Staff Report

Development Services Department *www.kitchener.ca*

REPORT TO:	**Heritage Kitchener**
DATE OF MEETING:	**June 6, 2023**
SUBMITTED BY:	**Garett Stevenson, Interim Planning Director, 519-741-2200 ext. 7070**
PREPARED BY:	**Raida Chowdhury, Student Planner, 519-741-2200 ext. 7078**
WARD(S) INVOLVED:	**Ward 10**
DATE OF REPORT:	**June 2, 2023**
REPORT NO.:	**DSD-2023-275**
SUBJECT:	**Addendum to Report DSD-2023-248**

RECOMMENDATION:

For information

REPORT:

Report no. DSD-2023-275, dated May 27, 2023, as prepared for the June 6, 2023 Heritage Kitchener meeting, outlines the 2023 Mike and Pat Wagner Award nomination summaries for 5 nominated properties.

This addendum report is to add the nomination summary for 1 Queen Street North to report no. DSD-2023-275.

1 Queen Street North (American Hotel) – Rehabilitation / Adaptive Reuse of Cultural Heritage Resources

The subject property is listed as a non-designated property of cultural heritage value or interest on the Municipal Heritage Register. The original owner of the property is Louis Breithaupt, who served as Mayor of Berlin from 1879 to 1880. The site was home to the American Hotel and remains the oldest commercial building in Kitchener. The property has undergone rehabilitation and continues to be used as commercial space. The rehabilitation work included improvements to the structural integrity of the building, repairs to the masonry, and updates to the egress. Additions to modernize the building such as an elevator and washroom were included. The exterior was finished with various elements appropriate to the style of the building, including trim, decorative moulding, and cornices.

Figure 1: 1 Queen Street North Before Restoration

Figure 2: 1 Queen Street North After Restoration

APPROVED BY: Must be the CAO or a General Manager

ATTACHMENTS:

Attachment A – 1 Queen Street North Nomination Package

Raida Chowdhury

From: noreply@esolutionsgroup.ca
Sent: Wednesday, April 26, 2023 11:51 AM
To: Great Places (SM)
Subject: New Response Completed for Great Places Awards - 2023
Attachments: 2023-04-26-063.pdf

Hello,

Please note the following response to Great Places Awards - 2023 has been submitted at Wednesday April 26th 2023 11:46 AM with reference number 2023-04-26-063.

- **Nomination type**
  Mike & Pat Wagner heritage award

- **Mike & Pat Wagner heritage award**
  Rehabilitation / adaptive reuse of cultural heritage resources

- **Has this project been nominated before?**
  No

- **Name of project being nominated**
  American Hotel

- **Project address/location**
  1 Queen Street North

- **Why are you nominating this project?**
  It has been through too many tenants, too much abuse, and what was left too little, to make a reasonable candidate for a more precious restoration. Yet, what is said to be the oldest building in downtown Kitchener circa 1862, still deserved to be rescued, repurposed and revitalised in a lasting way.

- **Main contact name**
  Stephen Litt, Vive Development

- **Address (main contact)**
  1020 King Street East, Kitchener

- **Phone number (main contact)**
  5194982141

- **Email (main contact)**
  sl@vivedevelopment.ca

- **Name (nominator)**
  Richard D'Alessandro, NEO Architecture

- **Street address (nominator)**
  270 King Street East

- **City (nominator)**
  Kitchener

- **Province (nominator)**
  Ontario

- **Postal code (nominator)**
  N2G 2L1

- **Phone (nominator)**
  5195900265

- **Email (nominator)**
  richard@neoarchitecture.ca

- **Nominator confirmation**
  By checking this box, I as nominator confirm I have notified the nominee /property owner and have received their permission to make this nomination.

- **Enter answer below:**
  American Hotel
  1 Queen Street North, Kitchener
  Building Height: 3 Storeys
  Building Area: 621 sqm
  GFA: 1839 sqm

  It began with stripping away layers of haphazard renovations, inside and out. Sagging joists were sistered, beams and columns were added. Openings were braced and structural loads transferred. Brick was repaired and refinished.

  Then, to prolong the use of the building and extend its life indefinitely, an elevator and washrooms were added, and means of egress updated to comply with current building codes. Conflict upon compromise was discovered and necessary, budgets blown and timelines tested - less determined owners would have thrown in the towel.

  But at long last, the building is whole and the street level exterior has now been reunified. Generous expanses of glazing and a continuous signage band serve new commercial tenants and office spaces above. The building is finished with trims, decorative moulding and cornices of the appropriate style, and in a discrete and dignified black. Save for one wall, which is instead clad in a contemporary pattern of shiny metal, in order to enhance the historically nondescript side facing Goudie's Lane.

- **Firm name**
  1. Vive Development
  2. JG Group
  3. NEO Architecture
  4. Strik Baldinelli Moniz
  5. Ontenco
  6. MHBC

7. Woodhouse Group

- **Contact name**
  1. Stephen Litt
  2. Shaddi Fahel
  3. Laird Robertson
  4. Kevin Moniz
  5. Nizar Abboud
  6. Pierre Chauvin
  7. Jason Boyer

- **Telephone**
  1. 519 498 2141
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  6. 519 580 4912
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- **Email**
  1. sl@vivedevelopment.ca
  2. shaddi@jggroup.ca
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  6. pchauvin@mhbcplan.com
  7. jasonb@woodhouse.ca

- **Upload documents containing all project material**
  1. 1 Queen_Historic.jpg [80.0 KB]
  2. 1 Queen_Existing.jpg [1.3 MB]
  3. 1 Queen_Proposed.jpg [8.5 MB]
  4. 1 Queen_Phase 1 Drawings.pdf [12.9 MB]
  5. 1 Queen_Phase 2 Drawings.pdf [9.8 MB]

[This is an automated email notification -- please do not respond]


A. TYSON'S GROCERY
R.W. NIEHAUS


CIVILIAN
legacy greens


FOUR KING ST E

10/5/2018 4:49 PM

OBC SUMMARY

3.1.3.1 Major Occupancy Fire Separations
A2 to D = 1 Hr
A2 to E = 2 Hr
D to E = n/a

3.1.7. Occupant Load
A2 = Ø.95/m² (non-fixed tables and chairs)
D = 9.3/m² (offices)
E = 3.1/m² (1ST storey)

3.3.1 Separation of Suites
1Hr FRR required between Group D suites. Can be 45 min if 3.2.2 is permitted to be less than 1 Hr for the floor area above (or below at top level).

3.4.2.5. Location of Exits
1(c) 45m (147'-1") for occupancies other than high hazard industrial, if sprinklered.

3.4.3.2 Exit Width
6.1mm/person (1.5Ø) = 915mm exit width.
Ground Floor (Retail) = 192.4/3.1+52/2x6.1=mm/6=1mm/exit
Ground Floor (Office) = 192.4/9.3+/2x6.1=mm/5Ømm/exit
Second Floor = 481m²/9.3+53/2x92=248.4mm/exit
Third Floor = 431m² /9.3+47/2x32=22Ø.Ø/exit

3.1.4.3. Washroom Requirements
3.7.4.2.(1) Occupant load for offices for plumbing fixture count = 14 m²/person
3.7.4.7.(2) Shared washroom for less than 1Ø persons.
3.7.4.8.(2) Public washrooms for mercantile = 1:3ØØ males and 1/1ØØ females except that (a) uc for employees can count toward public count if accessible to the public, (b) if the total mercantile area is less than 6ØØ m2, only 1 uc/sex be provided.
• Less than 1Ø employees and 6ØØm² = 1 uc/sex, publicly accessible
NOTE: Retail/Office space on the ground floor will be initially occupied by the same office tenant as the second floor. Washrooms for the ground floor office use will be provided on the second floor. Retail washrooms at the ground floor will be by tenant.
Retail: Assuming a maximum of 1Ø retail employees (5/sex) only 1 washroom per sex is required. Public retail washrooms can be shared with employee washroom if accessible for less than 6ØØm² (retail= 511m²). Therefor only two unisex, including one barrier-free, washrooms are required.
Office: Based on an occupancy load of 14m²/person 2 fixtures/sex are required for Phase 1 and a total of 3/sex for Phase 2.

3.8.3.13
A barrier-free shower is not required where there is only one in a group.

11.2.1 A Construction Index
The building currently has no visibly fire ratings between floors. It is assumed that the fire protection performance level on the Construction Index (CI) is 1.

11.2.1.B-N Hazard Index
11.2.1.1 C Hazard Index (large building) Group A2 (Restaurant) = 6
11.2.1.1 Hazard Index (small building) Group C (Apartments) = 4
11.2.1.1 J Hazard Index (medium building) Group D (Office/Business) = 3
11.2.1.1 K Hazard Index (medium building) Group E (Retail) = 4-5

There is a change of use on a portion of the second and third floors from Group C Residential (H=4) to Group D Office - Business (H=3).

11.4.3.4A
Existing C.I. 1 to Proposed H.I. 6 (Combustible) must comply with the AC which is to provide a 1 hr rating plus sprinkler system.

11.4.3.4B Additional Upgrading for Multiple Major Tenants

Major Occupancy	3.1.3.1 Requirement	Part 11 CA	Part 11 CA (Sprinklered)
All	1 hr rating	45 mins	30 min
All	2 hr rating	1.5 hr	1 hr

Wall Type Legend

W301.2x
- LOCATION
- SUBSTRATE
- TYPE
- SUFFIX

LOCATION
E EXTERIOR TYPE
W INTERIOR PARTITION
C CEILING
R ROOF

SUBSTRATE
1 POURED CONCRETE
2 CONCRETE BLOCK
3 STUD FRAMING

TYPE
REFER TO SCHEDULE

SUFFIXES:
1 NO RATING REQUIRED
2 1 HOUR FIRE SEPARATION
x EXISTING TO REMAIN

Fire Separation Legend

Ø.Ø HOUR RATED FIRE SEPARATION

1.Ø HOUR RATED FIRE SEPARATION

2.Ø HOUR RATED FIRE SEPARATION

Fire Separation Notes

1. ALL EXISTING OPENINGS IN RATED PARTITIONS TO BE INFILLED TO MATCH EXISTING AND MAINTAIN REQUIRED FIRE RESISTANCE RATING.
2. PATCH AND REPAIR ALL WALL TO MAINTAIN REQUIRED FIRE RESISTANCE RATING.
3. ALL FLOORS TO HAVE A 1 HOUR FIRE RESISTANCE RATING. REFER TO 3/A0Ø1 FOR ASSEMBLY CONSTRUCTION.
4. ALL NEW STRUCTURE TO HAVE A 1 HOUR FIRE RESISTANCE RATING CONSISTING OF TWO LAYER OF ⅝" TYPE X GYPSUM BOARD.
5. ALL EXISTING BRICK MASONRY WALL 2 WYTHS OR THICKER PROVIDE A MINIMUM OF A 1 HOUR FIRE RESISTANCE RATING.

Wall Types

E201.x — EXTERIOR WALL - MASONRY (EXISTING)
- STONE RUBBLE

E202.x / E202 — EXTERIOR WALL - MASONRY (EXISTING)
- 2 WYTH BRICK MASONRY

E203.x / E203 — EXTERIOR WALL - MASONRY (EXISTING)
- 3 WYTH BRICK MASONRY

E204.x / E204 — EXTERIOR WALL - MASONRY (EXISTING)
- 4 WYTH BRICK MASONRY

E203.X — EXTERIOR WALL - MASONRY
- 8" CONCRETE BLOCK

E204 — EXTERIOR WALL - MASONRY/METAL SHINGLE
- METAL SHINGLE SIDING
- AIR BARRIER
- 5/8" EXTERIOR GRADE HEATING
- 8" INSULATION
- 8" Z GIRTS
- VAPOUR BARRIER
- EXISTING MASONRY WALL

E301 — EXTERIOR WALL - STUD W/ PANELS
- EXTERIOR GRADE WOOD PANEL (PAINT FINISH)
- WOOD FURRING
- AIR/VAPOUR MEMBRANE
- EXISTING MASONRY WALL

E302 — EXTERIOR WALL - STUD W/ MASONRY VENEER
- 4" MASONRY VENEER
- 1" AIR SPACE
- AIR BARRIER
- 1" RIGID INSULATION
- 5/8" EXTERIOR SHEATHING
- 8" WOOD STUD FRAMING AT 16" O/C (UNLESS NOTED OTHERWISE)
- VAPOUR BARRIER
- 5/8" GYPSUM BOARD

E303 — EXTERIOR WALL - STUD W/ MASONRY VENEER
- 3/4" BOARD AND 2"X1" BATTENS AT 8" O/C.
- AIR BARRIER
- 5/8" EXTERIOR SHEATHING
- 8" WOOD STUD FRAMING AT 16" O/C (UNLESS NOTED OTHERWISE)
- VAPOUR BARRIER
- 5/8" GYPSUM BOARD

R300.1 — ROOF ASSEMBLY - (1 HR FIRE RATED) 6B-3 F4b
- EPDM ROOFING MEMBRANE
- 1/2"PROTECTION BOARD
- 1" RIGID INSULATION (R35)
- VAPOUR BARRIER MEMBRANE
- 3/4" WOOD BOARD (EXISTING)
- 12" WOOD JOIST (EXISTING)
- 5/8" TYPE X GYPSUM BOARD (2 LAYERS)

4 A001 Exterior Assembly Types
SCALE: 1" = 1'-0"

Partition Types

W203.1 — PARTITION - MASONRY 1 HR (SB-2)
- 8" LIGHTWEIGHT CONCRETE BLOCK

W301.1 — PARTITION - STUD (1 HR FIRE RATED) ULC W302
- 5/8" SHEETROCK FIRECODE C CORE GYPSUM PANELS, BOTH SIDES
- 2x4 WOOD STUD AT 16" O/C (UNO)
- JOINTS FINISHED

W302 — PARTITION - STUD (1 HR FIRE RATED SHAFT WALL) ULC W352
- 5/8" SHEETROCK FIRECODE C CORE GYPSUM PANELS, JOINTS FINISHED
- 2 ½" CGC C-H STUDS (25 GAUGE) AT 24" O/C (UNO)
- 1" SHEETROCK GYPSUM LINER PANELS

W303 — PARTITION - STUD
- 5/8" GYPSUM BOARD
- 2x4 WOOD STUD AT 16" O/C (UNO)
- SOUND BATT INSULATION
- 5/8" GYPSUM BOARD

W304 — PARTITION - STUD (MOISTURE RESISTANT)
- 5/8" GYPSUM BOARD
- 2x4 WOOD STUD AT 16" O/C (UNO)
- SOUND BATT INSULATION
- 5/8" MOISTURE RESISTANT GYPSUM BOARD (AT WASHROOM SIDE)

W305 — PARTITION - STUD
- 5/8" GYPSUM BOARD
- 5/8" WOOD STRAPPING
- NEW/EXISTING BACK UP WALL

Ceiling Types

C301.1 — CEILING - JOIST (1 HR FIRE RATED) 9B-3 F4b
- FINISHED FLOOR (BY TENANT)
- 3/4" WOOD BOARD (EXISTING)
- 12" WOOD JOIST (EXISTING)
- 5/8" TYPE X GYPSUM BOARD (2 LAYERS)

C302 — CEILING - JOIST
- WOOD FRAMING TO SUIT
- 5/8" GYPSUM BOARD (MOISTURE RESISTANT AT SHOWERS)

3 A001 Interior Assembly Types
SCALE: 1" = 1'-0"

Item	Ontario Building Code Data Matrix			OBC Reference
1	Project Description: 1 QUEEN STREET NORTH	☐ New ☑ Change of Use ☐ Addition ☑ Alteration ☑ Demolition	☑ Part 3 ☐ Part 9 ☐ Part 11	2.1.1.
2	Major Occupancy(s):	Group5 A2, D + E		3.1.2.1.(1) 9.10.2.
3	Building Area (m2):	Existing: 727.3 New: Ø.Ø Total: 727.3		3.9.3.1. 1.1.3.2.
4	Gross Floor Area (m2):	Existing: 1,838.5 New: Ø.Ø Total: 1,838.5		3.9.3.1. 1.1.3.2.
5	Number of Storeys:	Above Grade: 3 Below Grade: 1		3.9.3.1. 2.1.1.3.
6	Building Height	13.Ø m +/-		
7	Number of Streets / Access Routes:	3		3.9.3.4. 9.10.19.
8	Building Classification:	Existing Legal Non-Conforming		3.2.2.26. 9.10.4.
9	Sprinkler System:	(EXISTING) ☑ Entire Building ☐ Basement Only ☐ In Lieu of Roof Rating ☐ Not Required		3.2.2.26 3.2.1.5. 3.2.2.17. 9.10.8.
10	Standpipe Required:	(EXISTING) ☐ Yes ☑ No		3.2.9.
11	Fire Alarm Required:	(EXISTING) ☑ Yes ☐ No		3.2.4. 9.10.17.2.
12	Water Service / Supply is Adequate:	☑ Yes ☐ No		3.2.5.7. N/A
13	High Building:	☐ Yes ☑ No		3.2.6. N/A
14	Permitted Construction: / Actual Construction:	☐ Combustible ☐ Combustible / ☐ Non-Combustible ☑ Non-Combustible / ☑ Both ☐ Both		3.2.2.26. 9.10.6.
15	Mezzanine(s) Area (m2):	Ø.Ø		3.2.1.1.(3-8) 9.10.4.1.
16	Occupant Load: Basement: 0 Ground Floor: 21 if Office, 52 if Retail	☐ sm / person Second Floor: 53 Third Floor: 47 ☑ Design of Building		3.1.16.1. 9.9.1.3.
17	Barrier-free Design:	☑ Yes ☐ No		3.9.3.9. 9.5.2.
18	Hazardous Substances:	☐ Yes ☑ No		3.3.2.1.(1) & 3.3.1.19.(1) 9.10.1.3.(4)
19	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (hours): Floor 1 HR — 6B-3 F4b; Roof 1 HR — 6B-3 F4b; Mezz. 1 HR — N/A. Supporting Members FRR (hours): Floor 1 HR — 9B-2; Roof 1 HR — 9B-2; Mezz. 1 HR — N/A	Listed Design No. or Description (SG-2)	3.2.2.43A & 3.2.1.4. 9.10.8. 9.10.9. 9.10.9.4.(2)
20	Spatial Separation - Construction of Exterior Walls:			3.9.3.2. 9.10.14.
	Walls: North / East / West / South	Area of EBF (m2)	L.D. (m)	L/H Ratio	Permitted U.O.s (%)	Proposed U.O.s (%)	F.R.R. (Hours)	Listed Design or Description	Combustible Construction	Comb Constr NonC Cladding	Non-Comb Construction
21	REQUIRED WASHROOMS: GROUND FLOOR: Office 1/sex, 1/sex provided on second floor - or - Retail requires 1/sex (by tenant.). SECOND FLOOR: Office 2/sex required, 3/sex provided. THIRD FLOOR: Office 2/sex required, 3/sex provided.										
22	EXISTING MASONRY WALLS = MIN. 6.5" (160mm), SB-2 TABLE 2.1.1, SOLID BRICK MINIMUM EQUIVALENT THICKNESS 152 = 3HR FRR										

2 A001 OBC Part 3 Matrix
SCALE: N.T.S.

Item	OBC Data Matrix - Division B, Part 11 - Renovation of Existing Building		OBC Reference
	Project Description: 1 QUEEN STREET NORTH EXISTING USES: GROUND - A2 + E (VACANT) 2ND/3RD - C (VACANT) + D (VACANT) FUTURE USES: GROUND - A2, D/E 2ND/3RD - D		
1	Building Classification:	Describe Existing Use: SEE ABOVE Describe Proposed Use: SEE ABOVE Construction Index: 1 Construction Index: 6 Hazard Index: 6 Hazard Index: 6 ☐ Not Required (No Change of Major Occupancy)	11.2.1. T11.2.1.1A T11.2.1.B to N
2	Alteration to Existing Building is:	☐ Basic Renovation ☑ Extensive Renovation	11.3.3.1 11.3.3.2
3	Reduction in Performance Level	Structural ☐ No ☑ Yes Increase in Occupant Load ☐ No ☑ Yes Change of Major Occupancy: ☐ No ☑ Yes Plumbing ☐ No ☑ Yes Sewage System ☑ No ☐ Yes ASSUMED	11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5
4	Compensating Construction	Structural ☐ No ☑ Yes • STRUCTURAL COMPONENTS UPGRADES AS REQUIRED. REFER TO STRUCTURAL DRAWINGS. — 11.4.3.2 Increase in Occupant Load ☐ No ☑ Yes • THE OCCUPANT LOAD HAS INCREASED BY APPROXIMATELY 6 PERSONS ON BOTH THE 2ND AND 3RD FLOORS. EARLY WARNINGS AND EVACUATION REQUIREMENTS ARE ADEQUATE OR UPGRADED. — 11.4.3.3 Change of Major Occupancy: ☐ No ☑ Yes • SPRINKLERS HAVE BEEN ADDED AND 1 HOUR FIRE SEPARATIONS PROVIDED BETWEEN FLOORS AND AT THE ROOF. — 11.4.3.4 Plumbing ☐ No ☑ Yes • NEW WASHROOMS HAVE BEEN PROVIDED AS REQUIRED FOR THE INTENDED OCCUPANCIES. THE GROUND FLOOR SPACE, IF OFFICE SPACE, IS ACCOMMODATED WITHIN THE FIXTURE COUNT FOR THE 2ND FLOOR (SAME SUITE). IF THE GROUND FLOOR IS RETAIL, WASHROOMS WILL BE PROVIDED AS PERT OF THE TENANT IMPROVEMENT OR AT PHASE 2. — 11.4.3.5 Sewage System ☑ No ☐ Yes • THE EXISTING SEWAGE SYSTEM IS NOT ADVERSELY AFFECTED BY THE CONSTRUCTION. — 11.4.3.6	
3	Compliance Alternatives Proposed	☑ No ☐ Yes (give number(s))	11.4.3.4.A.

1 A001 OBC Part 11 Matrix
SCALE: N.T.S.

Drawing List

ARCHITECTURAL

A001	OBC MATRIX, GENERAL NOTES, DEMO NOTES
A002	LIFE SAFETY-BASEMENT
A003	LIFE SAFETY-GROUND FLOOR
A004	LIFE SAFETY-SECOND FLOOR
A005	LIFE SAFETY-THIRD FLOOR
A006	LIFE SAFETY-UNPROTECTED OPENINGS
A200	BASEMENT DEMOLITION PLAN
A201	GROUND FLOOR DEMOLITION PLAN
A202	SECOND FLOOR DEMOLITION PLAN
A203	THIRD FLOOR DEMOLITION PLAN
A200	BASEMENT PLAN
A211	GROUND FLOOR PLAN
A212	SECOND FLOOR PLAN
A213	THIRD FLOOR PLAN
A214	ROOF PLAN
A220	WASHROOM ENLARGEMENTS
A300	ELEVATIONS
A801	SCHEDULES

STRUCTURAL

S1.Ø	GENERAL NOTES AND SPECIFICATIONS
S1.2	SCHEDULES
S2.Ø	GROUND FLOOR FRAMING PLAN
S2.1	SECOND FLOOR FRAMING PLAN
S2.2	THIRD FLOOR FRAMING PLAN
S2.3	ROOF FRAMING PLAN
S3.Ø	SECTIONS AND DETAILS
A4.Ø	TYPICAL DETAILS

MECHANICAL

M-1.Ø	BASEMENT HVAC LAYOUT
M-1.1	GROUND FLOOR HVAC LAYOUT
M-1.2	SECOND FLOOR HVAC LAYOUT
M-1.3	THIRD FLOOR HVAC LAYOUT
M-1.4	ROOF HVAC LAYOUT
M-1.5	SCHEDULES AND DETAILS
M-1.6	SPECIFICATIONS
M-2.Ø	BASEMENT HYDRONIC PIPING
M-2.1	GROUND FLOOR HYDRONIC PIPING
M-2.2	SECOND FLOOR HYDRONIC PIPING
M-2.3	THIRD FLOOR HYDRONIC PIPING
M-2.4	ROOF GAS PIPING
M-2.5	SCHEDULES AND DETAILS
M-2.6	HYDRONIC SYSTEM PIPING DETAIL
M-3.Ø	BASEMENT PLUMBING LAYOUT
M-3.1	SECOND FLOOR PLUMBING LAYOUT
M-3.2	THIRD FLOOR PLUMBING LAYOUT
M-3.3	SCHEDULES, DETAILS AND SPECIFICATIONS
M-4.Ø	BASEMENT SPRINKLER LAYOUT
M-4.1	GROUND FLOOR SPRINKLER LAYOUT
M-4.2	SECOND FLOOR SPRINKLER LAYOUT
M-4.3	THIRD FLOOR SPRINKLER LAYOUT

ELECTRICAL

E-1.1	BASEMENT EMERGENCY + FIRE ALARM LAYOUT
E-1.2	GROUND FLOOR EMERGENCY + FIRE ALARM LAYOUT
E-1.3	SECOND FLOOR EMERGENCY + FIRE ALARM LAYOUT
E-1.4	THIRD FLOOR EMERGENCY + FIRE ALARM LAYOUT
E-1.5	EMERGENCY + FIRE ALARM LEGEND + SPECIFICATIONS

Demolition Notes

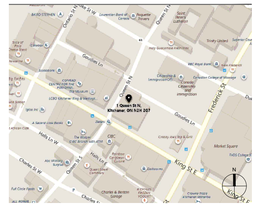
GENERAL

1. DO NOT SCALE DRAWINGS.
2. THE DEMOLITION PORTION OF THE PROJECT SHALL BE APPLIED AS TYPICAL FOR ALL FLOORS OF THE PROJECT UNLESS NOTED OTHERWISE.
3. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR REVIEWING THE SITE CONDITIONS TO DETERMINE THE EXTENT OF MATERIALS TO BE DEMOLISHED/REMOVED.
4. DEMOLITION TO BE COORDINATED WITH ALL TRADES INCLUDING MECHANICAL AND ELECTRICAL.
5. ALL COMPONENTS SHOWN IN DASHED LINES ON THE DEMOLITION PLANS ARE TO BE REMOVED AND DISPOSED OF.
6. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL MATERIALS UNLESS NOTED OTHERWISE.
7. UPON REMOVAL OF ANY SERVICES/PARTITIONS, REQUIRED FIRE SEPARATIONS AND FIRE STOPPING ARE TO BE CONFIRMED AND REINSTATED AS REQUIRED. PROVIDE MATERIAL DATA SHEETS FOR APPROVAL.
8. THIS DRAWING IS INTENDED TO ASSIST THE CONTRACTOR WITH COSTING THE DEMOLITION AND REMOVALS NECESSARY FOR THIS CONTRACT. IT IS NOT TO BE TAKEN AS AN ALL-INCLUSIVE INVENTORY OF THE WORK. THE CONTRACTOR MUST CAREFULLY INSPECT ALL AREAS OF EXISTING DEMOLITION PRIOR TO COMMENCEMENT OF WORK. DEMO PLANS INDICATE GENERAL NATURE OF DEMOLITION ONLY AND MAY NOT INCLUDE EVERY MISC. ITEM, DEVICE, OR COMPONENT REQUIRED TO BE REMOVED IN PREPARATION FOR FUTURE WORK.
9. ANY AREAS THAT ARE DAMAGED OR AFFECTED BY THE DEMOLITION ARE TO BE RESTORED TO MATCH ADJACENT + BE PREPARED TO RECEIVE NEW FINISH AS REQUIRED.
10. ALL DEMOLITION WORK SHALL BE CARRIED OUT BY A QUALIFIED DEMOLITION CONTRACTOR IN ACCORDANCE w/ CSA STANDARD S350-M1980 "CODE OF PRACTICE FOR SAFETY IN DEMOLITION OF STRUCTURES" AND THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS - ØREG. 213/91.
11. DEMOLITION CONTRACTOR TO TAKE MEASURES TO RECYCLE ALL POTENTIAL RECYCLABLE MATERIALS.
12. CONTRACTOR SHALL NOT AT ANY TIME EXCEED ANY FLOOR LIVE LOAD CAPACITIES.
13. CONTRACTOR TO FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. IN THE EVENT OF A DISCREPANCY BETWEEN THE DRAWINGS AND THE EXISTING CONDITIONS, NOTIFY THE ARCHITECT BEFORE PROCEEDING.
14. ALL SERVICES IN WALLS BEING DEMOLISHED ARE TO BE REMOVED BACK TO SOURCE/PANEL.
15. ALL SERVICES ON STRUCTURAL COLUMNS THROUGHOUT AND LOCATED ALONG THE PERIMETER BUILDING WALLS AND COLUMNS ARE TO BE REMOVED BACK TO SOURCE/PANEL.
16. ALL FLOOR MOUNTED SERVICES ARE TO BE REMOVED BACK TO SOURCE/PANEL AND FLOOR PENETRATIONS PATCHED TO MATCH EXISTING CONSTRUCTION.
17. PATCH/GRIND AND MAKE GOOD EXISTING FLOORS.

General Notes

GENERAL

1. INTERIOR DIM'S: ARE TAKEN FROM FACE TO FACE OF FRAMING OR MASONRY OR FACE OF MASONRY OPENINGS. U.N.O.
2. FIELD VERIFY ALL DIM'S + EXISTING CONDITIONS, TYPICAL ALL DRAWINGS.



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ONTARIO ASSOCIATION OF ARCHITECTS
OCT 05/18
LAIRD ANDREW ROBERTSON
LICENCE 4921

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1979 — DEVELOPMENT • FINANCING • CONSULTING

PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
OBC MARTIX, GENERAL NOTES, NOTES

PROJECT NUMBER 18-023
PROJECT DATE July 2018
DRAWN BY ssomerville

A001

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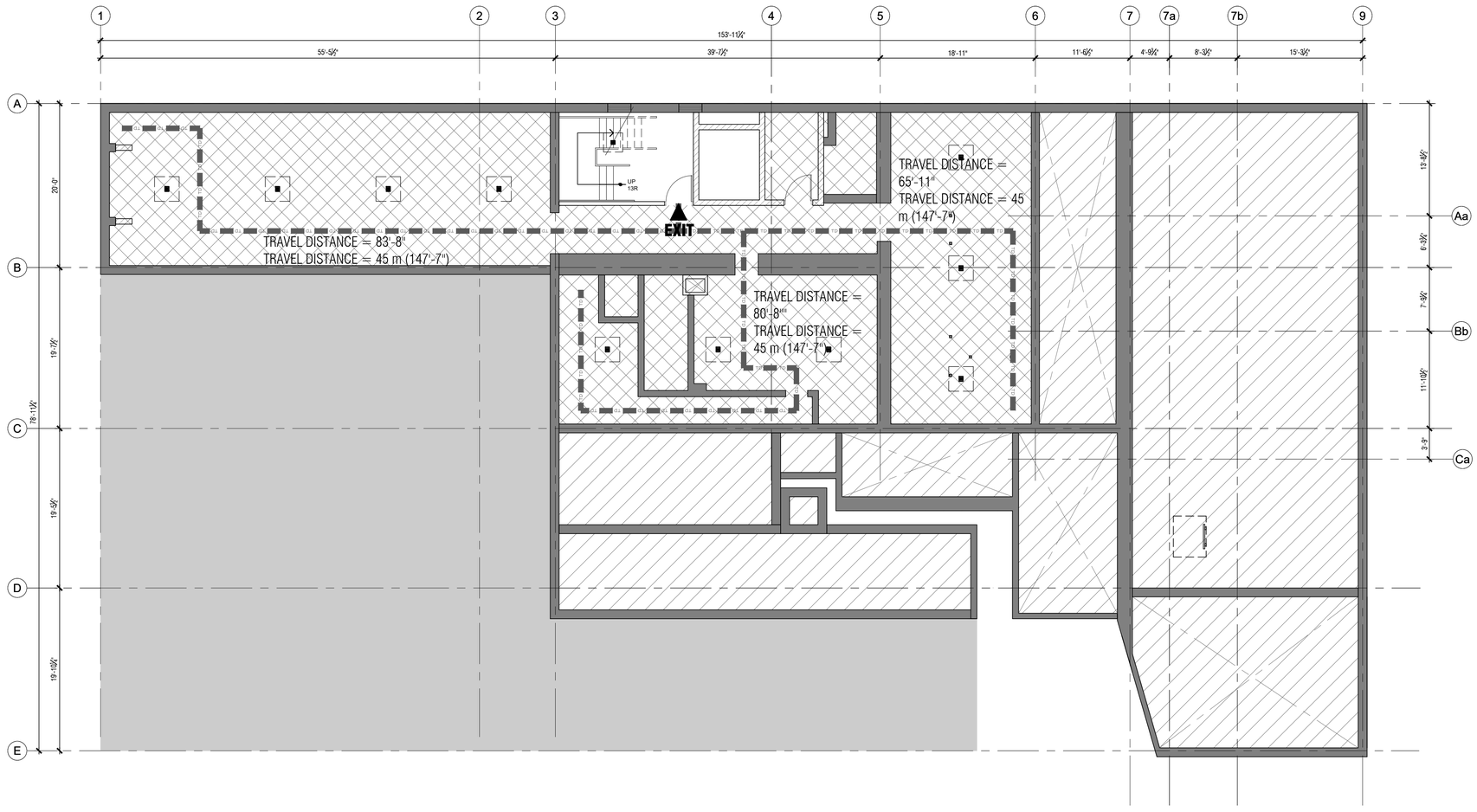

1 A002 Life Safety - Basement
SCALE: 1/8" = 1'-0"

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXTENT OF OCCUPANCY
- Ø HR FIRE SEPARATION
- 1 HR FIRE SEPARATION
- 2 HR FIRE SEPARATION
- TRAVEL DISTANCE

Fire Separation Legend

- ØØ HOUR RATED FIRE SEPARATION
- 1Ø HOUR RATED FIRE SEPARATION
- 2Ø HOUR RATED FIRE SEPARATION

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PROJECT

AMERICAN HOTEL

1 Queen Stret East, Kitchener

DRAWING

PHASE 1
LIFE SAFETY - BASEMENT

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PROJECT DATE	July 2018
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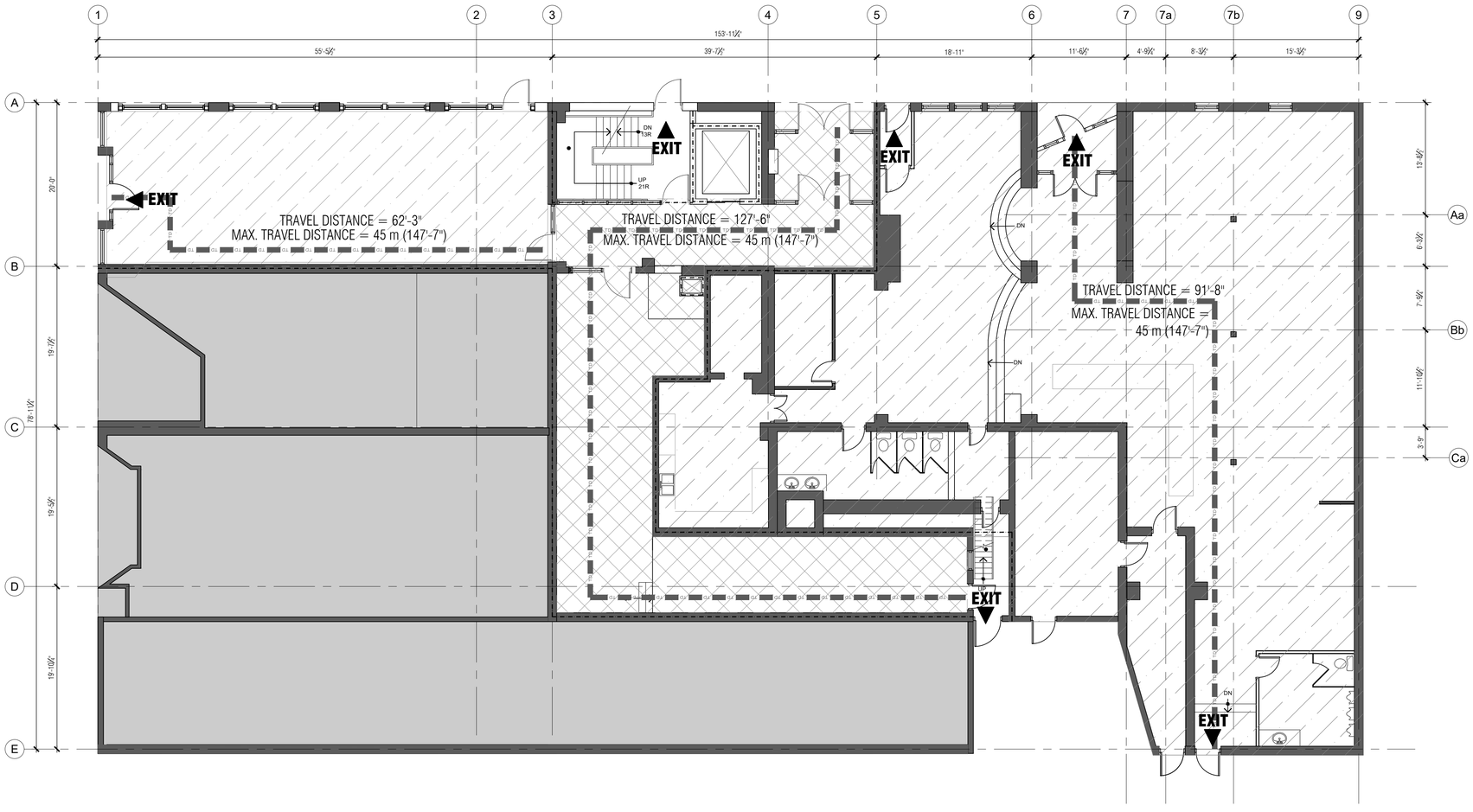

1 A003 Life Safety - Ground Floor
SCALE: 1/32" = 1'-0"

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- EXISTING 1 HR FRR BETWEEN FLOORS
- NEW 1 HR FRR BETWEEN FLOORS
- Ø HR FIRE SEPARATION
- 1 HR FIRE SEPARATION
- 2 HR FIRE SEPARATION
- TD TD TRAVEL DISTANCE

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PROJECT

AMERICAN HOTEL

1 Queen Stret East, Kitchener

DRAWING

PHASE 1
LIFE SAFETY - GROUND FLOOR

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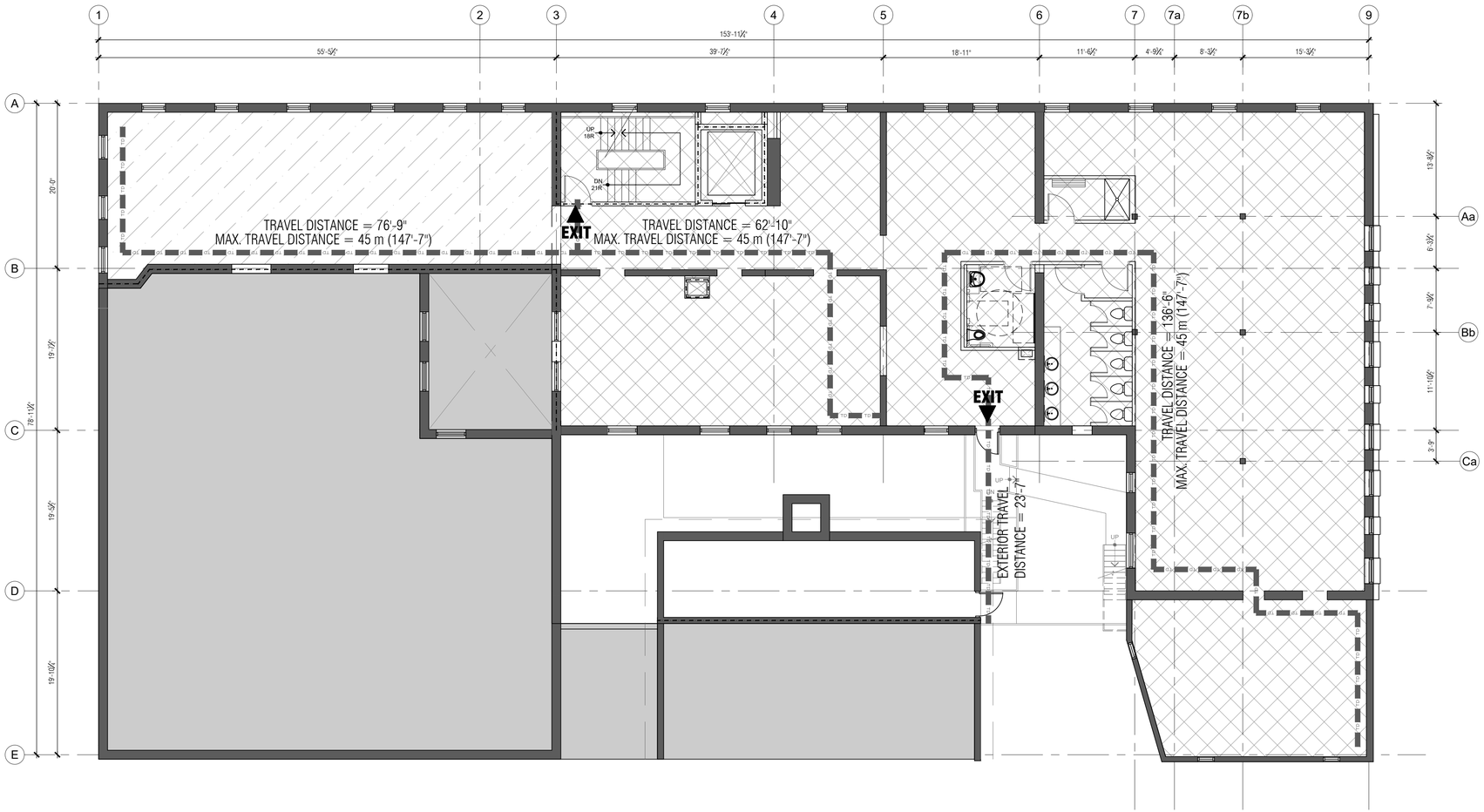

BASEMENT

1 A204 Life Safety - Second Floor
SCALE: 1/8" = 1'-0"

EXISTING ADJACENT PROPERTY

EXISTING WALLS TO REMAIN

EXISTING 1 HR FRR BETWEEN FLOORS

NEW 1 HR FRR BETWEEN FLOORS

Ø HR FIRE SEPARATION

1 HR FIRE SEPARATION

2 HR FIRE SEPARATION

TD TD TRAVEL DISTANCE

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PROJECT

AMERICAN HOTEL

1 Queen Stret East, Kitchener

DRAWING

PHASE 1
LIFE SAFETY - GROUND FLOOR

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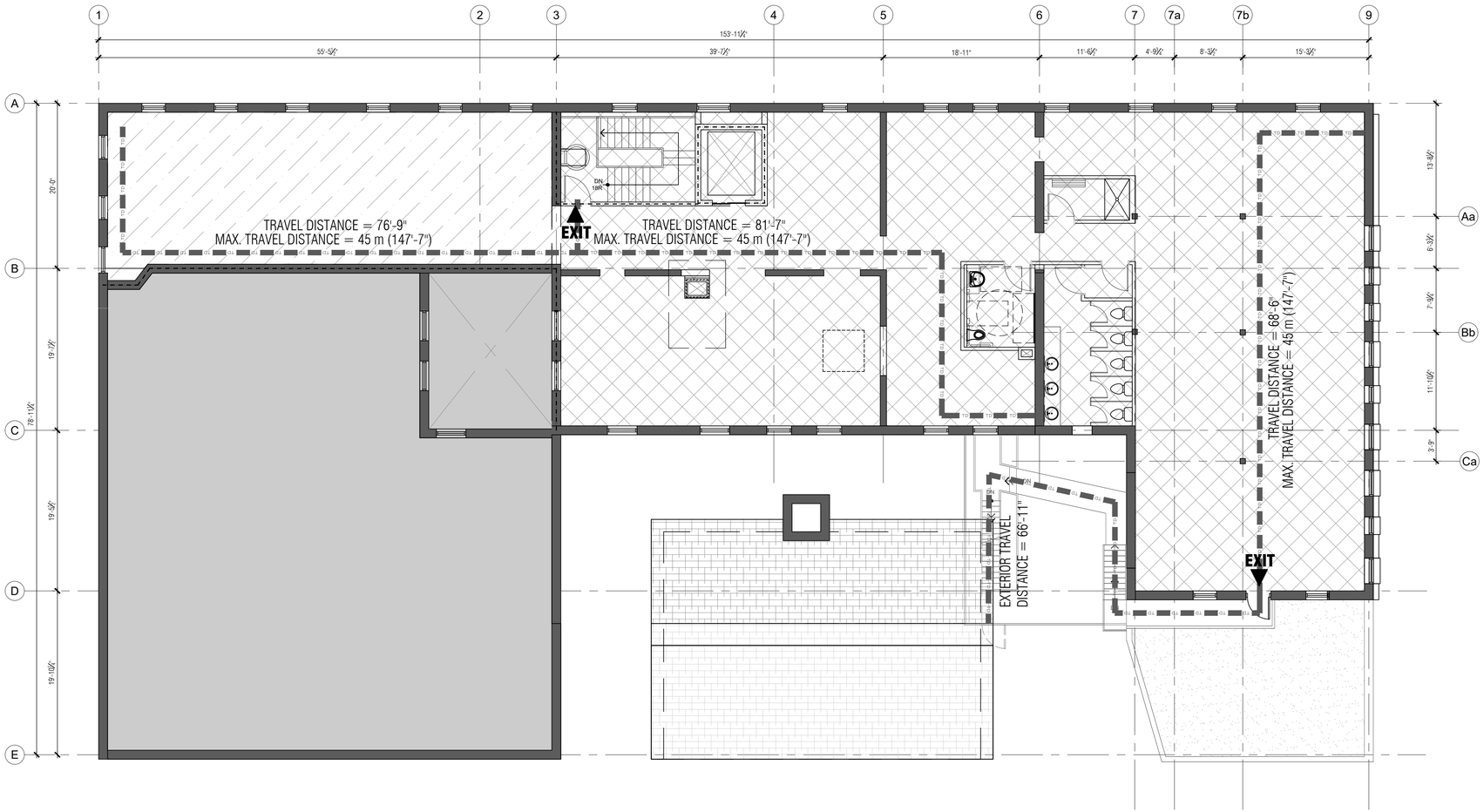

1 A205 Life Safety - Third Floor
SCALE: 1/8" = 1'-0"

EXISTING ADJACENT PROPERTY

EXISTING WALLS TO REMAIN

EXISTING 1 HR FRR BETWEEN FLOORS

NEW 1 HR FRR BETWEEN FLOORS

Ø HR FIRE SEPARATION

1 HR FIRE SEPARATION

2 HR FIRE SEPARATION

TD TD TD TRAVEL DISTANCE

No.	DATE	ISSUE
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PROJECT

AMERICAN HOTEL

1 Queen Stret East, Kitchener

DRAWING

PHASE 1
LIFE SAFETY - THIRD FLOOR

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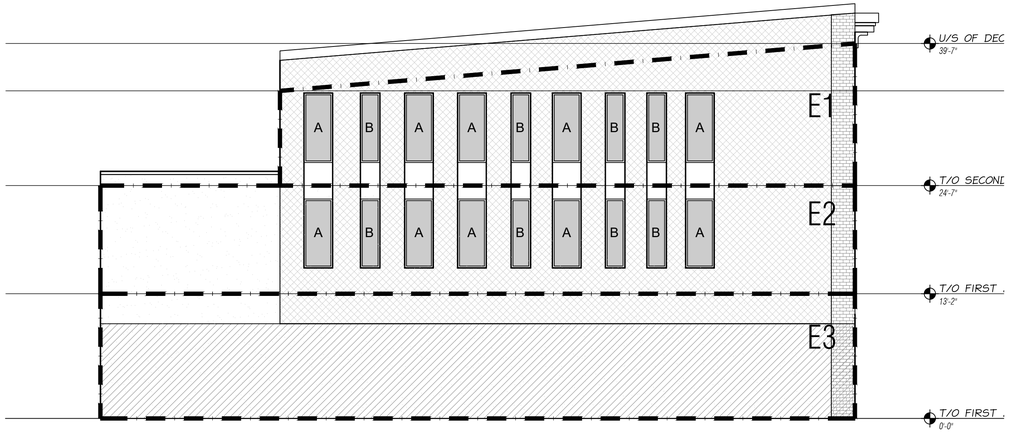
UNPROTECTED OPENINGS									OPENING SIZES NORTH WALL				OPENING SIZES EAST WALL				OPENING SIZES WEST WALL			
WALL FACE	AREA OF EBF (sq.m.)	L.D. (m)	PERMITTED U.P.O.'S (%)	PROPOSED U.P.O.'S (%)	F.R.R. (HOURS)	LISTED DESIGN OF DESCRIPTION	COMB/NON COMB CONSTRUCTION	COMB/NON COMB CLADDING	OPENING TYPE	AREA OF OPENING (m2)	NUMBER OF UNITS	TOTAL AREA	OPENING TYPE	AREA OF OPENING (m2)	NUMBER OF UNITS	TOTAL AREA(m2)	OPENING TYPE	AREA OF OPENING (m2)	NUMBER OF UNITS	TOTAL AREA(m2)
NORTH(1)	100.13	6	67.95%	14.1%			BOTH		C	20.8	18	374.4	A	21.7	10	217	D	19.7	6	118.2
NORTH(2)	76.21	6	83.41%	18.5%			BOTH		D	19.7	12	236.4	B	14.6	8	116.8	N	26.9	2	53.8
NORTH(3)	97.84	6	69.3%	10.8%			BOTH		E	12.1	2	24.2					O	39.2	1	39.2
NORTH(4)	78.04	6	81.76%	14.1%			BOTH		F	10.7	2	21.4								
NORTH(5)	59.39	6	98.12%	18.5%			BOTH		G	19.4	1	19.4								
NORTH(6)	72.63	6	86.63%	19.4%			BOTH		H	20	3	60								
NORTH(7)	15.26	6	100%	79.7%			BOTH		I	131	1	131								
NORTH(8)	68.50	6	45.75%	31.8%			BOTH		J	30.3	1	30.3								
EAST(1)	56.40	6	98.72%	27.5%			BOTH		K	27	1	27								
EAST(2)	84.50	6	77.3%	18.3%			BOTH		L	28.5	6	171								
EAST(3)	97.45	6	69.53%	0%			BOTH		M	36.9	1	36.9								
WEST(1)	29.69	5.2	100%	7.8%			BOTH		P	26.9	1	26.9								
WEST(2)	22.41	5.2	100%	24.5%			BOTH													
WEST(3)	22.08	5.2	100%	39.9%			BOTH													

3 A006 **EXPOSED BUILDING FACE - WEST ELEVATION (KING STREET E)**
SCALE: 1/4" = 1'-0"



2 A006 **EXPOSED BUILDING FACE - EAST ELEVATION (GOUDIES LANE)**
SCALE: 1/4" = 1'-0"

1 A006 **EXPOSED BUILDING FACE - NORTH ELEVATION (QUEEN STREET N)**
SCALE: 1/4" = 1'-0"

Legend

- EXISTING ADJACENT PROPERTY
- NOT IN SCOPE
- Ø HR FIRE SEPARATION
- 1 HR FIRE SEPARATION
- 2 HR FIRE SEPARATION
- TRAVEL DISTANCE

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LAIRD ANDREW ROBERTSON
LICENCE 4921
DATE 05/18

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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
LIFE SAFETY
UNPROTECTED OPENINGS

PROJECT NUMBER 18-023
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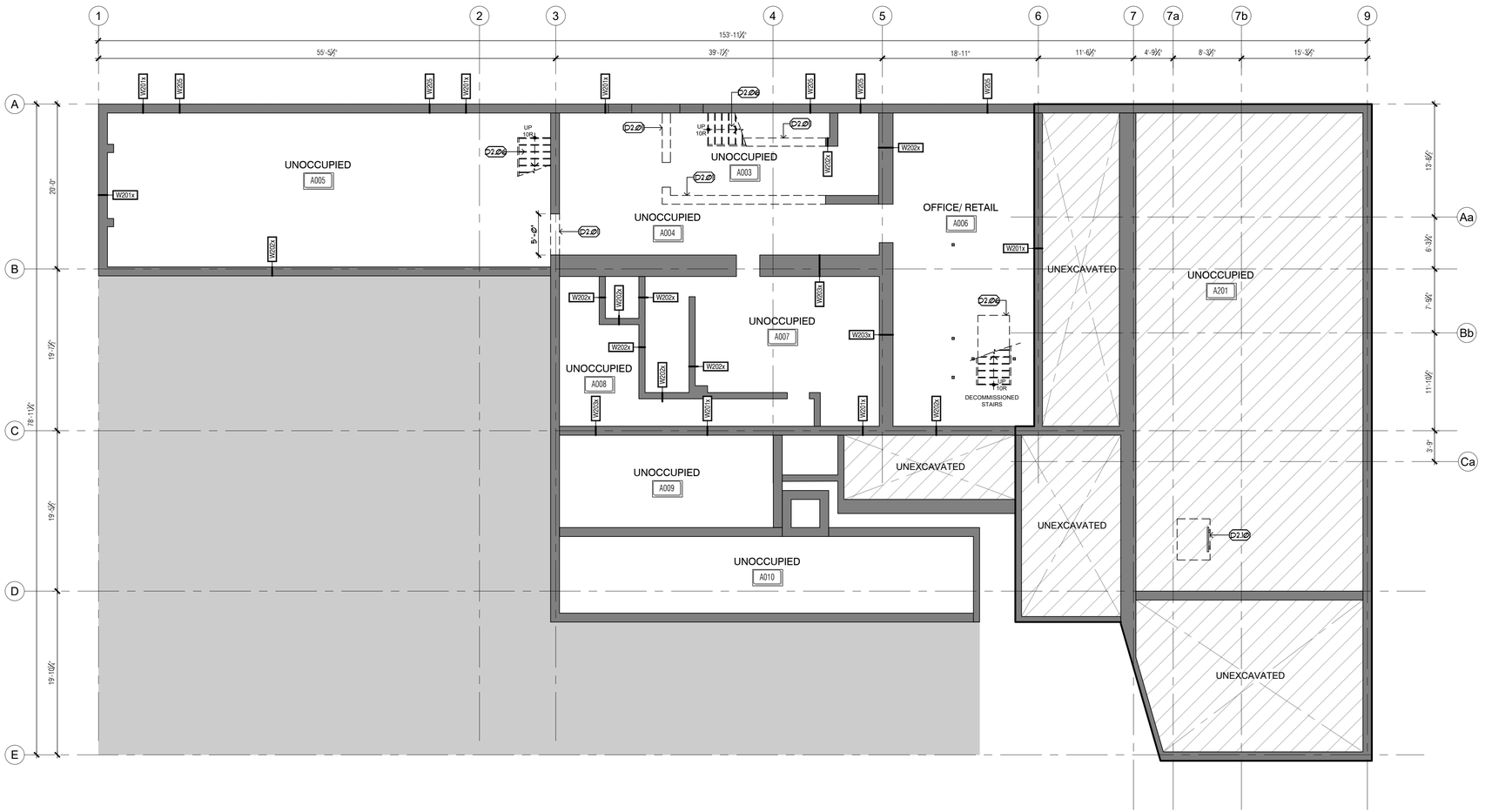

1 A200 Basment Demolition Plan
SCALE: 1/8" = 1'-0"

Demolition Legend

D2.00 EXISTING WINDOW TO BE REMOVED.
D2.01 EXISTING WALL TO BE REMOVED. REFER TO STRUCTURAL FOR ADDITIONAL REQUIREMENTS AT LOAD-BEARING WALLS.
D2.02 EXISTING SIDELIGHT, AND TRANSOM IF APPLICABLE TO BE REMOVED.
D2.03 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.04 EXISTING SILL TO BE REMOVED.
D2.05 EXISTING WALL TO BE REMOVED.
D2.06 EXISTING STAIR AND HANDRAIL TO BE REMOVED.
D2.07 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.08 EXISTING FLOOR AND STRUCTURE TO BE REMOVED AT NEW OPENING. REFER TO STRUCTURAL.
D2.09 NEW OPENING IN EXISTING WALL. REFER TO STRUCTURAL.
D2.10 EXISTING FLOOR TRAP DOOR AND LADDER ACCESS TO BASEMENT.
D2.11 EXTENT OF EXISTING FLOOR TO BE REMOVED. REFER TO STRUCTURAL.

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED

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1 Queen Stret East, Kitchener

DRAWING
PHASE 1
BASEMENT DEMOLITION PLAN

PROJECT NUMBER 18-023
PROJECT DATE July 2018
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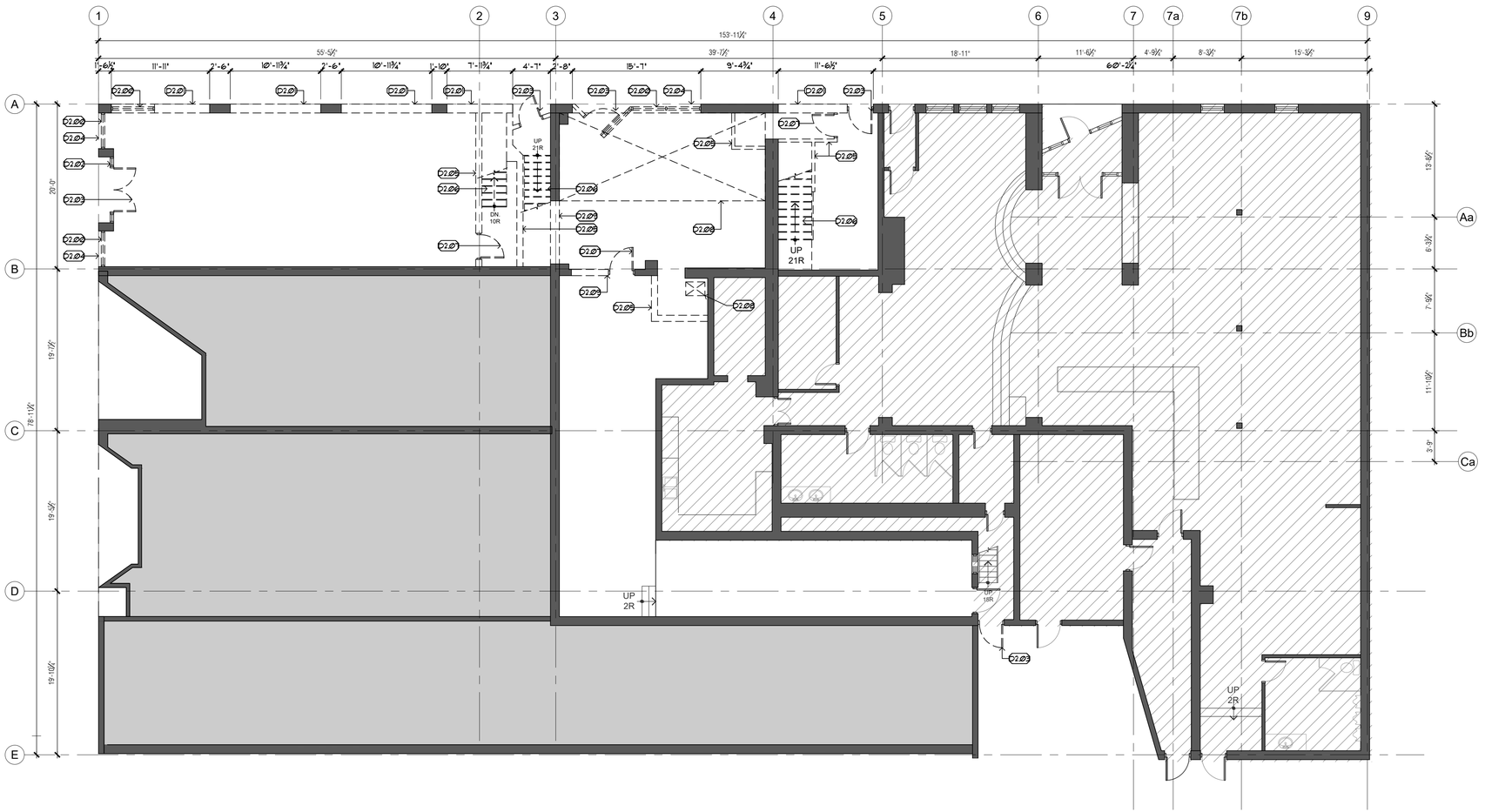
Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED



1 A201 Ground Floor Demo Plan
SCALE: 1/8" = 1'-0"

Demolition Legend

D2.00 EXISTING WINDOW TO BE REMOVED.
D2.01 EXISTING WALL TO BE REMOVED. REFER TO STRUCTURAL FOR ADDITIONAL REQUIREMENTS AT LOAD-BEARING WALLS.
D2.02 EXISTING SIDELIGHT, AND TRANSOM IF APPLICABLE TO BE REMOVED.
D2.03 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.04 EXISTING SILL TO BE REMOVED.
D2.05 EXISTING WALL TO BE REMOVED.
D2.06 EXISTING STAIR AND HANDRAIL TO BE REMOVED.
D2.07 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.08 EXISTING FLOOR AND STRUCTURE TO BE REMOVED AT NEW OPENING. REFER TO STRUCTURAL.
D2.09 NEW OPENING IN EXISTING WALL. REFER TO STRUCTURAL.
D2.10 EXISTING FLOOR TRAP DOOR AND LADDER ACCESS TO BASEMENT.
D2.11 EXTENT OF EXISTING FLOOR TO BE REMOVED. REFER TO STRUCTURAL.

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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
GROUND FLOOR DEMOLITION PLAN

PROJECT NUMBER 18-023
PROJECT DATE July 2018
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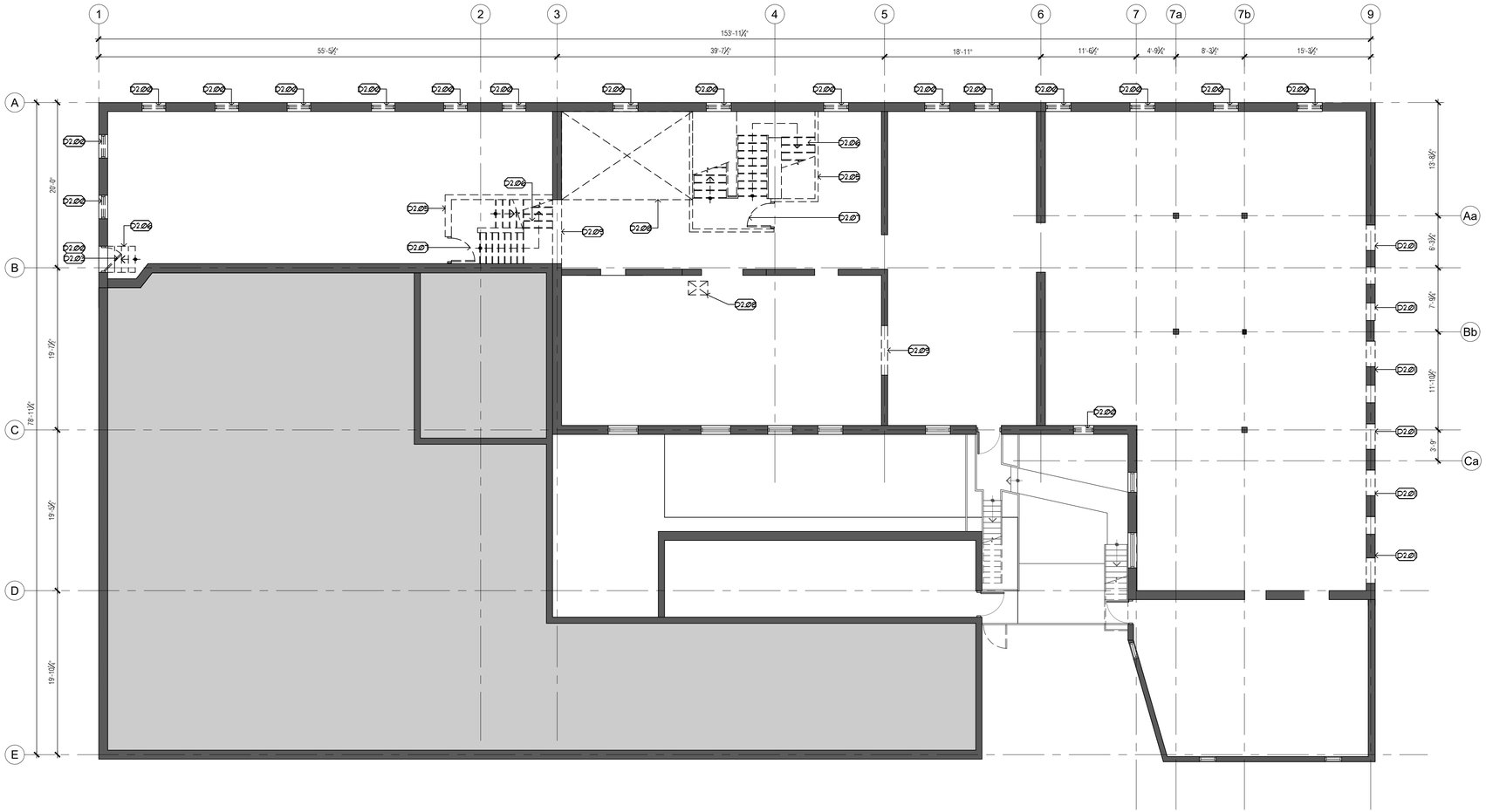

1 A202 Second Floor Demo Plan
SCALE: 1/8" = 1'-0"

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED

Demolition Legend

D2.00 EXISTING WINDOW TO BE REMOVED.
D2.01 EXISTING WALL TO BE REMOVED. REFER TO STRUCTURAL FOR ADDITIONAL REQUIREMENTS AT LOAD-BEARING WALLS.
D2.02 EXISTING SIDELIGHT, AND TRANSOM IF APPLICABLE TO BE REMOVED.
D2.03 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.04 EXISTING SILL TO BE REMOVED.
D2.05 EXISTING WALL TO BE REMOVED.
D2.06 EXISTING STAIR AND HANDRAIL TO BE REMOVED.
D2.07 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.08 EXISTING FLOOR AND STRUCTURE TO BE REMOVED AT NEW OPENING. REFER TO STRUCTURAL.
D2.09 NEW OPENING IN EXISTING WALL. REFER TO STRUCTURAL.
D2.10 EXISTING FLOOR TRAP DOOR AND LADDER ACCESS TO BASEMENT.
D2.11 EXTENT OF EXISTING FLOOR TO BE REMOVED. REFER TO STRUCTURAL.

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1 Queen Stret East, Kitchener

DRAWING
PHASE 1
SECOND FLOOR DEMOLITION PLAN

PROJECT NUMBER 18-023
PROJECT DATE July 2018
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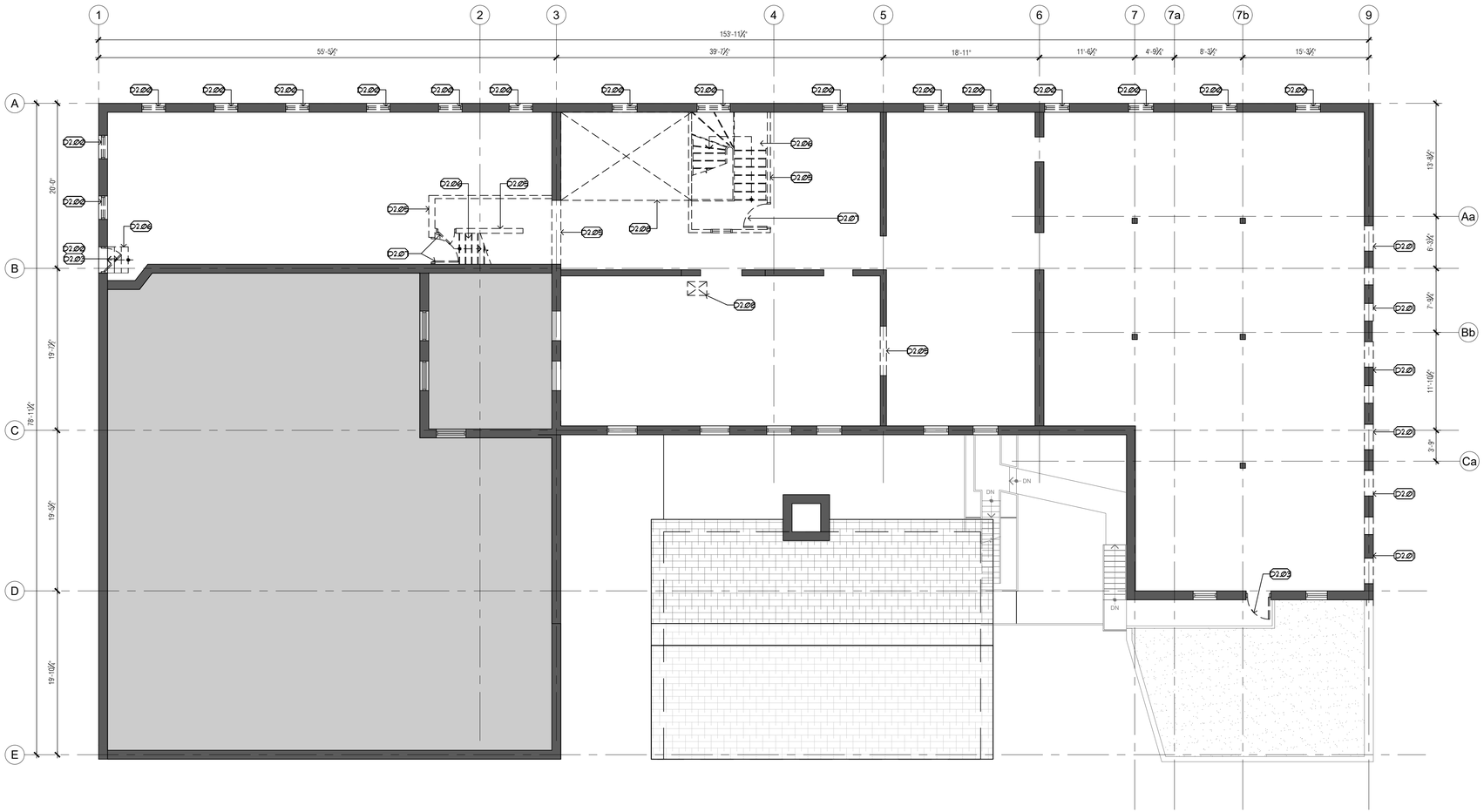
Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED



1 A203 Third Floor Demolition Plan
SCALE: 1/8" = 1'-0"

Demolition Legend

D2.00 EXISTING WINDOW TO BE REMOVED.
D2.01 EXISTING WALL TO BE REMOVED. REFER TO STRUCTURAL FOR ADDITIONAL REQUIREMENTS AT LOAD-BEARING WALLS.
D2.02 EXISTING SIDELIGHT, AND TRANSOM IF APPLICABLE TO BE REMOVED.
D2.03 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.04 EXISTING SILL TO BE REMOVED.
D2.05 EXISTING WALL TO BE REMOVED.
D2.06 EXISTING STAIR AND HANDRAIL TO BE REMOVED.
D2.07 EXISTING DOOR AND FRAME TO BE REMOVED.
D2.08 EXISTING FLOOR AND STRUCTURE TO BE REMOVED AT NEW OPENING. REFER TO STRUCTURAL.
D2.09 NEW OPENING IN EXISTING WALL. REFER TO STRUCTURAL.
D2.10 EXISTING FLOOR TRAP DOOR AND LADDER ACCESS TO BASEMENT.
D2.11 EXTENT OF EXISTING FLOOR TO BE REMOVED. REFER TO STRUCTURAL.

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PROJECT
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1 Queen Stret East, Kitchener

DRAWING
PHASE 1
THIRD FLOOR DEMOLITION PLAN

PROJECT NUMBER 18-023
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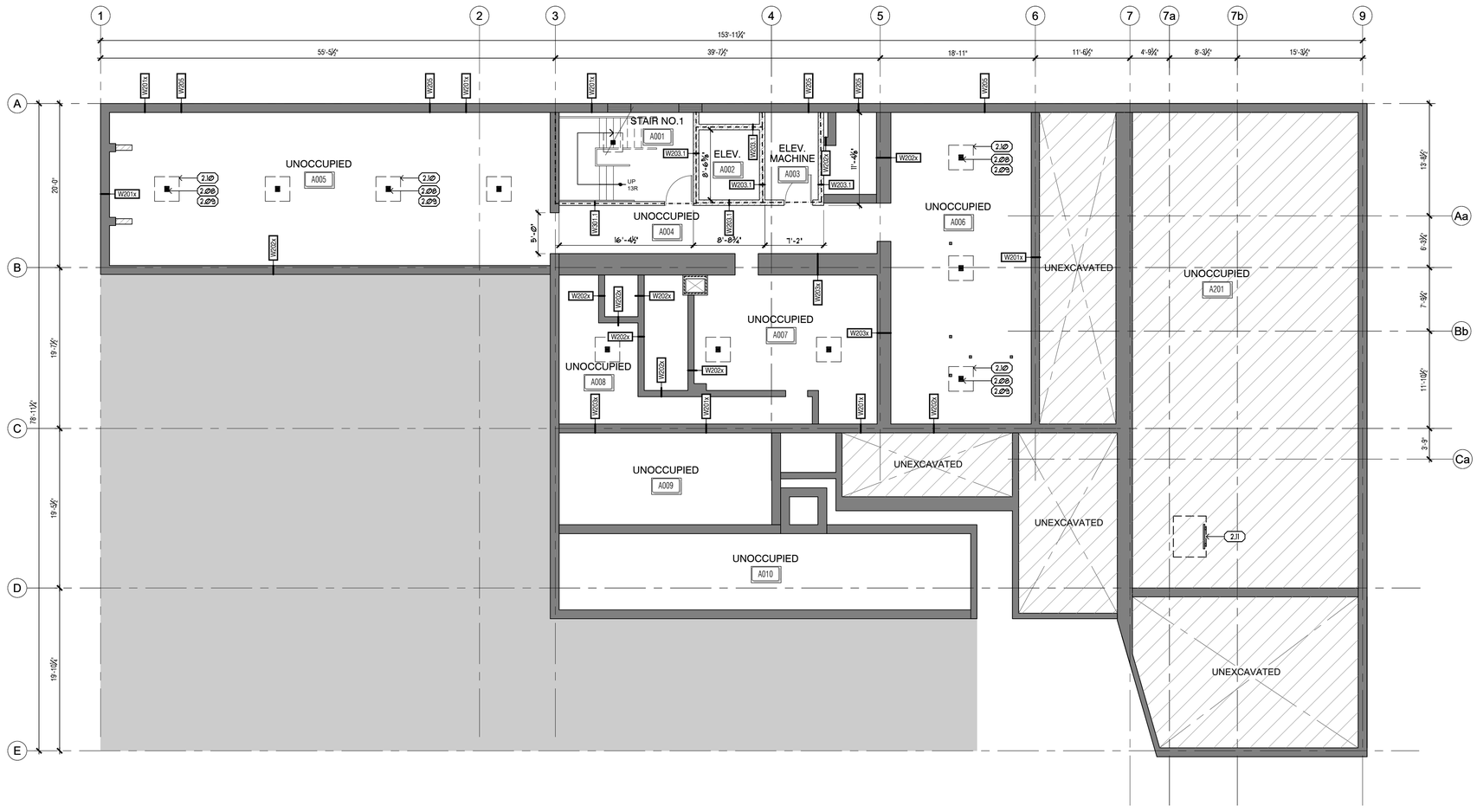

1 A210 Basment Plan
SCALE: 1/8" = 1'-0"

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED

Proposed Legend

2.00 INSULATED GLAZING IN THERMALLY BROKEN FRAME.
2.01 INSULATED DOOR AND SIDELIGHT IN THERMALLY BROKEN FRAME.
2.02 INSULATED DOOR IN THERMALLY BROKEN FRAME.
2.03 DOOR AND SIDELIGHT IN ALUMINUM FRAME.
2.04 DOOR AND GLAZING IN RATED (3/4 HR) HOLLOW METAL FRAME WITH FIRE GLASS.
2.05 STEEL STAIR AND LANDINGS.
2.06 EXISTING STAIR AND HANDRAIL TO REMAIN.
2.07 SEMI-RECESSED MAIL BOX.
2.08 NEW STRUCTURAL FRAMING (TYPICAL). REFER TO STRUCTURAL.
2.09 1 HR FRR AT NEW STRUCTURE. SB-2 2 LAYERS 5/8" TYPE X GYPSUM BOARD.
2.10 NEW FOOTING BELOW (TYPICAL). REFER TO STRUCTURAL.
2.11 EXISTING FLOOR HATCH AND LADDER FO BASEMENT ACCESS.
2.12 EXISTING WINDOW TO REMAIN.
2.13 EXISTING DOOR AND FRAME TO REMAIN.
2.14 INFILL EXISTING WALL AT REMOVED ITEM TO MATCH EXISTING.
2.15 NEW ROOF ACCESS LADDER AND CAGE.
2.16 OUTLINE OF NEW SKYLIGHT ABOVE.
2.17 INFILL EXISTING OPENING TO MATCH EXISTING.

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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
BASEMENT PLAN

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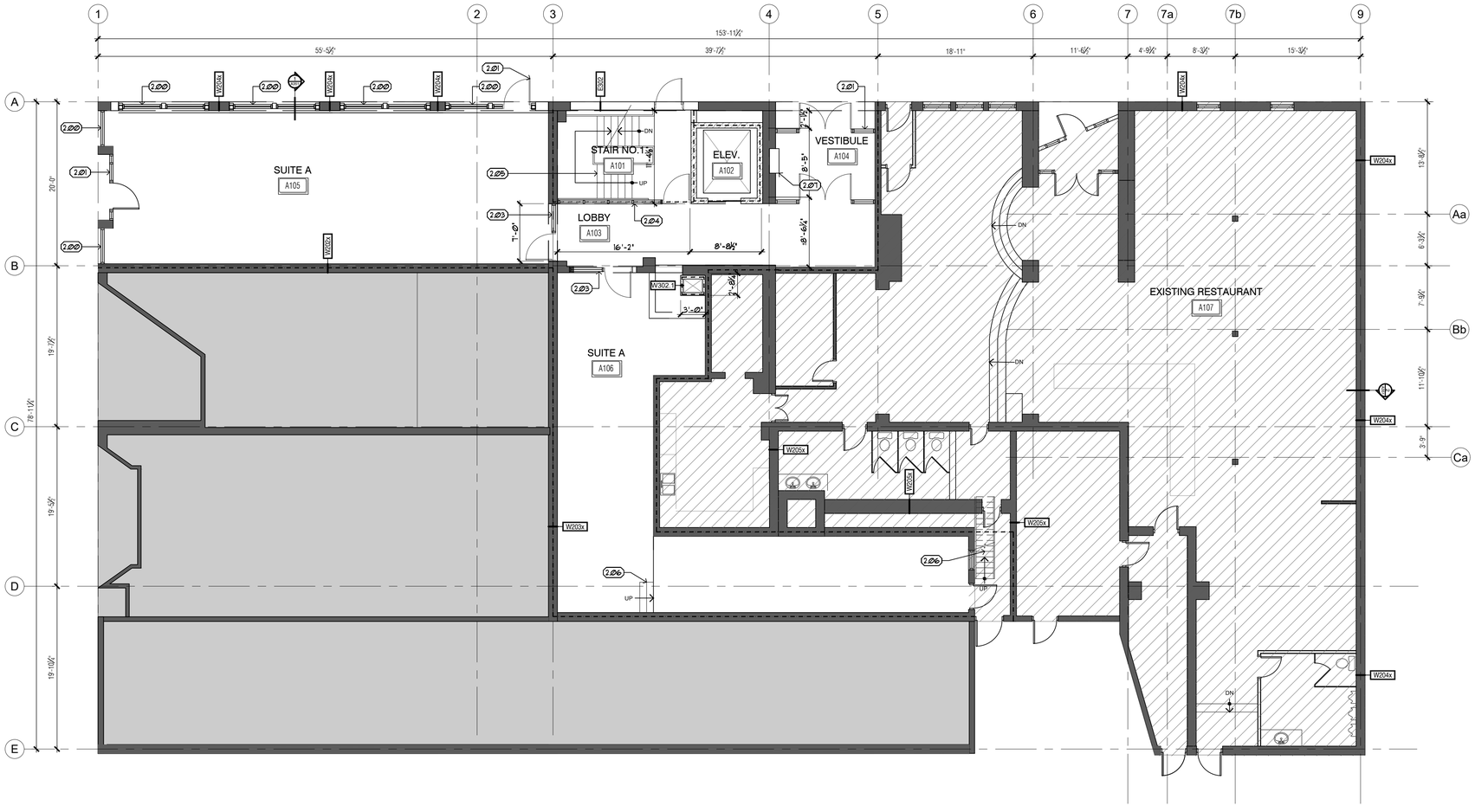
Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED



1 A211 Ground Floor Plan
SCALE: 1/8" = 1'-0"

Proposed Legend

2.00 INSULATED GLAZING IN THERMALLY BROKEN FRAME.
2.01 INSULATED DOOR AND SIDELIGHT IN THERMALLY BROKEN FRAME.
2.02 INSULATED DOOR IN THERMALLY BROKEN FRAME.
2.03 DOOR AND SIDELIGHT IN ALUMINUM FRAME.
2.04 DOOR AND GLAZING IN RATED (3/4 HR.) HOLLOW METAL FRAME WITH FIRE GLASS.
2.05 STEEL STAIR AND LANDINGS.
2.06 EXISTING STAIR AND HANDRAIL TO REMAIN.
2.07 SEMI-RECESSED MAIL BOX.
2.08 NEW STRUCTURAL FRAMING (TYPICAL). REFER TO STRUCTURAL.
2.09 1 HR FRR AT NEW STRUCTURE. SB-2 2 LAYERS 5/8" TYPE X GYPSUM BOARD.
2.10 NEW FOOTING BELOW (TYPICAL). REFER TO STRUCTURAL.
2.11 EXISTING FLOOR HATCH AND LADDER TO BASEMENT ACCESS.
2.12 EXISTING WINDOW TO REMAIN.
2.13 EXISTING DOOR AND FRAME TO REMAIN.
2.14 INFILL EXISTING WALL AT REMOVED ITEM TO MATCH EXISTING.
2.15 NEW ROOF ACCESS LADDER AND CAGE.
2.16 OUTLINE OF NEW SKYLIGHT ABOVE.
2.17 INFILL EXISTING OPENING TO MATCH EXISTING.

