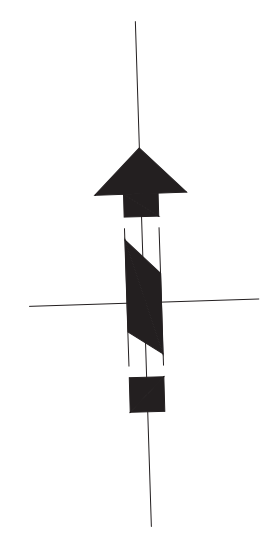


# GRAB AND GO PLUS RESTAURANT

## 1746 MARINE DRIVE, WEST VANCOUVER, BC



MANSOURI

PEOPLE BUILD DESIGN

109-1305 WELCH STREET, NORTH VANCOUVER, BC, V7P 1B3  
WWW.MANSOURIDESIGN.COM

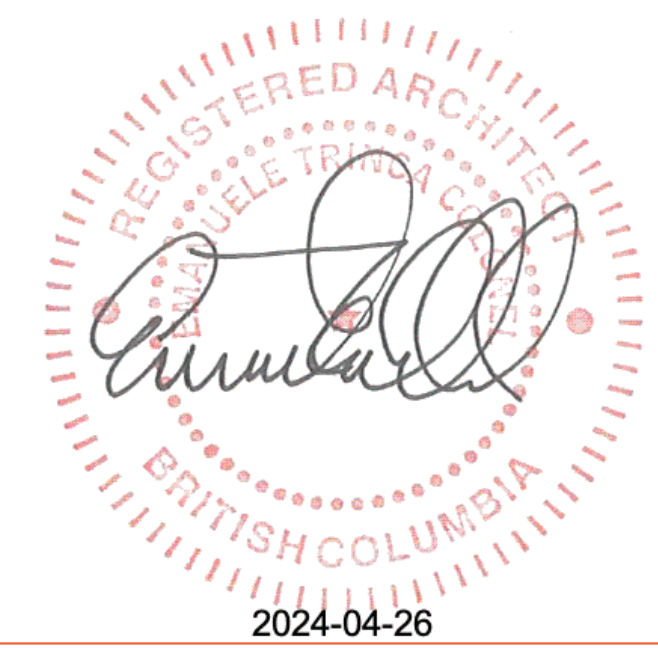
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TRINCA ARCHITECTURE INC

1645 West 5th Ave  
Vancouver BC V6J 1N5  
604.737.4766  
info@trincaarchitecture.com



PROJECT :

GRAB AND GO PLUS RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER BC

TITLE :  
SITE AND CONTEXT PLANS  
PROJECT DATA

DATE FEBRUARY, 2024  
DRAWN K. MEMORY  
CHECKED MT  
SCALE N.T.S.  
REVISION APRIL. 25, 2024

DRAWING NO.

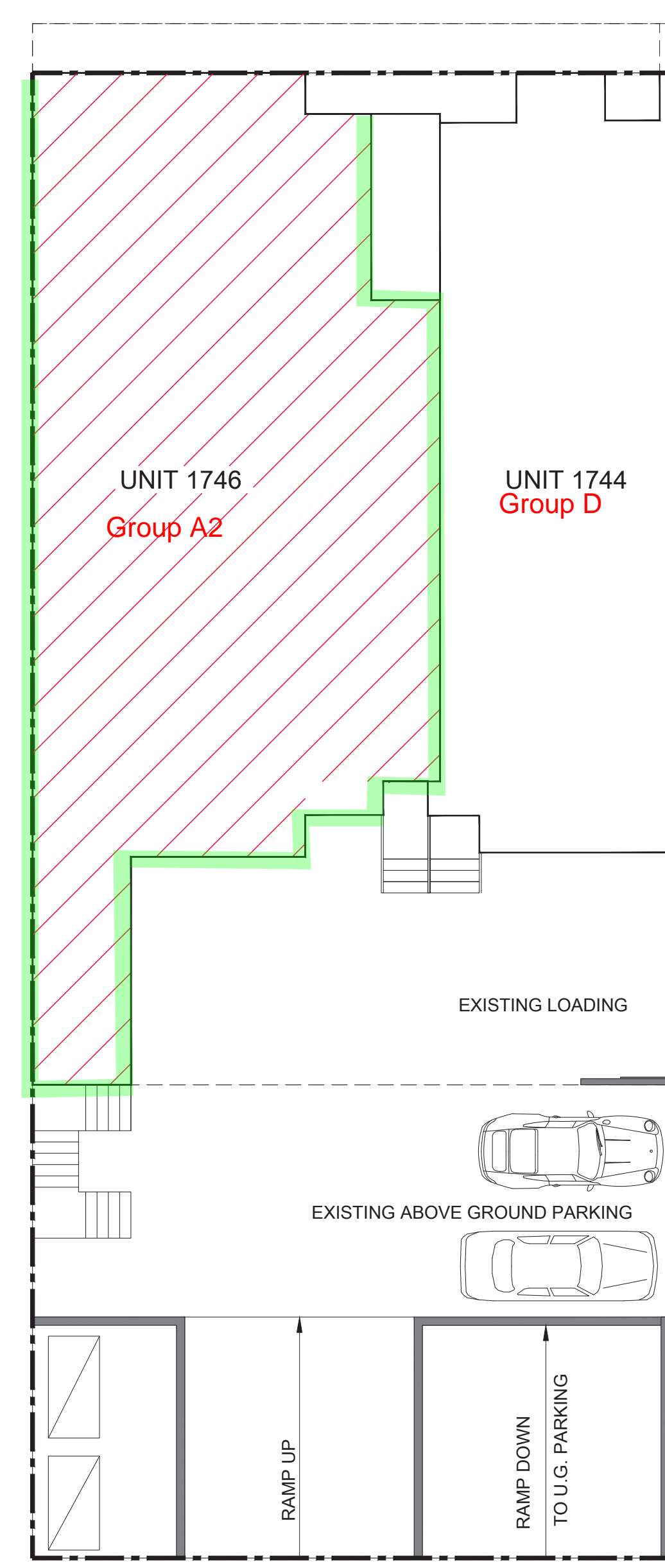
A-01

2018 BC Building Code

MARINE DRIVE



CONTEXT PLAN



AMBLESIDE LANE

SITE PLAN

**REMOVAL OF CONSTRUCTION MATERIALS**

- For buildings constructed prior to 1990
- Inspections will not be carried out until the Hazmat Survey and any related documents are received.
- These documents must be prepared by a Qualified Person.

Please refer to: [www.worksafebc.ca](http://www.worksafebc.ca) and [www.westvancouver.ca/permits](http://www.westvancouver.ca/permits)

**PROFESSIONAL ENGINEER APPROVAL REQUIRED FOR SEISMIC AND STRUCTURAL ADEQUACY OF ALL CEILING HUNG EQUIPMENT, CEILINGS AND BULKHEADS**

**ELECTRICAL, PLUMBING, SPRINKLERS AND SIGNAGE WILL REQUIRE SEPARATE PERMIT**

**PLEASE CALL FOR FRAME INSPECTION PRIOR TO INSULATION OR DRYWALL (after Electrical and Plumbing rough-in)**

**STRUCTURAL ENGINEER DESIGN AND REVIEW REQUIRED FOR STORAGE RACKING/SHELVING IN EXCESS OF 8'-6"**

**STRUCTURAL ENGINEER REQUIRED TO REVIEW NEW OPENING IN REINFORCED SLAB. REFER TO BASE BUILDING CONSULTANTS**

**COMBUSTIBLE INTERIOR FINISHES IN NONCOMBUSTIBLE CONSTRUCTION**

- Wall finishes, other than foamed plastics, shall be not more than 25mm thick, and FSR 150 maximum on any exposed surface, or any surface that would be exposed by cutting through the material in any direction.
- Ceiling finishes, other than foamed plastics, shall be not more than 25mm thick, and FSR 25 maximum on any exposed surface or any surface that would be exposed by cutting through the material in any direction, except that not more than 10% of the ceiling area within each fire compartment is permitted to have FSR not more than 150.
- Combustible interior ceiling finishes of fire-retardant-treated wood are permitted provided they are not more than 25mm or are exposed fire-retardant-treated wood battens.

**Door Handle Requirements**  
Section 3.8.3.6. (4)(a)  
Door handles shall be graspable and operable with one hand in a closed position, without requiring tight grasping, pinching fingers, or twisting of the wrist.

**THE OPERATION OF A BUSINESS MUST COMPLY WITH THE BUSINESS LICENCE BYLAW NO. 4455, 2005, PART 6 AS IT RELATES TO THE CONTROL OF ODOURS EMANATING FROM A TENANCY (PLACE OF BUSINESS).**

**THIS PROPERTY IS LOCATED IN A DEVELOPMENT PERMIT AREA. ANY ALTERATION TO THE EXTERIOR OF THE BUILDING REQUIRES THE APPROVAL OF THE PLANNING DEPARTMENT OF WEST VANCOUVER.**

**Letters of Assurance on File**

A CRP Emanuele Trinca Colonel, R.Arch.  
B Arch Emanuele Trinca Colonel, R.Arch.  
B Elec Abdul El-Haddad, P. Eng.  
B Mech Satwik Shetty, P. Eng.  
B Plumb Satwik Shetty, P. Eng.  
B Fire Suppression Satwik Shetty, P. Eng.

Vancouver Coastal Health approved letter and stamped drawings received and on file.  
Metro Vancouver grease interceptor compliance letter received and on file.

**PROJECT ADDRESS:**  
1746 MARINE DRIVE, WEST VANCOUVER, BC

**LEGAL DESCRIPTION:**  
PLAN 4140 DISTRICT LOT 775 BLOCK R LOT 5

**SCOPE OF WORK:**  
THE TENANT IMPROVEMENT FOR THE FITTING OUT OF A RESTAURANT

BUILDING CODE SUMMARY		REFERENCE
GOVERNING BUILDING CODE:	BCBC 2018	
MAJOR OCCUPANCY CLASS:	D	3.2.2.56
	A2	3.1.2.1
NUMBER OF STREETS:	2	3.2.2.10
BUILDING AREA:	ABOVE GROUND APPROX. 6980 SQ. FT. (650 M <sup>2</sup> ) UNDER GROUND APPROX. 5340 SQ. FT. (696 M <sup>2</sup> )	
UNIT AREA:	2078 SQ. FT. (193 M <sup>2</sup> )	
BUILDING HEIGHT (STOREYS):	2 ABOVE GROUND - 1 UNDERGROUND	
SUITE CLASSIFICATION:	GROUP A, DIVISION 2,	3.2.2.25
SPRINKLER SYSTEM:	NO	
STANDPIPE REQUIRED:	NO	3.2.5.8
EXISTING BUILDING CONSTRUCTION:	COMBUSTIBLE OR NON-COMBUSTIBLE	
REQUIRED FRR:		
FLOOR	45 MIN	3.2.2.25.A)
MEZZANINES	45 MIN	3.2.2.25.B)
SUPPORTING MEMBERS	45 MIN	3.2.2.25.D)
A2 - D	2 H existing(wall)per HP	3.1.3.1.
EXISTING FRR:		
WALLS	2 H	
FLOORS	12 H existing(floor above) per HP	
EXITS		3.4
CRITERIA FOR ONE EXIT:	GROUP A MAX FLOOR AREA 150 M <sup>2</sup>	
MAXIMUM TRAVEL DISTANCE 15M. (NOT SPRINKLERED)		TABLE 3.4.2.1.-A
GROSS AREA 193 M <sup>2</sup>		
NO. OF EXITS	REQUIRED - 2	EXISTING - 2
DISTANCE BETWEEN EXITS	NOT LESS THAN 9M	3.4.2.3.1) B)
TRAVEL DISTANCE	27.17M (MAX 30M) (SEE FLOOR PLAN A05)	3.4.2.5.1) F)
EXIT WIDTH REQUIRED		3.4.3
EXIT WIDTH: 6.1MM/PERSON		3.4.3.2.1A)
REQ'D WIDTH: 305 MM		
EXIT WIDTH PROVIDED: 1830MM		
EMERGENCY LIGHTING REQ'D:	YES @ EXITS	3.2.7.3
OCCUPANT LOAD		3.1.17.2
AREA	AREA/PERSON	OCCUPANT LOAD (ROUNDED UP)
RESTAURANT DINING AREA 52.8 M <sup>2</sup>	1.20	44
KITCHEN 55.8 M <sup>2</sup>	9.30	6
TOTAL		50
NUMBER OF SEATS PROVIDED:		44
STAFF (KITCHEN, RESTAURANT SERVICE AREA):		6
		50
LAVATORIES		TABLE 3.7.2.2.-A
NUMBERS OF PERSONS OF EACH SEX - 25		
REQUIRED	MALE - 1	
	FEMALE - 1	
EXISTING PROVIDED:		
	MALE - 1 ACCESSIBLE	
	FEMALE - 1 ACCESSIBLE	
	STAFF 1 - UNISEX	
ACCESSIBLE LAVATORIES CONFORM	TO 3.8.3.12 OF THE BCBC 2018	

NOTE: SEPARATE PERMIT REQUIRED FOR THE SIGNAGE .

**ACCEPTED**  
FOR BUILDING PERMIT ISSUANCE  
  
**BP119005**  
  
These drawings to be available on site PERMITS & INSPECTIONS DEPT DISTRICT OF WEST VANCOUVER

REVISED  
APR 26 2024

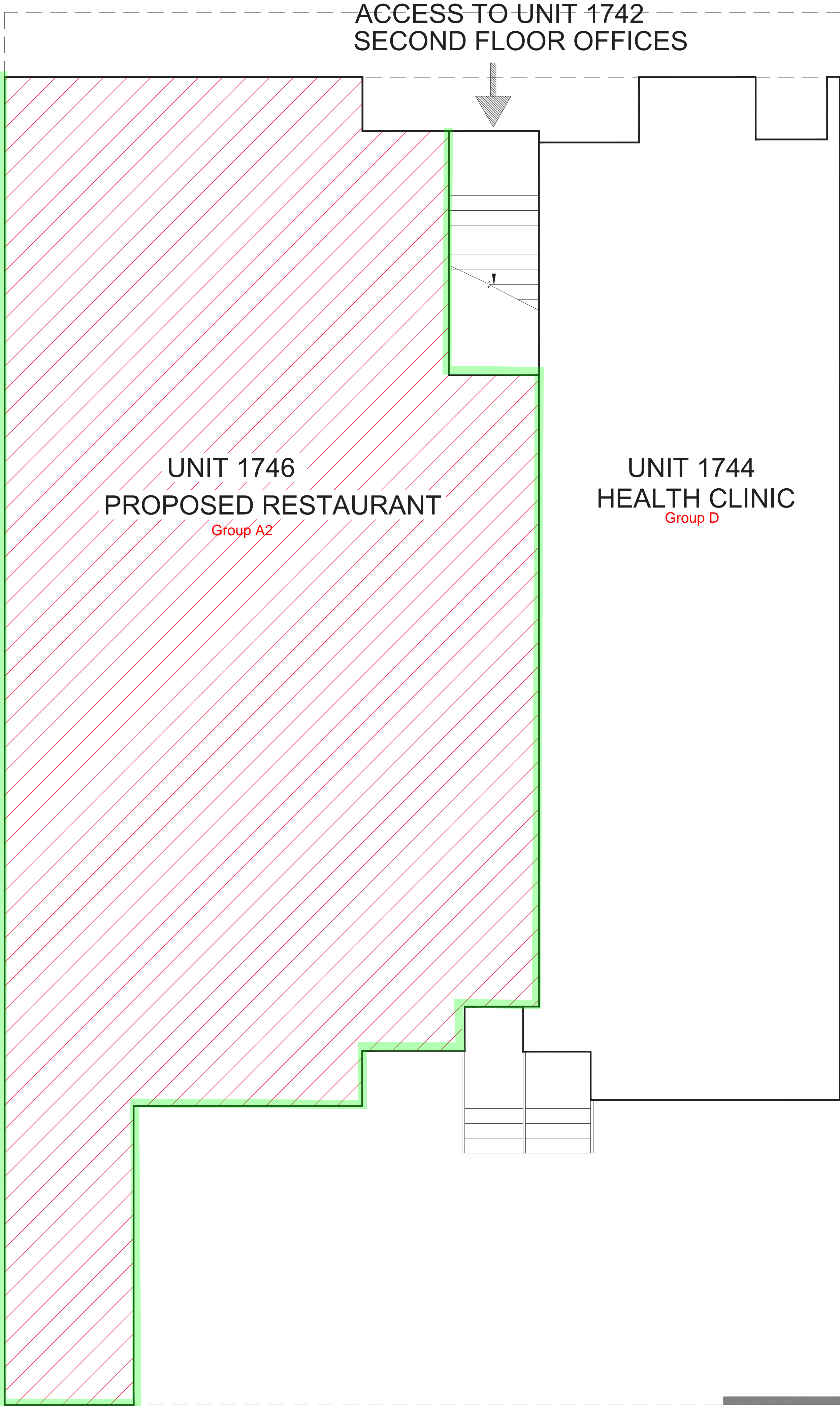
District of West Vancouver  
Permits Dept.



REVISED

APR 26 2024

District of West Vancouver  
Permits Dept.



metrovanancouver  
SERVICES AND SOLUTIONS FOR A LIVABLE REGION

BP 119005

February 15, 2024

Parks and Environment Department  
Tel. 604-432-6200 or via Email  
regulations@metrovanancouver.ca  
File: SF-03-03-NVC  
Ref: FSEL-1

Grab and Go Plus  
1805 Lonsdale Avenue  
North Vancouver, BC V7M 2J8

VIA EMAIL: masoud\_ashouri2016@icloud.com

Attention: Masoud Ashourimovasagh, Owner

Dear Masoud Ashourimovasagh:

**Proposed Installation and the Food Sector Grease Interceptor Bylaw**

Metro Vancouver staff review proposed grease interceptor installations to provide interpretation on whether the installation will comply with current requirements in *GV&DD Food Sector Grease Interceptor Bylaw No. 365, 2023* ("the Bylaw"). While we appreciate the opportunity to review your proposal, the Bylaw does not require this review. Please note that the responsibility to comply with the Bylaw falls upon the owner/operator.

Based on the information provided on February 12, 2024, we understand that you will install and connect the fixtures and grease interceptor at Grab and Go Plus, 1746 Marine Drive, West Vancouver, BC, as outlined in the table below:

Fixtures	Dimensions (inches)	Assigned Flow Rate in gallons per minute (GPM)	Connection to Grease Interceptor
1. Three-compartment sink	3x(24 x 24 x 14)	78.6*	Zurn Proceptor
2. Dishwasher	-	14	GMC 100
3. Floor Drain	3	37.5**	USGPM

\*Assigned flow rate using 75% sink volume as per grease interceptor selection methodology.

\*\*Flows from the floor drains and/or mop sink are considered non-simultaneous for the calculations.

**RECEIVED**

FEB 29 2024  
66089315

District of West Vancouver  
Permits Dept.

4515 Central Boulevard, Burnaby, BC, Canada V5H 0C6 | 604-432-6200 | metrovanancouver.org  
Metro Vancouver Regional District | Greater Vancouver Water District | Greater Vancouver Sewerage and Drainage District | Metro Vancouver Housing Corporation

Grab and Go Plus  
Proposed Installation and the Food Sector Grease Interceptor Bylaw  
Page 2 of 2

If you make any changes to the specifications noted in the table above, and would like us to reassess your proposal, please let us know as soon as possible.

**Consistency with the MV Grease Interceptor Selection Methodology**

We have reviewed the assigned flow rates of all plumbing fixtures connected to the grease interceptor detailed in the table above and have found that the proposed installation is consistent with Step 1 of the approved Metro Vancouver Grease Interceptor Selection Methodology and meets the certification requirements in the Bylaw.

**Future Compliance with the Bylaw**

In addition to the requirement to install a grease interceptor that meets the standards requirements and is properly-sized (Part 8), there are grease interceptor maintenance requirements specified in the Bylaw (Part 10). The attached Grease and Commercial Kitchens brochure summarizes these requirements. Future compliance with the Bylaw will largely depend on proper maintenance of the grease interceptor, and we may request maintenance records or inspect the establishment to assess if the grease interceptor is operated properly.

There may be municipal or health authority requirements that are additional to the terms specified in the Bylaw.

If you have any questions, please contact me at 604-307-5216 or at [Cynthia.Barros@metrovanancouver.org](mailto:Cynthia.Barros@metrovanancouver.org).

Sincerely,

*Cynthia Barros*

Cynthia Barros  
Officer  
Environmental Regulation and Enforcement Division

CAB/HMA/cab

cc: Norm Vito, Utilities, Engineering and Transportation Department, City of West Vancouver, [nvito@westvancouver.ca](mailto:nvito@westvancouver.ca)

Attachment: Grease and Commercial Kitchens Brochure

66089315

Vancouver  
Coastal Health  
Promoting wellness. Ensuring care.

Coastal Health Office, Box 1040, 5571 16th Ave, Sackville, NB, 100 Tel: 1804-405-5164  
North Vancouver Office, 127 W. Esplanade, North Vancouver, V7M 1S2 Tel: 604-983-6700  
Richmond Office, 8100 Granville, Richmond, BC V6V 3T5 Tel: 604-273-3147  
Surrey Office, Box 320 1140 Hunter Pl, Surrey, BC V4A 0A2 Tel: 1804-495-2253  
Vancouver Office, 1200-601 West Broadway, Vancouver, BC V6E 4C2 Tel: 604-675-3809

**FOOD PREMISES PLAN REVIEW**

Date (Plan Reviewed)	February 20, 2024	Date (Plan Received)	Nexus	202402232336
Premises Name	Grab and Go Plus Restaurant		EHO/Work Area	Jasmin Findlay
Address	1746 Marine Dr, West Vancouver		Building Permit #	
Discussed with applicant: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Applicant Name	Sam Mansouri, Designer	Applicant Phone	778.995.6838

Environmental Health has reviewed the plans for: FS1 <input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Proposed	<input type="checkbox"/> Renovation by existing owner
Drawing No.	Drawing Date
<input checked="" type="checkbox"/> Plans APPROVED subject to the following conditions:	
<input checked="" type="checkbox"/> A copy of the VCH-approved plans with this review sheet must be kept on premises during construction and available at all times.	
<input checked="" type="checkbox"/> Any revisions to the VCH-approved plans will require re-submission for health approval	
<input checked="" type="checkbox"/> No accumulation of smoke, grease, water vapour and objectionable odors permitted. Ventilation must comply with Municipal, Fire and Building Code requirements	
<input checked="" type="checkbox"/> Final finish: floors, walls in food preparation, storage and display areas smooth and impervious	
<input checked="" type="checkbox"/> Final finish: Ceilings above food preparation, storage, display areas smooth & impervious, no exposed utility lines	
<input checked="" type="checkbox"/> Floor and wall joints to be covered	
<input checked="" type="checkbox"/> Floor drains in the food preparation area (as required)	
<input checked="" type="checkbox"/> Adequately sized dry storage area	
<input checked="" type="checkbox"/> Building designed to prevent entry of pests	
<input checked="" type="checkbox"/> Adequate lighting with protective shields over food preparation and storage areas	
<input type="checkbox"/> Approved potable water source	
<input checked="" type="checkbox"/> Adequate hot water supply	
<input checked="" type="checkbox"/> Hand wash sink located in food preparation area x3	
<input type="checkbox"/> Two-compartment pot sink with drain board	
<input checked="" type="checkbox"/> Approved commercial dishwasher	
<input checked="" type="checkbox"/> Three-compartment pot sink with drain board	
<input checked="" type="checkbox"/> Janitorial sink located in suitable area	
<input type="checkbox"/>	
<input type="checkbox"/>	

Operator Requirements:	
<input checked="" type="checkbox"/> Final health inspection and approval required prior to opening for business	
<input checked="" type="checkbox"/> Complete and submit a <input checked="" type="checkbox"/> Food operating permit application form or <input type="checkbox"/> Non-permitted facility application form	
<input checked="" type="checkbox"/> Provide copy of Food Safe certification or equivalent	
<input checked="" type="checkbox"/> Written Food Safety and Sanitation plan	
<input checked="" type="checkbox"/> Provide copy of Certificate of Incorporation for corporately owned premises	
<input checked="" type="checkbox"/> Construction or alteration of a food premises must follow requirements outlined in the <i>Public Health Act, Food Premises Regulations, B.C. Reg. 210/99</i> and supporting documents.	
<input checked="" type="checkbox"/> Contact other local government, Provincial or Federal inspection agencies for approval	

<input type="checkbox"/> Plans NOT APPROVED:	
<input type="checkbox"/> Require detailed floor/equipment plans of food preparation/storage areas	
<input type="checkbox"/>	
<input type="checkbox"/>	

*Charlene Wood*  
EHO (Signature)  
Food Premises Plan Review (Rev. 2023)

Charlene Wood

Reviewed By: (Print)

MANSOURI

PEOPLE BUILD DESIGN

109-1305 WELCH STREET, NORTH VANCOUVER, BC, V7P 1B3

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TRINCA ARCHITECTURE INC

1645 West 5th Ave  
Vancouver BC V6J 1N5  
604.737.4766  
[info@trincaarchitecture.com](mailto:info@trincaarchitecture.com)



PROJECT :  
GRAB AND GO PLUS  
RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER BC

TITLE :  
GROUND FLOOR KEY PLAN

DATE FEBRUARY, 2024

DRAWN K. MEMORY  
CHECKED MT

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

DRAWING NO. A-02



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PROJECT :  
GRAB AND GO PLUS  
RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER BC

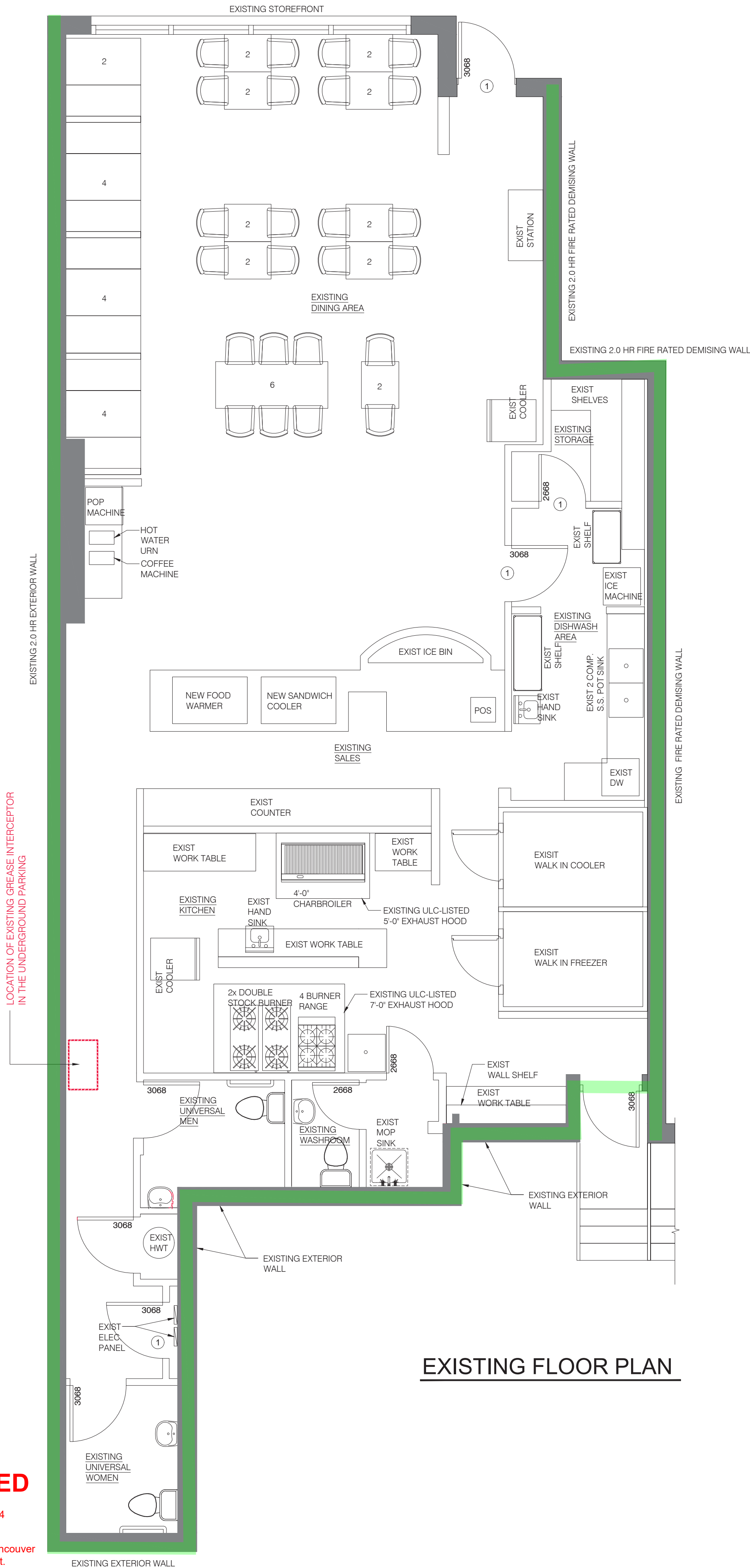
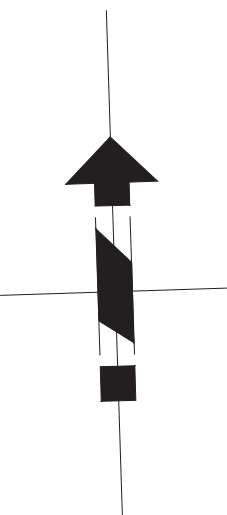
TITLE :  
EXISTING AND DEMOLISH  
FLOOR PLANS

DATE FEBRUARY, 2024

DRAWN K. MEMORY  
CHECKED MT

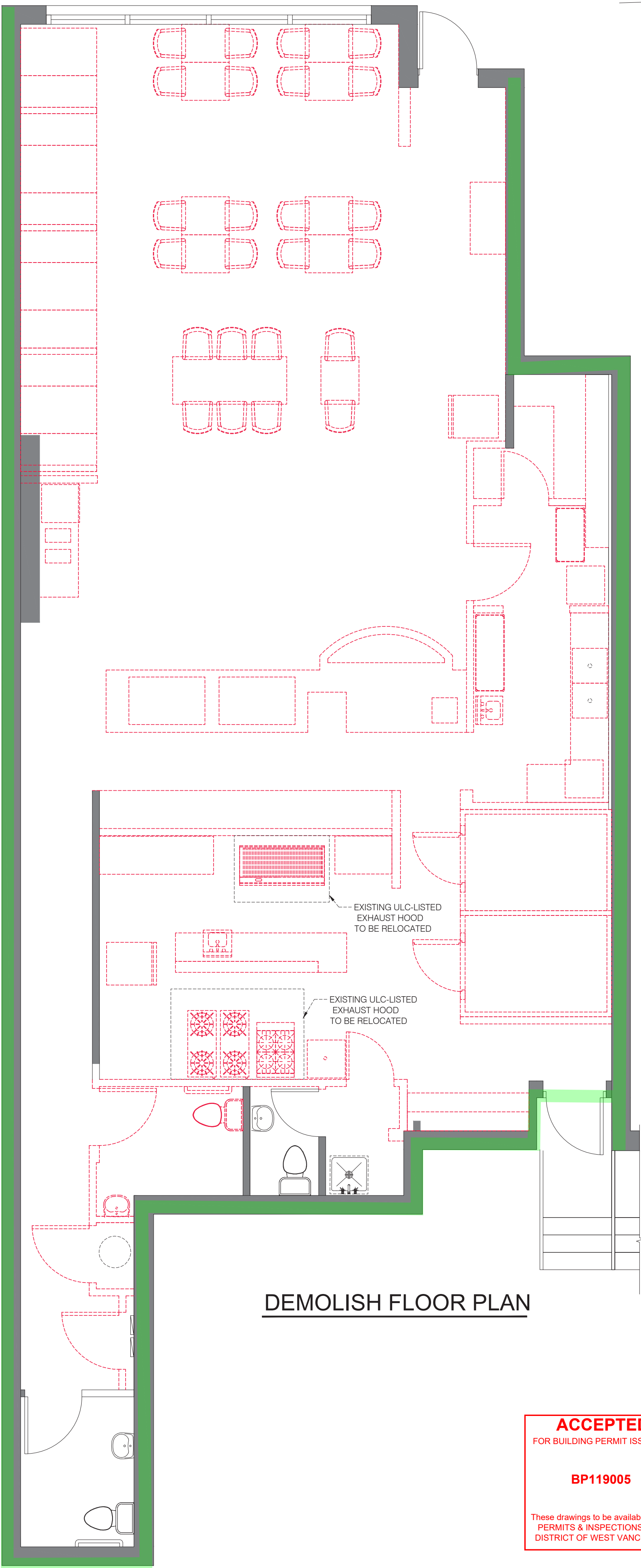
SCALE 1/4" = 1'-0"  
REVISION

DRAWING NO. A-03



LEGEND:

- EXISTING WALLS TO REMAIN
- EXISTING WALLS, DOORS, EQUIPMENT AND FURNITURE TO BE REMOVED



REVISED

APR 26 2024

District of West Vancouver  
Permits Dept.

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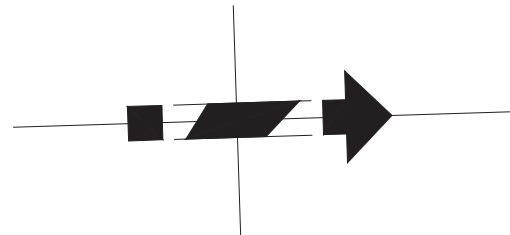
PROJECT :  
GRAB AND GO PLUS  
RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER BC

TITLE :  
EXISTING UNDERGROUND  
PARKING FLOOR PLAN

DATE FEBRUARY, 2024  
DRAWN K. MEMARY  
CHECKED MT  
SCALE 1/4" = 1'-0"  
REVISION APRIL. 25, 2024

DRAWING NO. A-04



Any new piping penetrations through slab above to be firestop'd and be visible for inspection. 2hr slab.

New grease interceptor to be installed as per mechanical drawings. Existing location of previous grease interceptor as per hp plans.

LOCATION OF EXISTING GREASE INTERCEPTOR IN THE UNDERGROUND PARKING

CONC. CURB

5 SMALL CAR

4

3

2

SMALL CAR

1

EXIT

11

12

GATE

EXISTING UNDERGROUND PARKING

REVISED

APR 26 2024

District of West Vancouver  
Permits Dept.

ACCEPTED  
FOR BUILDING PERMIT ISSUANCE

BP119005

These drawings to be available on site  
PERMITS & INSPECTIONS DEPT  
DISTRICT OF WEST VANCOUVER



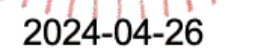
## PEOPLE BUILD DESIGN

WWW.MANSOURIDESIGN.COM

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info@trincaarchitecture.com



## GRAB AND GO PLUS RESTAURANT

TITLE :  
PROPOSED FLOOR PLAN  
PROPOSED RCP

SCALE  $\frac{1}{4}" = 1'-0"$   
 REVISION APRIL 25, 2024

DRAWING NO. A-05





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info@trincaarchitecture.com



2024-04-26

PROJECT :  
**GRAB AND GO PLUS RESTAURANT**

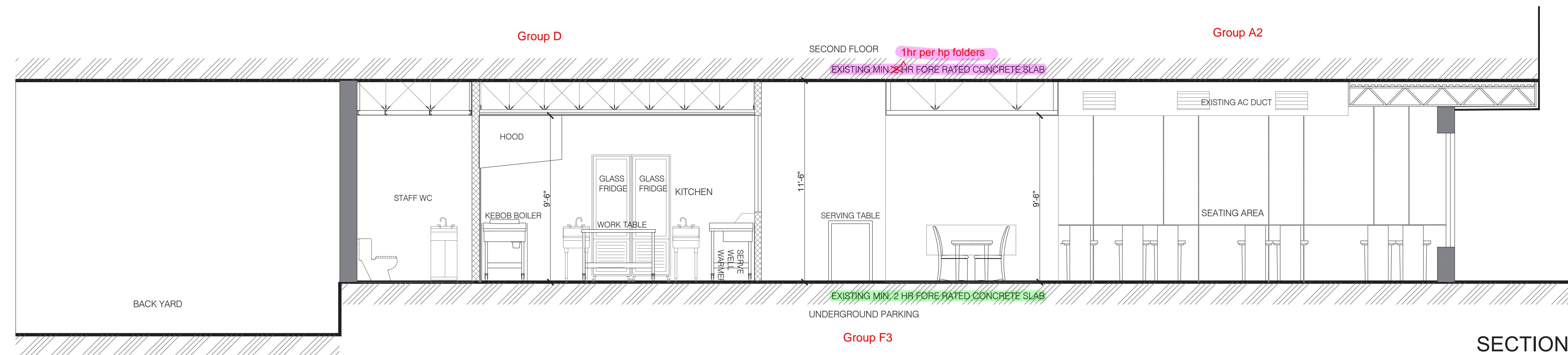
1746 MARINE DRIVE, WEST VANCOUVER BC

TITLE :  
**SECTIONS AND DETAILS**

DATE FEBRUARY, 2024

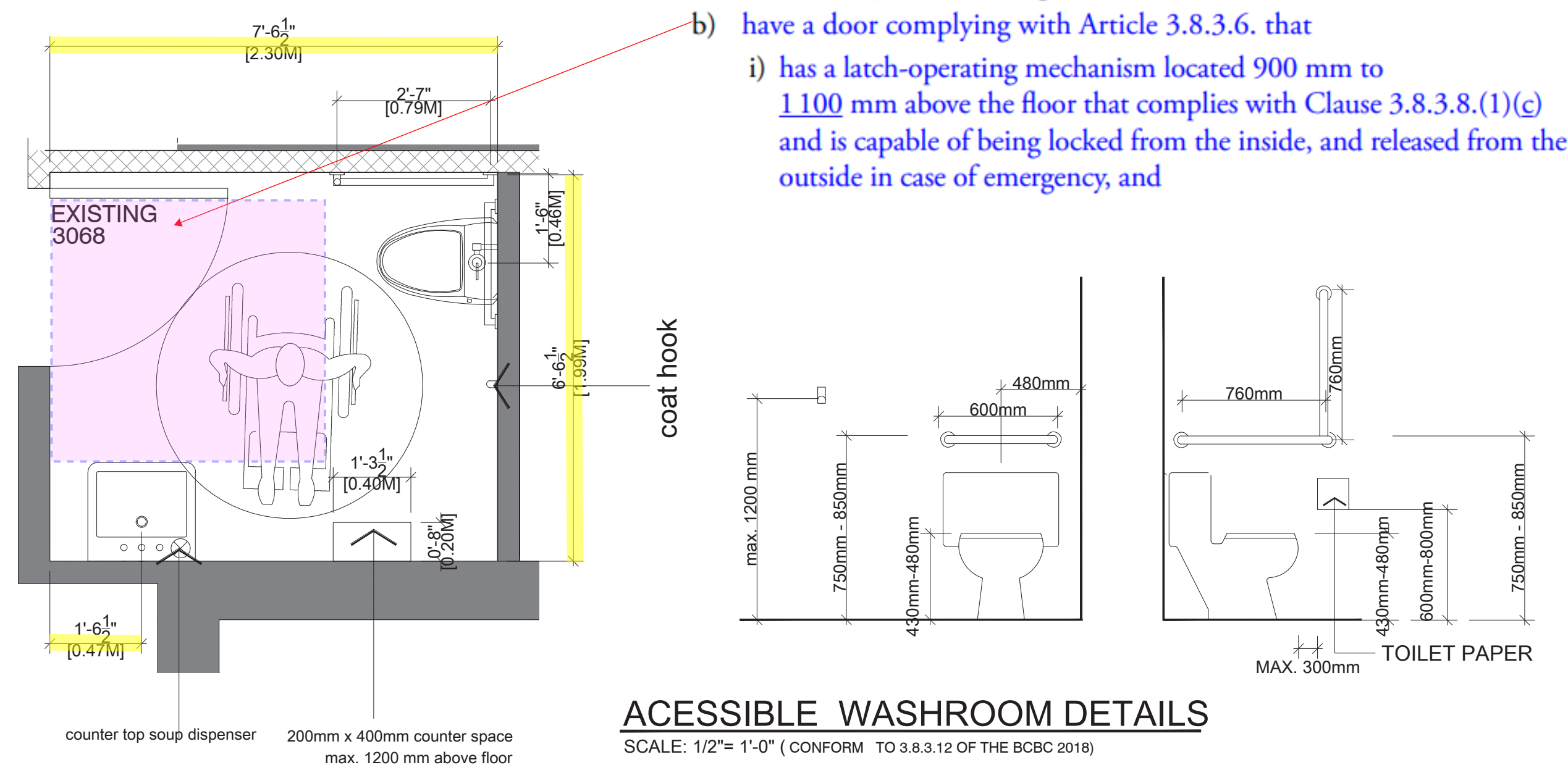
DRAWN K. MEMORY  
CHECKED MT  
SCALE AS SHOWN  
REVISION APRIL 25, 2024

DRAWING NO. A-06



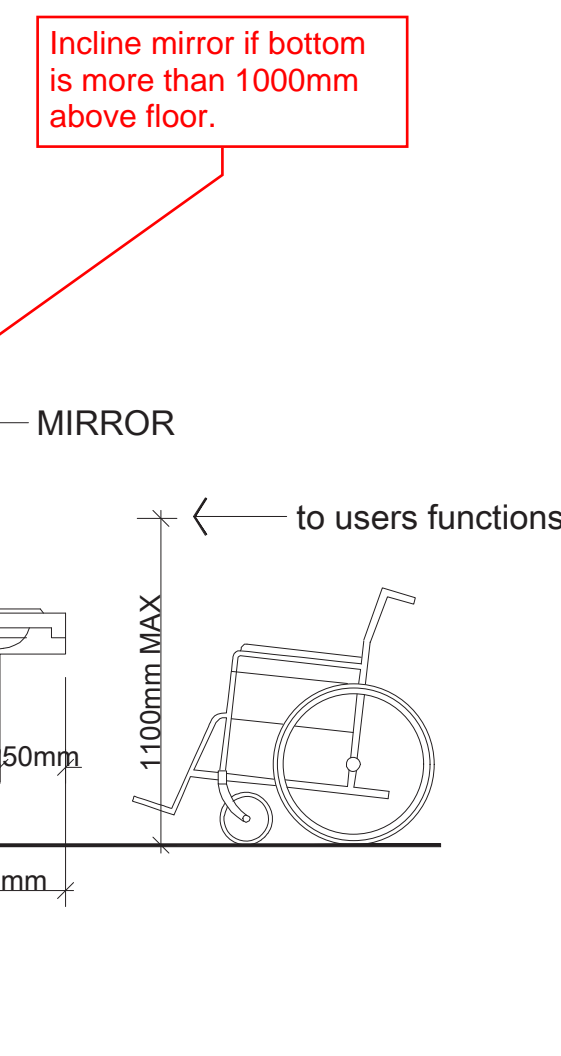
SECTION A

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

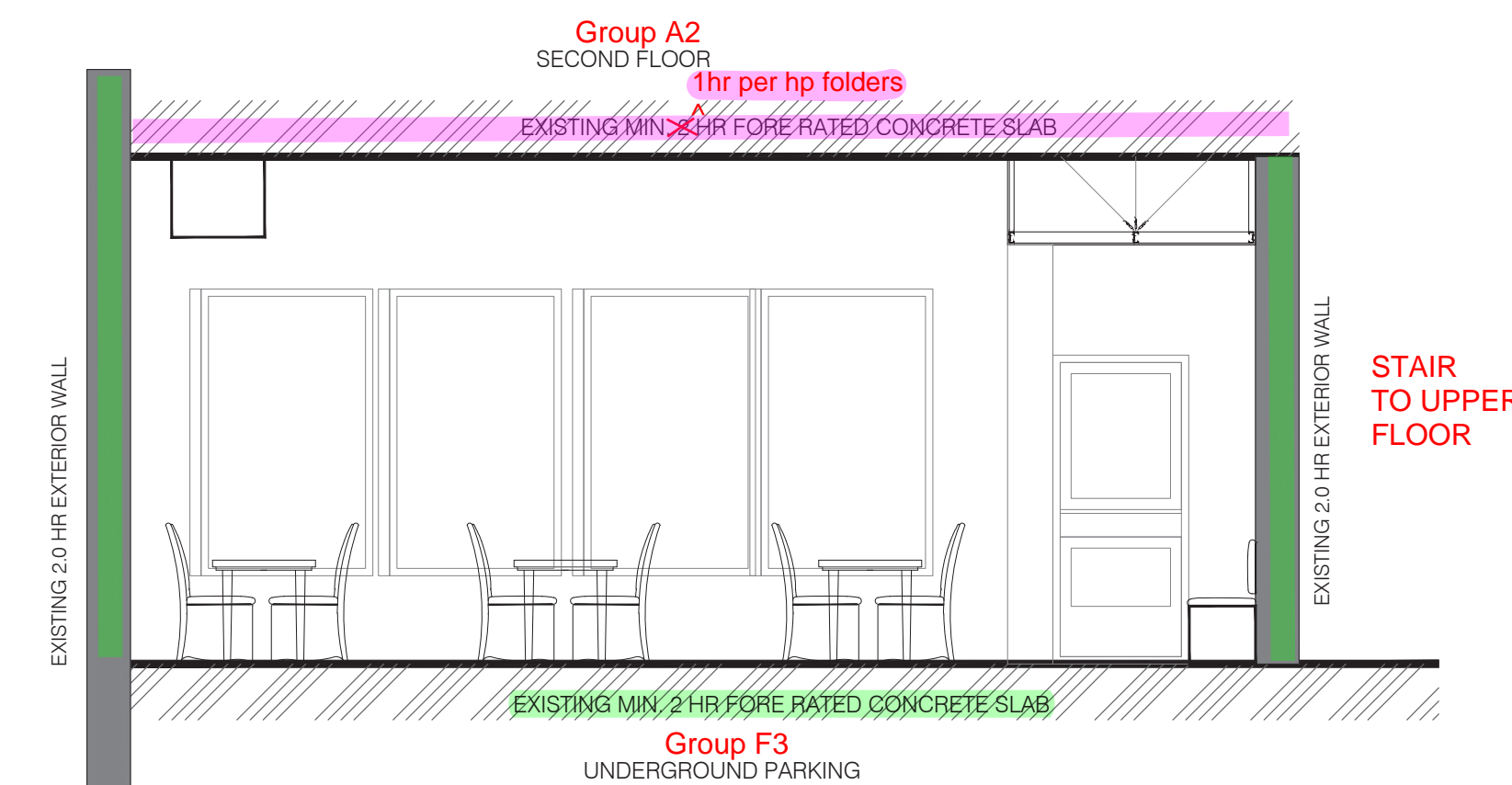


ACCESSIBLE WASHROOM DETAILS

SCALE: 1/2" = 1'-0" (CONFORM TO 3.8.3.12 OF THE BCBC 2018)



