Downtown Reinvestment Grant Program Application

Rec'd 9-10-15

Please return completed with necessary attachments and signature to Economic Development office, 215 E. McKinney no later than 5 pm by the first Monday of each month. If you have any application questions, please contact the Economic Development Program Administrator at 940-349-7732.

Applicant Name Jonathan Powell	Date 9/11/15
Business Name Frog and Scorpion Brewing Company, LLC (Hopt Sting)	
Mailing Address 3833 Berkshire Ln Bedford, Texas 76021	
Contact Phone 817-658-1974	Email Address jpowell6358@gmail.com
Building Owner (if different from applicant) Joseph Valenti	
Historical/Current Building Name	
Project Site/Address 104 W. McKinney St.	

Type of Work: (check all that apply)

Paint Only	☐	Façade & Building Renovation	☐
Signage	☐	Awnings	☐
Utility Upgrades	☑	Impact Fees	☐

Details of Planned Improvements relating to Grant Request (attach additional information if necessary) Electrical, water, sewage upgrades to bring building up to code. Facade & roof improvements, as well as sidewalk work

How will this project benefit Downtown?

We will be establishing a retail brewpub under the new regulations and will be revitalizing a block which currently is under-utilized.

Project Expenditures	Estimated Costs	Grant Requested
Façade/Building Rehab		
Awnings		
Signs		
Impact Fees		
Utility Upgrades	$200,000	$25,000
Totals	$200,000	$25,000

TOTAL COST OF PROPOSED PROJECT $ 200,000

TOTAL GRANT REQUEST
(May not exceed 50% of TOTAL COST up to $25,000) $ 25,000

Attach with all required color samples of paint, awning/canopy, sign design, etc., as well as photographs of building's exterior facade, roof and foundation.

See revised budget on next page

Applicant's Signature

9/11/15
Date

Construction Budget

Project Expenditures	Estimated Costs	Grant Requested
Façade/Building Rehab	$548,415	$12,500
Awnings		
Signs		
Impact Fees		
Utility Upgrades	$50,375	As available
Roof	$52,500	$12,500
Other costs (overhead, profit, other)	$125,997	
Totals	$777,287	$25,000

Total Cost of Proposed Project: $777,287

Total Grant Request: $25,000

Bid Documents

See Attached Bid Documents from Links Construction.

Drawings

See Attached Drawings from KAS.

We appreciate your consideration of this grant request. We look forward to becoming an important asset and attraction to add to the economic vitality and livability of Downtown Denton.

Sincerely,

Vicki Oppenheim, AICP
Principal
940-367-8029

DOWNTOWN REINVESTMENT GRANT AGREEMENT FORM

Please complete and return with Downtown Reinvestment Grant Application to Economic Development office, 215 E. McKinney no later than 5 pm by the first Monday of each month. If you have any questions, please contact the Economic Development Program Administrator at 940-349-7732.

I have met with the Economic Development Program Administrator, and I have read and fully understand the Downtown Reinvestment Grant procedures established by the Denton City Council. I intend to use this grant program for the aforementioned renovation projects to advance the efforts of revitalization and historic preservation of Denton's historic downtown. *I have not received, nor will I receive insurance monies for this revitalization project.*

I understand that if I am awarded a Downtown Reinvestment Grant by the City of Denton, any deviation from the approved project may result in the partial or total withdrawal of the grant. (If I am awarded a reinvestment grant for façade, awning or sign work and the façade, sign or awning is altered for any reason within **one (1) year** from construction, I may be required to reimburse the City of Denton immediately for the full amount of the grant.)

Frog and Scorpion Brewing Company, LLC

Business/Organization Name

Jon Powell — Jonathan Powell — 9/11/15

Applicant's Signature — ***Printed Name*** — ***Date***

Building Owner's Signature *(if different from applicant)* ***Printed Name*** ***Date***

This section is to be completed by Economic Development staff

Date considered by DTTF — ***Recommendation*** — ***Staff Signature***

Date considered by City Manager — ***Recommendation*** — ***City Manager Signature***

Date considered by EDPB — ***Recommendation*** — ***Staff Signature***

March 29, 2016

Department of Development Services
City Hall West
221 N. Elm
Denton, TX 76201

Re: Project Narrative, New Downtown Brewery and Pub

We are pleased to submit this pre-design application for the proposed New Downtown Brewery and Pub at 104 W. McKinney Street. This project is planned to be a high-quality addition to the downtown with a modern and inviting atmosphere to feature unique beer brewed by experienced brewers. An existing building that was most recently used as a garage for towed and stored vehicles will be upgraded. Here are the following required items for the Pre-Development Meeting request:

1. List of attendees and respective responsibilities in the development

- Joseph Valenti: Owner of 104 W. McKinney Street and participant in the project
- Vicki Oppenheim, AICP and LEED Green Associate
  Green Leaf Environmental Planning: Urban Planner
- David M. Robinson, *AIA, LEED AP BD+C*
  Managing Director, Studio
  Kirkpatrick Architecture Studio: Architect
- Jon Powell: Brewery Owner and Operator

2. List of questions and topics to be discussed.

A. In the serving area, we are proposing an occupancy factor of 1 occupant per every 7 square feet. Please confirm if this factor is acceptable.
B. Please confirm if the plumbing factor for water closet should be 1/40 or 1/75.
C. We are proposing to fire sprinkler the building. The only public access is on the McKinney façade where a door to a sprinkler room is not feasible. Please confirm if an exposed fire riser in the brewery

section of the building is acceptable. Further, please confirm that an FDC on the McKinney façade is acceptable.

D. Please confirm if and Envelope ComCheck will be required.

E. What are the options for dumpster placement?

F. Are there any future plans for the public alley. The alley is needed as a loading area for the brewery.

G. Are there any limits on hours of operation (either for production or retail)?

H. Are there any plans for upgrades of the public sidewalks on McKinney Street? Are there any plans for pedestrian access upgrades at the nearby intersections? We believe this is very important for future customers.

I. Are there any issues with connecting to the water, electrical, or gas utilities?

J. What noise ordinance requirements will be applicable to this development?

K. Are there any capital improvements planned for that section of McKinney Street between Elm and Locust?

3. Site Location Map

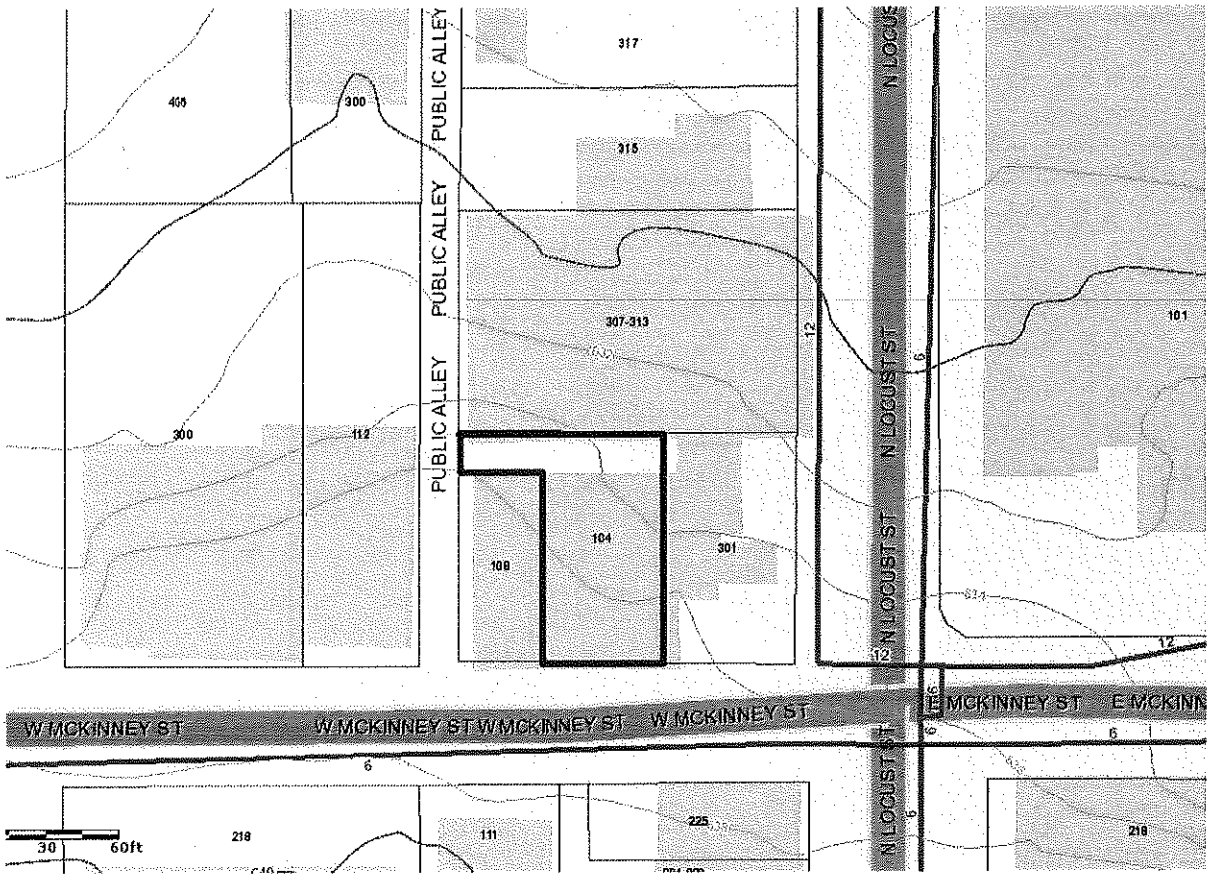


Figure 1: 104 W. McKinney

4. Written description of the proposed development.

The Client is proposing to open a Brewery at 104 West McKinney Street in Denton, Texas. The property is approximately 0.11 acres in the Lacy Addition, Lot 1, portion of Blocks 8 and 9, and the building is approximately 4,040 square feet. The Client envisions providing high-quality beer on tap in a comfortable and attractive brew-pub. The brewery/brew-pub will also sell beer to local bars and sell kegs for local events and parties. The brew-pub will include the production of beer onsite. There will also be limited bottling operations 3 to 4 times per year of 500 to 1000 bottles per run. Pre-prepared food will be served but there are no plans for a full-kitchen or restaurant. Patrons may also possibly order food for delivery from other establishments.

The property is located just north of the Square and is in an area that is most likely going to see a new wave of redevelopment. Denton's downtown continues to grow with its nightlife and established music scene. Denton's brewery and brew-pub scene is also beginning to develop, with Audacity Brew House, Barley and Board on the Square, and the upcoming Armadillo Ale brewery in the downtown near the DCTA train station. There are several new bars with lively nightlife scenes that have beer on tap in the downtown.

The property is currently a brick-veneer garage leased by B&O Service and Towing for the storage of towed vehicles. The current property owner also stores vehicles in the garage. According to the Denton Appraisal District Records, the building was built in 1920. Very large equipment with significant energy and water use will be needed for the brewing process. The water use will be 10 gallons of water utilized per 1 gallon of beer. Green technologies for water reuse and electrical use are desired.

The Client proposes operating the brewing process 2 to 3 times per week. A dust collector or vacuum collector will be needed to collect the dust. Dust that will be generated will be stored in 55 gallon drums and removed immediately to be used for cattle feed.

Preliminary Equipment List

Equipment Name	Description
Grain Mill	~3 SF, single or 3 phase, 120 or 240
Auger System	Connecting grain mill to girst case, grist case to Mash Tun
Dust Collector	Connects to grain mill, ~3 SF, single phase, 120.
Mash Tun	These will all be aggregated as the Brewhouse. The Kettle and Mash Tun will need steam pipes from the boiler for heating. Total footprint ~100 SF. Height of ~8.5ft.

Brew Kettle	
Heat Exchanger	
Brewhouse pump w/ VFD	
Hot Water Tank	Will need steam piping from boiler. ~10 SF footprint, with ~8.5ft height.
Cold Water Tank	Will need glycol piping connecting it with glycol tank/pumps. ~10SF footprint, with 8.5ft height.
Boiler	May require own room. Lots of options here and need to get guidance from the city first. We can go electric or natural gas fired. Electric would require 3 phase 240. Footprint anywhere from 6-10 SF with 5-7ft height.
Water Softener	Both these should not take up more than 3 SF.
Water Filter	
Air Compressor	Another area where talking to the city will narrow down options. 240 ideal. Should not be more than 5 SF footprint.
Air Dryer	Single phase 120. 2 SF footprint.
Fermenters	Will need glycol piping connecting it with glycol tank/pumps. We shouldn't ever need tanks larger than 10 SF, with 10ft height (prob. significantly smaller). We would like to start with 6 fermenters and having them as close to the brewhouse as possible.
Bright Beer Tanks	Similar to Fermenters in size and requirements. We would like to start with 2 and having them as close to Fermenters as possible (ideally on opposite side of brewhouse).
CO2 Tanks/Lines	These should only take up ~3 SF. Usually just get tucked into out of the way corner. No special requirements.
Keg Washer	These are on wheels. Just wanted to allow about 10 SF for a keg washing station.
Walk In Cooler	~250 SF, with 10ft height.
Glycol System	This will require a small tank to hold the glycol and a large pump. Not more than 10 SF. 240 probably required.

5. Conceptual site plan, sketch or other graphic information to depict the proposed project.

See Attached plans.

We appreciate your responses to our questions and look forward to meeting with you at the Pre-Design Meeting.

Sincerely,

Vicki Oppenheim, AICP, LEED Green Associate
940-367-8029
vicki@greenlep.com
Green Leaf Environmental Planning

GREEN LEAF ENVIRONMENTAL PLANNING

July 29, 2016

City of Denton
Economic Development Division

Re: Additional Information for Downtown Reinvestment Grant Program
Hop and Sting Brewing Company

Dear Economic Development Division:

We are pleased to submit additional information necessary to process the Downtown Grant for the Hop and Sting Brewing Company at 104 W. McKinney Street. The project will transform an underutilized building from 1920's that currently stores towed vehicles into a state-of-the-art brew-pub that generates sales tax revenues and attracts visitors to the downtown. This brewery will be in addition to a new "brewery district" that appears to be developing in the downtown with Armadillo Ale, Barley and Board (a small brewing operation), and the Denton County Brewing Company to the east at 200 E. McKinney Street.

Hop and Sting was recently featured in the Dentonite blog: http://www.thedentonite.com/blog/hop-and-sting-brewing-co-denton. The brewery provided a sneak preview of its craft beers through samples at a recent fundraiser for the Denton Community Market at the Denton Arts Council. At the fundraiser, the beers were praised by the public as very high quality.

The upgrades and renovation of the building will add modern accents to a building that adjoins the architecturally-significant Gulf Station building. The Hop and Sting Brewing Company plans on hiring 4 full-time employees the first year and projects $500,000 gross sales the first year. Sales are projected to increase to $1.25 million by the third year. The interior will be inviting for people to observe the brewing process and drink the craft beer on-site. A limited number of bottled beer will be sold in special runs each year.

The brewery will require significant investment to renovate the building and purchase the necessary equipment to operate the brewery. At this time, the building and construction process will bring the building up to current codes and hook up to the necessary utilities needed to safely operate the brewery.

Summary of Construction:

Kirkpatrick Architecture Studio (KAS) in Denton is the architect on the project. The existing 1920's era building is a single story, double-wide brick building approximately 4,100 square feet. While not registered with local historical societies, the building's character contributes to the downtown urban fabric. In order to maintain historical relevancy, the building will have selective masonry tuck-pointing performed to shore up areas where the bricks have lost structural integrity. The building has brick detailing consistent with the craftsmanship and scale of the era and is being preserved. The front façade in particular is being addressed due to its visibility. The existing garage doors will be replaced with energy efficient aluminum storefront and glass set in a pattern that maintains the neighborhood scale and character. The existing roof has failed is contributing to the deterioration of the interior and will be removed and a new SBS modified bituminous roof will be installed that meets current Energy Codes.

The sidewalk is being replaced to accommodate ADA provisions and to promote the pedestrian nature of the downtown revitalization. In addition, the entry will be recessed to provide a safety zone on the sidewalk away from vehicular traffic. A pedestrian scale railing is proposed between the vehicles and the pedestrians that will serve as both a buffer and as signage.

For the interior, the existing floor slab will be removed and a new concrete slab will be installed. New electrical service will be provided to operate the brewery equipment as the current service is inadequate for modern use. New roof mounted HVAC system that meets current Energy Codes is required to condition the space. A new, larger water service will be plumbed into the building. A trench drain will be added to facilitate cleaning. The interior will be divided using cold formed metal framing and fire rated gypsum board partitions. Two new restrooms and support spaces will be created inside. The front façade will receive new aluminum storefront for transparency.

The existing exposed brick on the interior is being preserved and renovated where needed with tuck-pointing. The existing wood roof trusses and wood roof deck are being left exposed to highlight the building's character and its new use.

Life Safety measures include the installation of a new wet pipe fire suppression system. Brewery equipment is exposed to view and all associated plumbing and electrical work will occur on adjacent walls or ceiling.

Links Construction Estimate

		SUB TOTAL COSTS	THIS PROJECT		PROPOSED CONTRACT	
		BLDG/SITE/GC	SQFT COST	SITE SQFT	[illegible]	
DATE:	Tuesday, July 26, 2016		SITE	NA	BUILDERS RISK	
PROJECT:	[illegible]	FEE	[illegible]	[illegible]	1,135.87	YES
OWNER:	[illegible]	[illegible]	BLDG W/GC		GENERAL LIABILITY	
ADDRESS:	[illegible]		[illegible]		816.15	YES
OVERHEAD:	5.00%		TOTAL		LENGTH OF PROJECT (days)	
PROFIT:	5.00%	TOTAL COSTS	[illegible]			
SQFT:	[illegible]	[illegible]			137.0	

Phase	Description	Notes	Budget $	Cost Type	SUBCONTRACTOR	
DIVISION 01	GENERAL REQUIREMENTS		[illegible]		$ [illegible]	
023216- -	Material Testing		2,992.00			
024116- -	Structure Demolition		35,705.00			
DIVISION 02	EXISTING CONDITIONS		[illegible]			
033000- -	Cast in Place Concrete		51,310.00			
DIVISION 03	CONCRETE		[illegible]			
040516- -	Masonry Restoration		15,785.00			
042113- -	Brick & CMU Infill		12,000.00			
042200- -	Masonry Cleaning		17,000.00			
049999- -	Barricades & Scaffolding		4,500.00			
DIVISION 04	MASONRY		[illegible]			
051200- -	Structural Steel Fab & Erect		28,382.00			
057300- -	Decorative Metal Railings		12,132.00			
DIVISION 05	METALS		[illegible]			
062023- -	Millwork		19,500.00			
064000- -	Install Salvaged Wood Clg		9,900.00			
DIVISION 06	WOODS, PLASTICS, AND COMPOSITES		[illegible]			
071100- -	Water Repellent		2,869.00			
071200- -	Sealants		1,242.00			
071400- -	Concrete Floor Sealer		2,122.00			
072700- -	Fluid Applied Air Barriers		3,346.00			
075200- -	2-Ply Mod Bit Roofing		52,500.00			
DIVISION 07	THERMAL & MOISTURE PROTECTION		[illegible]			
081213- -	HM Drs / Frms / Hdwr		3,224.00			
083323- -	Overhead Door		4,500.00			
083800- -	Ellason Doors		1,695.00			
084113- -	Aluminum Framed Storefronts		27,445.00			
DIVISION 08	OPENINGS		[illegible]			
092116- -	Gypsum Board Assemblies		18,400.00			
093000- -	Tile		6,274.00			
099113- -	Painting		13,200.00			
DIVISION 09	FINISHES		[illegible]			
102813- -	Toilet Accessories		2,130.00			
105629- -	Address Numbers		3,500.00			
DIVISION 10	SPECIALTIES		[illegible]			
211300- -	Fire Sprinkler Systems		14,000.00			
DIVISION 21	FIRE SUPPRESSION		[illegible]			
220000- -	Plumbing		47,575.00			
DIVISION 22	PLUMBING		[illegible]			
260000- -	Electrical		93,633.00			
269999- -	Primary Allowance per Addm 1		22,000.00			
DIVISION 26	ELECTRICAL		[illegible]			
321313- -	Flatwork Between Buildings		INCL			
321600-10-	Sidewalks		INCL			
331119- -	Fire line Utility Piping		50,375.00			
DIVISION 33	UTILITIES		[illegible]			
	PROJECT SUBTOTAL		[illegible]			
	OVERHEAD		[illegible]			

SUBTOTAL (PROJECT SUBTOTAL + OVERHEAD)		[illegible]			
PROFIT		[illegible]			
SUBTOTAL (SUBTOTAL + PROFIT)		[illegible]			
TAX (MUST ENTER %)	8.25%	[illegible]			
PROJECT TOTAL		[illegible]			

HOP & STING BREWERY

DENTON TEXAS

1 AREA MAP

2 VICINITY MAP

KIRKPATRICK ARCHITECTURE STUDIO

100 West Mulberry
Denton, Texas
76201

James R. Kirkpatrick, FAIA
940/387.8182
jim@k-a-studio.com

FRANK W. NEAL & ASSOCIATES STRUCTURAL ENGINEERS

1015 W. Broadway Ave
Fort Worth, Texas
76104

Kevin Goodman
817/332.1544
kgoodman@fwna-eng.com

NOVAENGINEERING CONSULTING ENGINEERS

2525 North Josey Lane
Dallas, Texas
75007

Joel Garcia
972/979.7869
jgarcia@nova-engineering.net

07/08/2016

INCLUDED IN THIS ISSUE
ISSUE DATE OF SHEET
REVISION NUMBER

INDEX OF DRAWINGS

ARCHITECTURAL		
07/08/16	A0.00	COVER SHEET
07/08/16	A0.01	PROJECT INFO, CODE, LIFE SAFETY
07/08/16	A1.01	SITE PLAN
07/08/16	A1.02	DEMO FLOOR PLAN
07/08/16	A1.03	NEW FLOOR PLAN
07/08/16	A1.04	FF&E PLAN
07/08/16	A1.05	DEMO REFLECTED CEILING PLAN
07/08/16	A1.06	NEW REFLECTED CEILING PLAN
07/08/16	A1.07	ROOF PLAN WITH DETAILS
07/08/16	A2.01	SCHEDULES
07/08/16	A4.01	DEMO EXTERIOR ELEVATIONS
07/08/16	A4.02	EXTERIOR ELEVATIONS
07/08/16	A5.10	PARTITION TYPES
07/08/16	A7.01	INTERIOR ELEVATIONS & DETAILS
07/08/16	A7.02	DETAILS
07/08/16	A7.03	HEAD JAMB AND SILL DETAILS
STRUCTURAL		
07/08/16	S0.01	GENERAL NOTES
07/08/16	S1.01	DETAILS
07/08/16	S2.01	FOUNDATION PLAN
07/08/16	S2.02	RTU LOCATION PLAN
PLUMBING/MECHANICAL/ELECTRICAL		
07/08/16	MEP1.00	COVER SHEET - MEP
07/08/16	MEP1.01	SPECIFICATIONS - MEP
07/08/16	MEP2.02	ROOF PLAN - MEP
07/08/16	MEP2.01	FLOOR PLAN - MECHANICAL
07/08/16	M5.01	SCHEDULES AND DETAILS - MECHANICAL
07/08/16	E2.01	FLOOR PLAN - ELECTRICAL
07/08/16	E4.01	SCHEDULES AND DETAILS - ELECTRICAL
07/08/16	P2.01	FLOOR PLAN - PLUMBING
07/08/16	P5.01	SCHEDULES AND DETAILS - PLUMBING

MEANS OF EGRESS

IBC TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	BUILDING COMPONENT	S.F.	S.F./OCC.	OCC.
BUSINESS	SERVICES	1,200	100 GROSS	12
FACTORY	PRODUCTION	2,800	100 GROSS	28
				40

IBC SECTION 1005.3.2 MINIMUM REQUIRED EGRESS WIDTH PER OCCUPANT
DOORS, CORRIDORS, AISLES, ETC.: 40 TOTAL OCCUPANTS X 0.3 = 9 INCHES REQUIRED
150 INCHES PROVIDED

IBC SECTION 1005.3 DISTRIBUTION OF EGRESS CAPACITY
WHERE MORE THAN ONE EXIT, OR ACCESS TO MORE THAN ONE EXIT, IS REQUIRED, THE MEANS OF EGRESS SHALL BE CONTINUOUS SUCH THAT THE LOSS OF ANY ONE EXIT, OR ACCESS TO ONE EXIT, SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50 PERCENT OF THE REQUIRED CAPACITY.

IBC SECTION 1008.1.1 SIZE OF DOORS
THE MINIMUM WIDTH OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A CLEAR WIDTH OF 32 INCHES

IBC TABLE 1015.1
SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

OCCUPANCY	MAXIMUM OCCUPANT LOAD
GROUP B	49
GROUP F2	29

IBC SECTION 1016.2.1 - TWO WAYS OF EXIT ACCESS DOORWAYS
THE EXIT DOORS OR EXIT ACCESS DOORWAYS SHALL BE PLACED A DISTANCE APART EQUAL TO NOT LESS THAN ONE-HALF OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE BUILDING OR AREA TO BE SERVED MEASURED IN A STRAIGHT LINE BETWEEN EXIT DOORS OR EXIT ACCESS DOORWAYS. EXCEPTION 2: WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM, THE SEPARATION DISTANCE OF THE EXIT DOORS OR EXIT ACCESS DOORWAYS SHALL NOT BE LESS THAN ONE-THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVED.

IBC TABLE 1017.2
EXIT ACCESS TRAVEL DISTANCES

OCCUPANCY	WITH SPRINKLER SYSTEM (FEET)
GROUP B	250
GROUP F2	400

IBC TABLE 1018.1
CORRIDOR FIRE-RESISTANCE RATING

OCCUPANCY	OCCUPANT LOAD SERVED BY CORR.	REQUIRED RATING WITH SPRINKLER
GROUP B	GREATER THAN 30	0.5
GROUP F2	GREATER THAN 30	0

IBC SECTION 1018.3 - MINIMUM CORRIDOR WIDTH
THE MINIMUM CORRIDOR WIDTH SHALL BE AS DETERMINED IN SECTION 1005.1, BUT NOT LESS THAN 44 INCHES.
EXCEPTION 1: 24 INCHES FOR ACCESS TO AND UTILIZATION OF ELECTRICAL, MECHANICAL OR PLUMBING SYSTEMS OR EQUIPMENT.
EXCEPTION 2: 28 INCHES WITH A REQUIRED OCCUPANT CAPACITY OF LESS THAN 50

PLUMBING FIXTURE CALCULATIONS

TOTAL OCCUPANTS: 40

OCCUPANCY	# OF OCCUPANTS	WATER CLOSET	REQUIRED
GROUP B	12	1 PER 10	1
GROUP F2	28	1 PER 100	1

2 WATER CLOSETS REQUIRED
2 WATER CLOSETS PROVIDED

OCCUPANCY	# OF OCCUPANTS	LAVATORY	REQUIRED
GROUP B	12	1 PER 10	1
GROUP F2	28	1 PER 100	1

2 LAVATORIES REQUIRED
2 LAVATORIES PROVIDED

OCCUPANCY	# OF OCCUPANTS	SERVICE SINK	REQUIRED
GROUP B	12	N/A	0
GROUP F2	28	1 SERVICE SINK	1

1 SERVICE SINK REQUIRED
1 SERVICE SINK PROVIDED

OCCUPANCY	# OF OCCUPANTS	DRINKING FOUNTAINS	REQUIRED
GROUP B	12	1 PER 100	1
GROUP F2	28	1 PER 100	1

1 DRINKING FOUNTAINS REQUIRED
1 DRINKING FOUNTAINS PROVIDED

OCCUPANCY	# OF OCCUPANTS	SHOWERS	REQUIRED
GROUP B	12	1 PER 9	2
GROUP F2	28	1 PER 100	0

2 SHOWERS REQUIRED
2 SHOWERS PROVIDED

OCCUPANCY	# OF OCCUPANTS	EMER. SHOWER / EYE WASH	REQUIRED
GROUP B	12	N/A	0
GROUP F2	28	N/A	0

0 EMERGENCY SHOWER AND EYEWASH STATIONS REQUIRED
0 EMERGENCY SHOWER AND EYEWASH STATIONS PROVIDED

PARKING CALCULATIONS

COMMERCIAL USE	COUNT	REQUIREMENTS PER DEVELOPMENT CODE SECT. 30.344		
STAFF	0	2 SPACES / STAFF MEMBER	=	0
VISITOR	0		=	0

SPACES REQUIRED = 0
SPACES PROVIDED = 0

1. PARKING REQUIREMENTS NOT SPECIFICALLY DEFINED; CALCULATIONS PER DISCUSSION WITH CITY.
2. ALLOWS OVERLAP AT SHIFT CHANGES

REGULATORY AUTHORITIES

CITY OF DENTON
601 E Hickory St
DENTON, TX 76205
940-349-8240

STATE OF TEXAS
STATE FIRE MARSHAL
333 GUADALUPE ST.
AUSTIN, TX 78701

TEXAS DEPARTMENT OF LICENSING & REGULATION
TEXAS ACCESSIBILITY STANDARDS
920 COLORADO
AUSTIN, TX 78701

APPLICABLE CODES

BUILDING:	2012 INTERNATIONAL BUILDING CODE
	2012 INTERNATIONAL EXISTING BUILDING CODE
ACCESSIBILITY:	2012 TEXAS ACCESSIBILITY STANDARDS
ADA/A:	2010 ADA/A
LIFE SAFETY:	2012 NFPA 101 LIFE SAFETY CODE
FIRE SAFETY:	2012 INTERNATIONAL FIRE CODE
ENERGY:	2012 INTERNATIONAL ENERGY CONSERVATION CODE
ELECTRIC:	2014 NATIONAL ELECTRIC CODE
PLUMBING:	2012 INTERNATIONAL PLUMBING CODE
MECHANICAL:	2012 INTERNATIONAL MECHANICAL CODE
GAS:	2012 INTERNATIONAL FUEL GAS CODE
OWNER CRITERIA:	2014 DESIGN & CONSTRUCTION GUIDELINES CONTRACTOR SAFETY & WORK PRACTICES GENERAL CONSTRUCTION GUIDELINES

DESIGN DATA

WIND VELOCITY = 90 MPH
ENERGY CODE = ZONE 3A

USE AND OCCUPANCY CLASSIFICATION

IBC SECTION 302.1 AND 312.3

CLASSIFICATION		BUILDING COMPONENT
BUSINESS	GROUP B	LIVING QUARTERS
FACTORY	GROUP F2	VEHICLE BAYS, SUPPORT SPACES

NOTE: INVERSE OF SERVICE OF LESS THAN 50 PEOPLE IS CONSIDERED ACCESSORY TO B AND F2

GENERAL BUILDING HEIGHTS AND AREAS

CONSTRUCTION TYPE V-B

ALLOWABLE BUILDING HEIGHT (FEET): ALLOWABLE BUILDING HEIGHT (IBC TABLE 503)		40-0"
AUTOMATIC SPRINKLER SYSTEM INCREASE (IBC SECTION 504.3)		20-0"
ALLOWABLE BUILDING HEIGHT WITH MODIFICATIONS		60-0"
PROPOSED BUILDING HEIGHT		22-0"

CONSTRUCTION TYPE F-2 (MOST RESTRICTIVE)

ALLOWABLE BUILDING HEIGHT (STORIES): ALLOWABLE BUILDING HEIGHT (IBC TABLE 503)	2
AUTOMATIC SPRINKLER SYSTEM INCREASE (IBC SECTION 504.3)	1
ALLOWABLE BUILDING HEIGHT WITH MODIFICATIONS	3
PROPOSED BUILDING HEIGHT	1
ALLOWABLE BUILDING AREA(S.F.): ALLOWABLE BUILDING AREA (IBC TABLE 503)	7,500
AUTOMATIC SPRINKLER SYSTEM INCREASE (IBC SECTION 504.3)	300%
ALLOWABLE BUILDING AREA WITH MODIFICATIONS	21,000
PROPOSED BUILDING AREA	4,000

TYPES OF CONSTRUCTION

IBC TABLE 602.4
TYPE V-B - TYPE OF CONSTRUCTION IN WHICH THE STRUCTURAL ELEMENTS, EXTERIOR WALLS AND INTERIOR WALLS ARE OF ANY MATERIALS PERMITTED BY THIS CODE.