No.	DATE	ISSUE
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1-243 King St E. Kitchener ON. N2G 2K8 | 519-590-1636
neoarchitecture.ca

ONTARIO ASSOCIATION OF ARCHITECTS
OCT 05/18
LAIRD ANDREW ROBERTSON
LICENCE
4921

OWNER

VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING

PROJECT

AMERICAN HOTEL

1 Queen Stret East, Kitchener

DRAWING

PHASE 1
GROUND FLOOR PLAN

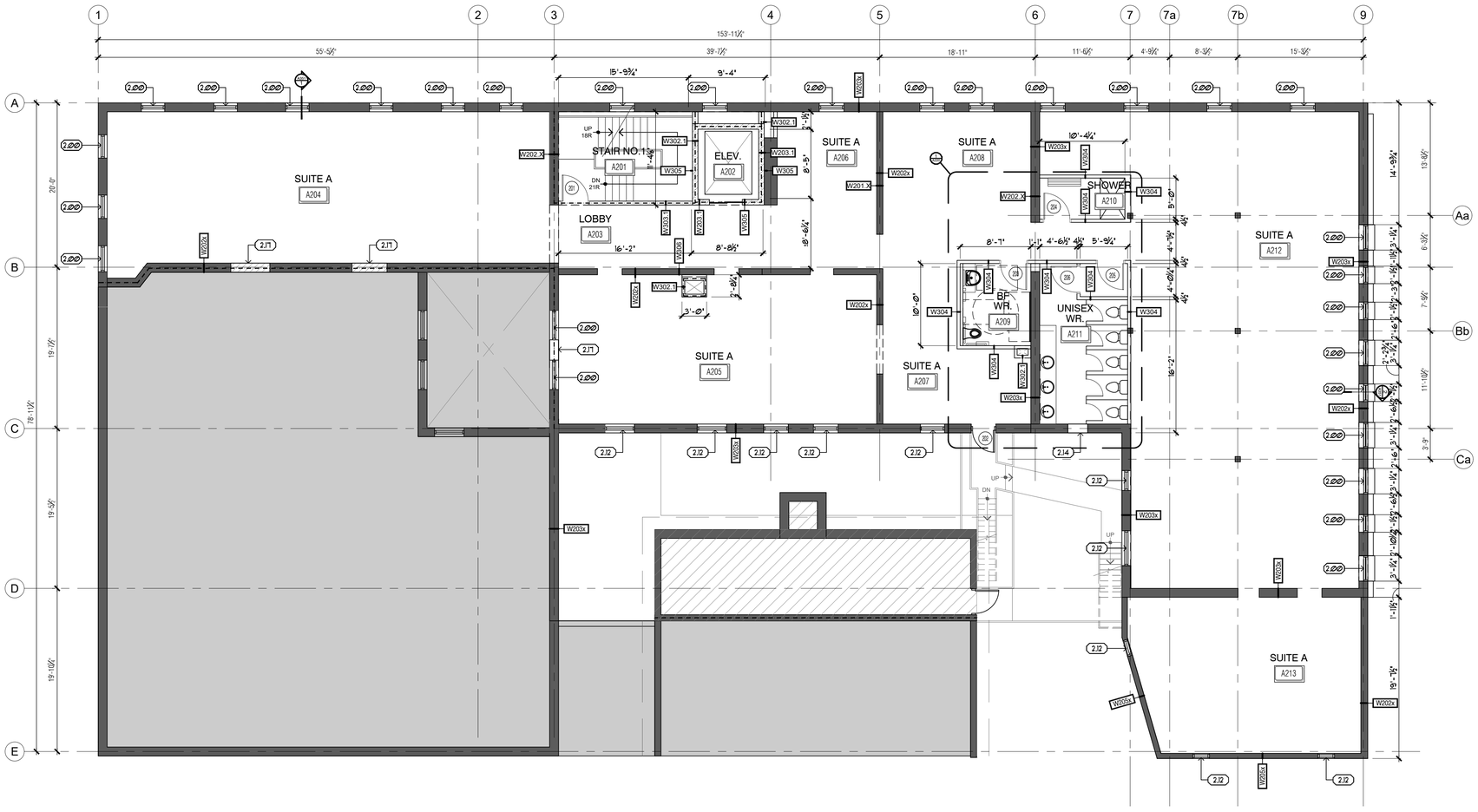
PROJECT NUMBER	18-023
PROJECT DATE	July 2018
DRAWN BY	ssomerville

A211

10/5/2018 4:51 PM

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED



1 A212 Second Floor Plan
SCALE: 1/8" = 1'-0"

Proposed Legend

2.00 INSULATED GLAZING IN THERMALLY BROKEN FRAME.
2.01 INSULATED DOOR AND SIDELIGHT IN THERMALLY BROKEN FRAME.
2.02 INSULATED DOOR IN THERMALLY BROKEN FRAME.
2.03 DOOR AND SIDELIGHT IN ALUMINUM FRAME.
2.04 DOOR AND GLAZING IN RATED (3/4 HR.) HOLLOW METAL FRAME WITH FIRE GLASS.
2.05 STEEL STAIR AND LANDINGS.
2.06 EXISTING STAIR AND HANDRAIL TO REMAIN.
2.07 SEMI-RECESSED MAIL BOX.
2.08 NEW STRUCTURAL FRAMING (TYPICAL). REFER TO STRUCTURAL.
2.09 1 HR FRR AT NEW STRUCTURE. SB-2 2 LAYERS 5/8" TYPE X GYPSUM BOARD.
2.10 NEW FOOTING BELOW (TYPICAL). REFER TO STRUCTURAL.
2.11 EXISTING FLOOR HATCH AND LADDER FO BASEMENT ACCESS.
2.12 EXISTING WINDOW TO REMAIN.
2.13 EXISTING DOOR AND FRAME TO REMAIN.
2.14 INFILL EXISTING WALL AT REMOVED ITEM TO MATCH EXISTING.
2.15 NEW ROOF ACCESS LADDER AND CAGE.
2.16 OUTLINE OF NEW SKYLIGHT ABOVE.
2.17 INFILL EXISTING OPENING TO MATCH EXISTING.

No.	DATE	ISSUE
1	OCT 5/18	Phase 1 Permit

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OCT 05 18
LAURD ANDREW ROBERTSON
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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
SECOND FLOOR PLAN

PROJECT NUMBER 18-023
PROJECT DATE July 2018
DRAWN BY ssomerville

A212

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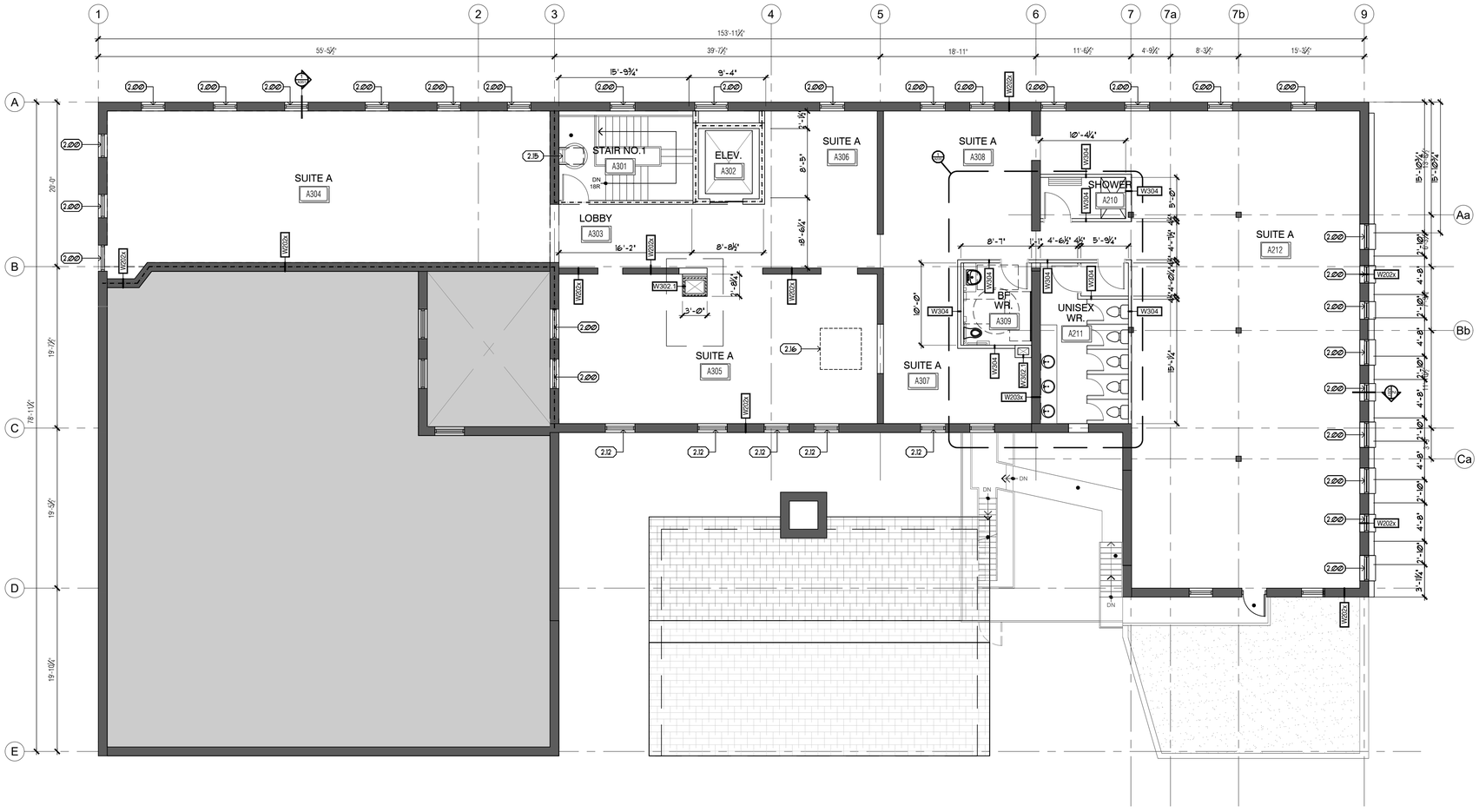

1 A213 Third Floor Plan
SCALE: 1/8" = 1'-0"

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING TO BE REMOVED

Proposed Legend

2.00 INSULATED GLAZING IN THERMALLY BROKEN FRAME.
2.01 INSULATED DOOR AND SIDELIGHT IN THERMALLY BROKEN FRAME.
2.02 INSULATED DOOR IN THERMALLY BROKEN FRAME.
2.03 DOOR AND SIDELIGHT IN ALUMINUM FRAME.
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2.12 EXISTING WINDOW TO REMAIN.
2.13 EXISTING DOOR AND FRAME TO REMAIN.
2.14 INFILL EXISTING WALL AT REMOVED ITEM TO MATCH EXISTING.
2.15 NEW ROOF ACCESS LADDER AND CAGE.
2.16 OUTLINE OF NEW SKYLIGHT ABOVE.
2.17 INFILL EXISTING OPENING TO MATCH EXISTING.

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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
THIRD FLOOR PLAN

PROJECT NUMBER 18-023
PROJECT DATE July 2018
DRAWN BY ssomerville

A213

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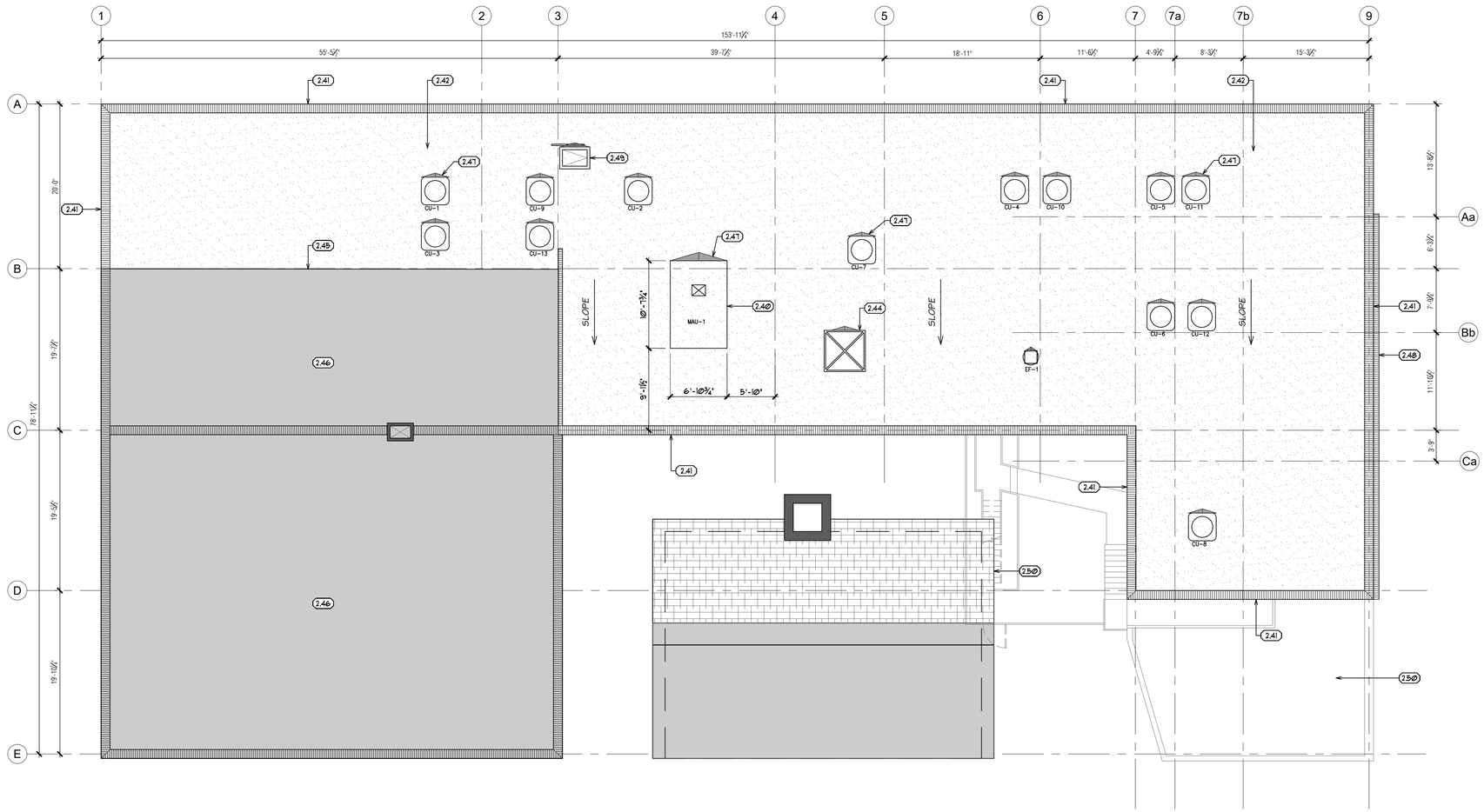

1 A213 Third Floor Plan
SCALE: 1/8" = 1'-0"

Keynotes

2.40 NEW MAKE-UP AIR UNIT. REFER TO MECHANICAL.
2.41 NEW PREFINISHED METAL CAP FLASHING.
2.42 NEW ROOFING ASSEMBLY R300.1. REFER TO A001.
2.43 NEW COIL UNIT (TYPICAL). REFER TO MECHANICAL.
2.44 NEW SKYLIGHT WITH FIRE GLASS. REFER TO STRUCTURAL FOR FRAMING.
2.45 EXTENT OF NEW ROOFING.
2.46 EXISTING ROOF TO REMAIN.
2.47 ROOF CRICKET. TYPICAL AT ALL ROOF TOP EQUIPMENT.
2.48 NEW PREFINISHED METAL CAP FLASHING ON NEW WALL.
2.49 NEW 24"X36" ROOF ACCESS HATCH AND GUARD.
2.50 EXISTING ROOF BELOW.

Legend

EXISTING ADJACENT PROPERTY

N

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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
ROOF PLAN

PROJECT NUMBER 18-023
PROJECT DATE July 2018
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A214

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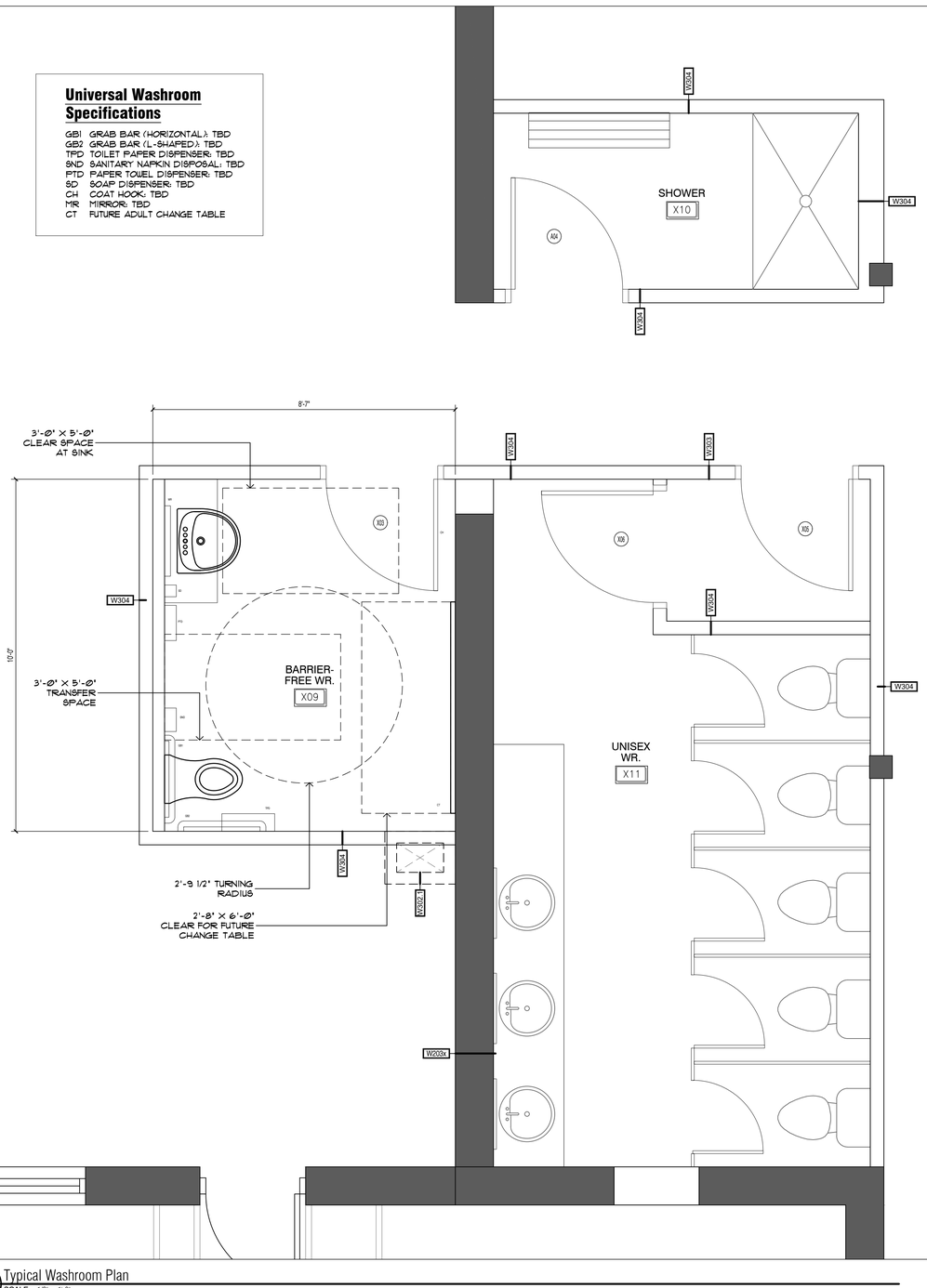
Universal Washroom Specifications

GB1	GRAB BAR (HORIZONTAL): TBD
GB2	GRAB BAR (L-SHAPED): TBD
TPD	TOILET PAPER DISPENSER: TBD
SND	SANITARY NAPKIN DISPOSAL: TBD
PTD	PAPER TOWEL DISPENSER: TBD
SD	SOAP DISPENSER: TBD
CH	COAT HOOK: TBD
MR	MIRROR: TBD
CT	FUTURE ADULT CHANGE TABLE



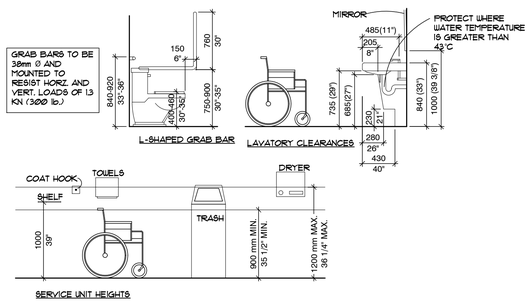
1 A220 Typical Washroom Plan
SCALE: 1/2" = 1'-0"

BARRIER-FREE ENTRY DOOR ASSEMBLY NOTES:

1. ENSURE A MAXIMUM DIFFERENCE IN ELEVATION OF 13mm TO ACCOMMODATE BARRIER-FREE ACCESSIBILITY INTO THE FACILITY AT BUILDING ENTRIES NOTED TO HAVE PUSH BUTTONS. USE DESIGNATED BARRIER-FREE DOOR SILL.s

BARRIER FREE ACCESSIBILITY NOTES:

1. WORK & ACCESSORIES REQUIRED TO 'ACCESSIBLE' WASHROOM:
   - .1 INSULATE WASTE & HOT WATER SUPPLY PIPING AT U/S OF LAVATORY.s
   - .2 WALL HUNG LAVATORY SHALL BE EQUIPPED WITH APPROVED 'WING-HANDLED' TRIM.s
3. MOUNT ALL FIXTURES AND ACCESSORIES AT 1200mm A.F.F.s
   - .4 ENSURE MINIMUM 600mm CLEARANCE FROM JAMB TO IN-SWING OF DOORS.s
   - .5 ENSURE MINIMUM 300mm CLEARANCE FROM JAMB TO OUT-SWING OF DOORS.s
   - .6 PROVIDE COAT HOOK AT 1200mm A.F.F.s
2. GRAB BARS TO ACCESSIBLE WASHROOM (ABLE TO SUPPORT 300 LB. CAPACITY.):
   - .1 SIDE BAR TO BE 38mm DIA. S.S. L-SHAPED WITH 760mm LONG HORIZONTAL AND VERTICAL COMPONENTS. VERTICAL COMPONENT TO BE MOUNTED 150mm N FRONT TOILET SEAT. HORIZONTAL COMPONENT TO BE MOUNTED 160mm A.F.F. , PROVIDE SOLID BACK SUPPORT FOR ANCHORS. PROVIDE 38mm CLEAR BETWEEN BAR AND WALL.
   - .2 BACK BAR TO BE 38mm DIA. BY 600mm STRAIGHT S.S. MOUNTED HORIZONTALLY ON WALL BEHIND TOILET SEAT AT 840mm A.F.F. OR 150mm ABOVE TOP OF TANK. PROVIDE SOLID BACK SUPPORT FOR ANCHORS. PROVIDE 38mm CLEAR BETWEEN BAR AND WALL.



2 A220 Universal Washroom Elevations
SCALE: N.T.S.

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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
Washrooms

PROJECT NUMBER 18-023
PROJECT DATE July 2018
DRAWN BY ssomerville

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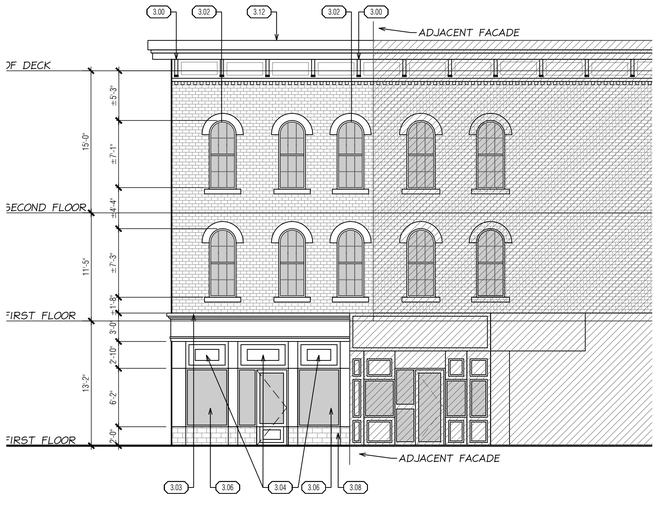
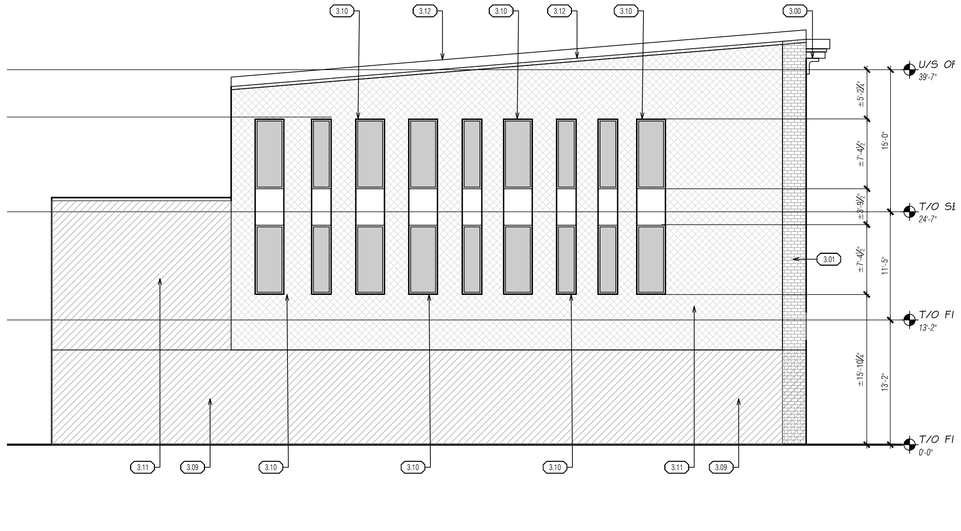


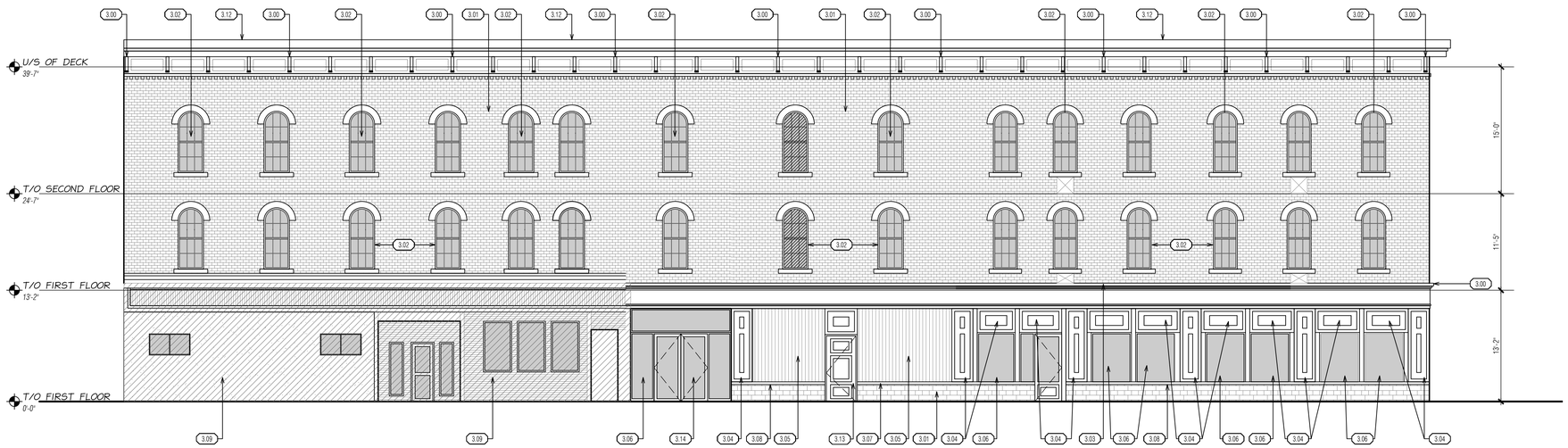
3 A301 WEST ELEVATION (KING STREET E)

SCALE: 3/32" = 1'



2 A301 EAST ELEVATION (GOUDIES LANE)

SCALE: 3/32" = 1'



1 A301 NORTH ELEVATION (QUEEN STREET N)

SCALE: 3/32" = 1'

Legend

- EXISTING ADJACENT PROPERTY
- NOT IN SCOPE
- OPAQUE FILM AT INSIDE OF WINDOW
- INFILL EXISTING OPENING (TO MATCH ADJACENT)

Proposed Keynotes

3.00 EXISTING CORNICE TO REMAIN. NEW PAINT FINISH.
3.01 EXISTING MASONRY TO REMAIN. REMOVE EXISTING PAINT AND MAKE GOOD.
3.02 NEW WINDOW IN EXISTING OPENING. TYPICAL.
3.03 NEW CORNICE BAND. PAINT FINISH.
3.04 NEW DECORATIVE PANEL.
3.05 NEW BOARD AND BATTEN SIDING. PAINT FINISH.
3.06 NEW INSULATED GLAZING IN THERMALLY BROKEN ALUMINUM STOREFRONT GLAZING.
3.07 NEW STONE SILL.
3.08 NEW STONE SILL.
3.09 EXISTING FACADE TO REMAIN.
3.10 NEW WINDOW IN NEW OPENING WITH PREFINISHED SILL BOX. SILL AND HEAD TO ALIGN WITH EXISTING WINDOW OPENINGS. TYPICAL.
3.11 EXISTING STUCCO/PARGING TO REMAIN. PAINT FINISH.
3.12 NEW 4" PREFINISHED METAL FLASHING.
3.13 NEW DOOR. PAINT FINISH.
3.14 NEW INSULATED GLAZING IN THERMALLY BROKEN ALUMINUM DOOR FRAME.

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AMERICAN HOTEL

1 Queen Stret East, Kitchener

DRAWING

PHASE 1
ELEVATIONS

PROJECT NUMBER 18-023
PROJECT DATE July 2018
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A301

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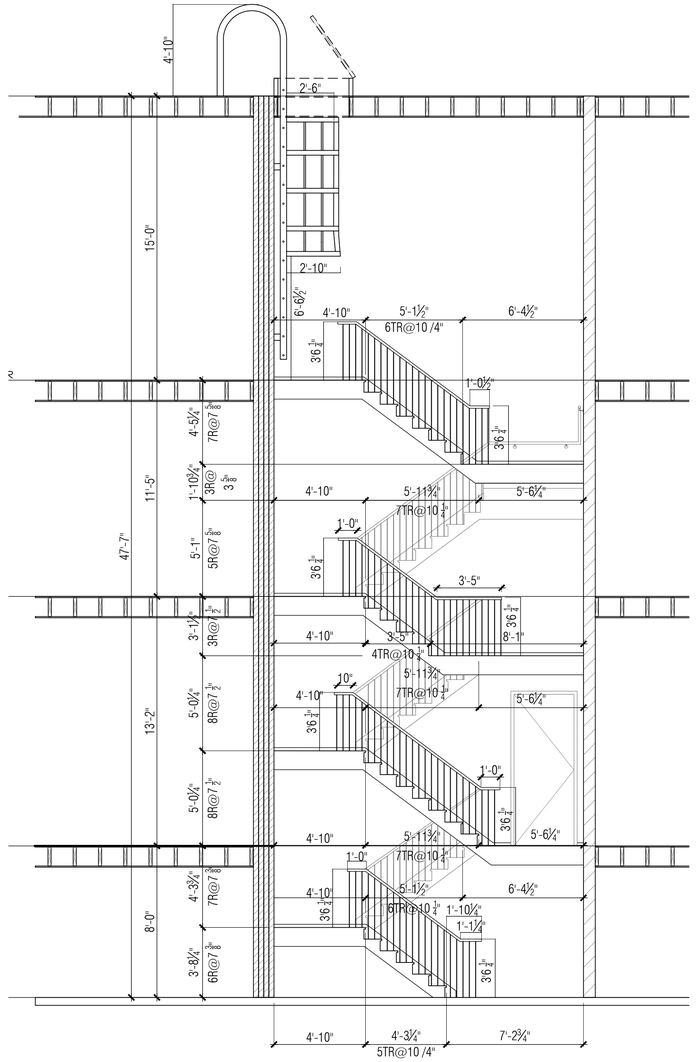

1 / A601 Stair No.1 Section
SCALE: 1/4" = 1'-0"

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DATE 05/18

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PROJECT
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
STAIR SECTION

PROJECT NUMBER
18-023
PROJECT DATE
July 2018
DRAWN BY
ssomerville

A601

DOOR SCHEDULE

DOORS							FRAMES					HARDWARE	COMMENTS NOTE: ALL DOOR HARDWARE TO BE STAINLESS STEEL
No.	Elev.	Size	Mat'l	Finish	Glazing	F.R.R.	Elev.	Size	Mat'l	Finish	F.R.R.		
001	A	3'-2"x7'-0"	HM	PAINT	-	3/4 HR	A	3'-6"x7'-2"	HM	PAINT	3/4 HR	3 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	
101	A	3'-2"x8'-0"	ALUM	ANOD	TEMP	-	E	8'-0"x8'-2"	ALUM	ANOD	-	LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	INSULATED GLAZING, THERMALLY BROKEN FRAME
102	C	3'-2"x8'-0"	ALUM	PAINT	TEMP		E	3'-6"x8'-2"	ALUM	PAINT		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	INSULATED GLAZING, THERMALLY BROKEN FRAME
103	B	3'-2"x8'-0"	WOOD	STAIN	-		E	3'-6"x8'-2"	WOOD	STAIN		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	INSULATED GLAZING, THERMALLY BROKEN FRAME
104	C	(2) 3'-2"x8'-0"	ALUM	ANOD	TEMP		D	7'-0"x8'-2"	ALUM	ANOD		LOCK SET, 8 BUTT HINGES, 2 SELF-CLOSING DEVICE, 2 O/H STOP,	INSULATED GLAZING, THERMALLY BROKEN FRAME
105	C	(2) 3'-2"x8'-0"	ALUM	ANOD	TEMP		D	7'-0"x8'-2"	ALUM	ANOD		2 PASSAGES SETS, 8 BUTT HINGES, 2 SELF-CLOSING DEVICE, 2 O/H STOP	
106	D	3'-2"x8'-0"	HM	PAINT	FIRE	3/4 HR	E	3'-6"x8'-2"	HM	PAINT	3/4 HR	PASSAGES SETS, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	FIRE GLASS
107	C	3'-2"x8'-0"	ALUM	ANOD	TEMP		E	3'-6"x8'-2"	ALUM	ANOD		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	
108	-	EXISTING	-	PAINT	-		E	3'-6"x8'-2"	-	PAINT		NEW DOOR HARDWARE	
109	A	3'-2"x7'-0"	HM	PAINT	-		A	3'-6"x7'-2"	HM	PAINT		LOCK SET, 3 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP, PANIC BAR	
201	B	3'-2"x8'-0"	WOOD	STAIN	-	3/4 HR	C	3'-6"x8'-2"	HM	PAINT	3/4 HR	PASSAGES SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	FIRE GLASS
202	A	3'-2"x8'-0"	HM	PAINT	-		A	3'-6"x8'-2"	HM	PAINT		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP, PANIC BAR	INSULATED GLAZING, THERMALLY BROKEN FRAME
203	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP, PUSH BUTTON, AUTO LOCK, POWER DOOR OPERATOR	
204	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	
205	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		PASSAGES SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	
206	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		PASSAGES SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	
301	B	3'-2"x8'-0"	WOOD	STAIN	-	3/4 HR	C	3'-6"x8'-2"	HM	PAINT	3/4 HR	PASSAGES SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	FIRE GLASS
302	A	3'-2"x8'-0"	HM	PAINT	-		A	3'-6"x8'-2"	HM	PAINT		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP, PANIC BAR	INSULATED GLAZING, THERMALLY BROKEN FRAME
303	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP, PUSH BUTTON, AUTO LOCK, POWER DOOR OPERATOR	
304	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		LOCK SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	
305	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		PASSAGES SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	
306	B	3'-2"x8'-0"	WOOD	STAIN	-		B	3'-6"x8'-2"	WOOD	STAIN		PASSAGES SET, 4 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP,	

1 / A801 Door Schedule
SCALE: NTS

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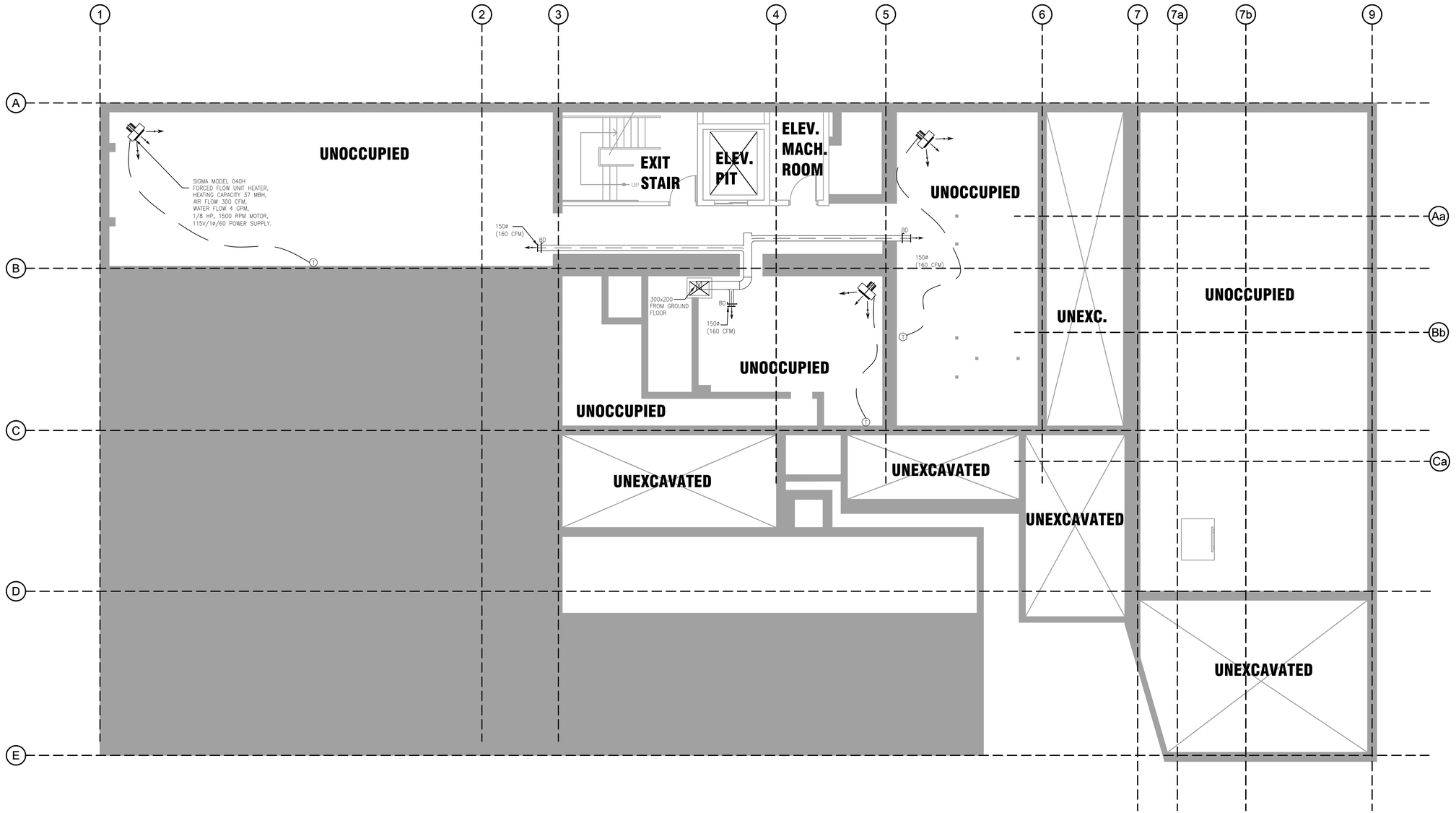
AMERICAN HOTEL
1 Queen Stret East, Kitchener

DRAWING
PHASE 1
SCHEDULES

PROJECT NUMBER
18-023
PROJECT DATE
July 2018
DRAWN BY
SSorterville

A801



NOTES:

NO	DATE	ISSUE
1	04 OCT 2018	ISSUED FOR PERMIT.

TRUE NORTH	PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER

VIVE DEVELOPMENT

JG GROUP EST 1979
DEVELOPMENT • FINANCING • CONSULTING

PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
BASEMENT HVAC LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
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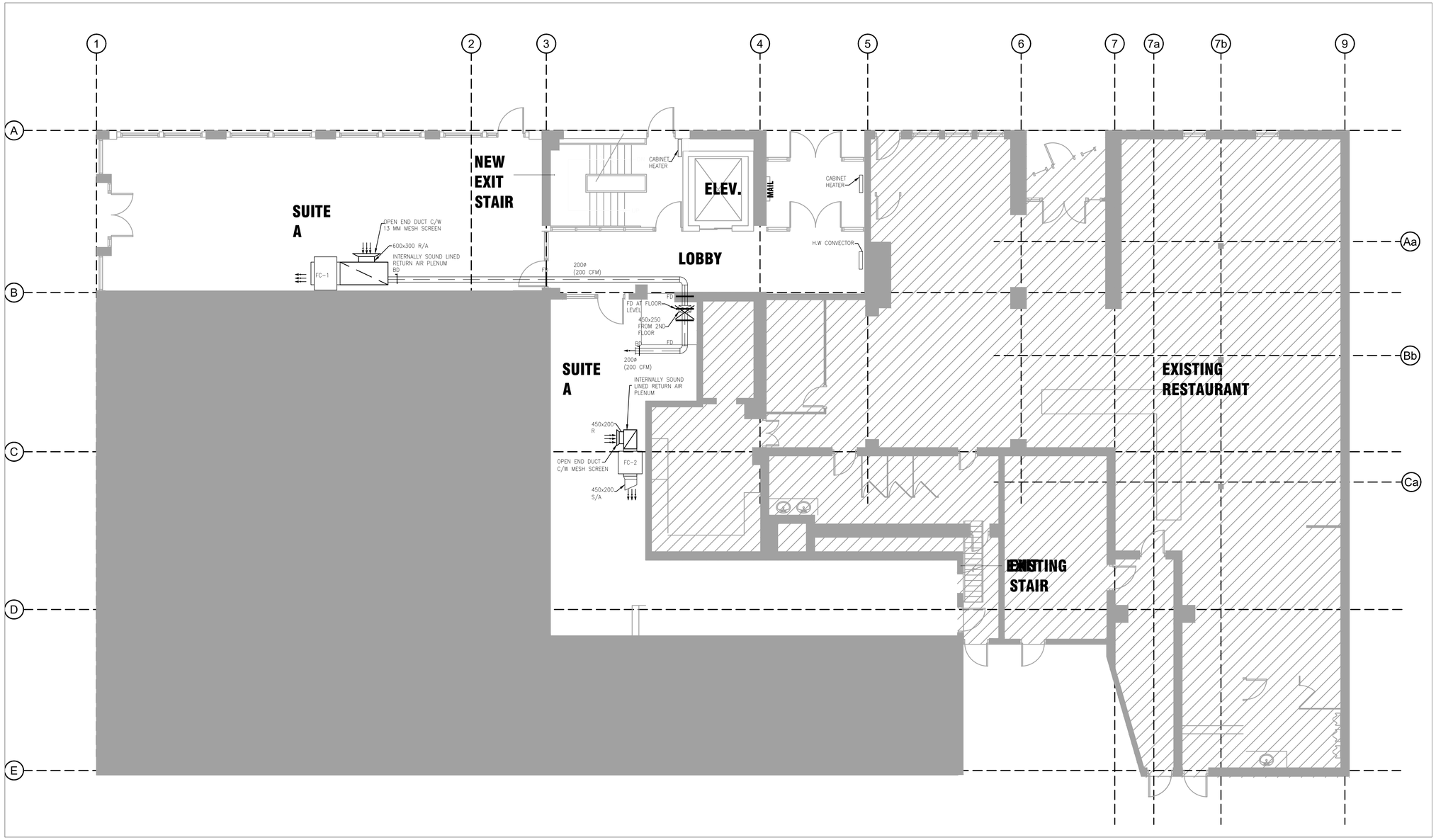

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JG GROUP EST 1979
DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
GROUND FLOOR HVAC LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
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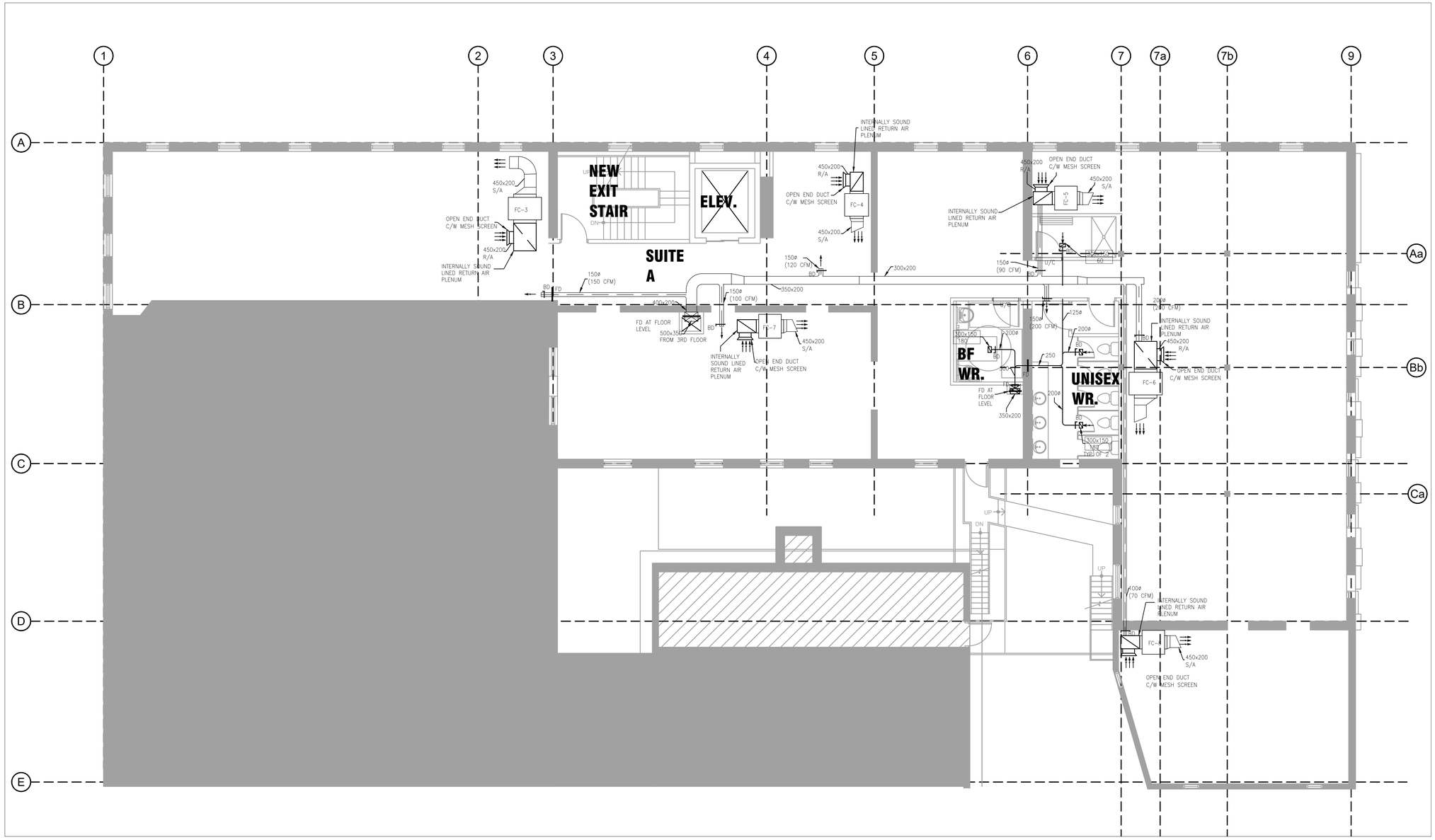

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ENGINEER:

Entenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER

VIVE DEVELOPMENT

JG GROUP EST 1979
DEVELOPMENT • FINANCING • CONSULTING

PROJECT

CLIENT PROJECT NO:
-

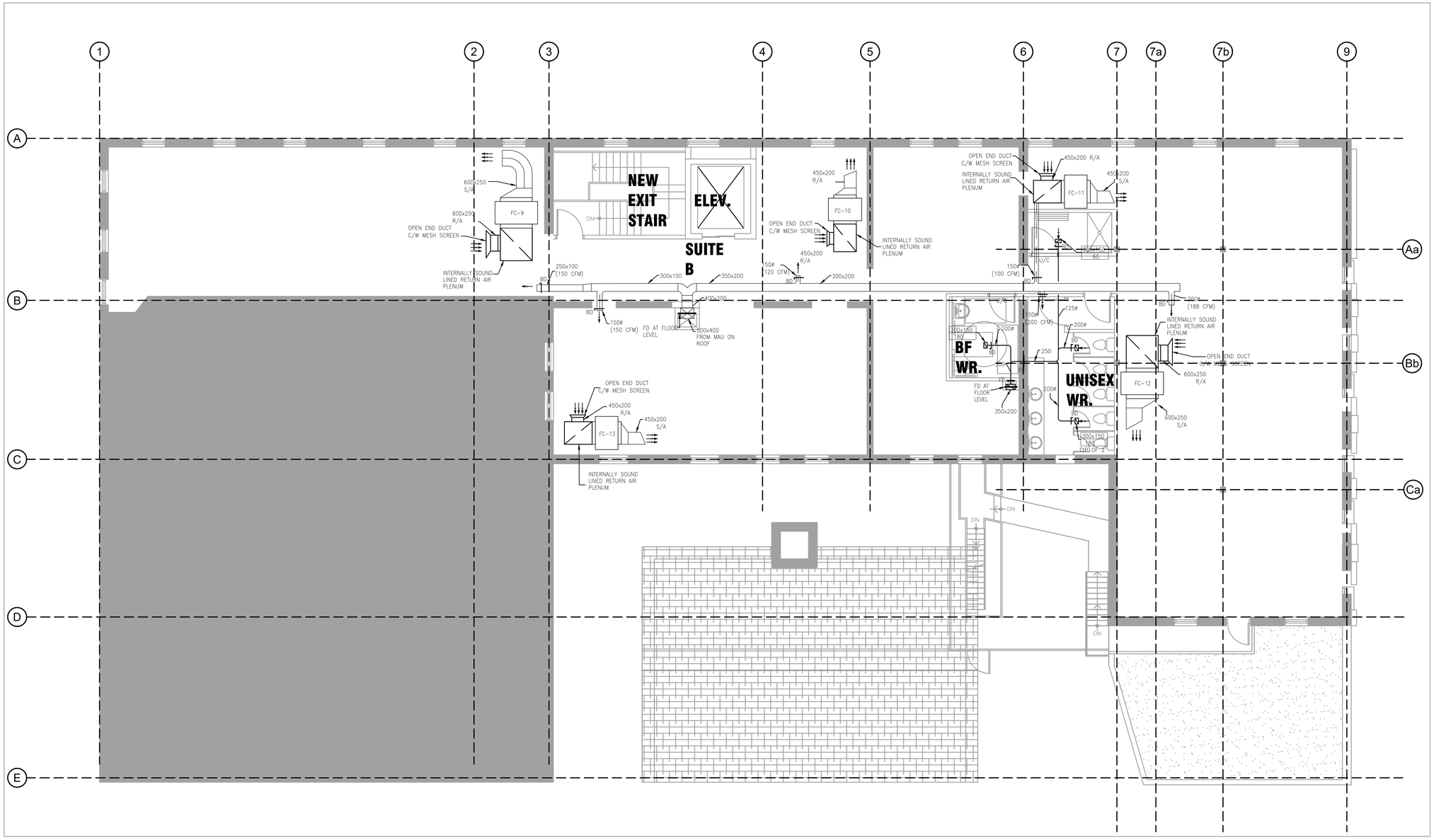
JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SECOND FLOOR HVAC LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
3/ 6	M-1.2		0



NOTES:

NO	DATE	ISSUE
1	04 OCT 2018	ISSUED FOR PERMIT.

TRUE NORTH	PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

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Building Services Design & Consulting
Ph: 519-760-0288

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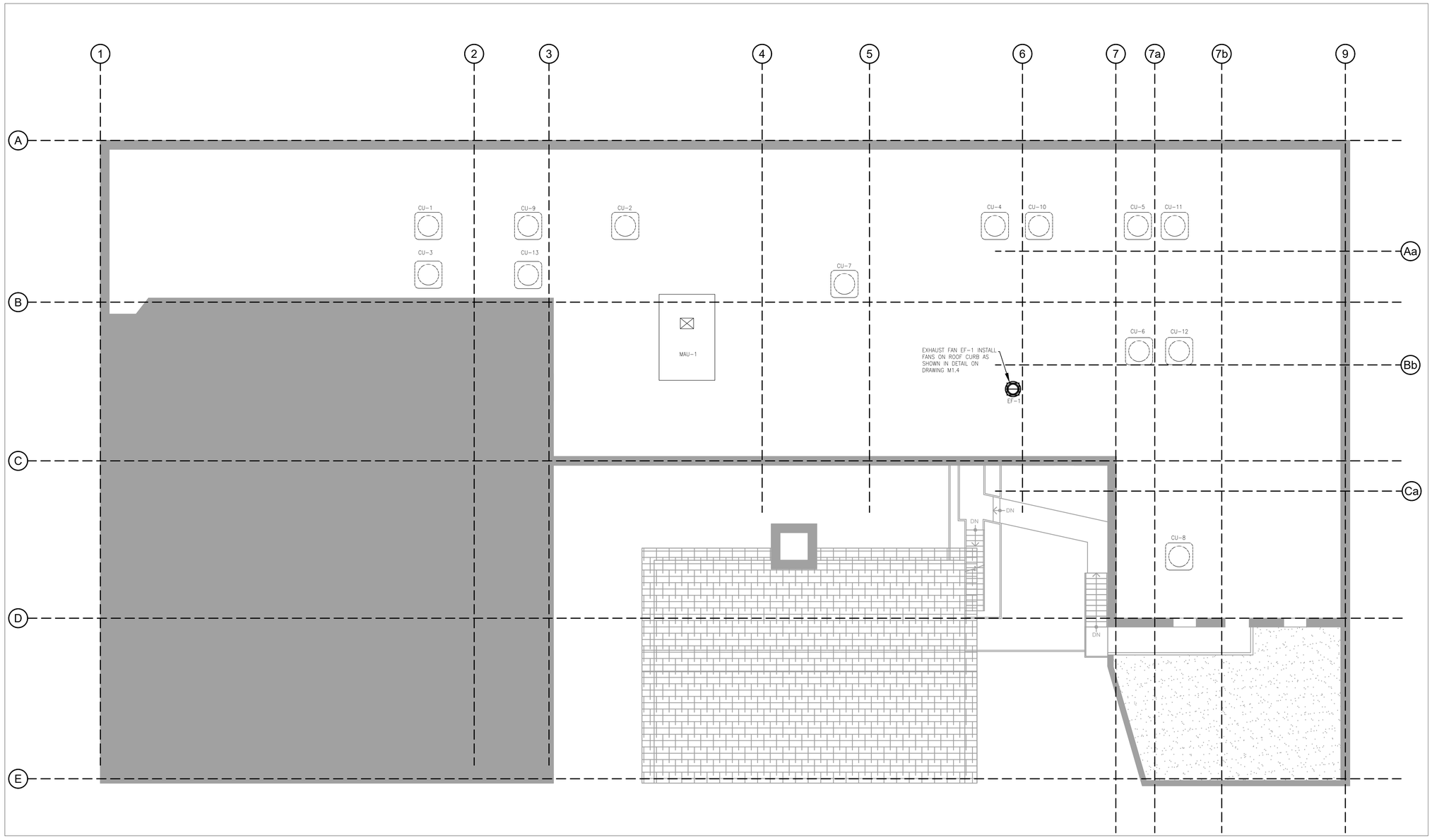
4 / 6	M-1.3		0



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FAN COIL SCHEDULE

UNIT No.	SERVICE & LABEL	MAKE & MODEL	DISCHARGE	HEAT OUTPUT (BTU)	AIR SUPPLY (HEATING) (CFM)	AIR SUPPLY (COOLING) (CFM)	MOTOR (HP)	ELECTRICAL	NUMBER OF COILS	COOLING CAPACITY (TONS)	CONDENSING UNIT	CONDENSING UNIT MCA	CONDENSING UNIT ELECTRICAL	CONDENSING UNIT WEIGHT (lb)	APPROX. LENGTH OF REFRIG. PIPES (FEET)	REMARKS
FC-1	GROUND FLOOR TENANT A	CARRIER 42DE20	SIDE	14,800	2000	2000	2 AT 1/4	208/1/60	4	5.0	CARRIER 24ABB60	–	208/1/60	–	–	SEE NOTES BELOW
FC-2	GROUND FLOOR TENANT B	CARRIER 42DE08	SIDE	19,900	800	800	2 AT 1/4	208/1/60	4	3.0	CARRIER 24ABB36	–	208/1/60	–	–	SEE NOTES BELOW
FC-3	FAN COIL UNIT SECOND FLOOR	CARRIER 42DE12	SIDE	30,000	1000	1000	2 AT 1/4	208/1/60	4	3.0	CARRIER 24ABB36	–	208/1/60	–	–	SEE NOTES BELOW
FC-4	FAN COIL UNIT SECOND FLOOR	CARRIER 42DE08	SIDE	14,200	600	600	2 AT 1/4	208/1/60	4	3.0	CARRIER 24ABB36	–	208/1/60	–	–	SEE NOTES BELOW
FC-5	FAN COIL UNIT SECOND FLOOR	CARRIER 42DE08	SIDE	14,200	600	600	2 AT 1/4	208/1/60	4	2.0	CARRIER 24ABB24	–	208/1/60	–	–	SEE NOTES BELOW
FC-6	FAN COIL UNIT SECOND FLOOR	CARRIER 42DE14	SIDE	31,700	1200	1200	2 AT 1/4	208/1/60	4	4.0	CARRIER 24ABB48	–	208/1/60	–	–	SEE NOTES BELOW
FC-7	FAN COIL UNIT SECOND FLOOR	CARRIER 42DE08	SIDE	19,600	700	700	2 AT 1/4	208/1/60	4	2.0	CARRIER 24ABB24	–	208/1/60	–	–	SEE NOTES BELOW
FC-8	FAN COIL UNIT SECOND FLOOR	CARRIER 42DE06	SIDE	14,300	600	600	2 AT 1/4	208/1/60	4	1.5	CARRIER 24ABB24	–	208/1/60	–	–	SEE NOTES BELOW
FC-9	FAN COIL UNIT THIRD FLOOR	CARRIER 42DE16	SIDE	41,000	1400	1400	2 AT 1/4	208/1/60	4	3.0	CARRIER 24ABB36	–	208/1/60	–	–	SEE NOTES BELOW
FC-10	FAN COIL UNIT THIRD FLOOR	CARRIER 42DE12	SIDE	22,400	1000	1000	2 AT 1/4	208/1/60	4	3.0	CARRIER 24ABB36	–	208/1/60	–	–	SEE NOTES BELOW
FC-11	FAN COIL UNIT THIRD FLOOR	CARRIER 42DE12	SIDE	27,900	1000	1200	2 AT 1/4	208/1/60	4	2.0	CARRIER 24ABB24	–	208/1/60	–	–	SEE NOTES BELOW
FC-12	FAN COIL UNIT THIRD FLOOR	CARRIER 42DE16	SIDE	48,000	1500	1500	2 AT 1/4	208/1/60	4	4.0	CARRIER 24ABB48	–	208/1/60	–	–	SEE NOTES BELOW
FC-13	FAN COIL UNIT THIRD FLOOR	CARRIER 42DE12	SIDE	19,200	1000	1000	2 AT 1/4	208/1/60	4	3.0	CARRIER 24ABB36	–	208/1/60	–	–	SEE NOTES BELOW

NOTES:
1. PROVIDE FOR EACH FAN COIL COMPLETE WITH AN ELECTRONIC PROGRAMMABLE THERMOSTAT C/W 30FT WIRE COILED FOR FUTURE USE, HOT WATER HEATING COIL SECTION AND FILTERS.
2. PROVIDE ONE (1) CONDENSING UNIT FOR EACH FAN COIL. COORDINATE LOCATION OF EACH UNIT ON SITE AND INSTALL MAINTAINING MINIMUM CLEARANCES AS REQUIRED BY EQUIPMENT MANUFACTURER.
4. RUN LIQUID AND SUCTION REFRIGERATION LINES FROM EACH CONDENSING UNIT TO RESPECTIVE F.C. UNIT. COORDINATE EXACT ROUTING ON SITE AND SIZE CIRCUIT BASED ON TOTAL EQUIVALENT LENGTH AND CAPACITY. VERIFY SIZES WITH CONDENSING UNIT MANUFACTURER.
5. PIPE 1" CONDENSATE DRAIN FROM EACH AIR HANDLER TO NEAREST FLOOR DRAIN C/W TRAP.
6. CONNECT HOT WATER HEATING SUPPLY AND RETURN PIPES TO EACH FAN COIL UNIT COMPLETE WITH ISOLATING VALVES, STRAINER, CIRCUIT BALANCING VALVE AND THERMOMETERS.
7. SEAL DUCT JOINTS AIR TIGHT TO APPROVAL.
8. INSULATE ALL HEATING PIPES. RECOVER EXPOSED PIPES IN TENANT SPACE WITH WHITE PVC COVERING.

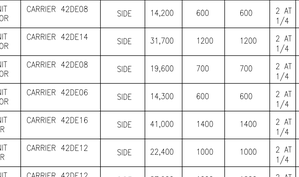
FAN EQUIPMENT SCHEDULE

NUMBER	SERVICE AND LABEL	MAKE OF FAN	MODEL No.	VOL. FLOW (CFM)	O.V. (FPM)	S.P. (IN)	SPEED R.P.M.	TIP SPEED F.P.M.	SONES	MOTOR H.P.	MOTOR PH	MOTOR V	ACCESSORIES & REMARKS
EF-1	WASHROOM EXHAUST FAN	GREENHECK	GB-131	1200	–	0.25	1000	–	7.7	1/4	1	115	PROVIDE FAN C/W DISCONNECT AND SPEED CONTROL. PROVIDE 7 DAY TIMER AND WIRE TO OPERATE FAN.

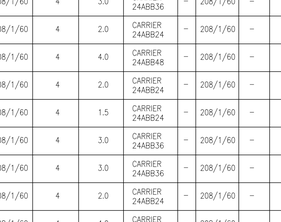
MAKE UP AIR UNIT SCHEDULE

NUMBER	SERVICE AND LABEL	MAKE OF FAN	MODEL No.	VOL. FLOW (CFM)	HEATING (BTU)	S.P. (IN)	SPEED R.P.M.	TIP SPEED F.P.M.	SONES	MOTOR H.P.	MOTOR PH	MOTOR V	ACCESSORIES & REMARKS
MAU-1	BUILDING MAKE UP AIR UNIT	REZNOR	YDMA – 120	2500	120,000	–	–	–	–	–	3	208	SEE NOTES BELOW .

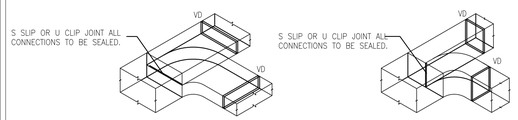
NOTES:
1. PROVIDE UNIT WITH ECM ENCLOSED MOTOR WITH FACTORY INSTALLED ABB DRIVE.
2. PROVIDE UNIT WITH ROOF CURB.
3. PROVIDE UNIT WITH DUCT STATIC PRESSURE CONTROL.
4. PROVIDE UNIT WITH SMOKE DETECTOR.



SPIN-IN ANGLED COLLAR
N.T.S.

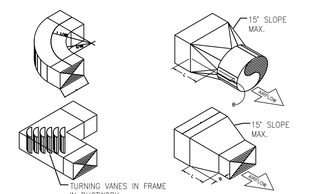


BRICK VENT DETAIL
N.T.S.



NOTES
VOLUME CONTROL SHOULD BE BY BRANCH DAMPERS.
ALL TURNING RADIUS TO CONFORM TO SMACNA DUCT CONSTRUCTION STANDARDS.

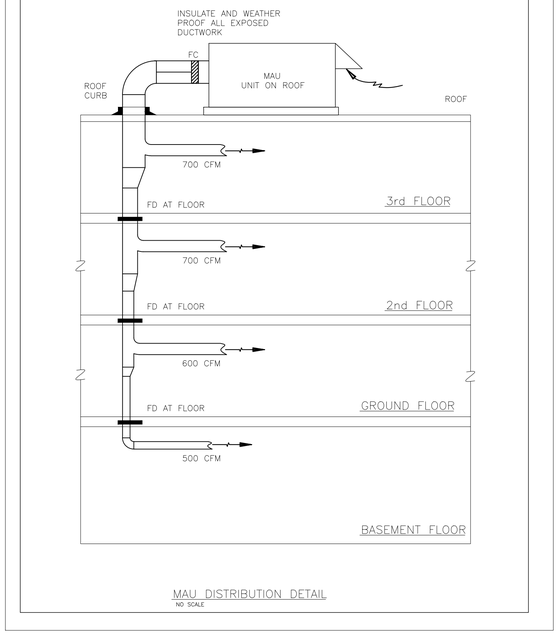
DETAILS OF AIR FLOW BRANCHES
N.T.S.



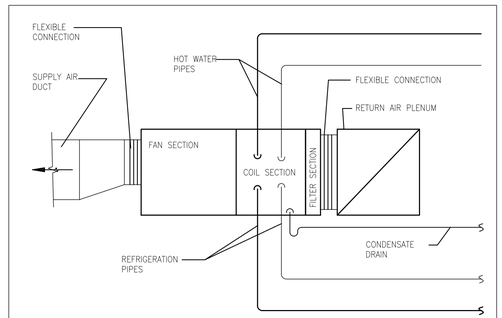
NOTE:
PROVIDE TURNING VANES WHERE CENTRELINE RADIUS IS < 1 1/4 W

B=OFFSET
L=3.7 * B (MINIMUM)

DUCT ELBOWS & AND TRANSITIONS
N.T.S.

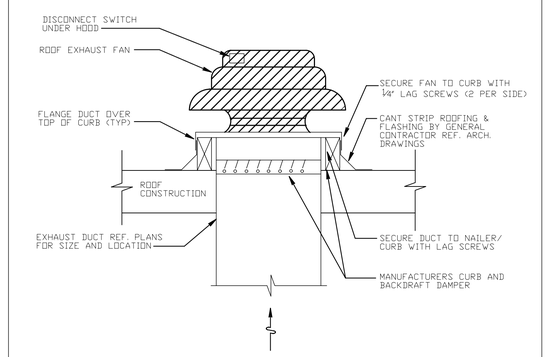


MAU DISTRIBUTION DETAIL
NO SCALE



INSTALLATION NOTES:
1. MAINTAIN SERVICE CLEARANCE IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS.
2. EXTEND CONDENSATE PIPE TO NEAREST DRAIN. INSULATE ALL PIPES AND RE-COVER EXPOSED PIPES WITH PVC COVERING.
3. PROVIDE DISCONNECT AT UNIT LINE SIDE.
4. WIRE UNIT TO OPERATE FROM REMOTE PROGRAMMABLE THERMOSTAT. COORDINATE LOCATION OF THERMOSTAT ON SITE. INSTALL ALL CONTROL WIRING IN CONDUITS.

FAN COIL UNIT DETAIL
N.T.S.



ROOF MOUNTED EXHAUST FAN
NOT TO SCALE

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NOTES AND SPECIFICATION

GENERAL CONDITIONS

1. SUPPLY AND INSTALL A COMPLETE MECHANICAL SYSTEM AS SHOWN, NOTED AND/OR SPECIFIED.
2. ARRANGE TO VISIT JOB SITE AND EXAMINE ALL EXISTING CONDITIONS WHICH AFFECT THE WORK. EXISTING SYSTEMS ARE MAY NOT BE ACCURATELY SHOWN.
3. ARRANGE FOR, PAY AND OBTAIN ALL REQUIRED PERMITS, FEES, LICENSES, CERTIFICATE OF INSPECTIONS, TESTING, ETC. PROVIDE AND SUBMIT DRAWINGS AND FORMS TO THE AUTHORITIES AS REQUIRED.
4. CONFORM WITH BUILDING CODE AND STANDARDS, LOCAL BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
5. REVIEW ALL DRAWINGS AND CO-ORDINATE WITH OTHER TRADES REGARDING LOCATION OF EQUIPMENT, CONTROL DEVICE LOCATIONS, DISTRIBUTION SYSTEM, ETC.
6. SUBMIT SHOP DRAWINGS FOR EACH EQUIPMENT AND SYSTEM.
7. SUPPLY ELECTRICAL REQUIREMENTS AND WIRING DIAGRAMS TO ELECTRICAL CONTRACTOR FOR THEIR CONNECTION.
8. CLEAN ALL EQUIPMENT AND OTHER INSTALLATIONS. FOLLOW INITIAL MAINTENANCE INSTRUCTION FROM MANUFACTURER.
9. PROVIDE GUARANTEE IN WRITING FOR THE INSTALLED MATERIAL AND WORKMANSHIP INCLUDING THE MANUFACTURER'S GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION AND ACCEPTANCE.
10. FIELD COORDINATE AND LOCATE THE EXACT DIMENSIONS AND POSITIONS OF EACH REQUIRED OPENING AND HOLE. OBTAIN APPROVAL FOR ANY CUTTING OR DRILLING THAT IS REQUIRED IN FLOORS, ROOFS, CEILINGS AND/OR WALLS FOR PASSAGE OF PIPES, DUCTS, ETC.
11. CUTTING AND PATCHING SHALL TO COMPLETE THE MECHANICAL WORK SHALL BE DONE BY THIS CONTRACTOR. FINISHES BY OTHERS UNLESS OTHERWISE NOTED.
12. TEST AND ADJUST ALL SYSTEMS TO THE SATISFACTION OF THE ENGINEER AND THE AUTHORITIES HAVING JURISDICTION. REFER TO TESTING AND BALANCING SPECIFICATIONS.

MATERIAL

1. ALL MATERIALS AND EQUIPMENT TO BE NEW AND FREE OF DEFECTS, AND SHALL BE C.S.A. APPROVED.
2. AIR DISTRIBUTION
   - 2.1 ALL DUCTWORK SHALL BE FABRICATED TO SMACNA DUCT MANUAL STANDARDS, SECTION NO. 1 AND AS FOLLOWS:
   - 2.2 MATERIAL AND THICKNESS
     DUCTWORK SHALL BE FABRICATED FROM BEST QUALITY LOCKFORMING GALVANIZED STEEL SHEETS AS MANUFACTURED BY STELCO OR DOFASCO FOLLOWING THICKNESS:
     SIZE OF DUCT

	GAUGE OF SHEET STEEL
UP TO 600mm (24") IN WIDTH OR DEPTH OR UP TO 200mm (8") DIAMETER	NO. 24 US
625mm (25") TO 1200mm (48") IN WIDTH OR DEPTH OR 225mm (9") TO 550mm (22") DIAMETER	NO. 22 US

   - 2.3 CONSTRUCTION
     LONGITUDINAL SEAMS SHALL BE MADE WITH PITTSBURGH LOCK OR BUTTON PUNCH SEAMS IN ALL SIZES. ALL DUCTWORK SHALL BE CROSS BROKEN OR BEADED 300mm (12") O.C. FOR RIGIDITY. DUCTS SHALL HAVE PLAIN "S" SLIPS ON THE LONG SIDES, & DRIVE CLEATS ON THE SHORT SIDES, FOLDED OVER TO PREVENT AIR LEAKAGE. MINIMUM END JOINT SPACING IS 3 METERS (10 FEET). ALL BENDS OR ELBOWS SHALL BE MADE WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT. WHERE IT IS NOT POSSIBLE, TURNING VANES SHALL BE USED. VANES SHALL BE OF SINGLE VANE CONSTRUCTION WITH 1-1/2 SPACE UP TO 600mm (24") WIDTH AND 80mm (3-1/4") SPACING OVER 600mm (24").
   - 2.4 DAMPERS INSIDE DUCTWORK TO BE SUITABLY REINFORCED TO PREVENT VIBRATION.
   - 2.5 GRILLES & REGISTERS TO BE ALUMINUM GRID, SIMILAR TO E.H.PRICE, COMPLETE WITH OFF-WHITE BORDER FRAME.
   - 2.6 EXHAUST AIR GRILLE TO BE ALUMINUM, LOUVRED PATTERN EACH COMPLETE WITH FRAME.
   - 2.7 HANGERS
     DUCTWORK SHALL HAVE SUBSTANTIAL HANGERS ATTACHED TO THE STRUCTURE WITH CONCRETE INSERTS TO SECURE THE DUCTS IN PLACE AND PREVENT VIBRATION. NO CADDY CLIPS OR PLUMBER'S TAPE PERMITTED FOR HANGING DUCTS. HORIZONTAL DUCTWORK UP TO 750mm (30") WIDE OR 600mm (24") DIA. SHALL BE SUPPORTED BY GALVANIZED 25mm (1"), #16 GAUGE OR HEAVIER HANGER PLACED NOT OVER 1.8 m APART, WITH ENDS TURNED UNDER THE DUCT. SECURE TO DUCT WITH SHEET METAL SCREWS, TWOPER SIDE AND ONE IN BOTTOM.
   - 2.8 BALANCING DAMPERS
     PROVIDE BALANCING DAMPER IN DUCTWORK WHERE SHOWN AND WHERE REQUIRED FOR PROPER ADJUSTMENT OR AIR QUANTITIES. OPEN AND CLOSED POSITIONS MUST BE CLEARLY MARKED.
     - 2.8.1 SPLITTER DAMPERS SHALL BE AIRFOIL SHAPE DOUBLE THICKNESS OF GAUGE HEAVIER THAN DUCT WITH LOCKING QUADRANT ON EXTERIOR OF DUCT.
     - 2.8.2 SINGLE BLADE ROUND BUTTERFLY U.S. 20 GA THICK WITH LOCKING QUADRANT.
   - 2.9 ACOUSTIC TREATMENT
     INTERNALLY SOUND LINE ALL S.A. & R.A. DUCTS CONNECTED TO MECHANICAL UNITS AS NOTED WITH 25mm (1") FIBERGLASS, RIGID-COATED ACOUSTIC DUCT INSULATION, ADHERE THE LINING OF THE INTERIOR SIDES OF DUCTWORK WITH A MINIMUM OF 75% COVERAGE OF AN APPROVED COLD WATERPROOF ADHESIVE.
     IN ADDITION, USE MECHANICAL FASTENERS, MECHANICAL PINS, ADHERED CLIPS OR ADHERED NYLON PINS. DO NOT DRILL OR PUNCH HOLES THROUGH THE DUCTWORK.
     INSULATION SHALL BE APPLIED WITH ALL JOINTS AND VOIDS SHALL BE FILLED WITH AN APPROVED WATERPROOF, FIRE-RETARDANT MASTIC, WATERPROOF MASTIC SHALL BE APPLIED OVER ALL ANCHORS WHERE THEY PIERCE THE COVERING, PROTECT LEADING AND TRAILING EDGE OF LINER WITH A 25mm (1") METAL STRIP.
     THE DUCTWORK MUST BE ENLARGED IN THESE AREAS TO MAINTAIN THE SAME CROSS-SECTIONAL AREA SHOWN ON THE PLANS.
     INTERNALLY SOUND LINE S.A. AND RETURN AIR DUCTS FROM EACH UNIT OPENING (INCLUDING EXHAUST FANS) UP TO MINIMUM 6100 MM (20 FT)
   - 2.10 DUCT SEALANT
     SEAL ALL DUCT FITTINGS WITH APPROVED DUCT SEALANT. DUCT SEALANT MANUFACTURER SHALL BE DURO DYNE OR APPROVED EQUAL.
   - 2.11 PLUMBING PIPING
     ALL SEWAGE PIPING SHALL BE PVC PIPES M15 SYSTEM OR APPROVED EQUAL. ALL HOT AND COLD WATER SUPPLY PIPES SHALL BE PVC WIRSEBO OR APPROVED EQUAL.

EQUIPMENT

1.0 HORIZONTAL FAN COILS WITH HOT WATER HEATING COILS.
FURNISH AND INSTALL CARRIER OR APPROVED EQUAL HIGH EFFICIENCY FAN COIL UNITS AS SHOWN AND NOTED. EACH UNIT SHALL BE MPV ELITE SERIES TWO STAGE HEAT AND VARIABLE SPEED BLOWER. EACH FAN COIL SHALL BE CSA AND ULS APPROVED. REFER TO SCHEDULE FOR MODEL NUMBERS, CAPACITIES AND ACCESSORIES. EACH UNIT SHALL HAVE CONCENTRIC KITS FOR INSTALLATION THRU THE WALL, PROGRAMMABLE THERMOSTAT, FILTER SECTION, 50 MM THICK FILTER, COOLING, HEATING COILS AND ADJUSTABLE SPEED FAN MOTOR.

PROVIDE FOR EACH FAN COIL SYSTEM REMOTE AIR COOLED CONDENSING UNIT AND INSTALL ON THE ROOF ABOVE CORRIDOR AREA. COORDINATE ROUTING OF REFRIGERANT LINES AND CONTROL WIRES ON SITE.
COORDINATE LOCATION OF EACH UNIT ON SITE AND INSTALL IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS. MAINTAIN REQUIRED SERVICE ACCESS AND FILTER REPLACEMENT.
PROVIDE CONDENSATE DRAIN FROM EACH UNIT TO NEAREST FLOOR DRAIN C/W TRAP. CONNECT EACH HEAT RECOVERY UNIT TO RESPECTIVE FURNAE AS SHOWN AND NOTED ON DRAWINGS.

2.0 FAN EQUIPMENT
1. PROVIDE NUTONE, REVERSOMATIC AND GREENHECK EXHAUST FANS WHERE SHOWN AND NOTED ON DRAWING. REFER TO SCHEDULE ON DRAWINGS FOR
2. EACH FAN SHALL BE CSA APPROVED AND COMPLETE WITH ROOF CURB, BACK DRAFT DAMPER, SCREEN, CENTRIFUGAL FAN WHEEL, MOTOR ACCESS AND STARTER.
3. PROVIDE FOR EACH FAN DISCONNECT AND STARTER. POWER WIRING BY DIVISION 16.

SCOPE OF WORK:

1. WORK INCLUDES SUPPLY AND INSTALLATION OF ALL LABOUR AND MATERIAL NECESSARY FOR VARIOUS SYSTEMS AS REQUIRED TO MAKE FINISHED INSTALLATIONS.
2. MECHANICAL DRAWINGS INDICATE GENERAL LOCATION OF ROUTE OF PIPES AND DUCTS WHICH ARE TO BE INSTALLED. WHERE REQUIRED WORK IS NOT SHOWN OR ONLY SHOWN DIAGRAMMATIC ALLY, INSTALL SAME TO CONSERVE HEAD ROOM AND INTERFERE AS LITTLE AS POSSIBLE WITH FREE USE OF SPACE THROUGH WHICH THEY PASS.
3. THE WORK SHALL INCLUDE, BUT SHALL NOT NECESSARILY BE LIMITED TO THE SUPPLY AND INSTALLATION OF THE FOLLOWING:
   - .1 INSTALLATION OF HVAC SYSTEM AND KITCHEN EXHAUST SYSTEM C/W ALL ASSOCIATED DUCTWORK, PIPING, VENTS, ETC.
   - .2 INSTALLATION OF PLUMBING SYSTEM.
   - .4 GRILLES, REGISTERS, DUCTS AND ASSOCIATED FITTINGS.
   - .5 PROPANE PIPING.
   - .6 EXHAUST FANS AND ASSOCIATED DUCTWORK.
   - .7 TEMPERATURE CONTROLS.
   - .8 AIR BALANCING.
4. THIS CONTRACTOR SHALL EXAMINE THE SITE AS WELL AS ALL DRAWINGS AND SPECIFICATIONS RELATIVE TO THIS WORK. NO ALLOWANCE WILL BE MADE FOR FAILURE TO MAKE SUCH EXAMINATION AND TO TAKE INTO ACCOUNT ALL ASPECTS, WHICH MAY GOVERN THE EXECUTION AND COMPLETION OF THE WORK.
5. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURE FROM DAMAGE WHEN CARRYING OUT THE WORK. CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR ANY CLAIMS OR DAMAGES IN RELATION TO WORK OF THIS CONTRACT.
6. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED FOR ALL TRADES INCLUDING HOLES AND OPENINGS FOR EQUIPMENT ENTRY AND EXIT, CONDUITS, PIPING, VENTS, LOUVRES AND DUCT SYSTEMS.
7. THIS CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL CHARGES FOR INSPECTION, CONNECTIONS AND TESTS REQUIRED BY AUTHORITIES AS DEEMED NECESSARY BY THE ENGINEER.
8. ABIDE BY ONTARIO BUILDING CODE, SMACNA STANDARDS, ASHRAE STANDARDS AND ALL LOCAL BY LAWS RELATING TO THIS INSTALLATION. OBTAIN AND PAY FOR PERMIT, FEES, INSPECTIONS AND DEPOSITS REQUIRED BY ALL AUTHORITIES. SUBMIT ALL REQUIRED PRINTS AND FORMS AS REQUIRED BY AUTHORITIES.
9. UPON COMPLETION OF WORK, TEST AND BALANCE SYSTEM TO AIRFLOW CAPACITIES NOTED. SUBMIT AIR BALANCING REPORT AND AS-BUILT DRAWINGS.
10. GENERAL NOTES LISTED ON DRAWINGS SHALL FORM PART OF THE SPECIFICATIONS.

GAS PIPING

1. PROVIDE GAS PIPING AS REQUIRED FOR EACH MECHANICAL UNITS AND D.H.W. HEATERS. THE PIPING SHALL BE BLACK STEEL PIPE, SCHEDULE #40, WITH 1034 KPA BLACK MALLEABLE IRON FITTINGS. INSTALL PIPING TO CONFIRM TO CGA #B149 AND PROVINCIAL GAS UTILIZATION CODE BOTH AMENDED TO DATE. PROVIDE PRV WHERE SHOWN.
2. GAS VALVES SHALL BE CGA OR ULC APPROVED SELF LUBRICATED BALLVALVE OR LUBRICATED PLUG WITH GREASING NIPPLE, EACH WITH MANUAL LEVER HANDLE. PROVIDE VALVE AT EACH UNIT CONNECTION INCLUDING EQUIPMENT SUPPLIED BY OWNER OR ANOTHER SECTION.
3. PRESSURE REDUCING VALVES SHALL BE CGA AND ULC APPROVED PRESSURE REDUCING VALVES EACH WITH PRE-SET PRESSURE SETTING TO DECREASE GAS PRESSURE FROM 15 PSI DOWN TO PRESSURE AS REQUIRED BY THE ROOF TOP UNITS.
4. PROVIDE FLEXIBLE HOSE CONNECTOR ON NEW ROOF TOP HVAC UNIT BETWEEN EACH ROOF TOP UNIT AND ITS SHUTOFF VALVE. FLEXIBLE CONNECTIONS SHALL BR FLEXIBLE OR EQUAL #FLT, 200 SERIES C.G.A. APPROVED STAINLESS STEEL BRAIDED HOSE CONNECTOR RATED FOR OUTDOOR USE. MINIMUM LENGTH SHALL BE 450mm (18").
5. INSTALL NEW GAS PIPES ON EXISTING ROOF AS REQUIRED. PROVIDE PIPE SUPPORTS AT 2.5m (8') INTERVALS. VERIFY EXACT ROOTING OF GAS PIPING ON SITE BEFORE PROCEEDING.
6. PRESSURE TEST GAS PIPE WITH NOT LESS THAN 345 KPA AIR FOR AT LEAST 24 HOURS WITHOUT DECREASE IN PRESSURE. CHECK EACH JOINT WITHSOAP AND WATER SOLUTION DURING TESTING PERIOD. DISCONNECT SYSTEM DURING TESTS. DO NOT USE OXYGEN FOR TESTING.
7. CLEAN AND PRIME AND PAINT GAS PIPING (YELLOW COLOUR) WITH MINIMUM TWO COATS OF PAINT.

AIR BALANCE

1. BALANCE AND ADJUST EACH HVAC SYSTEM, SYSTEM VOLUMES SHALL BE WITHIN 5% OF REQUIREMENTS SHOWN. ADJUST AND SET BALANCE DAMPERS, FANS AND DRIVES TO GIVE THE SPECIFIED VOLUMES AT ALL OUTLETS. THE BALANCING OF AIR SYSTEMS IS TO BE DONE BY A BALANCING FIRM SPECIALIZING IN THIS WORK. CLEAN DUCT SYSTEMS, FILTERS, ETC. BEFORE TESTING IS DONE.
2. PROVIDE TWO BOUND COPIES OF THE AIR BALANCING REPORT. AIR BALANCING SHALL BE DONE BY A PROFESSIONAL TESTING AND BALANCING FIRM. AIR QUANTITIES AT EACH OUTLET SHALL BE AS INDICATED IN THE DRAWINGS. THIS REPORT SHALL SHOW THE QUANTITIES VELOCITIES AND AREA OF EACH OUTLET, TYPE AND MODEL NUMBER OF FANS AND MOTOR INSTALLED, ACTUAL AIR DELIVERED BY THE FAN WITH TOTAL STATIC PRESSURE AND VOLTAGE DRAWN BY THE MOTORS. ADJUST AND RETEST TO THE SATISFACTION OF THE PROJECT COORDINATOR PROVIDE ADDITIONAL COPY OF THE AIR BALANCE REPORT TO THE MECHANICAL CONSULTANT.
3. UPON COMPLETION OF THE AIR BALANCE AND SUBMITTAL OF THE AIR BALANCE MAINTENANCE MANUAL REPORT TO THE OWNER. THIS CONTRACTOR SHALL PROVIDE, IF CALLED FOR, A SPOT CHECK ON THE SYSTEM WITH THE CONSULTANT. IF ACTUAL AIR QUANTITIES DO NOT AGREE WITH THE AIR BALANCE REPORT DATA, THIS CONTRACTOR MAY BE CALLED UPON TO COMPLETELY REBALANCE THE SYSTEM UNTIL SATISFACTORY IS ACHIEVED AND ACCEPTED BY THE CONSULTANT.

