## MEP Engineer

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# HOUSTON COMMUNITY COLLEGE **CENTRAL CAMPUS**

# CULINARY ARTS SHELL **INTERIOR BUILDOUT**

1401 ALABAMA ST HOUSTON, TX 77004



AUTOARCH Architects, LLC.

# Structural Engineer

Food Service Food Service Design Consultants (281) 350-2323 9800 Oakridge Dr. The Woodlands, Texas 77380

04/15/20









HCC HOUSTON COMMUNITY COLLEGE

**CENTRAL CAMPUS** 

AUTOARCH Architects, LLC.

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CONSULTANTS: MEP ENGINEERS Infrastructure Associates (713) 622-0120 STRUCTURAL ENGINEERS Dally + Associates (713) 337-8881 FOOD SERVICE

Foodservice Design Professionals (281) 350-2323





#	Date	ISSUED FOR
1	4/15/20	PERMIT AND BIDDING



Project Number	19012		
Drawn By	Author Checker		
Checked By			
Approved By	Approver		
Drawing Title			
PROJECT			
Drawing Number			

A0.01







Drawing Number

A0.02



spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D25

CONSOLIDATED FABRICATORS CORP. BUILDING PRODUCTS DIV - Type SUPREME D25

QUAIL RUN BUILDING MATERIALS INC - Type SUPREME D25 SCAFCO STEEL STUD MANUFACTURING CO - Type SUPREME D25

STEEL CONSTRUCTION SYSTEMS INC - Type SUPREME D25

UNITED METAL PRODUCTS INC - Type SUPREME D25

20. Framing Members — Steel Studs — (As an alternate to Item 2) For use with Items 1M and 4O - channel shaped studs min 1-5/8 in. deep, formed of 25 MSG galv steel, max

3B. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.

3D. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 3) — Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry

4. Gypsum Board\* — 5/8 in. thick, outer layer paper, glass mat or vinyl surfaced. (Laminated System) Gypsum board applied vertically in two layers. Inner layer attached to stude with 1 in. long Type S steel screws spaced 8 in. OC along vertical edges, and 12 in. OC in the field and outer layer laminated to inner layer with joint compound, applied with a notched spreader producing continuous beads of compound about 3/8 in. in diameter, spaced not greater than 2 in. OC. Joints of laminated outer layer offset 12 in. from inner layer joints Outer layer gypsum board attached to floor and ceiling runner track with 1-5/8 in. long Type S steel screws spaced 12 in. OC. Optional, (Direct Attached System), Inner layer attached to studs with 1 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges. Outer layer attached to the studs over the inner layer with 1-5/8 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges and 12 in. OC to the floor and ceiling runners. Joints of screw-attached outer layer offset from inner layer joints. Joints of outer layer may be taped or untaped.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6, LS, TG-C, Type X, Veneer Plaster Base-Type X, Water Rated-Type X. Sheathing Type-X, Soffit-Type X, GreenGlass Type X, Type X ConfortGuard Sound Deadening Gypsum Board, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type-DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LWX, Sheathing Type-DGLW, Soffit-Type LW2X, Veneer Plaster Base - Type LW2X, Sheathing Type-DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - T

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Air, Gyproc DuraLine MR

4A. Gypsum Board\* — (As an alternate to Item 4) — Nom 3/4 in. thick, installed as described in Item 4 with 1-1/4 in. long Type S screws for inner layer and 2-1/4 in. long Type S

4B. Gypsum Board\* — (As an alternate to Items 4 and 4A) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Horizontal joints need not be backed by steel framing. Secured as described in Item 4 for the direct attached system. When used in widths other than 48 in., gypsum panels to be installed

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR

4C. Gypsum Board\* — (As an alternate to Items 4, 4A and 4B) — Two layers of 5/8 in. thick gypsum board applied horizontally or vertically. Inner layer attached to studs with No. 6 by 1 in. long Type S bugle head screws spaced 24 in. OC along the top and bottom tracks starting 2 in. and then 12 in. from the vertical edge. Inner layer screws spaced 24 in. OC along the studs and starting 1-1/4 in. from the horizontal joints when installed horizontally. Outer layer attached to studs with 1-5/8 in. long Type S bugle head screws spaced 16 in. OC along the top and bottom tracks starting 1-3/4 in. from the vertical edge. Outer layer screws spaced 16 in. OC along the studs and starting 1-1/4 in. and then 8 in. from the horizontal joints when installed horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and

veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6, LS, TG-C, Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, GreenGlass Type X, Type X ConfortGuard Sound Deadening Gypsum Board, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type-DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - Type LWX, Sheathing Type-DGLW, Soffit-Type LW2X, Veneer Plaster Base - Type LW2X, Sheathing Type-DGLW, Soffit-Type DGLW, Type LW2X, Veneer Plaster Base - T

4D. Gypsum Board\* — (Not Shown) — (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studes Item 2B) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

4F. Gypsum Board\* — (As an alternate to Items 4 through 4E) — 5/8 in. thick, applied vertically or horizontally as the outer layer to one side of the assembly. Horizontal joints need not be backed by steel framing. Secured as described in Item 4 for the direct attached system. When used in widths other than 48 in., gypsum panels to be installed

4G. Gypsum Board\* — As an alternate to Item 4 — Nom. 5/8 in. thick, inner layer attached vertically to studs with 1 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges. Outer layer attached to the studs horizontally over the inner layer with 1-5/8 in. long Type S steel screws spaced 16 in. OC in the field and along the vertical edges and 12 in. OC to the floor and ceiling runners. Joints of outer layer must be taped. Nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of

4H. Gypsum Board\* — (Not Shown) — (As an alternate to Items 4. For direct attachment only to steel studs Item 2B) — For Direct Application to Studs Only- For use as the base layer on one or both sides of the wall. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type S 12 steel screws spaced 8 in. OC at perimeter and 12 in

4I. Gypsum Board\* — (As an alternate to Item 4, not for use with Items 1C and 2C or 1L and 2N) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges

4J. Gypsum Board\* - (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2B) - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the

4K. Gypsum Board — (As an alternate to Items 4 through 4J, not for use with Items 1C and 2C.) — Two layers of nominal 15 mm thick gypsum board applied vertically. Inner layer attached to studs with No. 3.5 x 1-3/8 in. long bugle head, self-drilling screws spaced 23-5/8 in. OC in the field and 15-3/4 in. OC in the perimeter, with the first screw 2 in. from the edge. Outer layer attached to the studs over the inner layer with No. 3.5 x 1-3/4 in. long bugle head, self-drilling screws spaced 11-13/16 in. OC in the field and 7-7/8 in OC in the perimeter, with the first screw 3/4 in. from the edge. Outer layer screws staggered from inner layer screws. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layer staggered one stud cavity. Self-adhesive fiberglass mesh (9x9 mesh) tape, nom 2 in. wide, applied over all joints

4L. Gypsum Board\* — (As an alternate to Items 4 through 4K) — Two layers of 5/8 in. thick gypsum board applied vertically or horizontally. Inner layer attached to studs with #6 x 1 in. long bugle head screws spaced 12 in. OC along the top and bottom tracks and 16 in. OC in the field and along the vertical edges. Outer layer attached to studs with #6 x 1-5/8 in. long bugle head screws spaced 12 in. OC along the top and bottom tracks and 16 in. OC in the field and along the vertical edges. Vertical joints are centered over studs and staggered between layers and on opposite sides of the wall. Horizontal joints on the face layer are staggered 12 in. from the base layer. Horizontal joints need not to be

4N. Gypsum Board\* — (As an alternate to Item 4 through 4M) — For direct application to studs only - Four layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. When applied horizontally, base layer secured to studs with 1 in. Type S screws spaced 24 in. OC. Second layer installed with joints offset 12 in. from base layer and secured with 1 in. Type S screws spaced 24 in. OC. Fourth layer installed with joints in line with second layer and secured with 1-5/8 in. Type S screws spaced 12 in. OC. For all layers, screws offset 4 in. from previous layer. When applied vertically, base layer secured with 1 in. Type S screws spaced 24 in. OC. Second layer secured with joints offset one stud cavity and secured with 1 in. Type S screws spaced 24 /2 in Type S screws spaced 12 in OC. Fourth layer secured wi

40. Gypsum Board\* — (As an alternate to Items 4 through 4N) — Two layers of 5/8 in. thick gypsum board applied vertically or horizontally. Inner layer attached to studs with 1 in. long Type S screws spaced 16 in. OC in the field and vertical edges and along top and bottom tracks. Outer layer attached to studs with 1-5/8 in. long Type S screws spaced 16 in. OC in the field and vertical edges and along the top and bottom tracks. Vertical joints are centered over studs and staggered between layers and on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Horizontal edge joints and horizontal butt joints in

4P. Wall and Partition Facings and Accessories\* — (As an alternate to Item 4) — Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 5. Lead Batten Strips — (Not Shown, For Use With Item 4D) — Lead batten strips, min 1-1/2 in, wide, max 10 ft long with a max thickness of 0.125 in, Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum board (Item 4D) and optional at remaining stud locations. Required behind vertical joints.

5A. Lead Batten Strips — (Not Shown, for use with Item 4H) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations. 6. Lead Discs or Tabs — (Not Shown, For Use With Item 4D) — Used in lieu of or in addition to the lead batten strips (Item 5) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4D) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C" 6A. Lead Discs — (Not Shown, for use with Item 4H) — Max 5/16 in. diam by max0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to

have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

7. Mineral and Fiber Board\* — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to studs and floor and ceiling runners with 1-5/8 in. long Type S steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board. HOMASOTE CO — Homasote Type 440-32

7A. Mineral and Fiber Board — (Optional, Not Shown) — For optional use as an additional layer on one side of wall - Nom 1/2 in. thick, 4 ft wide, square edge fiber boards applied vertically to studs on one side of the wall in between the wood studs and the UL Classified Gypsum Board (Item 4). Fiber boards installed with 1-1/4 in. long, Type S steel screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 4) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board BLUE RIDGE FIBERBOARD INC — SoundStop

8. Furring Channels — (Optional, Not Shown — not for use with Items 4D, 4H, 4J, or 4N) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. 8A. Framing Members\* — (Optional on one or both sides, Not Shown — not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel raming Members as described below a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. b. Steel Framing Members\* — Used to attach furring channels (Item 8Aa) to studs. Clips spaced max. 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

8B. Framing Members\* — (Optional on one or both sides, Not Shown — Not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4. b. Steel Framing Members\* — Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips. STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

8C. Steel Framing Members\* — (Optional on one or both sides, Not Shown — Not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel Framing Members as described below a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 8Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4. b. Steel Framing Members\* — Used to attach furring channels (Item 8Ca) to studs. Clips spaced 48 in. OC, and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. REGUPOL AMERICA — Type SonusClip

8D. Steel Framing Members\* — (Optional on one or both sides, Not Shown — Not for use with Items 4D, 4H, 4J, or 4N) — As an alternate to Item 8, furring channels and Steel Framing Members as described below: a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4. b. Steel Framing Members\* — Used to attach resilient channels (Item 8Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw. KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6. Barrier Mesh — (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 4) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center. CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada)

employing the UL or cUL Certification (such as Canada), respectively.

steel, attached to floor and ceiling with fasteners spaced 24 in. OC ma to floor and ceiling with fasteners 24 in. OC. max. SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20 OC max. CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™ Track IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track

vith fasteners spaced 24 in. OC max

TELLING INDUSTRIES L L C — Viper20™ Track asteners spaced 24 in. OC max. CRACO MFG INC - SmartTrack20

than assembly height.

CRACO MFG INC — SmartStud20™

DMFCWBS L L C - ProSTUD MBA METAL FRAMING — ProSTUD RAM SALES L L C — Ram ProSTUD KIRII (HONG KONG) LTD - Type KIRII

EB METAL INC - NITROSTUD OLMAR SUPPLY INC - PRIMESTUD

CRACO MFG INC - SmartStud201 3. Batts and Blankets\* — (Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity.

application only try density of 4.3 pounds per cubic f NÚ-WOOL CO INC - Cellulose Insulation

See Batts and Blankets (BZJZ) category for names of manufacturers.

with Type USGX

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-C, PG-9, PG-11, PGS-WRS

optional for use with Type USGX

#### 📊 Design No. U465 October 02, 2019

Nonbearing Wall Rating — 1 HR. \* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions

2 3 4 5

1. Floor and Ceiling Runners — (Not Shown) — Channel shaped runners, 3-5/8 in. deep (min), 1-1/4 in. legs, formed from min No. 25 MSG galv

1A. Framing Members\* - Floor and Ceiling Runners - (Not Shown) - As an alternate to Item 1 - Channel shaped, min 3-5/8 in. deep, attached

ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV - Type SUPREME D24/30EQD and Type SUPREME D20

QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

1B. Framing Members\* — Floor and Ceiling Runners — Not Shown — In lieu of Item 1 — For use with Item 2B, proprietary channel shaped runners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in.

MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper20™ Track

FUSION BUILDING PRODUCTS — Viper20™ Track

1C. Floor and Ceiling Runners — (Not Shown) — For use with Item 2C — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners spaced max 24 in. OC. 1D. Framing Members\* — Floor and Ceiling Runners — Not Shown — In lieu of Items 1 through 1C — For use with Item 2D and 4G only, proprietary channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. CLARKDIETRICH BUILDING SYSTEMS — CD ProTRAK

DMFCWBS L L C - ProTRAK MBA METAL FRAMING — ProTRAK

RAM SALES L L C — Ram ProTRAK

STEEL STRUCTURAL PRODUCTS L L C — Tri-S ProTRAK

1E. Framing Members\* - Floor and Ceiling Runners - Not Shown - In lieu of Items 1 through 1D - For use with Item 2E and 4I only, proprietary channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling FELLING INDUSTRIES L L C — TRUE-TRACK™

1F. Framing Members\* - Floor and Ceiling Runners - Not Shown - In lieu of Items 1 through 1E - For use with Item 2, channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 25 MSG steel, attached to floor and ceiling with fasteners spaced 24 in. OC max. KIRII (HONG KONG) LTD — Type KIRII

1G. Framing Members\* — Floor and Ceiling Runners — Not Shown — In lieu of Items 1 through 1F — For use with Item 2, channel shaped runners, 1-1/4 in. deep by min 3-5/8 in. wide, attached to floor and ceiling with fasteners spaced 24 in. OC max. STUDCO BUILDING SYSTEMS - CROCSTUD Track

1H. Floor and Ceiling Runners — (Not Shown) — Channel shaped, fabricated from min 0.02 in. galv steel, min width to accommodate stud size, with min 1 in. long legs, for use with studs specified below and fabricated from min 0.02 in. galv steel or thicker, attached to floor and ceiling with fasteners spaced max 24 in. OC. MARINO/WARE, DIV OF WARE INDUSTRIES INC — Viper20™ Track VT100

FUSION BUILDING PRODUCTS — Viper20™ Track VT100 IMPERIAL MANUFACTURING GROUP INC — Viper20™ Track VT100

11. Framing Members\* - Floor and Ceiling Runners - Not Shown - In lieu of Item 1 - For use with Item 2H, proprietary channel shaped unners, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in.

1J. Framing Members\* — Floor and Ceiling Runners — Not Shown — In lieu of Items 1 — For use with Item 2 L, proprietary channel shaped

runners, 1-1/4 in. deep by min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. STEEL INVESTMENT GROUP L L C — AlphaTRAK 1K. Framing Members\* - Floor and Ceiling Runners - Not Shown - In lieu of Item 1 - For use with Item 2M, proprietary channel shaped

unners, 1-1/4 in. wide by min 3-5/8 in. deep, fabricated from min 25 MSG (0.018 in. min. bare metal thickness), attached to floor and ceiling with CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper X Track 1L. Framing Members\* - Floor and Ceiling Runners - Not Shown - In lieu of Item 1 - For use with Item 2N, proprietary channel shaped

unners. 1-1/4 in, wide by min 3-5/8 in, deep fabricated from min 0.020 in, thick galv steel, attached to floor and ceiling with fasteners spaced 24 in, 2. Steel Studs — Channel shaped, 3-5/8 in. deep (min), formed from min No. 25 MSG galv steel spaced 24 in. OC max. Studs to be cut 3/4 in. less

A Framing Members\* — Steel Studs — As an alternate to Item 2 — Channel shaped studs min 3-5/8 in deep spaced a max of 24 in OC. Studs to be cut 3/4 in. less than assembly height. ALLSTEEL & GYPSUM PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV - Type SUPREME D24/30EQD and Type SUPREME D20 QUAIL RUN BUILDING MATERIALS INC — Type SUPREME D24/30EQD and Type SUPREME D20

SCAFCO STEEL STUD MANUFACTURING CO — Type SUPREME D24/30EQD and Type SUPREME D20 STEEL CONSTRUCTION SYSTEMS INC — Type SUPREME D24/30EQD and Type SUPREME D20

UNITED METAL PRODUCTS INC — Type SUPREME D24/30EQD and Type SUPREME D20

2B. Framing Members\* — Steel Studs — Not Shown — In lieu of Item 2 — For use with Item 1B, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height CALIFORNIA EXPANDED METAL PRODUCTS CO — Viper20™

MARINO/WARE, DIV OF WARE INDUSTRIES INC - Viper20™

FUSION BUILDING PRODUCTS — Viper20™

IMPERIAL MANUFACTURING GROUP INC — Viper20™

2C. Steel Studs — (As an alternate to Item 2, For use with Item 1C) — Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height. See materials in Item(s) 4 that require Item 2C studs. 2D. Framing Members\* — Steel Studs — As an alternate to Items 2 through 2C — For use with Item 1D and 4G only, channel shaped studs, min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height. CLARKDIETRICH BUILDING SYSTEMS - CD ProSTUD

STEEL STRUCTURAL PRODUCTS L L C - Tri-S ProSTUD

2E. Framing Members\* — Steel Studs — As an alternate to Items 2 through 2D — For use with Item 1E and 4I only, channel shaped studs, min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height. TELLING INDUSTRIES L L C — TRUE-STUD™

2F. Framing Members\* — Steel Studs — As an alternate to Items 2 through 2E — For use with Item 1F, channel shaped studs, min 3-5/8 in. wide fabricated from min 25 MSG steel, spaced a max of 24 in. OC. Studs to be cut 1/2 in. less than assembly height.

2G. Framing Members\* — Steel Studs — Not Shown — In lieu of Item 2 through 2F — For use with Item 1G. Proprietary channel shaped studs, ninimum 3-5/8 in. wide, Studs to be cut 1/2 in. less than the assembly height.

STUDCO BUILDING SYSTEMS - CROCSTUD 2H. Framing Members\* — Steel Studs — Not Shown — In lieu of Item 2 — For use with Item 1I, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.

relling INDUSTRIES L L C — Viper20™ 21. Framing Members\* — Steel Studs — In lieu of Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-

protected steel, 3-5/8 in. deep (min), spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height. 2J. Framing Members\* — Steel Studs — In lieu of Item 2 — For use with Item 1, channel shaped studs, fabricated from min 25 MSG corrosion-

protected steel, 3-5/8 in. deep (min), spaced 24 in. OC max. Studs to be cut 3/4 in. less than assembly height.

2K. Framing Members\* — Steel Studs — As an alternate to Item 2 — For use with Item 1B (3-5/8 in. wide track), channel shaped studs, fabricated from min 25 MSG corrosion-protected steel, 1-1/4 in. wide by 3-5/8 in. deep, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than MARINO/WARE, DIV OF WARE INDUSTRIES INC — StudRite™

2L. Framing Members\* — Steel Studs — As an alternate to Items 2 — For use with Item 1J, channel shaped studs, min 3-5/8 in. wide fabricated from min 0.018 in. thick galv steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height STEEL INVESTMENT GROUP L L C — AlphaSTUD

2M. Framing Members\* — Steel Studs — Not Shown — In lieu of Item 2 — For use with Item 1K, proprietary channel shaped steel studs, min 1-1/4 in. wide by min 3-5/8 in. deep, fabricated from min 25 MSG (0.018 in. min. bare metal thickness). Studs cut 3/4 in. less in length than

CALIFORNIA EXPANDED METAL PRODUCTS CO - Viper X

2N. Framing Members\* — Steel Studs — Not Shown — In lieu of Item 2 — For use with Item 1L, proprietary channel shaped steel studs, 1-1/4 in. wide by min 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel. Studs cut 3/4 in. less in length than assembly height.

ROCKWOOL — Type AFB, min. density 1.69 pcf / 27.0 kg/m3 See Batts and Blankets (BZJZ) category for names of Classified companies.

3A. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 3) — (100% Borate Formulation) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft3, in accordance

with the application instructions supplied with the product. U S GREENFIBER L L C — INS735, INS745, INS750LD for use with wet or dry application. INS765LD and INS773LD are to be used for dry

3B. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum

3C. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 3) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft3. INTERNATIONAL CELLULOSE CORP — Celbar-RL

3D. Batts and Blankets\* — For use with Item 8. Nom 3 in. thick, minimum 3.4 pcf mineral wool batts, friction fit between the studs and floor and

3E. Batts and Blankets\* — For use with Item 4P, 4R, and 4S. Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL

Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies. 3F. Fiber, Sprayed\* — As an alternate to Batts and Blankets (Item 3) — Spray-applied cellulose material. The fiber is applied with water to

completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach tent before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft3.

APPLEGATE HOLDINGS L L C — Applegate Advanced Stabilized Cellulose Insulation 4. Gypsum Board\* — 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in.

OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the assembly. When attached to Items 6 (resilient channels) or 6A, 6B, 6C, 6D, or 6E (furring channels), gypsum board is screw attached to furring channels with 1 in. long, Type S steel screws spaced 12 in. OC. CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

AMERICAN GYPSUM CO - Types AG-C, AGX-1, M-Glass, LightRoc

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO - Type DBX-1 CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 5, optional for use

CERTAINTEED GYPSUM INC — Types 1, EGRG, GlasRoc, Type X, Type X-1, Type C, 5/8" Easi-Lite Type X, Easi-Lite Type X-2

CONTINENTAL BUILDING PRODUCTS OPERATING CO. L L C - Types LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD, LGLLX GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DA, DAPC, DGG, DS, GPFS6, LS, Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, TG-C, GreenGlass Type X, Type X ComfortGuard Sound Deadening Gypsum Board

Type LWX, Veneer Plaster Base Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type-LW2X, Water Rated - Type LW2X, Sheathing -Type LW2X, Soffit - Type LW2X, Type DGL2W, Water Rated - Type DGL2W, Sheathing - Type DGL2W NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSMR-C, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSL

NATIONAL GYPSUM CO - Riyadh, Saudi Arabia - Type FR, or WR

PANEL REY S A - Types GREX, GRIX, PRC, PRC2, PRX, RHX, MDX, ETX

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Air, Gyproc DuraLine MR ACTIV'Air, Gyproc DuraLine M2TECH ACTIV'Air SIAM GYPSUM INDUSTRY (SARABURI) CO LTD - Type EX-

THAI GYPSUM PRODUCTS PCL — Type X, Type C

UNITED STATES GYPSUM CO - Type AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, USGX (Joint tape and compound, Item 5, optional for use with Type USGX)

USG BORAL DRYWALL SFZ LLC — Types C. SCX, USGX (Joint tape and compound, Item 5, optional for use with Type USGX USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 5, 4A. Gypsum Board\* — (As alternate to Item 4) — Nom 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Panels attached to steel study and floor runner with 1 in. long Type S steel screws spaced 8 in. OC when applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. When used in widths other than 48 in., gypsum panels to be installed horizontally. CERTAINTEED GYPSUM INC — Type X, Type X-1, Type C, Type EGRG/ GlasRoc, GlasRoc-2, Type SilentFX, Easi-Lite Type X-2

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 5, optional for use with Type USGX) CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C - Types LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD GEORGIA-PACIFIC GYPSUM L L C — Types DAP, DAPC, DGG, DS

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Air, Gyproc DuraLine MR ACTIV'Air, Gyproc DuraLine M2TECH ACTIV'Air THAI GYPSUM PRODUCTS PCL - Type X, Type C

UNITED STATES GYPSUM CO - Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, USGX (Joint tape and compound, Item 5, optional for use with

USG BORAL DRYWALL SFZ LLC — Types C, SCX, USGX (Joint tape and compound, Item 5, optional for use with Type USGX)

USG MEXICO S A DE C V — Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, USGX, WRC or WRX (Joint tape and compound, Item 5, optional for use with Type USGX) 4B. Gypsum Board\* — (As an alternate to Items 4 or 4A) — Nom 3/4 in. thick, 4 ft wide, installed as described in Item 4A with screw length increased to 1-1/4 in CGC INC - Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

USG MEXICO S A DE C V — Types AR, IP-AR

4C. Gypsum Board\* — As an alternate to Items 4, 4A, and 4B — Nom. 5/8 in. thick gypsum panels, with square edges, applied horizontally. Gypsum panels fastened to framing with 1 in. long bugle head steel screws spaced a max 8 in. OC, with last 2 screws 3/4 in. and 4 in. from each edge of board. Horizontal joints need not be backed by steel framing. ntal edge joints and horizontal butt joints on opposite sides of studs on interior walls need not be staggered or backed by steel framing. GEORGIA-PACIFIC GYPSUM L L C — Type DGG, GreenGlass Type X

4D. Gypsum Board\* — As an alternate to Items 4, 4A, 4B, and 4C — Nom. 5/8 in. thick gypsum panels applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by steel framing. Gypsum panels fastened to framing with 1 in. long Type S steel screws 12 in. OC along vertical edges and in the field. Screws spaced a max 12 in. along the top and bottom

edges of the wall for both vertical and horizontal applications. When used in widths other than 48 in, gypsum panels to be installed horizontally. NATIONAL GYPSUM CO — Types eXP-C, FSK, FSK-C, FSK-G, FSL, FSW-C, FSW-G, FSW, FSW-3, FSW-5, FSW-6, FSMR-C 4E. Gypsum Board\* --- (As an alternate to Items 4 through 4D) --- Installed as described in Item 4. 5/8 in. thick, 4 ft. wide, applied vertically only and fastened to the studs and plates with 1 in. long, Type S steel screws spaced, 12 in. OC. NATIONAL GYPSUM CO — Type SBWB

4F. Gypsum Board\* — (Not Shown) — (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C) -Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

4G. Gypsum Board\* — (As an alternate to Items 4 through 4F) — For use with Items 1D and 2D only, 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A, LGFC-C/A

NATIONAL GYPSUM CO - Types FSW

RAY-BAR ENGINEERING CORP — Type RB-LBG

UNITED STATES GYPSUM CO — Type SCX USG BORAL DRYWALL SFZ LLC - Type SCX

4H. Gypsum Board\* — (As an alternate to Items 4 through 4G) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type QuietRock ES 4. Gypsum Board\* — (As an alternate to Items 4 through 4F) — For use with Items 1E and 2E only, 5/8 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track with 1 in. long, Type S steel screws spaced 8 in. OC. along edges of board and 12 in. OC in the field of the board. Joints oriented vertically and staggered on opposite sides of the

UNITED STATES GYPSUM CO — Type SCX

USG BORAL DRYWALL SFZ LLC — Type SCX 4J. Gypsum Board\* — (Not Shown) — (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C) —

Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4K. Gypsum Board\* — (As an alternate to Item 4 and 4A, not for use with Items 1D, 1E, 2D and 2E) — Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 4 and 4A. CGC INC — Type ULX

4P. Gypsum Board\* — As an alternate to Item 4. For use with Item 3E, Batts and Blankets\* — 5/8 in. thick, 4 ft wide, installed as described in Item 4. UNITED STATES GYPSUM CO — Types ULIX

4R. Gypsum Board\* — As an alternate to Item 4D. For use with Item 3E, Batts and Blankets\* — 5/8 in. thick, 4 ft wide, installed as described in Item 4. NATIONAL GYPSUM CO — Type FSLX.

4S. Gypsum Board\* — As an alternate to Item 4. For use with Item 3E, Batts and Blankets\* — 5/8 in. thick, 4 ft wide, installed as described in Item 4A.

4Q. Gypsum Board\* — 3/4 in. thick, 4 ft wide, attached to steel studs and floor and ceiling track as described in Item 4 with screw length increased to min. 1- 1/8 in.

4T. Wall and Partition Facings and Accessories\* — (As an alternate to 5/8 in. thick board as outlined in Item 4) — Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field.

5. Joint Tape and Compound — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Paper tape and

6. Resilient Channel — (Optional — Not Shown) — 25 MSG galv steel resilient channels spaced vertically max 24 in. OC, flange portion attached to each intersecting stud with 1/2 in. long type S-12 pan head steel screws. May not be used with Item 4F, 4J or 4L.

6A. Steel Framing Members\* — (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as

described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one

screw on each flange of the channel. Not for use with Items 4F, 4J, or 4L. b. Framing Members\* — Used to attach furring channels (Item a) to studs (Item 2). Clips spaced 48 in. OC., and secured to studs with 1-5/8 in. wafer or hex head Type S steel

6B. Framing Members\* — (Not Shown) — (Optional on one or both sides) — As an alternate to Item 6, furring channel and Steel Framing Members as described below:

6C. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining

screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32

a. Furring Channels — Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 4. Not for use with Items 4F, 4J, or 4L.

b. Steel Framing Members\* — Used to attach furring channels (Item 6Ba) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire Gypsum board attached to furring channels as described in Item 4. Not for

b. Steel Framing Members\* — Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.

6D. Steel Framing Members\* — (Optional, Not Shown) — Furring channels and Steel Framing Members as described below: a. Furring Channels — Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 6Db. Ends of adjoining

channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4. Not for

b. Steel Framing Members\* — UUsed to attach furring channels (Item 6Da) to studs. Clips spaced 48 in. OC, and secured to studs with No.8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.

6E. Steel Framing Members\* — (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below: a. Resilient Channels — Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining

channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4. Not for use with Items 4F, 4J, or 4L.

b. Steel Framing Members\* — Used to attach resilient channels (Item 6Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.

7. Wall and Partition Facings and Accessories\* — (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the steel framing and the UL

Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

8. Mineral and Fiber Board\* — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to studs and floor and ceiling runners with 1-5/8 in. long Type S steel screws, spaced 12 in. OC and 24 in. OC along all intermediate framing. The

ed UL Classified gypsum board layer (Item 4M) is to be installed over the Mineral and Fiber Boards. Batts and Blankets, Item 3D, and Adhesive, Item 11, are required

9. Lead Batten Strips — (Not Shown, For Use With Item 4E) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the

12. Wall and Partition Facings and Accessories\* — (Optional, Not Shown) — For use with Items 1 to 11, Items 2 to 2J, Item 3, Items 4 to 41, Item 5 and Item 6. For maximum fire

UNITED STATES GYPSUM CO - Type ULX USG MEXICO S A DE C V - Type ULX

4L. Gypsum Board\* - (Not Shown) - (As an alternate to Item 4 when used as the base layer on one or both sides of wall. For direct attachment only to steel studs Item 2C).

compound. Screw heads covered with joint compour

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO - Types eXP-C, FSK-C, FSW-C

UNITED STATES GYPSUM CO - Types C, IP-X2, IPC-AR

USG MEXICO S A DE C V - Types C, IP-X2, IPC-AR

CERTAINTEED GYPSUM INC - Type FRPC, Type C

AMERICAN GYPSUM CO — Type AG-C

CGC INC — Types C, IP-X2, IPC-AR

PANEL REY S A — Types PRC, PRC2

ACTIV'Air, Gyproc DuraLine M2TECH ACTIV'Air

THAI GYPSUM PRODUCTS PCL — Type C

USG BORAL DRYWALL SFZ LLC — Type C

NATIONAL GYPSUM CO — Type FSW

in. wide furring channels.

PLITEQ INC — Type Genie Clip

use with Items 4F, 4J, or 4L.

use with Items 4F, 4J, or 4L.

REGUPOL AMERICA — Type SonusClip

HOMASOTE CO — Homasote Type 440-32

HOMASOTE CO — Homasote Type 440-32

edges of Mineral and Fiber Board (Item 8).

MSL — RefleXor membrane, SONOpan panel

Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

RADIATION PROTECTION PRODUCTS INC - Type RPP - Lead Lined Drywal 4M. Gypsum Board\* — (For use with Item 8) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 8) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C - Type LGFC-C/A

PABCO BUILDING PRODUCTS L L C. DBA PABCO GYPSUM - Type PG-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type PG-13

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C - Type CLLX.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 545

joint compound may be omitted when gypsum boards are supplied with square edges.

STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM - Type QuietRock QR-500 and QR-510

strips required behind vertical joints of lead backed gypsum wallboard (Item 4J) and optional at remaining stud locations.

length increased by minimum 3/4 inch. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),

have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

CLARKDIETRICH BUILDING SYSTEMS — Barrier Mesh, Barrier Mesh Clips

KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)



**ISSUED FOR** PERMIT AND BIDDING

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Drawn By	Author			
Checked By	Checker			
Approved By	Approver			
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and Fiber Board — (Optional, Not Shown) — For optional use as an additional studs on one side of the wall in between the wood studs and the UL Classified n. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gy I fastener length shall be increased by a minimum of 1/2 in. Not evaluated or in or use with Item 4M. SE FIBERBOARD INC — SoundStop	al layer on one side of wall - Nom 1/2 in. thick, 4 ft wide, square edge fiber boards d Gypsum Board (Item 4). Fiber boards installed with 1-1/4 in. long, Type S steel ypsum board (Item 4) installed as indicated as to fastener type and spacing, exce ntended as a substitute for the required layer(s) of UL Classified Gypsum Board.	s applie screw ept tha Not
E FIBERBOARD INC — SoundStop		
studs on one side of the wall in between the wood studs and the UL Classified n. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gy I fastener length shall be increased by a minimum of 1/2 in. Not evaluated or in or use with Item 4M. BE FIBERBOARD INC — SoundStop	d Gypsum Board (Item 4). Fiber boards installed with 1-1/4 in. long, Type S steel ypsum board (Item 4) installed as indicated as to fastener type and spacing, exce ntended as a substitute for the required layer(s) of UL Classified Gypsum Board.	so pt N

8B. Mineral and Fiber Board\* — (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to studs and floor and ceiling runners with 1-5/8 in. long Type S steel screws, spaced 12 in. OC and 24 in. OC along all intermediate framing. The required UL Classified gypsum board layer is to be installed over the Mineral and Fiber Boards and secured to studs with length of fasteners increased by 1/2 in. over the length specified for installation of the gypsum boards. Batts and Blankets, Item 3, are optional unless otherwise required. Not for use with Items 4F, 4J, 4L, and 4M.

strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum board (Item 4E) and optional at remaining stud locations. Required behind vertical joints. 9A. Lead Batten Strips — (Not Shown, for use with Item 4J) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studi and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screws at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-2011, Grades "B, C or D". Lead batten

10. Lead Discs or Tabs — (Not Shown, For Use With Item 4E) — Used in lieu of or in addition to the lead batten strips (Item 8) or optional at other locations - Max 3/4 in, diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4E) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". 10A. Lead Discs — (Not Shown, for use with Item 4J) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to 11. Adhesive — Not Shown — (For use with Item 8) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical

rating of 1 hour. On one side of the wall, over the first layer of Gypsum Board (Item 4 to Item 4), install RefleXor membrane with the gold side facing outwards. Membrane installed with T50 staples spaced 12 inches on center in both directions as per manufacturer's instructions, seams in membrane to be overlapped by 2 inches. When RefleXor membrane is used an additional layer of Gypsum Board that is identical to the one used in the first layer and as specified in Item 4 to Item 41 shall be installed over the membrane. The additional layer of Gypsum Board to be installed through the membrane to the stud as specified in Item 4 to Item 41 except the fastener length shall be increased by a minimum of 5/8 inch. Install Batts and Blankets in the stud cavity as per Item 3. On the other side of the wall, prior to the installation of the Gypsum Board, install Resilient Channels as per Item 6. Over the Resilient Channels install 3/4 inch thick SONOpan panel secured to the Resilient Channels with drywall screws and washers spaced at 16 in. OC on the perimeter of the panel and 8 in. OC in the field of the panel. Over the SONOpan panel install the same Gypsum Board as specified in Item 4 to Item 4 with the fastener

13. Barrier Mesh — (Optional, Not Shown) - Attached to steel studs on one or both sides of the wall using Barrier Mesh Clips spaced at maximum 12 inches on center vertically, using a flat head type screw penetrating through the steel at least 3/8 of an inch. For Steel Studs less than 0.033 inches in thickness, use self-piercing screws. For Steel Studs equal to or greater than 0.033 inches in thickness, use steel drill screws (self-tapping). Gypsum Board (Item 4) to be installed directly over the Barrier Mesh using prescribed screw patterns with lengths increased by a minimum 1/8 in. Barrier Mesh may be installed with the long dimension of the diamond pattern positioned vertically or horizontally. Barrier Mesh joints may occur as butt joints at the framing members and secured using the Barrier Mesh Clips or occur in between framing members as overlapping joints secured using 18 SWG wire ties spaced a maximum 12 in. on center.