IBC TABLE 601
FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE V-B
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS EXTERIOR 4,000 INTERIOR	0 0
NONBEARING WALLS AND PARTITIONS EXTERIOR	TABLE 602
NONBEARING WALLS AND PARTITIONS INTERIOR	0
FLOOR CONSTRUCTION AND SECONDARY MEMBERS	0
ROOF CONSTRUCTION AND SECONDARY MEMBERS	0

IBC TABLE 602
FIRE RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON SEPARATION DISTANCE

FIRE SEPARATION DISTANCE (FEET)	TYPE OF CONSTRUCTION	OCCUPANCY B
X < 5	V-B	1
5 ≤ X < 10	V-B	1
10 ≤ X < 30	V-B	0
30 ≤ X	V-B	0

INTERIOR FINISHES

IBC TABLE 803.9
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY

GROUP	SPRINKLERED		
	EXIT ENCLOSURES AND EXIT PASSAGEWAYS	CORRIDORS	ROOMS AND ENCLOSED SPACES
B	C	C	C
F2	C	C	C

A. CLASS C INTERIOR FINISH MATERIALS SHALL BE PERMITTED FOR WAINSCOTING OR PANELING OF NOT MORE THAN 1000 SQUARE FEET OF APPLIED SURFACE AREA IN THE GROUND FLOOR WHERE APPLIED DIRECTLY TO UNCOMBUSTIBLE BASE AND FURRED OVER FURRING STRIPS APPLIED TO A NON-COMBUSTIBLE BASE AND FURRED-OUT

B. IN OTHER THAN GROUP I-2 OCCUPANCIES IN BUILDINGS LESS THAN THREE STORIES ABOVE GRADE PLANE OF OTHER THAN GROUP F-2, CLASS B INTERIOR FINISH FOR NONSPRINKLERED BUILDINGS AND CLASS C INTERIOR FINISH FOR SPRINKLERED BUILDINGS SHALL BE PERMITTED IN INTERIOR EXIT STAIRWAYS AND RAMPS.

C. REQUIREMENTS FOR ROOMS AND ENCLOSED SPACES SHALL BE BASED UPON SPACES ENCLOSED BY PARTITIONS. WHERE A FIRE-RESISTANCE RATING IS REQUIRED FOR STRUCTURAL ELEMENTS, THE ENCLOSING PARTITIONS SHALL EXTEND FROM THE FLOOR TO THE CEILING. PARTITIONS THAT DO NOT COMPLY WITH THIS SHALL BE CONSIDERED ENCLOSING SPACES AND THE ROOM OR SPACES ON BOTH SIDES SHALL BE CONSIDERED ONE.

IBC SECTION 803.1.1
CLASS A: FLAME SPREAD INDEX 0-25, SMOKE-DEVELOPED INDEX 450
CLASS B: FLAME SPREAD INDEX 26-75, SMOKE-DEVELOPED INDEX 450
CLASS C: FLAME SPREAD INDEX 76-200, SMOKE-DEVELOPED INDEX 450

GENERAL CONSTRUCTION NOTES

01 CONTRACTOR SHALL MAKE AN EXAMINATION OF THE PROJECT SITE AND COMPLETELY FAMILIARIZE HIMSELF WITH THE NATURE AND EXTENT OF THE WORK TO BE ACCOMPLISHED. NO EXTRA COMPENSATION WILL BE ALLOWED FOR ANY WORK MADE NECESSARY BY UNUSUAL CONDITIONS OR OBSTACLES ENCOUNTERED DURING THE PROGRESS OF THE WORK WHICH CONDITIONS OR OBSTACLES ARE READILY APPARENT UPON A VISIT TO THE SITE. IF THERE ARE ANY QUESTIONS IN THIS REGARD OR IF THERE ARE ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL SITE CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO SUBMISSION OF BIDS.

02 THE CONTRACTOR SHALL CONTACT ALL LOCAL UTILITIES COMPANIES AND ANY OTHER UTILITY COMPANY THAT SERVES THE AREA AT LEAST 72 HOURS PRIOR TO CONSTRUCTION TO VERIFY LOCATIONS OF EXISTING UTILITY LINES. THE FOLLOWING ARE THE TELEPHONE NUMBERS OF THE ENTITIES MOST LIKELY TO APPEAR:

TEXAS ONE CALL	1-800-245-4545
TEXAS EXCAVATION SAFETY SYSTEM	1-800-344-8377
ONCOR	1-800-855-4860
ATMOS	1-800-460-3000
SWBELL	1-800-251-7000

03 PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES LOCATED WITHIN THE VICINITY OF ANY WORK. IF THE EXISTING UTILITIES ARE IN ANY WAY DIFFERENT FROM WHAT IS SHOWN ON THE DRAWINGS, THEY SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF DENTON PROJECT REPRESENTATIVE AND THE PROJECT ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS TO, OR DAMAGES INCURRED TO EXISTING UTILITIES DURING CONSTRUCTION.

04 CONTRACTOR SHALL MAKE ALL USE PRECAUTIONS TO PROTECT EXISTING UTILITIES. IF ANY DAMAGE OCCURS, TO EXISTING UTILITIES, DAMAGES TO BE REPORTED TO THE UTILITY COMPANY AND REPAIRED IMMEDIATELY TO AT LEAST PRE-EXISTING CONDITION AT NO ADDITIONAL COST TO THE OWNER.

05 THE CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS, WHEN UNMOLCATED OR INCORRECTLY LOCATED UNDERGROUND PIPING OR A BREAK IN THE LINE OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED. CONTRACTOR TO COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICE BY OPERATION.

06 ALL BARRICADES AND SIGNS SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

07 WHERE NEW CONSTRUCTION TIES TO EXISTING FACILITIES, THE PROPER SAW CUT AND CONNECTION SHALL BE MADE USING GOOD WORKMANSHIP AND PROPER TRANSITION TECHNIQUES TO BE APPROVED BY THE ARCHITECT.

08 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY AND INSTALL ALL MATERIALS SO AS TO MEET OR EXCEED PROJECT'S SPECIFICATIONS, STATE AND CITY OF DENTON, TEXAS CODES AND ORDINANCES.

09 THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING AND OBTAINING PERMITS FROM THE CITY, STATE, OR OTHER REGULATORY AGENCIES TO PERFORM WORK.

10 ALL DEMOLITION AND EXCAVATED MATERIALS SHALL BE LEGALLY DISPOSED OF OFF THE SITE UNLESS OTHERWISE INSTRUCTED BY THE OWNER, OR BY THE OWNER'S REPRESENTATIVE.

11 THE CONTRACTOR SHALL CONTACT THE OWNER'S PROJECT REPRESENTATIVE 48 HOURS BEFORE COMMENCING CONSTRUCTION.

12 ALL CONSTRUCTION OPERATIONS TO BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). COPIES OF THE OSHA STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE. INFORMATION AND RELATED REFERENCE MATERIALS MAY BE OBTAINED FROM OSHA, 903 SAN JACINTO, AUSTIN, TEXAS

13 THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ALL JOB SITE SAFETY, MANAGEMENT OF JOB SITE PERSONNEL, SUPERVISION OF THE USE OF JOB SITE EQUIPMENT AND DIRECTION OF ALL CONSTRUCTION PROCEDURES, METHODS AND ELEMENTS REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

14 CONTRACTOR TO MAINTAIN ACCESS TO PUBLIC AND PRIVATE FACILITIES DURING CONSTRUCTION. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE CITY OF DENTON.

15 BLASTING IS NOT PERMITTED ON THIS PROJECT

16 THE CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING SANITARY SEWER SERVICES LOCATED WITHIN THE PROJECT LIMITS.

17 THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITY SERVICES PRIOR TO THE START OF CONSTRUCTION. THE CITY OF DENTON AND / OR OWNER SHALL NOT COMPENSATE ANY WORK PERFORMED TO REPAIR UTILITY SERVICES DAMAGED BY CONSTRUCTION.

18 ALL ADDITIONAL PIPING NEEDED TO PROVIDE SERVICE TEMPORARY PORTABLE WATER SERVICES SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER

19 IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REMOVE EXCESS SPOILS AND MATERIAL DISTURBED BY CONSTRUCTION.

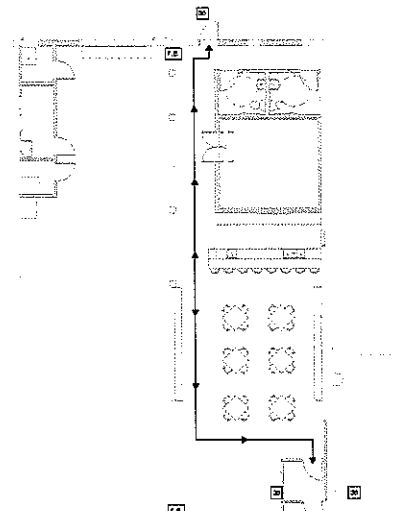
20 ANY EXISTING PAVEMENT, CURBS, AND / OR SIDEWALKS DAMAGED OR REMOVED BY THE CONTRACTOR THAT ARE NOT A PART OF THIS CONTRACT MUST BE REPAIRED BY THE CONTRACTOR TO AT LEAST THE PRE-EXISTING CONDITION, AT NO EXPENSE, BEFORE ACCEPTANCE OF THE WORK.

21 CONSTRUCTION SPOILS OR MATERIALS TO BE USED FOR PROPOSED CONSTRUCTION, SHALL NOT BE STOCKPILED OR STORED WITHIN 100 YEAR FLOOD PLAIN.

22 NEW SANITARY SEWER MAIN AND SERVICES SHALL BE CONSTRUCTED PER THE LATEST TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARDS AND SPECIFICATIONS.

23 CONTRACTOR TO PROVIDE ADEQUATE TRENCH SAFETY PER LATEST OSHA STANDARDS.

GENERAL LIFE SAFETY PLAN



GENERAL NOTES

01 ALL WORK PERFORMED BY THE GENERAL CONTRACTOR SHALL BE PERFORMED IN ACCORDANCE WITH RECOGNIZED STANDARDS OF GOOD WORKMANSHIP. THE GENERAL CONTRACTOR IS TO PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES NECESSARY AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS TO PROVIDE A COMPLETE AND FINISHED SPACE. THIS INCLUDES ALL ARCHITECTURAL, ELECTRICAL, PLUMBING, HEATING AND VENTILATION, AND FIRE SAFETY TRADES. ALL MATERIALS SHALL BE OF FIRST QUALITY AND SHALL MEET RECOGNIZED STANDARDS OF QUALITY ESTABLISHED FOR THEIR GENERIC GROUP. ALL METHODS OF CONSTRUCTIONS AND ASSEMBLY SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATIONS

02 THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND THE RULES AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION OVER CONSTRUCTION OF THE PROJECT SHALL APPLY TO THE CONTRACT THROUGHOUT, AND THEY WILL BE DEEMED TO BE INCLUDED IN THE CONTRACT AS THOUGH HEREIN WRITTEN OUT IN FULL.

03 THIS PROJECT INVOLVES CONSTRUCTION WITHIN AN ALREADY EXISTING STRUCTURE. AS SUCH, THE EXISTING BUILDING AND ITS PRESENT CONDITION STAND AS CONDITIONS REQUIRED TO BE ADHERED TO PRIOR TO THE PLANS AND SPECIFICATIONS. CONTRACTORS, BY SUBMITTING A BID, ARE ASSUMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITION OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED IN THE OTHER CONSTRUCTION DOCUMENTS. ABSOLUTELY NO CLAIMS FOR EXTRA COSTS WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING.

04 IT SHALL BE THE FULL RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE AND EXPEDITE ALL PHASES OF ARCHITECTURAL, STRUCTURAL, AND MECHANICAL WORK, INCLUDING PLUMBING, HEATING, VENTILATING, FIRE SAFETY, AND ELECTRICAL WORK, REGARDLESS OF WHETHER THE OWNER MAY HAVE SEPARATE CONTRACTS FOR ANY TRADES, BRANCHES, OR ITEMS OF WORK AND EQUIPMENT. ALL OTHER TRADES, SUB-CONTRACTORS AND/OR SEPARATE CONTRACTORS SHALL COOPERATE FULLY WITH THE GENERAL CONTRACTOR.

05 ALL SUBSTITUTIONS THAT ARE TO BE ON AN "OR EQUAL" BASIS MAY BE ISSUED ONLY WITH THE WRITTEN APPROVAL FROM THE OWNER, UNLESS OTHERWISE SPECIFIED. THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SPECIFIED FOR ALTERNATES SHOULD BE THE SAME AS THAT SPECIFIED FOR WORK OF SIMILAR TYPE, CHARACTER, AND MATERIALS THROUGHOUT THE BUILDING.

06 SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL ON ALL MILLWORK ITEMS PRIOR TO FABRICATION. FIXTURE CUTS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND COORDINATION ON ALL LIGHTING FIXTURES EXCEPT WHERE EXAMPLES ARE REFERRED. PLUMBING FIXTURES, HARDWARE AND HVAC EQUIPMENT AND ANY OTHER SPECIFIED EQUIPMENT PRIOR TO THEIR BEING ORDERED AND INSTALLED.

07 WORK IN A PLACE THAT IS SUBJECT TO INJURY BECAUSE OF OPERATIONS BEING CARRIED ON THERE, SHALL BE COVERED, BOARDED UP, OR SUBSTANTially ENCLOSED WITH ADEQUATE PROTECTION. ALL FORMS OF PROTECTION SHALL BE CONSTRUCTED IN A MANNER, SUCH THAT, UPON COMPLETION, THE ENTIRE WORK WILL BE DELIVERED TO THE TRUNTH FREE, WHOLE, AND UNBLEMISHED. CONSTRUCTION, WORK DAMAGED BY FAILURE TO PROVIDE PROTECTION SHALL BE REPLACED WITH NEW WORK AT THE EXPENSE OF THE CONTRACTOR.

08 THE GENERAL CONTRACTOR SHALL PROVIDE AND PAY FOR THE COLLECTION OF DEBRIS, AS REQUIRED IN CONNECTION WITH WORK OF CONSTRUCTION AND INSTALLATION. CONTRACTOR'S CONSTRUCTION MATERIALS, TOOLS, EQUIPMENT AND DEBRIS SHALL BE STORED ONLY WITHIN THE DEMISED PREMISES, OR IN AREAS TEMPORARILY DESIGNED FOR THAT PURPOSE BY THE OWNER. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A TEMPORARY LIGHTING AND POWER SYSTEM FOR THE WORK OF ALL TRADES DURING CONSTRUCTION, AND SHALL REMOVE SAME PRIOR TO THE COMPLETION OF THE PROJECT.

09 THE CONTRACTOR MUST REQUIRE A CERTIFICATE OF OCCUPANCY FROM THE JURISDICTIONAL AUTHORITIES BY THE DATE OF COMPLETION AS SPECIFIED IN THE CONTRACT AND WILL DELIVER COPY OF THE CERTIFICATE OF THE PROJECT.

10 THE GENERAL CONTRACTOR SHALL AND HEREBY CODE GUARANTEE AND EACH SUB-CONTRACTOR SHALL AND DOES HEREBY WARRANT THAT ALL WORK FOR THIS BUILDING, UNDER THIS CONTRACT, SHALL BE FREE FROM DEFECTS OF FAULTY LABOR AND/OR MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF SAME.

11 THE GENERAL CONTRACTOR SHALL REQUIRE AND PAY FOR ALL PERMITS REQUIRED

12 A COMPLETE SET OF RECORD DRAWINGS ARE REQUIRED TO BE SENT TO THE ARCHITECT WITHIN 2 WEEKS OF PROJECT COMPLETION FOR ALL MECHANICAL, PLUMBING, ELECTRICAL, ARCHITECTURAL, HVAC, FIRE SAFETY, OR OTHER FIELD REVISIONS.

13 ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE 2012 INTERNATIONAL BUILDING CODE (IBC), WITH LOCAL AMENDMENTS, AND WITH ALL OTHER CODES, ORDINANCES, AND REQUIREMENTS SET FORTH BY THE CITY OF DENTON.

14 DO NOT SCALE DRAWINGS

15 ALL DIMENSIONS ARE TO BE FIELD VERIFIED AND BACK-CHECKED FOR CORRECTNESS. IF ANY DEVIATIONS OR DISCREPANCIES OCCUR, IT SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION PRIOR TO PROCEEDING WITH THE WORK.

16 THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE DRAWINGS, SPECIFICATIONS, DETAILS, AND NOTES FOR INFORMATION REGARDING THE SCOPE OF THE WORK INTENDED PRIOR TO PROCEEDING WITH THE WORK.

17 ALL ELEVATIONS OF FLOOR PLAN, SECTIONS, ROOF PLANS, ETC., ARE ESTABLISHED FROM THE DATUM ELEVATION OF 100'-0", REFER TO CIVIL & STRUCTURAL FOR ACTUAL ELEVATION.

18 ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS AND FIRE RATED CEILING ASSEMBLIES SHALL BE INSTALLED ACCORDING TO ALL STANDARDS AND PER APPLICABLE CODES FOR REQUIRED HOUR FIRE RATED CONSTRUCTION.

19 IN THE EVENT OF A CONFLICT WITHIN THE CONSTRUCTION DOCUMENTS, THE MORE EXPENSIVE, GREATER QUALITY, AND LARGER SCOPE SHALL GOVERN.

20 ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE 2012 TEXAS ACCESSIBILITY STANDARDS

GENERAL LIFE SAFETY NOTES

01 REFER TO PROJECT MANUAL FOR INTERIM LIFE SAFETY MEASURES

02 GENERAL CONTRACTOR SHALL VERIFY QUANTITY & LOCATION OF FIRE EXTINGUISHERS WITH FIRE INSPECTOR PRIOR TO INSTALLATION. APPROVED LOCATION FROM FIRE INSPECTOR SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW.

LIFE SAFTEY SCHEDULE

Number	Name	Occupancy Type	Net Area	Occupancy Factor	Occupancy Load
105	Storage	S	87 SF		
106	MILL ROOM	F-2	32 SF		
109	Restroom	B	56 SF		
110	Restroom	B	58 SF		
111	Cooler	B	236 SF		
112	Bar	B	99 SF		
108	Shipping / Receiving	F-2	Not Enclosed		
104	Cooler	F-2	814 SF		
103	Brew House	F-2	486 SF		
113	Hallway	B	271 SF		
102	Dining	B	1040 SF		
101	Vestibule	B	44 SF		
107	BOILER	F-2	622 SF		

FIRESTOP SYSTEMS

01 FIRESTOP SYSTEMS FOR METALIC PIPES, CONDUITS, OR TUBING
A) C-AJ-1002
B) F-A-1036
C) W-L-1199

02 FIRESTOP SYSTEMS FOR INSULATED METALIC PIPES:
A) C-AJ-2012
B) C-AJ-5111
C) W-L-5001
D) W-L-5002

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HOP & STING BREWERY

REVISIONS

No.	DATE	DESCRIPTION

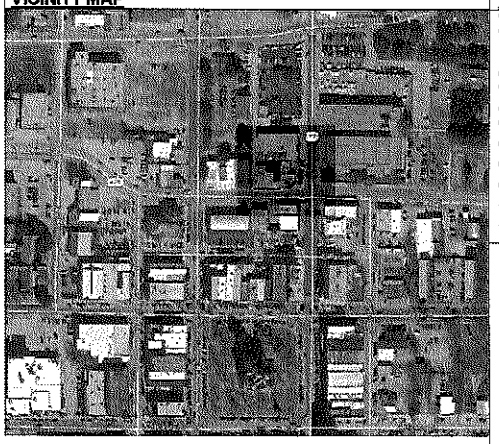
CONTENTS : PROJECT INFO, CODE, LIFE SAFETY

DATE : 07/08/2016

SHEET

A0.01

VICINITY MAP



GENERAL SITE NOTES

01 ARCHITECTURAL SITE PLAN IS ISSUED FOR REFERENCE ONLY.

02 THE CONTRACTOR SHALL MAINTAIN EXISTING ACCESS TO ALL EMERGENCY ENTRANCES AND SHALL NOT BLOCK ACCESS TO DRIVES AND COVERED DROP OFF AREAS. SITE WORK AND STAGING THAT AFFECT THE AREAS ADJACENT TO THE EMERGENCY ENTRANCES WILL REQUIRE A WRITTEN COORDINATION PLAN SUBMITTED AND APPROVED BY THE OWNER.

03 SLOPE SIDEWALKS FROM BUILDINGS @ 1/4" PER FOOT UNLESS NOTED OTHERWISE

04 PROVIDE LIGHT BROOM FINISH FOR ALL EXTERIOR CONCRETE WORK UNLESS NOTED OTHERWISE.

05 PROVIDE 1/4" RADIUS EDGE AT ALL SIDEWALKS

06 PROVIDE SCHEDULED EXPANSION JOINT (E/J) AS INDICATED ON PLAN & AT 100-0" MAXIMUM.

07 PROVIDE SAWED OR TOOLED CONTROL JOINT (C/J) AS INDICATED ON PLAN & AT 6'-0" MAXIMUM

08 PROVIDE 1/2" BITUMINOUS EXPANSION BOARD & SEALANT AT ALL CONCRETE RAMPS, SIDEWALKS & BUILDING FOUNDATIONS

09 DOWEL CONCRETE FLATWORK TO BUILDING FOUNDATION AT DOORS WITH REINFORCING STEEL.

10 THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE LINES WITH UTILITY PROVIDER & OWNER'S REPRESENTATIVE

11 ELECTRICAL, TELEPHONE, DATA, FIBER OPTIC, & CABLE SERVICE SHALL TERMINATE IN ROOM 100 STORAGE.

Site Plan
1" = 20'-0"

KEYED NOTES

01 NEW CONCRETE FLATWORK

02 NEW MECHANICAL EQUIP. REF ROOF PLAN

03 NEW GUARDRAIL

04 NEW FENCE

05 NEW PEDESTRIAN EMERGENCY EGRESS GATE

06 NEW SITE LIGHTING

07 NEW FIRE HYDRANT

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HOP & STING BREWERY

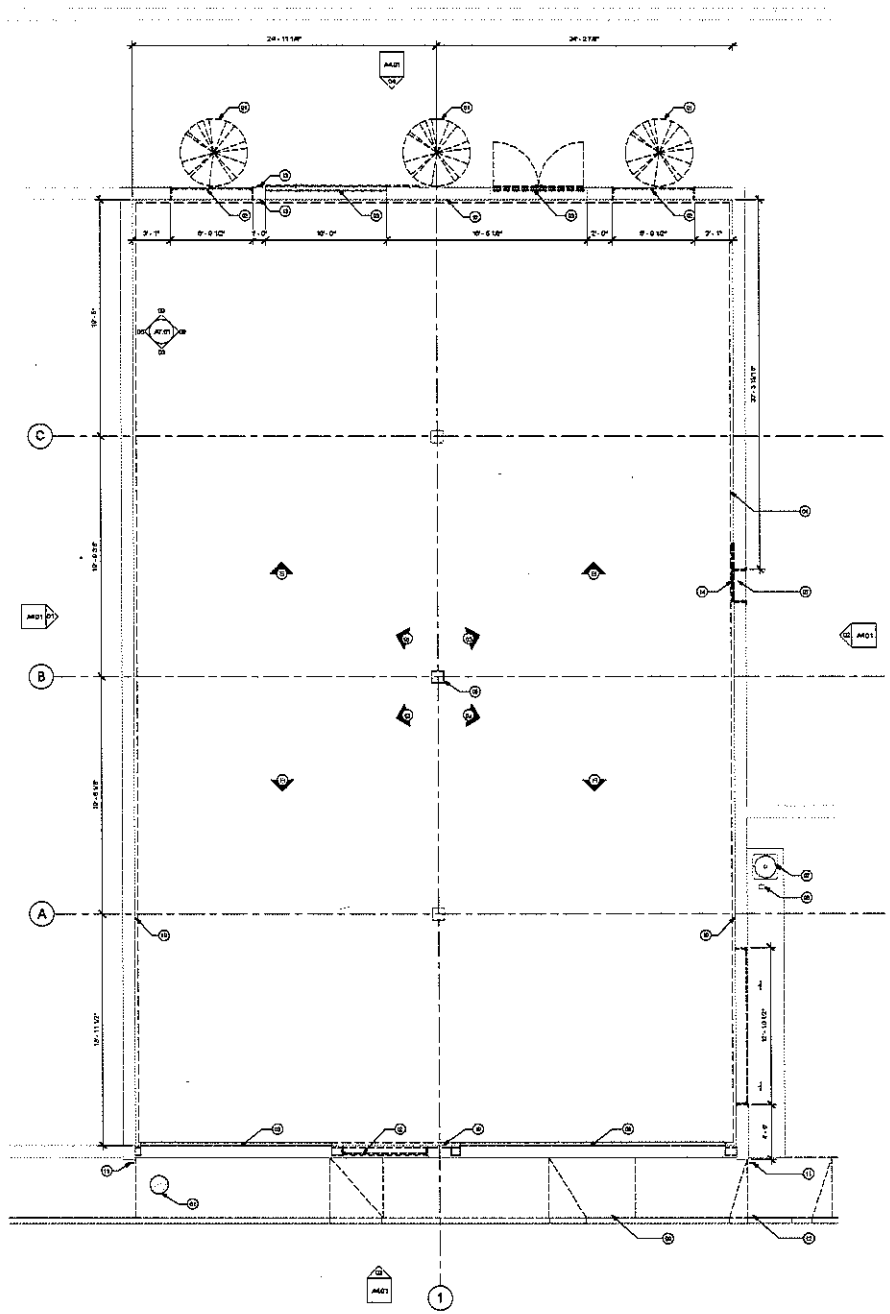
REVISIONS

No.	DATE	DESCRIPTION

CONTENTS :
SITE PLAN

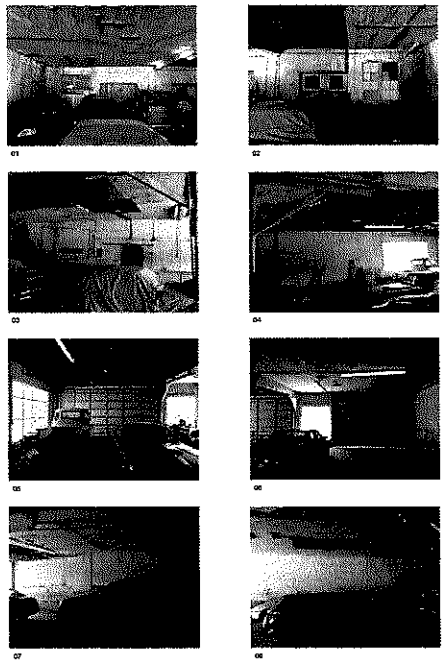
DATE :
07/08/2015

SHEET
A1.01



104 MCKINNEY STREET

02 DEMOLITION FLOOR PLAN
3/4" = 1'-0"



01 DEMOLITION PHOTOS

GENERAL DEMOLITION NOTES

01 THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIRING EXISTING WALLS AND FLOORS AS REQUIRED TO PROVIDE A SMOOTH SURFACE, FREE FROM DEFECTS, AND READY FOR FINISHING. THIS INCLUDES DAMAGE CAUSED BY EQUIPMENT REMOVAL AND DAMAGE BY OTHER TRADES. CONTRACTOR SHALL REPAIR, REPLACE, AND PATCH ALL ITEMS DAMAGED AS A RESULT OF CONSTRUCTION.

02 REMOVE EXISTING CONSTRUCTION AS INDICATED. TYPICAL WALL REMOVAL INCLUDES FINISHES AND MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEMS CONTAINED THEREIN. REMOVE DOORS, DAMPERS, WINDOWS, FRAMES, AND OTHER FIXTURES AS REQUIRED. AFTER REMOVAL OF PIPE CHASES, PATCH HOLES IN EXISTING FLOORS OR WALLS TO REMAIN TO MEET ORIGINAL FIRE PROTECTION AND STRUCTURAL REQUIREMENTS. PATCH ADJOINING WALLS, FLOORS AND DECK AND PREPARE SURFACES TO RECEIVE NEW FINISHES PER FINISH SCHEDULE

03 WHERE NEW FINISHES ARE TO BE INSTALLED IN EXISTING SURFACES, REMOVE THE EXISTING FINISH AND PREPARE SURFACE TO RECEIVE THE NEW FINISH.

04 COORDINATE ITEMS TO BE SALVAGED OR REUSED ACCORDING TO THE PROJECT MANUAL.

05 DEMOLITION WORK SHALL BE EXECUTED IN CONFORMANCE WITH ALL CODES AND AS SET FORTH BY THE GOVERNING AUTHORITIES.

06 BRACE ALL EXISTING STRUCTURES OR STRUCTURAL ELEMENTS AS NECESSARY DURING CONSTRUCTION.

07 REFER TO PROJECT MANUAL FOR INTERIM LIFE SAFETY MEASURES.

08 THERE DRAWINGS HAVE BEEN DEVELOPED FROM LIMITED PHYSICAL MEASUREMENTS WHICH MAY NOT REFLECT ACTUAL FIELD CONDITIONS. VERIFY THESE DIMENSIONS WITH EXISTING FIELD CONDITIONS AND NOTIFY ARCHITECT IMMEDIATELY OF INCONSISTENCIES BETWEEN ACTUAL AND PROPOSED CONDITIONS BEFORE PROCEEDING WITH CONSTRUCTION.

09 REFER TO CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL, SECURITY, AND TECHNOLOGY DRAWINGS FOR ADDITIONAL INFORMATION.

10 DO NOT CUT ANY STRUCTURE WORK WITHOUT PRIOR APPROVAL.

11 THE EXISTING BUILDING ENVELOPE SHALL BE MAINTAINED IN A WATERTIGHT CONDITION AT ALL TIMES.

12 FOR EXTENT AND LOCATION OF CHANNELING OF EXISTING FLOOR, WALL OR CEILING, REFER TO MECHANICAL, ELECTRICAL, PLUMBING, SECURITY AND TECHNOLOGY DRAWINGS.