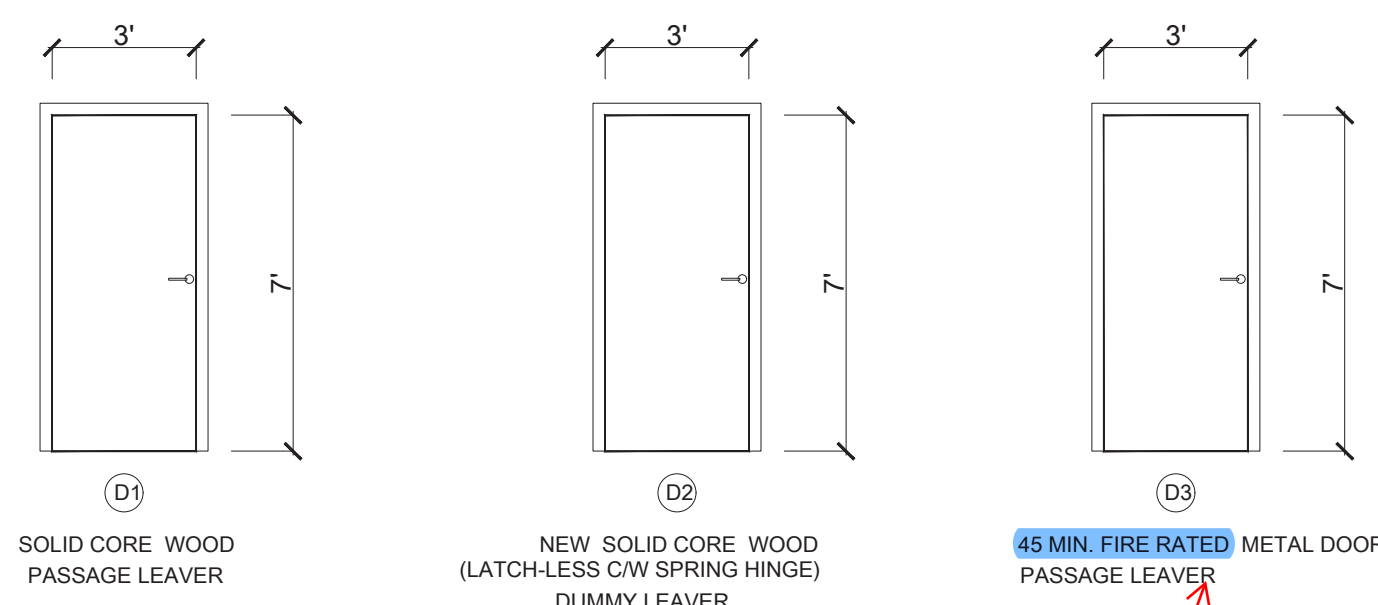
Pipe protection per 3.8.315.(1)(e)



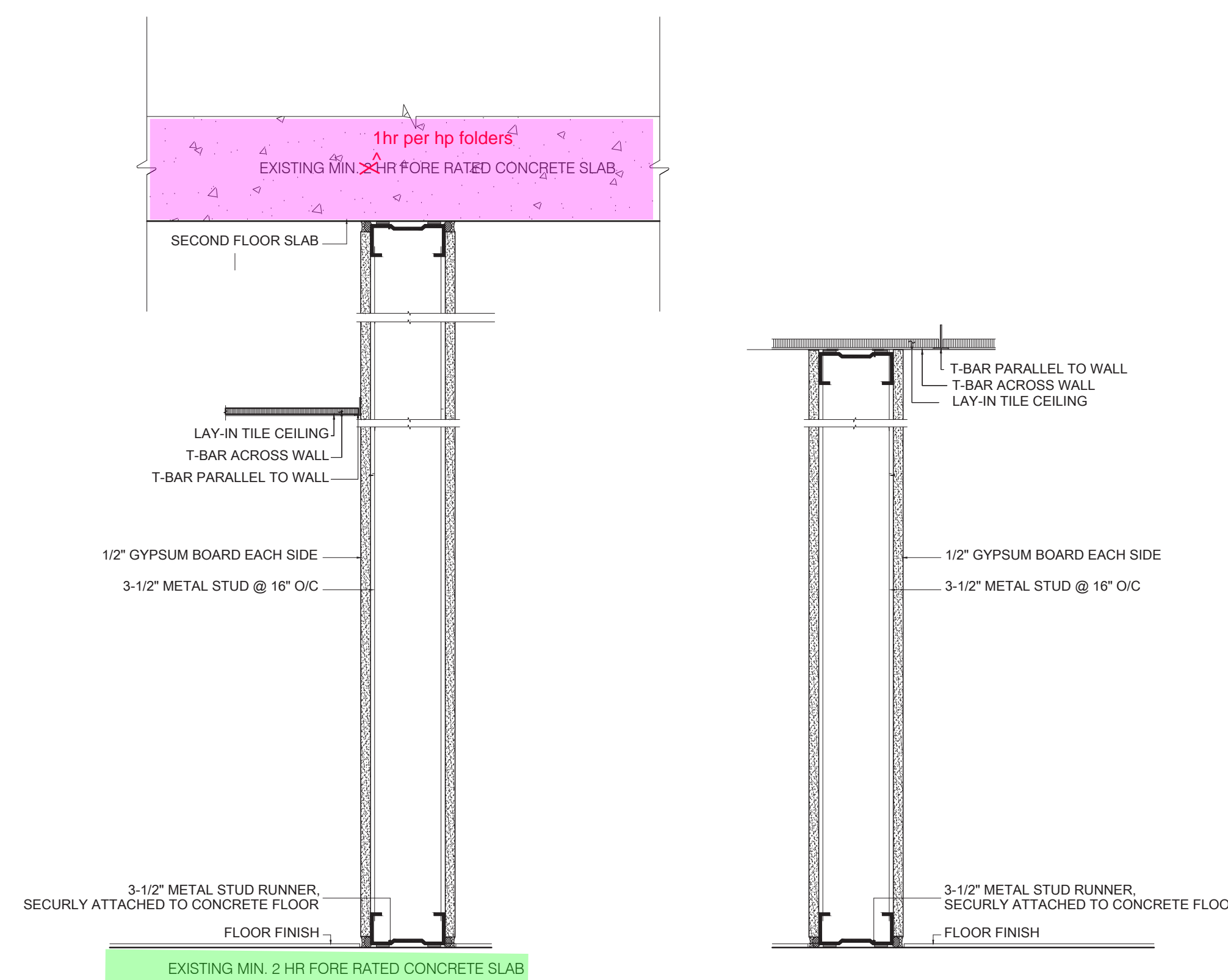
SECTION B

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

NEW DOORS

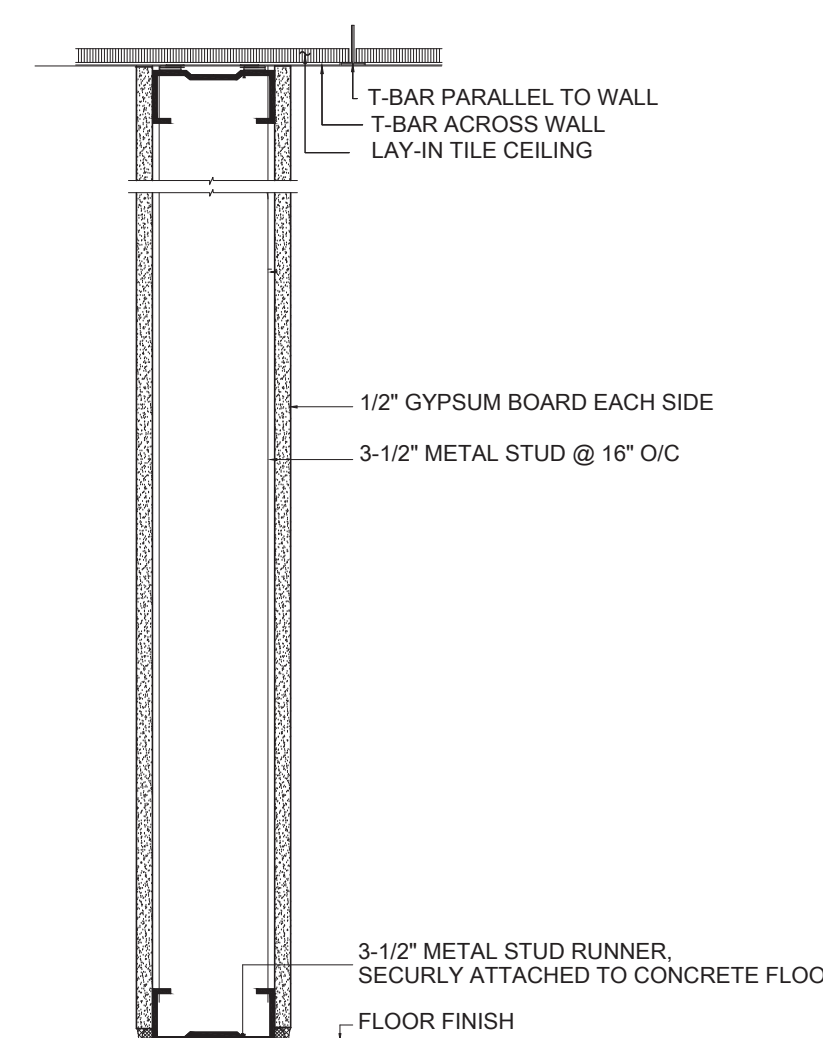


must be equipped with self-closing device.



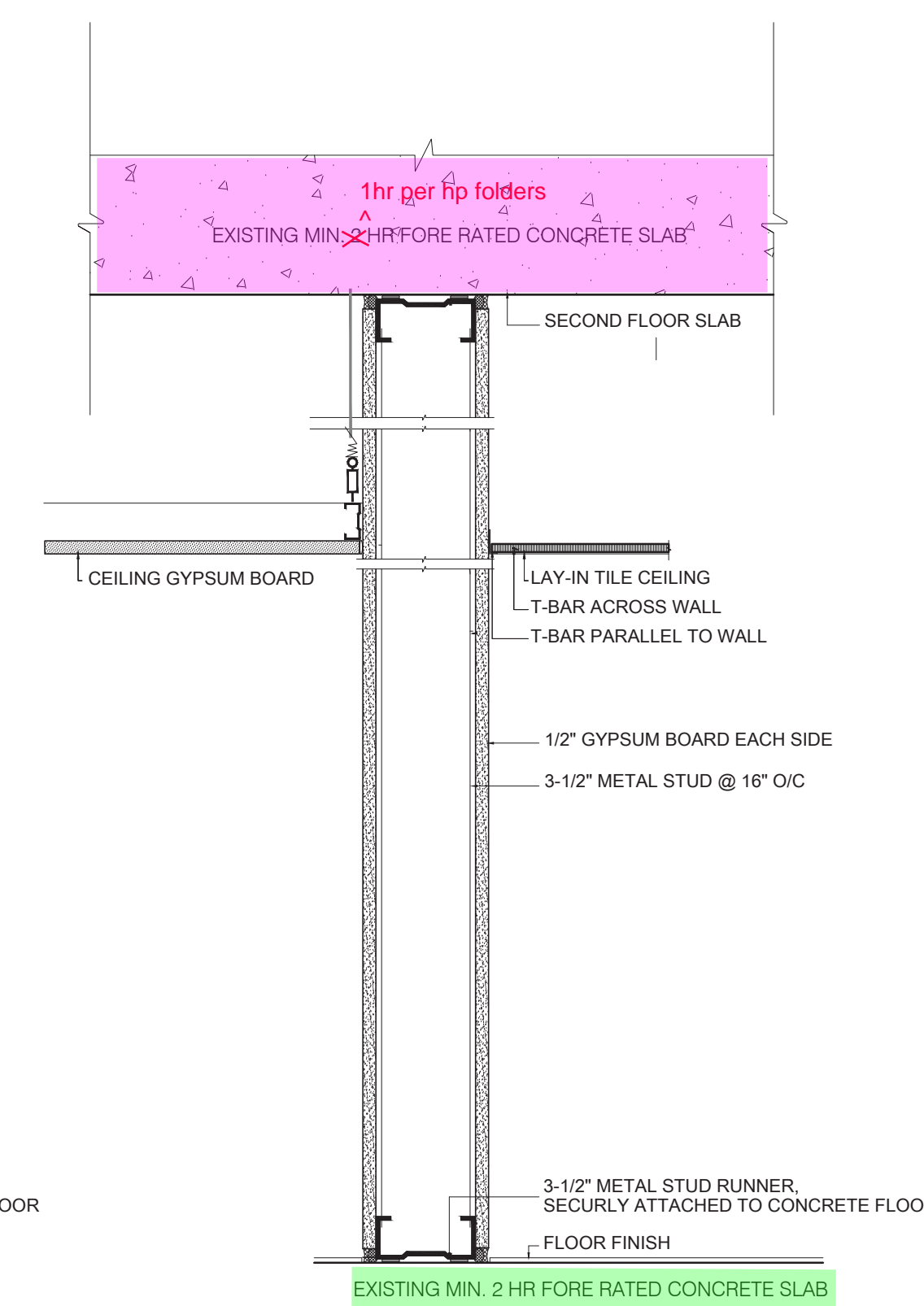
TYPICAL NEW WALL BETWEEN KITCHEN AND SEATING

N.T.S.



TYPICAL NEW KITCHEN WALL

N.T.S.



TYPICAL NEW WALL BETWEEN KITCHEN AND WASHROOMS / CORRIDOR

N.T.S.

**ACCEPTED**  
FOR BUILDING PERMIT ISSUANCE  
  
**BP119005**  
These drawings to be available on site PERMITS & INSPECTIONS DEPT. DISTRICT OF WEST VANCOUVER

REVISED

APR 26 2024

District of West Vancouver  
Permits Dept.





"WE MAKE THE KITCHEN BETTER!"  
Toll Free: 855-855-0399 Email: info@atosausa.com  
www.atosa.com | www.atosausa.com  
California, Colorado, Florida, Georgia, Illinois,  
Massachusetts, New Jersey, Ohio, Texas, Washington

MODELS:

YR280-AP-161

## 280 lb. Ice Machine

### Standard Features

- Up to 283 lb. production ice machine (per 24 hrs)
- Built-in storage capacity of 88 lbs. (under counters)
- Durable stainless steel exterior
- Slanted black plastic bin door
- Ice scoop included
- Height includes leg levelers
- Air cooled condenser
- Removable air filter
- Power switch accessible without panel removal
- For freestanding or built-in applications
- Requires use of a drain
- ETL Listed and ETL Sanitation Listed



Half-diced cube Inlet hose Drain hose Ice scoop



Dimension (inch)  
3/8" x 7/8" x 7/8"

- Don't forget to leave the unit some room to breathe!
- Please clean the condenser frequently to give the unit more fresh air.

2 YEAR PARTS AND LABOR WARRANTY (US ONLY)  
5 YEAR COMPRESSOR PART WARRANTY (US ONLY)



75



"WE MAKE THE KITCHEN BETTER!"  
Toll Free: 855-855-0399 Email: info@atosausa.com  
www.atosa.com | www.atosausa.com  
California, Colorado, Florida, Georgia, Illinois,  
Massachusetts, New Jersey, Ohio, Texas, Washington

### SPECIFICATIONS

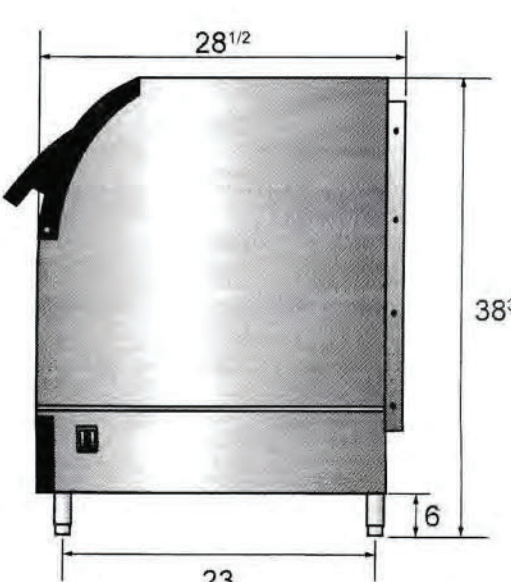
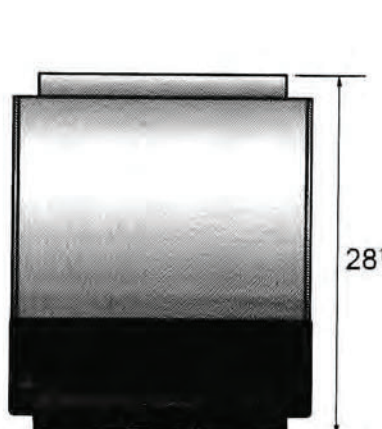
Model	Type	Refrigerant	Voltage (V/Hz/Ph)	Amps(A)	Watts(W)	kWh/100 lbs ice	Ice-Making Capacity (lbs/hr)	Leg (inch)	Exterior Dimensions (inch)	Gross Weight (lbs)
YR280-AP-161	Cube ice	R290	115/60/1	7.2	704	5.97	283/24	6	23 <sup>1/2</sup> x 28 <sup>1/2</sup> x 38 <sup>3/8</sup>	187

### PLAN VIEW

YR280-AP-161 Front View

YR280-AP-161 Top View

YR280-AP-161 Side View



### Ice machine comparison

Models	Type	Refrigerant	Voltage (V/Hz/Ph)	Amps(A)	Watts(W)	kWh/100 lbs ice	Ice-Making Capacity (lbs/hr)	Leg (inch)	Exterior Dimensions (inch)	Gross Weight (lbs)
YR140-AP-161	Cube ice	R290	115/60/1	3.1	363	6.13	142/24	6	23 <sup>1/2</sup> x 28 <sup>1/2</sup> x 38 <sup>3/8</sup>	176
YR450-AP-161	Cube ice	R290	115/60/1	9.6	965	5.04	460/24	6	30 <sup>1/2</sup> x 24 <sup>1/2</sup> x 21 <sup>1/2</sup>	158
YR800-AP-261	Cube ice	R-404a	220/60/1	7.5	1750	5.18	810/24	6	30 <sup>1/2</sup> x 24 <sup>1/2</sup> x 31 <sup>1/2</sup>	231

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MODELS:

MSF8305GR / MSF3615GR  
MSF8306GR / MSF8307GR / MSF8308GR

## Mega Top Sandwich Prep Tables

### Standard Features

- Stainless steel exterior & interior
- Rear mount compressor with environmentally friendly R290 refrigerant
- Dixell digital controller
- Maintains temperatures between 33°F - 40°F
- Pre-installed 4" deep stainless steel pans
- 10" cutting board
- Recessed door handle(s)
- Self-closing door(s) with stay open feature
- Magnetic door gasket(s) standard for positive door seal
- One(1) pre-installed shelf per section
- Pre-installed casters

### Optional Accessories

- Double overshelf for 48", 60" and 72" models



MSF8305GR

MSF3615GR



MSF8306GR



MSF8307GR



MSF8308GR

For the best results of food preservation we recommend setting your refrigerator between 33°F to 38°F

- Don't forget to leave the unit some room to breathe!
- Please clean the condenser frequently to give the unit more fresh air.

2 YEAR PARTS AND LABOR WARRANTY (US ONLY)  
5 YEAR COMPRESSOR PART WARRANTY (US ONLY)



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### SPECIFICATIONS

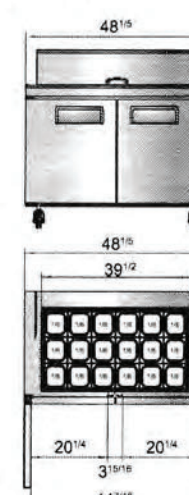
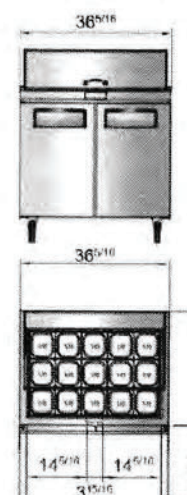
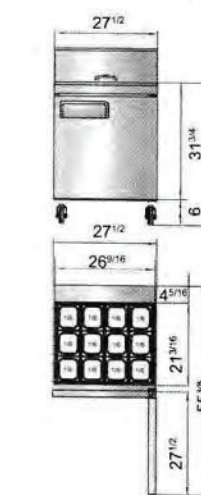
Models	Door	Capacity (Cu Ft)	Shelves	Casters (inch)	Amps (A)	Voltage (V/Hz/Ph)	HP	Refrigerant	Exterior Dimensions (inch)	Net Weight (lbs)	Gross Weight (lbs)
MSF8305GR	1	7.2	1	5	2.3	115/60/1	1/7	R290	27 <sup>1/2</sup> x 34 x 47 <sup>1/2</sup>	170	212
MSF3615GR	2	8.7	2	5	2.3	115/60/1	1/7	R290	36 <sup>1/2</sup> x 34 x 47 <sup>1/2</sup>	174	240
MSF8306GR	2	13.4	2	5	2.3	115/60/1	1/7	R290	48 <sup>1/2</sup> x 34 x 47 <sup>1/2</sup>	243	293
MSF8307GR	2	17.2	2	5	2.8	115/60/1	1/5	R290	60 <sup>1/2</sup> x 34 x 47 <sup>1/2</sup>	284	340
MSF8308GR	3	21.1	3	5	2.8	115/60/1	1/5	R290	72 <sup>1/2</sup> x 34 x 47 <sup>1/2</sup>	331	401

### PLAN VIEW

MSF8305GR

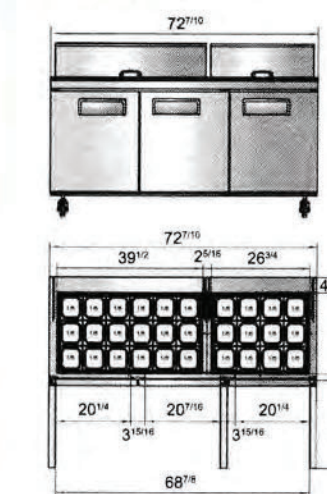
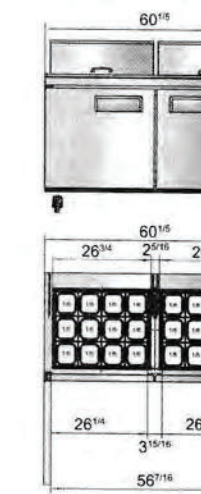
MSF3615GR

MSF8306GR



MSF8307GR

MSF8308GR



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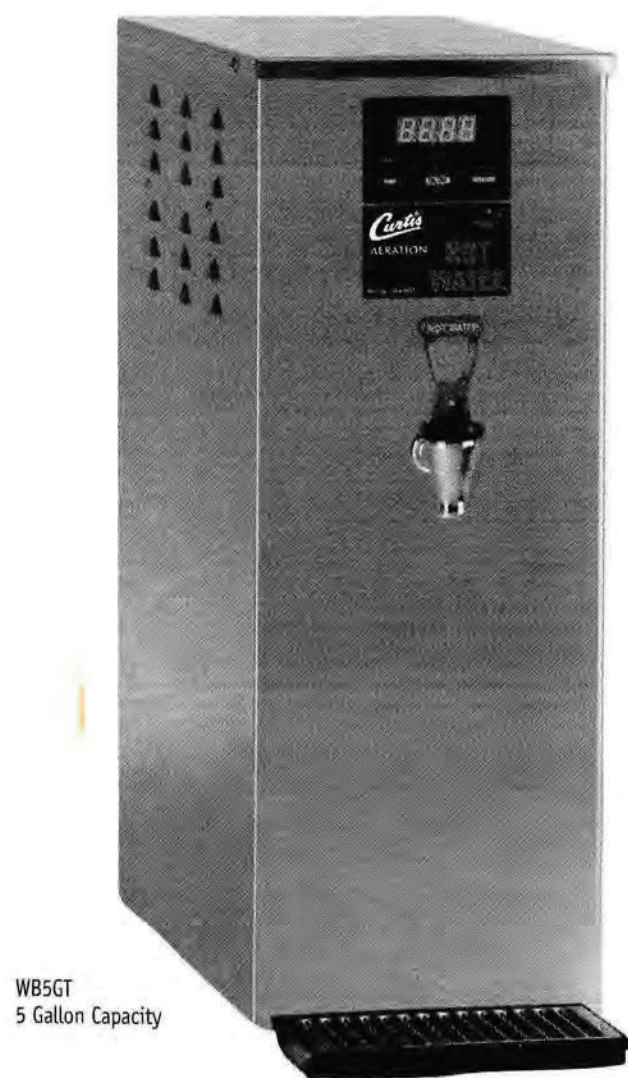
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### DIGITAL HOT WATER DISPENSER

MODEL: WB5GT



WB5GT  
5 Gallon Capacity



Large LED Display - 140°F - 210°F

ITEM NO

PROJECT

DATE

### FEATURES AT A GLANCE

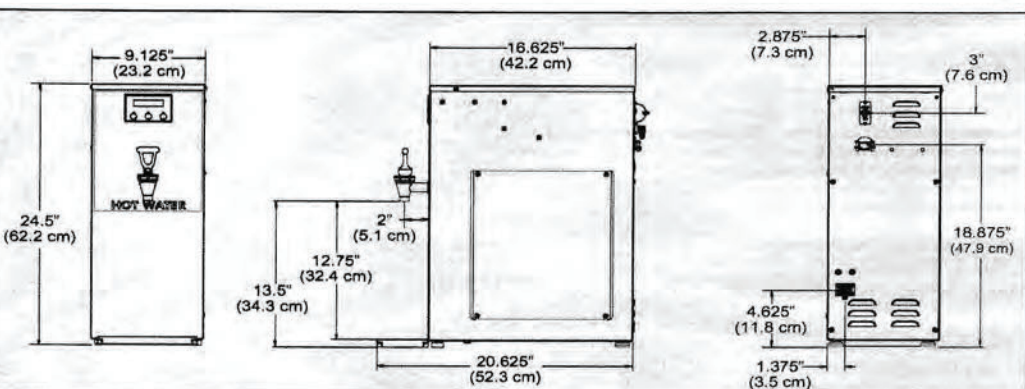
- G3 Digital Control Module - Provides precise control of temperature and aeration.
- Agitation Pump - Continuous or on demand aeration improves tea extraction and food flavor.
- Large LED Display - Easy to read, displays constant water dispense temperature.
- Easy-To-Operate - Simple graphic design with color coded buttons for all operating functions and ready lights.
- Automatic Refill System
- Thermostatic Controls - Programmable temperature range of 140°F to 210°F.
- On Board Diagnostics - Continually senses water level & temperature for proper operation.
- Common Parts and Side Access - Creates an easy to service unit.
- Standard 120/220VAC Dual Voltage Operation.

### The Curtis G3 Water Boiler - Perfect for tea, soup, freeze-dried products, cleaning jobs and more!

With the latest in digital technology, these water boilers offer precise control over all critical functions. Curtis' digital Water Boilers deliver large volumes of piping hot water right at the preparation site. They are constructed of heavy gauge stainless steel and feature thermostatic controls and solid-state automatic refill systems.



### WB-5GT



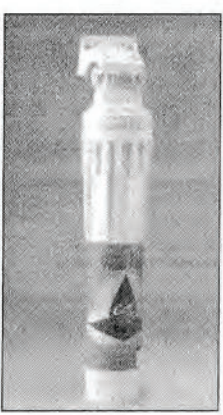
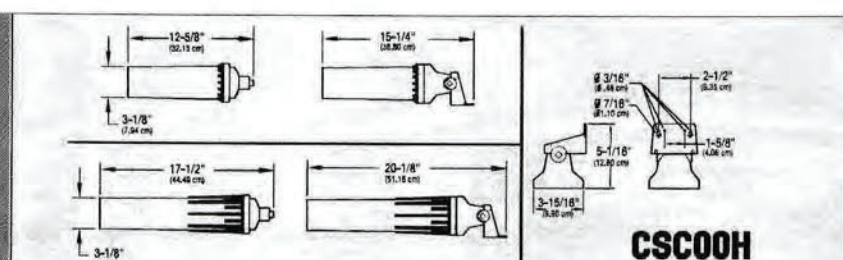
Specifications	Tank Capacity	Volume	Voltage	Power Requirements	Cord & Plug	Water Inlet	Dimensions (HxWxD)	Shipping Weight	Cube
WB5GT	5 Gallons	120VAC-4.6 gal/hr 220VAC-15.5 gal/hr	120/220VAC/60Hz 2W/3W+G*	1500W/12.5A 5000W/22.7A	6 ft. NEMA 5-15P 120V	1/4" Flare	24.5" x 9.125" x 16.625"	39 lbs.	5.7

\*Optional 200VAC/3Phase - Specify 3 Wire or 4 Wire Plus Ground.

### ACCESSORY ITEMS

CSC10

CSC15



Specifications	Application/Description	Rated Life (months)	Flow (GPM)	Micro Rating	Pressure Range (PSI)	Operating Temp (°F)	Water Connection	20°F (°F)	Cube** (cu ft)
CSC0000H with Head	Chlorine & Sediment Removal, Scale Prevention/OCS	10,000	1.65	10	35-125psi	35-100°F	3/8" NPT	17	1.23
CSC0000H Cartridge Only	Chlorine & Sediment Removal, Scale Prevention/OCS	10,000	1.65	10	35-125psi	35-100°F	3/8" NPT	15	1.43
CSC10000H with Head	Chlorine & Sediment Removal, Scale Prevention/OCS	15,000	2.0	10	35-125psi	35-100°F	3/8" NPT	23	1.69
CSC10000H Cartridge Only	Chlorine & Sediment Removal, Scale Prevention/OCS	15,000	2.0	10	35-125psi	35-100°F	3/8" NPT	21	1.69

\*Rated Life is for Chlorine Removal. To ensure proper control of scale, filters should be replaced every 6 months.

\*\* Shipping Weight and Cube are per cases of 6.



WILBUR CURTIS COMPANY, INC.  
6913 Acco Street, Montebello, CA 90640-5403  
Telephone: 800-421-6150 • 323-837-2300  
Fax: 323-837-2406  
www.wilburcurtis.com



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BP119005

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2024-02-09

PROJECT :

GRAB AND GO PLUS  
RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER BC

TITLE :

EQUIPMENT SPEC.

DATE

FEBRUARY, 2024

DRAWN

K. MEMORY

CHECKED

MT

SCALE

N.T.S.

REVISION

DRAWING NO.

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FEB 29 2024

District of West Vancouver  
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## Bottom Mount Reach-In Freezers

### Standard Features

- Bottom mount compressor units with environmentally friendly R290 refrigerant
- Stainless steel exterior & interior
- Left hand hinge model available (MBF8501GRL)
- Dixell digital controller
- Maintains temperatures between -8°F – 0°F
- LED interior light(s)
- Recessed door handle(s)
- Door lock(s) standard
- Magnetic door gasket(s) standard for positive door seal
- Pre-installed casters
- Three(3) pre-installed shelves per section
- Down duct refrigeration to ensure even distribution of air

### Optional Accessories

- Extra shelves – includes 4 shelf clips per shelf  
MBF8501GRL(L) shelf part #: W0402393  
MBF8503GR shelf part #: W0402387  
MBF8504GR left and right shelf part #: W0402387  
MBF8504GR middle shelf part #: W0402388



MBF8503GR

For the best results of food preservation we recommend setting your freezer between -8 °F to 0 °F

- Don't forget to leave the unit some room to breathe!
- Please clean the condenser frequently to give the unit more fresh air.



2 YEAR PARTS AND LABOR WARRANTY (US ONLY)  
5 YEAR COMPRESSOR PART WARRANTY (US ONLY)



\*For confirmation and updates on the latest energy star models, please visit energystar.gov\*

ATOSA USA

#### MODELS:

MBF8501GR / MBF8501GRL  
MBF8503GR / MBF8504GR



MBF8501GR(L)



MBF8503GR



MBF8504GR



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## Glass Door Reach-In Refrigerators

### Standard Features

- Stainless steel exterior & interior
- LED interior lights
- Heavy duty Embraco compressor with environmentally friendly R290 refrigerant
- Dixell digital controller
- Maintains temperatures between 33°F – 38°F
- Self-closing door(s) with automatic stay open feature
- Recessed door handle(s)
- Magnetic door gasket
- Double pane glass door
- Pre-installed casters
- NEMA 5-15P plug standard
- Four(4) pre-installed shelves per section
- Door locks standard on MCF8705GR and MCF8707GR (not available on sliding glass door model MCF8709GR)

### Optional Accessories

- Extra shelves – includes 4 shelf clips per shelf



MCF8705GR  
MCF8707GR

For the best results of food preservation we recommend setting your refrigerator between 33 °F to 38 °F

- Don't forget to leave the unit some room to breathe!
- Please clean the condenser frequently to give the unit more fresh air.



2 YEAR PARTS AND LABOR WARRANTY (US ONLY)  
5 YEAR COMPRESSOR PART WARRANTY (US ONLY)

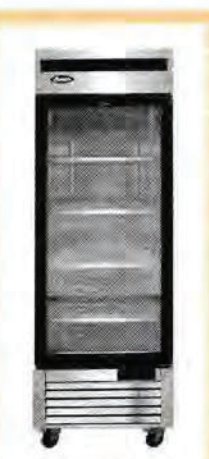


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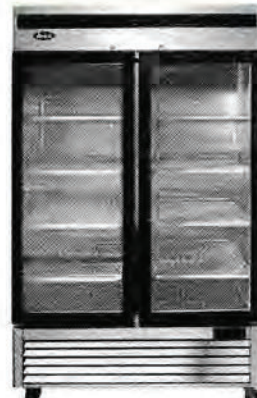
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#### MODELS:

MCF8705GR / MCF8707GR / MCF8709GR



MCF8705GR



MCF8707GR



MCF8709GR



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## Undercounter Refrigerators

### Standard Features

- Stainless steel exterior & interior with reinforced stainless steel top
- Environmentally friendly R290 refrigerant
- Left hand hinge model available (MGF8401GRL)
- Electronic temperature controller
- Maintains temperatures between 33°F - 45°F
- Recessed door handle(s)
- Self-closing door(s) with stay open feature
- Magnetic door gasket(s) standard for positive door seal
- Pre-installed casters
- One(1) pre-installed shelf per section

### Optional Accessories

- Extra shelves – includes 4 shelf clips per shelf  
MGF8401GRL(L) shelf part #: W0402568  
MGF36RGR shelf part #: W0402713  
MGF8402GR shelf part #: W0402171  
MGF8403GR shelf part #: W0402569  
MGF8404GR shelf part #: W0402171 left/right shelf, part #: W0402570 middle shelf

For the best results of food preservation we recommend setting your refrigerator between 33 °F to 45 °F

- Don't forget to leave the unit some room to breathe!
- Please clean the condenser frequently to give the unit more fresh air.