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	GENERAL PLAN DEMOLITION NOTES
	1. ALL WORK SHOWN IS EXISTING TO REAMIN UNLESS NOTED OR INDICAT AS DASHED LINES TO BE REMOVED. THE EXTENT OF DEMOLTION WOR SHALL INCLUDE ALL INCIDENTAL DEMOLITION WORK NECESSARY TO PROPERLY PROVIDE ALL NEW WORK SHOWN AND SPECIFIED, TO INCLU MECHANICAL, ELECTRICAL, AND PLUMBING ITEMS.
	2. DEMOLITION WORK SHOWN IS BASED ON EXISTING DRAWINGS AND INSPECTIONS. THE CONTRACTOR SHALL VISUALLY INSPECT ALL EXIST CONDITIONS, AND IS RESPONSIBLE FOR PERFORMING THE INDICATED DEMOLITION WORK EVEN IF ACTUAL CONDITIONS DIFFER FROM THESE SHOWN ON THE DRAWINGS
	3. DEMOLITION CONTRACTOR SHALL COORDINATE WITH NEW WORK SECTIONSFOR ADDITIONAL INFORMATION RELATED TO EXTENT OF DEMOLITION.
	<ol> <li>REFER TO ALL OTHER DRAWINGS IN THIS SET FOR INCIDENTAL DEMOLI WORK NOT NOTED ON THE DEMOLITION PLANS.</li> </ol>
	5. THE OWNER HAS THE FIRST RIGHT OF REFUSAL OF ALL SALVAGE ITEM THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL DEBRIS. DO NO STOCKPILE DEBRIS ON SITE.
	6. ITEMS TO BE DEMOLISHED SHALL BE REMOVED COMPLETELY INCLUDIN ALL ANCHORS, HANGERS, FASTENERS, PIPES, CONDUITS, DUCTS, ETC.
	<ol> <li>CONCRETE SLAB PATCHES MUST BE FLUSH WITH REMAINING SURFACE TO PERMIT APPLICATION OF FINISHES. PROVIDE WELED WIRE MESH IN PATCH AREAS LARGER THAN (4) FOUR SOURCE FEET</li> </ol>
	<ol> <li>CONCRETE SLABS TO REMAIN SHALL BE PATCHED, SCRAPED, LEVELED AND CLEANED TO PROVIDE A SURFACE SUITABLE FOR NEW FINISHES.</li> <li>WHERE RENOVATED AREAS ARE RECIEVEING NEW LINDERGROUND</li> </ol>
2	MECHANICAL, PLUMBING, ELECTRICAL OR ADDITIONAL FOUNDATION W SEE MECHANICAL, PLUMBING AND STRUCTURAL DRAWINGS, AS WELL A ARCHITECTURAL DRAWINGS TO DETERMINE EXTENT OF REQUIRED CU AND PATCH OF EXISTING SLAB. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CONCRETE SLAB DEMOLITION AND REPLACEMENT NECESSARY TO INSTALL THE NEW WORK. BACKFILL ALL BELOW GRADI DEMOLITION WORK WITH SUITABLE FILL MEETING STRUCTURAL BEQUIREMENTS FOR NEW WORK
	<ul> <li>9. PARTITIONS SHOWN TO BE REMOVED SHALL BE CONFIRMED BY THE CONTRACTOR AS TO TYPE OF PARTITION AND EXACT LOCATION. COMPLETELY REMOVE PARTITIONS FROM FLOOR TO STRUCTURE ABOY</li> </ul>
	INCLUDING BASE, ALL FASTENERS, GROUT, SEALANTS, ETC., UNLESS OTHERWISE NOTED. MASONRY PARTITIONS WHICH EXTEND THROUGH SLAB SHALL BE REMOVED TO 8" BELOW FINISH FLOOR. FILL SLAB OPEN WITH CONCRETE FILL TO RECIEVE FINISH FLOOR. WHERE WALLS SCHEDULED TO BE REMOVED SIT ON SLAB, GRIND SLAB TO RECIEVE FI FLOOR.
	10. REMOVE, PATCH AND REPAIR PORTIONS OF WALL PARTITIONS WHICH CONFLICT WITH NEW WORK TO BE INSTALLED, EVEN IF NOT SPECIFICA NOTED TO BE DEMOLISHED ON PLANS.
	11. WALL REMOVED FROM INTERSECTING WALLS SHALL INCLUDE TOOTHE REPLACEMENT OF DAMAGED MASONRY ON WALL TO REMAIN AND REMOVAL OF TIES PROJECTING FROM WALLS. SEE DETAILS FOR ADDITIONAL CONDITIONS.
	12. WALLS TO BE PARTIALLY REMOVED SHALL BE TERMINATED WITH FINIS MASONRY ENDS BY TOOTHING IN NEW MASONRY UNITS, TO MATCH ADJACENT MASONRY. SEE DETAILS FOR OTHER CONDITIONS. NO WAL SHALL BE TERMINATED WITH EXPOSED OPEN CELLS OR DAMAGED MASONRY UNITS.
<u>(46</u> )	13. WHERE NEW OPENINGS ARE SHOWN IN EXISTING WALL, CAREFULLY REMOVE TO NEAREST JOINT LINE WITHOUT DISTURBING ADJACENT WO SO THAT NEW WORK CAN BE PATCHED IN TO MATCH. ALL NEW MASON WORK SHALL BE TOOTHED IN.
	<ul> <li>14. ALL EXISTING STRUCTURE SHALL REMAIN, UNLESS OTHERWISE NOTED</li> <li>15. COORDINATE DEMOLITION OF ALL STRUCTURAL ITEMS (COLUMNS, BEA SLABS, ETC.) WITH STRUCTURAL DRAWINGS. EXTENT OF DEMOLITION AREA SHALL BE IN ACCORDANCE WITH STRUCTURAL REQUIREMENTS A COORDINATED WITH ALL NEW WORK.</li> </ul>
	16. TEMPORARILY SUPPORT ALL BEAMS, LINTELS, PORTIONS OF WALLS ET TO BE DISTURBED BY DEMOLITION WORK, UNTIL THEY ARE RE-SUPPOR
5	17. CONTRACTOR SHALL BE RESPOSIBLE FOR MAINTAINING THE INTEGRITY EXISTING BUILDING ELEMENTS TO REMAIN THROUGHOUT SEQUENCE O WORK. ANY DAMAGE TO EXISTING BUILDING CONDITIONS SHOWN TO REMAIN SHALL BE RESTORED TO NEW WORK CONDITION AT NO COST OWNER.
<u>_ 6</u> )	18. WINDOWS SCHEDULED FOR REMOVAL SHALL BE REMOVED COMPLETE FASTENERS MAY BE CUT FLUSH WITH HEAD, JAMBS, AND SILL IF THE NI WINDOW UNIT WILL CONSEAL FASTENER. PROTECT EXISTING SILLS SCHEDULED TO REMAIN. ALL EXISTING WINDOW OPENINGS MUST BE F MEASURED PRIOR TO SUBMITTAL OF SHOP DRAWINGS.
	19. WHERE FINISHES ARE INDICATED TO BE REMOVED, REMOVAL SHALL INCLUDE ANY GROUT, ADHESIVES, FASTENERS, AND ALL OTHER ITEMS USED TO ATTACH THE FINISHES TO THE SURFACES THAT THEY COVER
	20. ANY FLOOR AREAS DAMAGED BY DEMOLITION CONTRACTOR SHALL BE PATCHED TO MATCH EXISTING.
	21. WHERE CEILINGS ARE REMOVED, REMOVE ALL CEILING SYSTEMS COMPLETELY INCLUDING GRID, TRIM HANGERS, CLIPS, ETC. WHERE NE CEILINGS ARE SPECIFIED, NO DOUBLE CEILINGS ARE PERMITTED. REM
	ALL ORIGINAL CONCEALED CEILINGS WHERE ENCOUNTERED. 22. ALL EXISTING SURFACES TO REMAIN SHALL BE PROTECTED, PATCHED DAMAGED AND CLEANED PRIOR TO APPLICATION OF EINISHES
	23. CONCTRACTOR TO PROTECT ALL EQUIPMENT AND OTHER ELEMENTS I AREA OF NEW OR DEMOLITION WORK.
	24. REMOVE ALL CURTAINS AND BLINDS IN AREAS OF RENOVATION OR DEMOLITION, UNLESS OTHERWISE NOTED.
	25. REMOVE MECHANICAL, ELECTRICAL AND PLUMBING ITEMS AS NOTED O MECHNICAL, ELECTRICAL AND PLUMBING PLANS. COORDINATE WITH O STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING FOR ADDITIO DEMOLITION NOTES. REMOVAL WORK IS INTENDED TO INCLUDE ALL ASSOCIATED ITEMS SUCH AS ELECTRICAL OUTLETS. SWITCHES, COND
	PIPING, MOUNTING BLOCKS, ETC., AS NOTED. THE CONTRACTOR SHAL REFER TO ALL CIVIL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR PROCEDURES CONCERNING RELATED TRADES IN AREAS WHICH REQUIRE DEMOLITIO REPAIR AND PATCH ANY AREAS DAMAGED DURING REMOVAL WORK.
9	26. WHERE EXISTING WALL FINISHES ARE INCIDATED TO BE REMOVED, REMOVAL SHALL INCLUDE ANY GROUT, ADHESIVES, FASTENERS, AND A OTHER ITEMS USED TO ATTACH THE FINISHES TO THE SURFACES THAT THEY COVER.
	27. WHERE EXISTING EXTERIOR AND INTERIOR WALLS ARE INDICATED TO REMAIN, REMOVE ALL INTERIOR FINISHES AS WELL AS ANY EXISTING FURRING ON ALL INTERIOR FACES.
	DEMOLITION PLAN LEGEND
	FLOOR AREA TO RECEIVE SELF-LEVELING COMPOUND
	DEMOLITION KEYNOTES
	D01 PREPARE FLOOR SURFACE FOR RECEIVING SELF-LEVELING COMPOUND D02 ADJUST EXISTING DRAINS TO BE FLUSH WITH NEW FLOORING



DEMOLITION PLAN

Drawing Number

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#### CEILING DEMOLITION KEYNOTES

 CONTRACTOR TO REMOVE EXISTING LIGHT FIXTURES PREP CONDUITS AND ELECTRICAL FOR NEW CONDITION
 CONTRACTOR TO PREP EXISTING SPRINKLER LINES FOR NEW CONDITION





### **ROOF DEMOLITION KEYNOTES**

 CONTRACTOR TO COORDINATE WITH MECHANICAL PLAN TO DEMO NEW OPENINGS FOR NEW PENETRATIONS FOR EXHAUST FLUE
 CONTRACTOR TO COORDINATE WITH MECHANICAL PLANS TO PROVIDE NEW OPENING FOR DUCT AND VENT FOR NEW AHU COORDINATE WITH MECHANICAL.





		GENERAL PLAN NOTES
		1. ALL WORK TO BE PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE MOST RECENT EDITION OF THE CITY OF HOUSTON CODE, LABO LAWS, RULES & REGULATIONS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS TO CARRY OUT TH
		<ol> <li>WORK DESCRIBED IN THE CONSTRUCTION DOCUMENTS.</li> <li>THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS. ANY DISCREPANCIES WITH THE DRAWINGS OR DIMENSIONS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION PRIOR TO CONSTRUCTION</li> </ol>
		<ol> <li>IF A CONFLICT EXSITS BETWEEN THE DRAWINGS (AND/OR SPECIFICATIONS), THE MORE STRINGENT AND COSTLY REQUIREMENT SHALL APPLY. ITEMS SHOWN ON THE DRAWINGS, BUT NOT SPECIFIED</li> </ol>
		SHALL APPLY AND BE FURNISHED AND INSTALLED BY THE CONTRACTOR. AN ITEM IS SHOWN ON THE DRAWINGS, BUT IS NOT INCLUDED IN THE SPECIFICATIONS, PROVE ITEM OF A QUALITY CONSISTANT WITH THE GENERAL QUALITY OF THE CONTRACT REQUIREMENTS. BRING CONFLICT BETWEEN THE DRAWING AND SPECIFICATIONS TO THE ATTENTION OF TH
		<ol> <li>WRITTEN INFORMATION TAKES PRECEDENT OVER DRAWING LINES. BRING CONFLICTS BETWEEN WRITTEN INFORMATION AND DRAWN LINE TO THE</li> </ol>
		<ul> <li>ATTENTION OF THE ARCHITECT IMMEDIATELY.</li> <li>5. IF AN AREA OR SPACE IS SHOWN, BUT IS NOT CLEARLY DEFINED OR INDICATED BY NOTES, PROVIDE THE SAME MATERIALS AND FINSIHES AS SCHEDULED ELSE WHERE IN THE RULL DING FOR THAT SPACE</li> </ul>
		<ol> <li>PRIOR TO SUBMITTAL OF BID, IT IS THE RESPONSIBILITY OF THE CONTRACTOR(S) TO BECOME FAMILIAR WITH ALL CONDITIONS AT THE SIT RELATIVE TO EXISTING WORK, MATERIAL HANDLING, STORAGE &amp; DELIVER</li> </ol>
		WORK SPACE AVAILABLE, SAFETY PRECAUTIONS REQUIRED, AND ALL OTHER CONDITIONS NECESSARY TO COMPLETE AN ACCURATE AND COMPLETE BID. NO INCREASE IN PROJECT COST WILL BE ALLOWED FOR FAILURE OF THE GENERAL CONTRACTOR TO KNOW EXISTING SITE CONDITIONS.
	2	7. THE GENERAL CONTRACTOR GUARANTEES & WARRANTS THAT ALL WORF PERFORMED SHALL BE FREE FROM DEFECTS IN MATERIALS & WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER THE ISSUANCE OF TH CERTIFICATE OF FINAL COMPLETION. ANY DEFECTS OR DAMAGE DISCOVERED DURING SAID PERIOD SHALL BE REPAIRED OR REPLACED AS DIRECTED IN WRITING BY THE ARCHITECT WITH NO COST TO THE OWNER OR ARCHITECT.
	3	8. THE GENERAL CONTRACT SHALL INCLUDE IN HIS/HER BID ALL COSTS ASSOCIATED WITH MATERIAL HANDLING, STORAGE AND DELIVERY.
		<ol> <li>THE GENERAL CONTRACTOR SHALL FURNISH &amp; INSTALL ALL ITEMS NECESSARY FOR A COMPLETE INSTALLATION.</li> <li>DO NOT SOALE DRAWINGS, ANY DIMENSIONS NOT INDICATED ON</li> </ol>
		10. DO NOT SCALE DRAWINGS. ANY DIMENSIONS NOT INDICATED ON DRAWINGS TO BE CONFIRMED WITH ARCHITECT PRIOR TO CONSTRUCTIO
	4	PRIOR WRITTEN APPROVAL FROM THE BUILDING OWNER AND/OR ARCHITECT.
		<ol> <li>THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS AT THE END OF EACH WORKDAY. THE GENERAL CONTRACTOR WILL FURNISH HIS/HER OW DUMPSTER FOR TRASH &amp; DEBRIS STORAGE UNTIL HE/SHE CAN REMOVE SUCH FROM THE PREMISES. ALL AREAS SHALL BE CLEANED/PROTECTED.</li> <li>ALL WOOD &amp; LUMBER SHALL BE FIRE RETARDANT TREATED AS PER THE</li> </ol>
		14. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING
		THE WORK OF ALL TRADES AS REQUIRED FOR THE COMPLETION OF WOR 15. MATERIALS SHALL BE NEW, OF QUALITY SPECIFIED, DELIVERED IN A TIMEI
	4.6	FASHION & AMPLE QUANTITY TO PREVENT DELAY OF WORK. SUBSTITUTIONS REQUIRE PRIOR APPROVAL BY THE ARCHITECT.
		SHALL HAVE WORKERS COMPENSATION AS REQUIRED BY LAW & SUFFICIENT PROTECTION FOR CLAIMS FOR PERSONAL INJURY, INCLUDING DEATH, SHOULD THEY ARISE FROM OPERATIONS UNDER CONTRACT.
	(5)	17. PRIOR TO DEMOLITION, THE GENERAL CONTRACTOR SHALL WALK THE SI & PROVIDE A WRITTEN LIST TO THE ARCHITECT OF ANY DAMAGE TO EXISTING FINISHES, MISSING EQUIPMENT, NON-OPERATIVE EQUIPMENT, ANY WATER LEAKS, ETC.
>		18. IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO SECURE THE PREMISES THROUGHOUT THE DURATION OF THE PROJECT.
		19. THE GENERAL CONTRACTOR SHALL TAKE THE APPROPRIATE MEASURES TO PROVIDE THE NECESSARY PROTECTION TO THE GENERAL PUBLIC FRO ACCESSING THE SITE AT ALL TIMES.
	6	20. THE GENERAL CONTRACTOR SHALL PROVIDE A SAFE WORKING ENVIRONMENT AS WELL AS REQUIRED MEANS OF EGRESS FOR ALL PERSONNEL ON THE PROJECT SITE.
		21. THE GENERAL CONTRACTOR SHALL PROVIDE THE NECESSARY PROTECTION OF ALL FINISHES THAT ARE TO REMAIN AND ALL AREAS ASSOCIATED WITH THE SCOPE OF THE PROJECT FROM DAMAGE. ANY AREAS DAMAGED DURING CONSTRUCTION SHALL BE RETURNED TO THEIR ORIGINAL FINISH.
		22. THERE ARE NO SUBSTITUTIONS ALLOWED UNLESS APPROVED BY THE ARCHITECT. THE GENERAL CONTRACTOR SHALL SUBMIT IN WRITING ALL REQUESTS FOR SUBSTITUTIONS.
	7	23. THE GENERAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, PRODUCT DATA & SAMPLES TO THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION. SUBCONTRACTORS SHALL VISIT THE PROJECT SITE TO VERIFY CONDITIONS, DIMENSIONS, ETC. THE GENERAL CONTRACTOR SHALL REVIEW ALL SUBMISSIONS PRIOR TO SUBMITTING TO THE ARCHITECT FOR APPROVAL.
>		24. THE GENERAL CONTRACTOR SHALL INSTALL ALL MATERIALS ACCORDING TO THE MANUFACTURER'S RECOMMENDED SPECIFICATIONS. THE GENER CONTRACTOR SHALL SUBMIT IN WRITING TO THE ARCHITECT IF, BECAUSE OF UNFORESEEN CONDITIONS, MATERIALS CANNOT BE INSTALLED ACCORDING TO SPECIFICATIONS PRIOR TO INSTALLATION.
		25. THE GENERAL CONTRACTOR SHALL ASSEMBLE ALL REQUIRED GUARANTEES, WARRANTIES & MAINTENANCE CONTRACTS EXECUTED BY EACH OF THE RESPECTIVE MANUFACTURERS, SUPPLIERS & SUBCONTRACTORS AND SUBMIT THE INFORMATION TO THE ARCHITECT.
		26. THE GENERAL CONTRACTOR SHALL BRING DISCREPANCIES BETWEEN TH DRAWINGS & SPECIFICATIONS IN WRITING TO THE ATTENTION OF THE ARCHITECT.
	(q)	27. ALL PLAN DETAILS & WALL SECTIONS ARE ASSUMED TO BE TYPICAL CONDITIONS UNLESS DETAILED OR NOTED OTHERWISE.
> >	9	28. CLOSE WITH FIRE MATERIALS & FIRE SEAL AS REQUIRED; ALL OPENING JOINTS OR GAPS ON FIRE RATED ASSEMBLIES SUCH AS DUCTS, PIPES & CONDUIT PENETRATIONS.
		29. THE GENERAL CONTRACTOR SHALL MAINTAIN ALL EXISTING FIRE RATINGS AT NEW CONSTRUCTION.
		<ul><li>30. VERIFY OPENINGS FOR PIPES &amp; DUCTS WITH MECHANICAL.</li><li>31. PROVIDE ACOUSTICAL CAULKING TOP, BOTTOM &amp; BOTH SIDES OF ALL</li></ul>
		INTERIORS STUD/GYPSUM BOARD WALLS; TYPICAL. 32. ALL HOLLOW METAL DOOR FRAMES ARE TO BE GROUT FILLED.
		33. PROVIDE "TYPE X" GYPSUM AT ALL REQUIRED RATED WALLS & CEILING ASSEMBLIES.
		<ul> <li>34. PROVIDE ALL NECESSARY WOOD BLOCKING AT ALL REQUIRED LOCATION FOR ERECTION OF EQUIPMENT, SYSTEMS &amp; ACCESSORIES.</li> <li>25. PROVIDE WATER RESISTANT CYRSUM ROADD AT ALL WET AREAS: TYRICA</li> </ul>
		PLAN LEGEND
		PARTITION TYPES - RE: A0.02
		FLOOR PLAN KEYNOTES
		001 LOCATION OF EXHAUST HOOD ABOVE REFER TO FOOD SERVICE DRAWINGS



A1.01



# **27** REFLECTED CEILING PLAN - LEVEL 2 Scale: 1/8" = 1'-0"



	GENERAL REFLECTED CEILING PLAN NOTES         1. TYPICAL CEILING HEIGHT SHALL BE 10°-0" UNLESS OTHERWISE NOTED ON REFLECTED CEILING PLANS. REFER TO TYPICAL DETAIL 11/A2.01 AT ALL STAINLESS STEEL EXHAUST HOODS.         2. REFER TO ELECTRICAL DRAWINGS FOR LIGHT PATTERN AND EXIT LIGHT LOCATIONS. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO SHOP DRAWINGS.         3. REFER TO MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ITEMS NOT SHOWN ON CEILING PLAN. GRILLES, SPEAKERS, SPRINKLERS, HEAT & SMOKE DETECTORS, SHALL BE CENTERED IN TILES UNLESS OTHERWISE NOTED.         4. ALL BULKHEAD DIMENSIONS ARE FROM FINISH FACE OF WALL OR BULKHEAS, THEAT & SMOKE DETECTORS, SHALL BE CENTERED IN TILES UNLESS OTHERWISE NOTED.         5. PROVIDE 1/2" REVEALS BETWEEN DISSIMILAR MATERIALS ON THE SAME PLANE AS THE CEILINGS.         5. PROVIDE 1/2" REVEALS BETWEEN DISSIMILAR MATERIALS ON THE SAME PLANE AS THE CEILING, PAINT EXPOSED STRUCTURE, UNDERESIDE OF DECK, SPRINKLER PIPING, CONDUIT AND ALL MISCELLANEOUS OVERHEAD ITEMS, COLORS THAT SHALL BE SELECTED BY ARCHITECT.         7. ALL GRIDED CEILING SHALL BE 2X2 VYNIL FACE ACOUSTICAL CEILINGS U.O.N.         8. ALL GRAY AREAS ARE AREA OF NO WORK.         CEILING PLAN KEYNOTES         011          011
3 5/8" STEEL STUDS @ 16" O.C. VINYL FACED ACCOUSTICAL PANEL CEILING 5/8" GYP DRY WALL REFRIGERATOR	





 GI	ENERAL ROOF PLAN NOTES
 •	
1.	DETAILS INDICATED ARE TYPICAL FOR SIMILAR ROOFING CONDITIONS UNLESS OTHERWISE NOTED.
2.	UNLESS OTHERWISE NOTED, MINIMUM ROOF SLOPE IS 1/4" PER FOOT. PROVIDE TAPERED INSULATION (EVEN IF NOT SHOWN ON THIS PLAN) AS REQUIRED TO MAINTAIN REQUIRED SLOPE TO ROOF DRAINS AND ELEMINATE ANY AREAS OF POTENTIAL STANDING WATER. PROVIDE TAPERED INSULATION (MINUM 1/4" PER FOOT SLOPE) AT ALL CRICKETS INDICATED TO DRAINS. COORDINATE HEIGHTS OF ALL FLASHINGS AND EXPANSION JOINT CAPS WITH TAPERED INSULATION TO MAINTAIN MINIMUM DIMENSIONS DETAILED.
3.	ALL ROOF PENETRATIONS AND ACCESSORIES (DRAINS, VENTS, ETC.) ARE TO BE INSTALLED AND FLASHED IN COMPLIANCE WITH THE CURRENT EDITIONS OF THE N.R.C.A. (ROOFING AND WATERPROOFING MANUAL) AND S.M.A.C.N.A. (ARCHITECTUAL SHEEL METAL MANUAL).
4.	COORDINATE WITH MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ITEMS (INCLUDING UNIT SIZES AND LOCATIONS) NOT SHOWN OR SCHEMATICALLY SHOWN ON ROOF PLANS.
5.	CURBS FOR ROOF TOP MECHANICAL EQUIPMENT ARE PROVIDED BY THE MECHANICAL CONTRACTOR. REFER TO TYPICAL CURB FLASHING DETAIL FOR BLOCKING AND FLASHING REQUIREMENTS. PROVIDE ALL BLOCKING NECESSARY TO ACHIEVE LEVEL MECHANICAL CURBS AT ALL LOCATIONS. MAINTAIN MINIMUN 8" FROM TOP OF CURB TO ADJACENT ROOF. PROVIDE TAPERED CRICKETS( MINIMM 1/2" PER FOOT SLOPE) AROUND ALL MECHANICAL EQUIPMENT CURBS.
6.	THE ROOF DRAIN AND MECHANICAL UNIT LOCATIONS SHOWN ON THE ROOPLAN ARE APPROXIMATE. COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS.
7.	PRIOR TO FLASHING OVERFLOW ROOF SCUPPERS AND DRAIN, ROOFING CONTRACTOR SHALL BE REQUIRED TO CONFIRM MAXIUM DRAIN PIPE HIEGHT OF 2" ABOVE THE ROOF IN ACCORDANCE WITH PLUMING DRAWINGS AND BUILDING CODE.
8.	START TAPERED INSULATION AT SUMP PLATES. INSULATION SHALL BE TAPERED DOWN FROM ALL (4) FOUR SIDES OF INDICATED SUMP. REFER TO TYPICAL ROOF DRAIN DETAIL A
9.	IN ACCORDANCE WITH SPECIFICATIONS SECTION 07 62 00 SHEET METAL, FLASHING AND TRIM, ROOFING CONTRACTOR SHALL BE REQUIRED TO PROVIDE A RECIEVER FLASHING TO MASONRY CONTRACTOR FOR INSTALLTION. ROOFER TO SOLDER JOINTS IN STAINLESS STEEL FLASHING
10.	PROVIDE WALKWAY PROTECTION WHERE INDICATED AND AT ALL SIDES OF MECHANICAL ROOF TOP UNITS REQUIRING SEVICE AND AT TOP AND BOTTOM OF ROOF STAIRS.
11.	ALL ROOF TOP EQUIPMENT (EXCLUDING PREFINISHED ITEMS) SHALL BE FIELD PAINTED.
12.	WHERE INDICATED, REFER TO PLUMBING DRAWINGS FOR RADON PIPE DETAIL. FLASHING SHALL BE IN ACCORDANCE WITH TYPICAL DETAILS.
13.	CONTRACTOR IS RESPONSIBLE FOR PROVIDING FRT WOOD BLOCKING AS REQUIRED TO ACCOMMODATE ALL PROFILES OF FINISHED ROOFING INCLUDING AT CRICKETS AND TAPERED INSULATION AT WALLS, PARAPETS AND GRAVEL STOPS. GRAVEL STOPS AT GUTTER SHALL BE STAINLESS STEEL WITH SOLDERED JOINTS.
14.	COORDINATE HOSE BIB LOCATIONS ON ROOF WITH MEP PLANS.
R	DOF LEGEND
	NEW EXHAUST EQUIPMENT (REFER TO MEP)
	BOUNDARY OF WORK BELOW

### **ROOF PLAN KEYNOTES**

001	NEW EXHAUST VENT PENETRATION CONTRACTOR TO PATCH EXI ROOF AND PROVIDE BRACING AS REQUIRED
002	NEW VENT AND DUCT FOR NEW AHU REFER TO MECHANICAL PLA

NEW PIPE PENTRATION REFER TO MECHANICAL PLANS FOR MORE DETAILS
CONTRACTOR TO PROVIDE NEW PIPE PENETRATION PATCH EXISTING ROOF AS REQUIRED



Drawing Number

A3.01



		EINU				
		Mark	MATERIAL	COLOR	MANUF.	REMARKS
	INT	(PNT1)	Paint (field)	WHITE	SHERWIN WILLIAMS	-
	ΡA	PNT2	Paint (accent)	WHITE	SHERWIN WILLIAMS	-
S	CERAMIC	CT1	Subway Tile	0190 - ARCTIC WHITE (3"x6" SUBWAY TILE)	DAL-TILE	-
WAL	IER	FRP1	Fiberglass Panel	WHITE	MARLITE	-
	0TF	SSP1	Stainless Steel Panel	STAINLESS STEEL	-	-
	Я	(RB1)	Rubber Base	131 - BISQUE	ROPPE	-
	BAS	CB1	Ceramic Base	0190 - ARCTIC WHITE (3'X6" SUBWAY TILE)	DAL-TILE	-
CEILINGS		VC1	Vinyl faced Accoustical ceiling Tiles	WHITE	ARMSTRONG	-
RING		QT1	Quary Tile	oq42 - Arrid Gray	DAL-TILE	-
FL OO		UF1	Urethane Flooring System	-	-	-
		CG	CORNER GUARD	STAINLESS STEEL	-	-
	NECUOS	TEP	TILE EDGE PROTECTION	STAINLESS STEEL	SCHLUTER SYSTEMS	-
	CELLA	EGR1	EPOXY GROUT	TBD	MAPEI	-
	NIN NIN	EGR2	EPOXY GROUT	TBD	MAPEI	-
		FLOC	RPLAN KEYNO	TES		

001 PROVIDE EXPANSION AT QUARY TILE THIS LOCATION





	GENI	ERAL FINISH NC	OTES		
	1. ALI RC	L PARTIAL HEIGHT W DUNDED EDGES 1" TH	ALL SHALL HAVE ST. IICK PROVIDED.	AINLESS STEEL	CAP WITH 1/8"
	2. ALI 3. ALI	L GROUTED TILES SH	HALL BE EPOXY. ECIEVE 1 1/2" x 1 1/2	"x 4' STAINLESS	STEEL COBNER
	GU	IARDS			
	4. TIL EX	PSOED EDGES	N SHALL BE USED A	I ALL TILE CORN	ERS AND
	5. PA 6. ALI	INT ALL EXPOSED CO	DLUMN WHITE THE COOKING PREPI	ERATION AREA I	NEXT TO GAS
	FL/	AMES SHALL RECEIV	E STAINLESS STEEL		
	AN	D SILL.	TALL RECIEVE TILE 3		
	FINI Mark	SHES LEGEND	COLOR	MANUF.	REMARKS
L,	(PNT1)	Paint (field)	WHITE	SHERWIN	-
PAIN	(PNT2)	Paint (accent)	WHITE	SHERWIN	-
ERAMIC	CT1	Subway Tile	0190 - ARCTIC WHITE (3"x6"	DAL-TILE	-
WALLS HER CI	(FRP1)	Fiberglass Panel	WHITE	MARLITE	-
IO	(SSP1)	Stainless Steel Panel	STAINLESS STEEL	-	-
	(RB1)	Rubber Base	131 - BISQUE	ROPPE	-
BASI	CB1	Ceramic Base	0190 - ARCTIC WHITE (3'X6" SUBWAY TILE)	DAL-TILE	-
CEILINGS	VC1	Vinyl faced Accoustical ceiling Tiles	WHITE	ARMSTRONG	-
SING	QT1)	Quary Tile	OQ42 - ARRID	DAL-TILE	-
FLOOF	(UF1)	Urethane Flooring System	TBD	BASF	-
	CG	CORNER GUARD	STAINLESS STEEL	BUILDER SOLUTIONS	
SUC	ТЕР	TILE EDGE	STAINLESS STEEL	SCHLUTER	-
LLANE	EGB1		ТВО	SYSTEMS	
MISCE	ECP2		ТВО	MAPEI	_
	EGR2				

 1/8"

 I/8"

 RNER

 AS

 JAMB

CONSULTANTS: <u>MEP ENGINEERS</u> Infrastructure Associates (713) 622-0120 <u>STRUCTURAL ENGINEERS</u> Dally + Associates (713) 337-8881 <u>FOOD SERVICE</u> Foodservice Design Professionals (281) 350-2323

PROFESSIONAL SEAL:

A PROJECT FOR: CULINARY ARTS SHELL INTERIOR BUILDOUT

 
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Project Number	19012
Drawn By	Author
Checked By	Checker
Approved By	Approver
Drawing Title	
INTERIOR EI	LEVATIONS
Drawing Number	A9.02



			FOODSERVICE EQUIPMENT SCHEDULE		
FDP ITEM	QTY	FDP DESCRIPTION	FDP REMARKS	MFR	MODEL
107	6	DRY STORAGE SHELVING		METRO	METRO MAX 'Q'
109	1	ICE MACHINE W/ BIN		MANITOWOC	IY-0454A
122	2	TWO COMPARTMENT SINK		CUSTOM FABRICATED	
123	1	DISPOSER - 3HP		MASTER DISPOSER	C-3-LBC-18-CCRMS-PF
130	1	WORKTABLE		CUSTOM FABRICATED	
138	3	PAN RACK			
151	6	FIRE PROTECTION SYSTEM		ANSUL	R102
153	1	EXHAUST HOOD			
158	2	EXHAUST HOOD			
159	1	CONDENSATE HOOD		ACCUREX	XD1
167	12	MOBILE WORKTABLE		CUSTOM FABRICATED	
168	5	S/S WALL CAP		CUSTOM FABRICATED	
193	1	REACH-IN REFRIGERATOR - 2DR		TRAULSEN	RHT 132WUT HHS
194	1	REACH-IN FREEZER - 1DR		TRAULSEN	RLT 132WUT HHS
201	6	WORK STATION		CUSTOM FABRICATED	
249	1	THREE COMPARTMENT SINK W/DISPOSER		CUSTOM FABRICATED	
251	1	DISHMACHINE - AM15T		HOBART	AM15T
254	2	SOILED & CLEAN DISHTABLE		CUSTOM FABRICATED	
255	2	MOBILE UTENSIL SHELF		METRO	METROMAX 'Q'
633	6	GRIDDLE W/ CABINET BASE		GARLAND	C24836-1-1
644	7	QUAD ELECTRIC CORD REEL	PROVIDED BY DIV. 26; COORDINATE CORD LENGTH WITH OWNERS		
650	6	FOUR BURNER RANGE		GARLAND	M44RC-E
660	3	CHARBROILER		GARLAND	MST24BE
704	2	SINGLE FRYER		VULCAN	1GR45A w/Casters no Basket Lift
743	1	ROLL-IN REFRIGERATED CABINET-2DR		TRAULSEN	RRI 232HUT FHS
801	1	SPREADER CABINET		CUSTOM FABRICATED	
802	1	STEAMER	COUNTER TOP	CLEVELAND	22CET3.1
808	1	DEMO COUNTER		CUSTOM FABRICATED	
809	1	40 GAL KETTLE		GROEN	DH-40
813	1	SPREADER CABINET		CUSTOM FABRICATED	
814	2	EXHAUST HOOD		ACCUREX	
815	1	EXHAUST HOOD		ACCUREX	XXDW
816	1	ICE CREAM FREEZER	EXISTING	EXISTING	RELOCATE
817	6	WORKTOP REFRIGERATOR	TRUE TWT-27-HC	TRUE	TWT-27-HC









HOOD #153 69.6 SQ. FT.; 696LBS PROVIDES EXHAUST FOR THE FOLLOWING EQUIPMENT:

(1) 40 GALLON KETTLE

(1) 4 BURNER RANGE

(1) CHARBROILER

(1) REFRIGERATED CABINET (1) GRIDDLE W/CABINET BASE

<u>**Clearance requirement:**</u> Where the hood is installed less than 18" from a combustible or semi-combustible surface Chapter 5, Section 508, subsection 508.4 of the Uniform Mechanical Code requires a 3" clearance or air space containing material as specified for one-hour fire resistive construction. Provide U-shaped 3" high S/S trim and 3M Fire Barrier Duct Wrap 15A in a manner as prescribed by the manufacturer. This requirement of 3" trim and duct wrap also applies to the top of the hood where it is installed less than 18" from the finished ceiling.