GRILLES, REGISTERS AND DIFFUSERS

1. PROVIDE WHERE SHOWN E.H. PRICE LIMITED GRILLES, REGISTERS AND DIFFUSERS. EACH UNIT SHALL BE FACTORY PRE-PAINTED AND COMPLETE WITH INTEGRAL BALANCING DAMPER.
2. PROVIDE EACH EXHAUST AND RETURN AIR GRILLE C/W BALANCING DAMPER.
3. COORDINATE EXACT LOCATION OF EACH GRILLE, REGISTER AND DIFFUSER ON SITE WITH LIGHTING AND REFLECTED CEILING PLAN. PROVIDE FLEXIBLE AIR DUCT AS SHOWN.
4. CUTTING AND PATCHING FOR GRILLES AND REGISTERS SHALL BE DONE BY THIS DIVISION.

INSULATION

1. DUCT INSULATION SHALL HAVE A DENSITY OF 1 1/2 LB/CU.FT. INSULATION TO BE APPLIED USING 100mm (4") STRIPS OF INSULATION BONDING ADHESIVE 200mm (8") O.C. TAPE. ALL JOINTS USING MINIMUM 75mm (3") WIDE RFFRK TAPE.
2. EXTERNALLY INSULATE ALL DUCTS 1.8 m (6'-0") MINIMUM FROM ROOF AND EXTERIOR WALLS.
3. INSULATE ENTIRE S.A. & R.A. DUCTS CONNECTED TO UNITS WITH MINIMUM 25 mm (1") THICK INSULATION.
4. INSULATE ALL DOMESTIC HOT AND COLD WATER LINES WITH MINIMUM 25 mm (1") THICK PIPE INSULATION. RECOVER EXPOSED PIPES WITH PVC JACKETING.
5. INSULATE ALL EXPOSED SANITARY PIPES AND CONCEALED HORIZONTAL SANITARY PIPES WITH 25mm THICK INSULATION AND COVER WITH PVC JACKETS.
6. INSULATE ALL EXPOSED PIPES IN GARAGE LEVEL WITH MINIMUM 50 mm (2") THICK RIGID INSULATION C/W ELECTRIC HEAT TRACING AND COVER WITH PVC JACKETS.
7. SEAL ALL DUCT JOINTS AND INSULATE ALL DUCTS IN GARAGE AND ATTIC SPACE USING MINIMUM R12 FOIL FACED INSULATION OR EQUAL.

AIR & HYDRONIC TESTING AND BALANCING

1. BALANCE AND ADJUST EACH HVAC SYSTEM, FURNACE AND EXHAUST SYSTEMS. EACH SYSTEM VOLUMES SHALL BE WITHIN 5% OF REQUIREMENTS SHOWN. ADJUST AND SET BALANCE DAMPERS, FANS AND DRIVES TO GIVE THE SPECIFIED VOLUMES AT ALL OUTLETS. THE BALANCING OF AIR SYSTEMS IS TO BE DONE BY A BALANCING FIRM SPECIALIZING IN THIS WORK. CLEAN DUCT SYSTEMS, FILTERS, ETC., BEFORE TESTING IS DONE.
2. PROVIDE TWO BOUND COPIES OF THE AIR BALANCING REPORT. AIR BALANCING SHALL BE DONE BY A PROFESSIONAL BEFORE TESTING IS DONE. TESTING AND BALANCING FIRM. AIR QUANTITIES AT EACH OUTLET SHALL BE AS INDICATED IN THE DRAWINGS. THIS REPORT SHALL SHOW THE QUANTITIES VELOCITIES AND AREA OF EACH OUTLET, TYPE AND MODEL. NUMBER OF FANS AND MOTOR INSTALLED, ACTUAL AIR DELIVERED BY THE FAN WITH TOTAL STATIC PRESSURE AND VOLTAGE DRAWN BY THE MOTORS ADJUST AND RETEST TO THE SATISFACTION OF THE PROJECT COORDINATOR PROVIDE ADDITIONAL COPY OF THE AIR BALANCE REPORT TO THE MECHANICAL CONSULTANT.
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PLUMBING SPECIFICATION

ALL ITEMS OF SPECIFICATION RELATED TO THE SERVICES INDICATED ON THE DRAWINGS SHALL APPLY TO THE PROJECT. THE BIDDING REQUIREMENTS AND GENERAL REQUIREMENTS (APPLICABLE SECTIONS) OF ARCHITECTURAL SPECIFICATIONS SHALL ALSO GOVERN THE WORK OF THIS DIVISION.

1. PROVIDE AND COMPLETE PLUMBING, DRAINAGE, VENT AND WATER PRIMER PIPING TO ALL PLUMBING FIXTURES AS INDICATED ON THE DRAWINGS FOR COMPLETE AND PROPER OPERATION OF THE FIXTURES.
2. ALL PIPING SHALL CONFORM TO PART 7 OF THE ONTARIO BUILDING CODE (LATEST EDITION).
3. THE FOLLOWING PIPING SPECIFICATION IS GENERAL AND COVERS VARIOUS TYPES OF SERVICES AND SHALL BE APPLICABLE TO THE SERVICES INDICATED ON THE DRAWINGS. MATERIALS SHALL BE NEW AND FREE FROM DEFECTS.
4. DOMESTIC HOT AND COLD WATER:
   - (A) ABOVE GROUND:
     SIZES UP TO AND INCLUDING 50mm - TYPE 'M' (CSA #HC 7.6) COPPER TUBING WITH SOLDERED PRESSURE FITTINGS.
   - (B) UNDER GROUND:
     SIZE 75mm AND LESS SHALL BE TYPE 'K' COPPER TUBING, SOFT TEMPER WITH WROUGHT COPPER SOLDER FITTINGS.
     SIZE 100mm AND LARGER SHALL BE CEMENT LINED DUCTILE IRON ANSI CLASS 52 WITH TYTON JOINTS TO THE STANDARDS AND SPECIFICATIONS OF THE REGIONAL MUNICIPALITY. ALL DUCTILE WATERMAINS HAVING DIRECT CONTACT WITH SURROUNDING SOIL ARE TO BE INSULATED WITH POLYETHLENE ENCASEMENT TO ANSI A2.15.
   - (C) WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE CLASS 150 PER A.W.W.A. C-900-75 WITH MECHANICAL JOINTS FOR UNDERGROUND WATERMAINS 100 MM AND LARGER.
5. SANITARY DRAINS AND VENTS:
   - (A) ABOVE GROUND:
     SIZE UP TO AND INCLUDING 50mm - TYPE DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS.
     SIZE 75 MM AND OVER - CLASS 4000 CAST IRON MJ PIPES AND FITTINGS, (OR HUB & SPIGOT) OR (DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS).
   - (B) UNDER GROUND:
     SIZE UP TO AND INCLUDING 40mm - TYPE 'K' COPPER TUBING WITH CAST SOLDER FITTINGS.
     SIZE 50 MM AND LARGER - CLASS 4000 CAST IRON 'MJ' PIPES AND FITTINGS (OR HUB & SPIGOT).
     STACK & FIXTURE FOOTINGS SHALL BE CAST IRON OR COPPER AS REQUIRED.
   - (C) WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE AN ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE PER C.S.A. B181.2 (SDR 35 AND 28) COMPLETE WITH RING TIGHT JOINTS AND GASKETED FITTINGS PER C.S.A. B182.1.
6. STORM DRAINS
   - (A) ABOVE GROUND:
     SIZE 75mm AND OVER - CLASS 4000 CAST IRON MJ PIPES AND FITTINGS, (OR HUB & SPIGOT) OR (DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS).
   - (B) BELOW GROUND:
     POLYVINYL CHLORIDE (P.V.C.) PIPE PER C.S.A. B181.2 (SDR 35 AND 28) COMPLETE WITH RING TIGHT JOINTS AND GASKETED FITTINGS PER C.S.A. B182.1.
7. VALVES:
   - (A) PROVIDE VALVES OF TYPES NOTED WHERE SHOWN OR DIRECTED. WATER VALVES SHALL BE OF CRANE, MCAVITY, JENKINS OR TOYO (INDUSTRIAL CLASS) MANUFACTURE (UNLESS OTHERWISE NOTED), ALL BRASS SOLDER JOINT UP TO AND INCLUDING 75 MM SIZE AND IBBM FLANGED OVER 75 MM SIZE.
   - (B) -OFF VALVES UP TO AND INCLUDING 75 MM SIZE: GATE VALVES TO 200# SHUT WATER PATTERN, RISING STEM, WEDGE DISC TYPE.
   - (C) SHUT-OFF VALVES OVER 75 MM SIZE: CRANE MCAVITY, JENKINS, DEMCO, DEZURIK, OR KEYSTONE LUG WAFER BUTTERFLY VALVES RATED AT 150# WP, 135 TIGHT SHUT-OFF WITH EPT LINER MANUAL LOCKABLE LEVER OPERATOR, 3 BEARINGS, BRONZE OR ALUM BRONZE DISK, 18-8 S.S. SHAFT AND CONFORMING TO MSS STANDARD SP-67 FOR DEADEND SERVICE WITH ONE FLANGE DISCONNECTED.
   - (D) THROTTLING OR BY -PASS VALVES: GLOBE TYPE, RISING STEM WITH RENEWABLE DISC, 200# WATER PATTERN OR BUTTERFLY VALVE AS FOR SHUT -OFF VALVES BUT FITTED WITH MANUAL GEAR OPERATOR.
   - (E) CHECK VALVES: SWING CHECK TYPE WITH REGRIND FEATURE, 200# WATER PATTERN, INSTALL IN HORIZONTAL POSITION ONLY.
8. CLEANOUTS
   - (A) MAKE EACH CLEANOUT FULL SIZE OF DRAIN UP TO AND INCLUDING 100 MM AND 100 MM SIZE FOR DRAINS OVER 100 MM.
   - (B) MAKE EACH CLEANOUT ACCESSIBLE AND WHEREVER NECESSARY, EXTEND BRANCH CONNECTIONS TO FINISH SURFACES OF WALLS AND FLOORS AND FIT WITH CLEANOUT COVER AND ACCESS DOOR.
   - (C) CRETE FLOOR WITH ZURN ZN1602 ADJUSTABLE FIT EACH FLOOR CLEANOUT IN CON FLOOR CLEANOUT WITH ROUND SCORIATED NICKLE BRONZE COVER. ALL CLEANOUTS MUST HAVE INSIDE GASKETTED C.I. PLUG. (ACCEPTABLE ALTERNATE MANUFACTURERS: ZURN, ANCON, JOSAM AND ENPOCO).
9. FLOOR DRAINS
   - (A) FLOOR DRAINS IN GENERAL SHALL BE CAST IRON WITH ADJUSTABLE STRAINERS, FLANGE AND WEEPHOLES AND SHALL BE INSTALLED WITH DEEP SEAL TRAP AND TRAP PRIMING FITTINGS. FLOOR DRAINS SHALL BE SIMILAR TO MANUFACTURER CATALOGUE NUMBERS LISTED.
     DRAIN F.D. ZURN ZN211 LACQUERED CAST IRON FLOOR DRAIN WITH DEEP SUMP, SEEPAGE FLANGE AND INTEGRAL CLAMPING DEVICE, ADJUSTABLE COLLAR AND NICKEL BRONZE ROUND STRAINER.
     FUNNEL FLOOR DRAIN F.F.D. ZURN #ZN-211-BF LACQUERED CAST IRON BODY WITH POLISHED NICKEL BRONZE ADJUSTABLE STRAINER HEAD AND GRATE, AND OVAL FUNNEL.
10. ROOF DRAIN
    - (A) PROVIDE ROOF DRAINS OF TYPES NOTED, WHERE SHOWN OR DIRECTED, COMPLETE WITH STRAINER AND ACCESSORIES NOTED OR REQUIRED TO COMPLETE INSTALLATION. ROOF DRAINS SHALL BE SIMILAR TO MANUFACTURER CATALOGUE NUMBERS LISTED.
    - (B) CONTROL FLOW ROOF DRAIN: ZURN ZCF-130 OR EQUAL, "CONTROL-FLO" ROOF DRAINS OF SIZES NOTED. DRAINS SHALL HAVE CAST IRON BODY, BOTTOM OR SIDE OUTLET AS REQUIRED, MULTI-WEIR BARRIER WITH INTEGRAL CLAMPING DEVICE AND GRAVEL GUARD.
    - (C) ACCEPTABLE ALTERNATE SUPPLIERS: ANCON, JOSAM AND ENPOCO.
11. INSULATION
    - (A) PROVIDE INSULATION OF PIPING AS DESCRIBED OR NOTED. INSULATION, JACKETS ADHESIVES AND MATERIALS SHALL BE INCOMBUSTIBLE, IN COMPLIANCE WITH ONTARIO BUILDING CODE: INSTALLED TO MANUFACTURER'S STANDARDS, AND TO APPROVAL. WHEAT PASTES SHALL NOT BE USED. PROVIDE SUITABLE APPROVED OPENINGS IN INSULATION FOR INSPECTION OUTLETS, EQUIPMENT NAMEPLATES AND OTHER FITTINGS.
    - (B) INSULATE HORIZONTAL CAST IRON RAIN WATER LEADERS AND FITTINGS HOT WATER, HOT WATER RECIRCULATION, AND COLD WATER PIPING, BOTH EXPOSED AND CONCEALED WITH 13 MM THICK GLASS FIBRE PIPE COVERING (MAXIMUM 0.23 CONDUCTIVITY AT -4.5 C MEAN) WITH FACTORY APPLIED FIRE RESISTIVE VAPOUR BARRIER OF NOT MORE THAN 0.02 PERM RATING WITH SEALED LAPPED JOINTS. BURIED PIPING NEED NOT BE INSULATED.

VERIFICATION OF EXISTING CONDITIONS

VISIT SITE AND REVIEW EXISTING CONDITIONS THAT WILL AFFECT THE INSTALLATION OF THE PROPOSED SYSTEMS. THE ARCHITECT AND ENGINEER ARE NOT RESPONSIBLE FOR CONDITIONS DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THESE DRAWINGS. THE CONTRACTOR, UPON MAKING SUCH A DISCOVERY, SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED.

LEGEND

	PIPES TURNING DOWN
	PIPES TURNING UP
G	GAS LINE
CO	SANITARY CLEANOUT
M16	NON FREEZE HOSE BIBB
	SHUT OFF GATE VALVE
	ONE WAY CHECK VALVE
	GLOBE VALVE
	PIPE UNION
FD	FLOOR DRAIN
FHC	FIRE EXTINGUISHER & CABINET
R.W.L.	RAIN WATER LEADER
RD	ROOF DRAIN
PRV	PRESSURE REDUCE VALVE
T	THERMOSTAT
	DIRECTION OF AIR FLOW
	SUPPLY AIR DUCT SECTION
	RETURN AIR DUCT SECTION
BD	DUCT BALANCING DAMPER
SP	DUCT SPLITTER DAMPER
S.A.	SUPPLY AIR
R.A.	RETURN AIR
U/C	DOOR UNDER CUT (3/4")

NOTES:

NO	DATE	ISSUE
1	04 OCT 2018	ISSUED FOR PERMIT.

TRUE NORTH	PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Ontenco inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1939 DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SPECIFICATION

SCALE:	DATE:	DRAWN:	CHECK:
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SHEET NO:	DRAWING NO:		REVISE:
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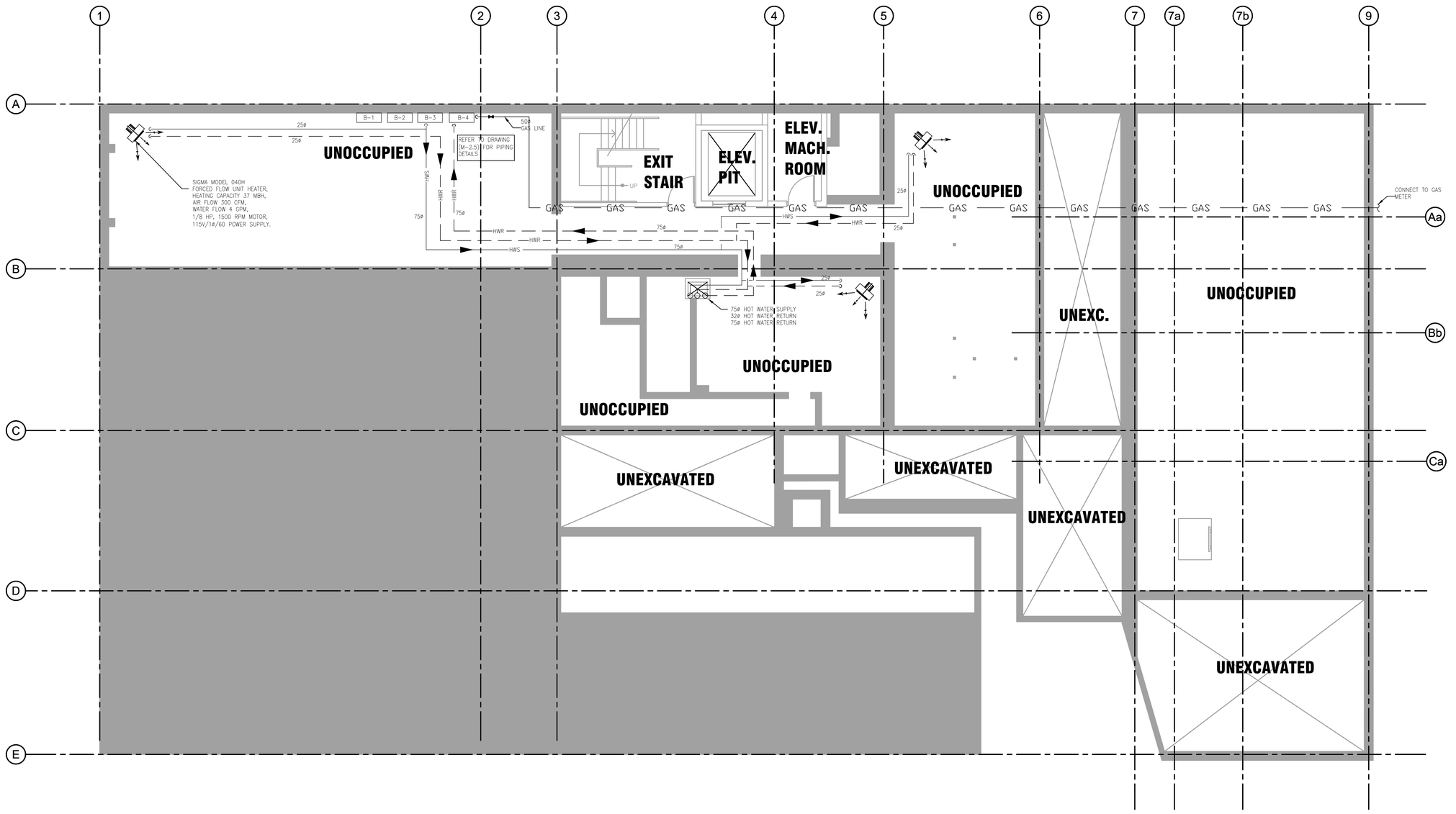

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CLIENT PROJECT NO:
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JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
BASEMENT HYDRONIC PIPING

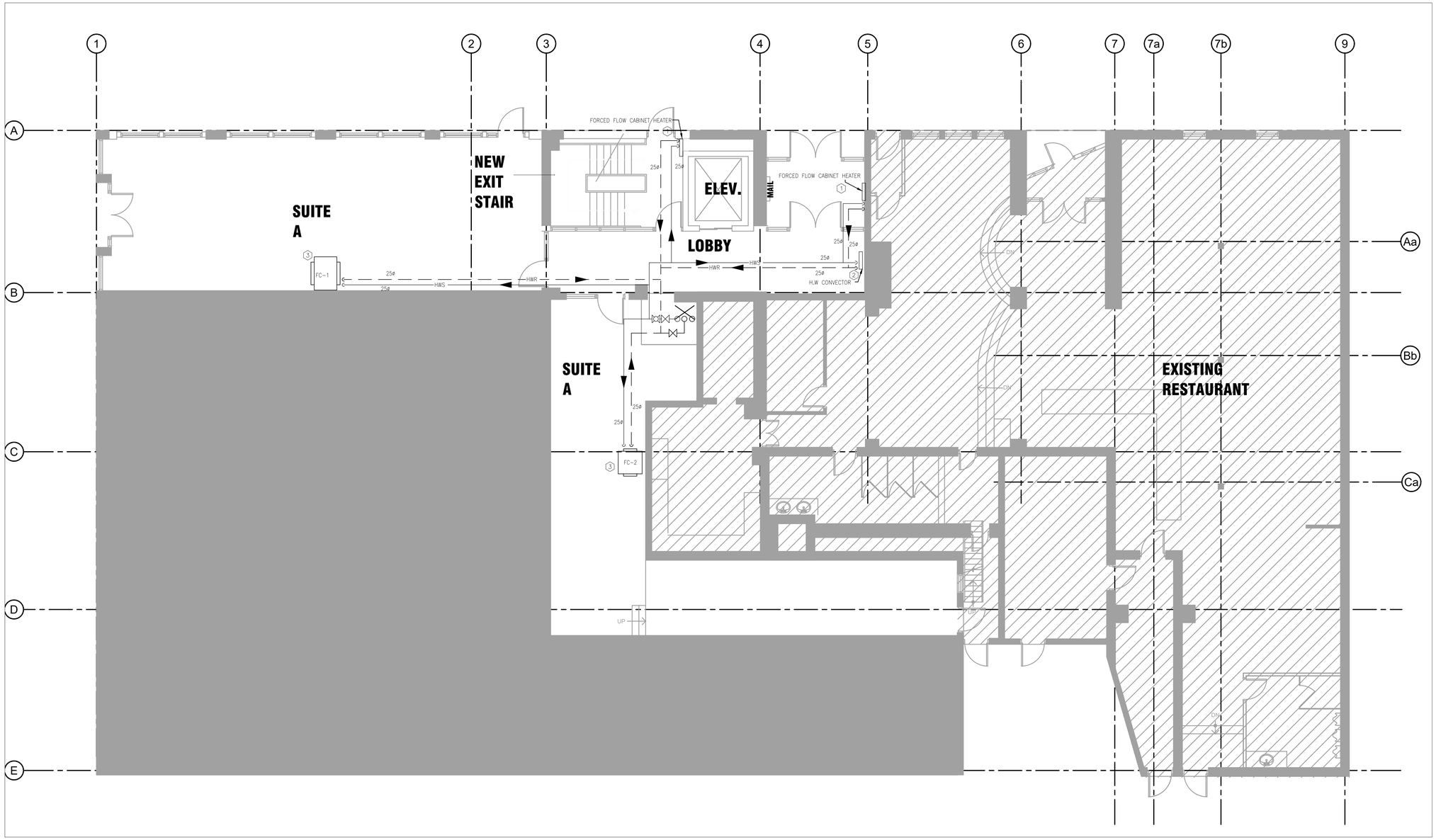
SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
1 / 7	M-2.0		0

DRAWING NOTES:

1. SIGMA OR EQUAL CONVECTOR HEATING UNIT, SURFACE MOUNTED C/W INTEGRAL THERMOSTAT CONTROL VALVE. HEATING CAPACITY 20 MBH, WATER FLOW 3 GPM, 115V/1ø/60 POWER SUPPLY.

2. SIGMA OR EQUAL FORCED FLOW CABINET HEATER, SURFACE MOUNTED C/W INTEGRAL THERMOSTAT, CONTROL VALVE AND FAN SWITCH. HEATING CAPACITY 37 MBH, AIR FLOW 300 CFM, WATER FLOW 4 GPM, 115V/1ø/60 POWER SUPPLY.

3. PROVIDE 25ø CONDENSATE DRAIN FROM EACH FAN COIL UNIT COMPLETE WITH TRAP AND PIPE TO NEAREST DRAIN. INSULATE PIPES USING 1" THICK PIPE INSULATION.



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PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
GROUND FLOOR HYDRONIC PIPING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
2 / 7	M-2.1		0

DRAWING NOTES:

1. SIGMA OR EQUAL CONVECTOR HEATING UNIT, SURFACE MOUNTED C/W INTEGRAL THERMOSTAT CONTROL VALVE. HEATING CAPACITY 20 MBH, WATER FLOW 3 GPM, 115V/1ø/60 POWER SUPPLY.

2. SIGMA OR EQUAL FORCED FLOW CABINET HEATER, SURFACE MOUNTED C/W INTEGRAL THERMOSTAT, CONTROL VALVE AND FAN SWITCH. HEATING CAPACITY 37 MBH, AIR FLOW 300 CFM, WATER FLOW 4 GPM, 115V/1ø/60 POWER SUPPLY.

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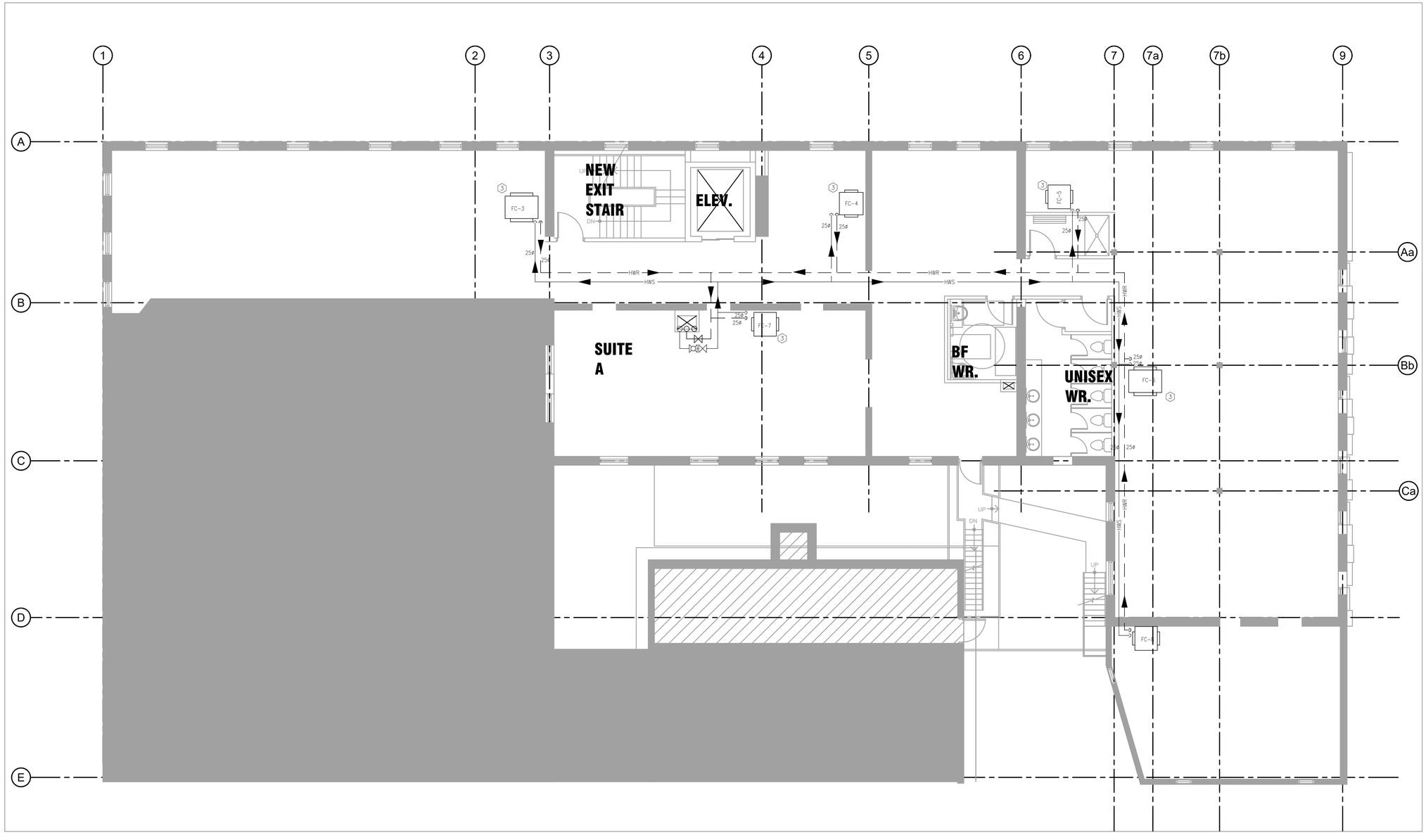

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CLIENT:

OWNER

VIVE DEVELOPMENT

JG GROUP EST 1959
DEVELOPMENT • FINANCING • CONSULTING

PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SECOND FLOOR
HYDRONIC PIPING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
3/ 7	M-2.2		0

DRAWING NOTES:

1. SIGMA OR EQUAL CONVECTOR HEATING UNIT, SURFACE MOUNTED C/W INTEGRAL THERMOSTAT CONTROL VALVE. HEATING CAPACITY 20 MBH, WATER FLOW 3 GPM, 115V/1ø/60 POWER SUPPLY.

2. SIGMA OR EQUAL FORCED FLOW CABINET HEATER, SURFACE MOUNTED C/W INTEGRAL THERMOSTAT, CONTROL VALVE AND FAN SWITCH. HEATING CAPACITY 37 MBH, AIR FLOW 300 CFM, WATER FLOW 4 GPM, 115V/1ø/60 POWER SUPPLY.

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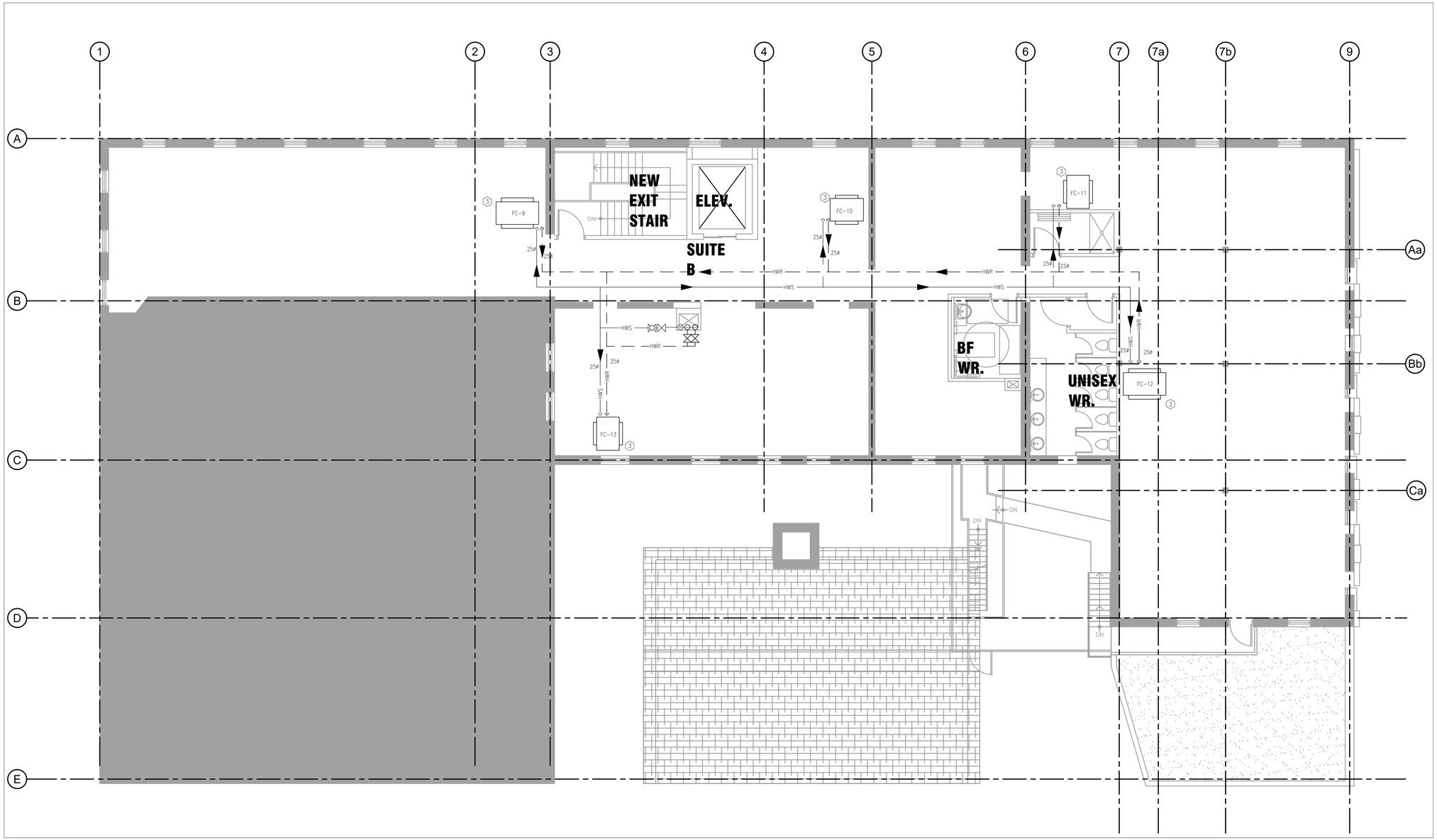

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JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING

PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

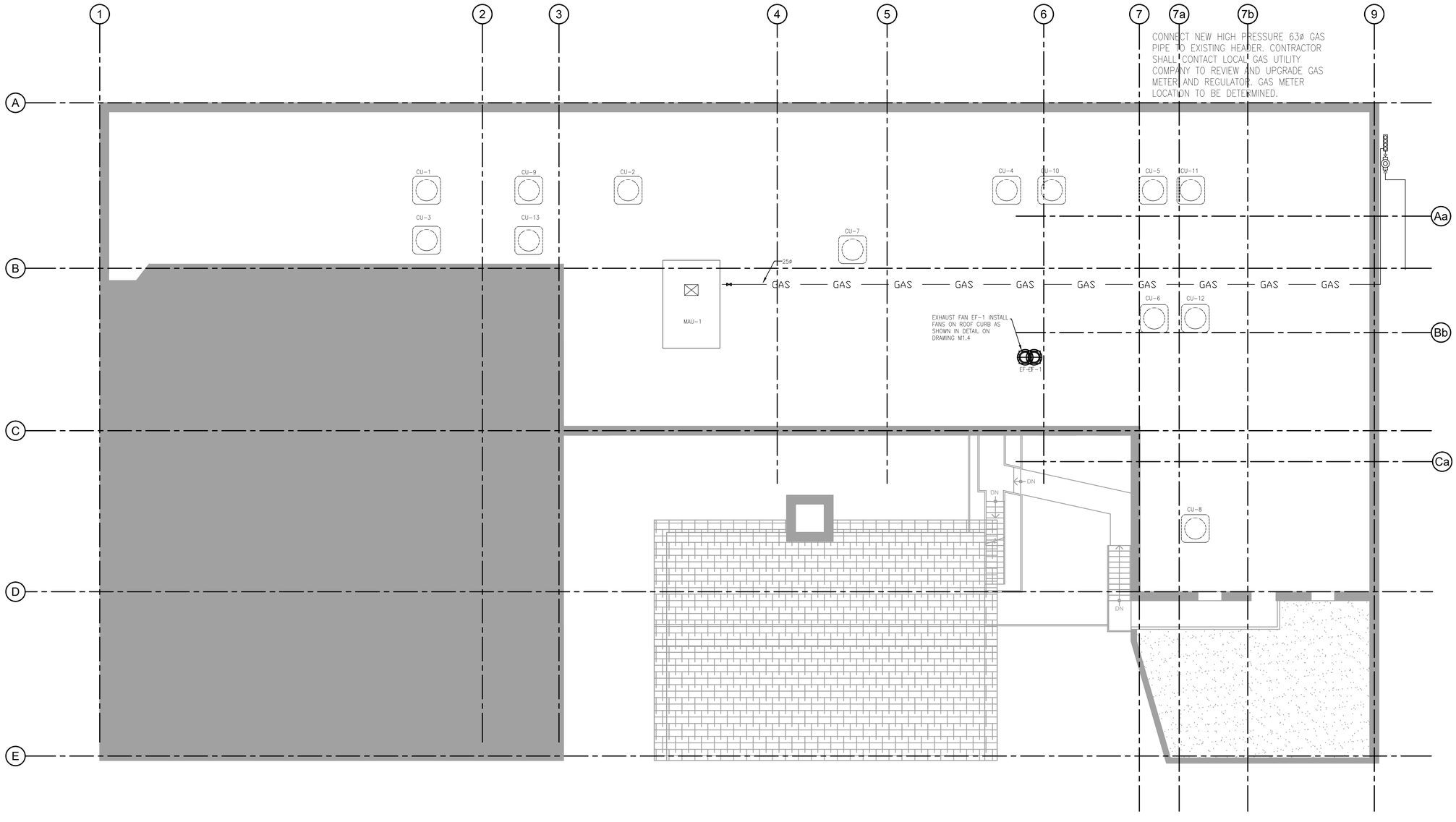
PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
THIRD FLOOR
HYDRONIC PIPING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S

SHEET NO:	DRAWING NO:	REVISE:
4 / 7	M-2.3	0



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PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
ROOF PLAN GAS PIPING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
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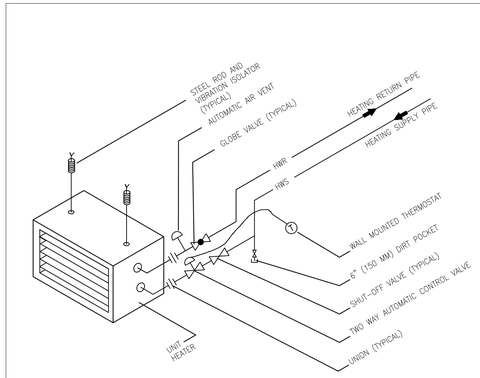
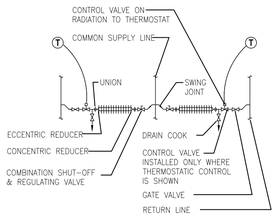
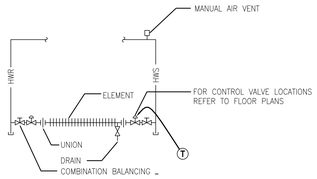


UNIT HEATER PIPING SCHEMATIC
N.T.S.

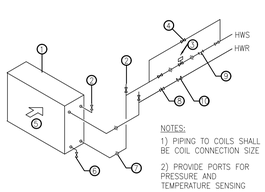


TYP. RADIATION HOOK UP WITH COMMON SUPPLY LINE
N.T.S.



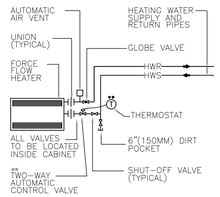
1. ALL CONVECTORS SHALL BE PROVIDED WITH A MODULATING CONTROL VALVE. VALVE SHALL FIT WITHIN THE CONVECTOR CABINET.
2. WHEN CONVECTORS ARE FED FROM BELOW, PROVIDE A MANUAL VENT AT THE ELBOW PRIOR TO THE WATER VALVE ON THE HWS PIPE.

RADIATION AND CONVECTOR HOOK UP DETAIL
N.T.S.



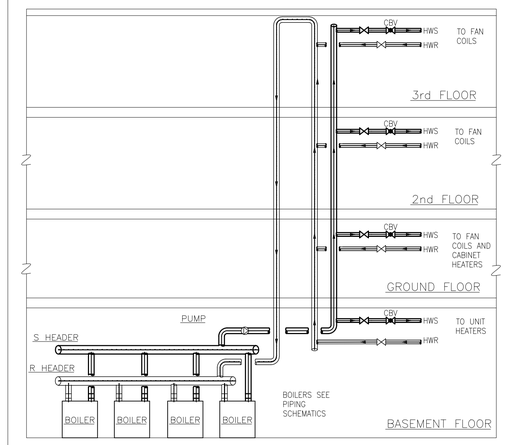
① HOT WATER COIL BANK
② AUTOMATIC AIR VENT
③ MODULATING CONTROL VALVE
④ BY-PASS VALVE
⑤ DIRECTION OF AIR FLOW
⑥ 3/4" DRAIN VALVE
⑦ UNION
⑧ SHUT-OFF VALVE
⑨ STRAINER
⑩ CBV-1 BALANCING VALVE

HOT WATER COIL PIPING DETAIL
N.T.S.

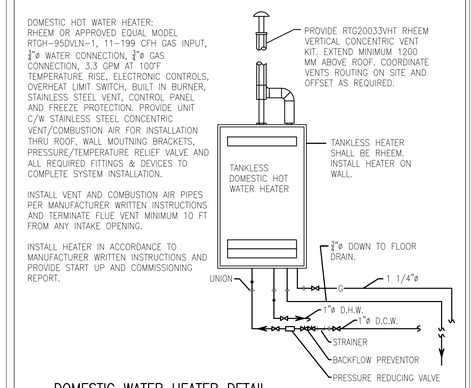


** CONTROL VALVE TO BE PROVIDED ONLY WHERE A THERMOSTAT IS SHOWN ON PLAN. WHERE NO THERMOSTAT SHOWN, A BALANCING VALVE TO BE PROVIDED IN LIEU OF CONTROL VALVE AND HEATER TO BE CONTROLED BY A BUILT-IN THREE SPEED SWITCH.

FORCED FLOW CABINET HEATER PIPING SCHEMATIC
N.T.S



H.W RISER DIAGRAM
NO SCALE



DOMESTIC WATER HEATER DETAIL
N.T.S.

HOT WATER HEATING BOILERS SCHEDULE

NO:	MAKE AND MODEL	GAS INPUT (CFH)	HEATING OUTPUT (MBD)	WATER FLOW (GPM)	TEMP. RISE (°C)	WATER P.D. (m)	FLUE VENT (DIA)	ELECTRICAL V/ø/Hz	REMARKS
B-1	NORITZ MODEL NCC1991	199	189	4.2-9.2	16.7	1.25	3"	115/1/60	PROVIDE EACH BOILER COMPLETE WITH INTEGRAL PUMP, FLUE VENT, COMBUSTION AIR INTAKE, ELECTRONIC TEMPERATURE CONTROL, STAINLESS STEEL BURNER, PUMP RELAY WITH DELAY SWITCH, DOWN STREAM TEST VALVE, HOT SURFACE IGNITION, MANUAL RESET, FLOW SWITCH, BAS TERMINAL STRIP, COMBUSTION AIR FILTER, ALARM BELL, GAS PRESSURE SWITCH WITH MANUAL RESET AND OUTDOOR/INDOOR CONTROLLER. PROVIDE TWO (2) YEAR FULL PART AND MATERIAL WARRANTY AND 5 YEAR HEAT EXCHANGER WARRANTY. PROVIDE INDOOR/OUTDOOR CONTROLLER WITH REQUIRED SENSORS. WIRE ALL SENSORS AND DEVICES TO COMPLETE OPERATION OF HEATING SYSTEM.
B-2	NORITZ MODEL NCC1991	199	189	4.2-9.2	16.7	1.25	3"	115/1/60	
B-3	NORITZ MODEL NCC1991	199	189	4.2-9.2	16	1.25	3"	115/1/60	
B-4	NORITZ MODEL NCC1991	199	189	4.2-9.2	16	1.25	3"	115/1/60	

CIRCULATING PUMP SCHEDULE

NO:	SYSTEM SERVED AND PUMP LABEL	MODEL	INLET (mm)	FLOW (GPM)	HEAD (M)	MOTOR HP	MOTOR RPM	MOTOR V/ø/Hz	REMARKS
P-1	CIRCULATING PUMP NO. P-1 HEATING SYSTEM	4380-2x2x8	50	109	10.6 (35 ft)	3	1800	208/3/60	PROVIDE PUMP C/W SUCTION GUIDE, TRIPLE DUTY VALVE AND BALANCING VALVE.
P-2	CIRCULATING PUMP NO. P-2 HEATING SYSTEM	4380-2x2x8	50	109	10.6 (35 ft)	3	1800	208/3/60	PROVIDE PUMP C/W SUCTION GUIDE, TRIPLE DUTY VALVE AND BALANCING VALVE.

AIR COOLED CHILLER UNITS

PROVIDE TWO AIR COOLED CHILLERS. EACH UNIT SHALL BE AERMEC MODEL AN3007A COMPLETE WITH THE FOLLOWING:

- SCROLL HIGH EFFICIENCY COMPRESSORS.
- GALVANIZED STEEL PANELS FOR FANS AND FRAME HOUSING.
- 24 L EXPANSION TANK.
- CIRCULATING PUMP 118 KPa, 3.4 L/S (53 GPM)
- 70 KW COOLING CAPACITY (20 TON NOMINAL)
- 24.05 KW INPUT POWER
- 230V/3/60
- 2.91 E.E.R.
- 40% ANTIFREEZE / 60% WATER BY VOLUME.
- FLOW SWITCH.
- DRAIN VALVE.
- AUTOMATIC AIR VENTS.

EACH CHILLER SHALL BE SUITABLE FOR OUTDOOR INSTALLATION, ULC AND CSA APPROVED.

PROVIDE WEATHER PROOF DISCONNECT FOR EACH CHILLER.

NOTES:

NO	DATE	ISSUE
1	04 OCT 2018	ISSUED FOR PERMIT.

TRUE NORTH	PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER

VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING

PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SCHEDULE & DETAILS

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
6 / 7	M-2.5		0

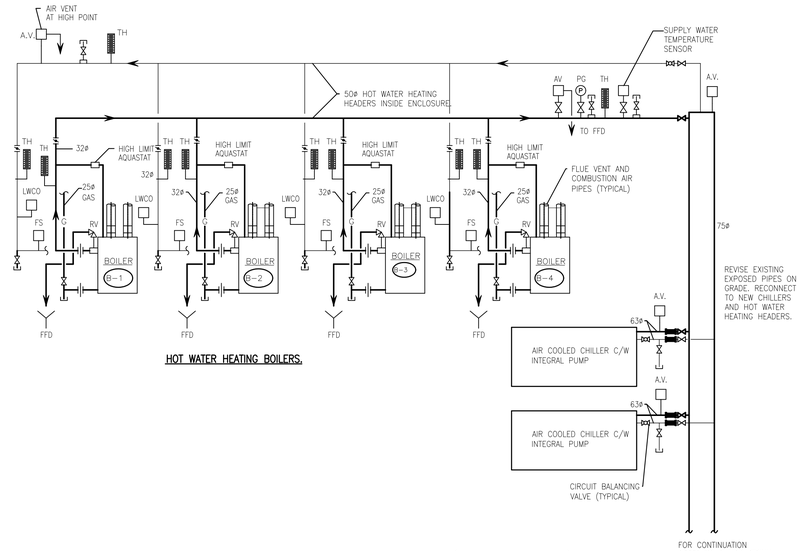
LEGEND

FS	FLOW SWITCH
RV	RELIEF VALVE
LWCO	LOW WATER CUT OFF
TH	THERMOMETER
A.V.	AUTOMATIC AIR VENT
FFD	FUNNEL FLOOR DRAIN
PG	PRESSURE GAUGE
▬	FLEXIBLE CONNECTION

GAS PIPING NOTES:

1. UPGRADE EXISTING GAS METER (IF APPLICABLE) WITH LOCAL GAS COMPANY.
2. GAS PIPES SHALL BE SUPPLIED, INSTALLED AND TESTED AN ACCORDANCE TO GAS CODE B52.
3. DO NOT INSTALL FITTINGS IN CONCEALED SPACES THAT ARE NOT PERMITTED.
4. PROVIDE EXPANSION LOOP FOR EACH STRAIGHT RUN IN EXCESS OF 30 METERS LONG.
5. ALL CORE DRILLING OF GAS PIPES PENETRATING FLOORS AND WALLS SHALL BE COORDINATED ON SITE.
6. GAS PIPES 3"ø AND LARGER SHALL BE WELDED.
7. GAS PIPES SHALL NOT BE INSTALLED IN CONCEALED SPACES.
8. PROVIDE FIRE SEAL AROUND EACH PIPE PENETRATION AT RATED FLOOR OR WALL EQUAL TO THE FIRE RESISTANCE RATING OF THE FLOOR OR WALL BEING PENETRATED.

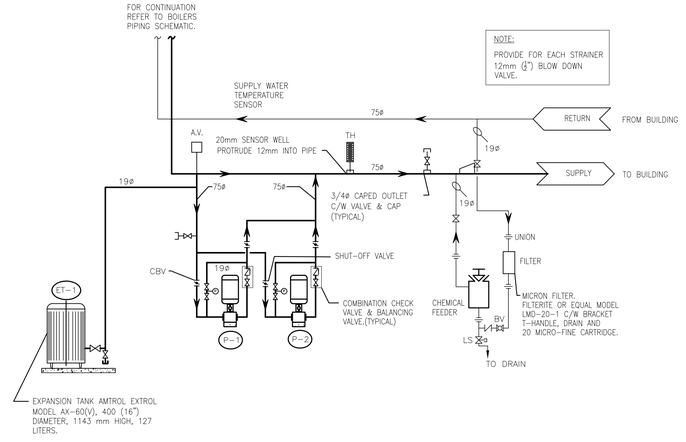
PIPE SIZING CHART					
MBH	GPM	PIPE SIZE		CAPACITY	
		INCH	MM.	KW.	L/S
13.8	1.38	1/2	13	0-4.0	0.09
30.0	3.0	3/4	19	4.1-8.8	0.19
58.0	5.8	1	25	8.9-17.0	0.37
118.0	11.8	1 1/4	32	17.1-34.6	0.74
180.0	18.0	1 1/2	38	34.7-52.8	1.13
350.0	35.0	2	50	52.9-102.6	2.20
570.0	57.0	2 1/2	63	102.7-167.2	3.59
1040	104.0	3	75	167.3-304.9	6.55
1500	150.0	3 1/2	88	305.0-439.8	9.45



HOT WATER HEATING BOILERS.

PIPING SCHEMATIC (BASEMENT)

NTS



PIPING SCHEMATIC (BASEMENT)

NTS

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K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER

VIVE DEVELOPMENT

JG GROUP EST 1959
DEVELOPMENT + FINANCING + CONSULTING

PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
HYDRONIC SYSTEM
PIPING DETAIL

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S

SHEET NO:	DRAWING NO:	REVISE:
7 / 7	M-2.6	0

PLUMBING DRAWING NOTES:

1. 100ø SANITARY IN CEILING SPACE BELOW. VERIFY ROUTING ON SITE AND COORDINATE CONNECTION POINT TO EXISTING IN BASEMENT BEFORE COMMENCING WORK. ALL CUTTING, TRENCHING, EXCAVATION, BACKFILLING AND CONCRETE FINISH BY THIS CONTRACTOR. MECHANICAL CONTRACTOR RESPONSIBLE FOR SCOPPING THE MAIN SANITARY LINE TO VERIFY THE SIZE AND CONDITION.
2. CONNECT 38ø DOMESTIC COLD WATER TO EXISTING IN CEILING SPACE C/W WITH ISOLATING BALL VALVE. INSULATE ALL NEW AND EXISTING PIPES. RECOVER INSULATION WITH PVC COVERING.
3. PROVIDE ELECTRIC DOMESTIC HOT WATER HEATER IN CEILING SPACE. MOUNT UNIT ON WALL C/W DRAIN PAN, DISCONNECT, T/P VALVE, AND ISOLATING VALVE (SEE DETAIL) UNIT SHALL BE BRADFORD WHITE OR EQUAL MODEL 12A-KW-3, 12 GAL, 3KW, 208/1/60, 700mm HEIGHT, 450mm DIA., 12GPH RECOVERY AT 100F° TEMPERATURE RISE. UNIT SHALL BE ULC, CSA AND ASME APPROVED.
4. 12.5 C.W. DOWN TO WATER CLOSET C/W SHUT OFF VALVE.
5. PROVIDE FLOOR DRAIN C/W TRAP SEAL PRIMER. CONNECT TO NEAREST MAIN BELOW. COORDINATE EXACT LOCATION AND ROUTING ON SITE.
6. REVIEW AND CONFIRM WATER METER REQUIREMENTS AND LOCATION.
7. PROVIDE CONDENSATE DRAIN FROM FAN COIL UNIT TO NEAREST FLOOR DRAIN C/W TRAP.
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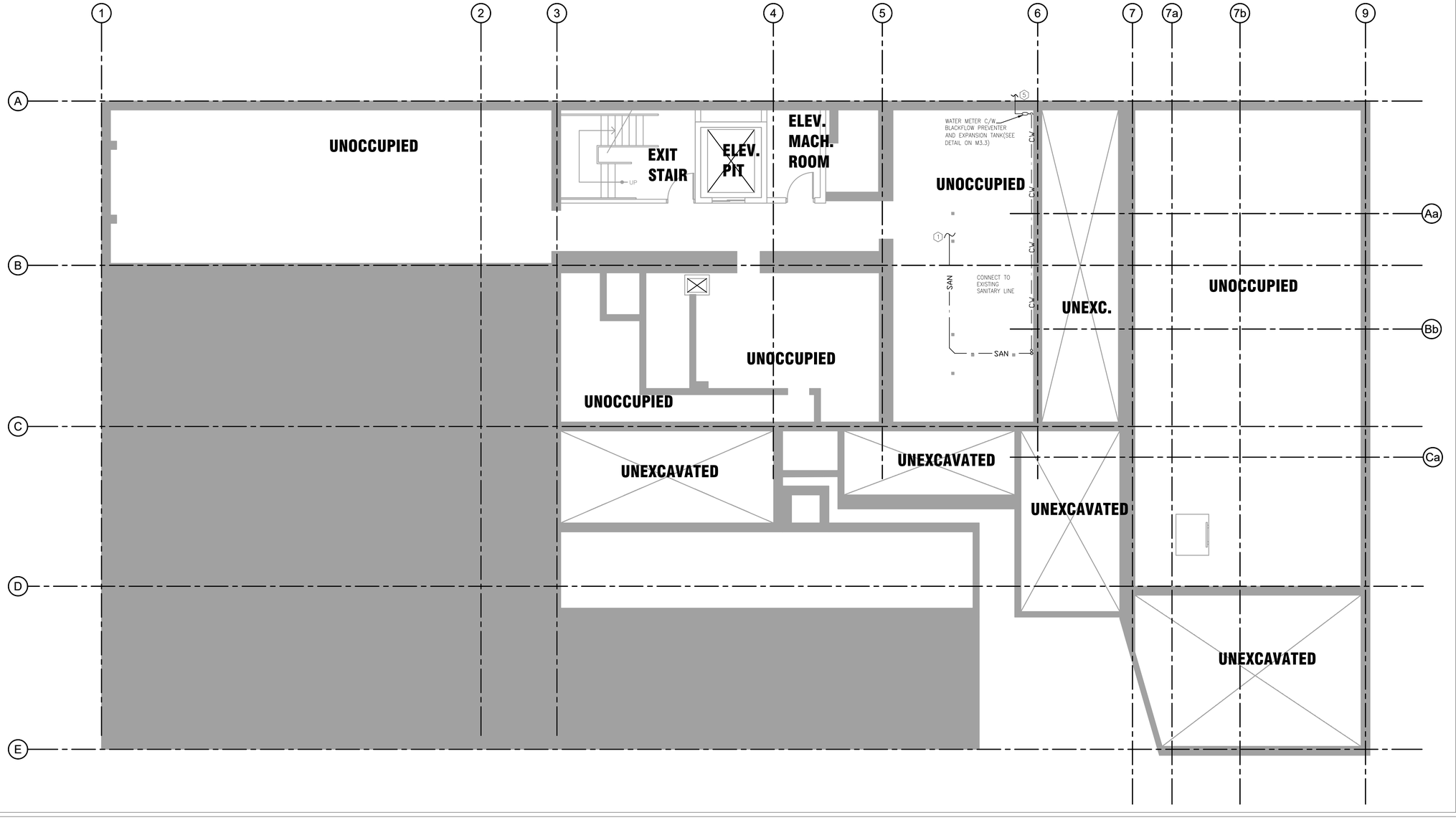

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STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Entenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER:
VIVE DEVELOPMENT
JG GROUP EST 1959 DEVELOPMENT • FINANCING • CONSULTING

PROJECT:

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
BASEMENT PLUMBING LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
1 / 4	M-3.0		0

PLUMBING DRAWING NOTES:

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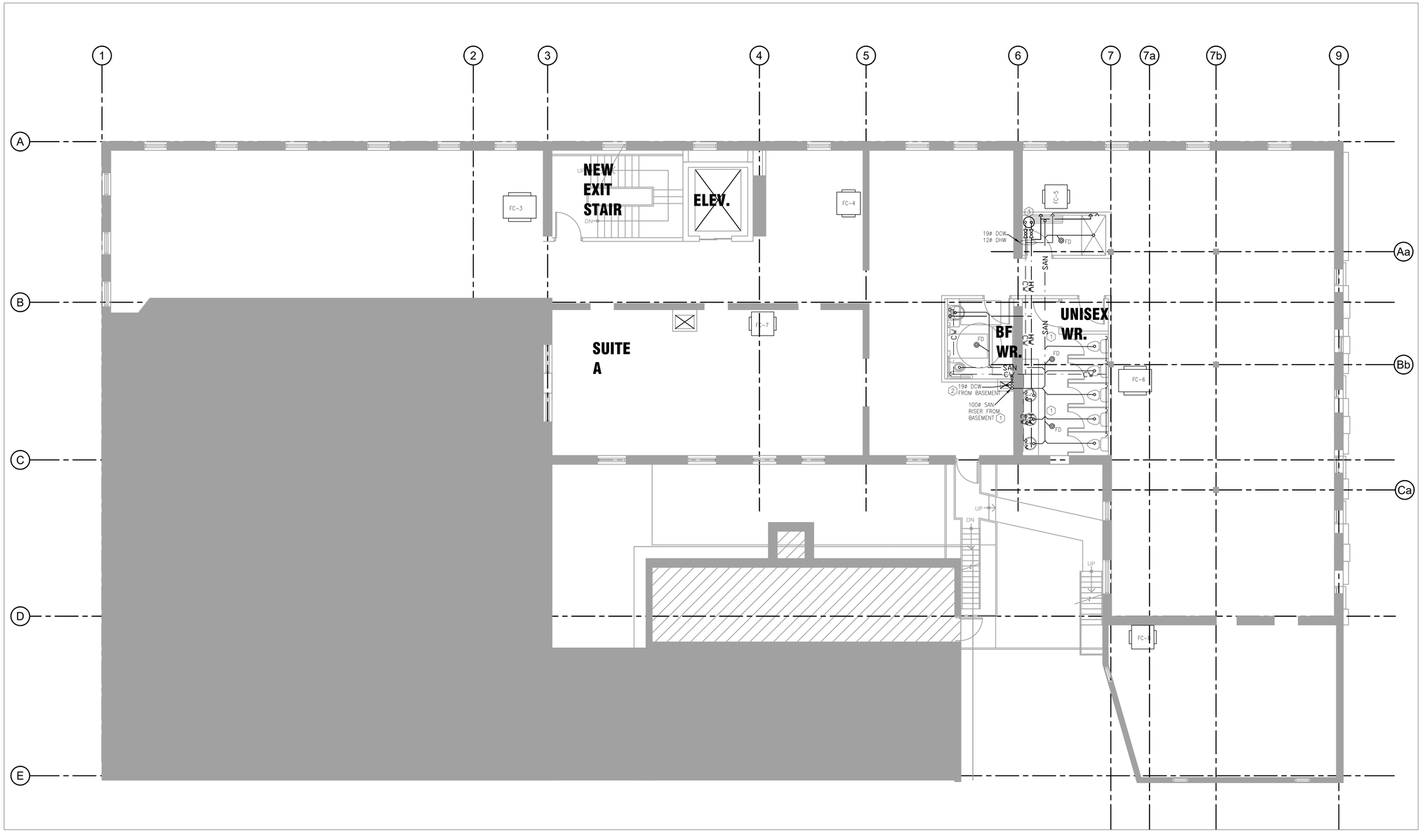

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K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Entenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SECOND FLOOR PLUMBING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
2/ 4	M-3.1		0

PLUMBING DRAWING NOTES:

1. 100ø SANITARY IN CEILING SPACE BELOW. VERIFY ROUTING ON SITE AND COORDINATE CONNECTION POINT TO EXISTING IN BASEMENT BEFORE COMMENCING WORK. ALL CUTTING, TRENCHING, EXCAVATION, BACKFILLING AND CONCRETE FINISH BY THIS CONTRACTOR. MECHANICAL CONTRACTOR RESPONSIBLE FOR SCOPPING THE MAIN SANITARY LINE TO VERIFY THE SIZE AND CONDITION.
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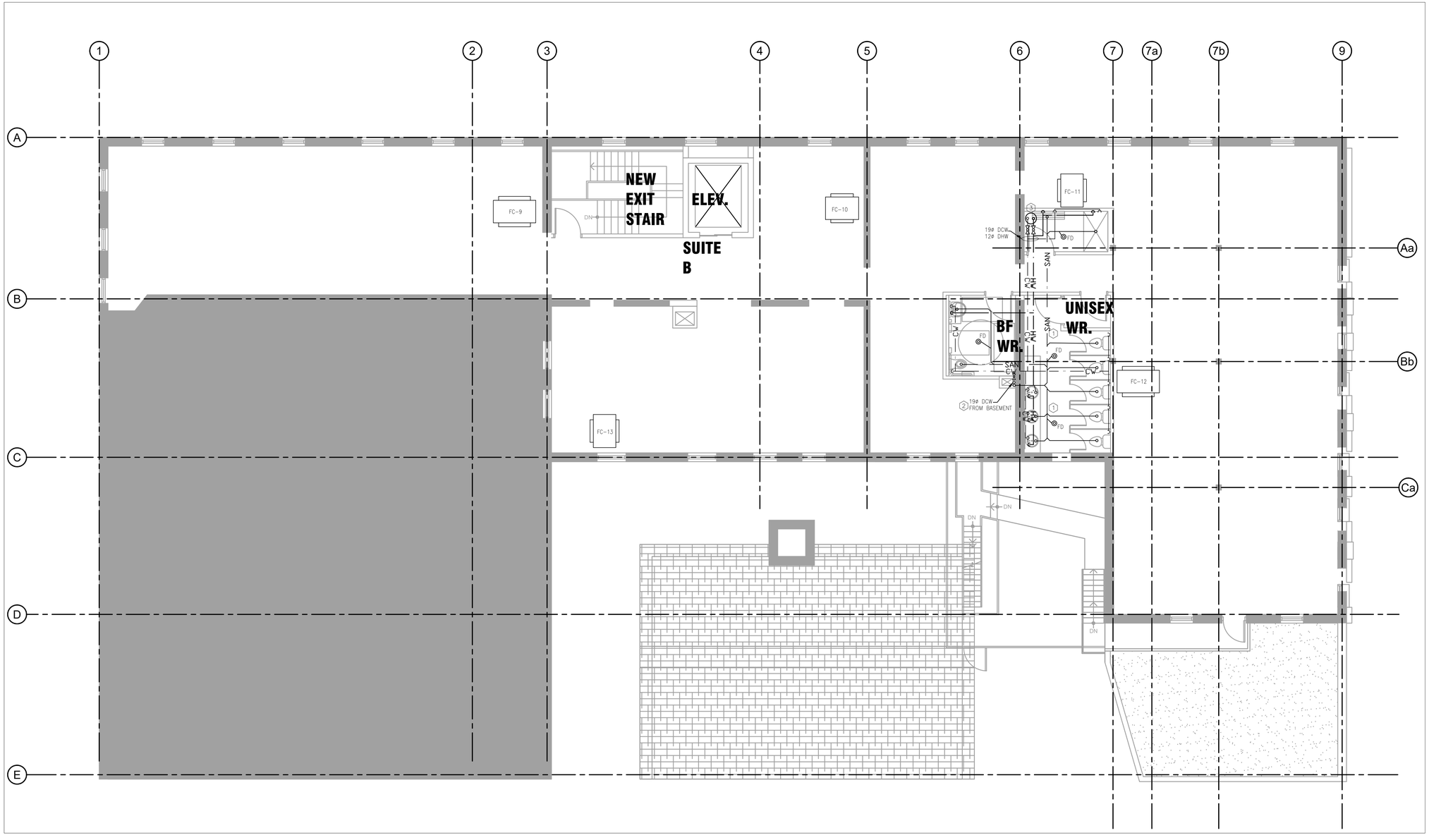

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LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1939 DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO: -

JOB NO: 20180725 - 04

PROJECT NAME: AMERICAN HOTEL

ADDRESS: 1 QUEEN ST N, KITCHENER

TITLE: THIRD FLOOR PLUMBING LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
3 / 4	M-3.2		0

PLUMBING FIXTURE SCHEDULE

TYPE	SPECIFICATION	TRIM AND FAUCET	TRAPS & SUPPLIES EQUAL TO	CW	HW	WASTE	VENT	REMARKS
WC-1	AMERICAN STANDARD MODEL MADERA ELONGATED 410 HIGH, # 2234.015 FLOOR MOUNTED DUAL FLUSH VALVE, VITREOUS CHINA, LOW CONSUMPTION, ELONGATED SYPHON JET FLUSH, & 279 x 330 WATER SURFACE.	CENTOCO #500CC SEAT ELONGATED HEAVY DUTY WHITE PLASTIC OPEN FRONT WITH COVER, CHECK HINGE AND STAINLESS STEEL POSTS, WASHERS AND NUTS.	50 mm FULLY GLAZED BALL PASS INTERNAL TRAPWAY, 1.3 GAL (6 L) FLUSH, 38 mm TOP SPUD AND BOLT CAPS. PROVIDE FLOOR FLANGE, FLANGE BOLTS & GASKET.	1 1/4"		3"	1 1/2"	PROVIDE SLOAN FLUSH VALVE # III-YO-XL REGAL C.P. EXPOSED, DIAPHRAGM TYPE, VACUUM BREAKER, BACK-CHECK ANGLE STOP, V.P. TRIM AND 6 LPF.
LAV-1	BASIN - DROP IN COUNTER AMERICAN STANDARD AQUALYN BASIN #0475.047 CENTRE HOLE ONLY, 521 x 445 x 187 mm DEEP, VITREOUS CHINA, FLAT SLAB, LOW FRONT LIP FRONT OVERFLOW, SEAL RIMMING WITH SEALANT.	POWERS P44-PTL1-LF4CTM ELECTRONIC SENSOR PLUMBING LAVATORY SUPPLY. HEAVY CAST BRASS CHROME PLATED, HIGH RISE SPOUT WITH INTEGRAL SENSOR ANTI-SPIN COVER PLATE. ST. STEEL BREADED SUPPLY, SLOW CLOSING LATCHING COIL AND FILTER.	MAXIMUM TEMPERATURE LIMIT STOP, 2 GPM FLOW AERATOR, C.P. "P" TRAP 1.5 MM GAUGE AND ESCUTCHEONS.	1/2"	1/2"	1 1/4"	1 1/4"	PROVIDE PLUG-IN TRANSFORMER, WIRING AND ESCUTCHEONS. PROVIDE POWERS HYDROGUARD SERIES 480 THERMOSTATIC TEMPERING VALVE UNDER EACH LAVATORY. C-1065 WITH OPEN STRAINER, 32 TAIL PIECE CH-8053 AND 32 MM OFFSET WASTE. PROVIDE EXTENDED POWER CORD TO REACH RECEPTACLE.

PLUMBING FIXTURES NOTES:

EACH PLUMBING FIXTURE SHALL BE LOW WATER CONSUMPTION IN ACCORDANCE TO ONTARIO BUILDING CODE. PROVIDE ALL REQUIRED FITTINGS, TRAPS, VALVES, FAUCETS AND ESCUTCHEONS TO COMPLETE EACH FIXTURE INSTALLATION. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BEFORE ORDERING ANY FIXTURE.

MINIMUM FIXTURE CONNECTION SCHEDULE

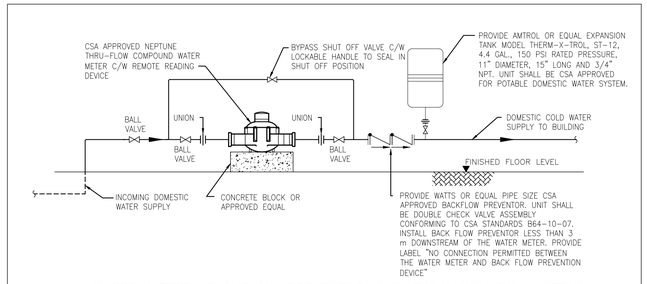
MARK	HW	CW	WASTE	REMARKS
LAV-1	1/2"	1/2"	2"	HAND SINK
WC-1	-	1/2"	2"	WATER CLOSET
UR-1	-	1/2"	2"	URINALS
FD, FFD	-	3/8"	3"	PRIMER FOR FLOOR & FUNNEL FLOOR DRAIN

FLOOR DRAIN, HUB DRAIN AND FUNNEL FLOOR DRAINS SHALL BE PRIMED, TRAPPED AND VENTED. FLOOR DRAIN SHALL BE FLUSH WITH FLOOR LEVEL. COORDINATE/VERIFY TYPE AND LOCATION OF EACH PLUMBING FIXTURE WITH LATEST ARCHITECTURAL DRAWINGS. PROVIDE TRAP SEAL PRIMER FOR EACH FLOOR DRAIN. INSTALL EACH PLUMBING FIXTURE COMPLETE WITH ISOLATING VALVES.

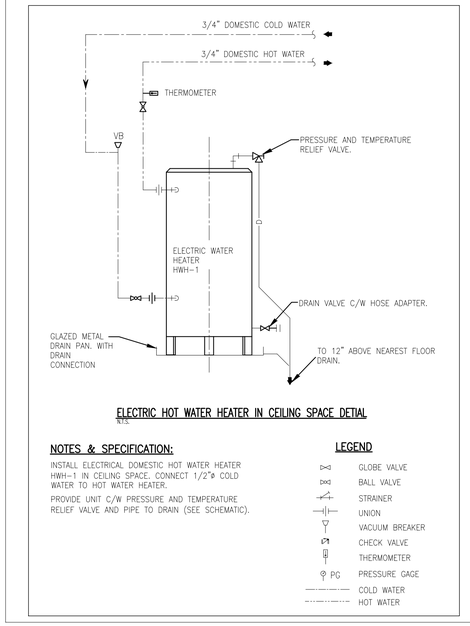
PLUMBING GENERAL NOTES

ALL ITEMS OF SPECIFICATION RELATED TO THE SERVICES INDICATED ON THE DRAWINGS SHALL APPLY TO THE PROJECT. THE BIDDING REQUIREMENTS AND GENERAL REQUIREMENTS (APPLICABLE SECTIONS) OF ARCHITECTURAL SPECIFICATIONS SHALL ALSO GOVERN THE WORK OF THIS DIVISION.

1. PROVIDE AND COMPLETE PLUMBING, DRAINAGE, VENT AND WATER PRIMER PIPING TO ALL PLUMBING FIXTURES AS INDICATED ON THE DRAWINGS FOR COMPLETE AND PROPER OPERATION OF THE FIXTURES.
2. ALL PIPING SHALL CONFORM TO PART 7 OF THE ONTARIO BUILDING CODE (LATEST EDITION).
3. THE FOLLOWING PIPING SPECIFICATION IS GENERAL AND COVERS VARIOUS TYPES OF SERVICES AND SHALL BE APPLICABLE TO THE SERVICES INDICATED ON THE DRAWINGS. MATERIALS SHALL BE NEW AND FREE FROM DEFECTS.
4. DOMESTIC HOT AND COLD WATER:
   - 4.1. ABOVE GROUND: SIZES UP TO AND INCLUDING 50mm – TYPE 'M' (CSA #HC 7.6) COPPER TUBING WITH SOLDERED PRESSURE FITTINGS.
   - 4.2. UNDER GROUND: SIZE 75mm AND LESS SHALL BE TYPE 'K' COPPER TUBING, SOFT TEMPER WITH WROUGHT COPPER SOLDER FITTINGS.
   - 4.3. SIZE 100mm AND LARGER SHALL BE CEMENT LINED DUCTILE IRON ANSI CLASS 52 WITH TYTON JOINTS TO THE STANDARDS AND SPECIFICATIONS OF THE REGIONAL MUNICIPALITY. ALL DUCTILE WATERMAINS HAVING DIRECT CONTACT WITH SURROUNDING SOIL ARE TO BE INSULATED WITH POLYETHLENE ENCASEMENT TO ANSI A2.15.
   - 4.4. WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE CLASS 150 PER A.W.W.A. C-900-75 WITH MECHANICAL JOINTS FOR UNDERGROUND WATERMAINS 100 MM AND LARGER.
5. SANITARY DRAINS AND VENTS:
   - 5.1. ABOVE GROUND: SIZE UP TO AND INCLUDING 50mm – TYPE DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS.
   - 5.2. SIZE 75 MM AND OVER – CLASS 4000 CAST IRON MJ PIPES AND FITTINGS, (OR HUB & SPIGOT) OR (DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS).
   - 5.3. UNDER GROUND: SIZE UP TO AND INCLUDING 40mm – TYPE 'K' COPPER TUBING WITH CAST SOLDER FITTINGS.
   - 5.4. SIZE 50 MM AND LARGER – CLASS 4000 CAST IRON 'MJ' PIPES AND FITTINGS (OR HUB & SPIGOT).
   - 5.5. STACK & FIXTURE FOOTINGS SHALL BE CAST IRON OR COPPER AS REQUIRED.
   - 5.6. WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE AN ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE PER C.S.A. B181.2 (SDR 35 AND 28) COMPLETE WITH RING TIGHT JOINTS AND GASKETED FITTINGS PER C.S.A. B182.1.
6. VALVES:
   - 6.1. PROVIDE VALVES OF TYPES NOTED WHERE SHOWN OR DIRECTED. WATER VALVES SHALL BE OF CRANE, MCAVITY, JENKINS OR TOYO (INDUSTRIAL CLASS) MANUFACTURE (UNLESS OTHERWISE NOTED), ALL BRASS SOLDER JOINT UP TO AND INCLUDING 75 MM SIZE AND IBBM FLANGED OVER 75 MM SIZE.
   - 6.2. SHUT-OFF VALVES UP TO AND INCLUDING 75 MM SIZE: GATE VALVES TO 200# SHUT WATER PATTERN, RISING STEM, WEDGE DISC TYPE.
   - 6.3. SHUT-OFF VALVES OVER 75 MM SIZE: CRANE MCAVITY, JENKINS, DEMCO, DEZURIK, OR KEYSTONE LUG WAFER BUTTERFLY VALVES RATED AT 150# WP, 135 TIGHT SHUT-OFF WITH EPT LINER MANUAL LOCKABLE LEVER OPERATOR, 3 BEARINGS, BRONZE OR ALUM BRONZE DISK, 18-8 S.S. SHAFT AND CONFORMING TO MSS STANDARD SP-67 FOR DEADEND SERVICE WITH ONE FLANGE DISCONNECTED.
   - 6.4. THROTTLING OR BY -PASS VALVES: GLOBE TYPE, RISING STEM WITH RENEWABLE DISC, 200# WATER PATTERN OR BUTTERFLY VALVE AS FOR SHUT -OFF VALVES BUT FITTED WITH MANUAL GEAR OPERATOR.
   - 6.5. CHECK VALVES: SWING CHECK TYPE WITH REGRIND FEATURE, 200# WATER PATTERN, INSTALL IN HORIZONTAL POSITION ONLY.
7. CLEANOUTS
   - 7.1. MAKE EACH CLEANOUT FULL SIZE OF DRAIN UP TO AND INCLUDING 100 MM AND 100 MM SIZE FOR DRAINS OVER 100 MM.
   - 7.2. MAKE EACH CLEANOUT ACCESSIBLE AND WHEREVER NECESSARY, EXTEND BRANCH CONNECTIONS TO FINISH SURFACES OF WALLS AND FLOORS AND FIT WITH CLEANOUT COVER AND ACCESS DOOR.
   - 7.3. CRETE FLOOR WITH ZURN ZN1602 ADJUSTABLE FIT EACH FLOOR CLEANOUT IN CON FLOOR CLEANOUT WITH ROUND SCORIATED NICKLE BRONZE COVER. ALL CLEANOUTS MUST HAVE INSIDE GASKETTED C.I. PLUG. (ACCEPTABLE ALTERNATE MANUFACTURERS: ZURN, ANCON, JOSAM AND ENPOCO).
8. FLOOR DRAINS
   - 8.1. FLOOR DRAINS IN GENERAL SHALL BE CAST IRON WITH ADJUSTABLE STRAINERS, FLANGE AND WEEPHOLES AND SHALL BE INSTALLED WITH DEEP SEAL TRAP AND TRAP PRIMING FITTINGS. FLOOR DRAINS SHALL BE SIMILAR TO MANUFACTURER CATALOGUE NUMBERS LISTED.
   - 8.2. DRAIN F.D. ZURN ZN211 LACQUERED CAST IRON FLOOR DRAIN WITH DEEP SUMP, SEEPAGE FLANGE AND INTEGRAL CLAMPING DEVICE, ADJUSTABLE COLLAR AND NICKEL BRONZE ROUND STRAINER.
   - 8.3. FUNNEL FLOOR DRAIN F.F.D. ZURN #ZN-211-BF LACQUERED CAST IRON BODY WITH POLISHED NICKEL BRONZE ADJUSTABLE STRAINER HEAD AND GRATE, AND OVAL FUNNEL.
9. INSULATION
   - 9.1. PROVIDE INSULATION OF PIPING AS DESCRIBED OR NOTED. INSULATION, JACKETS ADHESIVES AND MATERIALS SHALL BE INCOMBUSTIBLE, IN COMPLIANCE WITH ONTARIO BUILDING CODE: INSTALLED TO MANUFACTURER'S STANDARDS, AND TO APPROVAL. WHEAT PASTES SHALL NOT BE USED. PROVIDE SUITABLE APPROVED OPENINGS IN INSULATION FOR INSPECTION OUTLETS, EQUIPMENT NAMEPLATES AND OTHER FITTINGS.
   - 9.2. INSULATE HORIZONTAL CAST IRON RAIN WATER LEADERS AND FITTINGS HOT WATER, HOT WATER RECIRCULATION, AND COLD WATER PIPING, BOTH EXPOSED AND CONCEALED WITH 13mm (1/2") THICK GLASS FIBRE PIPE COVERING (MAXIMUM 0.23 CONDUCTIVITY AT -4.5 °C MEAN) WITH FACTORY APPLIED FIRE RESISTIVE VAPOUR BARRIER OF NOT MORE THAN 0.02 PERM RATING WITH SEALED LAPPED JOINTS. BURIED PIPING NEED NOT BE INSULATED.
10. LINES, GRADES AND SLOPES
    - 10.1. INSTALL ALL PIPING IN CONFORMITY WITH ELEVATIONS AND GRADES INDICATED. PIPING DRAINS AND SEWERS SHALL SLOPE AS INDICATED. SLOPE BETWEEN ELEVATIONS SHALL BE EVEN AND CONSISTENT. WHEN SLOPE IS NOT INDICATED, THE SLOPE SHALL BE:
      - 10.1.1. DRAINAGE PIPING, 2% O N 75 MM SIZE AND LESS, 1% ON 100 MM SIZE AND LARGER.
      - 10.1.2. WATER LINES, PITCH TO LOW POINT FOR COMPLETE DRAINAGE.
    - 10.2. VERIFY ALL FIELD SERVICE CONDITIONS, TO ENSURE THAT DRAINAGE RUNS CAN MEET THE SIZES AND INVERTS OF THE SITE SERVICES TERMINATED OUTSIDE THE BUILDING AS SHOWN ON MECHANICAL SITE PLAN. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCY DISCOVERED. IF PIPE INVERT DISCREPANCIES ARE NOT CLARIFIED AT AN EARLY STAGE, NO EXTRA SHALL BE PAID AT A LATER ROUTING OF DRAINS. PROVIDE REQUIR ED ADAPTORS TO MAKE DATE FOR RE CONNECTIONS BETWEEN SANITARY AND STORM DRAINAGE SYSTEMS AND SITE SERVICE TERMINATIONS.
11. EXCAVATION AND BACKFILL
    - 11. CONTRACTOR SHALL DO ALL EXCAVATING AND BACKFILLING REQUIRED FOR THE INSTALLATION OF HIS PIPES, SEWERS, WATER SERVICE ETC., PIPES SHALL BE SUPPORTED ON A SOLID BED OF UNDISTURBED SOIL WITH DEPRESSIONS FOR HUBS. IF CONDITIONS ARE SUCH THAT TRENCHES MUST BE LEFT OPEN FOR AN EXTENDED TIME, THEN THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND PROTECTION.
    - 11.1. INCLUDE ALL NECESSARY DEWATERING.
    - 11.2. KEEP GROUND FROM FREEZING.
    - 11.3. PROVIDE 100 MM BED OF 19 MM SCREENED STONE AND BACKFILL OVER PIPES WITH 150 MM OF CLEAN, SHARP SAND, CAREFULLY AND PROPERLY PACKED TO THE ARCHITECT'S/OWNERS SATISFACTION.
    - 11.4. BALANCE OF BACKFILL SHALL BE WITH GRANULAR 'B' BACKFILL. EXCAVATED MATERIAL MAY BE USED FOR BACKFILL WHERE APPROVED BY ARCHITECT.



WATER METER, BACKFLOW PREVENTOR AND EXPANSION TANK DETAIL
N.T.S.



ELECTRIC HOT WATER HEATER IN CEILING SPACE DETIAL
N.T.S.

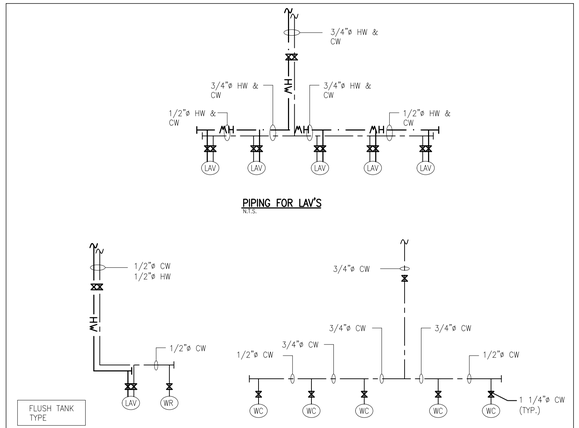
NOTES & SPECIFICATION:

INSTALL ELECTRICAL DOMESTIC HOT WATER HEATER HWH-1 IN CEILING SPACE. CONNECT 1/2"ø COLD WATER TO HOT WATER HEATER.

PROVIDE UNIT C/W PRESSURE AND TEMPERATURE RELIEF VALVE AND PIPE TO DRAIN (SEE SCHEMATIC).

LEGEND

- GLOBE VALVE
- BALL VALVE
- STRAINER
- UNION
- VACUUM BREAKER
- CHECK VALVE
- THERMOMETER
- PG PRESSURE GAGE
- COLD WATER
- HOT WATER



TYPICAL SCHEMATIC DIAGRAMS FOR WASHROOMS IN GROUND FLOOR
N.T.S.