13 EXISTING EGRESS IS TO BE MAINTAINED THROUGHOUT CONSTRUCTION.

14 CONTRACTOR SHALL INFORM THE OWNER PRIOR TO ANY DEMOLITION AND SHALL SCHEDULE SUCH DEMOLITION AS NOT TO INTERFERE WITH THE OWNER'S OPERATIONS

15 REMOVE UTILITIES TO ACCOMMODATE NEW CONSTRUCTION

16 OWNER ASSUMES ALL RESPONSIBILITY FOR HAZARDOUS MATERIAL IDENTIFICATION, TESTING, AND ABATEMENT.

17 COORDINATE ANY WORK WITHIN CITY RIGHT OF WAY WITH CITY OF DENTON

18 COORDINATE ANY STREET CLOSURES WITH OWNER & CITY OF DENTON.

KEYNOTES

01 REMOVE TREE

02 REMOVE WINDOWS AND FRAMING IN ITS ENTIRETY

03 REMOVE DOOR AND FRAMING IN ITS ENTIRETY

04 REMOVE SLAB IN ITS ENTIRETY

05 OPEN WALL TO BE LOCATED

06 CENTER COLUMN AND BRACING TO BE REMOVED AND REPLACED; REFER TO STRUCTURAL PLAN TO PRIOR BRACING

07 EXISTING AIR CONDITIONER TO REMAIN; REFER TO SPECIFICATIONS FOR PROTECTION

08 EXISTING ENTRY & GULF STATION TO REMAIN; REFER TO SPECIFICATIONS FOR PROTECTION

09 RAILING AND CURB TO BE REMOVED AND REPLACED; REF. FLOOR PLAN

10 BRACE SUPPORTS TO BE PREPPED FOR NEW FINISH

11 PIPE TO BE REMOVED

12 INDEMNALT TO BE REMOVED; REFER TO SITE PLAN

13 REMOVE EXISTING ELECTRICAL PANEL / SERVICE BOX & CONDUIT

14 DOOR AND HARDWARE TO BE SALVAGED; REF FLOOR PLAN AND ELEVATIONS FOR NEW PLACEMENT.

DEMOLITION LEGEND

EXISTING TO REMAIN

EXISTING TO BE REMOVED

EXISTING FLOOR SLAB TO BE REMOVED

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HOP & STING BREWERY

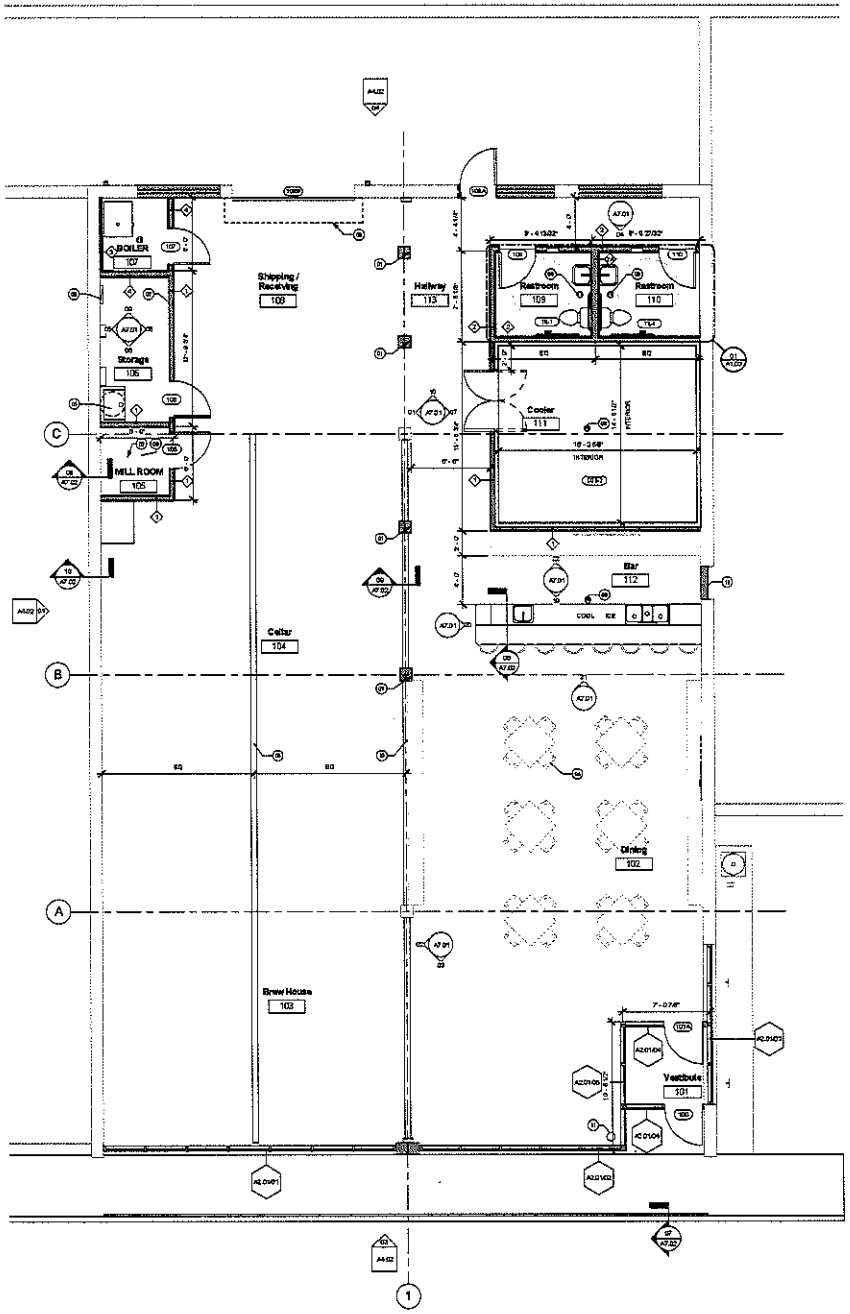
REVISIONS

NO.	DATE	DESCRIPTION

CONTENTS :
DEMO FLOOR PLAN

DATE :
07/08/2016

SHEET
A1.02



FLOOR PLAN
1/4" = 1'-0"

GENERAL NOTES

01 THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PATCHING AND REPAIRING EXISTING WALLS AND FLOORS AS REQUIRED TO PROVIDE A SMOOTH SURFACE FREE FROM DEFECTS, AND READY FOR FINISHING. THIS INCLUDES DAMAGE CAUSED BY EQUIPMENT REMOVAL AND DAMAGE BY OTHER TRADES.

02 UNLESS OTHERWISE NOTED, ACCESS PANELS (MINIMUM 12" BY 12" OR 24" BY 24") SHALL BE PROVIDED IN ALL PARTITIONS OR CEILINGS WHERE ELECTRICAL TRANSFORMERS, JUNCTION BOXES, PLUMBING VALVES, HVAC VAV BOXES, MOTORIZED DAMPERS, FIRE DAMPERS, SANITARY SEWER OR GREASE LINE TRAPS REQUIRING ACCESS ARE LOCATED. NOTE THAT MANY OF THESE ITEMS ARE NOT INDICATED ON THESE DOCUMENTS, BUT ACCESS PANELS SHALL BE PROVIDED AS THROUGH THEY HAVE BEEN SHOWN THROUGHOUT (BURDEN OF DETERMINING QUANTITIES ON THE CONTRACTOR). THE ARCHITECT SHALL COORDINATE THESE ACCESS PANELS WITH THE CONTRACTOR AT A LATER DATE SO AS TO MINIMIZE THE IMPACT ON AESTHETIC DESIGN OF THE PROJECT. ACCESS PANELS LOCATED IN FIRE RATED PARTITIONS OR CEILINGS SHALL LOCATE ALL ELEMENTS WHICH REQUIRE ACCESS ABOVE NONPUBLIC AREA CEILINGS OR ABOVE ACOUSTICAL PANEL OR TILE CEILINGS. IF POSSIBLE, THE CONTRACTOR SHALL PROVIDE A MARKED UP PLAN TO THE ARCHITECT AND OWNER SHOWING ALL AREAS AS REQUIRING ACCESS.

03 GENERAL CONTRACTOR MUST FIELD VERIFY ALL MEASUREMENTS AND CONDITIONS PRIOR TO PROCEEDING WITH THE WORK.

04 ALL DIMENSIONS ARE TO THE EXTERIOR WALL FACE OF STRUD, OR FACE OF MASONRY, UNLESS NOTED OTHERWISE.

05 REFER TO PROJECT MANUAL FOR TREATMENT OF WOOD INDICATED IN THESE DOCUMENTS. ALL WOOD INDICATED IN THESE DOCUMENTS IS TO BE TREATED FOR FIRE RETARDANCY UNLESS NOTED OTHERWISE.

06 WALL TYPES ARE DIAGRAMMATIC AND MUST BE USED IN CONJUNCTION WITH THE FINISH SCHEDULE, SECTIONS, DETAILS, AND ELEVATIONS FOR CORRECT FINISH.

07 ALL PLAN DETAILS INDICATED IN THE CONTRACT DOCUMENTS MUST BE REFERENCED TOGETHER WITH THE FINISH SCHEDULE, SECTIONS, DETAILS, AND ELEVATIONS.

08 PROVIDE CONTINUOUS BOX WALL CONSTRUCTION WITH DOUBLE STUDS AT ALL WINDOWS, DOOR JAMBS, AND OPENINGS ON EACH SIDE OF WALL.

09 THE CONTRACTOR SHALL VERIFY LOCATION AND QUANTITY OF FIRE EXTINGUISHERS WITH FIRE INSPECTOR BEFORE INSTALLATION. APPROVED LAYOUT FROM FIRE MARSHAL SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW.

KEYED NOTES

01 NEW CONCRETE

02 BOILER - OWNER PROVIDED

03 OVERHEAD FREEZING DOOR

04 BAR FURNITURE - OWNER PROVIDED

05 MOP SINK WITH WATER HEATER (WALL MOUNTED AT 72" A.F.F.)

06 ELECTRICAL PANEL

07 TELEPHONE DEMARK BOARD

08 FLOOR DRAIN

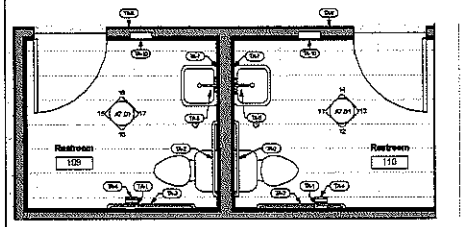
09 TRENCH DRAIN, SLOPE TBD

10 EXISTING CONCRETE CURB

11 WALL WITH 2 COAT RUN METAL STUDS AND ONE LAYER 5/8" GYPSUM BOARD. SEALED WITH CAULK

Floor Finish Schedule

Material: Mark	Material: Area	Material: Description	Material: Comments
CON-1	3819 SF	SEALED CONCRETE	
CON-2	236 SF	REINFORCED CONCRETE	
TIL-1	114 SF	6" X 6" TILE FLOOR	



01 Enlarged Restroom Plan
1/2" = 1'-0"

RESTROOM EQUIPMENT SCHEDULE GC FURNISHED AND INSTALLED

Type Mark	Description	Type Comments	Comments
TA-1	GRAB BAR - 18"	MOUNT VERTICAL W/ BOTTOM @ 39" AFF	
TA-2	GRAB BAR - 36"	36" AFF TO TOP OF GRIPPING SURFACE	BOBRICK B6108 X 36
TA-3	GRAB BAR - 42"	36" AFF TO TOP OF GRIPPING SURFACE	BOBRICK B6108 X 42
TA-4	TOILET PAPER DISPENSER	15" MIN AFF, 48" MAX AFF	BOBRICK B2740
TA-5	UNDER LAVATORY GUARD		TRUE BRO INC
TA-7	16"x36" RECT MIRROR W/ SST EDGE	40" AFF TO BOTTOM OF MIRROR SURFACE	BOBRICK B-165 1636
TA-8	UNISEX RESTROOM SIGN	ADA ROOM SIGNAGE	
TA-10	PAPER TOWEL DISPENSER AND RECEPTICLE	40" MAX TO DISPENSING SURFACE	BOBRICK B-3961

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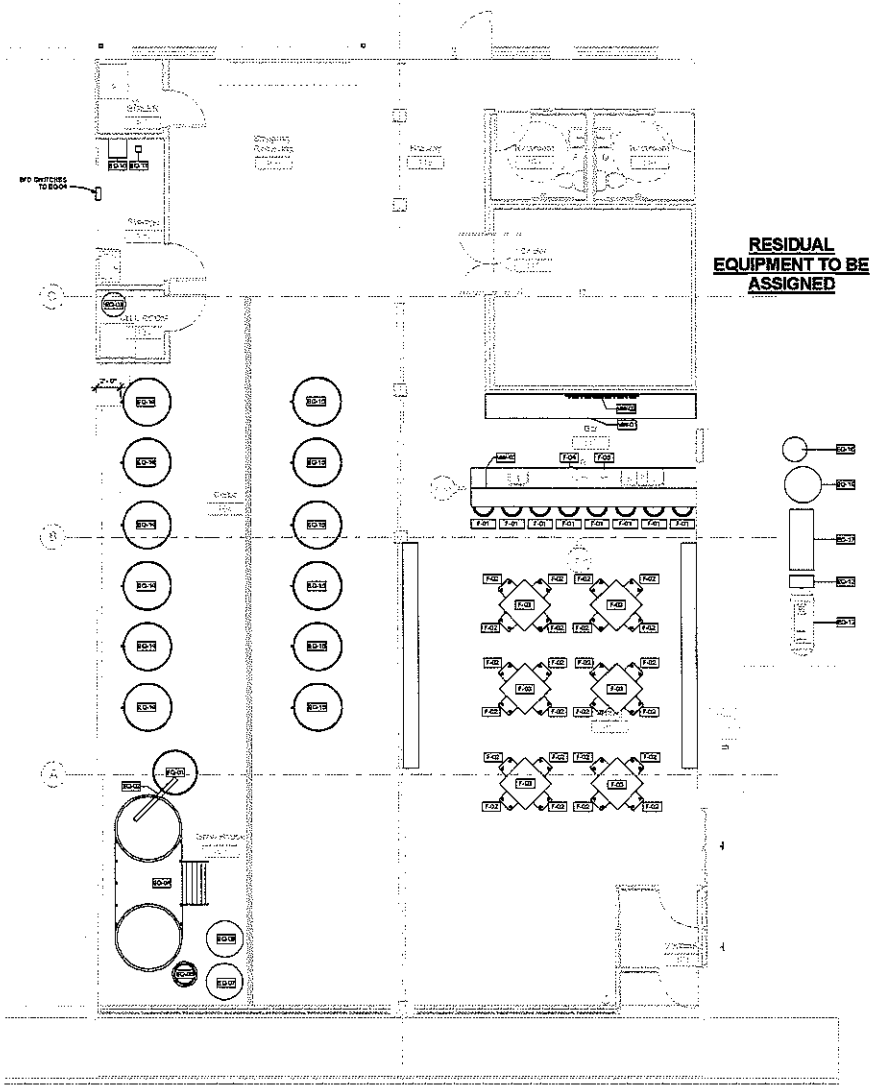
CONTENTS :
NEW FLOOR PLAN

DATE :
07/09/2016

SHEET
A1.03



RESIDUAL EQUIPMENT TO BE ASSIGNED

1 FFE PLAN
1/8" = 1'-0"

GENERAL NOTES

01 THE CONTRACTOR SHALL VERIFY & COORDINATE CLEAR DIMENSIONS REQUIRED FOR OWNER FURNISHED EQUIPMENT

02 THE CONTRACTOR SHALL SUPPLY BLOCKING FOR MOUNTING OF EQUIPMENT UNLESS MOUNTING SUPPORT IS OTHERWISE FURNISHED AS PART OF THE EQUIPMENT

03 THE CONTRACTOR SHALL COORDINATE WITH THE OWNER ON THE DELIVERY & INSTALLATION OF OWNER FURNISHED EQUIPMENT.

Furniture Schedule Owner Furnished and Installed

Type Mark	Family	Count	Description	Comments
F-01	Bar Stool	8		
F-02	Dining Chair	24		
F-04	Glass Cooler	1		
F-05	Ice Maker	1		
F-03	Table-Rectangular	6		

Equipment Schedule Owner Furnished, GC Installed

Type Mark	Family	Description	Model	Manufacturer	Count	Cost	Comments
EQ-01	Mill Tank	3 sf footprint			1		
EQ-02	Auger System	Connecting grain mill to grist case, grist case to mash tun.			1		
EQ-03	Dust Collector	~3sf footprint, single phase, 120			1		Connects to grain mill
EQ-04	Mash Tun	Aggregate Kettle and Mash Tun ~9.5' Height / 100 SF footprint		TBD	1		
EQ-05	Heat Exchange				1		
EQ-07	Hot Water Tank	Will need steam piping from boiler			1		
EQ-08	Cold Water Tank	Will need glycol piping connecting it with glycol tank/pumps			1		
EQ-09	Boiler general model	10 sf footprint, ~8.5' height			1		Electric would require 3 phase 240
EQ-10	Water Softener				1		
EQ-11	Water Filter				1		
EQ-12	Air Compressor	240 Idea			1		
EQ-13	Air Dryer	Single Phase 120			1		
EQ-14	Fermenting Tank	10' height / 10 sf footprint			6		
EQ-15	Bright Beer Tank	10' height / 10sf footprint			6		
EQ-16	CO2 Tanks				1		
EQ-17	Keg Washer	On Wheels			1		
EQ-19	Glycol System	Requires a small tank to hold the glycol and a large pump 240 probably required			1		

Furniture Schedule GC Furnished and Installed

Type Mark	Family	Description	Comments
MW-01	Wood Shelving		
MW-02	Taps		
MW-03	Bar Counter Tops		
MW-04	High Top 1		
MW-05	High Top 2		

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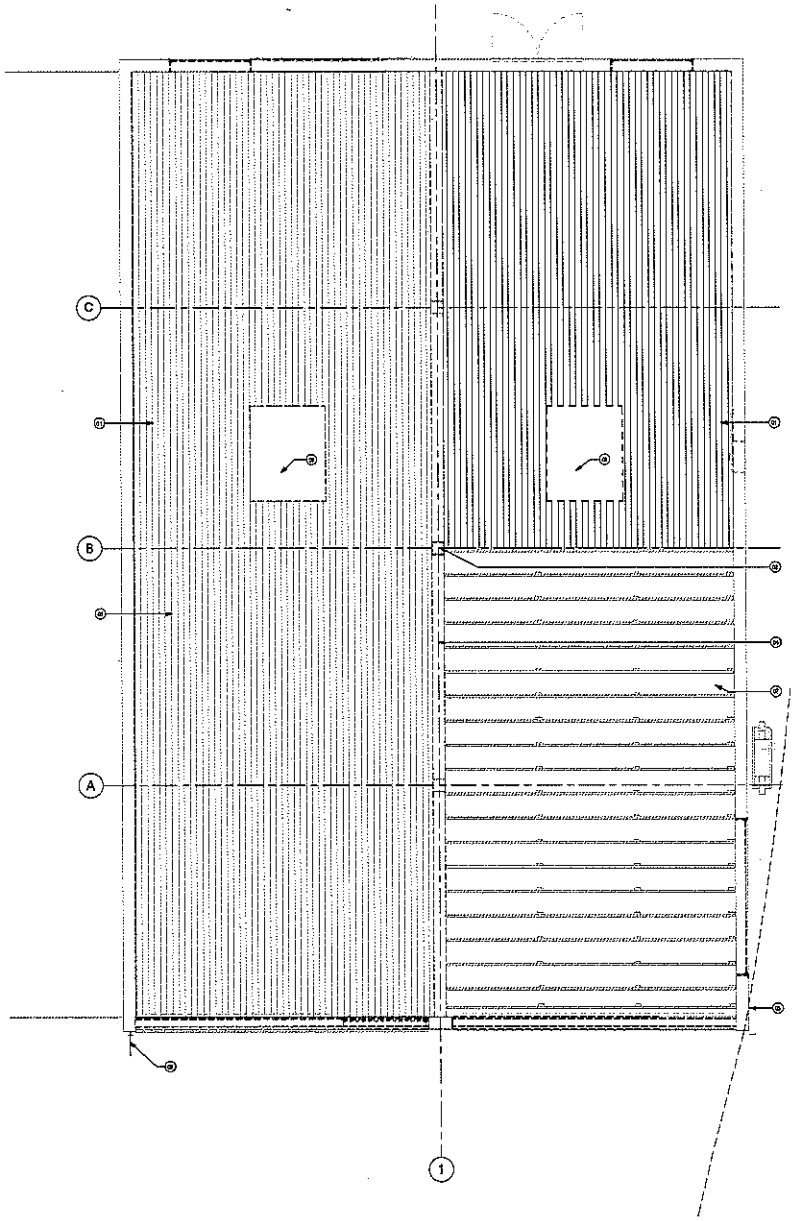
CONTENTS :
FFE PLAN

DATE :
07/08/2015

SHEET
A1.04



01 DEMOLITION REFLECTED CEILING PLAN
1/4" = 1'-0"

KEYED NOTES

01 CEILING BOARDS TO BE REMOVED; REUSE CEILING BOARDS PER OWNER INSTRUCTION; KEEP EXISTING FRAMING INTAKE

02 CENTER COLUMN TO BE REMOVED AND REPLACED. REF. STRUCT.

03 4 KICKERS MAY BE REMOVED FOR HVAC

04 CENTER BEAM TO BE REPLACED. REFER TO STRUCTURAL DRAWINGS

05 OVERHEAD ELECTRIC COLUMNS TO REMAIN

06 EXISTING SIGN ON BUILDING TO REMAIN FOR FUTURE GARAGE

07 CHANNELS TO REMAIN REF FINISH SCHEDULE

08 PROPOSED FLAME COLUMN TO REMAIN

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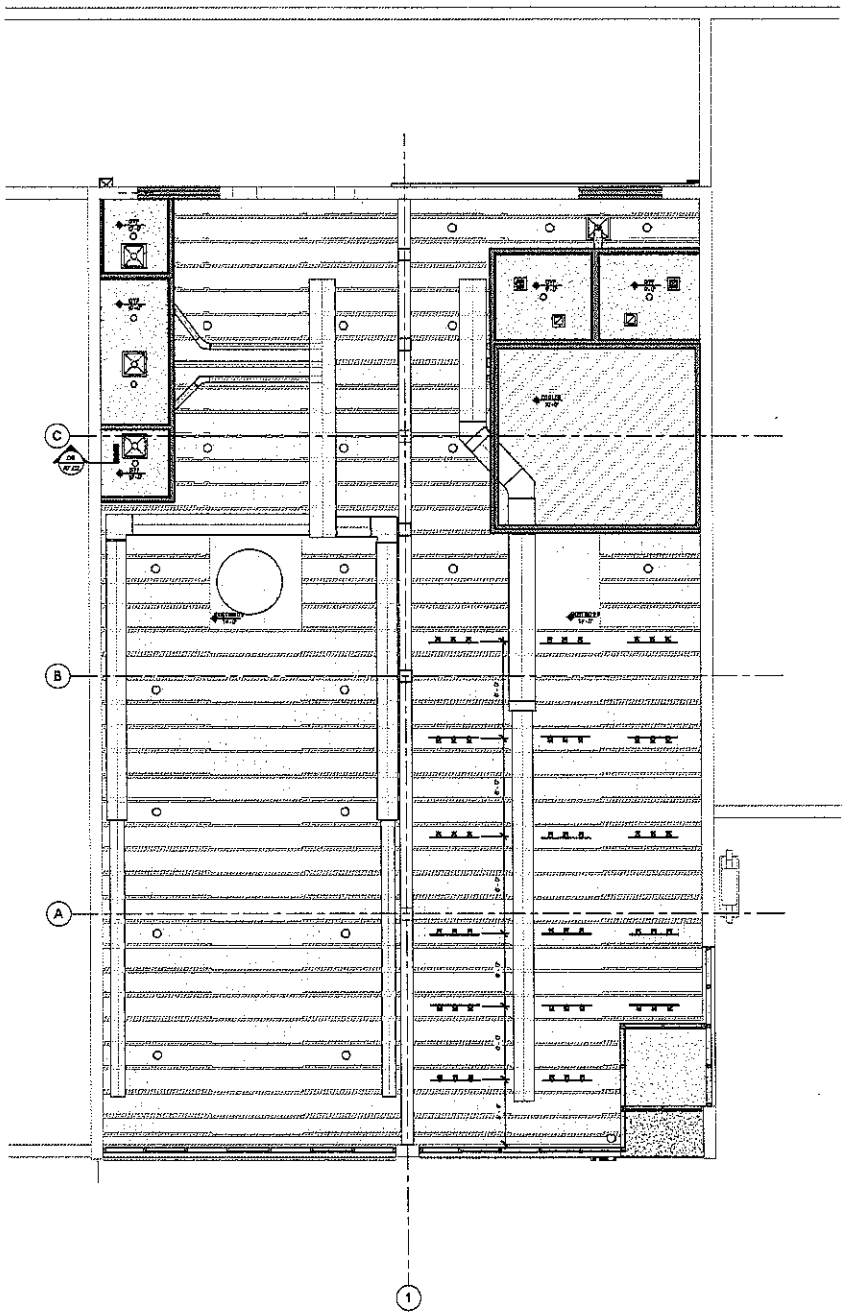
CONTENTS :
DEMO REFLECTED CEILING PLAN

DATE :
07/08/2016

SHEET
A1.05



REFLECTED CEILING PLAN
1/4" = 1'-0"

GENERAL RCP NOTES

01 REFER TO SITE PLAN FOR EXTERIOR LIGHTING

02 FIRE SUPPRESSION SPRINKLER LOCATION TO BE COORDINATED WITH ARCHITECT PRIOR TO ENGINEERING OR INSTALLATION.

03 THE CONTRACTOR SHALL COMPARE THE REFLECTED CEILING PLAN WITH ELECTRICAL, LIGHTING, MECHANICAL, FIRE SAFETY, AND TECHNOLOGY DRAWINGS AND REPORT ANY DISCREPANCIES TO ARCHITECT.

04 REFER TO ELECTRICAL PLANS FOR CEILING MOUNTED SMOKE DETECTORS, SPEAKERS, EXIT SIGNS, FIRE ALARM DEVICES AND SENSORS.

05 REFER TO ELECTRICAL PLANS FOR WALL MOUNTED SPEAKERS, EXIT SIGNS, FIRE ALARM DEVICES AND SENSORS.

06 FIRE SPRINKLER HEAD LOCATIONS ARE TO BE COORDINATED WITH LIGHTING, HVAC, DATA, TELECOMMUNICATIONS, AND AUDIO VISUAL EQUIPMENT. FIRE SPRINKLER HEADS ARE TO BE CENTERED BOTH WAYS IN CEILING TILE, GYPSUM BOARD, REVEALS, ETC. RECESSED SPRINKLER HEADS ARE REQUIRED AT ALL HARD CEILINGS.

KEYED NOTES

1. ALL EXISTING CEILINGS & GRIDS TO REMAIN. RESTO BE FINISHED PER FINISH SCHEDULE.
2. LIGHTS BY MANUFACTURER

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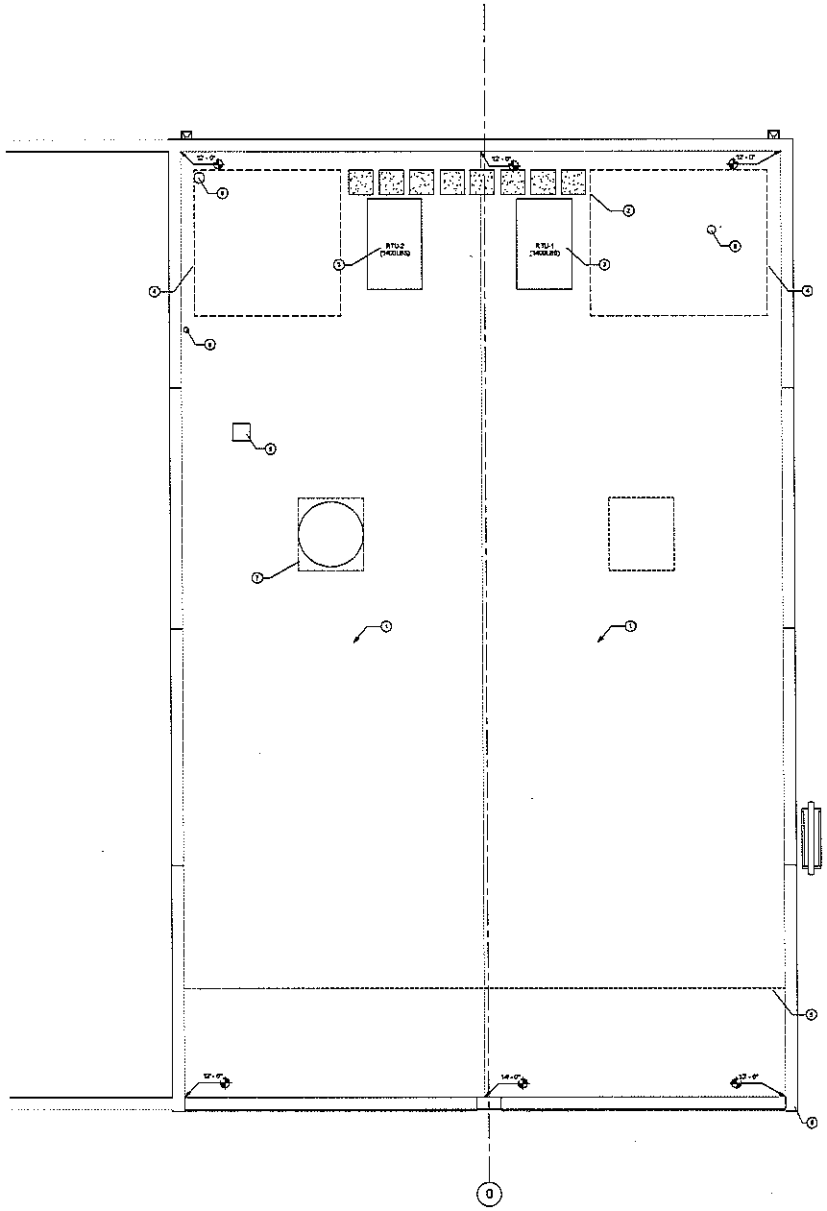
CONTENTS :
NEW REFLECTED CEILING PLAN

DATE :
07/06/2016

SHEET
A1.06



01 ROOF PLAN
1/4" = 1'-0"

GENERAL DEMOLITION NOTES

01 NOTIFY ARCHITECT IMMEDIATELY OF CORROSION OR FAILURES OF EXISTING ROOF DECKS TO REMAIN PRIOR TO PROCEEDING WITH WORK.

02 THE EXISTING BUILDING IS TO REMAIN WATER TIGHT AT ALL TIMES DURING DEMOLITION, REMOVAL, AND NEW WORK PROCESSES.

03 PROTECT THE EXISTING STRUCTURES CANOPIES, SIDEWALKS, LANDSCAPING, AND HOTEL TO REMAIN DURING PROJECT.

04 ALL THROUGH-ROOF PENETRATIONS SUCH AS VENT STACKS ARE TO BE MANUFACTURED INTO ONE PENETRATION.

05 VERIFY NUMBER AND LOCATION OF ALL ROOF TOP EQUIPMENT AND PENETRATIONS WITH MEP DRAWINGS. FINAL LOCATIONS TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, AND ROOFING.