UL LISTED NUMBER FOR ALL HOODS IS "710"

MANUFACTURER: ACCUREX

NOTATED IN SPECIFICATIONS:

SERVE

APPROVED EQUAL: AVTEC, MOD-U-

MODEL: SUPPLY & EXHAUST MODEL



















				EXHA	UST			S	UPPLY	TOTAL	OFOTION
то	TAL	1		C	OLLAR(S	5)		MUA	A AC	WEIGHT	LOCATION
C	FM	WID	TH	LENGTH	DIA.	CFM	S.P.	CFN	1 CFM	LBS.	LOCATION
~	50	1	0	29		3150	0.696	1			
31	50							1		552	SINGLE
							11	100 E.C.			
ATT 1	2110		0					0.00			
ATI	DN D	ETAIL	S				UTILITY	CABIN	ET(S)		
ATI	DN D	ETAII	_S (IN.)			FIRE S	UTILITY	CABIN	ET(S)	CONTROLS	3
ATI	DN D QTY	ETAIL SIZE	_S (IN.) H	LOCATIC	N	FIRE S	UTILITY YSTEM	CABIN	ET(S) MODEL		S RFACE
AT I	DN D QTY 6	ETAIL SIZE L 16	_S (IN.) H	LOCATIC	N	FIRE S TYPE	UTILITY YSTEM	CABIN	ET(S)		S RFACE



: FDP Project Number : Project Name : Project Location / : PM / APM





	- orallaritori		HOOD	DIMENSI	DNS (IN.)	1702202	COOKING			EXH	AUST			SU	PPLY	TOTAL	
HOOD	MARK	MODEL		VARDELL		HOOD	LOAD /	TOTAL	1	(	OLLAR	(S)		MUA	AC	WEIGHT	SECTION
NO.			LENGTE	VIDIH	HEIGHT	CONSTR.	RATING	CFM	WIDTH	LENGTH	DIA.	CFM	S.P.	CFM	CFM	LBS.	LOCATION
1	#159 CONDENSATE HOOD	XD1-48-S	48.00	48	24	300 SS 100%	0	600	12	12		600	0.043	-		144	SINGLE
HOODIN	FORMATION	1 11								-							
HOOD	MARK				L FOC				ISIZE (IN	J Y	1	EIDE 9		CADINE	1(5)		\$
NO.	MAININ	BULB / L	AMP INFO		CAND	LES M	ATERIAL	QTY	LH	LOCATI	ли	TYPE		SIZE	MODEL	INTE	RFACE
1	#159 CONDENSATE HOOD										_						
HOOD C	PTIONS																
18 IN	HIGH CEILING ENCLOSURES - FRO	ONT LEFT RIGH	T - FIELD I	NSTALLE	Ð												
FACT	DRY MOUNTED EXHAUST COLLAF	R(S)															
MESH	FILTER(S) INCLUDED TO COVER	DUCT OPENING	G(S)														









FIRE SYSTEMINFOR MARI 

#151 FSS FIRE SYSTEM OPTIC CHROME SLEEVE METAL BLOW-OFF GAS VALVE - INCL

#151 FSS FIRE SYSTEM OPTIC

FIRE SYSTEM INFORMATION

CHROME SLEEVE K-CLASS PORTAB METAL BLOW-OFF GAS VALVE - INCL HOOD SUPPRESS REMOTE PULL ST

MADIC		LOCATION	FLOW F	POINTS	SUPPLY	DETECTION	
MARK	MODEL	LUCATION	HOODS	PCU	LINE	DETECTION	MARK(S) PROTECTED BY FIRE STSTEM
151 FSS 158.1	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	10 UTILIZED 11 AVAILABLE		CONTINUOUS	FUSIBLE LINK	#158.1 EXHAUST HOOD SECTION 1
PTIONS AND AC	CESSORIES S PRE-PIPED HOOD(S) WI	ITH DETECTION AND FACTORY	COORDINATED INS	TALL)		1	
TIONS AND AC TON (INCLUDE /ES FOR FACT	CESSORIES S PRE-PIPED HOOD(S) WI ORY PROVIDED APPLIANC	ITH DETECTION AND FACTORY CES DROPS - INCLUDED	COORDINATED INS	TALL)			
PTIONS AND AC ATION (INCLUDE EVES FOR FACT OFF CAPS - INC	CESSORIES S PRE-PIPED HOOD(S) WI ORY PROVIDED APPLIANC -UDED HANICAL SHUTCEE VALVE	ITH DETECTION AND FACTORY CES DROPS - INCLUDED = 2" (ANSUL) - PADT# ANSULM		TALL)			
PTIONS AND AC ATION (INCLUDE EVES FOR FACT OFF CAPS - INC ICLUDED - MEC ESSION AGENT	CESSORIES S PRE-PIPED HOOD(S) WI ORY PROVIDED APPLIANC JUDED HANICAL SHUTOFF VALVE INCLUDED - 3 GAL [(1) 3	ITH DETECTION AND FACTORY CES DROPS - INCLUDED E, 2", (ANSUL) - PART# ANSULM 3.0 TANK(S)]	COORDINATED INS	TALL) 2200			

MADIZ			FLOW PC	DINTS	SUPPLY	DETECTION	
MARK	MODEL	LUCATION	HOODS	PCU	LINE	DETECTION	MARK(S) PROTECTED BT FIRE STSTEM
#151 FSS 153	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	12 UTILIZED 22 AVAILABLE		CONTINUOUS	FUSIBLE LINK	#153 EXHAUST HOOD SECTION 1
YSTEM OPTIONS AND ACC	CESSORIES				2		
INSTALLATION (INCLUDES	S PRE-PIPED HOOD(S) W	ITH DETECTION AND FACTORY	COORDINATED INST	FALL)			
ME SLEEVES FOR FACTO	ORY PROVIDED APPLIAN	CES DROPS - INCLUDED					
ASS PORTABLE FIRE EXTIP	NGUISHER - QTY OF 1						
AL BLOW-OFF CAPS - INCL	UDED						
VALVE - INCLUDED - MECH	HANICAL SHUTOFF VALVE	E, 2", (ANSUL) - PART# ANSULM	ECHSHUTOFFVALVE:	200			
D SUPPRESSION AGENT -	INCLUDED - 6 GAL [(2)	3.0 TANK(S)]					
	an and an	ושים שנישים מישר ישיעי אישר יישר יו לי יש יש ישר וויש אישרים.					
OTE PULL STATION - STAN	IDARD - INSTALLATION AT	I SINGLE POINT OF EGRESS					













FIRE SYSTE FULL INST CHROME S K-CLASS F METAL BLO GAS VALVE HOOD SUPP

MADIZ	MODEL	LOCATION	FLOW F	POINTS	SUPPLY	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
MARN	MODEL	ECCATION	HOODS	PCU	LINE	DETECTION	MARCE OF THE STELLER STATES
£151 FSS 814.1	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	14 UTILIZED 22 AVAILABLE		CONTINUOUS	FUSIBLE LINK	#814.1 EXHAUST HOOD SECTION 1
FALLATION (INCLUDE SLEEVES FOR FACT PORTABLE FIRE EXT .0W-OFF CAPS - INC	ES PRE-PIPED HOOD(S) W ORY PROVIDED APPLIAN INGUISHER - QTY OF 1 LUDED	ITH DETECTION AND FACTORY CES DROPS - INCLUDED	COORDINATED INS	STALL)			
E - INCLUDED - MEC	HANICAL SHUTOFF VALVE	E, 2", (ANSUL) - PART# ANSULM	ECHSHUTOFFVALV	E200			
PPRESSION AGENT	- INCLUDED - 6 GAL [(2)	3.0 TANK(S)]					
PHELSTATION - STAT	NDARD - INSTALLATION AT	SINGLE POINT OF EGRESS					

	MODEL	LOCATION	FLOW F	POINTS	SUPPLY	DETECTION	
MARK	WIUDEL	LOCATION	HOODS	PCU	LINE	DETECTION	WARK(3) FROTECTED BT FIRE STOTEM
#151 FSS 158.2	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	10 UTILIZED 11 AVAILABLE		CONTINUOUS	FUSIBLE LINK	#158.2 EXHAUST HOOD SECTION 1
E SYSTEM OPTIONS AND ACC	ESSORIES			12270101010		ř	
ULL INSTALLATION (INCLUDES	PRE-PIPED HOOD(S) \	WITH DETECTION AND FACTORY	COORDINATED INS	STALL)			
HROME SLEEVES FOR FACTOR	RY PROVIDED APPLIAN	NCES DROPS - INCLUDED					
-CLASS PORTABLE FIRE EXTIN	GUISHER - QTY OF 1						
1ETAL BLOW-OFF CAPS - INCLU	DED						
AS VALVE - INCLUDED - MECH	ANICAL SHUTOFF VAL	VE, 2", (ANSUL) - PART# ANSULM	ECHSHUTOFFVALV	E200			
100D SUPPRESSION AGENT - II	NCLUDED - 3 GAL - I(1	) 3.0 TANK(S)]					

REMOTE PULL STATION - STANDARD - INSTALLATION AT SINGLE POINT OF EGRESS

FIRE SYSTEM INFORMATION











MADIA			FLOW PC	STAIC	SUPPLY	DETECTION	
MARK	WODEL	LOCATION	HOODS	PCU	LINE	DETECTION	WARK(S) FROTECTED DI FIRE STOTEM
#151 FSS 815	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	11 UTILIZED 11 AVAILABLE		CONTINUOUS		#815 EXHAUST HOOD SECTION 1
YSTEM OPTIONS AND AC	CESSORIES						
INSTALLATION (INCLUDE	S PRE-PIPED HOOD(S) W	ITH DETECTION AND FACTORY	COORDINATED INST	FALL)			
OME SLEEVES FOR FACT	ORY PROVIDED APPLIAN	CES DROPS - INCLUDED					
ASS PORTABLE FIRE EXT	INGUISHER - QTY OF 1						
AL BLOW-OFF CAPS - INC	LUDED						
VALVE - INCLUDED - MEC	HANICAL SHUTOFF VALVI	E, 2", (ANSUL) - PART# ANSULM	ECHSHUTOFFVALVE:	200			
D SUPPRESSION AGENT	INCLUDED 3 GAL ((1)	3 O TANK(S)]					

HOOD SUPPRESSION AGENT - INCLUDED - 3 GAL. - [(1) 3.0 TANK(S)] REMOTE PULL STATION - STANDARD - INSTALLATION AT SINGLE POINT OF EGRESS

MADIZ		LOCATION	FLOW F	OINTS	SUPPLY	DETECTION	
MARK	MODEL	LOCATION	HOODS	PCU	LINE	DETECTION	MARK(3) FROTECTED BT FIRE STSTEM
#151 FSS 814.2	ANSUL R-102 WET CHEMICAL	REMOTE MOUNTED	14 UTILIZED 22 AVAILABLE		CONTINUOUS	FUSIBLE LINK	#814.2 EXHAUST HOOD SECTION 1
SYSTEM OPTIONS AND A L INSTALLATION (INCLUD ROME SLEEVES FOR FAC LASS PORTABLE FIRE EX	CCESSORIES ES PRE-PIPED HOOD(S) W FORY PROVIDED APPLIAN( TINGUISHER - QTY OF 1	ITH DETECTION AND FACTORY CES DROPS - INCLUDED	COORDINATED INS	TALL)			
TAL BLOW-OFF CAPS - INC	CLUDED						
SVALVE INCLUDED MED	CHANICAL SHUTOFF VALVE	E, 2", (ANSUL) - PART# ANSULM	ECHSHUTOFFVALVE	200			
	INCLUDED COAL DOL	3.0 TANK(S)]					
DD SUPPRESSION AGENT	- INCLUDED - 0 GAL [(2)	are thundred					













							CONTROL FEATURES
USEF	RINTERFACE	FAN	S CONTROLLED				LIGHTS OUT IN FIRE
Έ	LOCATION	MARK	TYPE	VOLT	PHASE	HP	BUILDING MANAGEMENT WIT
1		KEF-20	EXHAUST	460	3	5	
CREEN	SHIP LOOSE	KEF-21	EXHAUST	460	3	2	
ALCORE AND A LONG AND		KEF-22	EXHAUST	460	3	2	

F : FDP Project Number : Project Name : Project Location / : PM / APM





USEI	RINTERFACE	FANS	CONTROLLED			-1	CONTROL FEATURES
	LOCATION	MARK	TYPE	VOLT	PHASE	HP	BUILDING MANAGEMENT WITH
		KEF-17	EXHAUST	460	3	2	
REEN	SHIP LOOSE	KEF-18	EXHAUST	460	3	2	
		KEF-19	EXHAUST	460	3	2	

FDP Project Number : FDP Project Name : Project Name : Project Location / : PM/ APM





FS1B FOODSERVICE CULINARY 1 <u>PLUMBING PLAN</u> 1/4" = 1'-0"

# 2 PLUMBING GENERAL NOTES NONE

- INSTALLED BY DIVISION 22.
- GAS VALVE BY DIVISION 22.
- GREASE TRAP AND/OR INTERCEPTOR.

- DIV. 22 TO PROVIDE HOT WATER TEMPERING VALVE, IF REQ'D.
- FOODSERVICE EQUIPMENT.
- SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 22.

- EQUIPMENT SUPPLIER'S DIMENSIONED SHOP DRAWINGS.
- 3 PLUMBING COORDINATION NOTES N.T.S.
- REFER TO MECHANICAL DRAWINGS. NOTE: REFER TO ELECTRICAL/MECHANICAL DRAWINGS FOR REQUIREMENTS OF EXHAUST
- NOTE: WATER AND DRAIN CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOODSERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT
- 5 DISPOSER DETAIL N.T.S.
- DIVISION 26 TO PROVIDE AND INSTALL (N) POWER SUPPLY
- (H) 1/2" CW (I) 2" DRAIN LINE
- (G) FLOW CONTROL
- INSTALL (F) 1/2" CW INLET
- (E) SOLENOID VALVE DIVISION 22 TO PROVIDE AND
- (C) TIME DELAY (D) CONTROL PANEL
- (B) DISPOSER
- (A) VACUUM BREAKER

SECTION 11 40 00 TO PROVIDE LOOSE WITH FOODSERVICE EQUIPMENT DIVISION 22 AND 26 TO PROVIDE INSTALLATION.

	FOODSERVICE PLUMBING SCHEDULE							
FPD PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS		
		1						
P7	3/4"	H & C WATER	HOSE BIBB	WALL	18"	BTC: RE: NOTE #3		
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	LOCATE PER ENGINEER'S DRAWING		
P11	3/4"	H & C WATER	FAUCET	WALL	18"	FURNISHED BY SECTION 11 40 00: INSTALLED BY DIV: 22		
P11A	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED BY SECTION 11 40 00: INSTALLED BY DIV: 22		
P12	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE - RE: NOTE #4		
P109	3/4"	COLD WATER	WATER FILTER / ICE	WALL	60"	BTC: RE: NOTE #3 & #17		
P109A	(2) 12"SQ.	FLOOR SINKS	ICE MACHINE	FLOOR	0"	FULL & 3/4 GRATE - RE: NOTE #4		
P121	3/4"	H & C WATER	FAUCET	WALL	13"	BTC: RE: NOTE #3		
P121A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	3/4 GRATE - RE: NOTE #4		
P123	3/4"	H & C WATER	FAUCET / DISPOSER	WALL	13"	BTC: RE: NOTE #3 & #7		
P123A	2"	DIRECT DRAIN	DISPOSER	WALL	10"	BTC: RE: NOTE #3 & #8		
P249	3/4"	H & C WATER	FAUCET	WALL	13"	BTC: RE: NOTE #3		
P249A	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE		
P251	12"SQ.	FLOOR SINK	DISHMACHINE	FLOOR	0"	3/4 GRATE - RE: NOTE #4		
P251A	3/4"	HOT WATER	DISHMACHINE	WALL	18"	BTC; RE: NOTE #3 & #16, 140 DEG. MIN.		
P633	3/4"	NATURAL GAS	GRIDDLE	WALL	18"	BTC: RE: NOTE #3 - 90 MBTU/HR		
P650	1 1/4"	NATURAL GAS	RANGE	WALL	18"	BTC: RE: NOTE #3 & #9 - 180 MBTU/HR		
P660	3/4"	NATURAL GAS	CHARBROILER	WALL	18"	BTC: RE: NOTE #3 - 76 MBTU/HR		
P704	1/2"	NATURAL GAS	FRYER	WALL	24"	BTC: RE: NOTE #3 & #9 120 MBTU /HR EA.		
P802	3/4"	COLD WATER	STEAMER	WALL	18"	BTC: RE: NOTE #3 - INTERCONNECT THRU FILTER		
P809	4"	FUNNEL DRAIN	KETTLE TRENCH LINER	FLOOR	-9"	BTC; RE: NOTE #3; CRITICAL LOCATION		
P809A	3/4"	H & C WATER	KETTLE	WALL	18"	BTC: RE: NOTE #3		
P809B	3/4"	NATURAL GAS	KETTLE	WALL	18"	BTC: RE: NOTE #3 - 100 MBTU/HR		





FURNISHED BY DIVISION 22. FOR ADDTIONAL WATER AND DRAIN REQUIRMENTS

FANS AND MAKE-UP AIR HANDLERS AND LOCATION OF AN INTERLOCK AND START/STOP CONTROLS TO BE LOCATED WITHIN FOODSERVICE AREA BY DIVISION 26.

- 1. DO NOT ROUGH-IN FROM THIS DRAWING. REFER TO THE FOODSERVICE
- 2. DIMENSIONS INDICATED ARE TO BE VERIFIED BY FOODSERVICE EQUIPMENT
- SUPPLIER AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS. 3. ACCESSORIES PROVIDED LOOSE WITH FOODSERVICE EQUIPMENT BY
- 4. DRAINAGE AND PIPING SYSTEMS TO BE CLEANED PRIOR TO FINAL CONNECTION WITH
- 5. HAND LAVATORY PROVIDED AND INSTALLED BY DIVISION 22.
- 6. JANITOR SINK/FAUCET PROVIDED AND INSTALLED BY DIVISION 22.
- 7. INTERCONNECTION OF 1/2" CW TO PRE-RINSE AND DISPOSER'S CONE/BODY INLETS PIPED THRU SOLENOID AND VACUUM BREAKER BY DIVISION 22.
- \*\* 8. ENGINEER TO VERIFY W/ LOCAL CODE TO BYPASS OR PIPE THRU
- 9. 6" W.C. AT EQUIPMENT. MECHANICAL GAS SHUT-OFF VALVE BY SECTION 11 40 00. FINAL CONNECTION TO EQUIPMENT AND INSTALLATION OF MECHANICAL
- 10. ALL EXHAUST HOOD CONNECTIONS AND CONDENSATE CONNECTIONS FURNISHED

- 11. ALL EXPOSED FIRE SYSTEM PIPING TO BE CHROME PLATED OR STAINLESS STEEL.
- 12. NUMBER NOT USED.
- 13. ALL PIPING WITHIN COUNTER BODY OR UNDER FABRICATED COUNTERS TO BE RUN TO A CONNECTION POINT BELOW COUNTER BODY BY SECTION 11 40 00. FINAL CONNECTION BY DIVISION 22.
- 14. NUMBER NOT USED.
- 15. QUICK DISCONNECTS TO BE SUPPLIED BY SECTION 11 40 00 W/ALL GAS & WATER EQUIPMENT. 16. PROTECTIVE DEVICES TO PROTECT AGAINST BACK FLOW. BACK SYPHONAGE SHALL BE
- INSTALLED AT ALL FIXTURES AND EQUIPMENT WHERE BACKFLOW AND/OR BACKSYPHONAGE MAY OCCUR AND WHERE A MINIMUM AIR GAP CANNOT BE PROVIDED BETWEEN THE WATER TO THE FIXTURE OR EQUIPMENT AND ITS FLOOD/LEVEL RIM. TO BE PROVIDED AND INSTALLED BY DIVISION 22. VACUUM BREAKERS, WHEN FURNISHED WITH EQUIPMENT, SHALL OVERRIDE ABOVE, IF ACCEPTABLE WITH APPLICABLE CODES, BUT DIV. 22 TO PIPE WHEN NOT PREPIPED BY FACTORY. INTERCONNECT THRU WATER FILTER TO EQUIPMENT BY DIVISION 22.
- 17. BACKFLOW PREVENTION BY DIVISION 22





# 2 ELECTRICAL GENERAL NOTES NONE

13. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF EXISTING EQUIPMENT. 14. EMPTY CONDUIT RUN FROM CASHIER STATION TO MANAGERS OFFICE FOR POS SYSTEM BY DIVISION 26. LOCATION OF MANAGER'S OFFICE TO BE VERIFIED.

- CONNECTION BY DIVISION 26.
- 12. RECEPTACLE(S) TO BE PRE-WIRED TO JUNCTION BOX OR LOAD CENTER FOR FINAL
- 11. INTERCONNECT FIRE PROTECTION SYSTEM TO PANEL BOX SHUNT TRIP(S) AND BUILDING ALARM - BY DIVISION 26.
- 10. INTERCONNECT TO EXHAUST HOOD LIGHT(S) AND SWITCH BY DIVISION 26.
- 9. INTERCONNECT TO EXHAUST HOOD FAN(S) AND SWITCH BY DIVISION 26.
- FINAL CONNECTION BY DIVISION 26. 8. N/A
- 7. DOOR HEATER(S), LIGHT(S), COIL(S) AND PRESSURE RELIEF PORT(S) PRE-WIRED TO JUNCTION BOX AT TOP OF COLD STORAGE ASSEMBLY BY SECTION 14 00 00.
- WITHIN ELECTRICAL PANEL BOX FOR SHUT-DOWN DURING FIRE MODE BY DIVISION 26.
- 6. ALL ELECTRICAL CONNECTIONS BENEATH EXHAUST HOOD TO EXTEND TO SHUNT TRIP BREAKERS
- SECTION 11 40 00. FIELD INSTALLED BY DIVISION 26. 5. STAINLESS STEEL DISCONNECT SWITCH PROVIDED AND INSTALLED BY DIVISION 26.
- 4. ACCESSORIES AND FITTINGS PROVIDED LOOSE WITH FOODSERVICE EQUIPMENT BY
- 3. DIMENSIONS INDICATED ARE TO BE VERIFIED BY CONTRACTOR AND ADJUSTED AS REQUIRED BY FOODSERVICE EQUIPMENT AND/OR FIELD CONDITIONS.
- 2. VERIFY ALL ELECTRICAL CHARACTERISTICS WITH ENGINEERING DRAWINGS.
- 1. DO NOT ROUGH-IN FROM THIS DRAWING. REFER TO THE CONTRACTOR'S DIMENSIONED DRAWINGS.

#### ∽⊕ SCR FUF CON CS DIR 20 A 障 dr (MO SIN SIN FR PMR PED JBJUNCJBJUNC

DRAWINGS.

## 1 <u>ELECTRICAL PLAN</u> 1/4" = 1'-0"

FS1C FOODSERVICE CULINARY



					FOODSERVICE ELECTRICAL S	CHEDULE		
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E10	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	24"	
E11	DR	16.0A	120	1	CONVENIENCE	WALL	40"	MOUNT HORIZONTAL
E13	WPR	16.0A	120	1	CONVENIENCE OUTLET	WALL	48"	
E15	JB				REMOTE FIRE PULL	WALL	48"	RE: NOTE #11 - RECESSED JB - EXTEND TO FIRE SYSTEM FOR HOOD
E109	DR	16.0A	120	1	ICE MACHINE	WALL	60"	
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; RE: NOTE #4 - CONNECT THRU C.P. TO DISPOSER
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC; RE: NOTE #4, #6, #9 & #11
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC; RE: NOTE #4, #6, #9 & #10
E153M	JB	1.0A	120	1	TEMPERATURE SENSOR	CLG	DFA	BTC; RE: NOTE #4, #6 & #9
E193	JB	11.0A	120	1	REFRIGERATOR	WALL	90"	
E194	JB	11.5A	120	1	FREEZER	WALL	90"	
E251	JB				DISHMACHINE	WALL	24"	BTC; RE: NOTE #4 - INTERCONNECT TO E251A
E251A	JB/DS	11.6A	480	3	DISHMACHINE	WALL	54"	BTC; RE: NOTE #4 & #5 - INTERCONNECT TO E251
E251B	JB				BOOSTER HEATER	WALL	24"	BTC; RE: NOTE #4 - INTERCONNECT TO E251C
E251C	JB/DS	13.0KW	480	3	BOOSTER HEATER	WALL	54"	BTC; RE: NOTE #4 & #5 - INTERCONNECT TO E251B
E633	DR	1.0A	120	1	ELECTRONIC IGNITION	WALL	24"	SHUNT TRIP BREAKER
E644	JB	16.0A	120	1	EQUIPMENT	CLG	VERIFY	BTC; PROVIDED AND INSTALLED BY DIV. 26
E650	DR	3.4A	120	1	RANGE	WALL	24"	SHUNT TRIP BREAKER
E660	DR	1.0A	120	1	CHARBROILER	WALL	24"	SHUNT TRIP BREAKER
E704	DR	1.0A	120	1	FRYER	WALL	24"	SHUNT TRIP BREAKER PROVIDED AND INSTALLED BY DIVISION 26
E704A	DR	8.0A	120	1	FILTER	WALL	24"	SHUNT TRIP BREAKER PROVIDED AND INSTALLED BY DIVISION 26
E743	JB	11.4A	120	1	REFRIGERATOR	WALL	90"	
E784	SR	15.0A	208	1	ICE CREAM FREEZER	WALL	47"	MOUNT HORIZONTAL
E802	JB	34.4A	240	3	STEAMER - COUNTER TOP	WALL	24"	BTC; RE: NOTE #4 - SHUNT TRIP BREAKER
E809	JB	5.0A	120	1	KETTLE	WALL	24"	SHUNT TRIP BREAKER
E817	DR	3.0A	120	1	WORKTOP REFRIGERATOR	WALL	24"	

CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT	СС	сс	CONDUIT FOR COMPUTER CABLES
CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT
20 AMP DUPLEX RECEPTACLE (MOUNT HORIZONTAL)	Þ	WPR	20 AMP WEATHERPROOF RECEPTACLE (SPRING COVER)
SINGLE PURPOSE RECEPTACLE	/	FPB	FIRE PROTECTION BUZZER
SINGLE PURPOSE RECPT. 208V 1PH	$\otimes$	BSC	BEVERAGE SYSTEM CONDUIT
FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
PEDESTAL MOUNTED RECPTACLE		AFF	ABOVE FINISH FLOOR
DROP CORD RECEPTACLE	•	CS/JB	JUNCTION BOX ON PEDSTAL
JUNCTION BOX ON CEILING	L	DS	DISCONNECT SWITCH
JUNCTION BOX IN WALL			
JUNCTION BOX WITH DISCONNECT BY DIV.26	Ć <b>i</b>	JB/DS	CONDUIT STUB-UP WITH DISCONNECTI BY DIV.26

(4) ELECTRICAL SYMBOLS NONE

NOTE: ELECTRICAL CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOODSERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 26. FOR ADDTIONAL REQUIREMENTS REFER TO ELECTRICAL ENGINEER'S

3 ELECTRICAL COORDINATION NOTES



 $(5) \frac{\text{RECESSED FIRE PULL DETAIL}}{\text{N.T.S.}}$ 





SURFACE PROTECTION

NOZZLE(S)

E FUSIBLE LINK(S) (2) WIRES FROM FIRE SYSTEM TO SHUNT TRIP BREAKERS FOR SHUT DWON OF ELECTRICAL CONNECTIONS LOCATED BENEATH EXHAUST

HOOD DURING FIRE MODE

REMOTE FIRE PULL

(H) GAS VALVE

(I) GAS SUPPLY (AS REQUIRED)

# 6 FIRE SUPRESSION TYPICAL DETAIL N.T.S.





ISOMETRIC VIEWS WITHIN THIS DRAWING ARE NOT TO SCALE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY. ISOMETRIC VIEWS ARE NOT INTENDED FOR REGULATORY APPROVAL, PERMITTING, NOR CONSTRUCTION. REFER TO FLOOR PLANS AND DETAILS FOR SPECIFIC PROJECT INFORMATION 







# ISOMETRIC VIEWS WITHIN THIS DRAWING ARE NOT TO SCALE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY. ISOMETRIC VIEWS ARE NOT INTENDED FOR REGULATORY APPROVAL, PERMITTING, NOR CONSTRUCTION. REFER TO FLOOR PLANS AND DETAILS FOR SPECIFIC PROJECT INFORMATION















12 ELEVATION @ PRODUCTION 'B' 2 1/2" = 1'-0"



## 2 ELEVATION @ DISMACHINE 1/2" = 1'-0"





9 ELEVATION @ MOBILE TABLES 1 1/2" = 1'-0"





ITEM #167 MOBILE TABLE

DRAWER

U'SHELF

DRAWER

ITEM #167 MOBILE TABLE

DRAWER

DRAWER

U'SHELF

1 ELEVATION @ PREP SINKS 1/2" = 1'-0"



8 ELEVATION @ PRODUCTION 'C' 1 1/2" = 1'-0"

109

ICE

MACHINE



ELEVATION @ MOBILE TABLES 2



\_\_\_\_\_

ITEM#254

SOAP & TOWEL DISPENSER BY

OWNER

၀႐၀







3 ELEVATION @ PRODUCTION 'D' 1/2" = 1'-0"

ITEM #167 MOBILE TABLE	ITEM #167 MOBILE TABLE					
U'SHELF	DRAWER U'SHELF					
$( \begin{array}{c} ( \\ \\ \end{array} ) ) \\ ( \\ \\ \end{array} ) \\ ( \\ \\ \end{array} ) \\ ( \\ \\ \\ \end{array} ) \\ ( \\ \\ \\ \end{array} ) \\ ( \\ \\ \\ \\ \end{array} ) \\ ( \\ \\ \\ \\ \end{array} ) \\ ( \\ \\ \\ \\ \\ \end{array} ) \\ ( \\ \\ \\ \\ \\ \\ \\ \end{array} ) \\ ( \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	$(\textcircled{A})) \qquad (\textcircled{A})) \qquad (\overbrace{A}))$					

2 ELEVATION @ MOBILE TABLES 6 1/2" = 1'-0"



1 ELEVATION @ MOBILE TABLES 5 1/2" = 1'-0"





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AUTO	ARCH Architects 6200 Savoy, Su Houston, TX t (713) 95 f (713) 95 www.autoa	s, LLC. ite 100 77036 2-3366 2-5002 rch.net A R C H I T E C T S
CO <u>MEP</u> In (7 <u>STR</u> D (7 <u>FOC</u> F( (2	NSULTANTS <u>engineers</u> frastructure A 13) 622-0120 <u>uctural engine</u> ally + Associa 13) 337-888 <u>D service</u> podservice D 281) 350-2323	: Associates ) : <u>ERS</u> ates 1 esign Professionals 3
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FOODSERV	CE EQUIPMENT SCHEDULE		
 FDP DESCRIPTION	FDP REMARKS	MFR	MODEL
20 QT. MIXER W/STAND		HOBART	HL200
UTILITY CART		LAKESIDE	743
WORKTABLE		CUSTOM FABRICATED	
BAKER'S TABLE		CUSTOM FABRICATED	
PAN RACK		CRES COR	207-UA-12AC
FIRE PROTECTION SYSTEM		ANSUL	R102
EXHAUST HOOD		ACCUREX	
REACH-IN REFRIGERATOR - 2DR		TRAULSEN	RHT 2-32-WUT-HHS
FOUR DECK OVEN		REVENT	US 4 DECK 3 PAN
REACH-IN FREEZER - NARROW		TRAULSEN	RLT 332NUT-HHS
ROTATING RACK OVEN		REVENT	ONE 39/G/S W/'S'
PROOFER		REVENT	P7121
INDUCTION RANGE		EXISTING/RELOCATE	
DEMO COUNTER		CUSTOM FABRICATED	
FIVE COMPARTMENT SINK	(5) 24" X 26" 15" DEEP WITH ROUNDED INTERNAL EDGES	CUSTOM FABRICATED	
SPREADER CABINET		CUSTOM FABRICATED	
ICE CREAM FREEZER	EXISTING	EXISTING/RELOCATE	
SHEETER	EXISTING	EXISTING/RELOCATE	





	FOODSERVICE MECHANICAL SCHEDULE						
NO.	QTY	TYPE	SIZE	LOCATION	CFM	S.P.	
M101	2	EXHAUST	6" ROUND	VERIFY	353	GRAVITY	
M102	2	EXHAUST	4" ROUND	VERIFY	50	.30"	
NO. M101 M102	QTY 2 2	TYPE EXHAUST EXHAUST	SIZE 6" ROUND 4" ROUND	LOCATION VERIFY VERIFY	CFM 353 50	S.P. GRAVITY .30"	



CITY OF HOUSTON HOOD 3 REQUIREMENTS NONE

(1) INDUCTION RANGE (1) SPREADER CABINET (1) 4 DECK OVEN

HOOD #156 65 SQ. FT.; 479 LBS. PROVIDES EXHAUST FOR THE FOLLOWING EQUIPMENT:

SERVE MODEL: SUPPLY & EXHAUST MODEL NOTATED IN SPECIFICATIONS: **<u>Clearance requirement:</u>** Where the hood is installed less than 18" from a combustible or semi-combustible surface Chapter 5, Section 508, subsection 508.4 of the Uniform Mechanical Code requires a 3" clearance or air space containing material as specified for one-hour fire resistive construction. Provide U-shaped 3" high S/S trim and 3M Fire Barrier Duct Wrap 15A in a manner as prescribed by the manufacturer. This requirement of 3" trim and duct wrap also applies to the top of the hood where it is installed less than 18" from the finished ceiling.

UL LISTED NUMBER FOR ALL HOODS IS "710"

MANUFACTURER: ACCUREX

APPROVED EQUAL: AVTEC, MOD-U-







RMATION							
/	MODEL	LOCATION	FLOW F	POINTS	SUPPLY	DETECTION	MARK(S) PROTECTED BY FIRE SYSTEM
<b>`</b>	MODEL	LOCATION	HOODS	PCU	LINE	DETECTION	MARK(G) I KOTECTED DI LIKE STSTEM
	ANSUL R-102		4 UTILIZED		CONTINUOUS		#156 EXHAUST HOOD PASTRY SECTION 1
TAOINT	WET CHEMICAL	ILEMOTE MOONTED	5 AVAILABLE		COMINOCOL		
NS AND ACCE	ESSORIES PRE-PIPED HOOD(S) W	/ITH DETECTION AND FACTORY	COORDINATED INS	STALL)			
SFOR FACTOR	RY PROVIDED APPLIAN	CES DROPS - INCLUDED					
CAPS - INCLU	DED						
JDED - MECHA	ANICAL SHUTOFF VALV	E, 2", (ANSUL) - PART# ANSULM	ECHSHUTOFFVALVE	E200			
ON AGENT - IN	NCLUDED - 1.5 GAL [(	1) 1.5 TANK(S)]					
TION - STAND	ARD - INSTALLATION A	T SINGLE POINT OF EGRESS					











	JSER INTERFACE	FAN	S CONTROLLED			1	CONTROL FEATURES LIGHTS OUT IN FIRE
TYPE	LOCATION	MARK	TYPE	VOLT	PHASE	HP	BUILDING MANAGEMENT WITH B
OUCH SCREEN	SHIPLOOSE	KEF-23	EXHAUST	460	3	1	







$\bigcirc$	PLUMBING GEN
2	NONE



(B) DISPOSER

C) TIME DELAY

	FOODSERVICE PLUMBING SCHEDULE								
)	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS			
	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	LOCATE PER ENGINEER'S DRAWING			
	3/4"	H & C WATER	FAUCET	WALL	18"				
	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"				
	3/4"	H & C WATER	FAUCET	WALL	13"	BTC: RE: NOTE #3			
	12" SQ.	FLOOR SINK	SINK	FLOOR	0"	THREE QUARTER GRATE			
	3/4"	COLD WATER	DECK OVEN	WALL	60"	BTC: RE: NOTE #3			
	12"	FLOOR SINK	DECK OVEN	FLOOR	0"	BTC: RE: NOTE #3			
	3/4"	NATURAL GAS	ROTATING RACK OVEN	WALL	18"	BTC: RE: NOTE #3 - 85MBTU/HR			
	3/4"	COLD WATER	ROTATING RACK OVEN	WALL	60"	BTC: RE: NOTE #3			
	1/2"	COLD WATER	PROOFER	WALL	60"	BTC: RE: NOTE #3 & #17			
	12"SQ.	FLOOR SINKS	PROOFER	FLOOR	0"	3/4 GRATE - RE: NOTE #4			



FPD PNO F

P10

P11 P11A

P249

P249A P616 P616A P672

P672A P687 P687A

#### NOTE: WATER AND DRAIN CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOODSERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 22. FOR ADDTIONAL WATER AND DRAIN REQUIRMENTS

NOTE: REFER TO ELECTRICAL/MECHANICAL DRAWINGS FOR REQUIREMENTS OF EXHAUST FANS AND MAKE-UP AIR HANDLERS AND LOCATION OF AN INTERLOCK AND START/STOP CONTROLS TO BE LOCATED WITHIN FOODSERVICE AREA BY DIVISION 26.

1. DO NOT ROUGH-IN FROM THIS DRAWING. REFER TO THE FOODSERVICE

- 2. DIMENSIONS INDICATED ARE TO BE VERIFIED BY FOODSERVICE EQUIPMENT SUPPLIER AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.
- SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 22. 4. DRAINAGE AND PIPING SYSTEMS TO BE CLEANED PRIOR TO FINAL CONNECTION WITH
- 5. HAND LAVATORY PROVIDED AND INSTALLED BY DIVISION 22.

6. JANITOR SINK/FAUCET PROVIDED AND INSTALLED BY DIVISION 22.

- 7. INTERCONNECTION OF 1/2" CW TO PRE-RINSE AND DISPOSER'S CONE/BODY INLETS PIPED THRU SOLENOID AND VACUUM BREAKER BY DIVISION 22. \*\* 8. ENGINEER TO VERIFY W/ LOCAL CODE TO BYPASS OR PIPE THRU
- 9. 6" W.C. AT EQUIPMENT. MECHANICAL GAS SHUT-OFF VALVE BY SECTION 11 40 00. FINAL CONNECTION TO EQUIPMENT AND INSTALLATION OF MECHANICAL
- 10. ALL EXHAUST HOOD CONNECTIONS AND CONDENSATE CONNECTIONS FURNISHED

HW\_HOT WATER\_ IW\_\_\_INDIRECT WASTE (EXTEND TO F.D.)\_\_ CW COLD WATER FFD FUNNEL FLOOR DRAIN HTW 180 F HOT WATER EVC EXHAUST VENT CONNECTION SVC SUPPLY VENT CONNECTION GAS SUPPLY FR DIRECT-CONNECTED FLUE RISER SS STEAM SUPPLY PS PIPE SLEEVE AFF ABOVE FINISHED FLOOR CR CONDENSATE RETURN • DR DRAIN ST STUB UP/OUT BTC BRANCH TO CONN. ON EQUIP DFA DROP FROM ABOVE FS FLOOR SINK

4 PLUMBING SYMBOLS 1 NONE

- 11. ALL EXPOSED FIRE SYSTEM PIPING TO BE CHROME PLATED OR STAINLESS STEEL.
- 12. NUMBER NOT USED.
- 13. ALL PIPING WITHIN COUNTER BODY OR UNDER FABRICATED COUNTERS TO BE RUN TO A CONNECTION POINT BELOW COUNTER BODY BY SECTION 11 40 00. FINAL CONNECTION BY DIVISION 22.
- 14. NUMBER NOT USED.
- 15. QUICK DISCONNECTS TO BE SUPPLIED BY SECTION 11 40 00 W/ALL GAS & WATER EQUIPMENT. 16. PROTECTIVE DEVICES TO PROTECT AGAINST BACK FLOW. BACK SYPHONAGE SHALL BE INSTALLED AT ALL FIXTURES AND EQUIPMENT WHERE BACKFLOW AND/OR BACKSYPHONAGE
- MAY OCCUR AND WHERE A MINIMUM AIR GAP CANNOT BE PROVIDED BETWEEN THE WATER TO THE FIXTURE OR EQUIPMENT AND ITS FLOOD/LEVEL RIM. TO BE PROVIDED AND INSTALLED BY DIVISION 22. VACUUM BREAKERS, WHEN FURNISHED WITH EQUIPMENT, SHALL OVERRIDE ABOVE, IF ACCEPTABLE WITH APPLICABLE CODES, BUT DIV. 22 TO PIPE WHEN NOT PREPIPED BY FACTORY. INTERCONNECT THRU WATER FILTER TO EQUIPMENT BY DIVISION 22.
- 17. BACKFLOW PREVENTION BY DIVISION 22

NERAL NOTES 1





# 2 ELECTRICAL GENERAL NOTES 1 NONE

- 14. EMPTY CONDUIT RUN FROM CASHIER STATION TO MANAGERS OFFICE FOR POS SYSTEM BY DIVISION 26. LOCATION OF MANAGER'S OFFICE TO BE VERIFIED.
- CONNECTION BY DIVISION 26. 13. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF EXISTING EQUIPMENT.
- 12. RECEPTACLE(S) TO BE PRE-WIRED TO JUNCTION BOX OR LOAD CENTER FOR FINAL
- 11. INTERCONNECT FIRE PROTECTION SYSTEM TO PANEL BOX SHUNT TRIP(S) AND BUILDING ALARM - BY DIVISION 26.
- 10. INTERCONNECT TO EXHAUST HOOD LIGHT(S) AND SWITCH BY DIVISION 26.
- 9. INTERCONNECT TO EXHAUST HOOD FAN(S) AND SWITCH BY DIVISION 26.
- FINAL CONNECTION BY DIVISION 26. 8. N/A
- DOOR HEATER(S), LIGHT(S), COIL(S) AND PRESSURE RELIEF PORT(S) PRE-WIRED TO JUNCTION BOX AT TOP OF COLD STORAGE ASSEMBLY BY SECTION 14 00 00.
- WITHIN ELECTRICAL PANEL BOX FOR SHUT-DOWN DURING FIRE MODE BY DIVISION 26.
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- SECTION 11 40 00. FIELD INSTALLED BY DIVISION 26.
- REQUIRED BY FOODSERVICE EQUIPMENT AND/OR FIELD CONDITIONS. 4. ACCESSORIES AND FITTINGS PROVIDED LOOSE WITH FOODSERVICE EQUIPMENT BY
- 3. DIMENSIONS INDICATED ARE TO BE VERIFIED BY CONTRACTOR AND ADJUSTED AS
- 2. VERIFY ALL ELECTRICAL CHARACTERISTICS WITH ENGINEERING DRAWINGS.
- 1. DO NOT ROUGH-IN FROM THIS DRAWING. REFER TO THE CONTRACTOR'S DIMENSIONED DRAWINGS.



#### 3 ELECTRICAL COORDINATION NOTES 1

DRAWINGS.

FOR THE FOODSERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 26. FOR ADDTIONAL REQUIREMENTS REFER TO ELECTRICAL ENGINEER'S

NOTE: ELECTRICAL CONNECTIONS INDICATED ARE THOSE REQUIRED

4 ELECTRICAL SYMBOLS 1 NONE

	ΠR	20 AMP DUPLEX RECEPTACLE	$\square$		20 AMP WEATHERPROOF
		(MOUNT HORIZONTAL)		VVIIX	RECEPTACLE (SPRING COVER)
K	SR	SINGLE PURPOSE RECEPTACLE	/	FPB	FIRE PROTECTION BUZZER
Ø	SR	SINGLE PURPOSE RECPT. 208V 1PH	*	BSC	BEVERAGE SYSTEM CONDUIT
=	FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE
÷	PMR	PEDESTAL MOUNTED RECPTACLE		AFF	ABOVE FINISH FLOOR
0	DCR	DROP CORD RECEPTACLE	•O	CS/JB	JUNCTION BOX ON PEDSTAL
$\bigcirc$	JB	JUNCTION BOX ON CEILING		DS	DISCONNECT SWITCH
Ð	JB	JUNCTION BOX IN WALL			
		JUNCTION BOX WITH			CONDUIT STUB-UP
μ	JB/D2	DISCONNECT BY DIV.26		JB/D2	WITH DISCONNECTI BY DIV.26



FOODSERVICE ELECTRICAL SCHEDULE								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
				1	1			1
F10	DR	16 0A	120	1	CONVENIENCE OUTLET	WALI	24"	
E11	DR	16.0A	120	1	CONVENIENCE	WALL	47"	MOUNT HORIZONTAL
E15	JB				REMOTE FIRE PULL	WALL	48"	RE: NOTE #11 - RECESSED JB - EXTEND TO FIRE SYSTEM FOR HOOD
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC; RE: NOTE #4, #6, #9 & #11
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC; RE: NOTE #4, #6, #9 & #10
E153M	JB	1.0A	120	1	TEMPERATURE SENSOR	CLG	DFA	BTC; RE: NOTE #4, #6 & #9
E193	JB	8.2A	120	1	REFRIGERATOR	WALL	90"	
E616	JB	33.3KW	208	3	DECK OVEN	WALL	36"	BTC; RE: NOTE #4
E616A	JB	11.0KW	208	3	DECK OVEN	WALL	36"	BTC; RE: NOTE #4
E639	JB	16.0A	208	1	FREEZER	WALL	90"	COORDINATE NEMA PLUG
E672	JB	15.0A	208	3	ROTATING RACK OVEN	WALL	24"	BTC; RE: NOTE #4 - SHUNT TRIP BREAKER
E687	JB	15.0A	208	3	PROOFER	WALL	85"	
E695	JB	22.0A	200V-240V	1	EQUIPMENT	WALL	24"	SHUNT TRIP BREAKER BTC; RE: NOTE #4
E784	SR	15.0A	208	1	ICE CREAM FREEZER	WALL	47"	MOUNT HORIZONTAL
E803	JB	30.0A	208	1	TABLE RECEPTACLES	FLOOR	4"	
E817	DR	16.0A	480	3	DOUGH SHEETER	WALL	24"	CONFIRM NEMA CONFIGURATION W/DIV. 26
E784 E803 E817	SR JB DR	15.0A 30.0A 16.0A	208 208 480	1 1 3	ICE CREAM FREEZER TABLE RECEPTACLES DOUGH SHEETER	WALL FLOOR WALL	47" 4" 24"	MOUNT HORIZONTAL CONFIRM NEMA CONFIGURA <sup>®</sup> 26

E672	JB	15.0A
E687	JB	15.0A
E695	JB	22.0A
E784	SR	15.0A
E803	JB	30.0A
E817	DR	16.0A

4" X 4" OCTOGON BOX BY DIV. 26 FLUSH MOUNTED IN WALL. REMOTE FIRE PULL BY SECTION 11 40 00

BY DIVISION 26.

