100 Queen Street West Toronto, ON M5H 2N2 Tel: 4163975330

BUILDING PERMIT

This card must be kept posted in a conspicuous place on site of construction.

18 197188 BLD 00 BA

Site Address 348 DAVENPORT RD

Project Description Municipal Shelter;

Interior Alterations

Date Issued Tuesday August 07, 2018

Will Johnston Chief Building Official and

Executive Director

Mario Angelucci
Deputy Chief Building Official and
Director

THIS IS YOUR PERMIT TO CONSTRUCT PERMIT NUMBER: 18 197188 BLD 00 BA

Owner: Address:

CITY OF TORONTO C/O CHRISTINE WALLACE

55 JOHN ST FLOOR 2 TORONTO ON M5V 3C6

CITY OF TORONTO C/O SSHA PROGRAM SUPPORT, METRO HALL

55 JOHN ST 6 FL

TORONTO, ON M5V 3C6

CAN

Project Description: Municipal Shelter; Interior Alterations

Project Location: 348 DAVENPORT RD

Ward:

The issuance of this permit is based on the drawings, specifications, details and information submitted with the application. The submitted documents have been reviewed for compliance with the Ontario Building Code, Zoning By-laws, applicable regulations and legislation.

The referenced permit number listed above and on your permit placard also appears on all plans reviewed for this building permit application. The validity of this permit is restricted to the person/company named as owner. Permit ownership cannot be transferred unless prior written authorization is given by the Chief Building Official.

The extent of construction authorized under this permit is limited to the description contained herein as follows: Proposal for interior alterations to convert existing 4 storey mixed use building to a municipal women's shelter. See also 18 180707 ZZC.

Stated work and use must be in accordance with the plans, specifications, building permit notes and other information issued with this building permit. Changes to any documents submitted are not to be made unless prior authorization is obtained from the Chief Building Official or designate. False information may be grounds for revocation of the building permit.

Notwithstanding, it is the responsibility of the owner to comply with requirements of the Ontario Building Code and applicable laws as well as to ensure compliance ..

The permit placard must be posted in a conspicuous place on the construction site.

Mario Angelucci Issued by: South District Issuance Team

Deputy Chief Building Official Date Issued: August 07, 2018

Toronto and East York District

TORONTO Building Toronto and East York District

Please see the second page of this letter for additional requirements and inspection information.

WHEN YOU BEGIN DEMOLITION/CONSTRUCTION ...

Site Fencing

As soon as construction or demolition starts, your site must be entirely surrounded by a fence which is in compliance with the City of Toronto Municipal Code Chapter 363, Article III. The minimum requirement is plastic mesh fencing, 1.2 metres high, tied to posts spaced no more than 1.2 metres apart with an 11 gauge top and bottom wire threaded through the mesh and looped around each post. The Municipal Code is available on the City website at:

http://www.toronto.ca/legdocs/municode/1184_363.pdf

Construction Noise

Any construction which generates noise is prohibited in residential areas between the hours of 7:00 p.m. one day to 7:00 a.m. the next day, 9:00 a.m. on Saturdays, and all day Sunday and Statutory holidays.

When To Call For Inspection

You are required by Division C, Part 1, Article 1.3.5.1. of the Ontario Building Code, to notify the building inspection office at several prescribed stages of construction. Please contact the building inspection office at the telephone number listed below, when each of the following stages are substantially complete:

Inspection Stages

* Structural Framing

* Insulation/Vapour Barrier

* Fire Separations

* Fire Protection Systems

* Fire Access Routes

* Interior Final Inspection

* Exterior Final Inspection

* Site Grading Inspection

* Pool Suction/Gravity Outlets

* Pool Circulation System

* Occupancy

To Schedule your Next Mandatory Inspection

When you are ready to book your inspection, you may request an inspection online from your computer or smart phone using Toronto Building's Inspection Request web application at www.toronto.ca/building-inspection-request.

Alternatively, you may contact your local building inspection office by telephone at 416-338-0700, by fax 416-696-4151 or by email to TOBldgInsp@toronto.ca.

Inspections will take place within two days commencing at the start of business on the day following your notification (Inspection Request).

Please leave a telephone number where you can be reached or a message can be left.

The inspector assigned to your project is Keon Bull (416) 338-0847

PERMIT PLANS MUST BE ON SITE

Your permit plans and specifications must be on site at all times. Inspections are conducted with your copy of the plans.



Will Johnston Chief Building Official and Executive Director

August 07, 2018

Toronto Building
Toronto City Hall
12th Floor, East Tower
100 Queen Street West
Toronto, Ontario, M5H 2N2

BULLETIN - CONSTRUCTION SAFETY

The responsibilities of the City of Toronto under the Occupational Health and Safety Act apply to all our employees regardless of the location at which they are working.

Responsibilities for the Construction Safety Regulations on construction sites are clearly spelled out in the Act under the definitions of constructor, employer, supervisor and worker.

The City of Toronto believes that the goal of safe and injury free construction sites is a priority for all parties involved in building construction.

Safety training for the City of Toronto Building Inspectors is mandatory. However the delivery of a safe working environment on construction sites must include the compliance of individual builders with the Occupational Health and Safety Act.

Safety measures include the following:

- 1. Temporary guards on all openings,
- 2. Correct use of ladders,
- 3. Temporary or permanent stairs above or below grade by the time the sub floor is complete,
- 4. Clear and safe access to the site,
- 5. Protection of trenches and excavation below four feet deep, and
- 6. Correct use of fall prevention equipment where required.

As the employer responsible for the safety of building inspectors, the City of Toronto has instructed its Building Inspectors not to conduct inspections on sites where conditions exist that could jeopardize their health and safety.

The following are examples of conditions which may jeopardize the health and safety of inspectors:

- 1. Guards are missing,
- 2. Ladders do not meet regulations,
- 3. Temporary or permanent stairs, above or below grade, to all floor levels are not provided as required.
- 4. Access to the site has impediments or hazards, or
- 5. Trenches or excavations lack required shoring or slope of bank.

Prior to calling for an inspection the appropriate safety measures shall be in place as a site inadequately provided with these measures is not ready for inspection. The City of Toronto Building Inspectors will cooperate with builders regarding the timing of making provision for these safety measures. However, if the measures are not provided, an Order Not To Cover could be issued and the Ministry of Labour informed.

We look forward to working with you toward the goal of a safe environment for all workers.

Notice of Project - Please be advised that the Ministry of Labour requires a Notice of Project be filed with them before starting any project costing \$50,000 or more.

For more information about the Notice of Project form, please contact your local Ministry of Labour regional office at 416-314-5421 or 1-800-991-7454. Ministry of Labour construction information is available on their website at: http://www.labour.gov.on.ca/english/site/construction_info.html

Construction of the work approved in this building permit must be carried out with reasonable care to ensure protection for everyone on the construction site from the hazards associated with all overhead and underground power lines. Obtain further information at: http://www.torontohydro.com/powerlinesafety

TORONTO MUNICIPAL CODE 441 FEES AND CHARGES

Appendix C - Schedule 8, Toronto Building

18 197188 BLD 00 BA 348 DAVENPORT RD

Total Permit Fee

Total Permit Fee

\$4,782.10

\$4,782.10

Work Proposed Interior Alterations Sub Municipal Shelter

Building Classification	Service Index Dollars per Square Meter unless otherwise indicated	Value in Square Meters (unless otherwise indicated)	Fee
B. Alterations and Renovations:			
Interior Alterations (Partitions, Finishings, Etc.): Groups C, E and F	4.93	970	4,782.10

TORONTO

Application

Commitment to General Review			General Reviews		
					Folder No.
District Offic	es				
☑ Toronto an	d East York	□ North York	☐ Scarboro	ıgh	☐ Etobicoke York
	be Completed b	y Owner			
Project Descript	ion				-
New access ble	WCs, Universal WC	s and an accessible ra	mp. Changes to occ	ирапсу а	nd plumbing count.
Project Address	(Street Number, Stre	eet Name, Suite/Unit	Number, City/Town,	Postal C	ode)
348 Davenport	Road, Toronto ON, M	16H 2G4			
issued to au WHEREAS A been Issued NOW THERE demolished (1). The undersiconstruction other documenthe Ontario 2. All general Building Off 3. Should any construction engineer with the Undersicon undertake good The undersicon with the undersicon tension of the undersicon tension	Ontario Law prohibits thorize it, and Architects and engin FFORE the Owner, whereby confirms that: igned architect and/or a or demolition of the lents that form the bath association of Architect eview reports by the recipital; retained architect or part or demolition, the Crite appointed so thath a or demolition will onleneral review, and a pagned hereby certifier	professional engineer of the contract of the c	s have been retained whether the work is in a permit, in accordate scional Engineers will be notified in writing the motified in writing architect and/or proposed construction and agrees to the	the build d to provious n general noce with of Ontario be forwateral revieg immedition; and dessional description or dem	de general reviews of the conformity with the plans and the performance standards of
Owner's First Na	ame		Last Name		
Christine			Wallace		
Street Number					Postal Code
55	John Street				M5V 3C6
Telephone Num		Mobile Number		Fax Num	
(416) 392-15	45	(647) 331-7130		(416) 3	92-4828
Signature	place	Print Name	ne Wallace	Date	2018-07-13 (yyyy-mm-dd)
Co-ordinator of	the work of all consult	ants			

Continue on next page

Telephone Number

416-901-8055

1157

Workshop Architecture Inc.
Street Number | Street Name

Davenport Road

The personal information on this form is collected under the City of Toronto Act, S.O. 2006, Chapter 11, Schedule A, s. 136 (c) and the Building Code Act, S.O. 1992, Chapter 23, s. 8(1) and (2). The information collected will be used for processing applications and creating aggregate statistical reports. Questions about this collection may be referred to the Customer Service Manager in the appropriate district. Toronto East York District, 100 Queen Street West, Ground Floor, West Tower, Toronto M5H 2N2; North York District, 5100 Yonge Street, 1st Floor, Toronto M2N 5W4; Etobicoke York District, 2 Civic Centre Court, 1st Floor, Toronto M9C 2Y2; Scarborough District, 150 Borough Drive, 3rd Floor, Toronto M1P 4N7 or by telephone at (416) 397-5330.

Mobile Number



Postal Code

M6H 2G4

Fax Number

416-849-0383

Commitment to General Reviews

PART B - To be completed by Consultants

The undersigned architect and/or professional engineer(s) hereby certify that they are qualified in and have been retained to provide general reviews of the parts of construction or demolition of the building indicated, to determine whether the work is in general conformity with the plans and other documents that form the basis for the issuance of a permit, in accordance with the performance standards of the Ontario Association of Architects (OAA) or Professional Engineers Ontario (PEO).

First Consultant Information and Declaration							
☑ Architectural		Structural	☐ Mechanica	al [] Electrica	ıl	☐ Site Services
☐ Other:							
First Name		Last Name		Firm			
David		Colussi		Workshop	o Archite	cture li	nc.
Street Number	Street Nam	ne				Postal	Code
1157	Davenpo	ort Road				M6H 2	2G4
Telephone Number		M	lobile Number			Fax Nu	mber
416-901-8055						416-8	49-0383
hinh	·-	David	d Colussi		2018-07	7-13	
Signature		Print N	Name		Date (yy	yy-mm-	dd)
Second Consul	tant Info	mation and	d Declaration (if	applicabl	e)		
□ Architectural	✓	Structural	☐ Mechanica	al C] Electrica	ıl	☐ Site Services
☐ Other:							
First Name		Last Name		Firm			
PAUL		FRITZE		READ JO	NES CH	IRISTO	OFFERSEN LTD.
Street Number	Street Nam	те				Postal	Code
144	FRONT	STREET WI	EST			M5J 2	2L7
Telephone Number		M	lobile Number			Fax Nu	mber
647-792-0790		4	116-998-0194			416-9	77-1427
	itally signed by Pau te: 2018.07.13 10:43 00'	1 Fritze 3:26 PAU	L FRITZE		2018-07	7-13	
Signature		Print N	Name		Date (yy	yy-mm-	dd)
Third Consultar	nt Inform	ation and D	eclaration (if ap	plicable)			
☐ Architectural		Structural	☑ Mechanica	al 🖸	I Electrica	ıl	☐ Site Services
☐ Other:							
First Name		Last Name		Firm			
Alla		Prutkin		Sharma 8	& Partner	s Inc.	
Street Number	Street Nam	1е				Postal	Code
85	Curlew D	Orive, Suite 1	108			M3A	2P8
Telephone Number		M	lobile Number			Fax Nu	mber
416-291-8822		6	647-523-8821			1-888	-832-7160
Alla Prutkin Out, en	lly signed by Alla Prutkin n=Alla Prutkin, o=Sharma and Part nail=alla.prutkin@sharmaandpartn 2018.07.13 11:05:26 -04'00'	ners Inc., ers.com, Alla I	Prutkin		2018-0	7-13	
Signature		Print N	Name		Date (yy	yy-mm-	dd)



Existing Life Safety Systems for Building

Folder No.	
1 01001 110.	

Project Information		
Street No. Street Name		
Existing Use	Proposed Use	
Fire Alarm System		
1. Does this building have a fire alarm system?	□Yes □	No
Is the fire alarm system installed throughout the buildir	ng? □ Yes □	No
Standpipe and Hose System		
2. Does this building have a standpipe and hose system	? □ Yes □	No
If yes , the fire hose cabinets shall be located on th	e drawings.	
Length of fire hose:		
Sprinkler System		
3. Does the building have a sprinkler system?	□Yes □	No
Indicate where the sprinkler system is installed:		
The complete building	□Yes	No
All sub-grade levels	□Yes □	No
Above grade levels	□Yes □	No
Indicate which levels:		

Continue on next page.



Application

Existing Life Safety Systems for Building

Storeys					
4. Number of storeys: a) Above grade		b) Belo	w grade		
5. Is the building considered highrise?				□Yes	□No
If yes, then voice communication requ	irements must	be indicated.			
6. Is the alteration taking place on a cross-	over floor?			□Yes	□No
Tenants					
7. The floor(s) involved in this application a	re:	Single tenancy	or	☐ Multi	ple tenancy
Prepared By					
Architect/Professional Engineer/Designer					
First Name	Last Name			Telephone No.	
Company Name				FaxNo.	
Signature		Date (yyyy-mm-d	d)		

The personal information on this form is collected under the City of Toronto Act, S.O. 2006, Chapter 11, Schedule A, s. 136 (b) & (c) and the Ontario Building Code Act, S.O. 1992, Chapter 23. The information collected will be used for processing applications and creating aggregate statistical reports. Questions about this collection may be referred to the Customer Service Manager in the appropriate district. Toronto East York District, 100 Queen Street West, Ground Floor, West Tower, Toronto M5H 2N2; North York District, 5100 Yonge Street, 1st Floor, Toronto M2N 5W4; Etobicoke York District, 2 Civic Centre Court, 1st Floor, Toronto M9C 2Y2; Scarborough District, 150 Borough Drive, 3rd Floor, Toronto M1P 4N7.

Phone: (416) 397-5330

Application



Commitment to General Reviews

Folder No.

District Offic	es				
☐ Toronto and	I East York	☐ North York	☐ Scarborou	ıgh	□ Etobicoke York
PART A – To Project Descripti	be Completed by	/ Owner			
Project Address	(Street Number, Stre	et Name, Suite/Unit N	Number, City/Town,	Postal Co	ode)
during const practice in O WHEREAS O issued to aut WHEREAS A been issued, NOW THERE	ruction or demolition ntario; Intario Law prohibits thorize it, and rchitects and engine	the construction or ers are prohibited by	ofessional engineer demolition of a bui y law from undertal	or both Iding if a	permit has not been
construction other docum	or demolition of the b	uilding to determine was for the issuance of	hether the work is ir a permit, in accorda	general nce with t	de general reviews of the conformity with the plans and he performance standards of (PEO);
All general re Building Offi		rchitect and/or profess	sional engineers will	be forwa	rded promptly to the Chief
construction		ef Building Official will	be notified in writing	g immedia	ws for any reason during ately, and another architect or
					engineers are retained to olition has been issued.
The undersig	ned hereby certifies	that he/she has read	d and agrees to the	above.	
Owner's First Na	ame		Last Name		
Street Number	Street Name				Postal Code
Telephone Num	ber	Mobile Number		Fax Num	ber
Signature		Print Name		Date	(yyyy-mm-dd)
Co-ordinator of t	he work of all consulta	ants			
Street Number	Street Name				Postal Code
Telephone Num	ber	Mobile Number		Fax Num	ber

Continue on next page

The personal information on this form is collected under the City of Toronto Act, S.O. 2006, Chapter 11, Schedule A, s. 136 (c) and the Building Code Act, S.O. 1992, Chapter 23, s. 8(1) and (2). The information collected will be used for processing applications and creating aggregate statistical reports. Questions about this collection may be referred to the Customer Service Manager in the appropriate district. Toronto East York District, 100 Queen Street West, Ground Floor, West Tower, Toronto M5H 2N2; North York District, 5100 Yonge Street, 1st Floor, Toronto M2N 5W4; Etobicoke York District, 2 Civic Centre Court, 1st Floor, Toronto M9C 2Y2; Scarborough District, 150 Borough Drive, 3rd Floor, Toronto M1P 4N7 or by telephone at (416) 397-5330.



Commitment to General Reviews

PART B - To be completed by Consultants

The undersigned architect and/or professional engineer(s) hereby certify that they are qualified in and have been retained to provide general reviews of the parts of construction or demolition of the building indicated, to determine whether the work is in general conformity with the plans and other documents that form the basis for the issuance of a permit, in accordance with the performance standards of the Ontario Association of Architects (OAA) or Professional Engineers Ontario (PEO).

First Consulta	nt Information and	d Declaration			
☐ Architectural	☐ Structural	☐ Mechanica	al 🗆 E	Electrical	☐ Site Services
□ Other:					
First Name	Last Name		Firm		
Street Number	Street Name			Posta	Il Code
Telephone Number		Mobile Number		Fax N	lumber
Signature	Driv	nt Name		Date (yyyy-mm	n dd)
Second Consul	Itant Information a	and Declaration (if	applicable)		
☐ Architectural	☐ Structural	☐ Mechanica	al 🗆 E	Electrical	☐ Site Services
☐ Other:					
First Name	Last Name		Firm		
Street Number	Street Name			Posta	Il Code
Telephone Number		Mobile Number		Fax N	lumber
Signature	Prir	nt Name		Date (yyyy-mm	n-dd)
Third Consulta	nt Information and	I Declaration (if ap	plicable)		
☐ Architectural	☐ Structural	☐ Mechanica	al 🗆 E	Electrical	☐ Site Services
☐ Other:					
First Name	Last Name		Firm		
Street Number	Street Name			Posta	ıl Code
Telephone Number		Mobile Number		Fax N	lumber
		_1			
Signature	Prir	nt Name		Date (yyyy-mm	n-dd)

Commitment to General Reviews

☐ Architectural	ant Information an ☐ Structural	☐ Mechanica		☐ Site Services
☐ Alcilitectural	□ Structural	□ Mechanica		☐ Site Services
☐ Other:				
First Name	Last Name		Firm	
Street Number	Street Name			Postal Code
elephone Number		Mobile Number		Fax Number
Signature	Prin	t Name	 Date (yyy	/y-mm-dd)
Fifth Consultan	t Information and	Declaration (if app	olicable)	
☐ Architectural	☐ Structural	☐ Mechanica	-	☐ Site Services
☐ Other:				
First Name	Last Name		Firm	
Street Number	Street Name			Postal Code
Геlephone Number		Mobile Number		Fax Number
Signature	Prin	t Name	Date (yyy	vy-mm-dd)
Sixth Consultar	nt Information and	Declaration (if app	olicable)	
☐ Architectural	☐ Structural	☐ Mechanica	I □ Electrical	☐ Site Services
☐ Other:				
First Name	Last Name		Firm	
Street Number	Street Name			Postal Code
Telephone Number		Mobile Number		Fax Number
Signature	Prin	t Name	Date (yyy	vy-mm-dd)



Building Permit 332_12

The reviewed plans and specifications must be available on site during construction/demolition. Changes to these plans and specifications are not to be made unless prior written approval is obtained from the Chief Building Official.

The owner/permit holder is required to comply with the following Permit Notes, which are part of the reviewed permit documents:

Electromagnetic locking devices are not part of this permit. Separate permit is required. Emergency lights shall be provided along paths of egress as per 3.2.7. or 9.9.12. Emergency lighting shall always be maintained to an average level of illumination of at least 10 lx at floor level. Exit signs shall consist of a green pictogram and white graphic symbol meeting the visibility specifications referered to in ISO 3864-1 and conform to the dimensions indicated in ISO 7010 for the following symbols: (i) E001 emergency exit left; (ii) E002 emergency exit right; (iii) E005 90-degree directional arrow; and (iv) E006 45-degree directional arow. Fire alarm systems shall comply with the requirements of the Ontario Building Code. The audibility level of the alarms shall be maintained in all areas of the building. Interior finish and furnishings may have an affect on the decibel level of the fire alarm system. Portable fire extinguishers shall be provided and installed in conformance with Section 6.2 of the Ontario Fire Code. In buildings of combustible construction, except for exit closures, flame-spread rating of all interior wall and ceiling finishes (including glazing) shall not exceed 150. The City has Relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project. The issuance of a permit does not imply a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contravention are subsequently noted. Separate HVAC Permit is Required HVAC and PLUMBING are not part of this permit approval. Separate PLUMBING Permit is Required PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE Sprinkler Systems shall comply with NFPA 13 Standard 18 197188 BLD 00 Standpipe and hose systems shall be installed in compliance with the Ontario Building Code and NFPA 14 standard. Reviewed based on a hose length of ____30m_. **ZONING** O.B.C. Transparent Panels which could be mistaken as a means of egress shall be made inaccessible b FIRE SERVICES the Ontario Building Code O.B.C. (S) The sound pressure level in a sleeping room from a fire alarm audible signal device shall be not less than 75 dBA in a building of residential occupancy when any intervening doors between the device and the sleeping room are closed as per 3.2.4.20 (5).



In a building or part of it classified as a residential occupancy separate circuits shall be provided for audible signal devices on each floor area, and audible signal devices within dwelling units or suites or residential occupancy shall be wired on separate signal circuits from those not within suites of residential occupancy or dwelling units as per 3.2.4.20 (11).
Fire alarm systems, including those incorporating a voice communication system, shall be provided with an emergency power supply conforming to Sentences 3.2.7.8 (2) to (4).
New fire alarm components shall be compatible with remaining devices. Upon completion of work all existing ancillary systems, devices, smoke control and exhaust systems shall be reconnected and shall function and operate as originally designed to operate.
Fire alarm systems, including those with voice communication capability, shall be installed in conformance with CAN/ULC-S524, "Installation of Fire Alarm Systems".
The fire alarm annunciator shall have a separate zone indication of the actuation of the alarm initiating devices in each fire extinguishing system required by NFPA 96.
A fire alarm system shall be designed to notify the fire department in conformance with Article 3.2.4.8.
Fire alarm audible signal devices shall be supplemented by visual signal devices in any floor area in which the ambient noise level is more than 87 dBA as per 3.2.4.20 (7)(a).
Fire alarm visual signal devices shall be installed in addition to audible signal devices in a corridor used by the public and in a floor area or part of it where the public may congregate in a Group A occupancy as per 3.2.4.19.(4)(c)
Audible signal devices forming part of a fire alarm system shall be installed in a building so that alert signals and alarm signals are clearly audible throughout the floor area in which they are installed and shall comply with the applicable sound pressure levels and signal pattern described in Article 3.2.4.20.

Scope of Permit:

Interior alterations to convert existing 4 storey mixed use building to a municipal women's shelter.

The issuance of this permit does NOT relieve the applicant/owner from the requirement to comply with any other applicable legislations, regulations, and standards including, but not limited to, the Ontario Human Rights Code, Accessibility for Ontarians with Disabilities Act, and Integrated Accessibility Standards Regulation.

All service (piping, cables, ducts, etc.) penetrations through fire separations (floor, stair shaft walls, other shafts, etc.) shall be protected at the penetrations by tight-fitting or fire stop material of same degree of fire resistance rating as the fire separation itself.

Exit Signs are to be reviewed on site to ensure they are visible along all paths of egress/exits as obstructions by ducts, pipes, etc. may not be obvious on plans. Add, relocate and adjust signs and emergency lighting as required to achieve their intended performance objective.



THE ONTARIO BUILDING CODE

18 197188 BLD 00

ZONING		
O.B.C.	Johnson, David	07/Aug/2018
FIRE SERVICES		

O.B.C. (S)

WOR 1157	NAME: KSHOP ARCHIT DAVENPORT RO	DAD	LOCATIO 348 Dave Toronto, 0 M5R 1K6	nport Road DN			
	to, ON M6H 2G4 6.901.8055	fax 416.84					
	OF PROJECT:		Project A 970m2 (re				- LUGE
Daver	nport Shelter		9701112 (16	enovation)		OBC REFER	-
ITEM		ONTARIO'S	2012 BUILDING COD	NE DATA MATRIY DA	DTC 2 & 0	[A] for Division A or [C	
1	PROJECT DES		ZUTZ BOILDING COL	□ NEW	✓ PART 11	☑ PART 3	□ PART 9
ı	T NOSECT DES	CIXII TION.		□ ADDITION	11.1 TO 11.4	1.1.2. [A]	1.1.2 [A] &
		☑ (CHANGE OF USE		11.110 11.4	1.1.2. [A]	9.10.1.3
2	MAJOR OCCUP		Group C (Levels 1-4);		(Basement Levels)	3.1.2.1(1)	9.10.2
3	BUILDING AREA		EXISTING 279	NEW 0	TOTAL no change	` ,	1.4.1.2.[A]
4	GROSS AREA		EXISTING 1605	NEW 0	TOTALno change		1.4.1.2.[A]
5	NUMBER OF S	TORFYS	ABOVE GRADE 4		OW GRADE 2	1.4.1.2 [A] & 3.2.1.1.	1.4.1.2 [A]&9.10.
6			RE FIGHTER ACCESS		G UNCHANGED)	3.2.2.10 & 3.2.5	9.10.20
7	BUILDING CLAS			7 (27101114)	3 01101 // (1102.0)	3.2.2.2083	9.10.2.
-			POSED) MENTIRE E	RIJII DING 🗆 SELE	CTED COMPARTMENTS		9.10.8.2.
Ö	SPRINKLER ST	STEW (FROI	□ BASEME		U OF ROOF RATING	3.2.1.5	9.10.6.2.
				ED FLOOR AREAS	O OF ROOF RATING	3.2.2.17	
			SELECTE NOT REC	_		INDEX	INDEX
9	YY .STANDPIPE RE	OUIRED (I	· · · · · · · · · · · · · · · · · · ·	28)		3.2.9	N/A
	FIRE ALARM RI	<u>, </u>	NEFER TO CA C	✓ YES □ N		3.2.4	9.10.18
11	WATER/SERVI		S ADEQUATE	✓ YES □ N		3.2.5.7	N/A
	HIGH BUILDING		OADEQUATE	□YES ☑N		3.2.6	N/A
			TIONS ☑ COMBUST			3.2.2.2083	9.10.6
13	ACTUAL CONS		PERMITTE			3.2.2.2000	9.10.0
	AOTOAL OONO	INCOTION	□ COMBUST				
14	MEZZANINE(S)	AREA M ²	NA			3.2.1.1.(3)-(8)	9.10.4.1
15	OCCUPANT LO	AD BASED C	N □ M.SQ./PERSO	ON ⊠ DESIGN	OF BUILDING	3.1.17	9.9.1.3
	0000171111201		OCCUPANCY_	LOAD			
					1 EROONO		
			56 Clients/Resident 4 fixures rquired/6			3.7.4.6.(1)	
				en distribution by gend	der)		
			2 required/2 provide (note: existing WCs		e dedicated for staff use)		
			(note: externing true	o in bassinone lover an	o dedicated for stair doo,		
16	BARRIER-FREE	EDESIGN	⊠ YES	□ NO (EXPLAIN)		3.8	9.5.2
17	HAZARDOUS S	SUBSTANCE	S □ YES	⊠ NO		3.3.1.2. & 3.3.1.19	9.10.1.3(4)
18	REQUIRED FIRE		NTAL ASSEMBLIES RR (HOURS)		ED DESIGN NO. SCRIPTION (SG-2)	3.2.2.2083 & 3.2.1.4	9.10.8 9.10.9
	RESISTANCE	FLOORS?	HR/2HR HOURS	Exiting floor	rs 2-3 provide 45min		
	RATING (FRR)	ROOF	NA HOURS	FRR (uncha	anged); Basement		
	(1111)	MEZZANI	NE NA HOURS	provides 2h	IR FRR (unchanged)		
19	SPATIAL SEPA		NSTRUCTION OF E	XTERIOR WALLS N	Α	3.2.3	9.10.14
20	OTHER-DESCR	RIBE					
_0	Proposed Basic	Renovation r			s outlined in Part 11 Matri ement levels are F3 Occu		
						ancy, which shall remain	

A Zoning Review has been carried out and it has been determined the proposal complies with applicable City Zoning Bylaws, as

NAME OF PRACTICE:
WORKSHOP architecture inc
1157 Davenport Road
Toronto, ON M6H 2G4
phone: 416.901.805

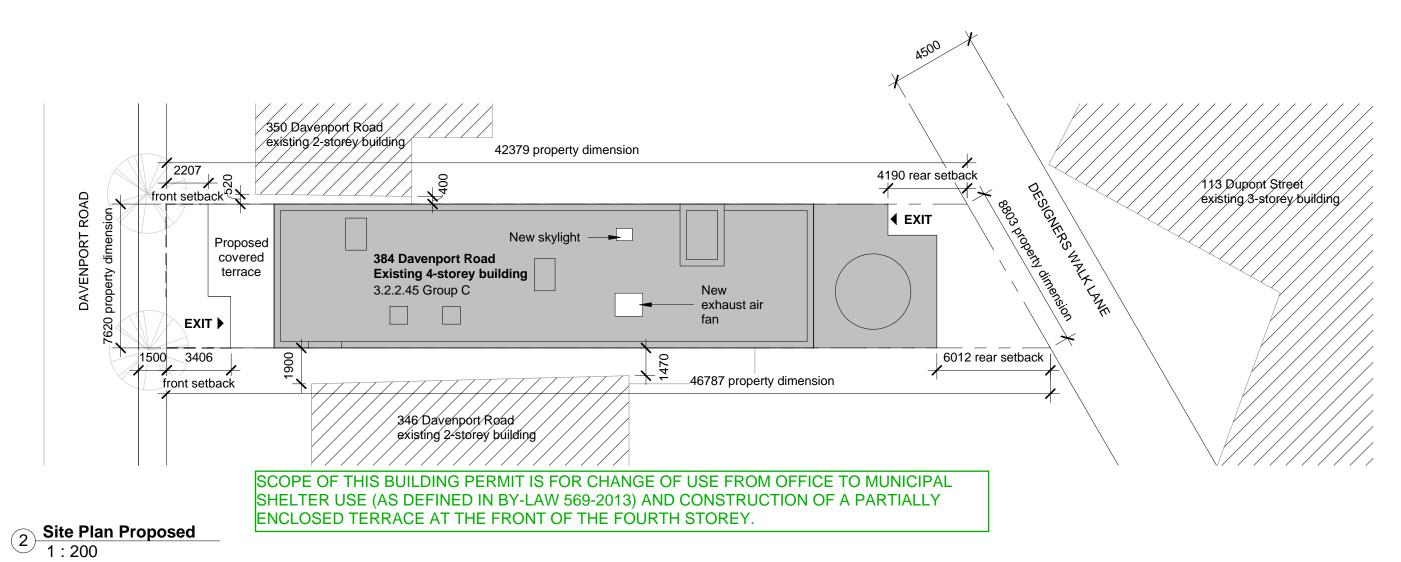
NAME OF PROJECT:
Davenport Shelter

LOCATION:
348 Davenport Road, Toronto ON
M5R 1K6

confirmed by Zoning Certificate 18 180707 ZZC 00 ZR.

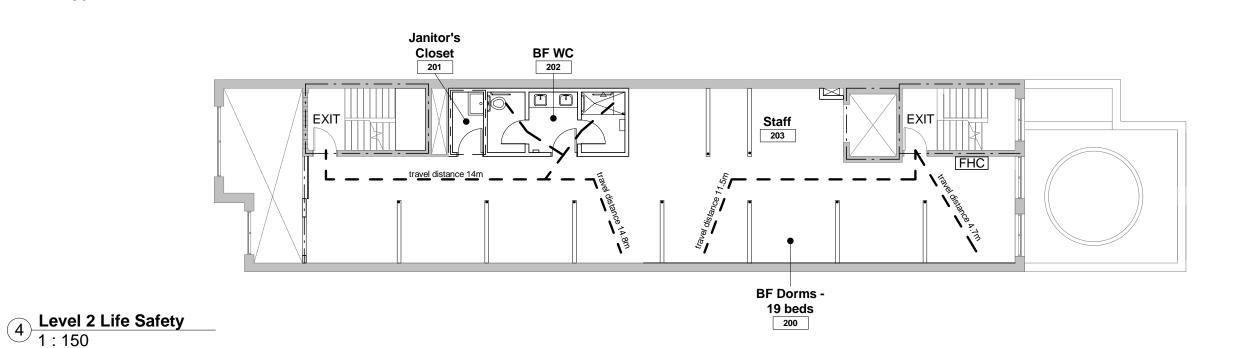
Ontario Bu	ilding Code Data Matrix –	Part 11 – Renovation of Existin	g Building		OBC Reference
11.1	Existing Building classification:			is comprised of ccupancies: F3 at levels 1-4.	11.2.1 T 11.2.1.1
		Existing Construction Index: Existing Hazard Index: Hazard Index for Proposed use	5 5 e: 4		T 11.2.1.1 to N
11.2	Alteration to Existing Building is:	Basic Renovation Extensive Renovation	X		11.3.3.1 11.3.3.2
11.3	Reduction in Performance Level:	Structural:	x No	☐ Yes	11.4.2 11.4.2.1
		By Increase in occupant load:	X No	☐ Yes	11.4.2.2
		By change of major occupancy	: X No	☐ Yes	11.4.2.3
		Plumbing:	x No	☐ Yes	11.4.2.4
		Sewage-system:	X No	☐ Yes	11.4.2.5
11.4	Compensating Construction:	Structural:	X No	☐ Yes	11.4.3 11.4.3.2
		Increase in occupant load:	x No	☐ Yes	11.4.3.3
		Change of major occupancy:	x No	☐ Yes	11.4.3.4
		Plumbing:	x No	☐ Yes	11.4.3.5
		Sewage system:	X No	☐ Yes	11.4.3.6
11.5	Compliance Alternatives Proposed:	▼ No Refer to CA □ Yes	A C28 for STF	PE	11.5.1

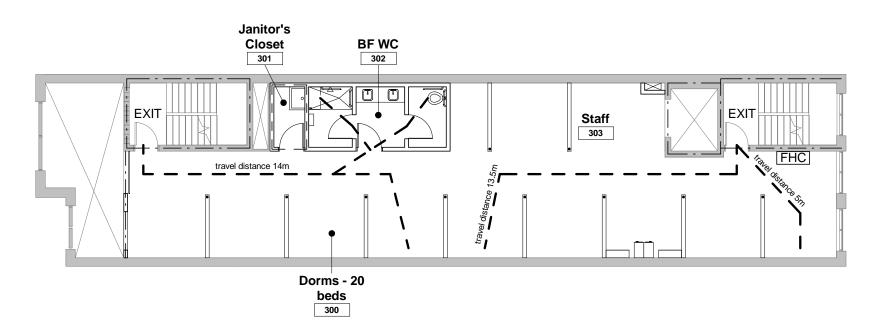
The issuance of this permit does NOT relieve the applicant/owner from the requirement to comply with any other applicable legislations, regulations, and standards including, but not limited to, the Ontario Human Rights Code, Accessibility for Ontarians with Disabilities Act, and Integrated Accessibility Standards Regulation.