2 YEAR PARTS AND LABOR WARRANTY (US ONLY)  
5 YEAR COMPRESSOR PART WARRANTY (US ONLY)



\*For confirmation and updates on the latest energy star models, please visit energystar.gov\*

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#### MODELS:

MGF8401GR / MGF8401GRL / MGF36RGR  
MGF8402GR / MGF8403GR / MGF8404GR

MGF8401GR(L)



MGF36RGR



MGF8402GR



MGF8403GR



MGF8404GR

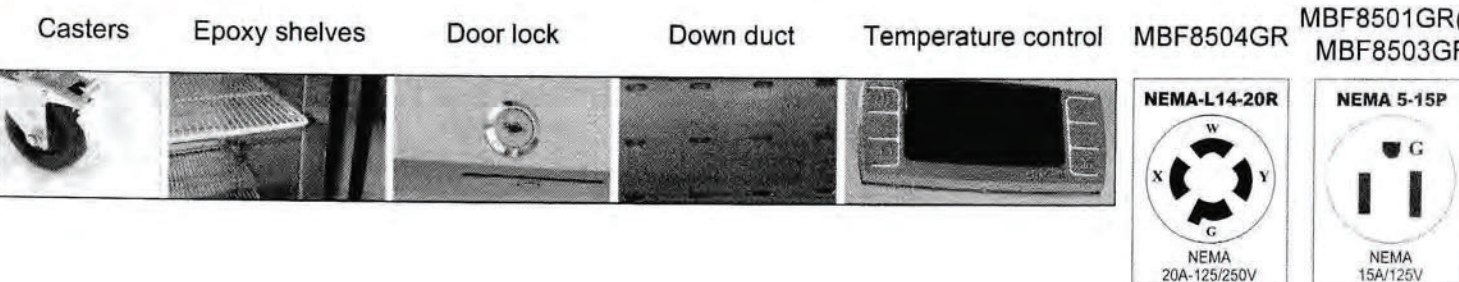
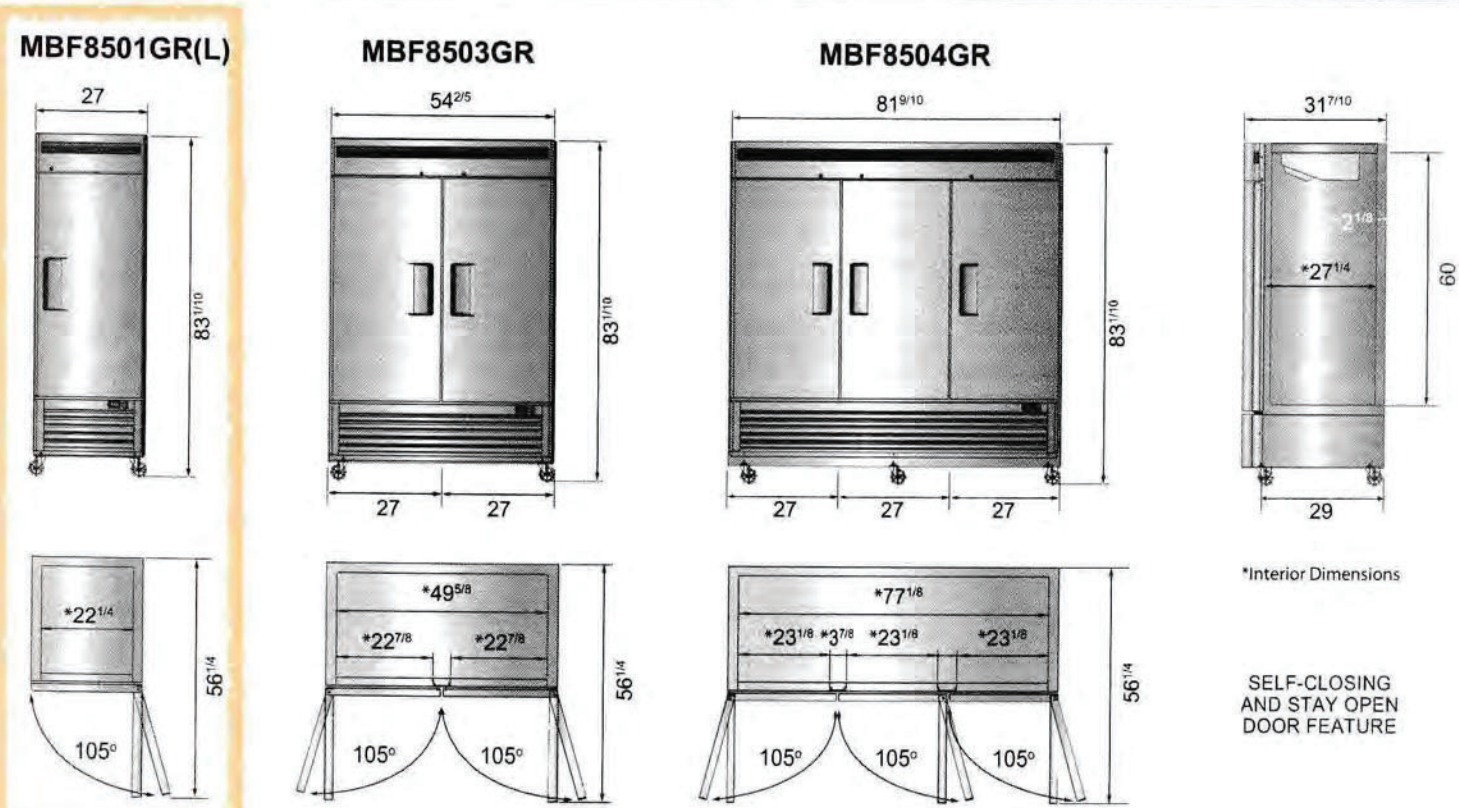


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### SPECIFICATIONS

Models	Door	Capacity (Cu.Ft.)	Shelves	Casters (inch)	Amps (A)	Voltage (V/Hz/Ph)	HP	Refrigerant	Exterior dimensions (inch)	Net weight (lbs)	Gross weight (lbs)
MBF8501GR(L)	1	19.1	3	4	6.3	115/60/1	1/2	R290	27"x31 1/8"x83 1/8"	265	298
MBF8503GR	2	44.8	6	4	8.6	115/60/1	3/4	R290	54 1/2"x31 1/8"x83 1/8"	410	465
MBF8504GR	3	68	9	4	6.2	208-230/115/60/1	1	R290	81 1/8"x31 1/8"x83 1/8"	551	628

### PLAN VIEW



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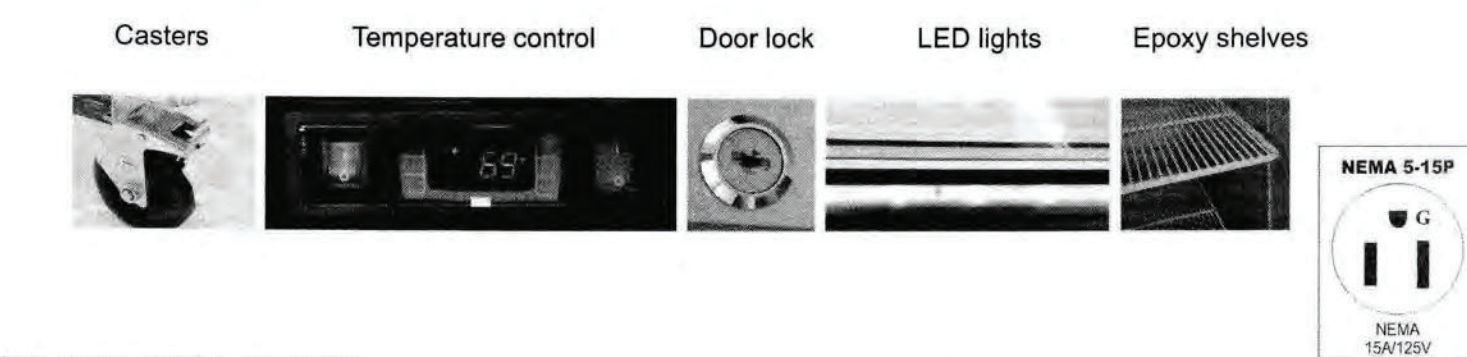
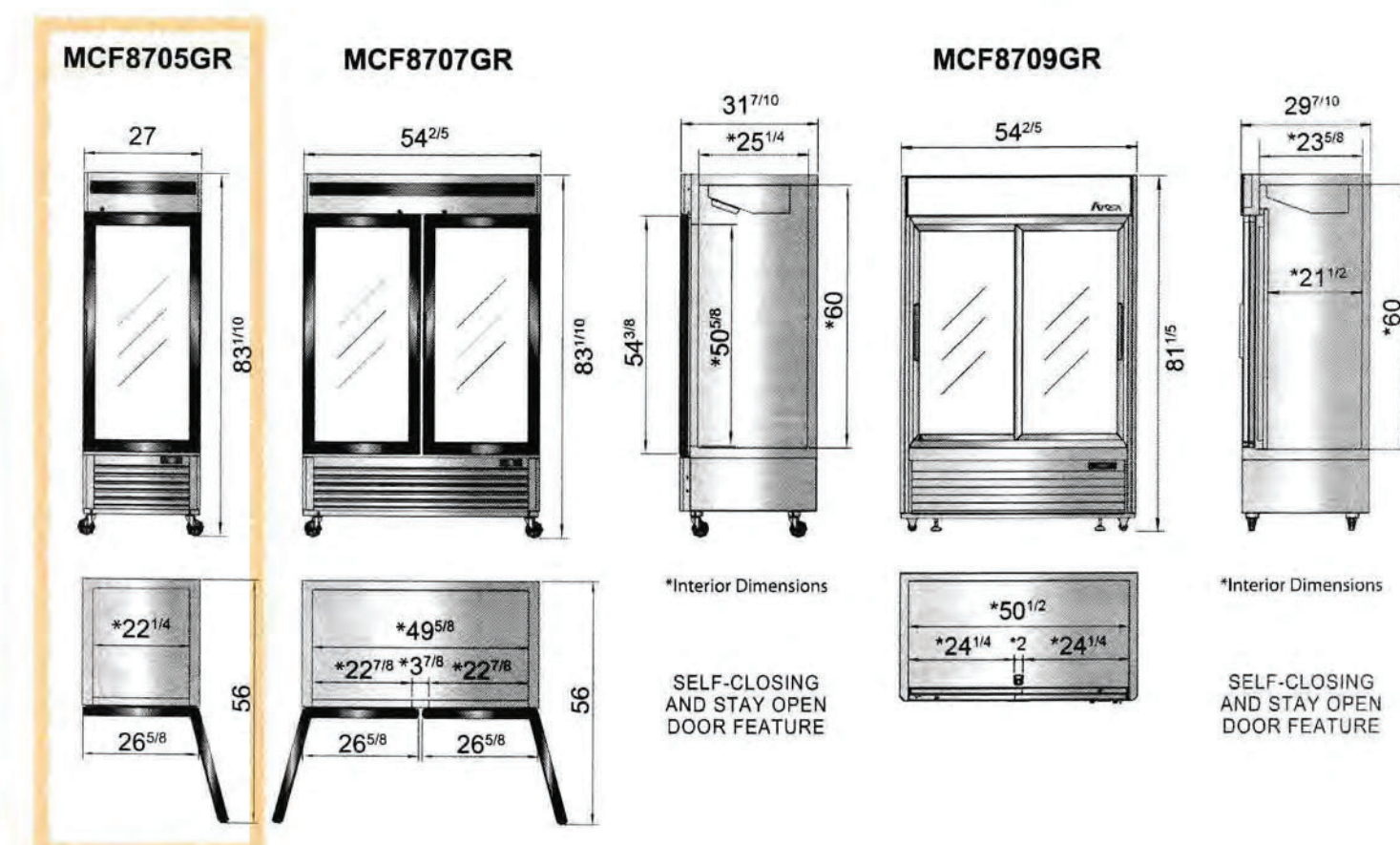


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### SPECIFICATIONS

Models	Door	Capacity (Cu.Ft.)	Shelves	Casters (inch)	Amps (A)	Voltage (V/Hz/Ph)	HP	Refrigerant	Exterior Dimensions (inch)	Net Weight (lbs)	Gross Weight (lbs)
MCF8705GR	1	19.1	4	4	2.1	115/60/1	1/7	R290	27"x31 1/8"x83 1/8"	293	326
MCF8707GR	2	44.8	8	4	3.2	115/60/1	1/5	R290	54 1/2"x31 1/8"x83 1/8"	485	540
MCF8709GR	2	44.9	8	2	4.2	115/60/1	1/4	R290	54 1/2"x29 1/8"x81 1/8"	456	511

### PLAN VIEW



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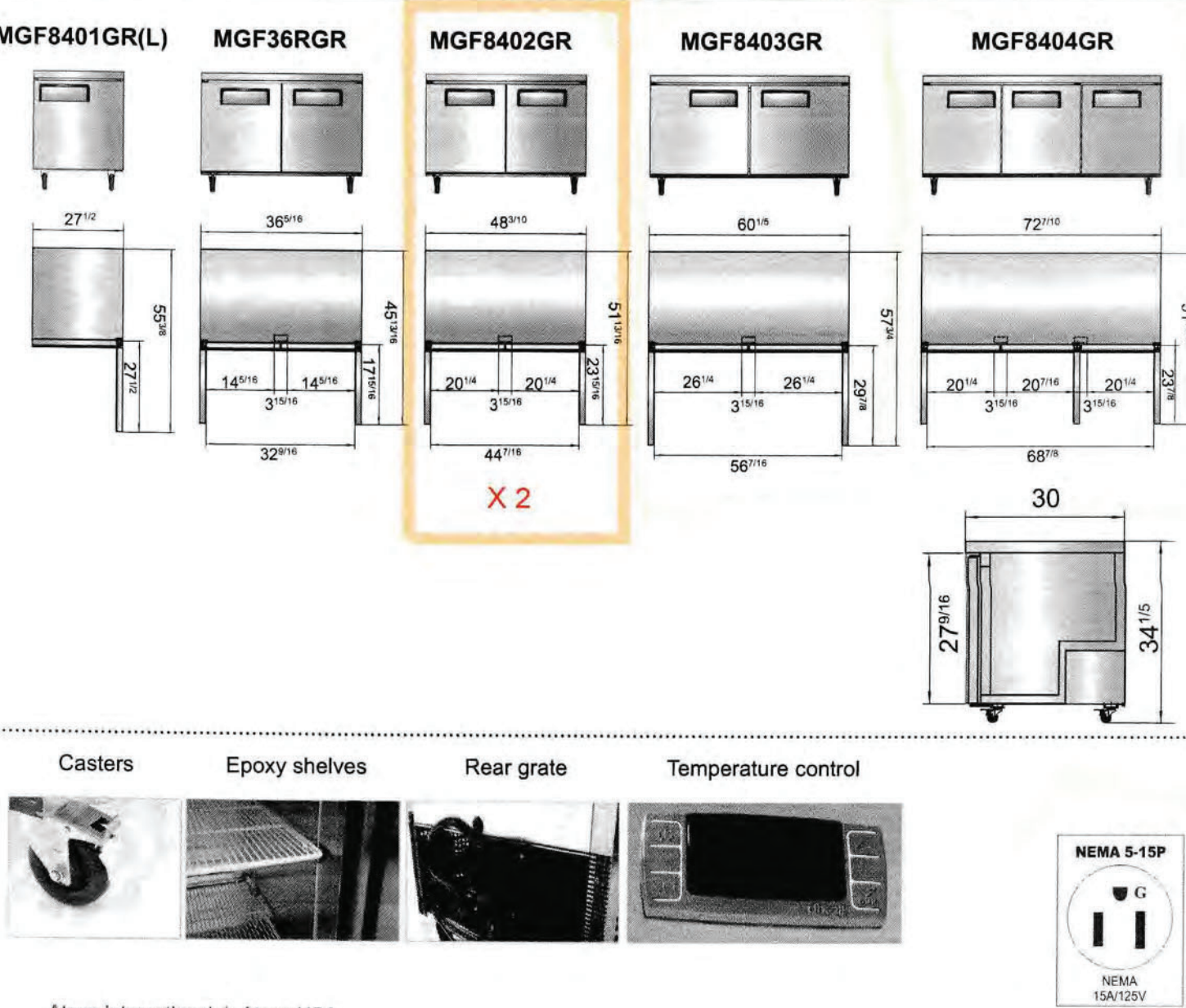


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### SPECIFICATIONS

Models	Door	Capacity (Cu.Ft.)	Shelves	Casters (inch)	Amps (A)	Voltage (V/Hz/Ph)	HP	Refrigerant	Exterior Dimensions (inch)	Net Weight (lbs)	Gross Weight (lbs)
MGF8401GR(L)	1	7.2	1	2	2.3	115/60/1	1/7	R290	27 1/2"x30"x34 1/8"	137	172
MGF36RGR	2	8.7	2	2	2.3	115/60/1	1/7	R290	36 1/8"x30"x34 1/8"	162	212
MGF8402GR	2	13.4	2	2	2.3	115/60/1	1/7	R290	48 1/8"x30"x34 1/8"	192	231
MGF8403GR	2	17.2	2	2	2.8	115/60/1	1/5	R290	60 1/8"x30"x34 1/8"	218	265
MGF8404GR	3	21.1	3	2	2.8	115/60/1	1/5	R290	72 1/8"x30"x34 1/8"	254	315

### PLAN VIEW



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1645 West 5th Ave  
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info@trincaarchitecture.com



PROJECT :  
GRAB AND GO PLUS  
RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER BC

TITLE :  
EQUIPMENT SPEC.

ACCEPTED  
FOR BUILDING PERMIT ISSUANCE  
BP119005

These drawings to be available on site  
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DISTRICT OF WEST VANCOUVER

DATE: FEBRUARY, 2024

DRAWN: K. MEMORY  
CHECKED: MT  
SCALE: N.T.S.  
REVISION:

DRAWING NO. A-07

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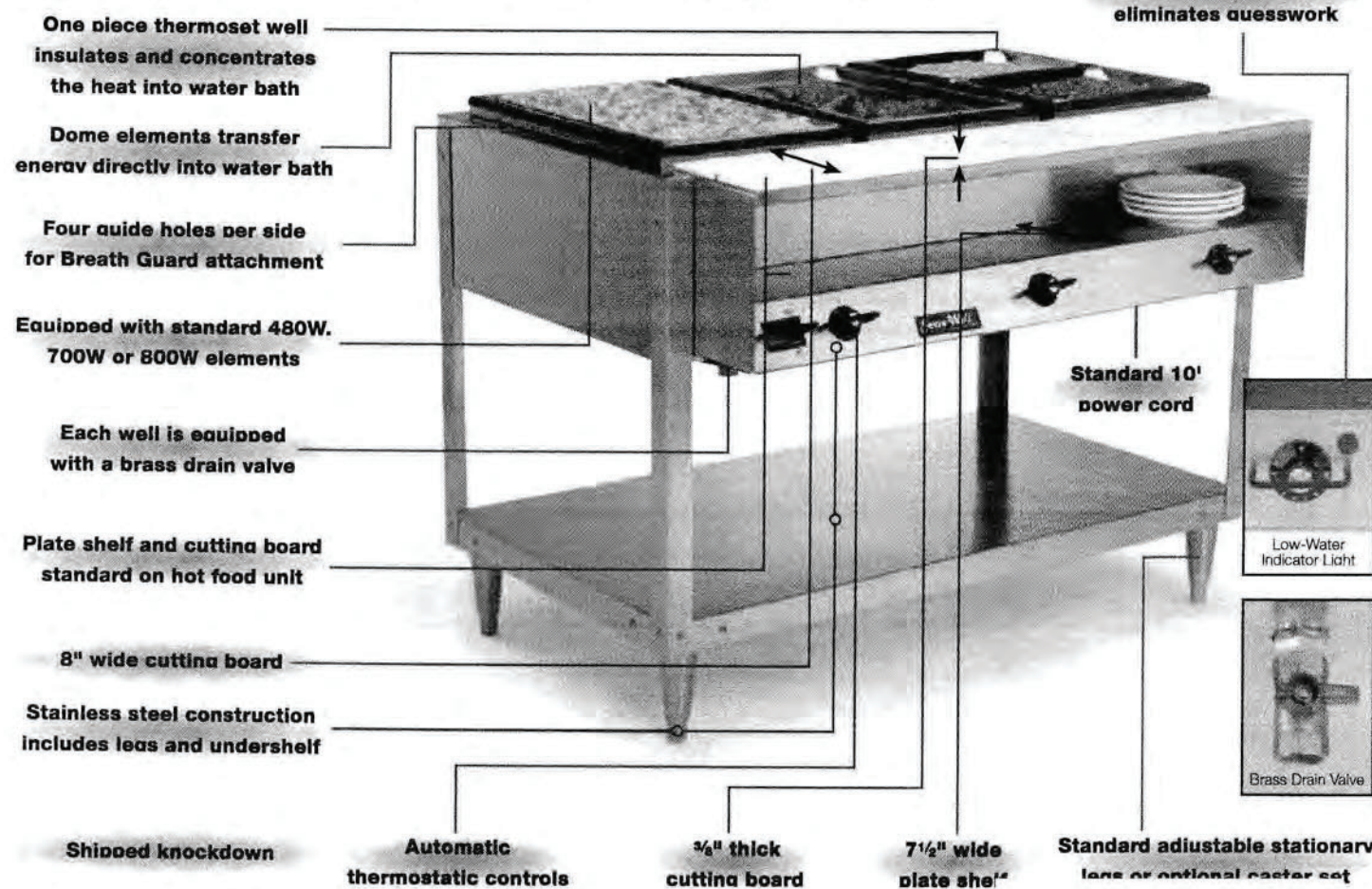


## Mobile Servina Eaiuiment

The Vollrath Company, LLC

### ServeWell® Food Stations

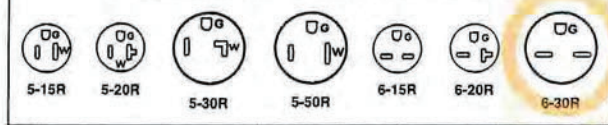
ServeWell® stations offer innovative design in value-priced mobile serving equipment.



### ServeWell® Hot Food Tables\*

- Thermostat wells cannot pit or rust
- Recommended for use with up to 4" (10.2 cm) deep full or fractional size cans. Well depth is 6 1/4"
- Use standard adaptor plates and insets for serving flexibility
- 38099: Optional Caster Set has four 4" (10.2 cm) swivel wheels** — two with brakes

#### Receptacle Configurations





## Single & Double Stock Pot Stoves

### Standard Features

- Stainless steel sides and front valve cover
- Full width, removable stainless steel drip pan for easy cleanup
- Heavy duty cast iron top grates
- Heavy duty cast iron three-ring burner, rated at a total of 80,000 BTU/hr
- Cast iron burners and top grates
- Stainless steel tubing for pilots and pilot tips per burner ring
- Each burner is equipped with two continuous pilots
- Two manual controls to operate the inner and outer rings independently
- Stainless steel legs standard
- 3/4" NPT rear gas connection and regulator standard

### MODELS:

ATSP-18-1 / ATSP-18-2 / ATSP-18-1L / ATSP-18-2L



ATSP-18-1



ATSP-18-1L



ATSP-18-2



ATSP-18-2L



1 YR WARRANTY ON ALL PARTS AND LABOR (US ONLY)



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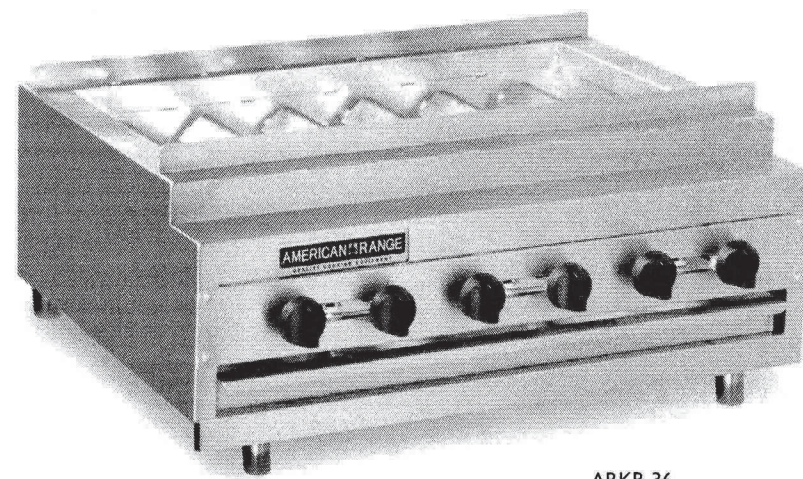
## AMERICAN RANGE

QUALITY LINE OF COOKING EQUIPMENT

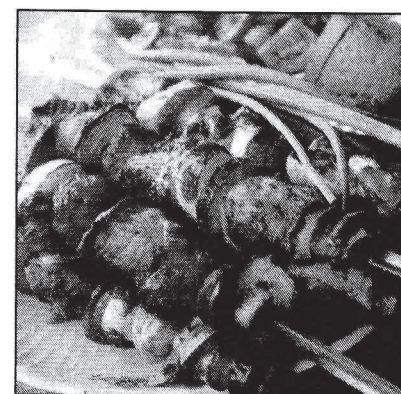
### ARKB HEAVY DUTY KEBOB BROTILERS

#### STANDARD FEATURES

- Individually controlled Stainless Steel 30,000 BTU/hr burners placed every 6", providing maximum output, flexibility and low maintenance.
- Heavy duty radiant bars for optimum heat distribution.
- Radiant bars individually removable for easy cleaning.
- Heavy gauge supports are spaced to hold skewers.
- 14 ga. all welded heavy duty reinforced fire box.
- Stainless Steel polished front and trim for easy cleaning, with fully-insulated double-layered all-welded steel chassis.
- Full length removable crumb tray for easy cleaning.
- Optional 4" legs or equipment stand available.
- One year limited warranty parts and labor.



ARKB-36



The American Range Heavy Duty Kebob Broiler is engineered to provide reliable, performance for many years. This Broiler allows juices from the meat to drip down onto the radiants, resulting in searing flames and smoke flavor.

The innovative design features heavy gauge steel support bars specially spaced to allow support of the "shish" skewers. Individually controlled 30,000 BTU/hr burners located every six inches provide complete coverage of a large cooking area. Front control valves flexibility to operate chosen burners as needed thus saving energy. All our quality counter appliances come standard with a Stainless Steel exterior and the best warranty in the business.

Look to American Range for innovation, reliable performance, quality and attention to your equipment needs and delivery now and in the future.

DESIGNED & BUILT IN USA

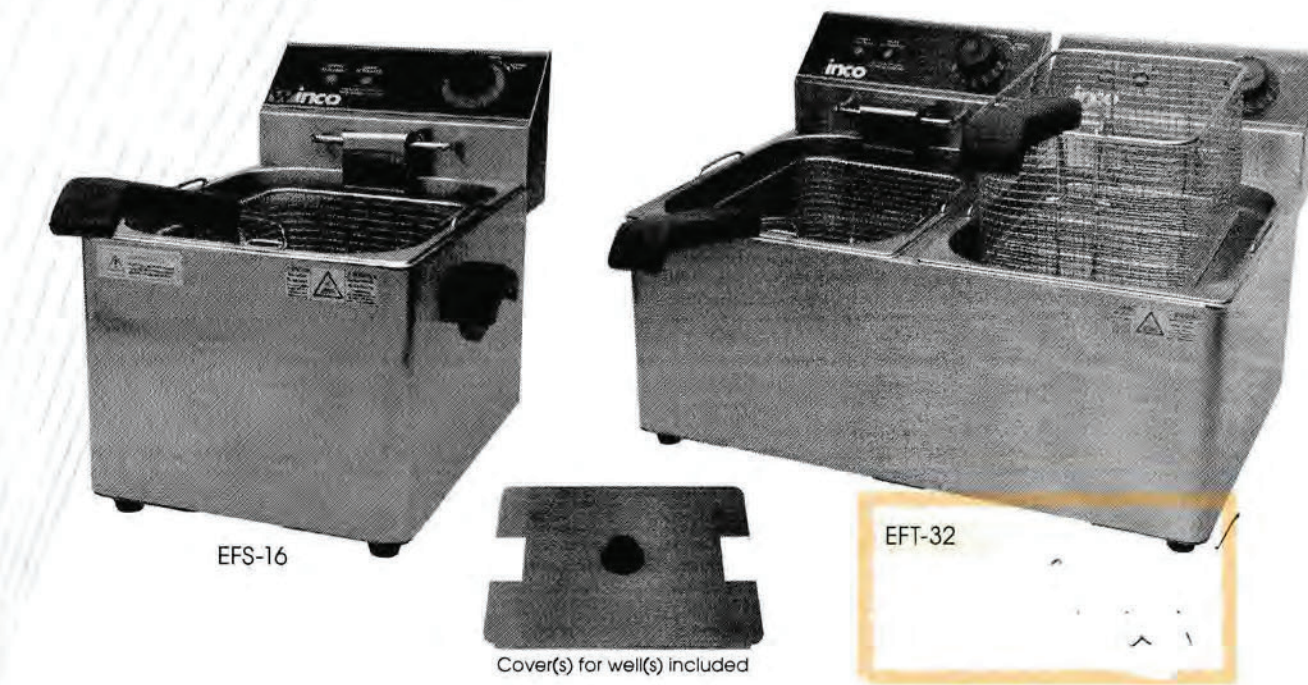
www.americanrange.com



## COUNTERTOP ELECTRIC DEEP FRYERS



EQUIPMENT®



MODEL	VOLTAGE	POWER (W)	AMPS (A)	CAPACITY OIL	DIMENSIONS (INCHES)		
					LENGTH	WIDTH	HEIGHT
EFT-16	120V ~ 60Hz	1750W	15A	16 lb / 8L / 2.3 gal	11.75"	16"	13.625"
EFT-32		1750W (x2)	15A (x2)	32 lb / 16L / 4.9 gal	21.25"	16"	13.625"

- Commercial fry basket(s) with safe secure handle
- Expedient heat-up
- Removable stainless steel fry well(s) for easy cleaning; fry well cover(s) included
- Removable power head(s)
- ETL listed for electrical safety in US and Canada, conforms to UL-197 and CSA C22.2
- ETL listed for sanitation, conforms to NSF-4
- One year parts and labor warranty

#### ELECTRIC COUNTERTOP SINGLE WELL DEEP FRYER

ITEM	DESCRIPTION	UOM	CASE
EFT-16	Single Well Fry Basket	Set	1
EFT-32	Double Well Fry Basket	Set	1

#### ELECTRIC COUNTERTOP TWIN WELL DEEP FRYER

ITEM	DESCRIPTION	UOM	CASE
EFT-32	Double Well Fry Basket	Set	1
EFT-32	Double Well Fry Basket	Set	1

☐ = Cash & Carry / Retail Packaging



www.winco.com

East Coast:  
Tel. 1.888.946.2682  
Fax. 1.888.946.2632

West Coast:  
Tel. 1.888.946.2652  
Fax. 1.562.926.5678

Project: \_\_\_\_\_ Item No. \_\_\_\_\_ Quantity \_\_\_\_\_



## STERO SD3 DOOR-TYPE DISHWASHER



#### STANDARD FEATURES

- .85 gallons per rack
- 58 racks per hour – hot water sanitizing
- 65 racks per hour – chemical sanitizing
- Timed wash cycles for 1, 2 or 4 minutes
- Digital control status
- 180° final rinse assurance
- Interchangeable upper and lower wash and rinse arms
- Automatic tank fill
- Door actuated start
- Automatic drain closure
- Exhaust fan control and booster activation included
- Stainless steel construction
- Error notification
- Straight-through or corner operation
- Hot water or chemical sanitization
- Pressure gauge

#### OPTIONS & ACCESSORIES

- Drain water tempering kit
- Electric booster heater
- Seismic feet
- Single point electrical conversion kit (3-phase only)
- Pressure reducing valve
- Shock arrestor

ACCEPTED  
FOR BUILDING PERMIT ISSUANCE

BP119005

These drawings to be available on site  
PERMITS & INSPECTIONS DEPT  
DISTRICT OF WEST VANCOUVER

MACHINE RATINGS	SD3 Hot Water Sanitizing	SD3 Chemical Sanitizing
Racks per Hour (Maximum)	58	65
Wash Motor H.P.	2	2
Electric Heating Unit (Regulated)	5 KW	5 KW
Electric Booster Heater	8.5 KW	—
Rate of Rinse Flow – Gallons per Minute – at 20 PSI Flow Pressure	5.1	5.1
Rinse Cycle – Gallons per Rack – at 20 PSI Flow Pressure	.97 – 180°F Minimum	.97 – 140°F Minimum
Peak Rate of Drain Flow – Gallons per Minute (Initial rate with full tank)	14	14
Incoming Water Temperature Required (Minimum)	110°F	140°F

ST50401 (09/15)

Page 1 of 4

# MANSOURI

PEOPLE BUILD DESIGN

109-1305 WELCH STREET, NORTH VANCOUVER, BC,  
V7P 1B3  
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# TA

TRINCA ARCHITECTURE INC

1645 West 5th Ave  
Vancouver BC V6J 1N5  
604.737.4766  
info@trincaarchitecture.com



PROJECT :

## GRAB AND GO PLUS RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER BC

TITLE :  
EQUIPMENT SPEC.

DATE

FEBRUARY, 2024

DRAWN

K. MEMORY

CHECKED

MT

SCALE

N.T.S.

REVISION

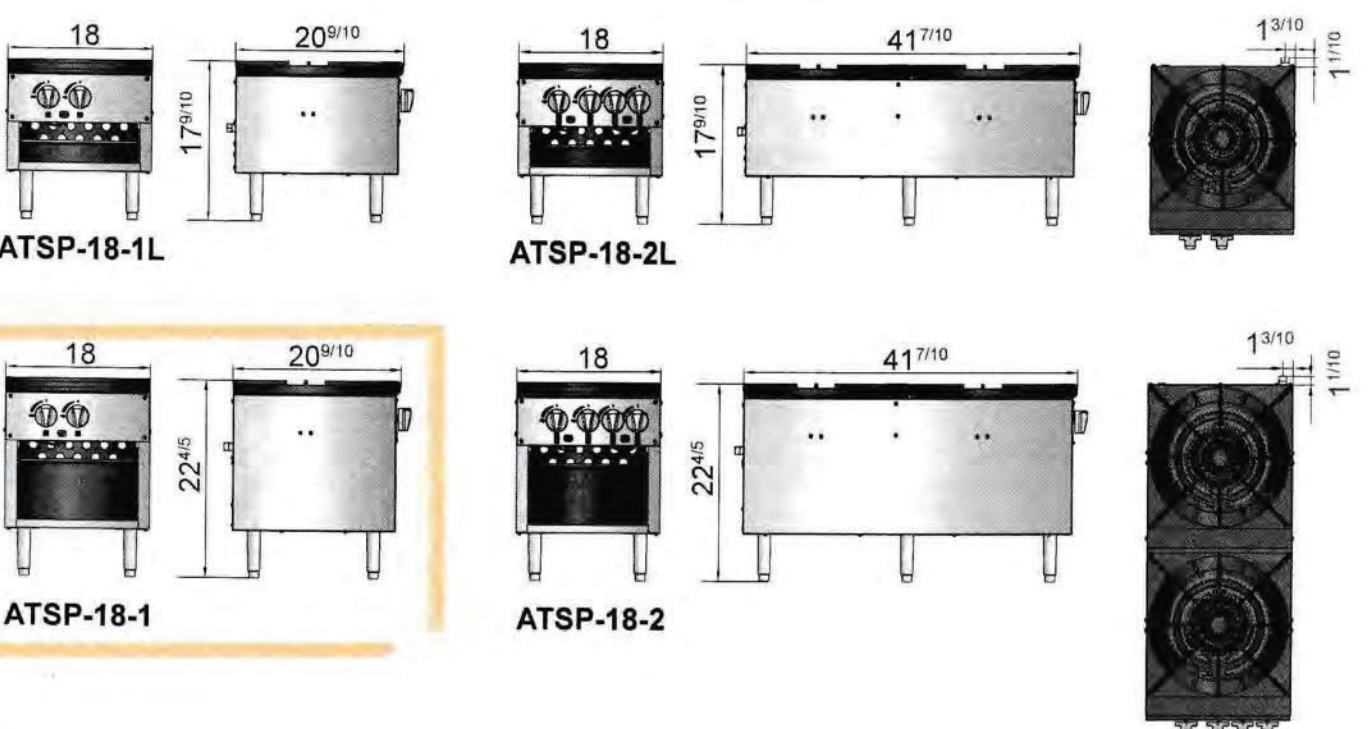
DRAWING NO.

A-09

### SPECIFICATIONS

Models	Burners and Control Method	Gas Type	Intake Tube Pressure (in.W.C.)	Per BTU B.T.U./h	Total BTU B.T.U./h	Regulator	Exterior Dimensions (inch)	Net Weight (lbs)	Gross Weight (lbs)
ATSP-18-1	2 Burners, Independent Manual Control	NG	4	40,000	80,000	4" w.c.	18" x 20" x 22" 1/2	106	119
ATSP-18-2	4 Burners, Independent Manual Control	NG	4	40,000	160,000	4" w.c.	18" x 41" x 22" 1/2	202	222
ATSP-18-1L	2 Burners, Independent Manual Control	NG	4	40,000	80,000	4" w.c.	18" x 20" x 17" 1/2	104	117
ATSP-18-2L	4 Burners, Independent Manual Control	NG	4	40,000	160,000	4" w.c.	18" x 41" x 17" 1/2	198	221

### PLAN VIEW



Heavy duty burners Stainless steel legs Cast iron top grates Stainless steel knobs Stainless steel drip pan



Gas Ranges

DESIGNED & BUILT IN USA

AT0189 10022013

AMERICAN RANGE  
QUALITY LINE OF COOKING EQUIPMENT

13592 Desmond St. Richmond CA 91331  
T: 818.897.0808 F: 818.897.1670  
Toll Free: 888.753.9898  
www.americanrange.com







# GRAB AND GO PLUS RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER, BC

## GENERAL DEMOLITION NOTES

- A. FOR ALL ITEMS NOTED TO BE REMOVED, REMOVE ITEMS INCLUDING CONDUIT AND WIRING BACK TO THE SOURCE AND MAKE IT SAFE. THE CONTRACTOR IS TO ALLOW FOR SITE VISITS, PRIOR TO SUBMITTING TENDER, TO VERIFY ALL ITEMS THAT ARE TO BE REMOVED.
- B. CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL AND MECHANICAL DRAWINGS TO DETERMINE THE EXACT EXTENT OF THE BUILDING DEMOLITION WORK BEING DONE.
- C. ALL REDUNDANT, UNUSED WIRING AND JUNCTION BOXES INCLUDING ANY UNUSED WIRING IN THE CEILING SPACE IS TO BE REMOVED BACK TO SOURCE.
- D. FOR ALL EXISTING DEVICES INDICATED TO REMAIN, REMOVE AND REINSTALL AS NECESSARY TO ALLOW CONSTRUCTION.
- E. DO NOT REMOVE ANY CABLING/WIRING FOR OUTLETS THAT ARE NOT WITHIN THE CURRENT CONSTRUCTION SCOPE OF WORK AREA.

## LIGHTING GENERAL NOTES (APPLIES TO ALL LIGHTING DRAWINGS)

- A. ALL NEW AND RELOCATED 120V LIGHTING IS TO BE CONNECTED TO ELECTRICAL PANEL. 80% CIRCUIT LOADING IS NOT TO BE EXCEEDED, PROVIDE NEW CIRCUITS AND BREAKERS AS REQUIRED.
- B. PROVIDE NEW EXIT SIGNS AS SHOWN ON THE DRAWING. CONNECT TO LOCAL FLOOR EXIT SIGN CIRCUIT (FOR STANDALONE EXIT SIGNS). NEW EXIT SIGNS TO BE EQUAL TO PLASTIC GREEN PICTOGRAM UNIVERSAL MOUNT. PROVIDE DIRECTIONAL ARROWS AS REQUIRED.
- C. CONTRACTOR TO PROVIDE EMERGENCY LIGHTING LAYOUT SIMILAR TO WHAT IS SHOWN ON THE DRAWINGS. EXTEND CONDUIT AND WIRING AS REQUIRED AND CONNECT TO EXISTING LOCAL LIGHTING CIRCUIT.
- D. ALL EXIT LIGHTS TO BE GREEN RUNNING MAN TYPE.
- E. ALL EMERGENCY LIGHTING TO BE IN WORKING ORDER.

## POWER GENERAL NOTES (APPLIES TO ALL POWER DRAWINGS)

- A. ELECTRICAL CONTRACTOR TO CO-ORDINATE ALL MOUNTING HEIGHTS & LOCATIONS WITH THE ARCHITECT PRIOR TO ROUGH-IN.
- B. CONTRACTOR TO REVIEW INTERIOR DESIGNER'S DRAWINGS AND NOTES.
- C. ALL ELECTRICAL PANELS ARE TO HAVE 1m CLEARANCE IN FRONT.
- D. ALL CONVENIENCE OUTLET IN CLOSE PROXIMITY (1.5m) TO SINKS ARE TO HAVE A GFI OUTLET.
- E. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS FOR ALL MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.
- F. SUPPLY AND INSTALL PULLSTRINGS IN ALL NEW EMPTY CONDUIT.
- G. ALL NEW WIRING TO BE CONCEALED.
- H. ALL RECEPTACLES TO BE MOUNTED TO CABINERY/MILLWORK WHERE THERE IS NO WALL PRESENT. ALLOW FOR FLOOR TRENCHING AND RECESS RECEPTACLES IN MILLWORK.
- I. FOR ANY FLOOR PENETRATIONS, CONTRACTOR IS TO ALLOW FOR SCANNING AND OBTAIN APPROVAL FROM BASE BUILDING AND STRUCTURAL ENGINEER FOR PENETRATION THROUGH STRUCTURAL FLOOR/WALL ETC. FIRESTOP ALL PENETRATIONS WITH 1 HOUR FIRE STOPPING MATERIAL.
- J. ALL RECEPTACLES DENOTED WITH A 'D' ARE TO BE DEDICATED CIRCUITS.
- K. ALL FIRE WALL BARRIER PENETRATIONS ARE TO BE FIRE STOPPED.
- L. ALL POWER AND DATA FEEDS ARE TO BE FED FROM THE CEILING AND DOWN COLUMN UNLESS OTHERWISE NOTED.
- M. ALL EXPOSED WIRING (POWER AND DATA) ARE TO BE RUN IN CONDUIT. PROVIDE SEPARATE CONDUITS FOR POWER AND DATA.
- N. ALL DATA AND POWER CABLES WITHIN A PLENUM CEILING SPACE ARE TO BE PLENUM RATED. DATA TO BE FT6 RATED. NO EXCEPTIONS.
- O. ANY CHANGES TO THE CIRCUITING OR LAYOUT FOR COST SAVINGS IS TO BE APPROVED BY THE OWNER AND ENGINEER.
- P. OWNER MAY CHANGE LOCATION OF OUTLETS PRIOR TO INSTALLATION WITH NO CHANGE TO CONTRACT PRICE, PROVIDED DISTANCE DOES NOT EXCEED 10' FROM ORIGINAL LOCATION.
- Q. COORDINATE EXACT LOCATION AND ROUGH-IN REQUIREMENTS FOR FOR SECURITY, CCTV, AND CARD ACCESS DEVICES WITH TENANT'S FORCES.
- R. ALL RECEPTACLES EXPOSED TO THE WEATHER SHALL BE PROVIDED WITH COVER PLATES SUITABLE FOR WET LOCATIONS WHETHER OR NOT A PLUG IS INSERTED INTO THE RECEPTACLE.
- S. FIRESTOP ALL PENETRATIONS THROUGH RATED ASSEMBLIES USING AN APPROVED MATERIAL AND PROVIDE SHOP DRAWINGS OF APPROVED METHOD(S).
- T. FOR MAINTENANCE OF ROOF TOP UNITS SUPPLY AND INSTALL CSA CONFIGURATION 5-30R CLASS A GFI TYPE RECEPTACLE IN A WEATHER PROOF ENCLOSURE MOUNTED WITHIN 24.5' (7.5m) OF MECHANICAL EQUIPMENT. MOUNTING HEIGHT SHALL NOT BE LESS THAN 29.5' (750mm) ABOVE FINISHED ROOF.
- U. WORKMANSHIP SHALL BE IN ACCORDANCE WITH WELL ESTABLISHED PRACTICE AND STANDARDS ACCEPTED AND RECOGNIZED BY THE CONSULTANT AND THE TRADE.
- V. THE CONSULTANT SHALL HAVE THE RIGHT TO REJECT ANY ITEM OF WORK THAT DOES NOT CONFORM TO THE CONTRACT DOCUMENTS AND ACCEPTED STANDARDS OF PERFORMANCE, QUIETNESS OF OPERATION, FINISH AND APPEARANCE.
- W. EMPLOY ONLY TRADESMEN HOLDING VALID PROVINCIAL TRADE QUALIFICATION CERTIFICATES. TRADESMEN SHALL PERFORM ONLY WORK THAT THEIR CERTIFICATE PERMITS.
- X. MAKE AND QUALITY OF MATERIALS USED ARE SUBJECT TO APPROVAL BY THE ENGINEER. REMOVE UNACCEPTABLE MATERIALS AND INSTALL SUITABLE MATERIALS IN THEIR PLACE.
- Y. MATERIALS SHALL BE NEW AND OF UNIFORM PATTERN THROUGHOUT, UNLESS NOTED OTHERWISE.

## REQUIRED FIELD REVIEWS

THE CONTRACTOR SHALL PROVIDE MINIMUM 1 WEEK NOTICE IN ORDER FOR CONSULTANT TO COMPLETE A FIELD REVIEW AT THE FOLLOWING PROJECT STAGES:

1. AT ROUGH IN STAGE - BEFORE BOARDING OF CEILING AND WALLS
11. BOTH POWER AND DATA TO BE ROUGHED IN
12. FIRE STOPPING SHALL BE COMPLETE
2. UPON SUBSTANTIAL COMPLETION OF WORK
21. SUBMIT ALL SUBSTANTIAL COMPLETION DOCUMENTS.
3. UPON COMPLETION OF RECTIFYING ALL DEFICIENCIES NOTED DURING PREVIOUS FIELD REVIEWS

## DRAWING LIST

E0 - COVER PAGE AND LEGEND
E1 - POWER AND DATA PLAN
E2 - LIGHTING AND LIFE SAFETY PLAN
E3 - SCHEDULES AND DETAILS
E4 - ELECTRICAL SPECIFICATIONS

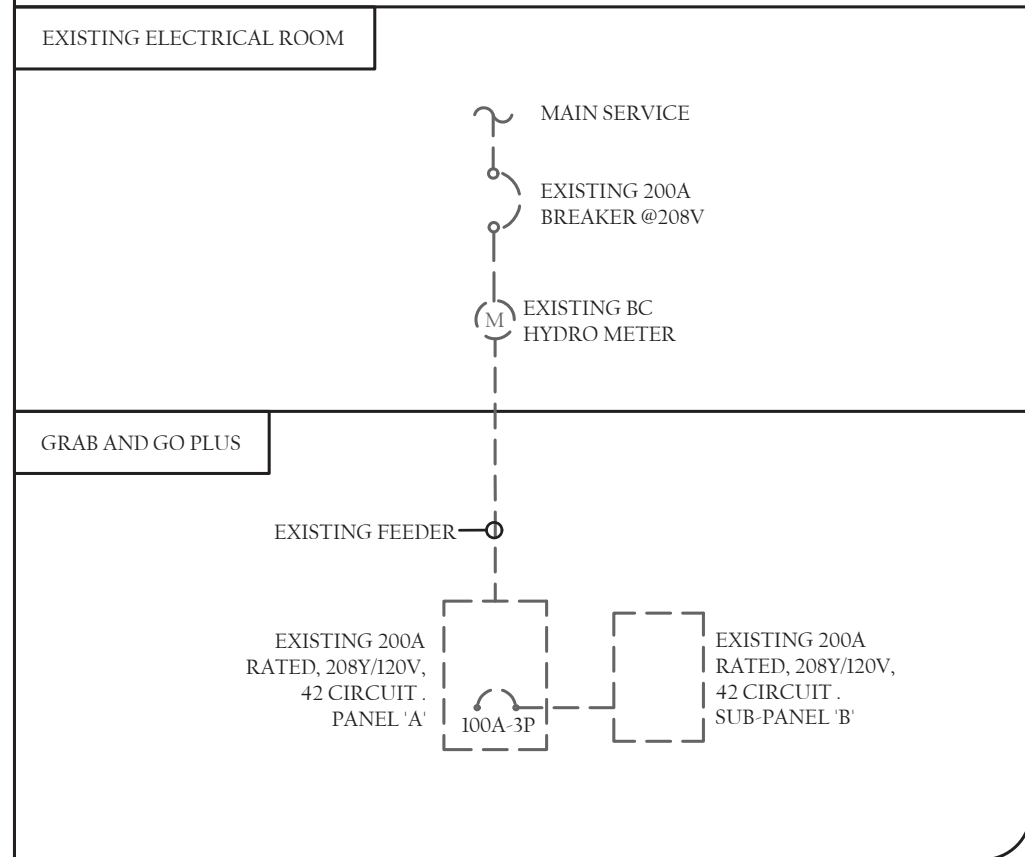
## SUBSTANTIAL COMPLETION CHECKLIST

- A. THE SEISMIC BRACING OF ELECTRICAL LIGHT FIXTURE INSTALLATION SHALL BE REVIEWED AND APPROVED BY A SEISMIC ENGINEER. SUPPORTING SCHEDULES SB & SC FROM A SEISMIC ENGINEER WILL BE REQUIRED.
- B. FIRE STOPPING CERTIFICATE.
- C. FINAL ELECTRICAL INSPECTION CARD FROM AHJ.
- D. FIRE ALARM VERIFICATION REPORT.