1/2" DIA. EMPTY EMT CONDUIT

EXTENDED UP 6" ABOVE CEILING

5 RECESSED FIRE PULL DETAIL 1 N.T.S.



6 FIRE SUPRESSION TYPICAL DETAIL 1 N.T.S.






1 FS PASTRY FACILITY MODEL









: FDP Project Number :: Project Name :: Project Location / :: PM / APM







2 ELEVATION @ 5COMPARTMENT SINK 1/2" = 1'-0"

### 1) ELEVATION @ PRODUCTION 1/2" = 1'-0"



5 ELEVATION @ HOLDING 1/2" = 1'-0"





3 ELEVATION @ BAKERS TABLES 1/2" = 1'-0"







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<ol> <li>1.112" X 112" X 1/8" GALVANIZED ANGLE IRON.</li> <li>1.12" X 114 GAUGE STAINLESS STEEL HAT CHANNEL.</li> <li>3.6 GAUGE STAINLESS STEEL C-CHANNEL.</li> <li>3.6 GAUGE STAINLESS STEEL C-CHANNEL.</li> <li>3.34" MARINE GRADE PLYWOOD BY SECTION 11 40 00 WITH THE FRONT BY TRADE CONTRACTOR. VERIFY FINISH WITH ACHITECTURAL DRAWINGS.</li> <li>6 GOLD EAN. 2" REID INSULATION WITH 1" C P. DRAIN - 16 GAUGE STAINLESS STEEL SE CTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1" C P. DRAIN - 16 GAUGE STAINLESS STEEL SE CTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1" C P. DRAIN - 16 GAUGE STAINLESS STEEL INSULATED DOUBLE FAN DOOR WITH RECESSED PULL.</li> <li>8 MANFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K COPPER AND EXTEND TO VAVLE IN PLUMBING COMPARTMENT.</li> <li>9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 9. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 1140 00.</li> <li>10.FIRHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.</li> <li>11 46 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.</li> <li>16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.</li> <li>16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.</li> <li>17.9'SIS TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.</li> <li>15 16" DA 116 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.</li> <li>114" SIS BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" 0.C.</li> <li>114" SIS BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" 0.C.</li> <li>13 6A SIS LOUVERED PANEL.</li> <li>14 6A GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE RON AND EXTEND UP THRU SPLASH TO 7-0" A.F.</li> <li>MOMBER NOT USED.</li> <li>14 6A AUGE STAINLESS STEEL LOUVERED DOUBLE PAN SLIDING DOOR WITH CORFONENT HARDWARE ADJACENT TO WALL FIXTURE.</li> <li>18 6A SIS LOUVERED PANEL.</li> <li>18 6A SIS LOUVERED PANEL.</li> <li>18 6A SIS LOUVERED PANEL.</li> <li>18 6A SIS LOUVERED PANEL.</li></ol>
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	ABBREVIATI	ONS LE	GEND		ME	ECHANICAL	SYMBOLS LEGE	ND	
ACRONYM	DESCRIPTION	ACRONYM	DESCRIPTION		SUPPLY AIR DUCT UP (PLAN)	AX CFM	DIFFUSER TYPE AND CFM		CHECK VALVE, SWING GATE
°F	FAHRENHEIT	FAS	FIRE ALARM SYSTEM					 ≻_}	
AC	AIR CONDITIONING	FCU	FAN COIL UNIT				THERMOSTAT - MOUNT 46 AFF UND		
AHU	AIR HANDLING UNIT	FPM	FEET PER MINUTE		AIR DUCT UP (PLAN)	(H)	HUMIDISTAT	⊢>Ò PRV	PRESSURE REDUCING VALVE
AI	ANALOG INPUT	FPT	FAN POWER TERMINAL		RETURN OR OUTSIDE	F	FIRESTAT		LOCK SHIELD
ALT		GPM	GALLON PER MINUTE				THERMOSTAT/ CO2 SENSOR/ HUMIDISTAT		
			HORSE POWER				MOUNT 48" AFF UNO		
			HOT WATER RETURN		EXHAUST AIR DUCT DOWN (PLAN)	(SD)	SMOKE DETECTOR	X	PRESSURE REGULATOR
		HWS	HOT WATER SUPPLY		RETURN AIR/TRANSFER AIR BOOT	$\bigcirc \longrightarrow \bigcirc \bigcirc \bigcirc \bigcirc$	PIPE UP		STRAINER W/BLOW DOWN VALVE
В	BOILER	ISP	INTERNAL STATIC PRESSURE		CEILING SUPPLY AIR DEVICE		PIPE DOWN		THREE-WAY VALVE (ELECTRIC)
BARO	BAROMETER (-TRIC)	Kw	KILOWATT						
BAS	BUILDING AUTOMATION SYSTEM	LAT	LEAVING AIR TEMPERATURE		SIDEWALL SUPPLY/EXHAUST REGISTER		САР		TWO-WAY VALVE (ELECTRIC)
BHP	BRAKE HORSE POWER	LHG	LATENT HEAT GIANT		EXHAUST REGISTER		90° ELBOW	$\rightarrowtail \qquad \qquad$	FLEXIBLE CONNECTION
BI	BINARY INPUT	LWT	LEAVING WATER TEMPERATURE		RETURN AIR GRILLE WITH BOOT		45° ELBOW	ĔJ	EXPANSION JOINT
ВО	BINARY OUTPUT	MUA	MAKEUP AIR UNIT						THERMOMETER
BTU	BRITISH THERMAL UNIT	MX	MIXING AIR			r M		×+⊤+∹ TW	
BTUH	BRITISH THERMAL UNIT/HOURS	NA	NOT APPLICABLE		DUCT SPLIT WITHOUT VANES		TEE	<u>}</u>	THERMOMETER WELL
		NU.			ACCESS DOOR		TEE UP	× ↓ ↓	TEST PLUG
					TRANSITION IN DUCT		TEE DOWN	$\bigcirc$	PRESSURE GAUGE W/GAUGE COCK
CHWS		PSI	POUNDS PER SQUARE INCH						
COEFF	COEFFICIENT	RA	RETURN AIR		DUCT WITH SPIN-IN CONNECTOR		TOP CONNECTION		MANUAL AIR VENT
CRAC	COMPUTER AIR CONDITIONER	REV	REVOLUTIONS	AP	ACCESS PANEL		CROSS		AUTOMATIC AIR VENT
СТ	COOLING TOWER	RTU	ROOF TOP UNIT		DUCT ELBOW WITH TURNING VANES		UNION (SCREWED)		SOLENOID VALVE
CU	CONDENSING UNIT	S/A	SUPPLY AIR		DUCT FL BOW WITHOUT VANES		LINION (FLANGED)	FS	FLOW SWITCH
CV	CONSTANT VOLUME	SG	SPECIFIC GRAVITY						TEMPERATURE AND PRESSURE
CWP	CONDENSER WATER PUMP	SHG	SENSIBLE HEAT GAIN		FLEXIBLE CONNECTION, FLEXIBLE DUCT		DUCT MOUNTED TEMPERATURE SENSOR		RELIEF VALVE
CWR	CONDENSER WATER RETURN	SP	STATIC PRESSURE		VOLUME DAMPER	P +	DUCT MOUNTED PRESSURE SENSOR	·	STEAM TRAP
CWS	CONDENSER WATER SUPPLY	SPEC	SPECIFICATION	M	MOTORIZED VOLUME DAMPER	SD	DUCT MOUNTED SMOKE DETECTOR	<u>у така</u>	STEAM MOISTURE SEPARATOR
DB		ТСН	THERMOSTAT/ CO2 SENSOR/ HUMIDISTAT					↓ □ FP	
					FIRE DAMPER		FIFE BREAN		CONTROL, ELECTRIC-PNEUMATIC
					SMOKE DAMPER		CONCENTRIC REDUCER	→ PE → → →	CONTROL, PNEUMATIC-ELECTRIC
EAT				FS	COMBINATION FIRE/SMOKE DAMPER		ECCENTRIC REDUCER	5-100-100-1-100-1000-1	RED. PRESS PRINCIPAL
ESP	EXTERNAL STATIC PRESSURE	VFD	VARIABLE FREQUENCY DRIVE		AIR FLOW MONITORING STATION	Č j	END SUCTION PUMP		PRIMARY CHILLED WATER RETURN
EWT	ENTERING WATER TEMPERATURE	WB	WET BULB				BALL VALVE		PRIMARY CHILLED WATER SUPPLY
EX	EXHAUST AIR								
NOTE:					RISE IN DUCT ELEVATION				CONDENSER WATER RETURN
NOT ALL ITEM	S NECESSARIET USED.				DROP IN DUCT ELEVATION		ISOLATION VALVE		CONDENSER WATER SUPPLY
					SPLITTER DAMPER - DIMENSION AS NOTED ON DRAWING		GATE VALVE WITH QUICK DISCONNECT	← HHWR	HOT WATER RETURN
				BDD	BACK DRAFT DAMPER		TWO-WAY VALVE	← HHWS	HOT WATER SUPPLY
				UCD I"	UNDERCUT DOOR I"		THREE-WAY VALVE	← CD →	CONDENSATE DRAIN
				RE: I/M-7	REFER TO DETAIL #I ON DRAWING M-7		BALANCING VALVE	→ SCHWR →	SECONDARY CHILLED WATER RETURN
				FM	FLOW METER	← MPS	MEDIUM PRESSURE STEAM SUPPLY	CHWS → SCHWS → SCH	SECONDARY CHILLED WATER SUPPLY
					CO2 SENSOR		REFRIGERANT PIPE	← CD →	CONDENSATING PIPE

NOTE: NOT ALL ITEMS NECESSARILY USED.

# MECHANICAL GENERAL NOTES

- SEE ARCHITECTURAL PLANS FOR TYPE OF CEILING. FOR LOCATIONS OF WALL MOUNTED DEVICES AND LOCATION HEIGHTS COORDINATE WITH ARCH, 2. DO NOT OPERATE AIR HANDLERS, FAN COIL UNITS, OR EXHAUST FANS UNTIL ALL INTERIOR
- CLEANING AND PAINTING IS COMPLETE. THE CLEANING OF FOULED COILS OR FAN ASSEMBLIES DUE TO PAINT OR CONSTRUCTION DEBRIS WILL BE THE RESPONSIBILITY OF THE HVAC CONTRACTOR. RECTANGULAR, OR ROUND DUCT SIZES INDICATED ARE ACTUAL SHEET METAL DIMENSIONS IN
- INCHES ALL ROUND DUCT SIZES INDICATE NET FREE INSIDE DIAMETER AND DO NOT ACCOUNT FOR ANY INSULATION. ROUND DUCTS ARE EXTERNALLY INSULATED PER SPECIFICATIONS.
- SCHEDULED MANUFACTURERS ARE BASIS OF DESIGN. SEE SPECIFICATIONS FOR OTHER ACCEPTABLE MANUFACTURERS. 5. MAJOR EQUIPMENT SHOWN ON THE PLANS AND ELEVATIONS ILLUSTRATE THE GENERAL
- ARRANGEMENT AND SPACE ALLOCATION. VERIFY THE SPACE REQUIREMENTS FOR EACH SYSTEM COMPONENT USING MANUFACTURER CERTIFIED SHOP DRAWINGS AND MAKE THE NECESSARY ADJUSTMENTS IN EQUIPMENT PLACEMENT AND CONNECTIONS IN ORDER TO ACCOMMODATE THE EXACT EQUIPMENT TO BE INSTALLED.
- REFER TO SPECIFICATIONS FOR SUPPORTS, ANCHOR BOLTS AND HANGERS FOR ALL EQUIPMENT. OTHER MISCELLANEOUS STEEL BRACING, SUPPORTS, AND REINFORCING STEEL REQUIRED TO SUPPORT EQUIPMENT SHALL BE FURNISHED AS PART OF THE SCOPE OF WORK OF DIVISION I5. INSTALL SMOKE DETECTORS IN CONFORMANCE WITH 2015 IMC WITH
- CITY OF STAFFORD, TX AMENDMENTS. 8. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS
- AND AUTHORITIES HAVING JURISDICTION. 9. ALL SUPPLY AND RETURN AIR DUCTS LOCATED IN UNCONDITIONED ATTICS OR OUTSIDE SHALL BE INSULATED (R-5 UNCONDITIONED AND R-8 OUTSIDE BUILDINGS).
- 10. FLEX DUCTS SHALL BE SAME SIZE AS DIFFUSER NECKS.
- II. SEAL ALL PENETRATIONS OF FLOORS, SMOKE WALLS, FIRE WALLS, LAB WALLS, AND EXTERIOR WALLS. 12. ARCHITECT SHALL APPROVE ALL THERMOSTAT OR TEMPERATURE SENSOR LOCATIONS.
- I3. DO NOT RUN DUCT OR PIPE OVER ELECTRICAL PANELS.
- 14. COORDINATE EXACT LOCATION OF EQUIPMENT, DUCTWORK, AIR DEVICES, AND THERMOSTATS WITH ARCHITECTURAL, STRUCTURAL AND REFLECTED CEILING PLANS. 15. ALL PENETRATIONS IN RATED WALLS SHALL BE SEALED WITH AN APPROVED FIRE RETARDENT
- SEALANT. 16. ALL DUCT RUN-OUTS TO SUPPLY AND EXHAUST, DIFFUSERS AND REGISTERS, SHALL HAVE
- MANUAL BALANCING DAMPERS. PROVIDE YOUNG REGULATORS WHERE CEILING IS INACCESSIBLE. 17. ALL DUCTWORK SHALL BE IN ACCORDANCE WITH LATEST SMACNA STANDARDS.
- 18. SECURE ALL PERMITS AND PROVIDE ANY REQUIRED TEMPORARY UTILITIES.
- 19. GUARANTEE LABOR AND MATERIAL FOR I YEAR AND PER DIV.I. 20. PROVIDE AUTOMATIC AIR VENTS ON ALL HIGH POINTS OF PIPING SYSTEMS AND DRAIN VALVED
- CONNECTIONS AT ALL LOW POINTS OF PIPING SYSTEMS. 21. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON SCOPE OF WORK AND REQUIRED
- INSTALLATION. 22. VERIFY FINAL LOCATION OF THERMOSTATS WITH ARCHITECT AND BUILDING ENGINEER PRIOR TO INSTALLATION.
- 23. ALL FLEXIBLE DUCT SHALL BE UL 181, CLASS I AIR DUCT BLACK LINER. MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL NOT EXCEED 6'-0". PROVIDE RIGID ROUND INSULATED AIR DUCT RUNOUT AS REQUIRED. FLEXIBLE DUCT SHALL HAVE THE EQUIVALENT OF ONLY TWO 90 DEG. ELBOWS MAXIMUM. FLEXIBLE DUCT SIZE SHALL MATCH THE DIFFUSER NECK SIZE.
- 24. THE AIR QUANTITIES SHOWN ON THE DRAWINGS FOR INDIVIDUAL OUTLETS MAY BE CHANGED TO OBTAIN UNIFORM TEMPERATURE WITHIN EACH SPACE OR ZONE, BUT THE TOTAL AIR QUANTITY SHOWN FOR EACH ZONE MUST BE OBTAINED.
- 25. PROVIDE SMOKE DETECTOR FOR ALL UNITS WITH CAPACITY OF 2000 CFM AND HIGHER AS REQUIRED BY CODE. COORDINATE WITH 2015 IMC SECTION 606.
- 26. WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER. RECORD DRAWINGS SHALL INCLUDE AS A MINIMUM THE LOCATION AND PERFORMANCE DATA ON EACH PIECE OF EQUIPMENT, GENERAL CONFIGURATION OF DUCT AND PIPE DISTRIBUTION SYSTEM INCLUDING SIZES, AND THE TERMINAL AIR OR WATER DESIGN FLOW RATES.
- 27. OPERATING AND MAINTENANCE MANUALS SHALL BE PROVIDED TO THE BUILDING OWNER OR THE DESIGNATED REPRESENTATIVE OF THE BUILDING OWNER WITHIN 90 DAYS AFTER THE DATE OF SYSTEM ACCEPTANCE. THESE MANUALS SHALL BE IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS (SEE APPENDIX E), AND SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING: (A) SUBMITTAL DATA STATING EQUIPMENT SIZE AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. (B) OPERATION MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE, EXCEPT EQUIPMENT NOT FURNISHED AS PART OF THE PROJECT. REQUIRED ROUTINE MAINTENANCE ACTIONS SHALL BE CLEARLY IDENTIFIED.
- (C) NAMES AND ADDRESSES OF AT LEAST ONE SERVICE AGENCY. (D) HVAC CONTROLS SYSTEM MAINTENANCE AND CALIBRATION INFORMATION, INCLUDING WIRING DIAGRAMS, SCHEMATICS, AND CONTROL SEQUENCE DESCRIPTIONS. DESIRED OR FIELD-DETERMINED SET-POINTS SHALL BE PERMANENTLY RECORDED ON CONTROL DRAWINGS AT CONTROL DEVICES OR, FOR DIGITAL CONTROL SYSTEMS, IN PROGRAMMING COMMENTS. (E) A COMPLETE NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING SUGGESTED SET-POINTS.
- 28. HOT WATER PIPE INSULATION SHALL BE MINIMUM I.5" IF THE PIPE DIAMETER IS LESS THAN I-1/2", 2" IF THE PIPE DIAMETER IS BIGGER THAN I-1/2".
- 29. THE CONTRACTOR TO ENSURE THAT ALL DUCTWORK EITHER STORED ON SITE OR INSTALLED IN THE BUILDING IS THOROUGHLY, SEALED TO PROTECT AGAINST DIRT AND MOISTURE UNTIL SUCH TIME THAT THE BUILDING IS DEEMED BY THE OWNER TO BE ADEQUATELY CLEAN TO ALLOW FOR START-UP OF THE ASSOCIATED AIR HANDLING EQUIPMENT. IF DUCTWORK IS NOT BE SEALED AS SPECIFIED, THEN THE CONTRACTOR TO HAVE SUCH DUCTWORK PROFESSIONALLY CLEANED TO AN AS-NEW CONDITION AT NO COST TO THE OWNER.
- 30. NO PORTION OF THE TOTAL CONTRACT WILL BE DECLARED SUBSTANTIALLY COMPLETE UNTIL THE AUTOMATIC TEMPERATURE CONTROL SYSTEM HAS BEEN DEMONSTRATED TO BE COMPLETE AND FUNCTIONING AS INTENDED. THE TEMPERATURE CONTROL SYSTEM WILL BE COMPLETE AND FUNCTIONING AS INTENDED WHEN ALL OF THE SPACE TEMPERATURES ARE MAINTAINED AT PLUS OR MINUS TWO DEGREES OF SET POINT.
- 31. LOCATE VALVES WITHIN 18 INCHES OF CEILING SO THAT THEY ARE WITHIN REACH.
- 32. ALL EXPOSED PIPING INTERIOR AND EXTERIOR SHALL BE PAINTED. INTERIOR COLOR SHALL BE ACCORDING TO THE ADOPTED COLOR CODES AND SHALL BE APPROPRIATELY LABELED AT INTERVIEWS IN SPECIFIED HEIGHT LETTERS. PIPING EXPOSED TO VIEW SHALL BE PAINTED TO COMPLY TO COLOR SCHEME PER SPECIFICATIONS. PIPING ON ROOF/EXTERIOR SHALL BE PAINTED WITH EPOXY POLYURETHANE INDUSTRIAL COATING.



UNIT NO.	LOCATION	SERVING	ТҮРЕ	
				LE
AHU-2-3	MECH ROOM	LEVEL-2	HORI. DRAW THRU	

NOTES:

2. FAN MOTORS SHALL BE INVERTER DUTY RATED SUITABLE FOR WORKING WTH VFD. 3. PROVIDE FLAT 2" MERV-II FILTER FOR ALL UNITS.

4. PROVIDE STAINLESS STEEL DRAIN PAN.

5. MOTORS SHALL BE PREMIUM EFFICIENCY TYPE(PER LATEST IEC CODE)

6. PROVIDE UNIT WITH 2" SPRING FAN ISOLATION AND BASE 6" RAILS. 7. PROVIDE SMOKE DETECTOR IN SUPPLY AIR DUCT TO TURN OFF UNIT IF SMOKE IS DETECTED.

8. EXTERNAL STATIC PRESSURE DOES NOT INCUDE FILTER LOSSES.

0. PROVIDE UNIT WITH MIXING BOX, MOTORIZED RETURN AIR AND OUTSIDE AIR DAMPERS.

I. PROVIDE OUTSIDE AIR DAMPER SIZED FOR 100% OUTSIDE AIR ECONOMIZER

		H	IOT V	VATE	R(		L SCH	HED	ULI	Ξ				
PLAN MARK	SERVING	AIR VOLUME (CFM)	WIDTH (IN)	HEIGHT (IN)	EAT (F)	LAT (F)	CAPACITY (MBH)	EWT (F)	LWT (F)	GPM	MAX ROWS	MAX WATER PRESSURE DROP (FT)	MAX AIR PRESSURE DROP (IN H20)	NOTES
HWC-2-8	PASTRY LAB	3000	26	16	50	75	81.0	150	130	8.1	2	10	0.35	ALL
HWC-2-9	SPECIALITY LAB	3750	32	16	50	75	101.2	150	130	10.1	2	10	0.35	ALL
HWC-2-10	SPECIALITY LAB	3750	32	16	50	75	101.2	150	130	10.1	2	10	0.35	ALL
HWC-2-II	SPECIALITY LAB	3750	32	16	50	75	101.2	150	130	10.1	2	10	0.35	ALL
HWC-2-12	SPECIALITY LAB	4350	36	16	50	75	117.4	150	130	11.8	2	10	0.35	ALL
HWC-2-13	SPECIALITY LAB	3150	26	16	50	75	85.0	150	130	8.5	2	10	0.35	ALL
HWC-2-14	SPECIALITY LAB	3150	28	16	50	75	85.0	150	130	8.5	2	10	0.35	ALL
NOTES:		_		-	-		-		-	7	-	-	-	

DIFFUSER NECK-DU	CT SIZE SCHEDULE
SUPPLY AIR (CFM)	DIFFUSER NECK AND BRANCH DUCT SIZE
0 - 100	6"Ø
101 - 200	8"Ø
201 - 300	10"Ø
301 - 400	12"Ø
401 - 800	I4"Ø

											AI	R HAN	DLING		SCH	EDUL	E																		
				SUPP	LY AIR FAN								CHILL	ED WAT	ER COIL											HOT WA	ATER COIL						ELECT	RICAL	
M.	AX DIMENSIOI	NS	SUPPLY AIRFLOW	OUTSIDE AIRFLOW	DISCHARGE		E.S.P (IN		MAX FINS	CAP	ΑCITY	MAX. FACE	ENTERII TEMPER	NG AIR RATURE	LEAVIN TEMPER	NG AIR RATURE	WATER	EWT	LWT	MAX.	P. D.	MIN	MAX FINS	CAPACITY	MAX. FACE	ENTERING AIR TEMPERATURE 1	LEAVING AIR TEMPERATURE	WATER	EWT	LWT	MAX.	P. D.	FAN MOTOR		NO <sup>.</sup>
LENGTH	WIDTH	HEIGHT	RATE	RATE (CEM)	CONFIGURATION		「」 WG)		PER INCH	TOTAL (BTUH)	SENSIBLE (BTUH)	VELOCITY	DB	WB	DB	WB	(GPM)	(°F)	(°F)	AIR	WTR	ROWS	PER INCH	TOTAL (BTUH)	VELOCITY (FPM)			(GPM)	(°F)	(°F)	AIR	WTR	SIZE	V/FN/NZ	
(IN)	(IN)	(IN)								,	,		(°F)	(°F)	(°F)	(°F)				IN.	FT.										IN.	FT.		<u> </u>	
137	102	90	20,000	20000	TOP REAR	AIRFOI	L 3.15	8.0	12.0	1937000	975000	450	96.0	80.0	53.0	52.9	240.1	45	61	1.3	15	1.0	9.0	696000	450	20.0	50.0	47.4	150	120	0.1	10	25.0	460/3/60	A

I. UNITS SHALL BE EQUIPPED WITH VARIABLE FREQUENCY DRIVE CAPABLE OF REDUCING FAN SPEED TO 30% OF THE DESIGN SPEED FOR ALL UNITS.

9. PROVIDE UNIT WITH FREEZE PROTECTION PUMP. SIZE PUMP FOR 50 GPM, 25 FT HEAD AND 1/2 HP MOTOR POWERED AT 115V / I PH / 60HZ.

				FAI	N SCH	HED	ULE				
		AIR VOLUME			E.S.P.		MOTOR				DEMADIZO
PLAN MARK	SERVING	(CFM)	FAN TYPE	DRIVE TYPE	IN WG	HP	V/P/Hz	RPM	MANUFACTURER & MODEL	LOCATION	REMARKS
KEF-I6	DISH WASHER	250	UP-BLAST	DIRECT	0.5	1/10	120/1/60	1725	ACCUREX XRUD	ROOF	I, 2, 3, 4
KEF-I7	CULINARY LAB	3750	UP-BLAST	DIRECT	1.25	2	460/3/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-18	CULINARY LAB	3750	UP-BLAST	DIRECT	1.25	2	460/3/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-I9	CULINARY LAB	3750	UP-BLAST	DIRECT	1.25	2	460/3/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-20	CULINARY LAB	4350	UP-BLAST	DIRECT	1.25	2	460/3/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-2I	CULINARY LAB	3150	UP-BLAST	DIRECT	1.25	2	460/3/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-22	CULINARY LAB	3150	UP-BLAST	DIRECT	1.25	2	460/3/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-23	PASTRY LAB	3000	UP-BLAST	DIRECT	1.25	2	460/3/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-24	PASTRY LAB	350	UP-BLAST	DIRECT	0.75	1/10	120/1/60	1725	ACCUREX XRUD	ROOF	ALL
KEF-25	PASTRY LAB	350	UP-BLAST	DIRECT	0.75	1/10	120/1/60	1725	ACCUREX XRUD	ROOF	ALL

NOTES: I. FAN SHALL BE SUITABLE FOR OUTDOOR INSTALLATION AND OPERATION. PROVIDE MANUFACTURER'S SUPPLIED 14" HIGH ROOF CURB AND INSECT SCREEN. REFER SPECIFICATIONS FOR WIND SPEED REQUIREMENTS.
 PROVIDE MOTORIZED DAMPER FOR UNIT WITH 300+ CFM. PROVIDE BACK-DRAFT DAMPER ON UNITS WITH LESS THAN 300 CFM. MOTORIZED DAMPER SHALL CLOSE WHEN ASSOCIATED FAN IS DE-ENERGIZED.
 PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION AND DISCONNECT SWITCH. 5. PROVIDE FAN WITH VFD. FAN SPEED TO BE CONTROLLED BY EXISTING KITCHEN VENTILATION CONTROLS SYSTEM.

		GRA	AVITY '	VENTIL	ATOR S	SCHEDU	LE	
PLAN		MAX AIR		DIMENS	IONS			
MARK	SERVING	(CFM)	THROAT	CURB CAB	WEATHERHOOD	HEIGHT BASE	MAKE AND MODEL	REMARKS
GV-I	AHU-2-3	20,000	60"X96"	68"XI04"	74"XII0"	42-1/2"	GREENHECK - WIH	ALL
NOTES: I. F 2. F 3. (	PROVIDE UNIT V PROVIDE UNIT V	VITH MANUFA	ACTURER FURN REEN. RCHUTECT	ISHED CUSTOM F	ROOF CURB.			

			AIR	DEVI	CE SCHED	ULE		
MARK	ΜΑΚΕ	TYPE	MODEL	FACE SIZE (INCH)	NECK SIZE	MATERIAL	MOUNTING	REMARKS
A	PRICE	SUPPLY	ASPD	24"X24"	SEE NECK SCHEDULE	ALUMINUM	CEILING	1,2,3,4
NOTES I. 2. 3. 4.	PROVIDE RO REFER TO P COORDINATE PROVIDE DIF	UND NECK A LANS FOR A E CEILING T <sup>V</sup> FUSERS WIT	DAPTER FOI IR FLOW RA YPE WITH FI TH INSULATE	R ALL SUPPLY TE. NAL ARCHITE ED PLENUM.	AIR DIFFUSERS WHERE NECE CTURAL PLANS.	SSARY.		

		FAI	N SCH	IED	ULE		
LUME			E.S.P.		MOTOR		
M)	FAN TYPE	DRIVE TYPE	IN WG	HP	V/P/Hz	RPM	MANUFACTURER & MOL
0	UP-BLAST	DIRECT	0.5	1/10	120/1/60	1725	ACCUREX XRUD

					SIZE	E (IN)	MAKE	
PLAN MARK	SERVED BY	LOCATION	MAX CFM	MIN CFM	WIDTH HEIGHT (IN) (IN)		AND MODEL	NOTE
AFMS-2-8	AHU-I-I	PASTRY LAB	3000	0	26	16	EBTRON - GTCII6PC	ALL
AFMS-2-9	AHU-2-I, 2-2	SPECIALITY LAB	3750	0	32	16	EBTRON - GTCII6PC	ALL
AFMS-2-I0	AHU-2-I, 2-2	SPECIALITY LAB	3750	0	32	16	EBTRON - GTCII6PC	ALL
AFMS-2-II	AHU-2-I, 2-2	SPECIALITY LAB	3750	0	32	16	EBTRON - GTCII6PC	ALL
AFMS-2-I2	AHU-2-I, 2-2	SPECIALITY LAB	4350	0	36	16	EBTRON - GTCII6PC	ALL
AFMS-2-I3	AHU-2-I, 2-2	SPECIALITY LAB	3150	0	26	16	EBTRON - GTCII6PC	ALL
AFMS-2-14	AHU-2-I, 2-2	SPECIALITY LAB	3150	0	28	16	EBTRON - GTCII6PC	ALL

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Drawing Number M2.01



2 ENLARGED PLAN - PASTERY LAB 2 - HVAC Scale: 1/4" = 1'-0"

	Keynote Legend
	22X20 EXHAUST DUCT UP TO KEF-23 ON ROOF.
2	8" EXHAUST DUCT UP TO KEF-I6 ON ROOF.
3	20X20 EXHAUST DUCT UP TO KEF-I7 ON ROOF.
4	20X20 EXHAUST DUCT UP TO KEF-I8 ON ROOF.
5	20X20 EXHAUST DUCT UP TO KEF-I9 ON ROOF.
6	20X20 EXHAUST DUCT UP TO KEF-20 ON ROOF.
7	22X20 EXHAUST DUCT UP TO KEF-2I ON ROOF.
8	22X20 EXHAUST DUCT UP TO KEF-22 ON ROOF.
9	6" FLUE EXHAUST DUCT UP TO ROOF.
10	8" EXHAUST DUCT UP TO KEF-24 ON ROOF.
	8" EXHAUST DUCT UP TO KEF-25 ON ROOF.

**ENLARGED PLAN - CULINARY LAB 2 - HVAC** Scale: 1/4" = 1'-0"





![](_page_47_Figure_1.jpeg)

![](_page_47_Picture_3.jpeg)

![](_page_48_Figure_0.jpeg)

I. ALL DUCTWORK ON ROOF SHALL BE CONSTRUCTED OF 16 GAUGE STAINLESS STEEL.

	Keynote Legend
I	6" FLUE EXHAUST DUCT FROM 2ND LEVEL. TERMINATE 3 FT ABOVE FINISHED ROOF WITH STACK CAP. AMPCO MODEL P-SK OR APPROVED EQUAL.

![](_page_48_Picture_4.jpeg)

![](_page_49_Figure_0.jpeg)

![](_page_49_Figure_1.jpeg)

![](_page_49_Picture_2.jpeg)

CON	TROLS SYMBOLS & ABBREVIATIONS
ECM	ELECTRONICALLY COMMUTATED MOTOR
AO	ANALOG OUTPUT POINT
AI	ANALOG INPUT POINT
DO/BO	DIGITAL OUTPUT POINT
DI/BI	DIGITAL INPUT POINT
	AIR FLOW SENSOR
—(TS)	TEMPERATURE SENSOR
(DP)	DIFFERENTIAL PRESSURE SENSOR
-(SP)	STATIC PRESSURE SENSOR
-PS	PRESSURE SWITCH
-FZ	FREEZE STAT
—(M)	MOTOR ACTUATOR
٩X	MODULATOR CONTROL VALVE
$\Box X$	SOLENOID OR ON/OFF CONTROL VALVE
VFD	VARIABLE FREQUENCY DRIVE CONTROL
SCR	SILICONE CONTROLLER RECTIFIER MOTOR CONTROL
$-\bigcirc$	PRESSURE GAUGE
	THERMOMETER
DT	DUCT TEMPERATURE
DH	DUCT HUMIDITY
SPT	STATIC PRESSURE TRANSMITTER
DSD	DUCT SMOKE DETECTOR
	AIRFLOW MEASURING STATION
	MOTORIZED CONTROL VALUE
	DIFFERENTIAL PRESSURE
	CURRENT RELAY SWITCH
HSL	HIGH STATIC LIMIT
LSL	LOW STATIC LIMIT

SEQUENCE OF OPERATION

DEGREE F, ADJUSTABLE).

SETPOINT OF I.0 W.G.

SYSTEM SHALL RESET THE SUPPLY AIR TEMPERATURE UP 0.1°F (ADJUSTABLE). IF COOLING REQUEST IS GREATER THAN SETPOINT, THE DDC SYSTEM SHALL RESET THE SUPPLY AIR TEMPERATURE DOWN 0.1°F (ADJUSTABLE).

SAFETIES SHALL BE SENT TO THE DDC. AN ALARM SHALL BE SENT TO THE DDC.

SEND AN ALARM TO THE DDC.

SIGNAL AND DE-ENERGIZE THE SUPPLY FAN.

- 6. A CURRENT SENSOR SHALL BE USED BY THE DDC SYSTEM TO CONFIRM THE FAN IS IN THE DESIRED STATE (I.E. ON OR OFF). THE DDC SYSTEM SHALL GENERATE AN ALARM IF STATUS DEVIATES FROM DDC START/STOP CONTROL
- 5. UPON SENSING A DROP IN PREHEAT TEMPERATURE TO 35 DEGREE F, A MANUAL-RESET LOW TEMPERATURE THERMOSTAT LOCATED ON THE DISCHARGE SIDE OF THE PRE-HEAT COIL SHALL, THROUGH HARD-WIRE INTERLOCK, DE-ENERGIZE THE SUPPLY FAN, CLOSE THE OUTSIDE AIR DAMPER, OPEN THE CHW VALVE FULLY, AND
- THE SUPPLY FAN WHENEVER STATIC PRESSURE EXCEEDS NEGATIVE 2" W.G. (FIELD ADJUSTABLE), AND 3. SMOKE DETECTORS LOCATED IN THE FAN DISCHARGE SHALL, THROUGH THE FIRE ALARM SYSTEM, DE-ENERGIZE THE SUPPLY FAN WHENEVER PRODUCTS OF COMBUSTION ARE SENSED. 4. EACH FILTER BANK (MERV-7 AND MERV-13 IS CONSIDERED TWO BANKS) WILL HAVE A DIFFERENTIAL PRESSURE SWITCH TO INDICATE HIGH DIFFERENTIAL PRESSURE ACROSS THE FILTERS. THE SWITCH SHALL BE AN ALARM INPUT TO THE DDC SYSTEM. INITIAL SET POINT TO BE 0.6 W.G. FOR MERV-7 AND 0.75 W.G. FOR MERV-I3.
- IF THE NUMBER OF COOLING REQUEST EXCEEDS THE SETPOINT PLUS [3] (ADJUSTABLE), THE DDC SYSTEM SHALL RESET THE SUPPLY AIR TEMPERATURE TO 53°F AND RESTART SUPPLY AIR TEMPERATURE SETPOINT SEQUENCE. I. A HIGH STATIC PRESSURE LIMIT SWITCH LOCATED IN THE FAN DISCHARGE SHALL BE HARD-WIRED TO DE-ENERGIZE THE SUPPLY FAN WHENEVER STATIC PRESSURE EXCEEDS 4.5 W.G. (FIELD ADJUSTABLE), AND AN ALARM 2. A LOW STATIC PRESSURE LIMIT SWITCH LOCATED IN THE FAN INTAKE SHALL BE HARD-WIRED TO DE-ENERGIZE
- 6. SUPPLY AIR TEMPERATURE RESET. DDC SHALL REVIEW AIR TERMINAL COOLING LOOPOUT (% OF COOLING) AT 5 MINUTE INCREMENTS TO RESET SUPPLY AIR TEMPERATURE SETPOINT. THE SUPPLY AIR TEMPERATURE SHALL BE ALLOWED TO RANGE BETWEEN 53°F AND 63°F (ADJUSTABLE). A PID LOOP OUTPUTING PERCENT OF COOLING DEMAND NECESSARY TO MAINTAIN THE NUMBER OF COOLING REQUEST SETPOINT OF [4] (ADJUSTABLE). IF NUMBER OF COOLING REQUEST IS LESS THAN OR EQUAL TO THE NUMBER OF COOLING REQUEST SETPOINT, THE DDC
- 15 MINUTE INTERVALS. RESET THE SETPOINT ONE INCREMENT UP OR DOWN TO MAINTAIN ALL MOTORIZED VOLUME DAMPERS AT 90% OR LESS OF FULL OPEN. THE SYSTEM SHALL MAINTAIN A MINIMUM SUPPLY AIR STATIC PRESSURE
- DUCT.. THE DDC SHALL SELECT THE LOWEST OF THE PRESSURE SIGNALS TO MODULATE THE SUPPLY FAN VFD TO MAINTAIN DUCT STATIC PRESSURE SETPOINT. THE DDC SHALL RESET SUPPLY AIR STATIC PRESSURE SETPOINT IN SMALL INCREMENTS AT
- 5. SUPPLY DUCT STATIC PRESSURE SENSOR(S) SHALL BE LOCATED APPROXIMATELY AT 2/3RD LENGTH OF THE SUPPLY AIR
- DDC, MODULATE THE NORMALLY CLOSED HEATING VALVE TO MAINTAIN DISCHARGE TEMPERATURE SETPOINT (50
- 3. A DUCT AVERAGING TEMPERATURE SENSOR LOCATED DOWNSTREAM OF THE COOLING COIL SHALL, THROUGH THE DDC, MODULATE THE NORMALLY OPEN CHW VALVE TO MAINTAIN DISCHARGE TEMPERATURE SETPOINT (53F, ADJUSTABLE, REFERENCE AIR HANDLING UNIT SCHEDULE). 4. A DUCT AVERAGING TEMPERATURE SENSOR LOCATED DOWNSTREAM OF THE HEATING COIL SHALL, THROUGH THE
- OPEN. WHEN THE UNIT IS STOPPED, THE CHW VALVE AND OA DAMPER SHALL CLOSE.
- VARIABLE FREQUENCY DRIVE, MERV-7 AND 13 FILTERS, AND HEATING AND COOLING COILS. 2. THE UNIT SHALL BE STARTED AND STOPPED THROUGH THE DDC. WHEN THE UNIT IS ENERGIZED, THE ELECTRONICALLY ACTUATED CHILLED (CHW) VALVE SHALL BE ALLOWED TO MODULATE AND THE OA DAMPER SHALL

EXISTING

BAS

DP

I. EACH AIR HANDLING UNIT SYSTEM SHALL BE A DRAW-THROUGH VAV TYPE, CONSISTING OF A SUPPLY FAN WITH

![](_page_50_Figure_28.jpeg)

SEQUENCE OF OPERATION: OCCUPANCY SHALL BE DETERMINED BY AN OCCUPANCY SENSOR MOUNTED IN THE SPACE. THE CONTRACTOR SHALL CONNECT THE LIGHTING CONTROLLER (PROVIDED UNDER DIVISION 26) TO THE DDC FOR OCCUPANCY STATUS SUCH THAT WHEN ALL OCCUPANCY SENSORS ARE INDICATING UNOCCUPIED STATE THE KVCP SHALL ENTER UNOCCUPIED MODE. OCCUPIED MODE EXHAUST AIR I. THE KITCHEN EXHAUST FANS SHALL BE CONTROLLED BY THE EXISTING KITCHEN VENTILATION CONTROL PANEL (KVCP). 2. THE EXHAUST AIR FANS SHALL MODULATE SPEED BASED ON EXHAUST AIR TEMPERATURE SENSOR MOUNTED WITHIN THE

TO DELIVER THE SCHEDULED AIRFLOW.