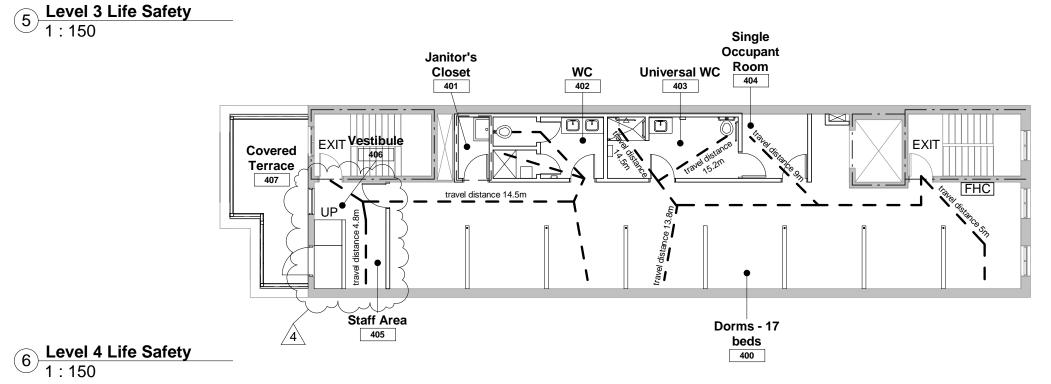


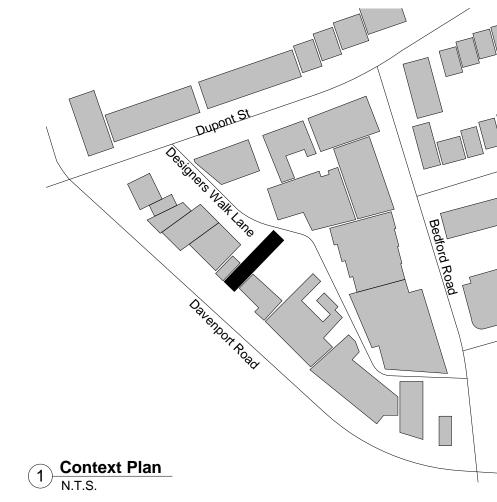
Exist Lobby to conform to 3.4.4.2.(2)

| Existing stainwells provide 1HR FRR (unchanged)
| Program Room | R









Sheet List		
Sheet Number	Sheet Name	
ARCHITEC	TURAL	
A0.0	OBC Matrix, Life Safety Plan, Site Plan	
A1.1	Existing & Demolition Plans	
A1.2	Demolition RCP	
A1.3	Proposed Plans & Schedules	
A1.4	Reflected Ceiling Plans & Schedules	
A2.0	Exterior Elevations	
A2.1	Proposed Interior Elevations & Details	
A2.2	Proposed Interior Elevations & Details	
A2.3	Proposed Interior Elevations & Details	
A3.0	Details - Covered Terrace	
STRUCTUI S0.1 S0.2	General Notes General Notes	
S0.2 S1.1	Ground Floor Renovation Plan	
S1.1 S1.2	Level 2 Renovation Plan	
S1.2 S1.3	Level 3 Renovation Plan	
S1.3 S1.4	Level 4 Renovation Plan	
S1.4 S1.5	Roof Renovation Plan	
J 1.5	Sections and Details	

M-1	Mechanical Legend, Drawing List and Schedules	
M-2	Basement 1 & 2 and Level 1 Plumbing Demolition	
M-3	Level 2, 3 & 4 Plumbing Demolition	
M-4	Basement 1 & 2 and Level 1 HVAC Demolition	
M-5	Level 2, 3 & 4 HVAC Demolition	
M-6	Basement 1 & 2 and Level 1 Fire Protection Demolition	
M-7	Level 2, 3 & 4 Fire Protection Demolition	
M-8	Basement 1 & 2 and Level 1 Plumbing New Layout	
M-9	Level 2, 3 & 4 Plumbing New Layout	
M-10	Basement 1 & 2 and Level 1 HVAC New Layout	
M-11	Level 2, 3 & 4 HVAC New Layout	
M-12	Basement 1 & 2 and Level 1 Fire Protection New Layout	
M-13	Level 2, 3 & 4 Fire Protection New Layout	
M-14	Mechanical Details	
M-15	Mechanical Specification	

M-15	Mechanical Specification
ELECTRIC	AL
E-1	Electrical Legend, Drawing List, Details and Schedules
E-2	Basement 1 & 2 and Level 1 Power Demolition
E-3	Level 2, 3 & 4 Power Demolition
E-4	Basement 1 & 2 and Level 1 Lighting Demolition
E-5	Level 2, 3 & 4 Lighting Demolition
E-6	Basement 1 & 2 amd Level 1 Power New Layout
E-7	Level 2, 3 & 4 Power New Layout
E-8	Basement 1 & 2 and Level 1 Lighting New Layout
E-9	Level 2, 3 & 4 Lighting New Layout
E-10	Electrical Details
E-11	Panes Schedules
E-12	Electrical Specification
E-13	Fire Alarm System

General Notes

1. All site access during the Work, including material delivery/removal and movement of personnel, shall be carried out via the west (Davenport Road). There is no contractor access via Designer's Walk Lane to the east. Contractor shall be responsible for obtaining Street Occupation Permits as required to complete the Work. Refer also to Specificaiton 01500.

2. Site visit is required by General Contractor to verify site conditions. Contact Architect for clarification if required.

3. Make good all surfaces/areas/finishes damaged during demolition.

4. All dimensions are to face of partition unless noted otherwise. Angles are 90 degrees unless noted otherwise.

5. Contractor to chalk partition layout on floor for Architect's review prior to construction.

6. Contractor to provide adequate blocking for all millwork, signage, grab bars, equipment, etc mounted to walls/ceilings.

7. Patch, repair and make good all existing partitions, bulkheads, and ceilings within area of work. Prepare existing surfaces as required to receive new finishes.

8. The General Contractor shall be responsible for all mechanical, electrical and plumbing work. The General Contractor shall be responsible for all chases, openings (including scanning/x-ray where required) and patching as required by mechanical, electrical, plumbing and IT cabling trades. Review requirements with these trades.

9. The General Contractor shall be responsible for keeping areas clean (e. access to exit corriors, etc). Remove garbage and clean daily and as required. At the completion of the job, the General Contractor shall remove all protective materials and arrange for a professional cleaning service to clean/wipe down all surfaces, including walls, windows/glazing, sills, blinds and fixtures/fittings.

10. General Contractor is to co-ordinate and co-operate with trades retained directly by Owner as applicable (eg. furniture installers, IT sub-trades etc.)

11. The General Contractor shall be responsile for scheduling the trades identiied in item 10, where such work affects the progress of the

12. The General Contractor shall comply with all applicable Building and Fire Codes.

13. All temporary shoring/support is the responsibility of the Contractor.

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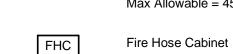
IZEA	Description	Date
1	ZZC Submission	15 June '18
2	Draft	28 June '18
3	Issued for Permit/Tender	13 July '18
4	Reissued for Building Permit	01 Aug '18



ZONING		
O.B.C.	Johnson, David	07/Aug/2018
FIRE SERVICES		
O.B.C. (S)		

Life Safety Plan Legend

 Travel Distance
Max Allowable = 45m



— — — OHR FRR

In I TORONTO

The City has Relied upon the plans and drawings prepared and submit the qualified architects and/or engineers on this project.

The issuance of a permit does not imply a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contravention are subsequently noted.



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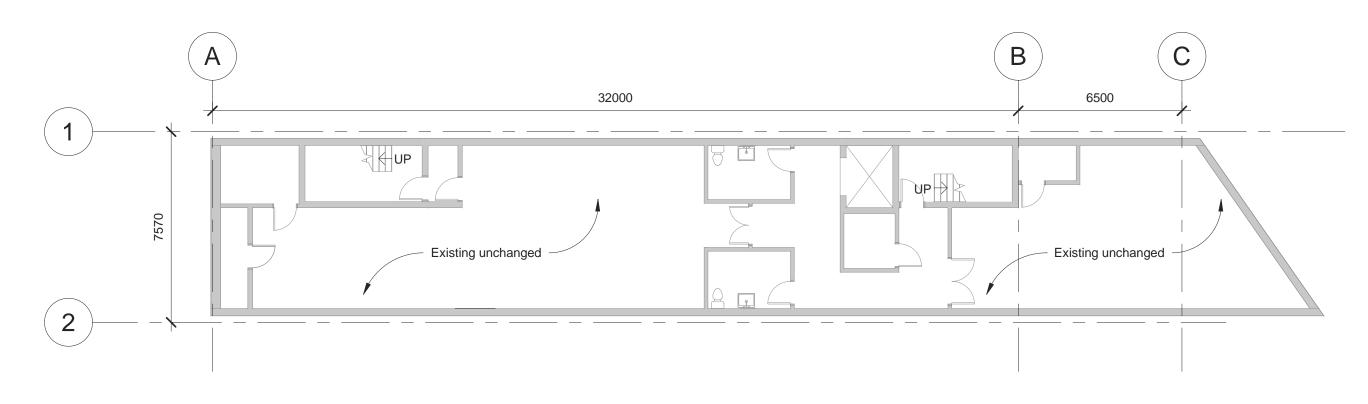
Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

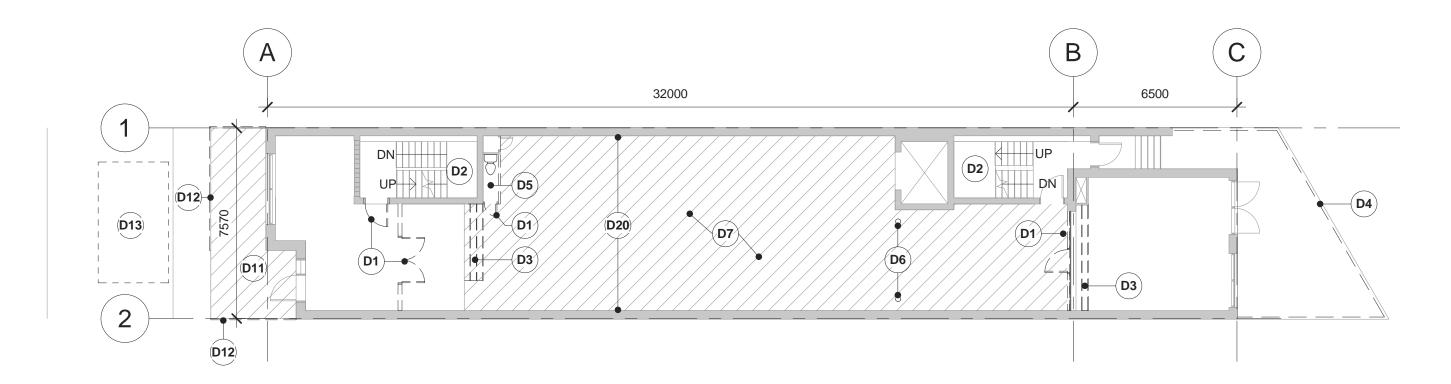
August 2018	Permit/Tende
DATE:	STATUS:
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PROJECT CODE:	SCALE:

OBC Matrix, Life Safety Plan, Site Plan

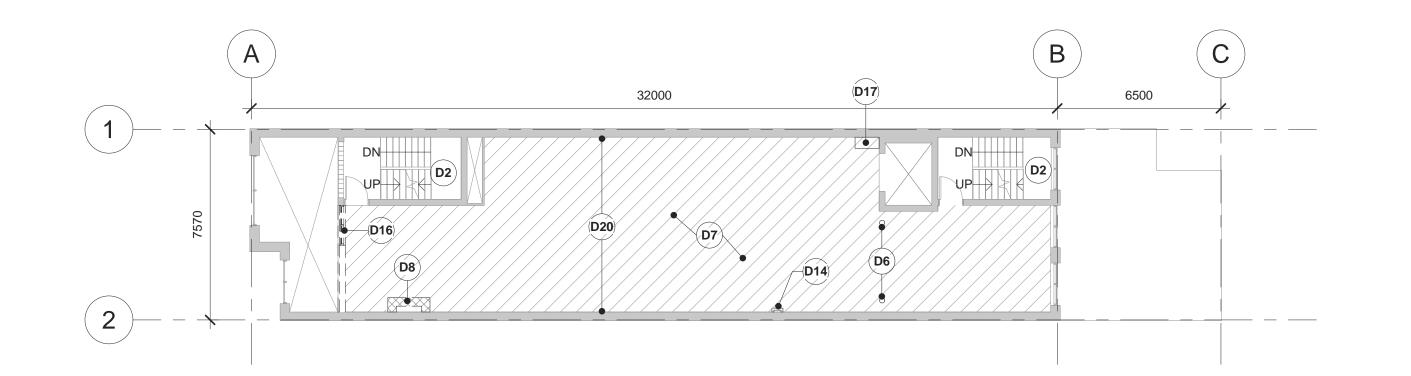




1 : 150

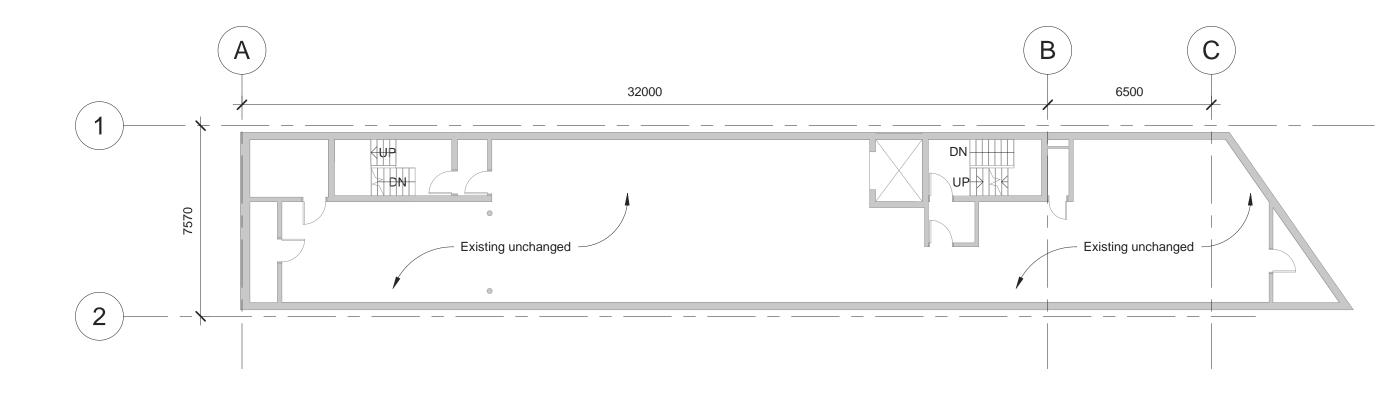


3 Level 1 Demolition 1:150

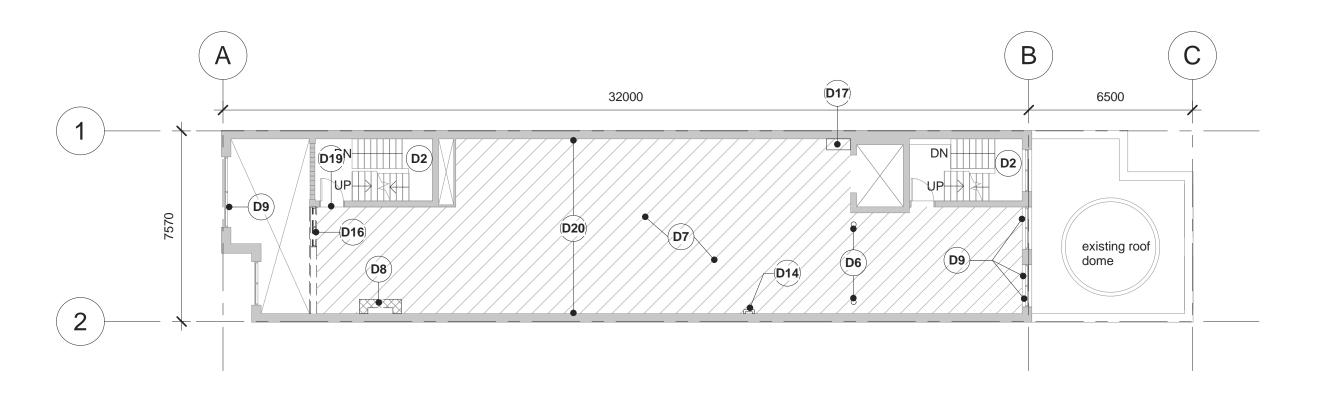


5 Level 3 Demolition 1: 150

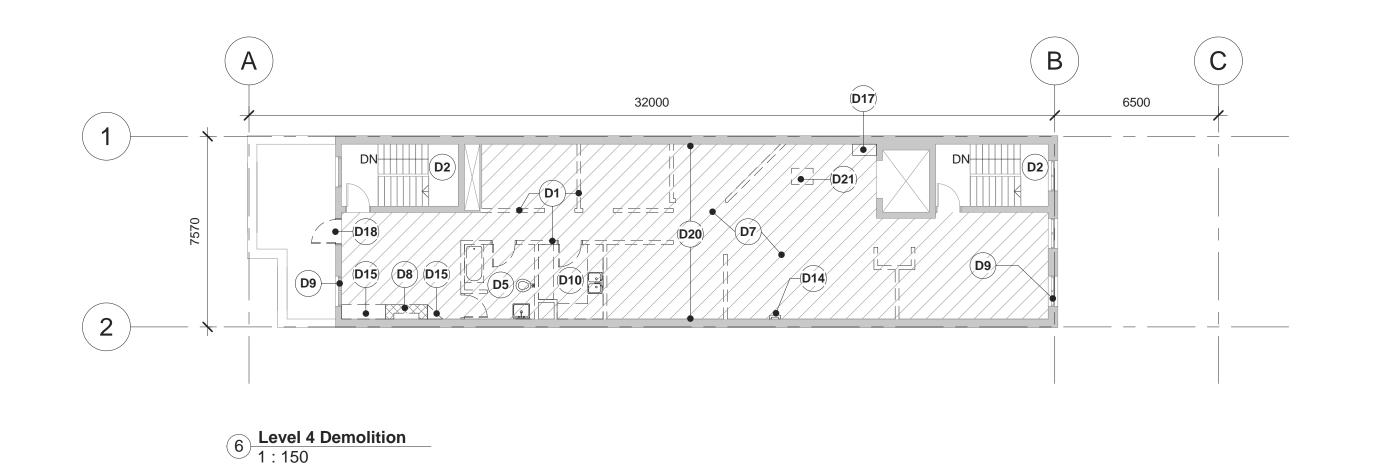
	Demolition Notes
Note	Description
D1	Demolish partition walls, doors and frames. Make good adjacent surfaces.
D2	Patch and level existing concrete at stair landings and treads to receive new floor finish throughout (typ)
D3	Demolish stairs. Make good adjacent surfaces.
D4	No access to lane.
D5	Demolish all plumbing fixtures, washroom accessories and floor finishes.
D6	Demolish decorative columns.
D7	Remove and dispose of flooring throughout. Prepare floor to receive new floor finish. Prepare concrete slab to receive new floor finish
D8	Demolish masonry fireplace. Make good adjacent surfaces.
D9	Remove and replace damanged glazed unit in existing window - refer to exterior elevations for location of panels.
D10	Demolish all millwork, plumbing, kitchen appliances and floor finishes.
D11	Remove and dispose of paving. Prepare slab to receive new paving.
D12	Remove and dispose of existing railing.
D13	Street occupation permit if required.
D14	Demolish chase/bump out. Make good adjacent surfaces.
D15	Demolish millwork. Make good adjacent surfaces.
D16	Demolish railing, partition and screen. Make good adjacent surfaces.
D17	New floor opening for shaft. Refer to structural amd mechanical.
D18	Demolish exterior door and frame. Make good adjacent surfaces. Prepare floor for new curb/threshold.
D19	Remove and replace glazed lite in existing door.
D20	Remove wood baseboards at perimeter walls throughout. Prepare wall surface to receive new finish.
D21	New roof opening for skylight - see structural.



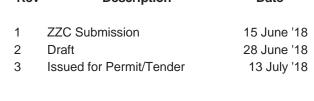
Basement 1 Existing 1: 150



4 Level 2 Demolition 1: 150

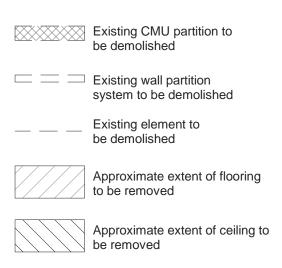


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Demolition Legend



Existing door leaf and frame to be demolished



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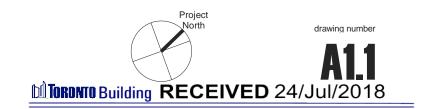
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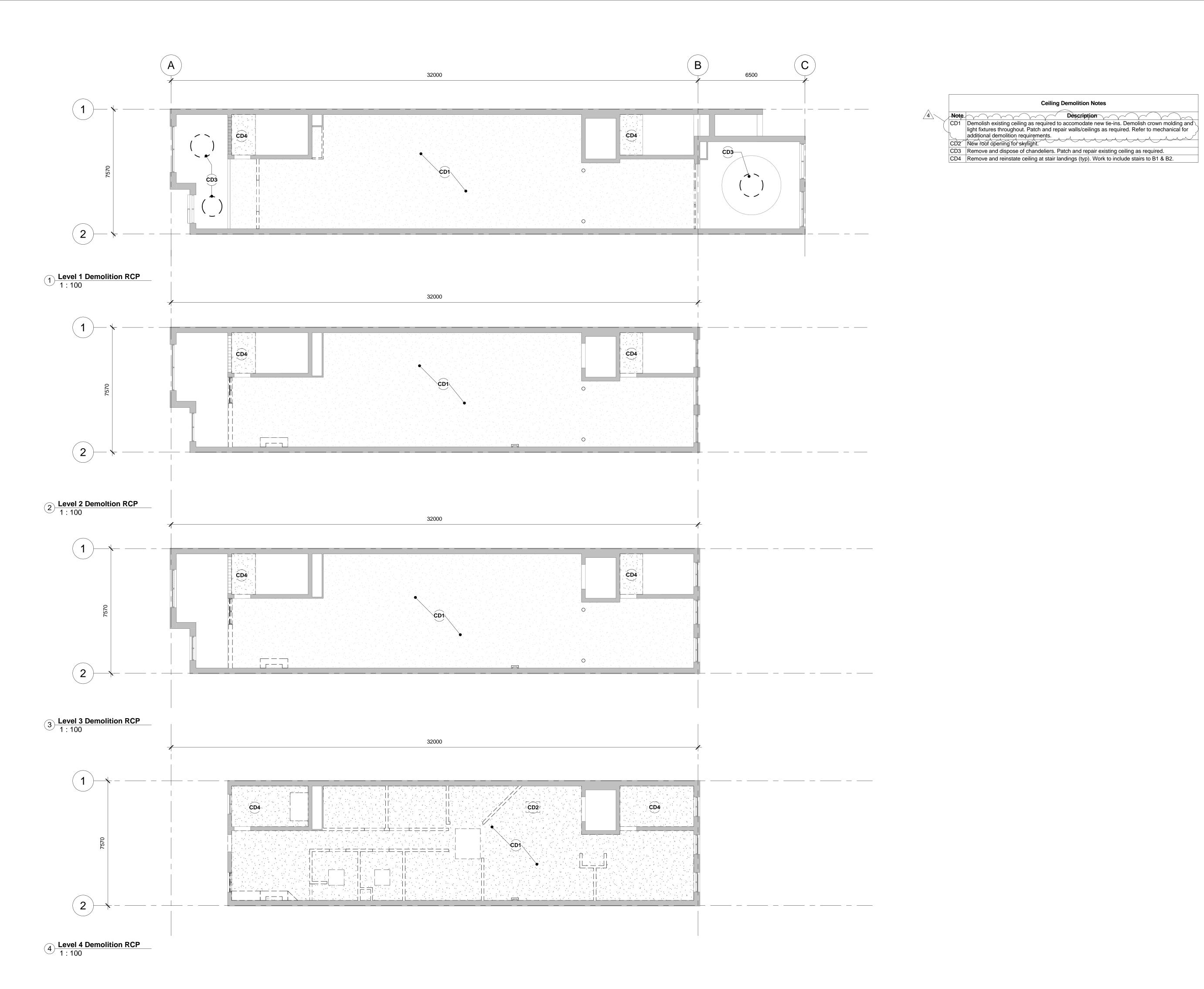
Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

PROJECT CODE:	SCALE:
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DATE:	STATUS:
July 2018	Permit/Tende

Existing & Demolition Plans





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28 June '18 3 Issued for Permit/Tender 13 July '18 4 Reissued for Building Permit 01 Aug '18



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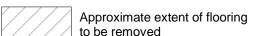
Demolition Legend

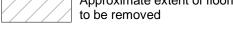
Ceiling Demolition Notes

Existing CMU partition to be demolished

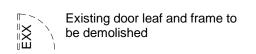
Existing wall partition system to be demolished

Existing element to be demolished





Approximate extent of ceiling to be removed





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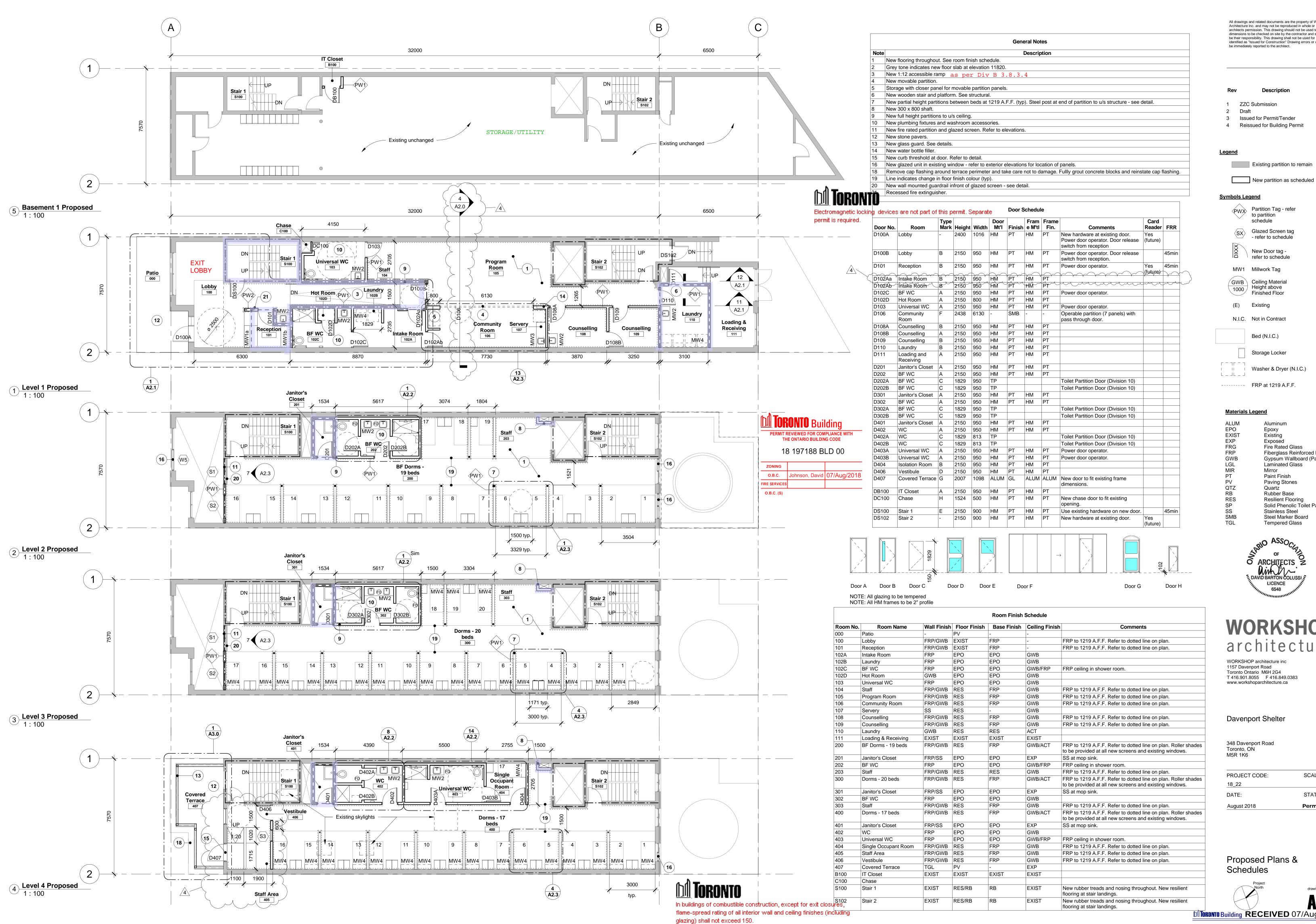
Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

August 2010	r en int/ i ender
August 2018	Permit/Tender
DATE:	STATUS:
18_22	As indicated
PROJECT CODE:	SCALE:

Demolition RCP





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> 15 June '18 2 Draft 28 June '18 13 July '18 Issued for Permit/Tender 01 Aug '18 Reissued for Building Permit

Existing partition to remain

Symbols Legend

PWX Partition Tag - refer to partition schedule

Glazed Screen tag

New Door tag -

refer to schedule

GWB Ceiling Material Height above

Finished Floor (E) Existing

N.I.C. Not in Contract

Bed (N.I.C.)

Storage Locker

□ □ □ Washer & Dryer (N.I.C.)

----- FRP at 1219 A.F.F.

Materials Legend

Aluminum Epoxy Existing Exposed Fire Rated Glass

Fiberglass Reinforced Panel Gypsum Wallboard (Painted) Laminated Glass Mirror Paint Finish

Paving Stones Quartz Rubber Base

Resilient Flooring Solid Phenolic Toilet Partition

Stainless Steel Steel Marker Board

Tempered Glass



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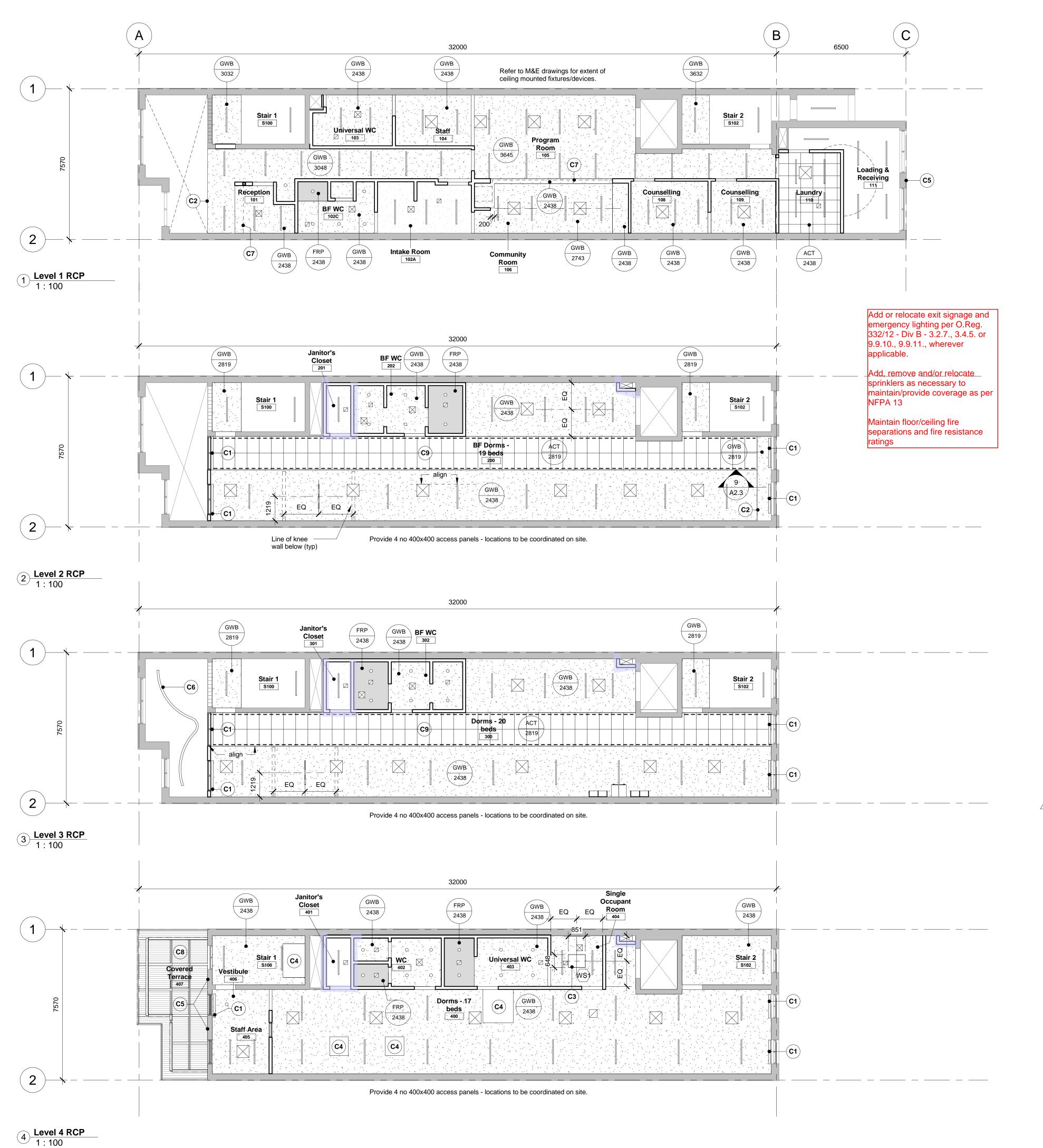
348 Davenport Road Toronto, ON M5R 1K6

PROJECT CODE: SCALE: As indicated STATUS: Permit/Tender

Proposed Plans & Schedules



A1.3



Ceiling Notes Description New rollershades at window/screen (typ) New GWB downstand. New skylight. See structural. Existing skylight. New exterior wall mounted light - see electrical. Suspended feature light - see electrical. Support beam for door - see structural. Paint underside of roof deck

Provide 19mm GWB finish at u/s roof joists above ACT ceiling for continuity of fire separation

ASSEMBLY SCHEDULE

1. CEMENT BOARD SUBSTRATE TO BE PROVIDED THROUGHOUT ALL WASHROOM/SHOWER AREAS AND AT ALL LOCATIONS SCHEDULED TO RECIEVE FULL HEIGHT FRP FINISH - REFER TO SPECIFICATION 09250

2. PROVIDE CONTINUOUS PLYWOOD BLOCKING BEHIND ALL MILLWORK CABINETS, SUSPENDED ITEMS, TELEVISIONS ETC.

3. REFER TO DRAWINGS/DETAILS FOR TERMINATION HEIGHT OF PARTITIONS. ASSUME TERMINATION AT U/S DECK UNLESS NOTED OTHERWISE.

4. PROVIDE FIRE RESISTANCE RATINGS AS INDICATED ON DRAWINGS

INTERIOR PARTITIONS

1 LAYER 16mm TYPE X GYPSUM WALLBOARD 92mm STEEL STUDS 1 LAYER16mmTYPE X GYPSUM WALLBOARD FINISHES AS SCHEDULED

CAPABLE OF ACHIEVING 1HR FRR WHERE INDICATED PER ULC W453



1 LAYER 16mm TYPE X GYPSUM WALLBOARD 150mm STEEL STUDS 1 LAYER16mmTYPE X GYPSUM WALLBOARD FINISHES AS SCHEDULED

FLOOR ASSEMBLY

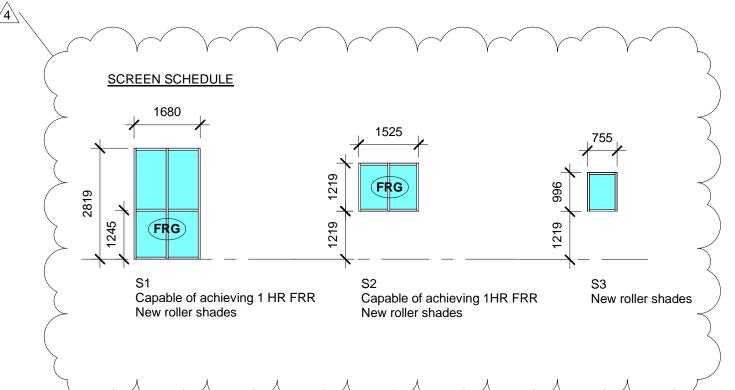
FLOOR FINISH AS SCHEDULED 2 LAYERs 19mm T&G PLYWOOD SUBFLOOR WOOD FRAMING (SEE STRUCTURAL)

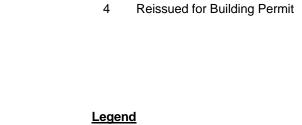


UNIT PAVERS ON PEDESTALS PROTECTION BOARD EXISTING ROOF MEMBRANE/STRUCTURE

ROOF ASSEMBLY

METAL DECKING ON SLOPED STRUCTURE (SEE STRUCTURAL)





18 197188 BLD 00

O.B.C. FIRE SERVICES O.B.C. (S)

PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE

Glazed Screen tag - refer to schedule New Door tag refer to schedule

MW1 Millwork Tag GWB Ceiling Material

Symbols Legend

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be immediately reported to the architect.

3 Issued for Permit/Tender

Existing partition to remain

New partition as scheduled

PWX Partition Tag - refer

schedule

be their responsibility. This drawing shall not be used for construction unless identified as "Issued for Construction" Drawing errors or discrepancies are to

28 June '18

13 July '18

01 Aug '18

Height above Finished Floor (E) Existing

Bed (N.I.C.)

N.I.C. Not in Contract

Storage Locker

Washer & Dryer (N.I.C.)

FRP at 1219 A.F.F.