06 PROVIDE 24" MINIMUM HORIZONTAL FLASHING CLEARANCES ON ALL SIDES OF EACH ROOF PENETRATION AND CURBS FROM OTHER ROOF PENETRATIONS, CURBS, WALLS, OR VALLEYS.

07 PROVIDE CRICKETS (1:2) PER FOOT OF SLOPED BEHIND ALL CURBS, WALLS, ETC. WITH A WIDTH OF 18" OR GREATER AND AS NECESSARY TO SHED WATER TO DRAINAGE POINT (S.A., ROOF DRAINS, SCUPPERS, OR EDGE DETAILS).

08 FLASH ALL AROUND ROOF TOP PENETRATIONS PER DETAILS UNLESS NOTED OTHERWISE

09 UTILITY PENETRATION THROUGH BASE FLASHINGS AND SIDES OF CURBS OR WALLS ARE NOT PERMITTED.

10 PROVIDE STAINLESS STEEL ADJUSTABLE HEIGHT PIPE SUPPORTS FOR ALL OVER-ROOF PIPING

11 PROVIDE 4:1 AP JOINT IN SHEET METAL RECEIVERS

12 PROVIDE GUTTER EXPANSION JOINTS AT 50'-0" PER SMACNA.

13 PROVIDE JOINT COVERS SET IN BOND MASTIC AT ALL SHEET METAL FLASHING AND COPING CAPS.

KEYED NOTES

1. ROOFING SYSTEM: SBS MODIFIED BITUMINOUS MEMBRANE, MONOPLYNE SHEET TO SHEET ASTM D 6162, GRADE 1, TYPE I (ONLY ALLOWED FIBER-REINFORCED), (2) MODIFIED ASPHALT SHEET, MONOTWISTER OR MEMBRANE CAP SHEET TO SHEET, ASTM D 6164 GR1, MODIFIED ASPHALT SHEET GRANULAR SURFACED, OR EX. BASE SHEET TO MEET ASTM D 4601 TYPE I ASPHALT IMPREGNATED & ASPHALT COATED BASED WITH FINE MINERAL SURFACING OVER 5th OVER. VAPOR RETARDER TO MEET ASTM D 4601 SMOOTHACK POLYETHYLENE WITH ADHESIVE PERIMETER WITH 0% OVERSIDE POLYSTYRENE INSULATION TO MEET ASTM C 578 TYPE 3 FELT WITH LOWE RESISTANT FACER ON BOTH SURFACES.
2. 24" MINIMUM GRAVEL SURFACE PAVER SUPPORTS
3. RTU
4. NEW DECKING IN AREA TO REPLACE ROTTEN DECKING
5. EXISTING TELEPHONE LINES TO BE RELOCATED O.C. TO COORDINATE WITH UTILITY OWNER
6. POWER LINES O.C. TO COORDINATE WITH UTILITY OWNER.
7. SKYLIGHT
8. ROOF VENT REF A202
9. REF A202

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CONTENTS :
ROOF PLAN WITH DETAILS

DATE :
07/09/2016

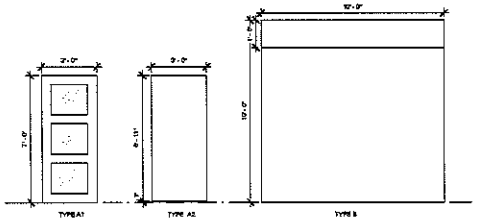
SHEET
A1.07

Door Schedule

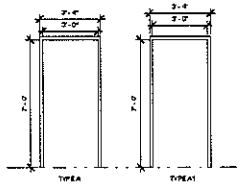
Mark	Leaf Type	Door Leaf Material	Door Glazing Type	Finish	Frame Type	Frame Material	DIMENSIONS Height	Width	Thickness	Fire Rating	CONSTRUCTION DETAILS Head Detail	Sill Detail	Jamb Details	Comments
100	A1	ALUMINUM	GL.01	CLEAR ANODIZED	A1	ALUMINUM	7'-0"	3'-0"	0'-2"	-	11/A7.03	06/A7.03	01/A7.03	
101A	A1	ALUMINUM	GL.01	CLEAR ANODIZED	A1	ALUMINUM	7'-0"	3'-1"	0'-2"	-	18/A7.03	05/A7.03	01/A7.03	
102	A2	STEEL	N/A		A	HOLLOW METAL	7'-0"	3'-0"	0'-2"	1 HR	15/A7.03	05/A7.03		
106	A2	STEEL	N/A		A	HOLLOW METAL	7'-0"	3'-0"	0'-2"		15/A7.03	09/A7.03		
107	A2	STEEL	N/A		A	HOLLOW METAL	7'-0"	3'-0"	0'-2"		16/A7.03	10/A7.03		
108A	A2	STEEL	N/A		A	HOLLOW METAL	7'-0"	3'-0"	0'-2"					
108B	B	ALUMINUM	N/A		MFG	N/A	8'-6"	10'-0"	0'-2"					
109	A2	WOOD	N/A		A	WOOD	7'-0"	3'-0"	0'-2"		15/A7.03	08/A7.03		
110	A2	WOOD	N/A		A	WOOD	7'-0"	3'-0"	0'-2"		15/A7.03	09/A7.03		

GLAZING TYPES

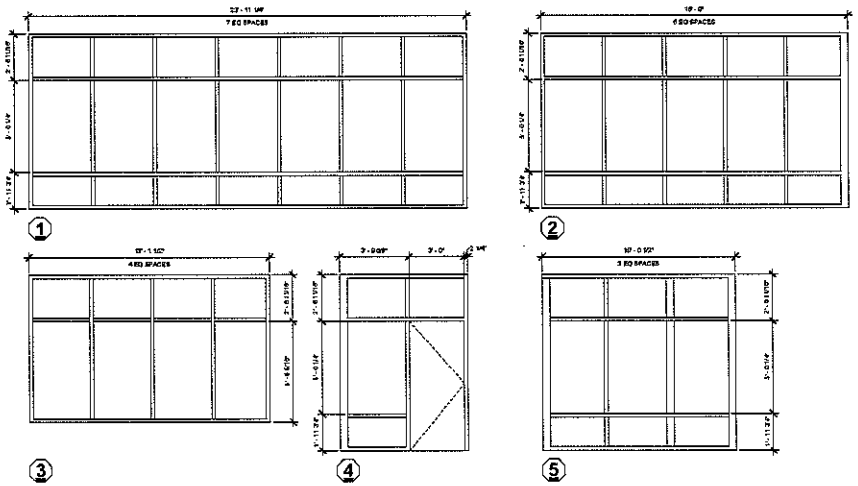
GL.01 - 1/4" THICK TEMPERED GLASS



1 LEAF ELEVATION
3/8" = 1'-0"



2 FRAME ELEVATION
3/8" = 1'-0"



3 WINDOW ELEVATION
3/8" = 1'-0"

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CONTENTS : SCHEDULES

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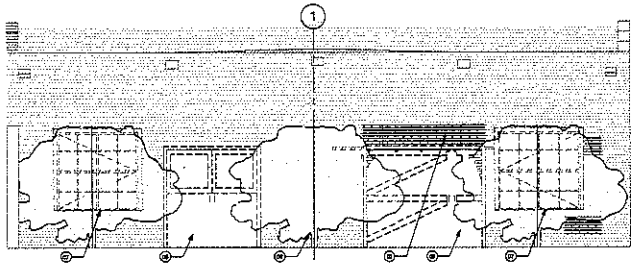
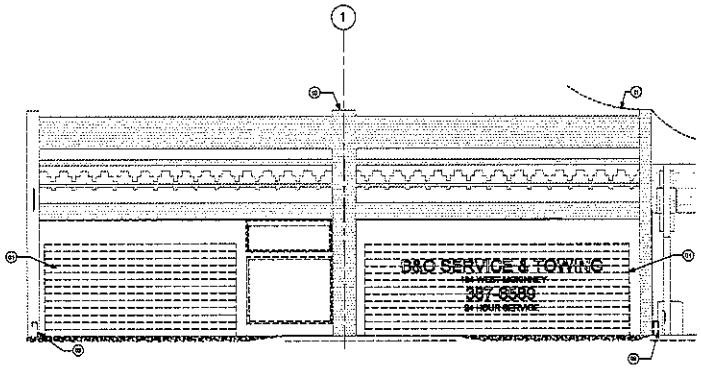
SHEET

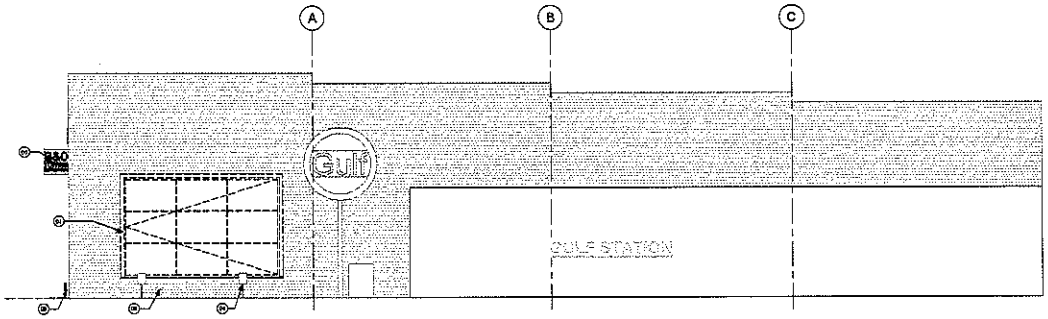
A2.01



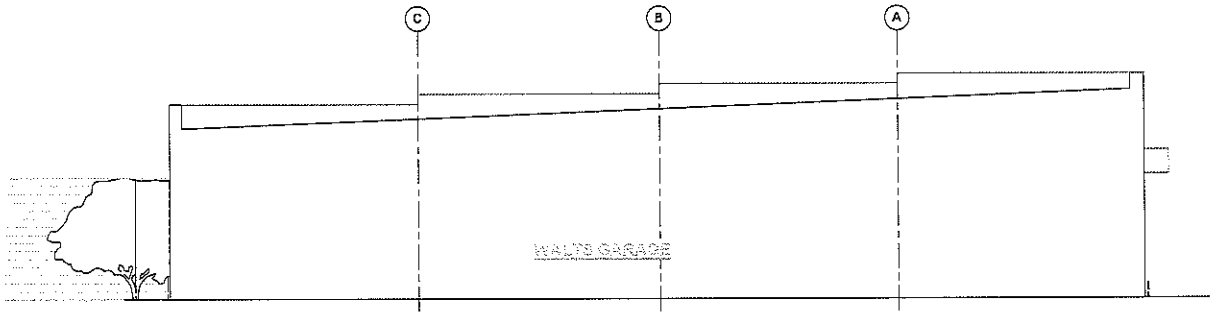
DEMO NORTH EXTERIOR ELEVATION
1/4" = 1'-0"



DEMO SOUTH EXTERIOR ELEVATION
1/4" = 1'-0"



DEMO EAST EXTERIOR ELEVATION
1/4" = 1'-0"



DEMO WEST EXTERIOR ELEVATION
1/4" = 1'-0"

KEYED NOTES

- REMOVE & DISCARD EXISTING SIDEWALK SYSTEMS
- REMOVE PREFORM CONCRETE REF. A100
- REMOVE BRICKS PREVIOUSLY MORTARED REF A201
- REMOVE SIGNAGE
- REMOVE SAID TOWING LETTERING FROM EAST SIDE OF BRICK SIGN TO REMAIN IN PLACE
- REMOVE WINDOWS AND FRAMING IN ITS ENTIRETY
- REMOVE METER
- EXIST GAS STUBS TO BE REMOVED
- REMOVE ALL METAL FRAMING ATTACHED TO BRICK FACADE
- EXIST POWER LINES TO BE REROUTED REFER TO A205

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CONTENTS
DEMO EXTERIOR ELEVATIONS

DATE
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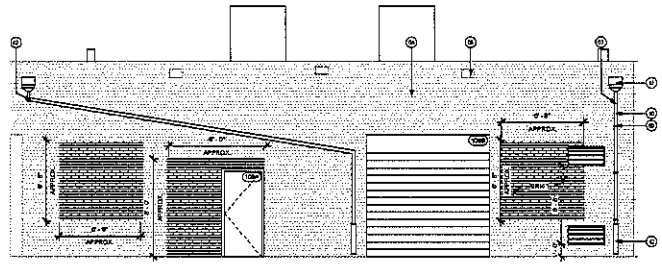
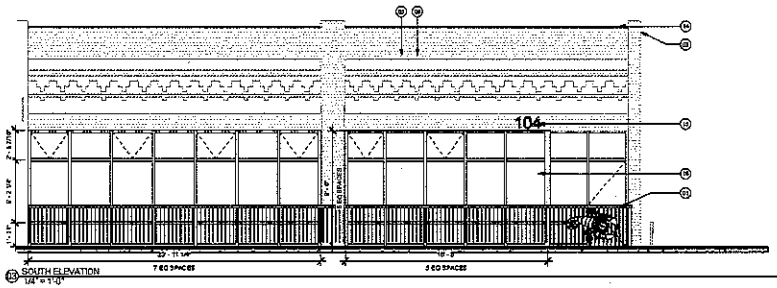
A4.01



NORTH ELEVATION
1/4" = 1'-0"



SOUTH ELEVATION
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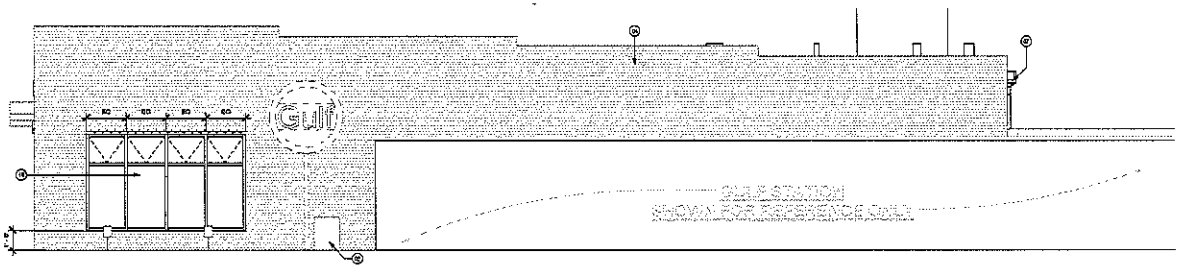
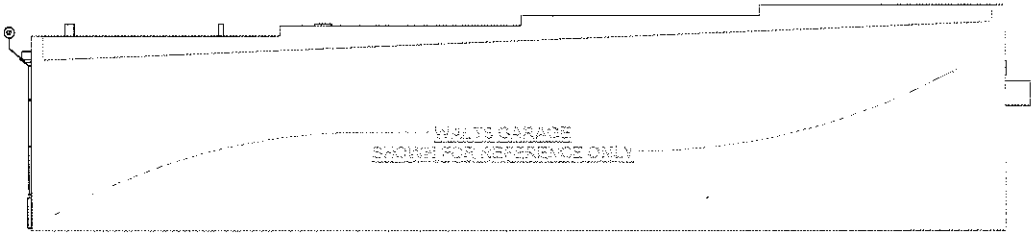


EAST ELEVATION
1/4" = 1'-0"



WEST ELEVATION
1/4" = 1'-0"

GENERAL NOTES

G1 MASONRY RESTORATION: REMOVE UNSOUND MORTAR WHERE INDICATED, EXPOSE BED JOINT & CLEAN REINFORCING FROM CORROSION AND INSTALL NEW MORTAR.

G2 REMOVE LOOSE MORTAR WHERE CRACKING IS OBSERVED & TUCKPOINT TO MATCH EXISTING.

G3 RE-POINT ANY NOTICEABLE CRACKS IN MORTAR HEAD JOINTS (0-10' OR MORE) AND PATCH ANY HOLES WITH BRICK AND MORTAR AS REQUIRED.

G4 CLEAN THE ENTIRE WALL INSIDE AND OUT WITH SPECIFIED CLEANER IN MANAGEABLE SECTIONS WORKING FROM BOTTOM TO TOP AND KEEPING THE SURFACE THOROUGHLY WET WITH WATER AT ALL TIMES.

G5 SEAL OUTSIDE OF WALL WITH SPECIFIED SEALER.

KEYED NOTES

01 NEW DOUGLAS

02 EXISTING A/C N.I.C.

03 NEW PIPE ATTACHED TO BLDG COORDINATE WITH UTILITY CO.

04 P-2 REF. FINISH SCHEDULE

05 P-1 REF. FINISH SCHEDULE

07 NEW SHEET METAL OVERFLOW OR COLLECTOR HEAD & DOWNSPOUT WITH CAST IRON BOOT

08 OVERFLOW SCUPPER

09 DOWNSPOUT BOOT ALIGN WITH MORTAR JOINT

10 DOWNSPOUT

11 COLLECTOR

12 CAST IRON BOOT

13 WALL CLEAN OUT

14 NEW SHEET METAL COPING

15 NEW STREET ADDRESS NUMBERS PER CITY OF BOSTON PIN MOUNTED BRUSHED STAINLESS STEEL

16 NEW STAIR RAIL

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HOP & STING BREWERY

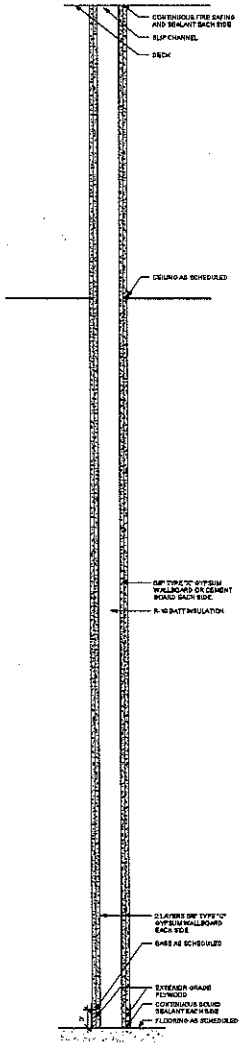
REVISIONS

No.	DATE	DESCRIPTION

CONTENTS :
EXTERIOR ELEVATIONS

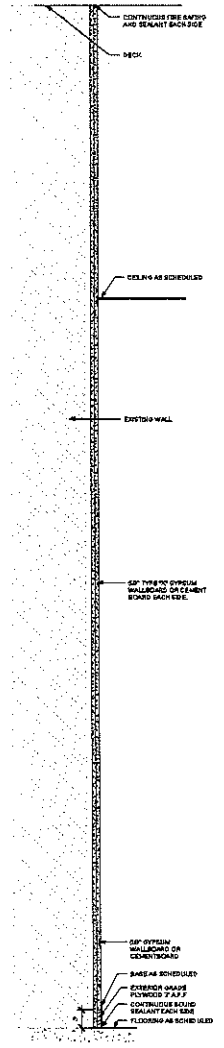
DATE :
07/08/2016

SHEET
A4.02



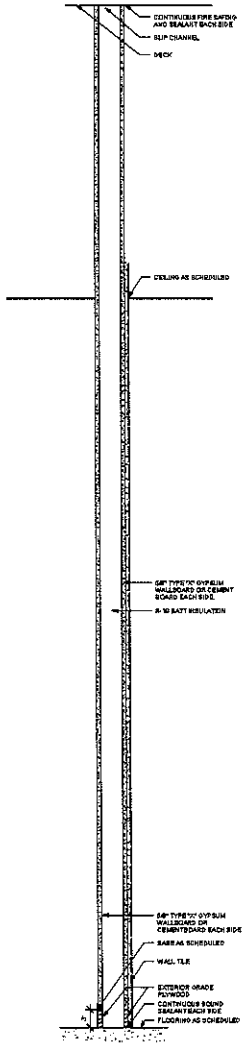
5 PARTITION TYPE 04
1 1/2" = 1'-0"

4		
	STUD WIDTH:	2 5/8" STUD
	STUD GAUGE:	18 GA
	INSULATION:	YES
	FIRE SEALANT:	YES
	OVERALL WIDTH:	6 1/4"
	NOTE:	2 LAYERS GYPSUM BOARD EACH SIDE. GYPSUM BOARD MOLD AND MOISTURE RESISTANT WITH WALL TILE ONE SIDE.



6 PARTITION TYPE 03
1 1/2" = 1'-0"

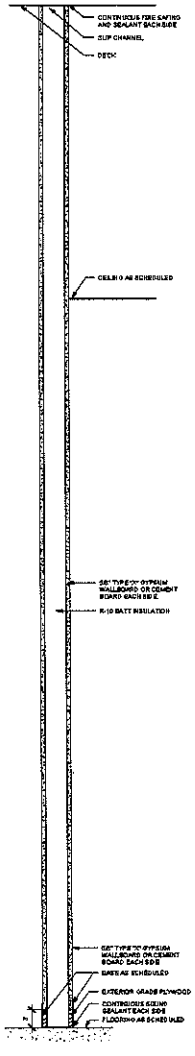
3		
	STUD WIDTH:	3 5/8" STUD
	STUD GAUGE:	18 GA
	INSULATION:	YES
	FIRE SEALANT:	YES
	OVERALL WIDTH:	8 3/4"
	NOTE:	2 LAYERS 5/8" TYPE "X" GYPSUM WALLBOARD



3 PARTITION TYPE 02
1 1/2" = 1'-0"

2		
	STUD WIDTH:	3 5/8" STUD
	STUD GAUGE:	18 GA
	INSULATION:	YES
	FIRE SEALANT:	NO
	OVERALL WIDTH:	6 3/4"
	NOTE:	GYPSUM BOARD ONE SIDE. GYPSUMBOARD MOLD AND MOISTURE RESISTANT WITH WALL TILE ONE SIDE.

2A		
	STUD WIDTH:	6" STUD
	STUD GAUGE:	18 GA
	INSULATION:	YES
	FIRE SEALANT:	NO
	OVERALL WIDTH:	8"
	NOTE:	GYPSUM BOARD MOLD AND MOISTURE RESISTANT WITH WALL TILE BOTH SIDES



1 PARTITION TYPE 01
1 1/2" = 1'-0"

1		
	STUD WIDTH:	3 5/8" STUD
	STUD GAUGE:	18 GA
	INSULATION:	YES
	FIRE SEALANT:	NO
	OVERALL WIDTH:	4 3/4"
	NOTE:	GYPSUM BOARD BOTH SIDES

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HOP & STING BREWERY

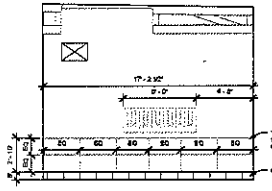
REVISIONS

NO.	DATE	DESCRIPTION

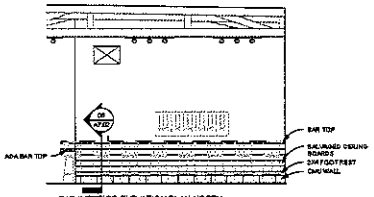
CONTENTS :
PARTITION TYPES

DATE :
07/06/2016

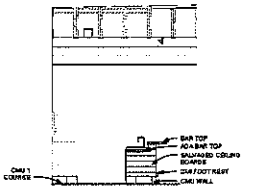
SHEET
A5.10



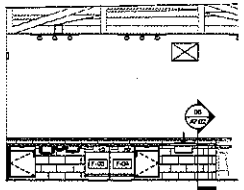
BAR INTERIOR ELEVATION NORTH
1/4" = 1'-0"



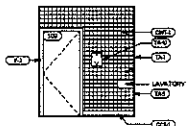
BAR INTERIOR ELEVATION PLAN NORTH
1/4" = 1'-0"



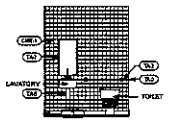
BAR PLAN EAST
1/4" = 1'-0"


BAR INTERIOR ELEVATION SOUTH
1/4" = 1'-0"

EQUIPMENT SCHEDULE			
Type Mark	Description	Type Comments	Comments
TA-1	GRAB BAR - 18"	MOUNT VERTICAL W/ BOTTOM @ 39" AFF	
TA-2	GRAB BAR - 36"	36" AFF TO TOP OF GRIPPING SURFACE	BOBRICK B6106 X 36
TA-3	GRAB BAR - 42"	36" AFF TO TOP OF GRIPPING SURFACE	BOBRICK B6106 X 42
TA-4	TOILET PAPER DISPENSER	19" MIN AFF, 48" MAX AFF	BOBRICK B2740
TA-5	UNDER LAVATORY GUARD		TRUE BRO INC
TA-7	18"X36" RECT MIRROR W/ SST EDGE	40" AFF TO BOTTOM OF MIRROR SURFACE	BOBRICK B-165 1836
TA-8	UNISEX RESTROOM SIGN	ADA ROOM SIGNAGE	
TA-10	PAPER TOWEL DISPENSER AND RECEPTICLE	48" MAX TO DISPENSING SURFACE	BOBRICK B-3961
TA-15	FIRE EXTINGUISHER	36" AFF TO BOTTOM OF CABINET	



RESTROOM
1/4" = 1'-0"



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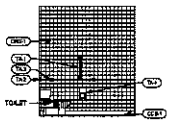

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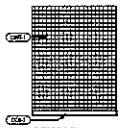
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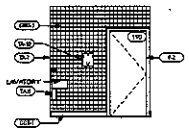
1/4" = 1'-0"



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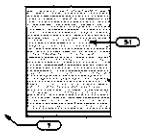
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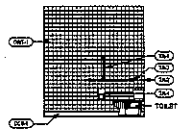
1/4" = 1'-0"



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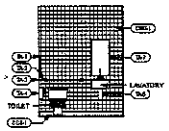
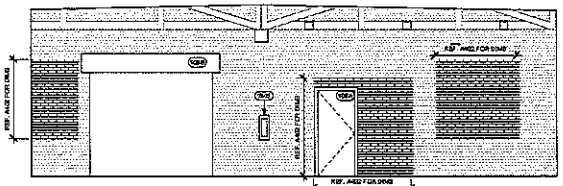
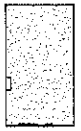
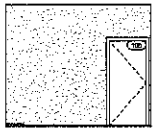


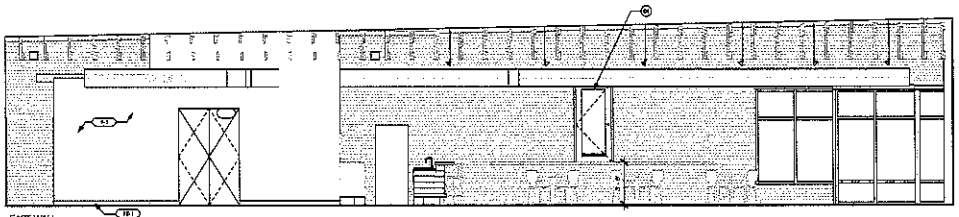
RESTROOM
1/4" = 1'-0"



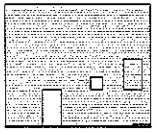
BACK OF HOUSE
1/4" = 1'-0"

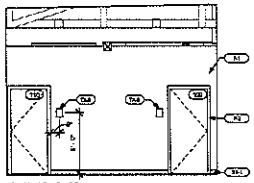

STORAGE
1/4" = 1'-0"

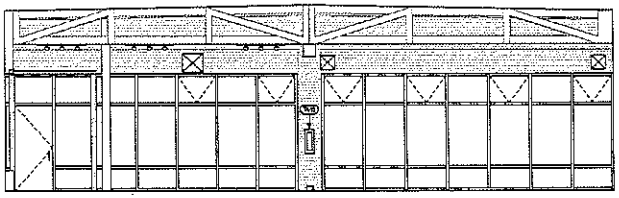

STORAGE
1/4" = 1'-0"

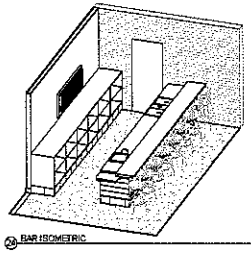

EAST WALL
1/4" = 1'-0"

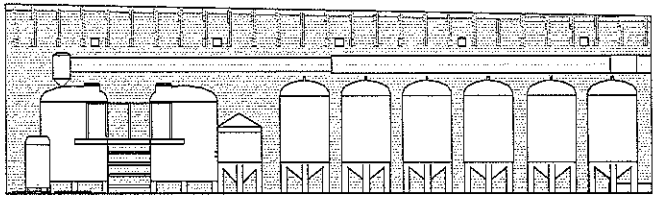
STORAGE
1/4" = 1'-0"

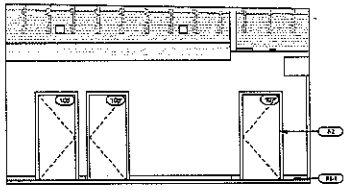

STORAGE
1/4" = 1'-0"


BACK OF HOUSE
1/4" = 1'-0"


STOREFRONT
1/4" = 1'-0"


BAR ISOMETRIC


WEST WALL
1/4" = 1'-0"


UTILITY
1/4" = 1'-0"

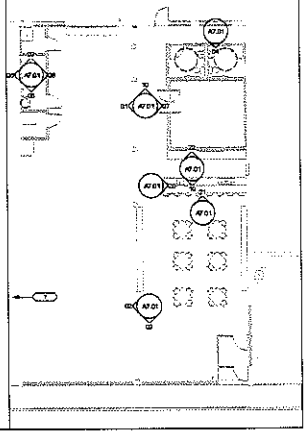
KEYED NOTES

20 SALVAGED SLIDING DOOR TO BE REDUCED HERE. REMOVE SENSOR TYPE. PAINT EDGE OF GLASS P-2

FINISH LEGEND

S-1 SEALER 1
CCB-1 CERAMIC COVE BASE 1 - COLOR BY OWNER
CWT-1 CERAMIC WALL TILE 1 - COLOR BY OWNER
CWT-2 CERAMIC WALL TILE 2 - COLOR BY OWNER
RB-1 RUBBER BASE 1
P-1 PAINT 1 - MPI INT EGA / MPI EGS 7-42H
P-2 PAINT 2 - MPI INT EG