HOOD CANOPIES BY THE KVCP. THE EXHAUST FAN VFD SHALL BE ADJUSTED (GAIN AND BIAS) DURING TAB WORK

3. THE KVCP SHALL PROVIDE THE BAS WITH THE EXHAUST AIR FLOWS FOR EACH SYSTEM (ANALOG MAKE-UP AIR SIGNAL FROM KVCP). THE DDC SYSTEM SHALL USE THE INFORMATION TO MODULATE MAKE UP AIR FLOWS FROM AHU-2-I

EXISTING

BAS

 $\langle$  DI  $\rangle$ 

DP

MERV 13

\_ \_\_ \_\_ -

(AO)

OUTSIDE

AIR

MD

DP

MERV 7

CONTROL POINTS SUMMARY												
KITCHEN VENTILATION CONTROL	OUT	IPUT	IN	PUT	SOFTWARE							
SYSTEM	DIGITAL	ANALOG	DIGITAL	ANALOG	GRAPHIC	ALARM						
					Х							
EXHAUST FAN FLOW (CFM)				Х								
EXHAUST FAN VFD		Х										
EXHAUST FAN VFD FAILURE						Х						
EXHAUST FAN REMOTE ENABLE	Х											
HOOD TEMPERATURE SENSOR				Х								
HOOD TEMPERATURE SENSOR FAILURE						Х						
HOOD HIGH TEMPERATURE ALARM						Х						
HOOD FIRE ALARM						Х						
BMS COMMUNICATION ALARM						Х						
MAKE UP AIR AFMS		Х		X								
HOT WATER COIL		Х		X								
OCCUPANCY STATUS			Х									
DISHWASHER HOOD FAN			Х									

![](_page_50_Figure_41.jpeg)

CONTROL POINTS SUMMARY											
	001	ſPUT	IN	PUT	SOFT	VARE					
AHU-2-3	DIGITAL	ANALOG	DIGITAL	ANALOG	GRAPHIC	ALARM					
					Х						
SUPPLY FAN START/STOP	X										
SUPPLY FAN VFD		Х									
SUPPLY FAN DIFFERENTIAL PRESSURE			Х								
CHILLED WATER VALVE		Х									
COLD DECK TEMPERATURE				X							
SUPPLY DUCT STATIC PRESSURE				X							
HIGH STATIC PRESSURE LIMIT SWITCH			Х			Х					
VFD FAILURE			Х			Х					
FILTER GAUGE			Х			Х					
OUTSIDE AIR DAMPER		Х				Х					
LOW STATIC PRESSURE SWITCH			Х			Х					
HOT WATER VALVE		Х									
HOT DECK TEMPERATURE				Х							
FREEZE STAT			Х			Х					

![](_page_50_Figure_44.jpeg)

1. DUCT SMOKE DETECTOR FURNISHED, MOUNTED, AND WIRED FOR UNIT SHUT-DOWN BY DIVISION 26. 2. PROVIDE 2 WAY MODULATING CONTROL VALVE UNLESS OTHERWISE INDICATED ON SCHEDULE OR IN SEQUENCE OF OPERATION.

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![](_page_51_Figure_0.jpeg)

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![](_page_52_Picture_0.jpeg)

</td <td></td>	
<br !	
KEYED NOTES (1) SIZE DR DRAIN P (2) UPSTREA ABOVE T (3) DOWNST (4) OPEN VE (5) ROUTE E FOOT. P	S: AIN PIPING AT LEAST ONE AN CONNECTION. PROVIDE AM CLEANOUT WITH REMO TOP RIM OF DRAIN PAN. REAM PLUGGED CLEANOU ENT - DO NOT CAP. DISCHARGE TO INDIRECT E ROVIDE CLEANOUTS AT C
YPICAL (	CONDENSATE DE
	MOTORIZE
	F
	6" H
NOTES	<u>&gt;</u> : VIDE IONIZATION TYPE SM(

![](_page_52_Figure_3.jpeg)

## TYPE SMOKE DETECTORS AS REQUIRED IN DUCT. D MECHANICAL PLANS FOR DUCT AND PIPE ROUTING

### TYPICAL CHILLED WATER VAV AHU DETAIL

 $\langle 2 \rangle$ 

UNION

CHECK VALVE

— ISOLATION VALVE (TYP.)

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![](_page_53_Figure_0.jpeg)

		_											
2	2 (EXISTING TO REMAIN) – 100A 3P	02     	(MOVE) – 100A 3P	03 <u> </u> }	] (MOVE) 100A 3P	04 I	] (MOVE) 100A 3P	05         	(MOVE) - 100A 3P	06	(MOVE) 100A 3P		)7 I (MC — 100, 3P
	- EXISTING FEEDER		– EXISTING FEEDER		EXISTING FEEDER	Ç	EXISTING FEEDER	с	EXISTING FEEDER	Q	EXISTING FEEDER	~	EXI
	( PA 2L	E) NEL ABI		(E) PANEL 2LAB2		(E) PANEL 2LAB3A	P 2L	(E) PANEL LAB3B		(E) PANEL 2LAB4A		(E) PANE 2LAB4	:L 4B
		 38A		0A 83A		88A		58A		0A 50A		0A 38A	 A

![](_page_53_Figure_10.jpeg)

![](_page_53_Picture_12.jpeg)

Drawing Number E1.02

(BOOKS SPECIFICATIONS S	UPERCEDE ANY NOTES BELOW)	SYMBOL	DESCRIPTION
I. SCOPE: THIS DIVISION SHALL INCLUDE ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED	20. SWITCHES: FURNISH AND INSTALL ALL FUSIBLE AND NON-FUSIBLE SWITCHES AS REQUIRED BY		HOME RUN TO PANEL <u>HA</u> , CIRCUITS I, 3, 5 USING 3#I2 (H), 3#I2 (N), I#I2 (G), 3/4" C (UNLESS OTHERWISE NOTED)
INSTALLATION OF NEW ELECTRICAL DISTRIBUTION SYSTEM, HVAC SYSTEM CONNECTIONS, NEW LIGHTING SYSTEM, NEW RECEPTACLES AND OUTLETS, FIRE ALARM AND	<ul> <li>A. HEAVY DUTY WITH NEMA-I OR 3R ENCLOSURE, AS REQUIRED, AND BE PROVIDED WITH</li> <li>PAD-LOCKING FEATURE</li> </ul>	НА-1,5,	EACH CIRCUIT WILL HAVE ITS OWN NEUTRAL ROUND LUMINAIRE RECESSED OR SUSPENDED FROM ABOVE
NOTIFICATION SYSTEM, AND OTHER ELECTRICAL WORK AS INDICATED ON THE PLANS. CONTRACTOR SHALL PROVIDE CONDUITS, CONDUCTORS FOR POWER, CONTROLS, AND	<ul> <li>B. PROVIDED AT EACH MOTOR THAT IS OUT OF SIGHT OF THE SWITCH OR PANEL FROM WHICH FED;</li> <li>AND BE NON-FUSIBLE DISCONNECT FOR SUCH USE.</li> </ul>	XX O 🖨	OPEN = DOWN-LIGHT, HALF-SHADED = WALL-WASHER XX = TYPE ON LUMINAIRE SCHEDULE
LIGHTING, LIGHTING CONTACTOR AND CONTACT CLOSURES, AND ALL REQUIRED APPARATUS REQUIRED FOR FULL OPERATION OF THE ELECTRICAL SYSTEM.	<ul> <li>C. SWITCH MANUFACTURER SHALL BE GE, WESTINGHOUSE, OR SQUARE D.</li> <li>D. DISCONNECT SWITCHES INSTALLED OUTSIDE THE BUILDING SHALL BE IN NEMA-3 ENCLOSURES.</li> </ul>	хх ОН	ROUND WALL-MOUNTED LUMINAIRE SUSPENDED FROM SIDE ARM
2. SITE VISIT AND FAMILIARIZATION: CONTRACTORS PROPOSING TO UNDERTAKE WORK UNDER THIS DIVISION SHALL VISIT THE SITE OF THE WORK, AND FULLY INFORM	E. FUSIBLE SWITCH-STARTER UNITS: EACH UNIT SHALL BE TOTALLY ENCLOSED AND EFFECTIVELY BARRIERED, MANUALLY OPERATED QUICK-MAKE, QUICK BREAK, HORSEPOWER		
THEMSELVES OF ALL CONDITIONS THAT AFFECT THE WORK, OR COST THEREOF. CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS AS RELATED TO THE	RATED STARTER. PROVIDE CLASS R TYPE REJECTION FUSE CLIPS. F. IDENTIFY EACH DEVICE WITH NAMEPLATE SHOWING THE LOAD SERVED, MATCHING THE		XX = TYPE ON LUMINAIRE SCHEDULE
SITE CONDITIONS. ANY DISCREPANCY SHALL BE REPORTED TO THE ENGINEER. 3. NOTICE: CONSIDERATION WILL NOT BE GRANTED FOR ANY ALLEGED MISUNDERSTANDING	EXISTING NAMEPLATES. 21. WIRING DEVICES: FURNISH AND INSTALL ALL WIRING DEVICES AS INDICATED ON THE DRAWINGS.		
OF THE AMOUNT OF WORK TO BE PERFORMED. TENDER OF A PROPOSAL SHALL CONVEY FULL AGREEMENT TO ALL ITEMS AND CONDITIONS SPECIFIED, INDICATED ON THE	DEVICES SHALL IN ALL CASES BE SUITABLE FOR THE USE INTENDED AND SHALL HAVE VOLTAGE AND CURRENT RATINGS ADEQUATE FOR THE LOADS TO BE SERVED.		EXIT SIGN WITH DIRECTIONAL ARROWS AS INDICATED, I OR 2 FACE, UNIVERSAL MOUNT
DRAWINGS, AND/OR REQUIRED BY NATURE OF THE SITE. 4. DISCREPANCIES: SHOULD CONTRACTOR FIND DISCREPANCIES OR OMISSIONS IN THE CONTRACT DOCUMENTS, OD DE IN DOUBT AS TO THE INTENT THEREOF, HE SHALL	A. MOUNTING: HEIGHTS OF ALL DEVICES ARE FROM FINISH FLOOR TO CENTERLINE OF DEVICE. DEVICES SHOWN ON THE DRAWINGS IN GROUPS OF TWO OR MORE SHALL BE LOCATED		XI OR X2 = TYPE ON LUMINAIRE SCHEDULE
IMMEDIATELY OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE SUBMITTING	THE FIRST DEVICE TO THE CENTERLINE OF THE NEXT DEVICE UNLESS OTHERWISE NOTES.	XX 🖂	EMERGENCY EGRESS ONLY LUMINAIRE SURFACE MOUNTED FROM BACK XX = TYPE ON LUMINAIRE SCHEDULE
<ol> <li>DEMOLITION: ALL ELECTRICAL COMPONENTS OF THE EXISTING SYSTEM WHICH ARE NOT UTILIZED FOR NEW CONFIGURATION SHALL BE REMOVED AND DISPOSED OF BY</li> </ol>	DOUBLE POLE, THREE-WAY, FOUR-WAY, KEYED AND DIMMER SWITCHES WHERE NOTES. MOUNT AT 3'-10" A.F.F. AND WITHIN 6" OF ADJACENT DOOR JAMB, UNLESS OTHERWISE NOTED. USE	$\rightarrow$	NEMA 5-20R DUPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WP = WEATHER PROOF, GFI = GFCI PROTECTED, IG = ISOLATED GROUND
CONTRACTOR. REFER TO DEMOLITION NOTES AND DRAWINGS FOR EXTENT OF WORK. 6. TIMELY PLACING OF MATERIALS AND EQUIPMENT: ALL ELECTRICAL APPARATUS SHALL BE	"KEYED" SWITCHES IN LOCATIONS INDICATED. C. CONVENIENCE OUTLETS: SHALL BE GROUNDING TYPE, 20 AMP, 125 VOLT, LEVITON, WHITE		PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER         NEMA 5-20R QUADRAPLEX RECEPTACLE, MOUNTED I8" AFF (UON)
INSTALLED AT THE PROPER TIME DURING PROGRESS OF CONSTRUCTION. COORDINATE WORK OPERATIONS WITH OTHER CRAFTS.	COLOR. WEATHERPROOF DUPLEX OUTLETS SHALL BE LEVITON 5342 WITH SIERRA NO. WPD-8 PLATE. MOUNT AT I8" A.F.F., UNLESS OTHERWISE NOTED. PROVIDE NEMA 5-20R DEVICES		WP = WEATHER PROOF, GFI = GFCI PROTECTED, IG = ISOLATED GROUND PROVIDE WITH SS-302 COVERPLATE AND CIRCUIT NUMBER
7. SPACE REQUIREMENTS: CONTRACTOR FOR WORK UNDER THIS DIVISION SHALL BE FULLY RESPONSIBLE FOR DETERMINING IN ADVANCE OF PURCHASE THAT EQUIPMENT AND	UNLESS OTHERWISE INDICATED. PROVIDE SPECIFICATION (SPEC) GRADE HEAVY DUTY STRAIGHT BLADE DEVICES UNLESS OTHERWISE NOTED. PROVIDE HOSPITAL GRADE DEVICES WHERE	€ L6-30	SIMPLEX RECEPTACLE, MOUNTED 18" AFF (UON) WITH INDICATED CONFIGURATION (E.G. L6-30R = NEMA TWISTLOCK, 250 VAC, 30 A)
MATERIALS PROPOSED FOR INSTALLATION SHALL FIT INTO THE CONFINES INDICATED. 8. MANUFACTURERS' LITERATURE: DELIVER ALL PRINTED TAGS, INSTRUCTIONS, CERTIFIED	INDICATED, OR AS REQUIRED BY CODES. D. ACCEPTABLE ALTERNATE MANUFACTURERS: SHALL BE LSI, H.E. WILLIAMS, HUBBELL, P&S AND		FLUSH FLOOR BOX WITH WIRING DEVICES AS INDICATED ON PLANS
UKAWINGS, FARTS LISTED, CERTIFICATES, ETC., SUPPLIED WITH EQUIPMENT ITEMS, TO THE OWNER. 9 CODES, PERMITS, AND FEES, WORK LINDED THIS DIVISION SHALL BE CONSTRUCTED IN	BRIANT, PROVIDED THEIR DEVICES ARE OF THE SAME FYPE AND QUALITY AND THAT ONLY ONE MANUFACTURER SHALL BE USED THROUGHOUT THE WORK. E. PLATES, SHALL BE MATCHING TYPE FOR ENUSHED ABEAS, AND CALVANUZED STEEL FOR ABEAS		HUBBELL SYSTEM ONE ONLY
7. CODES, FERMITS, AND FEES: WORK UNDER THIS DIVISION SHALL BE CONSTRUCTED IN STRICT CONFORMANCE WITH PERTINENT PROVISIONS OF CITY AND STATE BUILDING CODES	E. FLATES: SHALL BE MATCHING ITTE FOR FINISHED AREAS AND GALVANIZED STEEL FOR AREAS WITH EXPOSED CONDUIT. PROVIDE STAINLESS STEEL PLATES FOR FLUSH MOUNTED DEVICES. PROVIDE CAST ALLIMINUM WET LOCATION TYPE COVED PLATES WITH UNLOED COVEDS FOR	U	JUNCTION BOX
<ul> <li>A. ALL WORK SHALL COMPLY WITH THE 2017 EDITION OF NATIONAL ELECTRIC CODE (NEC).</li> </ul>	DEVICES LOCATED OUTSIDE. GANG OUTLETS GROUPED TOGETHER UNDER A SINGLE WALL PLATE.		LIGHT SWITCH RATED 120/277 VAC. MOUNTED 42" AFE (LION) SINGLE-POLE (LION)
B. OBTAIN ALL REQUIRED PERMITS. PAY ALL LEGAL FEES FOR PERMITS AND INSPECTIONS BY AUTHORITIES HAVING JURISDICTION.	F. INCANDESCENT DIMMERS: I20V SLIDE TO OFF, DECORA STYLE SIMILAR TO SWITCHES, WITH WATTAGE AS REQUIRED PER MANUFACTURER'S RECOMMENDATIONS. POWER FAILURE MEMORY.	\$ ***	2 = 2 - POLE, $3 = 3 - WAY$ , $4 = 4 - WAY$ , $D = DIMMER$ , $M = MOTOR - RATED W/ OL$ , WP = WEATHER PROOF, R = RED COLOR, K = KEYED,
C. ALL WORK SHALL COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.	RFI SUPPRESSION. WHERE SWITCHES ARE SHOWN NEXT TO DIMMERS, PROVIDE MULTI-GANG COVER PLATES. PROVIDE DIMMERS WITH IVORY FINISH, SAME AS SWITCHES UNLESS OTHERWISE		VS = INTEGRAL VACANCY SENSOR, OS = INTEGRAL OCCUPANCY SENSOR
<ul><li>I0. CUTTING AND PATCHING:</li><li>A. CONTRACTOR FOR THIS DIVISION SHALL LAYOUT TO DIMENSION AND LOCATIONS, CUT</li></ul>	DIRECTED. G. INSTALL WIRING DEVICES AND ACCESSORIES PLUMB AND LEVEL, IN ACCORDANCE WITH	(os) (iii)	CEILING OR WALL MOUNTED OCCUPANCY SENSOR LIGHTING CONTROL WITH PASSIVE
AND PATCH ALL OPENINGS ON SURFACES TO BE FORMED, FRAMED, OR CUT. B. SHOULD CONTRACTOR FOR THIS DIVISION FAIL TO ADHERE WITH THIS REQUIREMENT,	MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO FULFILL PROJECT REQUIREMENTS.		TV OUTLET I-GANG BACKBOX, +42" AFF (UON), SS-302 COVER I" C WITH PULL STRING
AS WORK PROGRESSES, ANY OPENINGS SHALL BE CUT AND PATCHED BY GENERAL CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR FOR THIS DIVISION.	H. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE VALUES FOR WIRING DEVICES.		CABLING BY TELECOM CONTRACTOR
PROTECTION OF AFFARATOS: TAKE ALL FRECAUTIONS NECESSART FOR PROFER PROTECTION OF NEW EQUIPMENT, APPARATUS, AND MATERIALS FROM DAMAGE. FAILURE TO DO SO WILL BE CAUSE FOR REJECTION OF ANY ITEM COMING UNDER QUESTION	INSTALLATIONS, AS NECESSARY TO INTERFACE INSTALLATION OF WIRING DEVICES WITH	w 🛡	WALL TELEPHONE OUTLET I-GANG BACKBOX, +42" AFF (UON), SS-302 COVER I" C WITH PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM <u>MEASURED</u> DEVICES AND LOW
12. SHOP DRAWINGS: CONTRACTOR FOR THIS DIVISION SHALL SUBMIT SHOP DRAWINGS AND CATALOGUE DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS AND OTHER	J. INSTALL WIRING DEVICES AFTER WIRING WORK IS COMPLETED. INSTALL ONLY IN ELECTRICAL BOXES THAT ARE CLEAN: FREE FROM EXCESS BUILDING MATERIALS, DIRT, AND DEBRIS.	XX	DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR.
MATERIAL REQUESTED BY ARCHITECT/ENGINEER. SUBMIT PRODUCT DATA FOR SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, WIRES, CABLE, SUPPORTING DEVICES,	INSTALL WALL PLATES AFTER PAINTING WORK IS COMPLETED. K. NO RECEPTACLE OR SWITCH OUTLETS SHALL BE MOUNTED BACK TO BACK. A MINIMUM OF ONE		XX – DENOTES NUMBER OF CAT6E CABLES
IDENTIFICATION COMPONENTS, LIGHT FIXTURES, FIRE ALARM SYSTEM AND COMPONENTS, WIRING DEVICES, MULTI-OUTLET RACEWAYS, CABINETS, AND BOXES. SUBMIT SIX COPIES	<ul> <li>(I) STUD MUST BE BETWEEN OUTLETS.</li> <li>L. INSTALL RECEPTACLES WITH GROUND PIN UP. INSTALL SWITCHES WITH THE "ON" POSITION UP.</li> </ul>		
WITHIN THIRTY (30) DAYS AFTER CONTRACT AWARD, AND IN NOT MORE THAN TWO GROUPS OF SUBMITTALS. SUBMITTALS SHALL CONSIST OF LAYOUTS, WORKING DRAWINGS, CUTS,	M. ALL EXTERIOR DEVICES TO BE WEATHER PROOF AND EXTERIOR RECEPTACLES SHALL BE A GFCI TYPE DEVICE.	$\phi \phi \phi \mathbf{v}$	MULTIOUTLET ASSEMBLY (PLUG MOLD) AS SPECIFIED ON PLANS
AND OPERATING AND PERFORMANCE DATA. ALLOW FOUR (4) WEEKS FOR REVIEW AND APPROVAL OF THE SHOP DRAWINGS BY ENGINEER.	N. ALL I20-VOLT RECEPTACLES OUTLETS LOCATED WITHIN SIX FEET OF SINKS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTION PROTECTION. GROUND FAULT OUTLETS SHALL BE		
GRADE OF STANDARD MANUFACTURE. APPROVED BY UL, AND BE SO LABELED. FOR WIRE AND CABLE MARKED AS REQUIRED BY ART 310-2 NEC INSTALLED BY SKILLED	GROUND FAULT PROTECTION.	EPO	EMERGENCY POWER OFF, MUSHROOM HEAD, MAINTAINED CONTACT PUSH BUTTON
ELECTRICIAN, WORKING UNDER THE DIRECT SUPERVISION OF COMPETENT EXPERIENCED FOREMAN AND/OR SUPERINTENDENT. PRODUCTS SHALL BE INSTALLED IN A THOROUGH	<ul> <li>DO NOT SHARE NEUTRAL CONDUCTORS ON DIMMERS.</li> <li>22. PANEL BOARD: PANEL BOARDS SHALL BE GE TYPE AL. AQ. OR AF OR APPROVED EQUAL. REFER TO</li> </ul>	PC	PHOTOELECTRIC SENSOR AIMED NORTH
WORKMANLIKE MANNER, PRESENTING A NEAT, CLEAN-CUT APPEARANCE WHEN COMPLETED. ANY PART OR PARTS NOT MEETING THIS REQUIREMENT SHALL BE REPLACED	CONSTRUCTION DOCUMENTS FOR THE TYPE AND NUMBER OF BRANCH CIRCUIT BREAKERS. ALL PANELBOARD BUSSING SHALL BE COPPER. PANELBOARDS SHALL BE IN OUTDOOR ENCLOSURE WHERE	ΓC	
OR REBUILT WITHOUT EXTRA EXPENSE TO OWNER. 14. PROTECTION OF EXISTING: PLENUM CABLE SHALL BE PROPERLY SECURED ABOVE CEILING	INSTALLED OUTDOOR. MINIMUM INTERRUPTING RATING FOR PANELS SHALL BE AS INDICATED ON DRAWINGS.		
PER APPLICABLE CODES. I5. WIRING METHODS: THE DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO SHOW THE	23. TRANSFORMERS: DRY TYPE, TWO_WINDING OF THE SIZE AND ELECTRICAL CHARACTERISTICS SHOWN AND SCHEDULED ON DRAWINGS. TRANSFORMERS SHALL BE EQUIPPED WITH 2 2–1/2% TAPS	(M)	POWER COMPANY POWER METER
LOCATIONS OF EQUIPMENT AND ARRANGEMENT OF CIRCUITS ONLY. EXACT LOCATIONS SHALL BE DETERMINED BY ACTUAL MEASUREMENT AT THE SITE. CONTRACTOR SHALL BE	ABOVE AND BELOW RATING. TRANSFORMERS SHALL HAVE A BONDING JUMPER INSTALLED BETWEEN THE SECONDARY NEUTRAL TERMINAL AND METAL CASE, AND SHALL INCLUDE A GROUND TERMINAL	CHA 24 COIL	
FULLY RESPONSIBLE FOR ALL RISES, DROPS, OFFSETS, ETC. NECESSARY TO AVOID CONFLICT WITH STRUCTURAL MEMBERS, AND SIMILAR ITEMS, WHEN INSTALLING ELECTRICAL CONDUCTS, INSTALL EXPOSED CONDUCT AS SHOWN OR NOTED, PARALLEL TO	OF PROPER SIZE TO RECEIVE GROUND CONDUCTOR. TRANSFORMERS SHALL BE RATED AT FULL LOAD IN A 40°C AMBIENT WITH 30°C ULTIMATE HOT SPOT TEMPERATURE RISE ALLOWANCE, WITH CLASS F	LC 277 VAC 30 AS	<u>CHA</u> = CONTACTOR NAME, COIL = COIL CONTROL VOLTAGE, VAC = VOLTAGE RATING, AS = CURRENT RATINGS, P = POLE COUNT, NEMA-# = ENCLOSURE TYPE
HORIZONTAL AND VERTICAL LINES OF STRUCTURES. MAKE BENDS WITH 90 DEGREE TURN	INSULATION HAVING A UL 185°C RATING LIMITING SYSTEM TEMPERATURE TO 115°C ON UNITS SMALLER THAN 15 KVA AND CLASS H INSULATION HAVING UL 220°C RATING LIMIT SYSTEM TEMPERATURE TO 150°C ON 15 KVA AND LARGER UNITS, PROVIDE COPPER WINDINGS	I2 P NEMA-I	
<ul> <li>I5. CONDUIT: FURNISH A COMPLETE RACEWAY SYSTEM FOR BUT NOT LIMITED TO FEEDER, BRANCH CIRCUITS, CONTROL WIRING, AND AUXILIARY SYSTEM WIRING.</li> </ul>	24. FUSES: FUSES IN MAIN, FEEDER, AND BRANCH CIRCUIT SWITCHES, RATED 600 AMPS AND BELOW, FEEDING MOTORS, TRANSFORMERS, AND GENERAL PURPOSE CIRCUITS (UNLESS OTHERWISE	240 VAC 60 AF	CIRCUIT BREAKER, MOLDED-CASE, THERMO-MAGNETIC (UON)
A. USE LIQUID TIGHT FLEXIBLE METAL CONDUIT AND FITTINGS FOR ALL MOTORIZED CONNECTIONS, WHERE EQUIPMENT IS SUBJECT TO MOVEMENT, OR LOCATED OUTDOOR.	SPECIFIED), SHALL BE UL LISTED AND LABELED AS CURRENT LIMITING, TIME-DELAY, 200,000 A.I.C., CLASS RK-5 FUSES SHALL BE BUSSMAN TYPE FRN-R (250V), AND FRS-R (600V).	60 AT св 3 Р	VAC = VOLTAGE RATING, AF = FRAME SIZE, AT = TRIP SETTING, P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)
B. WHERE ENTERING PANELS, PULL BOXES, J-BOXES, OR OUTLET BOXES, SECURED IN PLACE WITH WITH LOCK-NUTS INSIDE AND OUTSIDE, AND INSULATED BUSHING INSIDE.	25. GROUNDING: ALL CONDUIT WORK, MOTOR, STARTERS, AND OTHER ELECTRICAL EQUIPMENT WIRED AND CONNECTED BY THIS CONTRACTOR SHALL BE EFFECTIVELY AND PERMANENTLY GROUNDED IN		
C. BENDS AND OFFSETS MADE WITH APPROVED TOOLS ONLY. BENDS OR OFFSETS IN WHICH THE PIPE IS CRUSHED OR DEFORMED SHALL NOT BE INSTALLED.	FULL ACCORDANCE WITH NEC 250. 26. OTHER MATERIALS: FURNISH AND INSTALL ALL OTHER MATERIALS SUCH AS HARDWARE, TAPE,	240 VAC	DISCONNECT SWITCH VAC = VOLTAGE RATING, AS = SWITCH CURRENT RATING, AF = FUSE SIZE/TYPE (E.G.
D. USE EMITFOR INTERIOR DRY LOCATIONS, PVC FOR UNDERGROUND INSTALLATION, AND RIGID GALVANIZED STEEL FOR EXPOSED LOCATIONS SUBJECT TO DAMAGE.	CLAMPS, CONNECTORS, FITTINGS, SUPPORTS, AND ALL OTHER APPURTENANCES REQUIRED TO COMPLETE THE WORK TO THE FULL INTENT OF THE CONTRACT. TERMINAL LUGS SHALL BE	ου AF []' [] 3 P ΝΕΜΔ–Ι	P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)
FACILITATE INSTALLATION OF THE VARIOUS CONDUIT SYSTEMS. JUNCTION BOXES SHALL BE SUITARI F FOR ENVIRONMENT AND APPLICATION USED FOR	27. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPERATURE, CO2, AND HUMIDITY SENSOR	ς 240 VAC	
<ul> <li>I7. WIRE AND CABLE: ALL WIRE AND CABLE SHALL:</li> <li>A. BE NEW AND OF SOFT DRAWN, ANNEALED, COPPER HAVING A CONDUCTIVITY OF NOT</li> </ul>	QUANTITY AND LOCATIONS. 28. ELECTRICAL CONTRACTOR WILL CONNECT ALL LOW VOLTAGE PLUMBING CONTRACTOR SUPPLIED	60 AF 40 AT <sub>⊠</sub>	COMBINATION CIRCUIT BREAKER, MOTOR CONTROLLER, AND THERMAL OVERLOAD VAC = VOLTAGE RATING, AF = FRAME SIZE, AT = TRIP SETTING,
LESS THAN 98% OF THAT OF PURE COPPER; EACH WIRE CONTINUOUS WITHOUT WELD, SPLICE OR JOINT THROUGHOUT ITS LENGTH; UNIFORM IN CROSS SECTION AND FREE	TRANSFORMERS (FOR AUTOMATIC FLUSH) TO THE NEAREST I20V CIRCUIT (OR IF INDICATED ON PLANS WITH A CIRCUIT NUMBER). CONTRACTOR TO ASSUME ONE TRANSFORMER PER BATHROOM		P = POLE COUNT, NEMA- = ENCLOSURE TYPE (WHEN APPLICABLE)
FROM FLAWS, SCALES, AND OTHER IMPERFECTIONS. B. UNLESS OTHERWISE SPECIFIED OR NOTED, WIRES SHALL BE #12 AWG (FOR PHASE,	THE PLUMBING CONTRACTOR WILL BE RESPONSIBLE FOR LOW VOLTAGE WIRING TO THE FIXTURES. 29. SWITCHGEAR AND DISTRIBUTION PANELS: SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS	GENERAL NOTES:	
NEUTRAL, AND GROUND CONDUCTORS) TYPE THW, THWN, THHN, AS MANUFACTURED BY TRIANGLE, GENERAL ELECTRIC, OKONITE, OR ANACONDA.	OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR	I. SYMBOL LEGEN 2. ABBREVIATION	ND MAY CONTAIN SYMBOLS THAT ARE NOT USED ON ALL DRAWINGS. DEFINITIONS ARE NOT COMPREHENSIVE, AND NOT ALL ABBREVIATIONS MAY APPLY TO ALL D
<ul> <li>C. ALL WIRE #8 AND LARGER SHALL BE STRANDED.</li> <li>D. NOT BE DRAWN INTO A CONDUIT UNTIL ALL WORK WHICH MAY CAUSE INJURY TO NORMAL AT ION 10 CONDUCT TO NORMAL</li></ul>	MAINTENANCE OF THE EQUIPMENT, NEC 110.16. 30. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL GTD'S	ABBREVIATIONS, A 3. ALL COVER PLA	S THESE WILL NOT CONSTITUTE DISMISSAL OF CONTRACTOR RESPONSIBILITY. ATES FOR RECEPTACLES, SWITCHES, AND DATA SHALL BE SS-302 (UON).
INSULATION IS COMPLETE. WHERE TWO OR MORE CIRCUITS RUN TO A SINGLE OUTLET BOX, TAG EACH CIRCUIT AS A GUIDE.	(GENERATOR TRANSFER DEVICES), LIGHTING CONTROL EQUIPMENT, LOW VOLTAGE TRANSFORMERS AND OTHER ELECTRICAL ITEMS WHICH ARE ABOVE CEILINGS. THESE DEVICES SIMILAR TO	4. PROVIDE DECO	RA STYPE SWITCHES FOR LIGHT SWITCHES THAT ARE NOT OCCUPANCY SENSOR TYPE.
E. HAVE ALL STRANDED CONDUCTORS FORNISHED WITH COPPER CONNECTING LUGS, DRILLED, OR REAMED THE FULL DIAMETER OF THE BARE CONDUCTORS. MAINS AND FEEDERS SHALL BE RUN THEID ENTIDE LENGTH IN CONTINUOUS DISCESS WITHOUT	ELECTRICAL JUNCTION BOXES ARE NOT ALLOWED BY NEC TO BE ABOVE HARD CEILINGS. THE ARCHITECT/OWNER WILL NOT ALLOW THE INSTALLATION OF ACCESS PANELS IN THE CEILINGS. BE		
JOINTS OR SPLICES. 18. IDENTIFICATION OF CONDUCTORS AND PANEL ROARD ELEMENTS:	AWARE THAT EQUIFITIENT IN THUSE AREAS OF HARD CEILINGS WILL HAVE TO BE REMOTELY LOCATED TO THE NEAREST ACOUSTICAL LAY-IN CEILING AREAS. 31 FLECTRICAL MATERIAL AND FOURMENT: NO FLECTRICAL MATERIALS, APPARATUS, DEVICES		
A. EACH AND EVERY MAIN AND FEEDER CONDUCTOR SHALL BE IDENTIFIED AT EACH OUTLET POINT WHERE SUCH CONDUCTOR TERMINATES. FEEDER BUNDLES PASSING	APPLIANCES, FIXTURES, OR EQUIPMENT SHALL BE SOLD OR INSTALLED IN THE CITY UNLESS THEY ARE IN CONFORMANCE WITH THE PROVISIONS OF THIS CODE. THE LAWS OF THE STATE OF TEXAS		
THROUGH A JUNCTION OR SUPPORT BOX SHALL ALSO BE IDENTIFIED WITHIN SUCH ENCLOSURE, BUT MAY BE IDENTIFIED IN SUCH LOCATIONS AS A GROUP.	AND ANY APPLICABLE RULES AND REGULATIONS ISSUED UNDER THE AUTHORITY OF THE STATE STATUTES. THE MAKER'S NAME, TRADEMARK, OR OTHER IDENTIFICATION SYMBOL SHALL BE PLACED		
B. IDENTIFY BY USE OF PERMANENT TYPE BANDS, BRADY, OR T AND B. A DEFINITE NUMBER AND/OR LETTER CODE SHALL BE EMPLOYED AND BE UNIFORM THROUGHOUT	ON ALL ELECTRICAL MATERIALS, APPARATUS, DEVICES, APPLIANCES, FIXTURES, AND EQUIPMENT USED OR INSTALLED UNDER THE PROVISIONS OF THIS CODE. ALL ELECTRICAL MATERIALS AND		
EACH CONDUCTOR. C. IDENTIFY EACH SWITCH, INCLUDING MAIN DISCONNECT AND MOTOR STARTER WITH	EQUIPMENT SHALL BE LISTED AND LABELED FOR THE INTENDED USE AND SHALL BE INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY.		
WHITE-ON-BLACK NAMEPLATE, EACH HAVING I/4" HIGH LETTERS. NEATLY AND SECURELY ADHERE NAMEPLATES TO THE UNIT.	31. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONDUIT ROUTING TO ANY MECHANICAL ROOF TOP EQUIPMENT AND ROUTE THE CONDUIT THRU THE EQUIPMENT CURB SO		
	THERE IS NOT A SEPARATE ROOF PENETRATION.		