Ceiling Legend

O Potlight - see electrical

— — — LED cove light - see electrical

LED lighting fixture - see electrical

Return/exhaust grille

Supply air diffuser



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Davenport Shelter

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August 2018	Permit/Tende
DATE:	STATUS:
18_22	As indicate
PROJECT CODE:	SCALE:

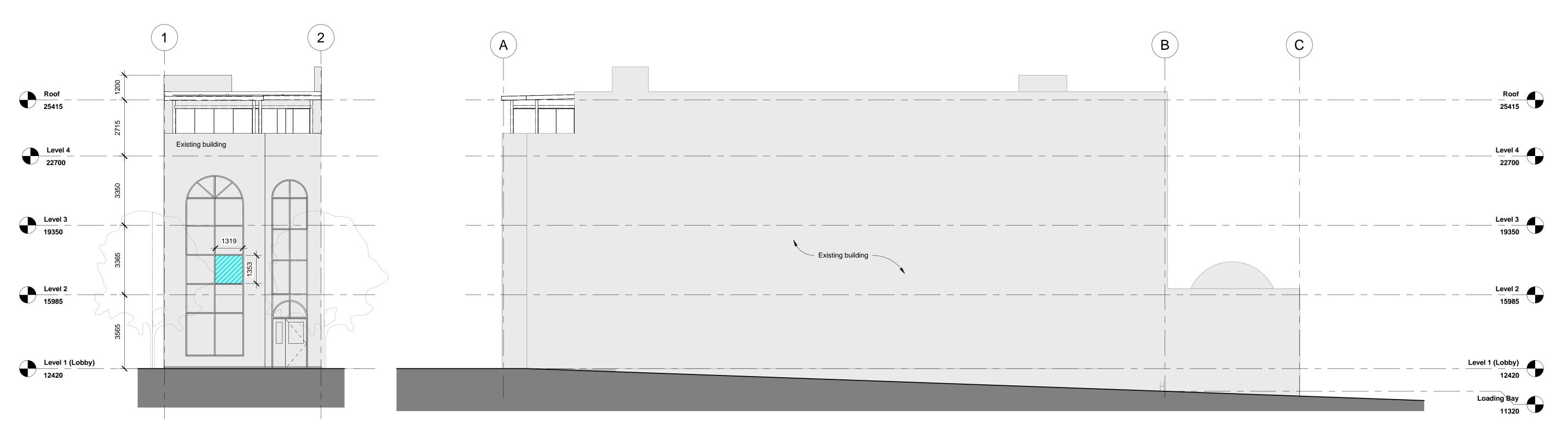
Reflected Ceiling Plans & Schedules



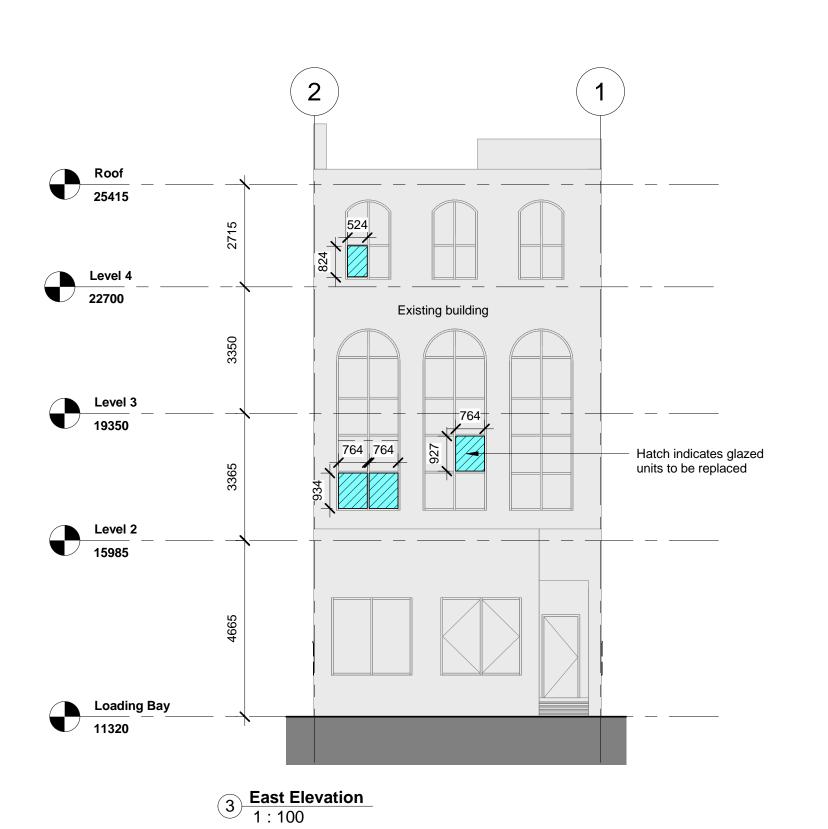


18 197188 BLD 00

	ZONING		
Rev	O.B.C.	ription	Date
	FIRE SERVICES		_ 0.00
1	ZZC Submissio	on	15 June '18
2	Draft		28 June '18
3	Issued for Pern	nit/Tender	13 July '18
4	Reissued for B	uilding Permit	01 Aug '18

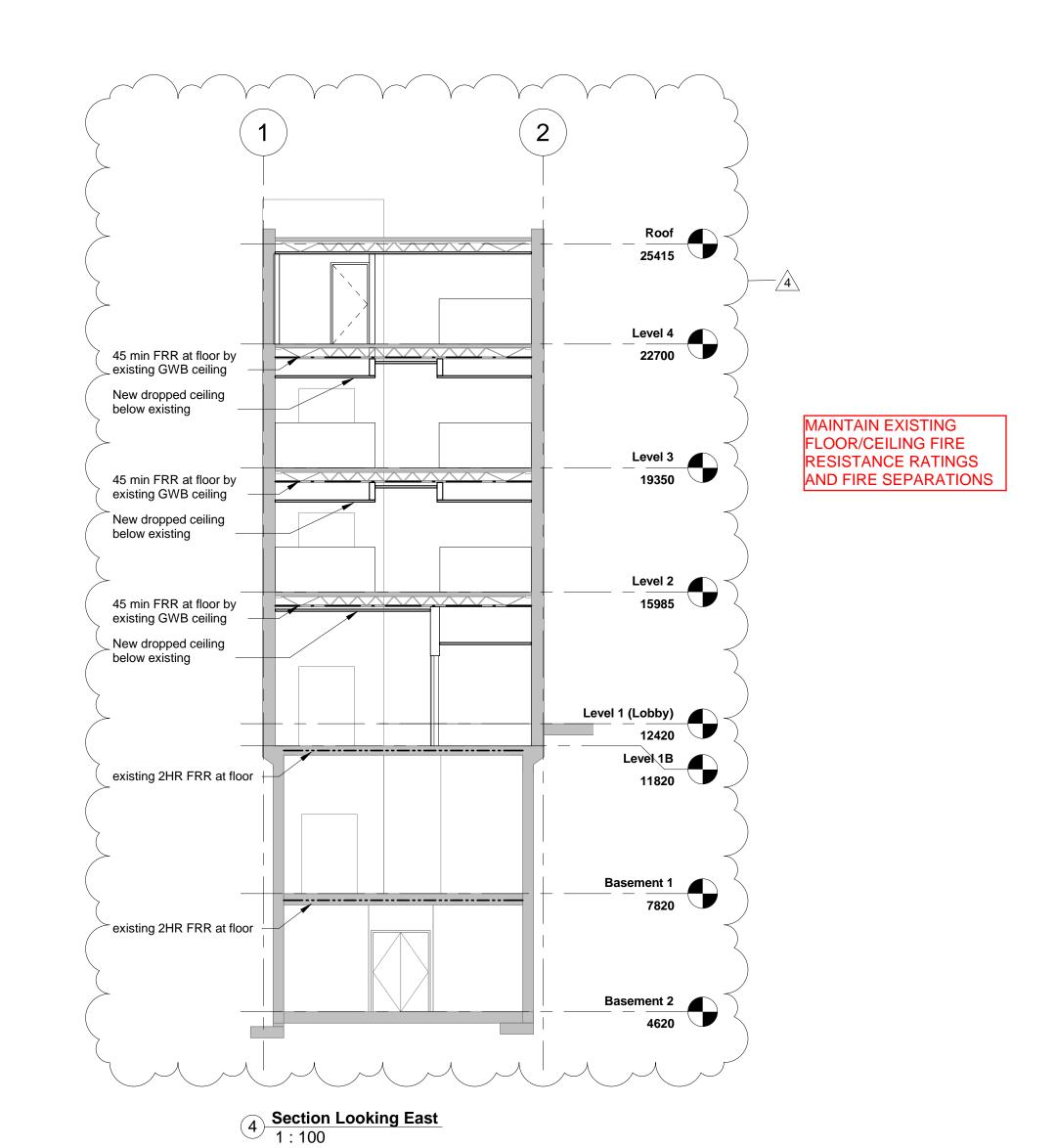


1 West Elevation 1: 100



Sealed Insulated Glass Units to CAN/CGSB-12.8:
Clear Tempered Glass (TGL) outboard lite, minimum 4mm thickness.
Low-E coating to #2 surface (Solarban 67 clear by PPG Industries Inc, SunGuard SN68 clear by Guardian or VE1-2M by Viracon)
Hermetically sealed, dehydrated air space, 100% Argon filled, 25mm overall thickness
Clear TGL inboard lite, minimum 4mm thickness

Glass Unit Performance Requirements: Visible Light Transmittance (VLT): 66 minimum U-Value: 0.38 (IP) maximum Solar Heat Gain Coefficient (SHG): .40 maximum 2 South Elevation 1: 100



Floor/Ceiling Assembly Legend

— — — 0HR FR
— - — 45MIN F

_____ 2HR FRR



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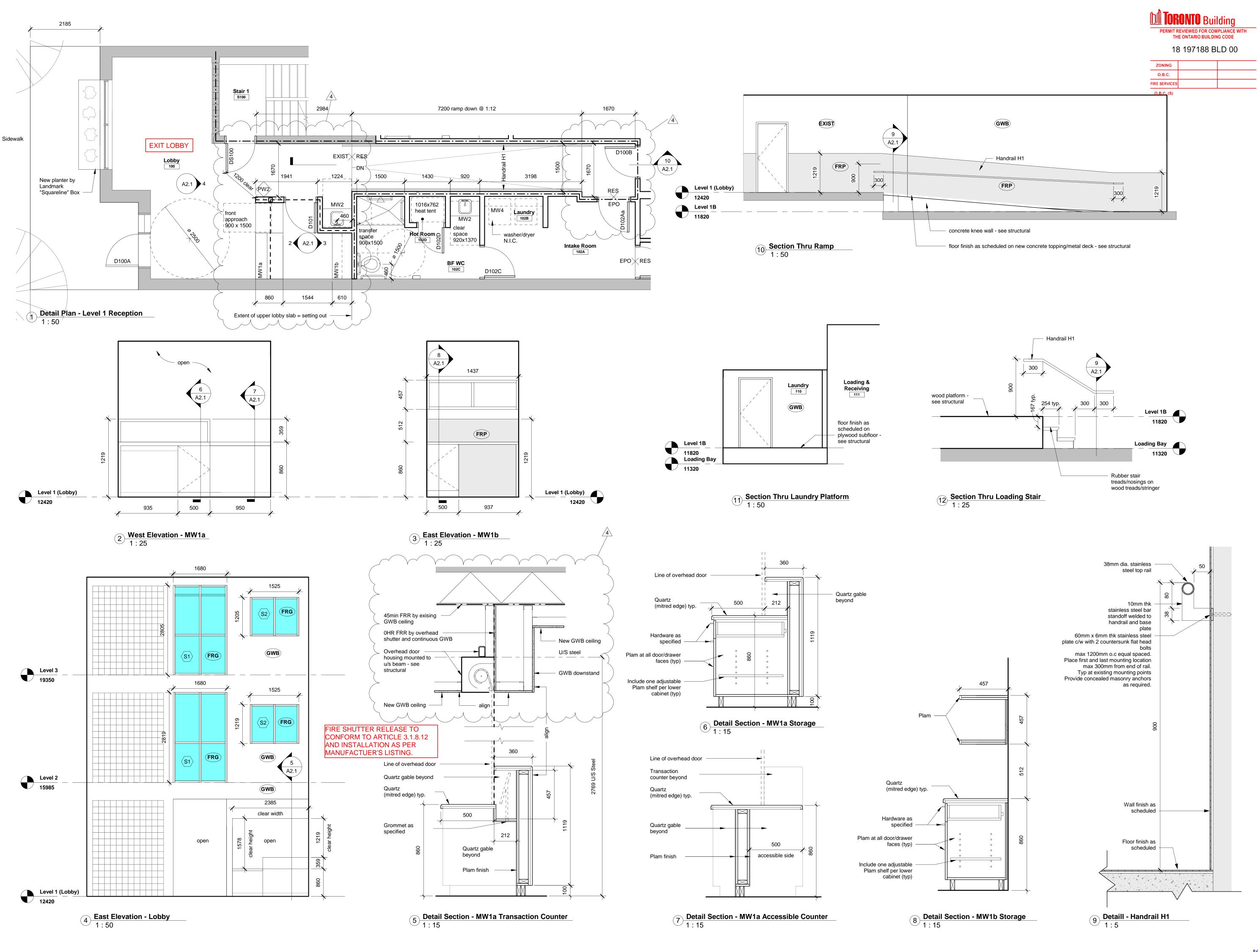
Davenport Shelter

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August 2018	Permit/Tender
DATE:	STATUS:
18_22	As indicated
PROJECT CODE:	SCALE:

Exterior Elevations





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2 Draft 28 June '18 Issued for Permit/Tender 13 July '18

01 Aug '18

4 Reissued for Building Permit

Materials Legend

RES

SMB TGL

ALUM Aluminum EPO EXIST EXP FRG Epoxy Existing Exposed Fire Rated Glass FRP Fiberglass Reinforced Panel GWB LGL MIR PT Gypsum Wallboard (Painted) Laminated Glass Paint Finish PV QTZ Paving Stones Quartz Rubber Base

Resilient Flooring

Steel Marker Board Tempered Glass

Stainless Steel

Solid Phenolic Toilet Partition

Millwork Hardware Legend

Adjustable Shelf Pins/Ferrules: Richelieu No 2291/2292-180 nickel finish at 2" centres or approved equivalent

Bumpers: 2 each per door: Richelieu No 2291/2292-180 nickel finish at 2" centres or approved equivalent

Cabinet Locks: Corbin 02067 x 7/8 or approved equivalent

Cabinet/Drawer Pulls: Richelieu Catalogue No BP2213175 or approved equivalent

Concealed Hinges: Blum 110 degrees or approved equivalent

Drawer guides: Blum WEBKIT1058762 or approved equivalent

Drawer Locks: Corbin 02066 x 7/8 or approved

equivalent

Grommets: Richelieu Catalogue No 60952140 or approved equivalent 6 in total - location TBD



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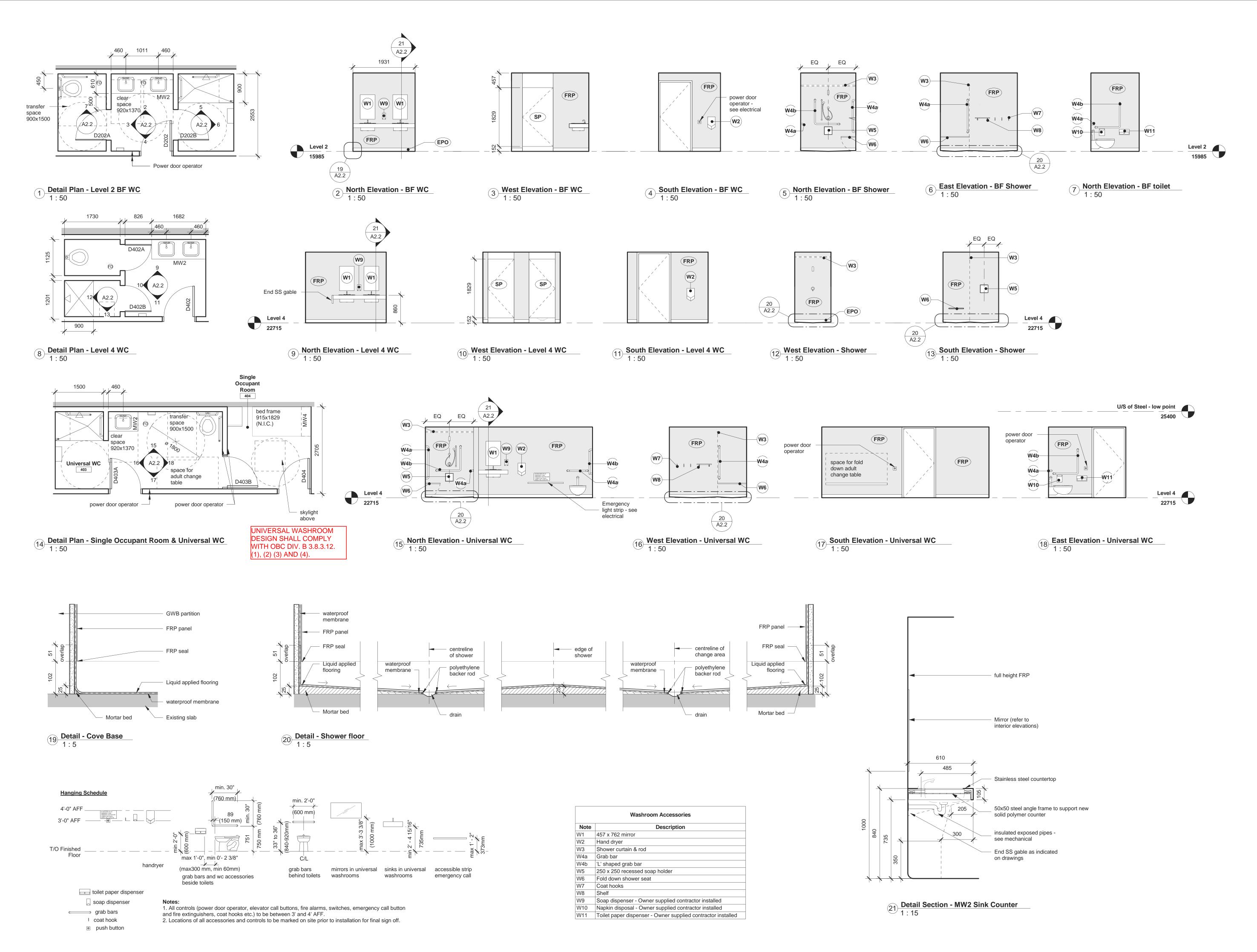
Davenport Shelter

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August 2018	Permit/Tender
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18_22	As indicated
PROJECT CODE:	SCALE:

Proposed Interior Elevations & Details





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1 Draft 28 June '18

13 July '18

2 Issued for Permit/Tender



10) 131	100 D	LD 00	
ZONING				
O.B.C.				
FIRE SERVICES				
O.B.C. (S)				

Materials Legend



WORKSHOP architecture

WORKSHOP architecture inc 1157 Davenport Road Toronto Ontario M6H 2G4 T 416.901.8055 F 416.849.0383 www.workshoparchitecture.ca

Davenport Shelter

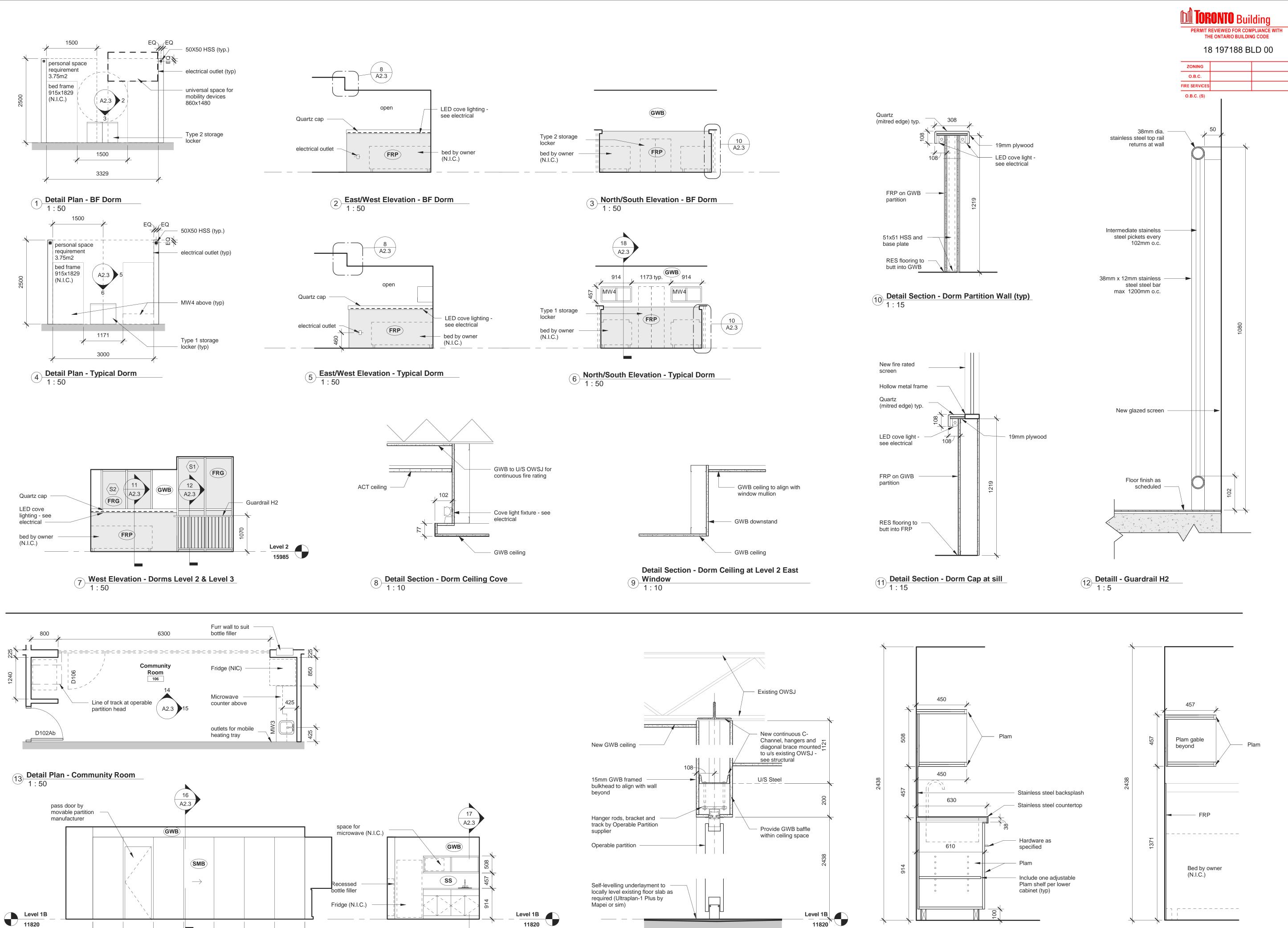
348 Davenport Road Toronto, ON M5R 1K6

PROJECT CODE:	SCALE:
18_22	As indicated
DATE:	STATUS:
July 2018	Permit/Tender

Proposed Interior Elevations & Details







11820

Detail Section - Operable Partition Track
1: 10

Detail Section - MW3 Servery Counter 1:15

11820

Front Elevation - MW3 Servery
1: 50

EQ

North Elevation - Movable Partition 1:50

EQ

EQ

6300

EQ

EQ

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Materials Legend

ALUM Aluminum EPO Epoxy **EXIST** Existing EXP Exposed FRG Fire Rated Glass FRP Fiberglass Reinforced Panel GWB Gypsum Wallboard (Painted) LGL MIR Laminated Glass Paint Finish PV QTZ RB RES SP Paving Stones Quartz Rubber Base Resilient Flooring Solid Phenolic Toilet Partition SS Stainless Steel Steel Marker Board

Millwork Hardware Legend

Adjustable Shelf Pins/Ferrules: Richelieu No 2291/2292-180 nickel finish at 2" centres or approved equivalent

Tempered Glass

Bumpers: 2 each per door: Richelieu No 2291/2292-180 nickel finish at 2" centres or

approved equivalent Cabinet Locks: Corbin 02067 x 7/8 or

approved equivalent Cabinet/Drawer Pulls:

Richelieu Catalogue No BP2213175 or approved equivalent

Concealed Hinges: Blum 110 degrees or approved equivalent

Drawer guides: Blum WEBKIT1058762 or approved equivalent

Drawer Locks: Corbin 02066 x 7/8 or approved

equivalent

Grommets: Richelieu Catalogue No 60952140 or approved equivalent 6 in total - location TBD



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Davenport Shelter

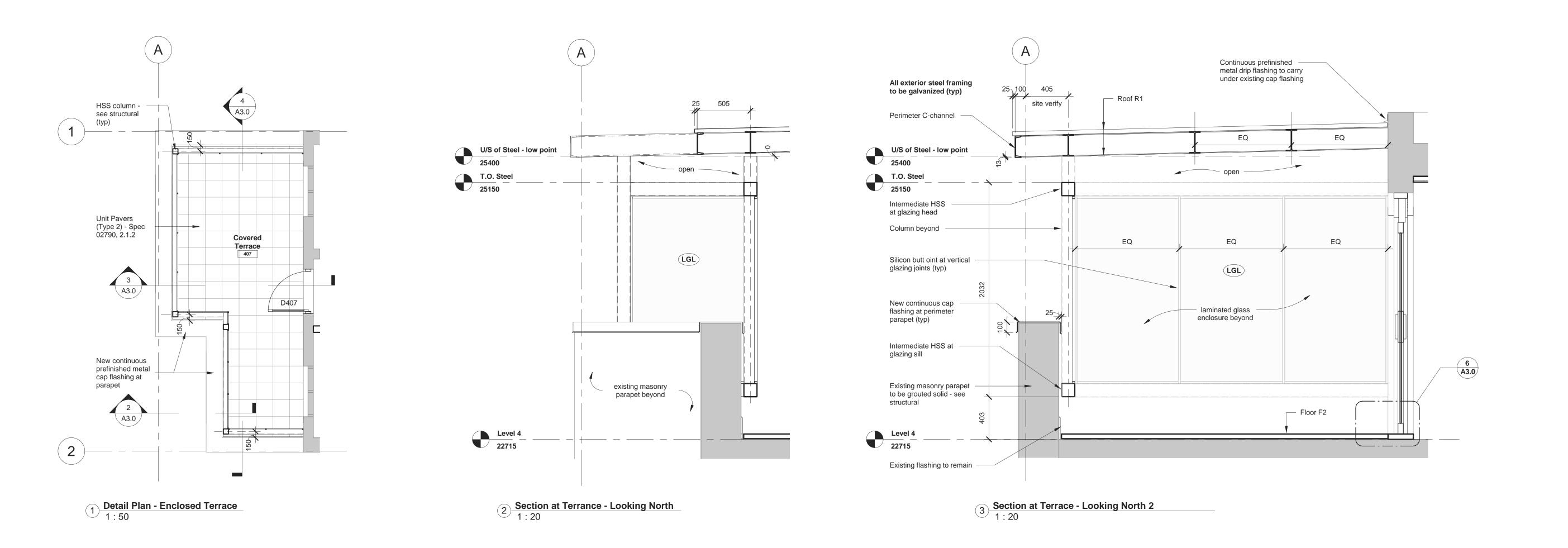
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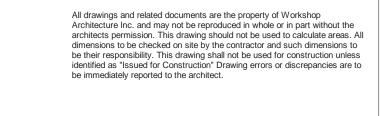
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Proposed Interior Elevations & Details







1 Draft 28 June '18 2 Issued for Permit/Tender 13 July '18

PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE 18 197188 BLD 00

	ZONING	
	O.B.C.	
FIR	E SERVICES	
	D.B.C. (S)	

Materials Legend

ALUM Aluminum EPO
EXIST
EXP
FRG
FRP
GWB
LGL
MIR
PT
PV
QTZ
RB
RES
SP Epoxy Existing Exposed Fire Rated Glass Fiberglass Reinforced Panel Gypsum Wallboard (Painted) Laminated Glass Mirror Paint Finish Paving Stones

Quartz Rubber Base Resilient Flooring Solid Phenolic Toilet Partition SS SMB TGL Stainless Steel Steel Marker Board

Tempered Glass



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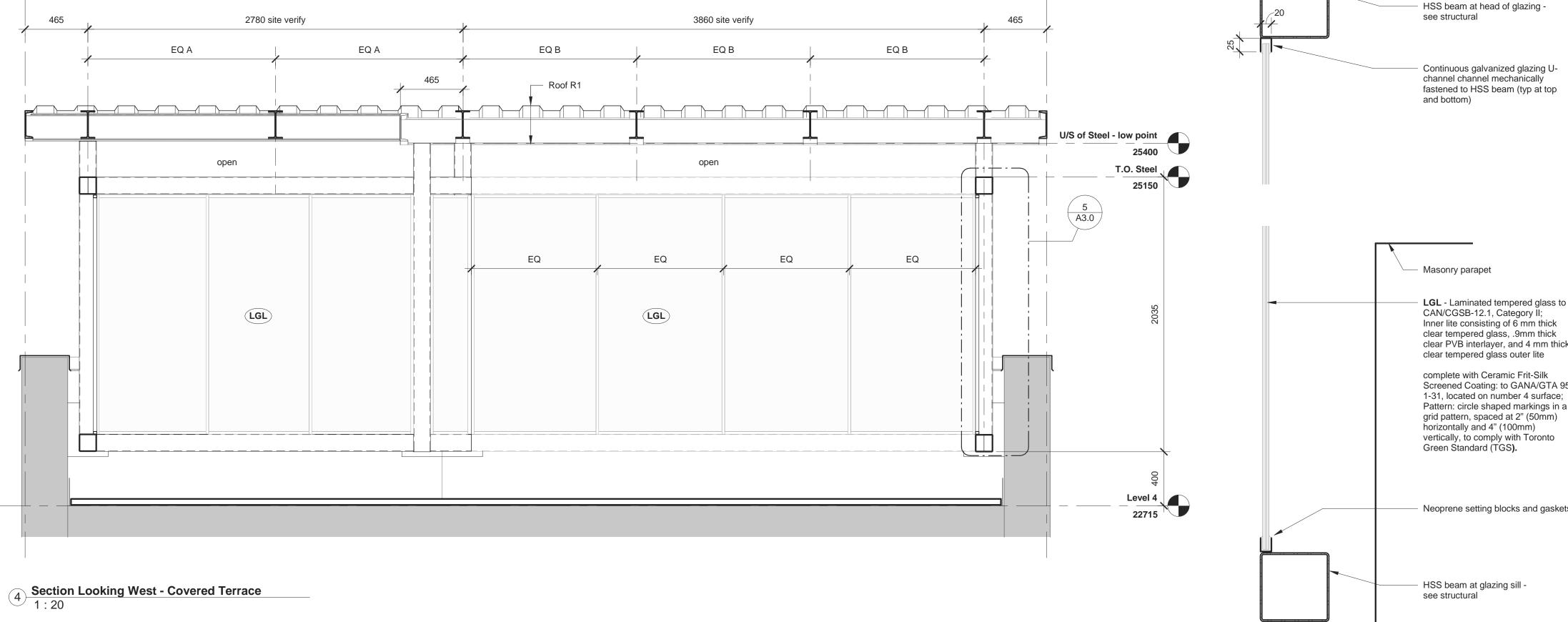
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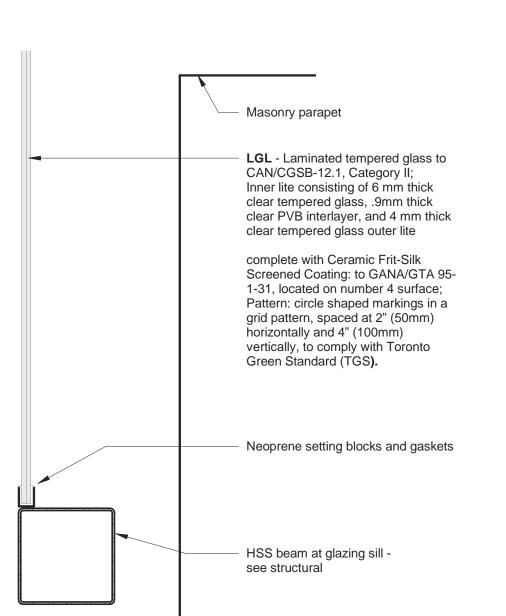
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Details - Covered Terrace





2



T.O. Steel 25150

5 Section Looking West - Covered Terrace - Callout 1 1:5

6 Section Thru Curb/Threshold 1:5

GLASS GUARDS

Painted wood trim -

wood framing

Unit Pavers (type 2) -

Protection board over existing roof membrane

Level 4 22715

2no pressure treated 38x89

Self adhered waterproof membrane (Blueskin W200 or

built up curb at door threshold

equivalent) lapped on to roof

membrane and carried up over

PROVIDE SHOP DRAWINGS OF GLASS GUARD TO THE

GUARD TO COMPLY WITH OBC 3.3.1.17, 4.1.5.14. FOR

BUILDING INSPECTOR. SHOP DRAWINGS SHALL:

a)BEAR THE SEAL AND SIGNATURE OF A

PROFESSIONAL ENGINEER OF ONTARIO. b)INCLUDE SPECIFICATION ON THE GLASS

c)INCLUDE CONNECTION DETAILS.

LOADS AND WITH OBC SB-13.

LIST OF DRAWINGS GENERAL NOTE S0.2 GENERAL NOTES GROUND FLOOR RENOVATION PLAN LEVEL 2 RENOVATION PLAN LEVEL 3 RENOVATION PLAN LEVEL 4 RENOVATION PLAN S1.4 S1.5 ROOF RENOVATION PLAN S2.1 SECTIONS AND DETAILS

GENERAL

SECTION MARK SHOWN THUS A MEANS SECTION #4 ON DRAWING S1.2.

- SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SLEEVES, NAILERS, INSERTS, ETC., TO BE ENCASED IN CONCRETE.
- SEE ARCHITECTURAL DRAWINGS FOR FLOOR AND ROOF ELEVATIONS, RECESSES, DRAINAGE SLOPES, ETC.
- THE GENERAL CONTRACTOR SHALL REVIEW ALL THE DRAWINGS AND CHECK DIMENSIONS BEFORE CONSTRUCTION. REPORT DISCREPANCIES BETWEEN STRUCTURAL AND OTHER DISCIPLINES DRAWINGS FOR
- CONCRETE WORK
 SHALL CONFORM TO CAN/CSA-A23.1, CAN/CSA-A23.2, CAN/CSA-A23.3 AND REFERENCED DOCUMENTS.
- STRUCTURAL STEEL WORK
 SHALL CONFORM TO CAN/CSA-S16 AND REFERENCED DOCUMENTS.
- FIRE RESISTANCE RATINGS
 SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PRECISE LOCATION OF REQUIRED FIRE RESISTANCE
- 8. DO NOT CUT OR DRILL ANY OPENINGS IN STRUCTURAL MEMBERS WITHOUT WRITTEN PERMISSION OF RJC. REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR LOCATIONS, CONFIGURATIONS, EXTENT, AND SIZES OF ALL CURBS, UPSTANDS, DOWNTURNS; AND FOR OPENINGS THROUGH FLOORS AND WALLS FOR DUCTS, CONDUIT AND PIPING. PROVIDE FOR SAME.

10. ABBREVIATIONS:

10. <u>/</u>	<u>ARRKFAIV</u>	HONS:			
-	75		MOMENT CONNECTION	L.L.B.B.	 LONG LEGS BACK TO BACK
	/ 3		PAD THROUGH FORCE [kN]	L.L.H.	 LONG LEGS BACK TO BACK
,	A.B.A.		ANCHOR BOLT	L.L.V.	 LONG LEG VERTICAL
			ARCHITECTURALLY EXPOSED	L.S.H.	 LONG SIDE HORIZONTAL
•			STRUCTURAL STEEL	L.S.V.	LONG SIDE VERTICAL
,	ATL.		ALTERNATE	L.W.	 LONG WAY
/	ARCH.		ARCHITECTURAL	LP	 LOW POINT
E	B.C.E.		BOTTOM CHORD EXTENSION	MAX.	 MAXIMUM
			BOTTOM EACH WAY	MECH.	 MECHANICAL
	3.L.L.		BOTTOM LOWER LAYER	Mf	 FACTORED BENDING MOMENT
			BOTTOM LONG WAY	Mfx	 STRONG AXIS BENDING
			BOTTOM SHORT WAY	Mfy	 WEAK AXIS BENDING MOMENT
	-,		BOTTOM LIBBER LAYER	MIN.	 MINIMUM
_	B.U.L. CA		BOTTOM UPPER LAYER COLUMN ABOVE	Mfl N.I.C.	 FACTORED TORSION NOT IN CONTRACT
			CANTILEVER	N.I.C. N.S.	 NEAR SIDE
			COLUMN BELOW	N.T.S.	 NOT TO SCALE
			COUPLING BEAM	0.C.	 ON CENTRE
			FACTORED COMPRESSION	0/C	 ON CENTRE
			CAST IN PLACE	OPP.	 OPPOSITE
(C.J.		CONTROL JOINT	O.WJ.	 OPEN WEB STEEL JOIST
	CL.		CENTER LINE	P.P.	 PARTIAL PENETRATION
			CLEAR	P/T	 POST-TENSIONING
			CONCRETE	R.D.	 ROOF DRAIN
			CONTINIOUS	RTN.	 RETURN
	J.1 .		COMPLETE PENETRATION	R/W	 REINFORCED WITH
			CENTRES	SL.	 SUPERIMPOSED DEAD LOAD
	C/W		COMPLETE WITH	0.01.	 STEP DOWN FOOTING
	J D 141		DIVIDER BEAM DETAIL	SIM. S.L.	 SIMILAR SNOW LOAD
	D.L.		DEAD LOAD	S.L.B.B.	SHORT LEGS BACK TO BACK
			DO OVER - (DITTO)	S.O.G.	 SLAB ON GRANDE
			DO OVER — (DITTO) DEEP (I.E. DEPTH OF BEAM)	SPEC.	 SPECIFICATIOND
			DEPTH TO SUIT	SR	 STUD RAIL
[DWG.		DRAWING	ST.	 STAGGER
			DOWELS	STIR. S.W.	 STIRRUP
			EACH END	S.W.	 SHORT WAY
			EACH FACE	SYM. TEW	 SYMMETRICAL
			ELEVATION		TOP EACH WAY
			ELEVATION	Tf	 FACTORED TENSION
			ELECTRICAL EACH SIDE	THK. THRU	 THICK
			EACH WAY	T.L.L.	 THROUGH TOP LOWER LAYER
			EACH WAY	T & B	 TOP AND BOTTOM
			EXISTING	T & C	 TENSION AND COMPRESSION
	EXT.		EXTERIOR	T & G	 TONGUE AND GROOVE
E	EXP. JT.		EXPANSION JOINT	T.J.	 TIE JOIST
F	F.D.		FLOOR DRAIN	T.O.	 TOP OF
	F.S.		FAR SIDE	T.O.C.	 TOP OF CONCRETE
	GALV.		GALVANIZED	T.O.S.S.	 TOP OF STRUCTURAL STEEL
	G.L		GRID LINE	T.O.S.	 TOP OF SLAB
	H.1.E.		HOOK ONE END	T.U.L.	 TOP UPPER LAYER
	1.2.E.		HOOK 2 ENDS	TYP	 TYPICAL
	1 & V		HORIZONTAL AND VERTICAL	U.N.O.	 UNLESS NOTED OTHERWISE
	H,HOR. HSC		HORIZONTAL HORIZONTALLY SLOTTED	ULS SLS	 ULTIMATE LIMIT STATE SERVICEABILITY LIMIT STATE
'	130		CONNECTION	U/S	 UNDERSIDE
+	Нf		FACTORED HORIZONTAL	V.,VERT.	 VERTICAL
'			SHEAR FORCE	V., VLIXI.	 FACTORED SHEAR FORCE
H	HORZ.		HORIZONTAL	W.O.	 WORK POINT
	HORIZ.		HORIZONTAL		
	HP		HIGH POINT		
	NT.		INTERIOR		
	JŢ.		JOINT		
Ļ	_G.		LONG		

1. <u>DEFINITIONS</u>:

L.L ---- LIVE LOAD

- A. RJC: READ JONES CHRISTOFFERSEN OR ITS REPRESENTATIVE.
- SPECIALTY STRUCTURAL ENGINEER: A STRUCTURAL ENGINEER REGISTERED AND LICENSED TO PRACTICE THE PROFESSIONAL ENGINEERING ASSOCIATION HAVING JURISDICTION IN THE AREA WHERE THE STRUCTURE IS TO BE BUILT AND WHO IS RESPONSIBLE FOR THE DESIGN AND FIELD REVIEW OF: STRUCTURAL ELEMENTS DESIGNED BY THE CONTRACTOR OR SUBCONTRACTORS, SUCH AS OPEN WEB STEEL JOISTS, PRECAST DOUBLE TEES, PRECAST PLANKS, STRUCTURAL STEEL CONNECTIONS, LIGHT WOOD FRAME ROOF TRUSSES, ETC.
- SECONDARY STRUCTURAL ELEMENTS AND NON-STRUCTURAL ELEMENTS. SEE ALSO "NON-STRUCTURAL ELEMENTS" GENERAL NOTES.
- C. <u>CONTINUOUS</u>: FULL TENSION SPLICE AND TENSION DEVELOPMENT LENGTH.
- EMBEDMENT: UNLESS NOTED OTHERWISE COMPRESSION EMBEDMENT MEANS A COMPRESSION DEVELOPMENT LENGTH AND TENSION EMBEDMENT MEANS A TENSION DEVELOPMENT LENGTH AS PER CAN/CSA-A23.3 AND AS SHOWN ON THESE GENERAL NOTES DRAWINGS.
- GENERAL CONTRACTOR: FOR THE PURPOSES OF THESE DRAWINGS, THE USE OF THE TERM "CONTRACTOR" OR "GENERAL CONTRACTOR" SHALL REFER TO THE PRIME PERSON OR COMPANY RESPONSIBLE FOR CONSTRUCTION OF THE PROJECT AND THE COORDINATION OF TRADES AND SUBCONTRACTORS. THIS MAY BE THE GENERAL CONTRACTOR, OR A CONSTRUCTION MANAGER.