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LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:
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Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT + FINANCING + CONSULTING
PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SCHEDULES , DETAILS & SPECIFICATIONS

SCALE:	DATE:	DRAWN:	CHECK:
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SHEET NO:	DRAWING NO:		REVISE:
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2. PROVIDE APPROVED NEW GOOD QUALITY SPRINKLER HEADS AND COORDINATE WITH LIGHTS, DUCTS, PIPES, GRILLES, ETC., FOR EACH HEAD LOCATION. ALSO REFER ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR COORDINATION.
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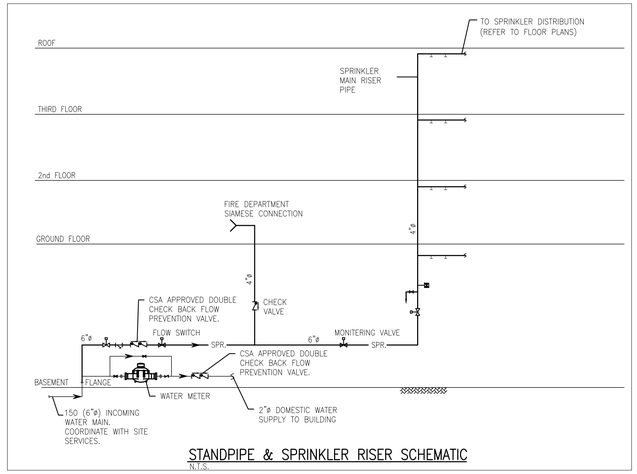
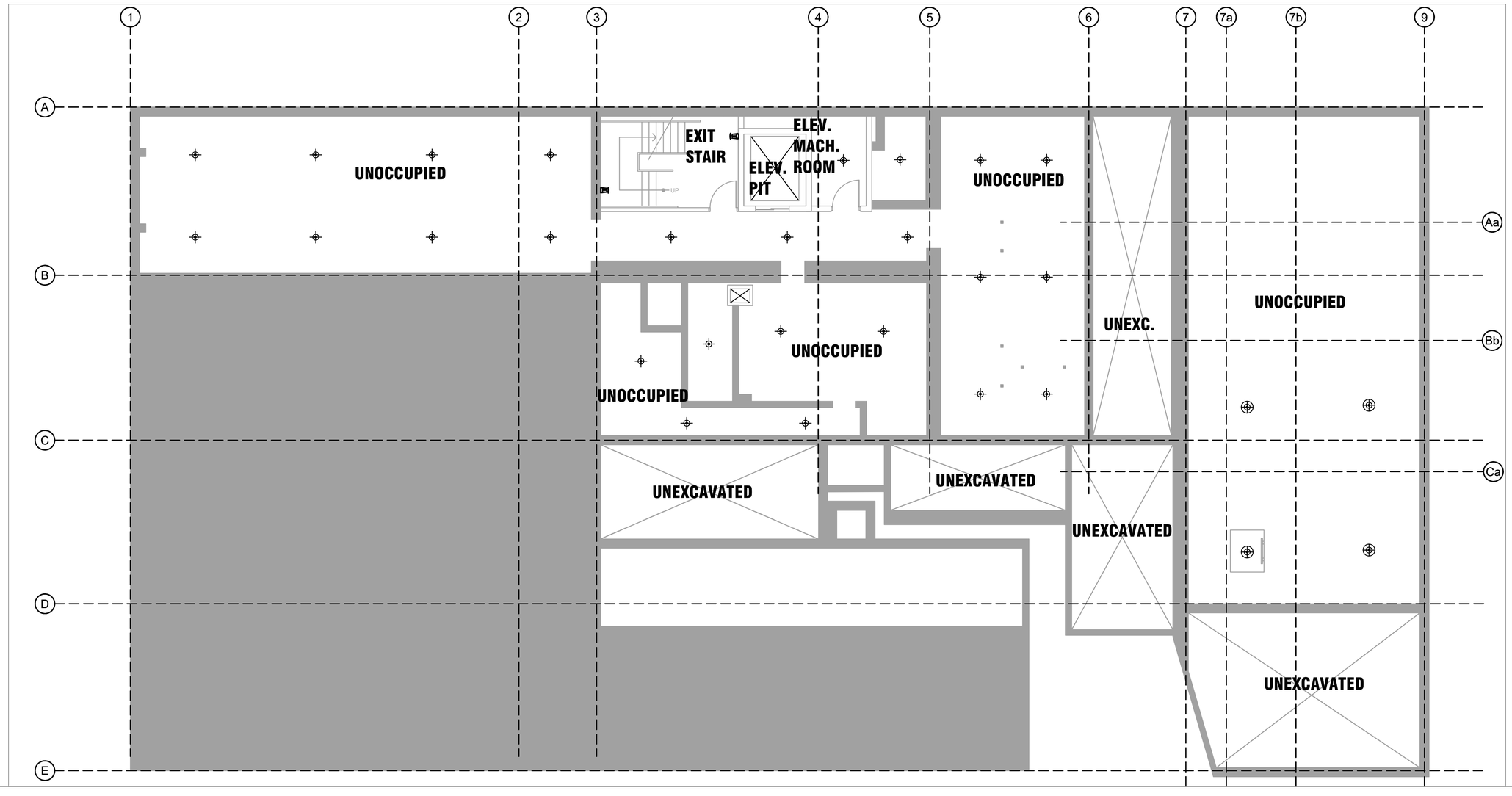


STANDPIPE & SPRINKLER RISER SCHEMATIC
N.T.S.



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PROJECT

CLIENT PROJECT NO: -

JOB NO: 20180725 - 04

PROJECT NAME: AMERICAN HOTEL

ADDRESS: 1 QUEEN ST N, KITCHENER

TITLE: BASEMENT SPRINKLER LAYOUT

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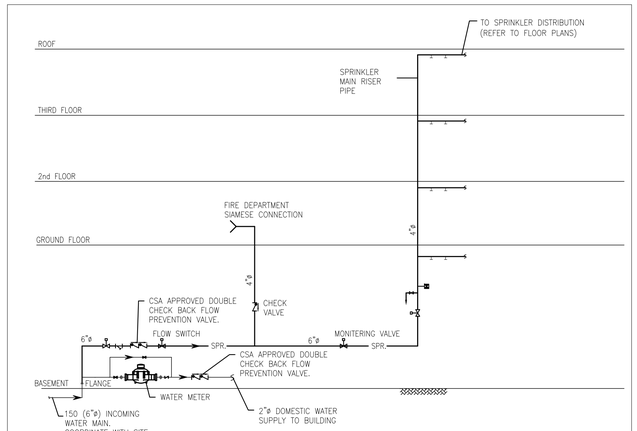

STANDPIPE & SPRINKLER RISER SCHEMATIC
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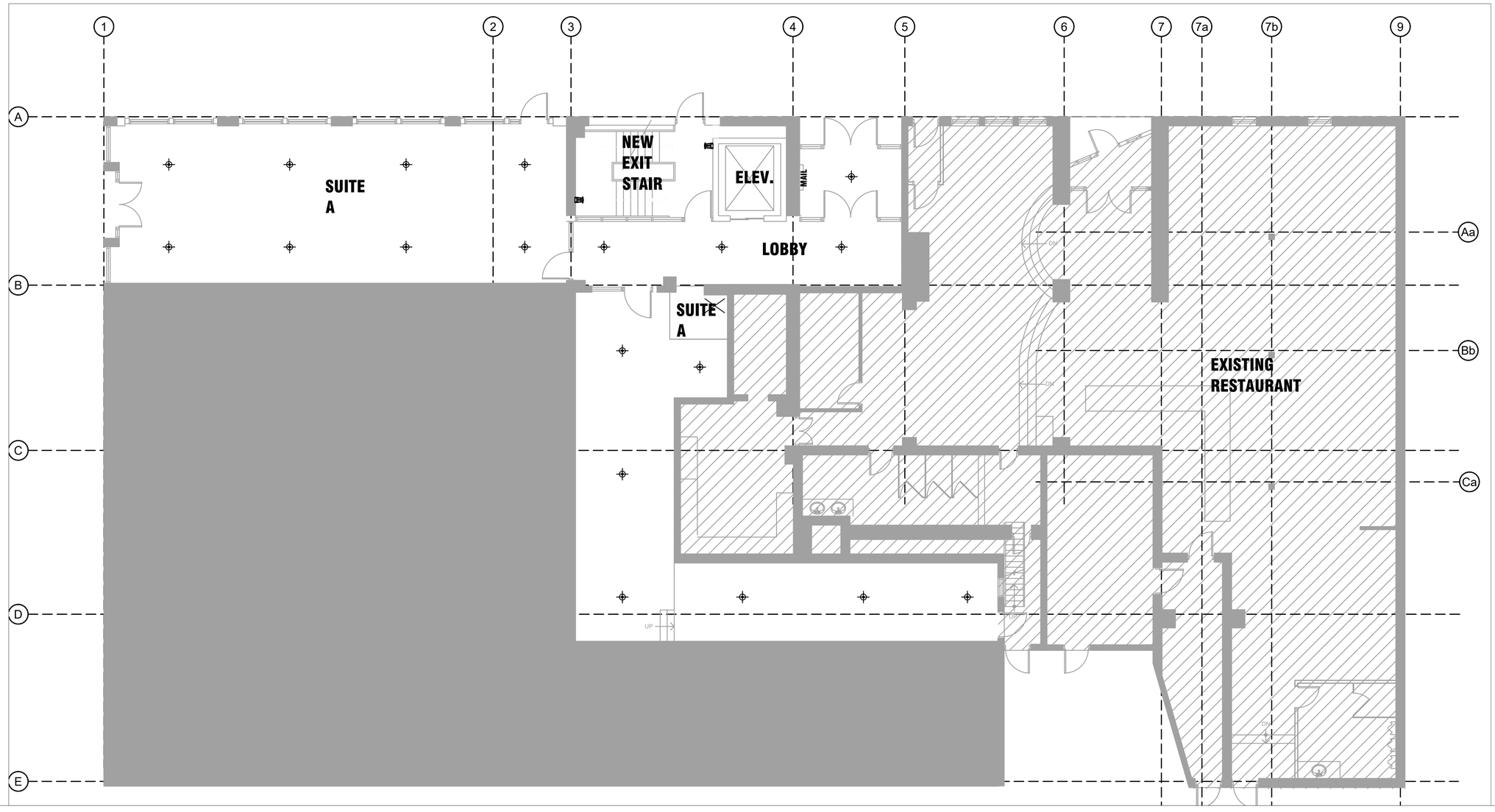

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CLIENT PROJECT NO:
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JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
GROUND FLOOR SPRINKLER LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
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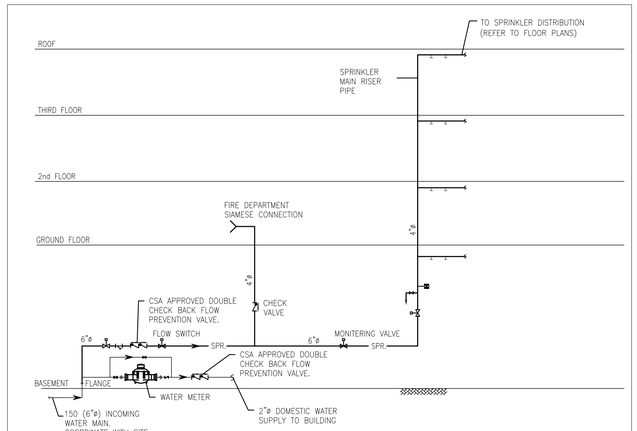

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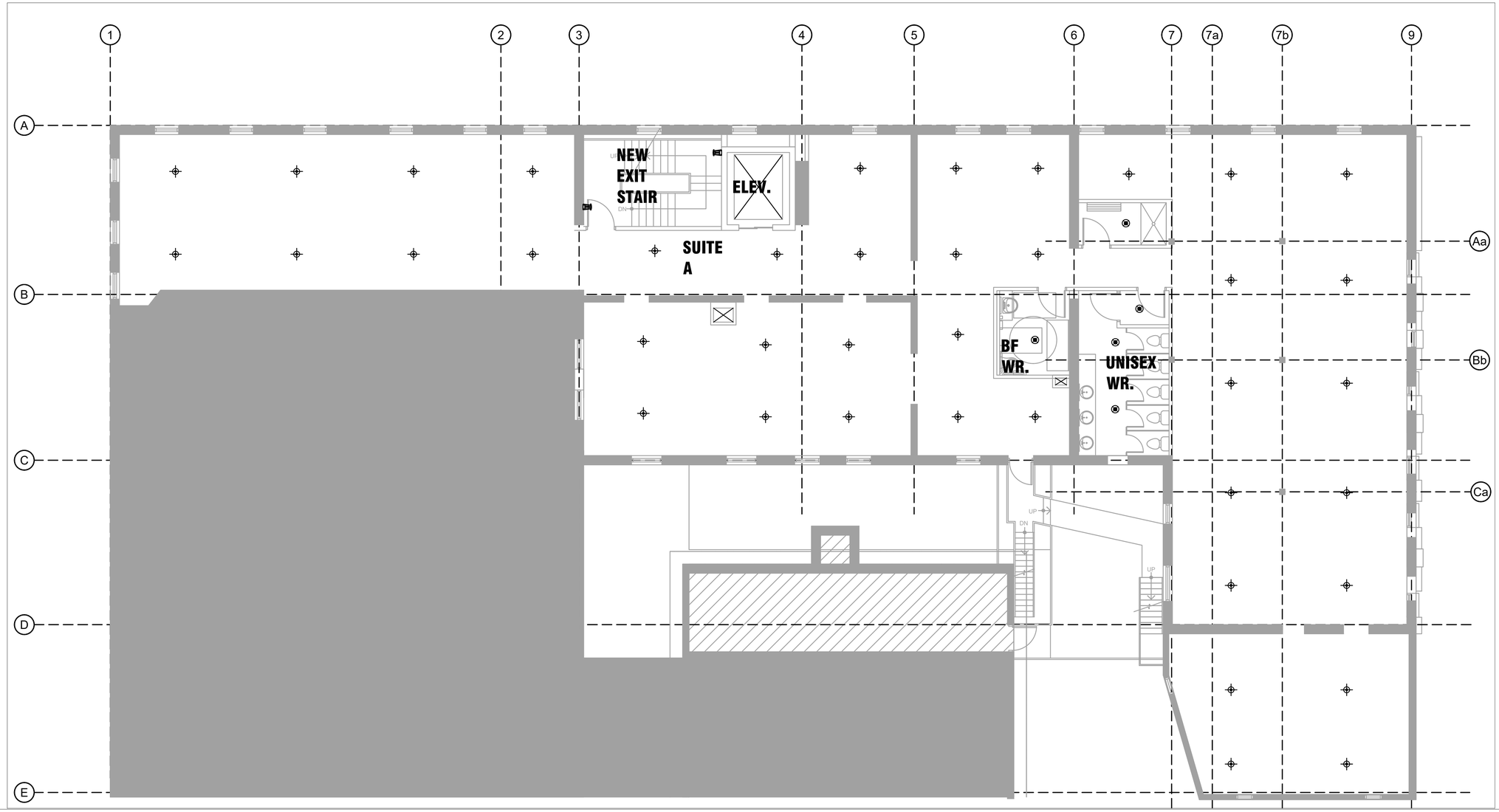

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1 QUEEN ST N, KITCHENER

TITLE:
SECOND FLOOR SPRINKLER LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
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GENERAL SPRINKLER NOTES:

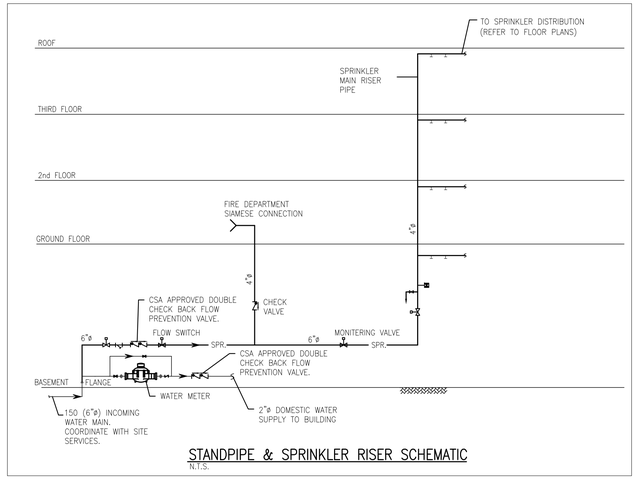
1. PROVIDE SPRINKLER PROTECTION THROUGHOUT THE PROPOSED BUILDING. SPRINKLERS SHALL BE INSTALLED BY LICENSED CONTRACTOR AND IN ACCORDANCE WITH LATEST REQUIREMENTS OF LOCAL FIRE DEPARTMENT, NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.) #13, AND ONTARIO BUILDING CODE BASED ON LIGHT HAZARD OCCUPANCY FOR OFFICE AREA.
2. PROVIDE APPROVED NEW GOOD QUALITY SPRINKLER HEADS AND COORDINATE WITH LIGHTS, DUCTS, PIPES, GRILLES, ETC., FOR EACH HEAD LOCATION. ALSO REFER ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR COORDINATION.
3. PROVIDE SHOP DRAWINGS SHOWING PIPE SIZE, LOCATION OF SPRINKLER HEADS, CONNECTION TO EXISTING SYSTEM AND ALL REQUIRED HYDRAULIC CALCULATIONS.
4. PROVIDE SAMPLE OF SPRINKLER HEAD FOR REVIEW AND APPROVAL.
5. COORDINATE WITH THE OWNER WORK SCHEDULE AND OBTAIN APPROVAL PRIOR TO COMMENCING WORK.
6. ALL DRAINAGE, CHARGING AND COMMISSIONING OF SPRINKLER SYSTEM SHALL BE DONE BY THIS CONTRACTOR. SUBMIT SCHEDULE OF WORK AND OBTAIN APPROVAL BEFORE COMMENCING WORK. PROVIDE VERIFICATION CERTIFICATE.
7. ALL SPRINKLERS IN ROOMS WITH SUSPENDED CEILINGS SHALL BE FULLY RECESSED AS PER SPECIFICATIONS. IN AREAS WITH NO CEILINGS, THE SPRINKLER HEADS SHALL BE STANDARD UPRIGHT OR PENDANT TYPE. ALL SPRINKLER HEADS SHALL BE ULC, UL, FM, APPROVED TYPE.
8. PIPE SHALL BE SCH-40, WHERE APPROVED SCH-10 CAN BE USED.
9. DRAWINGS SHOW PROPOSED ROUTING OF MAIN LINES. COORDINATE ON SITE EACH SPRINKLER PIPE WITH DUCTS, PLUMBING AND STRUCTURAL MEMBERS. REVISE AND OFFSET AS REQUIRED TO SUIT.
10. SPRINKLER PIPE SIZING AND PIPE BRANCHES LOCATION BY SPRINKLER COMPANY. INSTALL SPRINKLER MAIN LINE AS HIGH AS POSSIBLE AND SLOPE TO FULLY DRAIN ALL DRY PIPES. PROVIDE DRAIN DRIP DRUMS IN SPRINKLER ROOM AND AS REQUIRED.
11. PROVIDE ADDITIONAL SPRINKLER HEADS WHERE REQUIRED AND NEEDED TO COMPLY WITH CODE AND COVERAGE. THE DRAWINGS SHOW GENERAL HEAD LAYOUT AND SHALL NOT BE USED TO COUNT NUMBER OF HEADS.
12. PROVIDE OPENING FOR NEW PIPES AND SEAL AT DRYWALL CEILINGS AND RATED WALLS WITH FIRE STOPPING AFTER PIPES ARE INSTALLED.
13. PAINT ALL EXPOSED PIPES AND HANGERS WITH MINIMUM TWO COATS OF PAINT, COLOUR SELECTED BY ARCHITECT. PAINTING UNDER SCOPE OF SPRINKLER CONTRACTOR.
14. PENDANT SPRINKLER HEADS AT CEILINGS SHALL BE RECESSED BRONZE BODY SPRAY TYPE, 74°C (165°F) RATING, CHROME-PLATED BODY, DEFLECTOR AND CONCEALED COMPLETE WITH PRE-PAINTED (COLOR TO BE SELECTED BY ARCHITECT) COVER PLATES FOR INSTALLATION FLUSH WITH CEILING. EACH SPRINKLER HEAD SHALL BE COMPLETE WITH IDENTIFICATION PLATE AND TEMPERATURE RATING.
15. QUANTITY AND LOCATION OF SPRINKLER HEADS SHALL BE AS REQUIRED AND NOT ACCORDING TO ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE TO SUIT REFLECTED CEILING PLANS WHERE REQUIRED.

SPRINKLER DRAWING NOTES:

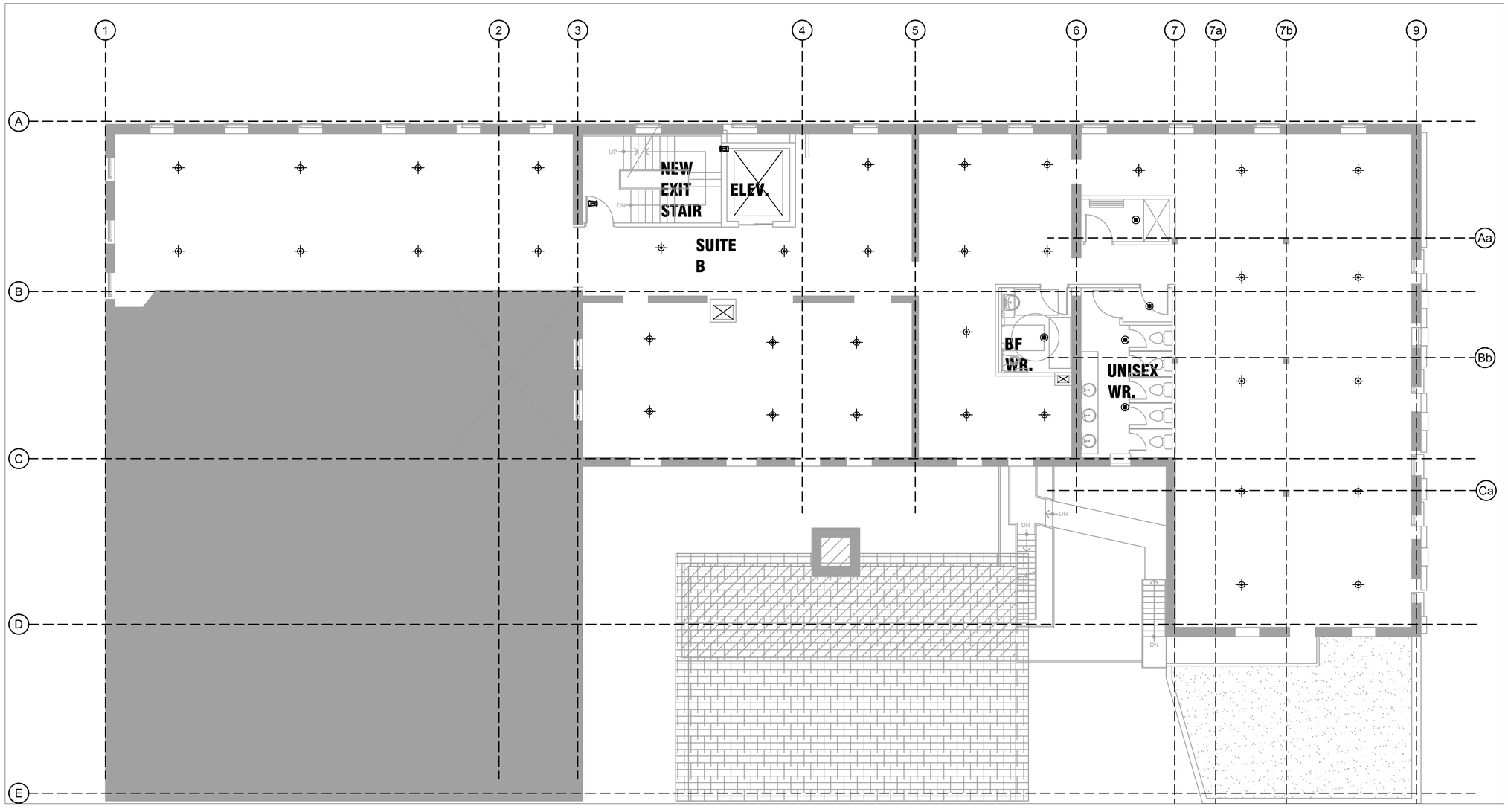
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR NEW SPRINKLER SYSTEM BEFORE COMMENCING WORK.
2. COORDINATE LOCATION OF SPRINKLER MAINS AND RISERS WITH ARCHITECT AND ENGINEERS.

SPRINKLER LEGEND	
⊗	NEW SPRINKLER HEAD RECESSED IN DROPPED CEILING.
⊕	NEW UPRIGHT SPRINKLER HEAD.
	SIDE DISCHARGE SPRINKLER HEAD.
⊕	EXISTING UPRIGHT SPRINKLER HEAD.

NOTE:
PROVIDE FHC IF REQUIRED FOR EACH UNIT (TO BE VERIFIED WITH SPRINKLERS COMPANY BY OTHERS)



STANDPIPE & SPRINKLER RISER SCHEMATIC
N.T.S.



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STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
01 OCT 18
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
THIRD FLOOR SPRINKLER LAYOUT

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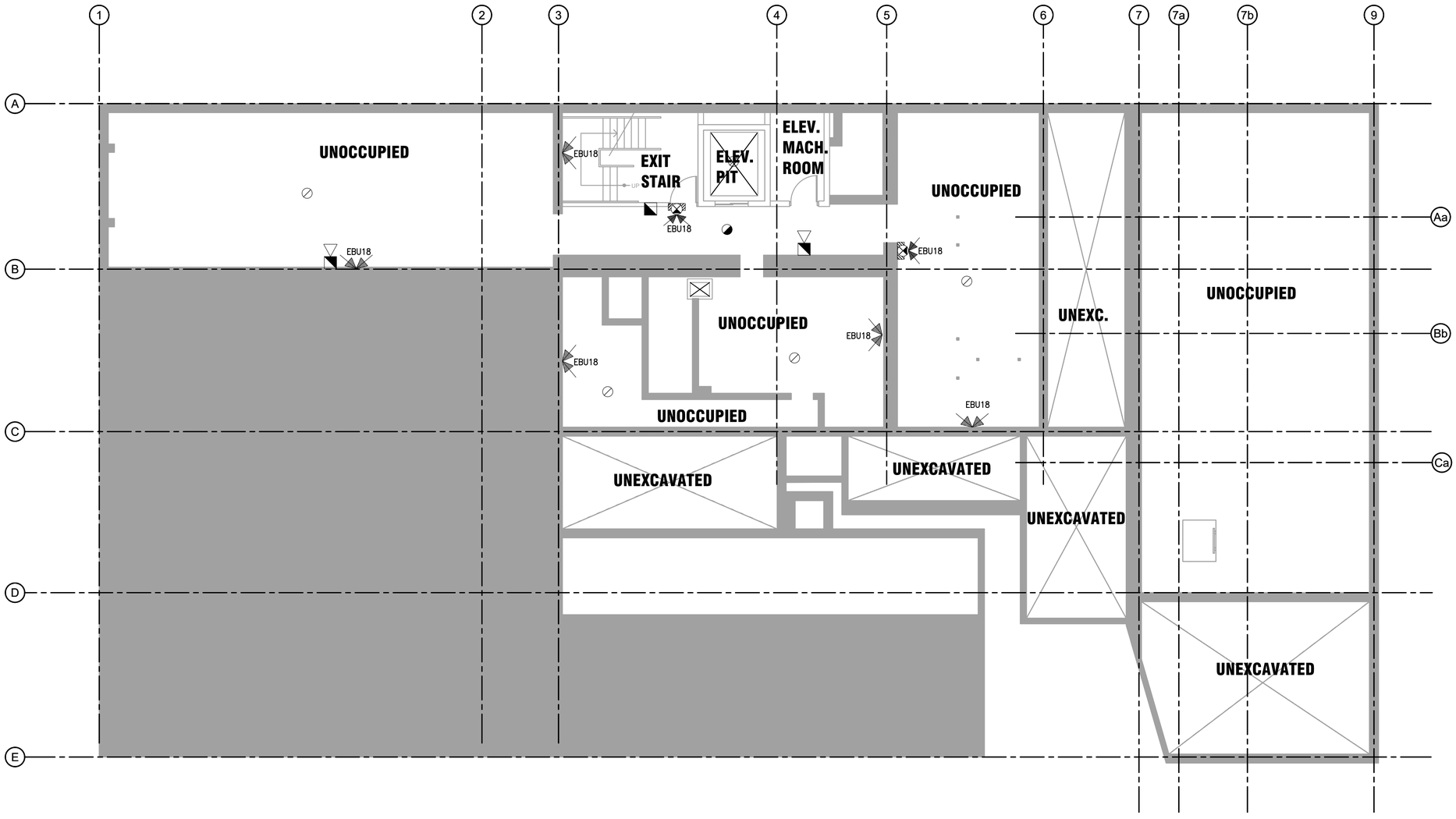

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ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
BASEMENT FLOOR EMERGENCY & FIRE ALARM LAYOUT

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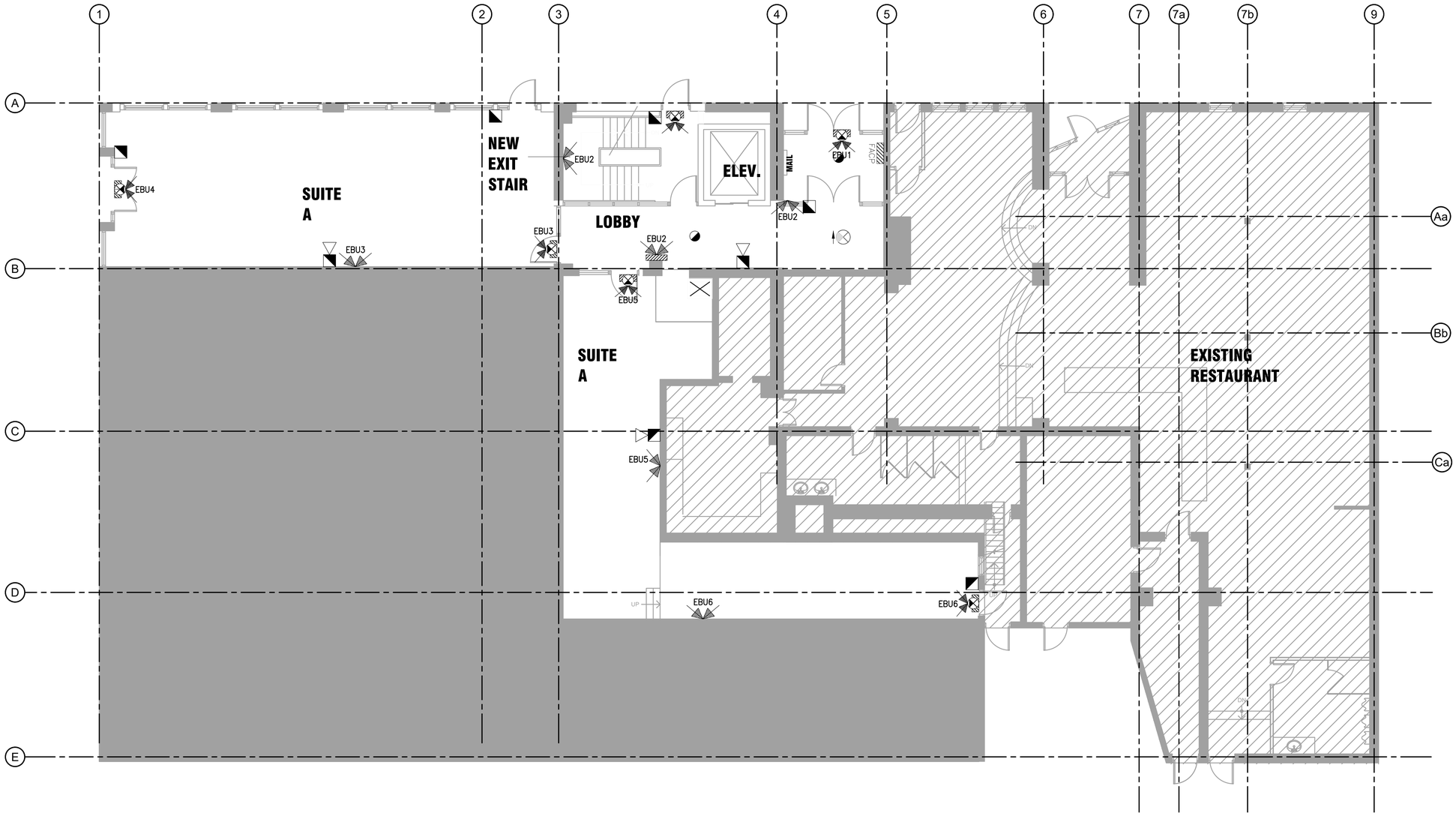

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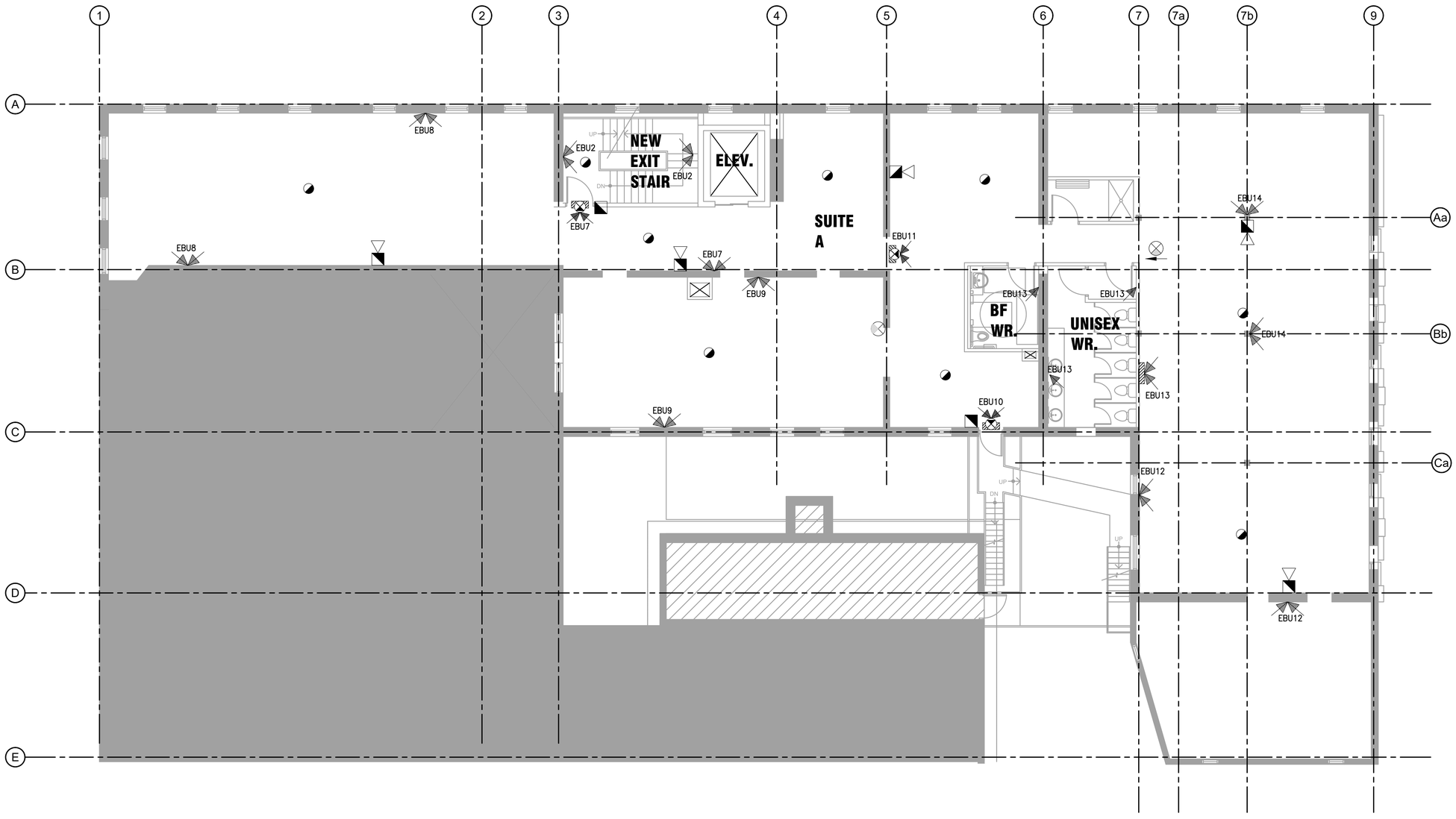

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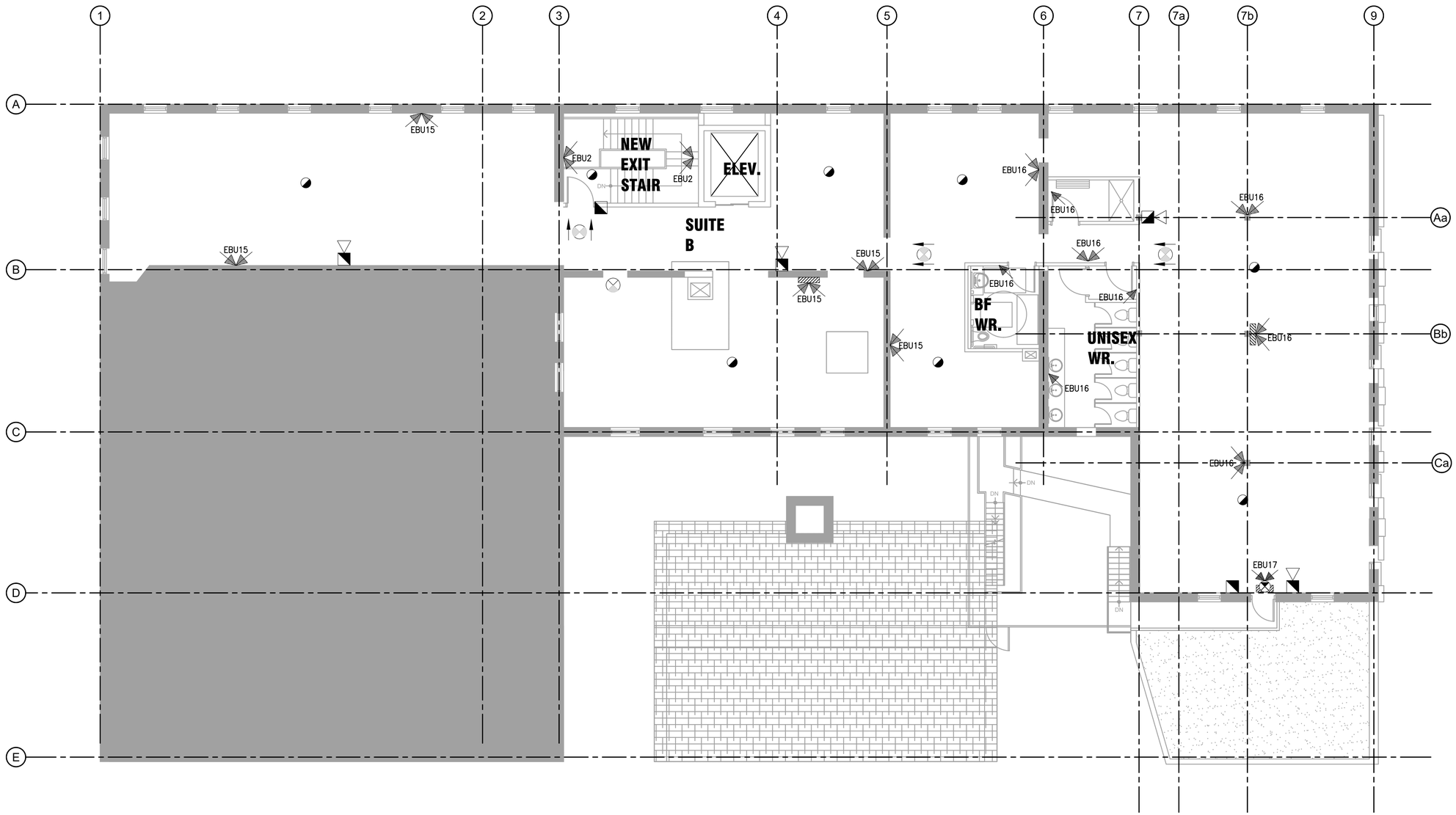

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EMERGENCY LIGHTING LEGEND–SCHEDULE

WALL 'MOUNTED EXIT SIGN COMPLETE WITH L.E.D. LAMP 120 VAC / 12 VDC AIMLITE. SHADING DENOTES FACE C/W DIRECTIONAL ARROW.

CEILING MOUNTED EXIT SIGN COMPLETE WITH L.E.D. LAMP 120 VAC / 12 VDC AIMLITE. SHADING DENOTES FACE C/W DIRECTIONAL ARROW.

EMERGENCY LIGHTING WALL MOUNTED TWO LAMPHEADS AND BATTERY UNIT (EBU–X) COMBO. 12V DC, BATTERY/LAMPHEADS SPECIFIED BELOW.

EMERGENCY LIGHTING WALL MOUNTED TWO LAMPHEADS, WIRED BACK TO A REMOTE BATTERY UNIT (EBU–X). 12V DC, LAMPHEADS SPECIFIED BELOW.

EMERGENCY LIGHTING WALL MOUNTED TWO LAMPHEADS, EXIT SIGN, AND BATTERY UNIT (EBU–X) COMBO. 12V DC, REFER TO SPECIFICATION BELOW.

EBU–X DENOTES CONNECTED TO EMERGENCY BATTERY 'EBU–X'

EXIT SIGN AIMLITE CAT. NO. RPST–2M–WHT–BAT, 120VAC INPUT, DOUBLE FACE, SELF–POWERED FOR 90 MINUTES.

EMERGENCY LIGHTING, EXIT SIGN AND STAND–BY BATTERY UNIT COMBO AIMLITE CAT. NO. CSRP1272–1M–2MD–7LA–WHT LED, 120VAC INPUT, 12VDC OUTPUT, 72W FOR 30 MINUTES.

EMERGENCY POWER STAND–BY BATTERY UNIT AIMLITE CAT. NO. EBST–12200–2MD–MR16–7WA–WHT LED 120VAC INPUT, 12VDC OUTPUT, 200W FOR 30 MINUTES.

EMERGENCY EXIT LIGHT HEADS AIMLITE CAT. NO. RMMD–212–7LA–WHT LED 12VDC WIRED TO REMOTE BATTERY UNIT.

EMERGENCY EXIT LIGHT HEADS AIMLITE CAT. NO. RMMD–112–7LA–WHT LED 12VDC WIRED TO REMOTE BATTERY UNIT.

EXIT SIGNS SHALL BE PROVIDED IN ACCORDANCE TO THE LATEST EDITION OF THE ONTARIO BUILDING CODE (NEW GREEN PICTOGRAM).

EMERGENCY LIGHTING SPECIFICATION

.1 EMERGENCY LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 3.2.7.3 OF THE LATEST EDITION OF ONTARIO BUILDING CODE. EMERGENCY LIGHTING SHALL BE PROVIDED TO AN AVERAGE LEVEL OF ILLUMINATION NOT LESS THAN 10 LX AT FLOOR OR TREAD LEVEL AS REQUIRED IN O.B.C.

.2 LOCATE EACH EMERGENCY LIGHT ON SITE TO SUIT EXIT ROUTING AND LINE OF SIGHT.

.3 THE CONTRACTOR SHALL ARRANGE FOR TESTING OF EMERGENCY LIGHTS AND SUBMIT SEALED CERTIFICATE AND SKETCH INDICATING LOCATION OF EACH LIGHT AND LIGHTING LEVEL. ADJUST EACH HEAD TO SUIT. ARRANGE WITH BUILDING OWNER AND OBTAIN APPROVAL BEFORE SHUTTING OFF MAIN POWER.

.4 SELF–CONTAINED EMERGENCY LIGHTING UNITS AND REMOTE BATTERIES SHALL CONFORM TO CSA C22.2 NO. 141 AND PROVIDE SUFFICIENT WATTAGE TO LIGHT ALL REMOTE EMERGENCY EXIT LIGHT HEADS WIRED TO IT, FOR MINIMUM PERIOD DESCRIBED IN SECTION 3.2.7.4 OF O.B.C. IN THE EVENT THAT THE REGULAR POWER SUPPLY TO THE BUILDING IS INTERRUPTED.

.5 MOUNTING HEIGHTS OF EQUIPMENT FROM FINISHED FLOOR TO CENTER LINE OF EQUIPMENT AS FOLLOWS:

EMG LIGHTING BATTERY PACKS & EXITS 1'–0" BELOW CEILING (305mm)

FIRE ALARM LEGEND

FACP	FIRE ALARM CONTROL PANEL
DA	DIGITAL AMPLIFIER
FAA	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM HORN
F	STROBE LIGHT
	PHOTOELECTRIC SMOKE DETECTOR
	PHOTOELECTRIC DUCT SMOKE DETECTOR
	HEAT DETECTOR
	PRE–ACTION DETECTOR (BY OTHERS)
L	LASER SMOKE DETECTOR
	FLAME DETETOR
	ISOLATOR

FIRE ALARM SYSTEM NOTES

1. CONTRACTOR SHALL PROVIDE ALL REQUIRED DEVICES, BELLS, PULL STATIONS, AND INTERCONNECTING WIRES TO COMPLETE SYSTEM. EXACT COUNT OF DEVICES AND EQUIPMENT SHALL BE ESTABLISHED USING LATEST APPROVED ARCHITECTURAL DRAWINGS.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO OBTAIN APPROVAL FROM THE LOCAL FIRE MARSHALL FOR ALL FIRE ALARM INSTALLATION. FIRE ALARM IS TO BE VERIFIED.

   CONTRACTOR SHALL SUBMIT MANUFACTURER FIRE ALARM EQUIPMENT AND SYSTEM SHOP DRAWING FOR REVIEW AND APPROVAL.
3. A SINGLE STAGE FIRE ALARM SYSTEM SHALL, UPON THE OPERATION OF ANY MANUAL PULL STATION OR FIRE DETECTOR, CAUSE AN ALARM SIGNAL TO SOUND ON ALL AUDIBLE SIGNAL DEVICES IN THE SYSTEM.
4. DEVICES SHOWN ARE DIAGRAMMATIC ONLY. FOR EXACT LOCATIONS AND QUANTITIES SEE FLOOR PLANS. REFER TO FIRE ALARM SYSTEM SPECIFICATION FOR ADDITIONAL FIRE ALARM SYSTEM REQUIREMENTS. ALL FIRE ALARM SYSTEM RACEWAY SIZES AND CIRCUITRY REQUIREMENTS SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND ALL CODES THAT MAY APPLY.
5. CABLING MUST BE UNIQUELY IDENTIFIED AND LABELED, AND PERMANENT. LABELING IS TO BE PRINTED.
6. F.A.C.P. AND OTHER PANELS (IF APPLICABLE) SHALL BE MOUNTED WITH CLEARANCES FOR OBSERVATION AND TESTING. ALL OTHER FIRE ALARM JUNCTION BOXES SHALL BE MARKED FOR IDENTIFICATION. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT TO F.A.C.P. AND TERMINAL CABINETS, AS REQUIRED.
7. THE CIRCUIT BREAKER SHALL HAVE A LOCK TO PREVENT ACCIDENTAL SHUT OFF AND BE CLEARLY MARKED "FIRE ALARM" IN THE PANEL BOARD DIRECTORY.
8. SPACE DETECTORS AS SHOWN ON FLOOR PLANS AND IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDED DISTANCE. PROVIDE ADDITIONAL DETECTORS WHERE REQUIRED. ALL LOW VOLTAGE FIRE ALARM CIRCUITS MAY OCCUPY A COMMON CONDUIT.
9. ALL CONDUIT, MOUNTING BOXES AND PANELS SHALL BE HUNG AND FASTENED WITH FITTINGS TO ENSURE POSITIVE GROUNDING THROUGHOUT THE ENTIRE SYSTEM.
10. TRANSPOSING OR CHANGING COLOR CODING OF WIRES IS NOT PERMITTED. ALL CONDUCTORS IN CONDUIT CONTAINING MORE THAN ONE WIRE SHALL BE LABELED ON EACH WIRE END.
11. CONDUCTORS IN CABINETS SHALL BE FORMED AND HARNESSED SO THAT EACH DROPS OFF DIRECTLY OPPOSITE ITS TERMINAL. ALL WIRING SHALL BE CHECKED AND TESTED TO ENSURE THAT THERE ARE NO GROUNDS, OPENS, OR SHORTS.
12. WIRING COLOR CODES SHALL BE CONSISTENT THROUGHOUT THE SYSTEM AND SHALL ALLOW FOR EASY IDENTIFICATION OF INITIATING, INDICATING AND AUXILIARY CONTROL CIRCUITS. LOCATE REMOTE TEST SWITCH AND PILOT LIGHT FOR ABOVE CEILING MOUNTED DUCT DETECTORS, FLUSH IN CEILING DIRECTLY BELOW DETECTOR.
13. NOT ALL INTERCONNECTING WIRING IS INDICATED, I.E. AS BETWEEN ELEVATOR LOBBY SMOKE DETECTORS AND ELEVATOR CONTROLLER, ETC.
14. ALL FIRE ALARM SYSTEM JUNCTION BOXES SHALL BE PANTED RED WITH STENCIL LETTERING INDICATING "FIRE ALARM SYSTEM", WIRING INDICATED ON THE RISER DIAGRAM IS DIAGRAMMATIC ONLY.
15. IT IS NOT INTENDED TO INDICATE ROUTING OR QUANTITY OF WIRES REQUIRED.
16. PROVIDE WIRING FOR A COMPLETE SYSTEM AS REQUIRED BY SYSTEM MANUFACTURER.
17. REFER TO FIRE ALARM SPECIFICATION.
18. SYSTEM COMPONENTS TO BE MIRCOM, OR APPROVED EQUIVALENT, AS FOLLOWS (OR AS INDICATED ON DRAWINGS): INDICATED COMPLETE WITH BATTERIES AND CHARGER, VOLTMETER, AMMETER, FLUSH MOUNTED COMPLETE WITH TRIM AND KEYS, CONNECTION FOR REMOTE STATION, ANNUCIATOR AND TROUBLE INDICATION AND BUZZER.
19. BELLS IN CORRIDORS AND COMMON AREAS SHALL BE VIBRATING TYPE
20. TEST AND VERIFY SYSTEM AND ISSUE CERTIFICATE COMPLETE WITH REPORT. THE TESTING IS TO BE DONE IN PRESENCE OF OWNER'S REPRESENTATIVE, THE MANUFACTURER'S TECHNICIAN AND THE ENGINEER. TESTING AND VERIFICATION SHALL BE IN ACCORDANCE WITH CAN4–S537 AND AS DIRECTED BY THE ENGINEER.
21. PROVIDE TELEPHONE SYSTEM CONDUIT CONNECTION TO CONTROL PANEL. COMPONENTS SHALL BE COMPATIBLE WITH EXISTING SYSTEM AND ULC APPROVED.
22. UPON ACTIVATION OF ANY ALARM INDICATING DEVICE, AN ALARM SHALL SOUND ON ALL BELLS AND ZONES AS SHOWN AND INDICATED ON THE MAIN ANNUNCIATOR AND/OR CONTROL PANEL. THE GENERAL ALARM SHALL BE CAPABLE TO BE ACTIVATED BY INSERTION OF THE GENERAL ALARM KEY IN THE FIRE ALARM PANEL.

MIRCOM FIRE ALARM SYSTEM COMPONENTS:
- CONTROL PANEL FX–2017–12A MAIN CHASSIS
- BBX–1072A ENCLOSURE
- AUXILIARY NODULE RM–100BA
- ADDRESSABLE MODULES MIX–500
- REMOTE ANNUNCIATOR RAM–1032 AND BB–1001 ENCLOSURE
- PULL STATIONMS–401
- HEAT DETECTORS 5601A & 5604A
- SMOKE DETECTORS C2WTR–BA AND C2W–BA
- MINI HORN MH–25W
- DOOR OPEN HOLDER DH24120RPC
- EOL COVERPLATE MP–300
- BATTERY BA–140

HORNS SHALL BE WITH STROBES.

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	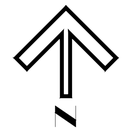

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GENERAL NOTES

1. CO-ORDINATE ALL WORK AND DRAWINGS WITH THE STRUCTURAL, MECHANICAL, ARCHITECTURAL WITH AND ELECTRICAL WORK AND DRAWINGS.

2. REPORT ANY DISCREPANCIES OR CONFLICTS IN DIMENSIONS AND/OR DETAILS TO THE ENGINEER PRIOR TO COMMENCING THE WORK IN QUESTION FOR CLARIFICATION.

3. ALL STRUCTURAL WORK TO BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE AND OTHER APPLICABLE STANDARDS AS NOTED BELOW (THE LATEST REVISIONS SHALL APPLY).

4. ALL LOADS, FORCES AND REACTIONS SHOWN ON THE DRAWINGS OR NOTED IN THE SPECIFICATIONS ARE SERVICE LOADS (UNFACTORED), UNLESS NOTED OTHERWISE.

EARTHWORK

1. EXAMINATION

1.1. FOOTINGS ARE DESIGNED FOR A SERVICEABILITY LIMIT STATES (SLS) GEOTECHINAL RESISTANCE OF XXX kPa (XXXX psf) AND ULTIMATE LIMIT STATES (ULS) GEOTECHNICAL RESISTANCE OF XXX kPa (XXX psf) AS SPECIFIED IN REPORT BY (GEOTECHNICAL ENGINEER), FILE No. XXX DATED MM/DD/YYYY.
1.2. FOOTINGS ARE DESIGNED FOR AN ASSUMED SERVICABILITY LIMIT STATES (SLS) GEOTECHNICAL RESISTANCE OF 120 kPa (2500 psf) AND ULTIMATE LIMIT STATES (ULS) GEOTECHNICAL RESISTANCE OF 168 kPa (3500 psf) GEOTECHNICAL ENGINEER TO CONFIRM.
1.3. DEEP FOUNDATION DESIGNED AS STEEL 'H' PILES (HP310X110) DRIVEN TO PRACTICAL REFUSAL IN THE QUEENSTON FORMATION WERE USED IN OUR DESIGN. REFER TO TERRAPROBE GEOTECHNICAL REPORT # 71-13-8084 DATED NOVEMBER 25 2013 FOR ADDITIONAL INFO.
1.4. BEFORE COMMENCING WORK VERIFY LOCATIONS OF BURIED SERVICES ON AND ADJACENT TO SITE.
1.5. ARRANGE WITH APPROPRIATE AUTHORITY FOR RELOCATION OF BURIED SERVICES THAT INTERFERE WITH EXECUTION OF WORK. PAY COSTS FOR RELOCATING SERVICES.

2. PREPARATION

2.1. TEMPORARY EROSION AND SEDIMENTATION CONTROL: PROVIDE TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES TO PREVENT SOIL EROSION AND DISCHARGE OF SOIL-BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS, ACCORDING TO SEDIMENT AND EROSION CONTROL DRAWINGS.
2.2. PROTECTION OF IN-PLACE CONDITIONS:
2.2.1. PROTECT EXCAVATION FROM FREEZING.
2.2.2. PROTECT EXPOSED CONCRETE FOOTINGS FROM FREEZING.
2.2.3. KEEP EXCAVATION CLEAN, FREE OF STANDING WATER, AND LOOSE SOIL.
2.2.4. WHERE SOIL IS SUBJECT TO SIGNIFICANT VOLUME CHANGE DUE TO CHANGE IN MOISTURE CONTENT, COVER AND PROTECT.
2.2.5. PROTECT NATURAL AND MAN-MADE FEATURES REQUIRED TO REMAIN UNDISTURBED. UNLESS OTHERWISE INDICATED OR LOCATED IN AN AREA TO BE OCCUPIED BY NEW CONSTRUCTION, PROTECT EXISTING TREES FROM DAMAGE.
2.2.6. PROTECT BURIED SERVICES THAT ARE REQUIRED TO REMAIN UNDISTURBED.

2.3. REMOVAL:

2.3.1. REMOVE TREES, STUMPS, LOGS, BRUSH, SHRUBS, BUSHES, VINES, UNDERGROWTH, ROTTEN WOOD, DEAD PLANT MATERIAL, EXPOSED BOULDERS AND DEBRIS WITHIN AREAS DESIGNATED ON DRAWINGS.
2.3.2. REMOVE STUMPS AND TREE ROOTS BELOW FOOTINGS, SLABS, AND PAVING.
2.3.3. REMOVE OBSOLETE BURIED SERVICES WITHIN 2 M (6'-6") OF FOUNDATIONS: CAP CUT-OFFS.
2.3.4. CUT EXISTING PAVEMENT OR SIDEWALK NEATLY ALONG LIMITS OF PROPOSED EXCAVATION IN ORDER THAT SURFACE MAY BREAK EVENLY AND CLEANLY.

3. PRODUCTS

3.1. GRANULAR A: TO OPSS 1010.
3.2. GRANULAR B: TYPE I TO OPSS 1010.
3.3. IMPORTED FILL: GRANULAR MATERIALS, FREE OF ORGANIC MATTERS AND ANY DELETERIOUS MATERIALS, ACCOMPANIED WITH A CERTIFICATE STATING FILL MEETS CURRENT MOE STANDARDS FOR RESIDENTIAL LAND USE.
3.4. WATER: CLEAN, POTABLE.

4. EXCAVATION

4.1. SHORE AND BRACE EXCAVATIONS, PROTECT SLOPES AND BANKS AND PERFORM WORK IN ACCORDANCE WITH PROVINCIAL & MUNICIPAL REGULATIONS, WHICHEVER IS MORE STRINGENT.
4.2. PERFORM BLASTING IN ACCORDANCE WITH PROVINCIAL & MUNICIPAL REGULATIONS: REPAIR DAMAGE.
4.2.1. DO NOT BLAST WITHIN 3M (10'-0') OF BUILDING AND WHERE DAMAGE WOULD RESULT.
4.3. STRIP TOPSOIL, LOOSE SILTY SAND CONTAINING ORGANICS, AND ANY DELETERIOUS MATERIALS OVER AREAS TO BE COVERED BY NEW CONSTRUCTION, OVER AREAS WHERE GRADE CHANGES ARE REQUIRED, AND SO THAT EXCAVATED MATERIAL MAY BE STOCKPILED WITHOUT COVERING SAME.
4.4. EXCAVATE AS REQUIRED TO CARRY OUT WORK
4.4.1. USE MEANS NECESSARY TO EXCAVATE FROZEN AND WATER SATURATED SOIL.
4.4.2. DO NOT DISTURB SOIL OR ROCK BELOW BEARING SURFACES.
4.4.3. NOTIFY CONSULTANT WHEN EXCAVATIONS ARE COMPLETE.
4.4.4. CORRECT UNAUTHORIZED OVER-EXCAVATION BY FILLING UNDER BEARING SURFACES AND FOOTINGS WITH GRANULAR B FILL COMPACTED IN 300MM (12") MAXIMUM LIFTS TO NOT LESS THAN 98% OF CORRECTED SPMDD.
4.5. ALL FOOTINGS ARE TO BE FOUNDED A MIN. 1200MM (4'-0") BELOW FINISHED FLOOR, BUT NOT LESS THAN 1200MM (4'-0") BELOW EXTERIOR FINISHED GRADE.
4.6. EXCAVATE FOR SLABS AND PAVING TO SUBGRADE LEVELS.
4.6.1. IN ADDITION, REMOVE ALL TOPSOIL, ORGANIC MATTER, DEBRIS AND OTHER LOOSE AND HARMFUL MATTER ENCOUNTERED AT SUBGRADE LEVEL.
4.7. KEEP EXCAVATION FREE FROM WATER.
4.8. EXCAVATION MUST NOT INTERFERE WITH BEARING CAPACITY OF ADJACENT FOUNDATIONS.
4.9. EXPOSED SUBGRADE TO BE THOROUGHLY RECOMPACTED AND INSPECTED BY QUALIFIED GEOTECHNICAL PERSONNEL. ANY LOOSE OR SOFT AREAS IDENTIFIED SHOULD BE FURTHER EXCAVATED TO THE LEVEL OF COMPETENT SOIL.
4.10. AVOID EXCAVATION BELOW GROUNDWATER TABLE IF QUICK CONDITION OR HEAVE IS LIKELY TO OCCUR.
4.11. DISPOSE OF WATER IN ACCORDANCE WITH OPSS 517 AND OPSS 518 IN MANNER NOT DETRIMENTAL TO PUBLIC AND PRIVATE PROPERTY, OR PORTION OF WORK COMPLETED OR UNDER CONSTRUCTION.

5. FILL TYPES AND COMPACTION

5.1. USE TYPES OF FILL AS INDICATED OR SPECIFIED BELOW. COMPACTION DENSITIES ARE PERCENTAGES OF MAXIMUM DENSITIES OBTAINED FROM ASTM D698.
5.1.1. BELOW FOOTINGS:
5.1.1.1. THE EXPOSED SUBGRADE SHALL BE RE-COMPACTED FROM THE SURFACE TO AT LEAST 100% SPMDD. ANY OVERLY WET AND SOFT AREAS SHOULD BE SUB-EXCAVATED AND BACKFILLED WITH APPROVED FILL PLACED IN THIN LAYERS AND COMPACTED TO 100% SPMDD.
5.1.1.2. ACHIEVE REQUIRED GRADES BELOW BUILDING FOUNDATIONS BY PLACING IMPORTED GRANULAR B TYPE I, IN MAXIMUM 300MM (12") THICK LIFTS, COMPACTED TO NO LESS THAN 100% SPMDD.
5.1.1.3. PLACE ENGINEERED FILL SUCH THAT THE FILL PAD EXTENDS HORIZONTALLY OUTWARDS FROM ALL FOOTINGS BY AT LEAST THE SAME DISTANCE AS HOW THICK THE ENGINEERED FILL PAD WILL EXIST BETWEEN THE UNDERSIDE OF FUTURE FOOTINGS AND THE APPROVED NATIVE EARTH SUBGRADE.
5.1.2. UNDER CONCRETE SLABS:
5.1.2.1. FLOOR SLABS MAY BE SUPPORTED ON SUITABLY STABLE NATIVE SOIL, SHALE, AND/OR ENGINEERED FILL.
5.1.2.2. PROOF-ROLL EXPOSED SUBGRADE WITH A HEAVY ROLLER; ANY SOFT/UNSTABLE AREAS DETECTED SHALL BE REPLACED WITH GRANULAR FILL COMPACTED TO AT LEAST 95% SPMDD.
5.1.2.3. PLACE IMPORTED GRANULAR B TYPE I FILL, IN MAXIMUM 300MM THICK LIFTS, TO THE REQUIRED FLOOR SUBGRADE LEVEL; COMPACT TO NO LESS THAN 95% SPMDD.
5.1.2.4. PROVIDE 150 MM (6") COMPACTED THICKNESS BASE COURSE OF GRANULAR A FILL TO UNDERSIDE OF SLAB. COMPACT TO 100% SPMDD.
5.1.2.5. EXTERIOR SIDE OF PERIMETER WALLS: USE FREE-DRAINING GRANULAR B FILL TO SUBGRADE LEVEL. PLACE IN THIN LAYERS AND COMPACT TO 95% SPMDD. OVER-COMPACTION SHOULD BE AVOIDED.

6. FIELD QUALITY CONTROL

6.1. ALL FILL PLACEMENT AND COMPACTION OPERATIONS SHALL BE SUPERVISED ON A FULL-TIME BASIS BY QUALIFIED GEOTECHNICAL PERSONNEL TO APPROVE FILL MATERIAL AND ENSURE THE SPECIFIED DEGREE OF COMPACTION HAS BEEN ACHIEVED.
6.2. PRIOR TO FORMING FOOTING, EXPOSED SUB-GRADE SHALL BE REVIEWED BY THE GEOTECHNICAL ENGINEER TO CONFIRM THE SOIL PARAMETERS USED FOR DESIGN.
6.3. DO NOT BEGIN BACKFILLING OR FILLING OPERATIONS UNTIL MATERIAL HAS BEEN APPROVED FOR USE BY CONSULTANT.
6.4. NOT LATER THAN 48 HOURS BEFORE BACKFILLING OR FILLING WITH APPROVED MATERIAL, NOTIFY CONSULTANT TO ALLOW COMPACTION TESTS TO BE CARRIED OUT BY DESIGNATED TESTING AGENCY.

7. BACKFILLING

7.1. REMOVE SNOW, ICE, CONSTRUCTION DEBRIS, ORGANIC SOIL, LOOSE INCOMPETENT NATIVE SOILS, AND STANDING WATER FROM SPACES TO BE FILLED.
7.2. COMPACT EXISTING SUBGRADE UNDER WALKS, PAVING, AND SLABS ON GRADE TO SAME COMPACTION AS FILL.
7.3. BACKFILLING ADJACENT TO OUTSIDE OF BUILDING:
7.3.1. ADJACENT TO FOUNDATION WALLS PLACE AND COMPACT APPROVED FREE-DRAINING GRANULAR FILL IN 200MM (8") LOOSE MEASURED LIFTS AND COMPACT TO 96% OF THE FILL MATERIALS' STANDARD PROCTOR MAXIMUM DRY DENSITY.
7.3.2. BELOW SIDEWALKS ADJACENT TO BUILDING PROVIDE 150 MM (6") MIN GRANULAR 'A' LAYER COMPACTED TO 100% S.P.M.D.D. OVER 300MM (12") LAYER OF GRANULAR 'B' COMPACTED TO 98% S.P.M.D.D. OVER FREE DRAINING GRANULAR FILL MENTIONED ABOVE.
7.3.3. WHEN BACKFILLING AND COMPACTING EITHER INTERIOR OR EXTERIOR FOUNDATION WALLS, THE HEIGHT OF FILL ON EITHER SIDE OF THE WALL SHALL NOT EXCEED 300MM (12").

SELECTIVE DEMOLITION

1. ALTERATION PROJECT PROCEDURES

1.1. EMPLOY SKILLED AND EXPERIENCED PERSONNEL ALTERATION WORK.
1.2. REMOVE, CUT, AND PATCH WORK IN A MANNER TO MINIMIZE DAMAGE AND TO PROVIDE MEANS OF RESTORING PRODUCTS AND FINISHES TO SPECIFIED CONDITION.
1.3. WHERE NEW WORK ABUTS, OR ALIGNS WITH EXISTING, PROVIDE A SMOOTH AND EVEN TRANSITION. PATCH WORK TO MATCH EXISTING ADJACENT WORK IN TEXTURE AND APPEARANCE.
1.4. WHEN FINISHED, SURFACES ARE CUT SO THAT A SMOOTH TRANSITION WITH NEW WORK IS NOT POSSIBLE, TERMINATE EXISTING SURFACE ALONG A STRAIGHT LINE AT A NATURAL LINE OF DIVISION AND SUBMIT RECOMMENDATION TO CONSULTANT FOR REVIEW.
1.5. PATCH OR REPLACE PORTIONS OF EXISTING SURFACES WHICH ARE DAMAGED, LIFTED, DISCOLORED, OR SHOWING OTHER IMPERFECTIONS.
1.6. FINISH SURFACES AS SPECIFIED IN INDIVIDUAL PRODUCT SECTIONS.

2. PROJECT CONDITIONS

2.1. CEASE OPERATIONS IMMEDIATELY IF STRUCTURE APPEARS TO BE IN DANGER AND NOTIFY CONSULTANT. DO NOT RESUME OPERATIONS UNTIL DIRECTED.

CAST-IN-PLACE CONCRETE AND CONCRETE REINFORCING

1. GENERAL:

1.1. ALL CONCRETE WORK INCLUDING BUT NOT LIMITED TO MATERIALS, MIXING, PLACING, CURING, PROTECTION AND FORMWORK IN ACCORDANCE WITH CSA STANDARD A23.1 AND A23.3, UNLESS NOTED OTHERWISE.
1.2. ALL CONCRETE REINFORCING INCLUDING MATERIALS, FABRICATION, DETAILING, LAP SPLICES, PLACEMENT, FIXING AND COVER IN ACCORDANCE WITH CSA STANDARD A23.1 AND A23.3, UNLESS NOTED OTHERWISE.
1.3. PROVIDE ALL PLANT, LABOUR, EQUIPMENT AND MATERIALS TO COMPLETE THE CAST-IN-PLACE CONCRETE WORK. THE WORK INCLUDES, BUT IS NOT LIMITED TO:
1.3.1. REINFORCED CONCRETE FOOTINGS, WALLS, BEAMS, AND SLABS
1.3.2. PATCHING SLEEVES, POCKETS
1.3.3. GROUTING OF COLUMN AND BEAM BEARING PLATES

2. WORK INSTALLED UNDER THIS SECTION, SUPPLIED BY OTHERS:

2.1. SETTING OF ANCHORS AND SLEEVES FOR MECHANICAL AND ELECTRICAL TRADES.
2.2. BUILDING IN OF IRON AND STEEL ITEMS.
2.3. SETTING OF ANCHORS AND OTHER HARDWARE TO BE CAST INTO THE CONCRETE.

3. CO-ORDINATION & CO-OPERATION:

3.1. CO-ORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER SECTIONS AND ADVISE OTHER TRADES WHEN MATERIALS TO BE BUILT INTO THE FORMS WILL BE REQUIRED.
3.2. CO-OPERATE WITH OTHER SECTIONS TO ENSURE AN UNINTERRUPTED SEQUENCE OF CONSTRUCTION.
3.3. INSTALL ANY ITEMS FURNISHED BY OTHERS, MISCELLANEOUS IRON WORK, ANCHORS, PIPE SLEEVES, HARDWARE, ETC., THAT ARE TO BE BUILT INTO THE CONCRETE WORK.
3.4. FORM ALL HOLES AND OPENINGS SHOWN OR REQUIRED TO ACCOMMODATE THE WORK OF OTHER TRADES.
3.5. MAKE GOOD ALL OPENINGS LEFT IN CONSTRUCTION AROUND PIPES, OPENINGS FOR STRUTS AND ANCHORAGES.

4. DESIGN CRITERIA:

4.1. DESIGN ALL CONCRETE MIXES FOR THE COMPRESSIVE STRENGTH AND SLUMP REQUIREMENTS AS SPECIFIED IN "PROPORTIONING OF CONCRETE" OF THIS SECTION. ALLOW FOR THE APPROPRIATE COEFFICIENT OF VARIATION FOR EACH STRENGTH CLASS FOR THE BATCH PLANT SUPPLYING THE CONCRETE.
4.2. SUBMIT MIX DESIGNS FOR EACH CLASS OF CONCRETE FOR REVIEW BY THE CONSULTANT AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF CONCRETING.

5. DESIGN CRITERIA – FORMWORK:

5.1. FORMWORK, FALSEWORK AND SHORING IS TO BE DESIGNED, ERECTED, BRACED AND MAINTAINED SO THAT IT WILL SAFELY SUPPORT:
5.1.1. THE LIQUID WEIGHT OF THE CONCRETE.
5.1.2. ALL APPLIED CONSTRUCTION LOADS, SUCH AS EQUIPMENT, PERSONNEL, RUNWAYS, AND WIND LOADS TO WHICH THE SYSTEM MAY BE SUBJECTED.
5.1.3. ALL SUPPORTED LOADS INCLUDING RESHORED SLABS.
5.2. FOLLOW THE PROVISIONS OF THE CONSTRUCTION SAFETY ACT AS AMENDED TO-DATE AND THE RECOMMENDATIONS OF THE CURRENT A.C.I. STANDARD 347.
5.3. REFER TO EQUIPMENT DRAWINGS FOR CRITICAL DIMENSIONS. DETAIL FORMS IN THESE AREAS TO PROVIDE THE SPECIFIED REQUIREMENTS.
5.4. TOLERANCES WITHIN CAN/CSA A23.1/A23.2 EXCEPT THAT TOLERANCES FOR EQUIPMENT ANCHORS, INSERTS, ETC. TO EQUIPMENT SUPPLIER'S REQUIREMENTS.

6. MATERIALS:

6.1. CEMENT: IN ACCORDANCE WITH CSA A3000.
6.2. AGGREGATES:
6.2.1. FINE AND COURSE AGGREGATE MATERIALS AND GRADING IN ACCORDANCE WITH SECTION 5 OF CAN/CSA A23.1/A23.2. MAXIMUM SIZE OF COURSE AGGREGATE TO SUIT SPACING OF REINFORCING BARS IN ACCORDANCE WITH CAN/CSA A23.1/A23.2.
6.2.2. PIT RUN GRAVEL WILL IS NOT BE ACCEPTABLE.
6.2.3. USE PEA GRAVEL 1/4" TO 3/8" (6.4mm TO 9.4mm) WHERE CONCENTRATION OF REINFORCEMENT REQUIRES THE USE OF A SMALLER DIAMETER AGGREGATE AND IN TOPPINGS WHERE THE TOPPING THICKNESS IS REDUCED BELOW 2" (50mm) MINIMUM THICKNESS.
6.3. ADMIXTURES:
6.3.1. USE ONLY THOSE CHEMICAL ADMIXTURES AND AIR ENTRAINING AGENTS CURRENTLY APPROVED FOR USE BY THE ONTARIO M.T.C. IN ACCORDANCE WITH O.P.S.S. FORM 1303, MATERIAL SPECIFICATIONS FOR AIR ENTRAINING AGENTS AND CHEMICAL ADMIXTURES.
6.3.2. CHEMICAL ADMIXTURES SHALL BE TYPE 1, WATER REDUCING ADMIXTURES BY GRACE.
6.3.3. ADMIXTURES TO BE COMPATIBLE WITH THE AIR ENTRAINING AGENT.
6.3.4. SUPERPLASTICIZER – WRDA SERIES BY GRACE, RECOMMENDED BY CONCRETE SUPPLIER.
6.4. REINFORCING STEEL (PLAIN) – NEW DEFORMED BARS IN ACCORDANCE WITH CSA G30.14 WITH A GUARANTEED YIELD STRESS OF 400 MPA.
6.5. REINFORCING STEEL (EPOXY COATED) – SAME AS FOR PLAIN REINFORCING STEEL BUT WITH EPOXY COATING TO ASTM A775/A775M. ALL SHOP OR FIELD CUT ENDS TO BE IMMEDIATELY COATED IN ACCORDANCE WITH ASTM A775/A775M AND MTO FORM 1443.
6.6. WELDED WIRE FABRIC: IN ACCORDANCE WITH CSA G30.5.
6.7. REINFORCING STEEL SUPPORTS – IN ACCORDANCE WITH R.S.I.O. MANUAL OF STANDARD PRACTICE. ALL THE WIRES, CHAIRS AND OTHER BAR SUPPORTS TO BE PLASTIC OR PLASTIC COATED CONSTRUCTION COMPATIBLE WITH END USE. ALL CHAIRS ARE TO BE PLASTIC CONSTRUCTION.
6.8. SPRAY-APPLIED CURING AND SEALING COMPOUNDS: IN ACCORDANCE WITH ASTM C-309: SEALTIGHT CS309 BY MEADOWS OR FLORSEAL BY SIKA CANADA INC.
6.9. EVAPORATION REDUCER: MASTER BUILDERS "CONFILM".
6.10. LUMBER, PLYWOOD AND OTHER FORMWORK MATERIALS: IN ACCORDANCE WITH CAN/CSA A23.1/A23.2, ARTICLE 11.3, EXCEPT THAT CONTACT SURFACES OF FORMS FOR CONCRETE WHICH WILL BE EXPOSED TO VIEW IN THE COMPLETED STRUCTURE TO BE NEW, DOUGLAS FIR PLYWOOD, WITH A HIGH DENSITY PHENOLIC RESIN OVERLAY ON CONCRETE SIDE OF FORM.
6.11. FORM OIL: COLOURLESS, NON-STAINING, MINERAL OIL, FREE OF KEROSENE.
6.12. FORM TIES:
6.12.1. FOR GENERAL WALL AREAS, REMOVABLE OR SNAP-OFF METAL TIES THAT AFTER REMOVAL OF FORMS, NO METAL IS WITHIN ONE INCH OF THE FINISHED SURFACE.
6.12.2. HEAVY DUTY TIES FOR ONE SIDED FORM CONSTRUCTION.
6.12.3. ON EXPOSED SIDES OF WALLS, METAL TIES WITH PLASTIC CONE 'FORMERS' TO SUIT ARCHITECTURAL DETAILS COMPLETE WITH SUITABLE PLUGS.
6.13. GROUT: NON-SHRINK, NON FERROUS. M-BED STANDARD BY SIKA CANADA INC., OR V-3 BY W.R. MEADOWS.
6.14. VAPOUR BARRIER: SEE SECTION 07 26 16 – BELOW GRADE VAPOUR RETARDERS.
6.15. ASPHALT IMPREGNATE FIBREBOARD: ½" (12mm) THICK FIBREBOARD, UNIFORMLY SATURATED WITH A BITUMINOUS BINDER.
6.16. CONTROL JOINT FILLER: AT SAWCUT CONTROL JOINTS IN ALL EXPOSED CONCRETE FLOORS AND BELOW RUBBER SHEET FLOORING: 'LOADFLEX' BY SIKA CANADA INC., OR 'BONFLEX' BY W.R. MEADOWS.
6.17. LATEX BONDING AGENT: FOR BONDING TOPPINGS TO CAST-IN-PLACE CONCRETE ITEMS: SURFACRETE BY SIKA CANADA INC., OR INTRALOK BY W.R. MEADOWS.
6.18. WATERSTOP: 6" (152mm) WIDE PVC WATERSTOP TYPE NO. 6316 BY W.R. MEADOWS.
6.19. CIRCULAR COLUMN FORMS: IF REQUIRED, ALL CIRCULAR FORMS TO HAVE PLASTIC LINER ON INNER PLY TO PREVENT TRANSFER OF SPIRAL MARKINGS TO CONCRETE.
6.20. NON-METALLIC HARDENER: SEALTIGHT TYPE 'R' PREMIXED FLOOR HARDENER BY W.R. MEADOWS, OR DIAMAG 7 BY SIKA CANADA INC., OR MASTERTOP 105 BY MASTERBUILDERS TECHNOLOGIES.

7. PROPORTIONING OF CONCRETE – GENERAL:

7.1. JOB-MIXED CONCRETE WILL NOT BE ALLOWED ON THIS PROJECT.
7.2. PROVIDE MIXED-IN-TRANSIT, READY-MIXED CONCRETE IN ACCORDANCE WITH CAN/CSA A23.1/A23.2. OBTAIN FROM A SUPPLIER APPROVED BY THE CONSULTANT FOR USE ON THIS PROJECT.
7.3. MIX ALL CONCRETE WITH MATERIALS SO GRADED AND PROPORTIONED TO PRODUCE A PLASTIC MASS OF SUCH CONSISTENCY THAT IT WILL FLOW SLOWLY UNDER ITS OWN WEIGHT AND WHICH CAN BE READILY WORKED INTO CORNERS OF FORMS AND UNDER AND AROUND REINFORCING WITHOUT FORMING VOIDS OR HONEYCOMBED SURFACES.
7.4. FURNISH TO THE SUB-CONTRACTOR, A "DELIVERY TICKET" FOR EACH BATCH OF CONCRETE DELIVERED TO THE SITE, WHICH SHALL BE KEPT ON RECORD FOR THE INSPECTION OF THE CONSULTANT. EACH TICKET SHALL SHOW THE FOLLOWING:
7.4.1. DATE AND TRUCK NUMBER
7.4.2. SUB-CONTRACTOR'S NAME
7.4.3. JOB DESIGNATION
7.4.4. SPECIFIED CONCRETE STRENGTH, SLUMP, AIR CONTENT AND ADMIXTURE
7.4.5. BATCH VOLUME
7.4.6. TIME OF BATCHING
7.4.7. FOR CONCRETE MIXES REQUIRING ENTRAINED AIR, DO NOT PRE-MIX THE AIR ENTRAINING AGENT WITH A CHEMICAL ADMIXTURE SOLUTION. WHERE BOTH AN AIR ENTRAINING AGENT AND CHEMICAL ADMIXTURE ARE USED, DISPENSE THE TWO MATERIALS SEPARATELY.
7.4.8. ACCELERATING OR RETARDING CHEMICAL ADMIXTURES SHALL ONLY BE USED WITH THE PRIOR APPROVAL OF THE CONSULTANT OR AT THE CONSULTANT'S WRITTEN REQUEST. DO NOT USE CALCIUM CHLORIDE OR PRODUCTS CONTAINING CALCIUM CHLORIDE.
7.4.9. CHEMICAL ADMIXTURES AND AIR ENTRAINING AGENTS SHALL BE SUPPLIED BY THE SAME MANUFACTURER AND BE COMPATIBLE. USE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS.
7.4.10. THE COMPRESSIVE STRENGTH OF ALL CONCRETE IS TO BE DETERMINED FROM TEST CYLINDERS MADE IN ACCORDANCE WITH CAN/CSA A23.1/A23.2.
7.4.11. MINIMUM TRUCK LOAD TO BE 1 1/2 CUBIC METERS.
7.4.12. PROPORTION THE MATERIALS IN ACCORDANCE WITH THE MIX DESIGNS SPECIFIED ABOVE TO PROVIDE THE FOLLOWING:

LOCATION	MAX w/c RATIO	28 DAY COMP. STRENGTH	SLUMP (MM)	AIR CONTENT (%)	COMMENTS (CLASS)
INTERIOR					
FOOTINGS	(BY SUPPLIER)	20MPa	80±20	NIL	N
FND WALLS/PIERS	0.55	25MPa	80±20	4–7	F2
FLOOR TOPPING	(BY SUPPLIER)	25MPa	80±20	NIL	N
S.O.G.	(BY SUPPLIER)	20MPa	80±20	NIL	N

8. PLANT QUALITY CONTROL:

8.1. ALL MATERIALS, BATCHING AND MIXING PROCEDURES ARE SUBJECT TO TEST OR INSPECTION BY THE CONSULTANT OR HIS DESIGNED REPRESENTATIVES.
8.2. PROVIDE SAMPLES OF MATERIALS AS MAY BE REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
8.3. PROVIDE ACCESS TO PITS, BATCH PLANTS, ETC., AS MAY BE REQUIRED BY THE CONSULTANT OR HIS DESIGNATED REPRESENTATIVES.

9. EXAMINATION:

9.1. EXAMINE AND OBTAIN ALL NECESSARY MEASUREMENTS OF PREVIOUSLY EXECUTED AND EXISTING WORK WHICH MAY AFFECT THE WORK OF THIS SECTION PRIOR TO COMMENCING OPERATIONS.
9.2. REPORT ANY DISCOVERED DISCREPANCIES TO THE CONSULTANT SO THAT INSTRUCTIONS CAN BE GIVEN FOR THE NECESSARY REMEDIAL ACTION.

10. ERECTION OF FORMS:

10.1. CONSTRUCT ALL FORMS TO HAVE SUFFICIENT STRENGTH, STABILITY AND RIGIDITY TO PREVENT BULGING OR DEFLECTION UNDER THE LIQUID WEIGHT OF CONCRETE AND TO SUPPORT IN ADDITION, ALL CONSTRUCTION LOADS TO WHICH THEY MAY BE SUBJECTED INCLUDING EQUIPMENT, RUNWAYS AND WIND FORCES IN ACCORDANCE WITH A.C.I. STANDARD 347.
10.2. ERECT FORMS TO THE LINES, DIMENSIONS AND ELEVATIONS SHOWN ON THE DRAWINGS SUCH THAT THE COMPLETED WORK IS WITHIN THE TOLERANCE LIMITS FOR REINFORCED CONCRETE BUILDINGS.
10.3. PROVIDE FOR ALL OPENINGS, OFFSETS, RISERS, BRACKETS, HAUNCHES, DEPRESSIONS AND CURBS AS SHOWN OR REQUIRED IN THE FORMWORK.
10.4. FOR TYPICAL WALL SURFACES, ARRANGE FORM TIES SUCH THAT AFTER REMOVAL OF THE FORMS, NO METAL IS WITHIN 1" (25mm) OF THE FINISHED SURFACE.
10.5. CLEAN FORMS OF ALL DEBRIS PRIOR TO CONCRETING. PROVIDE TEMPORARY OPENINGS AT THE BASE OF WALLS, COLUMN FORMS AND AT OTHER LOCATIONS WHERE NECESSARY TO FACILITATE CLEANING AND INSPECTION. PLACE OPENINGS SO THAT "WASH WATER" WILL HAVE A CLEAN RUN TO THE OUTSIDE OF THE FORMS.
10.6. PROVIDE 3/4"X 3/4" (19mm X 19mm) CHAMFERS ON ALL EXPOSED CORNERS OF CONCRETE, EXPOSED TO VIEW IN THE FINISHED STRUCTURE.
10.7. COAT FORMS WITH A NON-STAINING MINERAL OIL PRIOR TO THE PLACING OF REINFORCING STEEL IN ACCORDANCE WITH CAN/CSA A23.1/A23.2. WHERE CONCRETE SURFACES ARE TO RECEIVE A FINAL COAT OF PAINT OR PLASTER, OMIT THE FORM OIL AND WET DOWN THE FORMS JUST PRIOR TO CONCRETING.
10.8. REFER TO ARCHITECTURAL DRAWINGS FOR TIE AND REVEAL LOCATIONS IN EXPOSED CONCRETE WALLS, IF ANY
10.9. TAKE SPECIAL CARE WHEN LOWERING PLASTIC LINED CIRCULAR FORMS OVER REINFORCING STEEL TO AVOID SCRATCHING PLASTIC LINER.

11. REINFORCING STEEL:

11.1. PLACING, SPACING, SPLICING AND PROTECTION OF REINFORCEMENT IN ACCORDANCE WITH CAN/CSA A23.1/A23.2.
11.2. MAINTAIN THE COVER REQUIRED FOR REINFORCEMENT AS SHOWN ON THE DRAWINGS. WHERE NOT SPECIFICALLY SHOWN, REFER TO CAN/CSA A23.1/A23.2.
11.3. PULL UP MESH DURING CONCRETE POUR SO THAT REINFORCEMENT ENDS UP CENTERED IN THE SLAB.