## POWER, DATA & FIRE ALARM LEGEND

	SMOKE DETECTOR
	HEAT DETECTOR
	FIRE ALARM SPEAKER
	FIRE ALARM GONG BELL
	FIRE ALARM PULL STATION
	FIRE ALARM BUZZER
	ELECTRICAL PANEL
	JUNCTION BOX
	DIRECT CONNECTION
	3 PHASE ELECTRICAL CONNECTION
	FAN WITH DISCONNECT SWITCH
	DISCONNECT SWITCH
	SECURITY CAMERA
	FURNITURE POWER CONNECTION
	FURNITURE DATA CONNECTION
	FLOORBOX
STANDARD HEIGHT	ABOVE COUNTER HEIGHT
	FOURPLEX RECEPTACLE
	DUPLEX RECEPTACLE
	T-SLOT 20A RECEPTACLE
	208V-1P RECEPTACLE
	GFCI RECEPTACLE
	TELEPHONE (ANALOG) OUTLET
	DATA OUTLET
	TEL/DATA OUTLET
	EQUIPMENT TAG

## PARTIAL SINGLE LINE DIAGRAM



## LIGHTING LEGEND

	CEILING MOUNTED OCCUPANCY SENSOR
	EXIT/EMERGENCY LIGHT COMBO. MINIMUM 2 HOUR OPERATION REQUIRED.
	EMERGENCY LIGHT WITH BATTERY PACK. MINIMUM 2 HOUR OPERATION REQUIRED.
	EMERGENCY LIGHT DUAL REMOTE HEADS. MINIMUM 2 HOUR OPERATION REQUIRED.
	EXIT SIGN (GREEN RUNNING MAN)
	LIGHT SWITCH (MASTER)
	LIGHT SWITCH
	LIGHT SWITCH (3 WAY)
	WALL OCCUPANCY SENSOR SWITCH
	2'X4' LIGHT FIXTURE
	4' POT LIGHT
	TIMECLOCK

NOT ALL LIGHT SYMBOLS APPEAR ON LEGEND. REFER TO TAGS BESIDE LIGHT SYMBOLS AND CROSS REFERENCE WITH LIGHTING SCHEDULE

## ABBREVIATIONS

(D)	DEDICATED RECEPTACLE
ID, IV	1X DATA OUTLET, 1X VOICE OUTLET
RR	REMOVE AND RELOCATE ITEM
RE	RELOCATED ITEM
E	EXISTING ITEM TO REMAIN
BP	BATTERY PACK

## TENANT SPACE LOAD CALCULATION

PER TABLE 14 OF THE CEC  
BASIC PROPOSED LOAD (STORE/RESTAURANT)

PANEL 'A' (20/208V PANEL) CONNECTED LOAD AREA: 173.1m²		
30W/m² @ 1.0 DEMAND FACTOR	519	KW
SPECIAL EQUIPMENT LOADS @ 1.0 DEMAND FACTOR	23.30	KW
EXISTING MECHANICAL LOADS @ 1.0 DEMAND FACTOR	20.50	KW
TOTAL WATTS:	50.99	KW
TOTAL AMPS (208V, 3ø)	141.6	A
TOTAL AMPS AVAILABLE (80% OF 200A BREAKER)	160.0	A

## ELECTRICAL, POWER, LIGHTING, AND OTHER EQUIPMENT DESIGN(ENERGY)

BCBC: ELECTRICAL STANDARD/CODE: POWER COMPLIANCE PATH: IN ACCORDANCE WITH: POWER COMPLIANCE PATH: LIGHTING DESIGN METHOD: IN ACCORDANCE WITH: OTHER EQUIPMENT PATH: IN ACCORDANCE WITH:	2018 ASHRAE 90.1-2016 PRESCRIPTIVE N/A PRESCRIPTIVE BUILDING AREA METHOD N/A (NO OTHER EQUIP WORK) N/A
---	---

AREA DESCRIPTION	LPD (W/ft²)	ALLOWABLE WATTAGE
DINING FAST FOOD (1,883 ft²)	0.76	1,416W
TOTAL INSTALLED WATTS:		1,298W

## ELECTRICAL SHOP DRAWINGS

1. SUBMIT SHOP DRAWINGS TO CONSULTANT FOR REVIEW PRIOR TO ORDERING ANY ELECTRICAL/LIGHTING EQUIPMENT OR FIXTURES.

**ACCEPTED**  
FOR BUILDING PERMIT ISSUANCE

**BP119005**

These drawings to be available on site  
PERMITS & INSPECTIONS DEPT.  
DISTRICT OF WEST VANCOUVER



Aquavolt Engineering Ltd.  
CONSULTING MECHANICAL AND ELECTRICAL ENGINEERS

A: Unit 202 - 828 Harbourside Drive,  
North Vancouver, BC  
E: info@aquavolt.ca  
P: (778)-360-2153  
www.aquavoltengineering.ca

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SCALED

CONTRACTOR:

MANSOURI

PEOPLE BUILD DESIGN

109-1305 WELCH STREET, NORTH VANCOUVER, BC,  
V7P 1B3  
WWW.MANSOURIDESIGN.COM

KEY PLAN

CLIENT:


01	ISSUED FOR PERMIT	2024/02/12	AN
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NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY
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PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:

COVER PAGE AND LEGEND

SEAL



2024-02-12

EGBC PERMIT # 1000411

SCALE: PER DWG

DESIGNED BY: AN

DATE: FEB 2024

CHECKED BY: AH

PROJECT NUMBER: 24032

E0

RECEIVED

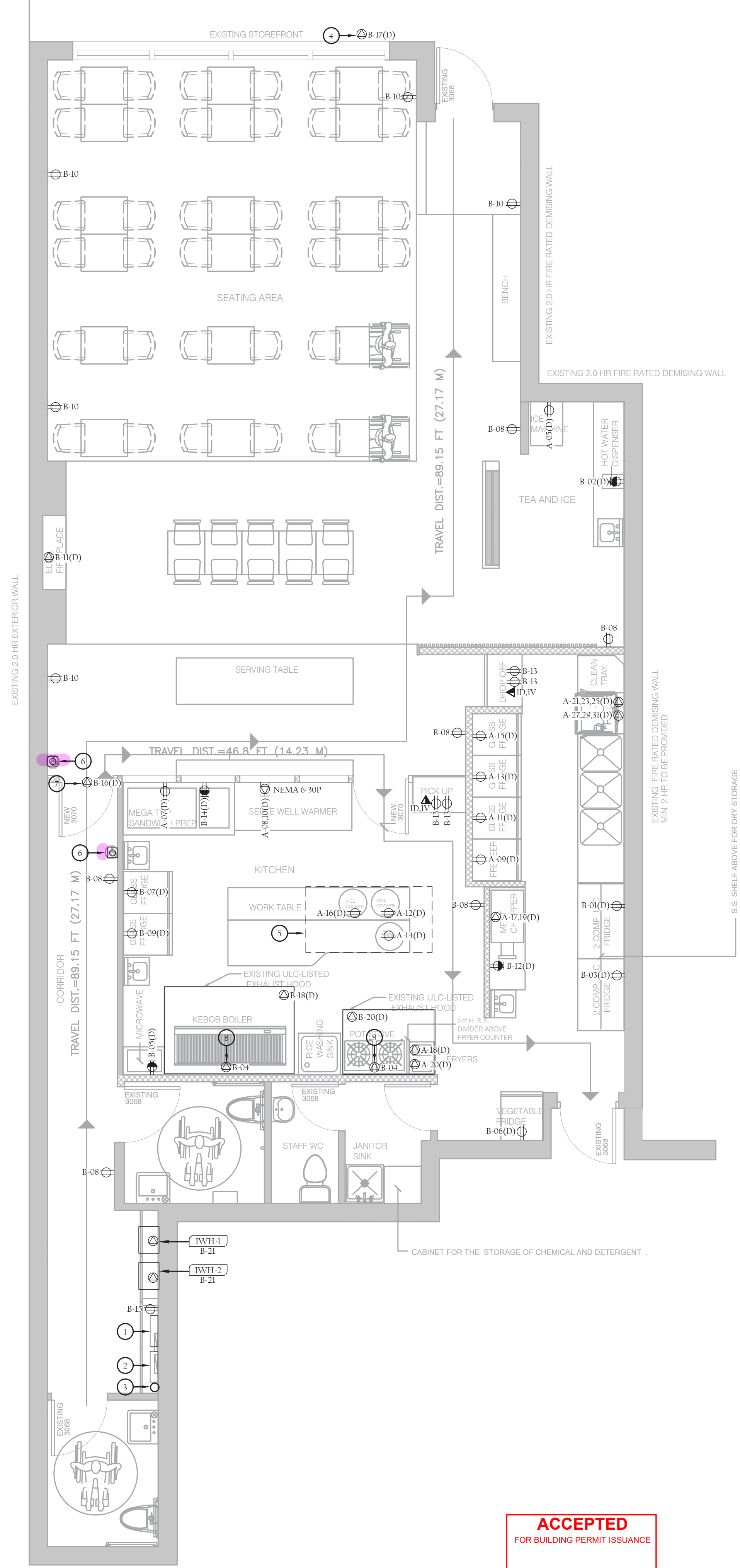
FEB 29 2024

District of West Vancouver  
Permits Dept.



EXISTING ELECTRICAL PANEL (208Y/120V) 200A RATED - PANEL 'A'									
DESIGNATION	BKR	CCT	ΦA	ΦB	ΦC	CCT	BKR	DESIGNATION	
LIGHTS - FRONT OF HOUSE	15A	1				2	100A	EXISTING SUB-PANEL 'B'	
LIGHTS - BACK OF HOUSE	15A	3				4	100A	EXISTING SUB-PANEL 'B'	
ICE MACHINE	15A	5				6	100A	EXISTING SUB-PANEL 'B'	
SANDWICH TABLE	15A	7				8	30A	SERVE WELL FOOD STATION	
BOTTOM REACH IN FREEZER	15A	9				10	30A	SERVE WELL FOOD STATION	
GLASS DOOR REACH IN FRIDGE	15A	11				12	15A	RICE MAKER	
GLASS DOOR REACH IN FRIDGE	15A	13				14	15A	RICE MAKER	
GLASS DOOR REACH IN FRIDGE	15A	15				16	15A	RICE MAKER	
MEAT CHOPPER	20A	17				18	20A	ELECTRIC DEEP FRYER	
MEAT CHOPPER	20A	19				20	20A	ELECTRIC DEEP FRYER	
DISHWASHER	30A	21				22	EX.	EXISTING OCCUPIED CIRCUIT	
DISHWASHER	30A	23				24	EX.	EXISTING OCCUPIED CIRCUIT	
DISHWASHER	30A	25				26	EX.	EXISTING OCCUPIED CIRCUIT	
DISHWASHER BOOSTER	30A	27				28	EX.	EXISTING OCCUPIED CIRCUIT	
DISHWASHER BOOSTER	30A	29				30	EX.	EXISTING OCCUPIED CIRCUIT	
DISHWASHER BOOSTER	30A	31				32	EX.	EXISTING OCCUPIED CIRCUIT	
		33				34	EX.	EXISTING OCCUPIED CIRCUIT	
		35				36	EX.	EXISTING OCCUPIED CIRCUIT	
		37				38	EX.	EXISTING OCCUPIED CIRCUIT	
		39				40	EX.	EXISTING OCCUPIED CIRCUIT	
		41				42	EX.	EXISTING OCCUPIED CIRCUIT	

EXISTING ELECTRICAL PANEL (208Y/120V) 200A RATED - SUB-PANEL 'B'									
DESIGNATION	BKR	CCT	ΦA	ΦB	ΦC	CCT	BKR	DESIGNATION	
UNDERCOUNTER FRIDGE	15A	1				2	20A	HOT WATER DISPENSER	
UNDERCOUNTER FRIDGE	15A	3				4	15A	IGNITER	
MICROWAVE	20A	5				6	15A	FRIDGE	
GLASS DOOR REACH IN FRIDGE	15A	7				8	15A	CONVENIENCE RECEPTACLES	
GLASS DOOR REACH IN FRIDGE	15A	9				10	15A	CONVENIENCE RECEPTACLES	
ELECTRIC FIREPLACE	20A	11				12	20A	ABOVE COUNTER RECEPTACLE	
POS STATIONS	15A	13				14	20A	ABOVE COUNTER RECEPTACLE	
RECEPTACLE	15A	15				16	15A	AUTO DOOR OPENER	
SIGNAGE	15A	17				18	15A	KITCHEN HOOD	
KITCHEN SUPPRESSION SYSTEM CONTROL PANEL	15A	19				20	15A	KITCHEN HOOD	
IWH 1 & 2 IGNITER	15A	21				22			
		23				24			
		25				26			
		27				28			
		29				30			
		31				32			
		33				34			
		35				36			
		37				38			
		39				40			
		41				42			



**ACCEPTED**  
FOR BUILDING PERMIT ISSUANCE:

**BP119005**

These drawings to be available on site  
PERMITS & INSPECTIONS DEPT  
DISTRICT OF WEST VANCOUVER

## GENERAL NOTES

- AREA IN FRONT OF ELECTRICAL PANELS TO REMAIN CLEAR AT ALL TIMES (MINIMUM 1m CLEARANCE).
- ALL RECEPTACLE HEIGHTS TO BE REFERENCED FROM ARCHITECTURAL DRAWINGS.
- SCAN SLAB PRIOR TO ANY TRENCHING OR CORING.
- THE TENANT CONTRACTOR SHALL FILL IN SLAB DEPRESSIONS AND CRACKS AND COVER WITH APPROPRIATE FLOOR FINISH.
- ELECTRICAL CONTRACTOR TO REVIEW MECHANICAL DRAWINGS FOR EXACT LOCATION/MOUNTING HEIGHT OF ALL MECHANICAL EQUIPMENT.
- DESIGN DRAWINGS MUST BE READ IN CONJUNCTION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS, DISCREPANCIES TO BE REPORTED TO THE ENGINEER PRIOR TO PROCEEDING WITH ANY WORK.
- LIST OF ELECTRICAL DEFECTS OR DEFICIENCIES IN THE WORK OF THE BASE BUILDING CONTRACTOR PRIOR TO COMMENCING WORK IN THE PREMISES. PRESENT A COPY OF THESE ITEMS TO THE INTERIOR DESIGNER, ENGINEER AND BUILDING OWNER.
- ANY MATERIAL NOT SPECIFIED IN THESE SPECIFICATIONS SHALL BE THE SAME THAT OF THE EXISTING BUILDING.
- PROVIDE A MINIMUM OF 96 HOURS NOTICE PRIOR TO ANY NECESSARY SHUTDOWN OF BUILDING SERVICES. ARRANGE AND CO-ORDINATE WITH BUILDING OWNER.
- KEEP A PERMANENT RECORD OF EACH INSPECTION MADE BY THE INSPECTING AUTHORITY SHOWING THE DATE, INSPECTOR'S NAME, SCOPE OF THE INSPECTION AND STATEMENT OF SPECIAL DECISIONS OR PERMISSIONS GRANTED. THESE RECORDS SHALL BE AVAILABLE TO THE ENGINEER AT ALL TIMES, AND TURNED OVER TO HIM AFTER COMPLETION OF THE WORK.
- TENANT CONTRACTOR TO COORDINATE WITH LANDLORD AS TO SALVAGING ANY EXISTING LIGHTING AND DISTRIBUTION EQUIPMENT.
- CONTRACTOR SHALL REVIEW AND COORDINATE WITH INTERIOR DESIGN AND MECHANICAL DRAWINGS TO DETERMINE THE EXACT EXTENT OF THE BUILDING DEMOLITION WORK BEING DONE.
- ALL REDUNDANT, UNUSED WIRING AND JUNCTION BOXES INCLUDING ANY UNUSED WIRING IN THE CEILING SPACE IS TO BE REMOVED BACK TO SOURCE.
- FOR ALL EXISTING DEVICES INDICATED TO REMAIN, REMOVE AND REINSTALL AS NECESSARY TO ALLOW CONSTRUCTION.
- DO NOT REMOVE ANY CABLING/WIRING FOR OUTLETS THAT ARE NOT WITHIN THE CURRENT CONSTRUCTION SCOPE OF WORK AREA.
- PROVIDE STAINLESS STEEL COVER PLATES FOR ALL RECEPTACLES LOCATED UNDER THE KITCHEN EXHAUST HOODS.
- COORDINATE EXACT MOUNTING HEIGHT FOR SIGNAGE POWER WITH PROJECT MANAGER ON SITE.
- PROVIDE FIRE STOPPING OF ALL ELECTRICAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES MEETING APPROVED MATERIALS AND METHODS FOR APPLICATIONS.
- PROVIDE GROUNDING AND BONDING IN ACCORDANCE WITH LATEST EDITION OF ELECTRICAL CODE.
- DOWNSSTREAM FUSES AND BREAKERS MAY BE SERIES RATED FOR REQUIRED FAULT INTERRUPTING RATINGS. PANELS ARE TO BE LISTED AS SUCH BY MANUFACTURER.
- COORDINATE ALL NEUTRAL CONDUCTOR REQUIREMENTS FOR MECHANICAL EQUIPMENT WITH SHOP DRAWINGS.
- PROVIDE LAMICOID LABELS FOR EACH PANEL INDICATING: PANEL NAME, VOLTAGE, FED FROM (PARENT PANEL/SWITCHBOARD), FEEDER SIZE AND FEEDER BREAKER SIZE.

## KEYED NOTES

- EXISTING 200A RATED ELECTRICAL PANEL 'A'. SEE SINGLE LINE DIAGRAM ON E0 FOR ADDITIONAL DETAILS.
- EXISTING 200A RATED ELECTRICAL SUB-PANEL 'B'. SEE SINGLE LINE DIAGRAM ON E0 FOR ADDITIONAL DETAILS.
- EXISTING BASE BUILDING DATA DEMARCATION POINT. DATA RACK TO BE INSTALLED AT THIS LOCATION. CONTRACTOR TO ALLOW FOR PATCH PANELS, DATA RACK, DATA CABLES AND ANY OTHER EQUIPMENT FOR A FULLY FUNCTIONING SYSTEM.
- PROVIDE POWER FOR OUTDOOR SIGNAGE. EXACT LOCATION TO BE COORDINATED ON SITE. SIGNAGE TO BE TIED TO TIMECLOCK ON SEPARATE RELAY. COORDINATE TIMES WITH CLIENT.
- POWER TO BE FED UNDER TABLE FROM NEAREST WALL. ALLOW FOR CORING OF SLAB. ENSURE THAT SLAB IS SCANNED PRIOR TO ANY CORING TAKING PLACE.
- ALLOW FOR ROUGH IN CONDUIT FOR AUTO DOOR OPENER PUSH BUTTON. EXACT HEIGHT TO BE COORDINATED WITH ARCHITECT PRIOR TO ROUGH IN.
- ALLOW FOR 120V POWER FOR AUTO DOOR OPENER.
- POWER FOR IGNITER. ENSURE THAT THIS SHUTS OFF WHEN THE FIRE SUPPRESSION SYSTEM IS ACTIVATED.

**STRUCTURAL ENGINEER REQUIRED TO REVIEW NEW OPENING IN REINFORCED SLAB. REFER TO BASE BUILDING CONSULTANTS**

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FEB 29 2024

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**Aquavolt Engineering Ltd.**  
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CONTRACTOR:

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PEOPLE. BUILD. DESIGN.

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KEY PLAN



CLIENT:

01	ISSUED FOR PERMIT	2024/02/12	AN
NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY

PROJECT NAME AND ADDRESS:

**GRAB AND GO PLUS RESTAURANT**  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:  
**POWER AND DATA PLAN**

SEAL



2024-02-12

EGBC PERMIT # 1000411

SCALE: PER DWG DESIGNED BY: AN

DATE: FEB 2024 CHECKED BY: AH

PROJECT NUMBER: 24032

**EI**

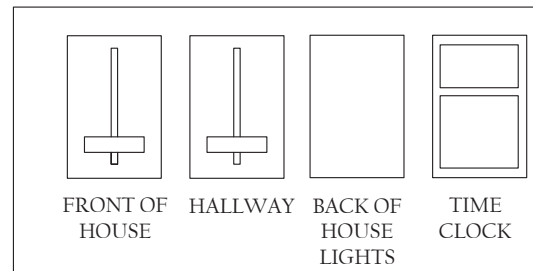


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#### SWITCHING ZONES



#### LIGHTING SCHEDULE

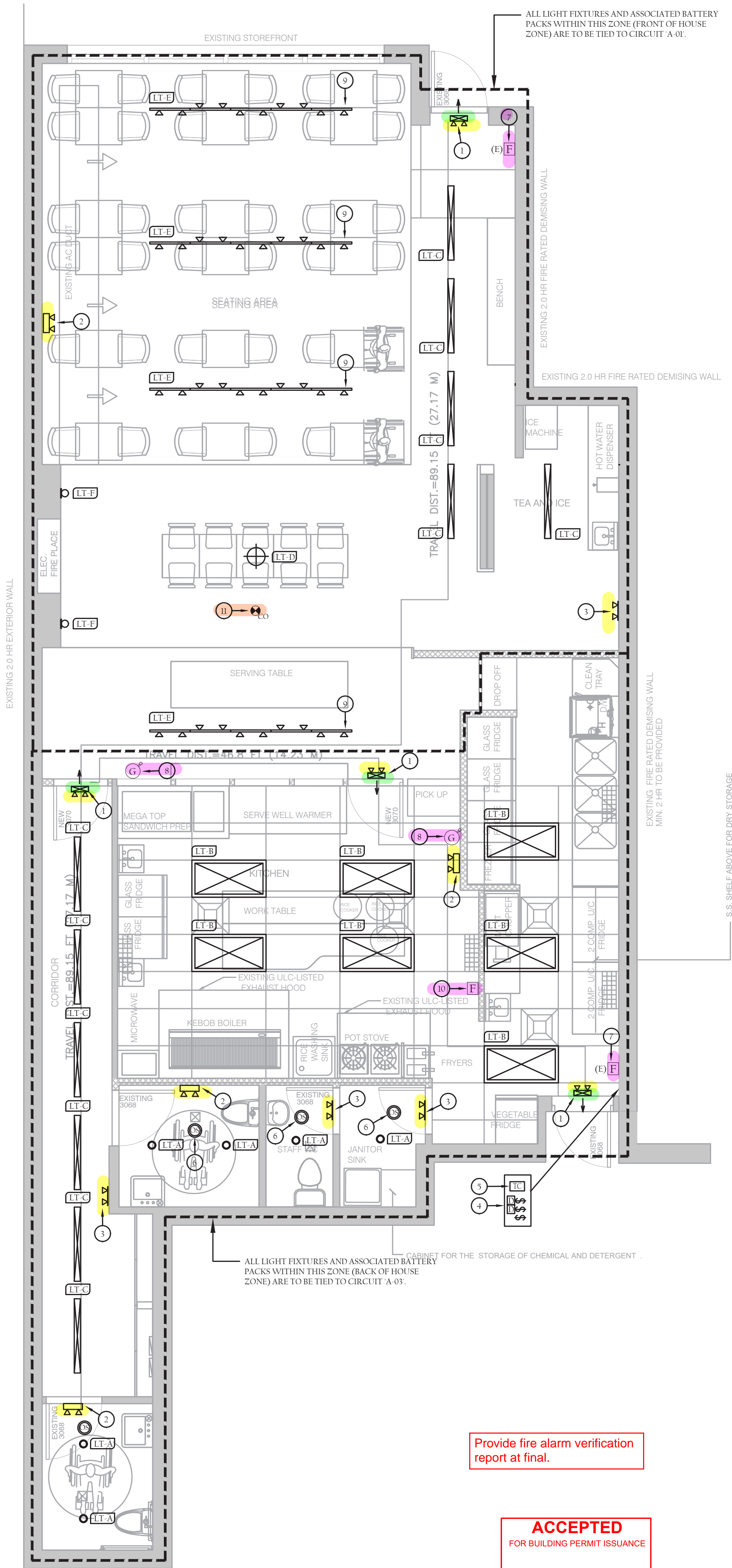
	RECESSED DOWNLIGHT, 12W, 120V
	2X 4' LED SURFACE MOUNT, 40 W
	NEW LED WRAP LIGHT 40 W, 3000 K,
	LED PENDANT, 20W
	SUSPENDED LED TRACK LIGHTING, 11W/HEAD
	WALL SCONCE, 15W

#### GENERAL NOTES

- ALL LIGHTING TO BE TIED TO NEW PROGRAMMABLE TIMECLOCK FOR SCHEDULED SHUTOFF. TIME CLOCK TO BE SET TO MANUAL ON AND AUTO OFF. TIMECLOCK TO COME COMPLETE WITH 2 HOUR OVERRIDE FUNCTION.
- EMERGENCY LIGHT REMOTE HEADS ARE TO BE CONNECTED TO NEAREST BATTERY PACK IN SAME LIGHTING ZONE.
- EMERGENCY BATTERY UNITS ARE TO BE CONNECTED TO LINE SIDE OF LOCAL LIGHTING CIRCUIT.
- COMBINATION EXIT/EMERGENCY FIXTURES ARE TO BE CONNECTED TO THE LINE SIDE OF THE LOCAL LIGHTING CIRCUIT WITHIN SAME LIGHTING ZONE.
- THIS CONTRACTOR SHALL STUDY THE DRAWINGS AND SPECIFICATIONS AND SHALL REPORT ANY ERRORS, INCONSISTENCIES OR OMISSIONS TO ENGINEER. DO NOT PROCEED IN UNCERTAINTY.
- CEILING MOUNTED SENSORS AND EXIT SIGNS IN SPACES WITH EXPOSED STRUCTURE ARE TO BE SUSPENDED ON 1/2" CONDUIT WITH BALL ALIGNERS (EXCEPT WHERE OTHERWISE NOTED). PAINT ASSEMBLY TO MATCH STRUCTURE, OR AS DIRECTED BY INTERIOR DESIGNER.
- COORDINATE PENDANT AND SUSPENDED FIXTURE MOUNTING HEIGHTS WITH INTERIOR DESIGN/ARCHITECTURAL PLANS.
- REVIEW INTERIOR DESIGN PLANS FOR ADDITIONAL DETAILS.

#### KEYED NOTES

- NEW GREEN RUNNING MAN EXIT SIGN, EMERGENCY LIGHT COMBO. TIE TO LOCAL LIGHTING CIRCUIT WITHIN SAME LIGHTING ZONE.
- NEW EMERGENCY LIGHT C/W BATTERY PACK. TIE TO LOCAL LIGHTING CIRCUIT WITHIN SAME LIGHTING ZONE.
- NEW DUAL REMOTE HEAD LIGHT. TIE TO NEAREST BATTERY PACK WITHIN SAME LIGHTING ZONE.
- LOCATION OF GANG SWITCHES. SWITCHES TO CONTROL ALL LIGHTING AS PER SWITCHING ZONE DETAIL. ENSURE THAT SWITCHES ARE TIED TO TIMECLOCK FOR AUTO SHUT OFF.
- NEW 2 CHANNEL TIMECLOCK TO BE INSTALLED. TIMECLOCK TO CONTROL ALL LIGHTING NOT CONTROLLED BY LOCAL SWITCHES. TIMECLOCK TO BE SET TO MANUAL ON AND AUTO OFF FOR SCHEDULED SHUT OFF. ONE CHANNEL FOR INTERIOR LIGHTS, THE OTHER FOR EXTERIOR SIGNAGE. OPERATING HOURS TO BE VERIFIED BY CLIENT. PROVIDE 2 HOUR OVERRIDE FEATURE.
- CEILING MOUNTED OCCUPANCY SENSOR TO CONTROL LIGHTS IN THIS ROOM.
- EXISTING FIRE ALARM PULL STATION TO REMAIN.
- NEW FIRE ALARM AUDIBLE DEVICE (GONG BELL) TO BE INSTALLED. FIRE ALARM SYSTEM TO BE RE-VERIFIED. PROVIDE VERIFICATION REPORT AT CLOSE OUT.
- 120W, 1A, CURRENT LIMITER TIED TO TRACK LIGHT.
- PULL STATION FOR FIRE SUPPRESSION SHALL BE INSTALLED BETWEEN 42" TO 48" ABOVE FINISHED FLOOR AT THE EGRESS. PULL STATION TO BE TIED TO NEW FIRE ALARM ZONE FOR KITCHEN SUPPRESSION SYSTEM. ENSURE THAT ALL ELECTRICAL EQUIPMENT INCLUDING ANY IGNITORS OR RECEPTACLES BEHIND THE COOKING LINE AND BELOW THE HOOD ARE SHUT OFF UPON ACTIVATION OF PULL STATION.
- CARBON MONOXIDE ALARM. ALARM DOES NOT NEED TO BE TIED TO THE FIRE ALARM SYSTEM. TO COME COMPLETE WITH BATTERY BACKUP. TIE TO LIGHTING CIRCUIT FOR HARD WIRING.



#### LIGHTING AND LIFE SAFETY PLAN

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

Provide fire alarm verification  
report at final.

ACCEPTED  
FOR BUILDING PERMIT ISSUANCE:

BP119005

These drawings to be available on site  
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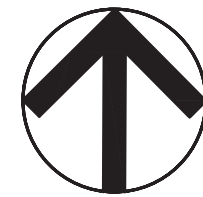
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KEY PLAN



NORTH

CLIENT:


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PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:

LIGHTING AND LIFE SAFETY PLAN

SEAL



2024-02-12

EGBC PERMIT # 1000411

SCALE: PER DWG

DESIGNED BY: AN

DATE: FEB 2024

CHECKED BY: AH

PROJECT NUMBER: 24032

E2



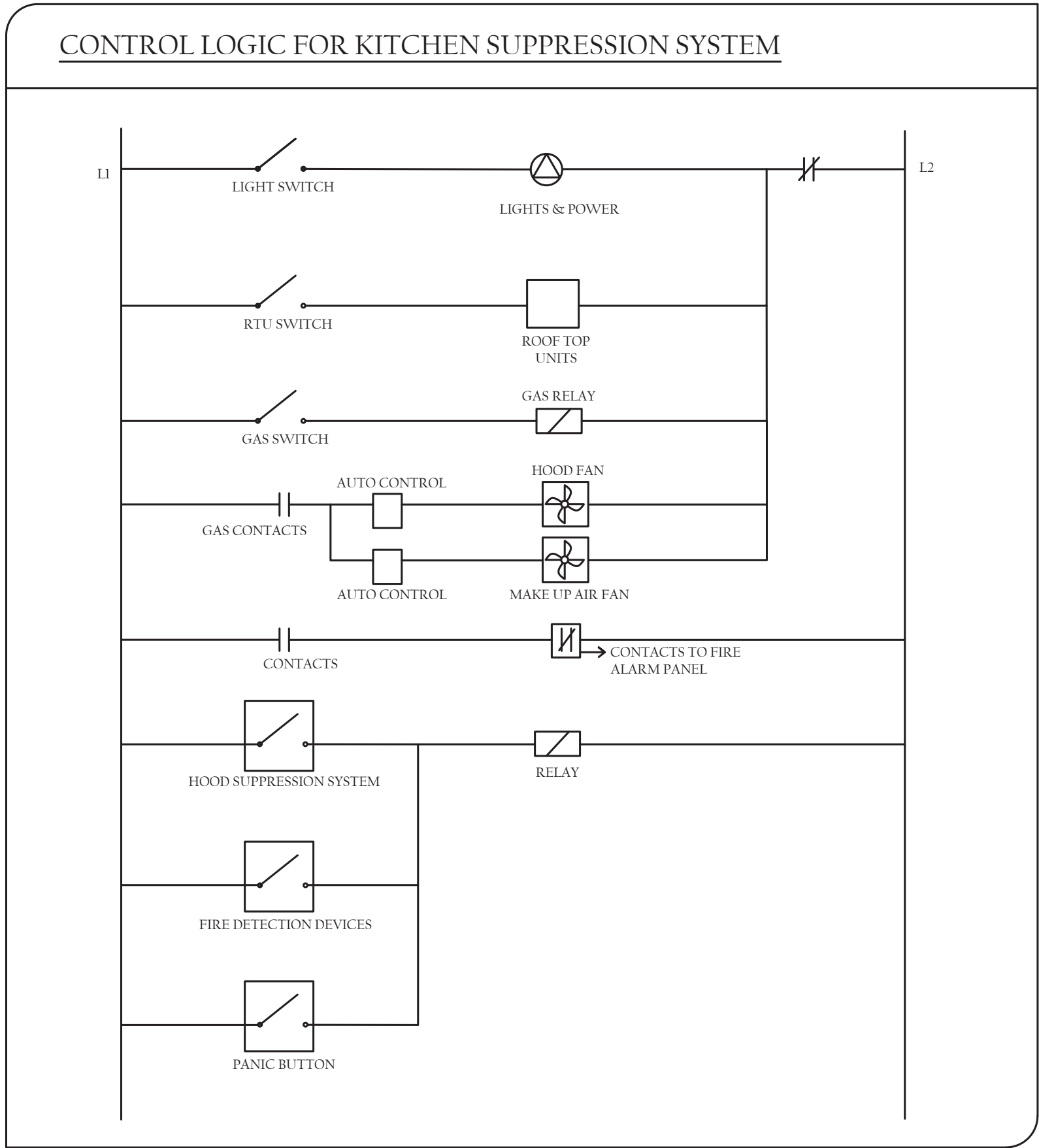
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INSTANT WATER HEATER SCHEDULE											
TAG	MAKE	MODEL	LOCATION	CAPACITY	GAS INPUT	FLA	BRK	ELECTRICAL	DIMENSIONS	WEIGHT	NOTES
DWH-1 & 2	NAVIEN	NPE-240S	ABOVE MOP SINK - SEE PLAN	3.8 GPM @ 100°F ΔT	200 MBH	4 A	15 A	120V/1φ/60Hz	17.3"W x 13.2"D x 27.4"H	75 LBS	ALL
NOTES: 1. FACTORY SUPPLIED NEUTRALIZING-KIT      2. REFER TO DETAIL    3. 0.97 EF CANADA RATED      4. INLINE MODULAR CONFIGURATION      5. ALTERNATE EQUAL RINNAI CUI99IN											

ELECTRICAL CONTRACTOR TO PROVIDE POWER TO ALL MECHANICAL EQUIPMENT AS SHOWN. DISCONNECT SWITCHES TO BE PROVIDED BY ELECTRICAL CONTRACTOR AS PER REQUIREMENTS AND SYMBOLS SHOWN ON DRAWINGS. ALL MECHANICAL EQUIPMENT TO BE SUPPLIED BY MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.



**ACCEPTED**  
FOR BUILDING PERMIT ISSUANCE

**BP119005**

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DISTRICT OF WEST VANCOUVER

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KEY PLAN

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GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:  
SCHEDULES AND DETAILS

SEAL



2024-02-12

EGBC PERMIT # 1000411

SCALE: PER DWG      DESIGNED BY: AN

DATE: FEB 2024      CHECKED BY: AH

PROJECT NUMBER: 24032

E3



ELECTRICAL SPECIFICATIONS

1. GENERAL ELECTRICAL REQUIREMENTS AND STANDARDS

11 RESPONSIBILITY AS TO WHICH TRADE PROVIDES REQUIRED ARTICLES OR MATERIALS RESTS ENTIRELY WITH THE GENERAL CONTRACTOR. EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE OF INTERPRETATION OF SPECIFICATIONS AS TO WHICH TRADE INVOLVED SHALL PROVIDE CERTAIN SPECIALTIES OR MATERIALS.

12 ELECTRICAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER CONSULTANT DRAWINGS, INCLUDING BUT NOT LIMITED TO THE MECHANICAL, STRUCTURAL, CIVIL ENGINEERS AS WELL AS INTERIOR DESIGNERS AND ARCHITECTS. CONTRACTOR IS TO CONSULT WITH AQUAVOLT ENGINEERING LTD IF THE ELECTRICAL DRAWINGS DO NOT MATCH THAT OF THE OTHER CONSULTANTS.

13 COORDINATE WITH AND GET APPROVAL FROM THE LANDLORD FOR ALL DRILLING, CORING AND CUTTING OF BUILDING STRUCTURE. COORDINATE LOCATIONS ON SITE PRIOR TO CARRYING OUT THE WORK. ALLOW FOR ALL COSTS FOR X-RAYING/SCANNING. CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE LANDLORD STRUCTURAL ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.

14 THE CONTRACTOR IS TO PROVIDE A CERTIFICATE OF GUARANTEE OF WORKMANSHIP AND MATERIAL FOR ONE YEAR FROM THE DATE OF ACCEPTANCE.

15 FIRE PROOF ALL FIRE RATED PENETRATIONS AFTER INSTALLATION.

16 ALL DATA CABLES WITHIN THE CEILING PLENUM ARE TO BE FT6 RATED.

17 TRANSFORMERS ARE NOT PERMITTED TO BE INSTALLED IN A RETURN AIR PLENUM.

18 REMOVE AND REINSTALL EXISTING DEVICES AS REQUIRED TO FACILITATE CONSTRUCTION.

19 CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHT WITH PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.

110 ALL RECEPTACLES AND JUNCTION BOXES ARE TO HAVE VISIBLE P-TOUCH LABELS.

111 PROVIDE WORK IN STRICT ACCORDANCE WITH THE LATEST EDITION OF APPLICABLE CODES INCLUDING (BUT NOT LIMITED TO) THE FOLLOWING CODES AND STANDARDS:

- CANADIAN ELECTRICAL CODE**  
- **BCBC 2018**  
- MUNICIPAL BYLAWS  
- CSA/ULC STANDARDS  
- ASHRAE 90.1 2019

2. MATERIALS AND EQUIPMENT

21 UNLESS SPECIFICALLY INDICATED OTHERWISE PROVIDE (FURNISH AND INSTALL) ALL SPECIFIED AND DRAWN EQUIPMENT, RACEWAY, BOXES, LUMINAIRES, CONTROLS, WIRING, CABLEING, SUPPORTS AND OTHER MATERIALS AS REQUIRED TO RENDER ALL ELECTRICAL AND ELECTRICALLY OPERATED EQUIPMENT, LUMINAIRES, DEVICES, ETC. FULLY OPERATIONAL.

22 ALL MATERIALS ARE TO BE NEW AND OF THE QUALITY SPECIFIED. MATERIALS SHALL BE APPROVED BY CSA OR EQUIVALENT AGENCY RECOGNIZED IN APPLICABLE PROVINCIAL BUILDING REGULATIONS, LOCAL CODES AND CITY BYLAWS.

23 MAINTAIN SAFETY AND GOOD CONDITION OF THE MATERIALS AND EQUIPMENT INSTALLED UNTIL FINAL ACCEPTANCE BY THE OWNER. STORE MATERIALS TO PREVENT DAMAGE AND WEATHERING PRIOR TO INSTALLATION.

24 WHEN SEVERAL MATERIALS, PRODUCTS OR ITEMS OF EQUIPMENT ARE SPECIFIED BY NAME FOR ONE USE, SELECT ONE OF THOSE SPECIFIED.

3. DRAWINGS AND SPECIFICATIONS

31 DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER. WHAT IS CALLED FOR BY ONE IS BINDING AS IF CALLED FOR BY BOTH.

32 SHOULD ANY DISCREPANCY OR INCONSISTENCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS THAT LEAVES THE ELECTRICAL CONTRACTOR IN DOUBT AS TO THE MEANING/INTENT, OBTAIN RULING FROM THE ENGINEER BEFORE SUBMITTING TENDER, OR ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE.

4. BASIC ELECTRICAL MATERIALS AND METHODS

4.1 GENERAL

A. FURNISH AND INSTALL ALL LABOR AND MATERIAL, TOOLS AND EQUIPMENT NECESSARY TO RENDER ALL SYSTEMS COMPLETE AND OPERATIONAL, AND READY FOR TURNOVER TO OWNER.

4.2 ELECTRICAL INSTALLATIONS

- A. INSTALL WORK CONDUIT, WIRING, OUTLET BOX TYPE WORK IN FINISHED AREAS CONCEALED. SUCH WORK INSTALLED IN UNFINISHED AREAS MAY BE EXPOSED AT THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
- B. WHERE OUTLET BOXES ARE TO BE INSTALLED IN EXTERIOR WALLS, THE ELECTRICAL CONTRACTOR IS TO ENSURE THAT THERE IS INSULATION BEHIND THE OUTLET BOXES TO PREVENT CONDENSATION THROUGH THE BOXES.
- C. PROVIDE NO WIRE SIZE SMALLER THAN NO. 12 FOR BRANCH CIRCUITS UNLESS OTHERWISE NOTED ON PLANS FOR CONTROL CIRCUITS. PROVIDE LARGER SIZES WHERE REQUIRED BY PREVAILING CODES OR INDICATED ON CONTRACT DOCUMENTS. PROVIDE NEUTRAL CONDUCTOR FOR ALL MULTI-POLE FEEDERS. PROVIDE NEUTRAL CONDUCTOR(S) FOR ALL MULTI-POLE FEEDERS AND BRANCH CIRCUITS UNLESS THIS CONTRACTOR DETERMINES IN FIELD THAT THE AFFECTED LOAD(S) WILL NEVER HAVE NEED FOR A NEUTRAL CONDUCTOR, AND CEC DOES NOT MANDATE OTHERWISE.

4.3 COORDINATION

- A. PARTICIPATE IN COORDINATION EFFORTS AND IN PREPARATION OF COORDINATION DRAWINGS PRIOR TO FABRICATION OR INSTALLATION OF EQUIPMENT, MATERIALS, ETC. COORDINATE ACTUAL CLEARANCES OF INSTALLED EQUIPMENT. COORDINATE EXACT LOCATION OF ELECTRICAL OUTLETS, LIGHTING FIXTURES, CONDUITS, RACEWAYS, EQUIPMENT, CABLE ASSEMBLIES, APPLICABLE DEVICES, ETC. WELL IN ADVANCE OF INSTALLATION SO THERE WILL BE NO INTERFERENCES AT INSTALLATION BETWEEN THE VARIOUS TRADES.
- B. WHERE WORK DONE BY THE ELECTRICAL CONTRACTOR DAMAGES THE WORK OF OTHER TRADES, THE ELECTRICAL CONTRACTOR SHALL REPAIR AND MAKE GOOD SUCH DAMAGE TO THE SATISFACTION OF EACH TRADE CONCERNED AS WELL AS THE ENGINEER.