GENERAL SCOPE OF STRUCTURAL WORK:

- INSTALLATION OF A NEW BARRIER FREE RAMP AND SLOPED BONDED TOPPING.
- INSTALLATION OF A NEW STRUCTURAL STEEL FRAME FOR THE RECEPTION DESK OVERHEAD ROLL-UP DOOR.
- 3. INSTALLATION OF A NEW TEMPORARY WOOD FRAMED FLOORING SYSTEM IN THE LAUNDRY ROOM. 4. INSTALLATION OF NEW STRUCTURAL STEEL POSTS AT HALF-HEIGHT PARTITION WALLS.
- 5. REINFORCING OF EXISTING OPEN-WEB STEEL JOISTS AND BEAMS.
- 6. INSTALLATION OF NEW STRUCTURAL STEEL FRAMING FOR FOLDING PARTITION WALL.
- INSTALLATION OF A NEW STRUCTURAL STEEL FRAMED CANOPY AND GLAZING SUPPORTS ON THE 4TH FLOOR
- INSTALLATION OF NEW THROUGH-SLAB OPENINGS ON THE 2ND TO 4TH FLOORS FOR NEW MECHANICAL SERVICES.
- INSTALLATION OF NEW STRUCTURAL STEEL FRAMING TO ACCOMMODATE AN OPENING THROUGH THE EXISTING ROOF DECK FOR INSTALLATION O F A NEW SKYLIGHT.

DESIGN CODE

THE COMPLETED BASE BUILDING STRUCTURE SHOWN ON THE STRUCTURAL DRAWINGS HAS BEEN DESIGNED IN SUBSTANTIAL ACCORDANCE WITH THE ONTARIO BUILDING CODE 2012 WHICH IS BASED ON THE NATIONAL BUILDING CODE OF CANADA 2010.

DESIGN LOADS:

	DEGIGIT EGADO:		
1.	SPECIFIED UNIFORM LOADS KPa (SEE ALSO PLANS)	LIVE LOAD	SUPERIMPOSED DEAD LOAD (S.D.L.)
	A. ROOF - BASED ON A GROUND SNOW LOAD OF PLUS A RAIN LOAD OF AND A IMPORTANCE FACTOR IS = 1.0 ULS, 0.9 SLS		} 0.8
	B. GROUND FLOOR		5.8
	C. 2ND TO 4TH FLOORS	2.4	2.4
	D. ROOF TERRACES	4.8	2.4

CONTRACTORS CONSTRUCTION LOADS MUST NOT EXCEED THE ABOVE DESIGN LOADS. DESIGN LOADS MAY ONLY BE APPLIED AFTER CONCRETE REACHES ITS DESIGN STRENGTH.

SUPERIMPOSED DEAD LOADS (S.D.L.) ARE NON-STRUCTURE DEAD LOADS DUE TO ARCHITECTURAL TOPPINGS, FINISHES, PARTITIONS, ROOFING MATERIALS, PAVERS, SOIL, ETC. STRUCTURAL DEAD LOADS (D.L.) ARE DUE TO THE WEIGHT OF THE STRUCTURE ITSELF. THEY VARY WITH

WIND UPLIFT LOADS ON STEEL OR WOOD ROOFS SHALL BE 1 kPa NET FACTORED UNLESS NOTED

THE STRUCTURAL SYSTEM AND INCLUDE CONCRETE TOPPINGS ON STEEL DECK.

E. STAIRS AND CORRIDORS ----- 4.8

RENOVATIONS

- THE CONTRACT DOCUMENTS ARE BASED ON ASSUMED AS-BUILT DIMENSIONS FOR THE EXISTING BUILDING STRUCTURE AND ASSUMPTIONS IN ACCORDANCE WITH DETAILING AND PLACING PRACTICE. THESE ASSUMPTIONS MAY VARY FROM THE ACTUAL ON-SITE CONDITIONS. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE CONSULTANT OF ANY ACTUAL VARIATIONS FROM THE ASSUMED CONDITIONS.
- ACTUAL SITE CONDITIONS. THE CONTRACTOR WILL COOPERATE WITH THE CONSULTANT AND RJC IN THIS REGARD. MINOR MODIFICATIONS WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR AND WILL NOT RESULT IN A CHANGE IN THE CONTRACT PRICE.

MINOR MODIFICATIONS WILL BE REQUIRED TO THE WORK INDICATED ON THESE DRAWINGS TO REFLECT

- ENSURE THAT ALL NECESSARY JOB DIMENSIONS ARE TAKEN AND ALL TRADES ARE COORDINATED FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF SUCH DIMENSIONS, AND FOR COORDINATION.
- PRIOR TO FABRICATION OF ANY STRUCTURAL MEMBERS, THE CONTRACTOR SHALL COMPLETE THIS SITE REVIEW OF CRITICAL "TIE-IN" DIMENSIONS AND CONFIRM ALL DIMENSIONS TO ENSURE PROPER FIT OF NEW WORK TO EXISTING. REPORT ANY DISCREPANCIES TO RJC PRIOR TO STARTING WORK.
- COMMENCEMENT OF CONSTRUCTION OR ANY PART THEREOF CONSTITUTES ACCEPTANCE OF EXISTING CONDITIONS AND MEANS DIMENSIONS AND ELEVATIONS HAVE BEEN CONSIDERED, VERIFIED AND ARE
- ANY OPENINGS THAT ARE NOT SHOWN OR INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REPORTED TO RJC FOR REVIEW. THESE OPENINGS MAY NOT BE ALLOWED, MAY HAVE TO BE MOVED, OR MAY REQUIRE ADDITIONAL STRUCTURAL WORK AND DETAILING. DO NOT PROCEED WITH THESE OPENINGS WITHOUT WRITTEN PERMISSION FROM RJC.
- UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, THE CORING OR CUTTING OF OPENINGS AND HOLES SHOWN ON THE STRUCTURAL DRAWINGS THROUGH THE EXISTING STRUCTURE SHALL NOT CUT ANY REINFORCING BARS. THE CONTRACTOR SHALL LOCATE THE POSITION OF EXISTING REINFORCING BARS IN THE VICINITY OF THE HOLES AND SLEEVES TO BE CUT OR CORED, AND THE HOLES AND SLEEVES SHALL BE LOCATED TO AVOID CUTTING OF REINFORCING BARS. WHERE THIS IS NOT POSSIBLE, IT SHALL BE
- . NEW OPENINGS TO BE CUT THROUGH EXISTING FLOOR SLAB OR WALLS SHALL BE CLEARLY MARKED OUT BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY RJC ONCE THE MARKING OUT HAS BEEN COMPLETED SO THAT RJC CAN REVIEW THE PROPOSED LOCATIONS OF ALL NEW OPENINGS. DO NOT

PROCEED WITH CUTTING OF NEW OPENINGS WITHOUT THE APPROVAL OF RJC.

- . UNLESS NOTED OTHERWISE ON THE DRAWINGS NEW STRAIGHT SIDED OPENINGS THROUGH EXISTING SLABS AND WALLS SHALL BE SAWCUT WITH NO OVERCUTS. USE CORED HOLES AT THE CORNERS. JACKHAMMERING SHALL NOT BE PERMITTED. REFER TO THE DETAILS AND PROCEDURES INDICATED ON THE STRUCTURAL DRAWINGS FOR THE NEW OPENINGS. ALTERNATES TO THE ABOVE PROCEDURES MUST BE REVIEWED BY RJC PRIOR TO THE START OF DEMOLITION OR CONSTRUCTION.
- O. UNLESS NOTED OTHERWISE AT ALL LOCATIONS WHERE NEW CONCRETE WILL BE IN CONTACT WITH EXISTING CONCRETE SURFACES, THE EXISTING CONCRETE SURFACE IS TO BE COMPLETELY CLEANED AND ROUGHENED BY BUSH HAMMERING, (OR APPROVED EQUAL) TO AN AMPLITUDE OF 6 mm (1/4").
- 1. CONNECTIONS FOR NEW STRUCTURAL STEEL FRAMING TO EXISTING STRUCTURAL STEEL SHALL BE ACHIEVED THROUGH WELDED CONNECTIONS UNLESS OTHERWISE NOTED.
- 12. CONTRACTOR TO ENSURE THAT UNDERGROUND OR IN-SLAB SERVICES ARE NOT DAMAGED THROUGH DEMOLITION, SAWCUTTING, HOLE AUGURING, OR OTHER CONSTRUCTION ACTIVITIES. SEE SPECIFICATION FOR TESTING/LOCATING REQUIREMENTS.
- 13. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY IN AND ABOUT THE JOB SITE DURING CONSTRUCTION, AND THE DESIGN AND ERECTION OF ALL TEMPORARY STRUCTURES, FORMWORK, FALSEWORK, SHORING, BRACING, ETC., REQUIRED TO COMPLETE THE WORK (SUBMIT SHORING DRAWINGS SEALED BY A SPECIALTY STRUCTURAL ENGINEER).
- 14. DRILL AND SITE MEASURE BOLT HOLES IN EXISTING STRUCTURE PRIOR TO FABRICATING STEEL CONNECTION PLATES. BOLT HOLES MAY HAVE TO BE MOVED FROM WHAT IS SHOWN ON THE DRAWINGS TO AVOID CUTTING EXISTING REINFORCING OR TO AVOID OTHER SITE CONDITIONS. SITE MODIFICATION OF STEEL CONNECTION PLATES WILL NOT BE ACCEPTED WITHOUT THE PRIOR APPROVAL OF RJC.

TEMPORARY WORK:

- THE CONTRACTOR SHALL DESIGN, PROVIDE, ERECT, MAINTAIN, REMOVE AND ASSUME FULL AND SOLE RESPONSIBILITY FOR ALL TEMPORARY WORKS REQUIRED FOR THE SAFE AND COMPLETE EXECUTION OF THE
- IN THE EXECUTION OF THE TEMPORARY WORKS AND FOR THE DURATION OF THE CONTRACT, THE CONTRACTOR SHALL MAKE ADEQUATE PROVISION FOR ALL LIKELY CONSTRUCTION LOADING AND PROVIDE SUFFICIENT BRACING AND PROPS TO KEEP THE WORKS IN PLUMB AND ALIGNMENT AND FREE FROM EXCESSIVE DEFLECTION.
- ACCESS OF HEAVY CONSTRUCTION EQUIPMENT AND ACCUMULATION OF CONSTRUCTION MATERIALS ON THE FLOORS ARE NOT PERMITTED, UNLESS SUCH HAVE BEEN CATERED FOR IN THE CONTRACTOR'S TEMPORARY WORK DESIGN TO THE SATISFACTION OF THE ENGINEER.
- COSTS OF ALL TEMPORARY WORKS ARE TO BE INCLUDED IN THE CONTRACT PRICE.
- SUBMIT SHOP DRAWINGS FOR ALL TEMPORARY WORKS FOR REVIEW BEFORE FABRICATION COMMENCES. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF

FIELD REVIEW BY READ JONES CHRISTOFFERSEN (RJC):

READ JONES CHRISTOFFERSEN (RJC) PROVIDES FIELD REVIEW ONLY FOR THE WORK SHOWN ON THESE DRAWINGS. THIS REVIEW IS NOT A "FULL TIME" REVIEW BUT IS A PERIODIC REVIEW AT THE SOLE DISCRETION OF READ JONES CHRISTOFFERSEN IN ORDER TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY READ JONES CHRISTOFFERSEN. FIELD REVIEW BY READ JONES CHRISTOFFERSEN IS NOT CARRIED OUT FOR THE CONTRACTOR'S BENEFIT, NOR DOES IT MAKE READ JONES CHRISTOFFERSEN GUARANTORS OF THE CONTRACTOR'S WORK. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORK IN CONFORMANCE WITH THE DOCUMENTS. RJC SHALL NOT BE RESPONSIBLE FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUB-COTNRACTOR, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH HE CONTRACT DOCUMENTS. RJC WILL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON RJC'S DRAWINGS. THE EXTENT OF THIS REVIEW IS AT THE SOLE DISCRETION OF RJC AND IS FOR THE SOLE PURPOSE OF ASCERTAINING GENERAL CONFORMANCE WITH THE BUILDING ENVELOPE DESIGN CONCEPT. THE REVIEW IS NOT AN APPROVAL OF THE DESIGN, DETAILS, AND DIMENSIONS INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS OR HER RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

PROVIDE 24 HOURS ADVANCE NOTICE OF EACH REQUIRED FIELD REVIEW. FIELD REVIEWS SHALL BE SCHEDULED TO BE CARRIED OUT DURING NORMAL BUSINESS HOURS UNLESS SPECIAL ARRANGEMENTS ARE

. THE WORK TO BE REVIEWED SHALL BE GENERALLY COMPLETE.

SHOP DRAWING REVIEW RESPONSIBILITY:

AS PART OF THEIR FIELD SERVICES, RJC WILL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON RJC'S DRAWINGS BY MEANS OF APPROPRIATE RATIONAL SAMPLING PROCEDURES AND COMMENT ON THE ACCURACY WITH WHICH THE CONTRACTOR PREPARED THE DRAWINGS. REVIEW OF SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS, RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INFORMATION PERTAINING TO THE FABRICATION PROCESS, TECHNIQUES OF CONSTRUCTION AND INSTALLATION, AND FOR COORDINATION OF THE WORK OF ALL SUB-TRADES.

CONCRETE:

- CONCRETE IS SPECIFIED AS PER THE "PERFORMANCE" ALTERNATE AS OUTLINED IN CSA A23.1. CONCRETE IS TO BE CAST-IN-PLACE. THE USE OF SHOTCRETE FOR ANY ELEMENTS REQUIRES APPROVAL BY THE ENGINEER. ANY COSTS ASSOCIATED WITH CHANGES TO BE MADE TO THE CONTRACT DOCUMENTS TO ACCOMMODATE SHOTCRETE AS WELL AS ANY ADDITIONAL TESTING IS TO BE PAID FOR BY THE CONTRACTOR.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR WORKING WITH THE CONCRETE SUPPLIER TO ENSURE THAT THE PLASTIC AND HARDENED MIX PROPERTIES MEET SITE REQUIREMENTS FOR PLACING, FINISHING, AND THE OWNERS' SPECIFIED PERFORMANCE REQUIREMENTS. THE GENERAL CONTRACTOR SHALL MEET THE DOCUMENTATION AND QUALITY CONTROL REQUIREMENTS OUTLINED UNDER THE "PERFORMANCE" ALTERNATE
- THE SUPPLIER SHALL MEET ALL CERTIFICATION AND DOCUMENTATION REQUIREMENTS AS OUTLINED UNDER THE "PERFORMANCE" ALTERNATE OF CSA A23.1.
- . THE CONCRETE SUPPLIER SHALL BE CERTIFIED BY THE READY MIXED CONCRETE ASSOCIATION OF ONTARIO.
- . CONCRETE PROPERTIES:

GENERAL (AREAS NOT INCLUDING PARKING)						
ELEMENT	COMPRESSIVE STRENGTH (MPa) 28 DAY U.N.O.	EXPOSURE CLASS	COMMENTS			
TOPPING ON STEEL DECK	25 MPa	N				
SLABS AND TOPPINGS	25 MPa (28 DAY) 30 MPa (90 DAY)	N				

- . PORTLAND CEMENT SHALL BE TYPE GU UNLESS NOTED OTHERWISE.
- CONCRETE SHALL HAVE A UNIT WEIGHT OF 23±1 kN/m3 (145±5 PCF) UNLESS NOTED OTHERWISE.
- THE CONCRETE PROPERTIES USED IN DESIGN ARE BASED ON 19 mm AGGREGATE, UNLESS NOTED OTHERWISE. ALL LOCATIONS FOR CONCRETE MIX DESIGNS WITH AGGREGATE SIZE SMALLER THAN 19mm PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL. ANY INCREASE IN REQUIRED CONCRETE STRENGTH OR INCREASE IN QUANTITY OF REINFORCEMENT DUE TO PROPOSED USE OF CONCRETE MIX WITH AGGREGATE SIZE SMALLER THAN 19mm TO BE PAID FOR BY THE CONTRACTOR.
- RECYCLED AGGREGATE IS NOT TO BE USED WITHOUT WRITTEN APPROVAL BY THE ENGINEER.
- 10. SLUMP AND AGGREGATE SIZE TO BE PER SPECIFICATION SECTION 03 01 00.
- . MAXIMUM WATER/CEMENT RATIO AND AIR CONTENT TO MEET THE REQUIREMENTS FOR THE EXPOSURE CLASS AS OUTLINED IN CSA A23.1.
- 2. AT THE REQUEST OF THE OWNER, THE SUPPLIER WILL FURNISH TEST DATA RESULTS (LESS THAN 3 MONTHS OLD) FOR EACH PROPOSED MIX DESIGN DEMONSTRATING THAT THEY MEET THE STRENGTH, DURABILITY, AND SHRINKAGE REQUIREMENTS SPECIFIED.
- 13. CURING OF CONCRETE TO MEET THE REQUIREMENTS OF SPECIFICATION SECTION 03 01 00. NEW SLABS AND TOPPINGS ARE TO BE WET CURED FOR MINIMUM 10 DAYS.
- 14. REFER TO ARCHITECTURAL DRAWINGS FOR FINISH REQUIREMENTS.
- . NO CALCIUM CHLORIDE IS PERMITTED, IN ANY FORM, IN ANY CONCRETE MIX WITHOUT THE EXPRESS WRITTEN CONSENT OF READ JONES CHRISTOFFERSEN LTD.

CONCRETE REINFORCEMENT

- REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS:
- A. 10M AND LARGER (U.N.O.) CSA G30.18 GRADE 400R CSA G30.5 GRADE 400 WELDED WIRE REINFORCEMENT ALL REINFORCING THAT WILL BE WELDED CSA G30.18 GRADE 400W OR IS PART OF THE SEISMIC RESISTING ELEMENTS:
- (INCLUDING ZONE TIES AND HEADER TIES/STIRRUPS) AND MOMENT FRAME COLUMNS AND BEAMS (INCLUDING COLUMN TIES AND BEAM STIRRUPS).

REINFORCING FOR SHEAR WALLS, HEADERS AND ZONES

- (NOTE: CSA G30.18 W GRADES MAY BE SUBSTITUTED FOR CSA G30.18 R GRADES)
- UNLESS OTHERWISE NOTED CONCRETE COVER TO REINFORCEMENT SHALL BE:
- A. FOR FIRE RATINGS:

FIRE RATINGS		ATINGS	
	ELEMENT	0-2 HOURS	3 HOURS
	SLABS AND SLAB BANDS (NON-PARKING), STIRRUPS IN SLAB BANDS, ZONE TIES, NON-RETAINING WALLS	25mm (30M = 30mm)	35mm

<u>NOTES:</u>

- LARGEST COVER REQUIRED GOVERNS.
- SEE ARCHITECTURAL DRAWINGS FOR FIRE RATINGS.
- DESIGNATION OF REINFORCING BARS:
- IN BOTTOM OF BEAMS OR SLABS OR IN FAR FACE OF WALL A. BARS SHOWN THUS
- BARS SHOWN THUS IN TOP OF BEAMS AND SLABS OR IN NEAR FACE OF WALL B. STRAIGHT BARS: E.G 6-10M4200 MEANS 6-10M BARS 4200 LONG.
 - E.G 15M3800 + 15M3200 ALT. @ 300 MEANS 1-15M3800 BAR THEN 1-15M3200 BAR SPACED 300 AWAY
 - E.G 13-A20M4000 MEANS 13-20M BARS 4000 H.1.E. 180°. E.G 3-C25M3000 MEANS 3-25M BARS 3000 LONG H.1.E. 90°. (NOTE: BENT BAR LENGTHS INCLUDE HOOK DIMENSION)
- . DO NOT SUBSTITUTE DEFORMED WIRE FOR REINFORCING BARS WITHOUT PRIOR APPROVAL OF THE RJC.
- SUPPORT REINFORCING WITH CHAIRS, ACCESSORIES, OR REINFORCING BARS AS REQUIRED. BARS USED AS SUPPORT BARS SHALL BE CONSIDERED AS ACCESSORIES.

- "HSL" MEANS AN "HSL HEAVY-DUTY EXPANSION ANCHOR".

- PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN CONCRETE COVER AS SPECIFIED. ALL SUPPORTS AND BARS MUST BE TIED TOGETHER TO MAINTAIN REINFORCING STEEL SECURELY IN PLACE DURING CONCRETE
- TESTING OF REINFORCING STEEL SHALL CONFORM TO THE SPECIFICATIONS.

CONCRETE ANCHORS:

- EXCEPT WHERE INDICATED ON THE DRAWINGS, ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI (CANADA) LTD. CONTACT HILTI AT (800) 363-4458 FOR PRODUCT RELATED QUESTIONS.
- "EPOXY ANCHOR" MEANS A: HIT-HY 200 SAFE SET SYSTEM OR HIT-HY 200 FOR FAST CURE APPLICATIONS.
- HIT-RE 500 OR HIT-RE 500 SD ADHESIVE ANCHOR FOR SLOW CURE APPLICATION.
- "SCREENED EPOXY ANCHOR" MEANS A "HIT HY 70 ADHESIVE ANCHOR". "KWIK BOLT" MEANS A "KWIK BOLT TZ OR KWIK BOLT 3 EXPANSION ANCHOR", TO BE SELECTED BASED ON APPLICATION REQUIREMENTS.
- ANCHOR CAPACITY USED IN DESIGN IS BASED ON GUIDELINES PUBLISHED BY HILTI. ALTERNATE FASTENING SYSTEMS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL, ALTERNATE ADHESIVE ANCHORS MUST BE FOUAL CONSIDERING LOAD RESISTANCE. IN SERVICE AND INSTALLATION TEMPERATURE, AVAILABILITY OF COMPREHENSIVE INSTALLATION INSTRUCTIONS, CREEP TESTING, SEISMIC TESTING, AND APPROPRIATE ON SITE TRAINING.
- INSTALL AS PER THE MANUFACTURER'S SPECIFICATION. WEDGE ANCHORS TO HAVE HOLES CLEANED WITH HIGH PRESSURE AIR BLAST. ADHESIVE (EPOXY) ANCHORS TO HAVE HOLES WELL CLEANED WITH HIGH PRESSURE AIR BLAST FOLLOWED BY BRUSHING THEN HIGH PRESSURE AIR BLAST. USE STEEL WIRE BRUSH ON CONCRETE AND NYLON BRUSH ON MASONRY.
- ON-SITE TRAINING AND REVIEW BY HILTI:

THE CONTRACTOR SHALL RETAIN A HILTI REPRESENTATIVE TO PROVIDE ON-SITE ANCHOR INSTALLATION TRAINING FOR ALL OF THE HILTI PRODUCTS SPECIFIED. THE CONTRACTORS PERSONNEL MUST BE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS. LETTERS OF TRAINING FOR OF INSTALLERS TO BE SUBMITTED TO RJC.

THE CONTRACTOR IS TO RETAIN AN INDEPENDENT TESTING AGENCY TO PROVIDE AN ON-GOING SERVICE OF ON-STE QUALITY CONTROL REVIEWS TO ENSURE THAT ANCHORS ARE BEING INSTALLED IN ACCORDANCE TO HILTI (CANADA) LIMITED'S SPECIFICATIONS. QUALITY ASSURANCE REPORTS FROM THE HILTI REPRESENTATIVE ÁRE TO BE SUBMITTED TO RJC AFTER EACH SITE VISIT.

- A REPRESENTATIVE SAMPLE OF ANCHORS ARE TO BE TESTED FOR EACH TYPE OF ANCHOR SPECIFIED. ANCHORS WHICH FAIL THE LOAD TEST SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S
- TESTING OF EPOXY ANCHORS:

PROVIDE TESTING OF EPOXY ANCHORS BY THE PROJECT MATERIALS CONSULTANT / TESTING AGENCY AS

- PROOF LOAD TEST 10% OF EPOXY ANCHORS TO MANUFACTURER'S SPECIFIED CAPACITY. - RANDOMLY SELECT 2% OF EPOXY ANCHORS (3 MINIMUM) FOR TESTING TO FAILURE. CONTRACTOR TO REPLACE ANCHORS AT CONTRACTOR'S COST.
- THE ABOVE TESTING IS PAID FOR BY THE OWNER. THE FOLLOWING TESTING IS PAID FOR BY THE
- IF ANY PROOF LOAD TEST FAILS, TEST 100% OF ANCHORS. - IF ANY ANCHORS ARE FOUND TO BE INSTALLED WITHOUT COMPLETE EPOXY OR ARE EMBEDDED LESS THAN 90% OF THE DEPTH SHOWN ON THE DRAWINGS, THEN PROOF LOAD TEST 100% OF THE
- PROVIDE FULL TIME FIELD REVIEW OF ALL REPAIRS BY MATERIALS CONSULTANT/TESTING AGENCY. THE TESTING AGENCY IS TO PROVIDE A TESTING AND REPAIR REPORT SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OR TERRITORY WHERE THE WORK IS DONE.
- ANCHOR CAPACITY IS DEPENDENT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.
- . DO NOT CUT REINFORCING BARS TO INSTALL ANCHORS UNLESS THE STRUCTURAL DRAWINGS SPECIFICALLY NOTE FOR A PARTICULAR DETAIL THAT THE REINFORCING BARS IN THE CONCRETE CAN BE CUT.
-). EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF CONCRETE ANCHORS, BY HILTI RERROSCAN, HILTI PS 1000, GPR, X-RAY, CHIPPING OR OTHER MEANS, BEFORE ANY HOLES ARE DRILLED.
- . WHEN ANCHORS ARE USED TO ATTACH STRUCTURAL STEEL, THE CONTRACTOR SHALL USE A TEMPLATE TO LOCATE THE ANCHOR HOLES. IF THIS IS NOT DONE, THEN UPON COMPLETION OF ANCHOR INSTALLATION, THE CONTRACTOR SHALL PREPARE TEMPLATES OF THE AS-BUILT ANCHOR POSITIONS. THE CONTRACTOR
- SHALL REFER TO THESE TEMPLATES FOR THE FABRICATION OF THE STEEL STRUCTURE. AT LOCATIONS OF INTERFERENCE BETWEEN CONCRETE ANCHORS AND EXISTING REINFORCEMENT, ADJUST PROPOSED LOCATIONS OF ANCHORS AS REQUIRED TO AVOID CUTTING REINFORCEMENT. SUBMIT A
- PROPOSED ANCHOR LAYOUT TO RJC FOR REVIEW AND APPROVAL BEFORE INSTALLING ANCHORS. 2. DO NOT OVERSIZE HOLES IN STEEL MATERIAL TO FIT ANCHOR LOCATIONS EXCEPT FOR COLUMN BASE

PLATE HOLES WHICH ARE FABRICATED SLIGHTLY OVERSIZED AS PER STANDARD PRACTICE. NON-STRUCTURAL ELEMENTS:

"NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT PART OF THE STRUCTURAL DESIGN SHOWN ON THESE DRAWINGS. SUCH ELEMENTS ARE DESIGNED, DETAILED AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THESE DRAWINGS OF READ JONES CHRISTOFFERSEN LTD., WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS REQUIRED FOR THESE ELEMENTS, THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL ALSO PROVIDE ANY LETTERS REQUIRED BY BUILDING PERMIT AUTHORITIES.

- . EXAMPLES OF NON-STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
- A. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, FLAG POSTS, CANOPIES, CEILINGS, MILLWORK, ETC
- B. CLADDING, GLAZING, WINDOW MULLIONS, INTERIOR STUD WALLS AND EXTERIOR STUD WALLS. SKYLIGHTS MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
- NON-LOAD BEARING MASONRY. NON-STRUCTURAL CONCRETE TOPPINGS.
- SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO READ JONES CHRISTOFFERSEN LTD. THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT OF THE ELEMENT ON THE PRIMARY STRUCTURAL SYSTEM.
- THE DESIGN WIND LOADS TO BE USED FOR GLAZING ARE SHOWN BELOW. LOADS ARE UNFACTORED (SPECIFIED). THE LOADS ARE BASED ON Iw = 1.0 FOR ULTIMATE LIMIT STATES. MULTIPLY TABLE VALUES BY lw = 0.75 FOR SERVICEABILITY LIMIT STATES.

HEIGHT ABOVE STREET (METERS)	INWARD PRESSURE (kPa)	OUTWARD PRESSURE (kPa)	OUTWARD PRESSURE AT CORNER (kPa)
10.5	0.51	0.4	0.4

- CORNER PRESSURES ARE TO BE TAKEN AT A DISTANCE OF IN EACH DIRECTION FROM EACH CORNER OF THE BUILDING.
- . FOR STONE OR MASONRY CLADDING, SEISMIC FORCES MAY GOVERN.

6. THE DESIGN WIND LOAD TO BE USED FOR INTERIOR STUDS AND PARTITIONS IS 5 PSF (UNFACTORED)

- UNLESS NOTED OTHERWISE. THE MAXIMUM ALLOWABLE DEFLECTIONS FOR GLAZING, STUDS, PARTITIONS AND CLADDING UNDER THE WIND LOADS SHOWN ABOVE SHALL MEET THE ARCHITECTURAL SPECIFICATIONS, THE NATIONAL BUILDING CODE AND THE MANUFACTURER'S SPECIFICATIONS. IN NO CASE SHALL THE DEFLECTIONS EXCEED THE

A. ELEMENTS SUPPORTING GLAZING ----- L/180, MAX. 25mm CONCRETE TOPPING NOTES (ON STEEL DECK):

- ALL CONCRETE TOPPING ON STEEL DECK WHICH IS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE STRUCTURAL CONCRETE TOPPING. TOPPING OR COVER SLAB THICKNESSES SHOWN ARE MEASURED FROM TOP OF DECK. TOTAL THICKNESS IS MEASURED FROM BOTTOM OF DECK TO TOP OF COVER SLAB.
- TOPPING/COVER SLAB THICKNESS \$\\ \frac{1}{2} \\ \fr TOTAL OVERALL THICKNESS
- ALL POUR JOINT LOCATIONS SHALL BE PRE-APPROVED. EXCEPT AT SLAB EDGES AND EXPANSION JOINTS. POUR JOINTS SHALL GENERALLY BE AT LOCATIONS WHICH ARE AT THE MID-SPAN OF BOTH BEAM AND

CONCRETE IS TO BE WELL VIBRATED, ESPECIALLY AT COLUMNS AND AROUND EMBEDDED METAL.

SCREEDING SHALL CONFORM TO CAMBERS IN STRUCTURAL STEEL, TO MAINTAIN THE REQUIRED CONCRETE THICKNESSES. HOWEVER, ALLOWANCE SHOULD BE MADE FOR ADDITIONAL CONCRETE REQUIRED DUE TO STEEL DECK DEFLECTION AND STRUCTURAL STEEL TOLERANCES.

ALL CONCRETE TOPPING SHALL BE REINFORCED. WHERE NO REINFORCING IS SHOWN ON THE DRAWINGS,

- USE THE FOLLOWING: 65mm COVER SLAB – WWR 152x152 – MW9.1 x MW9.1 – WWR 152x152 – MW11.1 x MW11.1 75mm COVER SLAB 90mm COVER SLAB - WWR 152x152 - MW13.3 x MW13.3
- 10M @ 400 EACH WAY (25mm COVER FROM TOP) WELDED WIRE REINFORCEMENT SHALL BE SUPPORTED 25mm ABOVE STEEL DECK. LAP WIRE
- REINFORCEMENT A MINIMUM OF 2 CROSS WIRES + 50mm. U.N.O. PROVIDE 15M1000 @ 300mm ADDITIONAL TOP REINFORCING CENTERED OVER ALL SUPPORTS WHERE THE STEEL DECK IS NOT A CONTINUOUS SHEET. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING LOCATIONS:

– WWR 152x152 – MW16.0 x MW16.0 OR

- AT SUPPORTS WHERE THE DECK IS LAPPED.

EXTENDING 600mm BEYOND THE CORNER.

100mm COVER SLAB

- AT SUPPORTS WHERE THE DECK CHANGES DIRECTION. - AT SUPPORTS WHERE CHANGES IN DECK ELEVATION OCCUR.
- AT SUPPORTS WHERE THE CONCRETE TOPPING MEETS A FORMED CONCRETE SLAB. . U.N.O. PROVIDE 15M1500 @ 500mm ADDITIONAL TOP REINFORCING CENTERED OVER ALL INTERIOR GIRDERS.
- . AT ALL OPENINGS GREATER THAN 150mm, REINFORCE EACH SIDE OF THE OPENING WITH REINFORCING BARS, SEE ALSO STANDARD DETAIL AND FLOOR PLANS. D. OPENINGS SMALLER THAN 150mm X 150mm WHICH ARE CLOSER THAN 600mm SPACING SHALL HAVE
- 2-15M1500 PLACED BETWEEN THEM. 1. ALL EXTRA REINFORCING SHOWN ON PLANS, TOP AND BOTTOM, SHALL BE CHAIRED, U.N.O.

12. AT ALL RE-ENTRANT CORNERS OF BUILDING PERIMETER, PROVIDE 2-15M1500 ALONG EACH EDGE

3. CONDUITS AND PIPES ARE NOT ALLOWED IN THE CONCRETE TOPPING ON TOP OF STEEL DECK UNLESS APPROVED BY THE STRUCTURAL ENGINEER.





Read Jones Christoffersen Ltd.
Engineers



KEY PLAN



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	ZONING		
	O.B.C.		
	FIRE SERVICES		
	O.B.C. (S)		
2.	ISSUED FOR PERMIT	July 13/18	P.F.
1.	ISSUED FOR TENDER	July 13/18	P.F.
No.	Revision	Date	Ву

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Toronto, Ontario

Project Name 348 Davenport Street

DAVENPORT SHELTER RENOVATION

Sheet Title

GENERAL NOTES

Drawn By M.L. Scale N.T.S. Designed By P.F. Date **July**, **2018**

Sheet Number

RJC Project Number

MTORONTO Building RECEIVED 24/Jul/2018

TOR.121290.0001

EMBEDMENT/DEVELOPMENT LENGTHS AND SPLICE LENGTHS:

BASED ON CAN/CSA-A23.3

- WHERE EMBEDMENT OR SPLICES ARE DIMENSIONED ON THE DRAWINGS, SUCH DIMENSION SHALL APPLY. WHERE THE DRAWINGS INDICATE A COMPRESSION EMBEDMENT, IT IS A COMPRESSION EMBEDMENT LENGTH AND
- IT SHALL BE AS NOTED BELOW. WHERE THE DRAWINGS INDICATE A TENSION EMBEDMENT, IT IS A TENSION EMBEDMENT LENGTH AND SHALL BE
- AS NOTED BELOW. WHERE NO EMBEDMENT OR EMBEDMENT TYPE IS CALLED FOR ON THESE DRAWINGS, IT SHALL BE A TENSION
- EMBEDMENT, EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION EMBEDMENT.
- WHERE NO SPLICE OR SPLICE TYPE IS CALLED FOR ON THESE DRAWINGS, IT SHALL BE A TENSION SPLICE, EXCEPT FOR COLUMNS WHICH SHALL BE A COMPRESSION SPLICE.
- IN TABLES BELOW, EMBEDMENT LENGTHS ARE SHOWN WITHOUT BRACKETS, AND SPLICE LENGTHS ARE SHOWN IN BRACKETS. ALL LENGTHS ARE FOR Fy = 400 MPa REBAR. FOR Fy=500 MULTIPLY VALUES IN TABLES
- ALL TENSION SPLICE LENGTHS ARE CLASS "B" (1.3ld).

COMPRESSION EMBEDMENT AND SPLICE LENGTHS

- COMPRESSION EMBEDMENT REFERS TO THE LENGTH REQUIRED TO PROVIDE THE "COMPRESSION DEVELOPMENT LENGTH" AS DEFINED IN CAN/CSA-A23.3-04 CLAUSE 12.3.2.
- SPLICE LENGTH REFERS TO THE MINIMUM LAP LENGTH REQUIRED FOR A COMPRESSION SPLICE AS DEFINED IN CAN/CSA-A23.3-04 CLAUSE 12.16.1.

CONCRETE	FUNCTION	REBAR DESIGNATION					
STRENGTH		10M	15M	20M	25M	30M	35M
20. MD=	EMBEDMENT	215	325	430	430	645	755
20 MPa	(SPLICE)	(300)	(440)	(585)	(585)	(880)	(1025)
OF MD.	EMBEDMENT	200	290	385	385	580	675
25 MPa	(SPLICE)	(300)	(440)	(585)	(585)	(880)	(1025)
30 MPa &	EMBEDMENT	200	265	355	355	530	620
GREATER	(SPLICE)	(300)	(440)	(585)	(585)	(880)	(1025)

TENSION EMBEDMENT AND SPLICE LENGTHS

- TENSION EMBEDMENT REFERS TO THE LENGTH REQUIRED TO PROVIDE A "TENSION DEVELOPMENT LENGTH" AS DEFINED IN CAN/CSA-A23.3-04 CLAUSE 12.2.3.
- SPLICE LENGTH REFERS TO THE MINIMUM LAP LENGTH REQUIRED FOR A CLASS 'B' TENSION SPLICE (1.3%) AS PER CAN/CSA-A23.3-04 CLAUSE 12.15.