KEY PLAN



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HOP & STING BREWERY

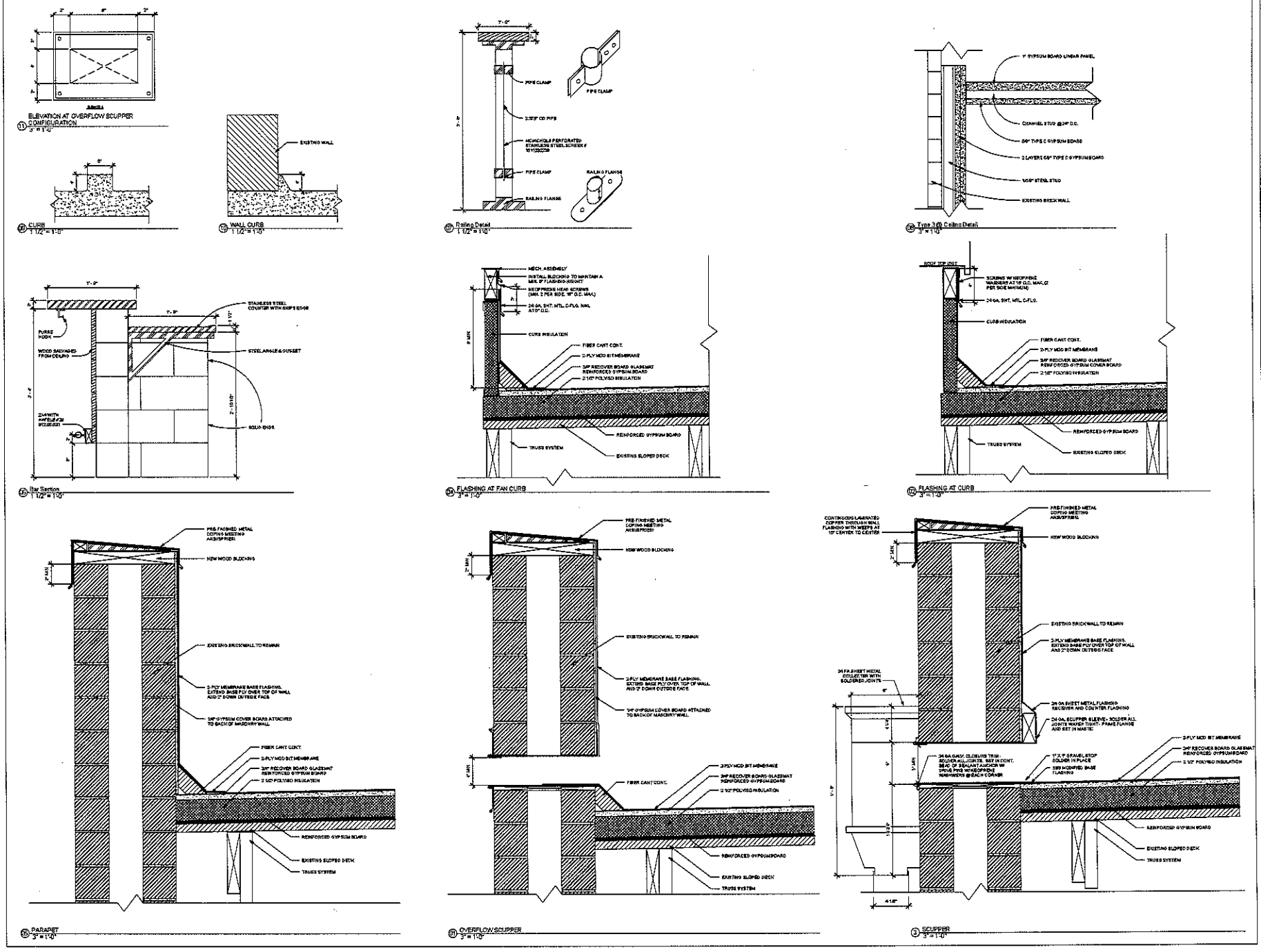
REVISIONS

No.	DATE	DESCRIPTION

CONTENTS :
INTERIOR ELEVATIONS & DETAILS

DATE :
07/08/2016

SHEET
A7.01



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HOP & STING BREWERY

REVISIONS

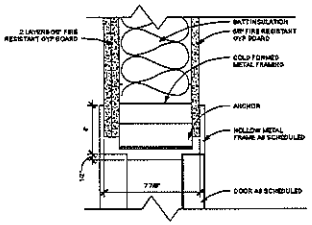
No.	DATE	DESCRIPTION

CONTENTS : DETAILS

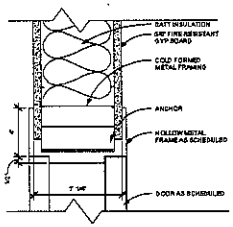
DATE : 07/08/2016

SHEET

A7.02



13 DOOR HEAD AT 6" STUD WALL TYPE 4
3" = 1'-0"



14 DOOR HEAD AT 6" STUD WALL
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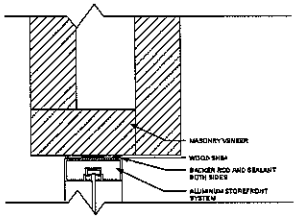
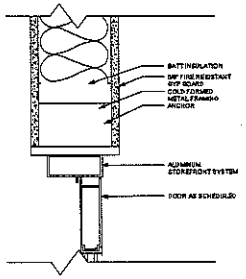
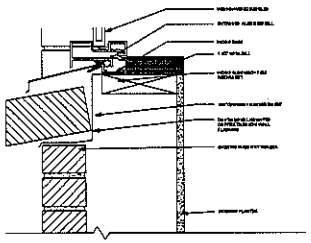


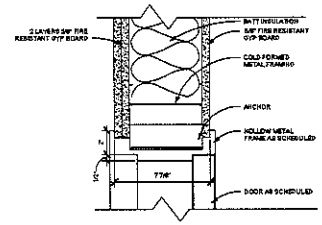
11 STOREFRONT JAMB
3" = 1'-0"



15 STOREFRONT HEAD / JAMB
3" = 1'-0"



14 WINDOW SILL
3" = 1'-0"



16 DOOR JAMB AT 6" STUD WALL TYPE 4
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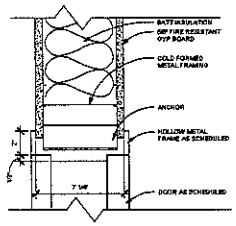

17 DOOR JAMB AT 6" STUD WALL
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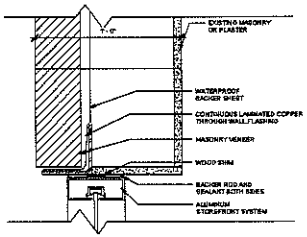

18 STOREFRONT HEAD
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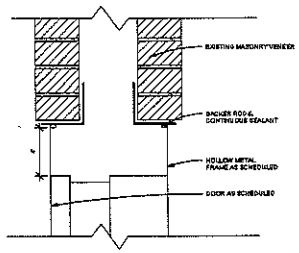

19 DOOR HEAD AT EXISTING WALL
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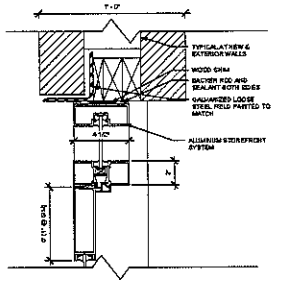

20 EXTERIOR STOREFRONT HEAD
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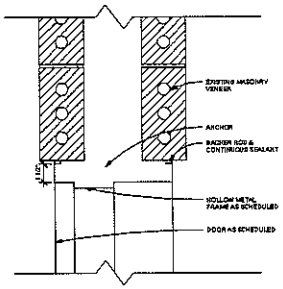
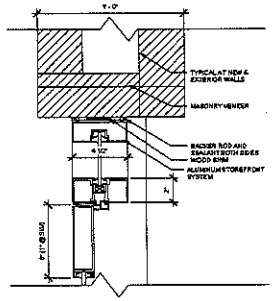


15 DOOR JAMB AT EXISTING WALL
3" = 1'-0"



24 EXTERIOR STOREFRONT JAMB
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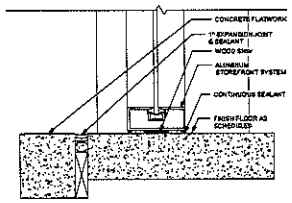
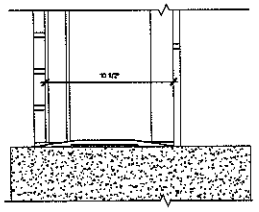
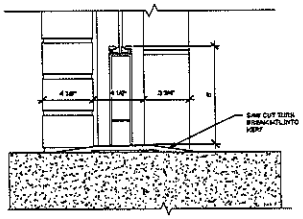


19 STOREFRONT SILL
3" = 1'-0"



22 DOOR SILL AT EXISTING WALL
3" = 1'-0"



21 EXTERIOR STOREFRONT ENTRY SILL 1
3" = 1'-0"

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HOP & STING BREWERY

REVISIONS

NO.	DATE	DESCRIPTION

CONTENTS :
HEAD, JAMB AND SILL DETAILS

DATE :
07/08/2015

SHEET
A7.03

DIMMER SCHEDULE

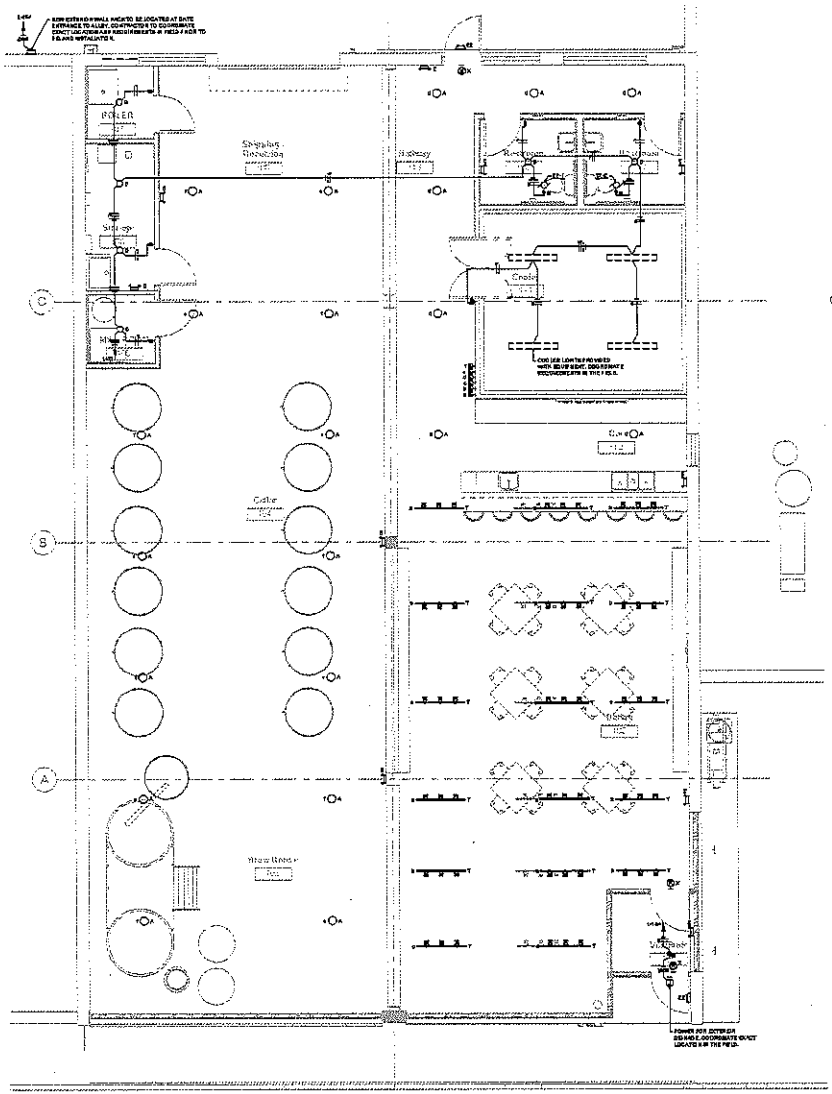
ZONE	LOCATION	TYPE	LOAD (VA)	CIRCUIT
1	[illegible]	LED	[illegible]	1-2
2	[illegible]	LED	[illegible]	3-4
3	[illegible]	LED	[illegible]	5-6
4	[illegible] HALLWAY	LED	[illegible]	7-8
5	[illegible] CELLAR [illegible]	LED	[illegible]	9-10
6	[illegible] CELLAR [illegible]	LED	[illegible]	11-12
TOTALS			[illegible]	

GENERAL NOTES:

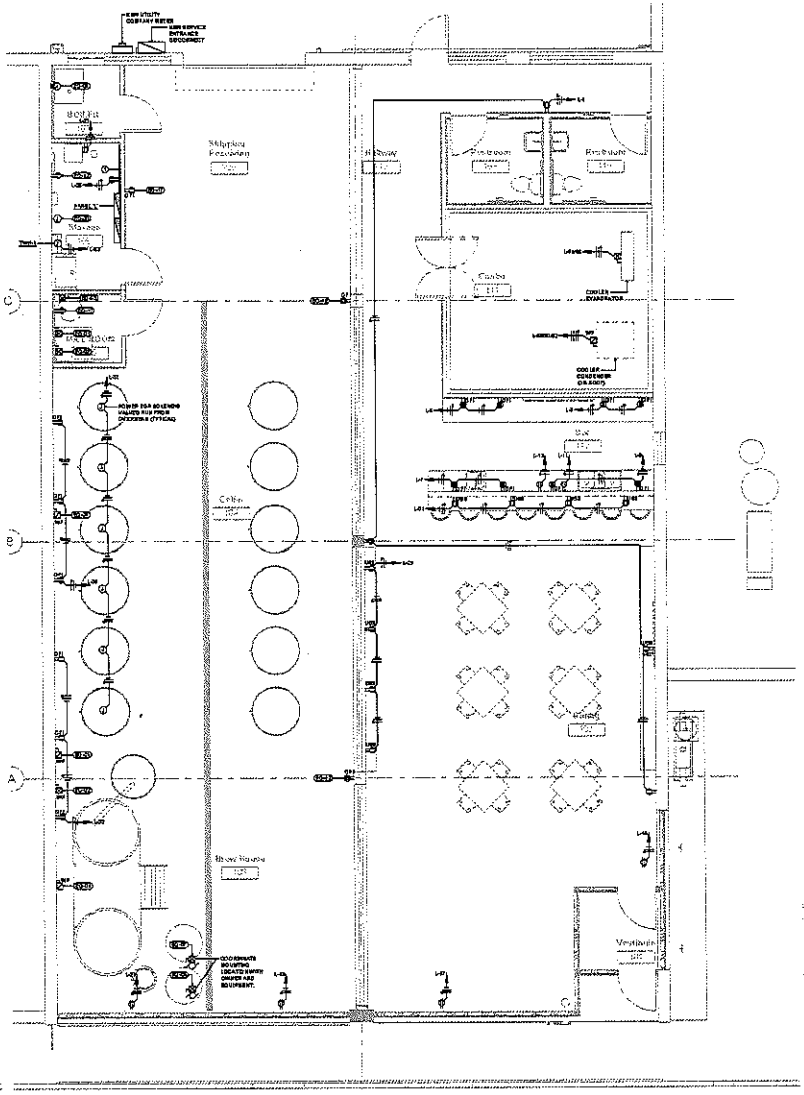
1. CIRCUIT EXIT SIGNS ARE EMERGENCY POWER FED FROM NON-NEXT TO NORMAL LIGHTING CIRCUIT DERIVED THEREFOR OR A NON-SWITCHED HOT LEG.
2. WATERPROOF LIGHT FIXTURES INDICATE EMERGENCY CIRCUIT OR BATTERY BACKUP. EMERGENCY LIGHT FIXTURES SHALL BE WIRED TO REMAIN ON AT ALL TIMES AND REQUIRE NO EXTERNAL LIGHTING CONTROL DEVICES. FOR ALL EMERGENCY OFF UNLESS NOTED OTHERWISE ON PLANS.
3. ENSURE THAT ALL ELECTRICAL DEVICES IN CELLAR AND BREW HOUSE AREAS ARE RATED FOR SUCH LOCATION. DEVICES MOUNTED IN WALLS SHALL BE NO LOWER THAN 36" ABOVE FINISHED FLOOR. COORDINATE EXACT LOCATION AND FIELD RESULTS WITH EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.

KEYED NOTES BY SYMBOL:

1. TELEPHONE SCHEDULES, PROVIDE 4" X 8' TYPE AC PLYWOOD FLYWOOD PANTS WITH TWO 8FT WIDE AT PANTS. PROVIDE @ 8' FROM CO EQUIPMENT WALL STRIPED TO FIRE PRIVITY (SEE AS DIRECTED BY CO REPRESENTATIVE CONTACT.



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



01 FLOOR PLAN - ELECTRICAL
SCALE: 1/4" = 1'-0"

NOVA ENGINEERING

2016-06-24 PERMIT SET

KIRKPATRICK ARCHITECTURE STUDIO

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REVISIONS

NO	DATE	DESCRIPTION

CONTENTS : FLOOR PLAN - ELECTRICAL

DATE :

SHEET

E2.01

PANEL (L) SCHEDULE

DESCRIPTION	P	AMP	LIGHT	RECEP	DEVICE	HEAT	MTRH	COMP	OTHER	PHASE	OTHER	COMP	MTRH	HEAT	MOTOR	RECEP	LIGHT	P	AMP	DESCRIPTION
(3) RECEPTACLES	1	20	0	900	0	0	0	0	0	1440	0	0	0	0	0	0	1800	1	20	LIGHTING
(1) EXR RECEPTACLES	1	20	0	0	0	0	0	1800	0	0	1440

GENERAL NOTE(S):

1. COORDINATE FINAL PLAC EMENT OF DIFFUSERS WITH ARCHITECTURAL RCP AND LIGHTING LAYOUT.

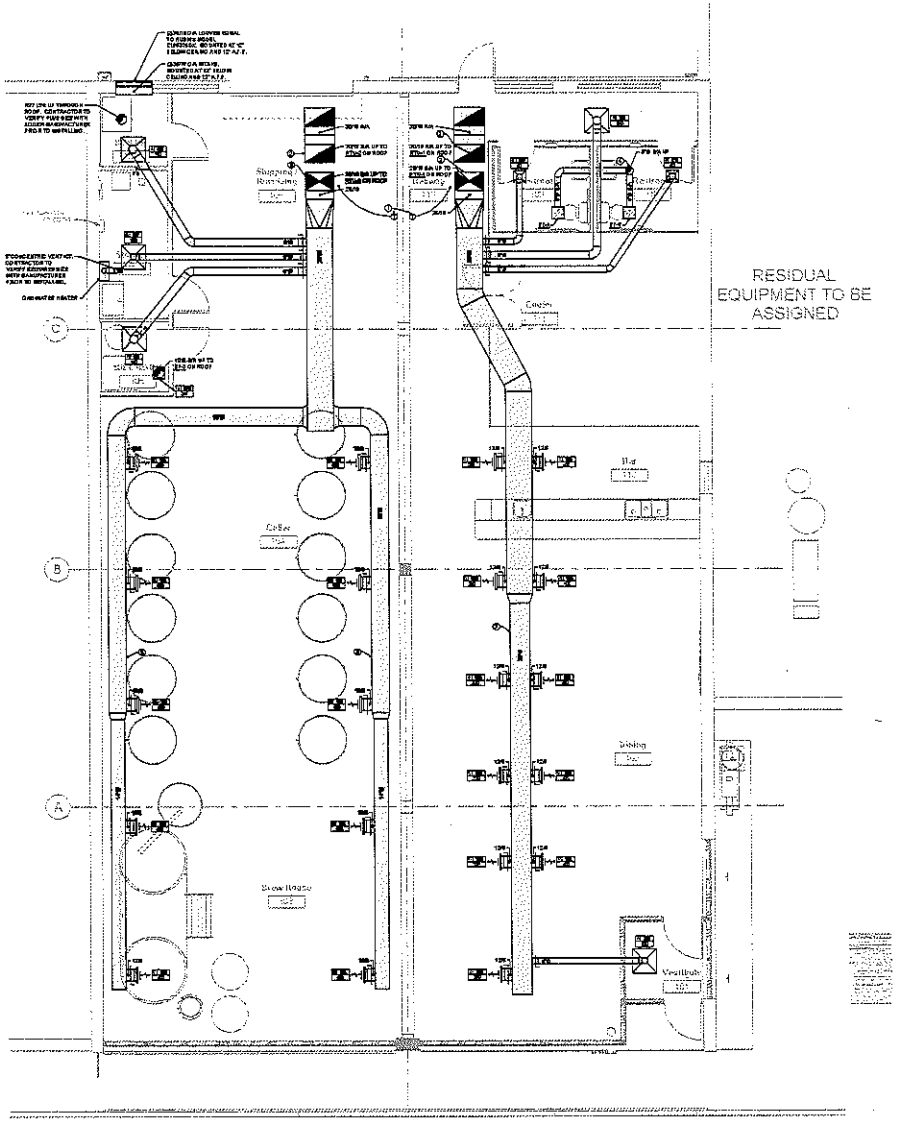
2. COORDINATE EXACT LOCATION FINAL ROOF MOUNTED EQUIPMENT AND ASSOCIATED ROOF PENETRATIONS WITH EXISTING STRUCTURE. VERIFY FINAL LOCATION WITH STRUCTURAL ENGINEER.

3. EXISTING RTU S SHO WN IN PLAN IN NATURE. STRAIGHT SHOTS THAT CROSS OVERHEAD AREA MUST PASS AROUND THE BRANCH DRAW. TRIM BRANCH SHOTS SMALL TO FIT STEM WITH TRANSITIONS TO RETURN AND SUPPLY THE BAND.

4. MAINTAIN A MINIMUM 10'-0" CLEARANCE BETWEEN OUTDOOR HOOD AND ROOF EQUIPMENT PER INTERNATIONAL MECHANICAL CODE.

KEYED NOTES BY SYMBOL:

1. THERMOSTAT LOCATIONS ARE TO BE MOUNTED ATTHE BREAKER. TRICO AND HVAC SUBCONTRACTOR SHALL NOT INSTALL THIS WITHOUT THEIR APPROVAL.
2. TRANSITION TO FIRE CONNECTION PER ATUNIT.
3. ALL EXCTRIC BOXES THAT ARE WILL BE INSTALLED IN AN EXPOSED CEILING. PROVIDE NO UNDERTRAL SHOTTBOOS ARE SHOT, GALVANIZED FINISH, INTERNAL LIP TRICKS LOCKED COLLOVER FOR INSULATION. ELECTRICIAN SHALL BE SUPPLIED BOX ALONG TO ALLOW AIRCRAFT CABLE SUPPORTS.
4. PROVIDE SUPPLY RELIEF HOOD EQUAL TO GREENHECK SCGR-5-RM, WITH BIRD SCREEN.



01 FLOOR PLAN - MECHANICAL
SCALE: 1/4" = 1'-0"

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REVISIONS

NO	DATE	DESCRIPTION

CONTENTS : FLOOR PLAN - MECHANICAL

DATE :

SHEET

M2.01

ROOFTOP UNIT SCHEDULE

MARK	SERVES	NOM. TONS	AMBIENT TEMP (°F)	O/A CFM	SUPPLY FAN CFM	SUPPLY FAN E.S.P. (" WC)	SUPPLY FAN BHP/MP	SUPPLY FAN RPM	COOLING COIL E.A.T. (°F) DB/WB	COOLING COIL L.A.T. (°F) DB/WB	COOLING COIL TOT. CAP (MBH)	COOLING COIL SEN. CAP (MBH)	HEATING TYPE	HEATING INPUT (MBH)	HEATING OUTPUT (MBH)	ELECTRICAL MOCP	ELECTRICAL UNIT MCA	ELECTRICAL UNIT VOLT/PH	MANUFACTURER	MODEL NO.	REMARKS
RTU-1	—	10.0	100	900	4,400	1.0	3.0 HP	1000	77.0/66.7	55.0/57.4	94.4	80.0	GAS	300	240	60	46.7	208/60	TRANE	YHC120	1,2,3,4
RTU-2	—	10.0	100	900	4,400	1.0	3.0 HP	1000	77.0/66.7	55.0/57.4	94.4	80.0	GAS	300	240	60	46.7	208/60	TRANE	YHC120	1,2,3,4

1. WITH PROGRAMMABLE T-STAT WITH NIGHT SETBACK(SEE COMPLIANT). 2. WITH ECONOMIZER, BAROMETRIC RELIEF, ENTHALPY CONTROLLED. 3. HAIL GUARDS. 4. SHOWN SEN+ 12.0% FOR ECM.

AIR DEVICE SCHEDULE

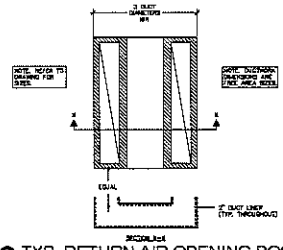
MARK	DUTY	TYPE	FACE SIZE	NECK SIZE	CFM	MAX. T.P. (" W.G)	MAX. N.C.	MFG.	MODEL NO.	REMARKS
A	SUPPLY	CEILING	24"X24"	AS NOTED	AS NOTED	0.15	25	TITUS	350	1,2
B	SUPPLY	CEILING	12"X12"	AS NOTED	AS NOTED	0.15	25	TITUS	350	1,2
C	SUPPLY	SIDEWALL	AS NOTED	AS NOTED	AS NOTED	0.15	25	TITUS	350FL	1,2
D	RETURN	CEILING	12"X12"	12"X12"	AS NOTED	0.15	25	TITUS	50F-1"	1,2

1. AIR DEVICE SHALL BE FOR FINISHED ROOM UNLESS OTHERWISE NOTED OTHERWISE BY THE ARCHITECT. SUPPLIED IN ZINC AREA SHALL BE PRETREATED WITH BLACK (COORDINATE WITH ARCHITECT). OF FINISH AT THE SUPPLIER. SEALED WITH FACE ADDITIONALLY AFFIXTITED.
2. AIR DEVICE SHALL HAVE FRAMES AND SPRINGS INSTALLED FOR THE CONTRACTOR IN WHICH THEY WILL BE INSTALLED.

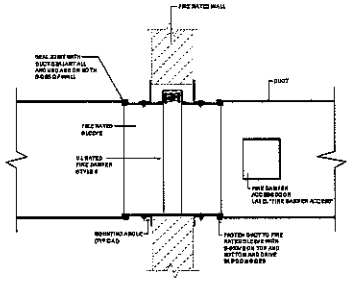
FAN SCHEDULE

MARK	LOCATION	DRIVE	CFM	E.S.P. (" WC)	FAN RPM	WATT/ HP	VOLT/PH	MANUFACTURER	MODEL NO.	REMARKS
EF-1	RESTROOMS	DIRECT	75	0.25	900	60 W	120V/1#	G.REEMENT	10"-BG	1,2
EF-2	RESTROOMS	DIRECT	75	0.25	900	60 W	120V/1#	G.REEMENT	10"-BG	1,2
EF-3	WALKIN/DRY	DIRECT	300	0.50	1075	1/10 HP	1#/115V	G.REEMENT	8-07BHD	1,2,3

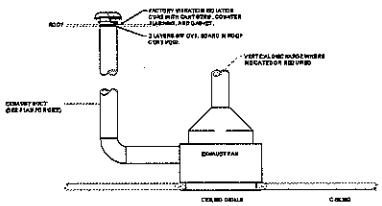
1. MOUNT ON ROOF.
2. CONTROL FOR FAN SHALL BE SET BRACKETED WITH LOW THERMOSTAT.
3. WITH VIBRATION ISOLATORS (WITH SPRING ISOLATED FOOT) MOUNTED ZONE.



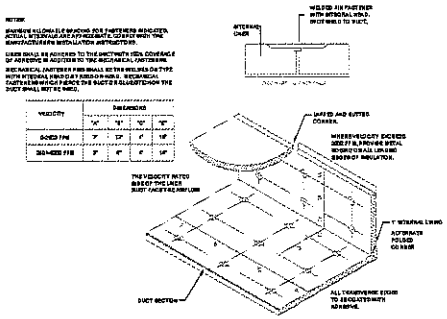
10 TYP. RETURN AIR OPENING BOOT
SCALE: NTS



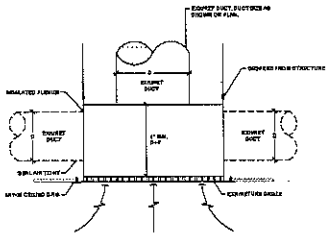
07 TYPICAL FIRE DAMPER DETAIL
SCALE: NONE



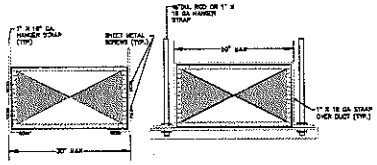
09 EXHAUST FAN - CEILING THROUGH ROOF
SCALE: NOT TO SCALE



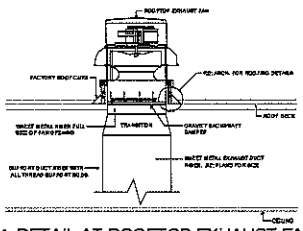
06 INTERNAL DUCTLINER DETAIL
SCALE: NOT TO SCALE



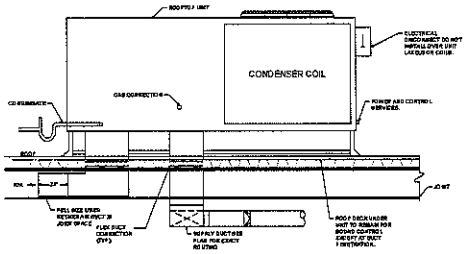
03 DUCTED EXH/RETURN GRILLE
SCALE: NOT TO SCALE



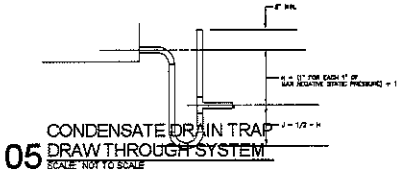
02 RECTANGULAR DUCT HANGER
SCALE: NOT TO SCALE



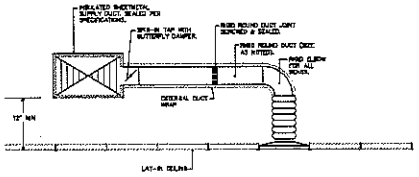
11 DETAIL AT ROOFTOP EXHAUST FAN
SCALE: NOT TO SCALE



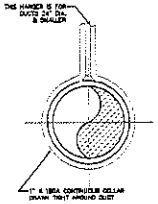
08 TYPICAL ROOFTOP UNIT DETAIL
SCALE: NOT TO SCALE



CONDENSATE DRAIN TRAP
05 DRAW THROUGH SYSTEM
SCALE: NOT TO SCALE



04 TYPICAL DIFFUSER CONNECTION
SCALE: NOT TO SCALE



01 ROUND DUCT HANGER
SCALE: NOT TO SCALE

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REVISIONS

NO.	DATE	DESCRIPTION

CONTENTS : SCHEDULES AND DETAILS - MECHANICAL

DATE :

SHEET

M5.01

MECHANICAL AND PLUMBING SYMBOLS

SYMBOL	DESCRIPTION
	THIN LINE WIDTHS REPRESENT EXISTING WORK
	BOLD LINE WIDTHS REPRESENT NEW WORK
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK
	NEW DUCTWORK
	CHANGE OF ELEVATION - RISE (R) OR DROP (D)
	DUCT UP, INDICATIVE PERIMETER FIRST FIGURE IS TOP DIMENSION
	DUCT UP, INDICATIVE PERIMETER FIRST FIGURE IS TOP DIMENSION
	DUCT DOWN, INDICATIVE PERIMETER FIRST FIGURE IS TOP DIMENSION
	DUCT DOWN, INDICATIVE PERIMETER FIRST FIGURE IS TOP DIMENSION
	MANUAL VOLUME DAMPER
	FIRE DAMPER, VERTICAL POSITION
	FIRE DAMPER, HORIZONTAL POSITION
	CEILING DIFFUSER
	CEILING DIFFUSER (TOUCH GRILLE)
	DUCT DIFFUSER
	SIDEWALL GRILLE OR REGISTER
	INDICATES DIRECTION NOT AIR FLOW
AIR DEVICE TAG	NECK SIZE / AIR QUANTITY (CFM)
DETAIL TAG	DETAIL NUMBER / SHEET ON WHICH DETAIL APPEARS
KEYNOTE TAG	PLUMBING KEYNOTE / PSI
	TEMPERATURE SENSOR
	THERMOSTAT
	EXISTING PIPING TO BE REMOVED
	SANITARY SEWER
	STORM SEWER
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	VENT
	CONDENSATE DRAIN
	FIRE PIPING
	GAS PIPING
	TEMPERED WATER PIPING
	CONNECT ADD TO EXISTING
	PIPE, TURNED UP
	PIPE, TURNED DOWN
	CONNECTION, BOTTOM
	CONNECTION, TOP
	ELBOW
	TEE
	CAP
	STRAINER
	UNION
	FLANGE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	ANGLE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	GATE VALVE
	GLOBE VALVE
	PLUG VALVE
	PRESSURE RELIEF VALVE
	PRESSURE REDUCING VALVE
	AUTOMATIC BUTTERFLY VALVE
	AUTOMATIC 2-WAY VALVE
	AUTOMATIC 3-WAY VALVE
	PENETRATION
	WATER HAMMER ARRESTOR

NOTES:
1. ALL MECHANICAL EQUIPMENT MAY NOT APPEAR ON THE DRAWINGS.
2. ALL WALL MOUNTED OUTLETS (POWER, DATA, TELEPHONE, ETC.) SHALL BE MOUNTED NO LESS THAN 18" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
3. ALL LIGHT SWITCHES SHALL BE MOUNTED NO MORE THAN 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.

ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
	BOLD LINE REPRESENTS NEW WORK
	THIN LINE STEP REPRESENTS EXISTING WORK
	DASHED LINE REPRESENTS DEMO WORK
	CONDUIT
	UNDERGROUND/UNDERFLOOR CONDUIT
	FLEXIBLE CONDUIT
	WIRE BOLD
	HOMERUN
	WIRING, NEUTRAL
	WIRING, HOT
	WIRING, SWITCHING
	WIRING, GROUND
	WIRING, MOUNTED DOWN
	120V 15-20A RECEPTACLE
	208V 20A RECEPTACLE
	ABOVE COUNTER 120V 15A RECEPTACLE MOUNT @ 44" A.F.F. (U.N.O.)
	GFI RECEPTACLE
	GFI RECEPTACLE
	DUPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE
	ABOVE COUNTER QUADRAPLEX RECEPTACLE MOUNT @ 44" A.F.F. (U.N.O.)
	CEILING MOUNTED SPECIAL PURPOSE RECEPT., OR PPLY SUCT MEDIA CONFIGURATION
	TURN FLOOR MOUNT QUADRAPLEX RECEPTACLE
	CEILING MOUNTED DUPLEX RECEPTACLE
	FLOOR MOUNTED QUADRAPLEX RECEPTACLE
	CEILING MOUNTED QUADRAPLEX RECEPTACLE
	DUPLEX RECEPTACLE ON EMERG. CIRCUIT
	ABOVE COUNTER DUPLEX RECEPTACLE ON EMERG. CIRCUIT MOUNT @ 44" A.F.F. (U.N.O.)
	ABOVE COUNTER QUAD RECEPTACLE ON EMERG. CIRCUIT MOUNT @ 44" A.F.F. (U.N.O.)
	20 GPM COLD WATER
	DATA CONNECTION TO OUTLET RUN 3/4" E.C. TO 4" ABV. C.I.O.
	PHONE FLOOR DATA CONNECTION TO OUTLET
	TELEPHONE OUTLET RUN 3/4" E.C. TO 4" ABV. C.I.O.
	PHONE FLOOR TELEPHONE OUTLET
	TELEPHONE / DATA OUTLET RUN 3/4" E.C. TO 4" ABV. C.I.O.
	PHONE FLOOR TELEPHONE OUTLET
	PAGING DEVICE
	TELEVISION OUTLET WITH 3/4" CONDUIT CONNECTED TO OTHER DEVICES (E.G.)
	CEILING MOUNTED TELEVISION OUTLET
	JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	PUSH-BUTTON
	MOMENTARY SWITCH
	CONNECTION, TOP
	FIXED SPECIAL PURPOSE SWITCH
	VFD (VARIABLE FREQUENCY DRIVE)
	TWO (TWO OR MORE) SWITCHES MOUNTED IN 1 ENCLOSURE
	ENCLOSED CIRCUIT BREAKER SPECIAL PURPOSE
	MOTOR
	SWITCH
	20 AMP 120 VOLT SWITCH
	THREE WAY SWITCH
	FOUR-WAY SWITCH
	MANUAL MOTOR STARTER
	WALL MOUNTED VOLTAGE CONTROL (F.A.)
	SWITCH SWITCH
	PUSH-BUTTON
	CARD READER
	DOOR CONTACT
	MAG-LOCK
	GENERATOR

ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION
	SHUNT TRIP
	CLOCK
	MOTION DETECTOR SWITCH
	CEILING MOUNTED MOTION DETECTOR
	METER
	120/208V ELECTRICAL PANEL
	277/480V ELECTRICAL PANEL
	TRANSFORMER
	1HR LIGHTING CONTACTOR
	NEW 2'X 4' FLUORESCENT REFERENCE LIGHT FIXTURE SCHEDULE
	SAME AS 2' X 4' EXCEPT WITH EMERGENCY REMOTE BATTERY PACK
	NEW 2' X 2' FLUORESCENT REFERENCE LIGHT FIXTURE SCHEDULE
	SAME AS 2' X 2' EXCEPT WITH EMERGENCY REMOTE BATTERY PACK
	FLUORESCENT STRIP REFERENCE LIGHT FIXTURE SCHEDULE
	SCONCE LIGHT REFERENCE LIGHT FIXTURE SCHEDULE
	WALL MOUNTED LIGHT FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE
	LIGHT FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE
	WALL MOUNTED REFERENCE LIGHT FIXTURE SCHEDULE
	LIGHT FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE
	PENDANT CHANDELIER LIGHT FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE
	10 LB. INTS. SITE LIGHT FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE
	10 LB. INTS. SITE LIGHT FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE
	SINGLE FACE EXITING & EMERGENCY LIGHTS & ILLUMINATED FACE REFERENCED LIGHT FIXTURE SCHEDULE
	DOUBLE FACE EXIT MOUNTED AREA INDICATED ILLUMINATED FACE REFERENCED LIGHT FIXTURE SCHEDULE
	WALL MOUNT EXIT FACE REFERENCE LIGHT FIXTURE SCHEDULE
	EMERGENCY LIGHTING FIXTURE REFERENCE LIGHT FIXTURE SCHEDULE
	FIRE ALARM SWITCH
	DOOR HOLDER
	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM CONTROL PANEL
	FIRE ALARM OVERFLOW SWITCH
	FIRE ALARM DAMPER SWITCH
	ALERT, REMOTE ALARM
	ADA APPROVED FIRE ALARM HORN, MOUNT @ 80" AFF.
	CEILING MOUNTED ADA APPROVED FIRE ALARM HORN.
	ADA APPROVED AUDIO VISUAL FIRE ALARM DUAL BELL DEVICE, MOUNT @ 80" AFF.
	CEILING MOUNTED ADA APPROVED AUDIO VISUAL FIRE ALARM DUAL BELL DEVICE.
	ADA STROBE ONLY FIRE ALARM DEVICE, MOUNT @ 80" AFF.
	CEILING MOUNTED ADA STROBE ONLY FIRE ALARM DEVICE
	ADA APPROVED FIRE ALARM PULL STATION (DOUBLE EQUAL TO LENGTH EXISTING FIRE ALARM SYSTEM)
	MANUAL PULL STATION, DUAL ACTION
	REMOTE FIRE ALARM
	SMOKE DETECTOR
	DUCT MOUNTED SMOKE DETECTOR
	DUCT MOUNTED SMOKE DETECTOR
	HEAT DETECTOR
	UNDERFLOOR HEAT DETECTOR
	FLAME DETECTOR
	SPEAKER
	FIRE ALARM SPEAKER

ABBREVIATIONS

SYMBOL	DESCRIPTION
ABA	ABA CAMS WITH SMOKE FILTER ACT
AFF	ABOVE FINISHED FLOOR
E	EXISTING, UNLESS NOTED WITH SLASH PLATE
BSD	BASEMENT SUMP
BOD	BOTTOM OF DUCT
BFF	BELOW FINISHED FLOOR
BFF	BOTTOM FREEZER
BRF	BRANCH REFRIGERANT
C	CONDUIT
CB	CIRCUIT BREAKER
CD	CONDENSATE DRAIN
CFW	CHILLED FEED WATER
CHR	CHILLED WATER RETURN
CHS	CHILLED WATER SUPPLY
CR	CONDENSER WATER RETURN
CS	CONDENSER WATER SUPPLY
CU	COPPER
CW	DOMESTIC COLD WATER
D	EXISTING TO BE DEMO LIMITED
DCU	DOUBLE CLEANOUT
E	EXISTING TO REMAIN
EA	EXHAUST AIR
EWT	ENTERING WATER TEMPERATURE
EC	EMPTY CONDUIT
ESP	EXTERNAL STATIC PRESSURE
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EWT	ENTERING WATER TEMPERATURE
FF	FIREPROOF FIREPROOF
F	FIRE LINE
FCO	FLOOR CLEANOUT
FSD	FIRE SUPPRESSOR SWITCH
FLD	FLOOR DRAIN
FD	FIRE DAMPER
FR	FLOOR REMAIN
FSD	COMBINATION FIRE SMOKE DAMPER
G	GAS
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GFR	GALLONS PER HOUR
HO	HOPPER SMART HOT OAK
HP	HORSEPOWER
HR	HEATING HOT WATER RETURN
HS	HEATING HOT WATER SUPPLY
HW	HOT WATER SUPPLY
HWR	HOT WATER RETURN
IC	IN COMPUTER
IG	INSULATED GROUND
KR	KITCHEN REMAIN
KW	KILOWATT
MA	MAKEUP AIR
MTD	MOUNTED
N	NEW
NC	NOT IN CONTACT
NR	REMAIN
OA	OUTDOOR AIR
OBD	OVERFLOW BLADE DAMPER
OCD	OVERFLOW CONDENSATE DRAIN
OCPD	OVERCURRENT PROTECTIVE DEVICE
OD	OVERFLOW ROOF DRAIN
OHCI	OVERHEAD HANGER, CONTRACTOR INSTALLED
PED	PARALLEL BLADE DAMPER
PSI	POUNDS PER SQUARE INCH
R	EXISTING TO BE RELOCATED
RA	RETURN AIR
RD	ROOF DRAIN
RL	REFRIGERANT LIQUID
RO	REVERSE OSCILLATING

ABBREVIATIONS

SYMBOL	DESCRIPTION
RS	REFRIGERANT SUCTION
S	SINK
SA	SUPPLY AIR
SAN	SANITARY SEWER
SD	STORM DRAIN
SHF	SHELVES
TT	TRAP PRIMER
TW	TEMPERED WATER
U	URINAL
UF	UNDERFLOOR
UG	UNDERGROUND
UNS	UNLESS NOTED OTHERWISE
UR1	UNIVERSAL RETAIL PUB. A SEVICE REMAIN OVER SURFACE RECEPTACLE WITH UNI 50 RTS MATRIX FOR 2.5 AIR IN, MIN AT TO LIMITED THICKNESS.
V	VENT
VIF	VERIFY IN FIELD
VTR	VENT THROUGH ROOF
W	WALL MOUNTED
WC	WATER CLOSET
WCO	WALL CLEANOUT
WP	WEATHER PROOF

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NOVA ENGINEERING

2016-08-24 PERMIT SET

DIVISION 13: SPECIAL SYSTEMS

13915 - FIRE SUPPRESSION PIPING

A. PROVIDE COMPLETE WET FIRE FIRE SUPPRESSION SYSTEM FOR THE ENTIRE BUILDING. FIRE SUPPRESSION SYSTEMS SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION. SYSTEM SHALL BE DESIGNED AND INSTALLED BASED ON NFPA 13 STANDARD.
B. SPRINKLER HEADS IN FINISHED AREAS SHALL BE CONCEALED TYPE WITH WHITE COVER PLATES. SPRINKLER HEADS SHALL BE CENTERED IN CEILING TILES.
C. COORDINATE THE SIZING AND LAYOUT OF FIRE SUPPRESSION PIPING WITH THE ENGINEER. ALL TRADES TO ALLOW ADEQUATE SPACE FOR SPRINKLER PIPING. ALL PIPING SHALL BE INSTALLED TO CONFORM TO THE REQUIREMENTS OF THE AHJ.
D. REVISE LAYOUT TO THE EXISTING FIRE SUPPRESSION SYSTEM IF SYSTEM SHALL BE REQUIRED TO ACCOMMODATE FUTURE USE. SYSTEM THAT SATISFIES THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION. FIRE SUPPRESSION SYSTEM SHALL BE VERIFIED WITH THE SYSTEM INSTALLER.
E. SPRINKLER HEADS IN FINISHED CEILINGS SHALL BE CONCEALED TYPE WITH WHITE FLUSH COVERS OR RECESSED TYPE WITH TWO-PIECE CONVERSION RESTRICTING HEAD MOTION. SPRINKLER HEADS IN UNFINISHED SPACES SHALL BE CHROME PLATED.
F. EXTENDED COVERAGE TYPE SPRINKLER HEADS MAY BE USED WHERE APPROVED BY THE AUTHORITIES HAVING JURISDICTION.

DIVISION 15: MECHANICAL

15050 - BASIC MECHANICAL MATERIALS AND METHODS

A. PROVIDE ALL EQUIPMENT, MATERIALS, LABOR, SUPERVISION, AND SERVICES NECESSARY FOR OR INCIDENTAL TO THE INSTALLATION OF COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS SHOWN OR INDICATED ON THE DRAWINGS. FROM INDICATIONS SHALL BE TAKEN TO PROTECT ALL EXISTING STRUCTURE AND PROPERTY WITH WHICH WORK COMES IN CONTACT OR OVER WHICH MATERIALS, EQUIPMENT, ERRANTS, ETC., MAY BE TRANSPORTED. MISTAKES, OR REPAIR, ALL DAMAGE RESULTING FROM THIS PROVISION SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER.
B. MATERIALS AND/OR EQUIPMENT FAILING TO GIVE SATISFACTORY SERVICE DURING A ONE YEAR INTERVAL AND UNDER WARRANTY PERIOD SHALL BE REMOVED OR REPLACED WITH NEW.
C. SUBMITTALS OF PRODUCT DATA FOR ALL MECHANICAL AND PLUMBING ITEMS FOR APPROVAL.
D. PROVIDE ALL EQUIPMENT COORDINATE WITH THE OWNER FOR ANY MOVES AND SCHEDULING OF ANY EXISTING OR EXISTING TENANT SYSTEM INTERRUPTIONS.
E. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS PUBLISHED RECOMMENDATIONS FOR THE SERVICE INTENDED. THE INSTALLATION OF ALL EQUIPMENT SHALL BE MADE BY EXPERIENCED CRAFTSMEN IN A MANNER SUBORDINATING EXPERIMENTAL.
F. THE DOCUMENTS INCLUDE ALL MATERIAL TOOLS, SERVICE, AND COSTS NECESSARY TO COMPLETELY INSTALLED MECHANICAL WORK. IT IS THE INTENT AND MEANING OF THE CONTRACT DOCUMENTS THAT THE MECHANICAL SYSTEM BE INSTALLED COMPLETE INCLUDING ALL ITEMS AND APPURTENANCES REASONABLY, REASONABLY INCIDENTAL, OR CUSTOMARILY INCLUDED EVEN THOUGH NEAT AND EVEN ITEM IS NOT SPECIFICALLY MENTIONED IN SPECIFICATIONS.
G. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND ALL APPLICABLE CODES AND STANDARDS WHICH INCLUDE ALL ORDINANCES, AMENDMENTS AND UTILITY COMPANY REGULATIONS. WHERE CONFLICTS EXIST AMONG ANY MEANS CODES AND STANDARDS, THE ARCHITECT SHALL BE NOTIFIED IN WRITING. REVISED WORK IS FOUND NEED THAT DOES NOT COMPLY WITH APPLICABLE CODES AND STANDARDS, THERE DEFECTS SHALL BE CORRECTED WITH NO CHANGE IN CONTRACT PRICE.
H. THE CONTRACT DOCUMENTS WERE PREPARED FOR A NEW BUILDING. HOWEVER, DO NOTHING WITHIN THE DRAWINGS THE INSTALLATION OF THE MECHANICAL SHALL BE CARRY OUT IMMEDIATE PRIOR TO SUBMITTING A BID, FAILURE OF SUCH TO DO SO, OR PROCEEDING WITH INSTALLATION, CONSTITUTE SUCH TO ACCEPTING CONDITIONS SHALL BE ENOUGH TO THE ARCHITECT OR THE ARCHITECT FOR REVIEW AND RESOLUTION. UPON CONVENIENCE OF CONSTRUCTION, IT SHALL BE PROVISIONED THAT THE DESIGNED BY THE ENGINEER HAVE BEEN ACCEPTED.
I. COORDINATE LOCATIONS OF EXISTING EQUIPMENT (PUCTS, TERMINAL BOXES, ETC.) WITH ANY FIXED TO STRUCTURE PARTITIONS, REGARDLESS EQUIPMENT IS REQUIRED TO SUPPLY ADDRESS REASONABLE DISTANCE.
J. ALL EXISTING MECHANICAL EQUIPMENT AND PLUMBING FIXTURES INDICATED BY THE DRAWINGS SHALL BE REMOVED. EXISTING EQUIPMENT SHALL BE INSPECTED PRIOR TO SUBMITTING A BID. THE EQUIPMENT IS TO BE REMOVED, CLEANED, AND PLACED IN ACCEPTABLE CONDITION ON PARTS OF THE BUILDING, THEREAFTER, ALL REMARKS, PARTS, ETC. SHALL BE INCLUDED.
K. ALL MECHANICAL EQUIPMENT AND EQUIPMENT SHALL BE DESIGNED, SELECTED, AND INSTALLED BY SPECIALIZED TRADES.
L. ALL MECHANICAL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE ARCHITECT WITH DRAWINGS AND THE TERMS AND CONDITIONS OF THE CONTRACT DOCUMENTS.
M. ALL EXISTING SHALL BE TAKEN WITH EXISTING CONDITIONS ON THE FIELD AND BE PREPARED TO COORDINATE INSTALL CONFORM CONDITIONS TO BE ENCOUNTERED BY ALL TRADES. ANY EXCEPTIONS SHALL BE NOTED IN WRITING AND SHALL BE REVIEWED AT THE BID.
N. THE WORKING CONDITION OF ALL EXISTING EQUIPMENT TO BE REUSED SHALL BE VERIFIED PRIOR TO THE START OF CONSTRUCTION. THE OWNER SHALL BE GIVEN WRITTEN NOTICE OF ANY BUSINESS OR MALFUNCTIONS FOUND.
O. COORDINATE EQUIPMENT INSTALLATIONS FOR THE REQUIRED OR DESIGNED CONDITIONS ALL OTHER TRADES. COORDINATION TO OTHER TRADES OF EQUIPMENT IS NOTED IN WITING. PIPES, ANTENNAS, EQUIPMENT, MEDIUM, ETC. SHALL BE COLOR, OR OTHER CHARACTERISTIC ARE THE RELATED EFFECTIVE AUDIBLE AND THE CONSTRUCTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR HAVING THE CHANGE.
P. THE DRAWINGS ARE DIAGRAMMATIC, IT IT SHALL BE REQUIRED AS DIRECT AS ACTUAL CONSTRUCTION AND INSTALLATION PRACTICE MAY DICTATE. ALL DIMENSIONS SHALL BE VERIFIED AT THE JOB SITE. ALL DIMENSIONS SHALL BE TAKEN FROM THE DESIGNED FOR BUILDING CONSTRUCTION AND INSTALLATION. ALL DIMENSIONS AND CONDITIONS TO BE ENCOUNTERED ARRANGED AS SHOWN ON THE DRAWINGS MUST EXACTLY PROVIDE INVERTED AND ALL SUCH CHANGES SHALL BE INCORPORATED INTO THE INDIVIDUAL DRAWINGS.
Q. UPON COMPLETION OF THE WORK, ALL EXPOSED SURFACES OF THE MECHANICAL EQUIPMENT PROVIDED SHALL BE THOROUGHLY CLEANED. REMOVE ALL TRACES OF SOIL, LABELS, DIRT, OIL, OR OTHER DEFACEMENTS. USE ONLY THE MATERIALS THE PROPER CLEANERS RECOMMENDED BY THE MANUFACTURERS. DO NOT PAINT OVER NAMEPLATES.
R. UPON COMPLETION, PROVIDE MANUFACTURER'S OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT INSTALLED AS PART OF THE PROJECT THEREUNDER.
S. PROVIDE TRAINING TO OPERATORS DESIGNED, INSTALLED, TESTED AND EQUIPMENT INSTALLED AS PART OF THE WORK.
T. SUPPORT, PROVIDE, AND PROVIDE ALL PROPER SLEEVES, PLATES, ETC. TO ALLOW INSTALLATION OF MECHANICAL EQUIPMENT, DUCTS, PIPES, ETC. THROUGH WALLS, FLOORS, AND ROOFS. PROVIDE ALL PROPER FRAMING, ETC. FOR FIXTURES.
U. IN THE EVENT OF A CONFLICT WITH THE CONTRACT DOCUMENTS, THE GREATER QUANTITY OR HIGHER QUALITY SHALL BE INSTALLED.
V. UPON THE COMPLETION OF THE WORK, PROVIDE "AS-BUILT" RECORD DRAWINGS TO THE OWNER. DRAWINGS SHALL BE PROVIDED IN ELECTRONIC FORMAT OR AS PER THE INSTALLATION INFORMATION.
W. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE RULES, BUILDING AND INDUSTRY STANDARDS, LOCAL CODES, LAWS, AND ORDINANCES. IN THE EVENT THAT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS, NOTIFY THE ENGINEER IMMEDIATELY.

15060 - HANGERS AND SUPPORTS

A. ALL EQUIPMENT AND PIPING SHALL BE RESPONSIBLY SUPPORTED WITHIN THE BUILDING AND ADEQUATE. PROVIDED SHALL BE MADE FOR SLIDE AND ANCHORAGE. HANGERS, RODS, CLAMPS, AND INSERTS SHALL BE APPROVED BY UL FOR THE SERVICE INTENDED.

15075 - MECHANICAL IDENTIFICATION

A. ALL MAJOR EQUIPMENT SHALL BE IDENTIFIED WITH ENGRAVED NAMEPLATES ATTACHED WITH SCREWS. LABELS SHALL USE NO ABBREVIATIONS FROM EQUIPMENT DESIGNATION.
B. PIPE SYSTEMS SHALL BE MARKED WITH WRAP-ON PIPE MARKERS GREATER EVERY 10 FEET. MARKERS SHALL INDICATE THE DIRECTION OF FLOW.

15081 - DUCT INSULATION

A. INTERIOR METAL DUCTS SHALL BE INSULATED DEPENDING WITH TYPE OF DUCT WORK. TWO INCH THICKNESS (ONE AND ONE-HALF INCHES IN FLARES) OR CLASS WITH ON-HALF INCH THICKNESS DUCT LINER. ALL DUCTS SUBMERGED INSIDE THESE AREA INSULATED. INCREASE DUCT DIMENSIONS AS REQUIRED IF LINER IS USED.
B. INSTALLED SHALL BE EQUAL TO 48.
C. ALL INSULATION AND JACKET MATERIALS EXPOSED TO RETURN AIR SHALL BE SPECIFICALLY APPROVED FOR THAT APPLICATION.

15083 - PIPE INSULATION

A. METAL DUCT INSULATION UNDER 1.5 INCHES AND SMALLER SHALL BE INSULATED WITH 1 INCH THICKNESS FIBERGLASS CLASS FIBER PIPE INSULATION WITH WHITE ALL SERVICE JACKET AND INTERNAL VAPOR BARRIER. INSULATION THICKNESS IN THREE LARGER DIAMETER THAN 1.5 INCHES SHALL BE 1.5 INCH THICKNESS.
B. CIRCULATED SEGMENTS NOT WATER FINISH SHALL BE INSULATED WITH 1 INCH THICKNESS PREFORMED GLASS FIBER PIPE INSULATION WITH AN ALL SERVICE JACKET.
C. DRAINING COLD WATER, HOT WATER, AND RAIN CONDENSATE DRAIN PIPING SHALL BE INSULATED WITH 50 INCH THICKNESS PREFORMED GLASS FIBER PIPE INSULATION WITH WHITE ALL SERVICE JACKET AND INTERNAL VAPOR BARRIER.
D. ALL INSULATION AND JACKET MATERIALS EXPOSED TO RETURN AIR SHALL BE SPECIFICALLY APPROVED FOR THAT APPLICATION.

15110 - VALVES

A. ALL VALVES SHALL BE RATED FOR THE MAXIMUM FLEXIBLE OF THE SYSTEM IN WHICH THEY ARE TO BE INSTALLED.
B. ALL WATER SERVICE VALVES SHALL BE LUG TYPE BUTTERFLY OR BALL TYPE.

15140 - DOMESTIC WATER PIPING

A. DOMESTIC COLD, HOT, AND CIRCULATED HOT WATER PIPING AND EXPOSED HOT CONDENSATE DRAIN PIPING SHALL BE TYPE L HARD COPPER WITH WROUGHT COPPER FITTINGS.
B. INSULATING UNIONS, FITTINGS, OR COUPLINGS SHALL BE USED WHERE DISSIMILAR METALS ARE JOINED.

15150 - SANITARY WASTE AND VENT PIPING

A. SANITARY WASTE, VENT, AND DRAIN PIPING 2 INCHES AND LARGER SHALL BE SERVICE WEIGHT CAST IRON. PIPING BELOW THE SLAB SHALL BE HUB AND SPIGOT TYPE WITH SHIELD JOINTS. PIPING ABOVE THE SLAB SHALL BE NO-HUB TYPE. VENT PIPING MAY BE SCHEDULE 40 GALVANIZED STEEL, DWV COPPER, OR SERVICE WEIGHT CAST IRON. WASTE PIPING SMALLER THAN 2 INCHES MAY BE DWV COPPER. SCHEDULE 40 PVC MAY BE USED WHERE ACCEPTED BY THE AUTHORITIES HAVING JURISDICTION; HOWEVER, PVC PIPING MAY NOT BE USED IN PLENUM AREAS OR USED FOR RETURN AIR PLENUMS.

15183 - REFRIGERANT PIPING

A. REFRIGERANT LINE SHALL BE SEAMLESS COPPER TUBE. ASTM B 280, TYPE ACR, HARDNESS COPPER FITTINGS ASME B16.22. WROUGHT COPPER UNIONS 175.22.

15194 - FUEL GAS PIPING

A. NATURAL GAS PIPING SHALL BE WROUGHT BLACK STEEL (WELDED) OR POLYETHYLENE. ABOVE GROUND GAS PIPING SHALL BE MADE BLACK STEEL SCHEDULE 40, THREADED. ENCLOSE ALL INDOOR GAS PIPING INCORPORATING UNDERGROUND WITH PROVIDED MANUFACTURERS.

15410 - PLUMBING FIXTURES

A. PLUMBING FIXTURES AND EQUIPMENT SHALL BE PROVIDED AS SCHEDULED OR INDICATED AND INSTALLED COMPLETE WITH STOP VALVES, SUPPLIES, MOUNTINGS ETC. ARE ALL OTHER APPURTENANCES REQUIRED TO CONNECT TO BUILDING PIPING AT FIXTURE.

15710 - ROOFTOP UNITS

A. PROVIDE ROOFTOP ARRANGED AND TESTED, PACKAGED ROOFTOP COOLING AND HEATING UNITS OF THE SIGNAL CAPACITIES SCHEDULED. UNITS SHALL BE AS MANUFACTURED BY CARRIER, LENNOX, TRANE, AND YORK. UNITS SHALL HAVE FULLY INSULATED OUTDOOR AIR HOOD WITH BAROMETRIC RELIEF DAMPERS, FACTORY COILS, SCROLL COMPRESSORS, HEATING ELEMENTS, PLENUM FOR 2 THROUGH 5 PATTERN, ACCESSORIES SCHEDULED FOR COMPLETE AND OPERATING SYSTEMS.

15815 - METAL DUCTS

A. DUCTS SHALL BE FABRICATED IN DUCTS SHEET METAL CONSTRUCTED AND SEALED IN ACCORDANCE WITH THE LATEST SMACNA STANDARDS FOR THE PRESSURE CLASS OF THE SYSTEM ABOVE.
B. VOLUME DAMPERS SHALL BE INSTALLED AT EVERY BRANCH TO ADJUST THE FREE AREA REQUIRED. WHERE INTERNAL DUCT LINER IS USED, INCREASE THE DUCT DIMENSIONS ACCORDINGLY.
C. ALL DUCTS SHALL BE SEALED WITH THE SEAMS AND JOINTS OUT OF AIR CONDITIONING UNITS AND WITHIN EVERY FOOT OF TERMINAL ROOM SHALL BE SEALED WITH THE MASTIC. THE MASTIC COVER AIR CHANNEL FOUND BEHIND ACOUSTIC DUCT LINER APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

15820 - DUCT ACCESSORIES

A. PROVIDE FLEXIBLE DUCT CONNECTIONS AT EQUIPMENT.
B. FLEXIBLE SPECIFIC DUCT SIZES FOR INDIVIDUAL RUNOUTS, SUPPLY, RETURN, SHALL BE EXCEED A FOOT IN TOTAL LENGTH AND 3.5 INCHES WIDE FOR TO FASTENER INSTRUCTIONS TO AIR FLOW. ALL CHANGES IN DIRECTION OF MORE THAN FORTY-FIVE DEGREES SHALL BE MADE WITH RIGID DUCT FITTING.
C. FLEXIBLE DUCTS SHALL HAVE CORE MADE TWO THICKNESS EXTERNAL INSULATION WITH FOIL JACKET AND VAPOR BARRIER. FLEXIBLE DUCTS SHALL BE CLASS 1 UL-181 AND MEET FIRE RATING REQUIREMENTS.
D. VENT AND INLETS RATING AND PROVIDED FOR RETURN AIR. GRILLE RETURN AIR TRANSFER DUCTS SHALL BE PROVIDED SMALL FLOW IS TO MINIMIZE PARTITION TRANSFER NOISE. TRANSFER DUCTS SHALL BE MADE FOR A MAXIMUM VELOCITY OF 400 FPM.
E. ALL PRESSURE SHALL BE TYPE 1 WITH TWO CLOSED NOTCH TO THE ABUTMENTS.
F. PROVIDE NOISE BALCONIES AT EACH MOUNTED TRIM DAMPER.
G. PROVIDE MANUAL VOLUME CONTROL DAMPERS IN THE DUCT RUNOUT TO ENSURE AIRFLOW BALANCE.