4.4 IDENTIFICATION

- A. SUBMIT MANUFACTURER'S DATA ON ELECTRICAL IDENTIFICATION MATERIALS AND PRODUCTS. SUBMIT DETAILED NAMEPLATE SCHEDULE INDICATING PROPOSED NOMENCLATURE, COLORS, TEXT HEIGHTS, FASTENING METHODS, ETC.
- B. PROVIDE TYPEWRITTEN DIRECTORIES IN ALL PANELS.
- C. PROVIDE MANUFACTURER'S STANDARD VINYL CLOTH SELF-ADHESIVE CONDUCTOR MARKERS OF WRAP-AROUND TYPE, EITHER PRE-NUMBERED PLASTIC COATED TYPE, OR WRITE ON TYPE WITH CLEAR PLASTIC SELF-ADHESIVE COVER FLAP, NUMBERED TO SHOW CIRCUIT IDENTIFICATION. PROVIDE ON CONDUITORS. PROVIDE COLOR CODED INSULATION FOR CONDUCTORS. PROVIDE COLOR CODED JACKETS FOR CABLES. MATCH COLOR SCHEMES WITH MARKING SYSTEM USED IN SUBMITTALS, CONTRACT DOCUMENTS, INDUSTRY STANDARDS, ETC. APPLY CABLE/CONDUCTOR IDENTIFICATION ON EACH CABLE IN EACH BOX/ENCLOSURE/CABINET FOR CABLES THAT ARE NOT AVAILABLE WITH COLOR CODED INSULATION OR JACKETS.
- D. FIRE ALARM BREAKER TO BE PAINTED RED AND CLEARLY IDENTIFIED.

5. LOW-VOLTAGE ELECTRICAL POWER CONDUITORS AND CABLES

5.1 GENERAL

A. PROVIDE WIRE AND CABLE SUITABLE FOR THE TEMPERATURE, CONDITIONS, AND LOCATION WHERE INSTALLED.

5.2 CONDUCTORS

- A. PROVIDE COPPER CONDUCTOR MATERIAL FOR WIRES AND CABLES UNLESS SPECIFICALLY INDICATED OTHERWISE ON SINGLE-LINE DIAGRAM ON DRAWINGS.
- B. ALL BUILDING WIRING IS TO BE RW90, 600V, COPPER, EXCEPT WHERE NOTED OTHERWISE.
- C. CONDUCTOR SIZES INDICATED ARE BASED ON COPPER UNLESS SPECIFICALLY INDICATED OTHERWISE ON SINGLE-LINE DIAGRAM ON DRAWINGS.

6. WORKMANSHIP

6.1 ALL WORK SHALL BE EXECUTED IN A NEAT MANNER BY QUALIFIED TRADESMEN. THE ELECTRICAL CONTRACTOR SHALL KEEP A COMPETENT FOREMAN AND NECESSARY ASSISTANTS ON THE SITE DURING THE DURATION OF THE PROJECT.

6.2 ALL MATERIAL AND INSTALLATION SHALL MATCH BUILDING STANDARD UNLESS NOTED OTHERWISE ON THE DRAWINGS.

7. EXIT AND EMERGENCY LIGHTING

7.1 EMERGENCY LIGHTS SHALL OPERATE FOR A MINIMUM OF 1 HOUR.

7.2 ALL EMERGENCY LIGHTING IS TO OPERATE AUTOMATICALLY WITHOUT DELAY UPON FAILURE OF NORMAL POWER SUPPLY.

7.3 EXIT SIGNS TO BE OF THE RUNNING GREEN MAN PICTORIAL TYPE.

7.4 EXIT SIGNAGE SHALL BE CONNECTED TO A DEDICATED EXIT SIGNAGE CIRCUIT.

7.5 CONNECT EMERGENCY LIGHTING UNITS TO THE LINE SIDE OF THE LOCAL LIGHTING CIRCUIT.

7.6 PROVIDE TRANSFORMER WHERE REQUIRED FOR EMERGENCY POWER FROM 347V TO 120V.

8. RECORD PLANS

8.1 THE ENGINEER WILL FURNISH TO THE ELECTRICAL CONTRACTOR ONE SET OF DRAWINGS TO BE USED FOR RECORD PURPOSES. THE ELECTRICAL CONTRACTOR IS TO ACCURATELY RECORD ON THESE PRINTS ALL REVISIONS TO THE ORIGINAL PLANS THAT ARE MADE ON SITE DURING CONSTRUCTION.

8.2 THE ELECTRICAL CONTRACTOR IS TO PRODUCE A SET OF RED LINE MARK-UP DRAWINGS, INCLUDING ALL CHANGES TO THE ORIGINAL TENDER DRAWINGS COVERED BY CHANGE ORDERS, FIELD CHANGES, APPENDIX, AND JOB CONDITIONS, AND PROVIDE THESE TO THE ENGINEER IN HARD COPY FORM. COMPLETED RECORD DRAWINGS ARE TO BE CLEARLY MARKED "RECORD DRAWINGS". THE COST OF WHICH WILL LIE WITH THE ELECTRICAL CONTRACTOR.

8.3 THE CONTRACTOR SHALL ALLOW FOR A COST OF \$800 PER DRAWING PAGE FOR TRANSFERRING RED LINE MARK-UPS TO ELECTRONIC CAD RECORD DRAWINGS FOR AQUAVOLT ENGINEERING CAD SERVICES. THIS AMOUNT SHOULD BE INCLUDED IN THE TENDER BID.

9. MECHANICAL EQUIPMENT

PART 1 - GENERAL

9.1 RELATED WORK

A. PROVIDE ALL NECESSARY ELECTRICALLY RELATED WORK AS REQUIRED TO RENDER ALL MECHANICAL EQUIPMENT (INCLUDING PLUMBING, HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT) FULLY OPERATIONAL AND FULLY COMPLIANT WITH CEC. THIS INCLUDES, PRIOR TO ORDERING MATERIALS OR COMMENCING WITH ROUGH-IN, REVIEWING EQUIPMENT SUBMITTAL DATA AND COORDINATING WITH INSTALLING CONTRACTORS TO ENSURE THE CORRECT SIZE, RATING AND QUANTITY OF CONDUCTORS ARE PROVIDED.

PART 2 - EXECUTION

9.2 INSTALLATION

A. GENERAL

1. PROVIDE DISCONNECT SWITCH AHEAD OF ALL EQUIPMENT, INCLUDING CONTROLS, UNLESS THE MECHANICAL EQUIPMENT COMES WITH INTEGRAL CEC-COMPLIANT DISCONNECT(S). PROVIDE NEMA 3R ENCLOSURES WHERE INSTALLED OUTDOORS AND WHERE INSTALLED INDOORS IN AREAS SUBJECT TO MOSTLY GROUND METAL FRAMES OF EQUIPMENT BY CONNECTING FRAMES TO THE GROUNDING METAL RACEWAY OR TO A FULL-SIZE GREEN GROUND CONDUCTOR OR BOTH. PROVIDE THE NECESSARY ELECTRICAL CONNECTIONS BETWEEN THE SPECIFIED EQUIPMENT AND THE JUNCTION BOX NEAR EQUIPMENT WITH FLEXIBLE METALLIC CONDUIT (LIQUID-TIGHT OUTDOORS) AND MATCHED CONNECTORS.
2. SIZES, ELECTRICAL RATINGS, ETC. OF EQUIPMENT AND WIRING SHOWN ON DRAWINGS ARE BASED ON THE RESPECTIVE EQUIPMENT DESIGN BASE MANUFACTURERS. IF DIFFERENT MANUFACTURER(S) OR MODEL(S) ARE ACTUALLY SUPPLIED, PROVIDE NECESSARY COORDINATION IN FIELD (PRIOR TO ORDERING MATERIALS AND PRIOR TO ROUGH-IN) AND PROVIDE THE NECESSARY SIZE OF RELATED ELECTRICAL EQUIPMENT, WIRING, CONDUIT, ETC.
3. PRIOR TO FURNISHING SUBMITTALS AND PRIOR TO ROUGH-IN, DETERMINE EXACT ELECTRICALLY RELATED CHARACTERISTICS, LOADS, VOLTAGES, DISCONNECT AND STARTER REQUIREMENTS, LOCATIONS, MOUNTING HEIGHTS, CONNECTION POINTS, ETC. OF MECHANICAL EQUIPMENT.
4. LOCATIONS OF DISCONNECTS AND STARTERS SHOWN ON DRAWINGS ARE INDICATED FOR SCHEMATIC PURPOSES ONLY. DETERMINE EXACT LOCATIONS IN FIELD SO THAT THEY ARE COMPLIANT WITH CEC REQUIREMENTS.

10. OCCUPANCY SENSORS

PART 1 - GENERAL

10.1 RELATED WORK

- A. PROVIDE LABOR, MATERIALS, TOOLS, APPLIANCES, CONTROL HARDWARE, SENSOR, WIRE, JUNCTION BOXES AND EQUIPMENT NECESSARY FOR AND INCIDENTAL TO THE DELIVERY, INSTALLATION AND FURNISHING OF COMPLETELY OPERATIONAL OCCUPANCY SENSOR LIGHTING CONTROLS, AS DESCRIBED HEREIN.
- B. PROVIDE OCCUPANCY SENSORS FOR ENTIRE PROJECT THAT ARE ALL MADE BY THE SAME MANUFACTURER. PROVIDE COMPONENTS THAT ARE ALL MADE BY THE SAME MANUFACTURER IN CASES WHERE OCCUPANCY SENSOR COMPONENTS ARE ALSO CONNECTED TO A BUILDING LIGHTING CONTROL SYSTEM, REGARDLESS OF WHERE THE MATERIALS ARE SPECIFIED IN DIVISION 26 DOCUMENTS.

PART 2 - SPECIFIC REQUIREMENTS

10.2 ACCEPTABLE MANUFACTURERS

A. BASIS OF DESIGN MANUFACTURER IS WATSTOPPER. OTHER ACCEPTABLE MANUFACTURERS ARE HUBBELL, SENSOR SWITCH, LEVITON AND LUTRON IN AS MUCH THE SYSTEMS MEET THE INTENT AND FUNCTIONALITY AND SUSTAINABILITY OF THE DESIGN.

11. PANELBOARDS

11.1 EXCEPT AS OTHERWISE INDICATED, PROVIDE PANELBOARDS, ENCLOSURES AND ANCILLARY COMPONENTS, OF TYPES, SIZES, AND RATINGS INDICATED, WHICH COMPLY WITH MANUFACTURER'S STANDARD MATERIALS, WITH THE DESIGN AND CONSTRUCTION IN ACCORDANCE WITH PUBLISHED PRODUCT INFORMATION.

11.2 PROVIDE PANELBOARDS WITH PROPER NUMBER OF UNIT PANELBOARD DEVICES AS REQUIRED FOR COMPLETE INSTALLATION WHERE TYPES, SIZES, OR RATINGS ARE NOT INDICATED, COMPLY WITH CEC AND ESTABLISHED INDUSTRY STANDARDS FOR THOSE APPLICATIONS INDICATED.

11.3 PROVIDE PANELBOARDS THAT ARE NEW AND MANUFACTURER'S LATEST STANDARD CATALOG DESIGN.

11.4 PROVIDE PANELBOARDS SUITABLE FOR SERVICE VOLTAGE WITH NUMBER OF BRANCH CIRCUITS OF CAPACITY SCHEDULED.

11.5 IN THE EVENT THAT TANDEM BREAKERS ARE BEING USED, ENSURE THAT THE INSTALLED PANEL SUPPORTS THE USE OF TANDEM BREAKERS.

11.6 PROVIDE ELECTRICAL DISTRIBUTION RELATED EQUIPMENT WITH APPROPRIATELY BRACED BUSSING AND PROPERLY RATED BREAKERS, FUSES, ETC. FOR THE AVAILABLE FAULT CURRENTS.

- A. IN EXISTING BUILDINGS WHERE FAULT CURRENT VALUES ARE NOT INDICATED ON DRAWINGS, COORDINATE WITH EXISTING "UPSTREAM" DISTRIBUTION EQUIPMENT, AND PROVIDE EQUIPMENT AIC RATINGS THAT MEET OR EXCEED SAME.
- B. PROVIDE ENCLOSURES FASTENED FIRMLY TO WALLS AND STRUCTURAL SURFACES, ENSURING THAT THEY ARE PERMANENTLY AND MECHANICALLY ANCHORED.
- C. PROVIDE NEATLY TYPEWRITTEN CIRCUIT DIRECTORY CARD FOR EACH PANELBOARD UPON COMPLETION OF INSTALLATION WORK. INCLUDE THE ACTUAL ROOM NAMES/NUMBERS THAT ARE SELECTED FOR INTERIOR SIGNAGE/DESIGNATION.
- D. BALANCE PANEL LOAD FOR EACH PHASE A, B, & C. ALLOW FOR RELOCATING CIRCUITS WITHIN PANEL BOARD TO BALANCE THE LOAD.

12. HANGARS, FASTENING AND SEISMIC BRACING

- A. ELECTRICAL EQUIPMENT SHALL BE ADEQUATELY SUPPORTED WITH HANGERS AND FASTENINGS TO STRUCTURAL BUILDING MEMBERS ONLY.
- B. WHERE WOOD SCREWS ARE USED, THEY SHALL PENETRATE WOOD AT LEAST 25(4).
- C. PERFORATED PIPE HANGER IRONS SHALL NOT BE USED.
- D. LIGHTING FIXTURES ARE TO BE ADEQUATELY SUPPORTED. ONLY FIRST CLASS METHODS OF SUPPORT WILL BE ACCEPTED. FASTEN FLUORESCENT FIXTURES AT A MINIMUM OF 3 LOCATIONS, INCLUDING NO. 12 FASTENINGS AT EACH END. FASTEN EXTERIOR FIXTURES WITH A MINIMUM OF 4 1/4" FASTENINGS.
- E. RECESSED FIXTURES SHALL BE SUPPORTED INDEPENDENT FROM T BAR CEILING BY WIRE TO BUILDING STRUCTURE FROM TWO DIAGONAL ENDS TO MEET SEISMIC REQUIREMENTS.
- F. ALL EQUIPMENT MUST BE SEISMICALLY SECURED TO CODE REQUIREMENTS. THE CONTRACTOR SHALL ENGAGE THE SERVICES OF A SEISMIC ENGINEER TO REVIEW/DESIGN ALL SUPPORT METHODS AND PROVIDE A STAMP/SEAL ON ALL SUPPORT SHOP DRAWINGS.
- G. COORDINATE WITH A REGISTERED SEISMIC PROFESSIONAL TO REVIEW SCOPE, ASSIST WITH BRACING INSTALLATION REQUIREMENTS AND COMPLETE REVIEW OF THE ELECTRICAL INSTALLATION AT COMPLETION OF WORK. THE SEISMIC ENGINEER SHALL PROVIDE SEALED LETTER OF ASSURANCE AND COMPLIANCE PRIOR TO SUBSTANTIAL COMPLETION.

13. FIRE STOPPING

- A. ALL OPENINGS IN FLOORS AND WALLS FOR ELECTRICAL SYSTEMS CONDUITS, DUCTS, CABLE SHALL BE SEALED WITH FIRE STOPPING MATERIAL AFTER FINAL INSTALLATION OF THE SYSTEMS.
- B. FIRE STOPPING SHALL BE DESIGNED AND INSTALLED TO SUIT THE APPLICATION; INSTALLED PER MANUFACTURER'S INSTRUCTIONS AND THE FINAL INSTALLATION SHALL BE IN FULL CONFORMANCE TO CAN4-S101.

14. CONDUIT INSTALLATION

- A. CONDUIT SHALL BE CONCEALED IN ALL LOCATIONS SUCH AS SUSPENDED CEILINGS, STUD WALLS ETC.
- B. CONDUIT SHALL BE INSTALLED NEATLY IN A WORKMANSHIP MANNER. ALL HORIZONTAL RUNS OF CONDUIT IN SUSPENDED CEILING SPACE SHALL BE RUN TIGHT TO UNDERSIDE OF DECKING AND SOLID STRUCTURAL MEMBERS. CONDUITS MUST ALWAYS BE RUN A MINIMUM OF 1 (100 MM) ABOVE SUSPENDED CEILINGS.
- C. RACEWAYS ARE TO BE INSTALLED FREE FROM DENTS AND BRUISES AND SHALL HAVE THEIR ENDS CAPPED, PLUGGED, OR SEALED AS NECESSARY TO PREVENT ENTRANCE OF DIRT OR MOISTURE.
- D. CONDUIT SHALL BE SECURELY FASTENED TO STRUCTURAL CEILING. LOCATE CONDUITS CLEAR OF MECHANICAL UNITS, COMMUNICATION CABLE TRAY AND OTHER AREAS REQUIRING ACCESS. CONDUIT OR WIRING SHALL NOT BE FASTENED TO ANY SPRINKLERS, MECHANICAL UNITS OR ANY OTHER EQUIPMENT IN CEILING SPACE OR THEIR SUPPORTS.
- E. CONDUIT SIZE SHALL BE AS CALLED FOR ON THE DRAWINGS OR TABLE 6 OF THE ELECTRICAL CODE. UNLESS OTHERWISE NOTED, RUNNING THREADS SHALL NOT BE USED. CONDUIT REQUIRING GROUND WIRES SHALL BE INCREASED TO COMPLY WITH THE CODE WHERE REQUIRED.
- F. INSTALL A CONTINUOUS NYLON CORD (PULLSTRING) IN EACH CONDUIT LEFT EMPTY.

15. OUTLET LOCATIONS

A. THE ENGINEER RESERVES THE RIGHT TO CHANGE THE LOCATION OF OUTLETS (BOTH POWER AND DATA) TO WITHIN 3 M OF POINTS INDICATED ON PLANS WITHOUT EXTRA CHARGE, PROVIDED THE ELECTRICAL CONTRACTOR IS ADVISED BEFORE INSTALLATION IS MADE.

16. FIRE ALARM SYSTEM

- A. THE ELECTRICAL TRADE SHALL TIE INTO THE EXISTING FIRE ALARM SYSTEM. FURNISH ALL LABOR, SERVICES, AND MATERIALS NECESSARY TO PROVIDE AND INSTALL A COMPLETE, FUNCTIONAL LIFE SAFETY FIRE SYSTEM. THE SYSTEM SHALL COMPLY IN EVERY RESPECT WITH ALL PERTINENT CODES, RULES, AND REGULATIONS, AND WITH THE LAWS OF THE LOCAL AUTHORITIES HAVING JURISDICTION.
- B. PROVIDE NEW FIRE ALARM SPEAKERS/BELLS/PULL STATIONS OR OTHER FIRE ALARM DEVICES AS SHOWN ON THE DRAWINGS.
- C. NEW DEVICES MUST MATCH EXISTING MANUFACTURER AND MODELS.
- D. NEW DEVICES SHALL BE CONNECTED TO EXISTING ZONES AND SHALL BE PROVIDED AS SHOWN.
- E. DEVICES TO BE INSTALLED AS REQUIRED TO ACHIEVE A FULLY OPERATIONAL FIRE ALARM SYSTEM.
- F. THE CONTRACTOR MUST ALLOW FOR A SUFFICIENT AMOUNT OF TIME BETWEEN FIRE ALARM VERIFICATION TESTING AND FINAL OCCUPANCY.
- G. THE CONTRACTOR SHALL ALLOW FOR THE SUPPLY AND INSTALLATION OF AN ADDITIONAL FIRE ALARM AUDIBLE DEVICES ABOVE AND BEYOND WHAT IS SHOWN ON THE DRAWINGS, PER FLOOR IN THE EVENT THEY ARE REQUIRED TO INCREASE FIRE ALARM AUDIBILITY LEVELS.

17. COMMUNICATIONS

- A. SUPPLY AND INSTALL ALL WIRE AND JACKS FOR TELEPHONE, FAX AND POS CONNECTIONS FROM THE SERVICE PROVIDER'S DEMARCATION POINT TO LOCATIONS AS SPECIFIED IN THE DRAWINGS.
- B. INSTALL EMT CONDUITS FROM EACH WALL OR FLOOR MOUNTED COMMUNICATION OUTLET (UNLESS NOTED OTHERWISE) TO THE ACCESSIBLE CEILING SPACE ABOVE COMPLETE WITH BUSHING AT BOTH ENDS.
- C. CAT 6 UTP CABLE SHALL BE FOUR-PAIR, UNSHIELDED, TWISTED, 22 AWG TO 24 AWG, 100 OHM FT6. TRANSMISSION REQUIREMENTS SHALL MEET OR EXCEED ALL REQUIREMENTS OF TIA/EIA-568-B.2 FOR CATEGORY 6 CABLEING AND COMPONENTS.
- D. TERMINATE ALL FIBER PATCH PANELS. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL REQUIRED COMPONENTS INCLUDING PATCH PANELS, SPLICE TRAYS, ADAPTERS, CONNECTORS, AND CABLE GLIDES AS PART OF AN INTEGRATED CABLE MANAGEMENT SYSTEM. CONNECTOR TYPE TO BE APPROVED BY CLIENT IT DEPARTMENT/CONTRACTOR.
- E. ALL PATCH CORDS ARE TO BE SUPPLIED BY THIS CONTRACTOR. PATCH CORDS TO BE CAT 6, 4-PAIR, STP, 24AWG, 80/20, RJ45 ON BOTH ENDS, 2.1M IN LENGTH.

18. ALTERNATIVES

- A. ALTERATIONS ENTAILING ADDITIONAL WORK OR DELETIONS ARE TO BE CARRIED OUT ONLY UPON THE WRITTEN REQUEST OF THE PRIME CONSULTANT INVOLVED IN THE PROJECT.
- B. ANY PRICES SUBMITTED BY THE ELECTRICAL CONTRACTOR FOR ADDITIONAL WORK OR ALTERATIONS ARE TO INCLUDE A PRICE BREAKDOWN FOR ALL LABOR AND MATERIALS. NO EXTRAS WILL BE ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION.

19. GROUNDING

A. PROVIDE ALL GROUNDING AND BONDING IN ACCORDANCE WITH SECTION 10 OF THE CURRENT EDITION OF THE CANADIAN ELECTRICAL CODE.

20. SHOP DRAWINGS

- A. COMPLETE AND DETAILED SHOP DRAWINGS OF EACH ELECTRICAL COMPONENT AND SYSTEM SHALL BE SUBMITTED TO THE CONSULTANT FOR APPROVAL. BEFORE FABRICATION OF MATERIALS OR EQUIPMENT, SUBMIT COPIES OF PDF THEREOF AS DRAWINGS TO THE CONSULTANT, FOR REVIEW FOR ALL ITEMS AS REQUIRED IN THIS SPECIFICATION.
- B. SHOP DRAWINGS SUBMITTED SHALL BE CERTIFIED BY THE MANUFACTURER, BE CHECKED BY THE CONTRACTOR AND SHALL BEAR THEIR APPROVAL STAMP AND SIGNATURE. DRAWINGS NOT PREVIOUSLY CHECKED BY THE CONTRACTOR WILL NOT BE REVIEWED.
- C. THE REVIEW OF SHOP DRAWINGS BY THE CONSULTANT IS FOR SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW SHALL NOT MEAN THAT THE CONSULTANT APPROVES THE DETAIL INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING SAME, AND SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SHOP DRAWINGS OR OF THEIR RESPONSIBILITY FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOB SITE.
- D. DEVIATIONS FROM THE SPECIFIED LUMINAIRE AND CONTROL PACKAGE WILL REQUIRE ASHRAE 90.1-2016 COMPLIANCE FORMS TO BE REVISED AND RESUBMITTED TO THE AUTHORITY HAVING JURISDICTION BY THE ELECTRICAL ENGINEER OF RECORD FOR THE PROJECT. THE COST OF REVISING AND RESUBMITTING THESE FORMS WILL BE AT THE EXPENSE OF THE CONTRACTOR. ALLOW FOR THE FOLLOWING TO BE PAYABLE TO AQUAVOLT ENGINEERING LTD. FOR THE WORK TO BE COMPLETED \$5,000 PER ALTERNATE PACKAGE SUBMISSION TO REVIEW AND ENSURE ENERGY AND CONTROL TARGETS ARE NOT DEVIATED FROM: \$5,000 TO COMPLETE THE COMPLIANCE FORMS WITH THE ACCEPTED ALTERNATE LUMINAIRES/CONTROL PACKAGE.

21. FIELD REVIEWS

- A. PROVIDE SUFFICIENT NOTICE (2 WORKING DAYS) TO THE ENGINEER TO COMPLETE FIELD REVIEWS AT THE FOLLOWING STAGES OF WORK:
- ROUGH-IN
  - SUBSTANTIAL
  - FINAL
- B. FAILURE TO COMPLETE REVIEW PRIOR TO CONCEALING OF WORK MAY REQUIRE THE WORK TO BE EXPOSED AT CONTRACTOR COST AND THE INSTALLATION APPROVED BY THE ENGINEER.

22. SUBSTANTIAL COMPLETION CHECKLIST

- A. THE FOLLOWING ITEMS MUST BE COMPLETED FOR SUBSTANTIAL COMPLETION OF THE PROJECT (PRIOR TO OCCUPANCY):
- FIRE ALARM INSTALLATION IS COMPLETE AND VERIFICATION REPORT IS SUBMITTED FOR REVIEW.
  - ELECTRICAL INSPECTION CARD FROM THE AUTHORITY HAVING JURISDICTION IS RECEIVED AND SHOWS "PASSED"
  - FIRE STOPPING IS COMPLETE, REVIEWED AND APPROVED.
  - THE SEISMIC BRACING OF THE ELECTRICAL INSTALLATION HAS BEEN REVIEWED AND APPROVED BY A SEISMIC ENGINEER. A LETTER OF ASSURANCE FROM A SEISMIC ENGINEER WILL BE REQUIRED.
  - THE ELECTRICAL INSTALLATION HAS BEEN MADE SAFE WITH COVERS INSTALLED.
- B. FAILURE TO COMPLETE ITEMS NOTED ABOVE MAY RESULT IN NO ISSUANCE OF THE ELECTRICAL LETTER OF ASSURANCE AND ADDITIONAL FIELD REVIEWS WILL NEED TO BE COMPLETED AT \$450 PER VISIT OR AS SPECIFIED ON THE ACCEPTED FEE PROPOSAL.



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CONTRACTOR:

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KEY PLAN

CLIENT:


01	ISSUED FOR PERMIT	2024/02/12	AN
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NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY
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PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:

ELECTRICAL SPECIFICATIONS

SEAL



2024-02-12

EGBC PERMIT # 1000411

SCALE: PER DWG	DESIGNED BY: AN
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DATE: FEB 2024	CHECKED BY: AH
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PROJECT NUMBER: 24032

E4

ACCEPTED  
FOR BUILDING PERMIT ISSUANCE

BP119005

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PERMITS & INSPECTIONS DEPT.  
DISTRICT OF WEST VANCOUVER

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FEB 29 2024

District of West Vancouver  
Permits Dept.



# GRAB AND GO PLUS RESTAURANT

1746 MARINE DRIVE, WEST VANCOUVER, BC

## PLUMBING HYDRAULIC LOAD SCHEDULE

FIXTURES	QTY	DOMESTIC WATER FIXTURE UNIT				SANITARY FIXTURE UNIT			VENT LINE SIZE
		HOT	COLD	COMBINED 100%	TOTAL	TRAP SIZE	SAN	TOTAL	
LAVATORY SELF CLOSING FAUCET (8.1LPM OR LESS)	1	1.5	1.5	2	6	1-1/4"	1	3	1-1/2"
WATER CLOSET (FLUSH TANK)	3	-	2.2	2.2	6.6	3"	4	12	2" WET VENT
MOP SINK	1	2.25	2.25	3	3	2"	2	2	1-1/2"
HAND SINK	4	1.5	1.5	2	8	1-1/2"	1.5	6	1-1/2"
RICE WASH SINK	1	3	3	4	4	2"	2	2	1-1/2"
TRIPLE SINK	1	3	3	4	4	2"	2	2	1-1/2"
DISHWASHER	1	0.75	-	-	0.75	2"	3	3	1-1/2"
DRAINWATER TEMPERING KIT (DTK)	1	-	2.5	2.5	2.5	-	-	-	-
ICE MACHINE	1	-	2	2	2	-	-	-	-
HOT WATER DISPENSER	1	-	2	2	2	-	-	-	-
EMERGENCY FLOOR DRAIN	2	-	-	-	-	3"	0	0	-
FUNNEL FLOOR DRAIN	1	-	-	-	-	3"	3	3	1-1/2"
HUB FLOOR DRAIN	1	-	-	-	-	3"	3	3	-
TOTAL	21	19.5	31.85		38.85			36	

## FLOOR DRAIN SCHEDULE

TAG	MAKE	MODEL	DESCRIPTION	SIZE	NOTES
FD-1	WATTS	FD-103NH C-A6-1	FLOOR DRAIN	3"	C/W TRAP PRIMER, HEAT TRACED AND INSULATED TRAP
FD-2	WATTS	FD-103NH C-EF-1	FLOOR DRAIN WITH ROUND FUNNEL	3"	C/W TRAP PRIMER, HEAT TRACED AND INSULATED TRAP
FD-3	WATTS	FD-103NH C-D10-1	FLOOR DRAIN WITH HUB FUNNEL	3"	C/W TRAP PRIMER, HEAT TRACED AND INSULATED TRAP

## EXPANSION TANK SCHEDULE

TAG	MAKE	MODEL	LOCATION	TANK CAPACITY	MAX. ACCEPTANCE VOLUME	DIMENSIONS	WEIGHT	NOTES
ET-1	AMTROL	ST-5C	NEXT TO HWY	2.1 GAL	0.9 GAL	10"Ø x 10" H	10 LBS	ALL
NOTES: 1. ASME CONSTRUCTION 2. DIAPHRAGM TYPE 3. MAXIMUM OPERATING TEMPERATURE 200°F 4. MAXIMUM WORKING PRESSURE 250 PSI 5. FACTORY PRE-CHARGE 55 PSIG								

## INSTANT WATER HEATER SCHEDULE

TAG	MAKE	MODEL	LOCATION	CAPACITY	GAS INPUT	FLA	BRK	ELECTRICAL	DIMENSIONS	WEIGHT	NOTES
IWH1 & 2	NAVIENT	NPE-2408	SEE PLAN	3.8 GPM @ 100°F ΔT	200 MBH	4 A	15 A	120V/1φ/60Hz	17.3"W x 13.2"D x 27.4"H	75 LBS	ALL
NOTES: 1. FACTORY SUPPLIED NEUTRALIZING KIT 2. REFER TO DETAIL 3. 0.97 EF CANADA RATED 4. INLINE MODULAR CONFIGURATION 5. ALTERNATE EQUAL RINNAI CU1891N											

## GREASE INTERCEPTOR SIZING TABLE & SCHEDULE

# / TAG	FIXTURE	QUANTITY	LENGTH x WIDTH x HEIGHT / COMPARTMENT				GPM / COMPARTMENT	TOTAL GPM	NOTES
-	3 COMPARTMENT DISH SINK	1	24" x 24" x 14"				26.2	78.6	-
II	DISHWASHER	1	-	-				14	PER MANUFACTURER DATA
FD-1	FLOOR DRAIN	1	-	-				37.5	NON-SIMULTANEOUS LOAD
TOTAL FLOW FOR GREASE INTERCEPTOR GI-2								92.6 GPM	PER METRO VANCOUVER SIZING METHOD
TAG	MAKE	MODEL	FLOWRATE	LENGTH	WIDTH	HEIGHT	INLET & OUTLET SIZE	NOTES	SINK BOWL DIMENSIONS ARE NOT ALLOWED TO BE LARGER THAN THE DIMENSIONS SHOWN UNDER COMPARTMENT SECTION. NOTIFY ENGINEER OF ANY CHANGE AS GREASE INTERCEPTOR SIZE MAY INCREASE. INSTALLATION AND MAINTENANCE TO CONFORM TO CSA B481.3.12 AND B481.4.12.
GI-1	ZURN	PROCEPTOR GMC100 CSA	100 GPM	62"	32"	32"	4"	ALL	
NOTES: 1. PARKADE FLOOR MOUNTED    2. CSA CERTIFIED    3. C/W SAMPLING "T" W/ CLEAN-OUT    4. EXTERNAL FLOW CONTROL DEVICE									

## MECHANICAL SHOP DRAWINGS

- REFER TO ARCHITECTURAL PLANS FOR PLUMBING FIXTURES SPECIFICATIONS.
- SUBMIT SHOP DRAWINGS TO CONSULTANT FOR REVIEW PRIOR TO ORDERING ANY MECHANICAL PLUMBING EQUIPMENT OR FIXTURES.

## REQUIRED FIELD REVIEWS

THE CONTRACTOR SHALL PROVIDE **MINIMUM 1 WEEK** NOTICE IN ORDER FOR CONSULTANT TO COMPLETE A FIELD REVIEW AT THE FOLLOWING PROJECT STAGES:

- AT ROUGH IN STAGE  
11.1. BELOW SLAB  
ALL DRAINAGE AND VENT PIPING MUST BE INSTALLED AS SHOWN ON DRAWINGS. ALL PIPING MUST BE UNDER PRESSURE TEST AT THE TIME OF FIELD REVIEW.  
11.2. ALL DOMESTIC WATER PIPING INSTALLED MUST BE UNDER PRESSURE TEST.  
11.3. FLOOR DRAIN TRAP PRIMER TUBING SHALL BE INSTALLED C/W SLEEVES.  
12. ABOVE SLAB - BEFORE BOARDING OF CEILING AND WALLS  
12.1. ALL NEW PLUMBING PIPING SHALL BE UNDER PRESSURE TEST.  
12.2. FIRE STOPPING SHALL BE COMPLETE WHERE POSSIBLE.  
12.3. GAS LINES MUST BE INSTALLED C/W GAS INSTALLATION PERMIT FROM TECHNICAL SAFETY BC.  
2. UPON SUBSTANTIAL COMPLETION OF WORK  
2.1. FIRE STOPPING SHALL BE FULLY COMPLETE.  
2.2. ALL PLUMBING FIXTURES SHALL BE INSTALLED.  
2.3. PLUMBING PIPING SHALL BE INSULATED AS NOTED ON DRAWINGS AND DETAILS.  
2.4. SUBMIT ALL SUBSTANTIAL COMPLETION DOCUMENTS NOTED ON DRAWING M1 & M3.  
3. UPON COMPLETION OF RECTIFYING ALL DEFICIENCIES NOTED DURING PREVIOUS FIELD REVIEWS.

## GENERAL NOTES

- WORKMANSHIP SHALL BE IN ACCORDANCE WITH WELL ESTABLISHED PRACTICE AND STANDARDS ACCEPTED AND RECOGNIZED BY THE CONSULTANT AND THE TRADE.
- THE CONSULTANT SHALL HAVE THE RIGHT TO REJECT ANY ITEM OF WORK THAT DOES NOT CONFORM TO THE CONTRACT DOCUMENTS AND ACCEPTED STANDARDS OF PERFORMANCE, QUIETNESS OF OPERATION, FINISH AND APPEARANCE.
- EMPLOY ONLY TRADESMEN HOLDING VALID PROVINCIAL TRADE QUALIFICATION CERTIFICATES. TRADESMEN SHALL PERFORM ONLY WORK THAT THEIR CERTIFICATE PERMITS.
- MAKE AND QUALITY OF MATERIALS USED ARE SUBJECT TO APPROVAL BY THE ENGINEER. REMOVE UNACCEPTABLE MATERIALS AND INSTALL SUITABLE MATERIALS IN THEIR PLACE.
- MATERIALS SHALL BE NEW AND OF UNIFORM PATTERN THROUGHOUT, UNLESS NOTED OTHERWISE.

## DRAWING LIST

M0 - COVER PAGE, LEGEND & SCHEDULES

M1 - HVAC PLAN & HOOD SECTION DETAILS

M1 - KITCHEN FIRE SUPPRESSION SYSTEM SCHEMATIC

M2 - DOMESTIC WATER & GAS DISTRIBUTION PLAN

M3 - DRAINAGE & VENT PLAN

M4 - MECHANICAL DETAILS

M5 - MECHANICAL SPECIFICATIONS

## FIRESTOPPING

- GENERAL CONTRACTOR IS TO RETAIN A CERTIFIED FIRESTOPPING CONTRACTOR TO CARRY OUT ALL FIRESTOP WORK REQUIRED FOR THIS PROJECT. REQUIRED FIRE RESISTANCE RATING OF ASSEMBLY IS TO BE CONFIRMED WITH THE ARCHITECT. SUBMIT ULC APPROVED LISTING DETAILS AND MATERIALS SHOP DRAWINGS FOR REVIEW PRIOR TO COMMENCING WORK. CONTRACTOR SHALL SUBMIT FIRESTOPPING COMPLETION CERTIFICATE AT THE END OF JOB.

## LIGHTING AND VENTILATION REQUIREMENT

- GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL AND HVAC CONTRACTOR TO PROVIDE ADEQUATE LIGHTING AND VENTILATION IN ALL AREAS WHERE PLUMBING FIXTURES ARE PROPOSED TO MEET BRITISH COLUMBIA PLUMBING CODE 2018 CLAUSE 2.1.31 (1) PLUMBING FIXTURES SHALL NOT BE INSTALLED IN A ROOM THAT IS NOT LIGHTED AND VENTILATED IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS IN PARTS 3.6 AND 9 OF DIVISION B OF BRITISH COLUMBIA PLUMBING CODE. HVAC DESIGN IS NOT IN SCOPE OF WORK OF THE CONSULTANT.

## PLUMBING LEGEND

\*NOT ALL SYMBOLS ARE USED ON THE DRAWINGS\*

	DOMESTIC COLD WATER LINE
	DOMESTIC HOT WATER LINE
	DOMESTIC HOT WATER RETURN LINE
	SANITARY LINE ABOVE SLAB
	SANITARY LINE BELOW SLAB
	GREASE SANITARY LINE BELOW SLAB
	VENT LINE
	GAS LINE
	CONDENSATE LINE
	CONNECTION POINT
	PIPE UP / DOWN
	PIPE TEE UP / DOWN
	CLEAN OUT ABOVE SLAB / BELOW SLAB
	P-TRAP
	CAP OR PLUG
	FLOOR DRAIN C/W TRAP PRIMER
	FUNNEL DRAIN C/W TRAP PRIMER
	HUB FLOOR DRAIN C/W TRAP PRIMER
	PUMP
	WATER / GAS METER
	HEAT TRACE
	ISOLATION VALVE
	ISOLATION VALVE ON VERTICAL LINE
	PRESSURE REDUCING VALVE
	THREADED UNION
	STRAINER
	P & T RELIEF VALVE
	CHECK VALVE
	BALANCING VALVE
	PRESSURE GAUGE
	TEMPERATURE GAUGE
	LINE TO BE DEMOLISHED
	PULL STATION
	FIRE EXTINGUISHER
	PLUMBING EQUIPMENT / FIXTURE TAG

## HVAC LEGEND

\*NOT ALL SYMBOLS ARE USED ON THE DRAWINGS\*

	RECTANGULAR / ROUND DUCTWORK
	EXISTING RECTANGULAR / ROUND DUCTWORK
	DUCTWORK TO BE REMOVED
	NEW SINGLE LINE DUCTWORK
	EXISTING SINGLE LINE DUCTWORK
	SINGLE LINE DUCTWORK TO BE REMOVED
	ROUND DUCT UP / DOWN
	SUPPLY DUCT UP / DOWN
	RETURN OR TRANSFER DUCT UP / DOWN
	EXHAUST DUCT UP / DOWN
	DUCT - ACOUSTIC INSULATION
	DUCT - THERMAL INSULATION
	SMOKE / FIRE DAMPER COMBINATION (HORIZONTAL / VERTICAL)
	BALANCING DAMPER
	BACKDRAFT DAMPER
	MOTORIZED DAMPER
	THERMOSTAT
	TEMPERATURE SENSOR
	VARIABLE SPEED SWITCH
	COUNTDOWN TIMER
	REVERSE ACTING THERMOSTAT
	DOOR GRILLE
	DOOR UNDERCUT
	SUPPLY AIR DIFFUSER
	RETURN AIR GRILLE C/W SIGHT BAFFLE
	EXHAUST AIR GRILLE C/W ACOUSTIC PLENUM BOX
	MAKE-UP AIR DIFFUSER
	FAN
	AIRFLOW (CFM)
	HVAC EQUIPMENT TAG



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KEY PLAN

CLIENT:


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NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY

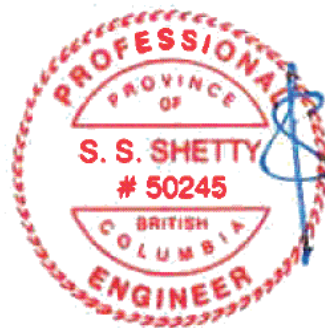
PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:

COVER PAGE, LEGEND &  
SCHEDULES

SEAL



2024-02-26

EGBC PERMIT # 1000411

SCALE: PER DWG

DATE: FEB 2024

PROJECT NUMBER: 24032

M0

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FEB 29 2024

District of West Vancouver  
Permits Dept.

ACCEPTED  
FOR BUILDING PERMIT ISSUANCE

BP119005

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PERMITS & INSPECTIONS DEPT  
DISTRICT OF WEST VANCOUVER



### HVAC GENERAL NOTES

- VERIFY WITH LANDLORD'S REPRESENTATIVE THE SCOPE OF LANDLORD AND TENANT'S CONTRACTOR'S WORK BEFORE PRICING. USE LANDLORD APPROVED BASE BUILDING CONTRACTORS WHERE REQUIRED AT TENANT'S EXPENSE.
- ALL SPECIFICATIONS TO ADHERE TO LEASE AGREEMENT AND TENANT DESIGN CRITERIA.
- PROVIDE ACCESS PANELS OF SUFFICIENT SIZE WHERE REQUIRED.
- PROVIDE/MAINTAIN ACCESS TO BASE BUILDING EQUIPMENT ABOVE THE CEILING THAT MAY REQUIRE PERIODIC SERVICE OR MAINTENANCE.
- CONTRACTOR TO ENGAGE A STRUCTURAL ENGINEER TO VERIFY AND SIGN OFF ON STRUCTURAL CAPACITY OF ALL MECHANICAL COMPONENTS (INCLUDE DUCT, DIFFUSERS, GRILLES, FANS, MAIL HOODS, ETC), INCLUDING ANCHORAGE AND SEISMIC RESTRAINT. SUBMIT SUPPORTING SCHEDULES.
- CONTRACTOR TO PROVIDE MINIMUM 10'-0" SEPARATION FROM INTAKE AND EXHAUST AIR DUCTS AND 12'-0" SEPARATION FROM INTAKE AIR TO PLUMBING VENT.
- ALL SUPPLY AIR & RETURN AIR DUCTS SHALL BE THERMALLY INSULATED AS PER ASHRAE 90.1-2019 (TABLE 6.8.2).
- PROVIDE ACCESS PANEL TO MOTORIZED DAMPERS, BALANCING DAMPERS AND MECHANICAL EQUIPMENTS FOR MAINTENANCE AND SERVICE.
- DUCT SIZES ARE ALLOWED TO ALTER IF THERE IS LESS CEILING SPACE AVAILABLE. ENSURE TO KEEP THE VOLUME AS PER DRAWINGS.
- CONTRACTOR TO CONDUCT LEAKAGE TEST ON WELDED GREASE DUCT PRIOR COVERING AS PER ASHRAE STANDARD 154 & NFPA 96. LEAKAGE TEST SHALL BE PERFORMED BY SEALING THE GREASE DUCT FROM THE HOOD EXHAUST OPENING TO THE DUCT TERMINATION. ONCE THE TEST IS COMPLETED, CONTRACTOR SHALL PROVIDE THE LETTER CONFIRMING THE TEST RESULTS.