CASE 1 CONDITIONS

TENSION EMBEDMENT AND SPLICE LENGTHS CONFORMING TO CAN/CSA-A23.3-04 TABLE 12.1 (0.45 k_1 k_2 k_3 k_4 f_y d_b / $\sqrt{f'c}$) ARE TO BE AS PER THE FOLLOWING TABLE FOR:

- BEAM AND GIRDER TOP AND BOTTOM BARS.
- SLAB BAND TOP BARS. TWO WAY SLAB TOP AND BOTTOM BARS.
- ONE WAY SLAB BOTTOM BARS.
- WALL HORIZONTAL AND VERTICAL DISTRIBUTED REINFORCING - SEE ALSO NOTES ON TOP BARS AND EPOXY COATED REINFORCEMENT.
- MEMBERS WHICH DO NOT SATISFY THE ABOVE CONDITIONS SHALL HAVE TENSION EMBEDMENTS AND SPLICES
- AS PER <u>CASE 2</u> TABLE BELOW.

CONCRETE	FUNCTION	REBAR DESIGNATION					
STRENGTH		10M	15M	20M	25M	30М	35M
20 MD-	EMBEDMENT	325	485	645	1010	1210	1410
20 MPa	(SPLICE)	(420)	(630)	(840)	(1310)	(1570)	(1835)
	EMBEDMENT	300	435	580	900	1080	1260
25 MPa	(SPLICE)	(390)	(565)	(750)	(1170)	(1405)	(1640)
30 MPa	EMBEDMENT	300	395	530	825	990	1155
	(SPLICE)	(390)	(515)	(685)	(1070)	(1285)	(1500)

NOTES:

"TOP BAR" VALUES ARE 1.3 TIMES THE ABOVE LENGTHS. "TOP BAR" APPLIES TO HORIZONTAL REINFORCEMENT CAST WITH 300mm OR MORE OF CONCRETE BELOW THE BAR.

CASE 2 CONDITIONS

- TENSION EMBEDMENT AND SPLICE LENGTHS CONFORMING TO CAN/CSA-A23.3-04 TABLE 12.1 $(0.6k_1 k_2 k_3 k_4 f_y d_b / \sqrt{f'_c})$ are to be as per the following table for members not satisfying case 1 conditions as set out above. For example:
- ONE WAY SLAB TOP BARS (SEE TOP BAR NOTE). SLAB BAND BOTTOM BARS.
- BARS (EXCLUDING THE SPLICE) SPACED CLOSER TOGETHER THAN 2 BAR DIAMETERS.
- STIRRUPS IN BEAMS, GIRDERS AND TRANSFER SLABS. SEE ALSO NOTES ON TOP BARS AND EPOXY COATED REINFORCEMENT.

CONCRETE	FUNCTION	REBAR DESIGNATION					
STRENGTH		10M	15M	20M	25M	30М	35M
20 MPa	EMBEDMENT	430	645	860	1345	1610	1880
	(SPLICE)	(560)	(840)	(1120)	(1745)	(2095)	(2445)
	EMBEDMENT	385	580	770	1200	1440	1680
25 MPa	(SPLICE)	(500)	(750)	(1000)	(1560)	(1875)	(2185)
30 MPa	EMBEDMENT	355	530	705	1100	1315	1535
	(SPLICE)	(460)	(685)	(915)	(1425)	(1710)	(1995)

NOTES:

"TOP BAR" VALUES ARE 1.3 TIMES THE ABOVE LENGTHS. "TOP BAR" APPLIES TO HORIZONTAL REINFORCEMENT CAST WITH 300mm OR MORE OF CONCRETE BELOW THE BAR.

STRUCTURAL STEEL:

- STRUCTURAL STEEL SECTIONS SHALL BE NEW AND CONFORM TO THE FOLLOWING:
- A. W AND WT SHAPES ----- CSA G40.21 GRADE 345WM/ASTM B. C, HP, L, M, MC, MT, S, AND ST SHAPES ----- CSA G40.21 GRADE 350W, ASTM A992. OR ASTM A572 GRADE 50 C. RECTANGULAR OR SQUARE HSS ----- CSA G40.21 GRADE 350W CLASS C
- D. ROLLED PLATES AND BARS ----- CSA G40.21 GRADE 300W E. BOLTS (SEE PLANS AND DETAILS) ----- ASTM F3125 GRADE A325 OR A490
- F. STRUCTURAL STEEL ANCHOR RODS (U.N.O.) ---- ASTM F1554 GRADE 36 MINIMUM G. REINFORCING BAR ANCHOR BOLTS ----- CSA G30.18 GRADE 400R DESIGN FORCES INDICATED ON DRAWINGS FOR STRUCTURAL STEEL WORK ARE FACTORED FORCES UNLESS
- A. FORCES ----- kN

NOTED OTHERWISE. FORCES ARE VERTICAL SHEAR FORCES UNLESS NOTED OTHERWISE.

- B. MOMENTS ---- kN-m
- LINE LOADS ----- kN/m D. DISTRIBUTED LOADS ----- kPa
- SEE "DESIGN LOADS" NOTES FOR DEFINITIONS AND VALUES OF LIVE LOAD, DEAD LOAD AND SUPERIMPOSED DEAD LOAD. SEE ALSO PLANS FOR OTHER LOAD/FORCE REQUIREMENTS.

CONNECTION DESIGN BY FABRICATOR

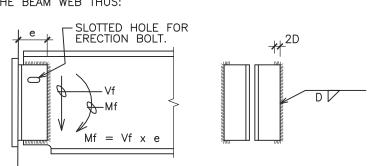
- ALL CONNECTIONS TO BE DESIGNED BY FABRICATOR UNLESS NOTED OTHERWISE. ALL BEAM CONNECTIONS TO BE STANDARD FRAME BEAM CONNECTIONS OR EQUIVALENT, UNLESS NOTED OTHERWISE. THE FABRICATOR SHALL SUBMIT SUMMARY DESIGN DRAWINGS FOR REVIEW SHOWING IN DETAIL THE "STANDARD" CONNECTIONS AND THEIR CAPACITIES THAT IS INTENDED FOR USE ON THE PROJECT. THESE DRAWINGS ARE IN ADDITION TO THE REGULAR SHOP DRAWINGS, AND SHALL PRECEDE THEM.
- SHOP DRAWINGS SHALL BE PREPARED UNDER THE DIRECTION OF A SPECIALTY STRUCTURAL ENGINEER. FOR THOSE CONNECTIONS AND COMPONENTS DESIGNED BY THE FABRICATOR, THIS ENGINEER OR THEIR REPRESENTATIVE SHALL VISIT THE SITE TO REVIEW IN PLACE THE CONNECTIONS AND COMPONENTS DESIGNED BY THIS ENGINEER TO SATISFY THEMSELVES THAT THESE CONNECTIONS AND COMPONENTS SUBSTANTIALLY COMPLY WITH THEIR DESIGN ON THE SHOP DRAWINGS. THIS ENGINEER SHALL PROVIDE A LETTER TO RJC TO THIS EFFECT. THIS ENGINEER SHALL ALSO PROVIDE SEALED SKETCHES FOR ALL FIELD MODIFICATIONS MADE TO THEIR DESIGN.
- THE CONTRACTOR SHALL NOTIFY THE CONSULTANT IN WRITING (AND BEFORE THE SUBMISSION OF SHOP DRAWINGS) AS TO WHO THE ENGINEER WILL BE THAT WILL BE DESIGNING AND PROVIDING FIELD REVIEW FOR THE CONNECTIONS AND COMPONENTS DESIGNED BY THE CONTRACTOR.
- PRIOR TO SUBMITTING SHOP DRAWINGS THE CONTRACTOR SHALL NOTIFY RJC IN WRITING THAT THE FABRICATOR IS CERTIFIED TO A MINIMUM OF DIVISION 2 OF CSA W47.1.
- DRAWINGS OF COMPONENTS AND CONNECTIONS DESIGNED BY THE FABRICATOR'S SPECIALTY STRUCTURAL ENGINEER SHALL BE SIGNED AND SEALED BY THIS ENGINEER OR A LETTER SHALL BE SUBMITTED AT THE END OF SHOP DRAWING PRODUCTION SIGNED AND SEALED BY THIS ENGINEER, IDENTIFYING WHAT WAS DESIGNED AND LISTING THE FINAL DRAWINGS WITH DATES AND REVISION NUMBERS.
- CONNECTIONS AND SPLICES NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUESTED BY THE FABRICATOR MUST BE ACCEPTABLE TO RJC AND DETAILED ON THE SHOP DRAWINGS. TESTING OF THESE CONNECTIONS SHALL BE AT THE DISCRETION OF RJC AND TO THE CONTRACTORS ACCOUNT.
- SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO START OF STEEL FABRICATION. ALSO REFER TO "SHOP DRAWINGS" NOTE IN THE GENERAL NOTES SECTION OF THE STRUCTURAL DRAWINGS.

FABRICATION AND DETAILING

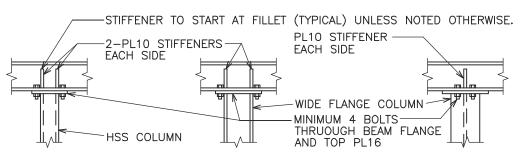
- FILLET WELDS SHALL BE 5mm MINIMUM UNLESS NOTED OTHERWISE.
- BOLTS SHALL BE 19mm MINIMUM A325 UNLESS NOTED OTHERWISE.
- BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS IN EACH CONNECTED PIECE AND BE DESIGNED AS BEARING CONNECTIONS, U.N.O.
- . IN ADDITION TO ALL OTHER CRITERIA SPECIFIED IN ASTM F1554, ALL HOOKED ANCHOR RODS IN CONCRETE SHALL BE MANUFACTURED WITH A MINIMUM INSIDE BEND RADIUS OF 3 TIMES THE ROD DIAMETER, UNLESS
- ALL WELDED HEADED STUDS AND WELDED DEFORMED BAR ANCHORS SHALL BE INSTALLED AS PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS OR SHOP FILLET WELDED TO DEVELOP THE TENSILE FACTORED RESISTANCE OF THE BAR. ANY FIELD FILLET WELDED DEFORMED BARS OR STUDS WILL BE REJECTED. SEE PLANS, SECTIONS, DETAILS, AND SCHEDULES FOR LOCATIONS, ETC. THE CONTRACTOR SHALL CO-ORDINATE THE DESIGN, SUPPLY, AND INSTALLATION OF ALL STUDS AND ANCHORS, INCLUDING, BUT NOT LIMITED TO STUDS AND DEFORMED BAR ANCHORS ON COMPOSITE BEAMS, DRAG STRUTS, EMBEDDED PLATES, ETC.
- UNLESS NOTED OTHERWISE, COLUMN CAP PLATES SHALL BE 16mm THICK AND COLUMN BASE PLATES SHALL BE 20mm MINIMUM THICK.
- PROVIDE 6mm CAP PLATES FOR ALL HSS MEMBERS UNLESS NOTED OTHERWISE.
- CONNECTION DETAILS SHOWN ON THE STRUCTURAL DRAWINGS SHALL NOT BE ALTERED BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL FROM READ JONES CHRISTOFFERSEN LTD.
- UNLESS NOTED OTHERWISE ON THE PLANS, REFER TO THE DETAILS IN THE GENERAL NOTES FOR FRAMING FOR SUPPORT OF ROOF TOP MECHANICAL EQUIPMENT.
- 10. STEEL SHALL BE PREPARED AND FINISHED IN ACCORDANCE WITH CSA S16 AND THE ARCHITECTURAL DRAWINGS AND PAINTING SPECIFICATIONS WHICH MAY INCLUDE ADDITIONAL CLEANING AND PRIMING
- I. ALL STRUCTURAL STEEL OUTSIDE OF THE BUILDING ENVELOPE TO BE HOT—DIP GALVANIZED UNLESS NOTED
- 12. DESIGN DRAWINGS INCLUDE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS. SEE ALSO ARCHITECTURAL DRAWINGS FOR ROOF AND FLOOR ELEVATIONS, ROOF SLOPES, EDGE DETAILS, AND ADDITIONAL DIMENSIONS AND DETAILS. WHERE ELEVATIONS, ROOF SLOPES, ET CETERA, ARE SHOWN ON THE STRUCTURAL DRAWINGS, THEY MUST BE CONFIRMED WITH THE ARCHITECTURAL DRAWINGS.
- 13. UNLESS NOTED OTHERWISE, DO NOT OVERSIZE HOLES IN STEEL TO FIT ANY CAST-IN-PLACE OR POST-INSTALLED ANCHORS WITHOUT APPROVAL IN WRITING BY RJC.
- 14. UNLESS NOTED OTHERWISE, CAST-IN-PLACE ANCHOR RODS FOR COLUMN BASES TO HAVE PLACEMENT ROD HOLE SIZES IN STEEL PLATES NOT TO EXCEED DIAMETER OF FASTENER + 6mm.
- 15. UNLESS NOTED OTHERWISE, HOLE SIZES IN STEEL PLATES FOR POST-INSTALLED ANCHORS NOT TO EXCEED DIAMETER OF FASTENER + 3mm.

16. GENERAL SEISMIC REQUIREMENTS

- A. WHERE CONNECTION FORCES ARE NOT SHOWN ON THE DRAWINGS, THE CONNECTION DESIGN SHALL SATISFY THE REQUIREMENTS OF CSA S16 - CLAUSE 27.
- B. STEEL IN THE ENERGY DISSAPATION SYSTEM SHALL SATISFY THE LIMITS OF Fy, Fu, AND CHARPY V-NOTCH IMPACT REQUIREMENTS AS NOTED IN CSA S16 - CLAUSE 27.1.5.
- C. WELDS AND WELD MATERIAL SHALL SATISFY CSA S16 CLAUSE 27.1.5.3 (CHARPY REQUIREMENTS).
- D. BOLTED CONNECTIONS SHALL SATISFY CSA S16 CLAUSE 27.1.6. 7. UNLESS NOTED, BEAM AND GIRDER CONNECTIONS TO EMBEDDED PLATES SHALL BE DOUBLE ANGLE FRAMING CONNECTIONS WELDED TO THE BEAM WEB THUS:



- 18. UNLESS NOTED OTHERWISE ALL CONNECTIONS FOR BEAMS AND GIRDERS SHALL BE DESIGNED FOR A SHEAR BASED ON THE MEMBER'S FULL MOMENT RESISTANCE CAPACITY RELATED TO A UNIFORM LOAD ON A SIMPLE SUPPORTED SPAN.
- 19. TOP FLANGES OF BEAMS TO BE FREE OF ALL PAINT, DIRT, HEAVY RUST, MILL SCALE, SAND AND OTHER MATERIALS WHICH WILL INTERFERE WITH WELDING OF STUD SHEAR CONNECTIONS AND STEEL DECK TO
- 20. BEAMS NOTED AS COMPOSITE ON THE DRAWINGS REQUIRE STUD SHEAR CONNECTIONS, SEE ALSO SHEAR CONNECTOR NOTES. SEE ALSO PLANS, SECTIONS, DETAILS AND SCHEDULES FOR STUDS SHOWN ON BEAMS / GIRDERS / DRAG-STRUTS ETC. OTHER THAN COMPOSITE BEAMS.
- 21. UNLESS NOTED OTHERWISE WHERE BEAMS SIT OVER COLUMNS, PROVIDE FULL HEIGHT, FULL WIDTH PL10 STIFFENERS EACH SIDE OVER COLUMN.



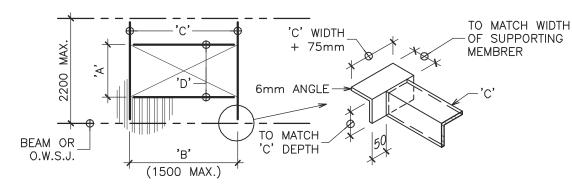
NAILING:

- NAILING SHALL CONFORM TO THE BUILDING CODE PART 9, AND "WOOD BUILDING TECHNOLOGY" PUBLISHED BY THE CANADIAN WOOD COUNCIL. NAILING CALLED UP ON THESE DRAWINGS (I.E. FOR SHEATHING) IS BASED ON COMMON NAILS. SEE NOTE 10 UNDER MATERIALS FOR COMMON NAIL SIZES.
- UNLESS NOTED OTHERWISE NAIL ALL FLOOR SHEATHING WITH 65mm NAILS AT 250mm O/C FOR FLOORS TO ALL SUPPORTING MEMBERS. FLOOR SHEATHING SHALL BE NAILED WITH SPIRAL NAILS AND SHALL BE GLUED TO THE JOISTS IN ADDITION TO NAILING. IF SMALLER DIAMETER NAILS (I.E. PNEUMATICALLY DRIVEN NAILS OR 'P-NAILS') ARE USED, INCREASE THE NUMBER OF NAILS BY 33%.

TYPICAL FRAMING AROUND OPENINGS

L76x76x4.8 x 1200mm LONG. WELD TO EVERY FLUTE.

- IN STEEL DECK WITHOUT CONCRETE TOPPING U.N.O.
- SEE ALSO MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR ALL OPENINGS IN DECK.
- U.N.O. REINFORCE OPENINGS WITHOUT MECHANICAL UNITS BETWEEN 150mm TO 450mm MAXIMUM DIMENSION WITH
- TYPICAL DETAILS FOR SMALL MECHANICAL UNITS AND/OR OPENINGS IN DECK UNLESS NOTED OTHERWISE ON PLANS AND DETAILS:

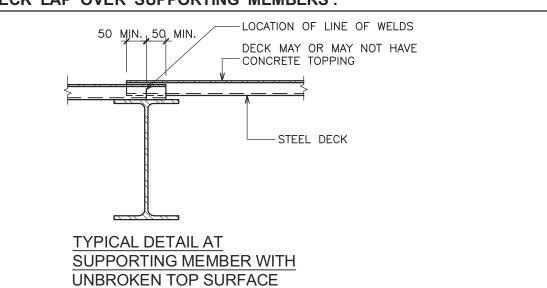


CONNECT ANGLES FOR MAXIMUM VERTICAL LOAD OF 6kN.

MECH. UNIT OR OPENING SIZE 'A' x 'B'	ANGLE 'C'	ANGLE 'D'	MECHANICAL UNIT WEIGHT (SPECIFIED)
150 x 150 TO 450 x 450	L76x76x6.4	L76x76x4.8	.025 kN TO 1.0 kN
450 x 450 T0 1500 x 1500	L102x102x6.4	L76x76x4.8	NO UNIT
450 x 450 T0 1500 x 1500	L102x102x6.4	L76x76x6.4	LESS THAN OR EQUAL TO 2 kN (1500mm MAX. HIGH)
450 × 900 TO 1500 × 1500	L102x102x6.4	L102x102x6.4	LESS THAN OR EQUAL TO 2 kN (1500mm MAX. HIGH)

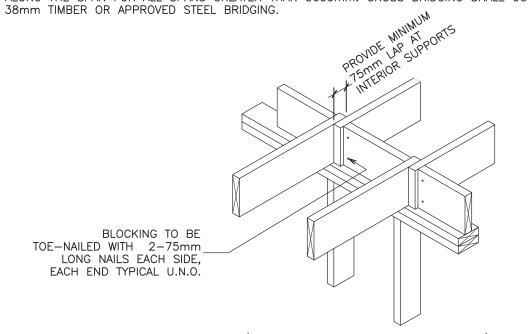
WHERE AN OPENING IN DECK IS UNDER A MECHANICAL UNIT AND IS SMALLER THAN THE FRAMING REQUIRED TO SUPPORT THE MECHANICAL UNIT, REINFORCE THE OPENING WITH L76x76x4.8 ON ALL FOUR SIDES SPANNING BETWEEN THE MECHANICAL UNIT SUPPORT MEMBERS. SEE NOTE 3, PLANS AND DETAILS FOR MECHANICAL UNIT SUPPORT FRAMING.

STEEL DECK LAP OVER SUPPORTING MEMBERS:

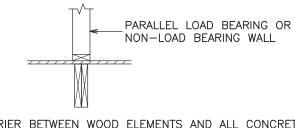


FRAMING NOTES:

DIMENSIONAL LUMBER JOISTS SHALL HAVE CROSS-BRIDGING OR FULL-DEPTH BLOCKING AT 1800mm O/C ALONG THE SPAN FOR ALL SPANS GREATER THAN 3600mm. CROSS BRIDGING SHALL CONSIST OF 38mm x



- TRIM OPENINGS IN FLOORS AND ROOFS (I.E. STAIRS, FIREPLACES, SKYLIGHTS ETC) WITH DOUBLE JOISTS UNLESS NOTED OTHERWISE.
- . PROVIDE DOUBLE JOISTS UNDER PARALLEL FRAME WALLS UNLESS NOTED OTHERWISE.



- PROVIDE A MOISTURE BARRIER BETWEEN WOOD ELEMENTS AND ALL CONCRETE OR MASONRY. THIS CAN BE A SHEET OF LIGHT-GAUGE (0.61mm MINIMUM) GALVANIZED METAL, ASPHALT IMPREGNATED BUILDING PAPER (7.5 kg PER 10m²), CLOSED—CELL FOAM GASKET MATERIAL, TYPE S ROLL ROOFING. SHEET POLYETHYLENE NOT PERMITTED. ALL JUNCTIONS AND TERMINATIONS TO BE LAPPED (50mm MINIMUM) AND SEALED. BUTT JOINTS IN MOISTURE BARRIERS NOT PERMITTED.
- UNLESS NOTED OTHERWISE NAIL ALL FLOOR SHEATHING AT 150 mm O/C AT THE EDGES OF SHEATHING SHEETS, AND AT 300mm O/C AT INTERMEDIATE SUPPORTS. FLOOR SHEATHING SHALL BE GLUED AND SCREWED TO THE JOISTS.
- LAY SHEATHING WITH THE SURFACE GRAIN AT RIGHT ANGLES TO THE FRAMING MEMBERS. STAGGER THE JOINTS PARALLEL TO THE FRAMING MEMBERS.
- FRAMING DETAILS SHALL ENSURE UNIFORM VERTICAL SHRINKAGE. ADJACENT PORTIONS OF THE STRUCTURE SHALL BE SUPPORTED ON ROUGHLY EQUIVALENT AMOUNTS OF HORIZONTAL TIMBER (JOISTS AND SILL PLATES). DO NOT MIX KILN-DRIED AND NON-KILN DRIED JOISTS IN ANY GIVEN FLOOR.
- STRUCTURAL ELEMENTS SPECIFIED IN METRIC UNITS HAVE THE FOLLOWING EQUIVALENT IMPERIAL UNITS. CHEVILING

<u>JOISTS</u>	SHEATHING
38 x 89	6mm
38 x 140	9.5mm
38 x 184	12.5mm
38 x 235	19mm
38 x 286	22.5mm

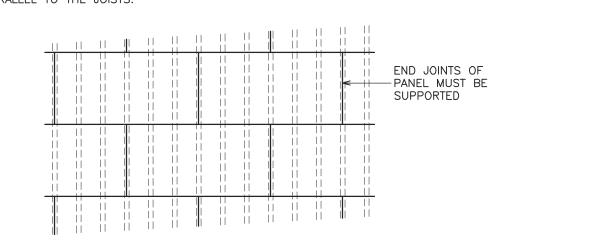
STRUCTURAL DESIGN BY PROFESSIONAL ENGINEER: The City has relied upon the plans and drawings

prepared and submitted by the qualified architects and/or engineers on this proj**ę**ct.

The issuance of a building permit does not imply that a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contraventions are subsequently noted.

SHEATHING

- 2 LAYERS OF 19mm TONGUE AND GROOVE PLYWOOD STAGGERED. (ANY JOINT WITHOUT A TONGUE AND GROOVE CONNECTION SHALL BE BLOCKED WITH A 38mmx89mm).
- . LAY FLOOR SHEATHING WITH THE SURFACE GRAIN AT RIGHT ANGLES TO THE JOISTS. STAGGER THE JOINTS PARALLEL TO THE JOISTS.



LINTELS

OVER ALL OPENINGS IN MASONRY WALLS PROVIDE THE FOLLOWING LINTELS, UNLESS OTHERWISE SHOWN. **BLOCK WYTHES**

STEEL LINTELS

CLEAR SPAN mm	140mm WALL	190mm WALL	240mm WALL	290mm WALL
UP TO 1200	2 - L64x64x6.4	2 - L89x89x7.9	L89x89x7.9 + L127x89x7.9LLV	3-L89x89x7.9
1201 TO 1800	2 - L89x64x6.4LLV	2 - L127x89x7.9LLV	L127x89x7.9LLV + L127x127x7.9	3-L127x89x7.9 LLV
1800 TO 2400	2 – L89x64x7.9LLV	2 – L127x89x9.5LLV	L127x89x9.5LLV + L127x127x9.5	3-L127x89x9.5 LLV
2401 TO 3000	2 – L89x64x9.5LLV	2 - L152x89x9.5LLV	L152x89x9.5LLV + L127x127x9.5	3-L152x89x9.5 LLV

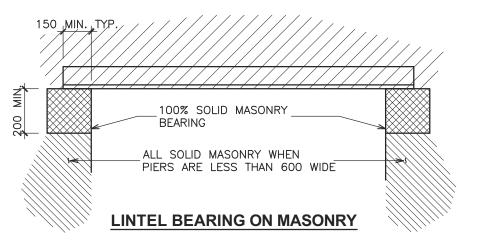
OR BLOCK LINTELS

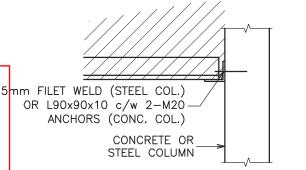
CLEAR SPAN mm	WALL THICKNESS mm	DEPTH mm	REINFORCING (TOP AND BOTTOM)
	140	200	1-10M
LID TO 1200	190	200	1-15M
UP TO 1200	240	200	1-15M
	290	300	1-15M
	140	300	1-15M
4004 TO 4000	190	300	1-15M
1201 TO 1800	240	300	1-15M
	290	300	1-15M
	140	400	1-15M
4000 TO 2400	190	400	2-15M
1800 TO 2400	240	400	2-15M
	290	300	2-15M
	140	600	2-20M
0404 TO 0000	190	600	2-15M
2401 TO 3000	240	400	2-15M
	290	300	2-15M

BLOCK WYTHES

OR EACH 100mm	LENGTH OF WALL
CLEAR SPAN mm	SIZE
UP TO 1200	L 89x89x7.9
1201 TO 1800	L 127x89x7.9 (LLV)
1800 TO 2400	L 152x89x7.9 (LLV)

- WELD BACK TO BACK ANGLES TOGETHER TOP AND BOTTOM WITH 5mm FILLET 50mm LONG AT 450mm MAXIMUM CENTERS.
- MINIMUM BEARING FOR STEEL LINTELS SHALL BE 150mm AND BLOCK LINTELS SHALL BE 200mm.
- FOR WALLS OVER 300mm THICK ADD ONE ANGLE FOR EACH ADDITIONAL 100mm OF WALL THICKNESS OR
- FOR LINTELS ABUTTING STEEL COLUMNS, CONC WALL OR COLUMNS PROVIDE L90x90x10 SHELF ANGLE.
- FILL VOIDS OF LINTEL BLOCK WITH 12.5 MPa GROUT MIN. USE MASONRY LINTELS IN ALL FIRE RATED MASONRY WALLS — SEE ARCH DWG. FOR WALL RATINGS.
- FOR 140 BLOCK USE BLOCK LINTELS.
- ALL STEEL LINTELS AND SHELF ANGLES IN THE EXTERIOR MASONRY SHALL BE HOT DIP GALVANIZED.





LINTEL BEARING ON COLUMN



Engineers 144 Front Street West, Suite 500

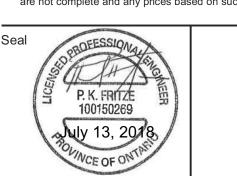


KEY PLAN



	THE ON TARIO BUILDING CODE					
	18	3LD 00				
		10 101 100 525 00				
	ZONING	ZONING				
	O.B.C.					
	FIRE SERVICES					
	O.B.C. (S)					
2.	ISSUED FOR	July 13/18	B P.F.			
1.	ISSUED FOR TENDER			July 13/18	B P.F.	
No.		Revision		Date	Ву	

- 1. All drawings, plans, models, designs, specifications and other documents prepared by Read Jones Christoffersen Ltd. ("RJC") and used in connection with this project are instruments of service for the work shown in them (the "Work") and as such are and remain the property of RJC whether the Work is executed or not, and RJC reserves the copyright in them and in the Work executed from them, and they shall not be used for any other work or project.
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348 Davenport Street **Toronto, Ontario**

DAVENPORT SHELTER RENOVATION

Sheet Title

GENERAL NOTES

Drawn By	M.L.	Scale	N.T.S.
Designed By	P.F.	Date	July, 2018
RJC Project N	umber	TOR	.121290.0001

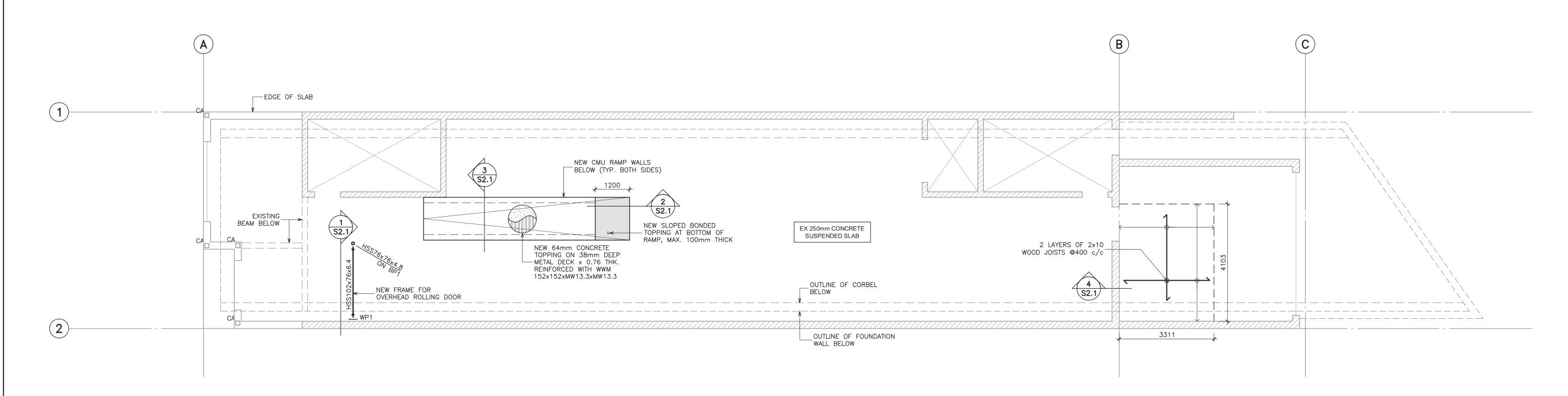
Sheet Number

MTORONTO Building RECEIVED 24/Jul/2018



O.B.C. FIRE SERVICES

O.B.C. (S)



STRUCTURAL DESIGN BY PROFESSIONAL ENGINEER:

The City has relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project.

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BASE PLATE SCHEDULE						
TYPE	SIZE	ANCHORAGE		DETAILS	COMMENTS	
BP1	150x150x13	4—13mmø HILITI HAS RODS, EPOXIED WITH HILTI HY200, MIN. 106mm EMBED.	25 100 25 45 45 45 45 45 45 45 45 45 4		_	
BP2	150x89x13	2-13mm%C HILTI HAS RODS THROUGH BOLTED	25 ••••		_	

	WALL PLATE SCHEDULE					
TYPE	SIZE	ANCHORAGE	DETAILS	COMMENTS		
WP1	300x300x13	4—13mmø HILTI KWIK HUS, HDG, 106mm EMBED.	38 224 38 CONNECTION TO WP1 BY FABRICATOR	- ANCHORS MIN. 100mm FROM ALL WALL EDGES - GROUT MASONRY SOLID PER DETAIL 11/S2.1 - SIMILAR FOR HSS SECTION		
WP2	400x400x13	6—13mmø HILTI KWIK HUS, HDG, 106mm EMBED.	38 224 38 877 791 791 791 791 791 791 791 7	- ANCHORS MIN. 100mm FROM ALL WALL EDGES - GROUT MASONRY SOLID PER DETAIL 11/S2.1		

	NON-LOAD BEARING MASONRY WALL
=====	FOUNDATION WALL BELOW
====	BEAM BELOW
<u> </u>	NEW 2x10 WOOD JOIST AND DIRECTION
	NEW SLOPED BONDED CONCRETE TOPPING
	NEW SLAB ON DECK AND DIRECTION
	EXISTING THROUGH SLAB OPENING
	NEW THROUGH SLAB OPENING
7/1/////	NEW MASONRY PARAPET WALL
===	NEW _L L102x102x6.4
	EXISTING STRUCTURAL STEEL FRAMING
	EXISTING 300 DP. OWSJ
	EXISTING 300 DP. OWSJ TO BE REINFORCED
	NEW STRUCTURAL STEEL FRAMING
0	NEW STRUCTURAL STEEL COLUMN
	EXISTING COLUMN TO REMAIN
WP#	NEW WALL PLATE (REFER TO SCHEDULE ON S1.1)
	FULL MOMENT CONNECTION

LOAD BEARING MASONRY WALL

LEGEND:

RENOVATION NOTES:

- 1. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SLOPES, ELEVATIONS, AND FINISH REQUIREMENTS.
- 2. COORDINATE THE REQUIREMENTS OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
- 3. THE CONTRACTOR SHALL DESIGN, INSTALL AND MAINTAIN ALL TEMPORARY WORKS AND SHORING AS REQUIRED TO CARRY OUT THE WORK. SUBMIT SHOP DRAWINGS SEALED BY THE CONTRACTOR'S SPECIALTY ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
- 4. SUBMIT STRUCTURAL STEEL SHOP DRAWINGS PRIOR TO FABRICATION IN ACCORDANCE WITH SECTION 05 10 00, SEALED BY THE
- CONTRACTOR'S SPECIALTY ENGINEER. 5. SUBMIT STRUCTURAL STEEL DECK SHOP DRAWINGS PRIOR TO FABRICATION IN ACCORDANCE WITH SECTION 05 30 00, SEALED BY
- THE CONTRACTOR'S SPECIALTY ENGINEER.
- 6. ALL NEW STRUCTURAL STEEL DECK WITH NEW CONCRETE TOPPING SHALL BE CANAM P-3615 COMPOSITE, 38mm DEEP, 0.76mm THICK, VENTED.
- 7. ALL NEW STRUCTURAL STEEL DECK WITHOUT CONCRETE TOPPING SHALL BE CANAM P-3615, 38mm DEEP, 0.91mm THICK.
- 8. REFER TO SCHEDULE ON S1.1 FOR BASE AND WALL PLATE DETAILS.
- 9. INSTALL ALL REINFORCING PRIOR TO INSTALLATION OF NEW OPENINGS, STRUCTURES OR FINISHES.
- 10. SCAN OR X-RAY STRUCTURAL CONCRETE ELEMENTS TO LOCATE ALL EMBEDDED ITEMS (I.E. REBAR, CONDUIT, ETC.) PRIOR TO DRILLING, NOTIFY RJC 24 HOURS IN ADVANCE TO REVIEW PROPOSED CORING LOCATIONS, DO NOT SEVER EMBEDDED ITEMS TO REMAIN WITHOUT WRITTEN PERMISSION FROM RJC.
- 11. CORE ALL THROUGH-SLAB OPENINGS WITH 200mm CORES. DO NOT USE PERCUSSIVE DEMOLITION METHODS UNLESS APPROVED IN WRITING BY RJC.
- 12. DO NOT CUT OR MODIFY EXISTING STRUCTURAL MEMBERS WITHOUT AUTHORIZATION FROM RJC.
- 13. INSTALL LINTELS ABOVE NON-LOAD BEARING WALL OPENINGS SHOWN ON ARCHITECTURAL DRAWINGS, PER THE GENERAL STRUCTURAL NOTES.
- 14. INSTALL STRUCTURAL STEEL REINFORCING AROUND ALL NEW OPENINGS IN ROOF DECK PER THE GENERAL STRUCTURAL NOTES.
- 15. THE CONTRACTOR SHALL MAKE PROVISIONS TO REMOVE AND REINSTATE ALL ARCHITECTURAL FINISHES AND BRICK VENEER REQUIRED TO CARRY OUT THE STRUCTURAL WORK. COORDINATE WITH ARCHITECTURAL DRAWINGS.
- 16. CONTRACTOR SHALL CUT WOOD FRAMING TO SIZE TO MEET FINISHES FLOOR ELEVATIONS.
- 17. TOE FASTEN NEW WOOD JOISTS TO GROUND FLOOR SLAB WITH 83mm LONG HILTI KWIK CON II CONCRETE SCREWS @400 c/c, EACH JOIST.
- 18. TOE FASTEN UPPER LAYER OF JOISTS AT EACH INTERSECTION WITH 83mm LONG #10 SCREW.
- 19. ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR SHALL BE HOT DIPPED GALVANIZED WITH ALL WELDS SHOP WELDED. SITE CONNECTIONS SHALL BE BOLTED, MIN. 2-19mm A325 BOLTS, HDG.





Read Jones Christoffersen Ltd.
Engineers

144 Front Street West, Suite 500 Toronto, ON M5J 2L7 Canada tel 416-977-5335

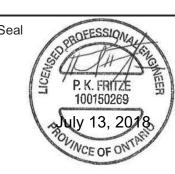


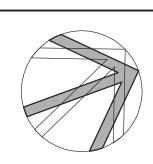
KEY PLAN

	2.	ISSUED FOR PERMIT	July 13/18	P.F.
	1.	ISSUED FOR TENDER	July 13/18	P.F.
	No	Revision	Date	By

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Project Name

348 Davenport Street Toronto, Ontario

DAVENPORT SHELTER RENOVATION

Sheet Title

GROUND FLOOR RENOVATION PLAN

Drawn By M.L. Scale 1:75 Designed By P.F. Date **July, 2018** TOR.121290.0001

Sheet Number

RJC Project Number

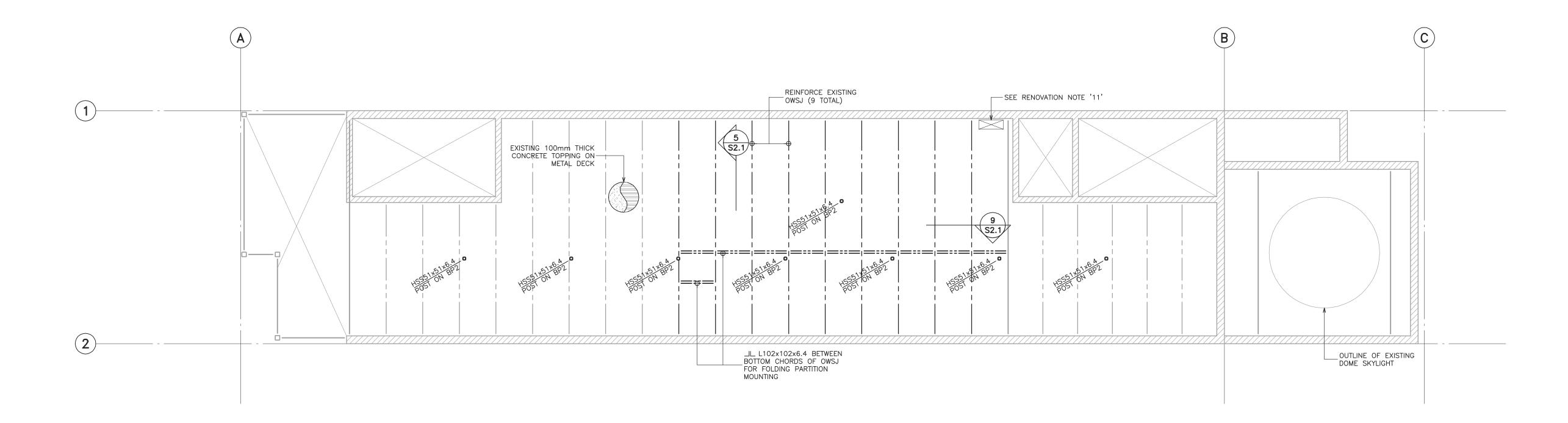
Revision

MTORONTO Building RECEIVED 24/Jul/2018



18 197188 BLD 00

ZONING	
O.B.C.	
FIRE SERVICES	
O.B.C. (S)	



RENOVATION NOTES:

. REFER TO RENOVATION NOTES ON DRAWING S1.1.