LECTR	ICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION	ABBREVIATION DEFINITIONS
	LIGHTING CLASS PANEL <u>HA</u> = PANEL NAME CHARACTERISTICS AS INDICATED ON ONE LINE DIAGRAM AND PANEL SCHEDULE DISTRIBUTION CLASS PANEL <u>DA</u> = PANEL NAME CHARACTERISTICS AS INDICATED ON ONE LINE DIAGRAM	2SIW TWO-SPEED, ONE-WINDING MOTOR 2S2W TWO-SPEED, TWO-WINDING MOTOR (A ABANDONED TO REMOVE A PHASE "A" IN THREE-PHASE SYSTEM A AMPERES AF AMPERE FLISE OR FRAME RATING
O →	CONDUIT TURNING UP CONDUIT TURNING DOWN WEATHER HEAD FOR CONNECTING OVER HEAD CONDUCTORS	AFCI ARC FAULT CIRCUIT INTERRUPTER AFF ABOVE FINISHED FLOOR AT AMPERE TRIP SETTING AFG ABOVE FINISHED GRADE B PHASE "B" IN THREE-PHASE SYSTEM BF BALLAST FACTOR
M	20" CU CHATWORTH GROUNDING BUSBAR 40153-020 TMGB PATTERN, 4" W x 1/4" H, 20"L, INSULATED STANDOFFS, PRE-DRILLED & TAP AS REQUIRED FOR CONDUCTORS FIRE ALARM MANUAL PULL STATION WITH TAMPER COVER FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED	BFC       BELOW FINISHED CEILING         BFF       BELOW FINISHED FLOOR         BFG       BELOW FINISHED GRADE         C       PHASE "C" IN THREE-PHASE SYSTEM         C       CONDUIT         CB       CIRCUIT BREAKER         CH       CONSTANT HORSE POWER (2SIW MOTOR)         CKT       CIRCUIT         CS       COMBINATION STARTER (MOTOR STARTER / DISCONNECT)
HD	FIRE ALARM HEAT DETECTOR, CEILING MOUNTED	CTCONSTANT TORQUE (2SIW MOTOR)CTCURRENT TRANSFORMER(D)EXISTING TO BE DEMOLISHED OR REMOVEDDETDDUAL ELEMENT, TIME DELAYDSDISCONNECT SWITCH(EEXISTING TO REMAINEMTELECTRICAL METALLIC TUBINGEPMELECTRONIC POWER METER
R	FIRE ALARM SUPERVISORY SHUTDOWN RELAY FIRE ALARM FIRE-WATER FLOW SWITCH	FAAPFIRE ALARM ANNUNCIATOR PANELFACPFIRE ALARM CONTROL PANELFVNRFULL VOLTAGE NON-REVERSINGGGROUNDGECGROUNDING ELECTRODE CONDUCTORGFI/GFCIGROUND FAULT CIRCUIT INTERRUPTER
TS AV 3	FIRE ALARM FIRE-WATER TAMPER SWITCH FIRE ALARM AUDIO/VISUAL HORN/STROBE	HMT       HARMONIC-MITIGATING TRANSFORMER         HOA       HAND / OFF / AUTO SWITCH (FOR FVNR CONTACTOR)         HLOA       HIGH / LOW / OFF / AUTO (FOR 2SIW OR 2S2W CONTACTOR)         IG       ISOLATED GROUND         J/       JAMMING RATIO         KAIC       KILO AMPERE INTERRUPTING CAPACITY
V <sub>3</sub>	FIRE ALARM VISUAL STROBE	KCMIL       KILO CIRCULAR MILS         KVA       KILO VOLT AMPERES COMPLEX OR APPARENT POWER         KVAR       KILO VOLT AMPERES REACTIVE POWER         KW       KILO WATT REAL POWER         LI       HOT LEG I IN SINGLE-PHASE SYSTEM < 250 VAC
FACP FAAP	FIRE ALARM CONTROL PANEL FIRE ALARM REMOTE ANNUNCIATOR PANEL PUBLIC ADDRESS SPEAKER, CEILING-MOUNTED WALL-MOUNTED VOLUME CONTROL ADJACENT TO LIGHT SWITCH (JJON)	MCC       MOTOR CONTROL CENTER         MLO       MAIN LUGS ONLY         (N       NEW         N       NEUTRAL         NEC       NATIONAL ELECTRICAL CODE (NFPA 70)         NEMA       NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION         NF       NON-FUSIBLE
(S) (B)	PUBLIC ADDRESS SPEAKER, CEILING-MOUNTED PUBLIC ADDRESS INTERCOM CALL BUTTON, WALL-MOUNTED 42" AFF	NFPA       NATIONAL FIRE PROTECTION ASSOCIATION         NSL       NON-SWITCHED HOT LEG         OFCI       OWNER FURNISHED, CONTRACTOR INSTALLED         OS       OCCUPANCY SENSOR         P       POLES         PF       POWER FACTOR         PFCC       POWER FACTOR CORRECTION CAPACITOR
(M) (KP)	INTRUSION ALARM MOTION DETECTOR	PVC       POLY VINYL CHLORIDE         PT       POTENTIAL TRANSFORMER         RAL       RIGID ALUMINUM         RGS       RIGID GALVANIZED STEEL         SEC       SECTION OF LIGHTING-CLASS PANEL         SPD       SURGE PROTECTION DEVICE
	INTRUSION ALARM DOOR CONTACTOR	SS-       STAINLESS STEEL, "XXX" = AUSTENTIC ALLOY TYPE (E.G. 304)         ST       SHUNT-TRIP FOR CIRCUIT BREAKER         THD       TOTAL HARMONIC DISTORTION         TVSS       TRANSIENT VOLTAGE SURGE SUPPRESSION         TYP       TYPICAL         UON       UNLESS OTHERWISE NOTED
	ACCESS CONTROL MAGNETIC DOOR LOCK	V VOLTS VAC VOLTS, ALTERNATING CURRENT VDC VOLTS, DIRECT CURRENT VFCI VENDOR FURNISHED, CONTRACTOR INSTALLED
	ACCESS CONTROL DOOR HOLD-OPEN	VFD VARIABLE FREQUENCY DRIVE VS VACANCY SENSOR VT VARIABLE TORQUE (2SIW MOTOR) W WIRES, NOT INCLUDING GEC
	VIDEO SURVEILLANCE CCTV CAMERA	WP     WEATHER PROOF       #     AMERICAN WIRE GAGE       Ø     PHASE       UF     MICRO FARAD
<u>TLA</u> DRY-TYPE 480: 208Y/I20 VAC 45 KVA NEMA-2	TRANSFORMER = <u>TLA</u> TRANSFORMER NAME TYPE = TRANSFORMER TYPE (E.G. DRY-TYPE, HARMONIC-MITIGATING), VAC = WINDING VOLTAGES (PRIMARY : SECONDARY), KVA = CONTINUOUS CAPACITY, TAPS = QUANTITY/DEVIATION OF TAPS, RISE = TEMP RISE, INSUL = INSULATION CLASS, WOUND = WINDING MATERIAL/CONFIGURATION, NEMA- = ENCLOSURE TYPE	Ω ΟΗΜS
VFD	VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECTING MEANS, VFCI MOTOR, SINGLE OR THREE PHASE HP = HORSE POWER	
-	EQUIPMENT CONNECTION	

S. SUBMIT FORMAL REQUEST FOR INFORMATION WHEN ENCOUNTERING CONFLICTS OR AMBIGUOUS SYMBOLS OR

![](_page_54_Picture_7.jpeg)

![](_page_55_Figure_0.jpeg)

## ELECTRICAL LOAD ANALYSIS

PROJECT: CULINARY ARTS SHELL INTERIOR BUILDOUT KVA ADDED LOAD DESCRIPTION I. ADDED (47) LIGHTS TO PLAN (49W / EACH) +2.3 KVA I. ADDED (II) RECEPTACLES ADDED TO PLAN 180 W / EACH +2 KVA I. ADDED A NEW MECHANICAL UNIT ( AHU-2-3 – 25 HP) +30 KVA 2. ADDED (7) KITCHEN EXHAUST FAN ( 2 HP / EACH) +20 KVA 3. NEW KITCHEN EQUIPMENTS (157 KVA x 0.65) +102 KVA TOTAL LOAD ADDED (KVA) +156 KVA TOTAL AMP ADDED (AMP) +188 AMP

EXISTING LOAD (AMP) 667 AMP

THE TOTAL LOAD AFTER RENOVATION IS 855 AMP. EXISTING SERVICE FOR THE BUILDING IS 1000 AMP @ 480Y/277 VAC 3¢, 4W.

![](_page_55_Picture_10.jpeg)

		X SU	RFACE		100% N	EUTRAL			NT SPD			NEM	۹		100 A	<b>.</b>	3 ø	4 WIRE
PANE	:L: 2H1 MTG	i: FLU	JSH B	US:	XS	YS GND	OP	<b>T:</b> F	FTL		ENCL:	TYPE	1	MA	IN: CU/SN	BUS	14	KAIC
LOCATI	ON: ELEC ROOM	STR	RUT		IS	SO GND		F	FUSIBLE			STEE	L		100 A	MLO	480Y/27	7 <b>VOLT</b>
FED FR	OM:	1			1				1		-	1			1			1
WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE / P	CKT NO	(k)	4 /A)	E (kV	3 (A)	(k)	C /A)	CKT NO	P / F	TRIP I Rate '	LOAD TYPE	LOA	AD DESCRIPTION		WIRE SIZE
3-#12, 1-#12, 1-#12, 3/4"C	(E) DISHWASHER	Q	20 / 3	1	3.0	1.0					2	1 /	20	L	(E) LIGHTING			1-#12, 1-#12, 1-#12, 3/4"C
				3			3.0	1.0			4	1 /	20	L	(E) LIGHTING			1-#12, 1-#12, 1-#12, 3/4"C
				5					3.0	1.0	6	1 /	20	L	(E) LIGHTING			1-#12, 1-#12, 1-#12, 3/4"C
3-#12, 1-#12, 1-#12, 3/4"C	(E) BOOSTER HEATER E251/B&C RM A218	Q	20 / 3	7	3.0	1.0					8	1 /	20	L	(E) LIGHTING			1-#12, 1-#12, 1-#12, 3/4"C
				9			3.0	1.0			10	1 /	20	L	(E) LIGHTING			1-#12, 1-#12, 1-#12, 3/4"C
				11					3.0	1.0	12	1 /	20	L	(E) LIGHTING			1-#12, 1-#12, 1-#12, 3/4"C
3-#12, 1-#12, 1-#12, 3/4"C	(E) DOUGH SHEETER	Q	20 / 3	13	4.4	0.0					14	1	20		SPARE			
				15			4.4	0.6			16	1 /	20	L	(N) LIGHTING - PA	ASTRY LAB 2		1-#12, 1-#12, 1-#12, 3/4"C
				17					4.4	1.0	18	1 /	20	L	(N) LIGHTING - CL	ULINARY LAB 2		1-#12, 1-#12, 1-#12, 3/4"C
	SPARE		30 3	19	0.0	4.3					20	3 /	20	Q	(N) BOOSTER HE	ATER - LAB 2		3-#12, 1-#12, 1-#12, 3/4"C
				21			0.0	4.3			22							
				23					0.0	4.3	24							
3-#12, 1-#12, 1-#12, 3/4"C	(N) DISHWASHER - LAB 2	Q	20 / 3	25	3.0	4.4					26	3 /	20	K	(N) DOUGH SHEE	TER		3-#12, 1-#12, 1-#12, 3/4"C
				27			3.0	4.4			28							
				29					3.0	4.4	30							
	SPARE		20 1	31	0.0	0.0					32	1	20		SPARE			
	SPARE		20 1	33			0.0	0.0			34	1	20		SPARE			
	SPARE		20 1	35					0.0	0.0	36	1	20		SPARE			
	SPARE		20 1	37	0.0	0.0					38	1	20		SPARE			
	SPARE		20 1	39			0.0	0.0			40	1	20		SPARE			
	SPARE		20 1	41					0.0	0.0	42	1	20		SPARE			
			Tota	I Load	: 24	kVA	25 k	κVA	25 I	kVA			I					
			Tota	Amps	: 87	' A	89	А	91	А	_							
						L	OAD AN	VALYSIS	S									
	LOAD TYPE	CO	NNECTED		FACTOR		DEM	AND							TO	TALS		
LIGHTING	L		7463	3 VA	125.00%			932	29 VA									
RECEPTACLE	R		(	) VA	0.00%				0 VA				CO	NNEC	TED LOAD (kVA) 7	74 kVA		
EQUIPMENT	Q		53200	) VA	100.00%			5320	00 VA					DEMA	AND LOAD (kVA) 7	76 kVA		
COOLING	C		(	) VA	0.00%				0 VA				CON	NECTE	D CURRENT (A)	89 A		
HEATING	Н		(	VA	0.00%				0 VA					DEMAN	ID CURRENT (A)	91 A		
MOTOR	Μ		(	VA	0.00%				0 VA									
LARGEST MOTOR	G		(	VA	0.00%				0 VA									
KITCHEN	К		13296	6 VA	100.00%			1329	96 VA									
EXISTING	X		(	VA	0.00%				0 VA									
NOTES:																		

ALL WIRING FOR 20A/1P CKT. SHALL CONSIST OF 2#12, 1#12G IN 3/4"C UNLESS OTHERWISE NOTED. \* PROVIDE A BREAKER WITH GFCI \*\* ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

	:I · 0⊔0	X SU	RFACE		100% NE	EUTRAL	X	INT SPD			NEMA		100 A	DUIC	3 ø	4 WIRE
FANE	L. 202	MTG: FLU	JSH B	US:	X SY	YS GND	OPT:	FTL	E	ENCL:	TYPE 1	MAIN:	CU/SN	603	14	KAIC
LOCATION: ELEC ROOM		STI	RUT		IS	O GND		FUSIBLE			STEEL		100 A	MCB	480Y/277	VOLT
FED FR	OM:							_								
WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE / P	CKT NO	ے (kV	4 (A)	B (kVA)	C (kV	; A)	CKT NO	P / TRIP RATE	LOAD TYPE	L	OAD DESCRIPTION		WIRE SIZE
3-#12, 1-#12, 1-#12, 3/4"C	(N) KEF-17	M	15 / 3	1	0.9	0.9			-	2	3 / 15	M (N	) KEF-18			3-#12, 1-#12, 1-#12, 3/4"C
				3			0.9 0.9			4						
				5				0.9	0.9	6						
3-#12, 1-#12, 1-#12, 3/4"C	(N) KEF-19	М	15 / 3	7	0.9	0.9				8	3 / 15	M (N	) KEF-20			3-#12, 1-#12, 1-#12, 3/4"C
				9			0.9 0.9			10						
				11				0.9	0.9	12						
3-#12, 1-#12, 1-#12, 3/4"C	(N) KEF-21	М	15 / 3	13	0.9	0.9				14	3 / 15	M (N	) KEF-22			3-#12, 1-#12, 1-#12, 3/4"C
				15			0.9 0.9			16						
				17				0.9	0.9	18						
3-#12, 1-#12, 1-#12, 3/4"C	(N) KEF-23	М	15 / 3	19	0.8					20	/					
				21			0.8			22	/					
				23				0.8		24	/					
			/	25						26	/					
			/	27						28	/					
			/	29						30	/					
			/	31						32	/					
			/	33						34	/					
			/	35						36	/					
			/	37						38	/					
			/	39						40	/					
			/	41						42	/					
	•		Tota	I Load	l: 6 k'	VA	6 kVA	6 k\	VA						·	
			Tota	Amps	<b>s:</b> 23	A	23 A	23	A	-						
						L	OAD ANALYSI	S								
	LOAD TYPE	CO	NNECTED		FACTOR		DEMAND						٦	TOTALS		
LIGHTING	L		(	VA	0.00%			0 VA								
RECEPTACLE	R		(	VA	0.00%			0 VA			C	ONNECTE	D LOAD (kVA	<b>)</b> 19 kVA		
EQUIPMENT	Q		(	VA	0.00%			0 VA				DEMAN	D LOAD (kVA	<b>)</b> 19 kVA		
COOLING	С		(	VA	0.00%			0 VA			CO	NNECTED	CURRENT (A	) 23 A		
HEATING	Н		(	VA	0.00%			0 VA				DEMAND	CURRENT (A	) 23 A		
MOTOR	Μ		19300	VA	100.00%		193	800 VA								
LARGEST MOTOR	G		(	VA	0.00%			0 VA								
KITCHEN	К		(	VA	0.00%			0 VA								
EXISTING	X		(	VA	0.00%			0 VA								
NOTES:																

ALL WIRING FOR 20A/1P CKT. SHALL CONSIST OF 2#12, 1#12G IN 3/4"C UNLESS OTHERWISE NOTED. \* PROVIDE A BREAKER WITH GFCI \*\* ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

			SUIDE			1(	<u> </u>									100 4		<b>3 a</b> 1	WIDE
PANE	L: 2LAB4B				вн	e.				r. v		Е			N4/		BUS	<u> </u>	
					DU	s	<u> </u>		UPI			E			IVIA			10	
EUCATI								SO GIND						SIEEL		100 A		2001/120	
WIRE SIZE	LOAD DESCRIPTION	L	OAD 1 YPE R	TRIP RATE /	Р (	CKT NO	()	A (VA)	B (kV	; A)	C (kV	C /A)	CKT NO	P / TRIP RATE	LOAD TYPE	LC	DAD DESCRIPTION		WIRE SIZE
1-#12, 1-#12, 1-#12, 3/4"C	RANGE - E650		Q	20 /	1	1	0.8	1.3		-		-	2	1 / 20	Q; K	HOOD LIGHTS	AND TEMP SENSOR	1-	#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER					3			0.0	0.4			4	1 / 20	R	CONVENIENCE	OUTLET - E13	1-	#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	WORKTOP REFRIGERATOR - 817		Q	20 /	1	5					0.4	0.4	6	1 / 20	Q	WORKTOP REF	RIGERATOR - 817	1-	#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER					7	0.0	0.0					8			SHUNT TRIP BF	REAKER		
1-#12, 1-#12, 1-#12, 3/4"C	WORKTOP REFRIGERATOR - 817		Q	20 /	1	9			0.4	0.1			10	1 / 20	Q	ELECTRONIC IC	GNITION - E633	1-	#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER					11					0.0	0.0	12			SHUNT TRIP BP	REAKER		
1-#12, 1-#12, 1-#12, 3/4"C	HOOD LIGHTS AND TEMP SENSOR	(	Q; K	20 /	1	13	1.3	0.2					14	1 / 20	Q	ELECTRONIC IC	GNITION - E633	1-	#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	HOOD LIGHTS AND TEMP SENSOR	(	Q; K	20 /	1	15			1.3	0.0			16			SHUNT TRIP BF	REAKER		
1-#12, 1-#12, 1-#12, 3/4"C	RECEPT - FRYER - E704		ĸ	20 /	1	17					1.0	1.0	18	1 / 20	K	RECEPT - FRYE	ER - E704	1-	#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER					19	0.0	0.0					20			SHUNT TRIP BF	REAKER		
1-#12, 1-#12, 1-#12, 3/4"C	RECEPT - FILTER - E704		ĸ	20 /	1	21			1.0	1.0			22	1 / 20	K	RECEPT - FILTE	ER - E704	1-	#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER					23					0.0	0.0	24			SHUNT TRIP BF	REAKER		
1-#12, 1-#12, 1-#12, 3/4"C	REFRIGERATOR - E743		K	20 /	1	25	1.4	0.4					26	1 / 20	Q	RANGE - E650		1-	#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	CONVENIENCE OUTLET - E13		R	20 /	1	27			0.4	0.0			28			SHUNT TRIP BF	REAKER		
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644		R	20 /	1	29					1.9	0.2	30	3 / 40	Q	STEAMER - CO	UNTER TOP	3	J-#8, 1-#8, 1-#10, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644		R	20 /	1	31	1.9	0.2					32						
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644		R	20 /	1	33			1.9	0.2			34						
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644		R	20 /	1	35					1.9	0.0	36			SHUNT TRIP BF	REAKER		
1-#12, 1-#12, 1-#12, 3/4"C	FREEZER PROTECTION PUMP		Q	20 /	1	37	0.5	0.0					38	1 20		SPARE			
	SPARE			20	1	39			0.0	0.0			40	1 20		SPARE			
	SPARE			20	1	41					0.0	0.0	42	1 20		SPARE			
	SPARE			20	1	43	0.0	0.0					44	1 20		SPARE			
	SPARE			20	1	45			0.0	0.0			46	1 20		SPARE			
	SPARE			20	1	47					0.0	0.0	48	1 20		SPARE			
	SPARE			20	1	49	0.0	0.0					50	1 20		SPARE			
	SPARE			20	1	51			0.0	0.0			52	1 20		SPARE			
	SPARE			20	1	53					0.0	0.0	54	1 20		SPARE			
	SPARE			20	1	55	0.0	0.0					56	1 20		SPARE			
	SPARE			20	1	57			0.0	0.0			58	1 20		SPARE			
	SPARE			20	1	59					0.0	0.0	60	1 20		SPARE			
				-	Total I	Load:	8	kVA	7 k	VA •	7 k	VA							
					otal A	mps:	6	57 A	54		56	A							
					<b>_</b>						15								
			CON	NECIE		// F			DEIW	AND	0.1/0					I			
						/A // 1		/		0/									
					400 V			o (		о <sup>2</sup> л (				Ľ			) 18 k\/A		
					۷ 000+ ۱۸ ۵		00.007	0		4(				<u> </u>					
HEATING					0.0		0.00%										) 50 A		
MOTOR	M				0.1		0.00%												
	G				0.1	/A	0.00%												
KITCHEN	K				8808 \	/A	65 00%	<u> </u>		57	725 VA								
					0000 V		0.000/0			51									

			SURFACE		1	00%	NEUTRAL			INT SPD			NEMA		100 A	3 ø	4 WIRE
PAN	EL: ZLAB4B	MTG: X	FLUSH	В	US:	X	SYS GND	OP	т: Х	FTL	E	ENCL:	TYPE 1	MA	NN: CU/SN	10	KAIC
LOCAT	ION: CULINARY LAB 2		STRUT				SO GND			FUSIBLE	Ξ		STEEL		100 A MLO	208Y/12	
FED FF	ROM:					]											
WIRE SIZE	LOAD DESCRIPTION	LOA TYF	AD TRIP PE RATE	/ <b>P</b>	CKT NO	()	A (VA)	E (k\	B /A)	(k)	C VA)	CKT NO	P / TRIP RATE	LOAD TYPE	LOAD DESCRIPTIO	DN	WIRE SIZE
1-#12, 1-#12, 1-#12, 3/4"C	RANGE - E650	Q	20	/ 1	1	0.8	1.3					2	1 / 20	Q; K	HOOD LIGHTS AND TEMP SENS	OR	1-#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER				3			0.0	0.4			4	1 / 20	R	CONVENIENCE OUTLET - E13		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	WORKTOP REFRIGERATOR - 817	Q	20	/ 1	5					0.4	0.4	6	1 / 20	Q	WORKTOP REFRIGERATOR - 81	7	1-#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER				7	0.0	0.0					8			SHUNT TRIP BREAKER		
1-#12, 1-#12, 1-#12, 3/4"C	WORKTOP REFRIGERATOR - 817	Q	20	/ 1	9			0.4	0.1			10	1 / 20	Q	ELECTRONIC IGNITION - E633		1-#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER				11					0.0	0.0	12			SHUNT TRIP BREAKER		
1-#12, 1-#12, 1-#12, 3/4"C	HOOD LIGHTS AND TEMP SENSOR	Q;	K 20	/ 1	13	1.3	0.2					14	1 / 20	Q	ELECTRONIC IGNITION - E633		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	HOOD LIGHTS AND TEMP SENSOR	Q;	K 20	/ 1	15			1.3	0.0			16			SHUNT TRIP BREAKER		
1-#12, 1-#12, 1-#12, 3/4"C	RECEPT - FRYER - E704	K	20	/ 1	17					1.0	1.0	18	1 / 20	K	RECEPT - FRYER - E704		1-#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER				19	0.0	0.0					20			SHUNT TRIP BREAKER		
1-#12, 1-#12, 1-#12, 3/4"C	RECEPT - FILTER - E704	K	20	/ 1	21			1.0	1.0			22	1 / 20	K	RECEPT - FILTER - E704		1-#12, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER				23					0.0	0.0	24			SHUNT TRIP BREAKER		
1-#12, 1-#12, 1-#12, 3/4"C	REFRIGERATOR - E743	K	20	/ 1	25	1.4	0.4					26	1 / 20	Q	RANGE - E650		1-#12, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	CONVENIENCE OUTLET - E13	R	20	/ 1	27			0.4	0.0			28			SHUNT TRIP BREAKER		
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644	R	20	/ 1	29					1.9	0.2	30	3 / 40	Q	STEAMER - COUNTER TOP		3-#8, 1-#8, 1-#10, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644	R	20	/ 1	31	1.9	0.2					32					
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644	R	20	/ 1	33			1.9	0.2			34					
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644	R	20	/ 1	35					1.9	0.0	36			SHUNT TRIP BREAKER		
1-#12, 1-#12, 1-#12, 3/4"C	FREEZER PROTECTION PUMP	Q	20	/ 1	37	0.5	0.0					38	1 20		SPARE		
	SPARE		20	1	39			0.0	0.0			40	1 20		SPARE		
	SPARE		20	1	41					0.0	0.0	42	1 20		SPARE		
	SPARE		20	1	43	0.0	0.0					44	1 20		SPARE		
	SPARE		20	1	45			0.0	0.0	0.0	0.0	46	1 20		SPARE		
	SPARE		20	1	47	0.0	0.0			0.0	0.0	48	1 20		SPARE		
	SPARE		20		49	0.0	0.0	0.0	0.0			50	1 20		SPARE		
	SPARE		20	1	51			0.0	0.0	0.0	0.0	52	1 20		SPARE		
	SPARE		20	1	53	0.0	0.0			0.0	0.0	54	1 20		SPARE		
	SPARE		20	1	55	0.0	0.0	0.0	0.0			50	1 20		SPARE		
	SPARE		20	1	57			0.0	0.0	0.0	0.0		1 20		SPARE		
	SFARE		20	Tota		0	k)/A	7 4	·\/ A	0.0		00	1 20		SFARE		
				Total		6		- / K 5/		/ r 56							
				TOtal	Amps.		<u>, 1</u>			3	7						
				[FD	F	ТОТО	R I			<b>,</b>					TOTALS		
		`		0	VA	0.00%		DEI		0 VA							
BECEPTACLE	B			8400	VA	100.00%	<u>/</u>		84	00 VA			С		TED LOAD (kVA) 21 kVA		
EQUIPMENT	Q			4000	VA	100.00%	- /		40	00 VA			0	DEMA	AND LOAD (kVA) 18 kVA		
COOLING	Ċ			0	VA	0.00%	-		.0	0 VA			00	NNECTE	ED CUBBENT (A) 59 A		
HEATING				0	VA	0.00%				0 VA				DEMAN			
MOTOR	M			0	VA	0.00%				0 VA							
LARGEST MOTOR	G			0	VA	0.00%				0 VA							
KITCHEN	K			8808	VA	65.00%	,		57	25 VA							
EXISTING	X			0	VA	0.00%				0 VA							
NOTES:	I			-	I		I			I					1		

ALL WIRING FOR 20A/1P CKT. SHALL CONSIST OF 2#12, 1#12G IN 3/4"C UNLESS OTHERWISE NOTED. \* PROVIDE A BREAKER WITH GFCI \*\* ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR

\*\*\* REFER TO FOOD SERVICE DESIGN FOR THE CONNECTION PRIOR TO INSTALLATION

	21 4 8 2	>	K SURFA	CE	100%	NEUTR/	AL	11	NT SPD		NE	MA			100 A	BUS	3 ø	<b>y</b> 4	WIRE
FANEL.	ZLADZ	MTG:	FLUSH	BUS:	Х	SYS GN	ID <b>OP</b>	<b>r:</b> F	TL	ENCL:	TYF	PE 1	MAI	N:	CU/SN		1(	0	KAIC
LOCATION:	ELEC ROOM					ISO GN	D	F	USIBLE		STI	EEL			100 A	MLO	208Y	/120	VO
FED FROM:									1										
WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE /	CKT NO	(k)	A √A)	E (kV	3 /A)	(kV	C /A)	CKT NO	P/	TRIP L RATE 1	OAD YPE	LC	DAD DESCRIPTIO	N		WIRE SIZE
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES UC REF	R	20 /	1 1	0.4	0.6		-		_	2	2 /	20	К	TABLE	MIXER		2-#12,	1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES UC REF	R	20 /	1 3			0.4	0.6			4								
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES UC REF	R	20 /	1 5					0.4	0.6	6	2 /	20	Κ	TABLE	MIXER		2-#12,	1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES UC REF	R	20 /	1 7	0.4	0.6					8								
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES UC REF	R	20 /	1 9			0.4	0.6			10	2 /	20	Κ	TABLE	MIXER		2-#12,	1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES UC REF	R	20 /	1 11					0.4	0.6	12								
2-#12, 1-#12, 1-#12, 3/4"C	FREEZER - E639	Q	20 /	2 13	1.7	0.6					14	2 /	20	Κ	TABLE	MIXER		2-#12,	1-#12, 1-#12, 3/4"C
				15			1.7	0.6			16								
1-#12, 1-#12, 1-#12, 3/4"C	RECEPT - PASTRY LAB 2	R	20 /	1 17					0.7	0.6	18	2 /	20	Κ	TABLE	MIXER		2-#12,	1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES - E11	R	20 /	1 19	0.2	0.6					20								
3-#12, 1-#12, 1-#12, 3/4"C	PROOFER - E687	K	20 /	3 21			1.8	0.6			22	2 /	20	Κ	TABLE	MIXER		2-#12,	1-#12, 1-#12, 3/4"C
				23					1.8	0.6	24								
				25	1.8	1.6					26	2 /	20	Q	ICE CR	EAM FREEZER - E	784	2-#12,	1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	REFRIGERATOR - E193	Q	20 /	1 27			1.0	1.6			28								
1-#12, 1-#12, 1-#12, 3/4"C	REFRIGERATOR - E193	Q	20 /	1 29					1.0	0.0	30				SPACE				
1-#12, 1-#12, 1-#12, 3/4"C	RECEPT - TEACHER STATION	R	20 /	1 31	0.2	0.0					32				SPACE				
1-#12, 1-#12, 1-#12, 3/4"C	RECEPTACLES - E11	R	20 /	1 33			0.2	0.5			34	1 /	20	М	(N) KEF	-25		1-#12,	1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	HOOD LIGHTS AND TEMP	Q; K	20 /	1 35					1.3	0.5	36	1 /	20	М	(N) KEF	-24		1-#12,	1-#12, 1-#12, 3/4"C
3-#12, 1-#12, 1-#12, 3/4"C	ROTATING RACK OVEN - E672	K	20 /	3 37	1.8	1.8					38	3 /	20	K	ROTAT	ING RACK OVEN -	E672	3-#12,	1-#12, 1-#12, 3/4"C
				39			1.8	1.8			40								
				41					1.8	1.8	42								
	SHUNT TRIP BREAKER			43	0.0	0.0					44				SHUNT	TRIP BREAKER			
	SPARE		20	1 45			0.0	2.3			46	3 /	30	K	INDUC	FION RANGE - E69	5	3-#10,	1-#10, 1-#10, 3/4"C
	SPARE		20	1 47					0.0	2.3	48								
	SPARE		20	1 49	0.0	2.3					50								
	SPARE		20	1 51			0.0	0.0			52				SHUNT	TRIP BREAKER			
	SPARE		20	1 53					0.0	0.0	54	1	20		SPARE				
	SPARE		20	1 55	0.0	0.0					56	3	30		SPARE				
	SPARE		20	1 57			0.0	0.0			58								
	SPARE		20	1 59					0.0	0.0	60								
			T	otal Load:	14	kVA	16	(VA	14 k	<va< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></va<>									
			То	tal Amps:	12	1 A	13		120	D A									
				TED					5										
			CONNE				DEM								10				
				0 VA		/o		2400				001	NEATE						
	R			0520 VA		)%		0520								45 KVA			
				0002 VA		)70 )/		0002							AD (KVA) DENIT (A)	104 A			
						/0									ENT (A)				
MOTOR	M					/0 )%		1000						JUNF		55 A			
	G			0.00 VA				- 1000 r											
				31645 VA	65.00	/0 0/		20560											
EXISTING				0 1040 VA		/0		20008											
	^			UVA	0.00	/0		L											

\*\*\* REFER TO FOOD SERVICE DESIGN FOR THE CONNECTION PRIOR TO INSTALLATION

PANEL:	2LAB4A	MTG:	SURFA X FLUSH	ICE BL	JS:	100% X	NEUTRA SYS GNI	L O <b>OP</b> T	<b>T</b> : X	INT SF FTL	D EN	NI CL: TY	EMA PE 1	N	IAIN:	100 A CU/SN	BUS -	3	<b>ø</b> 4 10	WIRE KAIC
LOCATION:	CULINARY LAB 2						ISO GNE	)		FUSIB	LE	ST	EEL			100 A	MLO	208	Y/120	VO
WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	TRIP RATE /	P CK	T D	ے (kV	A /A)	E (kV	B /A)		C (kVA)	CKT NO	P /	TRIP RATE	LOAD TYPE	LC	DAD DESCRIPTIO	N		WIRE SIZE
1-#12, 1-#12, 1-#12, 3/4"C	RANGE - E650	Q	20 /	1 1		0.4	0.4					2	1 /	20	Q	RANGE	- E650		1-#12	2, 1-#12, 1-#12, 3/4"C
	SHUNT TRIP BREAKER			3				0.0	0.0			4				SHUNT	TRIP BREAKER			
1-#12, 1-#12, 1-#12, 3/4"C	WORKTOP REFRIGERATOR	Q	20 /	1 5		0.0	0.0			0.4	1 0.4	6	1 /	20	Q	WORKT	OP REFRIGERAT	OR	1-#12	2, 1-#12, 1-#12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	WORKTOP REFRIGERATOR	0	20 /	1 9		0.0	0.0	0.4	0.6			10	1 /	20	0	KETTLE	- E809		1-#12	2. 1-#12. 1-#12. 3/4"C
	SHUNT TRIP BREAKER			11				0.1	0.0	0.0	) 00	12				SHUNT	TRIP BREAKER			
1-#12 1-#12 1-#12 3/4"C	HOOD LIGHTS AND TEMP	O. K	20 /	1 13		13	02			0.0	0.0	14	1 /	20	0	FLECT	RONIC IGNITION -	F633	1-#12	2 1-#12 1-#12 3/4"C
1-#12 1-#12 1-#12 3/4"C	FREEZER - E194	0	20 /	1 15		1.0	0.2	14	0.0			16				SHUNT		2000	1 // 12	
1-#12 1-#12 1-#12 3/4"C		0	20 /	1 17	,				0.0	0.2	2 12	18	1 /	20	ĸ	HOODI	IGHTS AND TEME	P	1-#12	2 1-#12 1-#12 3/4"C
	SHUNT TRIP BREAKER			19		0.0	13			0.2	- 1.2	20	1 /	20	ĸ	HOODI		р	1_#12	2, 1 #12, 1 #12, 3/4"C
1-#12 1-#12 1-#12 3/4"C	E11 - CONVENIENCE OUTLET	B	20 /	1 21	·	0.0	1.0	02	04			22	1 /	20	0	BANGE	- E650		1_#12	2, 1 #12, 1 #12, 3/4"C
2-#12 1-#12 1-#12 3/4"C	ICE CBEAM EBEEZEB - E784	0	20 /	2 23				0.2	0.1	1.6	3 00	24				SHUNT			1 // 12	
				25		1.6	0.1				0.0	26	1 /	20	0	FLECT	RONIC IGNITION -	E633	1-#12	2 1-#12 1-#12 3/4"C
1-#12 1-#12 1-#12 3/4"C	BEEBIGEBATOB - E193	0	20 /	1 27	,	1.0	0.1	1.3	0.0			28				SHUNT		2000		
1-#12 1-#12 1-#12 3/4"C	ICE MACHINE - E109	0	20 /	1 29	,			1.0	0.0	0.2	> 01	30	1 /	20	0	CHABR	OILER - E660		1-#12	2 1-#12 1-#12 3/4"C
	SHUNT TRIP BREAKER			31		0.0	0.0			0.1	- 0.1	32				SHUNT	TRIP BREAKER			
1-#12 1-#12 1-#12 3/4"C	CONVENIENCE OUTLET - E13	B	20 /	1 33		0.0	0.0	04	0.4	-		34	1 /	20	B	CONVE		- E13	1-#12	2 1-#12 1-#12 3/4"C
1-#12 1-#12 1-#12 3/4"C	ELECTRIC CORD REEL - E644	B	20 /	1 35				0.1	0.1	1 (	9 19	36	1 /	20	B	FLECTE		F644	1_#12	2, 1 #12, 1 #12, 3/4"C
1-#12, 1-#12, 1-#12, 3/4"C	ELECTRIC CORD REEL - E644	B	20 /	1 37	,	19	0.5					38	1 /	20	B	CONVE		- F10	1-#12	2, 1 #12, 1 #12, 3/4"C
3-#10 1-#10 1-#10 3/4"C	DISPOSAL - E123	0	25 /	3 39	)		0.0	1.3	0.5			40	1 /	20	M	KEE-16		210	1-#12	2 1-#12 1-#12 3/4"C
				41					0.0	1.5	3 0.0	42	1	20		SPARE				
				43		13	0.0				0.0	44	1	20		SPARE				
	SPARE		20	1 45			0.0	0.0	0.0			46	1	20		SPARE				
	SPARE		20	1 47				0.0	0.0	0.0	0.0	48	1	20		SPARE				
	SPARE		20	1 49		0.0	0.0					50	1	20		SPARE				
	SPARE		20	1 51		0.0	0.0	0.0	0.0			52	1	20		SPARE				
	SPARE		20	1 53				0.0	0.0	0.0	0.0	54	1	20		SPARE				
	SPARE		20	1 55		0.0	0.0					56	1	20		SPARE				
	SPARE		20	1 57	,	0.0	0.0	0.0	0.0			58	1	20		SPARE				
	SPARE		20	1 59	)					0.0	0.0	60	1	20		SPARE				
	-		-	otal Loa	ad:	9 k	VA	7 k	VA		9 kVA					-				
			т	otal Amp	os:	79	А	56	6 A		79 A									
							L	oad ai	NALYS	SIS										
L	OAD TYPE		CONNE	CTED		FACTO	DR	DEM	IAND							т	DTALS			
LIGHTING	L			0	VA	0.00%	6			0 VA										
RECEPTACLE	R			7200	VA	100.00	%		720	00 VA			CO	NEC	TED LOA	AD (kVA)	25 kVA			
EQUIPMENT	Q			13520	VA	100.00	%		1352	20 VA				DEM/	AND LOA	AD (kVA)	24 kVA			
COOLING	C			0	VA	0.00%	6			0 VA			CONN	IECTE	D CURF	RENT (A)	69 A			
HEATING	Н			0	VA	0.00%	6			0 VA			D	EMAN	ID CURF	RENT (A)	67 A			
MOTOR	Μ			500	VA	100.00	%		50	00 VA										
LARGEST MOTOR	G			0	VA	0.00%	6			0 VA										
KITCHEN	K			3720	VA	80.00	%		297	76 VA										
EXISTING	X			0	VA	0.00%	6			0 VA										