### SUBSTANTIAL COMPLETION CHECKLIST

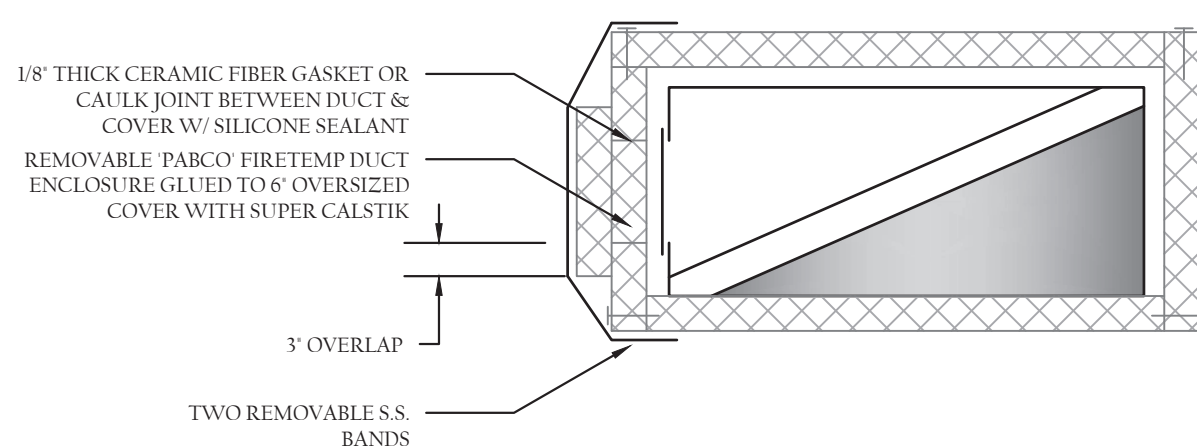
- AIR BALANCING REPORT AND COMMISSIONING REPORT PREPARED BY CERTIFIED AIR BALANCING TECHNICIAN. SYSTEM SHALL BE BALANCED TO  $\pm 10\%$ .
- SUPPORTING SCHEDULE 15B & 15C FROM A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER SIGNING OFF FOR STRUCTURAL CAPACITY OF ALL MECHANICAL COMPONENTS (INCLUDE DUCT, DIFFUSERS, GRILLES, FANS, MAIL HOODS, RTU, ETC), INCLUDING ANCHORAGE AND SEISMIC RESTRAINT.
- GREASE DUCT LEAK TEST CERTIFICATE FROM RED SEAL HVAC TRADE AND THEIR CURRENT INSURANCE. LEAKAGE TEST REPORT ON TO ENSURE WELDED JOINTS AND SEAMS ARE LIQUID TIGHT.

### GREASE DUCT LEAKAGE TEST

AQUAVOLT ENGINEERING WILL NEED TO WITNESS WATER PRESSURE LEAKAGE TEST ON ALL GREASE DUCTS TO ENSURE THERE IS NO LEAKAGE IN THE GREASE DUCT AND SEAMS/JOINTS ARE LIQUID TIGHT. CONTRACTOR TO GIVE ONE WEEK NOTICE TO AQUAVOLT ENGINEERING PRIOR TO ARRANGING THE WATER PRESSURE LEAKAGE TEST.

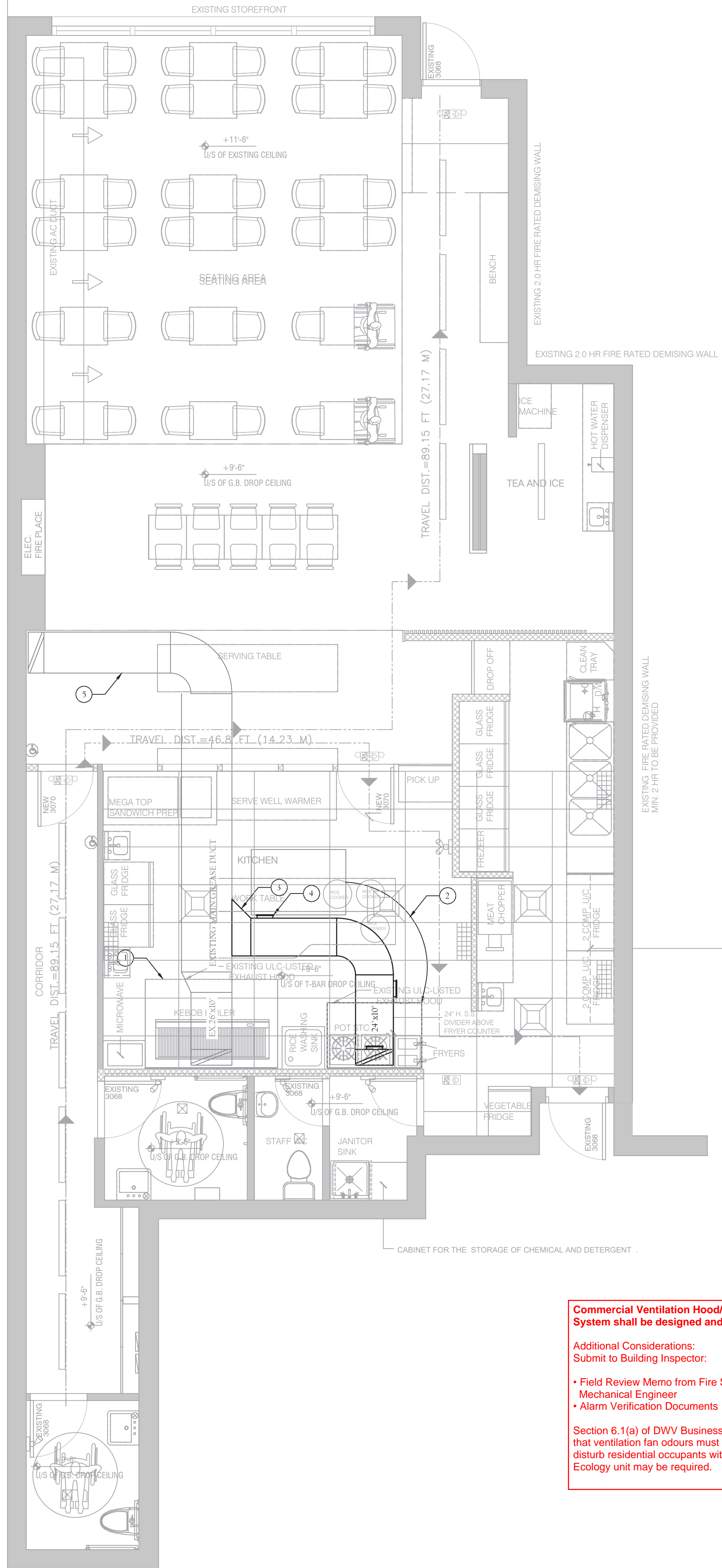
### KEYED NOTES

- APPROXIMATE LOCATION OF EXISTING LISTED COMMERCIAL KITCHEN HOOD TO REMAIN AS IT IS. CONTRACTOR TO VERIFY THE LOCATION, ORIENTATION, SPECIFICATIONS AND SYSTEM OPERATION PRIOR TO COMMENCING NEW WORK.
- RELOCATED EXISTING LISTED COMMERCIAL KITCHEN HOOD AS SHOWN. CONTRACTOR TO VERIFY THE LOCATION, ORIENTATION, SPECIFICATIONS AND SYSTEM OPERATION PRIOR TO COMMENCING NEW WORK.
- CONNECT NEW 24"x40" GREASE DUCT FROM EXISTING KITCHEN HOOD TO EXISTING MAIN GREASE DUCT. REFER HOOD ELEVATION DETAIL.
- NEW ACCESS PANEL FOR INSPECTION AND CLEANING PURPOSES AT ANY CHANGE OF DIRECTION AT 12 FT INTERVALS ON HORIZONTAL DUCT & EVERY LEVEL/STORY ON VERTICAL DUCT. TYPICAL OF ALL. MINIMUM 3 FT CLEARANCE REQUIRED IN FRONT.
- EXISTING MAIN GREASE DUCT TO REMAIN AS IT IS. CONTRACTOR TO VERIFY DUCT RUN TO EXISTING EXHAUST FAN LOCATED ON THE ROOF. CONTRACTOR TO REPORT BACK ANY DISCREPANCIES TO CONSULTANT. COORDINATE WORK WITH GENERAL CONTRACTOR AS REQUIRED.



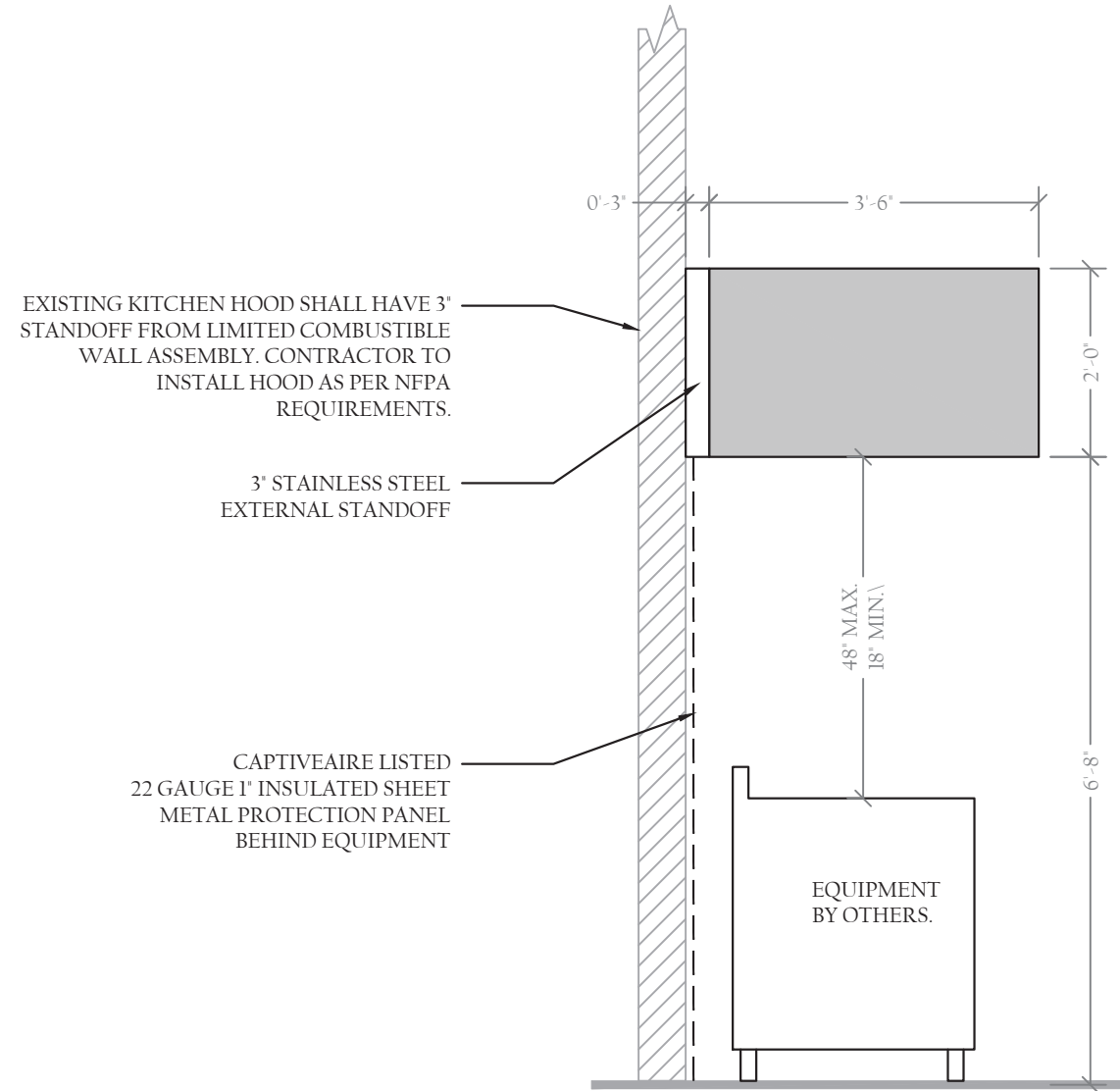
### KITCHEN EXHAUST DUCT CLEANOUT DETAIL

SCALE: N.T.S.



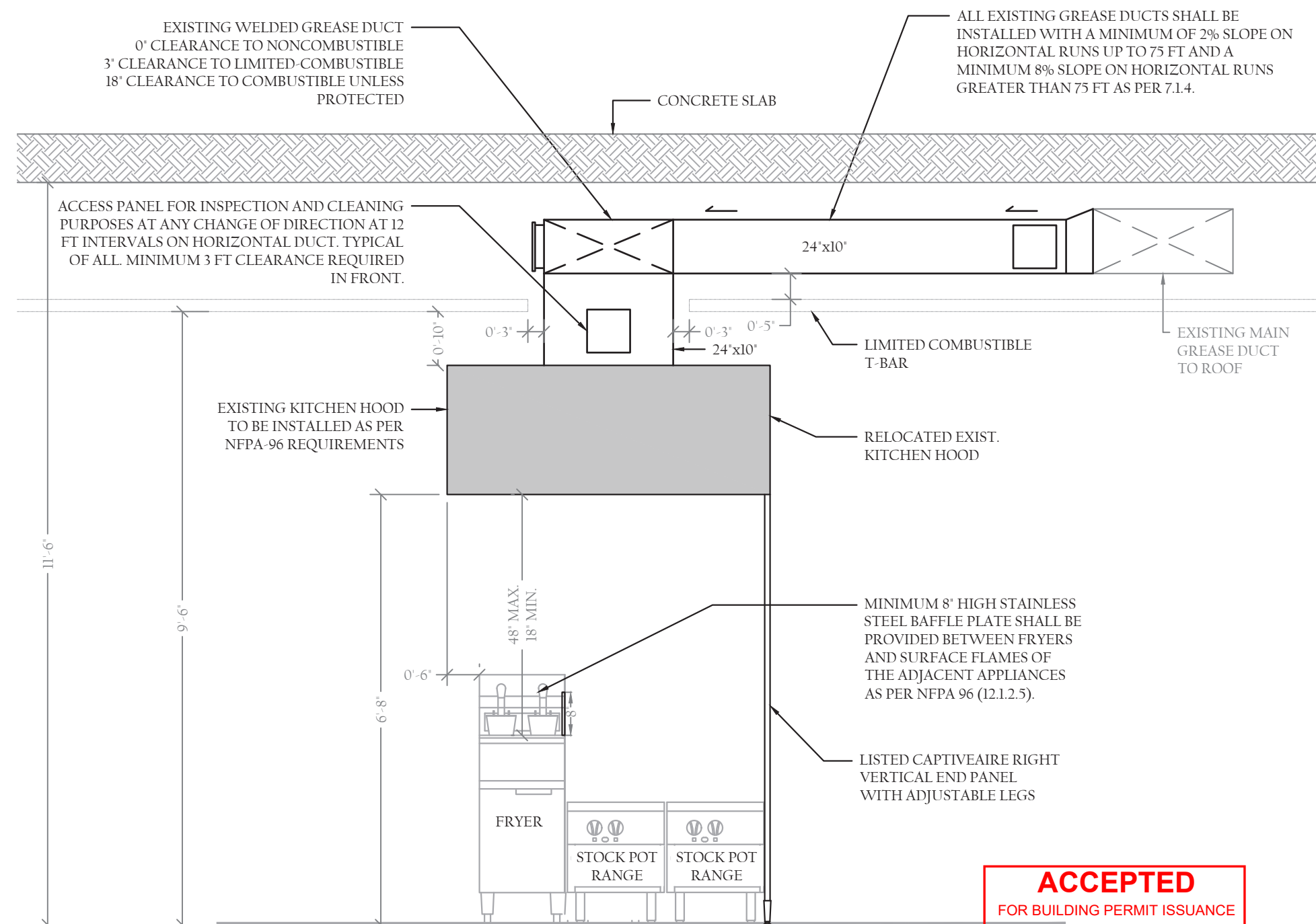
### HVAC PLAN

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



### EXISTING KITCHEN HOOD (SIDE VIEW)

SCALE: 1/2" = 1'-0"



### EXISTING KITCHEN HOOD (FRONT VIEW)

SCALE: 1/2" = 1'-0"

### NFPA 96 - 2014 COMPLIANCE

- ALL SEAMS, JOINTS, CONNECTIONS AND PENETRATIONS IN THE HOOD AND EXHAUST DUCT SHALL BE CONTINUOUS LIQUID TIGHT WELDED CONSTRUCTION AS PER 3.1.3. CONTRACTOR TO PERFORM LEAKAGE TEST AND PROVIDE AN ACCEPTABLE REPORT.
- HOOD SHALL COMPLY WITH ALL THE REQUIREMENTS OF CHAPTER 5.
- THE DISTANCE BETWEEN HOOD AND COOKING SURFACE SHALL BE AS GREAT AS POSSIBLE BUT NOT LESS THAN 18" AS PER 6.2.1.1.
- GREASE REMOVAL DEVICES USED IN CONJUNCTION WITH CHARCOAL OR CHARCOAL-TYPE BOILERS, INCLUDING GAS OR ELECTRICALLY HEATED CHARBROILERS, A MINIMUM VERTICAL DISTANCE OF 4'-0" (48 INCHES) SHALL BE MAINTAINED BETWEEN THE LOWER EDGE OF THE GREASE REMOVAL DEVICE AND THE COOKING SURFACE AS PER 6.2.1.2.
- GREASE FILTER MATERIAL/POSITION SHALL COMPLY WITH 6.2.3.
- GREASE FILTERS SHALL BE EQUIPPED WITH GREASE DIP TRAY UNDER LOWER EDGE AND SHALL HAVE A CAPACITY NOT EXCEEDING 1 GALLON AS PER 6.2.4.3.
- ALL GREASE DUCTS SHALL BE INSTALLED WITH A MINIMUM OF 2% SLOPE ON HORIZONTAL RUNS UP TO 75 FT AND A MINIMUM 8% SLOPE ON HORIZONTAL RUNS GREATER THAN 75 FT AS PER 7.1.4.
- ALL GREASE DUCTS SHALL BE INSTALLED WITHOUT FORMING DIPS OR TRAPS THAT MIGHT COLLECT RESIDUE AS PER 7.1.4.4.
- THE GREASE DUCT SHALL HAVE AN ACCESS PANEL FOR INSPECTION AND CLEANING PURPOSES AT ANY CHANGE OF DIRECTION AT 12 FT INTERVALS ON HORIZONTAL DUCT. EVERY STORY ON VERTICAL DUCT AND AT INLET ON TIE-OUT OR EXHAUST UNIT. IN-LINE FAN, MINIMUM 3 FT CLEARANCE REQUIRED IN FRONT.
- ACCESS PANEL LOCATIONS AND MATERIALS SHALL COMPLY WITH 7.3 AND 7.4.3 RESPECTIVELY. ACCESS PANEL AND FASTENERS, SUCH AS BOLTS, WELD STUDS, LATCHES AND WING NUTS SHALL BE OF THE SAME MATERIAL AND THICKNESS AS THE GREASE DUCT. ACCESS PANEL SHALL HAVE A GASKET OR SEALANT THAT IS RATED FOR 1500°F AND SHALL BE GREASE TIGHT. A SIGN SHALL BE PLACED NEAR THE ACCESS PANEL WITH "ACCESS PANEL - DO NOT OBSTRUCT".
- GREASE DUCT MATERIAL SHALL COMPLY WITH 7.3.1. GREASE DUCT SHALL BE CONSTRUCTED OF AND SUPPORTED BY CARBON STEEL NOT LESS THAN 18 GAUGE IN THICKNESS OR STAINLESS STEEL NOT LESS THAN 18 GAUGE IN THICKNESS AS PER 7.3.1.1.
- ALL GREASE DUCTS SHALL BE PROTECTED ON THE EXTERIOR BY PAINT OR OTHER SUITABLE WEATHER PROTECTIVE COATING AS PER 7.6.4.
- VERTICAL DUCTS PENETRATING ROOF OR FLOOR FIRE SEPARATIONS SHALL BE ENCLOSED IN A CONTINUOUS ENCLOSURE EXTENDING FROM THE CEILING ABOVE THE HOOD TO OR THROUGH THE ROOF SO AS TO MAINTAIN THE INTEGRITY OF THE FIRE SEPARATIONS REQUIRED BY THE BUILDING CODE BUT IN NO CASE SHALL HAVE FIRE RESISTANCE RATING OF LESS THAN 1 HOUR IN THE BUILDING WITH LESS THAN 4 STOREYS IN HEIGHT, AND 2 HOURS IN THE BUILDING WITH 4 STOREYS OR MORE IN HEIGHT. ACCESS DOORS TO ENCLOSURE MUST BE RATED. THE ENCLOSURE CLEARANCE SHALL MEET NFPA 96 - 7.7.2.2 (SEE NFPA 96 CLAUSE 7.7.1.5 FOR EXCEPTIONS).
- EACH GREASE DUCT SYSTEM SHALL CONSTITUTE AN INDIVIDUAL SYSTEM SERVING ONLY EXHAUST HOODS IN ONE FIRE ZONE ON ONE FLOOR, AND SHALL NOT BE INTERCONNECTED WITH ANY OTHER BUILDING VENTILATING OR EXHAUST SYSTEM AS PER 7.5.
- THE EXHAUST DISCHARGE POINT SHALL BE MINIMUM 10'-0" AWAY FROM ANY AIR INTAKES, ADJACENT BUILDINGS AND PROPERTY LINE AS PER 7.8.2.
- THE EXHAUST FAN SHALL DISCHARGE A MINIMUM OF 40' AWAY FROM ANY ROOF SURFACE. DUCTWORK SHALL BE A MINIMUM OF 18" AWAY FROM ANY ROOF SURFACES AS PER 7.8.2.1.
- GREASE SHALL BE DRAINED OUT OF ANY TRAPS OR LOW POINTS FORMED IN THE UPBLAST EXHAUST FAN OR DUCT NEAR THE TERMINATION OF THE SYSTEM INTO A COLLECTION CONTAINER THAT IS NON-COMBUSTIBLE, CLOSED, RAINPROOF, AND STRUCTURALLY SOUND AS PER 7.8.2.1 (4).
- THE UPBLAST EXHAUST FAN SHALL BE EQUIPPED WITH A HINGE KIT AND SUPPLIED WITH FLEXIBLE WEATHERPROOF ELECTRICAL CABLE C/W ISOLATION SWITCH AND SERVICE HOLD OPEN RETAINER TO ALLOW INSPECTION AND CLEANING AS PER 7.8.2.1 (8).
- FIRE ALARM MANUAL PULL STATION SHALL COMPLY WITH 10.5.
- MAINTENANCE AND PERIODIC INSPECTIONS OF KITCHEN EQUIPMENT SHALL BE CARRIED OUT TO COMPLY WITH CHAPTER 11.
- GREASE DUCTS SHALL NOT PASS THROUGH FIRE WALLS.
- ALL ELECTRICAL EQUIPMENT MUST BE INSTALLED IN ACCORDANCE WITH NFPA 70, CANADIAN ELECTRICAL CODE, WITH DUE REGARD TO THE EFFECTS OF HEAT, VAPOUR AND GREASE ON THE EQUIPMENT.

### ACCEPTED

FOR BUILDING PERMIT ISSUANCE

BP119005

These drawings to be available on site PERMITS & INSPECTIONS DEPT DISTRICT OF WEST VANCOUVER



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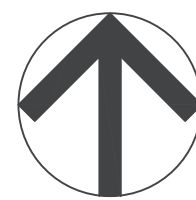
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KEY PLAN



CLIENT:


01	ISSUED FOR PERMIT	2024/02/26	AN
NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY

PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:

HVAC PLAN & HOOD SECTION  
DETAILS

SEAL



2024-02-26

EGBC PERMIT # 1000411

SCALE: PER DWG

DESIGNED BY: AN

DATE: FEB 2024

CHECKED BY: SS

PROJECT NUMBER: 24032

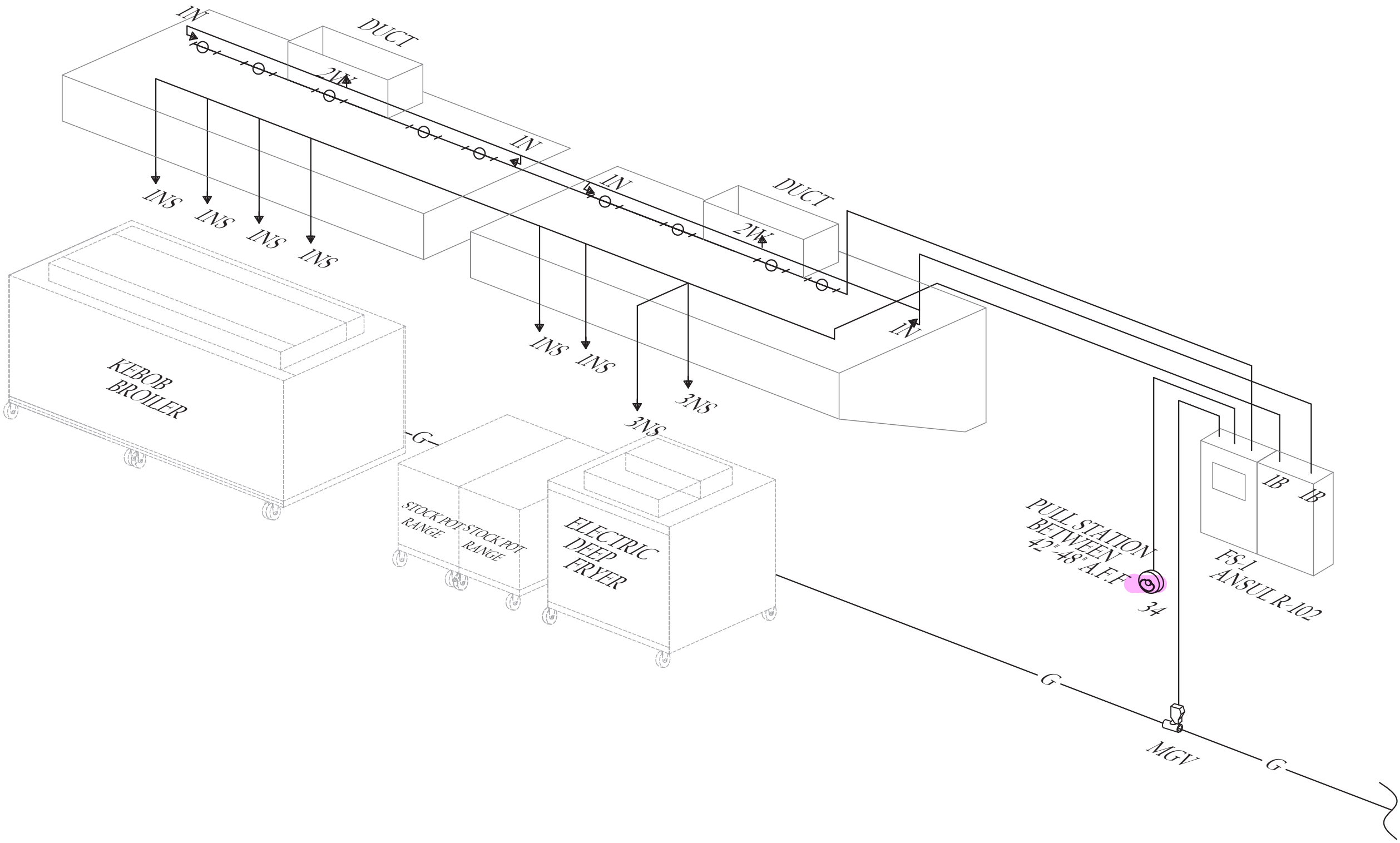
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KEH-1 & XKEH-2 FIRE SUPPRESSION SYSTEM  
SCALE: NTS

#### FIRE SUPPRESSION SYSTEM LEGEND

\*NOT ALL SYMBOLS ARE USED ON THE DRAWINGS\*

1B	3 GALLON TANK
3	OEM REGULATED RELEASE
5	ANSULUX LIQUID AGENT (3 GAL.)
7	CARTRIDGE (101-20)
10	TEST LINK
11	DOUBLE MICROSWITCH
12	HOSE ASSEMBLY
1N	NOZZLE ASSEMBLY (419335)
2W	DUCT NOZZLE (419337)
3N	NOZZLE ASSEMBLY (419338)
28	DETECTOR BRACKET
29	LOW TEMPERATURE FUSIBLE LINK
30	HIGH TEMPERATURE FUSIBLE LINK
1F	NOZZLE ASSEMBLY (419333)
MGV	MECHANICAL GAS VALVE
34	REMOTE MANUAL PULL STATION
S	SWIVEL ADAPTOR

#### FIRE SUPPRESSION SYSTEM (FS-1)

NOZZLE DESCRIPTION	FLOW POINTS	QUANTITY	TOTAL FLOW POINTS
NOZZLE 1W	1	-	-
NOZZLE 1F	1	-	-
NOZZLE 1N	1	10	10
NOZZLE 2W	2	2	4
NOZZLE 230	2	-	-
NOZZLE 245	2	-	-
NOZZLE 260	2	-	-
NOZZLE 3N	3	2	6
TOTAL	-	14	20
MODEL: ANSUL, ULC 300 CAPACITY: 6 GALLONS (20 FLOW POINTS OUT OF 22 FLOW POINTS)			

#### KITCHEN HOOD FIRE SUPPRESSION GENERAL NOTES

- VERIFY WITH LANDLORD'S REPRESENTATIVE THE SCOPE OF LANDLORD AND TENANT'S CONTRACTOR'S WORK BEFORE PRICING. USE LANDLORD APPROVED BASE BUILDING CONTRACTORS WHERE REQUIRED AT TENANT'S EXPENSE.
- CONTRACTOR SHALL READ THE FIRE SUPPRESSION DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
- CONTRACTOR SHALL COMPLY THE INSTALLATION OF FIRE SUPPRESSION SYSTEM WITH ULC/ORD - 1254.6 (UL300), NFPA 70A, NFPA 96, LOCAL BYLAWS, MANUFACTURERS INSTRUCTION AND TERMS OF THE EQUIPMENT LISTINGS.
- ALL NOZZLE PENETRATIONS IN HOOD TO BE SEALED LIQUID TIGHT AND COMPLY WITH NFPA 96 SECTION 5.1.5.
- CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW BEFORE COMMENCING ANY NEW WORK.
- THE SYSTEM SHALL BE PRE-TESTED PRIOR TO INSPECTION. THE SYSTEM SHALL BE INSTALLED AND FUNCTION IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURER'S INSTALLATION SPECIFICATIONS. TESTING DURING THE INSPECTION SHALL INCLUDE A MANUAL AND AUTOMATIC ACTIVATION VIA FUSIBLE LINK. THE COMPLETE TECHNICAL MANUAL SHALL BE MADE AVAILABLE.
- CONTRACTOR TO ENSURE DISCHARGE NOZZLES SHALL BE LOCATED AND INSTALLED AS SHOWN IN THE MANUFACTURER'S LISTED INSTALLATION MANUAL AND THE APPROVED PLANS. ALL DISCHARGE NOZZLES SHALL BE PROVIDED WITH CAPS, COVERS, OR OTHER SUITABLE PROTECTIVE DEVICES.
- PIPING SHALL BE RIGIDLY SUPPORTED TO PREVENT MOVEMENT. SWIVEL NOZZLES SHALL BE ROTATED TO A PREDETERMINED AIMING POINT AND THEN TIGHTENED TO HOLD THAT ANGLE. CAREFUL ATTENTION SHALL BE GIVEN AT THE TIME OF INSTALLING THE SYSTEM AS NOZZLES CANNOT BE MOVED "OUT OF THE WAY" ONCE APPROVED IN THE FIELD. ANY MOVING OF THE PIPE OR NOZZLES SHALL REQUIRE AN APPROVED CONTRACTOR TO EVALUATE THE PIPE/NOZZLE LAYOUT.
- CONTRACTOR TO PROVIDE MOVABLE COOKING EQUIPMENT WITH A MEANS TO ENSURE THAT IT IS CORRECTLY POSITIONED IN RELATION TO THE APPLIANCE DISCHARGE NOZZLE DURING COOKING OPERATIONS.
- FRYERS SHALL BE SEPARATED FROM SURFACE FLAME APPLIANCES BY 16" OR AN 8" HIGH STAINLESS STEEL Baffle PLATE SHALL BE PROVIDED BETWEEN FRYERS AND SURFACE FLAMES.
- A READILY ACCESSIBLE MEANS FOR PULL STATION SHALL BE INSTALLED BETWEEN 42" TO 48" ABOVE FINISHED FLOOR, BE ACCESSIBLE IN THE EVENT OF FIRE, BE LOCATED IN THE PATH OF EXIT OR EGRESS FROM THE COOKING AREA, A MINIMUM OF 10' 0" AND MAXIMUM OF 20' 0" FROM THE KITCHEN APPLIANCES.
- A CLASS K RATED EXTINGUISHER SHALL BE PROVIDED WITHIN A MAXIMUM OF 30' 0" OF COOKING EQUIPMENT. PLACEMENT IS AT DISCRETION OF THE INSPECTOR. ADDITIONAL EXTINGUISHERS MAY BE REQUIRED BASED ON TRAVEL DISTANCE FOR SOLID FUELED EQUIPMENT OR MULTIPLE FRYERS. PORTABLE FIRE EXTINGUISHERS SHALL BE CONSPICUOUSLY LOCATED ALONG NORMAL PATHS OF TRAVEL WHERE THEY ARE READILY ACCESSIBLE. PORTABLE FIRE EXTINGUISHERS SHALL BE MAINTAINED IN ACCORDANCE WITH NFPA 10, AS PER NFPA 96, SECTION 10.2.2. A PLACARD SHALL BE CONSPICUOUSLY PLACED NEAR EACH EXTINGUISHER THAT INDICATES THAT THE FIRE PROTECTION SYSTEM SHALL BE ACTIVATED PRIOR TO USING THE FIRE EXTINGUISHER.
- WHERE MORE THAN ONE MANUAL ACTUATOR (PULL) IS INSTALLED, THEY SHALL BE IDENTIFIED WITH A PERMANENT SIGN INDICATING WHICH EXTINGUISHING SYSTEM EACH WILL ACTIVATE.
- CONTRACTOR TO INSTALL A DUCT NOZZLE IF THERE IS AN OBSTRUCTION IN THE GREASE DUCT WITH ECOLOGY UNIT. THE DUCT NOZZLE SHALL BE INSTALLED DOWNSTREAM OF THE ECOLOGY UNIT.
- FUSIBLE LINK SHALL BE LOCATED AT OR WITHIN 1' 0" INTO THE EXHAUST DUCT OPENING.
- WHERE A BUILDING FIRE ALARM OR MONITORING SYSTEM IS INSTALLED, THE AUTOMATIC FIRE SUPPRESSION SYSTEM SHALL BE MONITORED IN ACCORDANCE WITH NFPA 72. IF NOT, LOCAL BELL WITH AUDIBLE ALARM SHALL BE INSTALLED.
- CONTRACTOR TO PROVIDE CONNECTION AND INTERFACE BETWEEN KITCHEN HOOD FIRE SUPPRESSION SYSTEM AND THE FIRE ALARM PANEL. PROVIDE A SEPARATE ZONE FOR ANNUNCIATION AT THE ANNUNCIATOR PANEL WITH THE NAME OF THE RESTAURANT.
- CONTRACTOR TO PROVIDE GAS SOLENOID VALVE AT THE MAIN GAS SUPPLY FOR ALL THE KITCHEN EQUIPMENTS. INTERLOCK GAS SOLENOID VALVE WITH THE KITCHEN HOOD FIRE SUPPRESSION SYSTEM.
- ALL CONTROL WIRING AT THE CONTROL PANEL REQUIRED FOR FULL OPERATION OF FIRE SUPPRESSION SYSTEM SHALL BE BY DIVISION 26.
- CONTRACTOR TO ENGAGE THE SERVICES OF CERTIFIED CONTROLS SYSTEM CONTRACTOR FOR ALL FIELD WIRING TO FACILITATE THE INTERLOCKING OF KITCHEN EXHAUST FAN WITH MAKE UP AIR UNIT, AIRFLOW SWITCH IN THE MAKE UP AIR DUCT TO INITIATE THE KITCHEN EXHAUST FAN AND AIRFLOW SWITCH IN THE KITCHEN EXHAUST DUCT TO INITIATE MAKEUP AIR GAS VALVE. PROVIDE RELAY INTERLOCK FOR MAKE UP AIR, KITCHEN EXHAUST FAN AND KITCHEN EQUIPMENTS WITH KITCHEN HOOD FIRE SUPPRESSION SYSTEM.

#### SEQUENCE OF OPERATION FOR FIRE SUPPRESSION

- IF FIRE SUPPRESSION SYSTEM IN ANY OF THE KITCHEN HOOD IS ACTIVATED BY FUSIBLE LINK AND/OR MANUAL PULL STATION:
  - NOZZLE TO DISCHARGE THE WET CHEMICAL SUPPRESSION AGENT.
  - ALL GAS FUELED, ELECTRICALLY POWERED, HEAT PRODUCING EQUIPMENT LOCATED UNDER THE HOOD AND HOOD LIGHTING SHALL SHUT DOWN.
  - KITCHEN HOOD EXHAUST FANS OR POLLUTION CONTROL UNIT SHALL CONTINUE TO OPERATE.
  - MAKE UP AIR FAN SHALL SHUT DOWN.
  - FIRE ALARM SHALL BE ACTIVATED AND ANNUNCIATED AS A SEPARATE ZONE AT THE FIRE ALARM PANEL AND ANNUNCIATOR.

#### TRIP TEST & SUBSTANTIAL COMPLETION CHECKLIST

- CONTRACTOR OR OWNER IS RESPONSIBLE TO CONTACT WITH THE FIRE DEPARTMENT AND THE AUTHORITY HAVING JURISDICTION TO SCHEDULE A FINAL TRIP TEST.
- CONTRACTOR TO PROVIDE INFORMATION & INSTRUCTIONS OUTLINING THE OPERATION AND MAINTENANCE PROCEDURES. ALSO, WARRANTY OF EACH COMPONENT OR DEVICE USED IN THE SYSTEM TO THE OWNER.
- CONTRACTOR TO ENGAGE SEISMIC ENGINEER TO VERIFY ALL SEISMIC REQUIREMENTS FOR KITCHEN EQUIPMENT UNDER THE HOOD. SUPPORTING SCHEDULES SB & SC FROM A SEISMIC ENGINEER WILL BE REQUIRED AS PART OF FINAL DOCUMENTS.
- CONTRACTOR TO PROVIDE FIRE SUPPRESSION VERIFICATION REPORT AFTER SUCCESSFUL TRIP TEST.

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BP119005

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KEY PLAN

CLIENT:

01	ISSUED FOR PERMIT	2024/02/26	AN
NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY

PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:

KITCHEN FIRE SUPPRESSION  
SYSTEM SCHEMATIC

SEAL



2024-02-26

EGBC PERMIT # 1000411

SCALE: PER DWG

DESIGNED BY: AN

DATE: FEB 2024

CHECKED BY: SS

PROJECT NUMBER: 24032

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## KEYED NOTES

1. BFP DEVICE SHALL BE INSTALLED ABOVE MOP SINK AND IS SHOWN CLOSER TO THE FIXTURE FOR CLARITY PURPOSE ONLY.
2. PROVIDE WATER HAMMER ARRESTOR AND PRV ON DISHWASHER WATER SUPPLY LINE. PROVIDE PCW LINE C/W RPBA FOR DRAIN WATER TEMPERING KIT (TKT). COORDINATE WITH GENERAL CONTRACTOR AND CLIENT FOR PLACING AN ADVANCE ORDER FOR THIS KIT.
3. CONNECT 1/2 GAS LINE [980 MBH] TO EXISTING 1/2 GAS LINE ON SITE. CONTRACTOR TO VERIFY GAS SIZE, PRESSURE, METER LOCATION AND DEVELOPED LENGTH PRIOR TO COMMENCING WORK.
4. CONNECT NEW 1/4 O.D PCW LINE [38.85 FU] TO EXISTING PCW LINE IN THE CEILING SPACE.
5. ALLOW FOR INSTALLATION OF NEW FIXTURE AT THE SAME LOCATION OF EXISTING FIXTURE AND OFFSET TO SUIT.
6. PUBLIC WASHROOM LAVATORY FAUCET SHALL BE OF TYPE TO AUTOMATICALLY SHUT OFF WATER WHEN NOT IN USE C/W THERMAL MIXING VALVE LIMITING TEMPERATURE TO 101°F.
7. WATER LINES TO BFP DEVICES INSTALLED ABOVE MOP SINK. REFER TO DETAILS AND PLUMBING GENERAL NOTE 1 FOR REFERENCE.
8. WATER LINES TO BE CONNECTED TO EXISTING WATER LINES SERVING WASHROOMS AND MOP SINK. ALLOW FOR RE/RE AS REQUIRED.
9. 4"O.D. COMBUSTION EXHAUST AND FRESH AIR VENT FROM INSTANT WATER HEATERS TO TERMINATE AT EXTERIOR WALL USING EXISTING ROUTING C/W GOOSENECK PER MANUFACTURER'S RECOMMENDATION AND GAS CODE.
10. 1/2 GAS [400 MBH] TO SPLIT INTO 2 @ 3/4" [200 MBH] FOR INSTANT WATER HEATER C/W PRV, SHUT-OFF, FLEXIBLE HOSE AND DIRT LEG. COORDINATE EXACT LOCATION ON SITE.
11. PULL STATION FOR FIRE SUPPRESSION SHALL BE INSTALLED BETWEEN 42' TO 48' ABOVE FINISHED FLOOR AT THE EGRESS.
12. CLASS K RATED FIRE EXTINGUISHER SHALL BE PROVIDED TO CONFORM TO NFPA 96-2014 & NFPA 10.

## GAS LOAD

EQUIPMENT	MODEL	QTY	MBH	LINE SIZE
KEROB BROILER	AMERICAN RANGE ARKB72	1	420	3/4"
POT RANGE	COOKRITE ATSP-18-1	2	80	3/4"
IWH-1	SEE DWG M0	1	200	3/4"
IWH-1	SEE DWG M0	1	200	3/4"
TOTAL		5	980 @ 2 PSIG	
TOTAL DEVELOPED LENGTH		210'-0"	TO BE CONFIRMED ON SITE	

## PIPE SIZING METHODOLOGY

- A. NEW DOMESTIC WATER PIPE SIZING IS IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE AS OUTLINED IN 2010 ASPE DATA HANDBOOK AND FIXTURE UNITS ARE BASED ON TABLE 2.6.3.2. A OF BRITISH COLUMBIA PLUMBING CODE 2018. MAXIMUM WATER FLOW RATE FOR COPPER CU/INCH AND DHW LINES IS 8 FT/SEC & 5 FT/SEC RESPECTIVELY. CONTRACTOR TO NOTIFY CONSULTANT IN ADVANCE IF A DIFFERENT PIPING MATERIAL IS PREFERRED. DO NOT COMMENCE WORK UNTIL REVISED PIPE SIZING CHART IS PROVIDED BY THE CONSULTANT FOR THE CONTRACTOR'S REFERENCE.