LEGEND: LOAD BEARING MASONRY WALL NON-LOAD BEARING MASONRY WALL FOUNDATION WALL BELOW BEAM BELOW NEW 2x10 WOOD JOIST AND DIRECTION NEW SLOPED BONDED CONCRETE TOPPING NEW SLAB ON DECK AND DIRECTION EXISTING THROUGH SLAB OPENING NEW THROUGH SLAB OPENING NEW MASONRY PARAPET WALL =::= NEW _L L102×102×6.4 EXISTING STRUCTURAL STEEL FRAMING EXISTING 300 DP. OWSJ _____ EXISTING 300 DP. OWSJ TO BE REINFORCED NEW STRUCTURAL STEEL FRAMING NEW STRUCTURAL STEEL COLUMN EXISTING COLUMN TO REMAIN

NEW WALL PLATE (REFER

FULL MOMENT CONNECTION

TO SCHEDULE ON S1.1)

WP# I

 \longrightarrow

STRUCTURAL DESIGN BY PROFESSIONAL

and/or engineers on this project.

The City has relied upon the plans and drawings

complete design review of this project has been

prepared and submitted by the qualified architects

The issuance of a building permit does not imply that a

performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code

and referenced standards where contraventions are

ENGINEER:

subsequently noted.





Read Jones Christoffersen Ltd.
Engineers

144 Front Street West, Suite 500 Toronto, ON M5J 2L7 Canada tel 416-977-5335 fax 416-977-1427



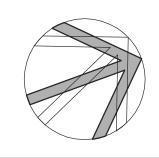
KEY PLAN

1					
	,				
		2.	ISSUED FOR PERMIT	July 13/18	P.F.
		1.	ISSUED FOR TENDER	July 13/18	P.F.
		No.	Revision	Date	Ву

Drawing Notes

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Project Name

348 Davenport Street Toronto, Ontario

DAVENPORT SHELTER RENOVATION

Sheet Title

LEVEL 2 RENOVATION PLAN

Drawn By M.L. Scale 1:75 Date July, 2018 Designed By P.F. TOR.121290.0001 RJC Project Number

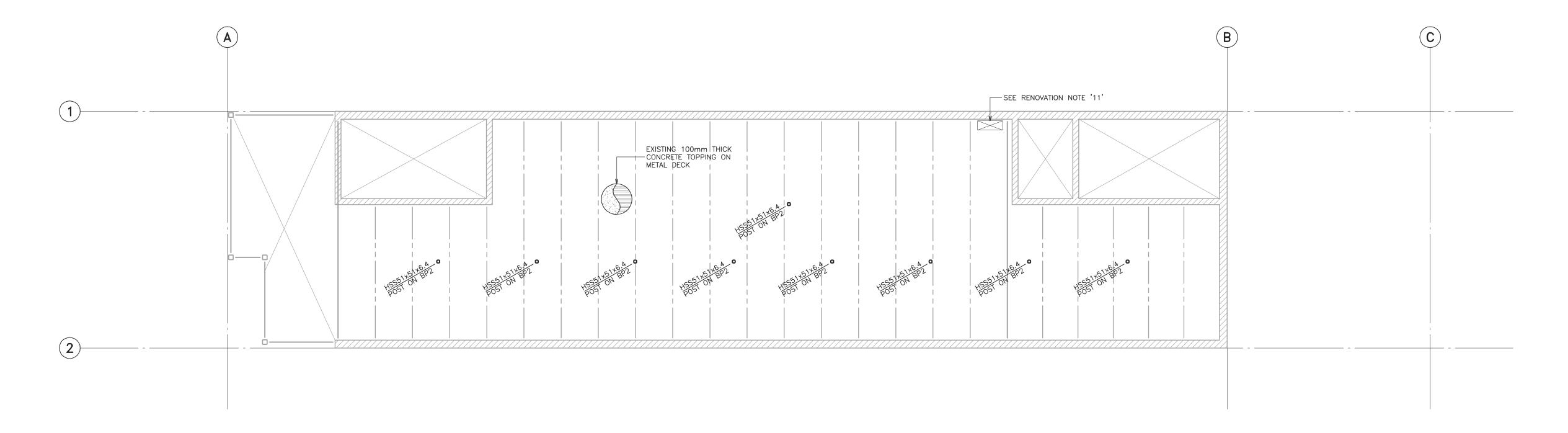
Sheet Number

Revision

TORONTO Building RECEIVED 24/Jul/2018



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RENOVATION NOTES:

STRUCTURAL DESIGN BY PROFESSIONAL

and/or engineers on this project.

The City has relied upon the plans and drawings prepared and submitted by the qualified architects

complete design review of this project has been

The issuance of a building permit does not imply that a

performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code

and referenced standards where contraventions are

ENGINEER:

subsequently noted.

1. REFER TO RENOVATION NOTES ON DRAWING S1.1.

LEGEND:			
7//////	LOAD BEARING MASONRY WALL		
	NON-LOAD BEARING MASONRY WALL		
=====	FOUNDATION WALL BELOW		
====	BEAM BELOW		
<u> </u>	NEW 2x10 WOOD JOIST AND DIRECTION		
	NEW SLOPED BONDED CONCRETE TOPPING		
	NEW SLAB ON DECK AND DIRECTION		
	EXISTING THROUGH SLAB OPENING		
	NEW THROUGH SLAB OPENING		
	NEW MASONRY PARAPET WALL		
===	NEW _JL L102x102x6.4		
	EXISTING STRUCTURAL STEEL FRAMING		
	EXISTING 300 DP. OWSJ		
	EXISTING 300 DP. OWSJ TO BE REINFORCED		
	NEW STRUCTURAL STEEL FRAMING		
o	NEW STRUCTURAL STEEL COLUMN		
	EXISTING COLUMN TO REMAIN		

NEW WALL PLATE (REFER

FULL MOMENT CONNECTION

TO SCHEDULE ON S1.1)

WP# I





Read Jones Christoffersen Ltd.
Engineers

144 Front Street West, Suite 500 Toronto, ON M5J 2L7 Canada tel 416-977-5335 fax 416-977-1427

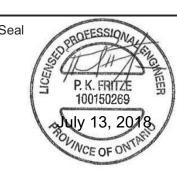


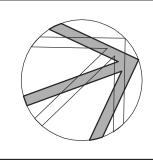
KEY PLAN

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	2.	ISSUED FOR PERMIT	July 13/18	P.F.
	1.	ISSUED FOR TENDER	July 13/18	P.F.
	No.	Revision	Date	Ву

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Project Name

348 Davenport Street Toronto, Ontario

DAVENPORT SHELTER RENOVATION

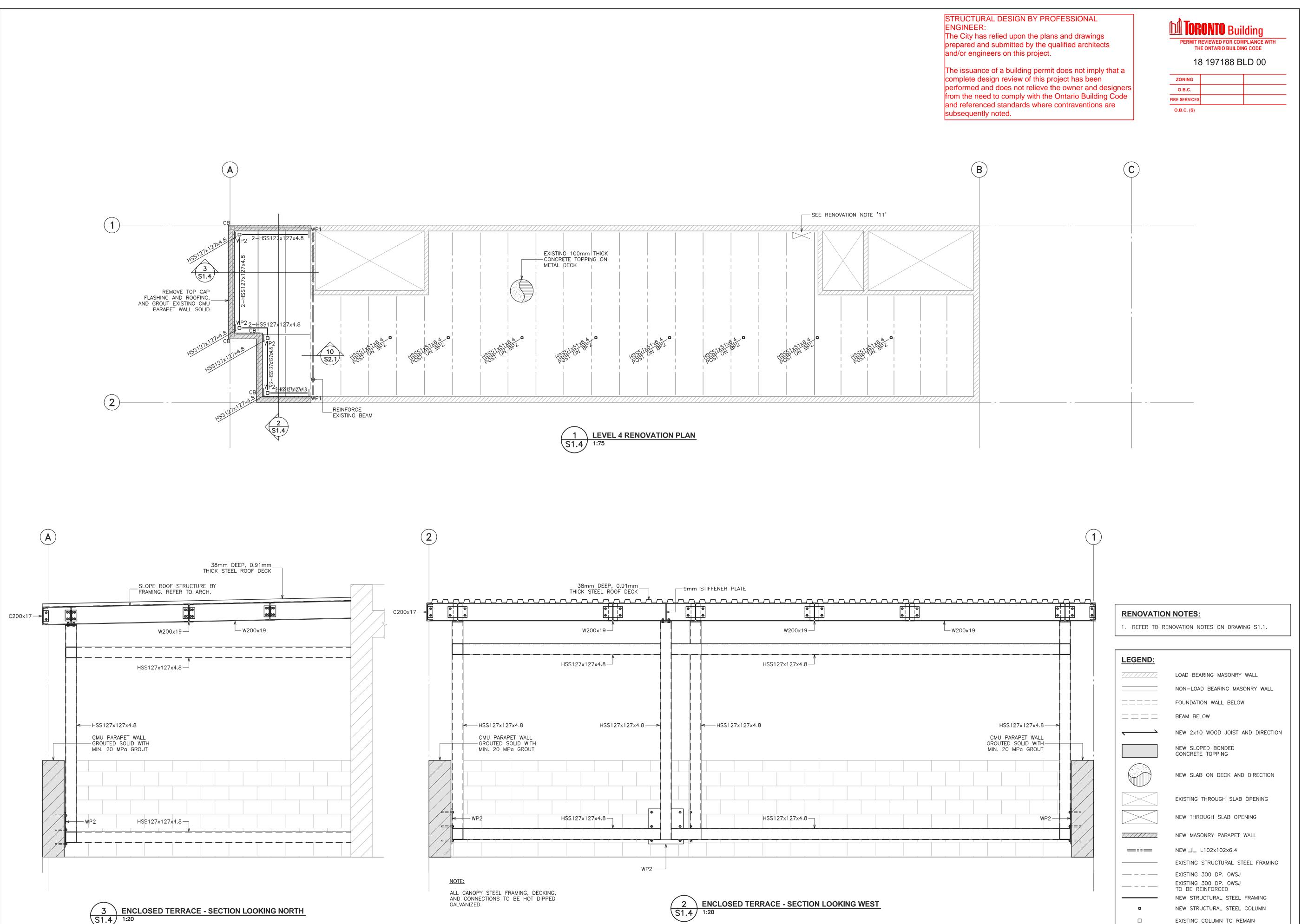
Sheet Title

LEVEL 3 RENOVATION PLAN

Drawn By M.L. Scale 1:75 Designed By P.F. Date July, 2018 TOR.121290.0001 RJC Project Number

Sheet Number

Revision







Read Jones Christoffersen Ltd.
Engineers

144 Front Street West, Suite 500 Toronto, ON M5J 2L7 Canada tel 416-977-5335 fax 416-977-1427

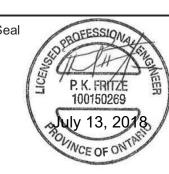


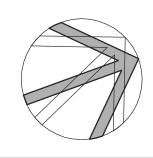
KEY PLAN

2.	ISSUED FOR PERMIT	July 13/18	P.F.
1.	ISSUED FOR TENDER	July 13/18	P.F.
No.	Revision	Date	Ву

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Project Name

348 Davenport Street Toronto, Ontario

DAVENPORT SHELTER RENOVATION

Sheet Title

LEVEL 4 RENOVATION PLAN

Drawn By M.L. Scale 1:75

Designed By P.F. Date July, 2018

RJC Project Number TOR.121290.0001

Sheet Number

Revision

S_{1.4}

NEW WALL PLATE (REFER

FULL MOMENT CONNECTION

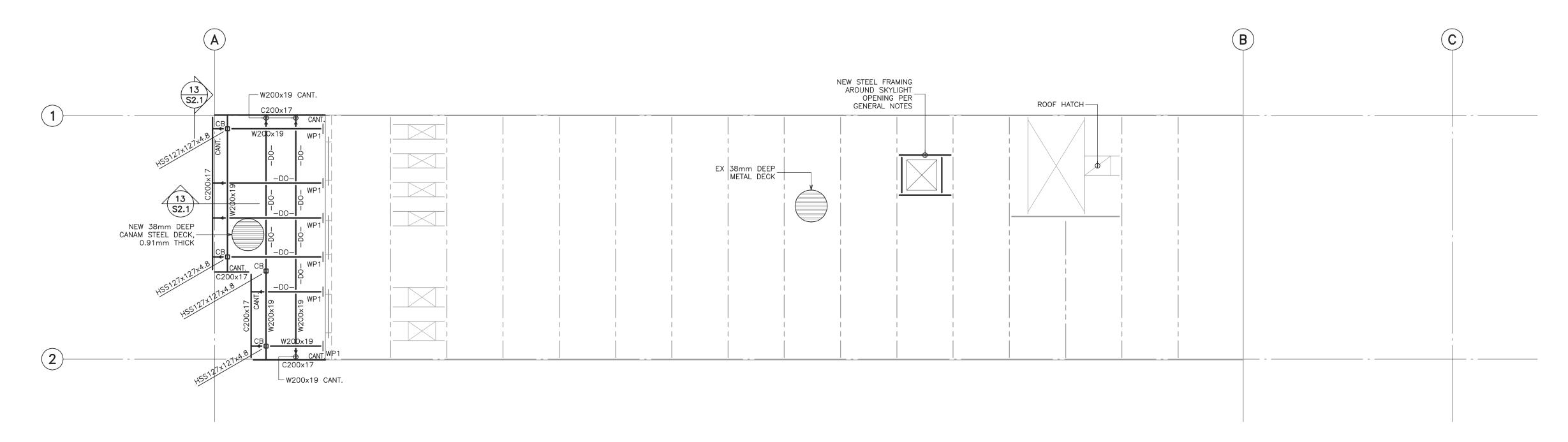
TO SCHEDULE ON S1.1)

WP#



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ZONING		
O.B.C.		
FIRE SERVICES		
O.B.C. (S)		



STRUCTURAL DESIGN BY PROFESSIONAL

The City has relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project.

The issuance of a building permit does not imply that a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contraventions are subsequently noted.

RENOVATION NOTES:

1. REFER TO RENOVATION NOTES ON DRAWING S1.1.

LEGEND:	
7//////	LOAD BEARING MASONRY WALL
	NON-LOAD BEARING MASONRY WALL
	FOUNDATION WALL BELOW
	BEAM BELOW
	NEW 2x10 WOOD JOIST AND DIRECTION
	NEW SLOPED BONDED CONCRETE TOPPING
	NEW SLAB ON DECK AND DIRECTION
	EXISTING THROUGH SLAB OPENING
	NEW THROUGH SLAB OPENING
	NEW MASONRY PARAPET WALL
=::=	NEW _JL_ L102x102x6.4
	EXISTING STRUCTURAL STEEL FRAMING
	EXISTING 300 DP. OWSJ
	EXISTING 300 DP. OWSJ TO BE REINFORCED
	NEW STRUCTURAL STEEL FRAMING
0	NEW STRUCTURAL STEEL COLUMN
	EXISTING COLUMN TO REMAIN
wp#	NEW WALL PLATE (REFER TO SCHEDULE ON S1.1)









KEY PLAN

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	,				
		2.	ISSUED FOR PERMIT	July 13/18	P.F.
		1.	ISSUED FOR TENDER	July 13/18	P.F.
		No.	Revision	Date	Ву

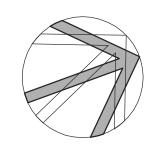
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Project Name

348 Davenport Street Toronto, Ontario

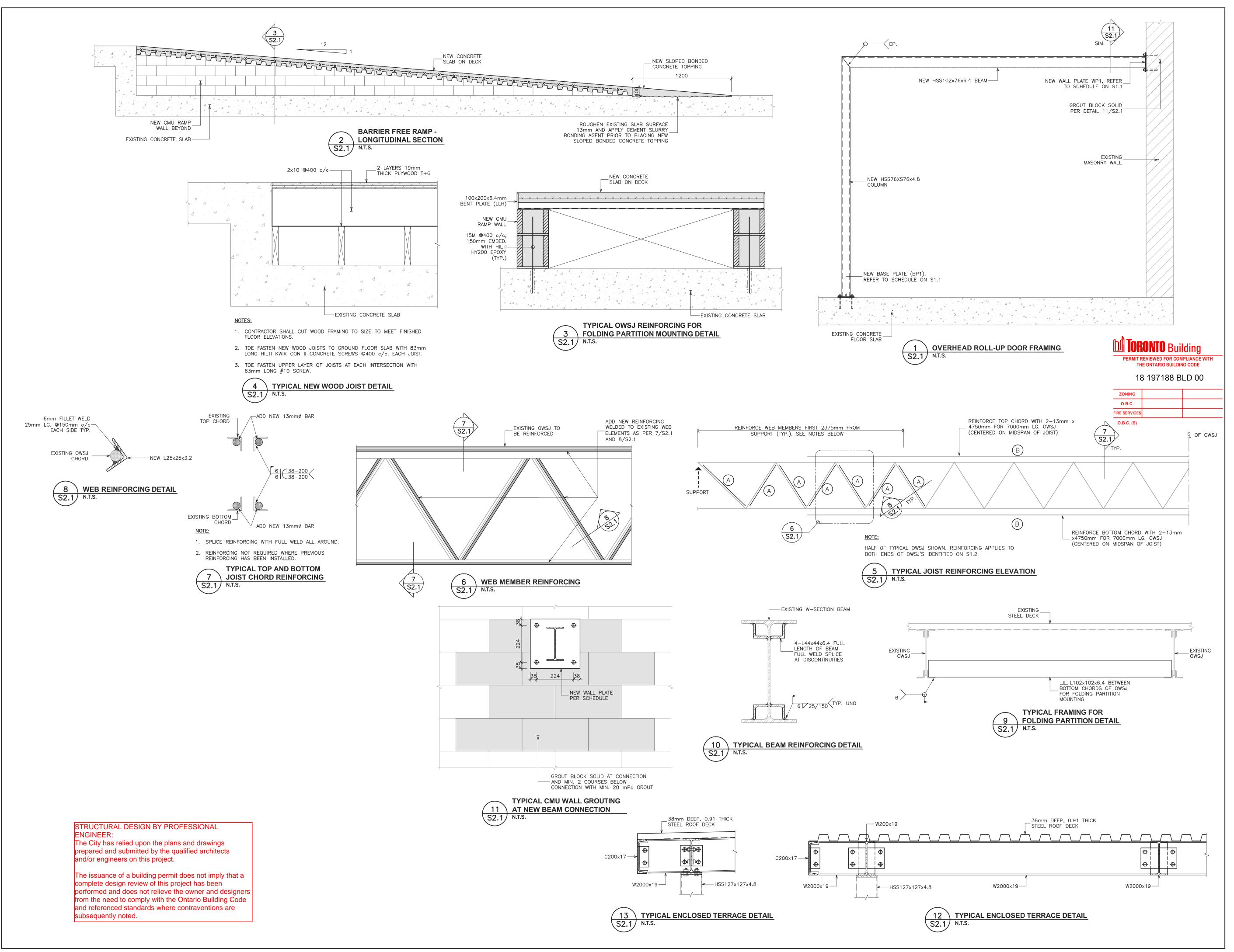
DAVENPORT SHELTER RENOVATION

Sheet Title

ROOF RENOVATION PLAN

Drawn By M.L. Scale 1:75 Designed By P.F. Date July, 2018 TOR.121290.0001 RJC Project Number

Sheet Number **S1.5** Revision







Read Jones Christoffersen Ltd.
Engineers
ric.ca

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tel 416-977-5335
fax 416-977-1427

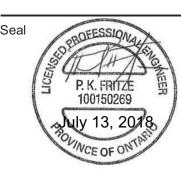


KEY PLAN

SJ				
	2.	ISSUED FOR PERMIT	July 13/18	P.F.
	1.	ISSUED FOR TENDER	July 13/18	P.F.
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Project Name

348 Davenport Street Toronto, Ontario

DAVENPORT SHELTER RENOVATION

Sheet Title

SECTIONS AND DETAILS

RJC Project	Number	TOR	.121290.000
Designed By	P.F.	Date	July, 2018
Drawn By	M.L.	Scale	AS NOTED

Sheet Number **S2**_1

Revision

MECHANIC

	MECHAN
	PLUMBING
SYMBOL	DESCRIPTION
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER DOMESTIC HOT WATER RECIRCULATION
	EXISTING DOMESTIC COLD WATER
	EXISTING DOMESTIC HOT WATER
	EXISTING DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT LINE
	EXISTING SANITARY VENT LINE BURIED SANITARY DRAIN
SAN	SUSPENDED SANITARY DRAIN
——SAN——	SANITARY DRAIN IN CEILING SPACE OF FLOOR BELOW
——PSAN ———	SANITARY PUMPED DISCHARGE
SANB	EXISTING BURIED SANITARY DRAIN
—— SAN	EXISTING SUSPENDED SANITARY DRAIN
	EXISTING SANIT. DRAIN IN CEILING SPACE OF FLOOR BELOW EXISTING SANITARY PUMPED DISCHARGE
-STMB	BURIED STORM DRAIN
STM	SUSPENDED STORM DRAIN
STM	STORM DRAIN IN CEILING SPACE OF FLOOR BELOW
——PSTM——	STORM PUMPED DISCHARGE
STMB	EXISTING BURIED STORM DRAIN
STM	EXISTING SUSPENDED STORM DRAIN EXIS. STORM DRAIN IN CEILING SPACE OF FLOOR BELOW
——————————————————————————————————————	EXISTING STORM PUMPED DISCHARGE
——————————————————————————————————————	CLEANOUT PLUG
——⊚ co	FLOOR CLEANOUT
—-с—	CONDENSATE DRAIN
c	EXISTING CONDENSATE DRAIN
	NATURAL GAS LINE
	EXISTING NATURAL GAS LINE ELBOW, TURNED DOWN AND TURNED UP
	BRANCH - TOP CONNECTION
<u> </u>	BRANCH - BOTTOM CONNECTION
—— — —————————————————————————————————	INTERIOR WALL HYDRANT
	EXTERIOR NON FREEZE WALL HYDRANT
 НВ	INTERIOR HOSE BIB
□ FD	FLOOR DRAIN
☐ FFD ○ HD	FUNNEL FLOOR DRAIN HUB DRAIN
RD Z RD	ROOF DRAIN
RDC 22 113	HVAC (PIPING)
SYMBOL	DESCRIPTION REFRIGERANT SUCTION
——RL ——	REFRIGERANT LIQUID
	·
RS	EXISTING REFRIGERANT SUCTION
	EXISTING REFRIGERANT SUCTION EXISTING REFRIGERANT LIQUID
—— RL ——	
—— RL ——	EXISTING REFRIGERANT LIQUID
VALVE SYMBOL —M—	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS
VALVE SYMBOL	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION
VALVE SYMBOL ——M—	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE
VALVE SYMBOL ——M—	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE
VALVE SYMBOL —M—	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV)
VALVE SYMBOL —M—	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE
SYMBOL M M M M M M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE
SYMBOL M M M M M M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE
VALVE SYMBOL M M M M M M M M M M M M M	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER
VALVE SYMBOL SYMBOL	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER
VALVE SYMBOL SYMBOL W X X X X X X X X X X X X	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE)
VALVE SYMBOL SYMBOL	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP
VALVE SYMBOL SYMBOL	DESCRIPTION DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END
VALVE SYMBOL SYMBOL N N N N N N N N N N N N N	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP
VALVE SYMBOL SYMBOL	DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION
VALVE SYMBOL SYMBOL A A A A A A A A A A A A A	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION
VALVE SYMBOL SYMBOL	DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE ECCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION
VALVE SYMBOL SYMBOL A A A A A A A A A A A A A	DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION FLANGED CONNECTION UNION
VALVE SYMBOL SYMBOL SYMBOL A A A A A A A A A A A A A	DESCRIPTION DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION UNION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER
VALVE SYMBOL SYMBOL A A A A A A A A A A A A A	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION TLANGED CONNECTION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER THERMOMETER WITH THERMOMETER WELL
VALVE SYMBOL SYMBOL A A A A A A A A A A A A A	DESCRIPTION DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION UNION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER
VALVE SYMBOL SYMBOL N N N N N N N N N N N N N	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION FLANGED CONNECTION UNION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER THERMOMETER WITH THERMOMETER WELL BACKFLOW PREVENTER (B.F.P.) (SUPPLIED WITHOUT
VALVE SYMBOL SYMBOL N N N N N N N N N N N N N	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION CAPPED CONNECTION UNION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER THERMOMETER WITH THERMOMETER WELL BACKFLOW PREVENTER (B.F.P.) (SUPPLIED WITHOUT SHUT—OFF
VALVE SYMBOL SYMBOL N N N N N N N N N N N N N	EXISTING REFRIGERANT LIQUID CS & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION UNION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER THERMOMETER WITH THERMOMETER WELL BACKFLOW PREVENTER (B.F.P.) (SUPPLIED WITHOUT SHUT—OFF VALVES) BACKFLOW PREVENTER (B.F.P.) (SUPPLIED WITH SHUT—OFF VALVES)
VALVE SYMBOL SYMBOL W X X X X X X X X X X X X	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION CAPPED CONNECTION FLANGED CONNECTION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER THERMOMETER WITH THERMOMETER WELL BACKFLOW PREVENTER (B.F.P.) (SUPPUED WITHOUT SHUT—OFF VALVES) BACKFLOW PREVENTER (B.F.P.) (SUPPUED WITH SHUT—OFF VALVES) BACKWATER VALVE (B.W.V.)
VALVE SYMBOL SYMBOL A A A A A A A A A A A A A A A A A A A	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PHUS VALVE PHUSP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION FLANGED CONNECTION UNION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER THERMOMETER WITH THERMOMETER WELL BACKFLOW PREVENTER (B.F.P.) (SUPPLIED WITHOUT SHUT—OFF VALVES) BACKWATER VALVE (B.W.V.) CHECK VALVE ELECTRIC PIPE HEATING (HEAT TRACING)
VALVE SYMBOL SYMBOL N N N N N N N N N N N N N	EXISTING REFRIGERANT LIQUID S & PIPING FITTINGS DESCRIPTION DOMESTIC COLD WATER METER DOMESTIC COLD WATER METER WITH REMOTE READOUT GATE VALVE GLOBE VALVE PRESSURE REDUCING VALVE (PRV) CHECK VALVE RELIEF VALVE STRAINER DRAIN COCK SOLENOID VALVE BUTTERFLY VALVE GRISWOLD VALVE BALL VALVE TWO—WAY AUTOMATIC CONTROL VALVE CIRCUIT BALANCING VALVE CONCENTRIC REDUCER ECCENTRIC REDUCER BACKFLOW PREVENTER (DOUBLE CHECK VALVE) PLUG VALVE PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER PUMP HOSE END BLIND FLANGED CONNECTION CAPPED CONNECTION FLANGED CONNECTION UNION CONNECT NEW SERVICES TO EXISTING PRESSURE GAUGE WITH GAUGE COCK AND SNUBBER THERMOMETER WITH THERMOMETER WELL BACKFLOW PREVENTER (B.F.P.) (SUPPLIED WITHOUT SHUT—OFF VALVES) BACKWATER VALVE (B.W.V.) CHECK VALVE

	\/ENITH ATION!
	VENTILATION
	DUCTWORK (DOUBLE LINE)
	DUCTWORK (DOUBLE LINE) EXISTING DUCTWORK (DOUBLE LINE)
	DUCTWORK (SINGLE LINE)
	EXISTING DUCTWORK (SINGLE LINE)
<u> </u>	ACOUSTICALLY LINED DUCTWORK (DOUBLE LINE)
	ACOUSTICALLY LINED DUCTWORK (SINGLE LINE)
~	FLEXIBLE DUCT
	EXISTING FLEXIBLE DUCT
	SUPPLY DUCT UP (RECTANGULAR)
	ROUND DUCT UP
	RETURN DUCT UP
	SUPPLY DUCT DOWN
<u></u> ■ • • • • • • • • • • • • • • • • • • 	ROUND DUCT DOWN
	RETURN DUCT DOWN
	CHANGE IN DUCT ELEVATION
	DUCT MOUNTED EQUIPMENT WITH FLEXIBLE CONNECTORS
~	SPIN ON FITTING WITH FLEXIBLE DUCT
DG, A.	EXISTING SPIN ON FITTING WITH FLEXIBLE DUCT
U/C	DOOR GRILLE DOOR UNDERCUT
BD BD	MANUAL BALANCING DAMPER
FD FD	FIRE DAMPER
MD MD	AUTOMATIC (MOTORIZED) DAMPER
SD SD SD	SMOKE (MOTORIZED) DAMPER
BDDBDD	BACKDRAFT DAMPER
	RETURN OR EXHAUST AIR GRILLE
	EXISTING RETURN OR EXHAUST AIR GRILLE
	SQUARE SUPPLY AIR DIFFUSER
	EXISTING SQUARE SUPPLY AIR DIFFUSER
©	ROUND SUPPLY AIR DIFFUSER
©	EXISTING ROUND SUPPLY AIR DIFFUSER
	SIDEWALL GRILLE
	EQUIPMENT
	EXISTING EQUIPMENT
<u> </u>	THERMOSTAT
T	EXISTING THERMOSTAT TEMPERATURE SENSOR
T	EXISTING TEMPERATURE SENSOR
	EXISTING CENTRAL VACUUM SYSTEM OUTLET
	EXISTING SERVICES OR EQUIPMENT TO BE REMOVED
	ABBREVIATIONS
	ADDREVIATIONS
SYMBOL	DESCRIPTION
Р	PUMP
HWH	HOT WATER HEATER
EHC	ELECTRIC DUCT HEATING COIL
UH	UNIT HEATER
FFH	FORCED FLOW HEATER
BBH ET	BASEBOARD HEATER EXPANSION TANK
DHWH	DOMESTIC HOT WATER HEATER
AFF	ABOVE FINISHED FLOOR
N N	NEW
ER C	DENOTES EXISTING TO BE RELOCATED
RTU	ROOF TOP UNIT
CC	COOLING COIL
HC	HEATING COIL
HRC	HEAT RECOVERY COIL
RF	RETURN FAN
SF	SUPPLY FAN
EF	EXHAUST FAN
S/A	SUPPLY AIR DUCTWORK
R/A	RETURN AIR DUCTWORK
E/A	EXHAUST AIR DUCTWORK
CTE	CONNECT TO EXISTING
-///////	EXISTING SERVICES / EQUIPMENT TO BE REMOVED
N	NEW SYSTEM TO DESIGN
EX	EXISTING TO REMAIN
	EVICTING TO BE BELOCATED BELLING
ER	EXISTING TO BE RELOCATED REMAIN

	FIRE PROTECTION	
SYMBOL	DESCRIPTION	
— SP —	SPRINKLER LINE	
—— SPD ——	SPRINKLER DRAIN	
—_F—	FIRE LINE	
SP	EXISTING SPRINKLER LINE	
SPD	EXISTING SPRINKLER DRAIN	
F	EXISTING FIRE LINE	
•	PENDANT SPRINKLER HEAD	
0	UPRIGHT SPRINKLER HEAD	
<u> </u>	SIDEWALL SPRINKLER HEAD	
	CONCEALED TYPE SPRINKLER HEAD	
0	EXISTING SPRINKLER HEAD	
	EXISTING SPRINKLER HEAD	
	SPRINKLER ZONE BORDER LINE	
FDCSVC	FIRE DEPARTMENT CONNECTION	
	SPRINKLER ZONE VALVE CABINET (RECESSED TYPE)	
FHC [IIIIII] FHC	FIRE HOSE CABINET (SURFACE MOUNTED)	
	FIRE HOSE CABINET (RECESSED)	
<u> </u>	SPRINKLER DRY PIPE VALVE	
<u> </u>	SPRINKLER WET PIPE ALARM CHECK VALVE	
\Diamond	PREACTION SPRINKLER VALVE	
	TEST DRAIN MODULE	
*P.I.V.	POST INDICATOR VALVE	
——⋈—Q;	OUTSIDE FIRE HYDRANT WITH VALVE	
F.E.	FIRE EXTINGUISHER	
<u> </u>	FIRE DEPARTMENT TEST CONNECTION	
ØPS	ALARM PRESSURE SWITCH	
SUPERVISED OS AND Y VALVE		
——I] SV	INDICATIVE TYPE SUPERVISED BUTTERFLY VALVE	
	ALARM FLOW SWITCH	
EP	EXCESS PRESSURE PUMP	
FP	FIRE PUMP	
JP	JOCKEY PUMP	
SP	SPRINKLER PUMP	
	GENERAL	
	ī	
SYMBOL	DESCRIPTION	
X	SECTION No.	
M-XXX	DRAWING No.	
X	DETAIL NO.	
M-XX	DETAIL NO. FOR CONTINUATION, SEE DETAIL NO. /DRAWING NO.	
	DRAWING No. J DETAIL No. /DRAWING No.	
	EQUIPMENT NUMBER	
$\langle x \rangle$	EQUIPMENT DESIGNATION	
	ENGIL METAL DESIGNATION	
N-X	REFER TO NOTE "X" ON THIS DRAWING	
X,XX	TYPE OF GRILLE OR DIFFUSER	
XXX	+ AIR QUANTITY (L/S) + GRILLE / DIFFUSER FACE SIZE OR NECK SIZE	
x,xx	TYPE OF GRILLE OR DIFFUSER	
XXX	GRILLE / DIFFUSER FACE SIZE OR NECK SIZE	
	+ AIR QUANTITY (L/S)	

NUMBER	DESCRIPTION		
M-1	MECHANICAL LEGEND, DRAWING LIST AND SCHEDULES		
M-2	BASEMENT 1 & 2 AND LEVEL 1 — PLUMBING DEMOLITION		
M-3	LEVEL 2, 3 AND 4 - PLUMBING DEMOLITION		
M-4	BASEMENT 1 & 2 AND LEVEL 1 - HVAC DEMOLITION		
M-5	LEVEL 2, 3 AND 4 - HVAC DEMOLITION		
M-6	BASEMENT 1 & 2 AND LEVEL 1 - FIRE PROTECTION DEMOLITION		
M-7	LEVEL 2, 3 AND 4 - FIRE PROTECTION DEMOLITION		
M-8	BASEMENT 1 & 2 AND LEVEL 1 - PLUMBING NEW LAYOUT		
M-9	LEVEL 2, 3 AND 4 — PLUMBING NEW LAYOUT		
M-10	BASEMENT 1 & 2 AND LEVEL 1 - HVAC NEW LAYOUT		
M-11	LEVEL 2, 3 AND 4 - HVAC NEW LAYOUT		
M-12	BASEMENT 1 & 2 AND LEVEL 1 - FIRE PROTECTION NEW LAYOU		
M-13	LEVEL 2, 3 AND 4 - FIRE PROTECTION NEW LAYOUT		
M-14	MECHANICAL DETAILS		
M-15	MECHANICAL SPECIFICATION		

ELECTRICAL DRAWING LIST

PLUMBING FIXTURE SCHEDULE

WATER CLOSET TYPE "WC" (FLOOR MOUNTED)

- AMERICAN STANDARD WATER CLOSET "MADERA FLOWISE" 15" HEIGHT, ELONGATED, SIPHON ACTION WITH DIRECT-FED JET, ELONGATED BOWL, BACK SPUD, HIGH-EFFICIENCY TOILET, LOW CONSUMPTION (1.1 GPF TO 1.6 GPF (4.2 LPF TO 6.0 LPF). MODEL #3453.001
- SLOW CLOSE SNAP-OFF HINGE LESS COVER.
- .3 FLUSH VALVE: AMERICAN STANDARD MODEL 6068.322.007, SELECTRONIC FLOWISE, SENSOR OPERATED, CONCEALED TOILET FLUSH VALVE WITH WALL BOX WITH 1-1/2" BACK SPUD. INLET

- AMERICAN STANDARD WATER CLOSET "MADERA FLOWISE" 16-1/2" HEIGHT, ELONGATED, SIPHON ACTION WITH DIRECT-FED JET, ELONGATED BOWL, BACK SPUD, HIGH-EFFICIENCY TOILET, LOW
- .2 SEAT: AMERICAN STANDARD #5901.100 HEAVY DUTY OPEN FRONT, FOR ELONGATED BOWL, WITH
- TO INCLUDE 1" ANGLE STOP WITH INTEGRAL BACKFLOW PREVENTER AND WHEEL HANDLE. OUTLET TO INCLUDE 1-1/2" VACUUM BREAKER AND ADJUSTABLE TAIL PIECE. PROVIDE S.S. RECESSED BACK BOX TO HOUSE ALL COMPONENTS. NO EXPOSED DEVICES WILL BE PERMITTED. PROVIDE S.S. ACCESS PANEL WITH TEMPER PROOF SCREWS

- . KINDRED. MODEL KSOV1821/7, DROP IN STAINLESS STEEL VANITY BASIN, 18 GAUGE STAINLESS STEEL, 3 HOLES 4" CENTERSET, 1 1/4" (32 MM) DIAMETER WASTE OUTLET. OVERALL SIZE: 18" X 21" X 7" (460MM X 530MM X 180MM)
- (12") LONG STAINLESS STEEL CLAD RUBBER FLEXIBLE RISERS.