12. CONCRETE PLACING:

12.1. DO NOT START CONCRETE PLACING UNTIL THE CONSULTANT HAS REVIEWED AND APPROVED ALL PREPARATIONS INCLUDING FORMS, JOINTS, AND REINFORCING STEEL.
12.2. ALL CONVEYING, DEPOSITING, COMPACTION AND VIBRATION IS TO BE DONE IN ACCORDANCE WITH CAN/CSA A23.1/A23.2.
12.3. MAXIMUM ELAPSE OF TIME BETWEEN CHARGING AND PLACING IS NOT TO EXCEED 1½ HOURS. REJECT CONCRETE WHICH EXCEEDS THIS LIMIT. IN HOT WEATHER, THIS TIME PERIOD MAY HAVE TO BE REDUCED AS DIRECTED BY THE CONSULTANT.
12.4. PLACE CONCRETE CAREFULLY AROUND ALL ACCESSORIES, SUCH AS PIPES, SLEEVES, AND CONDUITS.
12.5. WHEN CONCRETE IS TO BE PLACED IN RESTRICTED LOCATIONS, TAKE SPECIAL PRECAUTIONS TO ENSURE CLOSE CONTACT BETWEEN THE CONCRETE AND STEEL. TAKE CARE TO EXCLUDE AIR POCKETS AND HONEYCOMBED AREAS. USE OF A SUPERPLASTICIZER MAY BE REQUIRED FOR PROPER PLACEMENT.
12.6. WHEN BUGGIES ARE USED FOR PLACING CONCRETE IN SLABS ON SOIL, THEY ARE TO BE SUPPORTED ON RUNWAYS AND NOT DIRECTLY ON THE REINFORCING STEEL.
12.7. MAINTAIN A SUFFICIENT NUMBER OF INTERNAL MECHANICAL VIBRATORS ON SITE TO PROPERLY COMPACT THE CONCRETE WITHIN 15 MINUTES OF PLACING, BUT NOT LESS THAN TWO VIBRATORS FOR ANY POUR.
12.8. MECHANICAL VIBRATORS WHICH ARE APPLIED TO THE OUTSIDE OF THE FORMS ARE NOT PERMITTED WITHOUT PRIOR APPROVAL OF THE CONSULTANT.
12.9. THOROUGHLY COMPACT ALL CONCRETE DURING PLACING TO ENSURE THAT THE FINISHED CONCRETE IS FREE OF VOIDS OR OTHER DEFECTS.
12.10. ENSURE THAT REINFORCEMENT, HARDWARE, AND INSERTS ARE NOT DISTURBED DURING CONCRETE PLACEMENT.
12.11. STRIKE OFF-FLOOR SURFACES AT THE LEVEL SHOWN ON THE DRAWINGS BY MEANS OF PREVIOUSLY SET, CONTINUOUS PIPE SCREEDING, SET ON ADEQUATE SUPPORTS.
12.12. NOTIFY THE CONSULTANT AT LEAST 24 HOURS IN ADVANCE OF ANY SCHEDULED POUR.

13. CURING AND PROTECTION:

13.1. PROTECTION AND CURING OF CONCRETE FOR A MINIMUM OF 7 DAYS IN ACCORDANCE WITH SECTION 21 OF CAN/CSA A23.1/A23.2.
13.2. MAINTAIN ALL EQUIPMENT AND MATERIALS FOR THE PROTECTION AND CURING OF CONCRETE ON SITE, READY TO USE BEFORE CONCRETE PLACING IS STARTED.
13.3. COMPLETELY COVER FLOOR, ROOF, AND TOPPING SLABS WITH 6 MIL POLYETHYLENE SHEETING, PROPERLY LAPPED AT SIDE AND EDGE LAPS AND WEIGHTED DOWN IMMEDIATELY AFTER FINISHING.
13.4. A SPRAYED-ON MEMBRANE CURING COMPOUND MAY BE USED IN LIEU OF POLYETHYLENE SHEETING FOR CONCRETE, EXCEPT THAT FLOOR AREAS WHICH ARE TO HAVE TOPPING OR OTHER SURFACE TREATMENTS ARE NOT TO HAVE SPRAYAPPLIED COMPOUNDS EMPLOYED, BUT MUST BE POLYETHYLENE CURED.
13.5. FRESHLY FINISHED FLOORS ARE NOT TO BE USED FOR SEVEN (7) DAYS AFTER COMPLETION AND ONLY LIGHT USE IS PERMITTED FOR AN ADDITIONAL 7 DAYS.

14. COLD WEATHER CONCRETE:

14.1. ALL CONCRETING OPERATIONS DURING COLD WEATHER IN ACCORDANCE WITH SECTION 21 OF CAN/CSA A23.1/A23.2. CAREFULLY PROTECT ALL CORNERS AND EDGES.
14.2. EXERCISE PARTICULAR CARE TO ENSURE THAT PREVIOUSLY PLACED CONCRETE AND REINFORCING STEEL ARE ADEQUATELY HEATED TO PREVENT FREEZING OF NEW CONCRETE PLACED DIRECTLY AGAINST IT.
14.3. EXERCISE CARE TO AVOID RAPID TEMPERATURE CHANGES (THERMAL SHOCK) WHEN REMOVING AN AREA FROM TEMPORARY HEATING CONDITIONS.
14.4. REMOVE AND REPLACE ALL CONCRETE DAMAGED BY FROST OR FREEZING AT THE DIRECTION OF THE CONSULTANT AT NO COST TO THE OWNER.
14.5. ACCELERATING CHEMICAL ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE CONSULTANT.

15. HOT WEATHER CONCRETE:

15.1. ALL CONCRETING OPERATIONS DURING HOT WEATHER IN ACCORDANCE WITH SECTION 21 OF CAN/CSA A23.1/A23.2.
15.2. EXERCISE PARTICULAR CARE TO PREVENT SURFACE CRAZING OF FLOOR SLABS DUE TO COMBINED HIGH TEMPERATURES AND DRYING WINDS.
15.3. THE USE OF A WATER REDUCING-RETARDING CHEMICAL ADMIXTURE IN THE CONCRETE MIX MAY BE REQUIRED AT THE CONSULTANT'S DISCRETION.

16. FINISHING OF HORIZONTAL SURFACES:

16.1. FLOORS:
16.1.1. REFER TO A.C.I. STANDARD 302 FOR RECOMMENDED PROCEDURE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION AND FINISHING.
16.1.2. REFER TO A.C.I. STANDARD 301, SPECIFICATION FOR STRUCTURAL CONCRETE. MAINTAIN SURFACE TOLERANCES FOR ALL SLABS IN ACCORDANCE WITH SECTION 11.9 OF THAT STANDARD FOR CLASS A TOLERANCE.
16.1.3. CONCRETE FLOORS SHALL BE STEEL FLOATED WITH A DISC TYPE POWER FLOATING MACHINE, HAVING A 600 DISC, AND WEIGHING AT LEAST 300 POUNDS. CONTINUE THE FLOATING OPERATION UNTIL SUFFICIENT MOISTURE IS BROUGHT TO THE SURFACE TO FILL ALL VOIDS. AFTER FLOATING WHEN THE FLOOR HAS HARDENED SUFFICIENTLY SO THAT EXCESS FINES WILL NOT BE BROUGHT TO THE SURFACE, TROWEL WITH A STEEL TROWEL TO A SURFACE FREE OF ALL PINHOLES AND TROWEL MARKS. SEE A.C.I. STANDARD 301, SECTION 11.7.
16.1.4. FOLLOWING FINISHING OPERATIONS FOR FLOORS NOTED IN THE ROOM FINISH SCHEDULE TO REMAIN AS, EXPOSED CONCRETE, FILL SAWCUT CONTROL JOINTS WITH JOINT FILLER AND SEAL WITH UNTHINNED CURE AND SEAL COMPOUND, APPLIED IN STRICT CONFORMANCE WITH MANUFACTURERS INSTRUCTIONS.
16.1.5. IN ADDITION TO AREAS MENTIONED ABOVE, PROVIDE JOINT FILLER IN ALL CONTROL JOINTS BENEATH AREAS TO BE COVERED WITH RUBBER FLOORING, IF SCHEDULED.
16.1.6. JUST PRIOR TO TURN-OVER, CLEAN PLAIN CONCRETE FLOOR AREAS AND RESEAL WITH ONE COAT OF COMPATIBLE SEALER APPLIED IN STRICT CONFORMANCE WITH MANUFACTURERS INSTRUCTIONS.
16.1.7. PROVIDE FLOOR HARDENER TO EXPOSED CONCRETE FLOORS. APPLY HARDENER IN TWO EQUAL SHAKES IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS TO ACHIEVE A SURFACE HARDNESS FOR A MODERATE DUTY FLOOR.
16.1.8. CONFIRM WITH WATERPROOFING INSTALLER/MANUFACTURER ON PREFERRED FINISHING METHOD OF CONCRETE SLABS WHERE WATERPROOFING MEMBRANES ARE BEING PROVIDED.
16.1.9. FOLLOW ELEVATIONS SHOWN ON DRAWINGS WITH A MAXIMUM VERTICAL TOLERANCE OF +/-1/4" (6.35mm).
16.1.10. TYPICAL SLAB-ON-GRADE CONSTRUCTION SHALL BE A 4" (100mm) CONCRETE SLAB WITH 6X6XMIN6/MIN6 WWF ON COMPACTED GRANULAR 'A' ON COMPACTED GRANULAR 'B', UNLESS NOTED OTHERWISE.
16.1.11. VAPOUR BARRIER IS TO BE LAPPED 8" (200mm) MINIMUM AT JOINTS AND TURNED UP AT SLAB EDGES. IMMEDIATELY PRIOR TO PLACING CONCRETE, INSPECT VAPOUR BARRIER AND PATCH ANY PUNCTURES.

17. FINISHING OF VERTICAL SURFACES:

17.1. IN AREAS WHERE CONCRETE WALLS WILL BE EXPOSED, TAKE EXTRA CARE TO AVOID 'BUGHOLES' AND HONEYCOMBING. WHEN PLACING CONCRETE, RE-VIBRATE CRITICAL AREAS TO ENSURE COMPLETE CONSOLIDATION OF CONCRETE NEAR FORM SURFACES.
17.2. FOR REVEAL AND TIE LOCATIONS, SEE ARCHITECTURAL DRAWINGS.

18. TREATMENT AND REPAIRS FOR FORMED SURFACES:

18.1. AFTER REMOVAL OF FORMS, THE SURFACES OF CONCRETE ARE TO BE GIVEN ONE OR MORE OF THE FINISHES SPECIFIED HEREAFTER. METHODS USED ARE TO BE IN ACCORDANCE WITH SECTION 24 OF CAN/CSA A23.1/A23.2.
18.2. PATCH TIE HOLES AND OTHER DEFECTS. REMOVE FINS EXCEEDING 3/16" (4.5mm) IN HEIGHT.

GENERAL NOTES

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND / OR OMISSIONS TO STRIK BALDINELLI MONIZ LTD.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT BUILDING CODE REGULATIONS AND BYLAWS HAVING JURISDICTION.

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNTIL IT HAS BEEN SIGNED BY STRIK BALDINELLI MONIZ LTD. AND A BUILDING PERMIT HAS BEEN ISSUED.

CONSTRUCTION TO BE ACCORDING TO BEST COMMON PRACTICE.

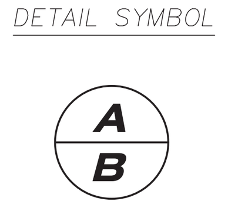
DO NOT SCALE DRAWINGS. WHEN REQUIRED REQUEST WRITTEN VERIFICATION OF DIMENSIONS WITH STRIK BALDINELLI MONIZ LTD.

THIS DRAWING & ALL DETAILS ARE FOR THIS PROJECT ONLY AND SHOULD NOT BE USED FOR ANY OTHER WORK.

CONTRACTOR IS FULLY RESPONSIBLE FOR MATTERS AFFECTING CONSTRUCTION

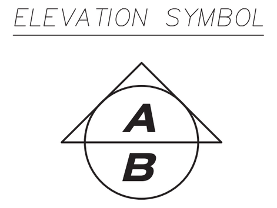
ANY MATERIAL ALTERATIONS CARRIED OUT DURING CONSTRUCTION BY THE CONTRACTOR OR ASSOCIATED SUB-CONTRACTOR SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO INSTALL FAILURE TO DO SO RESULTS IN FULL CONTRACTOR RESPONSIBILITY FOR SYSTEMS EFFECTED.

DETAIL SYMBOL



A – DETAIL NUMBER
B – LOCATION/DETAIL SHEET

ELEVATION SYMBOL



A – ELEVATION NUMBER
B – LOCATION/DETAIL SHEET

NO.	DATE	ISSUED / REVISIONS
01	2018.09.25	ISSUED FOR COORDINATION
02	2018.10.01	ISSUED FOR PERMIT

STRIK BALDINELLI MONIZ
CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL
1450 Huron Rd., Unit 225,
Kitchener, Ontario, N2R 0L3
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LICENSED PROFESSIONAL ENGINEER D. H. COWAN 100072514 OCT. 5, 2018 PROVINCE OF ONTARIO
Darryl Cowan, P.Eng.

PROJECT

AMERICAN HOTEL
1 QUEEN STREET N,
KITCHENER, ON.

CLIENT

VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING

DRAWING TITLE

GENERAL NOTES & SPECIFICATIONS

PROJ. NO.	SBMW-18-091	DRAWING NO.	
SCALE	AS NOTED	S1.0	
DATE	2018.10.01		
DRAWN	JRC/ZRJE		
DESIGNED	TW		
CHECKED	DC	REVISION NO.	02

18.3. WHEN, IN THE OPINION OF THE CONSULTANT, SATISFACTORY REPAIRS CANNOT BE MADE, THEN THE DEFECTIVE WORK IS TO BE CUT OUT AND REPLACED AS DIRECTED BY THE CONSULTANT.
18.4. TREATMENT OF HONEYCOMBED AREAS IS TO BE CARRIED OUT AS DIRECTED BY THE CONSULTANT. DO NOT TREAT SUCH AREAS PRIOR TO RECEIVING INSTRUCTIONS FROM THE CONSULTANT.

19. CONSTRUCTION JOINTS:

19.1. PLACE CONSTRUCTION JOINTS IN WALLS AND FLOORS IN LOCATIONS APPROVED BY THE ARCHITECT.
19.2. POUR CONSTRUCTION JOINTS TO THE ADJOINING WALL AS DETAILED ON THE DRAWINGS.
19.3. BEFORE PLACING ADJOINING CONCRETE AT CONSTRUCTION JOINTS, CLEAN THE EXISTING SURFACE OF DIRT, LAITANCE AND LOOSE AGGREGATE.
19.4. WHERE ADDITIONAL RESISTANCE TO HORIZONTAL SHEAR IS REQUIRED, FORM MORTISES OR KEYS IN CONCRETE. POURING SEQUENCE AND CONSTRUCTION JOINT LOCATION TO BE AS INDICATED OR AS APPROVED BY THE CONSULTANT.
19.5. INSTALL WATERSTOPS IN ALL CONSTRUCTION JOINTS EMPLOYING WIRE TIES TO ENSURE WATERSTOP STAYS IN POSITION WHEN POURING ADJOINING CONCRETE.

20. CONTROL JOINTS:

20.1. PROVIDE CONTROL JOINTS WHERE INDICATED IN FOUNDATION AND RETAINING WALLS AND IN FLOOR SLABS. AT ALL LOCATIONS SHOWN ON FOUNDATION PLAN AND AT ALL POINTS WHERE THE SLAB PASSES OVER AN INTERIOR FOOTING OR DOORWAY, SAWCUT CONTROL JOINTS IN FLOOR SLABS TO THE DEPTH SHOWN AS SOON AFTER PLACING THE CONCRETE AS THE SURFACE WILL ALLOW WITHOUT CHIPPING, BUT NO LATER THAN 24 HOURS AFTER PLACING.

21. FIELD QUALITY CONTROL:

21.1. ALL MATERIALS AND WORKMANSHIP SPECIFIED IN THIS SECTION SHALL BE SUBJECT TO TESTING AND INSPECTION BY AN INDEPENDENT TESTING AND INSPECTION COMPANY APPOINTED BY THE OWNER. ENGAGE THE SERVICES OF THE TESTING COMPANY AND INCLUDE COSTS FOR THEIR SERVICES WITHIN THE CONTRACT. COMPLY WITH REQUIREMENTS OF SECTION 01 45 00 – QUALITY CONTROL.
21.2. PROVIDE UNHINDERED ACCESS TO THE PROJECT FOR PURPOSES OF INSPECTION AND TESTING. PROVIDE STORAGE SPACE AND THE NECESSARY PROTECTION FOR TEST SPECIMENS AGAINST DAMAGE OR LOSS WHILE ON SITE.
21.3. PROVIDE REPRESENTATIVE SAMPLES OF THE MATERIALS AS REQUESTED BY THE TESTING AND INSPECTION COMPANY.
21.4. ALL FIELD TESTS FOR CONCRETE QUALITY AND ALL CRITERIA RELATING TO FAILURE TO MEET TEST REQUIREMENTS IN CAN/CSA A23.1/A23.2, SECTION 17, EXCEPT AS FOLLOWS:
21.4.1. EACH TEST SHALL CONSIST OF THREE STANDARD CYLINDERS, ACCOMPANIED BY A SLUMP TEST AND MEASUREMENT OF AIR CONTENT (WHERE APPLICABLE). UNLESS OTHERWISE DIRECTED BY THE CONSULTANT, ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND THE REMAINING TWO AT 28 DAYS.
21.4.2. THE INSPECTION COMPANY SHALL TAKE CONCRETE TESTS FOR NOT LESS THAN ONE TEST FOR EACH CLASS OF CONCRETE PLACED EACH DAY, AND NOT LESS THAN ONE TEST FOR EACH 50 CUBIC METRES OR PORTION THEREOF PLACED IN ANY DAY.
21.4.3. TWO (2) ADDITIONAL CONCRETE TEST CYLINDERS SHALL BE TAKEN DURING COLD WEATHER CONCRETING, AS DEFINED IN CAN/CSA A23.1, AND CURED ON THE JOB SITE UNDER IDENTICAL CONDITIONS TO THE NEWLY PLACED CONCRETE. UNLESS OTHERWISE DIRECTED BY THE CONSULTANT, ONE (1) CYLINDER SHALL BE TESTED AT 7 DAYS OF AGE AND (1) CYLINDER TESTED AT 28 DAYS OF AGE.
21.5. THE COST OF ANY ADDITIONAL TESTING AND/OR THE COST OF REPLACEMENT OF ANY PART OF THE STRUCTURE RESULTING FROM FAILURE OF THE CONCRETE TO MEET THE TEST REQUIREMENTS SHALL BE BORNE BY THE SUB-CONTRACTOR.
21.6. NOTIFY THE TESTING COMPANY OF THE POURING SCHEDULE SUFFICIENTLY IN ADVANCE SO THAT TESTS MAY BE MADE.
21.7. PROVIDE THE CONSULTANT WITH A DETAILED CONCRETE TEST REPORT SHOWING THE SLUMP, AIR CONTENT, TIME OF BATCH/PLACEMENT, BREAKING STRENGTH, AMBIENT TEMPERATURE AND AGE OF THE CONCRETE CYLINDER.

22. CLEAN-UP

22.1. AT THE COMPLETION OF THE WORK OF THIS SECTION, REMOVE FROM SITE EXCESS MATERIALS, DEBRIS AND EQUIPMENT.

STRUCTURAL STEEL

1. DESIGN

1.1. DESIGN DETAILS AND CONNECTIONS IN ACCORDANCE WITH REQUIREMENTS OF CAN/CSA-S16 AND CAN/CSA-S136 TO RESIST FORCES, MOMENTS, SHEARS, AND TO ALLOW FOR MOVEMENTS INDICATED.
1.2. WHEN SHEARS ARE NOT INDICATED ON DRAWINGS, SELECT OR DESIGN CONNECTIONS TO SUPPORT REACTION FROM MAXIMUM UNIFORMLY DISTRIBUTED LOAD THAT CAN BE SAFELY SUPPORTED BY BEAM IN BENDING, PROVIDED NO POINT LOADS ACT ON BEAM.
1.3. FOR COMPOSITE CONSTRUCTION, SELECT OR DESIGN MINIMUM END CONNECTION TO RESIST REACTION RESULTING FROM FACTORED MOVEMENT RESISTANCE AS TABULATED IN THE "HANDBOOK OF THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION" ASSUMING 100% SHEAR CONNECTION WITH DEPTH OF STEEL DECK AND/OR SLAB SHOWN ON DRAWINGS.

2. SHOP DRAWINGS:

2.1. SUBMIT DRAWINGS STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
2.2. INDICATE PROFILES, SIZES, SPACING, LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, ATTACHMENTS, FASTENERS, FIELD CONNECTIONS, AND CAMBERS.
2.3. INDICATE ALL DETAILS AND INFORMATION NECESSARY FOR ASSEMBLY AND ERECTION PURPOSES, INCLUDING ANCHOR BOLT SETTING DIAGRAM FOR PROPER INSTALLATION.

3. QUALIFICATIONS

3.1. FABRICATE STRUCTURAL STEEL MEMBERS TO CISC CODE OF STANDARD PRACTICE AND CSA-W59.
3.2. MANUFACTURER QUALIFICATIONS: COMPANY SPECIALIZING IN MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION WITH MINIMUM THREE (3) YEARS EXPERIENCE.
3.3. INSTALLER QUALIFICATIONS: COMPANY SPECIALIZING IN PERFORMING THE WORK OF THIS SECTION WITH MINIMUM THREE (3) YEARS EXPERIENCE.
3.4. WELDERS' CERTIFICATES: EMPLOY ONLY CERTIFIED WELDERS ON THE WORK, WITH VERIFIABLE QUALIFICATION TO CSA-W59 WITHIN THE PREVIOUS TWELVE (12) MONTHS.

4. MATERIALS

4.1. W-SHAPES: TO CSA-G40.20/G40.21, GRADE 350W, UNLESS NOTED OTHERWISE.
4.2. HOLLOW STRUCTURAL STEEL MEMBERS: TO CSA G40.20/G40.21, GRADE 350 W, CLASS C, UNLESS NOTED OTHERWISE.
4.3. PLATES, ANGLES, AND CHANNELS: TO CSA G40.20/G40.21, GRADE 300W, UNLESS NOTED OTHERWISE.
4.4. ANCHOR BOLTS: TO ASTM 307.
4.5. BOLTS, NUTS AND WASHERS: TO ASTM A325M, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS; HOT DIPPED GALVANIZED FOR EXTERIOR MEMBERS.
4.6. WELDING MATERIALS: TO CSA W48 SERIES, CSA W59 AND CERTIFIED BY CANADIAN WELDING BUREAU.
4.7. GROUT: TO ASTM C1107/C1107M, NON-SHRINK TYPE, PREMIXED COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 50 MPA AT 28 DAYS.
4.8. HOT DIP GALVANIZING: GALVANIZE STEEL, WHERE INDICATED, TO CAN/CSA-G164, MINIMUM ZINC COATING OF 275 G/M2.

5. FABRICATION

5.1. FABRICATE STRUCTURAL STEEL IN ACCORDANCE WITH CAN/CSA-S16, CAN/CSA-S136, AND IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS.
5.2. SPLICING WILL NOT BE ALLOWED WITHOUT THE APPROVAL OF THE CONSULTANT AT THE SHOP DRAWING REVIEW STAGE. SPLICING WILL THEN ONLY BE ALLOWED IF THE LENGTH OF THE FABRICATED MEMBER REQUIRED IS LONGER THAN THAT NORMALLY PRODUCED AT THE MILL. IF A MEMBER IS SPLICED, THE FABRICATOR AND SHOP DRAWING DESIGN ENGINEER SHALL ENSURE THAT THE SECTION PROPERTIES ARE CONTINUOUS OVER THE SPLICE.
5.3. ALL MEMBERS SHALL BE TRUE TO LENGTH SUCH THAT ASSEMBLY MAY BE DONE WITHOUT FILLERS.
5.4. CONTINUOUSLY SEAL JOINED MEMBERS WITH CONTINUOUS WELDS OR INTERMITTENT WELDS AND PLASTIC FILLER. WHERE FULL SEAL IS NOT POSSIBLE, PROVIDE WEEP HOLES.
5.5. MAKE GOOD WELDS WHICH SHOW INCLUSIONS, POROSITY, OR LACK OF FUSION PENETRATION BEYOND THE TOLERANCES SET OUT IN CSA W59.
5.6. GRIND ALL EXPOSED WELDS SMOOTH.
5.7. UNLESS NOTED OTHERWISE, FABRICATE CONNECTIONS FOR BOLT, NUT AND WASHER CONNECTORS.
5.8. TAKE CARE TO MINIMIZE DISTORTION DUE TO WELDING AND GALVANIZING PROCEDURES. STRAIGHTEN MEMBERS ARE REQUIRED TO MAINTAIN FABRICATION TOLERANCES OF CAN/CSA S-16.
5.9. PROVIDE HOLES FOR CONNECTING THE WORK OF OTHER TRADES, WHERE HOLE LOCATIONS CAN BE DETERMINED PRIOR TO FABRICATION, AND ONLY WHERE SUCH HOLES WILL NOT IMPAIR THE PERFORMANCE OF THE MEMBER.
5.10. UNLESS OTHERWISE SPECIFIED, MAKE HOLES 3/32" (2mm) LARGER THAN THE NOMINAL DIAMETER OF THE FASTENER. HOLES MAY BE PUNCHED, SUB-PUNCHED, DRILLED, OR REAMED AS PERMITTED IN CSA S16.
5.11. PROVIDE WELDED STRAP OR REINFORCING BAR ANCHORS FOR ATTACHMENT TO CONCRETE OR MASONRY, AS SHOWN IN THE TYPICAL DETAILS.
5.12. BEAR ANGLE LINTELS AS INDICATED ON DRAWINGS, BUT NOT LESS THAN 8" (200mm) AT EACH END. WELD ANGLES TOGETHER WHERE THE UPSTANDING LEGS ARE BACK TO BACK.
5.13. MARK MATERIALS IN ACCORDANCE WITH CSA G40.20/G40.21. DO NOT USE DIE STAMPING. WHEN STEEL IS TO BE LEFT IN UNPAINTED CONDITION, PLACE MARKING AT LOCATIONS NOT VISIBLE FROM EXTERIOR AFTER ERECTION.

6. FINISH

6.1. CLEAN STEEL TO SSPC SP-3, POWER TOOL CLEANING METHOD, SHOP COAT STRUCTURAL STEEL TO CISC/CPMA 1-73A. DO NOT PRIME SURFACES THAT WILL BE FIREPROOFED, FIELD WELDED, IN CONTACT WITH CONCRETE OR HIGH STRENGTH BOLTS.
6.2. SHOP PRIME STRUCTURAL STEEL, EXCEPT FOR:
6.2.1. SURFACES TO BE IN CONTACT WITH CONCRETE OR SOIL.
6.2.2. SURFACES AND EDGES TO BE FIELD WELDED.
6.2.3. STRIP PAINT FROM BOLTS, NUTS, CORNERS, AND SHARP EDGES BEFORE PRIME COAT IS DRY.
6.2.4. CONFIRM PRIMER REQUIREMENTS WITH ARCHITECT FOR STEEL MEMBERS BEING FIRE-RATED.
6.3. APPLY PRIMER AND TWO COATS OF COAL TAR EPOXY TO BASES OF EXTERIOR CANOPY COLUMNS.
6.4. HOT DIP GALVANIZING: WHERE INDICATED, GALVANIZE STEEL, TO CAN/CSA-G164, MINIMUM ZINC COATING OF 600 G/M2.

7. ERECTION

7.1. ERECT STRUCTURAL STEEL IN ACCORDANCE WITH CAN/CSA-S16 AND THE APPROVED ERECTION DRAWINGS.
7.2. ALLOW FOR ERECTION LOADS, AND FOR SUFFICIENT TEMPORARY BRACING TO MAINTAIN STRUCTURE SAFE, PLUMB, AND IN TRUE ALIGNMENT UNTIL COMPLETION OF PERMANENT BRACING.
7.3. FIELD WELD COMPONENTS AS INDICATED ON SHOP DRAWINGS.
7.4. FIELD CONNECT MEMBERS WITH THREADED FASTENERS; TORQUE TO REQUIRED RESISTANCE AS RECOMMENDED IN CAN/CSA-S16.
7.5. ASSEMBLE BOLTED PARTS TOGETHER SOLIDLY. DO NOT SEPARATE WITH GASKETS OR ANY OTHER INTERPOSED COMPRESSIBLE MATERIAL.
7.6. DO NOT DISTORT OR ENLARGE HOLES. HOLES IN ADJACENT PARTS SHALL MATCH SUFFICIENTLY WELL TO PERMIT EASY ENTRY OF BOLTS.
7.7. FIELD CUTTING OR ALTERING OF STRUCTURAL MEMBERS IS NOT PERMITTED WITHOUT WRITTEN APPROVAL FROM THE SUPPLIER'S DESIGN ENGINEER.
7.8. AFTER ERECTION, PRIME WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED, EXCEPT SURFACES TO BE IN CONTACT WITH CONCRETE.
7.9. GROUT UNDER BASE PLATES. TROWEL GROUTED SURFACE SMOOTH, SPLAY NEATLY TO 45 DEGREES.

8. TOLERANCES
8.1. TO CAN/CSA S16
8.1. MAXIMUM VARIATION FROM PLUMB: 1/4" (6mm) PER STOREY, NON-CUMULATIVE.
8.2. MAXIMUM VARIATION FROM TRUE ALIGNMENT: 1/4" (6mm).

9. FIELD QUALITY CONTROL

9.1. FIELD INSPECTION AND TESTING OF MATERIALS AND WORKMANSHIP SHALL BE CARRIED OUT BY AN INDEPENDENT INSPECTION/TESTING AGENCY. INSPECT STEEL, WELDS, AND BOLTED CONNECTIONS FOR ALIGNMENT AND STRUCTURAL INTEGRITY. SUBMIT REPORTS TO CONSULTANT WITHIN 1 WEEK OF COMPLETION OF INSPECTION.

ROUGH LUMBER

1. DESIGN

1.1. WOOD CONSTRUCTION SHALL CONFORM TO CAN/CSA 086-09 'ENGINEERING DESIGN IN WOOD' AND THE ONTARIO BUILDING CODE 2012.
1.2. DESIGN SHALL BE BASED ON LIMIT STATE DESIGN PRINCIPLES USING FACTORED LOADS AND RESISTANCES
1.3. SHOP DRAWINGS SIGNED AND SEALED BY A P.ENG. ARE TO BE SUBMITTED SHOWING LAYOUT AND DETAIL NECESSARY FOR DETERMINING FIT AND PLACEMENT OF ANY PRE-ENGINEERED WOOD PRODUCTS IN THE BUILDING
1.4. IT IS THE RESPONSIBILITY OF THE PRE-ENGINEERED WOOD PRODUCTS DESIGNER TO DESIGN AND SUPPLY BRACING FOR THE COMPRESSION EDGES OF MEMBERS IN THE CASE OF LOAD REVERSAL.

2. FRAMING

2.1. ACCURATELY PLACE STRUCTURAL SUPPORT AND MEMBERS IN POSITION AND BRACE SECURELY, TO REMAIN PLUMB AND TRUE UNTIL PERMANENTLY FIXED.
2.2. PLACE HORIZONTAL MEMBERS LAID FLAT, CROWN SIDE UP.
2.3. CONSTRUCT FRAMING MEMBERS FULL LENGTH WITHOUT SPLICES
2.4. SECURE SHEATHING AND DECKING PERPENDICULAR TO FRAMING MEMBERS WITH ENDS STAGGERED. SECURE SHEET EDGE OVER FIRM BEARING.
2.5. SECURE ROOF DECK JOINTS LOCATED BETWEEN ROOF FRAMING MEMBERS WITH SHEATHING CLIPS IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2.6. INSTALL DECKING TO MIN. TWO SPAN CONTINUOUS, UNLESS NOTED OTHERWISE.
2.7. PROVIDE WOOD BLOCKING REQUIRED FOR ATTACHMENT OF FITMENTS AND EQUIPMENT BY OTHERS.

3. MATERIALS

3.1. SAWN LUMBER: CSA 0141-05 "SOFTWOOD LUMBER", S4S; 15% MAXIMUM MOISTURE CONTENT (KILN-DRY); PRESSURE TREATED FOR EXTERIOR APPLICATIONS WHERE NOTED ON DRAWINGS, SPECIES AND NLGA GRADE AS FOLLOWS:
3.1.1. BEAM FRAMING: SPF SPECIES; BEAMS AND STRINGERS CLASSIFICATION, NO.1 OR NO.2 GRADE.
3.1.2. JOIST FRAMING: SPF SPECIES; STRUCTURAL JOISTS AND PLANKS CLASSIFICATION, NO.1 OR NO.2 GRADE
3.1.3. NON-STRUCTURAL LIGHT FRAMING: SPF SPECIES; LIGHT FRAMING CLASSIFICATION, STANDARD AND BETTER COMMON GRADE MIX
3.1.4. STUD FRAMING: SPF SPECIES; STUDS CLASSIFICATION, NO.1 OR NO.2 GRAD
3.1.5. STRUCTURAL COMPOSITE LUMBER (SCL): TO HAVE A MINIMUM MODULUS OF ELASTICITY OF 13790MPA (2.0E), LSD BENDING STRESS OF 37.6MPA (5450PSI) AND SHEAR STRESS OF 3.65MPA (530PSI) U.N.O. ACCEPTABLE PRODUCTS ARE PSL, LVL OR LSL.
3.2. PLYWOOD & OSB:
3.2.1. CANADIAN SOFTWOOD PLYWOOD TO BE MANUFACTURED AND IDENTIFIED IN ACCORDANCE WITH CAN/CSA 0151-09 "CANADIAN SOFTWOOD PLYWOOD", SHG GRADE; VENEER CORE, BUTT EDGE; SANDED FACES; THICKNESS AS INDICATED ON DRAWINGS
3.2.2. DOUGLAS FIR PLYWOOD TO BE MANUFACTURED AND IDENTIFIED IN ACCORDANCE WITH CAN/CSA 0121 "DOUGLAS FIR PLYWOOD" SHG GRADE; VENEER CORE, BUTT EDGE; SANDED FACES; THICKNESS AS INDICATED ON DRAWINGS
3.2.3. CONSTRUCTION SHEATHING OSB TO BE MANUFACTURED AND IDENTIFIED IN ACCORDANCE WITH CAN/CSA 0325-07 "CONSTRUCTION SHEATHING"
3.3. PRESSURE TREATED LUMBER: IN ACCORDANCE WITH CSA 080 SERIES-08 "WOOD PRESERVATION."
3.4. FASTENINGS:
3.4.1. DESIGN OF WOOD CONNECTIONS TO CONFORM TO CAN/CSA 086-0
3.4.2. WIRE NAILS, SPIKES & STAPLES TO CONFORM TO CAN/CSA B111
3.4.3. BOLTS TO CONFORM TO ASTM A307 "STANDARD SPECIFICATION FOR CARBON STEEL BOLTS, STUDS AND THREADED ROD", STAINLESS STEEL BOLTS TO ASTM F593 "STANDARD SPECIFICATION FOR STAINLESS STEEL BOLTS, HEXCAP SCREWS AND STUDS"
3.4.4. LAG SCREWS TO CONFORM TO CAN/CSA B34-1967 "MISCELLANEOUS BOLTS AND SCREWS"
3.4.5. USE GALVANIZED FASTENERS (NAILS, SCREWS, BOLTS ETC.) FOR EXTERIOR WORK AND FOR CONNECTIONS OF ANY PRESERVATIVE TREATED MATERIALS. HOT DIP GALVANIZE TO CAN/CSA STANDARD G164-M92 "HOT DIP GALVANIZING OF IRREGULARLY SHAPED ARTICLES"
3.5. PREFABRICATED ANCHORS/JOIST HANGERS: SIMPSON STRONG TIE OR USP STRUCTURAL CONNECTIONS TESTED IN ACCORDANCE WITH ASTM D1761 "STANDARD TEST METHODS FOR MECHANICAL FASTENERS IN WOOD".

MASONRY

1. DESIGN

1.1. MASONRY DESIGN TO CAN/CSA S304.1-04 "DESIGN OF MASONRY STRUCTURES" (LIMIT STATES DESIGN)
1.2. TOLERANCES TO CSA A371 "MASONRY CONSTRUCTION FOR BUILDINGS"
1.3. CONSULTANT WILL INSPECT INSTALLED MASONRY AND REJECT MASONRY THAT IS CHIPPED, CRACKED, OR BLEMISHED (STREAKED, STAINED OR OTHERWISE DAMAGED).
1.4. MAKE GOOD REJECTED MASONRY AS DIRECTED BY CONSULTANT

2. MATERIALS

2.1. ALL MATERIALS USED IN MASONRY CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA A371 "MASONRY CONSTRUCTION FOR BUILDINGS"
2.2. HOLLOW CONCRETE MASONRY UNITS TO CAN/CSA A165.1 MIN. COMPRESSIVE STRENGTH = 15MPA, U.N.O.
2.3. MASONRY MORTAR/GROUT FILL TO CAN/CAS A179 "FINE GROUT" MIN. 15MPA STRENGTH AT 28 DAYS, 175-200MM SLUMP TYPE S UNLESS NOTED OTHERWISE
2.4. MASONRY CONNECTORS AND REINFORCEMENT TO CSA A370
2.5. HOT DIP GALVANIZING: TO ASTM A123/A123M AND ASTM A153/A153M, CLASS B2, MINIMUM 458 G/M² ZINC COATING ON ALL SURFACES.
2.6. MANUFACTURES HAVING PRODUCTS CONSIDERED ACCEPTABLE FOR USE:
2.6.1. BLOK-LOK.
2.6.2. FERO.
2.7. ALL LADDER STEEL TO BE HEAVY DUTY 3/16" (4.76mm) GUAGE SIDE WIRE

3. ERECTION

3.1. CONSTRUCT MASONRY PLUMB, LEVEL AND TRUE TO LINE, WITH VERTICAL JOINTS IN ALIGNMENT.
3.2. LAY OUT COURSING AND BOND TO ACHIEVE CORRECT COURSING HEIGHTS, AND CONTINUITY OF BOND ABOVE AND BELOW OPENINGS, WITH MINIMUM OF CUTTING.
3.3. LAY MASONRY IN FULL BED OF MOTOR, PROPERLY JOINTED WITH OTHER WORK.
3.4. BUTTERING CORNERS OF JOINTS, AND DEEP OR EXCESSIVE FURROWING OF MORTAR JOINTS ARE NOT PERMITTED.
3.5. DO NOT USE CHIPPED, CRACKED OR OTHERWISE DAMAGED UNITS.
3.6. BUILD IN ITEMS REQUIRED TO BE BUILT INTO MASONRY. PREVENT DISPLACEMENT OF BUILT-IN ITEMS DURING CONSTRUCTION.
3.7. CHECK PLUMB, LOCATION AND ALIGNMENT FREQUENTLY, AS WORK PROGRESSES.
3.8. BRACE DOOR FRAMES TO MAINTAIN PLUMB. FILL SPACES BETWEEN FRAME JAMBS AND MASONRY WITH GROUT.
3.9. MAINTAIN MATERIALS AND SURROUNDING AIR TEMPERATURE TO MINIMUM 5 DEGREES CELSIUS AND MAXIMUM 50 DEGREES CELSIUS PRIOR TO, DURING, AND 48 HOURS AFTER COMPLETION OF MASONRY WORK.
3.10. DO NOT USE ANTI-FREEZE, LIQUID SALTS, OR OTHER SUBSTANCES TO LOWER THE FREEZING POINT OF MORTAR OR GROUT. CONFORM TO CSA A179
3.11. PROVIDE HEATED ENCLOSURES AND HEAT AS NECESSARY DURING COLD WEATHER CONSTRUCTION.
3.12. PREVENT FRESHLY LAID MASONRY FROM DRYING TOO RAPIDLY DURING HOT WEATHER BY MEANS OF WATERPROOF, NON-STAINING COVERINGS.
3.13. INSTALL ALL LOOSE STEEL LINTELS. CENTRE LINTEL OVER OPENING WIDTH.
3.14. PROVIDE TEMPORARY BRACING FOR MASONRY WALLS TO RESIST WIND PRESSURE AND OTHER LATER LOADS DURING AND AFTER ERECTION UNTIL PERMANENT LATERAL SUPPORT IS IN PLACE.
3.15. CONTACT CONSULTANT/ARCHITECT ABOUT SIZE & LOCATION OF MASONRY MOVEMENT JOINTS PRIOR TO SITE FABRICATION.
3.16. SECURE WALL TIES TO STRUCTURAL BACK-UP AT MAXIMUM SPACING OF 16" X 24" (400mm X 600mm) O/C.
3.17. SECURE WALL TIES TO STUDS USING A MINIMUM OF TWO FASTENERS.
3.18. DOUBLE QUANTITY OF WALL TIES WITHIN 8" (200mm) OF WALL CORNERS, WALL OPENINGS AND ALONG PARAPET WALLS.

4. JOINTING

4.1. MAKE VERTICAL AND HORIZONTAL JOINTS EQUAL AND UNIFORM THICKNESS.
4.2. ALLOW JOINTS TO SET JUST ENOUGH TO REMOVE EXCESS WATER, THEN TOOL WITH ROUND JOINTER TO RESULT IN SMOOTH, COMPRESSED, UNIFORMLY CONCAVE JOINTS.
4.3. STRIKE FLUSH JOINTS THAT WILL BE CONCEALED WITHIN THE WALL WHICH WILL RECEIVE A COATING OF PLASTER, TILE, INSULATION, RESOILIENT BASE, BITUMINOUS FOUNDATION PROTECTION, OR OTHER JOINT-CONCEALING FINISH. DO NOT STRIKE FLUSH MORTAR JOINTS DESIGNATED TO RECEIVE PAINTED OR OTHER THIN FINISHES.

5. CUTTING

5.1. CUT OUT MASONRY NEATLY FOR RECESSED OR BUILT-IN OBJECTS. MAKE CUTS STRAIGHT, CLEAN AND FREE FROM UNEVEN EDGES. MAKE GOOD MASONRY WHICH HAS CRACKED OR BROKEN AS A RESULT OF CUTTING IN BUILT-IN OBJECTS.

6. PROVISIONS FOR MOVEMENT

6.1. LEAVE A 3/8" (9.5mm) SPACE BETWEEN MASONRY AND VERTICAL STRUCTURAL ELEMENTS.
6.2. LEAVE A 7/16" (11mm) SPACE BETWEEN TOP OF NON-LOADBEARING WALLS AND PARTITIONS AND STRUCTURAL ELEMENTS.

REQUIRED SUBMITTALS

1. THE FOLLOWING ITEMS REQUIRE TESTING OR INSPECTION BY A CERTIFIED INDEPENDENT TESTING OR INSPECTION AGENCY UNLESS NOTED OTHERWISE. THE AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

ITEM	REQUIRED?	COMMENTS
REINFORCING STEEL PLACEMENT	YES	INSPECT FINAL PLACEMENT
CONCRETE COMPRESSIVE TESTS	YES	MIN 2 SETS/100m³
CONCRETE SLUMP	YES	
STRUCTURAL STEEL BOLTING	YES	
STRUCTURAL STEEL WELDING	YES	INSPECT ALL FIELD WELDS

2. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMIT ONE DIGITAL COPY UNLESS NOTED OTHERWISE

ITEM	REQUIRED SUBMITTAL?	P.ENG. STAMP REQUIRED?
REBAR SHOP DRAWINGS	YES	NO
CONCRETE MIX DESIGNS	YES	NO
STRUCTURAL STEEL SHOP DRAWINGS	YES	YES (CONNECTIONS)
JOIST/TRUSS SHOP DRAWINGS	YES	YES
MISC. STEEL HAND/GUARD RAILS/LADDER	YES	YES
STAIRS	YES	YES
MECHANICAL EQUIPMENT NOTED ON PLANS	YES	YES

LOADING INFORMATION

ROOF LOADING:

SNOW LOAD: ROOF SNOW . . . . . 41.8 psf (BASIC) +DRIFT

LIVE LOAD: COMMON STAIRS . . . . . 100.0 psf

DEAD LOAD: WOOD JOIST, PLYWOOD SHEATHING . . . . . 21.0 psf
MECH/ELEC/CEILING . . . . . 20.0 psf

2ND & 3RD FLOOR LOADING

LIVE LOAD: COMMON SPACE (CORRIDOR/LOBBY) . . . . . 100.0 psf
OFFICE . . . . . 50.0 psf

DEAD LOAD: WOOD JOIST, PLYWOOD SHEATHING, CONC TOPPING. 30.0 psf
MECH/ELEC/CEILING . . . . . 20.0 psf
PARTITIONS . . . . . 20.0 psf

1ST FLOOR LOADING:

INTERIOR:

LIVE LOAD: COMMON SPACE (CORRIDOR/LOBBY) . . . . . 100.0 psf
OFFICE . . . . . 100.0 psf

DEAD LOAD: WOOD JOIST, PLYWOOD SHEATHING,CONC TOPPING 30.0 psf
PARTITIONS. . . . . 20.0 psf
MECH/ELEC . . . . . 15.0 psf

WIND LOADING

WIND LOAD: q(1/50) . . . . . 7.7 psf
TOTAL UPLIFT . . . . . 25.0 psf

EARTHQUAKE LOADING

AS PER OBC 2012 PART 4 (4.1.8.7) THE STATIC ANALYSIS PROCEDURE WAS USED IN OUR ANALYSIS.

SOIL CLASS	D
Rd	1.0
Ro	1.0
fa	1.3
fv	1.4
Sa (0.2)	0.16
Sa (0.5)	0.095
Sa (1.0)	0.058
Sa (2.0)	0.018
PGA	0.054
IEFaS(0.2)	0.124<0.35
SEISMIC FORCE RESISTING SYSTEM	SHEAR WALLS

THE CLASSIFICATION OF THIS BUILDING IS ASSUMED TO BE NORMAL. AN IMPORTANCE COEFFICIENT OF 1.0 WAS USED IN ALL CALCULATIONS

GENERAL NOTES

DETAIL SYMBOL

A
B

A – DETAIL NUMBER
B – LOCATION/DETAIL SHEET

ELEVATION SYMBOL

A
B

A – ELEVATION NUMBER
B – LOCATION/DETAIL SHEET

NO.	DATE	ISSUED / REVISIONS
01	2018.09.25	ISSUED FOR COORDINATION
02	2018.10.01	ISSUED FOR PERMIT

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LICENSED PROFESSIONAL ENGINEER
D. R. COWAN
100072514
OCT. 5, 2018
PROVINCE OF ONTARIO

Darryl Cowan, P.Eng.

PROJECT

AMERICAN HOTEL
1 QUEEN STREET N,
KITCHENER, ON.

CLIENT

VIVE DEVELOPMENT

JG GROUP EST 1979
DEVELOPMENT • FINANCING • CONSULTING

DRAWING TITLE

SPECIFICATIONS CONT. & LOADING INFO

PROJ. NO.	SBMW-18-091	DRAWING NO.	
SCALE	AS NOTED		S1.1
DATE	2018.10.01		
DRAWN	JRC/ZRJE		
DESIGNED	TW		
CHECKED	DC	REVISION NO.	02

LOADBEARING MASONRY WALL LOOSE LINTEL SCHEDULE

MARK	WALL TYPE	MAX R/O	MATERIAL
ML-1	EXISTING MULTI WYTHE BRICK WALL	5'-0"	∠5"x3½"x¼" LLV
ML-2	EXISTING DOUBLE WYTHE BRICK WALL	5'-0"	(2) ∠3½"x3½"x¼"
ML-3	EXISTING DOUBLE WYTHE BRICK WALL	5'-0"	(2) ∠5"x3½"x¼" LLV
ML-4	12" BLOCK WALL	5'-0"	(2) ∠5"x5"x¼"
ML-5	10" BLOCK WALL	5'-0"	(2) ∠6"x4"x¼" LLV
ML-6	EXISTING TRIPLE WYTHE BRICK WALL	5'-0"	(3) ∠5"x3½"x¼" LLV

NOTES:

1. FILL BLOCK SOLID FROM UNDERSIDE OF LINTEL SUPPORT TO TOP OF FOUNDATION OR SLAB, AS APPLICABLE, TYPICAL FOR ALL LINTELS.
2. PROVIDE A MINIMUM 6" (152mm) OF BEARING EACH END FOR LINTELS TYP.
3. FOR MECHANICAL OPENINGS THRU BLOCK WALLS, USE ML-1 OR ML-2 AS OUTLINED ABOVE, U.N.O.
4. FOR ALL MECH. OPENINGS IN MULTI-WYTHE BRICK WALLS THAT ARE OVER 8"(203mm) LONG & LESS THAN 36" (915mm) LONG, PROVIDE A (2)L31/2"x(MATCH OVERALL WALL WIDTH)x1/4" (6.4mm) LINTEL TOE-TO-TOE
5. FOR 24" (610mm) WIDE OR LESS MECHANICAL LOUVRE OPENINGS THROUGH LOAD BEARING WALLS USE ML-1 UNLESS NOTED OTHERWISE.

STEEL/WOOD BEAM SCHEDULE

MARK	SIZE	COMMENTS
B-1	(4)1¾"x11⅞" SCL	MAX 13'-6" SPAN, SEE NOTES
B-2	(2)1¾"x11⅞" SCL	SEE NOTES
B-3	(1)1¾"x11⅞" SCL	SEE NOTES
B-4	W10x30	SEE NOTES
B-5	W8x31	SEE NOTES
B-6	W12x72 + 16"x⅜" BRICK PLATE	MAX. 12'-0" SPAN, SEE NOTES
B-7	W8x35 + 16"x⅜" PLATE	SEE NOTES
B-8	W8x21 + 16"x⅜" BRICK PLATE	SEE NOTES

NOTES:

1. ALL BEAMS ARE FLUSH IN FLOOR FRAMING UNLESS NOTED OTHERWISE.
2. FULLY BEAR ALL WOOD BEAMS ON POST SPECIFIED.
3. PROVIDE STUB POSTS IN WALL BELOW ALL BEAM ABOVE OPENINGS. MATCH POST PLY FOR FULL BEARING OF BEAM ABOVE.
4. PROVIDE RAISED HEEL OR FLUSH HANGER CONNECTION FOR ALL TRUSS FRAMING INTO FLUSH BEAMS.
5. REFER TO PLAN AND SCHEDULES FOR POST/COLUMN SIZES/LOCATION.
6. PROVIDE FULL BEARING ON ALL STUDS OF REQUIRED POSTS.
7. FASTEN BRICK PLATES W/ (2) LONG ¼" (6.4mm) FILLET WELDS @ 8" (203mm) O.C. STAGGERED EACH SIDE.
8. ALL STEEL TO STEEL CONNECTIONS ARE BY THE SUPPLIER, REFER TO PROJECT SPECIFICATIONS FOR REQUIREMENTS.
9. ALL BEAMS SUPPORTING CONCRETE OR CMU WALLS SHALL HAVE 15M, 16" (406mm) LONG WELDABLE BARS @ 16" (406mm) O.C. + @ EACH END. WELD ALONG THE CENTRE LINE OF THE TOP FLANGE OF BEAM.
10. ALL BEAMS SUPPORTING CONCRETE SLAB & WALL ABOVE SHALL HAVE 15M, 2'-0" (610mm) LONG WELDABLE BARS @ 16" (406mm) O.C. + @ EACH END. WELD ALONG THE CENTRE LINE OF THE TOP FLANGE OF BEAM.
11. ALL BEAMS FLUSH UNLESS NOTED OTHERWISE.
12. PROVIDE 3/8" (9.5mm) CONT. BRICK PLATE, WELD PLATE TO BOT. FLANGE OF BEAM w/ 3" (76mm) LONG ¼" (6.4mm) STITCH WELDS @ 1'-0" (305mm) o/c STAGGERED ON OPPOSING BEAM FACES c/w 3/8" (9.5mm) STEEL GUSSET PLATES @ 2'-0" (610mm) o/c FULLY WELDED TO WEB OF BEAM & PLATE w/ ¼" (6.4mm) FILLET WELDS.
13. ALL BEAMS SUPPORTING FLOORS SHOULD BE DROPPED U.N.O.
14. ALL BEAMS SUPPORTING ROOF SHOULD BE FLUSH U.N.O.
15. SEE GENERAL NOTES ON S1.1 FOR MINIMUM LUMBER AND SCL PROPERTIES.
16. SEE FRAMING NOTES FOR MULTY-PLY POST AND BEAM CONNECTION DETAILS.
17. PROVIDE (1) 3/8" (9.5mm) STIFFENER EACH SIDE OF BEAM:
    17.1. BELOW ALL STEEL COLUMNS SUPPORTED ON BEAM
    17.2. ABOVE ALL COLUMNS WHERE BEAM CANTILEVERS
    17.3. ABOVE ALL BEARING PLATES
18. ALL WEB STIFFENERS ARE AS FOLLOWS:

BEAM DEPTH	STIFFENER THICKNESS
<8"	¼"
<24"	⅜"
>24"	½"

WOOD LINTEL SCHEDULE

MARK	SIZE	POSTS	COMMENTS
L-1	(2)2x10 SPF 1/2	(1)2x6 JACK (1)2x6 KING	SEE NOTES
L-2	(3)1¾"x11⅞" SCL	(3)2x6 JACK (1)2x6 KING	SEE NOTES

NOTES:

1. ALL LINTELS ARE DROPPED IN FLOOR OR ROOF FRAMING UNLESS NOTED OTHERWISE.
2. FOR 1 & 2 FLUSH PLY LINTELS, PROVIDE LINTEL NOTED IN ADDITION TO RIM JOIST/BLOCKING REQUIRED BY FLOOR PACKAGE.
3. EXTEND LINTELS TO PROVIDE FULL BEARING ON ALL STUDS OF REQUIRED POSTS.
4. JACK AND KING STUD SIZE TO MATCH WIDTH OF WALL IN WHICH THE LINTEL IS LOCATED, REFER TO PLAN.
5. SEE GENERAL NOTES FOR MINIMUM LUMBER AND SCL PROPERTIES.
6. SEE FRAMING NOTES FOR MULTI-PLY POST AND BEAM CONNECTION DETAILS.

BEARING PLATE SCHEDULE

MARK	SIZE	ANCHOR SIZE	COMMENTS
BP1	9"x9"x⅝"	(1) ¾"ø ANCHOR WITH 6" EMBEDMENT AND 2" HOOK	SEE NOTES
BP2	18"x12"x⅝"	(2) ½"ø THREADED ROD DRILLED AND EPOXIED 5" INTO EXISTING MASONRYWITH HILTI HIT-HY 70 EPOXY	GROUT BEAM POCKET SOLID, SEE NOTES
BP3	6"x5"x¾"	(1) LONG ¾"ø ANCHOR WITH 6" EMBEDMENT AND 2" HOOK	SEE NOTES

NOTES:

1. ALL STEEL EXPOSED TO THE EXTERIOR IS TO BE HOT DIP GALVANIZED.
2. EXTEND BEAMS ONTO PLATES TO ENGAGE FULL LENGTH OF PLATE.
3. PROVIDE (1)15M VERTICAL BAR FULLY GROUTED IN EACH CORE FULL HEIGHT UNDER BEARING PLATES.
4. FULLY WELD STRUCTURAL MEMBER TO BEARING PLATE W/ ¼" (6.35MM) FILLET WELD, TYPICAL.
5. ENSURE BEARING PLATES ARE INSTALLED LEVEL.

STEEL COLUMN SCHEDULE

MARK	SIZE	TOP PLATE	BOTTOM PLATE	COMMENTS
C-1	HSS 6"x6"x¼"	NOTE 2	16"x16"x⅝"	ANCHORS TO BE (4) ½"ø HILTI THREADED RODS. DRILL & EPOXY INTO EXISTING W/ HILIT HIT-HY 70, ENSURE MIN. 5" EMBED.
C-2	HSS 4"x4"x⅜"	NOTE 2	8"x10"x⅝"	ANCHORS TO BE (4) ¾"ø ANCHOR BOLTS WITH 6" EMBEDMENT AND 2" HOOK

NOTES:

1. TOP/BOTTOM PLATES SHALL BE FULLY WELDED TO COLUMN USING MIN. ¼" (6.4mm) FILLET WELDS, OR AS DEFINED BY SUPPLIER.
2. PROVIDE ¾" (19mm) THICK STEEL TOP PLATE (MIN.) = TO LxW OF COLUMN U.N.O., TYPICAL.
3. PROVIDE 1-1/2" (40mm) THICK OF HIGH STRENGTH NON-SHRINK GROUT BELOW ALL COLUMN BASEPLATES. USE SIKAGROUT 212 OR EQUIVALENT.
4. SEE TYPICAL DETAILS FOR COLUMN BRACING.

FOUNDATION SCHEDULE

MARK	WALL WIDTH/ PIER SIZE	WALL / PIER REINFORCING	STRIP /PAD FOOTING SIZE	FOOTING REINFORCING
WF-1	EXIST. RUBBLE STONE	N/A	UNKNOWN	UNKNOWN
WF-2	10" CONCRETE BLOCK, REFER TO MASONRY BLOCK SCHEDULE	REFER TO MASONRY WALL SCHEDULE FOR INFO.	24"x8"	N/A
F-1	REFER TO WOOD POST SCHEDULE FOR SIZE & CONNECTION	N/A	36"x36"x10"	(3)15M B.E.W
F-2	CONCRETE BLOCK, REFER TO MASONRY WALL SCHEDULE	N/A	16'-4"x11'-8"x14"	15M @ 8" o/c TOP & BOTT. EA. WAY
F-3	N/A	N/A	72"x60"x24"	15M @ 8" o/c TOP & BOTT. EA. WAY

NOTES:

1. REFER TO GENERAL NOTES FOR CONCRETE & REINFORCING SPECIFICATIONS, TYPICAL.
2. ALL FOOTINGS TO HAVE MIN. 4'-0" (1220mm) FROST PROTECTION, SEE PLAN FOR U/S OF FOOTING ELEVATIONS, TYPICAL.
3. PROVIDE DOWELS FROM FOOTINGS INTO CONCRETE WALLS/COLUMNS ABOVE. MATCH VERTICAL WALL/COLUMN REINFORCING BAR SIZE & SPACING/NUMBER. DOWELS SHALL HAVE STANDARD 90° HOOKS, BE TIED TO THE BOTTOM MAT IN FOOTING, AND HAVE BAR EXTENSIONS ABOVE FOOTINGS FOR A TYPICAL LAP SPLICE. REFER TO CONCRETE SHEAR WALL SCHEMATIC FOR INFO.
4. PROVIDE 15M DOWELS FROM FOUNDATION WALL INTO STRIP FOOTING, 18" (457mm) LONG @ 32" (813mm) O.C. MAX. STAGGERED ENSURE 6" (152mm) EMBEDMENT MIN., TYPICAL
5. PROVIDE 15M DOWELS FROM PIER INTO PAD FOOTING, 32" (813mm) LONG, W/ 8" (203mm) EMBEDMENT, PROVIDE 1 DOWEL @ EACH VERT. PIER BAR LOCATION.
6. PROVIDE DOWELS FROM FOUNDATION WALLS INTO STRIP FOOTINGS, MATCH VERT. WALL REINFORCING BAR SIZE & SPACING. EXTEND INTO MIDDLE OF UNREINFORCED FOOTING OR TO THE BOTTOM MAT OF REINFORCED FOOTING. HOOK REINFORCEMENT IN ACCORDANCE WITH THE REBAR LAP/HOOK SCHEDULE. WHERE WALL ABOVE HAS NO VERTICAL REINFORCEMENT, PROVIDE TYPICAL DOWEL INSTALLATION AS SHOWN IN "TYPICAL FOOTING DOWEL SPACING" DETAIL IN TYPICAL DETAILS
7. PROVIDE HOOK DOWELS FROM CONCRETE PIER/COLUMNS TO PAD FOOTINGS EQUAL TO SIZE & NUMBER OF VERTICAL PIER/COLUMN REINFORCING.
8. HOOK VERT. PIER REINF. INTO PAD FOOTING AS PER LAP LENGTH SCHEDULE, TYPICAL
9. INSTALL (2)10M TIES IN THE TOP 5" (127mm) OF ALL PIERS. AROUND ALL DOOR OPENINGS INSTALL (2)20M DIAGONAL CORNER BARS (1 E.F.) 32" (813mm) LONG, TYPICAL.
10. REFER TO PLAN & SCHEDULES FOR CONCRETE COLUMN REINFORCING INFORMATION, REINFORCING SPECIFIED IS TO EXTEND BELOW T/O SLAB TO TOP OF PAD FOOTING, TYPICAL.
11. REFER TO PLAN & SCHEDULES FOR CONCRETE WALL REINFORCING INFORMATION, REINFORCING SPECIFIED IS TO EXTEND BELOW T/O SLAB TO TOP OF STRIP/PAD FOOTINGS, TYPICAL
12. REFER TO WALL/COLUMN SCHEDULE FOR DETAIL FOR DOWELS.

MASONRY WALL SCHEDULE

MARK	SIZE	WALL REINFORCING	COMMENTS
MW1	EXIST. 2-WYTHE BRICK (±8"-9")	N/A	N/A
MW2	EXIST. 3-WYTHE BRICK (±14")	N/A	N/A
MW3	EXIST. RUBBLE STONE	N/A	N/A
MW4	NEW 10" CONC. BLOCK	15M VERT @ 32" o/c. BOND BEAM w/(2)-15M AT EA. FLOOR LEVEL	HORIZ. LADDER STEEL EVERY 2ND COURSE. ALL REINFORCED CORES ARE TO BE GROUTED SOLID.
MW5	EXIST. 4-WYTHE BRICK	N/A	N/A
MW6	EXIST. 8" CONC. BLOCK	N/A	N/A
MW7	NEW 12" CONC. BLOCK + BRICK VENEER	15M VERT @ 16" o/c. BOND BEAM w/(2)-15M AT EA. FLOOR LEVEL	HORIZ. LADDER STEEL EVERY 2ND COURSE. ALL REINFORCED CORES ARE TO BE GROUTED SOLID.

NOTES:

1. ALL 8" (203mm) WALLS SHOWN ON PLAN ARE LOAD BEARING.
2. ALL MW6 & MW8a MASONRY WALLS SHOWN ON PLAN ARE NON-LOAD BEARING.
3. PROVIDE 1-15M VERTICAL IN CORE ADJACENT TO EACH SIDE OF ROUGH OPENING OR ADJACENT TO OUTSIDE OF STEEL LINTEL BEARING PLATE FOR ALL LOAD BEARING MASONRY WALLS.
4. GROUT ALL REINFORCED CORES SOLID WITH 15MPa GROUT.
5. DO NOT LOCATE A VERTICAL CONTROL JOINT WITHIN 16" (406mm) (HORIX.) OF ANY WALL OPENING.
6. FILL ALL PIERS BETWEEN OPENINGS LESS THAN 2'-0" (610mm) IN WIDTH SOLID WITH MORTAR IN ADDITION TO REINFORCING SPECIFIED IN NOTE #2.
7. LAP ALL MASONRY REINFORCING BARS A MINIMUM 2'-0" (610mm) TYPICAL.
8. GROUT ALL CORES BELOW BEARING PLATES/LINTEL BEARING LOCATIONS SOLID.
9. AT EACH FLOOR/ROOF DIAPHRAGM GROUT MIN. 3 BLOCK COURSES GROUTED SOLID.

WOOD POST SCHEDULE

MARK	SIZE	COMMENTS
P-1	(4)2x8	SEE PLAN FOR POST LOCATIONS POSTS MUST BE CONTINUOUS DOWN TO FOUNDATION LEVEL
P-2	(3)2x6	SEE PLAN FOR POST LOCATIONS POSTS MUST BE CONTINUOUS DOWN TO FOUNDATION LEVEL

NOTES:

1. FASTEN PLIES OF BUILT-UP COLUMNS USING 3-1/4" NAILS @ 9" (225mm) O.C. AS FOLLOWS:
   1.1. 2x4 (38x89)POSTS - 1 ROW
   1.2. 2x6 (38x140)POSTS - 2 ROWS
   1.3. 2x8 (38x184)POSTS - 3 ROWS
2. PROVIDE SOLID BLOCKING IN JOIST SPACE. WOOD GRAIN MUST BE ORIENTED VERTICALLY FOR CONVENTIONAL LUMBER OR USE LVL MATERAL. FOR 1 & 2 PLY LINTELS, PROVIDE LINTEL NOTED IN ADDITION TO RIM JOIST/BLOCKING REQUIRED BY FLOOR PACKAGE.
3. EXTEND LINTELS TO PROVIDE FULL BEARING ON ALL STUDS OF REQUIRED POSTS.
4. IF POST IS SHARED BY TWO BEAMS, SPLIT BEARING EQUALLY.
5. CONTINUE POSTS DOWN TO FOUNDATION OR SUPPORTING BEAM BELOW, TYPICAL.

WALL CONST. SCHEDULE

MARK	TYPICAL WALL CONSTRUCTION
WW1	TYPICAL WALL CONSTRUCTION • NEW 2x6 STUDS @ 16" O.C. C/W HORIZ. BLOCKING INSTALLED @ MID-HEIGHT OF WALL, DOUBLE T&B PLATES

FLOOR/ROOF FRAMING SCHEDULE

MARK	COMMENTS
ROOF FRAMING 'A' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 16" o.c., SISTER ALL NOTCHED, SPLIT & DISCONTINUOUS JOIST W/ NEW 2x12 SPF 1/2
ROOF FRAMING 'B' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 16" o.c., SISTER ALL NOTCHED, SPLIT & DISCONTINUOUS JOIST W/ NEW (1)1¾"X11⅞" SCL
ROOF FRAMING 'C' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 16" o.c., SISTER JOISTS W/ NEW 1.75"x11.875" SCL
ROOF FRAMING 'D'	REPLACE EXISTING ROOF FRAMING W/ NEW 2x12 @ 16" O.C
ROOF FRAMING 'E'	REPLACE EXISTING ROOF FRAMING W/ NEW 1¾"X11⅞" SCL @ 16" O.C
FLOOR FRAMING 'A' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 18" O.C. SISTER ANY NOTCHED, SPLIT, OR DISCONTINUOUS JOIST WITH A NEW 2x12
FLOOR FRAMING 'B' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 18" O.C. SISTER EVERY JOIST WITH A NEW 2x12 OR EVERY OTHER JOIST WITH A NEW 1.75"x11.875" SCL ENSURE ALL NOTCHED, SPLIT, OR DISCONTINUOUS JOISTS ARE SISTERED
FLOOR FRAMING 'C' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 18" O.C. SISTER 2 OF EVERY 3 JOISTS WITH A NEW 1.75"X11.875" SCL ENSURE ALL NOTCHED, SPLIT, OR DISCONTINUOUS JOISTS ARE SISTERED
FLOOR FRAMING 'D' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 18" O.C. SISTER EVERY JOIST WITH A NEW 1.75"X11.875" SCL
FLOOR FRAMING 'E' (EXISTING)	EXISTING ROUGH SAWN 2x12 @ 18" O.C. SISTER EACH JOIST WITH A NEW 2-1.75"x11.875" SCL
FLOOR FRAMING 'F' (EXISTING)	EXISTING ROUGH SAWN 2x10 @ 12" O.C. SISTER EACH JOIST WITH A NEW 2-1.75"x9.5" SCL
FLOOR FRAMING 'G'	NEW 2-1.75"x9.5" SCL @ 12" O.C.
FLOOR FRAMING 'H'	NEW 2x12 @ 16" O.C.
FLOOR FRAMING 'I'	NEW 1.75"X11.875" SCL @ 16" O.C.
FLOOR FRAMING 'J'	NEW 2-1.75"x11.875" SCL @ 16" O.C.
FLOOR FRAMING 'K'	NEW 2-2x8 @ 16" O.C. OR 2x10 @ 12" O.C.

NOTES:

1. PROVIDE 2x2 (38x38) CROSS BRIDGING FOR ALL CONVENTIONAL FLOOR JOISTS SPACED @ NOT MORE THEN 7'-0" (2134mm) O.C. MAX. BRIDGING FOR ENGINEERED FLOOR SYSTEM BY FLOOR SUPPLIER.
2. PROVIDE SOLID BLOCKING IN FLOOR JOIST SPACE AT POST/POINT LOAD LOCATIONS. WOOD GRAIN MUST BE ORIENTED VERTICALLY FOR CONVENTIONAL LUMBER OR USE LVL MATERIAL.
3. DESIGN OF ALL WOOD STAIRS ARE BY OTHERS. PROVIDE SEALED SHOP DRAWING FOR REVIEW.
4. ALL NEW WOOD FLOOR JOISTS TO BEAR 3½" MIN. IN NEW JOIST POCKET IN THE MULTI WYTH BRICK WALL, PROVIDE GROUT AT THE BOTTOM OF THE JOIST POCKET TO ENSURE EVEN, LEVEL BEARING, WRAP THE ENDS OF ALL NEW WOOD JOISTS IN A MOISTURE BARRIER TO PREVENT ROT.
5. FASTEN SISTERED JOISTS TOGETHER WITH (3) ROWS OF 3¼" NAILS @ 18" O.C.

GENERAL NOTES

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DETAIL SYMBOL

A
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ELEVATION SYMBOL

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LICENSED PROFESSIONAL ENGINEER D. H. COWAN 100072514 OCT. 5, 2018 PROVINCE OF ONTARIO

Darryl Cowan, P.Eng.

PROJECT

AMERICAN HOTEL
1 QUEEN STREET N,
KITCHENER, ON.

CLIENT

VIVE DEVELOPMENT

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SCHEDULES

PROJ. NO.	SBMW-18-091	DRAWING NO.	S1.2
SCALE	AS NOTED		
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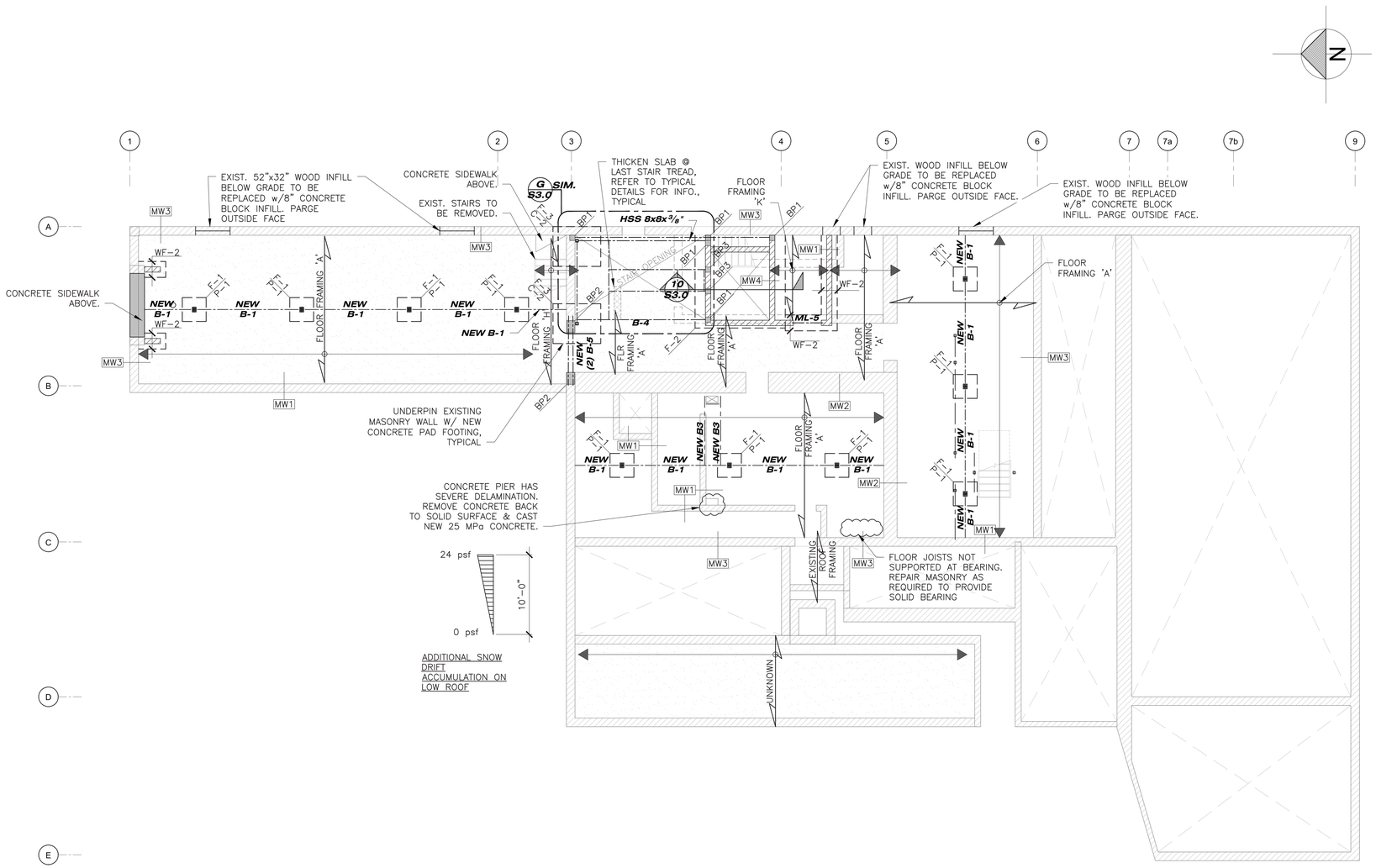
DESIGNED	TW		
CHECKED	DC	REVISION NO.	02



FOUNDATION & GROUND FLOOR FRAMING PLAN

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

FRAMING NOTES:

1. AREAS HATCH AS [. . .] INDICATES THAT THE STRUCTURAL FRAMING IS PARTIALLY OR FULLY OBSTRUCTED WITH EXISTING FINISHES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONCE DEMOLITION IS COMPLETED TO REVIEW THE CONDITION OF THE EXISTING STRUCTURAL FRAMING FOR ADEQUACY.

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100072514
OCT. 5, 2018
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GROUND FLOOR FRAMING PLAN

PROJ. NO.	SBMW-18-091	DRAWING NO.	
SCALE	AS NOTED		S2.0
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DRAWN	JRC/ZRJE		
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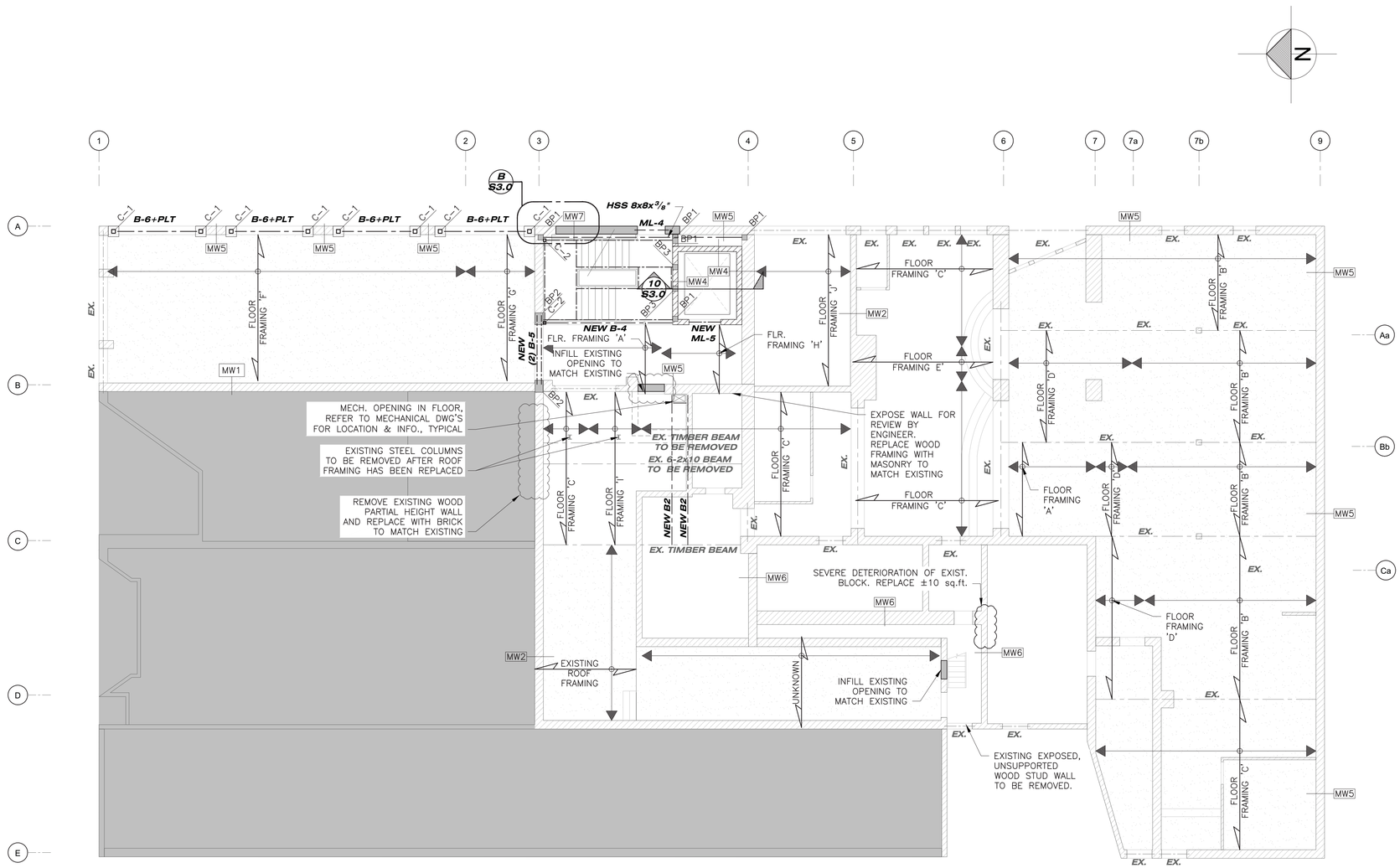

2ND FLOOR FRAMING PLAN

SCALE: ⅛"=1'-0"

FRAMING NOTES:

1. SINGLE PLY TRIMMERS AND JOISTS NOT SUPPORTED WITH JOIST HANGERS, PROVIDE NEW FACE MOUNT JOIST HANGERS.
2. REPAIR/REPLACE/REPOINT ALL MASONRY ABOVE NEW MASONRY LINTELS AND FOR 1'-0" EACH SIDE.
3. WHERE NEW MASONRY INFILL IS REQUIRED OR WHERE BRICK REPLACEMENT AND MASONRY REPOINTING IS REQUIRED, INSTALL NEW OR RE-USED MASONRY FROM OTER SECTIONS OF THE BUILDING. NEW MASONRY SHALL MATCH THE EXISTING HISTORIC MASONRY IN MATERIAL, SIZE, AND COLOUR, SUCH AS CLAY BRICKS AND LIME BASED MORTAR.
4. PRIOR TO INFILLING OR REPAIRING EXISTING BRICK, INSTALL NEW OPENINGS WHERE SHOWN. REMOVE BRICK IN CLEAN, NEAT CONDITION, TAKE CARE NOT TO BREAK OR DAMAGE. RE-USE REMOVED BRICK FOR REPAIR AND INFILL.
5. AREAS HATCH AS [EX.] INDICATES THAT THE STRUCTURAL FRAMING IS PARTIALLY OR FULLY OBSTRUCTED WITH EXISTING FINISHES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONCE DEMOLITION IS COMPLETED TO REVIEW THE CONDITION OF THE EXISTING STRUCTURAL FRAMING FOR ADEQUACY.
6. WHERE NEW POSTS ALIGN OVER EXISTING BRICK OR RUBBLE STONE WALL BELOW, PROVIDE MIN. 2" CONC. CAP ON WALL TO PROVIDE LEVEL BEARING FOR NEW POST.

GENERAL NOTES

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SECOND FLOOR FRAMING PLAN

PROJ. NO.	SBMW-18-091	DRAWING NO.	
SCALE	AS NOTED		S2.1
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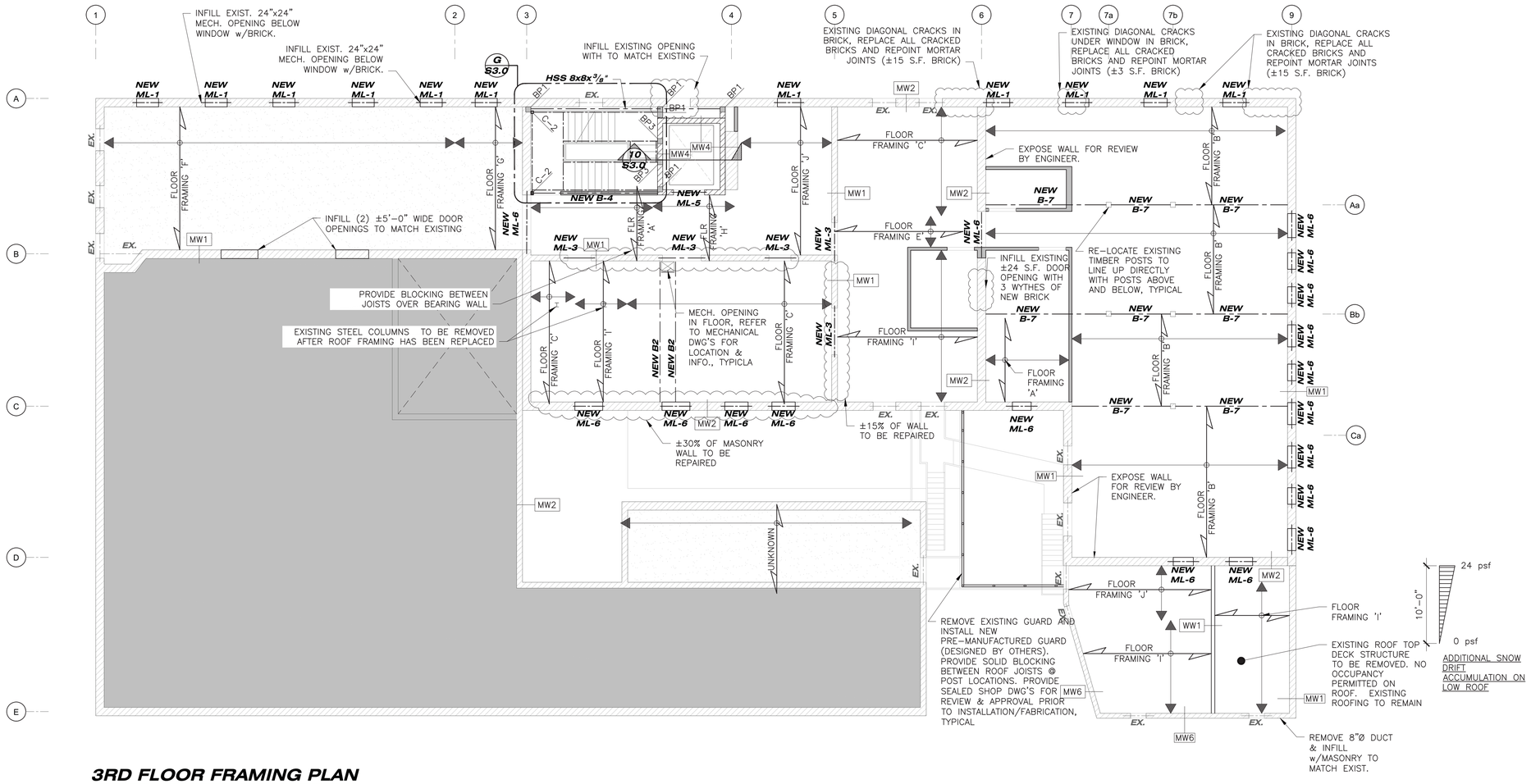

3RD FLOOR FRAMING PLAN

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

FRAMING NOTES:

1. SINGLE PLY TRIMMERS AND JOISTS NOT SUPPORTED WITH JOIST HANGERS, PROVIDE NEW FACE MOUNT JOIST HANGERS.
2. REPAIR/REPLACE/REPOINT ALL MASONRY ABOVE NEW MASONRY LINTELS AND FOR 1'-0" EACH SIDE.
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5. REPLACE ROOF/FLOOR SHEATHING AS REQUIRED. ENSURE ALL ROOF AREAS SLOPE TO EAVES/SCUPPERS.
6. AREAS HATCH AS [ ] INDICATES THAT THE STRUCTURAL FRAMING IS PARTIALLY OR FULLY OBSTRUCTED WITH EXISTING FINISHES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONCE DEMOLITION IS COMPLETED TO REVIEW THE CONDITION OF THE EXISTING STRUCTURAL FRAMING FOR ADEQUACY.

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LICENSED PROFESSIONAL ENGINEER D. H. COWAN 100072514 OCT. 5 2018 PROVINCE OF ONTARIO

Darryl Cowan, P.Eng.