15930 - FANS

A. ALL FANS SHALL BE AMCA CERTIFIED.

15955 - DIFFUSERS, REGISTERS, AND GRILLES

A. DIFFUSERS, REGISTERS, AND GRILLES SHALL BE SUPPLIED STANDARD GRILLES WITH STRAINERS AND SHALL BE PROVIDED WITH MOUNTING FRAMES OR MATCH THE CEILING SHALL TYPE SHOWN THROUGH SCHEDULES.

15990 - HVAC INSTRUMENTATION AND CONTROLS

A. PROVIDE ALL CONTROLS REQUIRED TO COMPLETELY ACCOMPLISH THE INTENDED FUNCTIONS AND OPERATION OF THE SYSTEMS AND ACHIEVE THE GOALS.
B. CONTROLS SHALL COMPATIBLE WITH AND CONNECT TO THE EXISTING BUILDING CONTROL SYSTEM. IF PNEUMATIC CONTROLS ARE USED, THE QUALITY AND CAPACITY OF THE EXISTING COMPRESSOR SYSTEM SHALL REVIEW AND CONFIRMED WITH THE ENGINEER BEFORE.
C. ELECTRIC AND/OR ELECTRONIC CONTROLS SHALL BE INSTALLED COMPLETE WITH REQUIRED POWER CIRCUITS, POWER SUPPLIES, WIRING, CONDUIT, ACCESSORIES, AND ENCLOSURES.
D. SEQ CONTROLS
E. LOCATIONS OF ALL THERMOSTATS/THERMISTORS SHALL BE COORDINATED WITH FURNITURE LOCATIONS AND PROVIDED. THERMOSTATS AND THERMISTORS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
F. CONNECTIONS AND WIRING SHALL BE INSTALLED TO CONFORM WITH THE REQUIREMENTS OF THE AHJ AND.
G. EACH SYSTEM SHALL HAVE CONTROLS WITH A FUNCTIONAL TEST PROCEDURE. THE CONTROLS SHALL HAVE THE CAPABILITY TO INITIATE EACH ON EACH SIGNAL THE SYSTEM LAYING ON THE DAY OF THE REGULAR TIME OF DAY, AND PROVIDE A MANUAL ACCESSIBLE MANUAL OVERRIDE THAT WILL INITIATE TO INDEPENDENT SYSTEMS WITHOUT BUILD METHOD REPORT BREAKING.

15950 - TESTING, ADJUSTING, AND BALANCING

A. ALL MECHANICAL SYSTEMS SHALL BE TESTED AND BALANCED USING AIR OR WATER BALANCERS. FINAL REPORT SHALL BE SUBMITTED TO THE OWNER.

DIVISION 16: ELECTRICAL

16010 - BASIC ELECTRICAL REQUIREMENTS

A. PROVIDE LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO INCLUDE, INSTALL, ALIGNED, AND PUT INTO SERVICE A COMPLETE ELECTRICAL SYSTEMS IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. PROVIDE THOSE NOT SPECIFIED BUT OBVIOUSLY NECESSARY OR NECESSARY TO THE SYSTEM BUT THE WORK.
B. OBTAIN ALL PERMITS AND PAY ALL FEES.
C. ALL WORK DONE SHALL BE SUPERVISED BY QUALIFIED ELECTRICIAN, UNDER THE SUPERVISION AND DIRECTION OF A SUPERINTENDENT HAVING SUCCESSFUL EXPERIENCE INSTALLING AND SUPERVISING SIMILAR WORK. SUPERVISOR OF SIMILAR THE AND NEW AND INCLUDES SUPERVISOR OF CONTRACT INCLUDING.
D. EQUIPMENT AND SERVICE FAILURE WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SURVEY THE PROJECT AND SECURE FAMILIARITY THE CONDITIONS AND SCOPE OF WORK. ALL COVER DRAWINGS, SPECIFICATIONS, AND ANCILLARY INFORMATION AND ALL WORK AND SUPPLIES REQUIRED. ANY ADDITIONAL COSTS DUE TO FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE BORNE BY THE CONTRACTOR.
E. COORDINATE WITH OTHER TRADES. GIVE ADVANCE NOTICE TO COORDINATING INSTALLATION OF LIGHTING, SPRINKLER PIPING, AND SPRINKLERS. COORDINATE ALL OUTLET LOCATIONS WITH BUILDING. COORDINATE WALL WITH THE WORK WHERE. HEAVY DUCT LOCATION, CHASE AND TRENCH OUTLETS AND SAVE BE NOTE WITH OTHER SCHEDULES, AND PROJECT. OR DESIGNATED TERMINATE REPRESENTATIVE FOR ITS INSTALLATION.
F. PRODUCTS OF A SIMILAR NATURE SHALL BE THE SAME TYPE AND MANUFACTURER. PROVIDE THE DESIGNED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SPECIFIED PRODUCTS, UNLESS OTHERWISE ASSIGNED BY THE ENGINEER.
G. ALL PRODUCTS SHALL BE UL LISTED AND INSTALLED IN ACCORDANCE WITH NATIONALLY RECOGNIZED AND ACCEPTED STANDARDS AND PROCEDURES.
H. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE RULES, REGULATIONS, TERRITORY STANDARDS, LOCAL CODES, LAWS, AND ORDINANCES. IN THE EVENT THAT A DISCREPANCY IN ISSUES IN THE CONTRACT DOCUMENTS, NOTIFY THE ENGINEER IMMEDIATELY.

16050 - BASIC ELECTRICAL MATERIALS AND METHODS

A. PER BID SPECIFIED, PROVIDE THE COURSE OF ELECTRICAL SUPPLIES AND PRODUCTS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: LIGHTING FIXTURES, SENSOR OPERATORS, RECEPTACLES, TECH, SWITCHGEARS, TRANSFORMERS, PANELBOARDS, CIRCUIT AND MOTOR BRANCHES, MOTOR CONTROL UNITS, DISTRIBUTED SENSOR, TRANSIENT VOLTAGE SURGE SUPPRESSOR, AND FIRE ALARM SYSTEM.
B. CONDUIT, WIRE, AND CABLE SHALL BE ALL NEW AND SPECIFIED IN SECTION 16, NOTE AS SEPARATE SET OF VIEW, CONDUIT, WIRE AND CABLE SHALL BE INSULATED AND INCLUDE ALL SHOP REFERENCE. PROVIDE COMPLETE WARRANTY INFORMATION FOR EACH ITEM TO INCLUDE PRODUCTION EQUIPMENT TO INCLUDE SATISFY INCLUDING OF WARRANTY ON SERVICE, INSTALLATION OF WARRANTY OF A SERVICE AND SUPPLIES, REPAIRS, AND TELEPHONE NUMBERS AND PROCEDURES FOR FILING A CLAIM AND OBTAINING WARRANTY SERVICE.
C. PREPARE MAINTENANCE MANUALS THAT INCLUDE THE FOLLOWING INFORMATION FOR EACH SYSTEM:
1. DESCRIPTIONS OF PRINCIPAL, NORMAL, OPERATING CHARACTERISTICS AND LIMITATIONS, PERFORMANCE CURVES, ENGINEERING DATA AND TESTS, FULL DETAILS REGARDING PLANS AND COMMERCIAL NUMBERS OF REPLACEMENT PARTS.
2. MANUFACTURERS PRINTED OPERATING PROCEDURES TO INCLUDE START-UP, STANDARD AND ROUTINE AND NORMAL SHUTDOWN INSTRUCTIONS, REGULATION, OILING, STATUS AND SHUTDOWN, AND EMERGENCY INSTRUCTIONS AND RUNNING AND WATER CHECKING INSTRUCTIONS.
3. MANUFACTURER'S PRINTED PREVENTIVE MAINTENANCE AND PREVENTIVE MAINTENANCE AND TROUBLESHOOTING, DISASSEMBLY, REASSEMBLY, ADJUSTMENT AND ALIGNMENT INSTRUCTIONS.
4. SUPPLIED INSTRUCTIONS AND LUBRICATION SCHEDULES AND SCHEDULE.
D. UPON COMPLETION OF WORK, PROVIDE "AS-BUILT" RECORD DRAWINGS. PRESENT COMPLETED DRAWINGS TO OWNER AND TWO SETS TO ARCHITECT. "AS-BUILT" DRAWINGS SHALL INCLUDE ALL CHANGES CIRCUIT WORK, RACEWAYS INCLUDING ALL SWITCHING, TRANSLATION OF ALL SUPPLIES.
E. PROVIDE SUPPORTING SERVICE FOR ALL ELECTRICAL SYSTEMS IN ACCORDANCE WITH AN FIELD ACCESSIBLE AND STANDARDS AS AND ACCESSIBLE.
F. PROVIDE ONLY CONTENTS OF THE FOLLOWING TYPES, INTERIOR, AND CONSTRUCTION FIXTURES:
1. EQUIPMENT HACKNEY, CHANGE STEEL REQUIRED AS SERVICE.
2. TOOLS LIST IN: ALL STEEL WITH HEAD TYPE.
3. FOR INTERIOR FIXTURES ENCLOSURES: WEATHERPROOF STEEL, DESIGNED AS EQUALLY FOR THE INTENDED SERVICE.

16060 - GROUNDING

A. PROVIDE AN ELECTRICAL EQUIPMENT GROUND SYSTEM AND AN ELECTRICAL DEVICES GROUNDING SYSTEM AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION. A MINIMUM SIZE REQUIRED BY EQUIPMENT AND USE CONDUCTOR SHALL BE MINIMUM AND ALL FIXTURES AND BRANCH CIRCUITS, INCLUDING ALL WIRE FLEXIBLE FROM SYSTEM TO MOTOR. THE TAPS MUST EXCEPT OF FOLLOWING SYSTEM TYPES.

16075 - ELECTRICAL IDENTIFICATION

A. PROVIDE AND INSTALL ENGRAVED PLASTIC LAMINATE NAMEPLATES FOR ALL PANELS, SWITCHGEAR, SWITCHES, MOTOR STARTERS AND ELECTRICAL EQUIPMENT. PROVIDE BRANCH CIRCUIT IDENTIFICATION (PANELBOARD CIRCUIT NUMBER) ON EACH PANELBOARD, SWITCHGEAR, ETC. PROVIDE ASSOCIATED LABEL FOR MOTOR STARTERS, DISCONNECTS, ETC. PROVIDE ASSOCIATED LABEL FOR ALL ELECTRICAL EQUIPMENT. PROVIDE ALL LABELS, CHARACTER SIZES, CHARACTER SPACING AND LABEL FORMAT AS REQUIRED. LETTERING SHALL BE 1/4 INCH HIGH. TEXT SHALL BE CLEAR, TERSE AND BY THE CONTRACT DOCUMENTS AND THEIR DRAWINGS.
B. PROVIDE TYPE AND PANELBOARD SCHEDULE FOR ALL NEW BUILDING AND ALL PANELBOARD TO WHICH GROUPS HAVE EXCEPTED.

16080 - ELECTRICAL TESTING

A. ALL ELECTRICAL EQUIPMENT AND WIRING SYSTEMS SHALL BE THOROUGHLY TESTED AND ALL DEFECTIVE AND MALFUNCTIONING EQUIPMENT SHALL BE DISCONNECTED, REPAIRED OR REPLACED. ALL SYSTEMS SHALL BE TESTED. TEST DATA SHALL BE PROVIDED FOR OWNERS RECORD.

16120 - CONDUCTORS AND CABLES

A. PROVIDED CONDUCTOR TYPE THW, THWN OR THHN AS REQUIRED FOR THE INTENDED USE. MINIMUM CONDUCTOR SIZE FOR BRANCH CIRCUITS SHALL BE NO LARGER 12 AWG. USE SIZES 12 AWG FOR ALL USE 10 12 AWG BRANCH CIRCUITS LONG OR THAN 100 FEET AND FOR ALL 277 VOLT BRANCH CIRCUITS LONG OR THAN 200 FEET REGARDED FROM PANELTO CENTER OF LOAD.
B. INSTALL ALL CONDUCTORS IN CONDUIT. USE NO APPROVED PULLING LUBRICANT WHERE REQUIRED.
C. USE NUMBER 12 AWG AS MINIMUM CONDUCTOR SIZE FOR POWER SYSTEMS AND FOR CONTROL CIRCUITS. ALL WIRES NUMBER 10 AWG AND SMALLER SHALL PERFORM ALL CONDUCTORS. LARGER SHALL BE STRANDED AND TERMINATED WITH COMPRESSION.
D. PROVIDE ALLOWED BY CODE, TYPE THT CABLE IN ACCEPTABLE BY WHERE WITH COUNTED FOR BACKPLAN FT, LENGTHS AS LIGHTING FIXTURE HANGS.

16130 - RACEWAYS AND BOXES

A. CONCEAL ALL CONDUITS, UNLESS INDICATED OTHERWISE, WITHIN FINISHED WALLS, CEILINGS, AND FLOORS. NEW RACEWAYS OF LARGER 1 CENTER ABOUT FREE FLANGES, RUN OF FLOOR AND STRAND OR BOT WATER PIPES. INSTALL RACEWAYS LEVEL, NO WEAR AND NOT AND LIMITS THE FINISHED AREA APPROVED ELEVATIONS.
B. ARE ONLY PLACEMENTS WHERE REQUIRED CONDUIT OR BOXES PREFACED ROOFS ARE NOT ACCEPTABLE. USE ONLY STEEL BOXES.
C. OUTDOORS USE THE FOLLOWING WIRING METHODS:
1. EXPOSED, INTERMEDIATE METAL CONDUIT.
2. CONCEALED, INTERMEDIATE METAL CONDUIT.
3. UNDERGROUND, RIGID PVC, AND RIGID METALLIC CONDUIT.
4. CONNECTION TO MOVING EQUIPMENT INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, OR ELECTRIC DELIVERY OR MOTOR-DRIVEN EQUIPMENT: LIQUID TIGHT FLEXIBLE METAL CONDUIT.
5. INDOORS OR OUTDOORS: CONNECTION TO VIBRATING EQUIPMENT AND HYDRAULIC, PNEUMATIC, OR ELECTRIC DELIVERY OF MOTOR-DRIVEN EQUIPMENT IN DIRECT OR BURIED LOCATION OR OUTDOORS STRUCTURES, OR WHERE SUBJECT TO WATER SPRAYING EXPOSED, UL 360/UL 214 AND IEC. LIQUIDTIGHT FLEXIBLE METAL CONDUIT.
D. INDOORS USE THE FOLLOWING WIRING METHODS:
1. CONNECTION TO MOVING EQUIPMENT INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC OR ELECTRIC DELIVERY OF MOTOR-DRIVEN EQUIPMENT: FLEXIBLE METAL CONDUIT.
2. EXPOSED: ELECTRICAL METALLIC TUBING.
3. CONCEALED: ELECTRICAL METALLIC TUBING.
E. ELECTRICAL METALLIC TUBING (EMT) IS PROVIDED FOR USE IN THE FOLLOWING LOCATIONS OR CONDITIONS:
1. ABOVE STRUCTURE OR ON WALL.
2. ATOP SUSPENDED.
3. IN OR BENEATH SLAB OR GRADE.
4. IN HAZARDOUS LOCATIONS.
5. WHERE EXPOSED TO MECHANICAL DAMAGE.
6. WHERE SUBJECTED TO EXCESSIVE MOISTURE OR DETERIORATION.
F. SUBMIT CONDUIT SCHEDULE.
G. PROVIDE FLEXIBLE CONDUIT, SMALL 1.5 INCH VARIES SUBMIT WITH AND WITH CODE AND CONSTRUCTION.
H. PROVIDE GALVANIZED STEEL FULL AND JUNCTION BOXES THAT COMPLY WITH AND WITH CODE AND CONSTRUCTION.
I. PULL JUNCTION AND PULL BOXES, ARE BOXES NOT LESS THAN 6 INCHES SQUARE AND 2 INCHES DEEP WITH REMOVABLE COVERS.
J. USE CAST ALUMINUM OR CAST IRON BOXES WITH THREADED HUBS AND GASKETED COVERS IN SUBMIT AREAS OR OUTDOORS.

16140 - WIRING DEVICES

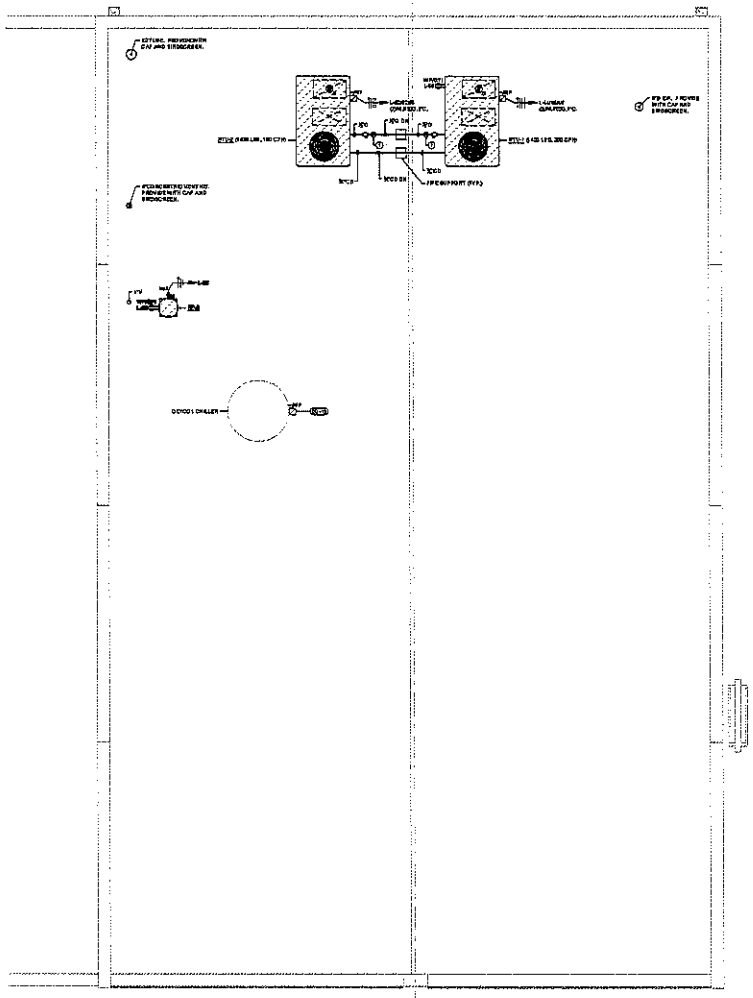
A. PROVIDE UL LISTED SPECIFICATION GRADE NEMA 5-20 AND 120 VOLTS SWITCHES AND RECEPTACLES. DEVICES AND WALL PLATES SHALL BE COLORED AS DIRECTED BY THE ARCHITECT OR OWNER. DEVICES CONTROLLED BY SENSORS NOT CONNECTED TO THE EMERGENCY SYSTEM SHALL HAVE REGISTER BY THE ARCHITECT. MOUNTING HEIGHTS SHALL BE AS FOLLOWS FOR ALL DATA, TELEPHONE AND SHALL BE PURCHASED WITH AND SHALL BE TRANSFERRED TO THE NEW OF THE CODES.
B. PROVIDE SINGLE POLE SENSOR SWITCHES DIRECTLY WITH NEMA 5-1, MOUNTED IN OUTLET BOXES AS INDICATED AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
1. OCCUPANCY LAMP SENSORS: REGULAR SENSOR SWITCHES FOR INCANDESCENT FIXTURES, SINGLE POLE AND SWITCHES AS SPECIFIED, SENSORS, ADVANCE WITH CONTROLLED AUTOMATIC NOTHING ON TOGGLE, AND ADJUSTABLE TIME SHUTOFFS, WITH BOTTOM OF OTHER OUTLET SHORT SWITCH. SENSOR WITH

GENERAL NOTE(S):

1. COORDINATE EXACT LOCATION OF ALL ROOF MOUNTED EQUIPMENT AND ASSOCIATED ROOF PENETRATIONS WITH EXISTING STRUCTURE. VERIFY FINAL LOCATIONS WITH STRUCTURAL ENGINEER.
2. MAINTAIN A MINIMUM 10'-0" CLEARANCE BETWEEN OUTSIDE AIR INTAKES AND EXHAUST SYSTEMS OR INTERNATIONAL MECHANICAL CODE.

KEYED NOTES BY SYMBOL:

1. PENNING TO GUNDER FROM REGULATOR.



01 ROOF PLAN - MEP
SCALE: 1/4" = 1'-0"

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ROOF PLAN - MEP

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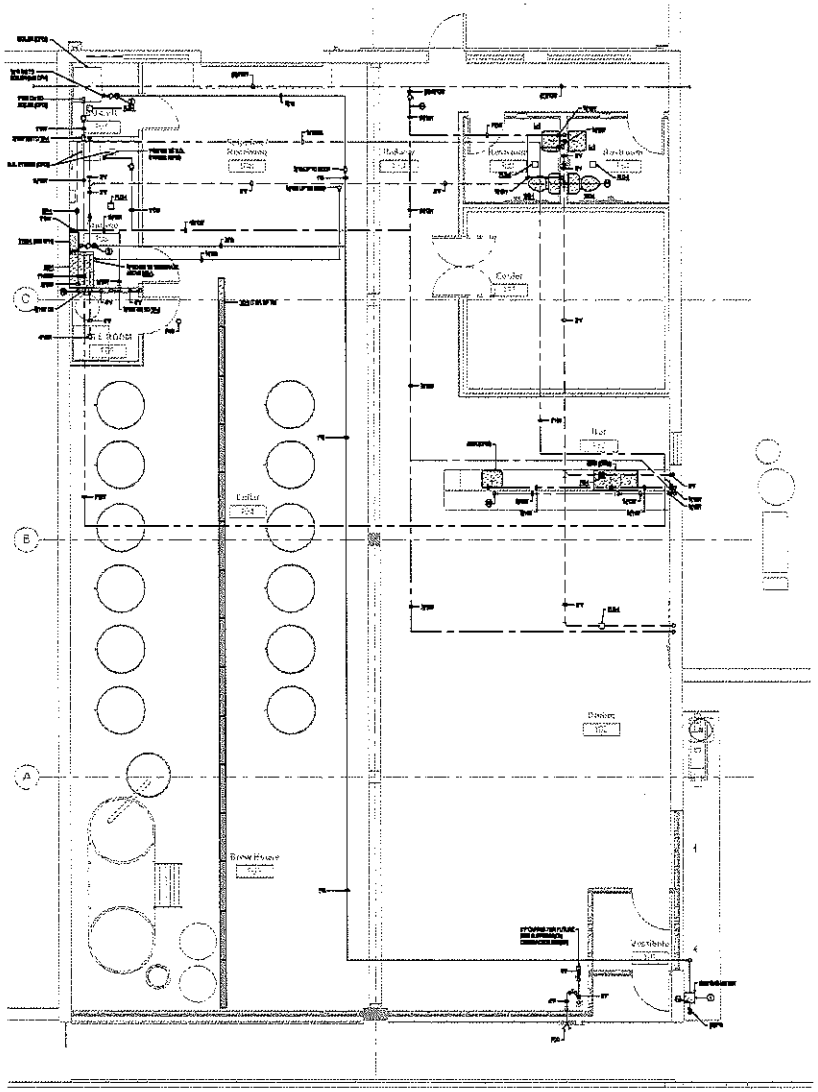
MEP2.02

GENERAL NOTE(S):

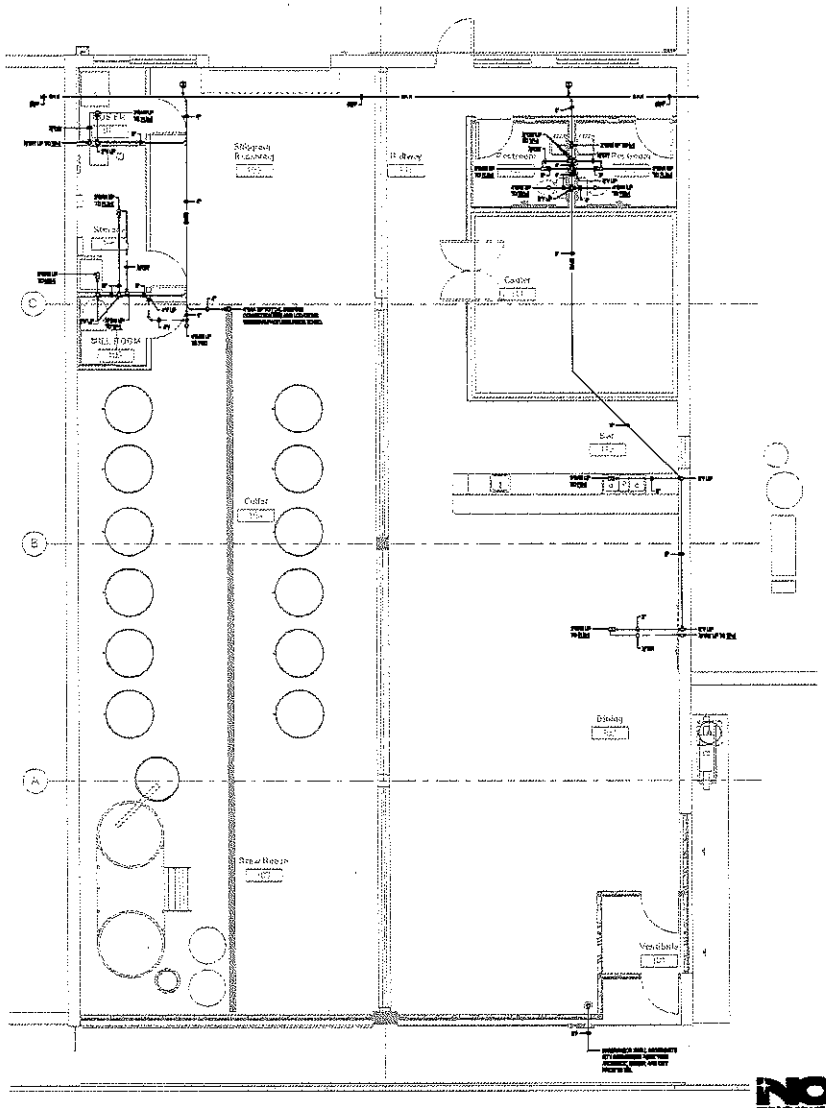
1. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF KITCHEN FIXTURES.
2. REFER TO ARCHITECTURAL PLANS FOR ALL SCHEDULES.
3. ALL EXISTING PLUMBING LINES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL EXISTING PLUMBING PRIOR TO BID.
4. ALL NON-SANITARY PIPING SHALL SLOPE 1/4" PER FOOT MIN.

KEYED NOTES BY SYMBOL:

1. CONTRACTOR TO COORDINATE WITH ARCHITECT FOR EXACT LOCATION OF ALL FIXTURES. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO BID. ALL DIMENSIONS SHOWN ON PLUMBING DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO BID. ALL EXISTING PLUMBING LINES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL EXISTING PLUMBING PRIOR TO BID.
2. PROVIDE TO CLEAN PERMANENT INSULATION.



02 FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



01 UNDERFLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"

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TANKLESS GAS WATER HEATER SCHEDULE

MARK	GAS INPUT (MBH)	VOLT/PH	TEMP. RISE IN °F		MANUFACTURER	MODEL NO.	REMARKS
			10.0 GPM	12.0 GPM			
TWH-1	399	120/1PH	95	48	RHEEM	RCH399-NA-NGE	1,2

NOTE: THIS MODEL IS FOR INDOOR INSTALLATION.
1. SET DEFAULT TEMPERATURE AT 110°F.
2. ADHERE TO MANUFACTURER'S INSTALL, AIRTEC DIR. TRANSITIONS AND THE FRUEY VALVE AND IF SINGLE VENT.