- KINDRED, MODEL QSL1718/8, SINGLE BOWL, LEDGEBACK STAINLESS STEEL SINK, 18 GAUGE STAINLESS STEEL, 3 HOLES 4" CENTER-TO-CENTER, 1 1/2" (38 MM) DIAMETER WASTE OUTLET. COMPARTMENT SIZE: 12" X 17" X 8" (300MM X 430MM X 200MM)
- 2 MOEN COMMERCIAL 8289. SOLID BRASS CONSTRUCTION, CHROME PLATED 8"(203MM) C.C. WITH 1/2"IPS CONNECTIONS. 4" WRIST BLADE HANDLES WITH HOT AND COLD COLOUR INDICATORS; 1/4 TURN CERAMIC DISC CARTRIDGES WITH FREE SPINNING HANDLE HUBS. 1.5GPM [5.7L/MIN] AERATOR WITH AN 8"
- (12") LONG STAINLESS STEEL CLAD RUBBER FLEXIBLE RISERS.

- 18 GAUGE STAINLESS STEEL, 3 HOLES 4" CENTER-TO-CENTRE SET, 1 ½" DIAMETER. COMPARTMENT SIZE: 18" X 16" X 10" (457MM X 406MM X 254MM),
- 2 MOEN COMMERCIAL 8289. SOLID BRASS CONSTRUCTION, CHROME PLATED 8"(203MM) C.C. WITH 1/2"IPS CONNECTIONS. 4" WRIST BLADE HANDLES WITH HOT AND COLD COLOUR INDICATORS; 1/4 TURN CERAMIC DISC CARTRIDGES WITH FREE SPINNING HANDLE HUBS. 1.5GPM [5.7L/MIN] AERATOR WITH AN 8" GOOSENECK SPOUT, (OPTIONAL 2.0GPM [7.6L/MIN] LAMINAR FLOW CONVERSION KIT INCLUDED).
- (12") LONG STAINLESS STEEL CLAD RUBBER FLEXIBLE RISERS.
- .4 TRAP: 38MM (1-1/2") ROUGH CAST BRASS "P" TRAP WITH CLEANOUT.

- .2 SEAT: AMERICAN STANDARD #5901.100 HEAVY DUTY OPEN FRONT, FOR ELONGATED BOWL, WITH
- TO INCLUDE 1" ANGLE STOP WITH INTEGRAL BACKFLOW PREVENTER AND WHEEL HANDLE. OUTLET TO INCLUDE 1-1/2" VACUUM BREAKER AND ADJUSTABLE TAIL PIECE. PROVIDE S.S. RECESSED BACK BOX TO HOUSE ALL COMPONENTS. NO EXPOSED DEVICES WILL

BE PERMITTED. PROVIDE S.S. ACCESS PANEL WITH TEMPER PROOF SCREWS

BARRIER FREE WATER CLOSET TYPE "WC-1" (FLOOR MOUNTED)

- CONSUMPTION (1.1 GPF TO 1.6 GPF (4.2 LPF TO 6.0 LPF). MODEL #3463.001
- SLOW CLOSE SNAP-OFF HINGE WITH COVER.
- .3 FLUSH VALVE: AMERICAN STANDARD MODEL 6068.322.007, SELECTRONIC FLOWISE, SENSOR OPERATED, CONCEALED TOILET FLUSH VALVE WITH WALL BOX WITH 1-1/2" BACK SPUD. INLET

LAVATORY TYPE "LAV"

- .2 FAUCET: DELTA, MODEL 21C424, 4" (100MM) CENTER, TWO 100MM BLADE HANDLES, SANITARY HOODS, POLISH CHROME FINISH, 1.5 GPM (5.7 L/MIN) VANDAL RESISTANT AERATOR.
- .3 SUPPLIES: POLISHED CHROME PLATED SUPPLIES: 10MM (3/8") SUPPLIES WITH BALL TYPE VALVE, 305MM
- .4 TRAP: 38MM (1-1/4") ROUGH CAST BRASS "P" TRAP WITH CLEANOUT.

- OVERALL SIZE: 17" X 19-1/8" X 8" (430MM X 490MM X 200MM)
- GOOSENECK SPOUT, (OPTIONAL 2.0GPM [7.6L/MIN] LAMINAR FLOW CONVERSION KIT INCLUDED). 3 SUPPLIES: POLISHED CHROME PLATED SUPPLIES: 10MM (3/8") SUPPLIES WITH BALL TYPE VALVE, 305MM
- .4 TRAP: 38MM (1-1/2") ROUGH CAST BRASS "P" TRAP WITH CLEANOUT.

SINK TYPE "S-1"

- FRANKE COMMERCIAL, DROP-IN, MODEL LBS6810-1/3, SINGLE COMPARTMENT SINK WITH FAUCET LEDGE, OVERALL SIZE: 20 1/8" X 20 9/16" (511MM X 522MM)
- .3 SUPPLIES: POLISHED CHROME PLATED SUPPLIES: 10MM (3/8") SUPPLIES WITH BALL TYPE VALVE, 305MM

- SHOWER TYPE "SH"
 - 1 SHOWER ENCLOSURE: PROVIDED BY ARCHITECTURAL TRADES, INCLUDING WATERPROOF MEMBRANE. CO-ORDINATE WITH OTHER DIVISIONS.
- .2 LIGATURE RESISTANT WALL SHOWER UNIT LR1748ADA SERIES BY ACORN. ADA COMPLIANT. PROVIDE S.S. ACCESS PANEL ON BACK OF UNIT. PROVIDE TEMPER-PROOF SCREWS. PROVIDE SHOWER UNIT TO BE 14 GAUGE, TYPE 304 S.S. WITH SATIN FINISH.
- 3 SHOWER VALVE: ASSA 1016 T/P TEMPERATURE AND PRESSURE BALANCING 1.6 GPM FLOW, WITH VANDAL AND LIGATURE RESISTANT TRI-LEVER HANDLE
- .4 PROVIDE NECESSARY FASTENERS

CONICAL SHOWER HEAD

- .5 50MM FLOOR DRAIN WITH S.S. STRAINER WITH PERFORATED OPENINGS (NO SLOP TYPE ALL WASHROOMS HAVE EPOXY FLOORING THROUGHOUT, DRAINS TO SUIT
- SHOWER TYPE "SH-1"(BARRIER FREE)
- SHOWER ENCLOSURE: PROVIDED BY ARCHITECTURAL TRADES, INCLUDING WATERPROOF MEMBRANE. CO-ORDINATE WITH OTHER DIVISIONS.
- .2 SHOWER VALVE AND SPRAY HEAD DELTA T13H252: POLISHED CHROME FINISH, PRESSURE AND TEMPERATURE BALANCING CONTROLLER WITH METAL LEVER ADA COMPLIANT HANDLE
- 3. HAND SHOWER HEAD, 1.5 GPM FLOW, WITH 24" LONG SLIDING BAR

ALL WASHROOMS HAVE EPOXY FLOORING THROUGHOUT, DRAINS TO SUIT

- 4. SPOUT WITH PULL-UP DIVERTER
- .5 50MM FLOOR DRAIN WITH S.S. STRAINER WITH PERFORATED OPENINGS (NO SLOP TYPE

JANITOR SINK TYPE "JS"

- .1 STERN WILLIAMS MOP SINK MODEL SB802: 24" X 24" X 12" (610MM X 610MM X 305MM DEEP) RECEPTOR COMPOSED OF PEARL GREY MARBLE CHIPS AND WHITE PORTLAND CEMENT, WITH NPS 3 DRAIN WITH S.S. STRAINER.
- .2 FAUCET: T-10-VB MOP SERVICE SINK FAUCET WITH VACUUM BREAKER, ADJUSTABLE TOP BRACE, 34" HOSE THREAD ON SPOUT WITH BRACKET HOOK INLET 8" ON CENTRE, CHROME
- .3 HOSE AND WALL HOOK: T-35, 36" LONG HOSE, WITH 34" CHROME COUPLING. S.S. WALL
- .4 MOP HANGER: T-40, S.S. MOP HANGER, 24" LONG WITH 3 RUBBER SPRING LOADED GRIPS.
- .5 PROVIDE SPLASH CATCHER PANELS ON TWO CORNER WALLS. PANELS TO BE 20 GA, TYPE 304 STAINLESS STEEL. PANELS TO BE 5FT HIGH.

EYE WASH STATION TYPE "EW"

- MODEL7360BT-7460BT WALL MOUNTED EYE/FACE WASH WITH STAINLESS STEEL 11"(27.9CM) ROUND BOWL, NAXION®MSR EYE/FACE WASH HEAD WITH INVERTED DIRECTIONAL LAMINAR FLOW AT 3.7 GPM FLOW CONTROL, UNIVERSAL SIGN, 12MM INLET, 38MM OUTLET
- 2 THERMOSTATIC MIXING VALVE: MODEL 9201EW AXION®EMERGENCY TEMPERING VALVE THERMOSTATICALLY MIXES HOT AND COLD WATER TO PROVIDE SAFE FLUID SUPPLY FOR SINGLE EMERGENCY EYE/FACE WASH, WITH FLOW RATE OF 10GPM (38.8 L). PROVIDE S.S. BACK BOX RECESSES IN WALL TO HOUSE MIXING VALVE AND CONTROLS. PROVIDE S.S. ACCESS PANEL.
- .3 TRAP: 38MM (1-1/2") ROUGH CAST BRASS "P" TRAP WITH CLEANOUT.

EYE WASH STATION TYPE "EW"

- MODEL7360BT-7460BT WALL MOUNTED EYE/FACE WASH WITH STAINLESS STEEL 11"(27.9CM) ROUND BOWL, NAXION®MSR EYE/FACE WASH HEAD WITH INVERTED DIRECTIONAL LAMINAR FLOW AT 3.7 GPM FLOW CONTROL, UNIVERSAL SIGN, 12MM INLET, 38MM OUTLET
- .2 THERMOSTATIC MIXING VALVE: MODEL 9201EW AXION®EMERGENCY TEMPERING VALVE THERMOSTATICALLY MIXES HOT AND COLD WATER TO PROVIDE SAFE FLUID SUPPLY FOR SINGLE EMERGENCY EYE/FACE WASH, WITH FLOW RATE OF 10GPM (38.8 L). PROVIDE S.S. BACK BOX RECESSES IN WALL TO HOUSE MIXING VALVE AND CONTROLS. PROVIDE S.S. ACCESS PANEL.
- .3 TRAP: 38MM (1-1/2") ROUGH CAST BRASS "P" TRAP WITH CLEANOUT.

BOTTLE FILLER / WATER FOUNTAIN STATION 'WF'

- .1 ELKAY EZH2O BOTTLE FILLER STATION, SURFACE MOUNTED (NON-FILTERED, REFRIGERATED) STAINLESS STEEL, MODEL EZWSSM.
- .2 UNIT TO BE LEAD FREE, LAMINAR FLOW, ANTIMICROBIAL, REAR DRAIN.
- 3. UNIT TO COMPLETE WITH ELECTRONIC BOTTLE FILLER SENSOR ACTIVATION.
- 4. UNIT DIMENSION: 17-15/16"(L) x 8-3/16"(W) x 25-7/16"(H)

6. FOLLOW MANUFACTURE INSTALLATION INSTRUCTIONS

5. POWER: 120V-1PH-60HZ, FLA 1 AMP

PLUMBING FIXTURE SERVICE REQUIREMENTS						
		MINI	MUM SER	VICE CO	NNECTION SIZE	
No.	DESIGNATION	DRAIN	COLD WATER	HOT WATER	VENT	
"WC"&'WC-1'	WATER CLOSET	75	25	_	AS PER CODE	
"LAV"	LAVATORY	32	12	12	AS PER CODE	
"SH"	SHOWER	50	12	12	AS PER CODE	
"S"	SINK	38	12	12	AS PER CODE	
"JS"	JANITOR'S MOP RECEPTOR	50	12	12	AS PER CODE	
"SS"	UTILITY SINK	38	12	12	AS PER CODE	
"EW"	EMERG. EYE WASH	38	12	12	AS PER CODE	
"FD"	FLOOR DRAIN	75	_	_	VENT & PRIME AS PER CODE	
"WF"	WATER COOLER	32	12	_	AS PER CODE	

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Description

16 July '18 1 Final Review 1 Issued for Permit & Tender 16 July '18



SEPARATE PERMITS REQUIRED FOR HVAC & PLUMBING. HVAC AND PLUMBING ARE NOT PART OF THIS PERMIT.



The City has Relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project.

The issuance of a permit does not imply a complete design review of this project has been performed and does not relieve the owner and designers. from the need to comply with the Ontario Building Code and referenced standards where contravention are subsequently noted.





HVAC and PLUMBING are not part of this permit approval.



SHARMA & PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive Unit 108 Tel.: (416) 291-8822 SPI PROJECT #: 2018-1039

WORKSHOP

1157 Davenport Road Toronto Ontario M6H 2G4 T 416.901.8055 F 416.849.0383 www.workshoparchitecture.ca

Davenport Shelter

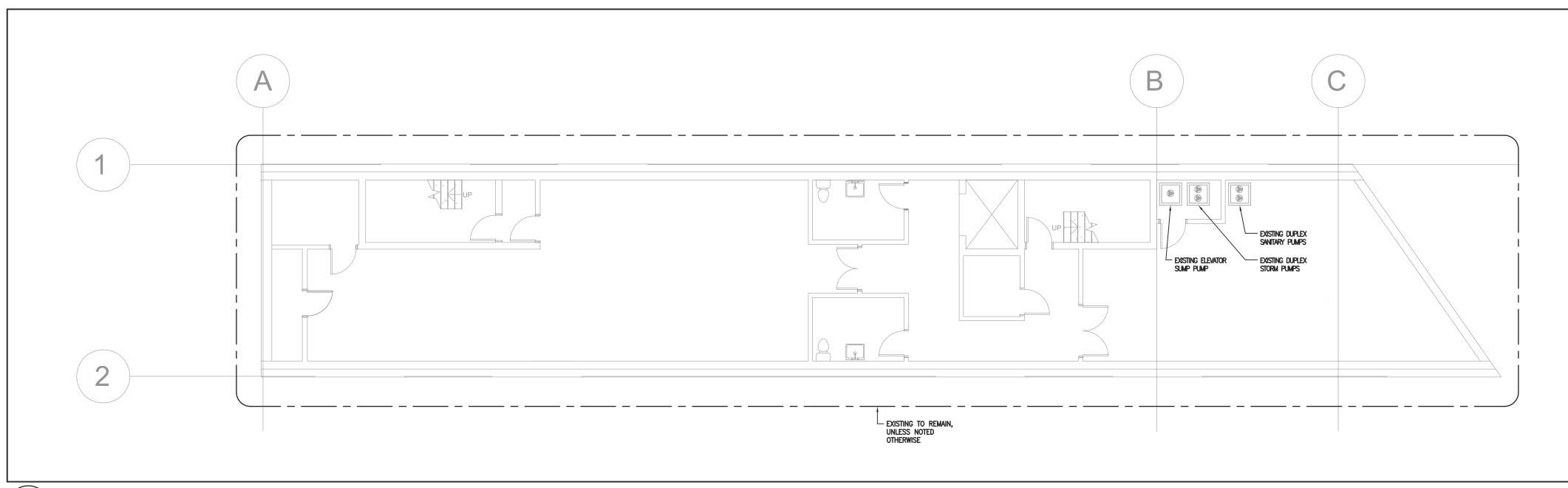
348 Davenport Road Toronto, ON M5R 1K6

PROJECT CODE: SCALE: N.T.S. DATE: STATUS: Permit / Tender

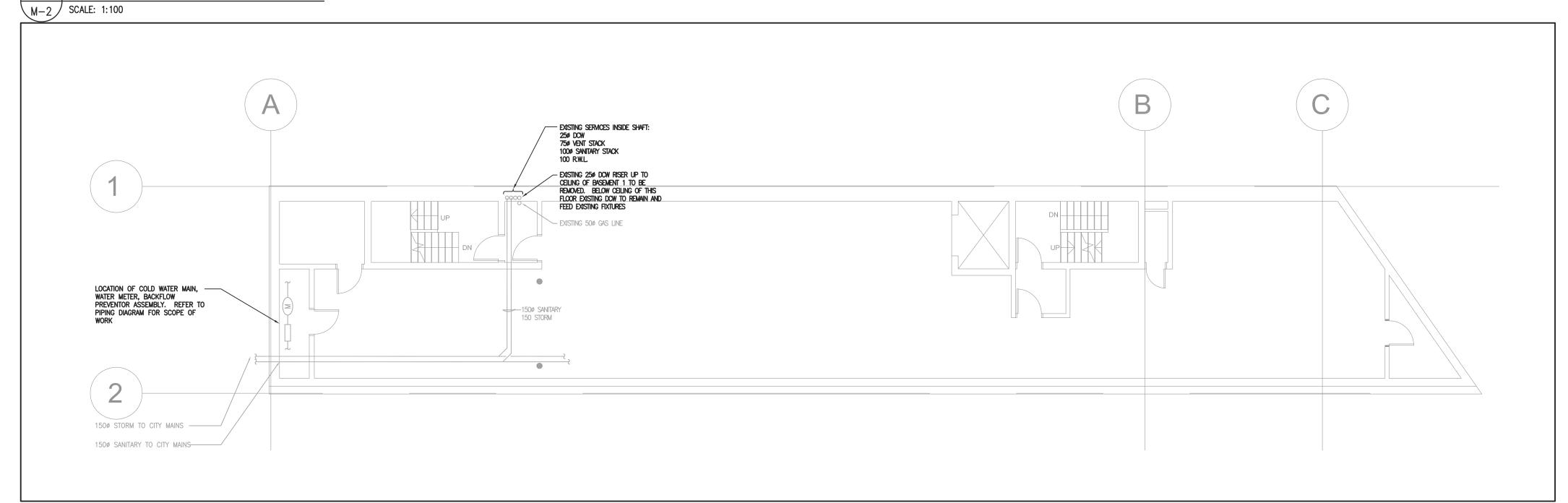
Mechanical Legend, Drawing List and Schedules



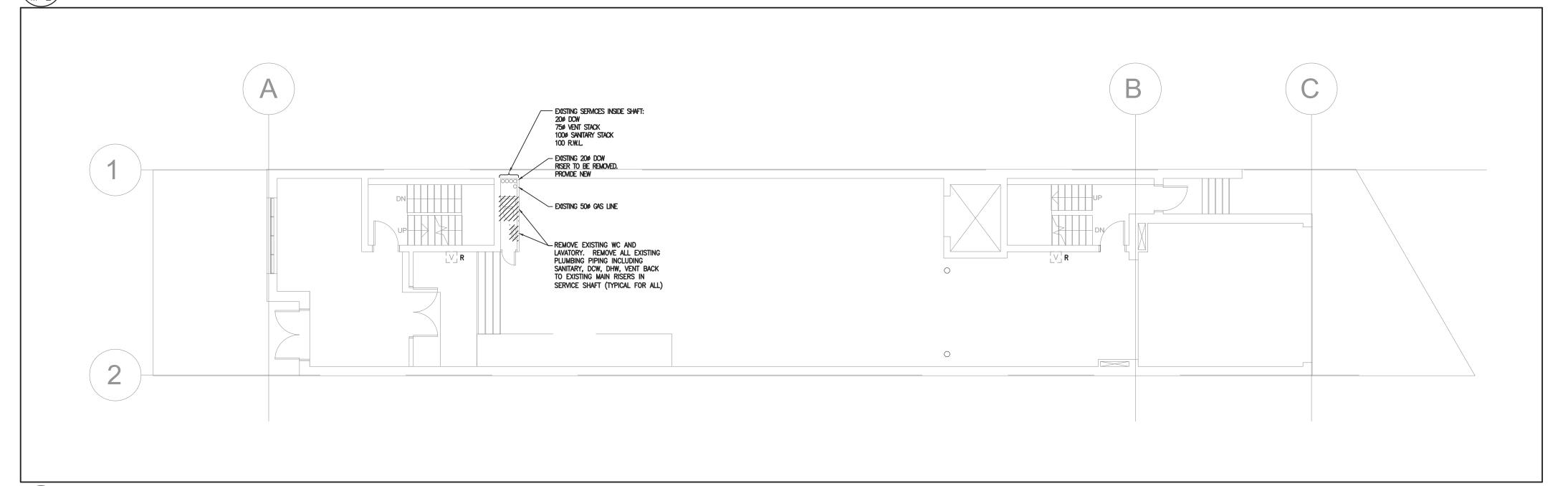




➤ BASEMENT 2 — PLUMBING DEMOLITION



BASEMENT 1 - PLUMBING DEMOLITION M-2 | SCALE: 1:100



\ LEVEL 1 - PLUMBING DEMOLITION

M-2 SCALE: 1:100

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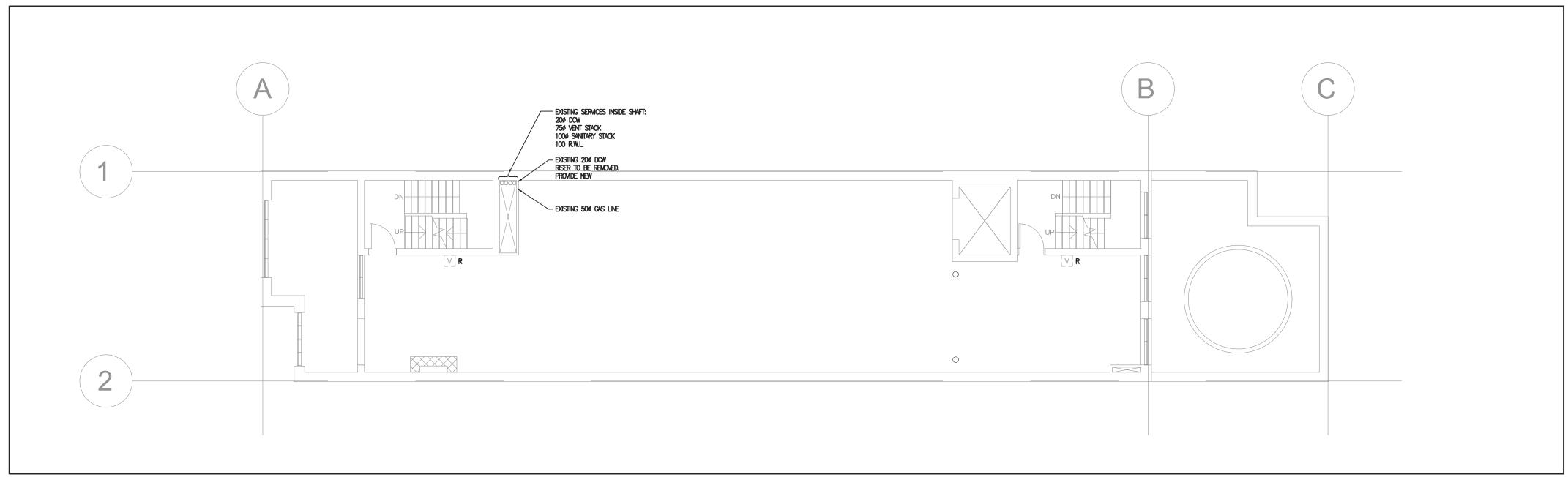
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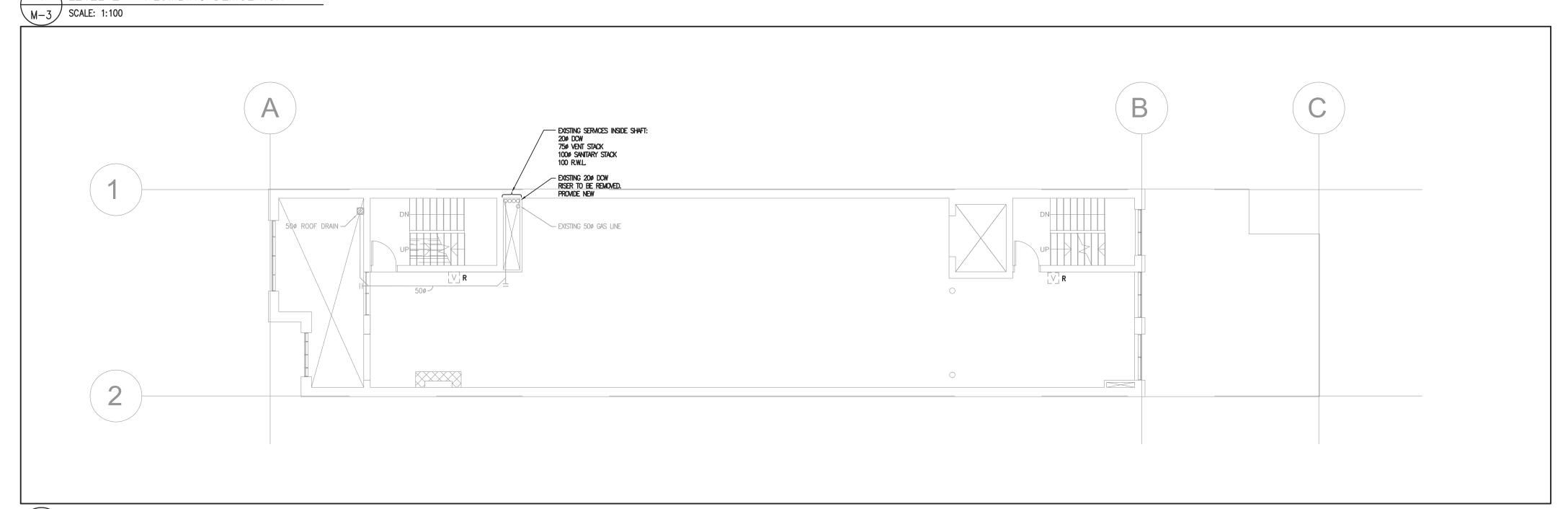
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16 July 2018	Permit / Tende
DATE:	STATUS:
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PROJECT CODE:	SCALE:

Basement 1 & 2 and Level 1 Plumbing Demolition

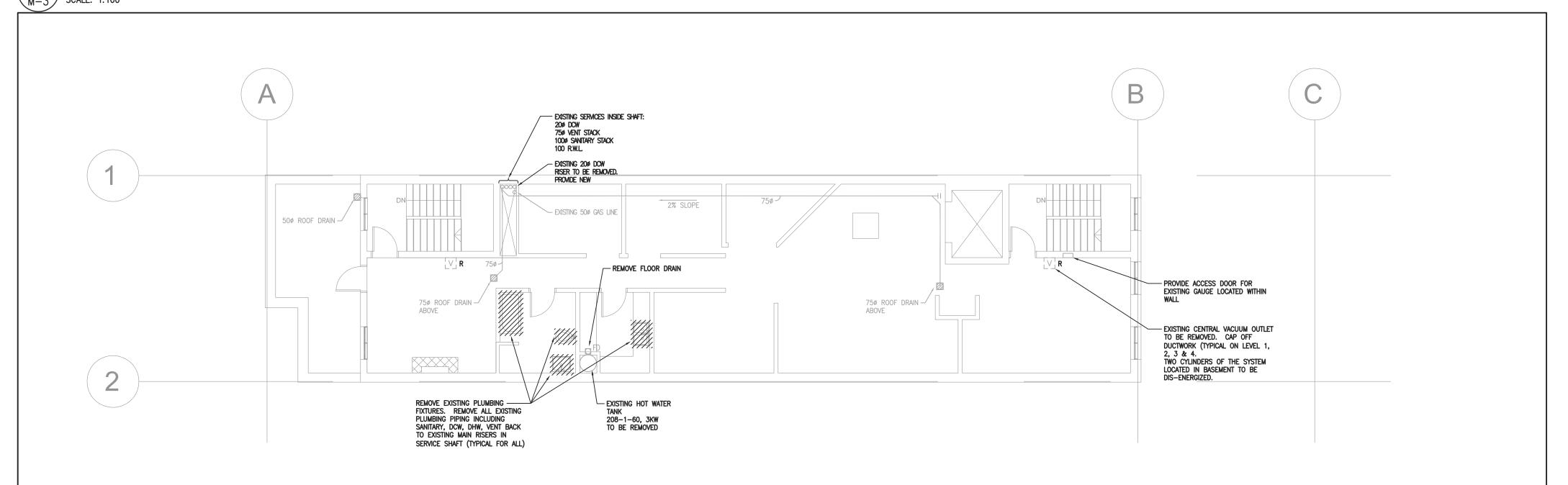




\ LEVEL 2 - PLUMBING DEMOLITION



\ LEVEL 3 - PLUMBING DEMOLITION M-3 SCALE: 1:100



\ LEVEL 4 - PLUMBING DEMOLITION

M-3 SCALE: 1:100

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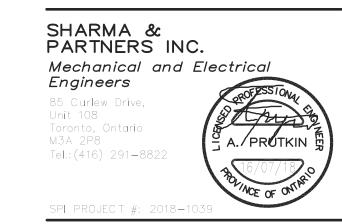
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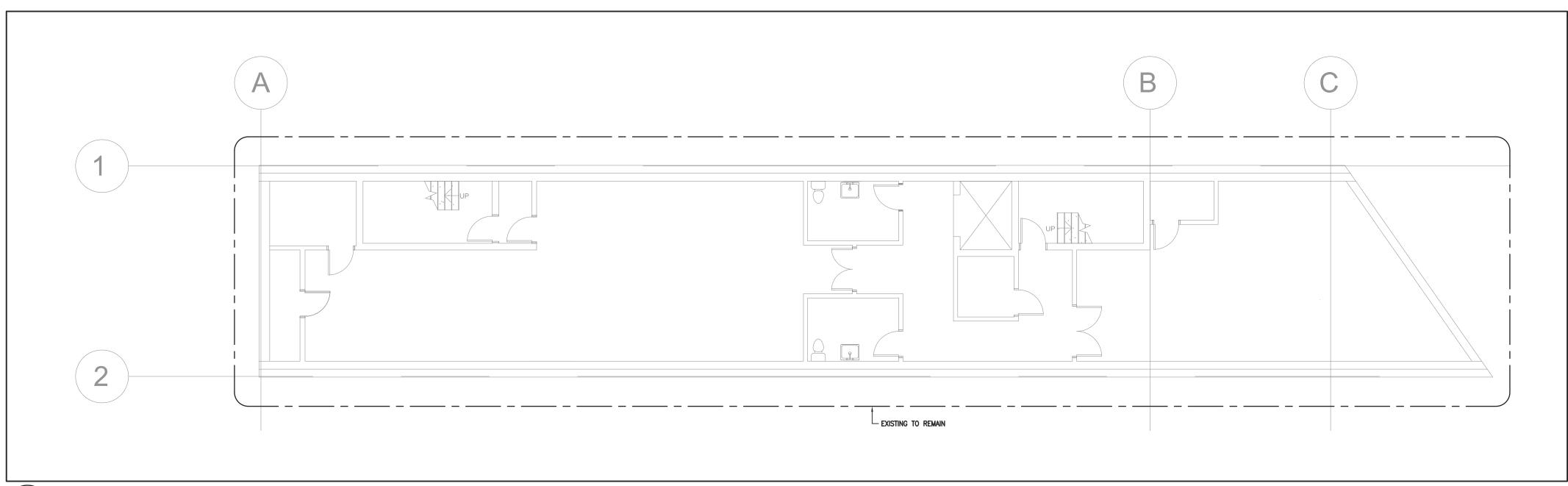
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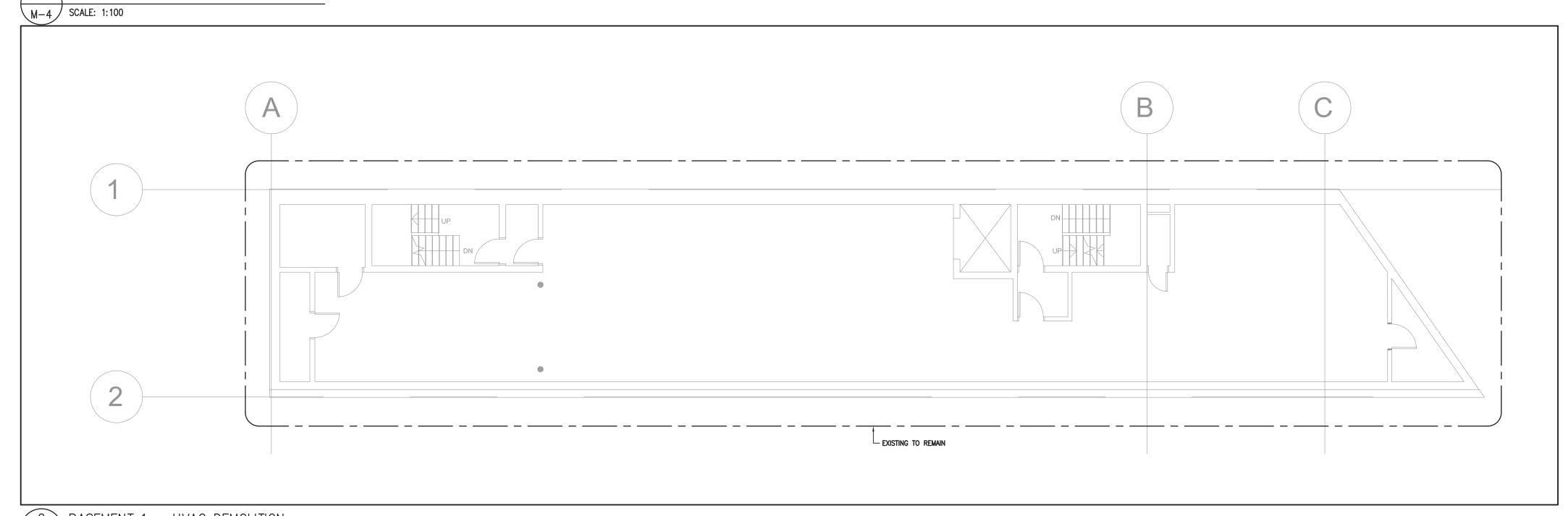
<u>16 July 2018</u>	Permit / Tende
DATE:	STATUS:
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PROJECT CODE:	SCALE:

Level 2, 3 & 4 Plumbing Demolition

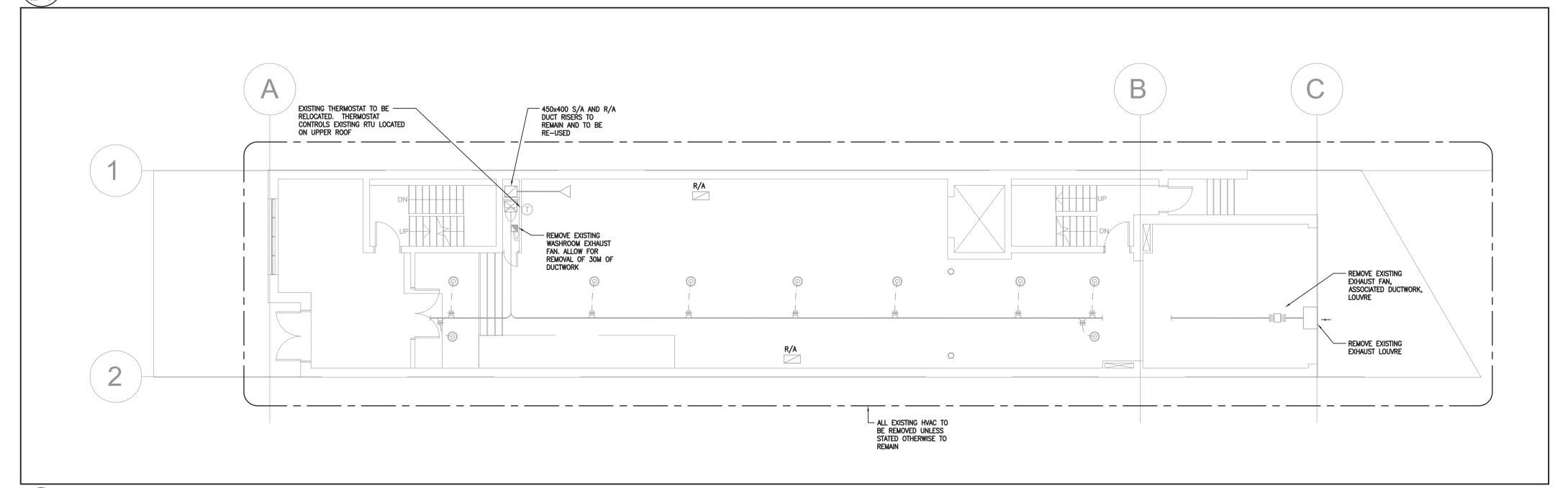




➤ BASEMENT 2 — HVAC DEMOLITION



 \setminus BASEMENT 1 - HVAC DEMOLITION M-4 | SCALE: 1:100



\ LEVEL 1 - HVAC DEMOLITION

M-4 SCALE: 1:100

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1 Final Review 16 July '18

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PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE

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> SHARMA & PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive, Unit 108 Tel.: (416) 291-8822 SPI PROJECT #: 2018-1039

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DEMOLITION NOTES:

REMOVE ALL EXISTING DUCTWORK, FITTINGS, DIFFUSERS AND GRILLES UP TO MAINS BELOW ROOF FROM RTU.