PROJECT

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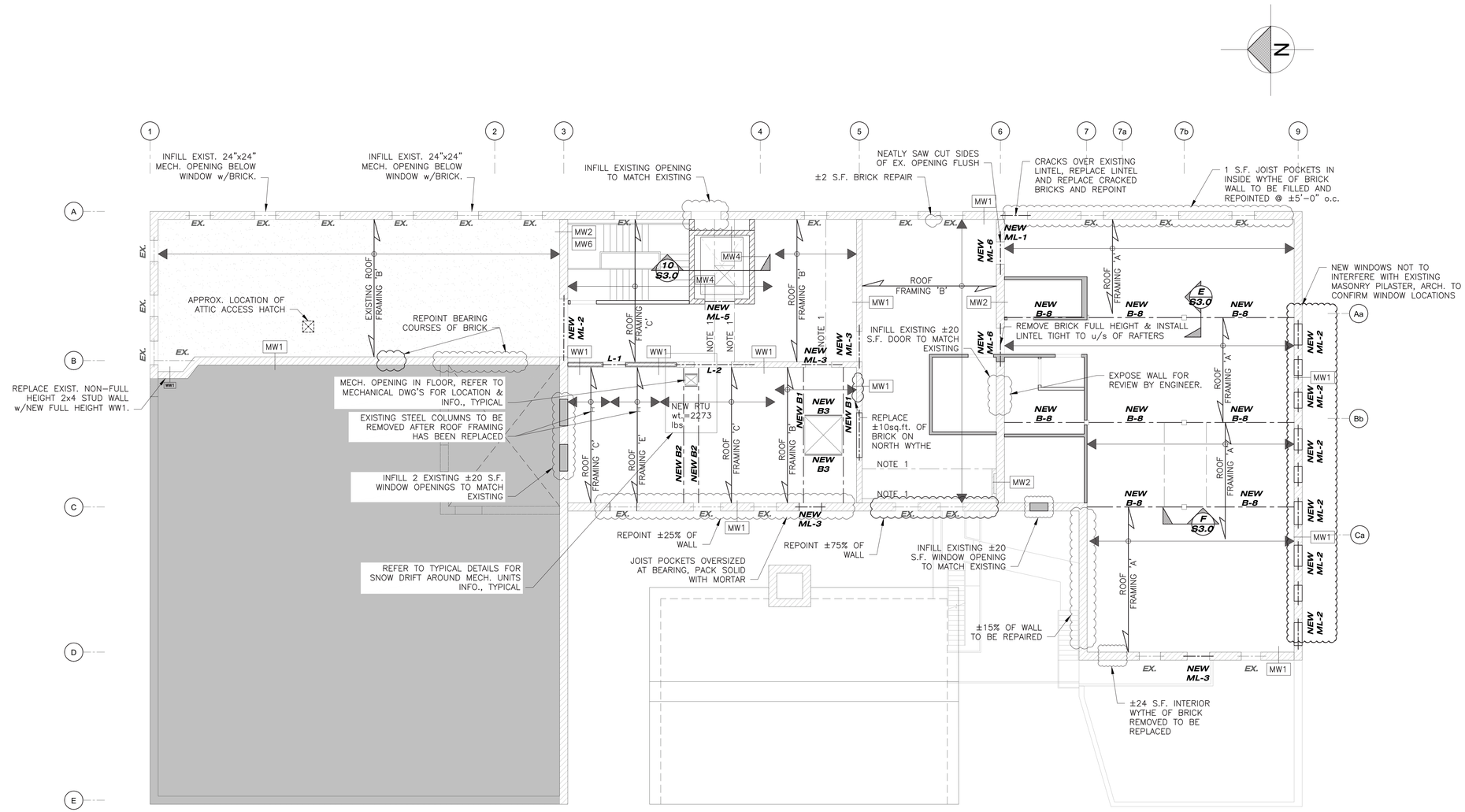
DRAWING TITLE

THIRD FLOOR FRAMING PLAN

PROJ. NO.	SBMW-18-091	DRAWING NO.	S2.2
SCALE	AS NOTED		
DATE	2018.10.01		
DRAWN	JRC/ZRJE		
DESIGNED	TW		
CHECKED	DC	REVISION NO.	02



ROOF FRAMING PLAN

SCALE: ⅛"=1'-0"

FRAMING NOTES:

1. SINGLE PLY TRIMMERS AND JOISTS NOT SUPPORTED WITH JOIST HANGERS, PROVIDE NEW FACE MOUNT JOIST HANGERS.
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6. AREAS HATCH AS [ ] INDICATES THAT THE STRUCTURAL FRAMING IS PARTIALLY OR FULLY OBSTRUCTED WITH EXISTING FINISHES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONCE DEMOLITION IS COMPLETED TO REVIEW THE CONDITION OF THE EXISTING STRUCTURAL FRAMING FOR ADEQUACY.
7. SEE TYPICAL DETAIL 1.06 FOR SNOW DRIFT AROUND MECHANICAL ROOF TOP UNIT.

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ROOF FRAMING PLAN

PROJ. NO.	SBMW-18-091	DRAWING NO.	
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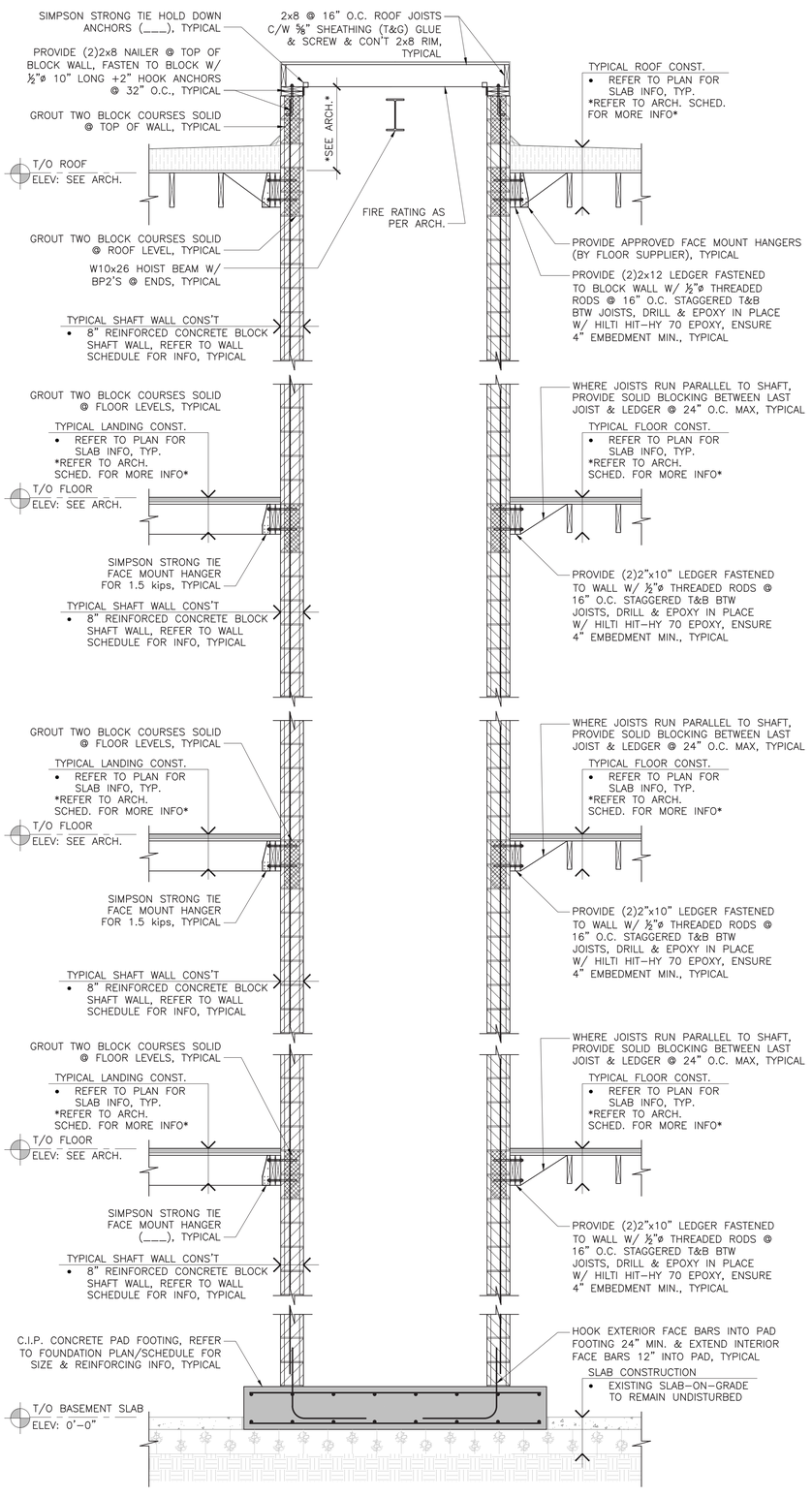
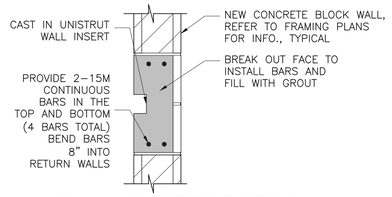


10
S2.0-S2.3

TYPICAL ELEVATOR SHAFT SECTION

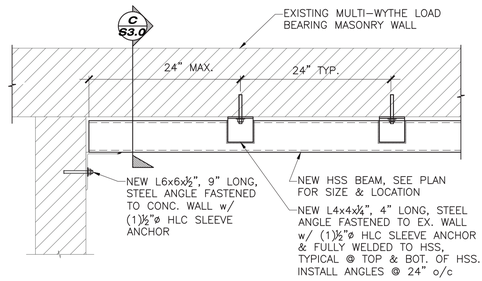
SCALE: ½"=1'-0"



A
S2.1

WALL INSERT DETAIL

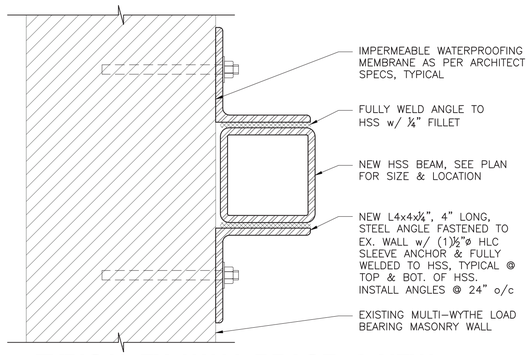
SCALE: 1"=1'-0"



B
S2.1

TYPICAL EX. WALL BRACE @ NEW STAIR OPENING DETAIL - PLAN

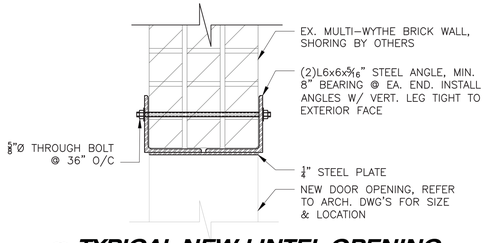
SCALE: 1"=1'-0"



C
S3.0

TYPICAL EX. WALL BRACE @ NEW STAIR OPENING DETAIL - SECTION

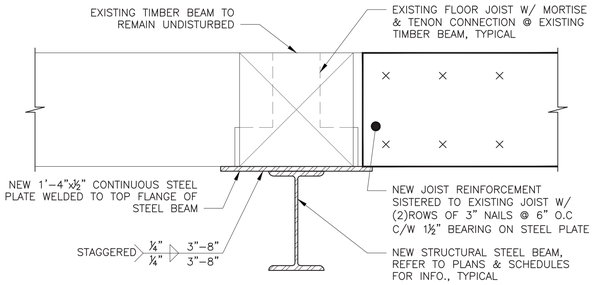
SCALE: 3"=1'-0"



D
S2.3

TYPICAL NEW LINTEL OPENING

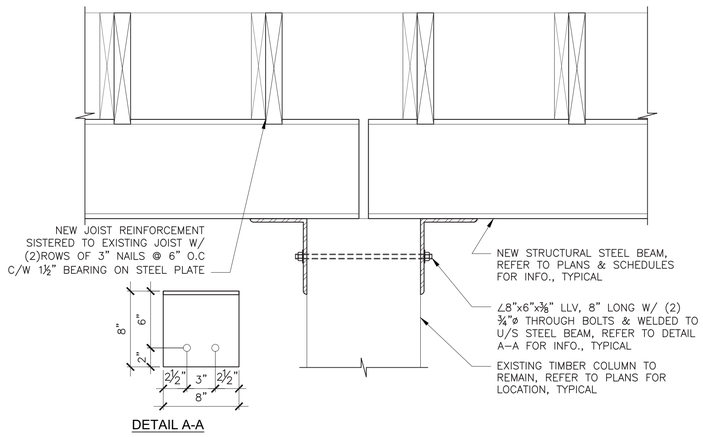
SCALE: 1½"=1'-0"



E
S2.3

TYPICAL TIMBER BEAM REINFORCEMENT

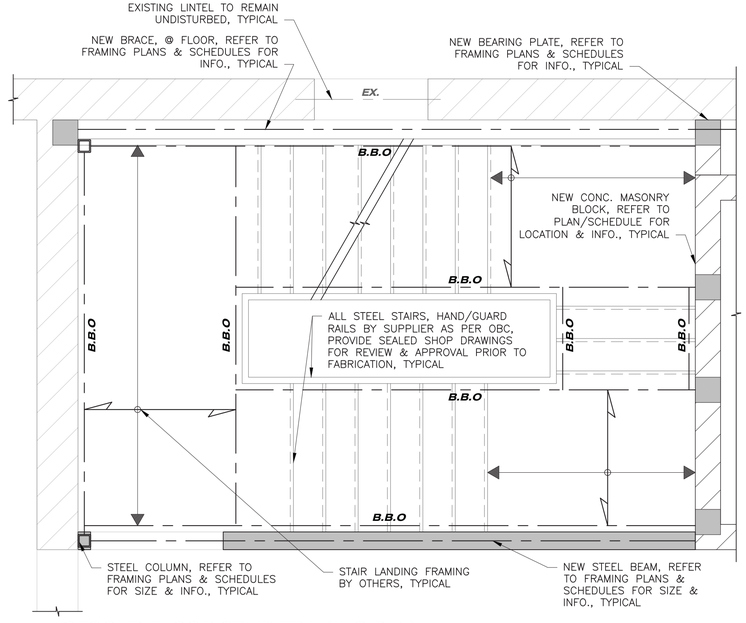
SCALE: 1½"=1'-0"



F
S2.3

TYPICAL STEEL REINFORCEMENT CONNECTION

SCALE: 1½"=1'-0"



G
S2.2

SECOND FLOOR STAIR FRAMING PLAN

SCALE = ½"=1'-0"

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DETAIL SYMBOL	ELEVATION SYMBOL
A B	A B
A - DETAIL NUMBER B - LOCATION/DETAIL SHEET	A - ELEVATION NUMBER B - LOCATION/DETAIL SHEET

NO.	DATE	ISSUED / REVISIONS
01	2018.09.25	ISSUED FOR COORDINATION
02	2018.10.01	ISSUED FOR PERMIT

STRIK
BALDINELLI
sbm MONIZ
CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL
1450 Huron Rd., Unit 225,
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D. H. COWAN
100072514
OCT. 5, 2018

Darryl Cowan, P.Eng.

PROJECT

AMERICAN HOTEL
1 QUEEN STREET N,
KITCHENER, ON.

CLIENT

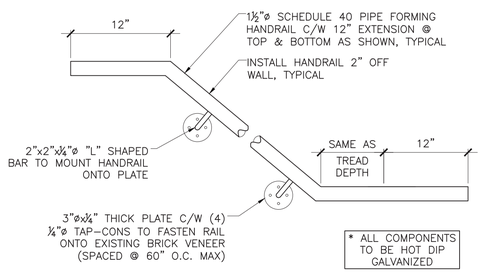
VIVE
DEVELOPMENT

JG GROUP
EST 1979
DEVELOPMENT • FINANCING • CONSULTING

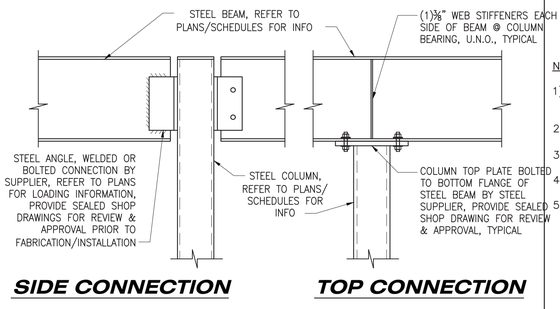
DRAWING TITLE

SECTION & DETAILS

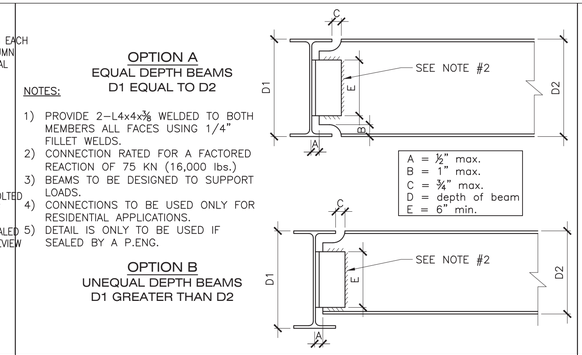
PROJ. NO.	SBMW-18-091	DRAWING NO.	
SCALE	AS NOTED	S3.0	
DATE	2018.10.01		
DRAWN	JRC/ZRJE		
DESIGNED	TW		
CHECKED	DC	REVISION NO.	02



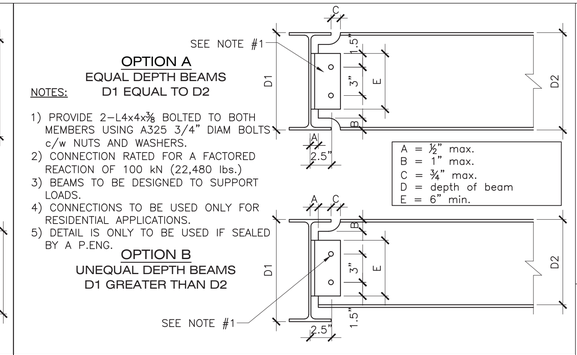
1.00 HANDRAIL DETAIL



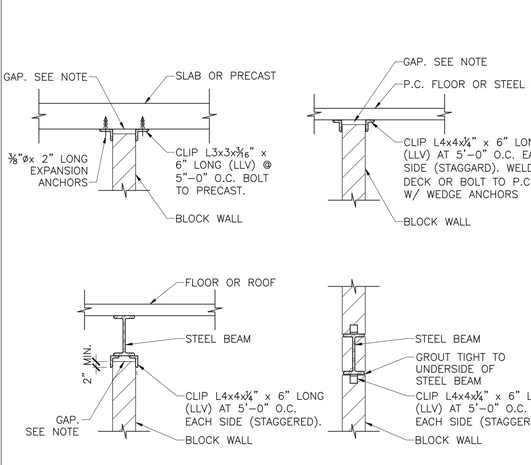
1.03 BEAM CONNECTIONS



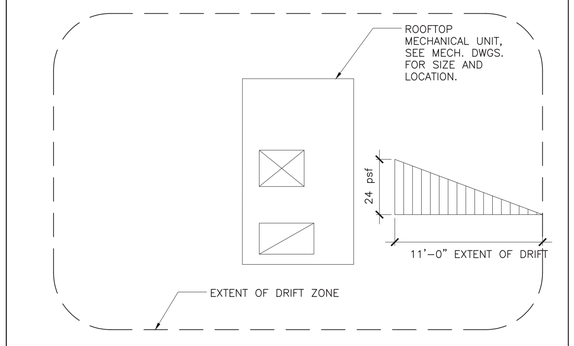
1.07 BEAM TO BEAM CONNECTIONS (WELDED)



1.11 BEAM TO BEAM CONNECTIONS (BOLTED)



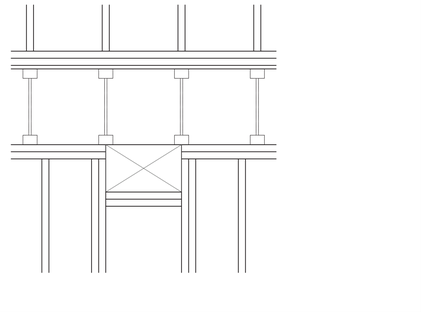
1.01 TYPICAL GUARD RAIL DETAIL



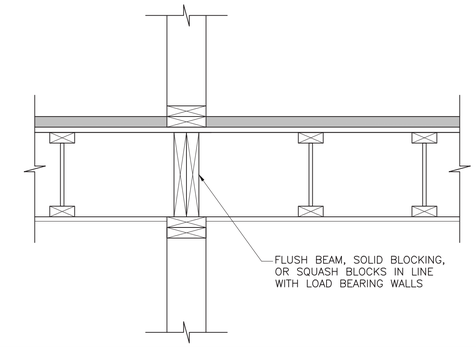
NOTES:

1. BEARING ELEVATIONS SHOWN ON FOUNDATION PLAN SET FOR TOP OF STRIP FOOTING FLUSH WITH TOP OF PAD FOOTINGS. REPORT ANY DISCREPANCIES ON FOUNDATION PLAN TO STRUCTURAL CONSULTANT.
2. REINFORCING IN STRIP AND PAD FOOTING NOT SHOWN FOR CLARITY – SEE FOUNDATION PLAN AND FOOTING SCHEDULES FOR REINFORCING.

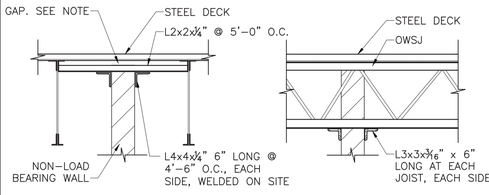
1.04 FOOTING TRANSITION



1.08 HVAC DUCT OPENING

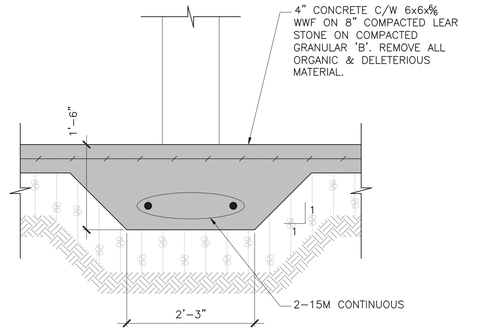


1.12 TYPICAL JOIST SPACE @ LOAD BEARING WALLS

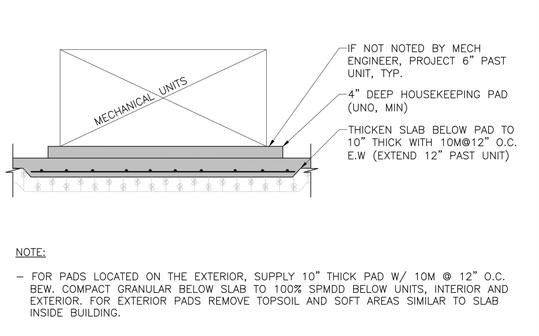


MAINTAIN 1" OF GAP BETWEEN TOP OF MASONRY WALL & UNDERSIDE OF FLOOR/BEAM CONSTRUCTION FOR ALL NON-LOADBEARING MASONRY WALLS, TYP.

1.02 TYPICAL MASONRY PARTITION SUPPORT



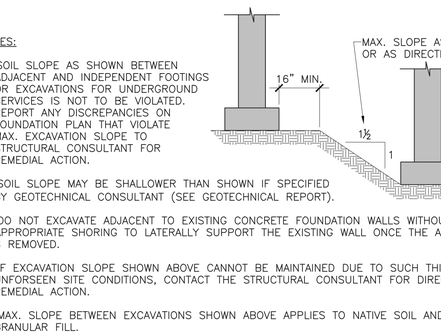
1.05 TYPICAL SLAB THICKENING



NOTE:

– FOR PADS LOCATED ON THE EXTERIOR, SUPPLY 10" THICK PAD W/ 10M @ 12" O.C. BEW. COMPACT GRANULAR BELOW SLAB TO 100% SPMDD BELOW UNITS, INTERIOR AND EXTERIOR. FOR EXTERIOR PADS REMOVE TOPSOIL AND SOFT AREAS SIMILAR TO SLAB INSIDE BUILDING.

1.09 SLAB THICKENING FOR MECHANICAL UNITS



1.13 SLOPE OF ADJACENT FOOTING EXCAVATIONS

1.06 TYPICAL MECHANICAL UNIT DRIFT

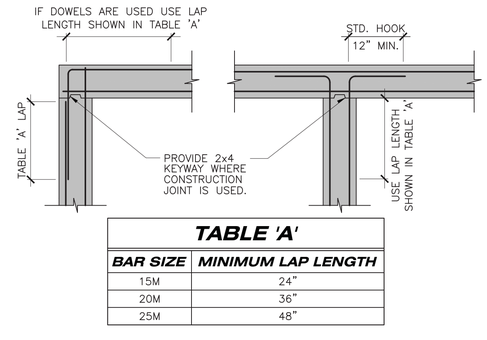
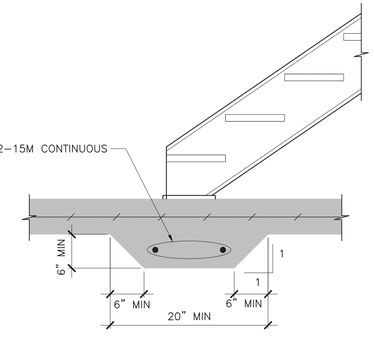


TABLE 'A'

BAR SIZE	MINIMUM LAP LENGTH
15M	24"
20M	36"
25M	48"

1.10 THICKENING HORIZONTAL CORNER REINFORCING DETAILS FOR WALLS



1.14 THICKENING OF SLAB ON GRADE UNDER STAIRS

GENERAL NOTES

IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ALL ERRORS AND / OR OMISSIONS TO STRIK BALDINELLI MONIZ LTD.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT BUILDING CODE REGULATIONS AND BYLAWS HAVING JURISDICTION.

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNTIL IT HAS BEEN SIGNED BY STRIK BALDINELLI MONIZ LTD. AND A BUILDING PERMIT HAS BEEN ISSUED.

CONSTRUCTION TO BE ACCORDING TO BEST COMMON PRACTICE.

DO NOT SCALE DRAWINGS. WHEN REQUIRED REQUEST WRITTEN VERIFICATION OF DIMENSIONS WITH STRIK BALDINELLI MONIZ LTD.

ALL DRAWINGS, & SPECIFICATIONS ARE THE PROPERTY OF STRIK BALDINELLI MONIZ LTD. & MUST BE RETURNED UPON COMPLETION OF THIS PROJECT.

THIS DRAWING & ALL DETAILS ARE FOR THIS PROJECT ONLY AND SHOULD NOT BE USED FOR ANY OTHER WORK.

CONTRACTOR IS FULLY RESPONSIBLE FOR MATTERS AFFECTING CONSTRUCTION

ANY MATERIAL ALTERATIONS CARRIED OUT DURING CONSTRUCTION BY THE CONTRACTOR OR ASSOCIATED SUB-CONTRACTOR SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO INSTALL. FAILURE TO DO SO RESULTS IN FULL CONTRACTOR RESPONSIBILITY FOR SYSTEMS EFFECTED.

DETAIL SYMBOL

A
B

A – DETAIL NUMBER
B – LOCATION/DETAIL SHEET

ELEVATION SYMBOL

A
B

A – ELEVATION NUMBER
B – LOCATION/DETAIL SHEET

NO.	DATE	ISSUED / REVISIONS
01	2018.09.25	ISSUED FOR COORDINATION
02	2018.10.01	ISSUED FOR PERMIT

STRIK BALDINELLI MONIZ
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LICENCED PROFESSIONAL ENGINEER
D. H. COWAN
100072514
OCT. 5, 2018
PROVINCE OF ONTARIO

Darryl Cowan, P.Eng.

PROJECT

AMERICAN HOTEL
1 QUEEN STREET N,
KITCHENER, ON.

CLIENT

VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING

DRAWING TITLE

TYPICAL DETAILS

PROJ. NO.	SBMW-18-091	DRAWING NO.
SCALE	AS NOTED	**S4.0**
DATE	2018.10.01	
DRAWN	JRC/ZRJE	
DESIGNED	TW	
CHECKED	DC	REVISION NO. 02

5/28/2020 8:55 AM

OBC SUMMARY

3.1.17. Occupant Load
A2 = 1.10/m^2 (dining, alcholic beverage and cafeteria space)
E = 3.7/m^2 (basements and first storey)

3.3.1.1 Separation of Suites
45 min required between suites and floors, floor ratings provided by sprinkler system as per T.11.4.3.4.A.

3.4.2.5. Location of Exits
1(c) 45m (147'-7") for occupancies other than high hazard industrial, if sprinklered.

3.4.3.2 Exit Width
SUITE B:
EXIT ROUTE A: D101 = 965mm/6.1=159PPL
EXIT ROUTE B: EXISTING DOOR = 864mm/6.1=142PPL
NEW STAIRS = 1130mm/8.0=142PPL

SUITE C:
EXIT ROUTE A: D101 = 965mm/6.1=159PPL
EXIT ROUTE B: EXISTING DOOR = 864mm/6.1=142PPL
NEW STAIRS = 1130mm/8.0=142PPL (TO BE CONFIRMED)

3.7.4.3. Washroom Requirements
3.7.4.2(1) Occupant load for offices for plumbing fixture count = 14 m^2/person
3.7.4.7(2) Shared washroom for less than 10 persons.
3.7.4.8(2) Public washrooms for mercantile = 1/300 males and 1/150 females except that (a) wc for employees can count toward public count if accessible to the public, (b) if the total mercantile area is less than 600 m2, only 1 wc/sex be provided.
*Less than 18 employees and 600m^2 = 1 wc/sex, publicly accessible
NOTE: Retail space on the ground floor may be initially occupied by the same office tenant as the second floor. Washrooms for the second floor office use will be provided on the second floor. Retail washrooms at the ground floor will be by tenant. The tenant will apply for a change of occupancy permit.
Retail: Assuming a maximum of 18 retail employees (9/sex) only 1 washroom per sex is required. Public retail washrooms can be shared with employee washroom if accessible for less than 600m^2 (retail= 517m^2). Therefor only two unisex, including one barrier-free, washrooms are required.
Office: Based on an occupancy load of 14m^2/person 2 fixtures/sex are required for Phase 1 and a total of 3/sex for Phase 2.
3.7.4.2.(7) The water closet and lavatory provided in the universal washroom described in Sentences 3.8.3.12.(1) may be counted as part of the plumbing fixtures required for males and females.

3.8.3.13
A barrier-free shower is not required where there is only one in a group.

11.2.1.1 A Construction Index
The building currently has no visibly fire ratings between floors. It is assumed that the fire protection performance level on the Construction Index (CI) is 4.

11.4.3.4A
There is not a reduction in the performance of the building according to 11.4.2 and therefore the additional upgrades required in table 11.4.3.4A are not applicable. However, as previous demolition may have altered any rating on the existing floor assemblies, upgrades are required within the area of scope to bring CI to match the HI of the new occupancy. A 45 minute FRR is required between floors or sprinklers at area without the required rating.
*All areas within the scope of work are proposed to be sprinklers.

11.4.3.4B Additional Upgrading for Multiple Major Tenants

Major Occupancy	3.1.3.1 Requirement	Part 11 CA	Part 11 CA (Sprinklered)
All	1 hr rating	45 mins	30 min
All	2 hr rating	1.5 hr	1 hr

Item	OBC Data Matrix - Division B, Part 11 - Renovation of Existing Building		OBC Reference
	Project Description: 1 QUEEN STREET NORTH EXISTING USES: GROUND – A2 PROPOSED GROUND – A2, E		
1	Building Classification:	Describe Existing Use: SEE ABOVE; Construction Index: 1; Hazard Index: 6; ☐ Not Required (No Change of Major Occupancy) Describe Proposed Use: SEE ABOVE; Construction Index: 6; Hazard Index: 6 COMPENSATING CONSTRUCTION REQUIRED TO RESTORE PERFORMANCE LEVEL OF BUILDING. SPRINKLERS THROUGHOUT ALL FLOOR LEVELS	11.2.1., T11.2.1.1A T11.2.1.B to N
2	Alteration to Existing Building is:	☐ Basic Renovation ☑ Extensive Renovation	11.3.3.1 11.3.3.2
3	Reduction in Performance Level	Structural ☑ No ☐ Yes Increase in Occupant Load ☑ No ☐ Yes Change of Major Occupancy: ☑ No ☐ Yes Plumbing ☑ No ☐ Yes Sewage System ☑ No ☐ Yes	11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5
4	Compensating Construction	Structural ☐ No ☑ Yes • STRUCTURAL COMPONENTS UPGRADES AS REQUIRED AFTER DEMOLITION WORK IS COMPLETE. REFER TO STRUCTURAL DRAWINGS.	11.4.3.2
		Increase in Occupant Load ☑ No ☐ Yes • THE OCCUPANT LOAD HAS INCREASED BY LESS THAN 15%.	11.4.3.3
		Change of Major Occupancy: ☑ No ☐ Yes • THE PERFORMACE LEVEL OF THE EXISTING BUILDING IS NOT REDUCED, BY PROPOSED CHANGE OF USE ON 2ND AND 3RD FLOOR: GROUP C TO GROUP D	11.4.3.4
		Plumbing ☑ No ☐ Yes • THE EXISTING PLUMBING IS NOT ADVERSELY AFFECTED BY THE CONSTRUCTION.	11.4.3.5
		Sewage System ☑ No ☐ Yes • THE EXISTING SEWAGE SYSTEM IS NOT ADVERSELY AFFECTED BY THE CONSTRUCTION.	11.4.3.6
5	Compliance Alternatives Proposed	☐ No ☑ Yes (give number(s)) D/E 28 (AREA OF SERVICE ROOM AT BASEMENT, D/E 40 EXISTING EXIT STAIR WIDTH AT FIRE ESCAPE)	11.4.3.4.A.

2 A001 OBC Part 11 Matrix
SCALE: N.T.S.

Item	Ontario Building Code Data Matrix		OBC Reference
1	Project Description: 1 QUEEN STREET NORTH ☐ New ☑ Change of Use ☐ Addition ☑ Alteration ☑ Demolition		☑ Part 3 ☐ Part 9 ☐ Part 11 2.1.1. / 2.1.1., 9.10.3. / 11.1. to 11.4.
2	Major Occupancy(s):	Groups A2, E, D	3.1.2.1.(1) / 9.10.2.
3	Building Area (m2):	Existing: 621.1 New: 0.0 Total: 621.1	3.9.3.1. / 1.1.3.2.
4	Gross Floor Area (m2):	Existing: 1,838.5 New: 0.0 Total: 1,838.5	3.9.3.1. / 1.1.3.2.
5	Number of Storeys:	Above Grade: 3 Below Grade: 1	3.9.3.1. / 2.1.1.3.
6	Building Height	13.0 m +/-	
7	Number of Streets / Access Routes:	2	3.9.3.4. / 9.10.19.
8	Building Classification:	A2: 3.2.2.24, E: 3.2.2.60. & D: 3.2.2.54	3.2.2. / 9.10.4.
9	Sprinkler System:	EXISTING NON-SPRINKLERED, SPRINKLERS PROPOSED AT ALL FLOORS WITHIN SCOPE OF WORK ☑ Entire Building ☐ Basement Only ☐ In Lieu of Roof Rating ☐ Not Required	3.2.2.24, 3.2.1.5, 3.2.2.17. / 9.10.8.
10	Standpipe Required:	(EXISTING) ☐ Yes ☑ No	3.2.9.
11	Fire Alarm Required:	(EXISTING) ☑ Yes ☐ No	3.2.4. / 9.10.17.2.
12	Water Service / Supply is Adequate:	☑ Yes ☐ No	3.2.5.7. / N/A
13	High Building:	☐ Yes ☑ No	3.2.6. / N/A
14	Permitted Construction: ☐ Combustible ☑ Non-Combustible ☐ Both Actual Construction: (EXISTING) ☑ Combustible ☐ Non-Combustible ☐ Both		3.2.2.24. / 9.10.6.
15	Mezzanine(s) Area (m2):	0.0	3.2.1.1.(3-8) / 9.10.4.1.
16	Occupant Load: ☑ sm / person ☐ Design of Building Basement: 0 Second Floor: NOT IN SCOPE Ground Floor: 308 SUITE B: 154.5m/3.7=42PPL SUITE C: 292.1m/1.1=266PPL MAX Third Floor: NOT IN SCOPE		3.1.16.1. / 9.9.1.3.
17	Barrier-free Design:	☑ Yes ☐ No	3.9.3.9. / 9.5.2.
18	Hazardous Substances:	☐ Yes ☑ No	3.3.2.1.(1) & 3.3.1.19.(1) / 9.10.1.3.(4)
19	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (hours) / Listed Design No. or Description (SG-2) Floor 2 HR / UL L541 (CAN/ULC S101 COMPLIANT) Roof 1 HR / N/A Mezz. 1 HR / N/A Supporting Members FRR (hours) / Listed Design No. or Description (SG-2) Floor 1 HR / SB-2 Roof 1 HR / N/A Mezz. 1 HR / N/A	3.2.2.24 & 3.2.1.4. / 9.10.8, 9.10.9, 9.10.9.4.(2)
20	Spatial Separation - Construction of Exterior Walls: REFER TO PAGE A003		3.9.3.2. / 9.10.14.

Walls	Area of EBF (m2)	L.D. (m)	L/H Ratio	Permitted U.O.s (%)	Proposed U.O.s (%)	F.R.R. (Hours)	Listed Design or Description	Combustible Construction	Comb Constr NonC Cladding	Non-Comb Construction
North(1)	48.5	6.174	-	100	45.21	-	EX./SB2	Yes	BOTH	Yes
North(2)	48.5	6.174	-	100	45.21	-	EX./SB2	Yes	BOTH	Yes
East	93.22	4.656	-	48	26.11	½ HR	EX./SB2	Yes	NonC Cladding	Yes
West	EX	EX	-	EX	EX	EX	EX./SB2	EX	EX	EX
South	EX	EX	-	EX	EX	EX	EX./SB2	EX	EX	EX

21	REQUIRED WASHROOMS: BASE BUILDING: 1 UNIVERSAL BARRIER FREE 1 UNIVERSAL WASHROOM TENANT SUITE WASHROOMS TO BE CONFIRMED WITH TENANT INTERIOR FIT OUT PERMIT.	
22	EXISTING MASONRY WALLS = MIN. 6.5" (160mm), SB-2 TABLE 2.1.1, SOLID BRICK MINIMUM EQUIVALENT THICKNESS 152 = 3HR FRR	

1 A001 OBC Part 3 Matrix
SCALE: N.T.S.

WALL TYPE LEGEND

W301.2x
- LOCATION
- SUBSTRATE
- TYPE
- SUFFIX

LOCATION
E EXTERIOR TYPE
W INTERIOR PARTITION
C CEILING
R ROOF

SUBSTRATE
1 POURED CONCRETE
2 CONCRETE BLOCK
3 STUD FRAMING

TYPE
REFER TO SCHEDULE

SUFFIXES:
1 NO RATING REQUIRED
2 FIRE SEPARATION
x EXISTING TO REMAIN

Drawing List

ARCHITECTURAL

MECHANICAL

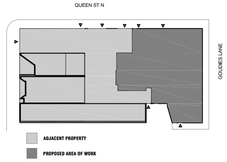
ELECTRICAL

General Notes:

GENERAL

1. INTERIOR DIM'S: ARE TAKEN FROM FACE OF FRAMING OR MASONRY OR FACE OF MASONRY OPENINGS. U.N.O.
2. FIELD VERIFY ALL DIM'S & EXISTING CONDITIONS, TYPICAL ALL DRAWINGS.
3. IN THE EVENT OF A DISCREPANCY BETWEEN ARCHITECTURAL & CONSULTANT DRAWINGS, NOTIFY ARCHITECT IMMEDIATELY PRIOR TO COMMENCING WORK – TYPICAL ALL DRAWINGS.
4. PROVIDE CONCEALED, BLOCKING AT ALL ACCESSORIES & CASEWORK LOCATIONS. EXTEND BLOCKING A MINIMUM OF 150MM BEYOND EACH END & 150MM ABOVE & BELOW ALL ACCESSORY ITEMS.
5. ALL PENETRATIONS IN FIRE RATED WALLS MUST BE SEALED WITH APPROPRIATE FIRESTOPPING
6. CONTRACTOR SHALL RETAIN SERVICES OF A FIRE STOPPING COMPANY AND SUBMIT U.L.C. SYSTEM(S) PROPOSED FOR ALL PENETRATIONS THROUGH FIRE SEPARATIONS TO CONSULTANT FOR APPROVAL PRIOR TO INSTALLATION OF FIRESTOPPING. THE FIRESTOPPING COMPANY SHALL PROVIDE A LETTER AT THE COMPLETION OF THE PROJECT STATING THAT THEY INSPECTED AND CERTIFY PROPER INSTALLATION.
7. SHAFT WALLS ARE TO BE FULL HEIGHT AND SEALED TO UNDERSIDE OF NEW ROOF. FIRE STOPPING TO HAVE RATING NOT LESS THAN SHAFT WALL.
8. FLOOR TRANSITION STRIP REQUIRED BETWEEN DISSIMILAR MATERIALS. FEATHER COAT AS REQUIRED TO MATCH THICKNESS
9. ALL GYPSUM BOARD FINISHED WALLS TO BE PAINT READY.
10. CONTRACTOR TO ENSURE FLUSH TRANSITION BETWEEN EXISTING AND INFILL WALLS.
11. GENERAL CONTRACTOR TO PROVIDE SMOOTH FLUSH JOINT AT ALL WALL JOINTS WHERE PROPOSED WALLS INTERSECT WITH EXISTING WALLS TO REMAIN.

KEY PLAN



No.	DATE	ISSUE
1	MAY 27/20	ISSUED FOR PERMIT

NEO ARCHITECTURE INC
I-249 King St E, Kitchener ON, N2G 2K8 | 519-590-1636
neoarchitecture.ca

ONTARIO ASSOCIATION OF ARCHITECTS
MAY 26/20
LAIRD ANDREW ROBERTSON
LICENCE
4921

OWNER

VIVE DEVELOPMENT

PROJECT

AMERICAN HOTEL

1 Queen Stret North, Kitchener

DRAWING

PHASE 2
OBC MARTIX, GENERAL NOTES, KEY PLAN

PROJECT NUMBER
18-023

PROJECT DATE
April 2020

DRAWN BY
adavis

A001

5/27/2020 10:24 AM

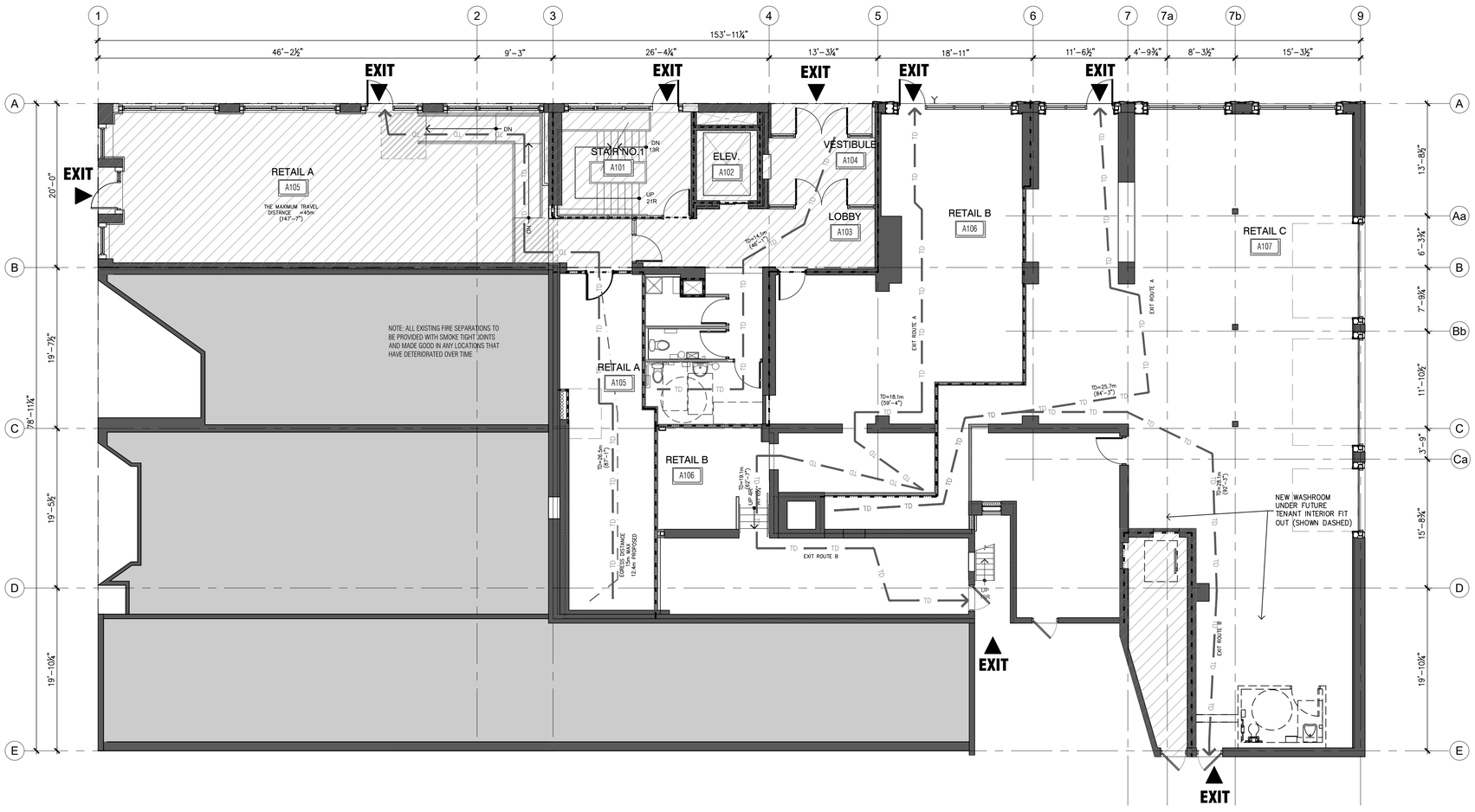
Fire Separation Notes

1. ALL EXISTING OPENINGS IN RATED PARTITIONS TO BE INFILLED TO MATCH EXISTING AND MAINTAIN REQUIRED FIRE RESISTANCE RATING.
2. PATCH AND REPAIR ALL WALLS TO MAINTAIN REQUIRED FIRE RESISTANCE RATING.
3. ALL FLOORS WITHIN THE SCOPE OF WORK TO BE SPRINKLERED IN LIEU OF FIRE RESISTANCE RATING.
4. ALL EXISTING BRICK MASONRY WALL 2 WRYTHS OR THICKER PROVIDE A MINIMUM OF A 1 HOUR FIRE RESISTANCE RATING.

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- EXISTING FIRE SEPARATION TO REMAIN
- 1.0 HR FIRE SEPARATION
- 2.0 HR FIRE SEPARATION
- TRAVEL DISTANCE

ALL COLUMNS IN BASEMENT TO HAVE 1 HOUR F.R.R.. REFER TO DETAILS.



1 A002 Life Safety - Ground Floor
SCALE: 1/32" = 1'-0"

No.	DATE	ISSUE
1	MAY 27/20	ISSUED FOR PERMIT

NEO ARCHITECTURE INC
1-243 King St E, Kitchener ON, N2G 2K8 | 519-590-1636
neoarchitecture.ca

ONTARIO ASSOCIATION OF ARCHITECTS
NAME 26/29
LAIRD ANDREW ROBERTSON
LICENCE
4921

OWNER

VIVE DEVELOPMENT
JG GROUP EST 1979
DEVELOPMENT + FINANCING + CONSULTING

PROJECT

AMERICAN HOTEL

1 Queen Stret North, Kitchener

DRAWING

PHASE 2
LIFE SAFETY - GROUND FLOOR

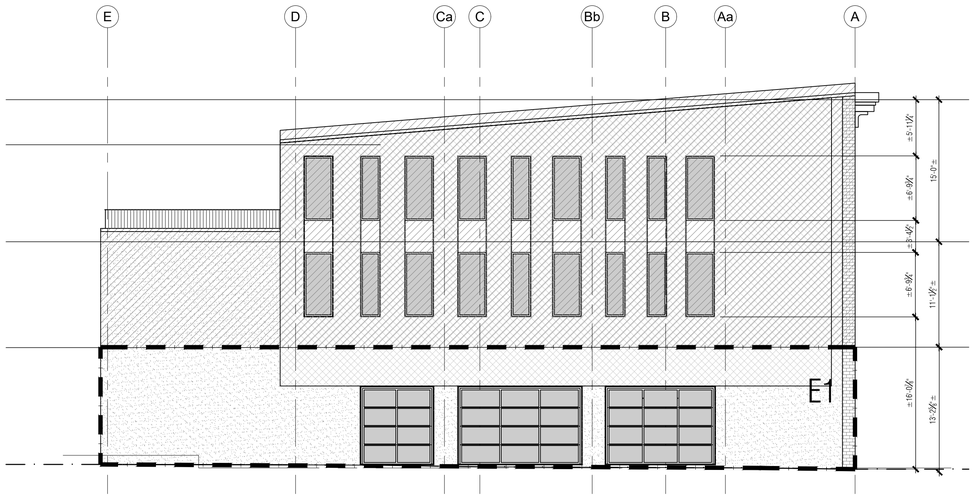
PROJECT NUMBER 18-023
PROJECT DATE April 2020
DRAWN BY adavis

A002

5/27/2020 10:24 AM

UNPROTECTED OPENINGS											
WALL FACE	SPRINK. COMP.	OCCUPANCY	AREA OF EBF (sq.m.)	AREA OF UPO (sq.m.)	L.D. (m)	PERMITTED U.P.O.'S (%)	PROPOSED U.P.O.'S (%)	F.R.R. (HOURS)	LISTED DESIGN OF DESCRIPTION	COMB/NON COMB CONSTRUCTION	COMB/NON COMB CLADDING
NORTH(1)	YES	A2	48.51	21.93	6.174	100	45.21	0 HOUR	EX./SB-2	BOTH	BOTH
NORTH(2)	YES	E	22.40	11.48	6.174	100	51.25	0 HOUR	EX./SB-2	BOTH	BOTH
EAST(1)	YES	A2	93.22	24.34	4.656	48	26.11	3/4 HOUR	EX./SB-2	BOTH	NON-COMB.

3 A004 Exposed Building Face - Calculations
SCALE: N.T.S.



2 A003 Exposed Building Face - East Elevation (Goudies Lane)
SCALE: 1/8" = 1'-0"

1 A004 Exposed Building Face - North Elevation (Queen Street N)
SCALE: 1/8" = 1'-0"

Legend

GLAZING

NOT IN SCOPE

OPAQUE FILM ON GLAZING

FIRE COMPARTMENT

No.	DATE	ISSUE
1	MAY 27/20	ISSUED FOR PERMIT

NEO ARCHITECTURE INC
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ONTARIO ASSOCIATION OF ARCHITECTS
MAY 26/20
LAIRD ANDREW ROBERTSON
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PROJECT

AMERICAN HOTEL

1 Queen Stret North, Kitchener

DRAWING

LIFE SAFETY
UNPROTECTED OPENINGS

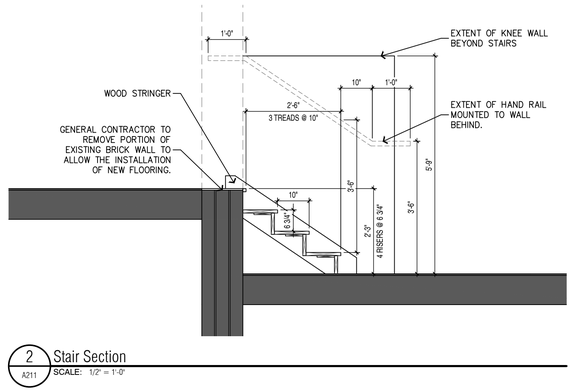
PROJECT NUMBER
18-023

PROJECT DATE
April 2020

DRAWN BY
adavis

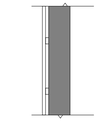
A003

5/27/2020, 10:24 AM

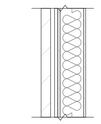


2 A211 Stair Section
SCALE: 1/2" = 1'-0"

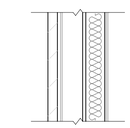
Wall Types



E301 — EXTERIOR WALL – STUD W/ PANELS
- EXTERIOR GRADE WOOD PANEL (PAINT FINISH)
- WOOD FURRING
- AIR/VAPOUR MEMBRANE
- EXISTING MASONRY WALL

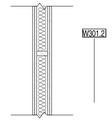


E302.2 — EXTERIOR WALL – STUD W/ MASONRY VENEER (2 HR FIRE RATED WALL) UL U404
- SALVAGED MASONRY BRICK VENEER
- 1" AIR SPACE
- AIR BARRIER
- 2 LAYERS ½" CEMENT BOARD
- 6" METAL STUDS @16" O/C, UNO
- 6" MINERAL WOOL INSULATION
- VAPOUR BARRIER
- 2 LAYERS 5/8" SHEETROCK FIRECODE CORE GYPSUM PANELS

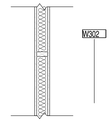


E303.2 — EXTERIOR WALL – STUD w/ MASONRY VENEER (2 HR FIRE RATED WALL) UL U419
- 3" SALVAGED EXISTING BRICK VENEER
- 1" AIR SPACE
- AIR BARRIER
- 2 LAYERS 1/2" TYPE "X" EXTERIOR SHEATHING
- 6" METAL STUDS @ 16" o/c, U.N.O. c/w MINERAL WOOL INSUALTION
- 1" AIR SPACE
- 6" METAL STUDS @ 16" o/c, U.N.O.
- VAPOUR BARRIER
- 2 LAYERS 1/2" SHEETROCK FIRECODE CORE GYPSUM BOARD

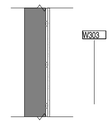
Partition Types



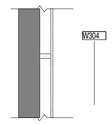
W301.2 — PARTITION – STUD (1 HR FIRE RATED) ULC W301
- 2 LAYERS OF 5/8" SHEETROCK FIRECODE C CORE GYPSUM PANELS, BOTH SIDES
- 2x4 WOOD STUD @ 16" O/C (UNO) c/w SOUND BATT INSULATION
- JOINTS FINISHED



W302 — PARTITION – STUD (MOISTURE RESISTANT)
- 5/8" GYPSUM BOARD
- 2x4 WOOD STUD @ 16" O/C (UNO)
- SOUND BATT INSULATION
- 5/8" MOISTURE RESISTANT GYPSUM BOARD (AT WASHROOM SIDE)



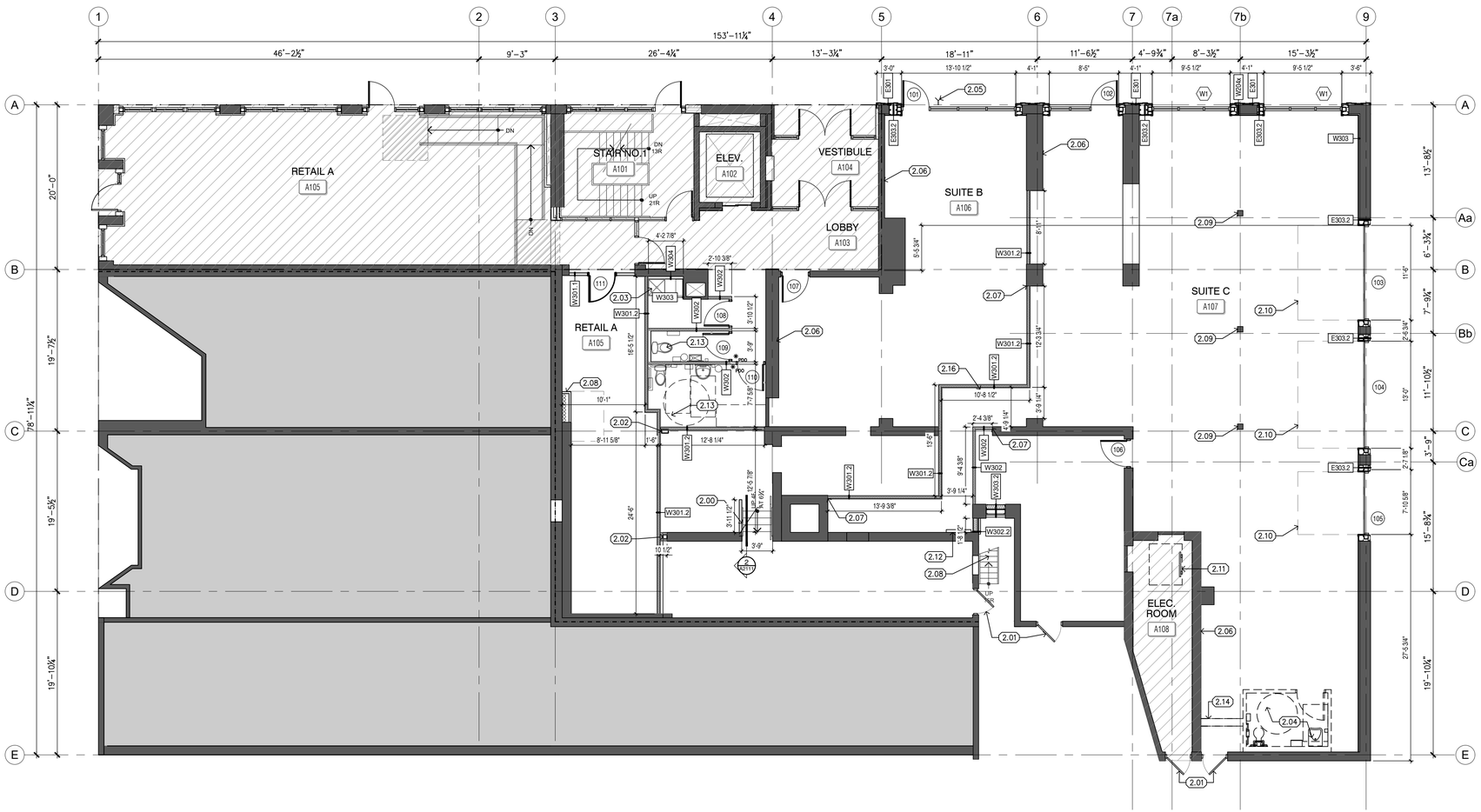
W303 — PARTITION – STUD
- 5/8" GYPSUM BOARD
- 5/8" WOOD STRAPPING
- NEW/EXISTING BACK UP WALL



W304 — PARTITION – STUD
- 2x4 WOOD STUD @ 16" O/C (UNO)
- 1/2" GYPSUM BOARD

Legend

- EXISTING ADJACENT PROPERTY
- EXISTING WALLS TO REMAIN
- NOT IN SCOPE
- *P00 POWER DOOR OPERATOR



1 A211 Ground Floor Plan
SCALE: 1/8" = 1'-0"

Proposed Legend

2.00 GENERAL CONTRACTOR TO SUPPLY AND INSTALL NEW WOOD STAIR CASE c/w HAND RAIL MOUNTED TO EXISTING WALL.
2.01 EXISTING DOOR AND FRAME TO REMAIN.
2.02 EXISTING STRUCTURAL FRAMING. REFER TO PHASE 1 PERMIT.
2.03 GENERAL CONTRACTOR TO SUPPLY AND INSTALL MOP SINK. REFER MECH. DWGS.
2.04 FUTURE WASHROOM LAYOUT TO BE PROVIDED WITH TENANT FIT OUT.
2.05 SIAMESE CONNECTION. REFER TO MECHANICAL DRAWINGS.
2.06 ENSURE EXISTING MASONRY WALLS ARE SMOKE SEALED AND ENSURE CONTINUOUS FIRE SEPARATION AS INDICATED ON DRAWINGS.
2.07 CONTRACTOR TO ENSURE NEW WALL FINISH IS CONSTRUCTED FLUSH WITH EXISTING
2.08 EXISTING CHASE TO REMAIN.
2.09 EXISTING COLUMN TO REMAIN.
2.10 OUTLINE OF GARAGE DOOR WHEN IN OPEN POSITION.
2.11 EXISTING FLOOR HATCH AND LADDER FOR BASEMENT ACCESS.
2.12 BASEBOARD HEATER. REFER TO ELEC. DWGS
2.13 NEW WASHROOM FIXTURES & EQUIPMENT SUPPLIED & INSTALLED BY GENERAL CONTRACTOR. REFER TO MECH. DWGS.
2.14 GENERAL CONTRACTOR TO SUPPLY AND INSTALL NEW STAIRS. RISER HEIGHT TO BE CONFIRMED ONCE DEMO IS COMPLETE.

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OWNER
VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT + FINANCING + CONSULTING

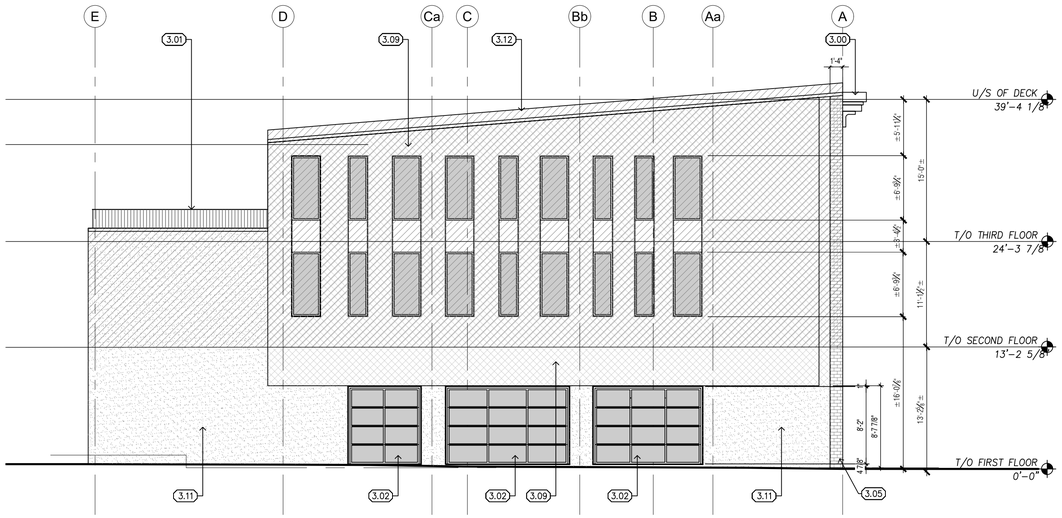
PROJECT
AMERICAN HOTEL
1 Queen Stret North, Kitchener

DRAWING
PHASE 2
GROUND FLOOR PLAN

PROJECT NUMBER 18-023
PROJECT DATE April 2020
DRAWN BY adavis

A211

5/27/2020 10:24 AM



2 A300 East Elevation (Goudies Lane)
SCALE: 1/8" = 1'-0"

1 A300 North Elevation (Queen Street N)
SCALE: 1/8" = 1'-0"

Legend

EXISTING ADJACENT PROPERTY

NOT IN SCOPE

Proposed Keynotes

3.00 EXISTING CORNICE TO REMAIN. NEW PAINT FINISH. COLOUR: TBD
3.01 METAL GUARD RAIL TO BE INSTALLED AROUND TERRACE. DETAILS TO BE PROVIDED UNDER THIRD FLOOR TENANT FIT OUT PERMIT.
3.02 NEW ALUMINUM GARAGE DOOR c/w THERMALLY BROKEN FRAME.
3.03 NEW CEMENT BOARD CORNICE BAND WITH DECORATIVE TRIM AND PAINT FINISH. COLOUR: TBD
3.04 NEW CEMENT BOARD PANEL WITH DECORATIVE TRIM AND PAINT FINISH. COLOUR: COLOUR #1 TO BE APPROVED BY ARCHITECT.
3.05 EXISTING MASONRY TO REMAIN. REMOVE EXISTING PAINT AND MAKE GOOD.
3.06 ALUMINUM WINDOW IN NEW OPENING. INSULATED GLAZING IN THERMALLY BROKEN ALUMINUM FRAMES.
3.07 NEW LIMESTONE SILL.
3.08 NEW MASONRY SILL BELOW WINDOW.
3.09 EXISTING FACADE TO REMAIN.
3.10 PROPOSED SIAMESE CONNECTION. REFER TO MECH. DWGS.
3.11 EXISTING STUCCO/PARGING TO REMAIN. PAINT FINISH.
3.12 NEW PREFINISHED METAL FLASHING. COLOUR: TBD
3.13 NEW INSULATED WOOD DOOR WITH INSULATED GLAZING.
3.14

No.	DATE	ISSUE
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ONTARIO ASSOCIATION OF ARCHITECTS
MAY 26/20
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4921

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PROJECT

AMERICAN HOTEL

1 Queen Stret North, Kitchener

DRAWING

PHASE 2
ELEVATIONS

PROJECT NUMBER
18-023

PROJECT DATE
April 2020

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A300

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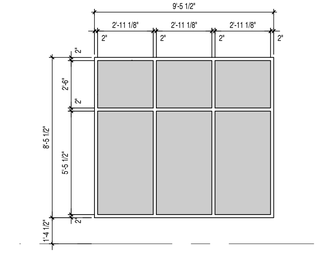
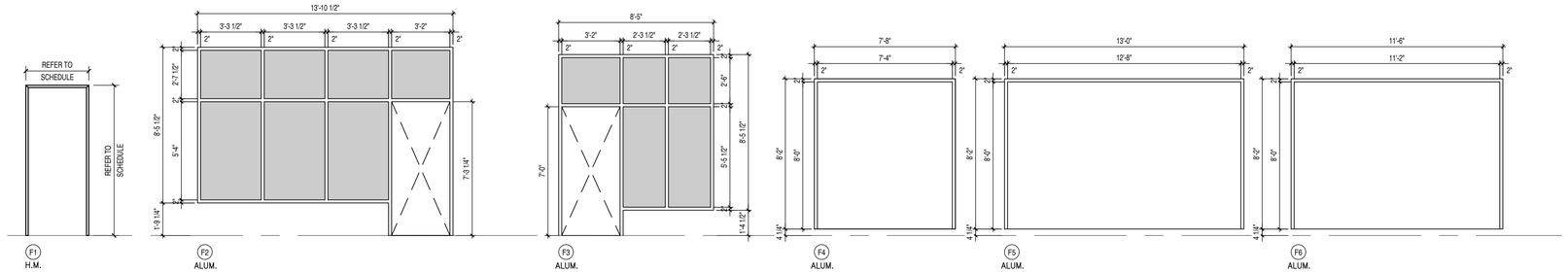
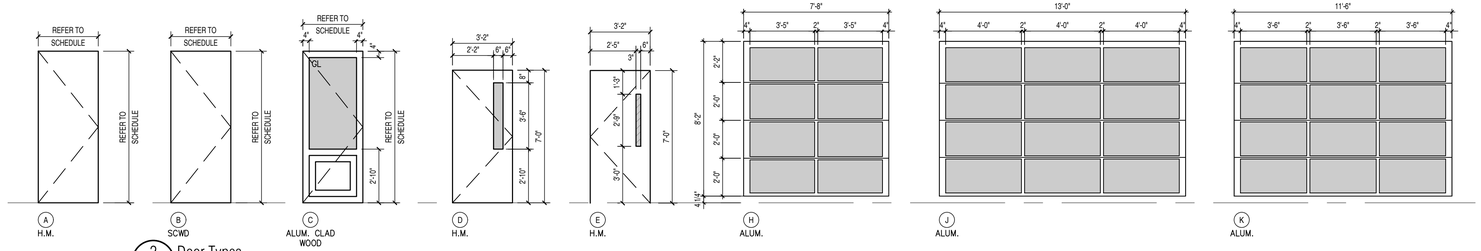


5 A801 WINDOW SCHEDULE
SCALE: 1/4" = 1'-0"



3 A801 Frame Types
SCALE: 1/4" = 1'-0"



2 A801 Door Types
SCALE: 1/4" = 1'-0"

DOORS							FRAMES					HARDWARE	COMMENTS NOTE: ALL DOOR HARDWARE TO BE STAINLESS STEEL
No.	Elev.	Size	Mat'l	Finish	Glazing	F.R.R.	Elev.	Size	Mat'l	Finish	F.R.R.		
101	C	3'-2"x7'-1 3/4"	SCWD	STAIN/ALUM(PT)	TEMP	3/4 HR	F2	SEE ELEV	ALUM	PAINT	3/4 HR	3 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP, LOCKSET, PANIC BAR, WEATHER STRIPPING	INSULATED GLAZING, THERMALLY BROKEN FRAME
102	C	3'-2"x7'-0"	SCWD	STAIN/ALUM(PT)	TEMP	3/4 HR	F3	SEE ELEV	ALUM	PAINT	3/4 HR	3 BUTT HINGES, SELF-CLOSING DEVICE, O/H STOP, LOCKSET, PANIC BAR, WEATHER STRIPPING	INSULATED GLAZING, THERMALLY BROKEN FRAME
103	H	7'-8"x8'-2"	ALUM	PAINT		3/4 HR	F4	SEE ELEV	ALUM	PAINT	3/4 HR	GARAGE DOOR PULL CHAIN, LOCK	INSULATED GLAZING, THERMALLY BROKEN FRAME
104	J	13'-0"x8'-2"	ALUM	PAINT		3/4 HR	F5	SEE ELEV	ALUM	PAINT	3/4 HR	GARAGE DOOR PULL CHAIN, LOCK	INSULATED GLAZING, THERMALLY BROKEN FRAME, NO EXTERIOR HARDWARE
105	K	11'-6"x8'-2"	ALUM	PAINT		3/4 HR	F6	SEE ELEV	ALUM	PAINT	3/4 HR	GARAGE DOOR PULL CHAIN, LOCK	INSULATED GLAZING, THERMALLY BROKEN FRAME
106	D	3'-2"x7'-0"	HM	PAINT			F1	3'-6"x7'-2"	HM	PAINT		3 BUTT HINGES, WALL STOP, PASSAGE	
107	E	3'-2"x7'-0"	HM	PAINT	TEMP	1 1/2 HR	F1	3'-6"x7'-2"	HM	PAINT	1 1/2 HR	3 BUTT HINGES, WALL STOP, PASSAGE	
108	A	3'-0"x7'-0"	HM	PAINT			F1	3'-4"x7'-2"	HM	PAINT		3 BUTT HINGES, WALL STOP, LOCK SET	
109	A	3'-2"x7'-0"	SCWD	STAIN			F1	3'-6"x7'-2"	HM	PAINT		3 BUTT HINGES, WALL STOP, LOCK SET, SELF CLOSING DEVICE	
110	A	3'-2"x7'-0"	SCWD	STAIN			F1	3'-6"x7'-2"	HM	PAINT		3 BUTT HINGES, WALL STOP, LOCK SET, SELF CLOSING DEVICE PUSH BUTTON, AUTO LOCK, POWER DOOR OPERATOR	
111	A	3'-2"x7'-0"	HM	PAINT			F1	3'-6"x7'-2"	HM	PAINT		3 BUTT HINGES, O/H STOP, LOCK SET, SELF CLOSING DEVICE, H/O DEVICE	TENANT REPRESENTATIVE TO REVIEW AND APPROVE DOOR HARDWARE

1 A801 Door Schedule
SCALE: NTS

No.	DATE	ISSUE
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MAY 26/20
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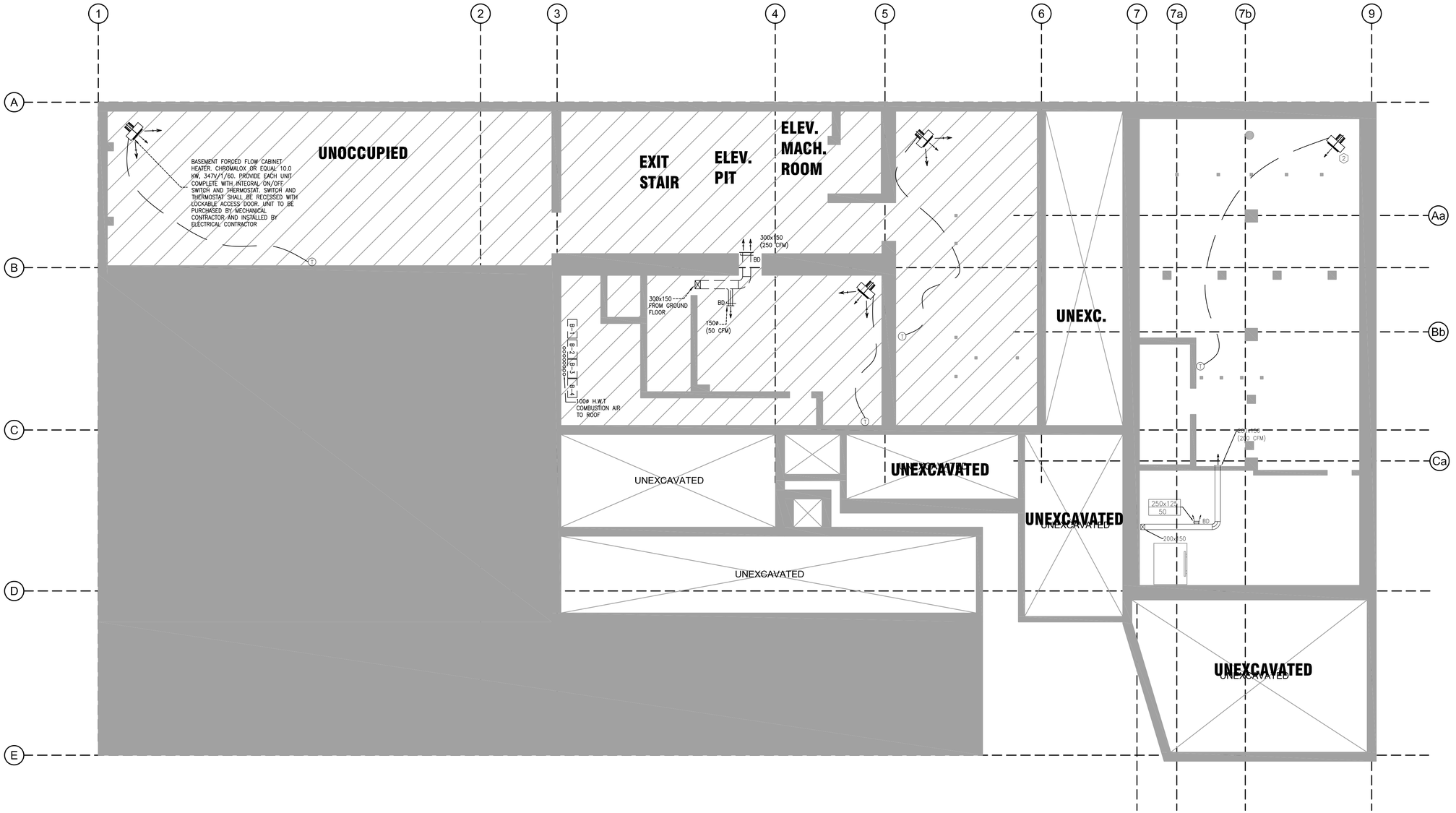
PROJECT
AMERICAN HOTEL
1 Queen Stret North, Kitchener

DRAWING
PHASE 2
SCHEDULES

PROJECT NUMBER 18-023
PROJECT DATE April 2020
DRAWN BY adavis

A801



HVAC DRAWING NOTES:

1. SEAL ALL JOINTS AND INSULATE DUCTS USING MIN. R20 FOIL FACED DUCT INSULATION. APPLIES TO ALL DUCTS IN GARAGE SPACE.
2. FORCED FLOW CABINET HEATER. CHROMALOX OR EQUAL 10.0 KW, 347v/1/60. PROVIDE EACH UNIT COMPLETE WITH INTEGRAL ON/OFF SWITCH AND THERMOSTAT. SWITCH AND THERMOSTAT SHALL BE RECESSED WITH LOCKABLE ACCESS DOOR. UNIT TO BE PURCHASED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR
3. SIGMA OR EQUAL CONVECTOR HEATING UNIT SURFACE MOUNTED C/W INTEGRAL THERMOSTAT CONTROL VALVE. HEATING CAPACITY 3.0 KW, 208/1/60
4. PROVIDE ELECTRIC BASEBOARD HEATER. CHROMALOX OR EQUAL, 1.0 KW, 115V/1/60. PROVIDE UNIT COMPLETE WITH INTEGRAL THERMOSTA
5. FORCED FLOW CABINET HEATER FOR TEMPORARY HEAT. CHROMALOX OR EQUAL 10.0 KW, 347V/1/60. PROVIDE EACH UNIT COMPLETE WITH INTEGRAL ON/OFF SWITCH AND THERMOSTAT. SWITCH AND THERMOSTAT SHALL BE RECESSED WITH LOCKABLE ACCESS DOOR. UNIT TO BE PURCHASED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR

NOTES:

NO	DATE	ISSUE
1	8 MAY 2020	ISSUED FOR REVIEW.
2	28 MAY 2020	ISSUED FOR PERMIT.

TRUE NORTH | PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
28 MAY 2020
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT + FINANCING + CONSULTING
PROJECT

CLIENT PROJECT NO: -

JOB NO: 20180725 - 04

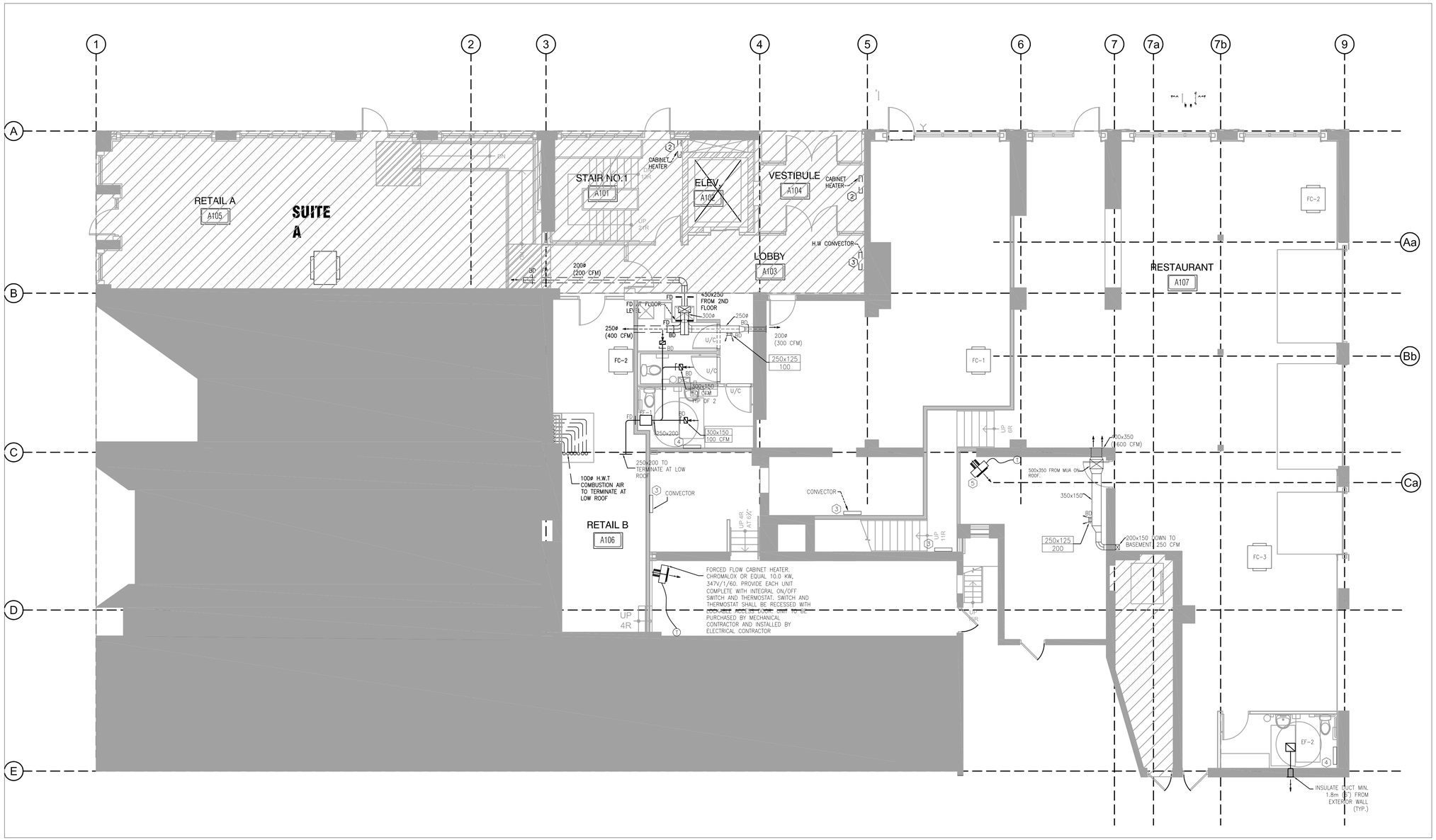
PROJECT NAME: AMERICAN HOTEL PHASE 2

ADDRESS: 1 QUEEN ST N, KITCHENER

TITLE: BASEMENT HVAC LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S

SHEET NO:	DRAWING NO:	REVISE:
1 / 4	M-1.0	0



HVAC DRAWING NOTES:

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3. SIGMA OR EQUAL CONVECTOR HEATING UNIT SURFACE MOUNTED C/W INTEGRAL THERMOSTAT CONTROL VALVE. HEATING CAPACITY 3.0 KW, 208/1/60
4. PROVIDE ELECTRIC BASEBOARD HEATER. CHROMALOX OR EQUAL, 1.0 KW, 115V/1/60. PROVIDE UNIT COMPLETE WITH INTEGRAL THERMOSTA
5. FORCED FLOW CABINET HEATER FOR TEMPORARY HEAT. CHROMALOX OR EQUAL 10.0 KW, 347V/1/60. PROVIDE EACH UNIT COMPLETE WITH INTEGRAL ON/OFF SWITCH AND THERMOSTAT. SWITCH AND THERMOSTAT SHALL BE RECESSED WITH LOCKABLE ACCESS DOOR. UNIT TO BE PURCHASED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR

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PROJECT

CLIENT PROJECT NO: -

JOB NO: 20180725 - 04

PROJECT NAME: AMERICAN HOTEL PHASE 2

ADDRESS: 1 QUEEN ST N, KITCHENER

TITLE: GROUND FLOOR HVAC LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
2 / 4	M-1.1		0

FAN COIL SCHEDULE

UNIT No.	SERVICE & LABEL	MAKE & MODEL	DISCHARGE	HEAT OUTPUT (BTU)	AIR SUPPLY (HEATING) (CFM)	AIR SUPPLY (COOLING) (CFM)	MOTOR (HP)	ELECTRICAL	NUMBER OF COILS	COOLING CAPACITY (TONS)	CONDENSING UNIT	CONDENSING UNIT MCA	CONDENSING UNIT ELECTRICAL	CONDENSING UNIT WEIGHT (lb)	APPROX. LENGTH OF REFRIG.PIPES (FEET)	REMARKS
FC-1	GROUND FLOOR TENANT A	CARRIER 42BHE20	SIDE	14,800	2000	2000	1/2	208/3/60	2	3.0	CARRIER 24ABB536	34.2	208/1/60	–	–	SEE NOTES BELOW
FC-2	FAN COIL UNIT SECOND FLOOR	CARRIER 40RUA	SIDE	68,000	3000	3000	1-1/2	208/3/60	2	7.5	CARRIER 38AUZ	15	208/3/60	–	–	SEE NOTES BELOW
FC-3	FAN COIL UNIT SECOND FLOOR	CARRIER 40RUA	SIDE	68,000	3000	3000	1-1/2	208/3/60	2	7.5	CARRIER 38AUZ	15	208/3/60	–	–	SEE NOTES BELOW

NOTES:
1. PROVIDE FOR EACH FAN COIL COMPLETE WITH AN ELECTRONIC PROGRAMMABLE THERMOSTAT C/W 50FT WIRE COILED FOR FUTURE USE, HOT WATER HEATING COIL SECTION AND FILTERS.
2. PROVIDE ONE (1) CONDENSING UNIT FOR EACH FAN COIL. COORDINATE LOCATION OF EACH UNIT ON SITE AND INSTALL MAINTAINING MINIMUM CLEARANCES AS REQUIRED BY EQUIPMENT MANUFACTURER.
4. RUN LIQUID AND SUCTION REFRIGERATION LINES FROM EACH CONDENSING UNIT TO RESPECTIVE F.C. UNIT. COORDINATE EXACT ROUTING ON SITE AND SIZE CIRCUIT BASED ON TOTAL EQUIVALENT LENGTH AND CAPACITY. VERIFY SIZES WITH CONDENSING UNIT MANUFACTURER.
5. PIPE 1" CONDENSATE DRAIN FROM EACH AIR HANDLER TO NEAREST FLOOR DRAIN C/W TRAP.
6. CONNECT HOT WATER HEATING SUPPLY AND RETURN PIPES TO EACH FAN COIL UNIT COMPLETE WITH ISOLATING VALVES, STRAINER, CIRCUIT BALANCING VALVE AND THERMOMETERS.
7. SEAL DUCT JOINTS AIR TIGHT TO APPROVAL.
8. INSULATE ALL HEATING PIPES. RECOVER EXPOSED PIPES IN TENANT SPACE WITH WHITE PVC COVERING.