## PLUMBING GENERAL NOTES

- D. EXISTING DOMESTIC WATER LINE, SANITARY DRAIN, VENT AND GAS LINE IS SHOWN IN APPROXIMATE LOCATION. CONTRACTOR TO VERIFY ACTUAL LOCATION, INVERT & FLOW DIRECTION (FOR SANITARY) AND SIZE ON SITE PRIOR TO COMMENCING NEW WORK.
- E. ALLOW FOR X-RAY AND CORE /TRENCH FOR ALL PLUMBING LINE PENETRATIONS OF STUD WALLS AND FLOORS. OBTAIN APPROVAL FROM STRUCTURAL AND BASH BUILDING PRIOR TO COMMENCING WORK. FIRE STOP ALL PENETRATIONS THRU RATED ASSEMBLIES WITH APPROPRIATE MATERIALS AND METHODS. PROVIDE FIRE STOPPING COMPLETION CERTIFICATE AT THE END OF THE JOB.
- F. PATCH AND MAKE GOOD ANY DAMAGED FLOOR, CEILING, ROOF AND WALL FOR NEW PLUMBING WORK.
- G. PROVIDE INSULATION FOR ALL COLD AND HOT WATER LINES TO ASHRAE 90.1 2019. USE OF PLASTIC PIPING FOR THW LINES SHALL NOT ELIMINATE THE REQUIREMENT TO PROVIDE INSULATION PER ASHRAE 90.1 (6.4.1.3). PROVIDE COMPLETE VAPOUR BARRIER AND SEAL.
- H. CONTRACTOR TO LABEL ALL GAS LINE TO GAS COPE AND PLUMBING LINES IN CEILING SPACE AT EVERY 20 FEET AND AFTER EVERY CHANGE IN DIRECTION. INCLUDE INSTALLATION DATE FOR ALL NEW PIPING LABELING (MONTH/YEAR). REFER TO PIPE IDENTIFICATION DETAIL.
- I. ALL SANITARY PIPING 4" AND GREATER TO RUN IN ITS SLOPE AND SMALLER THAN 4" AT 2% SLOPE. ALL CONDENSATE DRAIN LINES TO RUN AT 2% SLOPE.
- J. WHERE DISCREPANCIES ARE FOUND, CONTACT ENGINEER IN WRITING PRIOR TO SUBMITTING PRICE.
- K. ENSURE NO COMBUSTIBLE MATERIALS ARE TO BE PRESENT IN THE RETURN AIR CHUTE. PRESENT MATERIALS THAT DO NOT MEET PLUMBING USE REQUIREMENTS. REPORT FINDINGS TO THE CONSULTANT.
- L. CONTRACTOR TO ENGAGE A STRUCTURAL ENGINEER TO VERIFY AND SIGN OFF ON STRUCTURAL CAPACITY OF ALL PLUMBING COMPONENTS (EQUIPMENT AND PIPES) INCLUDING ANCHORAGE AND SEISMIC RESTRAINT. SUBMIT SUPPORTING SCHEDULES.
- M. CONTRACTOR SHALL INSTALL CAST IRON IN PARKADE. CAST IRON /SYSTEM XFL PIPE FOR DWV AND COPPER OR AQUADUR SCH 80 PIPE FOR DOMESTIC WATER AND SCH. 40 BLACK STEEL FOR GAS LINE TO MATCH BASE BUILDING MATERIALS. SUBJECT TO AHJ APPROVAL.
- N. PROVIDE WATER HAMMER ARRESTORS CERTIFIED TO ASSE-1000 AND CLEAN OUTS AS REQUIRED BY CODE.
- O. ALL RPA DEVICES C/W HUB TO DISCHARGE INTO MOP SINK OR FUNNEL FLOOR DRAIN (PROVIDE AS REQUIRED). ALL BACKFLOW PREVENTION DEVICES SHALL BE MOUNTED MINIMUM 29.5" AND MAXIMUM 60" ABOVE FINISHED FLOOR PER ASH 684 REQUIREMENTS.
- P. CONTRACTOR SHALL APPLY FOR GAS INSTALLATION PERMIT WITH TECHNICAL SAFETY BC OR AHJ AS SOON AS POSSIBLE AND SUBMIT FINAL GAS PASS CERTIFICATE FROM BC OR AHJ PRIOR TO REQUESTING MECHANICAL SCHEDULE C-8. NO EXCEPTION.
- Q. TRAP PRIMERS FOR FLOOR DRAINS ARE TO BE INSTALLED IN ACCESSIBLE LOCATION, WHEN INSTALLED IN FLOOR, PROVIDE STAINLESS STEEL COVER PLATE WITH LABEL INDICATING "TRAP PRIMER ACCESS PANEL". PEX PIPING IS ACCEPTABLE FOR TRAP PRIMER PIPING WHEN BURIED UNDER SLAB ONLY. ENSURE SLEEVES ARE PROVIDED FOR ALL PIPES (PORTABLE AND NON-PORTABLE) LINE PIPING PENETRATING THROUGH THE CONCRETE WALLS AND FLOORS FOR PROTECTION AGAINST ABRASION.
- R. CONTRACTOR SHALL VISIT THE SITE PRIOR TO PRICING THIS JOB TO UNDERSTAND THE SCOPE OF NEW WORK AND REQUIRED DEMOLITION. COORDINATE WITH GENERAL CONTRACTOR, ALLOW FOR DEMOLITION AND REMOVAL OF EXISTING WATER, VENT AND SANITARY AND GAS PIPING ETC. TO SUIT THE NEW TENANT LAYOUT.
- S. ALL PLUMBING LINES SHALL BE CONCEALED IN WALL CAVITY. INSTALLATION IN THE PLUMBING WALLS IS ONLY PERMITTED AT LANDLORD'S DISCRETION. GENERAL CONTRACTOR TO OBTAIN APPROVAL PRIOR TO COMMENCING WORK. COORDINATE WITH INTERIOR DESIGNER AND CLIENT WHERE FIRED OUT WALLS ARE REQUIRED TO CONCEAL PLUMBING LINES.
- T. PROVIDE ISOLATION VALVE ON EACH DCW AND /OR DHW SUPPLY LINE NEAR EACH PLUMBING FIXTURE.
- U. REFER TO ARCHITECTURAL/INTERIOR DESIGN DRAWINGS FOR PLUMBING FIXTURES SPECIFICATIONS. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL.
- V. PLUMBING CONTRACTOR TO COORDINATE WORK WITH OTHER TRADES AND GENERAL CONTRACTOR.

## PLUMBING FIXTURE SCHEDULE

- A. ALL WASHROOM FAUCETS SHALL BE OF TYPE TO AUTOMATICALLY SHUT OFF WHEN LAVATORY IS NOT IN USE - EITHER METERRING TYP OR AUTOMATIC. IT SHALL OVERRIDE ARCHITECTURAL SPECIFICATION.
- B. ALL WATER CLOSET SHALL BE ELONGATED BOWL TYPE WITH OPEN FRONT AND ELONGATED SEAT. IT SHALL OVERRIDE ARCHITECTURAL SPECIFICATION.
- C. INCLUDE DRAIN TEMPERING KIT FOR HIGH TEMPERATURE DISHWASHER AS PER SENTENCE 2.4.4.2. AS REQUIRED.
- D. REFER TO ARCHITECTURAL / INTERIOR DESIGN DRAWINGS FOR ALL PLUMBING FIXTURES SPECIFICATIONS.
- E. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO ORDERING.

ALL PLUMBING FIXTURES TO BE CSA APPROVED, COMPLY WITH ACCESSIBILITY REQUIREMENTS (WHERE REQUIRED) AND AS PER CB BUILDING & PLUMBING CODE. ALL FIXTURES SHALL BE PROVIDED BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE OR AS PER ARCHITECTURAL / INTERIOR DESIGN DRAWINGS. CONFIRM ALL SPECS WITH ARCHITECT / INTERIOR DESIGNER. VERIFY ALL DIMENSIONS, COUNTER DEPTHS, THICKNESS ETC., SLAB AND WALL THICKNESS, LOCATION OF MEMBRANE, PRIOR TO ORDERING. COORDINATE WITH MILLWORK. PROVIDE ALL ANCILLARY COMPONENTS SUCH AS P TRAPS, ESCUTCHEONS, FLEXIBLE BRAIDED HOSE, WALL CARRIERS, ANGLE VALVES ETC.

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**BP119005**

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**Aquavolt Engineering Ltd.**  
CONSULTING MECHANICAL AND ELECTRICAL ENGINEERS

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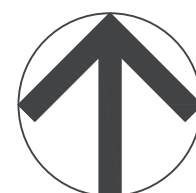
CONTRACTOR:

M A N S  
O U R I

PEOPLE BUILD DESIGN

109-1305 WELCH STREET, NORTH VANCOUVER, BC  
V7P 1B3  
WWW.MANSOURIDESIGN.COM

### KEY PLAN



CLIENT

[illegible]

PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE

DOMESTIC WATER & GAS  
DISTRIBUTION PLAN

SEAL



2024-02-26

EGBC PERMIT # 1000411

SCALE: PER DWG      DESIGNED BY: AN

DATE: FEB 2024	CHECKED BY: SS
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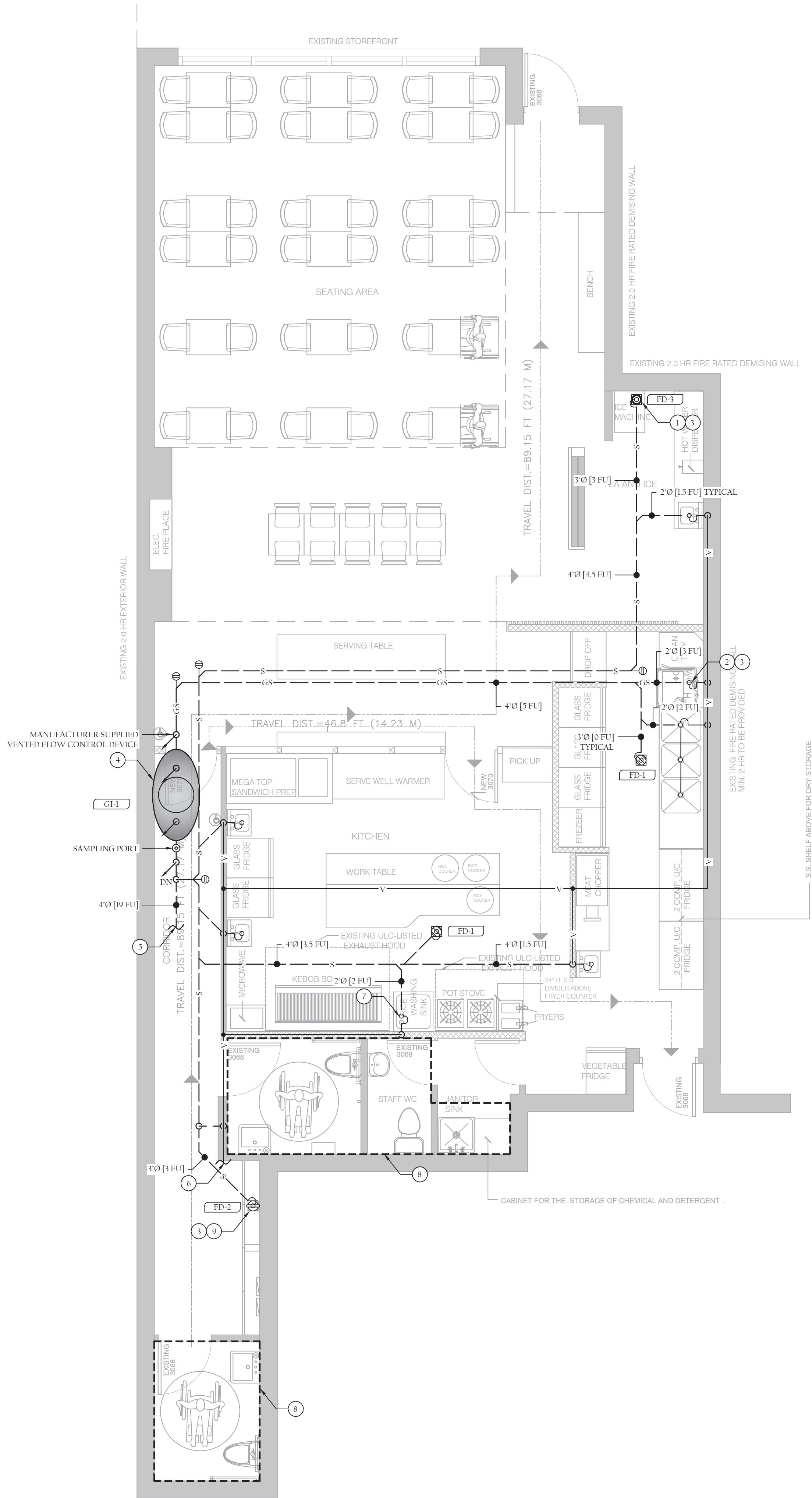
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DRAINAGE & VENT PLAN

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

SUBSTANTIAL COMPLETION CHECKLIST

- A. ROUGH-IN PLUMBING CERTIFICATE OF INSPECTION FROM AUTHORITY HAVING JURISDICTION.
- B. FINAL PLUMBING CERTIFICATE OF INSPECTION FROM AUTHORITY HAVING JURISDICTION.
- C. SUPPORTING SCHEDULE 5B & 5C FROM A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER SIGNING OFF FOR STRUCTURAL CAPACITY OF ALL PLUMBING COMPONENTS (INCLUDE HWT, EXPANSION TANK, PLATFORMS AND PIPING ETC.), INCLUDING ANCHORAGE AND SEISMIC RESTRAINT.
- D. FIRE STOPPING SHALL BE COMPLETE, REVIEWED AND APPROVED. WRITTEN LETTER TO BE ISSUED BY THE RESPONSIBLE CONTRACTOR, INCLUDE MATERIALS AND APPROVED LISTING DETAILS USED.
- E. FINAL SPRINKLER CERTIFICATE OF INSPECTION FROM AUTHORITY HAVING JURISDICTION (IF APPLICABLE).
- F. BACKFLOW PREVENTION TESTING CERTIFICATE.
- G. GAS INSTALLATION PERMIT & FINAL GAS PASS CERTIFICATE OF INSPECTION FROM AUTHORITY HAVING JURISDICTION.

KEYED NOTES

- ① ICE MACHINE DRAIN TO DISCHARGE INDIRECTLY INTO FLOOR DRAIN C/W FUNNEL AND AIR BREAK.
- ② PROVIDE FACTORY SUPPLIED DRAIN TEMPERING KIT ON DISHWASHER DRAIN LINE. PROVIDE P-TRAP IN THE PARKADE BELOW.
- ③ INSULATE AND HEAT TRACE ALL P-TRAPS IN THE CEILING OF UNHEATED PARKADE BELOW. HEAT TRACE TO BE RAYCHEM 5W/FT. SUPPLIED AND INSTALLED BY PLUMBING CONTRACTOR. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER.
- ④ FLOOR MOUNTED GREASE INTERCEPTOR C/W EXTERNAL MANUFACTURER SUPPLIED FLOW CONTROL DEVICE INSTALLED ON THE PARKADE FLOOR. VENTING SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS. GREASE INTERCEPTOR SHALL BE PERMANENTLY LABELLED FOR FLOW RATE CAPACITY PER METRO VANCOUVER GUIDELINES. CONNECT VENT LINES TO EXISTING VENT LINES IN THE PARKADE. MAKE GOOD.
- ⑤ CONNECT NEW 4" Ø SANITARY LINE TO EXISTING 4" Ø SANITARY LINE IN THE PARKADE AREA.
- ⑥ CONNECT NEW 2" Ø VENT LINE TO EXISTING 3" Ø VENT LINE IN THE CEILING SPACE.
- ⑦ INSTALL RICE INTERCEPTOR C/W INTEGRAL TRAP SEAL IN LIEU OF P-TRAP FOR THIS SINK. PROVIDE ROUGH-IN TO SUIT.
- ⑧ ALLOW FOR RE/RE OF PLUMBING FIXTURES AND MAKE GOOD.
- ⑨ RWH DRAINS TO DISCHARGE INDIRECTLY INTO THE FUNNEL FLOOR DRAIN C/W AIR BREAK AND TRAP PRIMER.



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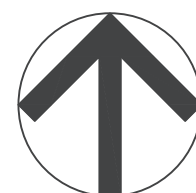
CONTRACTOR:

MANSOURI

PEOPLE BUILD DESIGN

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KEY PLAN



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NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY
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PROJECT NAME AND ADDRESS:

GRAB AND GO PLUS RESTAURANT  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:

DRAINAGE & VENT PLAN

SEAL



2024-02-26

EGBC PERMIT # 1000411

SCALE: PER DWG DESIGNED BY: AN

DATE: FEB 2024 CHECKED BY: SS

PROJECT NUMBER: 24032

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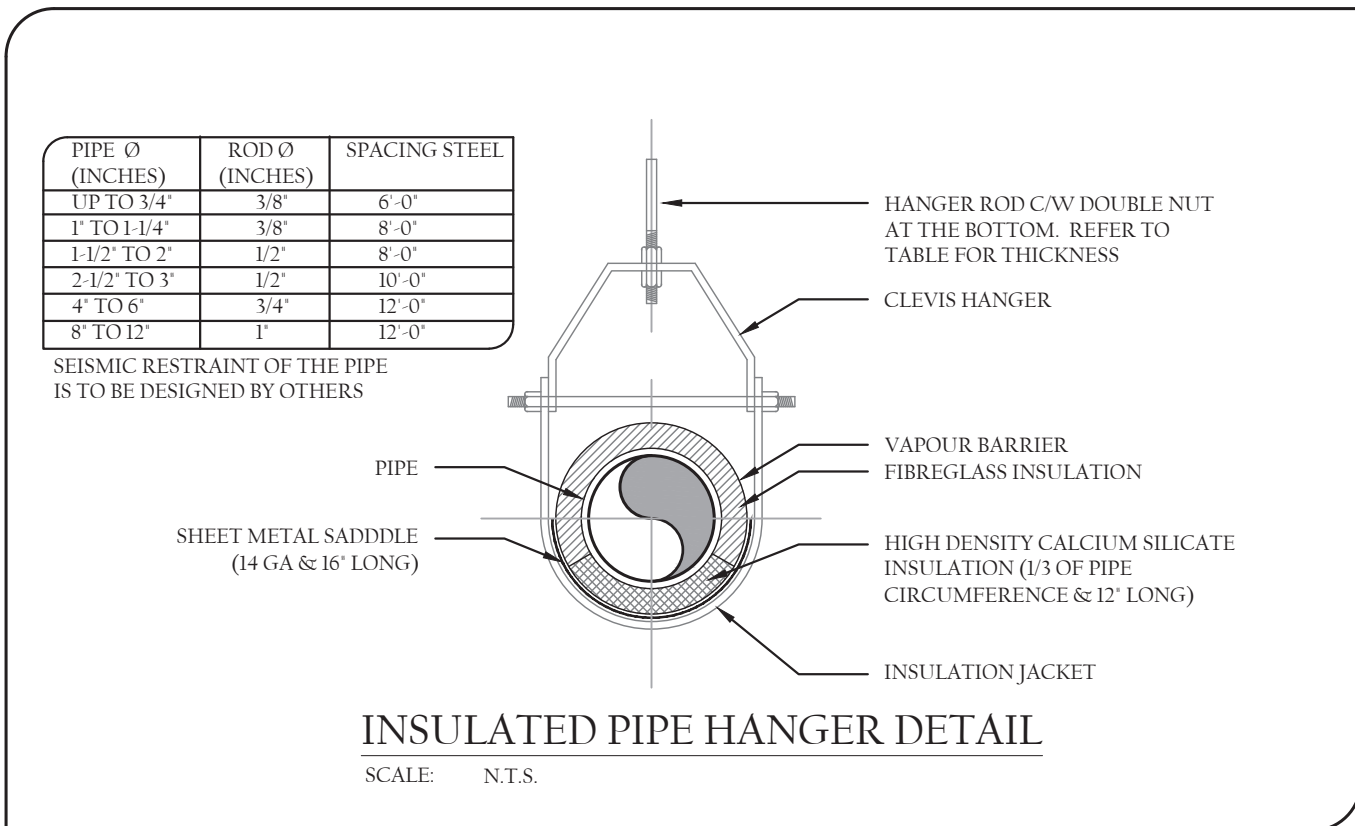
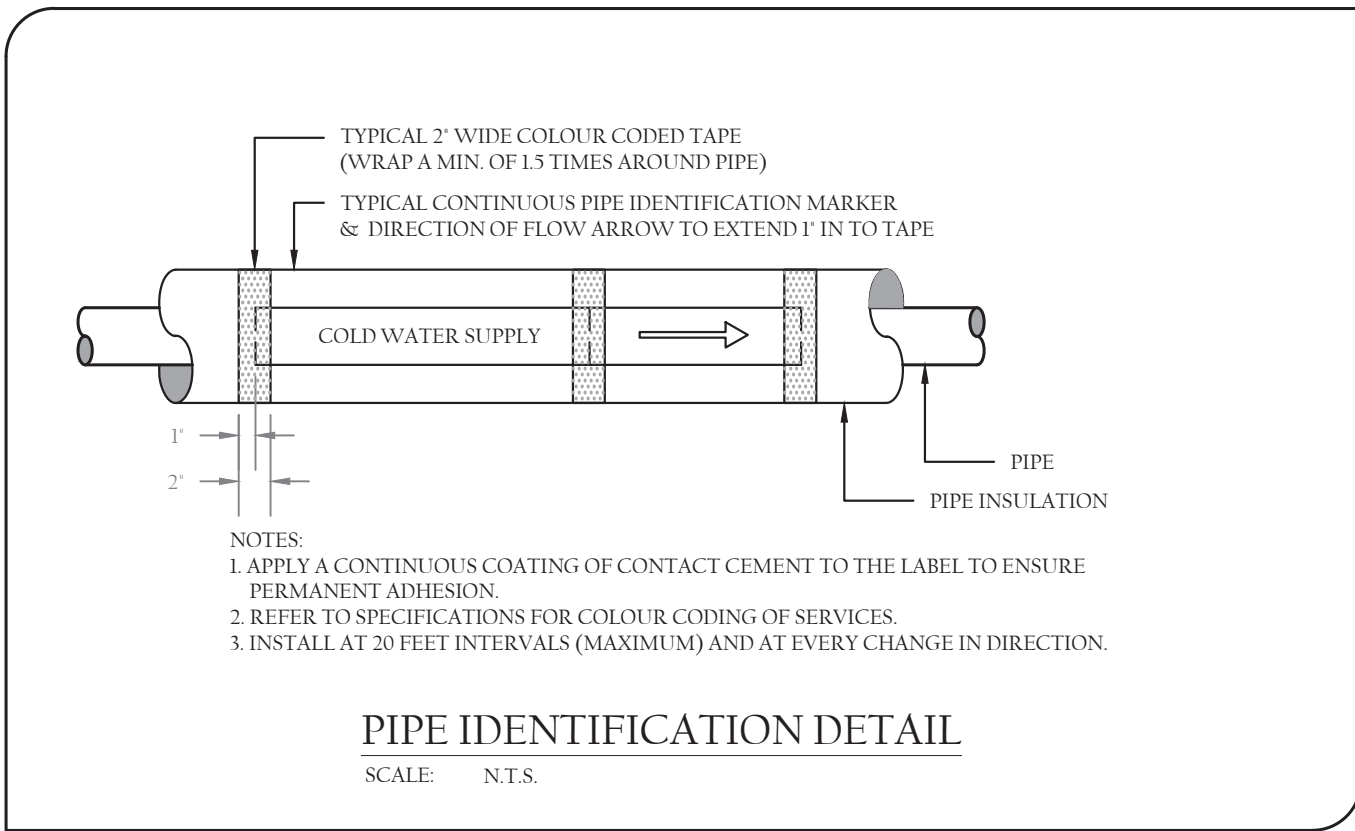
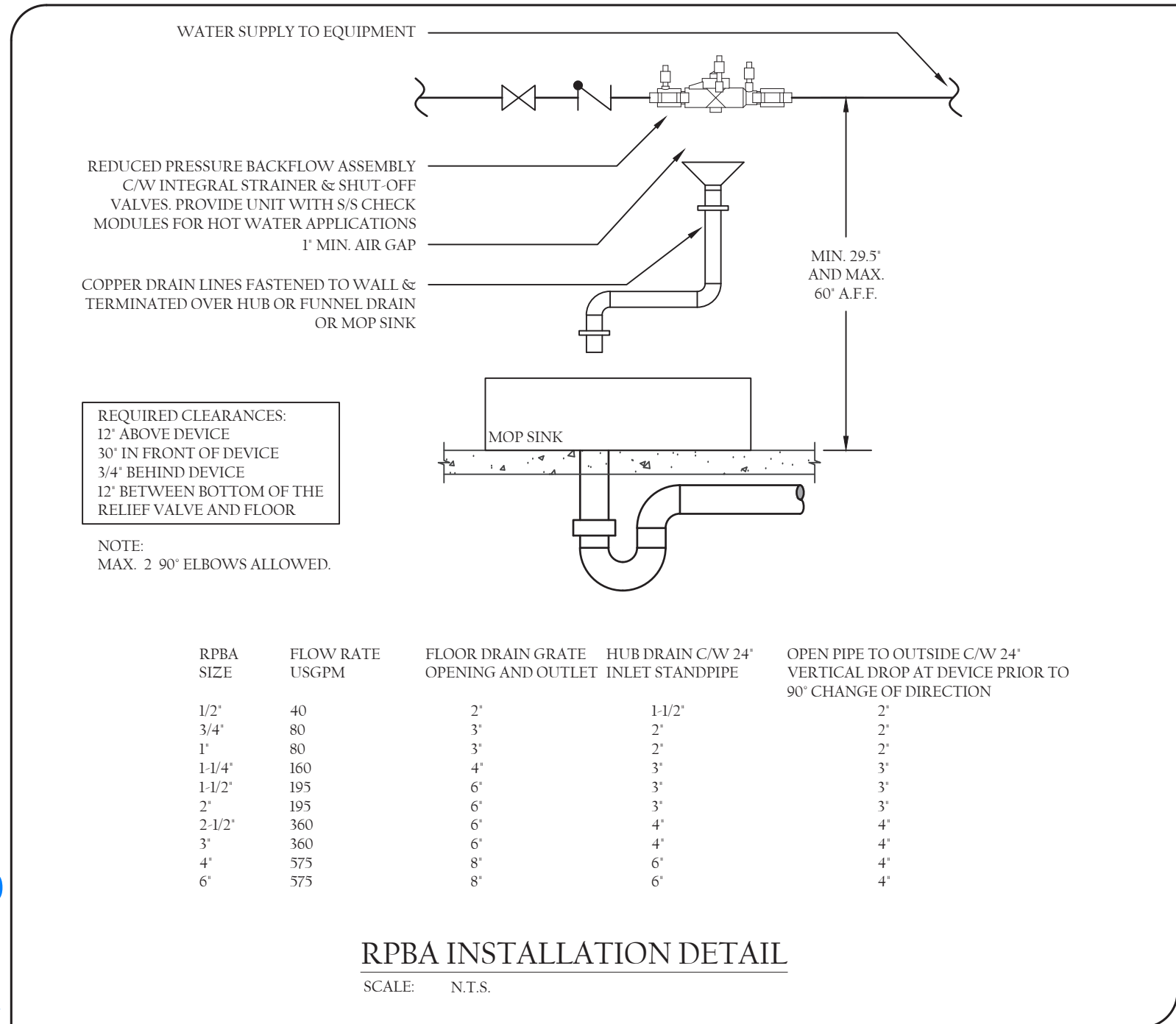
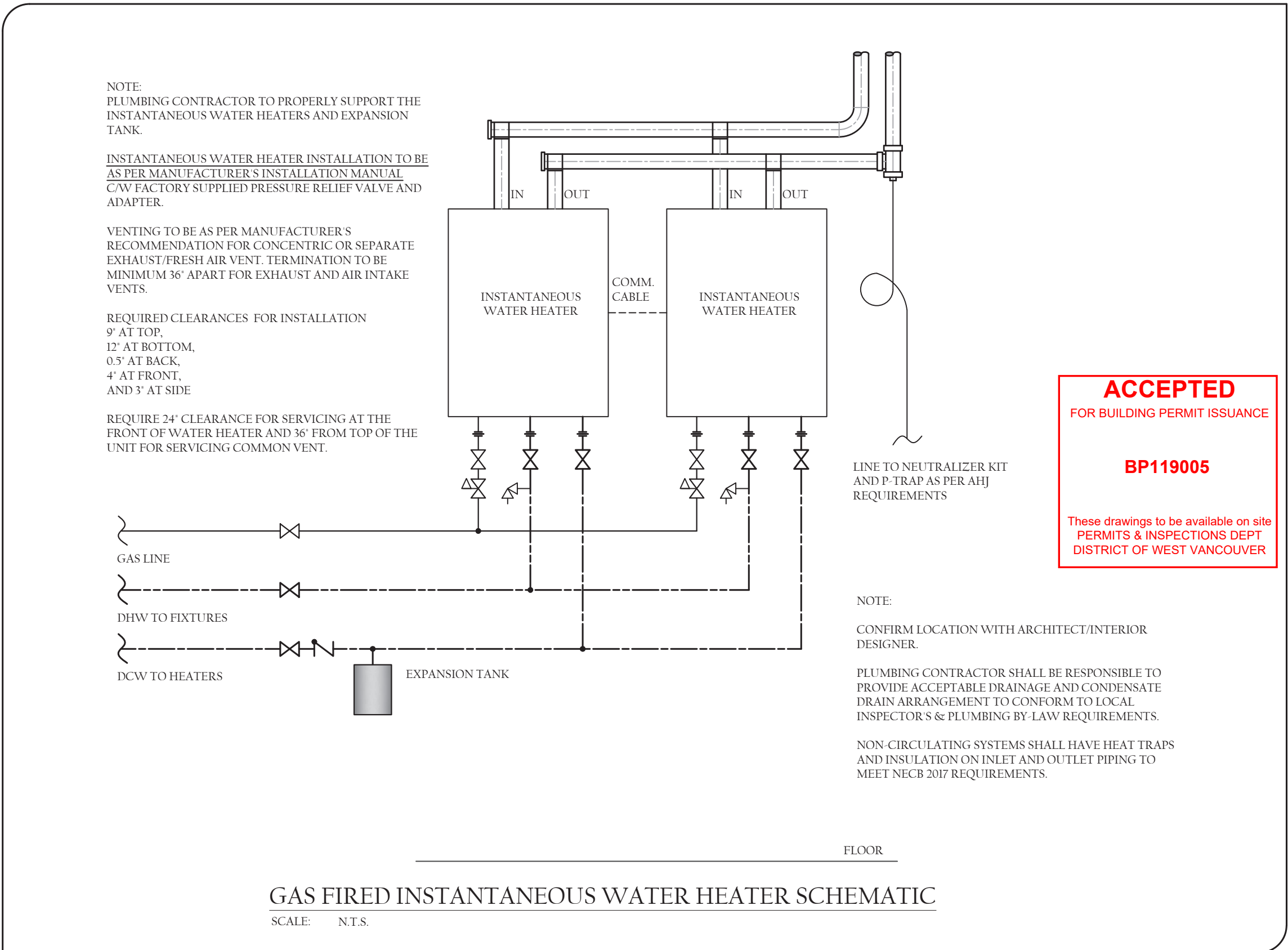
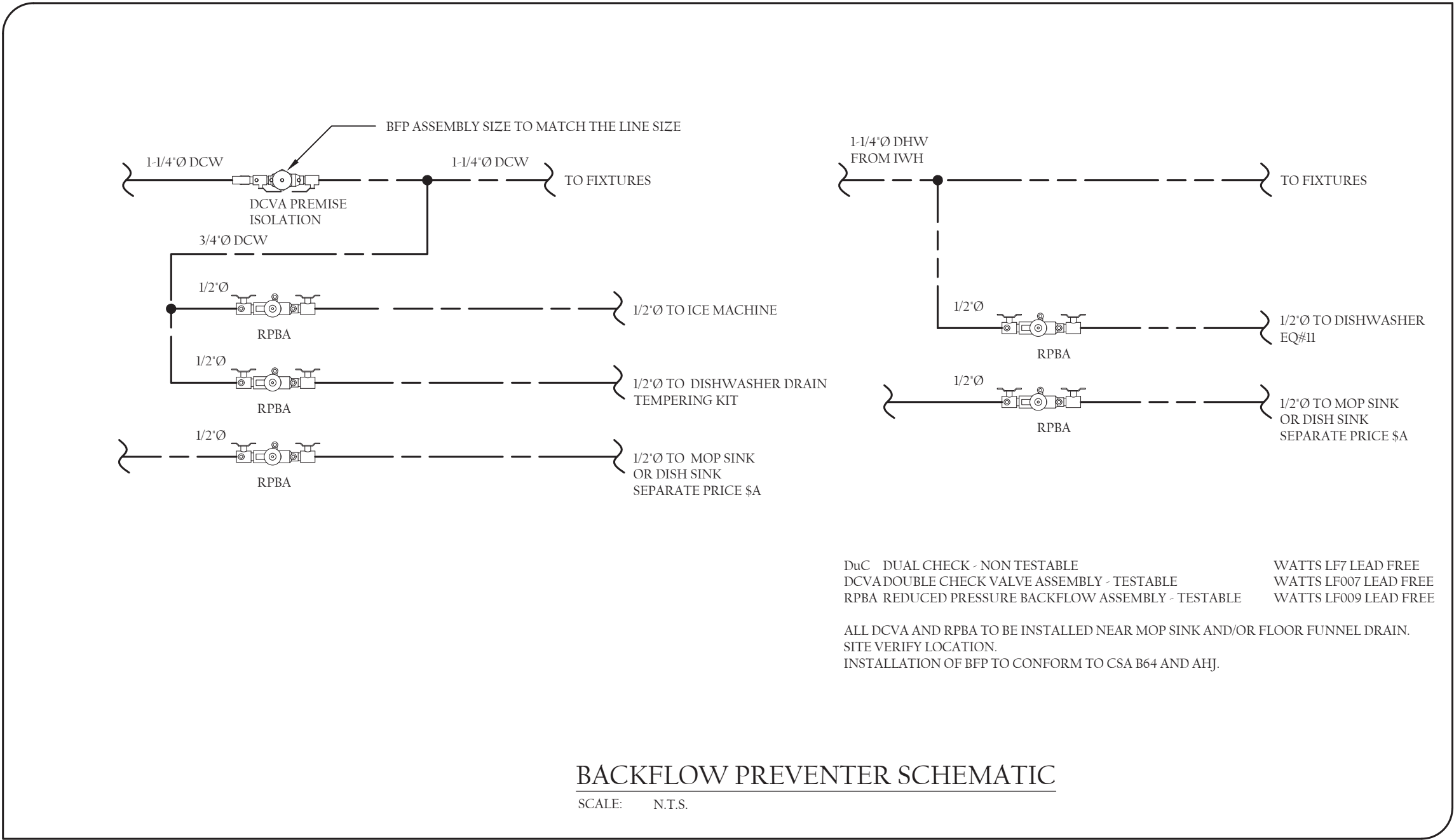
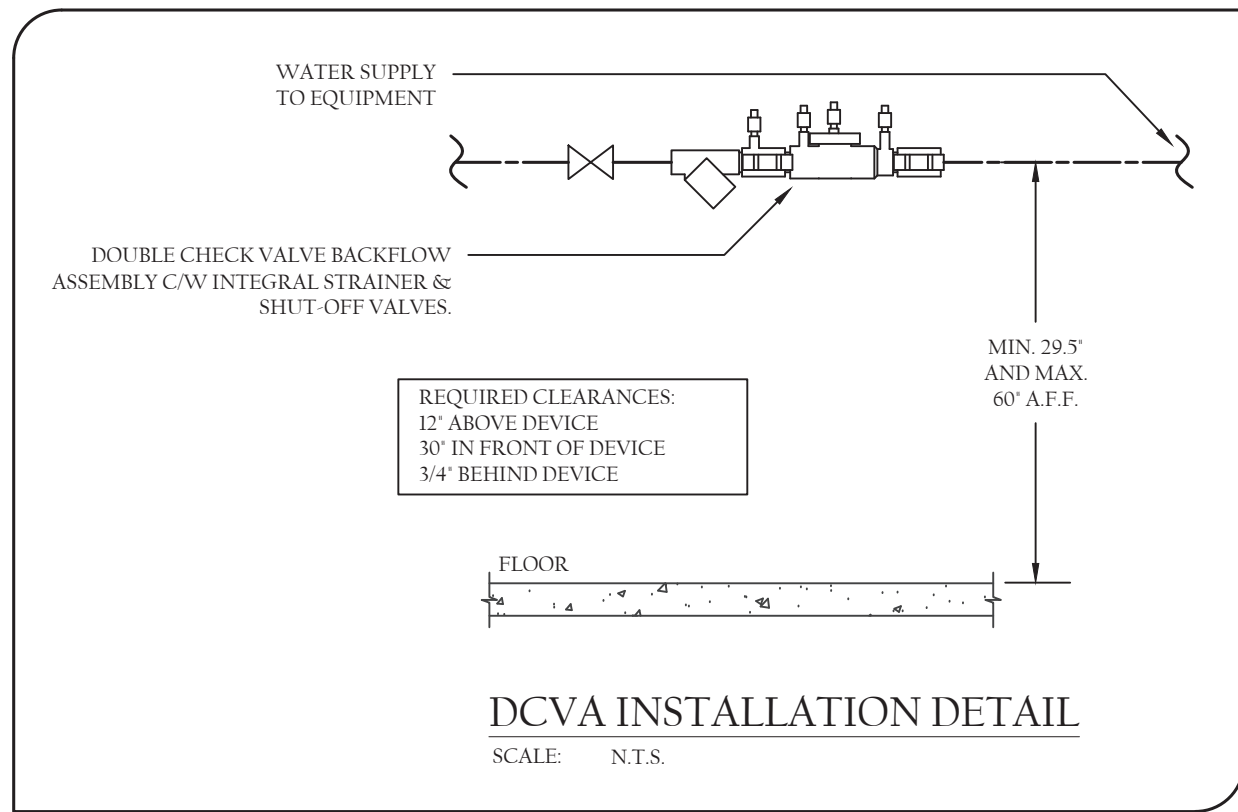
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NO.	DESCRIPTION	DATE (YYYY/MM/DD)	BY

PROJECT NAME AND ADDRESS:  
**GRAB AND GO PLUS RESTAURANT**  
1746 MARINE DRIVE,  
WEST VANCOUVER, BC

TITLE:  
**COVER PAGE, LEGEND &  
SCHEDULES**

SEAL	
	
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## MECHANICAL SPECIFICATIONS

### 10.GENERAL REQUIREMENTS AND STANDARDS:

#### 11. EXAMINATION OF SITE CONDITION AND INFORMATION:

- 11.1. INSPECT THE SITE AND OBTAIN ALL CONDITIONS AFFECTING THE WORK OF THIS DIVISION.
- 11.2. EACH CONTRACTOR, BEFORE TENDERING, SHALL EXAMINE ALL DRAWINGS, ARCHITECTURAL, STRUCTURAL AND ELECTRICAL AND SHALL FAMILIARIZE THEMSELVES WITH THE BUILDING CONSTRUCTION AND FINISH IN ORDER THAT TENDER MAY INCLUDE EVERYTHING NECESSARY FOR THE PROPER COMPLETION OF THE WORK AND REPORT ANY DISCREPANCIES AT ONCE AND IN TIME FOR VERIFICATION AND CORRECTION.
- 11.3. IT SHALL BE CONTRACTOR'S RESPONSIBILITY THAT ANY MATERIAL AND EQUIPMENT BE BROUGHT INTO THE BUILDING IN SUCH ASSEMBLIES AND SIZES AS TO ENTER INTO THE SPACES WHERE THEY ARE TO BE LOCATED AND TO BE SMALL ENOUGH TO BE HOISTED INTO THE BUILDING WITHOUT DIFFICULTY. ANY CUTTING, PATCHING, ETC., INVOLVED IN GETTING LARGE ASSEMBLIES INTO PLACE, SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.

#### 12. SCOPE OF WORK:

- 12.1. COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE BUILDING CODE, ALL OTHER APPLICABLE CODES, REGULATIONS, BY LAWS, AND OFFICIAL STANDARDS ACCORDING TO THE REQUIREMENTS AND INTERPRETATIONS OF THE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS IN CASE OF CONFLICT, THE CODES TAKE PRECEDENCE OVER THE CONTRACT DOCUMENTS.
- 12.2. SUPPLY ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES TO COMPLETE THE WORK OF THE MECHANICAL DIVISION AS SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS.
- 12.3. COMMISSION ALL SYSTEMS, ADJUST AND BALANCE THE SYSTEMS TO MAKE FULLY OPERATIONAL PRIOR TO TURN OVER TO THE OWNER.
- 12.4. AT TURN OVER TO THE OWNER, DEMONSTRATE THE SYSTEMS AND THEIR OPERATION TO THE OWNERS OPERATING PERSONNEL. PROVIDE DETAILED INSTRUCTIONS COMPLETE WITH MANUALS, WRITTEN DESCRIPTION AND SEMINARS.
- 12.5. OBTAIN WRITTEN ACCEPTANCE FROM THE OWNER THAT THE OWNER OPERATING PERSONNEL ARE FULLY CONVERSANT WITH ALL SYSTEMS.

#### 13. PURPOSE OF THE DRAWINGS AND SPECIFICATIONS:

- 13.1. INFORMATION REQUIRED IN LAYING OUT THE WORK SHALL BE OBTAINED BY REFERENCE TO ALL CONTRACT DOCUMENTS.
- 13.2. DRAWINGS SHOW THE GENERAL LOCATION AND ROUTE OF EQUIPMENT, PIPING, DUCTWORK, ETC., BUT MAY NOT SHOW ALL NECESSARY OFF-SETS. IT IS THE INTENT, HOWEVER, THAT THE INSTALLATION BE NEAT, STRAIGHT, ETC., MAKING BEST USE OF THE SPACE, CONSERVING HEADROOM AND PROVIDING SPACE FOR FURRING.
- 13.3. THE CONTRACTOR IS TO REVIEW THE LOCATIONS FOR ALL MECHANICAL SYSTEMS AND EQUIPMENT PRIOR TO INSTALLATION AND COORDINATE WITH ALL OTHER TRADES. CONTACTS THAT CANNOT BE RESOLVED THROUGH SITE COORDINATION SHOULD BE IDENTIFIED AND REFERRED TO THE MECHANICAL CONSULTANT PRIOR TO INSTALLATION.
- 13.4. CONFIRMATION OF INSTALLATION: CONTRACTOR SHALL PROVIDE WRITTEN/EMAIL CONFIRMATION TO THE DESIGN ENGINEER FOR SITE REVIEWS ON THE FOLLOWING:
  - 4.1.1. THE DATES OF PROPOSED CONSTRUCTION START FOR INSTALLATION OF MECHANICAL, PLUMBING AND FIRE SUPPRESSION SYSTEMS.
  - 4.1.2. THE DATE OF UNDERGROUND PIPING COMPLETION, INCLUDING THE DATE OF TRENCHING AND BACKFILLING, PRIOR TO THE INFORM THE ENGINEER 2 WORKING DAYS PRIOR TO COMPLETION AND ARRANGE FOR A SITE REVIEW OF THE UNDERGROUND PIPING INSTALLATION PRIOR TO COVERING.
  - 4.1.3. THE DATE OF COMPLETION OF PLUMBING AND SHEET METAL ROUGH-IN, MECHANICAL SYSTEMS, PARTICULARLY PLUMBING SYSTEMS, MUST NOT BE COVERED WITHOUT THE CONSENT OF THE ENGINEER. INFORM THE ENGINEER 2 WORKING DAYS PRIOR TO COMPLETION AND ARRANGE FOR A SITE REVIEW OF THE ROUGH-IN INSTALLATION PRIOR TO COVERING.
  - 4.1.4. THE DATE OF EQUIPMENT STARTUP. INFORM THE ENGINEER 2 WORKING DAYS PRIOR TO STARTUP DATE AND TIME.
  - 4.1.5. THE DATE OF FINAL FINISHING. INFORM THE ENGINEER 2 WORKING DAYS PRIOR TO COMPLETION AND ARRANGE FOR A REVIEW OF THE INSTALLATION.
  - 4.1.6. THE DATE OF TURN OVER TO THE OWNER.