PUMP SCHEDULE

MARK	PUMP		MOTOR			MANUFACTURER	MODEL NO.	REMARKS
	GPM	HEAD (FT)	RPM	HP	VOLT/PH			
P-1	1	10	3450	1/30	120/1PH	TACO	001-6F	1,2

1. PROVIDE TYPE ACCIONQUARTAT
2. AIR BRIDGE, FLANGED

PLUMBING FIXTURE SCHEDULE

FIXTURE	SPECIFICATION
WC-1	WHITE MODEL 16710, 2.0GAL, CARRIER ATTEL THERMAL EXPANDING TANK WITH STAINLESS STEEL DISPLACTED 1 GAL FIXED WITH SUPPORT.
LAV-1	WHITE MODEL 7 OTIS 4 QUIVALVE FLOOR 3 GAL (DRY LEGTHEN) AIR VENTS BLE STAINLESS AND WITH HEAL BOWL HIDDEN TRAP SIPHON.
SK-1	WHITE MODEL 7 OTIS 17 SQUARE FLOOR SINK 3 INCH SIDE 3 INT 8, WITH 12 INCH GRATE AND 3 INCH PIPE CONNECTION, CAST IRON BODY, HEAVY-DUTY NICKEL COATING AND PLASTIC ANTI-SPLASH DOME BETTER STRAINER.
LV1	AMERICAN STANDARD 0.2551.304.020 "MURRAY" SINGLE-HANDLE LAVATORY (2 CENTERS) FIXTURE FINISH: AMERIBLUM FIXTURE COMPLETE WITH 1/2" BRASS CONTACT DRAIN WITH BRASS, BUTTERFLY, PATRICIA WITH BASS MODEL 7.0.2.304 LAVATORY FAUCET, AND 0.2551.304.020 BRASS.
SH-1	1 INT BODY, 2PM-0.251, GOLDEN 2PO 1.5 GPM COMPLETE WITH SERVICE FAUCET 0.2.2.2

ABBREVIATIONS USED ON STRUCTURAL DRAWINGS

ABOVE FINISH FLOOR	– A.F.F.	LARGER THAN OR EQUAL TO	– ≥
ADDITIONAL	– ADDN'L.	LESS THAN OR EQUAL TO	– ≤
ADJACENT	– ADJ.	LIVE LOAD	– L.L.
ALTERNATE	– ALT.	LONGITUDINAL	– LONG.
ANCHOR BOLT	– A.B.	LONG LEG HORIZONTAL	– LLH
AND	– &	LONG LEG VERTICAL	– LLV
ANGLE	– L	LOW POINT	– L.P.
APPROXIMATE	– APPROX.		
ARCHITECTURAL	– ARCH'L.	MANUFACTURER	– MFR
AT	– @	MATERIAL	– MAT'L.
AIR CONDITIONER	– A/C	MAXIMUM	– MAX.
AIR HANDLING UNIT	– AHU	MECHANICAL	– MECH'L.
		METAL	– MET.
BACK TO BACK	– B/B	MEZZANINE	– MEZZ.
BASE PLATE	– BP	MINIMUM	– MIN.
BEAM	– BM.	MISCELLANEOUS	– MISC.
BEARING	– BRG.	MOMENT	– M.
BETWEEN	– BTWN.	MOMENT CONNECTIONS	– M.C.
BLOCKING	– BLK'G.		
BOTH WAYS	– B.W.	NON-SHRINK	– N.S.
BOTTOM	– BOT.	NOT TO SCALE	– N.T.S.
BOTTOM CHORD EXTENSION	– BCX	NUMBER	– NO.
BRIDGING	– BRDG.		
BUILDING	– BLDG.	ON CENTER	– O.C.
BUILDING LINE	– B.L.	OPENING (S)	– OPNG.(S)
		OPPOSITE	– OPP.
CEILING	– CLG.	OPPOSITE HAND	– O.H.
CENTER TO CENTER	– C/C	OUTSIDE DIAMETER	– O.D.
CENTER LINE	– ℄	OUTSIDE FACE	– O.F.
CENTERED	– CNTRD.		
CHANNEL	– C	PENETRATION	– PEN.
CLEAR	– CL.	PERIMETER	– PERIM.
COLUMN	– COL.	PERPENDICULAR	– PERP.
COMPRESSION	– C.	PIPE BRACE	– P.B.
CONCRETE	– CONC.	PLATE	– PL
CONCRETE MASONRY UNIT	– CMU	POINT	– PT.
CONDENSING UNIT	– CU	PRECAST CONCRETE	– P/C
CONNECTION (S)	– CONN.(S)	PROJECTION	– PROJ.
CONTINUOUS	– CONT		
CONSTRUCTION JOINT	– C.J.	RADIUS	– RAD.
COORDINATE	– COORD.	REFER	– REF.
		REINFORCING	– REINF.
DETAIL	– DET.	REMAINDER	– REM.
DEAD LOAD	– D.L.	REQUIRED	– REQ'D.
DIAGONAL	– DIAG.	RIGID FRAME	– R.F.
DIAGONAL BRACE	– D.B.	ROOF TOP UNIT	– RTU
DIAMETER	– DIA. OR ø	ROOF DRAIN	– R.D.
DIMENSION	– DIM.		
DOUBLE	– DBL.	SAWN JOINT	– S.J.
DOWELS	– DWL(S)	SCHEDULE	– SCHED.
DOWN	– DN.	SECTION	– SECT.
DRAWING	– DRWG.	SHEAR	– V
		SHEET	– SHT.
EACH	– EA.	SIMILAR	– SIM.
EACH FACE	– E.F.	SLIP CONNECTION	– S.C.
EACH WAY	– E.W.	SPACE	– SP.
ELECTRICAL	– ELEC'L	SPECIFICATIONS	– SPEC.
ELEVATION	– EL.	STANDARD	– STD.
ELEVATOR	– ELEV.	STEEL	– STL.
ENGINEER	– ENGR.	STIFFENER	– STIFF.
EQUAL (EQUALLY)	– EQ.	STIRRUPS	– STIR.
EXPANSION	– EXP.	STRUCTURE	– STRUCT
EXPANSION JOINT	– E.J.	STRUCTURAL	– STRUCT'L
EXISTING	– EXIST.	SUPPORT	– SUPT.
EXTERIOR	– EXT.	SYMMETRICAL	– SYMM.
FACE TO FACE	– F/F	TOP CHORD EXTENSION	– TCX
FAR SIDE	– F.S.	TEMPERATURE	– TEMP.
FINISH (ED)	– FIN.	TENSION	– T.
FINISHED FLOOR	– FIN. FL.	THICK	– THK.
FIXED CONNECTION	– F.C.	TONGUE AND GROOVE	– T & G.
FLANGE	– FLG.	TOP AND BOTTOM	– T & B.
FLOOR	– FL.	TOP OF BEAM	– T.O.B.
FOOTING	– FTG.	TOP OF CONCRETE	– T.O.C.
FOUNDATION	– FDN.	TOP OF FOOTING	– T.O.F.
		TOP OF JOIST	– T.O.J.
GAGE OR GAUGE	– GA.	TOP OF METAL DECK	– T.M.D.
GALVANIZED	– GALV.	TOP OF PIER	– T.O.P.
GENERAL	– GEN.	TOP OF PIER CAP	– T.O.P.C.
GUILAR	– GL.	TOP OF STRUCTURAL STEEL	– T.O.S.S.
GRADE	– GR.	TOP OF STRUCTURAL CONCRETE	– T.O.S.C
GRADE BEAM	– G.B.	TOP OF WALL	– T.O.W.
GYPSUM BOARD	– GYP. BD.	TOTAL LOAD	– T.L.
		TRANSVERSE	– TRAN.
HEADED STUD	– H.S.	TYPICAL	– TYP.
HEIGHT	– HT.		
HIGH POINT	– H.P.	UNLESS NOTED OTHERWISE	– U.N.O.
HORIZONTAL	– HORIZ.		
HORIZONTAL LOAD	– H.L.	VERTICAL	– VERT.
INFORMATION	– INFO.	WATERSTOP	– W.S.
INSIDE DIAMETER	– I.D.	WEIGHT	– WT.
INSIDE FACE	– I.F.	WELDED WIRE MESH (FABRIC)	– W.W.F.
INTERIOR	– INT.	WIND LOAD	– W.L.
INTERMEDIATE	– INTERM.	WITH	– W/
		WOOD	– WD.
JOINT	– JT.	WORK POINT	– W.P.
JOISTS	– JST (S)		
		X-BRACING	– XB
KIPS	– K.		

I. GENERAL CONDITIONS

A. ALL EXISTING CONDITIONS SHALL BE FIELD VERIFIED.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.
C. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF OTHER TRADES (MECH'L, ELECT'L, ETC.) PRIOR TO FABRICATION AND INSTALLATION OF MATERIALS.
D. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION, FORMING, OR PLACEMENT OF MATERIALS. GENERAL CONTRACTOR SHALL REPORT DISCREPANCIES IMMEDIATELY TO ARCHITECT AND SHALL PROCEED WITH CONSTRUCTION ONLY AFTER DISCREPANCY HAS BEEN RESOLVED.
E. CONSULT STRUCTURAL ENGINEER IF LOCATIONS OR DESIGN WEIGHTS OF ROOF TOP UNITS DIFFER FROM THOSE ON PLANS.
F. THE DETAILS DESIGNATED AS "TYPICAL DETAILS" (TYP) APPLY GENERALLY TO THE DRAWINGS IN ALL AREAS WHERE CONDITIONS ARE SIMILAR.
G. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND MECHANICAL SHEETS FOR MISCELLANEOUS STEEL.
H. CONTRACTOR SHALL REVIEW MECHANICAL SHEETS FOR MISCELLANEOUS CONCRETE.
I. THE DESIGN REPRESENTED BY THESE PLANS PROVIDES FOR STABILITY OF THE COMPLETED STRUCTURE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN STRUCTURE STABILITY AND SAFETY DURING CONSTRUCTION PER REQUIREMENTS OF SEI/ASCE 37-14 DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION.

II. SITE

A. DESIGN ALLOWABLE FOOTING BEARING PRESSURE IS 1,500 PSF.
B. FINE GRADING UNDER SLAB SHALL BE TRIMABLE, COMPACTABLE, GRANULAR FILL (NOT SAND).
C. A 15 MIL STEGO WRAP VAPOR BARRIER(0.01 PERM MAXIMUM PER ASTM E 1745) SHALL BE PROVIDED ABOVE THE FINE GRADING. SUBSTITUTIONS SHALL BE APPROVED IN WRITING BY ENGINEER OF RECORD.

III. CONCRETE

A. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
B. ALL SLABS TO RECEIVE FLOOR COVERINGS SHALL HAVE A MAXIMUM WATER/CEMENTITIOUS MATERIAL RATIO OF 0.45.
C. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. PROVIDE ASTM A706 GRADE 60 BARS FOR WELDED REINFORCEMENT.
D. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064.
E. LAP REINFORCING SPLICES #6 AND SMALLER BARS – 57 BAR DIAMETERS WITH 24" MINIMUM UNLESS NOTED OTHERWISE. LAP REINFORCING SPLICES #7 AND LARGER – 71 BAR DIAMETERS WITH 24" MINIMUM UNLESS NOTED OTHERWISE.
F. ALL REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL.
G. CONTRACTOR SHALL COORDINATE ALL PENETRATIONS, CONDUIT, CHAMFERS AND EMBEDDED ITEMS PRIOR TO CONCRETE PLACEMENT.
H. WELDED WIRE FABRIC AND WIRE SHALL BE LAPPED THE SPACING OF THE CROSS WIRES PLUS 2".
I. PROVIDE CONCRETE COVERAGE FOR REINFORCING STEEL AS FOLLOWS UNLESS OTHERWISE SHOWN:
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . 3"
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   NO. 6 THROUGH NO. 18 BARS . . . . . 2"
   NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER . . . . . 1-1/2"
   CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
   SLABS . . . . . 2" CLEAR TOP OF SLAB
J. SET ANCHOR RODS TO HAVE AT LEAST 3" CONCRETE COVER AND TO ALLOW REINFORCEMENT TO PASS OUTSIDE OF RODS.

IV. STRUCTURAL STEEL

A. STRUCTURAL STEEL PLATES, ANGLES, AND CHANNELS SHALL BE ASTM A36.
B. HSS SHAPES SHALL BE ASTM A500 GRADE B (f'y=46 ksi).
C. ALL BOLTED CONNECTIONS SHALL USE ASTM A325-N BOLTS UNLESS NOTED OTHERWISE.
D. ALL WELDS SHALL BE MADE USING E70 ELECTRODES.

V. SHOP DRAWINGS AND SUBMITTALS

A. SHOP DRAWINGS SHALL BE PREPARED AND SUBMITTED FOR REVIEW TO THE ARCHITECT/ENGINEER FOR EACH STRUCTURAL BUILDING MATERIAL AS SPECIFIED IN THE STRUCTURAL GENERAL NOTES AND THE PROJECT SPECIFICATIONS. SEE THE CONTRACT SPECIFICATIONS FOR SUBMITTAL PROCEDURES AND ADDITIONAL INFORMATION.
B. SHOP DRAWINGS SHALL USE DRAFTING LINE WORK AND LETTERING THAT IS CLEARLY LEGIBLE. SHOP DRAWINGS SHALL NOT CONTAIN REPRODUCTIONS OF THE CONTRACT DRAWING PLANS OR DETAILS. SHOP DRAWINGS SHALL NOT SHOW MATERIALS FOR MORE THAN ONE LEVEL ON THE SAME PLAN.
C. SHOP DRAWINGS SHALL SHOW CLEAR AND COMPLETE INFORMATION FOR THE FABRICATION (DETAIL SHEETS AND/OR MATERIAL LIST) AND INSTALLATION (ERECTION AND/OR PLACING DRAWINGS) OF MATERIALS. ERECTION AND PLACING DRAWING SHALL PROVIDE EVERY NOTE AND DETAIL REQUIRED TO CORRECTLY INSTALL MATERIALS; THEY SHALL NOT REFER TO THE CONTRACT DOCUMENTS FOR INSTALLATION INFORMATION.
D. ERECTION AND PLACING DRAWING PLANS SHALL BE ORIENTED AND REFERENCED IN THE SAME MANNER AS PLANS ON THE CONTRACT DOCUMENTS.
E. SHOP DRAWINGS SHALL LIST THE GRADE, CLASS AND/OR STRENGTH OF MATERIALS.
F. SUBMITTALS RECEIVED BY THE ARCHITECT/ENGINEER WHICH ARE INSUFFICIENT OR INCOMPLETE MAY BE REJECTED AND RETURNED TO THE CONTRACTOR WITHOUT REVIEW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO REJECTED, INSUFFICIENT, OR INCOMPLETE SHOP DRAWING SUBMITTALS.
G. SHOP DRAWINGS SHALL BE CHECKED AND INITIALED BY THE SUPPLIER PRIOR TO SUBMITTAL TO THE CONTRACTOR.
H. THE CONTRACTOR SHALL THOROUGHLY CHECK, COORDINATE, STAMP, DATE AND INITIAL EACH AND EVERY SHOP DRAWING PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER FOR REVIEW. SHOP DRAWINGS, WHICH DO NOT MEET THESE REQUIREMENTS, SHALL BE CONSIDERED INCOMPLETE AND RETURNED TO THE CONTRACTOR WITHOUT REVIEW.
I. CONTRACTOR'S REQUEST TO DEVIATE FROM THE CONTRACT DOCUMENTS SHALL BE CLEARLY IDENTIFIED BY "CLOUDING" ON THE SHOP DRAWINGS.
J. RESUBMITTED SHOP DRAWINGS SHALL CLEARLY IDENTIFY ITEMS THAT HAVE BEEN CORRECTED. SHOP DRAWINGS THAT ARE RESUBMITTED WITH REVISIONS THAT ARE NOT CLOUDED SHALL BE REJECTED AND RETURNED TO THE CONTRACTOR WITHOUT REVIEW.

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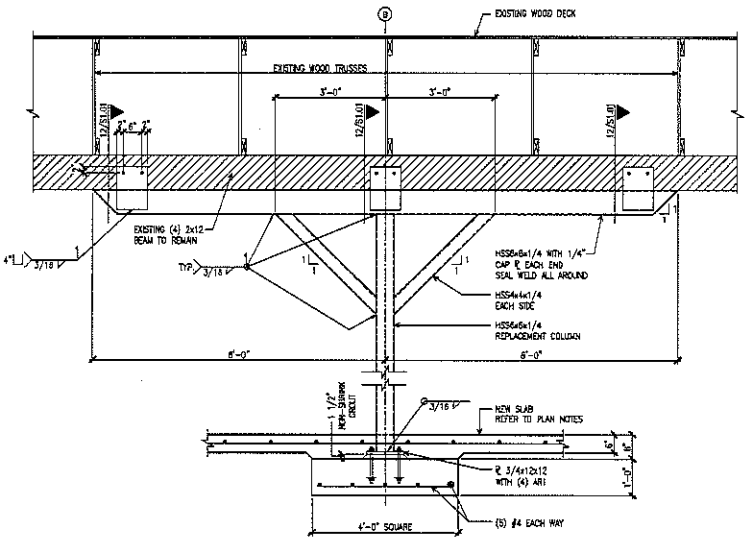
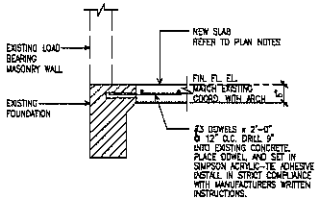
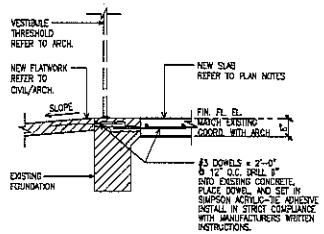


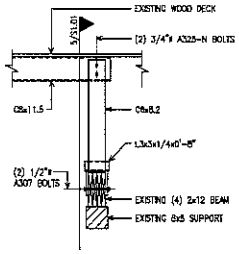
1 | DETAIL
3/4" = 1'-0" | NEW WOOD POST CONNECTION TO EXISTING



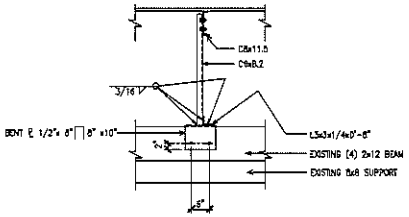
2 | DETAIL
3/4" = 1'-0" | NEW SLAB CONNECTION TO PERIMETER GRADE BEAM



3 | DETAIL
3/4" = 1'-0" | NEW SLAB CONNECTION TO PERIMETER GRADE BEAM AT VESTIBULE.



4 | DETAIL
3/4" = 1'-0" | CHANNEL TO EXISTING BEAM CONNECTION

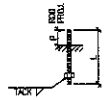


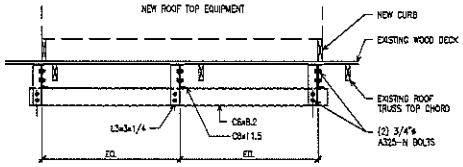
5 | DETAIL
3/4" = 1'-0" | CHANNEL TO EXISTING BEAM CONNECTION

Recommended Sequence of Construction - Column Replacement:

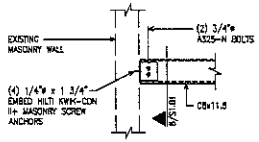
1. Determine the limits of the existing footing supporting the wood column to be replaced.
2. Remove inter-ior slab to be replaced around the existing wood column.
3. Remove additional slab to allow placement of temporary shoring to support the 4-2x12 built-up beam to remain each side of the column and the existing roof truss each side of the column that are to remain.
4. Temporary shoring shall be ground supported beyond the 6x6 framing above the wood column and beyond the limits of the new square footing to be installed.
5. Temporary shoring shall be installed with the means to allow jacking of the roof structure to elevate the existing 4-2x12 beams and roof trusses to their original elevations and establish the original positive drainage of the roof framing.
6. Contractor shall closely monitor the roof framing and truss connections to the exterior walls before and during the jacking operations. Stop jacking operations if unexpected or detrimental effects of the jacking operation are observed.
7. Shoring shall remain in-place until all roof construction for RTU reinforcement and framing is completed.
8. Remove wood column and full framing above the wood column.
9. Remove the wood column foundation.
10. Contractor shall coordinate with Independent Testing Agency to confirm subgrade under new column footing has an allowable bearing capacity of a minimum of 1,500 psf.
11. Place compacted select fill as required under new column footing.
12. Place new column footing, set new column anchor rod with a template.
13. Install new column.
14. Install balance of new roof framing for support of RTU's.
15. Remove shoring after new column concrete footing has achieved a minimum of 75% of its 28-day design strength.

ANCHOR ROD SCHEDULE				
MARK	DIA.	DIMENSIONS L	DIMENSIONS P	MATERIAL
AR1	3/4"	1'-0"	4"	F1554 GRADE 36

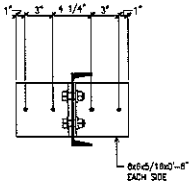




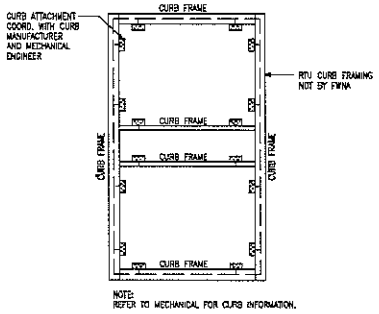
6 | DETAIL
3/4" = 1'-0" | CHANNEL TO CHANNEL CONNECTION AT AT NEW ROOF TOP UNITS



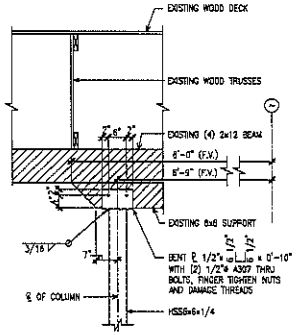
7 | DETAIL
3/4" = 1'-0" | CHANNEL TO EXISTING MASONRY WALL CONNECTION



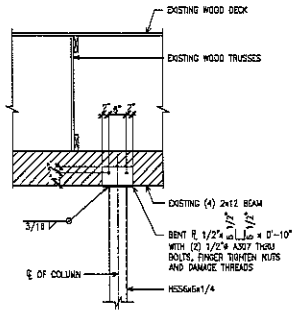
8 | DETAIL
N.T.S. | ANGLE TO CHANNEL CONNECTION



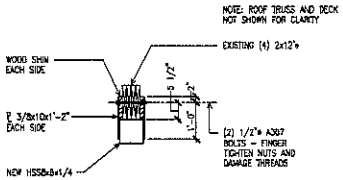
9 | DETAIL
N.T.S. | CURB SUPPORT FRAMING



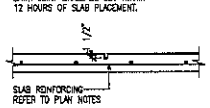
10 | DETAIL
3/4" = 1'-0" | NEW COLUMN TO EXISTING BEAM CONNECTION



11 | DETAIL
3/4" = 1'-0" | NEW COLUMN TO EXISTING BEAM CONNECTION



12 | DETAIL
3/4" = 1'-0" | STEEL BEAM TO EXISTING BEAM CONNECTION



13 | DETAIL
3/4" = 1'-0" | SAWN JOINT (SL)

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DENTON, TEXAS

REVISIONS

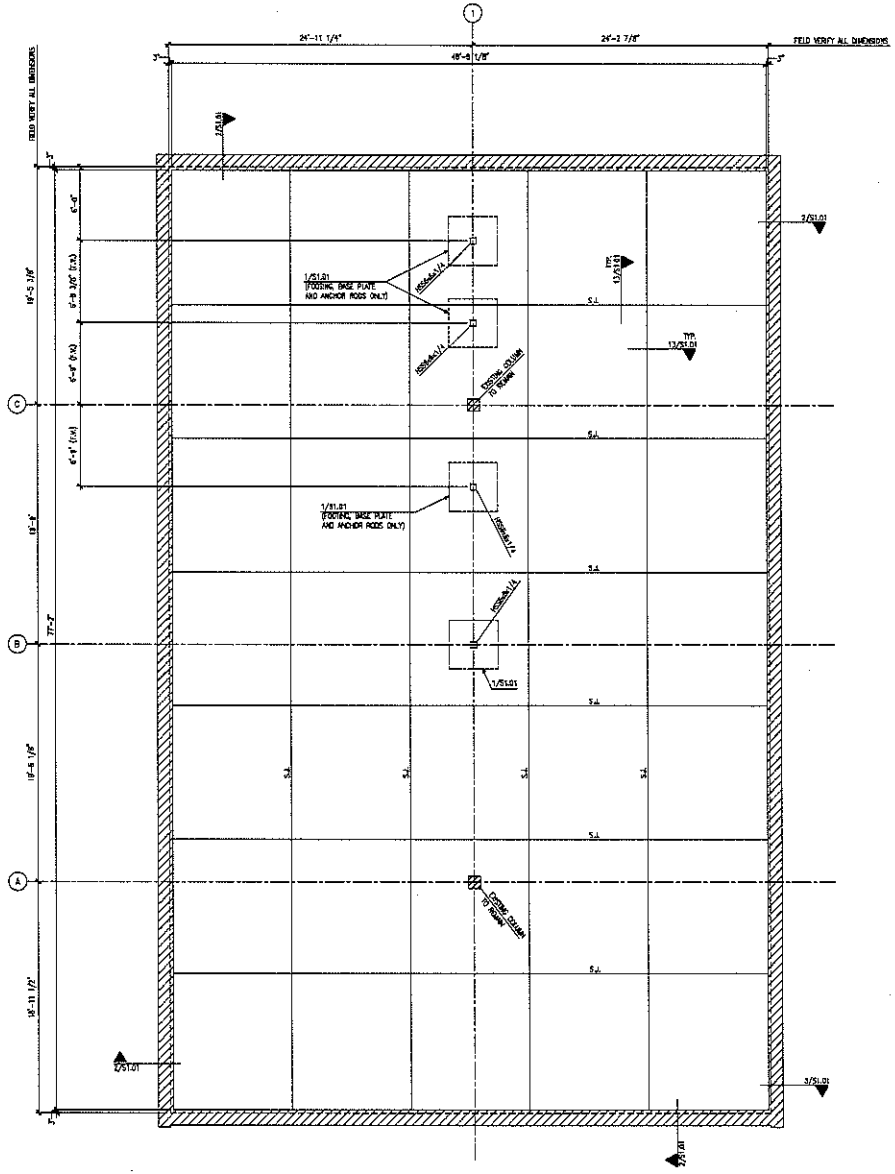
NO.	DATE	DESCRIPTION

CONTENTS : Details

DATE : 07/07/2016

SHEET

S1.01



1 | FOUNDATION PLAN
1/4" = 1'-0"

PLAN NOTES:
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO BEGINNING CONSTRUCTION.
2. REFER TO SHEET S0.01 FOR GENERAL NOTES.
3. REFER TO SHEET S1.01 FOR DETAILS NOT NOTED ON PLAN.
4. FIN. FL. EL. = DATUM EL. = 100'-0"
   ACTUAL = MATCH EXISTING
5. FLOOR SLAB SHALL BE 6" THICK CONCRETE REINFORCED WITH #4 @ 15" O.U.E.W. AT 2" CLEAR FROM TOP OF SLAB, UNLESS NOTED OTHERWISE ON PLAN.
6. REFER TO ARCHITECTURAL FOR LOCATION AND EXTENT OF ALL LEDGES, POCKETS, DEPRESSIONS AND FLOOR SLOPES.
7. PROVIDE SAW JOINTS IN SLAB TO DIVIDE SLAB INTO NEAR SQUARE SHAPES NOT TO EXCEED 144 SF (APPROXIMATELY 12'-0" O.C. MAX.)

NORTH

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REVISIONS

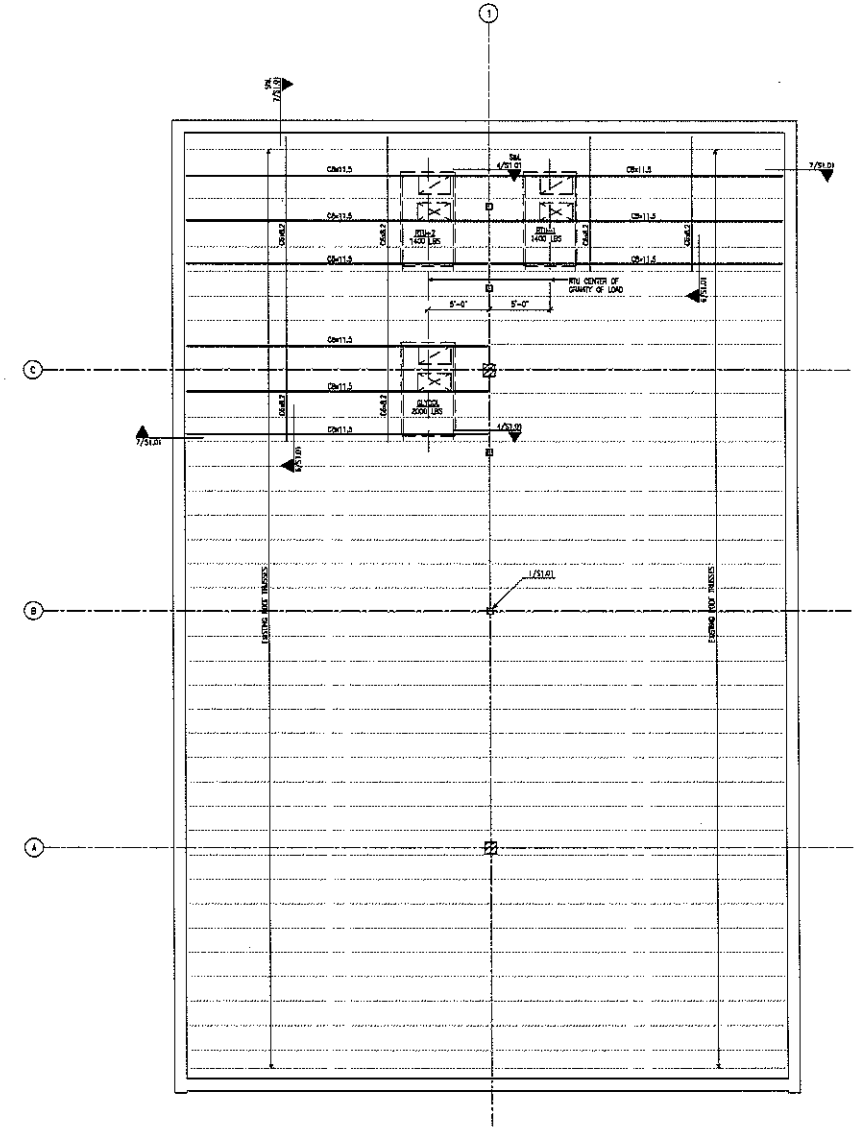
No.	DATE	DESCRIPTION

CONTENTS : Foundation Plan

DATE : 07/07/2016

SHEET

S2.01



1 | RTU LOCATION PLAN

1/4" = 1'-0"

PLAN NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO BEGINNING CONSTRUCTION.
2. REFER TO SHEET S0.01 FOR GENERAL NOTES.
3. REFER TO SHEET S1.01 FOR MECHANICAL UNIT SUPPORT DETAILS.
4. COORDINATE EXACT LOCATION OF RTU'S WITH MECHANICAL.

NORTH

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REVISIONS

No.	DATE	DESCRIPTION

CONTENTS :
RTU Location Plan

DATE :
07/07/2016

SHEET
S2.02

Please return completed with necessary attachments and signature to Economic Development office, 215 E. McKinney no later than 5 pm by the first Monday of each month. If you have any application questions, please contact the Economic Development Program Administrator at 940-349-7732.

Applicant Name Jonathan Powell	**Date** 9/11/15
Business Name Frog and Scorpion Brewing Company, LLC	
Mailing Address 3833 Berkshire Ln Bedford, Texas 76021	
Contact Phone 817-658-1974	**Email Address** jpowell6358@gmail.com
Building Owner (if different from applicant) Joseph Valenti	
Historical/Current Building Name	
Project Site/Address 104 W. McKinney St.	

Type of Work: (check all that apply)

Paint Only	☐	**Façade & Building Renovation**	☐
Signage	☐	**Awnings**	☐
Utility Upgrades	☑	**Impact Fees**	☐

Details of Planned Improvements relating to Grant Request (attach additional information if necessary) Electrical, water, sewage upgrades to bring building up to code.

We will be establishing a retail brewpub under the new regulations and will be revitalizing a block which currently is under-utilized.

Project Expenditures	Estimated Costs	Grant Requested
Façade/Building Rehab		
Awnings		
Signs		
Impact Fees		
Utility Upgrades	$200,000	$25,000
Totals	$200,000	$25,000

TOTAL COST OF PROPOSED PROJECT $ 200,000

TOTAL GRANT REQUEST
(May not exceed 50% of TOTAL COST up to $25,000) $ 25,000

Attach with all required color samples of paint, awning/canopy, sign design, etc., as well as photographs of building's exterior facade, roof and foundation.

Applicant's Signature

9/11/15
Date

DOWNTOWN REINVESTMENT GRANT AGREEMENT FORM

Please complete and return with Downtown Reinvestment Grant Application to Economic Development office, 215 E. McKinney no later than 5 pm by the first Monday of each month. If you have any questions, please contact the Economic Development Program Administrator at 940-349-7732.

I have met with the Economic Development Program Administrator, and I have read and fully understand the Downtown Reinvestment Grant procedures established by the Denton City Council. I intend to use this grant program for the aforementioned renovation projects to advance the efforts of revitalization and historic preservation of Denton's historic downtown. *I have not received, nor will I receive insurance monies for this revitalization project.*

I understand that if I am awarded a Downtown Reinvestment Grant by the City of Denton, any deviation from the approved project may result in the partial or total withdrawal of the grant. (If I am awarded a reinvestment grant for façade, awning or sign work and the façade, sign or awning is altered for any reason within **one (1) year** from construction, I may be required to reimburse the City of Denton immediately for the full amount of the grant.)

Frog and Scorpion Brewing Company, LLC

Business/Organization Name

Jon Powell — Jonathan Powell — 9/11/15

Applicant's Signature — ***Printed Name*** — ***Date***

Building Owner's Signature *(if different from applicant)* ***Printed Name*** ***Date***

This section is to be completed by Economic Development staff

Date considered by DTTF ***Recommendation*** ***Staff Signature***

Date considered by City Manager ***Recommendation*** ***City Manager Signature***

Date considered by EDPB ***Recommendation*** ***Staff Signature***