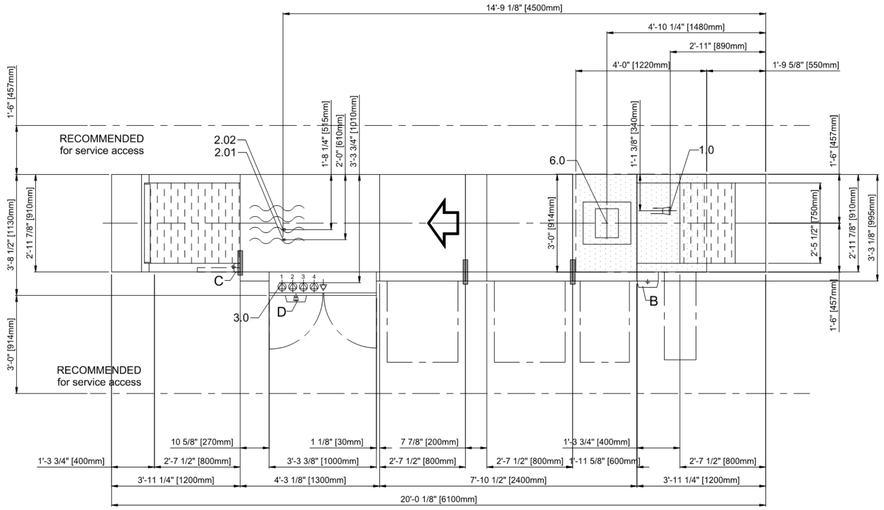
2/11/2019 1:12:44 PM



RIGHT SIDE
ELEVATION VIEW



FRONT ELEVATION VIEW



PLAN VIEW

1.0	Drain connection: 2" [50mm] OD horizontal drain outlet [HDPE piping]. Additional piping to drain to be supplied by others. Indirect routing to 4" floor drain recommended.	2" OD or 1-1/2" pipe via no-hub
2.01	Warm water, initial tank fill connection: - Temperature 110 - 140°F / 43 - 60°C (140°F / 60°C recommended to reduce start-up time) - Initial Fill: 67.6 U.S.gals / 256.0 l - Recommended water hardness 1-3 grains per U.S. gal Underside of machine is accessible for piping.	1/2" NPT
2.02	Cold water, final rinse connection: - Temperature cold as available (53°F / 12°C recommended maximum to reduce steam emissions) - Consumption: 56.2 U.S.gals/hr / 212.7 l/hr (at 100% capacity) - Recommended water hardness 1-3 grains per U.S. gal Underside of machine is accessible for piping.	1/2" NPT
3.0	Electrical connection: All connections are 4-wire (3 line, 1 ground, no neutral). Incoming leads must be appropriately sized for electrical supply. Individual circuit breaker/disconnects with lockout/tagout strongly recommended (by others)	

Terminal blocks (T1-4)	power supply	rated amps	min supply cond/max breaker
T1 motors, controls, dryer heat	460V/60Hz/3Ph	25.6 A	35 A
T2 tank heat	460V/60Hz/3Ph	28.8 A	40 A
T3 tank heat	460V/60Hz/3Ph	19.4 A	25 A
T4 tank heat, built in booster	460V/60Hz/3Ph	21.6 A	30 A
	total load	95.4 A	

Electrical supply should be routed into control box from above if possible. Openings in the box for the supply lines are NOT provided and should be executed on-site using appropriate strain relief devices.

Equipotential ground lug

6.0	Ventilation connection: MEIKO recommends a hood above the load end of the machine as shown to capture exhaust air from the machine vent, as well as any steam that may escape from the entrance of the machine. Recommended exhaust hood rating 500 cfm / 850 m³/hr An indirect vent connection that permits service access to ventilation fan is REQUIRED. Exhaust air temperature approximately 72°F / 22°C with incoming cold water temperature 53°F / 12°C. The waste air temperature is depending on the temperature of the incoming water supply. Maximum water temperature 53°F / 12°C strongly recommended. Relative humidity approximately 98%. Heat load of the machine into the dishwash area (not including ware or exhaust): Total: 12.9 kW Perceptible: 6.9 kW Latent: 6.0 kW The waste air connection must be corrosion-resistant and frost free. In particular, provision must be made to prevent air temperatures of 32°F / 0°C or colder from reaching the machine at any time. A hood that provides draining condensation from the vent ducting is STRONGLY RECOMMENDED. PLEASE NOTE: A direct vent connection is not possible. The housing for the exhaust fan is attached to a hinged panel that must be opened to access the heat exchanger for maintenance and service.