\*\*\* REFER TO FOOD SERVICE DESIGN FOR THE CONNECTION PRIOR TO INSTALLATION

וח		X SU	RFACE 1	00% NEUTH	RAL	INT SPD		NEMA	600 A	BUG 3 Ø	4 WIRE
וט	ST PANEL: JLDP	MTG: FLU	USH BUS:	X SYS G	ND OPT	FTL	ENCL:	TYPE 1	MAIN: CU/SN	BUS 14	KAIC
	LOCATION: ELEC ROOM	CC	NC PAD	ISO GI	ND	FUSIBLE		STEEL	600 A	MCB 208Y/12	20 VO
	FED FROM:									LSIG	
CKT NO	LOAD DESCRIPTION		FRAME (A)	RATING (A)	POLES	TYPE		LOAD (kVA)		WIRE SIZE	NOTES
1 (	E) EXISTING PANEL 2LAB1		100 A	100 A	3			32	3-#2,	1-#2, 1-#8, 1 1/2"C	
2 (	E) EXISTING PANEL 2LAB2		100 A	100 A	3			30	3-#2,	1-#2, 1-#8, 1 1/2"C	
3 (	E) EXISTING PANEL 2LAB3A		100 A	100 A	3			31	3-#2,	1-#2, 1-#8, 1 1/2"C	
4 (	E) EXISTING PANEL 2LAB3B		100 A	100 A	3			20	3-#2,	1-#2, 1-#8, 1 1/2"C	
5 (	E) EXISTING PANEL 2LAB4A		100 A	100 A	3			18	3-#2,	1-#2, 1-#8, 1 1/2"C	
6 (	E) EXISTING PANEL 2LAB4B		100 A	100 A	3			13	3-#2,	1-#2, 1-#8, 1 1/2"C	
7										С	
8										С	
9										С	
10										С	
11										С	
12										С	
13										С	
14										С	
15										С	
16										С	
17										С	
18										С	
19										С	
20										С	
						Total Conn. L	oad:	144			
						Total An	nps:	399			
	LOAD TYPE	CON	NNECTED F	ACTOR	DEMA	AND			т	DTALS	
LIGHTIN	G L		0 VA	0.00%	0 V.	'A					
RECEPT	ACLE R		0 VA	0.00%	0 V.	/A		CONN	ECTED LOAD (kVA)	144 kVA	
EQUIPM	ENT Q	14	3768 VA 1	00.00%	14376	8 VA		DE	EMAND LOAD (kVA)	144 kVA	
COOLING	G C		0 VA	0.00%	0 V	/A		CONNEC	CTED CURRENT (A)	399 A	
HEATING	G H		0 VA	0.00%	0 V	/A		DEN	AND CURRENT (A)	399 A	
MOTOR	Μ		0 VA	0.00%	0 V	/A					
LARGES	T MOTOR G		0 VA	0.00%	0 V	/Α					
KITCHEN	I K		0 VA	0.00%	0 V	/A					
EXISTIN	G X		0 VA	0.00%	0 V	'A					

	LOAD TYPE
LIGHTING	L
RECEPTACLE	R
EQUIPMENT	Q
COOLING	C
HEATING	Н
MOTOR	Μ
LARGEST MOTOR	G
KITCHEN	K
EXISTING	X

![](_page_56_Picture_17.jpeg)

![](_page_57_Figure_0.jpeg)

Keynote Legend

![](_page_57_Figure_4.jpeg)

![](_page_57_Picture_5.jpeg)

Drawing Number E1.0		
	Drawing Number	E1.0

					FOODSERVICE ELECTRICAL S	SCHEDULE								FOODSERVICE ELECTRICAL	SCHEDULE		
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS	FDP ENC	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELC	C FDP EAF	F FDP EREMARKS
E10	DP	16.04	120	1			24"		<b>E10</b>	DP	16.04	120	1			24"	
E10 E11		16.0A	120	1		WALL	24 40"		E10 E11		16.0A	120	1		WALL	<u> </u>	
E13	WPB	16.0A	120	1		WALL	48"		E15	JB					WALL	48"	BE: NOTE #11 - BECESSED IB - EXTEND
E15	IB					WALL	48"	BE: NOTE #11 - BECESSED IB -	210	00					VV//LL	10	TO FIRE SYSTEM FOR HOOD
	00						-0	EXTEND	E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC: RE: NOTE #4. #6. #9 & #11
E109	DR	16.0A	120	1	ICE MACHINE	WALL	60"	IO FIRE SYSTEM FOR HOOD	E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC: RE: NOTE #4, #6, #9 & #10
E123	JB	3.0HP	208	3	DISPOSER	WALL	24"	BTC; RE: NOTE #4 - CONNECT THRU C.P.	E153M	JB	1.0A	120	1	TEMPERATURE SENSOR	CLG	DFA	BTC; RE: NOTE #4, #6 & #9
								TO DISPOSER	E193	JB	8.2A	120	1	REFRIGERATOR	WALL	90"	
E151	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC; RE: NOTE #4, #6, #9 & #11	E616 *	JB	33.3KW	208	3	PIZZA DECK OVEN	WALL	36"	BTC; RE: NOTE #4
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC; RE: NOTE #4, #6, #9 & #10	E616A *	JB	11.0KW	208	3	PIZZA DECK OVEN	WALL	36"	BTC; RE: NOTE #4
E153M	JB	1.0A	120	1	TEMPERATURE SENSOR	CLG	DFA	BTC; RE: NOTE #4, #6 & #9	E639	JB	16.0A	208	1	FREEZER	WALL	90"	COORDINATE NEMA PLUG
E193	JB	11.0A	120	1	REFRIGERATOR	WALL	90"		E672	JB	15.0A	208	3	ROTATING RACK OVEN	WALL	24"	BTC; RE: NOTE #4 - SHUNT TRIP BREAKEF
E194	JB	11.5A	120	1	FREEZER	WALL	90"		E687	JB	15.0A	208	3	PROOFER	WALL	85"	
E251	JB				DISHMACHINE	WALL	24"	BTC; RE: NOTE #4 - INTERCONNECT TO	E695	JB	22.0A	200V-240V	1	EQUIPMENT	WALL	24"	SHUNT TRIP BREAKER BTC; RE: NOTE #4
								E251A	E784	SR	15.0A	208	1	ICE CREAM FREEZER	WALL	47"	MOUNT HORIZONTAL
E251A	JB/DS	11.6A	480	3	DISHMACHINE	WALL	54"	BTC; RE: NOTE #4 & #5 - INTERCONNECT TO E251	E803	JB	30.0A	208	1	TABLE RECEPTACLES	FLOOR	4"	
E251B	JB				BOOSTER HEATER	WALL	24"	BTC; RE: NOTE #4 - INTERCONNECT TO E251C	E817	DR	16.0A	480	3	DOUGH SHEETER	WALL	24"	CONFIRM NEMA CONFIGURATION W/DIV. 26
E251C	JB/DS	13.0KW	480	3	BOOSTER HEATER	WALL	54"	BTC; RE: NOTE #4 & #5 - INTERCONNECT TO E251B									
E633	DR	1.0A	120	1	ELECTRONIC IGNITION	WALL	24"	SHUNT TRIP BREAKER									
E644	JB	16.0A	120	1	EQUIPMENT	CLG	VERIFY	BTC; PROVIDED AND INSTALLED BY DIV. 26									
E650	DR	3.4A	120	1	RANGE	WALL	24"	SHUNT TRIP BREAKER									
E660	DR	1.0A	120	1	CHARBROILER	WALL	24"	SHUNT TRIP BREAKER									
E704	DR	1.0A	120	1	FRYER	WALL	24"	SHUNT TRIP BREAKER PROVIDED AND INSTALLED BY DIVISION 26									
E704A	DR	8.0A	120	1	FILTER	WALL	24"	SHUNT TRIP BREAKER PROVIDED AND INSTALLED BY DIVISION 26									
E743	JB	11.4A	120	1	REFRIGERATOR	WALL	90"										
E784	SR	15.0A	208	1	ICE CREAM FREEZER	WALL	47"	MOUNT HORIZONTAL									
E802	JB	34.4A	240	3	STEAMER - COUNTER TOP	WALL	24"	BTC; RE: NOTE #4 - SHUNT TRIP BREAKER									
E809	JB	5.0A	120	1	KETTLE	WALL	24"	SHUNT TRIP BREAKER									
E817	DR	3.0A	120	1	WORKTOP REFRIGERATOR	WALL	24"										

FOODSERVICE ELECTRICAL GENERAL NOTES

I. DO NOT ROUGH-IN FROM THIS DRAWING. REFER TO THE CONTRACTOR'S DIMENSIONED DRAWINGS.

2. VERIFY ALL ELECTRICAL CHARACTERISTICS WITH ENGINEERING DRAWINGS. 3. DIMENSIONS INDICATED ARE TO BE VERIFIED BY CONTRACTOR AND ADJUSTED AS REQUIRED BY FOODSERVICE EQUIPMENT AND/OR FIELD CONDITIONS. 4. ACCESSORIES AND FITTINGS PROVIDED LOOSE WITH FOODSERVICE EQUIPMENT BY SECTION II 40 00. FIELD INSTALLED BY DIVISION 26.

5. STAINLESS STEEL DISCONNECT SWITCH PROVIDED AND INSTALLED BY DIVISION 26. 6. ALL ELECTRICAL CONNECTIONS BENEATH EXHAUST HOOD TO EXTEND TO SHUNT TRIP BREAKERS WITHIN ELECTRICAL PANEL BOX FOR SHUT-DOWN DURING FIRE

MODE – BY DIVISION 26. 7. DOOR HEATER(S), LIGHT(S), COIL(S) AND PRESSURE RELIEF PORT(S) PRE-WIRED TO JUNCTION BOX AT TOP OF COLD STORAGE ASSEMBLY BY SECTION 14 00 00. FINAL CONNECTION BY DIVISION 26.

8. N/A 9. INTERCONNECT TO EXHAUST HOOD FAN(S) AND SWITCH BY DIVISION 26.

IO. INTERCONNECT TO EXHAUST HOOD LIGHT(S) AND SWITCH BY DIVISION 26.

II. INTERCONNECT FIRE PROTECTION SYSTEM TO PANEL BOX SHUNT TRIP(S) AND BUILDING ALARM - BY DIVISION 26. 12. RECEPTACLE(S) TO BE PRE-WIRED TO JUNCTION BOX OR LOAD CENTER FOR FINAL CONNECTION BY DIVISION 26.

13. SECTION II 40 00 TO VERIFY UTILITY REQUIREMENTS OF EXISTING EQUIPMENT. 14. EMPTY CONDUIT RUN FROM CASHIER STATION TO MANAGERS OFFICE FOR POS SYSTEM BY DIVISION 26. LOCATION OF MANAGER'S OFFICE TO BE VERIFIED.

	Keynote Legend
L	
I	PROVIDE STAINLESS STEEL CORD REELS SIMILAR TO HUBBEL #HBLSS45123 WITH HBL5369C.
2	SEE RECEPTACLE DETAILS ON 7 ON SHEET E5.01.
3	RECEPTACLE FOR TEACHER STATION. COORDINATE WITH ARCHITECTURAL ELEVATION AND A/V FOR ADDITION REQUIREMENT.
4	PROVIDE POWER FOR FIRE PROTECTION SYSTEM FROM EMERGENCY PANEL ILSLI. REFER TO FOODSERVICE DRAWINGS FOR CONT
5	PROVIDE POWER FOR GAS SHUT VALVE EPO FROM EMERGENCY PANEL ILSLI. ELECTRICAL CONTRACTOR SHALL VERIFY LOCATIO
6	HOOD FAN AND LIGHT SWITCH. REFER TO FOODSERVICE DRAWING FOR CONTINUATION.
7	ELECTRICAL CONTRACTOR SHALL RELOCATE THE LIGHTING SWITCH IN ELECTRICAL ROOM TO MAKE SPACE FOR PANEL 2H2.
8	PROVIDE POWER FOR HOOD LIGHT AND TEMPERATURE SENSOR. COORDINATE WITH FOODSERVICE DESIGN FOR CONTINUATION.

![](_page_58_Figure_11.jpeg)

FINUATION. ON OF PANEL ILSLI.

![](_page_58_Figure_20.jpeg)

ELECTRICAL GENERAL KITCHEN NOTES

- DO NOT ROUGH-IN FROM THIS DRAWING. REFER TO THE CONTRACTOR'S DIMENSIONED DRAWINGS. VERIFY ALL ELECTRICAL CHARACTERISTICS WITH ARCHITECT'S ENGINEERING DRAWINGS.
- DIMENSIONS INDICATED ARE TO BE VERIFIED BY CONTRACTOR AND ADJUSTED AS REQUIRED BY FOODSERVICE EQUIPMENT AND/OR FIELD CONDITIONS.
- ACCESSORIES AND FITTINGS PROVIDED LOOSE WITH FOODSERVICE EQUIPMENT BY SECTION II 40 00. FIELD 4. INSTALLED BY DIVISION 26. STAINLESS STEEL DISCONNECT SWITCH PROVIDED AND INSTALLED BY DIVISION 26.
- ALL ELECTRICAL CONNECTIONS BENEATH EXHAUST HOOD TO EXTEND TO SHUNT TRIP BREAKERS WITHIN
- ELECTRICAL PANEL BOX FOR SHUT-DOWN DURING FIRE MODE BY DIVISION 26. DOOR HEATER(S) LIGHT(S) AND PRESSURE RELIEF PORT(S) PRE-WIRED TO JUNCTION BOX AT TOP OF COLD STORAGE ASSEMBLY BY SECTION 14 00 00. FINAL CONNECTION BY DIVISION 26
- (7) WIRES AND CONDUIT FROM CONDENSOR JUNCTION BOX AT COLD STORAGE REFRIGERATION RACK TO EVAPORATOR COIL JUNCTION BOX BY DIVISION 26.
- INTERCONNECT TO EXHAUST HOOD FAN(S) AND SWITCH BY DIVISION 26. INTERCONNECT TO EXHAUST HOOD LIGHT(S) AND SWITCH BY DIVISION 26.
- INTERCONNECT FIRE PROTECTION SYSTEM TO PANEL BOX SHUNT TRIP(S) AND BUILDING ALARM BY DIVISION 26. RECEPTACLE(S) TO BE PRE-WIRED TO JUNCTION BOX OR LOAD CENTER FOR FINAL CONNECTION BY DIVISION 26.
- SECTION II 40 00 TO VERIFY UTILITY REQUIREMENTS OF EXISTING EQUIPMENT. EMPTY CONDUIT RUN FROM CASHIER STATION TO MANAGERS OFFICE FOR POS SYSTEM BY DIVISION 26. LOCATION 14. OF MANAGER'S OFFICE TO BE VERIFIED.

### FIRE ALARM

IT IS THE FIRE ALARM CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE HOOD EQUIPMENT FIRE EXTINGUISHING SYSTEM (ANSUL SYSTEM) IS INTERCONNECTED TO THE FUEL/CURRENT SUPPLY SO THAT IT AUTOMATICALLY SHUTS DOWN SUPPLY TO ALL EQUIPMENT UNDER THE HOOD AND SUPPLY FANS FOR THE HOOD WHEN THE SYSTEM IS ACTUATED. SOLENOID VALVES CONTROLLING FUEL GAS SUPPLY TO UNDER-HOOD EQUIPMENT AND CIRCUITS FEEDING ELECTRICAL HEATING UNDER-HOOD EQUIPMENT SHALL BE CIRCUITED THROUGH PANEL LS, SUB-FED BY A SHUNT-TRIP BREAKER. REFER TO THE UNIFORM MECHANICAL CODE SECTION 510.2.4.2, NEC AND NFPA FOR APPLICABLE REQUIREMENTS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE FIRE ALARM CONTRACTOR AND INSTALLATION OF SHUNT TRIPS AND ANY NECESSARY APPARATUSES FOR THE AUTOMATIC SHUTDOWN OF THE KITCHEN HOOD FANS AND DEVICES UNDER THE HOOD UPON ACTIVATION OF THIS SYSTEM. COORDINATE THIS WORK WITH THE FOOD SERVICE CONSULTANT. GENERAL NOTES:

ALL RECEPTACLES COVER PLATES IN THE KITCHEN WILL BE 302-STAINLESS STEEL. ALL RECEPTACLES IN THE LABS WILL BE GFI TYPE.

THE ELECTRICAL, CONTRACTOR WILL COORDINATE WITH THE KITCHEN CONSULTANT PLANS FOR FURTHER REQUIREMENTS AND CLARIFICATIONS. THE GENERAL CONTRACTOR MUST NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS WHICH MAY ARISE BEFORE ANY WORK OR ROUGH-INS ARE MADE.

### ENLARGED PLAN - CULINARY LAB 2 - POWER

![](_page_58_Picture_37.jpeg)

![](_page_59_Figure_0.jpeg)

![](_page_59_Figure_3.jpeg)

![](_page_59_Picture_4.jpeg)

![](_page_60_Figure_0.jpeg)

MOUNTING	LAMP	WATTAGE	VOLTAGE	DIMMABLE	Notes
		I			· ·
HUNG	LED	48 W	UNV	0-IOV DIMMING	
SED	LED	49 W	UNV	0-IOV DIMMING	
SED	LED	49 W	UNV	0-IOV DIMMING	
	I ED	10 W	UNV		
					FACES AND DIRECTIONAL
					ARROWS AS SHOWN ON PLANS

![](_page_60_Figure_5.jpeg)

![](_page_60_Figure_7.jpeg)

![](_page_60_Picture_9.jpeg)

![](_page_61_Figure_0.jpeg)

	FIRE ALARM SYM	1BOLS	LEGEND
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
XX <sup>V</sup> <sup>P</sup> C	FIRE ALARM VISUAL ALARM, TYPICALLY 80" A.F.F. TO TOP. XX = CANDELA LEVEL. P = PROTECTIVE COVER. C = CEILING MOUNT	HD	FIRE ALARM HEAT DETECTOR
M PD	FIRE ALARM MANUAL PULL STATION, 48" A.F.F. PD = PEDESTAL MOUNT. P = PROTECTIVE COVER.	DH	FIRE ALARM DOOR HOLDER
FS	FIRE ALARM SPRINKLER FLOW SWITCH	СМ	CONTROL MODULE
TS	FIRE ALARM SPRINKLER VALVE TAMPER SWITCH	MM	MONITOR MODULE
XX SV C	FIRE ALARM <u>SPEAKER</u> /VISUAL ALARM TYP 80" A.F.F. TO TOP. XX = CANDELA LEVEL. P = PROTECTIVE COVER. C = CEILING MOUNT	MSD	FIRE ALARM SMOKE FIRE DAMPER BY DIV. 15. PROVIDE 120V CIRCUIT BY DIV 16
DD	FIRE ALARM DUCT SMOKE DETECTOR WITH REMOTE LED	FCPS	REMOTE FIRE ALARM SYSTEM POWER SUPPLY
R	FIRE ALARM SHUTDOWN RELAY FOR HVAC EQUIPMENT	DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER
SD	FIRE ALARM SMOKE DETECTOR, PHOTOELECTRIC	FACP	FIRE ALARM CONTROL PANEL
SDS	FIRE ALARM SINGLE STATION SMOKE DETECTOR, I20V WITH BATTERY	FAAP	FIRE ALARM ANNUNCIATOR PANEL
BD	BEAM DETECTOR	CO	CARBON MONOXIDE AND SMOKE COMBINATION DETECTOR

![](_page_61_Figure_2.jpeg)

### ◀ ENLARGED PLAN - CULINARY LAB 2- FIRE ALARM

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

![](_page_61_Picture_30.jpeg)

![](_page_62_Figure_0.jpeg)

HCC HOUSTON COMMUNITY COLLEGE **CENTRAL CAMPUS** AUTOARCH Architects, LLC. 6200 Savoy, Suite 100 Houston, TX 77036 t (713) 952-3366 f (713) 952-5002 www.autoarch.net CONSULTANTS: MEP ENGINEERS Infrastructure Associates (713) 622-0120 <u>STRUCTURAL ENGINEERS</u> Dally + Associates (713) 337-8881 FOOD SERVICE Foodservice Design Professionals (281) 350-2323 PROFESSIONAL SEAL: M. Man  $\mathbf{X}$ SEVAK KALANTARIANS 97498 S'ONAL ENG 2020-04-15 A PROJECT FOR: CULINARY **ARTS SHELL** INTERIOR BUILDOUT # Date **ISSUED FOR** 2020/04/15 PERMIT AND BIDDING nfrastructure Associates INFRASTRUCTURE ASSOCIATES, INC. 6117 RICHMOND AVENUE, SUITE 200 HOUSTON, TEXAS 77057 TBPE REGISTRATION NO. F-4506 (713) 622-0120 PH (713) 622-0557 FAX WWW.IAHOUSTON.COM KEY PLAN TRUE NORTH PLAN NORTH Project Number 17024 Drawn By Author Checked By Checker Approved By Approver Drawing Title DETAILS Drawing Number E5.01

![](_page_63_Figure_0.jpeg)

### GRADE OF HORIZONTAL DRAINAGE

I. HORIZONTAL DRAINAGE PIPING SHALL RUN IN PRACTICAL ALIGNMENT AND UNIFORM SLOPE OF NOT ONE-FOURTH (I/4) OF AN INCH PER FOOT OR TWO PERCENT (2) TOWARD POINT OF DISPOSAL PROV IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER OR TO THE STRUCTURAL FEATURES ARRANGEMENT OF ANY BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF ONE-FOURTH (I/4) OF AN TWO PERCENT, ANY SUCH PIPE OR PIPING FOUR (4) INCHES OR LARGER IN DIAMETER MAY HAVE A S THAN ONE EIGHTH (I/8) OF AN INCH OR ONE (I) PERCENT, WHEN FIRST APPROVED BY THE ADMINIST AUTHORITY.

### PIPING MATERIALS

- SANITARY WASTE AND VENT PIPING : (BELOW GRADE) SCHEDULE 40 PVC, CONFORM TO ASTM D-I785 SOIL AND WASTE VENT PIPING. FITTINGS SHAL MATERIAL WITH SOLVENT CEMENT TYPE JOINTS.
- 2. SANITARY WASTE AND VENT PIPING : (ABOVE SLAB ONLY) PIPE: CAST IRON ASTM A 74, HUBLESS, SERVICE WEIGHT.
- JOINTS: NO HUB, ASTM C 564 NEOPRENE GASKETS AND STANDARD STAINLESS STEEL CLAMP ASSEMBLIES CONSTRUCTED OF TYPE 300 SERIES STAINLESS STEEL. CLAMP ASSEMBLIES SHA 1680 WHERE REQUIRED BY THE ADMINISTRATIVE AUTHORITY. FITTINGS: CAST IRON, ASTM A 888 DRAINAGE PATTERN.
- DOMESTIC WATER: TYPE "L" COPPER TUBING WITH WROUGHT COPPER FITTINGS AND 95/5 (TIN/ANTIMONY) SOLDE
- NATURAL GAS: (ABOVE GRADE) SCHEDULE 40 BLACK STEEL WITH CLASS I50 BLACK MALLEABLE IRON WELDED FITTINGS. ROC SHALL BE PAINTED WITH GALVANIC PAINT, PRIMED WITH ALKYD-BASE PRIMER AND 2 LAYERS COATS.
   NOTE: SCREWED JOINTS WILL NOT BE PERMITTED.
- A. ALL WELDING FITTINGS SHALL BE FACTORY–MADE AND SHALL BE FULL LINE SIZE, FOR EA ETC., WITH REDUCERS AFTER FITTINGS, IF REQUIRED.

### DISREGARD LEGEND ITEMS NOT INDICATED ON DRAW NEW PLUMBING FIXT T ====SAN / S==== SANITARY WASTE ===STORM / ST=== STORM DRAINAGE LI CONDENSATE DRAIN GREASE WASTE \_\_\_\_GW\_\_\_\_ \_\_\_\_AW\_\_\_\_\_ ACID WASTE \_\_\_\_CHEM-W=\_\_\_\_ CHEMICAL WASTE VENT \_\_\_\_\_V\_\_\_\_\_\_V \_FIRE\_\_ FIRE LINE \_\_\_\_\_DIS\_\_\_\_\_ DEIONIZED WATER S \_\_\_\_\_DIR\_\_\_\_\_ DEIONIZED WATER R SOFT WATER \_\_\_\_\_\_SW\_\_\_\_\_\_ DOMESTIC COLD WAT \_\_\_\_\_CW\_\_\_\_\_ DOMESTIC HOT WAT DOMESTIC HOT WATE \_\_\_\_\_TW\_\_\_\_\_ TEMPERED WATER PI \_\_\_\_\_TWR\_\_\_\_\_ TEMPERED WATER RE NON POTABLE WATER \_\_\_\_\_= NPW(C) \_\_\_\_\_= \_\_\_\_\_HPW(H) \_\_\_\_\_ NON POTABLE WATER DEIONIZED WATER \_\_\_\_\_ DI \_\_\_\_\_ \_\_\_\_\_NG / G \_\_\_\_\_ NATURAL GAS NATURAL GAS \_\_\_\_\_LA\_\_\_\_\_ \_\_\_\_\_VAC == NATURAL GAS \_\_\_\_\_N2 \_\_\_\_ NATURAL GAS FLOOR CLEAN OUT FCO EXTERIOR CLEANOUT ECO 🛛 WCO WALL CLEANOUT 🛡 FD FLOOR DRAIN 🖺 FS FLOOR SINK RISER IDENTIFICATIO ELBOW UP ELBOW DOWN CAP AND SEAL BALL VALVE 🔹 🖙 B.V. BALANCING VALVE GAS VALVE 👦 🚥 C.V. CHECK VALVE SOLENOID VALVE ÷ FLOW SWITCH ΤP AUTOMATIC TRAP PR BFP BACKFLOW PREVENTE VTR VENT THROUGH ROOF F.F.L. FINISHED FLOOR LEV INVERT LEVEL I.L. A.R.F. ABOVE FINISHED ROO EXISTING TO REMAIN (E) (OF) OVERFLOW STORM D PRIMARY STORM DRA (P)