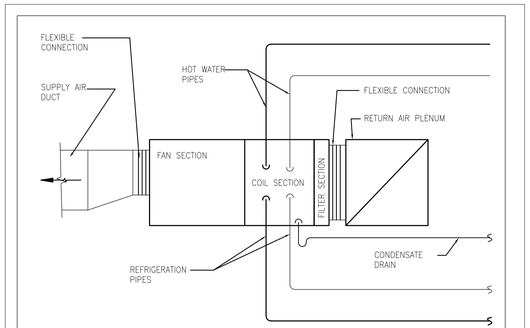
FAN EQUIPMENT SCHEDULE

NUMBER	SERVICE AND LABEL	MAKE OF FAN	MODEL No.	VOL. FLOW (CFM)	O.V. (FPM)	S.P. (IN)	SPEED R.P.M.	TIP SPEED F.P.M.	SONES	MOTOR H.P.	MOTOR PH	MOTOR V	ACCESSORIES & REMARKS
EF-1	WASHROOM EXHAUST FAN	GREENHECK	SQ-130HPVG	400	–	0.25	1540	–	12.5	1/4	1	115	PROVIDE FAN C/W DISCONNECT AND SPEED CONTROL. PROVIDE 7 DAY TIMER AND WIRE TO OPERATE FAN. INSTALL FAN USING VIBRATION ISOLATION.
EF-2	EXHAUST FAN No. EF-1 WASHROOM EXHAUST	BROAN	S11QUE	100	–	0.25	1050	–	1.5	0.9 A	1	115	WIRE TO START FROM SEPARATE SWITCH

MAKE UP AIR UNIT SCHEDULE

NUMBER	SERVICE AND LABEL	MAKE OF FAN	MODEL No.	VOL. FLOW (CFM)	HEATING (BTU)	COOLING (TON)	SPEED R.P.M.	TIP SPEED F.P.M.	SONES	MOTOR H.P.	MOTOR PH	MOTOR V	ACCESSORIES & REMARKS
MAU-1	BUILDING MAKE UP AIR UNIT	REZNOR	YDMA – 120	2500	120,000	5	–	–	–	–	3	208	SEE NOTES BELOW .

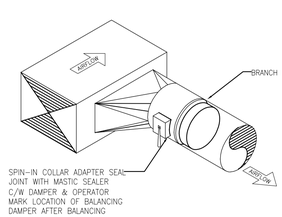
NOTES:
1. PROVIDE UNIT WITH ECM ENCLOSED MOTOR WITH FACTORY INSTALLED ABB DRIVE.
2. PROVIDE UNIT WITH ROOF CURB.
3. PROVIDE UNIT WITH DUCT STATIC PRESSURE CONTROL.
4. PROVIDE UNIT WITH SMOKE DETECTOR.



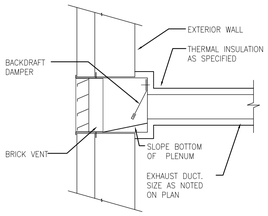
INSTALLATION NOTES:

1. MAINTAIN SERVICE CLEARANCE IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS.
2. EXTEND CONDENSATE PIPE TO NEAREST DRAIN. INSULATE ALL PIPES AND RE-COVER EXPOSED PIPES WITH PVC COVERING.
3. PROVIDE DISCONNECT AT UNIT LINE SIDE.
4. WIRE UNIT TO OPERATE FROM REMOTE PROGRAMMABLE THERMOSTAT. COORDINATE LOCATION OF THERMOSTAT ON SITE. INSTALL ALL CONTROL WIRING IN CONDUITS.

FAN COIL UNIT DETAIL
N.T.S.



SPIN-IN ANGLED COLLAR
N.T.S.



BRICK VENT DETAIL
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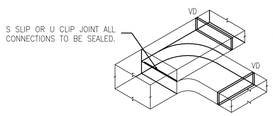
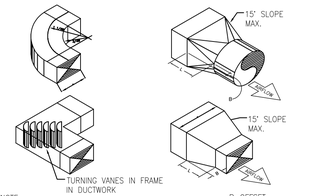


NOTES
VOLUME CONTROL SHOULD BE BY BRANCH DAMPERS.
ALL TURNING RADIUS TO CONFORM TO SMACNA DUCT CONSTRUCTION STANDARDS.

DETAILS OF AIR FLOW BRANCHES
N.T.S.



NOTE:
PROVIDE TURNING VANES WHERE CENTRELINE RADIUS IS < 1 1/4 W

B=OFFSET
L=3.7 • B (MINIMUM)

DUCT ELBOWS & AND TRANSITIONS
N.T.S.

NOTES:

NO	DATE	ISSUE
1	8 MAY 2020	ISSUED FOR REVIEW.
2	28 MAY 2020	ISSUED FOR PERMIT.

TRUE NORTH	PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
28 MAY 2020
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER

VIVE DEVELOPMENT
JG GROUP EST 1929 DEVELOPMENT • FINANCING • CONSULTING

PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SCHEDULES AND DETAILS

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
3 / 4	M-1.3		0

NOTES AND SPECIFICATION

GENERAL CONDITIONS

1. SUPPLY AND INSTALL A COMPLETE MECHANICAL SYSTEM AS SHOWN, NOTED AND/OR SPECIFIED.
2. ARRANGE TO VISIT JOB SITE AND EXAMINE ALL EXISTING CONDITIONS WHICH AFFECT THE WORK. EXISTING SYSTEMS ARE MAY NOT BE ACCURATELY SHOWN.
3. ARRANGE FOR, PAY AND OBTAIN ALL REQUIRED PERMITS, FEES, LICENSES, CERTIFICATE OF INSPECTIONS, TESTING, ETC. PROVIDE AND SUBMIT DRAWINGS AND FORMS TO THE AUTHORITIES AS REQUIRED.
4. CONFORM WITH BUILDING CODE AND STANDARDS, LOCAL BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
5. REVIEW ALL DRAWINGS AND CO-ORDINATE WITH OTHER TRADES REGARDING LOCATION OF EQUIPMENT, CONTROL DEVICE LOCATIONS, DISTRIBUTION SYSTEM, ETC.
6. SUBMIT SHOP DRAWINGS FOR EACH EQUIPMENT AND SYSTEM.
7. SUPPLY ELECTRICAL REQUIREMENTS AND WIRING DIAGRAMS TO ELECTRICAL CONTRACTOR FOR THEIR CONNECTION.
8. CLEAN ALL EQUIPMENT AND OTHER INSTALLATIONS. FOLLOW INITIAL MAINTENANCE INSTRUCTION FROM MANUFACTURER.
9. PROVIDE GUARANTEE IN WRITING FOR THE INSTALLED MATERIAL AND WORKMANSHIP INCLUDING THE MANUFACTURER'S GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION AND ACCEPTANCE.
10. FIELD COORDINATE AND LOCATE THE EXACT DIMENSIONS AND POSITIONS OF EACH REQUIRED OPENING AND HOLE. OBTAIN APPROVAL FOR ANY CUTTING OR DRILLING THAT IS REQUIRED IN FLOORS, ROOFS, CEILINGS AND/OR WALLS FOR PASSAGE OF PIPES, DUCTS, ETC.
11. CUTTING AND PATCHING SHALL TO COMPLETE THE MECHANICAL WORK SHALL BE DONE BY THIS CONTRACTOR. FINISHES BY OTHERS UNLESS OTHERWISE NOTED.
12. TEST AND ADJUST ALL SYSTEMS TO THE SATISFACTION OF THE ENGINEER AND THE AUTHORITIES HAVING JURISDICTION. REFER TO TESTING AND BALANCING SPECIFICATIONS.

MATERIAL

1. ALL MATERIALS AND EQUIPMENT TO BE NEW AND FREE OF DEFECTS, AND SHALL BE C.S.A. APPROVED.
2. AIR DISTRIBUTION
   - 2.1 ALL DUCTWORK SHALL BE FABRICATED TO SMACNA DUCT MANUAL STANDARDS, SECTION NO. 1 AND AS FOLLOWS:
   - 2.2 MATERIAL AND THICKNESS
     DUCTWORK SHALL BE FABRICATED FROM BEST QUALITY LOCKFORMING GALVANIZED STEEL SHEETS AS MANUFACTURED BY STELCO OR DOFASCO FOLLOWING THICKNESS:
     SIZE OF DUCT

	GAUGE OF SHEET STEEL
UP TO 600mm (24") IN WIDTH OR DEPTH OR UP TO 200mm (8") DIAMETER	NO. 24 US
625mm (25") TO 1200mm (48") IN WIDTH OR DEPTH OR 225mm (9") TO 550mm (22") DIAMETER	NO. 22 US

   - 2.3 CONSTRUCTION
     LONGITUDINAL SEAMS SHALL BE MADE WITH PITTSBURGH LOCK OR BUTTON PUNCH SEAMS IN ALL SIZES. ALL DUCTWORK SHALL BE CROSS BROKEN OR BEADED 300mm (12") O.C. FOR RIGIDITY. DUCTS SHALL HAVE PLAIN "S" SLIPS ON THE LONG SIDES, & DRIVE CLEATS ON THE SHORT SIDES, FOLDED OVER TO PREVENT AIR LEAKAGE. MINIMUM END JOINT SPACING IS 3 METERS (10 FEET). ALL BENDS OR ELBOWS SHALL BE MADE WITH RADIUS OF NOT LESS THAN 1-1/2 TIMES THE WIDTH OF THE DUCT. WHERE IT IS NOT POSSIBLE, TURNING VANES SHALL BE USED. VANES SHALL BE OF SINGLE VANE CONSTRUCTION WITH 1-1/2 SPACE UP TO 600mm (24") WIDTH AND 80mm (3-1/4") SPACING OVER 600mm (24").
   - 2.4 DAMPERS INSIDE DUCTWORK TO BE SUITABLY REINFORCED TO PREVENT VIBRATION.
   - 2.5 GRILLES & REGISTERS TO BE ALUMINUM GRID, SIMILAR TO E.H.PRICE, COMPLETE WITH OFF-WHITE BORDER FRAME.
   - 2.6 EXHAUST AIR GRILLE TO BE ALUMINUM, LOUVRED PATTERN EACH COMPLETE WITH FRAME.
   - 2.7 HANGERS
     DUCTWORK SHALL HAVE SUBSTANTIAL HANGERS ATTACHED TO THE STRUCTURE WITH CONCRETE INSERTS TO SECURE THE DUCTS IN PLACE AND PREVENT VIBRATION. NO CADDY CLIPS OR PLUMBER'S TAPE PERMITTED FOR HANGING DUCTS. HORIZONTAL DUCTWORK UP TO 750mm (30") WIDE OR 600mm (24") DIA. SHALL BE SUPPORTED BY GALVANIZED 25mm (1"), #16 GAUGE OR HEAVIER HANGER PLACED NOT OVER 1.8 m APART, WITH ENDS TURNED UNDER THE DUCT. SECURE TO DUCT WITH SHEET METAL SCREWS, TWOPER SIDE AND ONE IN BOTTOM.
   - 2.8 BALANCING DAMPERS
     PROVIDE BALANCING DAMPER IN DUCTWORK WHERE SHOWN AND WHERE REQUIRED FOR PROPER ADJUSTMENT OR AIR QUANTITIES. OPEN AND CLOSED POSITIONS MUST BE CLEARLY MARKED.
     - 2.8.1 SPLITTER DAMPERS SHALL BE AIRFOIL SHAPE DOUBLE THICKNESS OF GAUGE HEAVIER THAN DUCT WITH LOCKING QUADRANT ON EXTERIOR OF DUCT.
     - 2.8.2 SINGLE BLADE ROUND BUTTERFLY U.S. 20 GA THICK WITH LOCKING QUADRANT.
   - 2.9 ACOUSTIC TREATMENT
     INTERNALLY SOUND LINE ALL S.A. & R.A. DUCTS CONNECTED TO MECHANICAL UNITS AS NOTED WITH 25mm (1") FIBERGLASS, RIGID-COATED ACOUSTIC DUCT INSULATION. ADHERE THE LINING OF THE INTERIOR SIDES OF DUCTWORK WITH A MINIMUM OF 75% COVERAGE OF AN APPROVED COLD WATERPROOF ADHESIVE.
     IN ADDITION, USE MECHANICAL FASTENERS, MECHANICAL PINS, ADHERED CLIPS OR ADHERED NYLON PINS. DO NOT DRILL OR PUNCH HOLES THROUGH THE DUCTWORK.
     INSULATION SHALL BE APPLIED WITH ALL JOINTS AND VOIDS SHALL BE FILLED WITH AN APPROVED WATERPROOF, FIRE-RETARDANT MASTIC, WATERPROOF MASTIC SHALL BE APPLIED OVER ALL ANCHORS WHERE THEY PIERCE THE COVERING, PROTECT LEADING AND TRAILING EDGE OF LINER WITH A 25mm (1") METAL STRIP.
     THE DUCTWORK MUST BE ENLARGED IN THESE AREAS TO MAINTAIN THE SAME CROSS-SECTIONAL AREA SHOWN ON THE PLANS.
     INTERNALLY SOUND LINE S.A. AND RETURN AIR DUCTS FROM EACH UNIT OPENING (INCLUDING EXHAUST FANS) UP TO MINIMUM 6100 MM (20 FT)
   - 2.10 DUCT SEALANT
     SEAL ALL DUCT FITTINGS WITH APPROVED DUCT SEALANT. DUCT SEALANT MANUFACTURER SHALL BE DURO DYNE OR APPROVED EQUAL.
   - 2.11 PLUMBING PIPING
     ALL SEWAGE PIPING SHALL BE PVC PIPES M15 SYSTEM OR APPROVED EQUAL. ALL HOT AND COLD WATER SUPPLY PIPES SHALL BE PVC WIRSEBO OR APPROVED EQUAL.

EQUIPMENT

1.0 HORIZONTAL FAN COILS WITH HOT WATER HEATING COILS.
FURNISH AND INSTALL CARRIER OR APPROVED EQUAL HIGH EFFICIENCY FAN COIL UNITS AS SHOWN AND NOTED. EACH UNIT SHALL BE MPV ELITE SERIES TWO STAGE HEAT AND VARIABLE SPEED BLOWER. EACH FAN COIL SHALL BE CSA AND ULS APPROVED. REFER TO SCHEDULE FOR MODEL NUMBERS, CAPACITIES AND ACCESSORIES. EACH UNIT SHALL HAVE CONCENTRIC KITS FOR INSTALLATION THRU THE WALL, PROGRAMMABLE THERMOSTAT, FILTER SECTION, 50 MM THICK FILTER, COOLING, HEATING COILS AND ADJUSTABLE SPEED FAN MOTOR.

PROVIDE FOR EACH FAN COIL SYSTEM REMOTE AIR COOLED CONDENSING UNIT AND INSTALL ON THE ROOF ABOVE CORRIDOR AREA. COORDINATE ROUTING OF REFRIGERANT LINES AND CONTROL WIRES ON SITE.
COORDINATE LOCATION OF EACH UNIT ON SITE AND INSTALL IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS. MAINTAIN REQUIRED SERVICE ACCESS AND FILTER REPLACEMENT.
PROVIDE CONDENSATE DRAIN FROM EACH UNIT TO NEAREST FLOOR DRAIN C/W TRAP. CONNECT EACH HEAT RECOVERY UNIT TO RESPECTIVE FURNAE AS SHOWN AND NOTED ON DRAWINGS.

2.0 FAN EQUIPMENT
1. PROVIDE NUTONE, REVERSOMATIC AND GREENHECK EXHAUST FANS WHERE SHOWN AND NOTED ON DRAWING. REFER TO SCHEDULE ON DRAWINGS FOR
2. ~~BATH~~ FAN SHALL BE CSA APPROVED AND COMPLETE WITH ROOF CURB, BACK DRAFT DAMPER, SCREEN, CENTRIFUGAL FAN WHEEL, MOTOR ACCESS AND STARTER.
3. PROVIDE FOR EACH FAN DISCONNECT AND STARTER. POWER WIRING BY DIVISION 16.

SCOPE OF WORK:

1. WORK INCLUDES SUPPLY AND INSTALLATION OF ALL LABOUR AND MATERIAL NECESSARY FOR VARIOUS SYSTEMS AS REQUIRED TO MAKE FINISHED INSTALLATIONS.
2. MECHANICAL DRAWINGS INDICATE GENERAL LOCATION OF ROUTE OF PIPES AND DUCTS WHICH ARE TO BE INSTALLED. WHERE REQUIRED WORK IS NOT SHOWN OR ONLY SHOWN DIAGRAMMATIC ALLY, INSTALL SAME TO CONSERVE HEAD ROOM AND INTERFPERE AS LITTLE AS POSSIBLE WITH FREE USE OF SPACE THROUGH WHICH THEY PASS.
3. THE WORK SHALL INCLUDE, BUT SHALL NOT NECESSARILY BE LIMITED TO THE SUPPLY AND INSTALLATION OF THE FOLLOWING:
   - .1 INSTALLATION OF HVAC SYSTEM AND KITCHEN EXHAUST SYSTEM C/W ALL ASSOCIATED DUCTWORK, PIPING, VENTS, ETC.
   - .2 INSTALLATION OF PLUMBING SYSTEM.
   - .4 GRILLES, REGISTERS, DUCTS AND ASSOCIATED FITTINGS.
   - .5 PROPANE PIPING.
   - .6 EXHAUST FANS AND ASSOCIATED DUCTWORK.
   - .7 TEMPERATURE CONTROLS.
   - .8 AIR BALANCING.
4. THIS CONTRACTOR SHALL EXAMINE THE SITE AS WELL AS ALL DRAWINGS AND SPECIFICATIONS RELATIVE TO THIS WORK. NO ALLOWANCE WILL BE MADE FOR FAILURE TO MAKE SUCH EXAMINATION AND TO TAKE INTO ACCOUNT ALL ASPECTS, WHICH MAY GOVERN THE EXECUTION AND COMPLETION OF THE WORK.
5. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING STRUCTURE FROM DAMAGE WHEN CARRYING OUT THE WORK. CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR ANY CLAIMS OR DAMAGES IN RELATION TO WORK OF THIS CONTRACT.
6. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED FOR ALL TRADES INCLUDING HOLES AND OPENINGS FOR EQUIPMENT ENTRY AND EXIT, CONDUITS, PIPING, VENTS, LOUVRES AND DUCT SYSTEMS.
7. THIS CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL CHARGES FOR INSPECTION, CONNECTIONS AND TESTS REQUIRED BY AUTHORITIES AS DEEMED NECESSARY BY THE ENGINEER.
8. ABIDE BY ONTARIO BUILDING CODE, SMACNA STANDARDS, ASHRAE STANDARDS AND ALL LOCAL BY LAWS RELATING TO THIS INSTALLATION. OBTAIN AND PAY FOR PERMIT, FEES, INSPECTIONS AND DEPOSITS REQUIRED BY ALL AUTHORITIES. SUBMIT ALL REQUIRED PRINTS AND FORMS AS REQUIRED BY AUTHORITIES.
9. UPON COMPLETION OF WORK, TEST AND BALANCE SYSTEM TO AIRFLOW CAPACITIES NOTED. SUBMIT AIR BALANCING REPORT AND AS-BUILT DRAWINGS.
10. GENERAL NOTES LISTED ON DRAWINGS SHALL FORM PART OF THE SPECIFICATIONS.

GAS PIPING

1. PROVIDE GAS PIPING AS REQUIRED FOR EACH MECHANICAL UNITS AND D.H.W. HEATERS. THE PIPING SHALL BE BLACK STEEL PIPE, SCHEDULE #40, WITH 1034 KPA BLACK MALLEABLE IRON FITTINGS. INSTALL PIPING TO CONFIRM TO CGA #B149 AND PROVINCIAL GAS UTILIZATION CODE BOTH AMENDED TO DATE. PROVIDE PRV WHERE SHOWN.
2. GAS VALVES SHALL BE CGA OR ULC APPROVED SELF LUBRICATED BALLVALVE OR LUBRICATED PLUG WITH GREASING NIPPLE, EACH WITH MANUAL LEVER HANDLE. PROVIDE VALVE AT EACH UNIT CONNECTION INCLUDING EQUIPMENT SUPPLIED BY OWNER OR ANOTHER SECTION.
3. PRESSURE REDUCING VALVES SHALL BE CGA AND ULC APPROVED PRESSURE REDUCING VALVES EACH WITH PRE-SET PRESSURE SETTING TO DECREASE GAS PRESSURE FROM 15 PSI DOWN TO PRESSURE AS REQUIRED BY THE ROOF TOP UNITS.
4. PROVIDE FLEXIBLE HOSE CONNECTOR ON NEW ROOF TOP HVAC UNIT BETWEEN EACH ROOF TOP UNIT AND ITS SHUTOFF VALVE. FLEXIBLE CONNECTIONS SHALL BR FLEXIBLE OR EQUAL #FLT, 200 SERIES C.G.A. APPROVED STAINLESS STEEL BRAIDED HOSE CONNECTOR RATED FOR OUTDOOR USE. MINIMUM LENGTH SHALL BE 450mm (18").
5. INSTALL NEW GAS PIPES ON EXISTING ROOF AS REQUIRED. PROVIDE PIPE SUPPORTS AT 2.5m (8') INTERVALS. VERIFY EXACT ROOTING OF GAS PIPING ON SITE BEFORE PROCEEDING.
6. PRESSURE TEST GAS PIPE WITH NOT LESS THAN 345 KPA AIR FOR AT LEAST 24 HOURS WITHOUT DECREASE IN PRESSURE. CHECK EACH JOINT WITHSOAP AND WATER SOLUTION DURING TESTING PERIOD. DISCONNECT SYSTEM DURING TESTS. DO NOT USE OXYGEN FOR TESTING.
7. CLEAN AND PRIME AND PAINT GAS PIPING (YELLOW COLOUR) WITH MINIMUM TWO COATS OF PAINT.

AIR BALANCE

1. BALANCE AND ADJUST EACH HVAC SYSTEM, SYSTEM VOLUMES SHALL BE WITHIN 5% OF REQUIREMENTS SHOWN. ADJUST AND SET BALANCE DAMPERS, FANS AND DRIVES TO GIVE THE SPECIFIED VOLUMES AT ALL OUTLETS. THE BALANCING OF AIR SYSTEMS IS TO BE DONE BY A BALANCING FIRM SPECIALIZING IN THIS WORK. CLEAN DUCT SYSTEMS, FILTERS, ETC. BEFORE TESTING IS DONE.
2. PROVIDE TWO BOUND COPIES OF THE AIR BALANCING REPORT. AIR BALANCING SHALL BE DONE BY A PROFESSIONAL TESTING AND BALANCING FIRM. AIR QUANTITIES AT EACH OUTLET SHALL BE AS INDICATED IN THE DRAWINGS, THIS REPORT SHALL SHOW THE QUANTITIES VELOCITIES AND AREA OF EACH OUTLET, TYPE AND MODEL NUMBER OF FANS AND MOTOR INSTALLED, ACTUAL AIR DELIVERED BY THE FAN WITH TOTAL STATIC PRESSURE AND VOLTAGE DRAWN BY THE MOTORS. ADJUST AND RETEST TO THE SATISFACTION OF THE PROJECT COORDINATOR PROVIDE ANOTHER ADDITIONAL COPY OF THE AIR BALANCE REPORT TO THE MECHANICAL CONSULTANT.
3. UPON COMPLETION OF THE AIR BALANCE AND SUBMITTAL OF THE AIR BALANCE MAINTENANCE MANUAL REPORT TO THE OWNER, THIS CONTRACTOR SHALL PROVIDE, IF CALLED FOR, A SPOT CHECK ON THE SYSTEM WITH THE CONSULTANT. IF ACTUAL AIR QUANTITIES DO NOT AGREE WITH THE AIR BALANCE REPORT DATA, THIS CONTRACTOR MAY BE CALLED UPON TO COMPLETELY REBALANCE THE SYSTEM UNTIL SATISFACTORY IS ACHIEVED AND ACCEPTED BY THE CONSULTANT.

GRILLES, REGISTERS AND DIFFUSERS

1. PROVIDE WHERE SHOWN E.H. PRICE LIMITED GRILLES, REGISTERS AND DIFFUSERS. EACH UNIT SHALL BE FACTORY PRE-PAINTED AND COMPLETE WITH INTEGRAL BALANCING DAMPER.
2. PROVIDE EACH EXHAUST AND RETURN AIR GRILLE C/W BALANCING DAMPER.
3. COORDINATE EXACT LOCATION OF EACH GRILLE, REGISTER AND DIFFUSER ON SITE WITH LIGHTING AND REFLECTED CEILING PLAN. PROVIDE FLEXIBLE AIR DUCT AS SHOWN.
4. CUTTING AND PATCHING FOR GRILLES AND REGISTERS SHALL BE DONE BY THIS DIVISION.

INSULATION

1. DUCT INSULATION SHALL HAVE A DENSITY OF 1 1/2 LB/CU.FT. INSULATION TO BE APPLIED USING 100mm (4") STRIPS OF INSULATION BONDING ADHESIVE 200mm (8") O.C. TAPE. ALL JOINTS USING MINIMUM 75mm (3") WIDE RFFRK TAPE.
2. EXTERNALLY INSULATE ALL DUCTS 1.8 m (6'-0") MINIMUM FROM ROOF AND EXTERIOR WALLS.
3. INSULATE ENTIRE S.A. & R.A. DUCTS CONNECTED TO UNITS WITH MINIMUM 25 mm (1") THICK INSULATION.
4. INSULATE ALL DOMESTIC HOT AND COLD WATER LINES WITH MINIMUM 25 mm (1") THICK PIPE INSULATION. RECOVER EXPOSED PIPES WITH PVC JACKETING.
5. INSULATE ALL EXPOSED SANITARY PIPES AND CONCEALED HORIZONTAL SANITARY PIPES WITH 25mm THICK INSULATION AND COVER WITH PVC JACKETS.
6. INSULATE ALL EXPOSED PIPES IN GARAGE LEVEL WITH MINIMUM 50 mm (2") THICK RIGID INSULATION C/W ELECTRIC HEAT TRACING AND COVER WITH PVC JACKETS.
7. SEAL ALL DUCT JOINTS AND INSULATE ALL DUCTS IN GARAGE AND ATTIC SPACE USING MINIMUM R12 FOIL FACED INSULATION OR EQUAL.

AIR & HYDRONIC TESTING AND BALANCING

1. BALANCE AND ADJUST EACH HVAC SYSTEM, FURNACE AND EXHAUST SYSTEMS. EACH SYSTEM VOLUMES SHALL BE WITHIN 5% OF REQUIREMENTS SHOWN. ADJUST AND SET BALANCE DAMPERS, FANS AND DRIVES TO GIVE THE SPECIFIED VOLUMES AT ALL OUTLETS. THE BALANCING OF AIR SYSTEMS IS TO BE DONE BY A BALANCING FIRM SPECIALIZING IN THIS WORK. CLEAN DUCT SYSTEMS, FILTERS, ETC., BEFORE TESTING IS DONE.
2. PROVIDE TWO BOUND COPIES OF THE AIR BALANCING REPORT. AIR BALANCING SHALL BE DONE BY A PROFESSIONAL BEFORE TESTING IS DONE. TESTING AND BALANCING FIRM. AIR QUANTITIES AT EACH OUTLET SHALL BE AS INDICATED IN THE DRAWINGS. THIS REPORT SHALL SHOW THE QUANTITIES VELOCITIES AND AREA OF EACH OUTLET, TYPE AND MODEL. NUMBER OF FANS AND MOTOR INSTALLED, ACTUAL AIR DELIVERED BY THE FAN WITH TOTAL STATIC PRESSURE AND VOLTAGE DRAWN BY THE MOTORS ADJUST AND RETEST TO THE SATISFACTION OF THE PROJECT COORDINATOR PROVIDE ADDITIONAL COPY OF THE AIR BALANCE REPORT TO THE MECHANICAL CONSULTANT.
3. UPON COMPLETION OF THE AIR BALANCE AND SUBMITTAL OF THE AIR BALANCE MAINTENANCE MANUAL REPORT TO THE OWNER. THIS CONTRACTOR SHALL PROVIDE, IF CALLED FOR, A SPOT CHECK ON THE SYSTEM WITH THE CONSULTANT. IF ACTUAL AIR QUANTITIES DO NOT AGREE WITH THE AIR BALANCE REPORT DATA, THIS CONTRACTOR MAY BE CALLED UPON TO COMPLETELY REBALANCE THE SYSTEM UNTIL SATISFACTORY IS ACHIEVED AND ACCEPTED BY THE CONSULTANT.

PLUMBING SPECIFICATION

ALL ITEMS OF SPECIFICATION RELATED TO THE SERVICES INDICATED ON THE DRAWINGS SHALL APPLY TO THE PROJECT. THE BIDDING REQUIREMENTS AND GENERAL REQUIREMENTS (APPLICABLE SECTIONS) OF ARCHITECTURAL SPECIFICATIONS SHALL ALSO GOVERN THE WORK OF THIS DIVISION.

1. PROVIDE AND COMPLETE PLUMBING, DRAINAGE, VENT AND WATER PRIMER PIPING TO ALL PLUMBING FIXTURES AS INDICATED ON THE DRAWINGS FOR COMPLETE AND PROPER OPERATION OF THE FIXTURES.
2. ALL PIPING SHALL CONFORM TO PART 7 OF THE ONTARIO BUILDING CODE (LATEST EDITION).
3. THE FOLLOWING PIPING SPECIFICATION IS GENERAL AND COVERS VARIOUS TYPES OF SERVICES AND SHALL BE APPLICABLE TO THE SERVICES INDICATED ON THE DRAWINGS. MATERIALS SHALL BE NEW AND FREE FROM DEFECTS.
4. DOMESTIC HOT AND COLD WATER:
   - (A) ABOVE GROUND:
     SIZES UP TO AND INCLUDING 50mm - TYPE 'M' (CSA #HC 7.6) COPPER TUBING WITH SOLDERED PRESSURE FITTINGS.
   - (B) UNDER GROUND:
     SIZE 75mm AND LESS SHALL BE TYPE 'K' COPPER TUBING, SOFT TEMPER WITH WROUGHT COPPER SOLDER FITTINGS.
     SIZE 100mm AND LARGER SHALL BE CEMENT LINED DUCTILE IRON ANSI CLASS 52 WITH TYTON JOINTS TO THE STANDARDS AND SPECIFICATIONS OF THE REGIONAL MUNICIPALITY. ALL DUCTILE WATERMAINS HAVING DIRECT CONTACT WITH SURROUNDING SOIL ARE TO BE INSULATED WITH POLYETHLENE ENCASEMENT TO ANSI A2.15.
   - (C) WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE CLASS 150 PER A.W.W.A. C-900-75 WITH MECHANICAL JOINTS FOR UNDERGROUND WATERMAINS 100 MM AND LARGER.
5. SANITARY DRAINS AND VENTS:
   - (A) ABOVE GROUND:
     SIZE UP TO AND INCLUDING 50mm - TYPE DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS.
     SIZE 75 MM AND OVER - CLASS 4000 CAST IRON MJ PIPES AND FITTINGS, (OR HUB & SPIGOT) OR (DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS).
   - (B) UNDER GROUND:
     SIZE UP TO AND INCLUDING 40mm - TYPE "K" COPPER TUBING WITH CAST SOLDER FITTINGS.
     SIZE 50 MM AND LARGER - CLASS 4000 CAST IRON "MJ" PIPES AND FITTINGS (OR HUB & SPIGOT).
     STACK & FIXTURE FOOTINGS SHALL BE CAST IRON OR COPPER AS REQUIRED.
   - (C) WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE AN ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE PER C.S.A. B181.2 (SDR 35 AND 28) COMPLETE WITH RING TIGHT JOINTS AND GASKETED FITTINGS PER C.S.A. B182.1.
6. STORM DRAINS
   - (A) ABOVE GROUND:
     SIZE 75mm AND OVER - CLASS 4000 CAST IRON MJ PIPES AND FITTINGS, (OR HUB & SPIGOT) OR (DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS).
   - (B) BELOW GROUND:
     POLYVINYL CHLORIDE (P.V.C.) PIPE PER C.S.A. B181.2 (SDR 35 AND 28) COMPLETE WITH RING TIGHT JOINTS AND GASKETED FITTINGS PER C.S.A. B182.1.
7. VALVES:
   - (A) PROVIDE VALVES OF TYPES NOTED WHERE SHOWN OR DIRECTED. WATER VALVES SHALL BE OF CRANE, MCAVITY, JENKINS OR TOYO (INDUSTRIAL CLASS) MANUFACTURE (UNLESS OTHERWISE NOTED), ALL BRASS SOLDER JOINT UP TO AND INCLUDING 75 MM SIZE AND IBBM FLANGED OVER 75 MM SIZE.
   - (B) -OFF VALVES UP TO AND INCLUDING 75 MM SIZE: GATE VALVES TO 200# SHUT WATER PATTERN, RISING STEM, WEDGE DISC TYPE.
   - (C) SHUT-OFF VALVES OVER 75 MM SIZE: CRANE MCAVITY, JENKINS, DEMCO, DEZURIK, OR KEYSTONE LUG WAFER BUTTERFLY VALVES RATED AT 150# WP, 135 TIGHT SHUT-OFF WITH EPT LINER MANUAL LOCKABLE LEVER OPERATOR, 3 BEARINGS, BRONZE OR ALUM BRONZE DISK, 18-8 S.S. SHAFT AND CONFORMING TO MSS STANDARD SP-67 FOR DEADEND SERVICE WITH ONE FLANGE DISCONNECTED.
   - (D) THROTTLING OR BY -PASS VALVES: GLOBE TYPE, RISING STEM WITH RENEWABLE DISC, 200# WATER PATTERN OR BUTTERFLY VALVE AS FOR SHUT -OFF VALVES BUT FITTED WITH MANUAL GEAR OPERATOR.
   - (E) CHECK VALVES: SWING CHECK TYPE WITH REGRIND FEATURE, 200# WATER PATTERN, INSTALL IN HORIZONTAL POSITION ONLY.
8. CLEANOUTS
   - (A) MAKE EACH CLEANOUT FULL SIZE OF DRAIN UP TO AND INCLUDING 100 MM AND 100 MM SIZE FOR DRAINS OVER 100 MM.
   - (B) MAKE EACH CLEANOUT ACCESSIBLE AND WHEREVER NECESSARY, EXTEND BRANCH CONNECTIONS TO FINISH SURFACES OF WALLS AND FLOORS AND FIT WITH CLEANOUT COVER AND ACCESS DOOR.
   - (C) CRETE FLOOR WITH ZURN ZN1602 ADJUSTABLE FIT EACH FLOOR CLEANOUT IN CON FLOOR CLEANOUT WITH ROUND SCORIATED NICKLE BRONZE COVER. ALL CLEANOUTS MUST HAVE INSIDE GASKETTED C.I. PLUG. (ACCEPTABLE ALTERNATE MANUFACTURERS: ZURN, ANCON, JOSAM AND ENPOCO).
9. FLOOR DRAINS
   - (A) FLOOR DRAINS IN GENERAL SHALL BE CAST IRON WITH ADJUSTABLE STRAINERS, FLANGE AND WEEPHOLES AND SHALL BE INSTALLED WITH DEEP SEAL TRAP AND TRAP PRIMING FITTINGS. FLOOR DRAINS SHALL BE SIMILAR TO MANUFACTURER CATALOGUE NUMBERS LISTED.
     DRAIN F.D. ZURN ZN211 LACQUERED CAST IRON FLOOR DRAIN WITH DEEP SUMP, SEEPAGE FLANGE AND INTEGRAL CLAMPING DEVICE, ADJUSTABLE COLLAR AND NICKEL BRONZE ROUND STRAINER.
     FUNNEL FLOOR DRAIN F.F.D. ZURN #ZN-211-BF LACQUERED CAST IRON BODY WITH POLISHED NICKEL BRONZE ADJUSTABLE STRAINER HEAD AND GRATE, AND OVAL FUNNEL.
10. ROOF DRAIN
    - (A) PROVIDE ROOF DRAINS OF TYPES NOTED, WHERE SHOWN OR DIRECTED, COMPLETE WITH STRAINER AND ACCESSORIES NOTED OR REQUIRED TO COMPLETE INSTALLATION. ROOF DRAINS SHALL BE SIMILAR TO MANUFACTURER CATALOGUE NUMBERS LISTED.
    - (B) CONTROL FLOW ROOF DRAIN: ZURN ZCF-130 OR EQUAL, "CONTROL-FLO" ROOF DRAINS OF SIZES NOTED. DRAINS SHALL HAVE CAST IRON BODY, BOTTOM OR SIDE OUTLET AS REQUIRED, MULTI-WEIR BARRIER WITH INTEGRAL CLAMPING DEVICE AND GRAVEL GUARD.
    - (C) ACCEPTABLE ALTERNATE SUPPLIERS: ANCON, JOSAM AND ENPOCO.
11. INSULATION
    - (A) PROVIDE INSULATION OF PIPING AS DESCRIBED OR NOTED. INSULATION, JACKETS ADHESIVES AND MATERIALS SHALL BE INCOMBUSTIBLE, IN COMPLIANCE WITH ONTARIO BUILDING CODE: INSTALLED TO MANUFACTURER'S STANDARDS, AND TO APPROVAL. WHEAT PASTES SHALL NOT BE USED. PROVIDE SUITABLE APPROVED OPENINGS IN INSULATION FOR INSPECTION OUTLETS, EQUIPMENT NAMEPLATES AND OTHER FITTINGS.
    - (B) INSULATE HORIZONTAL CAST IRON RAIN WATER LEADERS AND FITTINGS HOT WATER, HOT WATER RECIRCULATION, AND COLD WATER PIPING, BOTH EXPOSED AND CONCEALED WITH 13 MM THICK GLASS FIBRE PIPE COVERING (MAXIMUM 0.23 CONDUCTIVITY AT -4.5 C MEAN) WITH FACTORY APPLIED FIRE RESISTIVE VAPOUR BARRIER OF NOT MORE THAN 0.02 PERM RATING WITH SEALED LAPPED JOINTS. BURIED PIPING NEED NOT BE INSULATED.

VERIFICATION OF EXISTING CONDITIONS

VISIT SITE AND REVIEW EXISTING CONDITIONS THAT WILL AFFECT THE INSTALLATION OF THE PROPOSED SYSTEMS. THE ARCHITECT AND ENGINEER ARE NOT RESPONSIBLE FOR CONDITIONS DISCOVERED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED ON THESE DRAWINGS. THE CONTRACTOR, UPON MAKING SUCH A DISCOVERY, SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY FOR GUIDANCE ON HOW TO PROCEED.

LEGEND

	PIPES TURNING DOWN
	PIPES TURNING UP
G	GAS LINE
CO / FCO	SANITARY CLEANOUT
WHB	NON FREEZE HOSE BIBB
	SHUT OFF GATE VALVE
	ONE WAY CHECK VALVE
	GLOBE VALVE
	PIPE UNION
FD	FLOOR DRAIN
FHC	FIRE EXTINGUISHER & CABINET
R.W.L.	RAIN WATER LEADER
RD	ROOF DRAIN
PRV	PRESSURE REDUCE VALVE
T	THERMOSTAT
	DIRECTION OF AIR FLOW
	SUPPLY AIR DUCT SECTION
	RETURN AIR DUCT SECTION
BD	DUCT BALANCING DAMPER
SP	DUCT SPLITTER DAMPER
S.A.	SUPPLY AIR
R.A.	RETURN AIR
U/C	DOOR UNDER CUT (3/4")

NOTES:

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2	28 MAY 2020	ISSUED FOR PERMIT.

TRUE NORTH | PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
28 MAY 2020
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1979 DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO:
-

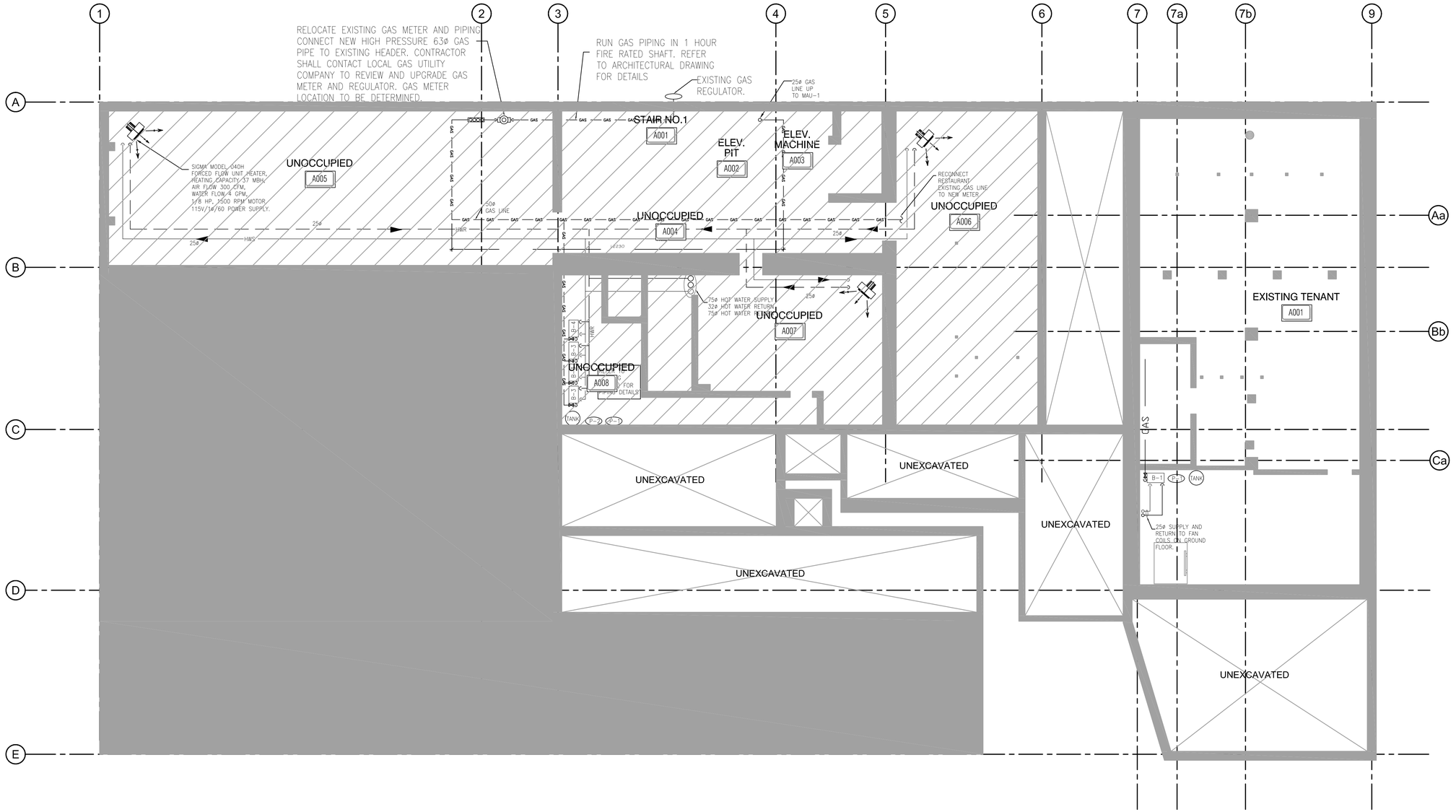
JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SPECIFICATION

SCALE:	DATE:	DRAWN:	CHECK:
1:75	08.22.18	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
4 / 4	M-1.3		0



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JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

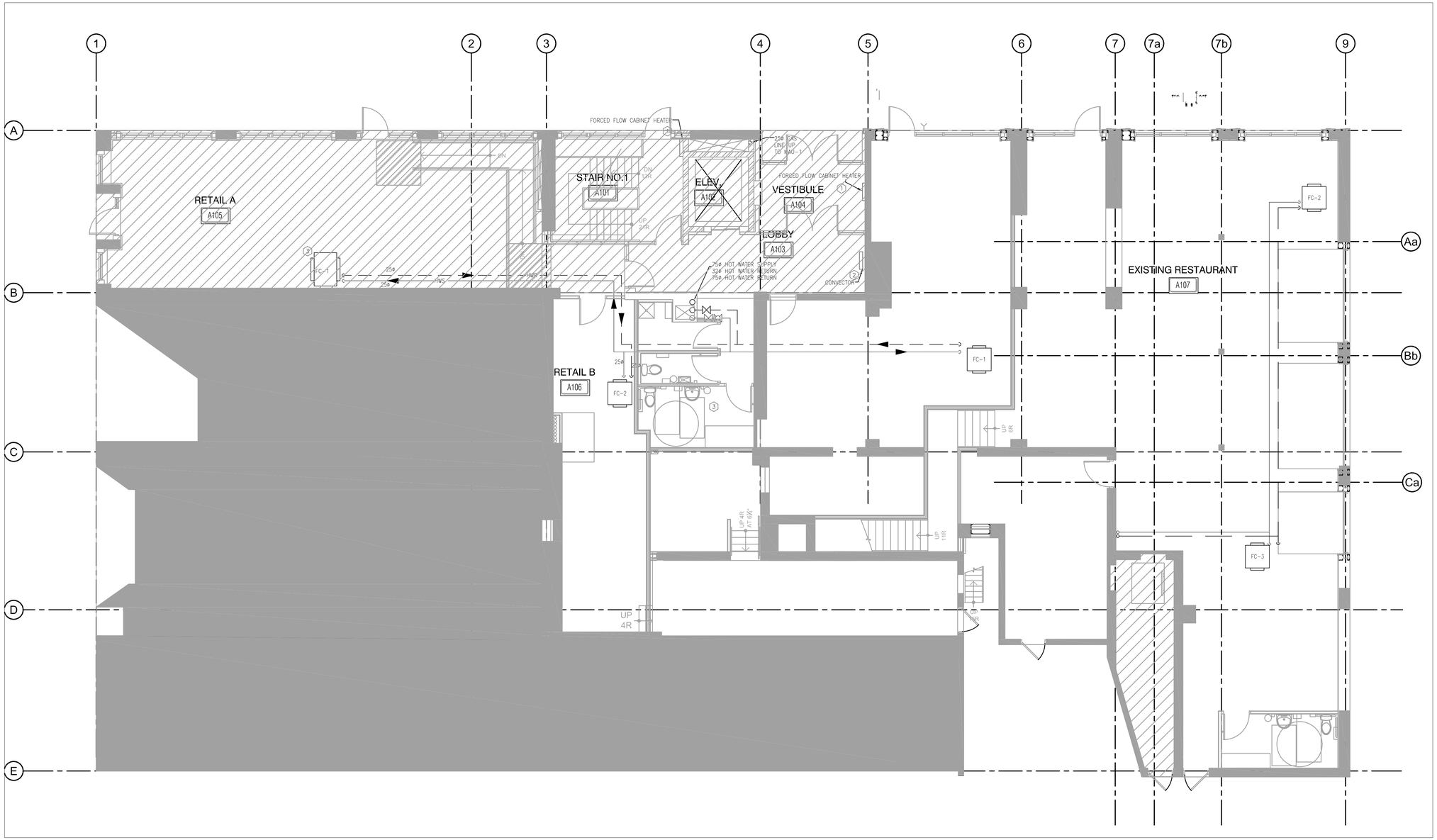
ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
BASEMENT HYDRONIC PIPING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
1 / 5	M-2.0		0

DRAWING NOTES:

1. FORCED FLOW CABINET HEATER. CHROMALOX OR EQUAL 10.0 KW, 347V/1/60. PROVIDE EACH UNIT COMPLETE WITH INTEGRAL ON/OFF SWITCH AND THERMOSTAT. SWITCH AND THERMOSTAT SHALL BE RECESSED WITH LOCKABLE ACCESS DOOR. UNIT TO BE PURCHASED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR
2. SIGMA OR EQUAL CONVECTOR HEATING UNIT FOR MAIN LOBBY, SURFACE MOUNTED C/W INTEGRAL THERMOSTAT CONTROL VALVE. HEATING CAPACITY 5.0 KW, 347V/1/60
3. INSTALL A FIRE STOPPING AT ALL PIPES GOING THOUGH FIRE RATED WALL



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CLIENT PROJECT NO:
-

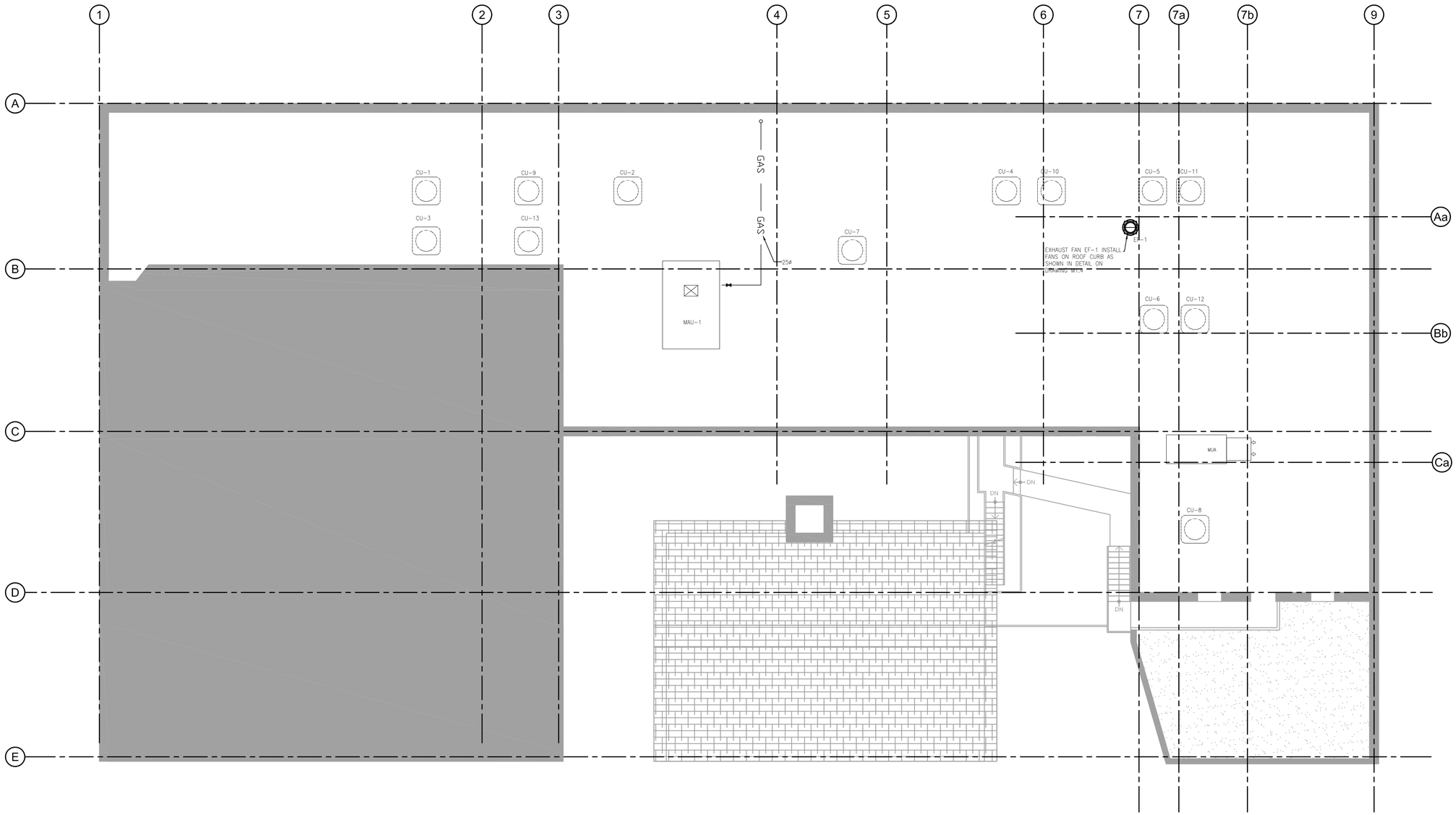
JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
GROUND FLOOR HYDRONIC PIPING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
2 / 5	M-2.1		0



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-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
ROOF PLAN GAS PIPING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
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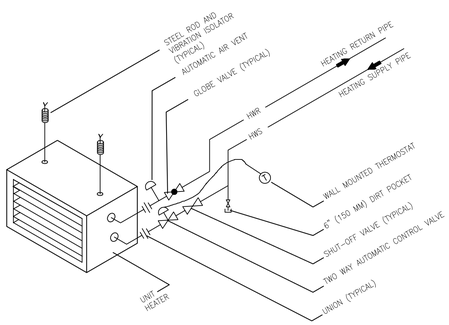
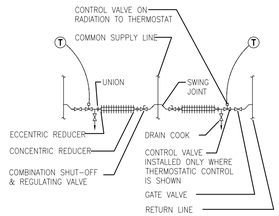
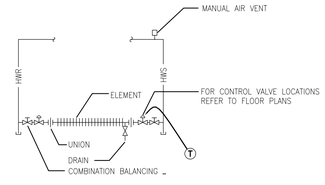


UNIT HEATER PIPING SCHEMATIC
N.T.S.

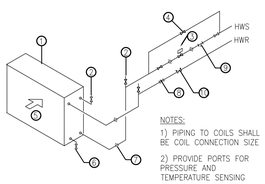


TYP. RADIATION HOOK UP WITH COMMON SUPPLY LINE
N.T.S.



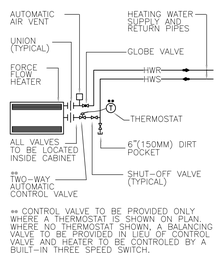
1. ALL CONVECTORS SHALL BE PROVIDED WITH A MODULATING CONTROL VALVE. VALVE SHALL FIT WITHIN THE CONVECTOR CABINET.
2. WHEN CONVECTORS ARE FED FROM BELOW, PROVIDE A MANUAL VENT AT THE ELBOW PRIOR TO THE WATER VALVE ON THE HWS PIPE.

RADIATION AND CONVECTOR HOOK UP DETAIL
N.T.S.



① HOT WATER COIL BANK
② AUTOMATIC AIR VENT
③ MODULATING CONTROL VALVE
④ BY-PASS VALVE
⑤ DIRECTION OF AIR FLOW
⑥ 3/4" DRAIN VALVE
⑦ UNION
⑧ SHUT-OFF VALVE
⑨ STRAINER
⑩ CBV-1 BALANCING VALVE

HOT WATER COIL PIPING DETAIL
N.T.S.



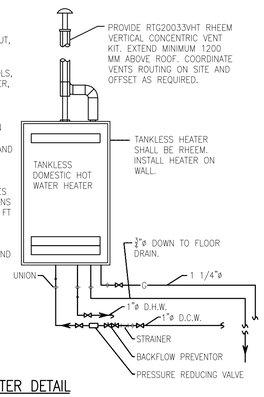
** CONTROL VALVE TO BE PROVIDED ONLY WHERE A THERMOSTAT IS SHOWN ON PLAN. WHERE NO THERMOSTAT SHOWN, A BALANCING VALVE TO BE PROVIDED IN LIEU OF CONTROL VALVE AND HEATER TO BE CONTROLED BY A BUILT-IN THREE SPEED SWITCH.

FORCED FLOW CABINET HEATER PIPING SCHEMATIC
N.T.S

DOMESTIC HOT WATER HEATER:
RHEEM OR APPROVED EQUAL MODEL RTGH-95DVLN-1, 11-199 CFH GAS INPUT, ¾"ø WATER CONNECTION, ¾"ø GAS CONNECTION, 3.3 GPM AT 100°F TEMPERATURE RISE, ELECTRONIC CONTROLS, OVERHEAT LIMIT SWITCH, BUILT IN BURNER, STAINLESS STEEL VENT, CONTROL PANEL AND FREEZE PROTECTION. PROVIDE UNIT C/W STAINLESS STEEL CONCENTRIC VENT/COMBUSTION AIR FOR INSTALLATION THRU ROOF, WALL MOUNTING BRACKETS, PRESSURE/TEMPERATURE RELIEF VALVE AND ALL REQUIRED FITTINGS & DEVICES TO COMPLETE SYSTEM INSTALLATION.

INSTALL VENT AND COMBUSTION AIR PIPES PER MANUFACTURER WRITTEN INSTRUCTIONS AND TERMINATE FLUE VENT MINIMUM 10 FT FROM ANY INTAKE OPENING.

INSTALL HEATER IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS AND PROVIDE START UP AND COMMISSIONING REPORT.



DOMESTIC WATER HEATER DETAIL
N.T.S.

HOT WATER HEATING BOILERS SCHEDULE

NO:	MAKE AND MODEL	GAS INPUT (CFH)	HEATING OUTPUT (MBD)	WATER FLOW (GPM)	TEMP. RISE (°C)	WATER P.D. (m)	FLUE VENT (DIA)	ELECTRICAL V/ø/Hz	REMARKS
B-1	NORITZ MODEL NCC1991	199	189	4.2-9.2	16.7	1.25	3"	115/1/60	PROVIDE EACH BOILER COMPLETE WITH INTEGRAL PUMP, FLUE VENT, COMBUSTION AIR INTAKE, ELECTRONIC TEMPERATURE CONTROL, STAINLESS STEEL BURNER, PUMP RELAY WITH DELAY SWITCH, DOWN STREAM TEST VALVE, HOT SURFACE IGNITION, MANUAL RESET, FLOW SWITCH, BAS TERMINAL STRIP, COMBUSTION AIR FILTER, ALARM BELL, GAS PRESSURE SWITCH WITH MANUAL RESET AND OUTDOOR/INDOOR CONTROLLER. PROVIDE TWO (2) YEAR FULL PART AND MATERIAL WARRANTY AND 5 YEAR HEAT EXCHANGER WARRANTY. PROVIDE INDOOR/OUTDOOR CONTROLLER WITH REQUIRED SENSORS. WIRE ALL SENSORS AND DEVICES TO COMPLETE OPERATION OF HEATING SYSTEM.

CIRCULATING PUMP SCHEDULE

NO:	SYSTEM SERVED AND PUMP LABEL	MODEL	INLET (mm)	FLOW (GPM)	HEAD (M)	MOTOR HP	MOTOR RPM	MOTOR V/ø/Hz	REMARKS
P-1	CIRCULATING PUMP NO. P-1 HEATING SYSTEM	4380-2x2x8	50	109	10.6 (35 ft)	3	1800	208/3/60	PROVIDE PUMP C/W SUCTION GUIDE, TRIPLE DUTY VALVE AND BALANCING VALVE.

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PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
SCHEDULE & DETAILS

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
6 / 7	M-2.4		0

LEGEND

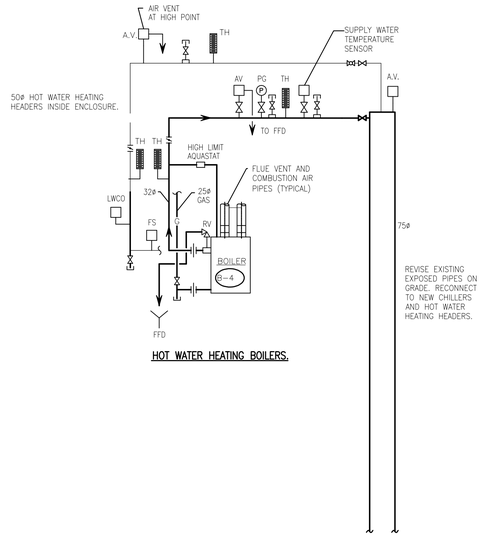
FS	FLOW SWITCH
RV	RELIEF VALVE
LWCO	LOW WATER CUT OFF
TH	THERMOMETER
A.V.	AUTOMATIC AIR VENT
FFD	FUNNEL FLOOR DRAIN
PG	PRESSURE GAUGE
	FLEXIBLE CONNECTION

GAS PIPING NOTES:

1. UPGRADE EXISTING GAS METER (IF APPLICABLE) WITH LOCAL GAS COMPANY.
2. GAS PIPES SHALL BE SUPPLIED, INSTALLED AND TESTED AN ACCORDANCE TO GAS CODE B52.
3. DO NOT INSTALL FITTINGS IN CONCEALED SPACES THAT ARE NOT VENTED.
4. PROVIDE EXPANSION LOOP FOR EACH STRAIGHT RUN IN EXCESS OF 30 METERS LONG.
5. ALL CORE DRILLING OF GAS PIPES PENETRATING FLOORS AND WALLS SHALL BE COORDINATED ON SITE.
6. GAS PIPES 3"ø AND LARGER SHALL BE WELDED.
7. GAS PIPES SHALL NOT BE INSTALLED IN CONCEALED SPACES.
8. PROVIDE FIRE SEAL AROUND EACH PIPE PENETRATION AT RATED FLOOR OR WALL EQUAL TO THE FIRE RESISTANCE RATING OF THE FLOOR OR WALL BEING PENETRATED.

PIPE SIZING CHART

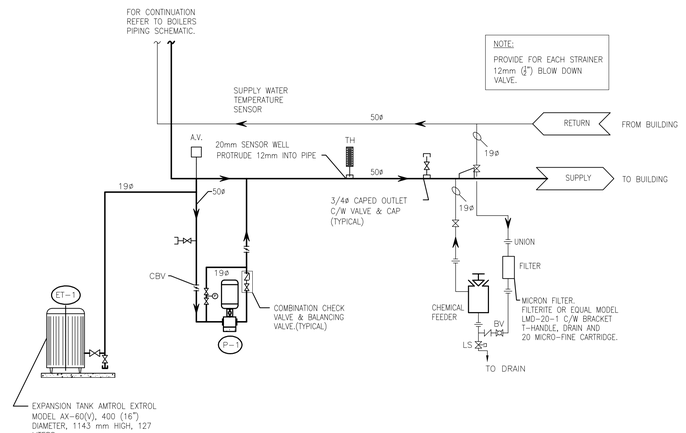
MBH	GPM	PIPE SIZE		CAPACITY	
		INCH	MM.	KW.	L/S
13.8	1.38	1/2	13	0-4.0	0.09
30.0	3.0	3/4	19	4.1-8.8	0.19
58.0	5.8	1	25	8.9-17.0	0.37
118.0	11.8	1 1/4	32	17.1-34.6	0.74
180.0	18.0	1 1/2	38	34.7-52.8	1.13
350.0	35.0	2	50	52.9-102.6	2.20
570.0	57.0	2 1/2	63	102.7-167.2	3.59
1040	104.0	3	75	167.3-304.9	6.55
1500	150.0	3 1/2	88	305.0-439.8	9.45



HOT WATER HEATING BOILERS.

PIPING SCHEMATIC (BASEMENT)

NTS



PIPING SCHEMATIC (BASEMENT)

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TITLE:
HYDRONIC SYSTEM
PIPING DETAIL

SCALE:	DATE:	DRAWN:	CHECK:
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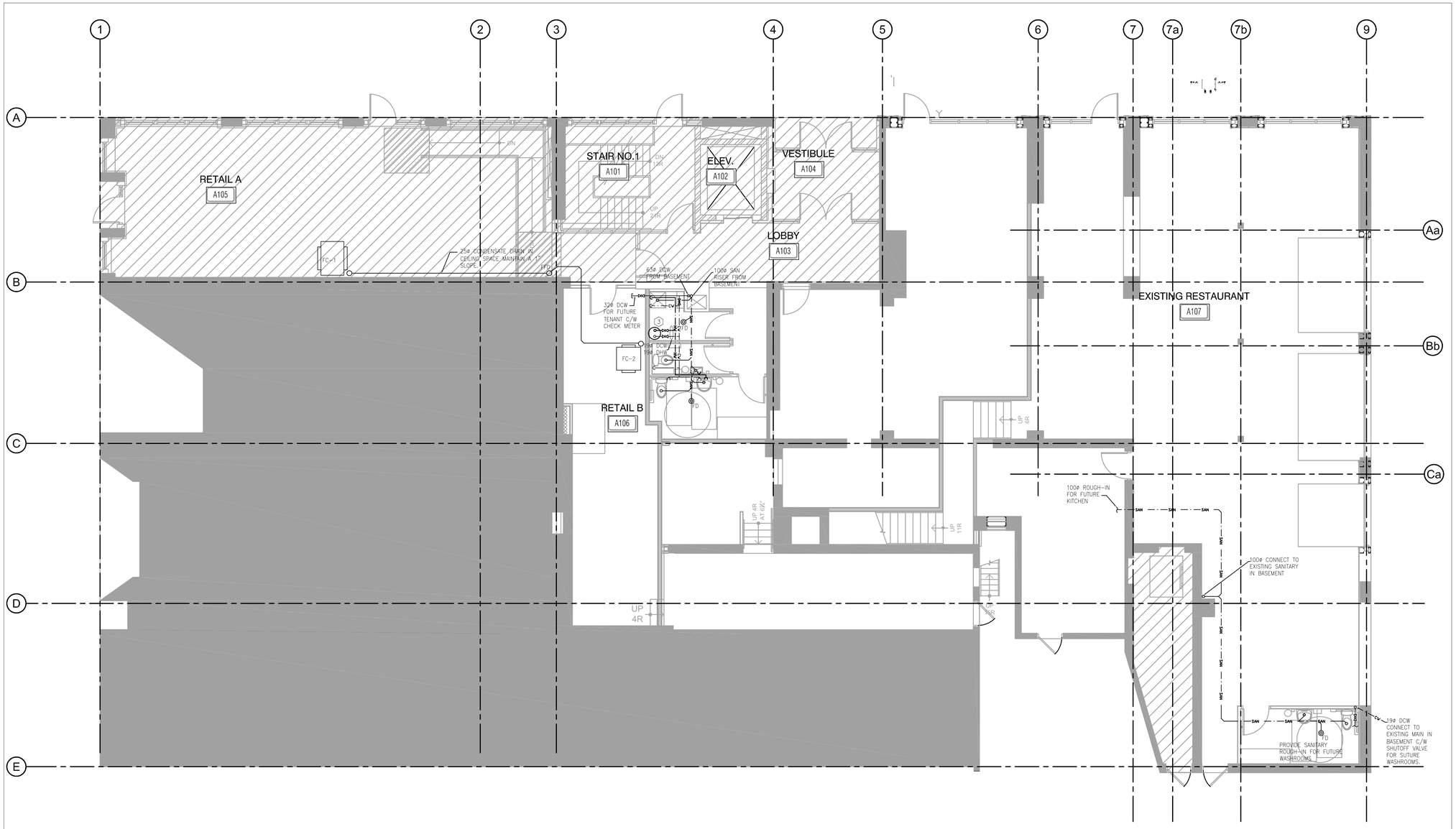
SHEET NO:	DRAWING NO:		REVISE:
5 / 5	M-2.4		0

PLUMBING DRAWING NOTES:

1. 100ø SANITARY IN CEILING SPACE BELOW. VERIFY ROUTING ON SITE AND COORDINATE CONNECTION POINT TO EXISTING IN BASEMENT BEFORE COMMENCING WORK. ALL CUTTING, TRENCHING, EXCAVATION, BACKFILLING AND CONCRETE FINISH BY THIS CONTRACTOR. MECHANICAL CONTRACTOR RESPONSIBLE FOR SCOPPING THE MAIN SANITARY LINE TO VERIFY THE SIZE AND CONDITION.
2. CONNECT 38ø DOMESTIC COLD WATER TO EXISTING IN CEILING SPACE C/W WITH ISOLATING BALL VALVE. INSULATE ALL NEW AND EXISTING PIPES. RECOVER INSULATION WITH PVC COVERING.
3. PROVIDE ELECTRIC DOMESTIC HOT WATER HEATER IN CEILING SPACE. MOUNT UNIT ON WALL C/W DRAIN PAN, DISCONNECT, T/P VALVE, AND ISOLATING VALVE (SEE DETAIL) UNIT SHALL BE BRADFORD WHITE OR EQUAL MODEL 12A-4W-3, 12 GAL, 3KW, 208/1/60, 700mm HEIGHT, 450mm DIA., 12GPH RECOVERY AT 100F TEMPERATURE RISE. UNIT SHALL BE ULC, CSA AND ASME APPROVED.
4. 12.5 C.W. DOWN TO WATER CLOSET C/W SHUT OFF VALVE.
5. PROVIDE FLOOR DRAIN C/W TRAP SEAL PRIMER. CONNECT TO NEAREST MAIN. COORDINATE EXACT LOCATION AND ROUTING ON SITE.
6. REVIEW AND CONFIRM WATER METER REQUIREMENTS AND LOCATION.
7. PROVIDE CONDENSATE DRAIN FROM FAN COIL UNIT TO NEAREST FLOOR DRAIN C/W TRAP.
8. COORDINATE ON SITE LOCATION OF GAS METERS AND ARRANGE WITH GAS COMPANY TO PROVIDE METERS AND REGULATORS AS REQUIRED.
9. INSULATE ALL HOT AND COLD DOMESTIC WATER LINES.
10. COORDINATE ON SITE LOCATION OF EACH PLUMBING VENT PIPE O AVOID ANY MECHANICAL EQUIPMENT ON THE ROOF.



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PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1929 DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO: -

JOB NO: 20180725 - 04

PROJECT NAME: AMERICAN HOTEL PHASE 2

ADDRESS: 1 QUEEN ST N, KITCHENER

TITLE: FIRST FLOOR PLUMBING

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S
SHEET NO:	DRAWING NO:		REVISE:
1/ 2	M-3.0		0

PLUMBING FIXTURE SCHEDULE

TYPE	SPECIFICATION	TRIM AND FAUCET	TRAPS & SUPPLIES EQUAL TO	CW	HW	WASTE	VENT	REMARKS
WC-1	AMERICAN STANDARD MODEL MADERA ELONGATED 410 HIGH, # 2234.015 FLOOR MOUNTED DUAL FLUSH VALVE, VITREOUS CHINA, LOW CONSUMPTION, ELONGATED SYPHON JET FLUSH, & 279 x 330 WATER SURFACE.	CENTOCO #500CC SEAT ELONGATED HEAVY DUTY WHITE PLASTIC OPEN FRONT WITH COVER, CHECK HINGE AND STAINLESS STEEL POSTS, WASHERS AND NUTS.	50 mm FULLY GLAZED BALL PASS INTERNAL TRAPWAY, 1.3 GAL (6 L) FLUSH, 38 mm TOP SPUD AND BOLT CAPS. PROVIDE FLOOR FLANGE, FLANGE ALL BRASS BOLTS & GASKET.	1 1/4"		3"	1 1/2"	PROVIDE EACH WATER CLOSET UNIT COMPLETE WITH TANK COVER LOCKING DEVICE, WHITE HEAVY DUTY, OPEN FRONT TOILET SEAT, HEAVY DUTY TOILET SEAT, SOLID PLASTIC, OPEN FRONT WITH LID. SEAT SHALL HAVE ANTIMICROBIAL PROTECTION.
LAV-1	BASIN – DROP IN COUNTER AMERICAN STANDARD AQUALYN BASIN #0475.047 CENTRE HOLE ONLY, 521 x 445 x 187 mm DEEP, VITREOUS CHINA, FLAT SLAB, LOW FRONT LIP FRONT OVERFLOW, SEAL RIMMING WITH SEALANT.	POWERS P44-PTL1-LF4CTM ELECTRONIC SENSOR PLUMBING LAVATORY SUPPLY, HEAVY CAST BRASS CHROME PLATED, HIGH RISE SPOUT WITH INTEGRAL SENSOR ANTI-SPIN COVER PLATE. ST. STEEL BREADED SUPPLY, SLOW CLOSING LATCHING COIL AND FILTER.	MAXIMUM TEMPERATURE LIMIT STOP, 2 GPM FLOW AERATOR, C.P. 'P' TRAP 1.5 MM GAUGE AND ESCUTCHEONS.	1/2"	1/2"	1 1/4"	1 1/4"	PROVIDE EACH UNIT COMPLETE WITH McGUIRE #8872C, P-TRAP, McGUIRE#155A OPEN GRID DRAIN, WATTS#WCA-411-CA-481 BASIN CARRIER, LAWLER #TMM-1070, BELOW DECK MECHANICAL WATER MIXING VALVE, INTEGRAL CHECKS.
WC-2 (HANDICAP)	WATER CLOSET AMERICAN STANDARD #2467.016, BARRIER FREE 'CADET RIGHT HEIGHT ELONGATED PESSURE-ASSISTED', 419 mm HIGH TOILET, VITREOUS CHINA, FLOOR MOUNTED, 6 LPF (1.6 US GPF), ELONGATED BOWL, PRESSURE ASSISTED SIPHON JET FLUSH ACTION, FULLY GLAZED 54 MM TRAPWAY, CLOSED COUPLING FLUSHOMETER TANK, TWO BOLTS CAPS, METAL CHROME TRIP LEVER AND EVERCLEAN SURFACE.	CENTOCO #500CC SEAT ELONGATED HEAVY DUTY WHITE PLASTIC OPEN FRONT WITH COVER, CHECK HINGE AND STAINLESS STEEL POSTS, WASHERS AND NUTS.	50 mm FULLY GLAZED BALL PASS INTERNAL TRAPWAY, 1.3 GAL (6 L) FLUSH, 38 mm TOP SPUD AND BOLT CAPS. PROVIDE FLOOR FLANGE, FLANGE ALL BRASS BOLTS & GASKET.	1 1/4"		3"	1 1/2"	PROVIDE EACH WATER CLOSET UNIT COMPLETE WITH TANK COVER LOCKING DEVICE, WHITE HEAVY DUTY, OPEN FRONT TOILET SEAT, HEAVY DUTY TOILET SEAT, SOLID PLASTIC, OPEN FRONT WITH LID. SEAT SHALL HAVE ANTIMICROBIAL PROTECTION.
LAV-2 (HANDICAP)	SEMI-PEDESTALAL: AMERICAN STANDARD #0954.004EC.020/0059.020EC.020 'MURRO WITH EVERCLEAN' BASIN, WHITE FINISH	CHICAGO FAUCETS#802-317ABCP, '802 SERIES', TWO HANDLES FAUCET. PROVIDE McGUIRE #LFH17OBVRB, POLISHED BRASS FAUCET SUPPLIES, FLEXIBLE CHROME SUPPLIES WITH SCREW STOPS.	MAXIMUM TEMPERATURE LIMIT STOP, 2 GPM FLOW AERATOR, C.P. 'P' TRAP 1.5 MM GAUGE AND ESCUTCHEONS.	1/2"	1/2"	1 1/4"	1 1/4"	PROVIDE EACH UNIT COMPLETE WITH McGUIRE #8872C, P-TRAP, McGUIRE#155A OPEN GRID DRAIN, WATTS#WCA-411-CA-481 BASIN CARRIER, LAWLER #TMM-1070, BELOW DECK MECHANICAL WATER MIXING VALVE, INTEGRAL CHECKS.
SH	SHOWER (BARRIER FREE): BRADLEY OR EQUAL MODEL HN300 IN WALL SHOWER, 5.7 L/MIN., EQUAL FLOW PRESSURE BALANCING VALVE, THERMOSTATIC MIXING, STANDARD SHOWER HEAD FIXED, HAND HELD SHOWER HEAD WITH 1500 MM FLEXIBLE HOSE, 600 MM METAL SLIDE BAR, VACUUM BREAKER, STOPS IN EACH SUPPLY, LEVEL HANDLE CONTROL, LOCKABLE BALL JOINT, BACK PLATE, AND ALL REQUIRED ACCESSORIES TO COMPLETE INSTALLATION.			1/2"	1/2"	3"	2"	COORDINATE WITH GENERAL CONTRACTOR TO DETERMINE SHOWER FLOOR DRAIN LOCATION BASED ON FLOOR SLOPE, FLOOR FINISH AND EXISTING CONDITIONS. INSTALL DRAIN FLUSH WITH FINISHED FLOOR LEVEL. PROVIDE POWERS OR EQUAL HYDROGUARD SERIES 480 THERMOSTATIC TEMPERING VALVE IN CEILING SPACE TO LIMIT HOT WATER TEMPERATURE (48°C) ADJUSTABLE. INSTALL PIPES COMPLETE WITH ISOLATING VALVES. INSULATE ALL PIPES.

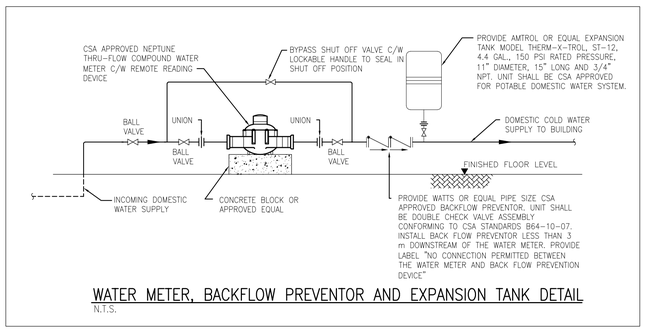
PLUMBING FIXTURES NOTES:

EACH PLUMBING FIXTURE SHALL BE LOW WATER CONSUMPTION IN ACCORDANCE TO ONTARIO BUILDING CODE. PROVIDE ALL REQUIRED FITTINGS, TRAPS, VALVES, FAUCETS AND ESCUTCHEONS TO COMPLETE EACH FIXTURE INSTALLATION. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BEFORE ORDERING ANY FIXTURE.

PLUMBING GENERAL NOTES

ALL ITEMS OF SPECIFICATION RELATED TO THE SERVICES INDICATED ON THE DRAWINGS SHALL APPLY TO THE PROJECT. THE BIDDING REQUIREMENTS AND GENERAL REQUIREMENTS (APPLICABLE SECTIONS) OF ARCHITECTURAL SPECIFICATIONS SHALL ALSO GOVERN THE WORK OF THIS DIVISION.

1. PROVIDE AND COMPLETE PLUMBING, DRAINAGE, VENT AND WATER PRIMER PIPING TO ALL PLUMBING FIXTURES AS INDICATED ON THE DRAWINGS FOR COMPLETE AND PROPER OPERATION OF THE FIXTURES.
2. ALL PIPING SHALL CONFORM TO PART 7 OF THE ONTARIO BUILDING CODE (LATEST EDITION).
3. THE FOLLOWING PIPING SPECIFICATION IS GENERAL AND COVERS VARIOUS TYPES OF SERVICES AND SHALL BE APPLICABLE TO THE SERVICES INDICATED ON THE DRAWINGS. MATERIALS SHALL BE NEW AND FREE FROM DEFECTS.
4. DOMESTIC HOT AND COLD WATER:
   - 4.1. ABOVE GROUND: SIZES UP TO AND INCLUDING 50mm – TYPE 'M' (CSA #HC 7.6) COPPER TUBING WITH SOLDERED PRESSURE FITTINGS.
   - 4.2. UNDER GROUND: SIZE 75mm AND LESS SHALL BE TYPE 'K' COPPER TUBING, SOFT TEMPER WITH WROUGHT COPPER SOLDER FITTINGS.
   - 4.3. SIZE 100mm AND LARGER SHALL BE CEMENT LINED DUCTILE IRON ANSI CLASS 52 WITH TYTON JOINTS TO THE STANDARDS AND SPECIFICATIONS OF THE REGIONAL MUNICIPALITY. ALL DUCTILE WATERMAINS HAVING DIRECT CONTACT WITH SURROUNDING SOIL ARE TO BE INSULATED WITH POLYETHLENE ENCASEMENT TO ANSI A2.15.
   - 4.4. WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE CLASS 150 PER A.W.W.A. C-900-75 WITH MECHANICAL JOINTS FOR UNDERGROUND WATERMAINS 100 MM AND LARGER.
5. SANITARY DRAINS AND VENTS:
   - 5.1. ABOVE GROUND: SIZE UP TO AND INCLUDING 50mm – TYPE DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS.
   - 5.2. SIZE 75 MM AND OVER – CLASS 4000 CAST IRON MJ PIPES AND FITTINGS, (OR HUB & SPIGOT) OR (DWV COPPER TUBING WITH CAST BRASS ALLOY DRAINAGE FITTINGS).
   - 5.3. UNDER GROUND: SIZE UP TO AND INCLUDING 40mm – TYPE 'K' COPPER TUBING WITH CAST SOLDER FITTINGS.
   - 5.4. SIZE 50 MM AND LARGER – CLASS 4000 CAST IRON 'MJ' PIPES AND FITTINGS (OR HUB & SPIGOT).
   - 5.5. STACK & FIXTURE FOOTINGS SHALL BE CAST IRON OR COPPER AS REQUIRED.
   - 5.6. WHERE ACCEPTED BY LOCAL AUTHORITIES PROVIDE AN ALTERNATE PRICE FOR POLYVINYL CHLORIDE (P.V.C.) PIPE PER C.S.A. B181.2 (SDR 35 AND 28) COMPLETE WITH RING TIGHT JOINTS AND GASKETED FITTINGS PER C.S.A. B182.1.
6. VALVES:
   - 6.1. PROVIDE VALVES OF TYPES NOTED WHERE SHOWN OR DIRECTED. WATER VALVES SHALL BE OF CRANE, MCAVITY, JENKINS OR TOYO (INDUSTRIAL CLASS) MANUFACTURE (UNLESS OTHERWISE NOTED), ALL BRASS SOLDER JOINT UP TO AND INCLUDING 75 MM SIZE AND IBBM FLANGED OVER 75 MM SIZE.
   - 6.2. SHUT-OFF VALVES UP TO AND INCLUDING 75 MM SIZE: GATE VALVES TO 200# SHUT WATER PATTERN, RISING STEM, WEDGE DISC TYPE.
   - 6.3. SHUT-OFF VALVES OVER 75 MM SIZE: CRANE MCAVITY, JENKINS, DEMCO, DEZURIK, OR KEYSTONE LUG WAFER BUTTERFLY VALVES RATED AT 150# WP. 135 TIGHT SHUT-OFF WITH EPT LINER MANUAL LOCKABLE LEVER OPERATOR, 3 BEARINGS, BRONZE OR ALUM BRONZE DISK, 18-8 S.S. SHAFT AND CONFORMING TO MSS STANDARD SP-67 FOR DEADEND SERVICE WITH ONE FLANGE DISCONNECTED.
   - 6.4. THROTTLING OR BY -PASS VALVES: GLOBE TYPE, RISING STEM WITH RENEWABLE DISC, 200# WATER PATTERN OR BUTTERFLY VALVE AS FOR SHUT -OFF VALVES BUT FITTED WITH MANUAL GEAR OPERATOR.
   - 6.5. CHECK VALVES: SWING CHECK TYPE WITH REGRIND FEATURE, 200# WATER PATTERN, INSTALL IN HORIZONTAL POSITION ONLY.
7. CLEANOUTS
   - 7.1. MAKE EACH CLEANOUT FULL SIZE OF DRAIN UP TO AND INCLUDING 100 MM AND 100 MM SIZE FOR DRAINS OVER 100 MM.
   - 7.2. MAKE EACH CLEANOUT ACCESSIBLE AND WHEREVER NECESSARY, EXTEND BRANCH CONNECTIONS TO FINISH SURFACES OF WALLS AND FLOORS AND FIT WITH CLEANOUT COVER AND ACCESS DOOR.
   - 7.3. CRETE FLOOR WITH ZURN ZN1602 ADJUSTABLE FIT EACH FLOOR CLEANOUT IN CON FLOOR CLEANOUT WITH ROUND SCORIATED NICKLE BRONZE COVER. ALL CLEANOUTS MUST HAVE INSIDE GASKETTED C.I. PLUG. (ACCEPTABLE ALTERNATE MANUFACTURERS: ZURN, ANCON, JOSAM AND ENPOCO).
8. FLOOR DRAINS
   - 8.1. FLOOR DRAINS IN GENERAL SHALL BE CAST IRON WITH ADJUSTABLE STRAINERS, FLANGE AND WEEPHOLES AND SHALL BE INSTALLED WITH DEEP SEAL TRAP AND TRAP PRIMING FITTINGS. FLOOR DRAINS SHALL BE SIMILAR TO MANUFACTURER CATALOGUE NUMBERS LISTED.
   - 8.2. DRAIN F.D. ZURN ZN211 LACQUERED CAST IRON FLOOR DRAIN WITH DEEP SUMP, SEEPAGE FLANGE AND INTEGRAL CLAMPING DEVICE, ADJUSTABLE COLLAR AND NICKEL BRONZE ROUND STRAINER.
   - 8.3. FUNNEL FLOOR DRAIN F.F.D. ZURN #ZN-211-BF LACQUERED CAST IRON BODY WITH POLISHED NICKEL BRONZE ADJUSTABLE STRAINER HEAD AND GRATE, AND OVAL FUNNEL.
9. INSULATION
   - 9.1. PROVIDE INSULATION OF PIPING AS DESCRIBED OR NOTED. INSULATION, JACKETS ADHESIVES AND MATERIALS SHALL BE INCOMBUSTIBLE, IN COMPLIANCE WITH ONTARIO BUILDING CODE: INSTALLED TO MANUFACTURER'S STANDARDS, AND TO APPROVAL. WHEAT PASTES SHALL NOT BE USED. PROVIDE SUITABLE APPROVED OPENINGS IN INSULATION FOR INSPECTION OUTLETS, EQUIPMENT NAMEPLATES AND OTHER FITTINGS.
   - 9.2. INSULATE HORIZONTAL CAST IRON RAIN WATER LEADERS AND FITTINGS HOT WATER, HOT WATER RECIRCULATION, AND COLD WATER PIPING, BOTH EXPOSED AND CONCEALED WITH 13mm (1/2") THICK GLASS FIBRE PIPE COVERING (MAXIMUM 0.23 CONDUCTIVITY AT -4.5 °C MEAN) WITH FACTORY APPLIED FIRE RESISTIVE VAPOUR BARRIER OF NOT MORE THAN 0.02 PERM RATING WITH SEALED LAPPED JOINTS. BURIED PIPING NEED NOT BE INSULATED.
10. LINES, GRADES AND SLOPES
    - 10.1. INSTALL ALL PIPING IN CONFORMITY WITH ELEVATIONS AND GRADES INDICATED. PIPING DRAINS AND SEWERS SHALL SLOPE AS INDICATED. SLOPE BETWEEN ELEVATIONS SHALL BE EVEN AND CONSISTENT. WHEN SLOPE IS NOT INDICATED, THE SLOPE SHALL BE:
      - 10.1.1. DRAINAGE PIPING, 2% O N 75 MM SIZE AND LESS, 1% ON 100 MM SIZE AND LARGER.
      - 10.1.2. WATER LINES, PITCH TO LOW POINT FOR COMPLETE DRAINAGE.
    - 10.2. VERIFY ALL FIELD SERVICE CONDITIONS, TO ENSURE THAT DRAINAGE RUNS CAN MEET THE SIZES AND INVERTS OF THE SITE SERVICES TERMINATED OUTSIDE THE BUILDING AS SHOWN ON MECHANICAL SITE PLAN. NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCY DISCOVERED. IF PIPE INVERT DISCREPANCIES ARE NOT CLARIFIED AT AN EARLY STAGE, NO EXTRA SHALL BE PAID AT A LATER ROUTING OF DRAINS. PROVIDE REQUIR ED ADAPTORS TO MAKE DATE FOR RE CONNECTIONS BETWEEN SANITARY AND STORM DRAINAGE SYSTEMS AND SITE SERVICE TERMINATIONS.
11. EXCAVATION AND BACKFILL
    - 11. CONTRACTOR SHALL DO ALL EXCAVATING AND BACKFILLING REQUIRED FOR THE INSTALLATION OF HIS PIPES, SEWERS, WATER SERVICE ETC., PIPES SHALL BE SUPPORTED ON A SOLID BED OF UNDISTURBED SOIL WITH DEPRESSIONS FOR HUBS. IF CONDITIONS ARE SUCH THAT TRENCHES MUST BE LEFT OPEN FOR AN EXTENDED TIME, THEN THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND PROTECTION.
    - 11.1. INCLUDE ALL NECESSARY DEWATERING.
    - 11.2. KEEP GROUND FROM FREEZING.
    - 11.3. PROVIDE 100 MM BED OF 19 MM SCREENED STONE AND BACKFILL OVER PIPES WITH 150 MM OF CLEAN, SHARP SAND, CAREFULLY AND PROPERLY PACKED TO THE ARCHITECT'S/OWNERS SATISFACTION.
    - 11.4. BALANCE OF BACKFILL SHALL BE WITH GRANULAR 'B' BACKFILL. EXCAVATED MATERIAL MAY BE USED FOR BACKFILL WHERE APPROVED BY ARCHITECT.