#### 13.1. REQUIREMENTS OF INSPECTION DEPARTMENTS:

- 13.1.1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL BY LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION IN EACH CASE, PARTICULARLY ALL AFFECTED DEPARTMENTS OF THE MUNICIPALITY AND PROVINCE. ANYTHING NECESSARY TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS SHALL BE PROVIDED BY THIS CONTRACTOR WITHOUT AN ADDITIONAL COST TO THE OWNERS IF IT COULD HAVE REASONABLY BEEN FORESEEN WHEN TENDERING.
- 13.1.2. IN THE EVENT THAT THE INSPECTION DEPARTMENTS REQUEST DEVIATES FROM THE ENGINEER'S LAYOUT, CONTRACTOR SHALL CONSULT ENGINEER BEFORE PROCEEDING WITH THE SAME. IT SHALL BE NOTED THAT ENGINEER'S DRAWING ARE GENERALLY ACCEPTABLE TO INSPECTION DEPARTMENTS AND MINOR SUPPLEMENTS NEED ONLY BE MADE BY SUBCONTRACTORS.

#### 61. PERMITS, CERTIFICATES AND FEES:

- 61.1. THIS CONTRACTOR SHALL PROVIDE ALL NOTICES, OBTAIN THE NECESSARY PERMITS AND PAY ALL FEES WHICH ARE REQUIRED TO COMPLETE THE WORK SPECIFIED HEREIN.
- 61.2. PROVIDE CERTIFICATES AS EVIDENCE THAT THE WORK INSTALLED CONFORMS TO THE CODES AND REGULATIONS OF THE AUTHORITY HAVING JURISDICTION. ALL CHARGES REQUESTED BY THE AUTHORITY SHALL BE MADE AT NO EXTRA CHARGE.

#### 71. CODES, REGULATIONS & BYLAWS:

- 71.1. ALL WORK IS INTENDED TO COMPLY WITH THE LATEST APPLICABLE PROVINCIAL BUILDING REGULATIONS, LOCAL CODES AND CITY BYLAWS. IF THE DOCUMENT INDICATES CONSTRUCTION METHODS OR MATERIALS OF A LESSER STANDARD, THE WORK SHALL BE DONE TO CONFORM TO CODE STANDARDS. HOWEVER, IN NO INSTANCE SHALL THE STANDARDS ESTABLISHED BY THE DOCUMENTS BE REDUCED.

#### 71.2. THE FOLLOWING CODES/REFERENCE STANDARDS SHALL BE APPLIED:

- 2018 BRITISH COLUMBIA BUILDING CODE
- 2018 BRITISH COLUMBIA PLUMBING CODE
- 2018 BRITISH COLUMBIA FIRE CODE
- MUNICIPAL BYLAWS
- CSA/ULC STANDARDS
- ASHRAE 62 - 2001
- ASHRAE 90.1 - 2019
- SMACNA STANDARDS

#### 81. COORDINATION WITH CONSULTANTS:

- 81.1. OBTAIN CLARIFICATION FROM THE ENGINEER OR OTHER CONSULTANTS WHERE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS NOT CLEAR.

#### 91. QUALITY OF MATERIALS AND WORKMANSHIP:

- 91.1. ALL THE MATERIALS AND EQUIPMENT'S SHALL BE NEW, UNIFORM AND OF FIRST GRADE QUALITY. THEY SHALL BE CONSTRUCTED TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SHALL CONFORM TO ALL APPLICABLE CODES, FIRE CODES, REGULATIONS AND TO THE REQUIRED STANDARDS OF CSA, ULC, ETI, ASHRAE, ASME, NFPA, ASTM, CTA, CGA, ETC. WHERE THE LATEST EDITION SHALL APPLY UNLESS IT'S RESTRICTED BY BUILDING CODE, EQUIPMENT AND MATERIAL CODE OF THIS STANDARD SHALL BE REMOVED AND REPLACED.

#### 101. SUBMITTAL OF SHOP DRAWINGS:

- 101.1. SHOP DRAWINGS MUST BE SUBMITTED FOR ALL EQUIPMENT AND SYSTEMS TO BE INSTALLED.
- 101.2. THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND MANUFACTURER'S SPECIFICATIONS OF ANY EQUIPMENT IS GENERAL FOR PERFORMANCE TO SERVE THE INTENT OF THE ENGINEER'S REVIEW. IT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ERRORS OR OF THE NECESSITY OF CHECKING THE DRAWING, OR OF FURNISHING ANY OF THE MATERIALS AND PERFORMING THE WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS TO THE FULL INTENT OF THE SPECIFICATIONS.
- 101.3. THE GENERAL AND THE SUBCONTRACTORS ARE TO REVIEW AND STAMP ALL SHOP DRAWINGS PRIOR TO SUBMISSION TO THE CONSULTANT FOR REVIEW. CONTRACTOR REVIEWS SHALL BE BASED ON COMPLIANCE WITH DESIGN EQUIPMENT AND SPECIFIED ACCESSORIES (COMPLIANCE WITH APPROVED/EQUALS LIST, CAPACITY, DIMENSIONS, WEIGHT, POWER REQUIREMENTS, ETC.) THE CONTRACTOR SHALL FLAG, FOR APPROVAL, DEVIATIONS FROM THE ORIGINALLY SPECIFIED EQUIPMENT. NO EQUIPMENT IS TO BE ORDERED UNTIL THE SHOP DRAWINGS HAVE BEEN APPROVED. IF A SHOP DRAWING OF AN ALTERNATE OR APPROVED EQUIPMENT OF EQUIPMENT HAS BEEN REJECTED THREE TIMES FOR FAILURE TO COMPLY WITH THE SPECIFICATIONS, THE CONTRACTOR WILL FURNISH THE ORIGINALLY SPECIFIED EQUIPMENT AT NO ADDITIONAL COST.
- 101.4. REFER TO THE ARCHITECTURAL/INTERIOR DESIGNERS DRAWINGS FOR ALL PLUMBING FIXTURES SPECIFICATIONS AND PRODUCE PLUMBING FIXTURE SHOP DRAWINGS.

#### 111. GUARANTEE:

- 111.1. CONTRACTOR SHALL GUARANTEE ALL LABOR, MATERIALS, EQUIPMENT, WORKMANSHIP ETC., USED IN THE WORK TO BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, OF BEST QUALITY AND EFFICIENT OPERATION UNDER THIS CONTRACT FOR A PERIOD OF 12 MONTHS AFTER FINAL ACCEPTANCE OF THE COMPLETED OPERATION. ANY DEFECTS WHICH MAY APPEAR IN ANY OF THE WORK, WITHIN ONE YEAR AFTER WRITTEN ACCEPTANCE OF WORK, SHALL BE REPAIRED AND REPLACED BY THE CONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- 111.2. EXTENDED WARRANTY AS PROVIDED BY SOME EQUIPMENT SUPPLIERS SHALL IN NO WAY VOIDED BY THIS CLAUSE.

#### 121. FOREMAN'S SUPERVISION:

- 121.1. ALL THE WORK SHALL BE CARRIED OUT UNDER THE CONTINUOUS SUPERVISION AND RESPONSIBILITY OF A COMPETENT FULL-TIME SUPERINTENDENT WITH EXPERIENCE IN WORK OF THIS CLASS AND SIZE.

#### 131. MAINTENANCE OF A CLEAN AND SAFE PROJECT:

- 131.1. REMOVE ALL DEBRIS PERTAINING TO THIS PORTION OF THE CONTRACT, AT REGULAR INTERVALS TO MAINTAIN A CLEAN AND SAFE PROJECT.
- 131.2. ABIDE BY ALL PROVINCIAL AND FEDERAL SAFETY REGULATIONS.
- 131.3. UPON COMPLETION OF WORK, CONTRACTOR SHALL LEAVE PREMISES IN A BROOM CLEAN CONDITION.

#### 141. RECORDS AS BUILT DRAWINGS:

- 141.1. PROVIDE THE OWNER WITH TWO SETS OF RECORD DRAWINGS.
- 141.2. SHOW CONDITIONS WITH RESPECT TO MATERIALS, SIZES, ROUTES AND LOCATIONS. PLOT LOCATIONS OF ACCESS DOORS, VALVES, DAMPERS ETC.
- 141.3. RECORD ACCURATELY ALL UNDERGROUND PIPING, DUCTWORK, ETC., SHOWING INVERT ELEVATIONS, CLEAN OUTS, ETC.
- 141.4. CONTRACTOR SHALL MAINTAIN AS BUILTS DURING CONSTRUCTION AND MAY BE CHECKED BY THE ENGINEER.
- 141.5. RECORD DRAWING MUST BE CLEARLY LABELED AS SUCH, WITH NAME OF COMPANY WHO COMPLETED THE WORK AND THE DATE INCLUDED. RECORD DRAWINGS NOT COMPLETED TO INDUSTRY STANDARD AND TO THE SATISFACTION OF THE ENGINEER WILL BE REJECTED.
- 141.6. PROVIDE ONE FULL SIZE HARD COPY AND SOFT COPY PDF OF RECORD DRAWINGS TO THE LANDLORD.
- 141.7. TENANT MUST SUBMIT A COMPLETE SET OF AS BUILT DRAWINGS AND FINAL CERTIFICATE OF APPROVAL FROM THE BUILDING INSPECTION DEPARTMENT TO THE LANDLORD UPON PROJECT COMPLETION.

#### 151. OPERATING AND MAINTENANCE MANUALS AND INSTRUCTIONS:

- 151.1. PREPARE THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS FOR THE MECHANICAL EQUIPMENT AND SYSTEMS AND PRESENT FOR APPROVAL TO THE ARCHITECT AT LEAST ONE MONTH PRIOR TO PROJECT COMPLETION. THESE SHALL INCLUDE:
  - GENERAL ARRANGEMENT SHOP DRAWINGS.
  - COMPLETE EXPLANATION OF OPERATING PRINCIPLES AND SEQUENCES.
  - COMPLETE PART LISTS WITH NUMBERS.

- RECOMMENDED MAINTENANCE PRACTICES AND PRECAUTIONS.
  - COMPLETE WIRING AND CONNECTIONS DIAGRAMS.
- 151.0. LADVICE AND INSTRU CT THE OWNER OR HIS REPRESENTATIVE ON THE LOCATION, FUNCTION AND GENERAL MAINTENANCE AND OPERATION OF ALL MECHANICAL EQUIPMENT PARTS INSTALLED.

- 151.0. LADVICE AND INSTRU CT THE OWNER OR HIS REPRESENTATIVE ON THE LOCATION, FUNCTION AND GENERAL MAINTENANCE AND OPERATION OF ALL MECHANICAL EQUIPMENT PARTS INSTALLED.
- 151.1. PIPES, ESCUTCHEONS AND FIRE PROOFING STOPWORKS FOR PENETRATIONS IN RATED FIRE SEPARATION:
  - 151.1.1. APPLY AND INSTALL SLEEVES FOR ALL SERVICES PASSING THROUGH WALLS, FLOORS, PARTITIONS, CEILING, ETC. SLEEVES SHALL BE FABRICATED OF THE APPROPRIATE MATERIALS FOR THE CONSTRUCTION PENETRATED TO OBTAIN PROPER SEALS, FIRE RATINGS, ETC.
  - 151.1.2. IN FINISHED AREAS, INSTALL ESCUTCHEONS PLATES TO CONCEAL THE SLEEVE SEALING MATERIAL.
  - 151.1.3. ALL SERVICES SUCH AS HEATING, PIPING, DUCTS, WIRING, CONDUIT, ETC. PASSING THROUGH RATED FIRE SEPARATIONS SHALL BE SMOKE AND FIRE STOPPED PRIOR TO THE APPLICATION OF THE SLEEVE SLEEVES, AND BETWEEN THE FIRE DAMPER AND THE FIRE SEPARATION. CHECK WITH FIRE STOPPING ASSEMBLY SHALL HAVE A FIRE RESISTANCE RATING WHICH SHALL NOT BE LESS THAN THE SURROUNDING ASSEMBLIES FIRE RESISTANCE RATING, AS INDICATED ON ARCHITECTURAL DRAWINGS.
  - 151.1.4. CONTRACTOR TO INSTALL FIRE STOPPING AND SMOKE SEAL MATERIAL IN ACCORDANCE WITH ULC CERTIFICATION AND MANUFACTURER'S INSTRUCTIONS IN FORMED, SLOPED OR CORED PENETRATIONS.
  - 151.1.6. INSTALL ULC APPROVED FIRE STOP SEALANT OF THE PROPER F AND FT RATING, AT ALL FIRE DAMPERS TO CAULK ALL JOINTS BETWEEN THE FIRE DAMPER SLEEVES AND SLEEVES, AND BETWEEN THE FIRE DAMPER SLEEVES AND THE FIRE SEPARATION. CHECK WITH FIRE DAMPER MANUFACTURER TO ENSURE THAT THE APPLICATION OF FIRE STOP SEALANT WILL NOT VOID THE ULC LISTING OF THE DAMPER.
  - 151.1.7. ALL SMOKE AND FIRE STOPPING SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR WHO SHALL SUBMIT A LETTER CERTIFYING THAT ALL WORK IS COMPLETE AND IN ACCORDANCE WITH THIS SPECIFICATION.

#### 171. EXCAVATING AND BACKFILLING:

- 171.1. UNLESS OTHERWISE INDICATED, ALL NECESSARY EXCAVATING AND BACKFILLING SHALL BE DONE BY THE EXPERIENCED CONTRACTOR.
- 171.2. BEFORE COMMENCING THE WORK, CHECK LOCATIONS OF ALL EXISTING SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES AND SUBSEQUENT EXPENSES RESULTING FROM NEGLIGENCE.
- 171.3. KEEP EXCAVATION AREAS FREE OF WATER.
- 171.4. WHERE ANY EXCAVATING IS NECESSARY IN CLOSE PROXIMITY TO OR BELOW ANY FOOTING LEVEL, CONTRACTOR TO SEEK DIRECTION FROM STRUCTURAL AND GEO TECHNICAL CONSULTANTS BEFORE BACKFILLING.
- 171.5. CONTRACTOR TO SEEK DIRECTION FROM STRUCTURAL ENGINEER FOR RE-BAR, STYROFOAM AND MEMBRANE INSTALLATION PRIOR BACKFILLING THE CONCRETE.

#### 181. NAMEPLATES, VALVE TAGS, PIPE AND DUCTWORK IDENTIFICATION:

- 181.1. EACH PRICE OF MECHANICAL EQUIPMENT SHALL BE COMPLETE WITH A LAMINOCID NAMEPLATE, SECURELY FASTENED IN A CONSPICUOUS PLACE ON THE EQUIPMENT.

#### 191. PROTECTION:

- 191.1. PROTECT THE WORK FROM CONSTRUCTION DIRT OR DAMAGE FROM ANY CAUSE. SECURELY PLUG AND CAP ALL OPENINGS IN PIPE, EQUIPMENT, AND FIXTURES TO PREVENT ANY OBSTRUCTIONS.

#### 201. ACCESS DOORS:

- 201.1.1. GATE ACCESS DOORS WHERE REQUIRED AND OF SUFFICIENT SIZE FOR SERVING VALVES, DAMPERS, CLEANOUTS, ETC.
- 201.1.2. THESE SHALL BE FLUSH MOUNTING, SCREWDRIVER ACCESS, METAL TYPES, 1/2 GAUGE PRIMED STEEL.

#### 211. BUILDING ENVELOPE:

- 211.1. ANY MECHANICAL PENETRATIONS AT THE EXTERIOR OR BUILDING ENVELOPE IS REQUIRED TO COMPLETE THE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE BUILDING ENVELOPE ENGINEER AND/OR ARCHITECT.
- 211.2. ALL BUILDING ENVELOPE PENETRATIONS SHALL BE PROPERLY SEALED BY FOLLOWING THE INSTRUCTIONS FORM OF THE BUILDING ENVELOPE ENGINEER AND/OR ARCHITECT.

#### 221. SEISMIC RESTRAINTS:

- 221.1. PROVIDE AND INSTALL SEISMIC RESTRAINTS FOR ALL NEW MECHANICAL EQUIPMENTS SUCH AS DUCTWORK, PIPING, HVAC UNITS, HOT WATER TANK ETC. MEETING REQUIREMENTS OF AUTHORITY HAVING JURISDICTION, SMACNA SEISMIC RESTRAINT GUIDE AND LATEST APPLICABLE PROVINCIAL BUILDING REGULATIONS AND LOCAL CODES.
- 221.2. A PROFESSIONAL ENGINEER REGISTERED, WHO SPECIALIZES IN DESIGN OF SEISMIC RESTRAINT SYSTEMS (SEISMIC ENGINEER) SHALL REVIEW AND PROVIDE SCHEDULE SB & SC.

#### 230. HEATING, VENTILATION AND AIR CONDITIONING:

##### 11. GENERAL:

- 11.1. ALL HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT SHALL BE CSA OR ULC LISTED, BEAR THE CSA OR ULC SEAL, AND BE INSTALLED IN ACCORDANCE WITH CSA OR ULC STANDARDS. PROVIDE VENTING MATERIALS IF REQUIRED TO SUIT THE SPECIFIC EQUIPMENT APPLICATION, AS PER MANUFACTURER'S VENTING GUIDELINES.
- 11.2. ALL DUCTWORK SHALL BE CONSTRUCTED, INSTALLED & SUPPORTED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS. INSTALL DUCTS IN LOCATIONS, SHAPES AND SIZES SHOWN. LAYOUT DUCTWORK IN ADVANCE TO ASSURE THAT IT WILL FIT IN THE SPACE PROVIDED.
- 11.3. DUCTWORK SHALL BE MADE SUBSTANTIALLY AIR TIGHT THROUGHOUT AND SHALL HAVE NO OPENINGS OTHER THAN THOSE REQUIRED FOR THE OPERATION AND MAINTENANCE OF THE ALLOWABLE LEAKAGE FACTOR SHALL NOT EXCEED 2% THROUGH THE LONGEST DUCT RUN. ALL DUCT JOINTS SHALL BE SEALED WITH LIQUID DUCT SEALANT MEETING THE FLAME RESISTANCE REQUIREMENTS OF ULC S109.
- 11.4. ALL AIR HANDLING SYSTEMS SHALL BE TESTED AND BALANCED BY A CERTIFIED TESTING COMPANY TO WITHIN 5% OF THE DESIGN AIR VOLUMES. AIR BALANCING REPORT SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO OCCUPANCY.
- 11.5. BALANCING DAMPERS SHALL BE INSTALLED AT ALL TAKE-OFFS FROM BRANCH DUCTS, AND ALL BRANCH DUCT CONNECTIONS TO MAIN DUCTS ON SUPPLY, RETURN AND EXHAUST SYSTEMS. BALANCING DAMPERS SHALL BE MANUALLY OPERATED BY OPPOSED BLADE TYPE, SPLITTER TYPE, OR BUTTERFLY TYPE, COMPLETE WITH LOCKING QUADRANT OPERATOR.
- 11.6. FIRE DAMPERS SHALL BE INSTALLED IN THE PLANE OF PENETRATION OF FIRE SEPARATIONS AND IN ACCORDANCE WITH NFPA 80A AND ULC S805 AND SHALL BEAR THE ULC SEAL. DAMPERS SHALL BE TYPE A, 1.5 HOUR FIRE RATED AND COMPLETE WITH 160 DEG. F REPLACEABLE LINK. A TIGHTLY FITTED ACCESS DOOR SHALL BE INSTALLED FOR EACH FIRE DAMPER TO PROVIDE ACCESS FOR INSPECTION, AND RESETTING OF DAMPER, AND REPLACING OF FUSIBLE LINK. FIRE DAMPERS SHALL BE SUPPORTED INDEPENDENTLY FROM DUCTWORK.
- 11.7. FIRE DAMPERS ARE REQUIRED TO BE CANULIUC 282 TESTED.
- 11.8. VIBRATION ISOLATION FLEXIBLE DUCT CONNECTORS SHALL BE USED WHERE DUCTWORK CONNECTS DIRECTLY TO AIR HANDLING EQUIPMENT. CONNECTORS SHALL BE NON-COMBUSTIBLE, OR OF COMBUSTIBLE FABRIC CONSTRUCTION PROVIDED THEY DO NOT EXCEED 10" IN LENGTH AND COMPLY WITH THE FLAME RESISTANCE REQUIREMENTS OF ULC S109. COLLARS SHALL BE GALVANIZED IRON AND FASTENED SECURELY TO ENSURE A LEAK PROOF CONNECTION.
- 11.9. THE MECHANICAL CONTRACTOR IS TO PROVIDE ACCESS PANELS FOR ALL MECHANICAL EQUIPMENTS, MOTOR OPERATED DAMPERS, BALANCING DAMPERS, FIRE AND SMOKE DAMPERS, AND SERVICE POINTS CONCEALED BEHIND WALLS AND CEILINGS. ACCESS PANEL LOCATED IN FIRE RATED ASSEMBLIES SHALL BE ULC LISTED TO MATCH THE RATING OF THE ASSEMBLY.
- 11.10. DUCT OPENINGS, AIR TERMINALS AND EQUIPMENT SHALL REMAIN COVERED OR PROTECTED WHILE ON THE JOB SITE PRIOR TO COMMISSIONING. FAILURE TO DO SO WILL RESULT IN THE MECHANICAL CONTRACTOR BEARING THE FULL COST OF CLEANING THE INTERIOR OF THE DUCTWORK SYSTEM(S) PRIOR TO OCCUPANCY.
- 11.11. THE CONTRACTOR IS TO REVIEW THE ARCHITECTURAL FIRE SEPARATION DRAWINGS AND PROVIDE FIRE & SMOKE DAMPERS AT ALL DUCT PENETRATIONS THROUGH FLOOR AND FIRE SEPARATIONS AND WHERE INDICATED ON THE PLANS. ALL FIRE & SMOKE DAMPERS ARE TO BE DYNAMIC AND TYPE B UNLESS SPECIFICALLY NOTED OTHERWISE. TYPE A DAMPERS MAY BE USED WHEN THERE IS A DIRECTLY MOUNTED FIRE STOPPING ASSEMBLY. IF TYPE A DAMPERS ARE USED THE DUCT IS TO BE OVERSIZED TO MAINTAIN THE CLEAR INSIDE DIMENSION OF THE DUCTWORK.
- 11.12. WHERE DUCTWORK PASSES THROUGH A WALL OR FLOOR, OTHER THAN WHEN A FIRE DAMPER IS REQUIRED, PACK AROUND THE DUCT USING A FIRE RESISTANT MATERIAL TO ENSURE A SOUND AND AIRTIGHT JOINT.
- 11.13. CONTRACTOR TO VERIFY MINIMUM 10" (250MM) DIMENSION FROM TOP OF ROOF ASSEMBLY TO TOP OF ROOF CURBS PRIOR TO ORDERING.
- 11.14. CONTRACTOR TO INSTALL REGISTERS, GRILLES, LOUVER AND DIFFUSERS AS SHOWN ON THE DRAWING. USE EQUIPMENT FROM MANUFACTURERS WITH PUBLISHED DATA TESTED TO AMCA STANDARDS. DO NOT USE TERMINAL DAMPERS UNLESS VOLUME CONTROL CANNOT BE ACHIEVED WITH DUCT DEVICES.
- 11.15. CONTRACTOR TO VERIFY THE MAXIMUM SOUND LEVEL AT ANY OCCUPIED SPACE SHALL NOT EXCEED NC [30].
- 11.16. CONTRACTOR TO INSTALL DRYER VENT COMPLETE WITH LINT TRAP IF ARCHITECTURAL/INTERIOR DESIGN DRAWING CONFIRMS THE DRYER INSTALLATION.
- 11.17. CONTRACTOR TO INSTALL B-VENTS FOR COMBUSTION EXHAUST GAS FLUE FOR ALL GAS FIRED UNITS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. COMBUSTION FRESH AIR INTAKE VENT IS REQUIRED.
- 11.18. CONTRACTOR TO VERIFY WITH ENGINEER AND INSTALL A CONDENSATE HOOD WITH EXHAUST FAN FOR HIGH TEMPERATURE COMMERCIAL DISHWASHER AND CONDENSATE HOOD FOR LOW TEMPERATURE COMMERCIAL DISHWASHER.
- 11.19. EXISTING HVAC UNITS, AIR CONDITIONING AND HEATING REUSED SHALL BE CHECKED BY THE TENANT'S HVAC CONTRACTOR SHALL EXECUTE THE FOLLOWING WORK WITHOUT BEING LIMITED TO:
  - FANS, REPLACE BELTS AND ALIGNMENT IF REQUIRED
  - BALL BEARINGS LUBRICATION
  - COILS, CLEANING AND PURGING
  - REPLACE FILTER IF REQUIRED
  - CHECK REFRIGERANT CHARGE
  - CHECK WIRING AND CONTROLS
  - CLEAN THE CONDENSER AND ITS COMPONENTS
  - VERIFY AND REPAIR DUCTS INDICATED ON DRAWINGS.

##### 21. DUCT INSULATION:

- 21.1. ALL DUCTS SHOWN ARE NET INSIDE CLASH DIMENSIONS (ACOUSTICALLY LINED DUCTWORK WILL BE INCREASED IN DIMENSION BY THE THICKNESS OF THE INSULATION).
- 21.2. PROVIDE ACOUSTIC LINING ON SUPPLY AND RETURN AIR DUCTS 3" (90) DOWNSTREAM OF ROOF TOP UNITS, AIR HANDLERS, FAN COILS, WATER SOURCE HEAT PUMPS, ON DUCTS TRANSFERS BETWEEN ROOMS, ON ALL EXHAUST DUCTS WITHIN 10' (3050) OF FANS ON ALL OUTDOOR AIR DUCTS AND WHERE INDICATED ON THE PLANS. DO NOT PROVIDE ACOUSTIC LINING ON KITCHEN GREASE OR DRYER EXHAUST DUCTS. ACOUSTIC LINING TO MEET ULC I81 AND NFPA 90A FLEXIBLE FIBER GLASS 1" THICK POLY ULC LINER.
- 21.3. PROVIDE THERMAL INSULATION ON FRESH AIR INTAKE AND EXHAUST DUCTS SUFFICIENTLY FROM THE EXTERIOR LOUVER TO PREVENT SWEATING AT COLDEST DESIGN EXTERIOR CONDITION. THERMAL INSULATION REQUIREMENTS AND SIZES ARE BELOW:
  - RECTANGULAR DUCT: RIGID FIBERGLASS 1 1/2" THICK BOARD, JOHNS MANVILLE SPIN GLASS 650 BOARD OR APPROVED EQUAL VAPOUR BARRIER SHALL CONSIST OF A FOIL SCRIM KRAFT PAPER LAMINATE CONSISTING OF ALUMINUM FOIL REINFORCED WITH FIBER GLASS YARN AND LAMINATED TO A MECHANICALLY TREATED FIRE RESISTANT KRAFT.
  - ROUND DUCT: FLEXIBLE FIBER GLASS 1 1/2" THICK BLANKET, JOHNS MANVILLE WITH A FOIL SCRIM KRAFT FACING OR APPROVED EQUAL.
  - EXHAUST FRESH AIR DUCT: INSULATE WITH IN 0" 4" OF COLD OUTLET AT ROOF, ATTIC, OR WALL WITH 1" THICK FIBER GLASS INSULATION WITH FOIL FACING VAPOUR BARRIER.
  - FLEXIBLE DUCT: CAN FLEX TYPE CL IV INSULATED POLYURETHAN JACKET, CAN FLEX TYPE CL IA INSULATED ALUMINIZED JACKET, OR APPROVED EQUAL.
- 21.4. ALL HEATING, AIR CONDITIONING, FRESH AIR AND EXHAUST IN DUCTWORK WITH IN UNCONDITIONED (ATTIC) SHALL BE INSULATED WITH 2" RIGID FIBERGLASS THERMAL INSULATION CAN VAPOUR BARRIER.
- 21.5. INSULATED OUTDOOR OR EXPOSED DUCTWORK SHALL BE FINISHED WITH 6 OZ. FIRE RETARDANT CANVAS LAGGED IN PLACE WITH FIRE RETARDED LAGGING ADHESIVE, OUTDOOR VAPOUR BARRIER MASTIC FINISH WITH A REINFORCING MEMBRANE. ALL JOINTS SHALL HAVE A MINIMUM OVERLAP OF 3".
- 21.4. ALL DUCT INSULATION SHALL BE CONTINUOUS THROUGHOUT WALL AND CEILING OPENINGS AND SLEEVES.

- 21.5. JACKETS, COVERINGS, SEALANTS ADHESIVES, ETC SHALL HAVE SMOKE DEVELOPED RATING NOT EXCEEDING 30 AND FLAME SPREAD RATINGS NOT EXCEEDING 25.

#### 31. DUCTWORK CONSTRUCTION:

- 31.1. DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL ACCORDANCE WITH NFPA 90A, ULC S100 AND ASTM A375. SUFFICIENTLY BRACED TO PREVENT BATTING OR LEAKING. DUCT SYSTEMS SHALL BE COMPLETE OF SIZES SHOWN. IF NOT SHOWN, OF SIZES REQUIRED TO PRODUCE CAPACITY OF EQUIPMENT INSTALLED, PROPERLY SUPPORT DUCTS WITH GALVANIZED HANGERS, GAUGES, JOINTS, BRACING AND HANGERS SHALL BE IN ACCORDANCE WITH THE SMACNA MANUAL LATEST EDITION.
- 31.6. MEDIUM VELOCITY AND EXPOSED RIGID DUCTWORK TO BE SPIRAL LOCK SEAM TYPE ONLY. DUCTWORK IN INTERIOR EXPOSED AREAS INTENDED TO BE PAINTED SHALL BE SATIN FINISH UNLESS INSTRUCTED BY ARCHITECT OR INTERIOR DESIGNER ON BOARD.
- 31.7. PRIOR TO FABRICATION OF DUCTWORK, CHECK ALL CEILING SPACES AND HEIGHTS AND CONFLICTS WITH OTHER TRADES.
- 31.8. LOW VELOCITY INSULATED FLEXIBLE DUCTWORK SHALL BE EQUAL TO THERMAFLEX TYPE M KC. CONNECT AIR OUTLETS TO LOW PRESSURE DUCTS WITH 5" (125 MM) MAXIMUM LENGTH OF STRETCHED FLEXIBLE DUCT. HOLD IN PLACE WITH CAULKING COMPOUND AND STRAP OR CLAMP.
- 31.9. PROVIDE ALL NECESSARY ANCHORS AND GUIDES TO PERMIT FIRE EXPANSION AND CONTRACTION OF DUCTS. HANGERS AND SUPPORTS FOR CONDUITS SHALL NOT INTRUDE OR PREJUDICE THE INSULATION.
- 31.10. ALL LAPS SHALL BE SMOOTH AND IN THE DIRECTION OF AIR FLOW. SHEET METAL SCREWS SHALL BE ACCEPTED ON LOW PRESSURE DUCTWORK ONLY.
- 31.11. CONSTRUCT LOW PRESSURE RECTANGULAR DUCTS FOR SYSTEMS LESS THAN 2" (5.0 KPA) STATIC PRESSURE AND UNDER 2000 FPM (6.2 MS) VELOCITY.
- 31.12. ELBOWS SHALL BE CONSTRUCTED USING A RADIUS OF 1.5 TIMES OF DUCT DIAMETER/WIDTH.
- 31.13. PROVIDE HANGERS AS FOLLOWS:

DUCT TYPE	DUCT DIMENSIONS	HANGER CONSTRUCTION
HORIZONTAL RECTANGULAR DUCT	UP TO 60" (LOW PRESSURE DUCTWORK ONLY)	TWO 25MM X 16 GAUGE STRAPS WITH TWO SCREWS ON SIDE OF DUCT, ONE SCREW ON BOTTOM. HANGERS SHALL BE AT EACH JOINT, MAXIMUM 96" ON CENTERS.

#### HORIZONTAL ROUND DUCT

	UP TO 18"	ONE 25MM X 16 GAUGE RING SUPPORTED FROM ONE 25MM X 16 GAUGE HANGER STRAP. HANGERS SHALL BE AT EACH JOINT, MAXIMUM 96" ON CENTERS.
HORIZONTAL ROUND DUCT	20" TO 36"	ONE 25MM X 12 GAUGE RING SUPPORTED FROM ONE 25MM X 12 GAUGE HANGER STRAP. HANGERS SHALL BE AT EACH JOINT, MAXIMUM 96" ON CENTERS.

#### 31.14. PROVIDE SHEET METAL THICKNESS AS FOLLOWS:

RECTANGULAR DUCT DIMENSIONS	SHEET METAL THICKNESS (GAUGES)	TYPE JOINT
UP TO 12"	26	"DRIVE SLIP"
14" TO 30"	24	"T"
32" TO 54"	22	"T"
56" TO 84"	20	"T"
86" AND MORE	18	"T"
ROUND DUCT DIMENSIONS:		
3" TO 8"	26	
10" TO 22"	24	
24" TO 36"	22	

#### 41. CONTROLS:

- 41.1. PROVIDE ALL AUTOMATIC CONTROLS CONSISTING OF, BUT NOT LIMITED TO: THERMOSTATS, AUTOMATIC DAMPERS, DAMPER ACTUATORS, CARBON MONOXIDE SENSORS, RELAYS, TRANSFORMERS, AND ALL OTHER APPARATUS REQUIRED TO OPERATE ALL MECHANICAL EQUIPMENT TO THE LEVEL OF THE SEQUENCES OF OPERATION AND SATISFACTION OF THE CONSULTANT.
- 41.2. CONTRACTOR TO INSTALL 7 DAY PROGRAMMABLE THERMOSTATS NEAR THE RETURN AIR OR INTERIOR WALLS AS SHOWN ON DRAWING FOR ALL RTU'S, AIR HANDLING UNITS, FAN COILS, WATER SOURCE HEAT PUMPS AND ANY HVAC UNITS.
- 41.3. PROVIDE REVERSE ACTING THERMOSTATS FOR EXHAUST FANS INSTALLED IN THE MECHANICAL ROOM, ELEVATOR MACHINE ROOM, ELECTRICAL ROOM, OR ANY HEAT DISSIPATING ROOM. TEMPERATURE SETTING RANGE: 50° TO 84°F.
- 41.4. ALL THE WIRING SHALL BE INSTALLED IN EMT CONDUIT AS PER DIVISION 26 SPECIFICATIONS.

#### 50. PLUMBING:

##### 11. GENERAL:

- 11.1. ALL WORK SHALL INCLUDE PLUMBING FIXTURES, WATER PIPING AND DRAINAGE AS REQUIRED AND/OR SHOWN ON THE DRAWING. ALL WORK SHALL BE INSTALLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE PLUMBING AND BUILDING CODES AND IN COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION.
- 11.2. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PLUMBING PERMITS.
- 11.3. PROVIDE TRAP SEAL PRIMER FOR EVERY FLOOR DRAIN AND HUB/DRAINS. TRAP SEAL PRIMER SHALL BE CONNECTED TO NEAREST WATER SUPPLY.
- 11.4. CONTRACTOR TO COORDINATE FINAL LOCATIONS OF PIPING AND PIPING RISERS, ETC., WITH OTHER TRADES PRIOR TO COMMENCEMENT OF ANY WORK. DROP ALL PENETRATIONS AS SHOWN OR AS CLOSE TO COLUMNS AND IN PARTITION WALLS WHERE POSSIBLE. COORDINATE WITH ARCHITECTURAL AND ARCHITECTURAL DRAWINGS.
- 11.5. ALL PIPING SHALL BE INSTALLED TO MAKE PROVISIONS FOR THE EXPANSION AND CONTRACTION OF PIPES AND TO BE FREE FROM STRAINS AND DISTORTIONS. PROVIDE SWING JOINTS ON ALL BRANCH LINES, EXPANSION LOOPS ON ALL STRAIGHT RUNS OVER 100', AND ANCHORS TO LIMIT HORIZONTAL EXPANSION.
- 11.6. UNLESS SPECIFICALLY NOTED OTHERWISE SLOPE ALL SANITARY AND STORM DRAINAGE PIPES MINIMUM 2% FOR PIPES 75MM (3") AND SMALLER AND MINIMUM 1% FOR SANITARY PIPES 100MM (4") AND LARGER.
- 11.7. CONTRACTOR TO VERIFY THE MANUFACTURER REQUIREMENT AND INSTALL CONDENSATE DRAIN PIPE FOR ALL NEW AIR HANDLING UNITS, FAN COIL UNITS, HEAT RECOVERY VENTILATORS AND ANY INDOOR HVAC UNITS (IF REQUIRED).
- 11.8. EVERY FIXTURE SHALL HAVE ITS OWN ISOLATION VALVES, TRAP AND VENT IN ACCORDANCE WITH THE CURRENT EDITION OF THE PLUMBING AND BUILDING CODES.
- 11.9. ALL PLUMBING VENTS ARE TO BE SIZED AND INSTALLED IN ACCORDANCE TO THE CURRENT EDITION OF THE PLUMBING AND BUILDING CODES AND IN COMPLIANCE WITH THE AUTHORITY HAVING JURISDICTION. ALL VENTS SHALL EXTEND TO A MINIMUM OF 300MM (12") ABOVE FINISHED ROOF.
- 11.10. PROVIDE CHROME PLATED SERVICE STOPS AT ALL PLUMBING FIXTURES, 1/4 TURN STOPS FOR PRIVATE FIXTURES, SCREWDRIVER STOPS FOR PUBLIC FIXTURES/CNV ESCUTCHEONS.
- 11.11. ALL SANITARY MAINS FROM THE UT SHALL BE 100MM (4") UNLESS NOTED OTHERWISE.
- 11.12. CONTRACTOR TO ENSURE THAT ALL CONNECTIONS BETWEEN PIPING AND EQUIPMENTS THAT HAS DISSIMILAR METALS SHALL HAVE DIELECTRIC COPULATIONS/CONNECTIONS.
- 11.13. PROVIDE WATER HAMMER ARRESTORS 2" ACCORDING TO SYSTEM WORKING PRESSURE, ON ALL HOT AND COLD WATER PIPING SERVING FIXTURES WITH QUICK CLOSING VALVES, AND WHERE REQUIRED BY THE CURRENT EDITION OF THE LOCAL PLUMBING CODE AND THE AUTHORITY HAVING JURISDICTION. EXAMPLE: WASHER.
- 11.14. ALL PIPING THAT PENETRATES AN ARCHITECTURAL FIRE SEPARATION IS TO BE FULLY FIRE STOPPED WITH LISTED FIRE STOP ASSEMBLIES AS REQUIRED BY THE PIPING AND FIRE STOP MANUFACTURERS AND THE AUTHORITY HAVING JURISDICTION.
- 11.15. SLEEVES SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR FOR ALL PIPES PASSING THROUGH FIRE RATED WALLS AND FLOORS. SLEEVES SHALL BE STANDARD WEIGHT STEEL PIPE OR 18 GAUGE (1.2MM) GALVANIZED STEEL.
- 11.16. PROVIDE VACUUM BREAKERS ON ALL HOSE CONNECTIONS, HOT WATER TANKS AND BACK FLOW PREVENTERS ON ALL DOMESTIC WATER CONNECTIONS, WHERE REQUIRED BY CODE AND LOCAL AUTHORITY.
- 11.17. CONTRACTOR TO REFER ARCHITECTURAL/INTERIOR DESIGN DRAWINGS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES. COORDINATE THE FIXTURE ROUGH-IN DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND PLUMBING FIXTURES SHOP DRAWINGS.
- 11.18. CONTRACTOR TO SEND THE PLUMBING FIXTURES SHOP DRAWINGS TO REVIEW AND APPROVE THE DRAIN SIZES AND PERFORMANCE OF THE PLUMBING FIXTURES PRIOR INSTALLATION.
- 11.19. CONTRACTOR SHALL PROVIDE MIXING VALVES AS REQUIRED BY LOCAL BUILDING CODES FOR PLUMBING FIXTURES, EXCEPT DISHWASHERS AND CLOTHES WASHERS, TO ENSURE A MAXIMUM WATER TEMPERATURE OF NOT MORE THAN 120°F (49°C). EXAMPLE: DAYCARE/SEX, PUBLIC LAVATORY, SHOWER, ETC.
- 11.20. CONTRACTOR SHALL PROVIDE EXPANSION TANK ON DOMESTIC WATER SYSTEM AFTER CHECK VALVE ASSEMBLY SUITABLE FOR THE VOLUME OF WATER IN THE SYSTEM TO ALLOW FOR EXPANSION AND CONTRACTION AS PER LOCAL BUILDING CODES.
- 11.21. CONTRACTOR TO PAINT ALL PIPING EXPOSED OUTSIDE TO PREVENT CORROSION.
- 11.22. CONTRACTOR TO CHECK INVERT ELEVATIONS PRIOR TO SANITARY AND STORM CONNECTIONS.
- 11.23. WORK INCLUDED WITHOUT BEING LIMITED TO:
  - DEMOLITION WORK OF ALL COMPONENTS UNSED
  - COMPLETE SANITARY DRAINAGE SYSTEM TO BE CONNECTED TO EXISTING
  - NATURAL GAS NETWORK CONNECTED TO EXISTING
  - DOMESTIC COLD WATER NETWORK TO BE CONNECTED TO EXISTING
  - DOMESTIC HOT WATER NETWORK
  - PLUMBING FIXTURES, FLOOR DRAINS, FUNNEL DRAINS, ETC
  - START UP, CALIBRATION AND TESTS OF SYSTEMS

##### 21. PIPE INSULATION:

- 21.1. INSULATION SHALL BE APPLIED ON CLEAN, DRY SURFACES AND ONLY AFTER TESTS AND APPROVALS REQUIRED HAVE BEEN COMPLETED. BOTH CONCEALED AND EXPOSED PIPING SHALL BE INSULATED.
- 21.2. ALL PIPE INSULATION SHALL BE CONTINUOUS THROUGH WALL AND CEILING OPENINGS AND SLEEVES. SUITABLE FIRE STOPS SHALL BE INSTALLED WHERE REQUIRED.
- 21.3. INSULATION ON ALL COLD SURFACES MUST BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOUR SEAL.
- 21.4. HANGERS, SUPPORTS, ANCHOR, ETC., THAT ARE SECURED DIRECTLY TO COLD SURFACES, MUST BE ADEQUATELY INSULATED AND VAPOUR SEALED TO PREVENT CONDENSATION.
- 21.5. ALL SURFACE FINISHES SHALL BE INSTALLED TO PROTECT ALL SURFACES, ENDS, AND ROW EDGES ON INSULATION.
- 21.6. INSULATE HORIZONTAL AND VERTICAL STORM