Separation

FEATURES AND OPTIONS

(B) on/off switch at entry tunnel (including protection bumper), operating side
(C) on/off switch at the end of the drying section(s), operating side
(D) Emergency stop at electrical cabinet (including protection bumper)
waste heat air recovery system (WAHRS)
electric heated tanks
built in booster heater (BIB)
single point exhaust
m-filter active tank water filtration and level control
conveyor belt MTB 1.11-2
electric heated single blower dryer (SBD)

GENERAL NOTES

All dimensions from floor are +/- 1/2" (13mm) due to adjustable feet. This drawing may not be copied, reproduced or distributed in any printed, electronic or machine-readable format without the advance permission of Meiko. This drawing is for information only and may not be used for competitive purposes. All rights reserved.

UTILITY NOTES

All aspects of the machine installation, including all utility connections, must comply with all applicable local and national codes. In most cases, actual utility connections may only be executed by a certified professional (electrician, plumber, etc.). All locations shown on this drawing represent actual utility connection locations and do not take into account local conditions. Connections inside the machine may require the installer to extend supply lines, use appropriate strain relief devices, etc. All utilities must function constantly without interruptions during operation. All aspects of the installation must be protected against freezing temperatures.

Revision

MEIKO USA, INC.
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WEB: www.meiko.us
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This document is only valid in conjunction with the conditions defined in the document " Important remarks " ! Can be requested from the manufacturer.

Reference	M-IQ STANDARD DRAWING / USA
Type	M-IQ B-M74 V6 N02 P8 R-L ELECTRIC HEAT HR / TF: SWW
Drawing-No.	S00041377
Order-No.	
Scale	1/2" = 1'-0"
drawn:	07.01.2019 m-iplan
checked:	08.01.2019 mja

USA US

UConn Dishrooms

Gelfenbein Hall

ColburnGuyette
foodservice design

Revision Schedule

No.	Description	Date

Drawing Scale:

Sheet Name:

Foodservice Details

Issued: 02/11/19

Drawn By: LK

Checked By: BT/KS

Drawing No.:

K6.2

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Hood information

Item #	Model	Length [in]	Material Exposed Unexposed	Weight of Hood	Exhaust Information: Total Exhaust [cfm]	S.P. [%GO]	T.A.S. [%GO]	Collars [in]: Length	Width	Qty	Supply Information: Total Supply [cfm]	S.P. [%GO]	Collars [in]: Length	Width	Qty	Weight of Plenum
GELF	CH	54	W.SA. 304 S.S. W.SA. Aluminized	202 lbs	500	0.05	0.00	8	8	1						

Supply Devices

Item #	Type	Supply [cfm]	dpTot [%GO]	Collar diam. [in]

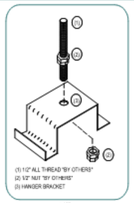
Hood information

Item #	Filters: Type	Qty	Size	Lighting: Qty	Type	Fire suppression: Type	Location	Switch panel: Type	Location	Continuous capture	Grease cup location
GELF											Left

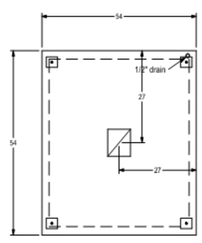
Hood information

Item #	Ceiling closure panels: Height [in]	Qty	Backsplash panels: Qty	Type	Length [in]	Height [in]
GELF	18	4				

Notes



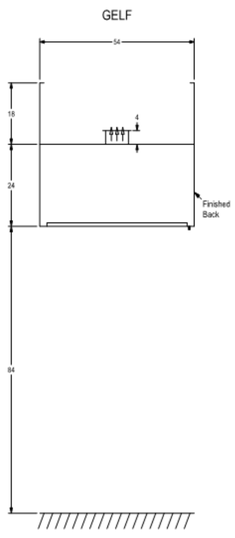
NOTE:
STRUCTURAL ENGINEER TO VERIFY LOCAL REQUIREMENTS. HANGING REQUIREMENTS ARE THE RESPONSIBILITY OF INSTALLING CONTRACTOR. LOCAL CODES MUST BE FOLLOWED.



GELF

All dimensions in inches

PRELIMINARY DRAWING, NOT TO SCALE



PRELIMINARY DRAWING, NOT TO SCALE

WEBSITE: WWW.HALTONCOMPANY.COM

HALTON CO. (USA)
1000 HOLLYWOOD AVE.
SUITE 1 FLEET, AT 41010
CONSTANTINE

HALTON CO. (CANADA)
1000 HOLLYWOOD AVE.
SUITE 1 FLEET, AT 41010
CONSTANTINE

REV | DATE

REVISED DESCRIPTION

PROJECT: UCONN DISHROOMS

LOCATION: Unit of Connecticut

DRAWN BY: HALTON CO. (CANADA) 02/11/2019

SCALE:

CONSULTANT:

Halton

DRAWING TITLE:

DRAWING No.:

REV. NO.:

SHEET NO.: of

UCONN DISHROOMS

Gelfenbein Hall

ColburnGuyette foodservice design

Revision Schedule

No.	Description	Date

Drawing Scale:

Sheet Name:

Foodservice Details

Issued: 02/11/19

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Checked By: BT/KS

Drawing No.:

K6.3

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