T.A.S

### PLUMBING LEGEND & ABBRE

Mining of the state o	AINAGE PIPING				F	PLUMBI	NG FIXTURE SCHEDULE
Link         Link <th< th=""><th>UNIFORM SLOPE OF NOT LESS THAN</th><th>MARK</th><th>DESCRIPTION</th><th>SI</th><th>ZE OF</th><th></th><th>REMARKS</th></th<>	UNIFORM SLOPE OF NOT LESS THAN	MARK	DESCRIPTION	SI	ZE OF		REMARKS
ALL S  A	INT OF DISPOSAL PROVIDED THAT, WHERE STRUCTURAL FEATURES OR TO THE NE-FOURTH (I/4) OF AN INCH PER FOOT OR IAMETER MAY HAVE A SLOPE OF NOT LESS ROVED BY THE ADMINISTRATIVE	<u>FD-I</u>	FLOOR DRAIN	3"-4"	SS 3"-4"	2"	2005-B-NB. J.R. SMITH, DUCO CAST IRON BODY WITH FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD 6" DIAMETER TYPE "A" NICKEL BRONZE STRAINER.
<ul> <li>Here Primesses III Y SYNSTERT</li> <li>Here Prin</li></ul>	IALS						DRAIN GENERAL NOTES BOOK SPECIFICATION SUPERCEDE ANY NOTES BELOW
<ul> <li>A. HITSLEYL &amp; LOUPH &amp; LEADER AND ALL COMPANIES</li> <li>A. MERSING ALL COMPANIES</li> <li>A. MERSIN</li></ul>						THESE DRAWING	S ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS
<ul> <li>a. The control of the contr</li></ul>	PIPING. FITTINGS SHALL BE COMPATIBLE					CLOSE AS POSSIE (STRUCTURAL FO THOSE SHOWN, T ADDITIONAL COS	BLE TO LOCATIONS SHOWN. WHERE INTERFERENCE'S WITH COMPONENTS OF OTHER TRADE'S WORK DUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTINGS AND LOCATIONS THAT VARY FROM THE CONTRACTOR SHALL OBTAIN PROJECT ENGINEER'S APPROVAL PRIOR TO INSTALLATION. NO T SHALL BE GRANTED FOR THESE CHANGES.
<ul> <li>c) status in the province of the</li></ul>	AINLESS STEEL CLAMP AND SOLID SHIELD CLAMP ASSEMBLIES SHALL CONFORM TO FM				2.	BEFORE BEGINNI SERVICES AND U PROCEED WITH C DAMAGED WITH A ENCOUNTERED A	NG EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL TILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN AUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.
<ul> <li>Change management</li> <li>Change management</li> <li>State particular backets of males and particular backets of mal</li></ul>					3.	ROUGH-IN PLUME SHALL ALLOW IN	BING PIPING USING DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATION OF ALL PIPING STALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.
<ul> <li>Nuclear of the second second</li></ul>	5 (TIN/ANTIMONY) SOLDER JOINTS.				4.	PROVIDE CLEANC SHALL PROVIDE A CLEANOUT ACID	OUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE. CONTRACTOR A COVER STATING WHAT SYSTEM IT IS SERVING. <u>(CLEANOUT SANITARY, CLEANOUT GREASE WASTE,</u> WASTE.)
<ul> <li>Participant Disks, L.L. Backbart Hank, L.M. Backbart Hank, J.M. Backbart</li></ul>	I WELDED FITTINGS. ROOF MOUNTED PIPING E PRIMER AND 2 LAYERS YELLOW GALVANIC TOP				5.	INDIVIDUAL FIXTU CONTRACTOR SH	JRE SUPPLY AND DRAIN SERVICES ARE NOT SHOWN DUE TO DRAWING SPACE LIMITATIONS. THIS ALL PROVIDE ALL SERVICES FOR A COMPLETE FIRST CLASS INSTALLATION.
<ul> <li>S. ALL SET PERSONNER TAYLORS</li> <li>S. S. ALL SET OF ALL SET OF ALL SET OF ALL SECTION AND ALL SET OF ALL SECTION AND ALL ALL ALL ALL ADD A</li></ul>	FULL LINE SIZE, FOR EACH TEE, BRANCH, ELBOW				6.	FURNISH AND INS	STALL ALL NECESSARY VALVES, TRAPS, GAUGES, STRAINERS, UNIONS, ETC. FOR EACH PIECE OF NG PLUMBING CONNECTIONS TO FACILITATE PROPER FUNCTIONING AND SERVICING.
Constructions     Constru					7.	SEAL ALL PENET A RATING EQUAL	RATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS WITH A UL LISTED ASSEMBLY TO PROVIDE TO OR GREATER THAN THE RATING OF THE WALL, FLOOR OR CEILING.
<ul> <li>INDUCTION OF MARTINE</li> <li>COMPARINGS</li> <li>COMPARINGS</li> <li>COMPARINGS</li> <li>COMPARINGS</li> <li>CONTRACTOR</li> <li>CONTRAC</li></ul>	& ABBREVIATIONS				8.	EACH CONTRACT IMPLEMENTING H VISITED THE PRE PROPERLY ACCOUNTS SHALL NOT BE CO	OR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS MISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO MPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT ONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL
<ul> <li>See Test Watter</li> <li>Pred Premer 2: A local control of counter 1. Laboration and the source and the source of the control of the source of the source of the control of the source of the control of the source of</li></ul>						COMPENSATION.	
STEAM RUMANDEL INF           DEPARTMENT INFO           DEPARTMENT RANK INFORMATION R	SANITARY WASTE				9.		ISTING AND FUTURE GRADES WITHIN AREAS WHERE WORK IS BEING DONE.
Condensity Final Deck         III. Provide ARACHA DECKS PARKET REAL CALLS AND ACCOUNT DESCRIPTION OF AND AND ACCOUNTS THE ANALYS AND ACCOUNTS	STORM DRAINAGE LINE				10.	DUE TO MISPLACI	EMENT SHALL BE AT CONTRACTORS EXPENSE.
<ul> <li>An American American Advances</li> <li>A American</li></ul>	GREASE WASTE				II.	PROVIDE A KEYE	DACCESS PANELS FOR ALL VALVES AND APPARATUSES THAT REQUIRE MAINTENANCE.
Common water Very Very Here time Edentized water share and provide and cold water share and provide the sh	ACID WASTE				12.	A WATER HAMME HAMMER ARREST	R ARRESTOR SHALL BE INSTALLED FOR ALL SINGLE AND MULTIPLE FIXTURE BRANCH LINES. WATER ORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND
VENT         INSULATE PRIVA CAPOLISON           DEFINITION         DESTIGUES WATCH SUPPLY           DECONZED WATCH SUPPLY         DESTIGUES COLS WATCH PRIVAGE COLD WATCH PRIVAGE SOFTENDE WATCH SUPPLY TO USULATION.           DECONZED WATCH SUPPLY         DESTIGUES COLD WATCH PRIVAGE COLD WATCH PRIVAGE SOFTENDE WATCH SUPPLY WATCH SUPPLY           SOFT WATCH SUPPLY         DESTIGUES COLD WATCH PRIVAGE PRIVAGE COLD WATCH PRIVAGE SOFTENDE WATCH SUPPLY           DESTIGUES WATCH SUPPLY         DESTIGUES COLD WATCH PRIVAGE COLD WATCH PRIVAGE AND	CHEMICAL WASTE					CONFORM TO ASS ARRESTOR DETA	SE 1010. PROVIDE FOR HOT WATER AND COLD WATER LINES AND REFER TO WATER HAMMER IL FOR MORE INFORMATION AND SIZING.
Decover De Anten Super-Y Decover De Anten Supe	FIRE LINE				13.	INSULATE PIPINO	G AS FOLLOWS:
BEINADED WATER RETURN DECINICUP WATER RETURN DOWSTC WATER RETURN NON FOLLE WATER NON FOLLE WATER RETURN NON FOLLE WATER NOT	DEIONIZED WATER SUPPLY					DOMESTIC COLD	WATER PIPING: /APOR SEAL ALL COLD AND SOFTENED WATER PIPE WITH GLASS FIBER PIPE INSULATION.
SATE AND AND SATE ALL NOT WATER PIPE INSULATION WITH FACTORY APPLIED WHITE JACKET. DOMESTIC IOU WATER PIPERS DOMESTIC IOT WATER PIPERS DATE IN THE RELUW IN PIPER DOMESTIC IOT WATER PIPERS DATE IN THE RELUW IN PIPER DATE IN THE RELUW IN PIPERS DATE IN THE INSULATION. NOT DIALE WATER PIPERS NOT DIALE WATER NOT DIALE WATER PIPERS NOT DIALE WATER NOT DIALE WATER PIPERS NOT DIALE WATER NOT DIALE WATER PIPERS NOT DIALE WATER PIPERS NOT DIALE WATER PIPERS NOT DIALE WATER NOT DIALE WATER PIPERS NOT DIALE WATER PIPERS NOT DIALE WATER NOT DIALE WATER PIPERS NOT DIALE WATER NOT DIALE WATER PIPERS NOT DIALE WATER PIPERS N	DEIONIZED WATER RETURN					(EXCEPTION : AL	L PIPING EXPOSED TO THE EXTERIOR SHALL BE PROVIDED WITH ALUMINUM).
DAMESTIC HOT WATTER REPURE Demonstrate Repure Repurp Repur	DOMESTIC COLD WATER PIPING					INSULATE ALL H	IOT WATER PIPE WITH GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED WHITE JACKET.
Domestic not waters retruins minisd         Domestic not waters retruins minisd         THEMPERD WATER RETURN MINISD         Domestic not waters retruins minisd         Domestic not waters retruins minisd         NON POTAGLE WATER RETURN MINISD         Demostic not waters retruins minisd         NON POTAGLE WATER RETURN MINISD         Demostic not waters retruins minisd         NON POTAGLE WATER RETURN MINISD         Demostic not waters retruins minisd         NON POTAGLE WATER         NON POTAGLE WATER         NOT POTAGLE WATER         NATURAL CAS         NATU	DOMESTIC HOT WATER PIPING					DRAINS: INSULATE AND \	APOR SEAL ALL ABOVEGROUND P-TRAPS AND HORIZONTAL DRAIN PIPING RECEIVING
LIPPERED WALE PINDS           DRAIN TO VERTICAL LEAGE PINDS           NON POTABLE WATER (COLD)           NATURAL GAS           NATURAL GAS           NATURAL GAS           NATURAL GAS           WALCAS           NATURAL GAS           NATURAL CLAND OF PANDAL	DOMESTIC HOT WATER RETURN PIPING					CONDENSATE OF	R ICE MAKER DRAINAGE WITH I/2" GLASS PER FIBER INSULATION. /APOR SEAL ROOF DRAIN AND OVERFLOW ROOF DRAIN SUMP, PIPING AND FITTINGS FROM
NON POTABLE WATER (CUD)         NON POTABLE WATER (CHOT)         DEGUNZED WATER (CHOT)         NATURAL GAS         CORR CLEAN OUT         CORR CLEAN OUT         CORR CLEAN OUT         CLEANOUT         RESE DENTIFICATION         BALANCING VAUE         BALANCING VAUE         RESE DENTIFICATION         BALANCING VAUE         BALANCING VAUE         BALANCING VAUE	TEMPERED WATER RETURN PIPING					DRAIN TO VERTI A.D.A. ACCESSIE	CAL LEADER WITH I/2" GLASS FIBER INSULATION. BLE LAVATORIES AND SINKS:
NON PATABLE WATER (HOT)       OG R KCOURE.         DERINZED WATER       II.         NATURAL CAS       SUPPORT INBURED DIPE AS FOLLOWS.         NATURAL CAS       HORIZOTTAL PIPING:         NATURAL DIPUNCI       HORIZOTTAL PIPING:         HUL	NON POTABLE WATER (COLD)					INSULATE ALL E & SINKS WITH F	EXPOSED DRAIN PIPING AND WATER SUPPLY PIPING BENEATH A.D.A. COMPLIANT LAVATORIES ULLY MOLDED CLOSED CELL VINYL INSULATION KIT AS MANUFACTURED BY TRUEBRO, BROCAR
Deconstant cases NATURAL case NATURAL cases	NON POTABLE WATER (HOT)					OR MCGUIRE.	
NATURAL GAS         NATURAL GAS         NATURAL GAS         NATURAL GAS         NATURAL GAS         FLOOR CLEAN OUT         ELGOR CLEAN OUT         WALL CLEANOUT         COPRED FLOOR SHALL BE SUPPORTED AT INSTRUCE ON EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE FLOOR DEVENT HORIZONTAL         WALL CLEANOUT         COPRED FLOOR SHALL BE SUPPORTED AT NOT MORE THAN SIX FOOT INTERVALS FOR PIPING I-I/2" AND SHALLEE AND NWALL CLEANOUT         FLOOR SINK         FLOOR SINK         RESER DENTIFICATION         ELBOW UP         ELBOW DOWN         ELBOW DOWN         ELBOW DOWN         ELBOW DOWN         ELBOW SOUND         SALL VALVE         BALL VALVE         BALL VALVE         BALL VALVE         BALL VALVE         GAS VALVE         COPRES PIPINS CHALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 0 FEET FOR I/4" AND LARGER PIPINS.         VERTICAL PIPINO:         RESER DENTIFICATION         VERTICAL PIPINO:         PROVIDE AT EACH PROVED	NATURAL GAS				14.	SUPPORT UNBUR HORIZONTAL PIPI	IED PIPE AS FOLLOWS: NG:
NATURAL GAS NATURAL CAS SUPPORTS SHALL LSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE FLACED IMMEDIATELY ADJACENT TO THE COUPLING. SUPPORTED INSES SHALL BE BRANCH CONNECTION. SUPPORTS SHALL BE FLACED IMMEDIATELY ADJACENT TO THE COUPLING. SUPPORTED INSES SHALL BE BRANCH CONNECTION. SUPPORTED INTERVALS FOR PIPING I-//2" AND SHALLER AND NNE FOOT INTERVALS FOR PIPING '' AND LARGER IN DIAMETER ALL CLEANOUT COPER PIPING '' AND LARGER IN DIAMETER HANGERS FOR NON-INSULATE COPER PIPING ''''''''''''''''''''''''''''''''''''	NATURAL GAS					HUBLESS CAST IF	RON SOIL PIPING SHALL BE SUPPORTED AT LEAST AT EVERY OTHER JOINT EXCEPT THAT WHEN THE STH BETWEEN SUPPORTS EXCEEDS FOUR FEET. THEY SHALL BE PROVIDED AT EACH JOINT.
IMPORTAGE         IMPORTAGE         EXTERIOR CLEANOUT         EXTERIOR CLEANOUT         WALL CLEANOUT         EXTERIOR CLEANOUT         HOWEMENT.         CCOPRER TUBINO SHALL BE SUPPORTED AT NOT MORE THAN SIX FOOT INTERVALS FOR PIPING I-1/2* AND SMALLER AND NNE FOOT INTERVALS FOR PIPING SHALL ABE A COPPER PIPING SHALL ALE A COPPER FINISH. IN POTENTIALLY DAMP LOCATIONS. NON-INSULATED COPPER PIPING SHALLES OF NO GREATER THAN 6 FEET FOR 1/2* PIPING, 8 FEET FOR 3/4* 8         FLOOR DRAIN         FLOOR NAM         ELBOW UP         GAS VALVE         GAS VALVE         GAS VALVE         GAS VALVE         GAS VALVE         FLOW DRESTICH ON THERE NOTH A BRANCH TAKE-OFF         FLOW SWITCH         AUTOMENT ER         AUTOMENT ER         FLOW SWITCH         AUTOMENT ER         AUTOMENT ER         SULENDI VALVE         FLOW SWITCH <td>NATURAL GAS</td> <td></td> <td></td> <td></td> <td></td> <td>SUPPORTS SHALL</td> <td>ALSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE PLACED JACENT TO THE COUPLING. SUSPENDED LINES SHALL BE BRACED TO PREVENT HORIZONTAL</td>	NATURAL GAS					SUPPORTS SHALL	ALSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE PLACED JACENT TO THE COUPLING. SUSPENDED LINES SHALL BE BRACED TO PREVENT HORIZONTAL
EXTERIOR CLEANOUT         WALL CLEANOUT         WALL CLEANOUT         FLOOR DRAIN         FLOOR SINK         PLOOR SINK         RISER IDENTIFICATION         ELBOW UP         SOLENDID VALVE	FLOOR CLEAN OUT					MOVEMENT.	
WALL CLEAROUT       HANGERS FOR NON-INSULATED COPPER PINING SHALL HAVE & COPPER PINING SHALL HAVE REFOR IN-1/4" AND LARGERS OR SUPPORTES SHALL BE UP LASTIC-COATED.         STEEL IPING SHALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR I/2" PIPING, 8 FEET FOR 3/4" & I''PIPING AND IOFEET FOR I-1/4" AND LARGERS OR SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR I/2" PIPING, 8 FEET FOR 3/4" & I''PIPING AND IOFEET FOR I-1/4" AND LARGERS OR SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR I/2" PIPING, 8 FEET FOR 3/4" & I''PIPING AND IOFEET FOR I-1/4" AND LARGERS OR SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR I/2" PIPING, 8 FEET FOR 3/4" & I''PIPING SHALL BELONG AT TAKE-OFF         CAP AND SEAL       SALL YALVE         BALL NALVE       'AT EACH FLOOR LEVEL         BALLACING VALVE       'ON EACH SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR I-4/4" AND LARGENT OR SUPPORTED AT INTERVALS OF NO GREATER THAN 6 TAKE-OFF         CHICK VALVE       'ON EACH SUPPORTED AT INTERVALS OF NO GREATER SUPPLY AND RETURN LINES.         SOLENOID VALVE       'NOILCATE FLOW THATEN TENN FOR THAN 10" FROM A BRANCH TAKE-OFF         CHICK VALVE       'OMESTIC HOT WATER         SOLENOID VALVE       'NOILCATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.         FLOOR SINCH       MEDIUM PRESSURE GAS PINING (14" WICT D5 PI) SHALL BE IDENTIFIED BY THE STATEMENT, 'WARNING TO 5 PI         NATIRA LOR OF       'NATURAL ASS'' MEDIU	EXTERIOR CLEANOUT					NINE FOOT INTER	RVALS FOR PIPING 2" AND LARGER IN DIAMETER.
1.00.0 MARK         PLOOR SINK         RISER IDENTIFICATION         ELBOW UP         ELBOW UP         ELBOW SOURCE         BALL VALVE         BALL VALVE         SALVE         GAS VALVE         GAS VALVE         SOLENON VALVE         GAS VALVE         SOLENON VALVE         SOLENON VALVE         GAS VALVE         SOLENON VERVENTER         VENT THROUGH ROOF         FINISHED FLOON ELVEL	WALL CLEANOUT					HANGERS FOR NO NON-INSULATED	DN-INSULATED COPPER PIPING SHALL HAVE A COPPER FINISH. IN POTENTIALLY DAMP LOCATIONS, COPPER PIPING HANGERS OR SUPPORTS SHALL BE PLASTIC-COATED.
RISER IDENTIFICATION       VERTICAL PIPING:         ELBOW UP       PROVIDE RISER CLAMP AT EASE AND AT EACH FLOOR LEVEL         ELBOW DOWN       IDENTIFICATION:         CAP AND SEAL       MARNING AND IDENTIFICATION:         CAP AND SEAL       MARNING AND IDENTIFICATION:         BALL VALVE       IDENTIFICACH PIPE WITH LABELING AT THE FOLLOWING LOCATIONS:         BALL VALVE       -AT EACH BRANCH TAKE-OFF FROM A MAIN         ON EACH SIDE OF A WALL PENERATION       -EVERY 20' OF STRAIGHT RUN OF PIPE         GAS VALVE       -AT EQUIPMENT CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF         CHECK VALVE       DOMESTIC HOT WATER:         SOLENOID VALVE       INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.         FLOW SWITCH       MEDIUM PRESSURE GAS PIPING (La' WIC TO 5 PI) SHALL DE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PI         MATURAL GAS.' THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 50 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL BE PLACED AT INTERVALS NOT EXCEEDING 50 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL BE PLACED AT INTERVALS NOT EXCEEDING 50 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL BE PLACED AT INTERVALS NOT EXCEEDING 50 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL AGAS'. THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 50 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL AGAS'. THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 50 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL BE PLACED AT EXCENSING TO RAMAL CLOSE OFF SPACE BETWEENTER	FLOOR SINK					STEEL PIPING SH I" PIPING AND IO F	ALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR I/2" PIPING, 8 FEET FOR 3/4" & EET FOR I-I/4" AND LARGER PIPING.
ELBOW UP       PROVIDE RISER CLAMP AT BASE AND AT EACH FLOOR LEVEL         ELBOW DOWN       IDENTIFICATION:         CAP AND SEAL       IDENTIFICATION:         BALL VALVE       -AT EACH BRANCH TAKE-OFF FROM A MAIN         BALLANCING VALVE       -AT EACH BRANCH TAKE-OFF FROM A MAIN         GAS VALVE       -AT EACH BRANCH TAKE-OFF FROM A MAIN         CHECK VALVE       ON EACH SIDE OF A WALL PEMETRATION         SOLENOID VALVE       -AT EQUIPMENT CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF         FLOW SWITCH       -AT EQUIPMENT CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF         AUTOMATIC TRAP PRIMER       INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.         BACKFLOW PREVENTER       INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.         INISHED FLOOR LEVEL       INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.         INVERT LEVEL       MEDIUM PRESSURE GAS PIPING (IA' WIC TO 5 PI) SHALL BE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PI         INVERT LEVEL       MEDIUM PRESSURE GAS PIPING (IA' WIC TO 5 PI SHALL BE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PI         INVERT LEVEL       MEDIUM PRESSURE CLOW SHELL HAVE IDENTIFICATION TAGS IN ACCORDANCE WITH APPLICABLE CODES.         INVERT LEVEL       KALL PERVENT         ABOVE FINISHED ROOF       FLOORS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE	RISER IDENTIFICATION					VERTICAL PIPING	):
LEDWINDOWN       IDENTIFY EACH PIPE WITH LABELING AT THE FOLLOWING LOCATIONS:         CAP AND SEAL       IDENTIFY EACH PREWITH LABELING AT THE FOLLOWING LOCATIONS:         BALL VALVE       -AT EACH BRANCH TAKE-OFF FROM A MAIN         BALANCING VALVE       -ON EACH SIDE OF A WALL PENETRATION         GAS VALVE       -AT EACH BRANCH TAKE-OFF FROM A BRANCH TAKE-OFF         CHECK VALVE       DOMESTIC HOT WATER:         SOLENDID VALVE       INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.         HATOMATIC TRAP PRIMER       MEDIUM PRESSURE GAS PIPING:         BACKFLOW PREVENTER       MEDIUM PRESSURE GAS PIPING:         VENT THROUGH ROOF       INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.         FINISHED FLOOR LEVEL       INVERT LEVEL         INVERT LEVEL       ABOVE FINISHED ROOF         EXISTING TO REMAIN       WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL.         WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL.         VENT THROUGH ROAF       WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL. </td <td>ELBOW UP</td> <td></td> <td></td> <td></td> <td></td> <td>PROVIDE RISER C</td> <td>LAMP AT BASE AND AT EACH FLOOR LEVEL</td>	ELBOW UP					PROVIDE RISER C	LAMP AT BASE AND AT EACH FLOOR LEVEL
BALL VALVE         BALLANCING VALVE         GAS VALVE         GAS VALVE         CHECK VALVE         SOLENOID VALVE         FLOW SWITCH         AUTOMATIC TRAP PRIMER         BACKFLOW PREVENTER         VENT THROUGH ROOF         FINISHED FLOOR         FINISHED FLOOR         KOVERT LEVEL         ABOVE FINISHED ROOF         FINISHED FLOOR         EXISTING TO REMAIN         OVERFLOW STORM DRAINAGE         PRIMARY STORM DRAINAGE	CAP AND SEAL				15.	IDENTIFY EACH I	PIPE WITH LABELING AT THE FOLLOWING LOCATIONS:
BALANCING VALVE         GAS VALVE         GAS VALVE         CHECK VALVE         SOLENOID VALVE         FLOW SWITCH         AUTOMATIC TRAP PRIMER         BACKFLOW PREVENTER         VENT THROUGH ROOF         FINISHED FLOOR LEVEL         INNERT LEVEL         ABOVE FINISHED ROOF         EXISTING TO REMAIN         OVERFLOW STORM DRAINAGE         PRIMARY STORM DRAINAGE	BALL VALVE					-AT EACH BRAN	CH TAKE-OFF FROM A MAIN DF A WALL PENETRATION
CHECK VALVE CHECK VALVE CHECK VALVE DOMESTIC HOT WATER DOMESTIC HOT WATER SUPPLY AND RETURN LINES. INDICATE DELIVERED WATER TEMPERATURE ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES. INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES. INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES. INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES. INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES. INDICATE FLOW DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES. INDICATE FLOW PREVENTER WEDIUM PRESSURE GAS PIPING(I4' WIC TO 5 PI) SHALL BE IDENTIFIED BY THE STATEMENT, 'WARNING TO 5 PI NATURAL GAS.' THESE LABELS SHALL BE PLACED AT INTERVALS. NOT EXCEEDING 30 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL BE PLACED AT INTERVALS. NOT EXCEEDING 30 FEET. ALL REGULATORS IN MEDIUM PRESSURE LINES SHALL HAVE IDENTIFICATION TAGS IN ACCORDANCE WITH APPLICABLE CODES. INVERT LEVEL ABOVE FINISHED ROOF EXISTING TO REMAIN OVERFLOW STORM DRAINAGE PRIMARY STORM DRAINAGE PRIMARY STORM DRAINAGE TEXAS ACCESSIBILITY STANDARDS	BALANCING VALVE					-EVERY 20' OF S -AT EQUIPMENT	STRAIGHT RUN OF PIPE CONNECTIONS IF MORE THAN 10' FROM A BRANCH TAKE-OFF
SOLENOID VALVE         FLOW SWITCH         AUTOMATIC TRAP PRIMER         BACKFLOW PREVENTER         VENT THROUGH ROOF         FINISHED FLOOR LEVEL         INVERT LEVEL         ABOVE FINISHED ROOF         EXISTING TO REMAIN         OVERFLOW STORM DRAINAGE         PRIMARY STORM DRAINAGE         PRIMARY STORM DRAINAGE	CHECK VALVE					DOMESTIC HOT V	VATER:
FLOW SWITCH         AUTOMATIC TRAP PRIMER         BACKFLOW PREVENTER         VENT THROUGH ROOF         FINISHED FLOOR LEVEL         INVERT LEVEL         ABOVE FINISHED ROOF         EXISTING TO REMAIN         OVERFLOW STORM DRAINAGE         PRIMARY STORM DRAINAGE         TEXAS ACCESSIBILITY STANDARDS	SOLENOID VALVE					INDICATE DELIVE	RED WATER TEMPERATURE ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES. DIRECTION WITH ARROWS ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES
Notionation reaction         BACKFLOW PREVENTER         VENT THROUGH ROOF         FINISHED FLOOR LEVEL         INVERT LEVEL         ABOVE FINISHED ROOF         EXISTING TO REMAIN         OVERFLOW STORM DRAINAGE         PRIMARY STORM DRAINAGE         TEXAS ACCESSIBILITY STANDARDS	FLOW SWITCH					MEDIUM PRESSUR	RE GAS PIPING:
VENT THROUGH ROOF         FINISHED FLOOR LEVEL         INVERT LEVEL         ABOVE FINISHED ROOF         EXISTING TO REMAIN         OVERFLOW STORM DRAINAGE         PRIMARY STORM DRAINAGE         TEXAS ACCESSIBILITY STANDARDS	BACKFLOW PREVENTER					MEDIUM PRESSUR NATURAL GAS."	RE GAS PIPING (I4" WIC TO 5 PI) SHALL BE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PI THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 30 FEET. ALL REGULATORS IN
FINISHED FLOOR LEVEL       I6. SLEEVES:         INVERT LEVEL       FLOORS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE ABOVE GRADE FLOORS.         ABOVE FINISHED ROOF       WALLS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE FIRE RATED WALLS.         EXISTING TO REMAIN       WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL.         OVERFLOW STORM DRAINAGE       INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.         TEXAS ACCESSIBILITY STANDARDS       ISTANDARDS	VENT THROUGH ROOF						E LINES SHALL HAVE IDENTIFICATION TAGS IN ACCORDANCE WITH APPLICABLE CODES.
ABOVE FINISHED ROOF EXISTING TO REMAIN OVERFLOW STORM DRAINAGE PRIMARY STORM DRAINAGE TEXAS ACCESSIBILITY STANDARDS					16.	SLEEVES: FLOORS: PROVIDE	E UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE ABOVE GRADE FLOORS.
EXISTING TO REMAIN         OVERFLOW STORM DRAINAGE         PRIMARY STORM DRAINAGE         TEXAS ACCESSIBILITY STANDARDS	ABOVE FINISHED ROOF					WALLS: PROVIDE	UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE FIRE RATED WALLS. ASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE RETWEEN PIPE OR DUCT AND
OVERFLOW STORM DRAINAGE       INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.         PRIMARY STORM DRAINAGE       INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.         TEXAS ACCESSIBILITY STANDARDS       INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.	EXISTING TO REMAIN						WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH
TEXAS ACCESSIBILITY STANDARDS	OVERFLOW STORM DRAINAGE					INSTALL CHROME	OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES.
	TEXAS ACCESSIBILITY STANDARDS						

![](_page_63_Figure_14.jpeg)

![](_page_64_Figure_0.jpeg)

![](_page_64_Figure_2.jpeg)

![](_page_65_Figure_0.jpeg)

![](_page_65_Figure_4.jpeg)

Drawing Number	P3.01

![](_page_66_Figure_1.jpeg)

### Keynote Legend

- EXISTING HW BYPASS VALVE, SET TO NORMALLY CLOSED ROUTE V LINE TO EXISTING VENT LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE.
- ROUTE SAN WASTE LINE TO EXISTING SAN WASTE LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION, SIZE, DIRECTION OF FLOW AND DEPTH OF BURY OF EXISTING PIPE. ROUTE NG LINE TO EXISTING NATURAL GAS LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE.
- PRESSURE REGULATOR (FROM 5PSI DOWN TO 14" OF WC) AUTOMATIC GAS SHUT-OFF VALVE CONNECTED TO FIRE ALARM SYSTEM IN DIVISION 26.
- ROUTE CW LINE TO EXISTING COLD WATER LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE. ROUTE HW LINE TO EXISTING COLD WATER LINE APPROXIMATELY THIS POINT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXISTING PIPE.
- 3/4"CW AND 3/4"HW DOWN TO FIXTURE.
- BACKFLOW PREVENTER.
- I/2"CW DOWN TO PROOFER. 3/4"CW AND 3/4"HW DOWN TO FOOD SERVICE EQUIPMENT.
- 13 3/4"HW TO DISHWASHER.

![](_page_66_Figure_11.jpeg)

1 SANITARY RISER DIAGRAM

![](_page_66_Figure_13.jpeg)

![](_page_67_Figure_0.jpeg)

RE-LOCATE EXISTING FIRE SPRINKLER HEADS IN THIS AREA TO ACCOMMODATE THE NEW WALLS AND CEILING GRID. ADJUST PIPING AS NECESSARY. LOCATIONS OF SPRINKLER HEADS SHALL BE VERIFIED AND DESIGNED IN ACCORDANCE WITH NFPA I3, AND LOCAL CITY FIRE DEPARTMENT. SPRINKLER SPACING AND PIPING SHALL BE DESIGNED BY A LOCAL RME.

-J.5

![](_page_67_Figure_3.jpeg)

![](_page_68_Picture_0.jpeg)

	DATA SYMBOL LEGEND
TEACHER	R STATION. CONTRACTOR WILL PROVIDE AND INSTALL ALL NECESSARY AV/SPEAKER CABLING
BETWEEI	N THE TEACHER STATION AND THE PROJECTOR WALL STATION AND SPEAKERS. DATA
CABLING	G CONTRACTOR WILL PROVIDE CAT6 CABLING TO NEAREST IDF .
ONE QTY ONE QTY ONE QTY ONE QTY ONE QTY ONE QTY ONE QTY	Y. #HBL985 2G DEEP WALL BOX WITH 2-INCH KO Y. #IMF2W WALL PLATE TO ACCEPT HUBBELL MODULES Y. #IM2KIW 2-PORTS MODULE FOR (2) #HXJ6B RJ45 DATA JACKS Y. IMIKIW SINGLE KEYSTONE OPENING FOR (I) #SFHCI4W HDMI FEED THRU Y. IMBDSIW MODULE OPENING FOR (I) 15-PIN VGA PIN #15GCI0 F-F COUPLER OR BY OTHERS Y. IMIKIW SINGLE KEYSTONE OPENING FOR (I) # SF35STW 3.5MM Y. IMIKIW FOR (I) #SFUSBAA3BK USB A-A Y. #IMIKIW FOR (I) #SFUSBAB3BK USB A-B
PROJECT	TOR WALL LOCATION. CONTRACTOR WILL PROVIDE AND INSTALL ALL NECESSARY
AV/SPEA	AKER CABLING BETWEEN THE TEACHER DESK AND PROJECTOR/SPEAKERS.
WALL BO	DX - #HBL985 2G DEEP BOX WITH 2" KO, SPECIFY 2 QTY. EC TO GANG TOGETHER. NO MUD
RING REO	QUIRED, UTILIZES WALL BOARD + (I) #HBL989 INTERNAL DIVIDER
+ #IMFP2	2D2W NON-METALLIC 4G WALL PLATE, PROVIDES (2) GANGS POWER FOR #DR20WHI TAMPER
RESISTA	NT 20A, I25V DECORATOR DUPLEX + (2) GANGS FOR HUBBELL INFINESTATION MODULES
GANG I F ONE QTY + (I) #H) ONE QTY ONE QTY ONE QTY ONE QTY	FOR DATA/AV: Y. #IM2KIW PROVIDES (2) KEYSTONE OPENINGS FOR (I) HDMI FEED THRU KEYSTONE #SFHCI4W XJ6B KEYSTONE TYPE CAT 6 RJ45 JACKS Y. #IMBDSIW FRAME FOR (I) VGA I5-PIN #I5GCI0 F-F COUPLER OR BY OTHERS Y. #IMIKIW FOR (I) #SFUSBAA3BK USB A-A Y. #IMIKIW FOR (I) #SFUSBAB3BK USB A-B Y. #IMIKIW FOR (I) #SF35STW 3.5MM Y. #IMBIW BLANK
WALL MO	OUNTED TELEVISION. DATA CABLING CONTRACTOR WILL PROVIDE CAT6 CABLING TO
NEAREST	T IDF .
ONE QTY	Y. #HBL985 2G DEEP WALL BOX WITH 2-INCH KO
ONE QTY	Y. #IMFIW WALL PLATE TO ACCEPT HUBBELL MODULES

DATA OUTLET SCHEDULE			
SYMBOL	DESCRIPTION	CABLE QTY.	MOUNTING/REMARKS
$\triangleright$	4"x4"x2-I/4" DATA OUTLET BACKBOX WITH I" CONDUIT AND PULL STRING TO NEAREST ACCESSIBLE CEILING. DUAL GANG BOX 4"X4"X3.5" AT AVI/AV2 STATIONS	Х	18" AFF, DATA OUTLET ONLY (REFER TO DETAILS)
c 🖂	CEILING OUTLET (SINGLE)	2	FLUSH CEILING MOUNT, FIELD COORDINATE EXACT LOCATION.
x	2-GANG BACKBOX WITH I-GANG REDUCER AS REQUIRED, SS-302 COVER PULL STRING ROUTED IN CONDUITS BACK TO SERVER ROOM WITH MEASURED I"C WITH DEVICES AND LOW-VOLTAGE CABLING BY TELECOM CONTRACTOR. RE:8/T6.02	X	18" AFF UNLESS INDICATED OTHERWISE ON FLOOR PLANS, DATA OUTLET ONLY (REFER TO DETAILS)
	D2VI - TWO DATA/NETWORK; ONE VOICE CONNECTION D2 - TWO DATA CONNECTION VI - SINGLE VOICE/TELEPHONE CONNECTION PA - PUBLIC ADDRESS P - DEDICATED ANALOG PHONE/VOICE CONDUIT AV - AUDIO/VISUAL DATA		
DB	DURESS BUTTON; 2-GANG BACKBOX WITH I-GANG REDUCER AS REQUIRED. PROVIDE WITH I"C WITH PULLSTRING	I	MOUNT ON WALL; COORDINATE MOUNTING REQUIREMENTS WITH APPLICABLE CONTRACTOR PRIOR TO ROUGH IN.
ти 🖂	WALL MOUNTED TV	I	MOUNT ON WALL; COORDINATE MOUNTING REQUIREMENTS WITH APPLICABLE CONTRACTOR PRIOR TO ROUGH IN.
PW	WALL MOUNTED PROJECTOR	I	MOUNT ON WALL; COORDINATE MOUNTING REQUIREMENTS WITH APPLICABLE CONTRACTOR PRIOR TO ROUGH IN.
A	MOUNTED AT NO HIGHER THAN 12' AFF. I"C WITH SWEEPING BENDS TO NEAREST ACCESSIBLE CEILING.	I	MOUNT IN CEILING; WIRELESS ACCESS POINT TO BE OWNER FURNISHED AND INSTALLED
AW	WIRELESS ACCESS POINT OUTLET BACKBOX WALL MOUNTED AT 12'AFF. I"C WITH SWEEPING BENDS TO NEAREST ACCESSIBLE CEILING.	I	MOUNT IN WALL; WIRELESS ACCESS POINT TO BE OWNER FURNISHED AND INSTALLED
AEX	EXTERIOR WIRELESS ACCESS POINT OUTLET BACKBOX WALL MOUNTED AT 12'AFF TO 15' AFF. I"C WITH SWEEPING BENDS TO NEAREST ACCESSIBLE CEILING.	I	MOUNT IN WALL; WIRELESS ACCESS POINT TO BE OWNER FURNISHED AND INSTALLED
$\nabla$	FLUSH FLOOR BOX WITH WIRING DEVICES AS INDICATED ON PLANS.	Х	MOUNT IN FLOOR FLUSH; FIELD COORDINATE EXACT LOCATION

-	AND	CONDUIT	PATHWAY

ONE QTY. #IM2KIW I-PORT MODULE FOR (I) #HXJ6B RJ45 DATA JACKS

ONE QTY. IMIKIW SINGLE KEYSTONE OPENING FOR (I) # SF35STW 3.5MM

ONE QTY. IMIKIW SINGLE KEYSTONE OPENING FOR (I) #SFHCI4W HDMI FEED THRU

ONE QTY. IMBDSIW MODULE OPENING FOR (I) 15-PIN VGA PIN #15GC10 F-F COUPLER OR BY OTHERS

CONDUIT RUN

CONDUIT TURNING DOWN

CONDUIT CAPPED FOR FUTURE.

HOMERUN TO COMM ROOM INDICATED. NO CONDUIT SIZE DENOTES I".

JUNCTION BOX

.5" COAXIAL CABLE

LOOP HANGER FOR CABLE PATHWAY

BASKET TYPE TRAY (CABLE TRAY)

		MI MI MI MI
OMM	UNICATIONS SYMBOLS	N N P P P R
YMBOL	DESCRIPTION	R
Sv	PUBLIC ADDRESS SPEAKER, CEILING-MOUNTED WALL-MOUNTED VOLUME CONTROL ADJACENT TO LIGHT SWITCH (UON)	SA SPA
S	PUBLIC ADDRESS SPEAKER, CEILING-MOUNTED. THE AWARDED CONTRACTOR SHALL COORDINATE WITH OWNER/ARCHITECT TO PROVIDE THE SAME MODEL WHICH THE BUILDING HAVE ON THE LAB I	T T TCI TC T M T Y
SR	LOCAL SOUND REINFORCEMENT SPEAKER, CEILING-MOUNTED	
	TELECOMMUNICATIONS GROUNDING BUSBAR, +84" AFF	
VP	AV WALL PLATE. THE AWARDED CONTRACTOR SHALL COORDINATE WITH OWNER/ARCHITECT TO PROVIDE THE SAME MODEL WHICH THE BUILDING HAVE ON THE LAB I	W/
PD	PANEL DISPLAY. THE AWARDED CONTRACTOR SHALL COORDINATE WITH OWNER/ARCHITECT TO PROVIDE THE SAME MODEL WHICH THE BUILDING HAVE ON THE LAB I	
0 0	OPEN FRAME RELAY RACK	

ABBREVIATION DEFINITIONS		
ACS	ACCESS CONTROL SYSTEM	
ADA	AMERICANS WITH DISABILITIES ACT	
AFF	ABOVE FINISHED FLOOR	
AP	ACCESS POINT	
С.	CONDUIT	
CATV	COMMUNITY ANTENNA TELEVISION	
CCIV	CLOSED CIRCUIT TELEVISION	
CR	CARD READER	
CX		
DC		
(D) (F)	TO BE DEMOLISHED	
	EXISTING	
	FIRE ALARM CONTROL PANEL	
FUTURE	THEM NOT PROVIDED IN THIS PROJECT. A PLACE HOLDER TO	
	SHUW SPACE FUR MATERIAL TO BE INSTALLED IN THE FUTURE	
	HEATING, VENTILATION, & AIR CONDITIONING	
	INTROSION DETECTION RETRAD	
MDF		
M/M		
MM	MULTIMODE	
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION	
NIC	NOT IN CONTRACT	
OSP		
PA	PUBLIC ADDRESS	
PBX	PRIVATE BRANCH EXCHANGE	
PIR	PASSIVE INFRARED	
REX	REQUEST-TO-EXIT	
RGS	RIGID GALVANIZED STEEL	
SCP	SECURITY CONTROL PANEL	
S/M	SINGLEMODE	
SM	SINGLEMODE	
SPARE	PRODUCTS OR MATERIAL PROVIDED BY PROJECT TO ACCOMODATE	
	ANTICIPATED GROWTH	
TBB	TELECOMMUNICATIONS BONDING BACKBONE	
TBD	TO BE DETERMINED	
TCP/IP	TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL	
TGB	TELECOMMUNICATIONS GROUND BUSBAR	
TMGB	TELECOMMUNICATIONS MAIN GROUND BUSBAR	
IYP	IYPICAL	
UL	UNDERWRITERS LABORATORIES, INC.	
UON	UNLESS OTHERWISE NOTED	
UPS	UNINTERRUPTIBLE POWER SUPPLY	
VUS	VIDEO DISTRIBUTION SYSTEM (PUSH-VIDEO SYSTEM)	
WAN	WIDE AREA NEIWORK	

![](_page_68_Picture_16.jpeg)

## SECURITY SYMBOL LEGEND

SYMBOL	DESCRIPTION
M	INTRUSION ALARM MOTION DETECTOR
KP	INTRUSION ALARM NUMERIC KEY-PAD
ES	ELECTRONIC STRIKE
ML	ELECTROMAGNETIC LOCK
CR	CARD READER
DH	ACCESS CONTROL DOOR HOLD-OPEN. COORDINATE WITH FIRE ALARM CONTRACTOR LOCATIONS AND REQUIRED SEQUENCING.
В	PUSH BUTTON DOOR RELEASE
MS	IP ADDRESSABLE MASTER STATION
DS	IP ADDRESSABLE FLUSH MOUNT DOOR STATION
RX	REQUEST TO EXIT MOTION SENSOR
	VIDEO CAMERA
	VIDEO SURVEILLANCE CCTV CAMERA
	BASKET TYPE TRAY WITH U-SHAPED ROUND WIRE MESH MOUNTED FROM WALL OR INVERTED "T" MOUNTS. 12"W X 4"H,: CHALFANT WMST412S OR EQUAL. BASKET MAY BE UTILIZED FOR SECURITY AND TELECOM. FIRE ALARM WIRING MUST BE A SEPARATELY INDEPENDENTLY SUPPORTED SYSTEM

## TELECOM GENERAL NOTES

I. ALL CONDUIT AND RACEWAY SHALL BE UNEXPOSED WHEREVER POSSIBLE EXPOSED CONDUIT SHALL BE PAINTED TO MATCH SURROUNDING STRUCTURE. COORDINATE WITH ARCHITECT AND OWNER FOR PAINT COLOR.

2. UNLESS OTHERWISE NOTED, HORIZONTAL DATA CABLE SHALL BE INSTALLED IN CONDUIT OR CABLE HANGER. IN AREAS WITH EXPOSED CEILING, CABLE SHALL BE DISTRIBUTED IN CONDUIT FROM DEVICE TO DESIGNATED COMM (IT) ROOM IN CONDUIT. IN AREAS WITH NON-EXPOSED CEILING, CONDUIT SHALL BE PROVIDED FROM WORK AREA OUTLET TO CEILING. THEN CABLE HANGERS SHALL BE USED TO DISTRIBUTE CABLE FROM CONDUIT TO DESIGNATED COMM (IT) ROOM. 3. CONDUIT SHALL BE SIZED PER ANSI/TIA/EIA 569-B, WITH A MINIMUM SIZE OF

ONE-INCH. 4. CONTRACTOR SHALL COORDINATE ACTUAL CONDUIT AND CABLE HANGER PATHWAY ROUTES WITH ALL OTHER TRADES. CONTRACTOR SHALL ENSURE COMPLIANCE WITH APPLICATION SPECIFICATIONS FOR CONDUIT AND CABLE INSTALLATION/OPERATION.

5. ELECTRICAL POWER CABLES AND CONDUITS SHALL NOT BE INSTALLED IN OR ATTACHED TO CABLE TRAYS.

6. CONTRACTOR SHALL NOT ABANDON WIRING, CONDUIT, J-BOXES, OR DEVICES IN PLACE. UNUSED EQUIPMENT AND SUPPORTS SHALL BE REMOVED AND DISPOSED

7. TELECOMMUNICATION OUTLET BOXES SHALL BE: - 4 IN. SQ. BY 2 I/2 IN. DEEP UNLESS NOTED OTHERWISE ALL COVERS OR PLATES SHALL BE DESIGNED TO FIT ONE-GANG OR

TWO-GANG OUTLET BOXES - PLASTER RINGS ARE NOT SUITABLE FOR SECURING SERVICE CONNECTORS - BUSHING CONNECTORS SHALL BE PROVIDED TO ALL OUTLET BOXES FLUSH WITH THE FINISHED WALL

8. ALL TELECOMMUNICATION CONDUITS SHALL BE PROVIDED WITH A MEASURED PULL TAPE.

9. NO MORE THAN 100' BETWEEN PULL BOXES.

10. NO MORE THAN 270 DEGREES OF TURNS BETWEEN PULL BOXES. II. UTILIZE SWEEPING BENDS.

12. PULL BOXES MUST NOT BE USED AS TURNS. THE BEND MUST COME BEFORE OR AFTER THE PULL BOX.

I3. CONDUITS/J-BOXES MUST BE LABELED WITH WHAT ROOM NUMBERS THEY ARE FEEDING AND WHAT SYSTEM.

14. CONDUITS SHOULD BE ROUTED AT HIGH LEVEL TO EITHER SIDE OF THE CORRIDOR. I5. UTILIZE THE FOLLOWING CONDUIT SIZES BASED ON NUMBER OF DATA CABLES IN THE CONDUIT.

SIZE OF CONDUIT MAX # OF CAT6 CABLES

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OORDINATE WITH CABLING CONTRACTOR FOR CONSTRUCTION SHOP DRAWINGS ALL LOW VOLTAGE DATA CABLES WILL BE ROUTED BACK TO THE CABLE TRAY IN MINIMUM I"C EMT THE CONTRACTOR WILL BE RESPONSIBLE FOR SIZING AND

CABLE TRAY AND OR WIRE NOT IN CONDUIT IS NOT ALLOWED IN ANY EXPOSED AREAS

1.25" 1.5"

2.5"

PULL BOXES MUST NOT BE USED AS TURNS. THE BEND MUST COME BEFORE OR AFTER THE PULL BOX. ALL EXPOSED CONDUITS ARE TO BE PAINTED PER ARCHITECT COLOR SELECTION.

CONDUITS/J-BOXES MUST BE LABELED WITH WHAT ROOM NUMBERS THEY ARE FEEDING AND WHAT SYSTEM. CONDUITS SHOULD BE ROUTED AT HIGH LEVEL TO EITHER SIDE OF THE CORRIDOR. ELECTRICAL CONTRACTOR WILL COORDINATE THE SIZES AND ROUTING WITH THE DATA CONTRACTOR AND OTHER

COORDINATE WITH FIRE SPECIFICATIONS AND INSTALLING CONTRACTOR FOR CONSTRUCTION SHOP DRAWINGS ALL EXPOSED (OR ABOVE HARD CEILINGS) LOW VOLTAGE FIRE ALARM WIRING WILL BE ROUTED BACK TO THE FACP ROOM IN EMT CONDUIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR SIZING AND ROUTING: PAINT AND LABEL AS REQUIRED

COORDINATE WITH SECURITY SPECIFICATIONS AND INSTALLING CONTRACTOR FOR CONSTRUCTION SHOP DRAWINGS ALL LOW VOLTAGE SECURITY ALARM WIRING WILL BE ROUTED BACK TO THE MDF ROOM IN EMT CONDUIT. THE CONTRACTOR WILL BE RESPONSIBLE FOR SIZING AND ROUTING: PAINT AND LABEL AS REQUIRED BY ARCHITECT

## SECURITY GENERAL NOTES

- ALL SECURITY SYSTEM EQUIPMENT, FURNISHINGS, CONDUIT, CABLING AND OTHER RELATED MATERIALS AND INTERFACES SHALL BE INSTALLED IN ACCORDANCE WITH PROJECT CONSTRUCTION SCHEDULES.
- 2. SECURITY SYSTEM EQUIPMENT, FURNISHINGS, CONDUIT, CABLING AND OTHER RELATED MATERIALS SHALL BE INSTALLED AS SHOWN.
- 3. EQUIPMENT MOUNTING PLYWOOD SHALL BE 3/4" AND SHALL BE COVERED WITH WHITE INTUMESCENT PAINT.
- 4. ALL CONDUIT (NEW) SHALL NOT BE LESS THAN 3/4" DIAMETER AND NO MORE THAN 40% FILLED.
- 5. ALL SECURITY EQUIPMENT ENCLOSURES AND CABINETS ARE TO BE TAMPER PROTECTED AND CONNECTED TO INDIVIDUAL MONITOR POINTS.
- 6. CONTRACTOR SHALL FURNISH AND INSTALL ALL CABLING AND CONDUIT FROM SECURITY DEVICE LOCATIONS TO DESIGNATED ROOMS AND CLOSETS. CABLING SHALL BE OF APPROPRIATE TYPE AND GAUGE AS REQUIRED BY THE MANUFACTURER, FOR PROPER SYSTEM OPERATION. CONTRACTOR SHALL ENSURE CABLES TO EACH DEVICE PROVIDES SUFFICIENT VOLTAGE, OR SIGNAL STRENGTH TO OPERATE WITHIN MANUFACTURERS SPECIFIED LIMITS.
- 7. CONTRACTOR SHALL COORDINATE EXACT DEVICE MOUNTING LOCATIONS WITH ARCHITECT AND OTHER TRADES PRIOR TO INSTALLATION OF DEVICES AND RELATED INFRASTRUCTURE.
- 8. INTRUSION DETECTION SYSTEM CONTRACTOR SHALL PROVIDE A COMPLETE AND FULLY FUNCTIONING SECURITY SYSTEM INCLUDING BUT NOT LIMITED TO ALL SECURITY DEVICES, WIRING AND COMMISSIONING OF SECURITY SYSTEM.
- 9. INTRUSION DETECTION SYSTEM CONTRACTOR SHALL PROVIDE ALL PROGRAMMING OF SECURITY SYSTEM AND DEVICES.
- 10. ALL DOOR CONTACTS SHALL BE RECESSED IN DOOR FRAME WHENEVER POSSIBLE AND SHALL MATCH COLOR OF DOOR FRAME.
- II. ALL DOORS SHALL BE ADDRESSED SEPARATELY. DOUBLE DOORS TO BE WIRED IN SERIES AND IDENTIFIED AS SINGLE ZONE.
- 12. CONTRACTOR SHALL PROVIDE SECURITY JUNCTION BOXES AND CONDUIT PATHWAY ROUTED TO NEAREST COMMUNICATION ROOM FOR FUTURE SECURITY INSTALLATIONS AS ILLUSTRATED IN DRAWING SET.
- 13. CONTRACTOR SHALL PROVIDE A COMPLETE INSTALLATION OF ALL SECURITY DEVICES, WIRING AND COMMISSIONING OF INTRUSION DETECTION SYSTEMS.
- 14. CONTRACTOR SHALL PROVIDE A COMPLETE INSTALLATION OF ALL SECURITY
- DEVICES, WIRING AND COMMISSIONING OF ACCESS CONTROL DOORS. 15. CONTRACTOR SHALL PROVIDE ALL PROGRAMMING OF INTRUSION DETECTION
- SYSTEM AND DEVICES. 16. CONTRACTOR SHALL PROVIDE ALL PROGRAMMING OF ACCESS CONTROL SYSTEM AND DEVICES.

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![](_page_69_Figure_0.jpeg)

![](_page_69_Picture_2.jpeg)

![](_page_70_Figure_0.jpeg)

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