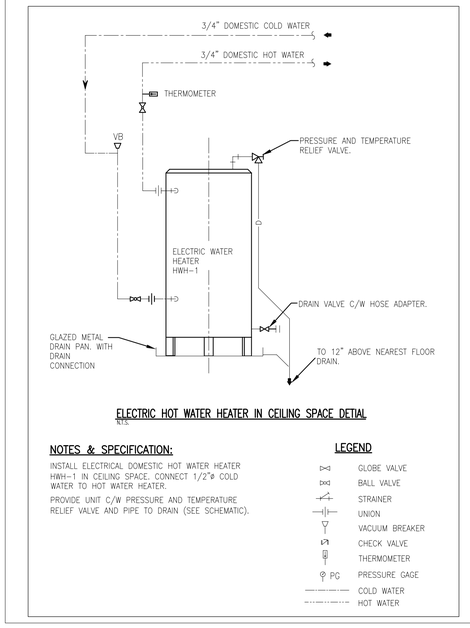


WATER METER, BACKFLOW PREVENTOR AND EXPANSION TANK DETAIL
N.T.S.

MINIMUM FIXTURE CONNECTION SCHEDULE

MARK	HW	CW	WASTE	REMARKS
LAV-1	1/2"	1/2"	2"	HAND SINK
WC-1	–	1/2"	2"	WATER CLOSET
UR-1	–	1/2"	2"	URINALS
FD, FFD	–	3/8"	3"	PRIMER FOR FLOOR & FUNNEL FLOOR DRAIN

FLOOR DRAIN, HUB DRAIN AND FUNNEL FLOOR DRAINS SHALL BE PRIMED, TRAPPED AND VENTED. FLOOR DRAIN SHALL BE FLUSH WITH FLOOR LEVEL. COORDINATE/VERIFY TYPE AND LOCATION OF EACH PLUMBING FIXTURE WITH LATEST ARCHITECTURAL DRAWINGS. PROVIDE TRAP SEAL PRIMER FOR EACH FLOOR DRAIN. INSTALL EACH PLUMBING FIXTURE COMPLETE WITH ISOLATING VALVES.



ELECTRIC HOT WATER HEATER IN CEILING SPACE DETIAL
N.T.S.

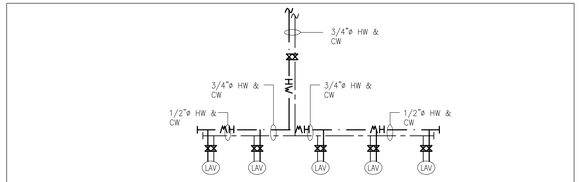
NOTES & SPECIFICATION:

INSTALL ELECTRICAL DOMESTIC HOT WATER HEATER HWH-1 IN CEILING SPACE. CONNECT 1/2"ø COLD WATER TO HOT WATER HEATER.

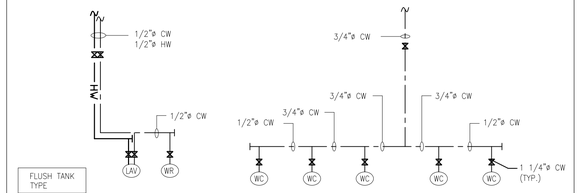
PROVIDE UNIT C/W PRESSURE AND TEMPERATURE RELIEF VALVE AND PIPE TO DRAIN (SEE SCHEMATIC).

LEGEND

- GLOBE VALVE
- BALL VALVE
- STRAINER
- UNION
- VACUUM BREAKER
- CHECK VALVE
- THERMOMETER
- PG PRESSURE GAGE
- COLD WATER
- HOT WATER



PIPING FOR LAV'S
N.T.S.



FLUSH TANK TYPE

PIPING FOR LAV'S & WR'S
N.T.S.

TYPICAL PIPING FOR TOILETS
N.T.S.

FLUSH VALVE TYPE

TYPICAL SCHEMATIC DIAGRAMS FOR WASHROOMS IN GROUND FLOOR
N.T.S.

NOTES:

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TRUE NORTH	PROJECT NORTH

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SCHEDULES , DETAILS & SPECIFICATIONS

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GENERAL SPRINKLER NOTES:

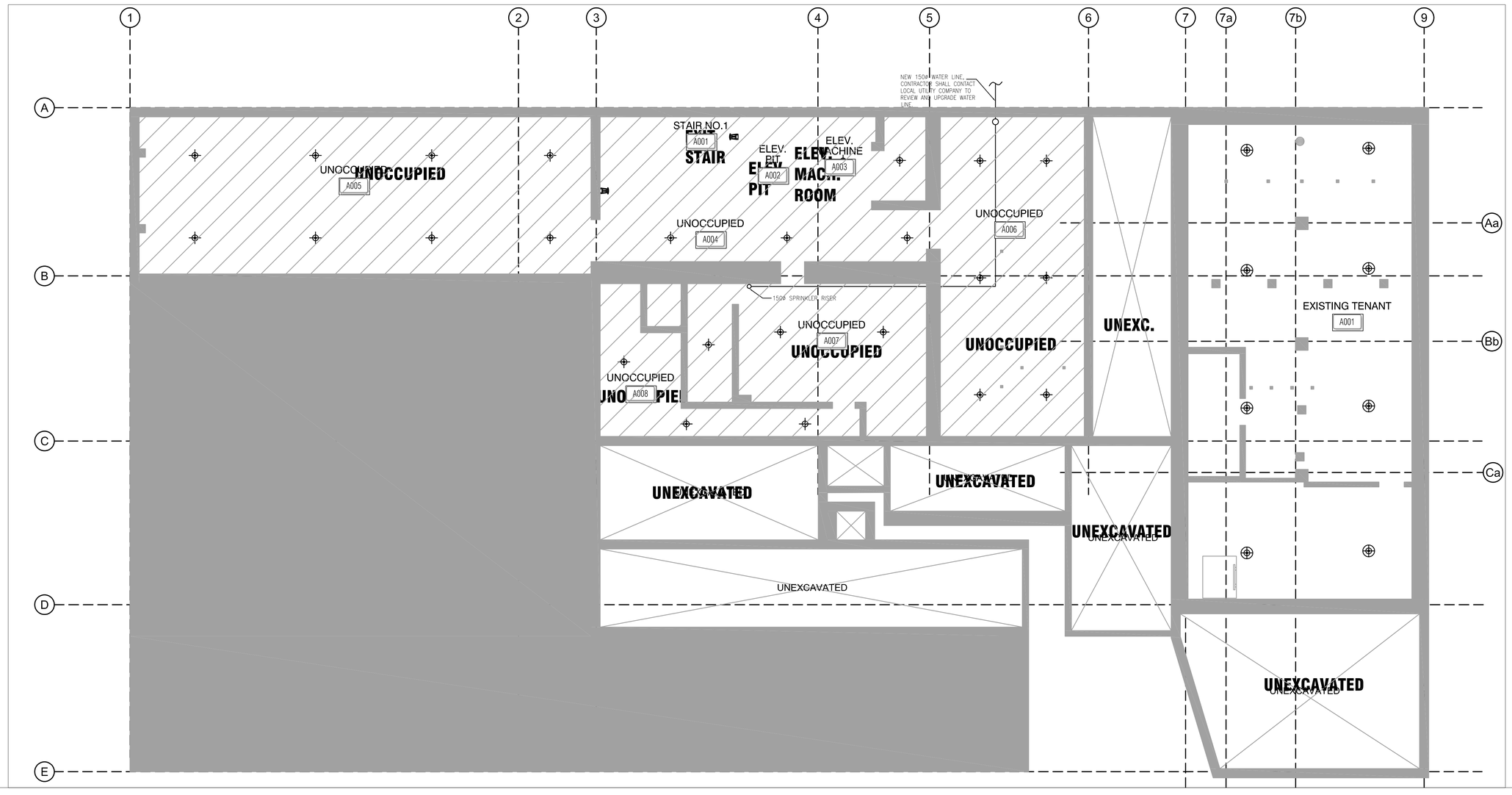
1. PROVIDE SPRINKLER PROTECTION THROUGHOUT THE PROPOSED BUILDING. SPRINKLERS SHALL BE INSTALLED BY LICENSED CONTRACTOR AND IN ACCORDANCE WITH LATEST REQUIREMENTS OF LOCAL FIRE DEPARTMENT, NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.) #13, AND ONTARIO BUILDING CODE BASED ON LIGHT HAZARD OCCUPANCY FOR OFFICE AREA.
2. PROVIDE APPROVED NEW GOOD QUALITY SPRINKLER HEADS AND COORDINATE WITH LIGHTS, DUCTS, PIPES, GRILLES, ETC., FOR EACH HEAD LOCATION. ALSO REFER ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR COORDINATION.
3. PROVIDE SHOP DRAWINGS SHOWING PIPE SIZE, LOCATION OF SPRINKLER HEADS, CONNECTION TO EXISTING SYSTEM AND ALL REQUIRED HYDRAULIC CALCULATIONS.
4. PROVIDE SAMPLE OF SPRINKLER HEAD FOR REVIEW AND APPROVAL.
5. COORDINATE WITH THE OWNER WORK SCHEDULE AND OBTAIN APPROVAL PRIOR TO COMMENCING WORK.
6. ALL DRAINAGE, CHARGING AND COMMISSIONING OF SPRINKLER SYSTEM SHALL BE DONE BY THIS CONTRACTOR. SUBMIT SCHEDULE OF WORK AND OBTAIN APPROVAL BEFORE COMMENCING WORK. PROVIDE VERIFICATION CERTIFICATE.
7. ALL SPRINKLERS IN ROOMS WITH SUSPENDED CEILINGS SHALL BE FULLY RECESSED AS PER SPECIFICATIONS. IN AREAS WITH NO CEILINGS, THE SPRINKLER HEADS SHALL BE STANDARD UPRIGHT OR PENDANT TYPE. ALL SPRINKLER HEADS SHALL BE ULC, UL, FM, APPROVED TYPE.
8. PIPE SHALL BE SCH-40, WHERE APPROVED SCH-10 CAN BE USED.
9. DRAWINGS SHOW PROPOSED ROUTING OF MAIN LINES. COORDINATE ON SITE EACH SPRINKLER PIPE WITH DUCTS, PLUMBING AND STRUCTURAL MEMBERS. REVISE AND OFFSET AS REQUIRED TO SUIT.
10. SPRINKLER PIPE SIZING AND PIPE BRANCHES LOCATION BY SPRINKLER COMPANY. INSTALL SPRINKLER MAIN LINE AS HIGH AS POSSIBLE AND SLOPE TO FULLY DRAIN ALL DRY PIPES. PROVIDE DRAIN DRIP DRUMS IN SPRINKLER ROOM AND AS REQUIRED.
11. PROVIDE ADDITIONAL SPRINKLER HEADS WHERE REQUIRED AND NEEDED TO COMPLY WITH CODE AND COVERAGE. THE DRAWINGS SHOW GENERAL HEAD LAYOUT AND SHALL NOT BE USED TO COUNT NUMBER OF HEADS.
12. PROVIDE OPENING FOR NEW PIPES AND SEAL AT DRYWALL CEILINGS AND RATED WALLS WITH FIRE STOPPING AFTER PIPES ARE INSTALLED.
13. PAINT ALL EXPOSED PIPES AND HANGERS WITH MINIMUM TWO COATS OF PAINT, COLOUR SELECTED BY ARCHITECT. PAINTING UNDER SCOPE OF SPRINKLER CONTRACTOR.
14. PENDANT SPRINKLER HEADS AT CEILINGS SHALL BE RECESSED BRONZE BODY SPRAY TYPE, 74°C (165°F) RATING, CHROME-PLATED BODY, DEFLECTOR AND CONCEALED COMPLETE WITH PRE-PAINTED (COLOR TO BE SELECTED BY ARCHITECT) COVER PLATES FOR INSTALLATION FLUSH WITH CEILING. EACH SPRINKLER HEAD SHALL BE COMPLETE WITH IDENTIFICATION PLATE AND TEMPERATURE RATING.
15. QUANTITY AND LOCATION OF SPRINKLER HEADS SHALL BE AS REQUIRED AND NOT ACCORDING TO ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE TO SUIT REFLECTED CEILING PLANS WHERE REQUIRED.

SPRINKLER DRAWING NOTES:

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HYDRONIC CALCULATIONS FOR NEW SPRINKLER SYSTEM BEFORE COMMENCING WORK.
2. COORDINATE LOCATION OF SPRINKLER MAINS AND RISERS WITH ARCHITECT AND ENGINEERS.

SPRINKLER LEGEND	
⊗	NEW SPRINKLER HEAD RECESSED IN DROPPED CEILING.
⊕	NEW UPRIGHT SPRINKLER HEAD.
	SIDE DISCHARGE SPRINKLER HEAD.
⊕	EXISTING UPRIGHT SPRINKLER HEAD.

NOTE:
PROVIDE FHC IF REQUIRED FOR EACH UNIT (TO BE VERIFIED WITH SPRINKLERS COMPANY BY OTHERS)



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BASEMENT SPRINKLER LAYOUT

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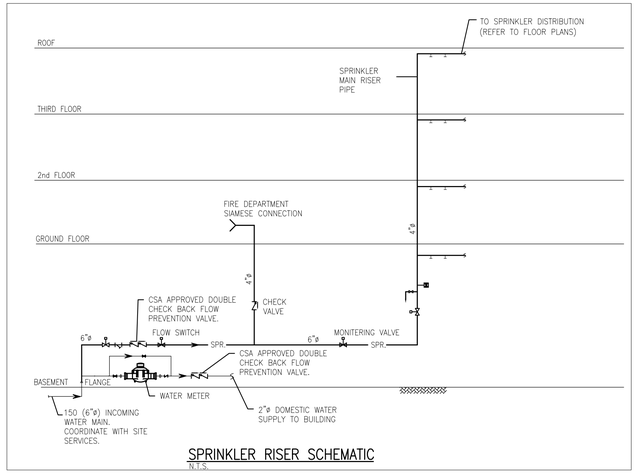
2. PROVIDE APPROVED NEW GOOD QUALITY SPRINKLER HEADS AND COORDINATE WITH LIGHTS, DUCTS, PIPES, GRILLES, ETC., FOR EACH HEAD LOCATION. ALSO REFER ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR COORDINATION.
3. PROVIDE SHOP DRAWINGS SHOWING PIPE SIZE, LOCATION OF SPRINKLER HEADS, CONNECTION TO EXISTING SYSTEM AND ALL REQUIRED HYDRAULIC CALCULATIONS.
4. PROVIDE SAMPLE OF SPRINKLER HEAD FOR REVIEW AND APPROVAL.
5. COORDINATE WITH THE OWNER WORK SCHEDULE AND OBTAIN APPROVAL PRIOR TO COMMENCING WORK.
6. ALL DRAINAGE, CHARGING AND COMMISSIONING OF SPRINKLER SYSTEM SHALL BE DONE BY THIS CONTRACTOR. SUBMIT SCHEDULE OF WORK AND OBTAIN APPROVAL BEFORE COMMENCING WORK. PROVIDE VERIFICATION CERTIFICATE.
7. ALL SPRINKLERS IN ROOMS WITH SUSPENDED CEILINGS SHALL BE FULLY RECESSED AS PER SPECIFICATIONS. IN AREAS WITH NO CEILINGS, THE SPRINKLER HEADS SHALL BE STANDARD UPRIGHT OR PENDANT TYPE. ALL SPRINKLER HEADS SHALL BE ULC, UL, FM, APPROVED TYPE.
8. PIPE SHALL BE SCH-40, WHERE APPROVED SCH-10 CAN BE USED.
9. DRAWINGS SHOW PROPOSED ROUTING OF MAIN LINES. COORDINATE ON SITE EACH SPRINKLER PIPE WITH DUCTS, PLUMBING AND STRUCTURAL MEMBERS. REVISE AND OFFSET AS REQUIRED TO SUIT.
10. SPRINKLER PIPE SIZING AND PIPE BRANCHES LOCATION BY SPRINKLER COMPANY. INSTALL SPRINKLER MAIN LINE AS HIGH AS POSSIBLE AND SLOPE TO FULLY DRAIN ALL DRY PIPES. PROVIDE DRAIN DRIP DRUMS IN SPRINKLER ROOM AND AS REQUIRED.
11. PROVIDE ADDITIONAL SPRINKLER HEADS WHERE REQUIRED AND NEEDED TO COMPLY WITH CODE AND COVERAGE. THE DRAWINGS SHOW GENERAL HEAD LAYOUT AND SHALL NOT BE USED TO COUNT NUMBER OF HEADS.
12. PROVIDE OPENING FOR NEW PIPES AND SEAL AT DRYWALL CEILINGS AND RATED WALLS WITH FIRE STOPPING AFTER PIPES ARE INSTALLED.
13. PAINT ALL EXPOSED PIPES AND HANGERS WITH MINIMUM TWO COATS OF PAINT, COLOUR SELECTED BY ARCHITECT. PAINTING UNDER SCOPE OF SPRINKLER CONTRACTOR.
14. PENDANT SPRINKLER HEADS AT CEILINGS SHALL BE RECESSED BRONZE BODY SPRAY TYPE, 74°C (165°F) RATING, CHROME-PLATED BODY, DEFLECTOR AND CONCEALED COMPLETE WITH PRE-PAINTED (COLOR TO BE SELECTED BY ARCHITECT) COVER PLATES FOR INSTALLATION FLUSH WITH CEILING. EACH SPRINKLER HEAD SHALL BE COMPLETE WITH IDENTIFICATION PLATE AND TEMPERATURE RATING.
15. QUANTITY AND LOCATION OF SPRINKLER HEADS SHALL BE AS REQUIRED AND NOT ACCORDING TO ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE TO SUIT REFLECTED CEILING PLANS WHERE REQUIRED.

SPRINKLER DRAWING NOTES:

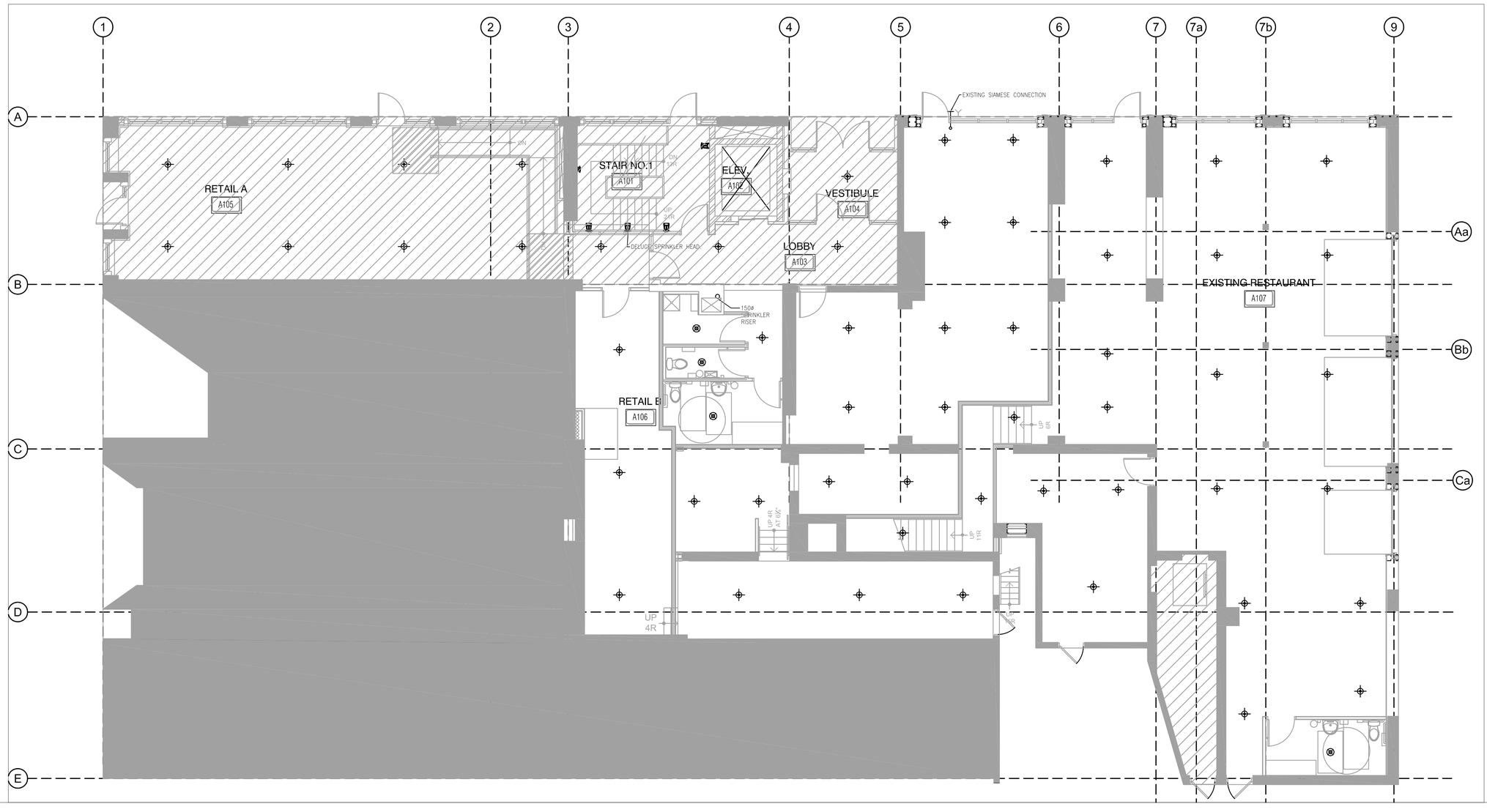
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HYDRONIC CALCULATIONS FOR NEW SPRINKLER SYSTEM BEFORE COMMENCING WORK.
2. COORDINATE LOCATION OF SPRINKLER MAINS AND RISERS WITH ARCHITECT AND ENGINEERS.

SPRINKLER LEGEND	
⊗	NEW SPRINKLER HEAD RECESSED IN DROPPED CEILING.
⊕	NEW UPRIGHT SPRINKLER HEAD.
	SIDE DISCHARGE SPRINKLER HEAD.
⊕	EXISTING UPRIGHT SPRINKLER HEAD.

NOTE:
PROVIDE FHC IF REQUIRED FOR EACH UNIT (TO BE VERIFIED WITH SPRINKLERS COMPANY BY OTHERS)



SPRINKLER RISER SCHEMATIC
N.T.S.



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TRUE NORTH	PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
28 MAY 2020
PROVINCE OF ONTARIO

ENGINEER:

Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1929 DEVELOPMENT • FINANCING • CONSULTING
PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
GROUND FLOOR SPRINKLER LAYOUT

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S
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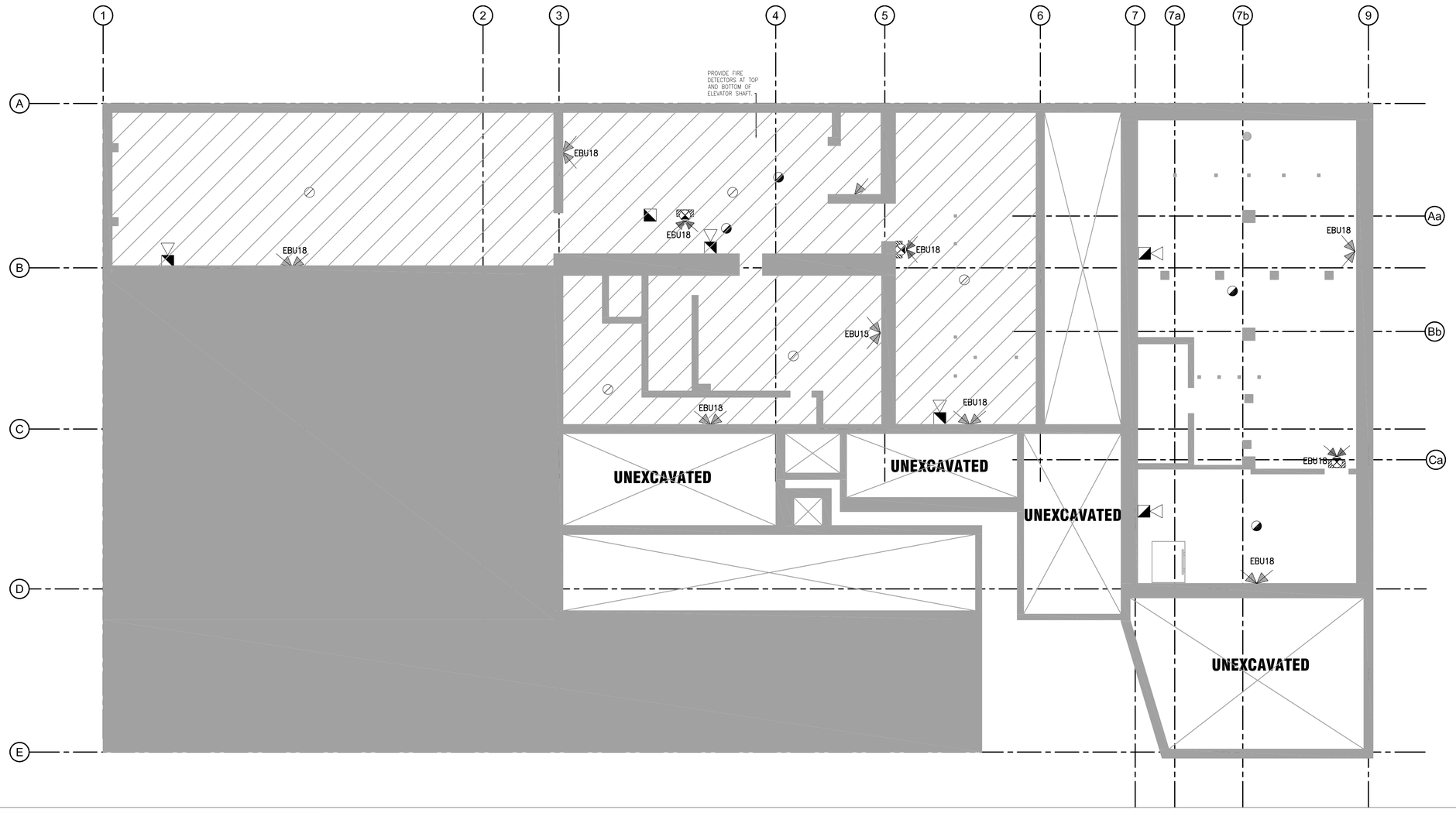

EMERGENCY LIGHTING LEGEND–SCHEDULE

WALL 'MOUNTED EXIT SIGN COMPLETE WITH L.E.D. LAMP 120 VAC / 12 VDC AIMLITE. SHADING DENOTES FACE C/W DIRECTIONAL ARROW.

CEILING MOUNTED EXIT SIGN COMPLETE WITH L.E.D. LAMP 120 VAC / 12 VDC AIMLITE. SHADING DENOTES FACE C/W DIRECTIONAL ARROW.

EMERGENCY LIGHTING WALL MOUNTED TWO LAMPHEADS AND BATTERY UNIT (EBU–X) COMBO. 12V DC, BATTERY/LAMPHEADS SPECIFIED BELOW.

EMERGENCY LIGHTING WALL MOUNTED TWO LAMPHEADS, WIRED BACK TO A REMOTE BATTERY UNIT (EBU–X). 12V DC, LAMPHEADS SPECIFIED BELOW.

EMERGENCY LIGHTING WALL MOUNTED TWO LAMPHEADS, EXIT SIGN, AND BATTERY UNIT (EBU–X) COMBO. 12V DC, REFER TO SPECIFICATION BELOW.

EBU–X DENOTES CONNECTED TO EMERGENCY BATTERY 'EBU–X'

EXIT SIGN AIMLITE CAT. NO. RPST–2M–WHT–BAT, 120VAC INPUT, DOUBLE FACE, SELF–POWERED FOR 90 MINUTES.

EMERGENCY LIGHTING, EXIT SIGN AND STAND–BY BATTERY UNIT COMBO AIMLITE CAT. NO. CSRP1272–1M–2MD–7LA–WHT LED, 120VAC INPUT, 12VDC OUTPUT, 72W FOR 30 MINUTES.

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PROJECT

CLIENT PROJECT NO:
-

JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
BASEMENT FLOOR EMERGENCY & FIRE ALARM LAYOUT

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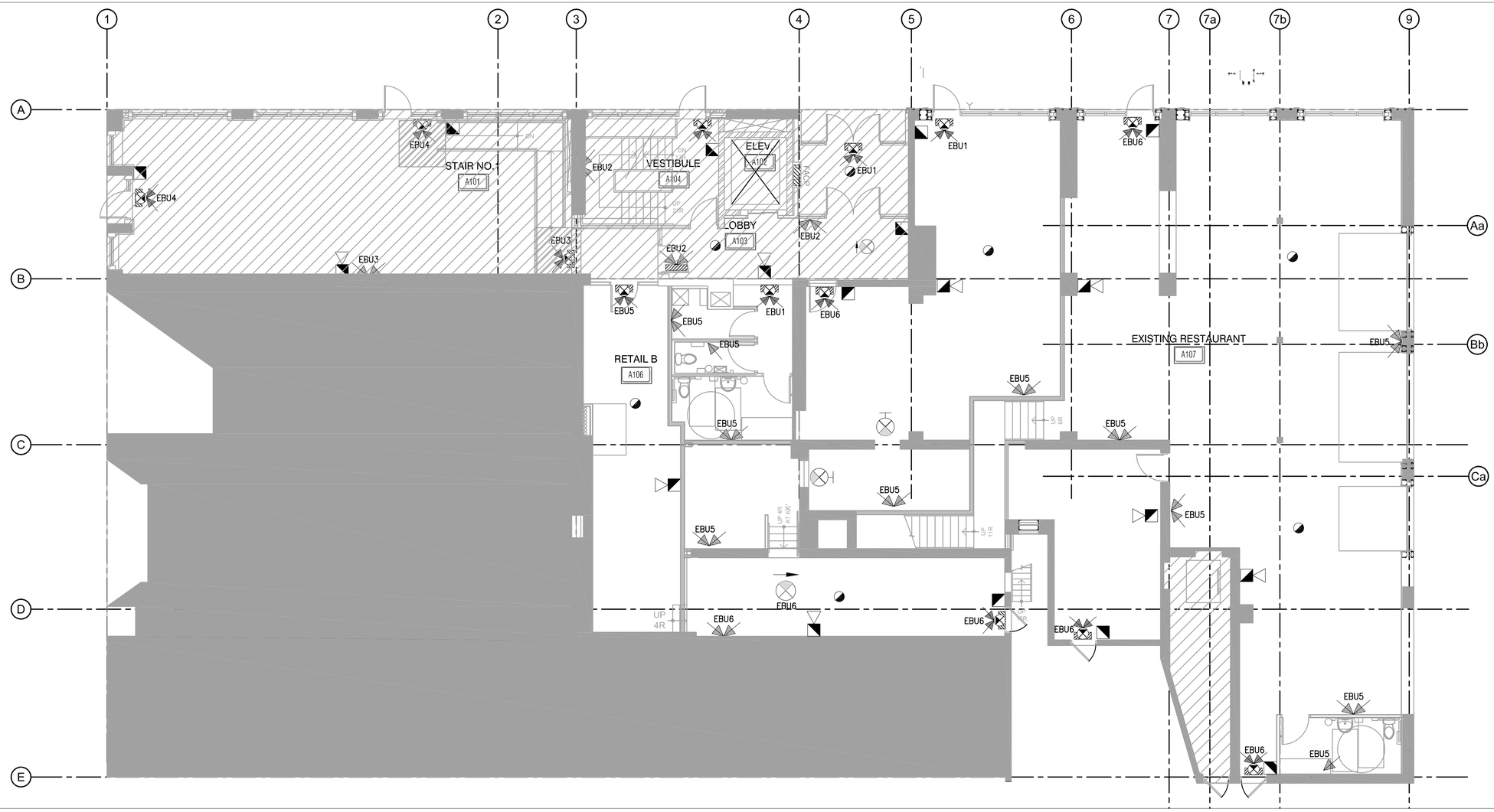

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CLIENT PROJECT NO: -

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PROJECT NAME: AMERICAN HOTEL PHASE 2

ADDRESS: 1 QUEEN ST N, KITCHENER

TITLE: GROUND FLOOR EMERGENCY & FIRE ALARM LAYOUT

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EBU–X DENOTES CONNECTED TO EMERGENCY BATTERY 'EBU–X'

EXIT SIGN AIMLITE CAT. NO. RPST–2M–WHT–BAT, 120VAC INPUT, DOUBLE FACE, SELF–POWERED FOR 90 MINUTES.

EMERGENCY LIGHTING, EXIT SIGN AND STAND–BY BATTERY UNIT COMBO AIMLITE CAT. NO. CSRP1272–1M–2MD–7LA–WHT LED, 120VAC INPUT, 12VDC OUTPUT, 72W FOR 30 MINUTES.

EMERGENCY POWER STAND–BY BATTERY UNIT AIMLITE CAT. NO. EBST–12200–2MD–MR16–7WA–WHT LED 120VAC INPUT, 12VDC OUTPUT, 200W FOR 30 MINUTES.

EMERGENCY EXIT LIGHT HEADS AIMLITE CAT. NO. RMMD–212–7LA–WHT LED 12VDC WIRED TO REMOTE BATTERY UNIT.

EMERGENCY EXIT LIGHT HEADS AIMLITE CAT. NO. RMMD–112–7LA–WHT LED 12VDC WIRED TO REMOTE BATTERY UNIT.

EXIT SIGNS SHALL BE PROVIDED IN ACCORDANCE TO THE LATEST EDITION OF THE ONTARIO BUILDING CODE (NEW GREEN PICTOGRAM).

EMERGENCY LIGHTING SPECIFICATION

.1 EMERGENCY LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 3.2.7.3 OF THE LATEST EDITION OF ONTARIO BUILDING CODE. EMERGENCY LIGHTING SHALL BE PROVIDED TO AN AVERAGE LEVEL OF ILLUMINATION NOT LESS THAN 10 LX AT FLOOR OR TREAD LEVEL AS REQUIRED IN O.B.C.

.2 LOCATE EACH EMERGENCY LIGHT ON SITE TO SUIT EXIT ROUTING AND LINE OF SIGHT.

.3 THE CONTRACTOR SHALL ARRANGE FOR TESTING OF EMERGENCY LIGHTS AND SUBMIT SEALED CERTIFICATE AND SKETCH INDICATING LOCATION OF EACH LIGHT AND LIGHTING LEVEL. ADJUST EACH HEAD TO SUIT. ARRANGE WITH BUILDING OWNER AND OBTAIN APPROVAL BEFORE SHUTTING OFF MAIN POWER.

.4 SELF–CONTAINED EMERGENCY LIGHTING UNITS AND REMOTE BATTERIES SHALL CONFORM TO CSA C22.2 NO. 141 AND PROVIDE SUFFICIENT WATTAGE TO LIGHT ALL REMOTE EMERGENCY EXIT LIGHT HEADS WIRED TO IT, FOR MINIMUM PERIOD DESCRIBED IN SECTION 3.2.7.4 OF O.B.C. IN THE EVENT THAT THE REGULAR POWER SUPPLY TO THE BUILDING IS INTERRUPTED.

.5 MOUNTING HEIGHTS OF EQUIPMENT FROM FINISHED FLOOR TO CENTER LINE OF EQUIPMENT AS FOLLOWS:

EMG LIGHTING BATTERY PACKS & EXITS 1'–0" BELOW CEILING (305mm)

FIRE ALARM LEGEND

FACP	FIRE ALARM CONTROL PANEL
DA	DIGITAL AMPLIFIER
FAA	FIRE ALARM ANNUNCIATOR PANEL
	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM HORN
F	STROBE LIGHT
	PHOTOELECTRIC SMOKE DETECTOR
	PHOTOELECTRIC DUCT SMOKE DETECTOR
	HEAT DETECTOR
	PRE–ACTION DETECTOR (BY OTHERS)
L	LASER SMOKE DETECTOR
	FLAME DETETOR
	ISOLATOR

FIRE ALARM SYSTEM NOTES

1. CONTRACTOR SHALL PROVIDE ALL REQUIRED DEVICES, BELLS, PULL STATIONS, AND INTERCONNECTING WIRES TO COMPLETE SYSTEM. EXACT COUNT OF DEVICES AND EQUIPMENT SHALL BE ESTABLISHED USING LATEST APPROVED ARCHITECTURAL DRAWINGS.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO OBTAIN APPROVAL FROM THE LOCAL FIRE MARSHALL FOR ALL FIRE ALARM INSTALLATION. FIRE ALARM IS TO BE VERIFIED.

   CONTRACTOR SHALL SUBMIT MANUFACTURER FIRE ALARM EQUIPMENT AND SYSTEM SHOP DRAWING FOR REVIEW AND APPROVAL.
3. A SINGLE STAGE FIRE ALARM SYSTEM SHALL, UPON THE OPERATION OF ANY MANUAL PULL STATION OR FIRE DETECTOR, CAUSE AN ALARM SIGNAL TO SOUND ON ALL AUDIBLE SIGNAL DEVICES IN THE SYSTEM.
4. DEVICES SHOWN ARE DIAGRAMMATIC ONLY. FOR EXACT LOCATIONS AND QUANTITIES SEE FLOOR PLANS. REFER TO FIRE ALARM SYSTEM SPECIFICATION FOR ADDITIONAL FIRE ALARM SYSTEM REQUIREMENTS. ALL FIRE ALARM SYSTEM RACEWAY SIZES AND CIRCUITRY REQUIREMENTS SHALL BE IN ACCORDANCE WITH EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND ALL CODES THAT MAY APPLY.
5. CABLING MUST BE UNIQUELY IDENTIFIED AND LABELED, AND PERMANENT. LABELING IS TO BE PRINTED.
6. F.A.C.P. AND OTHER PANELS (IF APPLICABLE) SHALL BE MOUNTED WITH CLEARANCES FOR OBSERVATION AND TESTING. ALL OTHER FIRE ALARM JUNCTION BOXES SHALL BE MARKED FOR IDENTIFICATION. PROVIDE 120V, 20A DEDICATED BRANCH CIRCUIT TO F.A.C.P. AND TERMINAL CABINETS, AS REQUIRED.
7. THE CIRCUIT BREAKER SHALL HAVE A LOCK TO PREVENT ACCIDENTAL SHUT OFF AND BE CLEARLY MARKED "FIRE ALARM" IN THE PANEL BOARD DIRECTORY.
8. SPACE DETECTORS AS SHOWN ON FLOOR PLANS AND IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDED DISTANCE. PROVIDE ADDITIONAL DETECTORS WHERE REQUIRED. ALL LOW VOLTAGE FIRE ALARM CIRCUITS MAY OCCUPY A COMMON CONDUIT.
9. ALL CONDUIT, MOUNTING BOXES AND PANELS SHALL BE HUNG AND FASTENED WITH FITTINGS TO ENSURE POSITIVE GROUNDING THROUGHOUT THE ENTIRE SYSTEM.
10. TRANSPOSING OR CHANGING COLOR CODING OF WIRES IS NOT PERMITTED. ALL CONDUCTORS IN CONDUIT CONTAINING MORE THAN ONE WIRE SHALL BE LABELED ON EACH WIRE END.
11. CONDUCTORS IN CABINETS SHALL BE FORMED AND HARNESSED SO THAT EACH DROPS OFF DIRECTLY OPPOSITE ITS TERMINAL. ALL WIRING SHALL BE CHECKED AND TESTED TO ENSURE THAT THERE ARE NO GROUNDS, OPENS, OR SHORTS.
12. WIRING COLOR CODES SHALL BE CONSISTENT THROUGHOUT THE SYSTEM AND SHALL ALLOW FOR EASY IDENTIFICATION OF INITIATING, INDICATING AND AUXILIARY CONTROL CIRCUITS. LOCATE REMOTE TEST SWITCH AND PILOT LIGHT FOR ABOVE CEILING MOUNTED DUCT DETECTORS, FLUSH IN CEILING DIRECTLY BELOW DETECTOR.
13. NOT ALL INTERCONNECTING WIRING IS INDICATED, I.E. AS BETWEEN ELEVATOR LOBBY SMOKE DETECTORS AND ELEVATOR CONTROLLER, ETC.
14. ALL FIRE ALARM SYSTEM JUNCTION BOXES SHALL BE PANTED RED WITH STENCIL LETTERING INDICATING "FIRE ALARM SYSTEM", WIRING INDICATED ON THE RISER DIAGRAM IS DIAGRAMMATIC ONLY.
15. IT IS NOT INTENDED TO INDICATE ROUTING OR QUANTITY OF WIRES REQUIRED.
16. PROVIDE WIRING FOR A COMPLETE SYSTEM AS REQUIRED BY SYSTEM MANUFACTURER.
17. REFER TO FIRE ALARM SPECIFICATION.
18. SYSTEM COMPONENTS TO BE MIRCOM, OR APPROVED EQUIVALENT, AS FOLLOWS (OR AS INDICATED ON DRAWINGS): INDICATED COMPLETE WITH BATTERIES AND CHARGER, VOLTMETER, AMMETER, FLUSH MOUNTED COMPLETE WITH TRIM AND KEYS, CONNECTION FOR REMOTE STATION, ANNUCIATOR AND TROUBLE INDICATION AND BUZZER.
19. BELLS IN CORRIDORS AND COMMON AREAS SHALL BE VIBRATING TYPE
20. TEST AND VERIFY SYSTEM AND ISSUE CERTIFICATE COMPLETE WITH REPORT. THE TESTING IS TO BE DONE IN PRESENCE OF OWNER'S REPRESENTATIVE, THE MANUFACTURER'S TECHNICIAN AND THE ENGINEER. TESTING AND VERIFICATION SHALL BE IN ACCORDANCE WITH CAN4–S537 AND AS DIRECTED BY THE ENGINEER.
21. PROVIDE TELEPHONE SYSTEM CONDUIT CONNECTION TO CONTROL PANEL. COMPONENTS SHALL BE COMPATIBLE WITH EXISTING SYSTEM AND ULC APPROVED.
22. UPON ACTIVATION OF ANY ALARM INDICATING DEVICE, AN ALARM SHALL SOUND ON ALL BELLS AND ZONES AS SHOWN AND INDICATED ON THE MAIN ANNUNCIATOR AND/OR CONTROL PANEL. THE GENERAL ALARM SHALL BE CAPABLE TO BE ACTIVATED BY INSERTION OF THE GENERAL ALARM KEY IN THE FIRE ALARM PANEL.

MIRCOM FIRE ALARM SYSTEM COMPONENTS:
- CONTROL PANEL FX–2017–12A MAIN CHASSIS
- BBX–1072A ENCLOSURE
- AUXILIARY NODULE RM–1008A
- ADDRESSABLE MODULES MIX–500
- REMOTE ANNUNCIATOR RAM–1032 AND BB–1001 ENCLOSURE
- PULL STATIONMS–401
- HEAT DETECTORS 5601A & 5604A
- SMOKE DETECTORS C2WTR–BA AND C2W–BA
- MINI HORN MH–25W
- DOOR OPEN HOLDER DH24120RPC
- EOL COVERPLATE MP–300
- BATTERY BA–140

HORNS SHALL BE WITH STROBES.

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EMERGENCY & FIRE ALARM LEGEND & SPECIFICATIONS

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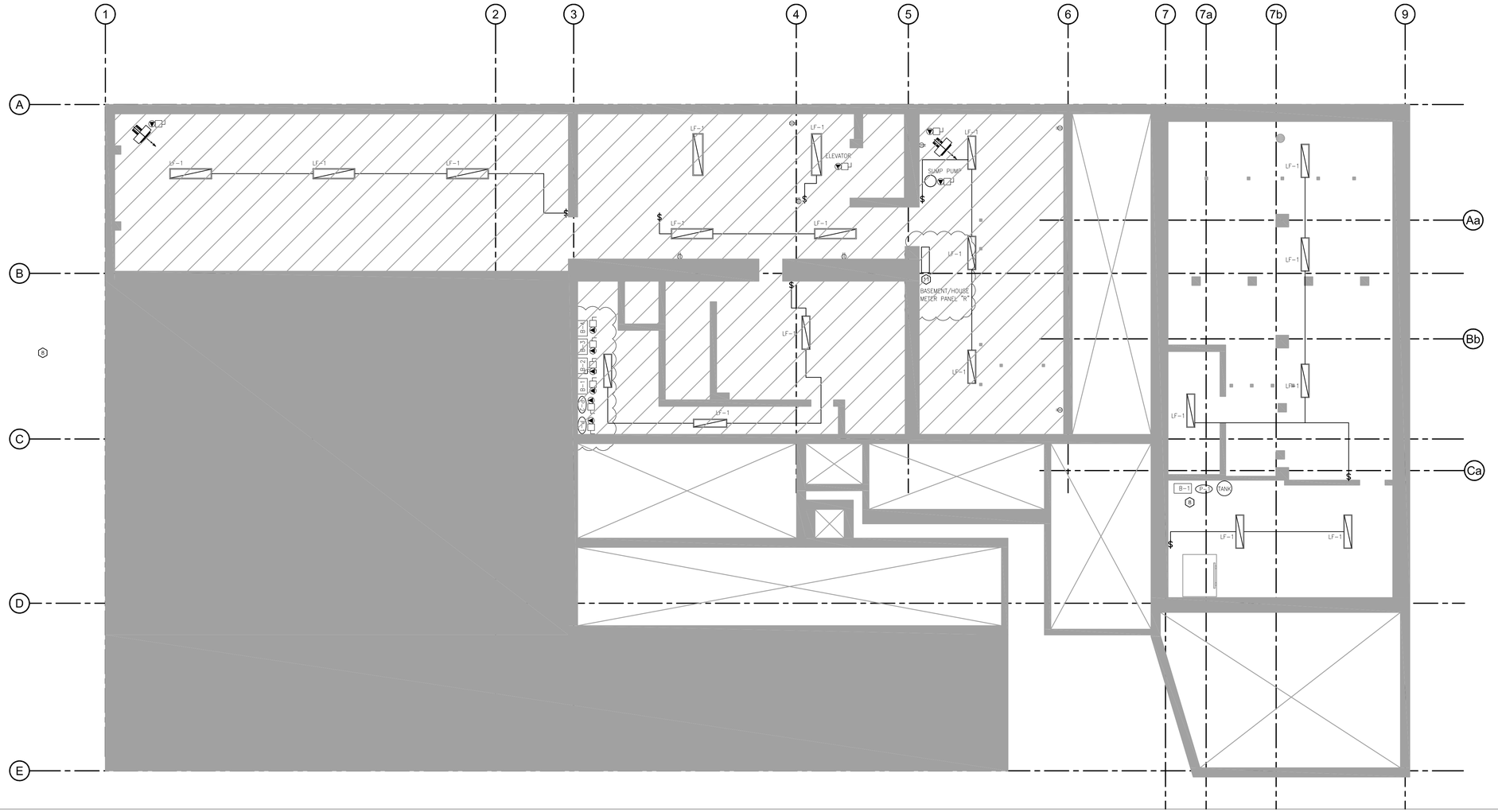

ELECTRICAL LEGEND

$	120 VOLT, 20 AMP SPECIFICATION GRADE SINGLE GANG ON/OFF TOGGLE SWITCH, c/w BACKBOX AND STAINLESS STEEL COVERPLATE.
$OS D	120 VOLT, 20 AMP SPECIFICATION GRADE SINGLE GANG OCCUPANCY SENSOR SWITCH WITH ON/OFF OVERRIDE AND DIMMER. PROVIDE BACKBOX AND STAINLESS STEEL COVERPLATE.
OS	CEILING MOUNTED OCCUPANCY SENSOR SWITCH. MANUFACTURER CATALOG NUMBER RMR-PDT 9 P, 120V. WIRE TO LIGHT FIXTURES AS SHOWN. PROVIDE BACK BOX AND SUPPORT BRIDGE.
GFI	120V, 15 AMP SPECIFICATION GRADE POWER RECEPTACLE RECESSED IN WALL COMPLETE WITH BACKBOX, STAINLESS STEEL COVER. WIRE TO POWER PANEL. GFI: GROUND FAULT CIRUIT INTERRUPT RECEPTACLE SPECIFIED BELOW.
	120 VAC, 15 AMP SPECIFICATION GRADE POWER RECEPTACLE RECESSED IN WALL COMPLETE WITH BACKBOX, STAINLESS STEEL COVERPLATE, AND WIRING BACK TO BREAKER PANEL. WP – DENOTES WEATHER PROOF HARDWARE
EL	120 VAC, 15 AMP SPECIFICATION GRADE POWER RECEPTACLE COMPLETE WITH BACKBOX, STAINLESS STEEL COVERPLATE, AND WIRING BACK TO BREAKER PANEL. EL – DENOTES AT HIGH LEVEL FOR EMERGENCY LIGHTING.
EF	EXHAUST FAN, FRACTIONAL HORSE POWER, SUPPLIED BY MECHANICAL, WIRING AND STARTER SWITCH SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. REVERSE ACTING THERMOSTATS SUPPLIED BY MECHANICAL AND SHALL BE INSTALLED BY ELECTRICAL TRADE. COORDINATE WITH ELECTRICAL TRADE. ALL WIRING SHALL BE IN EMT CONDUITS.
	WIRE FROM POWER PANEL TO EQUIPMENT COMPLETE WITH MANUAL DISCONNECT SWITCH RATED PER EQUIPMENT SPECIFICATION. COORDINATE WITH MECHANICAL TRADE. WP – DENOTES WEATHER PROOF HARDWARE
	HARD WIRED POWER CONNECTION TO EQUIPMENT. REVIEW SHOP DRAWINGS AND COORDINATE WITH OTHER TRADES FOR EQUIPMENT SPECIFICATION.

NOTE:

PROVIDE 115V/1P 15A RECEPTACLE FOR EACH EMERGENCY EXIT BATTERY UNIT. WIRE FROM RECEPTACLE TO POWER PANEL. ALL WIRES SHALL BE IN CONDUITS.

DRAWING NOTES:

1. ELECTRIC DOOR OPERATOR. PROVIDE UNIT AND WIRE TO OPERATE DOOR.
2. WASHROOM DOOR OPEN PUSH BUTTON (HANDICAP). WIRE EACH PUSH BUTTON TO DOOR OPERATOR. ALL WIRES SHALL BE CONCEALED AND IN CONDUITS. PROVIDE ALL REQUIRED DEVICES, DOOR OPERATOR, CONTROL WIRING AND POWER WIRING TO COMPLETE SYSTEM INSTALLATION.
3. DOOR OPEN PUSH BUTTONS. WIRE EACH PUSH BUTTON TO RESPECTIVE DOOR OPERATOR. ALL WIRES SHALL BE CONCEALED AND IN CONDUITS. PROVIDE ALL REQUIRED DEVICES, DOOR OPERATORS, CONTROL WIRING AND POWER WIRING TO COMPLETE SYSTEM INSTALLATION.
4. PROVIDE DISCONNECT FOR HOT WATER HEATER AND WIRE TO A DEDICATED CIRCUIT IN NEW POWER PANEL. COORDINATE WITH EQUIPMENT SHOP DRAWINGS FOR POWER REQUIREMENTS.
5. INSTALL ALL TEMPORARY LIGHT FIXTURES AND WIRE TO DEDICATED CIRCUITS AND TO NEW POWER PANEL COMPLETE WITH NEW BREAKERS. PROVIDE ALL REQUIRED WIRING, JUNCTION BOXES, CIRCUIT BREAKERS, CONDUITS OCCUPANCY SENSORS, SWITCHES AND DEVICES TO COMPLETE INSTALLATION OF LIGHT FIXTURES. ALL AIRES SHALL BE IN EMT CONDUITS.
6. PROVIDE 120V/1PH DUPLEX RECEPTACLES FOR SERVICE EACH COMPLETE WITH WEATHER PROOF BACK BOX, STAINLESS STEEL COVER PLATE AND WEATHER COVER. COORDINATE LOCATION ON ROOF AND WIRE TO HOUSE PANEL.
7. PROVIDE 120V CIRCUIT TO POWER FAUCETS. COORDINATE WITH MECHANICAL CONTRACTOR FOR LOCATION OF POWERED FAUCETS AND WIRING REQUIREMENTS. WIRE TO NEW POWER PANEL AND PROVIDE ALL REQUIRED JUNCTION BOXES AND CIRCUIT BREAKERS TO COMPLETE SYSTEM INSTALLATION.
8. PROVIDE 120V/1/60 CIRCUIT TO EACH BOILER AND PUMP. COORDINATE WITH MECHANICAL TRADE. PROVIDE ALL REQUIRED WIRING TO COMPLETE SYSTEM INSTALLATION.
9. LIGHT FIXTURES ON EXTERIOR WALLS WILL BE PROVIDED BY OWNER. INSTALL FIXTURES IN LOCATIONS AS SHOWN ON ARCHITECTURAL DRAWINGS AND CONNECT TO HOUSE PANEL. PROVIDE PHOTO CELL/TIMER CONTROLLER.

LIGHTING LUMINAIRES

ALL LUMINAIRE SHALL BE COMPLETE WITH LED, LAMPS OR TUBES AND ACCESSORIES REQUIRED TO LEAVE THE LUMINAIRE COMPLETE IN POSITION AND OPERATING. PROVIDE ALL MOUNTING ACCESSORIES AND TRIMS TO SUIT THE CEILING TYPE AND INSTALLATION. INCANDESCENT LAMPS SHALL BE SHORT NECK COMPACT FLUORESCENT SPIRAL LONG LIFE 115V. LUMINAIRES ARE AS NOTED OR SPECIFIED.

LF-1 — LIGHT FIXTURE-1: LED 4x1 PANEL, 3000K, 40 LUMINAIRE WATTAGE, 120V, 1 PH. EACH FIXTURE SHALL HAVE 0-10 DIMMABLE AND 2-4 C WIRELESS FEATURE, CCT ADJUSTABLE FROM 3000K-3500K-4000K-5000K, 0.95 FLICKER FACTOR, 90% POWER EFFICIENCY, 120° BEAM ANGLE AND IP40 GRADE. EACH FIXTURE SHALL BE ULC APPROVED AND RATED FOR 50,0000 HR. PROVIDE FOR EACH UNIT ALL REQUIRED ACCESSORIES TO COMPLETE INSTALLATION INCLUDING FRAME AND BRACKETS. REFER TO REFLECTED CEILING PLAN IN LATEST ARCHITECTURAL DRAWING SET. SUBMIT SHOP DRAWINGS FOR REVIEW.

NOTE:

REFER TO ARCHITECTURAL DRAWINGS FOR REFLECTED CEILING PLANS. PROVIDE ALL REQUIRED WIRING, OCCUPANCY SENSORS AND SWITCHES TO COMPLETE INSTALLATION.

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2	28 MAY 2020	ISSUED FOR PERMIT.

TRUE NORTH | PROJECT NORTH

STAMP

LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
28 MAY 2020
PROVINCE OF ONTARIO

ENGINEER:
Ontenco Inc.
Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
VIVE DEVELOPMENT
JG GROUP EST 1929 DEVELOPMENT + FINANCING + CONSULTING

PROJECT

CLIENT PROJECT NO: -

JOB NO: 20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
BASEMENT FLOOR POWER DISTRIBUTION

SCALE:	DATE:	DRAWN:	CHECK:
1:75	04.22.20	N.A.	K.S

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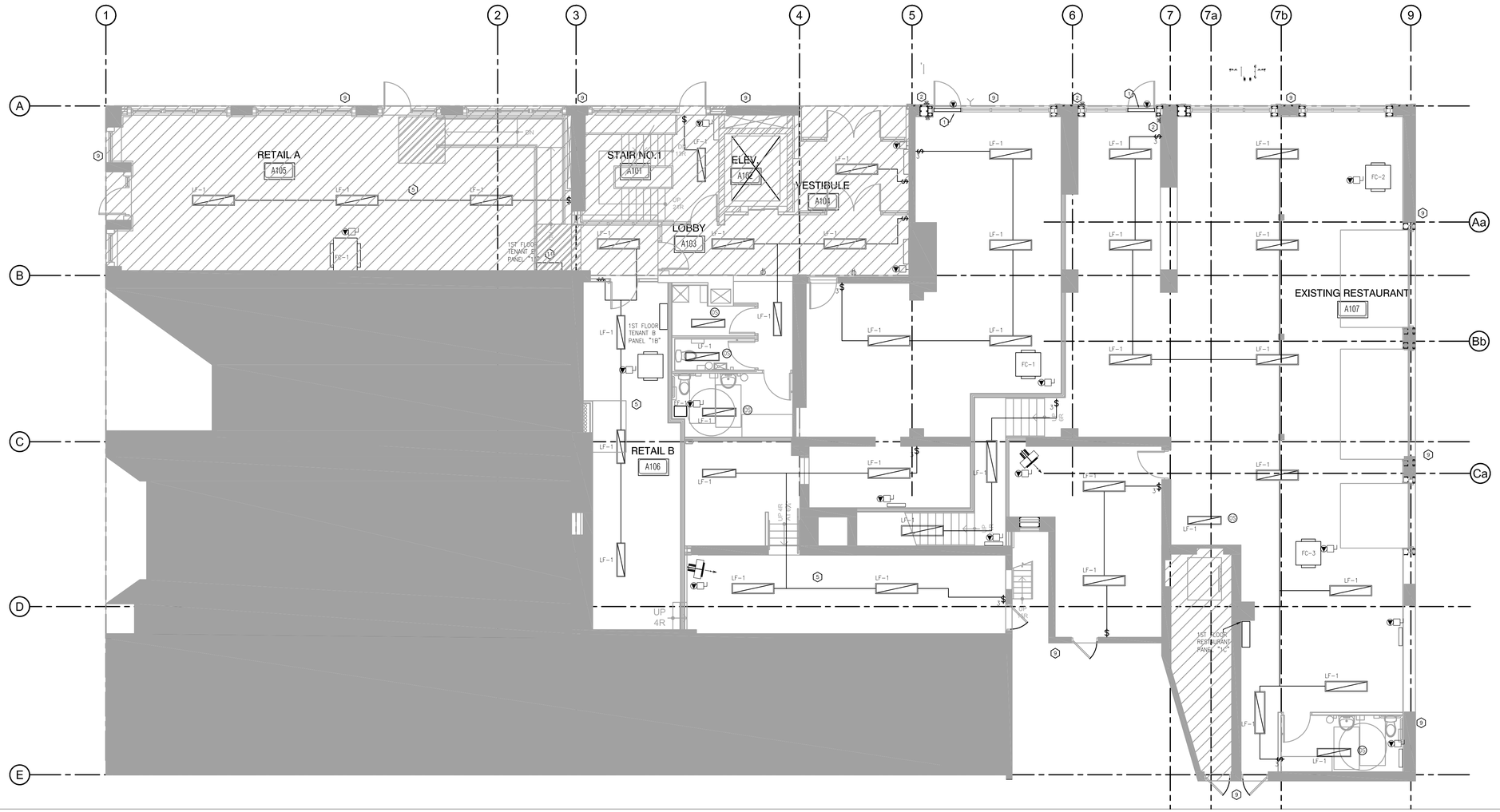
1/ 4	E-2.1	0



ELECTRICAL LEGEND

- $ — 120 VOLT, 20 AMP SPECIFICATION GRADE SINGLE GANG ON/OFF TOGGLE SWITCH, c/w BACKBOX AND STAINLESS STEEL COVERPLATE.
- $ OS D — 120 VOLT, 20 AMP SPECIFICATION GRADE SINGLE GANG OCCUPANCY SENSOR SWITCH WITH ON/OFF OVERRIDE AND DIMMER. PROVIDE BACKBOX AND STAINLESS STEEL COVERPLATE.
- OS — CEILING MOUNTED OCCUPANCY SENSOR SWITCH. MANUFACTURER CATALOG NUMBER RMR-PDT 9 P, 120V. WIRE TO LIGHT FIXTURES AS SHOWN. PROVIDE BACK BOX AND SUPPORT BRIDGE.
- GFI — 120V, 15 AMP SPECIFICATION GRADE POWER RECEPTACLE RECESSED IN WALL COMPLETE WITH BACKBOX, STAINLESS STEEL COVER. WIRE TO POWER PANEL. GFI: GROUND FAULT CIRUIT INTERRUPT RECEPTACLE SPECIFIED BELOW.
- — 120 VAC, 15 AMP SPECIFICATION GRADE POWER RECEPTACLE RECESSED IN WALL COMPLETE WITH BACKBOX, STAINLESS STEEL COVERPLATE, AND WIRING BACK TO BREAKER PANEL. WP – DENOTES WEATHER PROOF HARDWARE
- EL — 120 VAC, 15 AMP SPECIFICATION GRADE POWER RECEPTACLE COMPLETE WITH BACKBOX, STAINLESS STEEL COVERPLATE, AND WIRING BACK TO BREAKER PANEL. EL – DENOTES AT HIGH LEVEL FOR EMERGENCY LIGHTING.
- EF — EXHAUST FAN, FRACTIONAL HORSE POWER, SUPPLIED BY MECHANICAL, WIRING AND STARTER SWITCH SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR; REVERSE ACTING THERMOSTATS SUPPLIED BY MECHANICAL AND SHALL BE INSTALLED BY ELECTRICAL TRADE. COORDINATE WITH ELECTRICAL TRADE. ALL WIRING SHALL BE IN EMT CONDUITS.
- WIRE FROM POWER PANEL TO EQUIPMENT COMPLETE WITH MANUAL DISCONNECT SWITCH RATED PER EQUIPMENT SPECIFICATION. COORDINATE WITH MECHANICAL TRADE. WP – DENOTES WEATHER PROOF HARDWARE
- HARD WIRED POWER CONNECTION TO EQUIPMENT. REVIEW SHOP DRAWINGS AND COORDINATE WITH OTHER TRADES FOR EQUIPMENT SPECIFICATION.

NOTE:

PROVIDE 115V/1P 15A RECEPTACLE FOR EACH EMERGENCY EXIT BATTERY UNIT. WIRE FROM RECEPTACLE TO POWER PANEL. ALL WIRES SHALL BE IN CONDUITS.

DRAWING NOTES:

1. ELECTRIC DOOR OPERATOR. PROVIDE UNIT AND WIRE TO OPERATE DOOR.
2. WASHROOM DOOR OPEN PUSH BUTTON (HANDICAP). WIRE EACH PUSH BUTTON TO DOOR OPERATOR. ALL WIRES SHALL BE CONCEALED AND IN CONDUITS. PROVIDE ALL REQUIRED DEVICES, DOOR OPERATOR, CONTROL WIRING AND POWER WIRING TO COMPLETE SYSTEM INSTALLATION.
3. DOOR OPEN PUSH BUTTONS. WIRE EACH PUSH BUTTON TO RESPECTIVE DOOR OPERATOR. ALL WIRES SHALL BE CONCEALED AND IN CONDUITS. PROVIDE ALL REQUIRED DEVICES, DOOR OPERATORS, CONTROL WIRING AND POWER WIRING TO COMPLETE SYSTEM INSTALLATION.
4. PROVIDE DISCONNECT FOR HOT WATER HEATER AND WIRE TO A DEDICATED CIRCUIT IN NEW POWER PANEL. COORDINATE WITH EQUIPMENT SHOP DRAWINGS FOR POWER REQUIREMENTS.
5. INSTALL ALL TEMPORARY LIGHT FIXTURES AND WIRE TO DEDICATED CIRCUITS AND TO NEW POWER PANEL COMPLETE WITH NEW BREAKERS. PROVIDE ALL REQUIRED WIRING, JUNCTION BOXES, CIRCUIT BREAKERS, CONDUITS OCCUPANCY SENSORS, SWITCHES AND DEVICES TO COMPLETE INSTALLATION OF LIGHT FIXTURES. ALL WIRES SHALL BE IN EMT CONDUITS.
6. PROVIDE 120V/1PH DUPLEX RECEPTACLES FOR SERVICE EACH COMPLETE WITH WEATHER PROOF BACK BOX, STAINLESS STEEL COVER PLATE AND WEATHER COVER. COORDINATE LOCATION ON ROOF AND WIRE TO HOUSE PANEL.
7. PROVIDE 120V CIRCUIT TO POWER FAUCETS. COORDINATE WITH MECHANICAL CONTRACTOR FOR LOCATION OF POWERED FAUCETS AND WIRING REQUIREMENTS. WIRE TO NEW POWER PANEL AND PROVIDE ALL REQUIRED JUNCTION BOXES AND CIRCUIT BREAKERS TO COMPLETE SYSTEM INSTALLATION.
8. PROVIDE 120V/1/60 CIRCUIT TO EACH BOILER AND PUMP. COORDINATE WITH MECHANICAL TRADE. PROVIDE ALL REQUIRED WIRING TO COMPLETE SYSTEM INSTALLATION.
9. LIGHT FIXTURES ON EXTERIOR WALLS WILL BE PROVIDED BY OWNER. INSTALL FIXTURES IN LOCATIONS AS SHOWN ON ARCHITECTURAL DRAWINGS AND CONNECT TO HOUSE PANEL. PROVIDE PHOTO CELL/TIMER CONTROLLER.

LIGHTING LUMINAIRES

ALL LUMINAIRE SHALL BE COMPLETE WITH LED, LAMPS OR TUBES AND ACCESSORIES REQUIRED TO LEAVE THE LUMINAIRE COMPLETE IN POSITION AND OPERATING. PROVIDE ALL MOUNTING ACCESSORIES AND TRIMS TO SUIT THE CEILING TYPE AND INSTALLATION. INCANDESCENT LAMPS SHALL BE SHORT NECK COMPACT FLUORESCENT SPIRAL LONG LIFE 115V. LUMINAIRES ARE AS NOTED OR SPECIFIED.

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NOTE:

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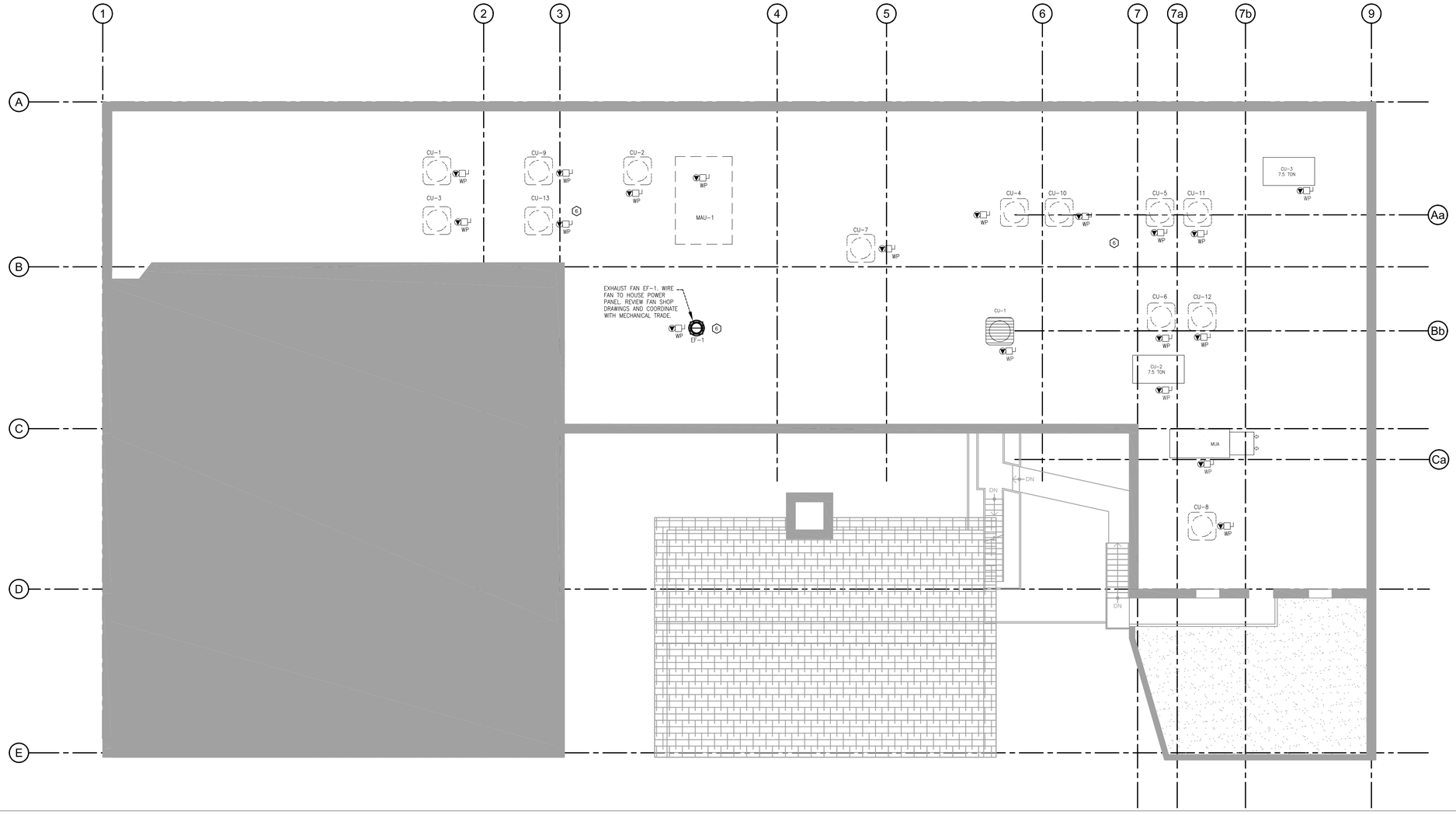

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TRUE NORTH | PROJECT NORTH

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LICENSED PROFESSIONAL ENGINEER
K. SALAMÉ
26 MAY 2020
PROVINCE OF ONTARIO

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Building Services Design & Consulting
Ph: 519-760-0288

CLIENT:

OWNER
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DEVELOPMENT • FINANCING • CONSULTING

PROJECT

CLIENT PROJECT NO:
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JOB NO:
20180725 - 04

PROJECT NAME:
AMERICAN HOTEL
PHASE 2

ADDRESS:
1 QUEEN ST N, KITCHENER

TITLE:
ROOF PLAN
POWER DISTRIBUTION

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ELECTRICAL SPECIFICATIONS WHERE APPLICABLE

GENERAL ELECTRICAL SPECIFICATIONS

1. OBTAIN AND PAY FOR PERMIT REQUIRED BY ONTARIO HYDRO INSPECTION AND LOCAL INSPECTION AUTHORITIES FOR THIS WORK. PRESENT FINAL CERTIFICATES TO CONSULTANT AND/OR OWNER.
2. CARRY OUT ALL WORK IN ACCORDANCE WITH OEC (ONTARIO ELECTRICAL CODE) REGULATIONS AND ONTARIO HYDRO INSPECTION REQUIREMENTS.
3. ALL EQUIPMENTS SHALL BE NEW AND CSA APPROVED UNLESS OTHERWISE NOTES..
4. SUBMIT SHOP DRAWINGS FOR LIGHTING FIXTURES, EXIT LIGHTS, EMERGENCY LIGHTS, AND BATTERY UNITS AND NEW PANELS TO CONSULTANT FOR REVIEW.
5. REFER TO ARCHITECTURAL SPECIFICATIONS AND DRAWINGS WHICH ARE PART OF THIS WORK.
6. MATERIAL DEMOLISHED AND REMOVED AND NOT REUSED, SHALL BECOME OWNERS PROPERTY AND SHALL BE REMOVED FROM THE SITE PRIOR TO COMPLETION OF WORK AS DIRECTED BY OWNER.
7. ON COMPLETION OF PROJECT AND BEFORE FINAL PAYMENT, SUBMIT ON1 (1) SET OF AS-BUILT DRAWINGS WITH ALL CHANGES AND BURIED SERVICES EXACT LOCATIONS AND THEREON.
8. PROVIDE LAMACOID LABELS (3-PLY) WHITE LETTERED ON BLACK BACKGROUND - 1/4" HIGH LETTERING ON ELECTRICAL EQUIPMENTS SUPPLIED, MOUNTED AND/OR CONNECTED BY THIS CONTRACT.
9. THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENTS DURING CONSTRUCTION AND COMPLETION OF CONTRACT.
10. CONFER WITH ALL TRADES AND ARRANGE EQUIPMENT IN PROPER RELATION WITH OTHER APPARATUS, DUCTS, PIPES, ETC. AND WITH BUILDING CONSTRUCTION AND ARCHITECTURAL FINISHES.
11. GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER/CONSULTANT. PROVIDE WRITTEN GUARANTEE.
12. OWNER RESERVE THE RIGHT TO TRAIL AND / OR TEMPORARY USAGE PRIOR TO ACCEPTING INSULATION.
13. WIRING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE APPROVED.
14. DEFINITIONS: THE FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATIONS AND ON ASSOCIATED DRAWINGS.
    - A) "CONCEALED" - HIDDEN FROM NORMAL SIGHT IN FURRED SPACES, SHAFTS, CEILING SPACES, WALLS, UNDER FLOOR AND PARTITIONS.
    - B) "EXPOSED" - ALL ELECTRICAL WORK VISIBLE TO BUILDING OCCUPANTS.
    - C) "PROVIDE" - (AND ALL TENSES OF PROVIDE) SUPPLY INSTALL, WIRE AND CONNECT COMPLETE.
    - D) "INSTALL" - (AND ALL TENSES OF INSTALL) INSTALL WIRE AND CONNECT COMPLETE, PRODUCTS AND SERVICES SPECIFIED.
    - E) "SUPPLY" - SUPPLY ONLY.
    - F) "OR APPROVED EQUAL" - MATERIAL OR EQUIPMENT PROPOSED BY CONTRACTOR, IN LIEU OF THAT SPECIFIED, AS APPROVED BY CONSULTANT.
    - G) "AS INDICATED" - AS SHOWN ON DRAWINGS AND/OR NOTED IN SPECIFICATIONS.
15. ALL WIRING SHALL BE COLOUR CODED AS PER OHESC AND BE IDENTIFIED WITH BRADY OR EQUIVALENT SELF STICKING PERMACODE WIRE MARKERS. ALL JUNCTION BOXES IN CONCEALED CEILING SPACES SHALL BE LABELED WITH PEN MARKER TO CIRCUITS CONTAINED THEREIN.
16. SUPPLY, INSTALL WIRE AND CONNECT ALL EQUIPMENT SHOWN SPECIFIED OR MENTIONED.
17. WIRE AND CONNECT MOTORS SUPPLIED BY OTHERS, AS INDICATED.
18. DISCONNECT SWITCHES: FUSED AND NON-FUSED, HEAVY DUTY, QUICK-MAKE, QUICK-BREAK MECHANISM, LOAD BREAK TYPE WITH DOOR, HANDLE AND SWITCHING MECHANISM INTERLOCK, ARC EXTINGUISHERS, SILVER PLATED WIPE ACTION CONTACTS, AND SPRING REINFORCED FUSE CLIPS, OF SIZES INDICATED, CSA APPROVED AND CERTIFIED. PROVIDE DISCONNECT SWITCHES AHEAD OF EACH PIECE OF EQUIPMENT WHERE NECESSARY TO MEET CODE REQUIREMENTS.
19. POWER PANELS SHALL BE NDP, CDP OR QMB, QMQB TYPE WITH BOLT-ON BREAKERS OR FUSES, BREAKERS: MINIMUM 22,000-AIC SYMMETRICAL @ 240V.
20. BOXES FOR OUTDOOR USE: GALVANIZED CAST FERALOY COMPLETE WITH NEOPRENE GASKET.
21. BOXES FOR INDOOR USE: CODE GAUGE ELECTRO GALVANIZED STEEL FOR CONCEAL MOUNTING AND GALVANIZED CAST FERALOY OR CAST BRUSHED ALUMINUM FOR EXPOSED USE, UNLESS OTHERWISE NO=TED.
22. FIXTURE BOXES: ELECTRO GALVANIZED STEEL. 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.
23. WHERE OUTLET BOXES ARE INSTALLED IN EXTERIOR WALLS AND / OR INSULATED CEILING HAVING ASSOCIATED VAPOUR BARRIERS ON THE WARM SIDE OF THE INSULATION AND WHERE OUTLET BOXES PERFORATE THE VAPOUR BARRIER. PROVIDE ELECTRICAL BOX VAPOUR BARRIERS BEHIND AND AROUND OUTLET BOXES.
25. SWITCHES AND RECEPTACLE BOXES SHALL BE 1104 TYPE FOR RECESSED MOUNTING.
26. ALL CONDUCTORS: COPPER WITH OR R-90 INSULATION, MINIMUM #12AWG, UNLESS OTHERWISE NOTED.
26. EMT SHALL BE USED FOR WIRING AND CONCEALED WHEREVER POSSIBLE. EMT COUPLINGS AND CONNECTORS SHALL BE STEEL SETSCREW CONCRETE TIGHT OR STEEL COMPRESSION RAIN TIGHT.
27. ALL SWITCHES RECEPTACLES AND COMMUNICATION OUTLETS SHALL BE WHITE. TO BE LEVITON COMMERCIAL GRADE DECORA SERIES.
28. ALL COVER PLATES SHALL BE BRUSHED STAINLESS STEEL.
29. USB RECEPTACLE: NEW 14A, 125V COMMERCIAL DECORA TAMPER RESISTANT COMBINATION USB CHARGER / DUPLEX RECEPTACLE UNDER STAINLESS STEEL COVER PLATE, LEVITON T5632-W OR APPROVED EQUAL.
30. SWITCH: NEW 15A, 125V COMMERCIAL DECORA SERIES SWITCH UNDER STAINLESS STEEL COVER PLATE, DIMMER SWITCH TO BE "MAESTRO" LED, MULTI LOCATION DIGITAL FADE DIMMER BY LUTRON. CONSULT WITH MANUFACTURERS FOR COMPATIBILITY WITH ACTUAL LIGHT FIXTURE SELECTION PRIOR TO ORDERING.
31. RECEPTACLES: WHITE FINISH WITH STAINLESS STEEL COVER PLATES. RECEPTACLES: LEVITON COMMERCIAL GRADE DECORA SERIES.
32. MOUNT DEVICES AT HEIGHTS SHOWN ON DRAWINGS. COMPLY WITH OBC, BARRIER FREE DESIGN.
33. PROVIDE, RELOCATE, INSTALL, WIRE AND CONNECT EMERGENCY LIGHTING AND EXIT LIGHTING SHOWN. PROVIDE NEW LAMPS FOR ALL RELOCATED EMERGENCY AND EXIT LIGHTS.
34. IF ASBESTOS MATERIAL IS ENCOUNTERED, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND NOTIFY THE CONSULTANT.
35. ALL PANEL BOARDS TO HAVE LOCKING HINGED DOOR C/W TYPED PLASTIC DIRECTORY AND NOTIFY THE CONSULTANT.
36. FOR RENOVATIONS: PROVIDE ALL CUTTING AND PATCHING REQUIRED TO CARRY OUT WORK UNDER THIS CONTRACT.

NOTES:

1. ALL ELECTRICAL EQUIPMENT, PANELS, BREAKERS, DISCONNECTS, WIRING, CONDUITS, AND INSTALLATION SHOWN SHALL BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.
2. ELECTRICAL CONTRACTOR SHALL ENSURE THAT EACH WIRE SIZE IS ADEQUATE FOR THE VOLTAGE DROP.
3. STARTERS SUPPLIED MECHANICAL DIVISION SHALL BE INSTALLED AND WIRED BY THIS DIVISION. COORDINATE WITH MECHANICAL CONTRACTOR AND REVIEW APPROVED SHOP DRAWINGS BEFORE WIRING TO ANY EQUIPMENT.
4. COORDINATE LOCATION OF METERING UNIT ON SITE AND INSTALL IN ACCORDANCE TO MANUFACTURER WRITTEN INSTRUCTIONS.
5. THIS LAYOUT IS SCHEMATIC ONLY. METERING ARRANGEMENT AND DISTRIBUTION EQUIPMENT MAY CHANGE TO SUIT SITE CONDITIONS AND CLIENT PREFERENCES.
6. COORDINATE EXISTING INCOMING SERVICE TO TENANT SPACE ON SITE.
7. FOR THE ELECTRICAL SERVICE COORDINATE WITH THE LANDLORD AND BASE BUILDING DRAWINGS.
8. HARD WIRED POWER CONNECTION TO EQUIPMENT COMPLETE WITH MANUAL DISCONNECT SWITCH RATED PER EQUIPMENT SPECIFICATION. ALL NEW WIRING TO BE CONNECTED TO EXISTING ELECTRICAL PANEL LP-179/3, 225A, 120/208V, 3PH AND 4 WATTS IN STORAGE ROOM F179.

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