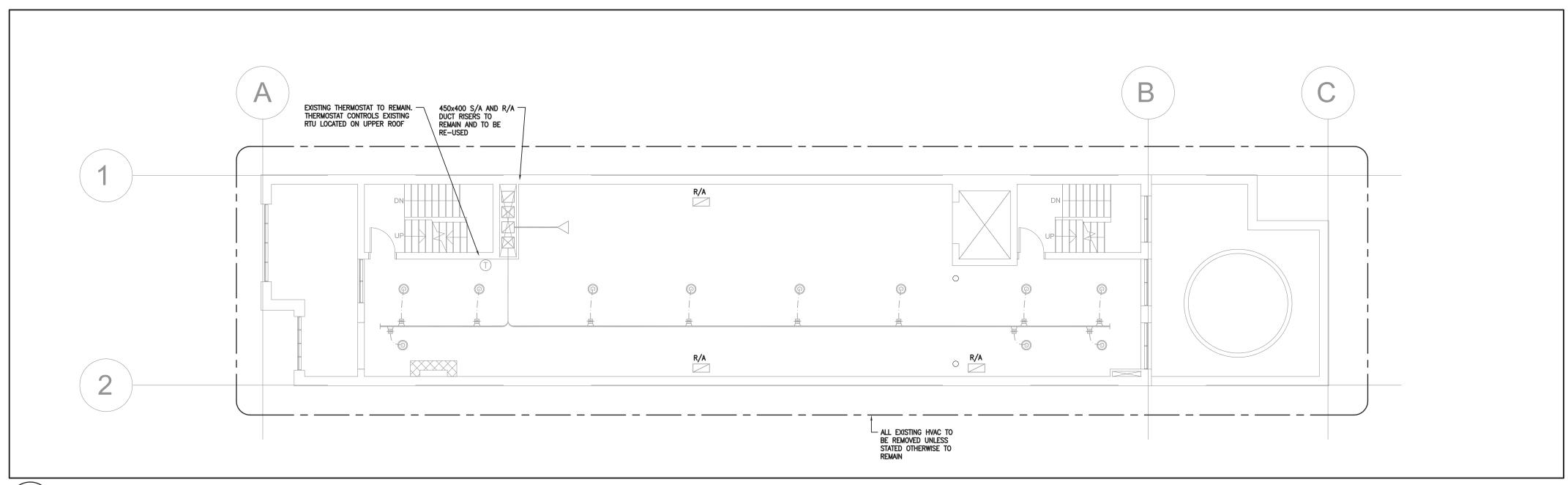
2. EXISTING DUCTWORK LAYOUT IS SHOWN FOR REFERENCE ONLY. VERIFY ON SITE AS REQUIRED.

IN ADDITION TO SHOWN, ALLOW IN CONTRACT FOR REPLACEMENT OF 5 EXISTING FIRE DAMPERS WITH NEW ONES. (400x300 DUCT SIZE)

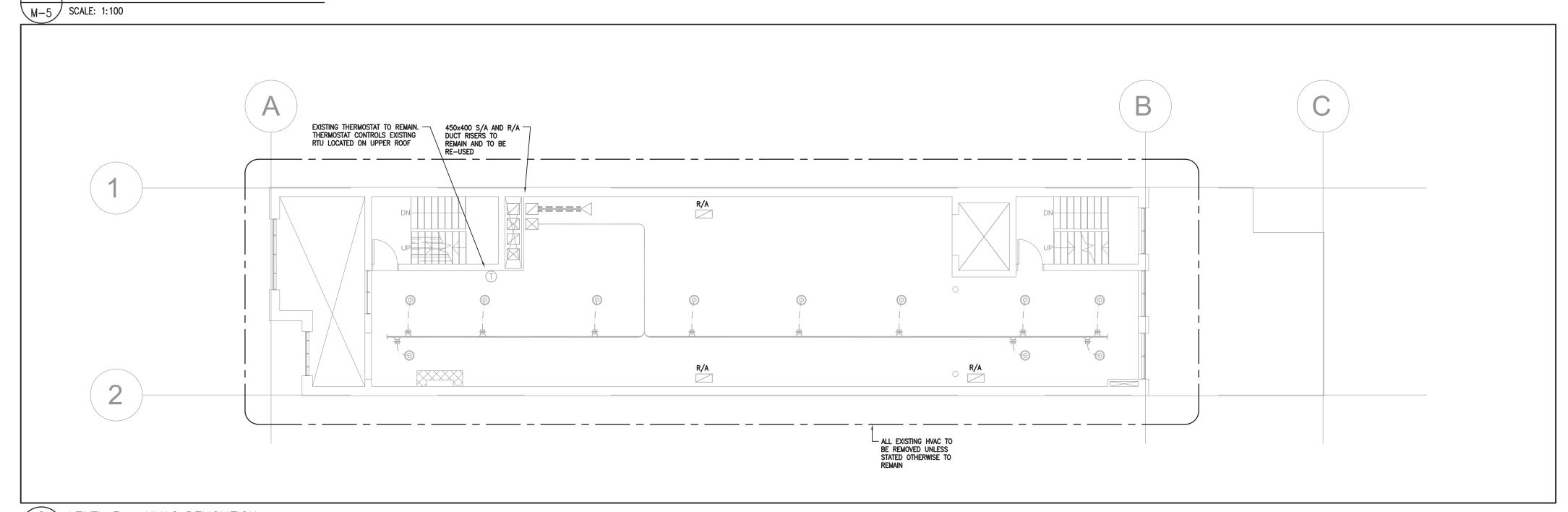
16 July 2018	refillit / Tende
16 July 2019	Permit / Tende
DATE:	STATUS:
18_22	As indicate
PROJECT CODE:	SCALE:

Basement 1 & 2 and Level 1 **HVAC Demolition**

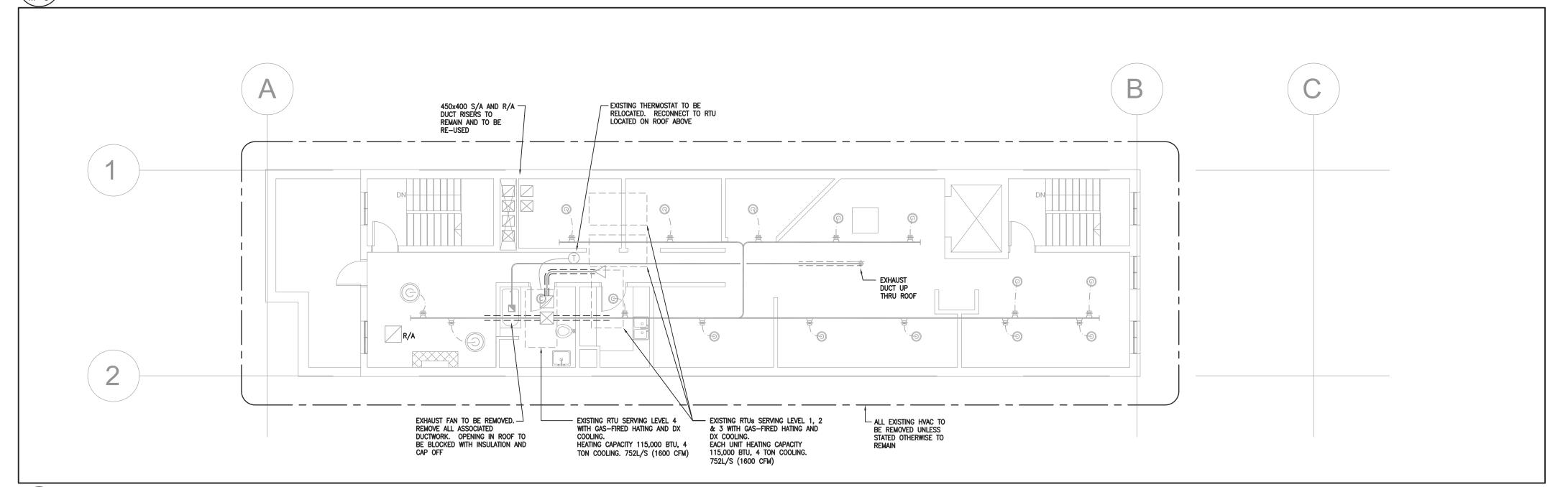




\ LEVEL 2 - HVAC DEMOLITION



\ LEVEL 3 - HVAC DEMOLITION M-5 SCALE: 1:100



\ LEVEL 4 - HVAC DEMOLITION

M-5 SCALE: 1:100

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16 July '18 1 Final Review 16 July '18 1 Issued for Permit & Tender

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FIRE SERVICES

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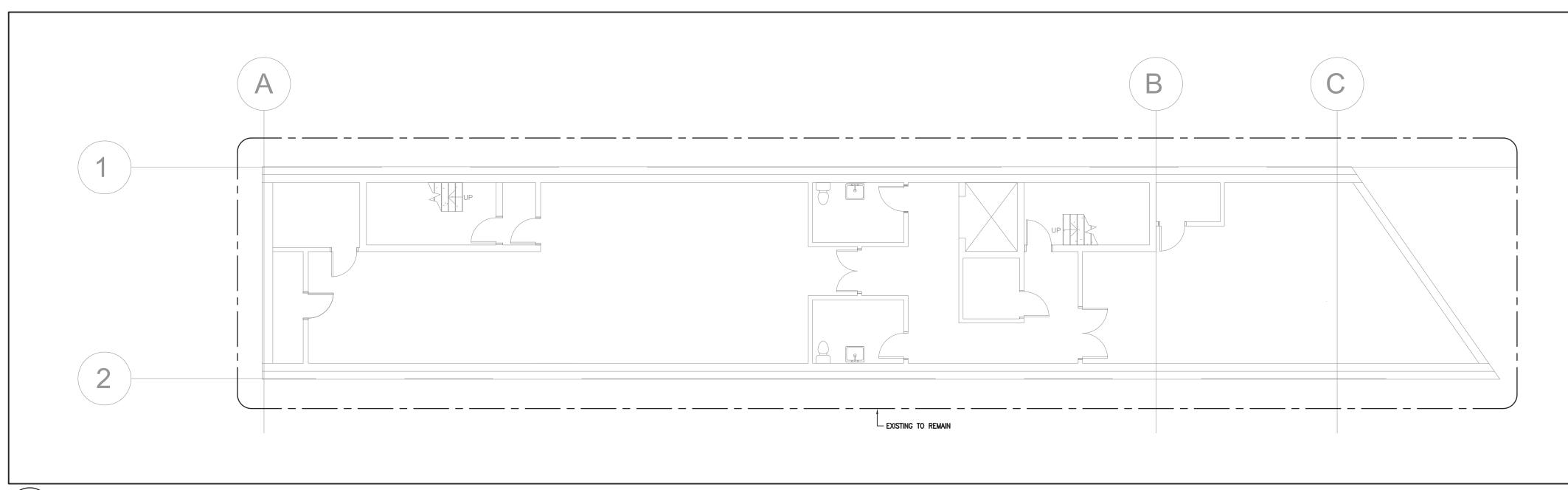
3. IN ADDITION TO SHOWN, ALLOW IN CONTRACT FOR REPLACEMENT OF 5 EXISTING FIRE DAMPERS

WITH NEW ONES. (400x300 DUCT SIZE)

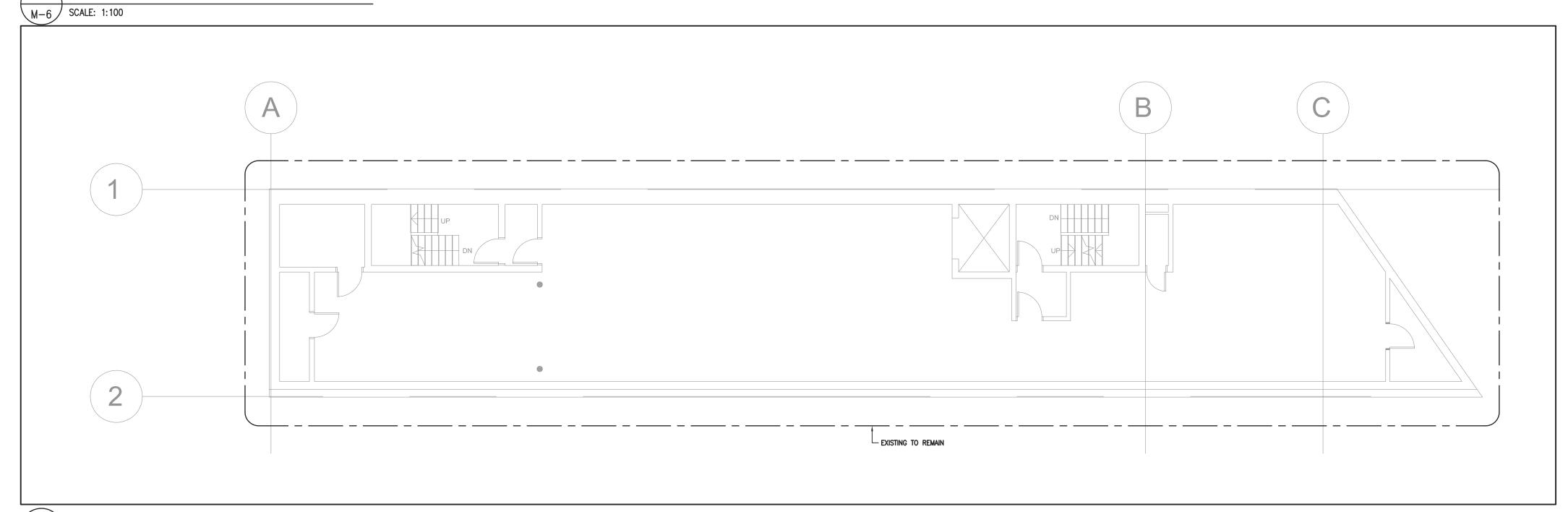
16 July 2018	Permit / Tende
DATE:	STATUS:
18_22	As indicate
PROJECT CODE:	SCALE:

Level 2, 3 & 4 **HVAC Demolition**

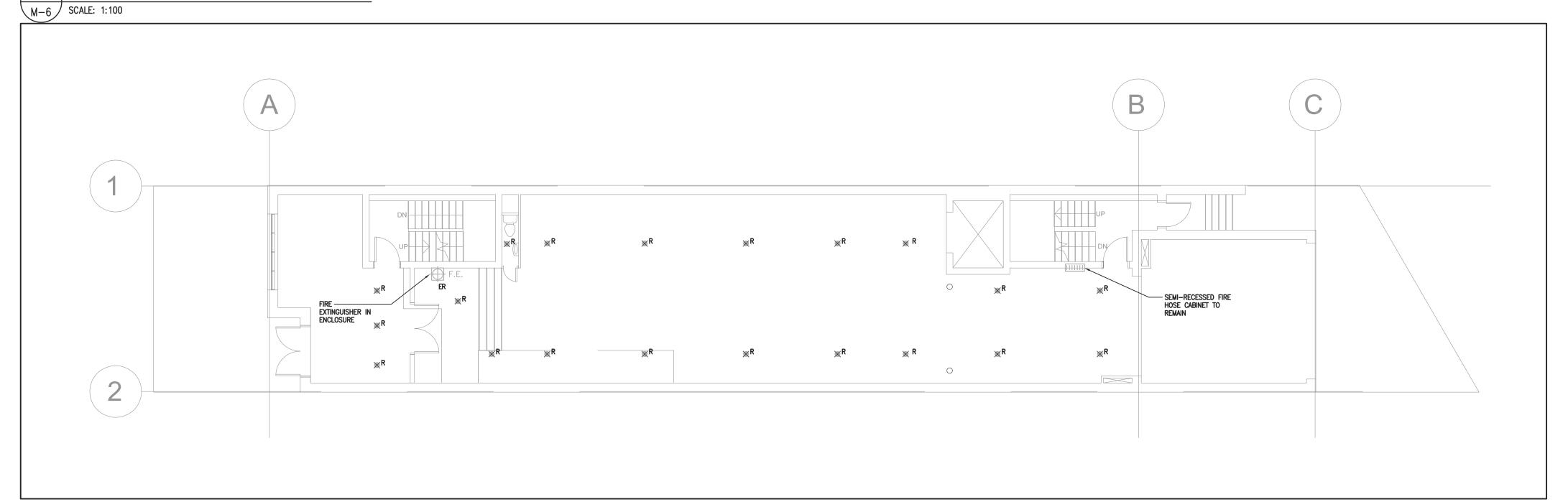




1 BASEMENT 2 - FIRE PROTECTION DEMOLITION



2 BASEMENT 1 - FIRE PROTECTION DEMOLITION



3 LEVEL 1 - FIRE PROTECTION DEMOLITION

M-6 SCALE: 1:100

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Rev Description

1 Final Review1 Issued for Permit & Tender

TORONTO Building

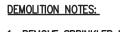
PERMIT REVIEWED FOR COMPLIANCE WITH
THE ONTARIO BUILDING CODE

18 197188 BLD 00

16 July '18 16 July '18



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- 1. REMOVE SPRINKLER HEADS IN RENOVATED AREAS WHERE SHOWN AND WHERE CEILING IS TO BE REPLACED.
- 2. REVISE SPRINKLER PIPING TO SUIT NEW CEILING HEIGHT AND LOCATION OF NEW SPRINKLER HEADS. REFER TO ARCHITECTURAL DRAWINGS FOR NEW CEILING HEIGHTS AND CEILING TYPE
- 3. IN ADDITION TO PIPE REVISIONS ASSOCIATED WITH NEW SPRINKLER HEADS LAYOUT AND NEW CEILING HEIGHTS, ALLOW IN CONTRACT FOR REPLACEMENT OF 50 FT OF 500 & 50 FT OF 380 SPRINKLER LINE (FOR UNFORESEEN SITE CONDITIONS AND SERVICES INTERFERENCE.
- 4. FOR EXISTING AND NEW CEILING HEIGHTS REFER TO ARCHITECTURAL DRAWINGS. REVISE SPRINKLER PIPING TO SUIT NEW CEILING HEIGHTS.

LEGEND:

- EX DENOTES EXISTING TO REMAIN
 ER EXISTING TO BE RELOCATED (PROVIDE NEW
- SPRINKLER HEAD IN NEW LOCATION)
- SPRINKLER HEAD IN NEW LOCAT
 R EXISTING TO BE REMOVED
 RP RELOCATED POSITION

SHARMA & PARTNERS INC.

Mechanical and Electrical Engineers

85 Curlew Drive, Unit 108
Toronto, Ontario
M3A 2P8
Tel.: (416) 291-8822

SPI PROJECT #: 2018-1039

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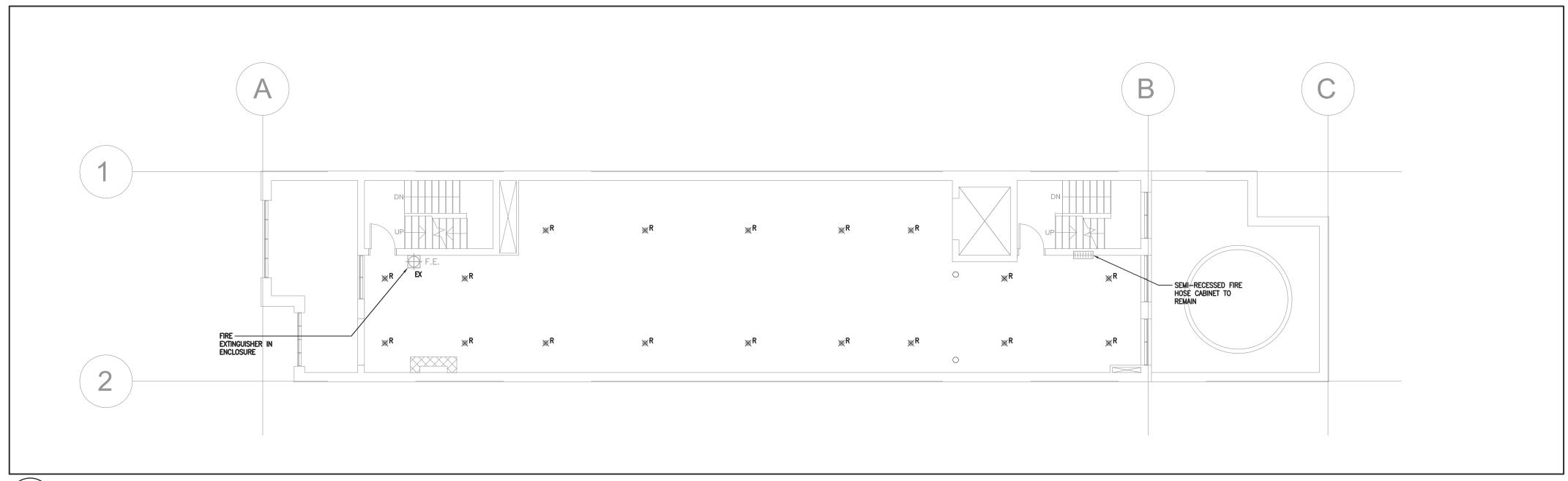
Davenport Shelter

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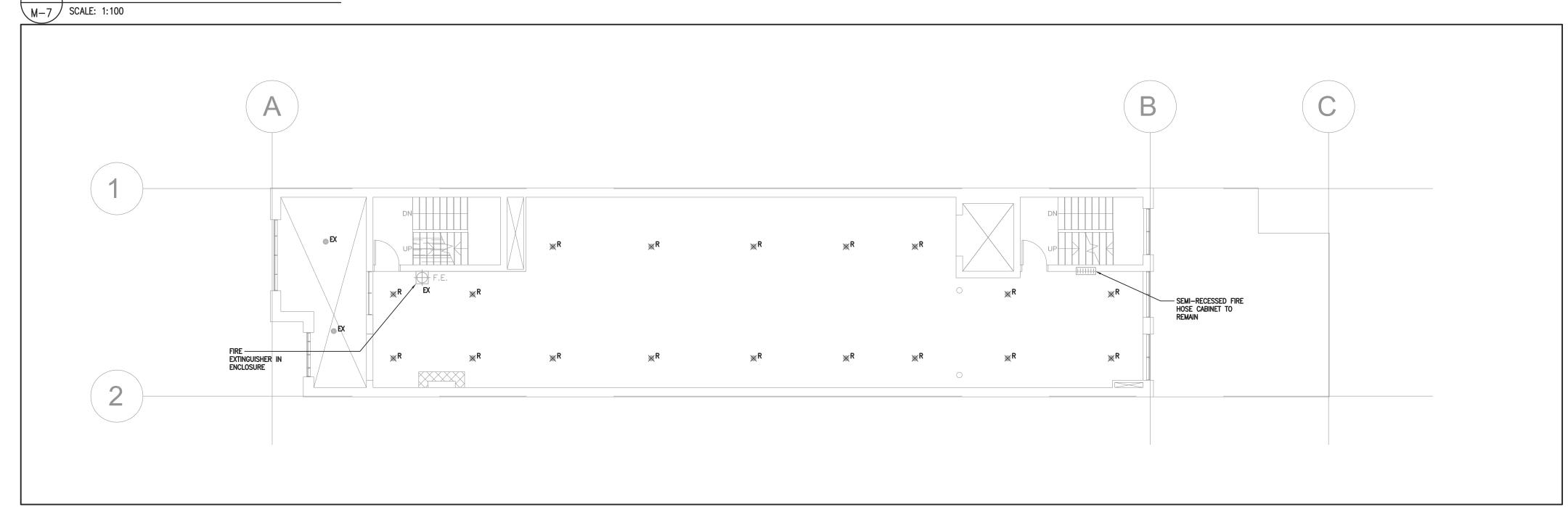
16 July 2018	Permit / Tender
DATE:	STATUS:
18_22	As indicated
PROJECT CODE:	SCALE:

Basement 1 & 2 and Level 1 Fire Protection Demolition

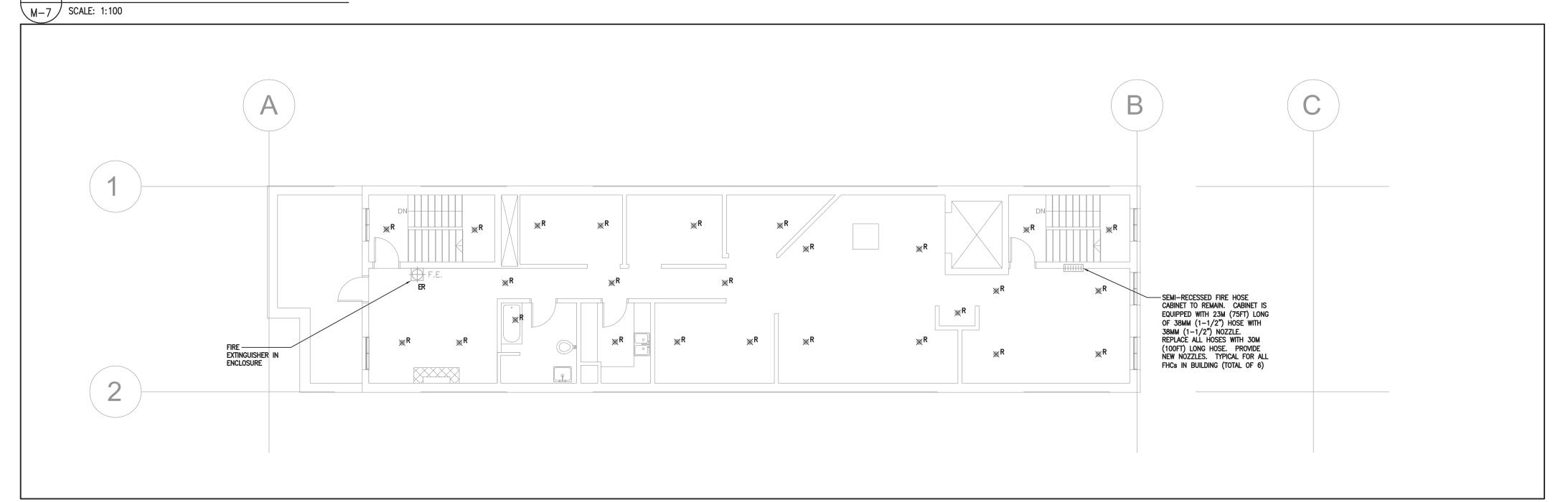




1 LEVEL 2 - FIRE PROTECTION DEMOLITION



2 LEVEL 3 - FIRE PROTECTION DEMOLITION



3 LEVEL 4 - FIRE PROTECTION DEMOLITION

M-7 SCALE: 1:100

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RevDescriptionDate1Final Review16 July '18

1 Issued for Permit & Tender

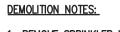
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O.B.C. REFERENCE
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 R EXISTING TO BE REMOVED
 RP RELOCATED POSITION

SHARMA & PARTNERS INC.

Mechanical and Electrical Engineers

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Toronto, Ontario
M3A 2P8
Tel.: (416) 291–8822

SPI PROJECT #: 2018–1039

WORKSHOP architecture Inc

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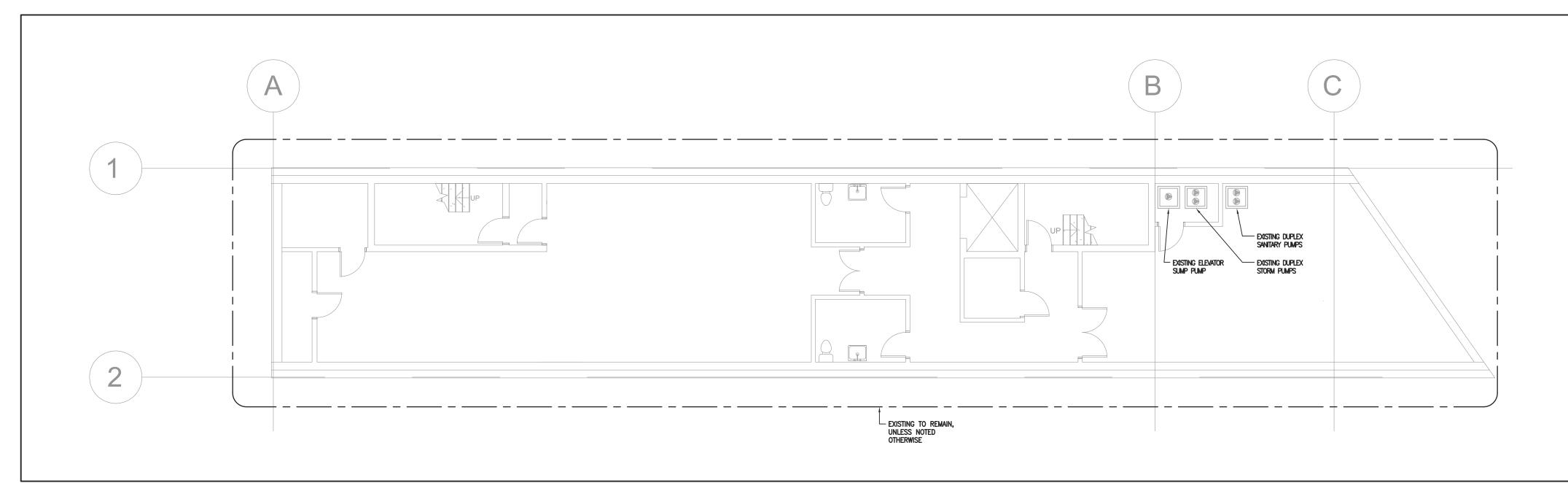
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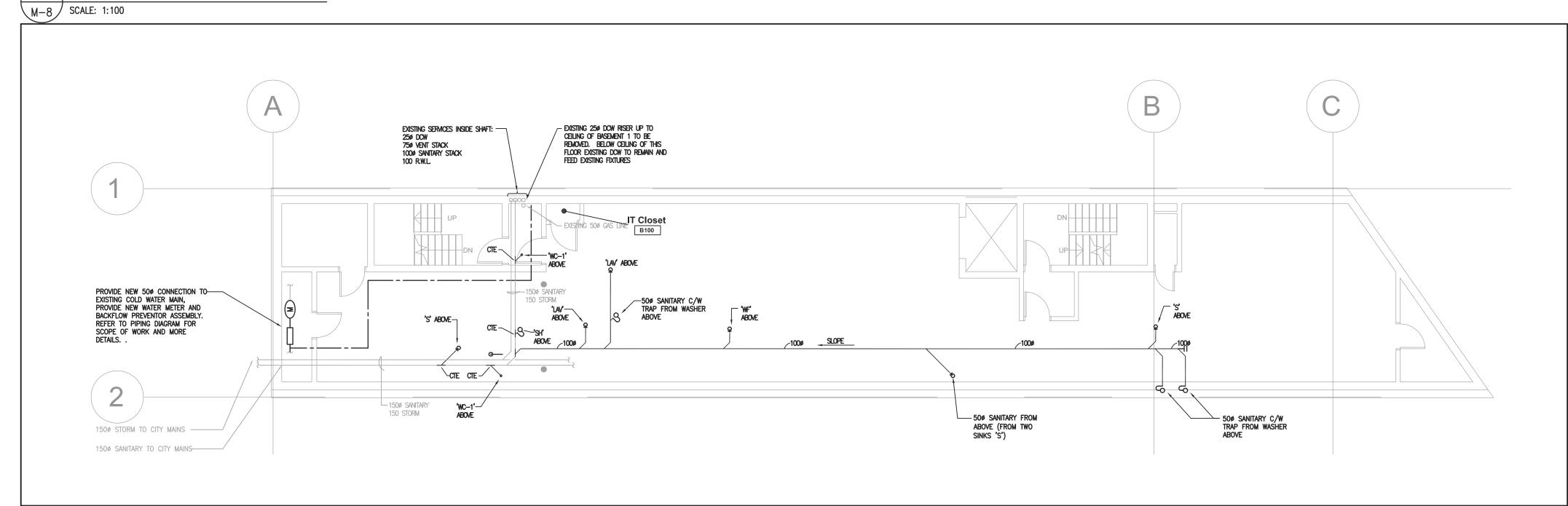
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DATE:	STATUS:
18_22	As indicate
PROJECT CODE:	SCALE:

Level 2, 3 & 4
Fire Protection Demolition

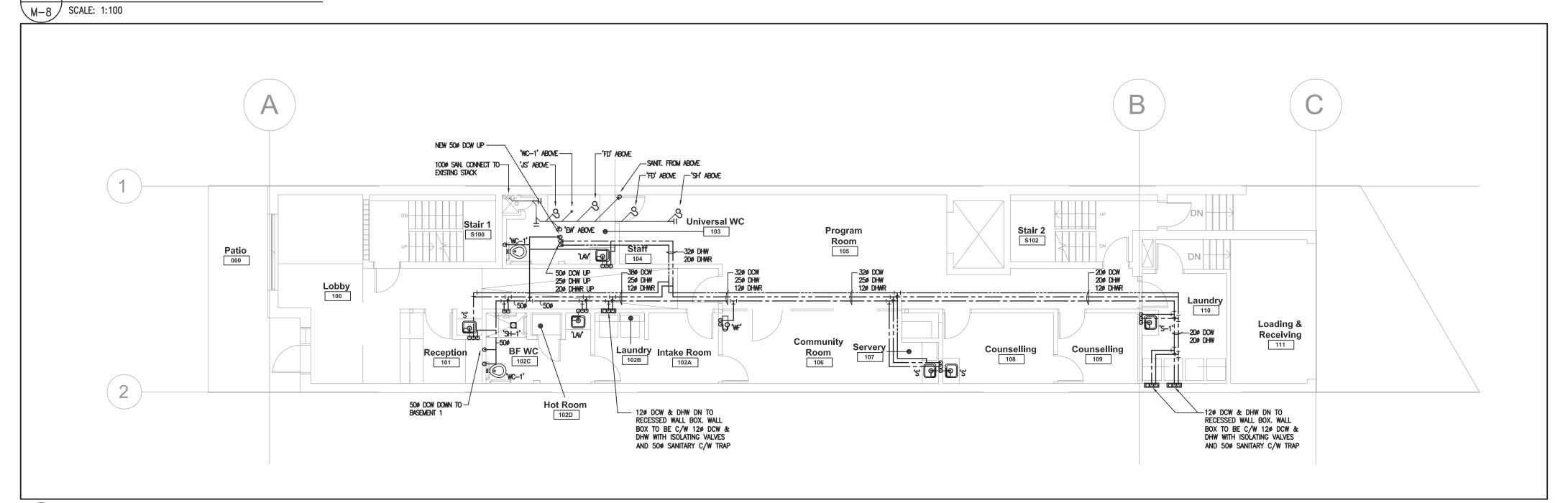




1 BASEMENT 2 - PLUMBING NEW LAYOUT

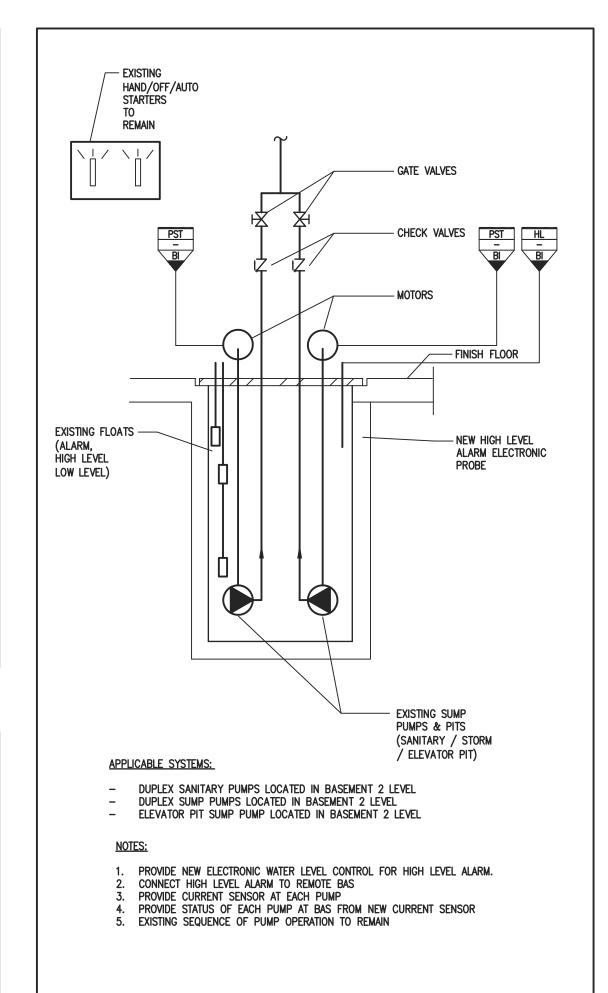


2 BASEMENT 1 - PLUMBING NEW LAYOUT



3 LEVEL 1 - PLUMBING NEW LAYOUT

M-8 SCALE: 1:100



4 TYP. SUMP PUMP SYSTEM CONTROL, MONITORING & ALARM M-8 N.T.S.

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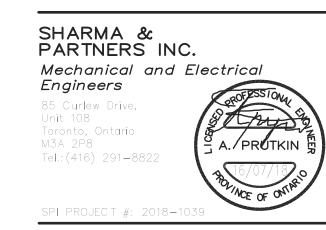
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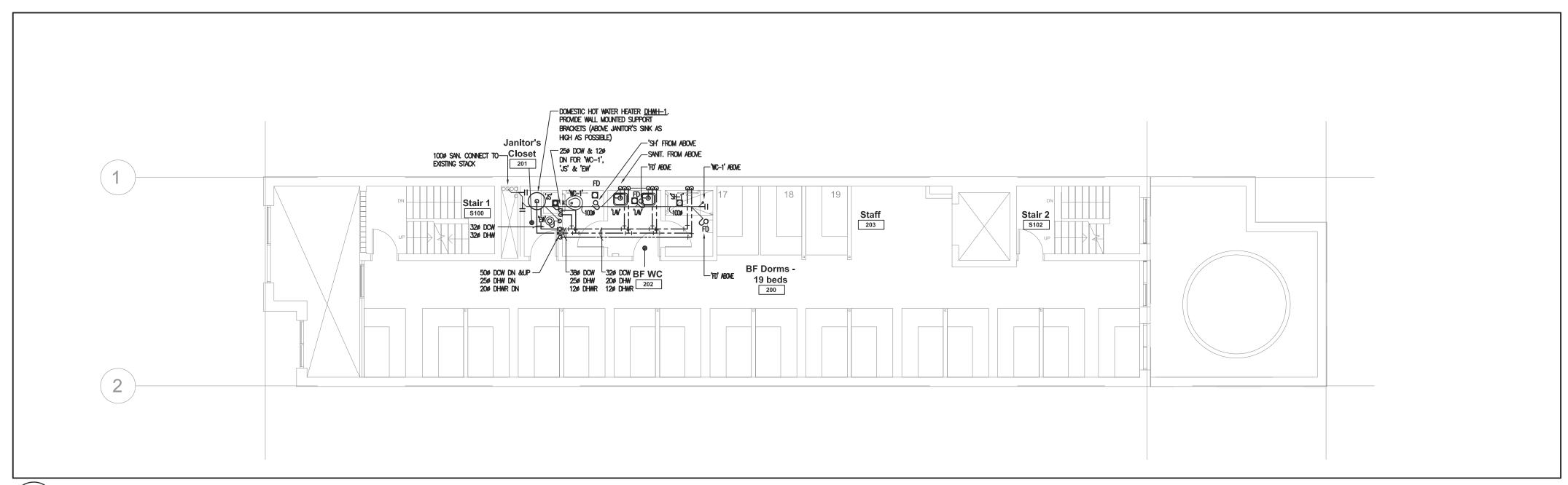
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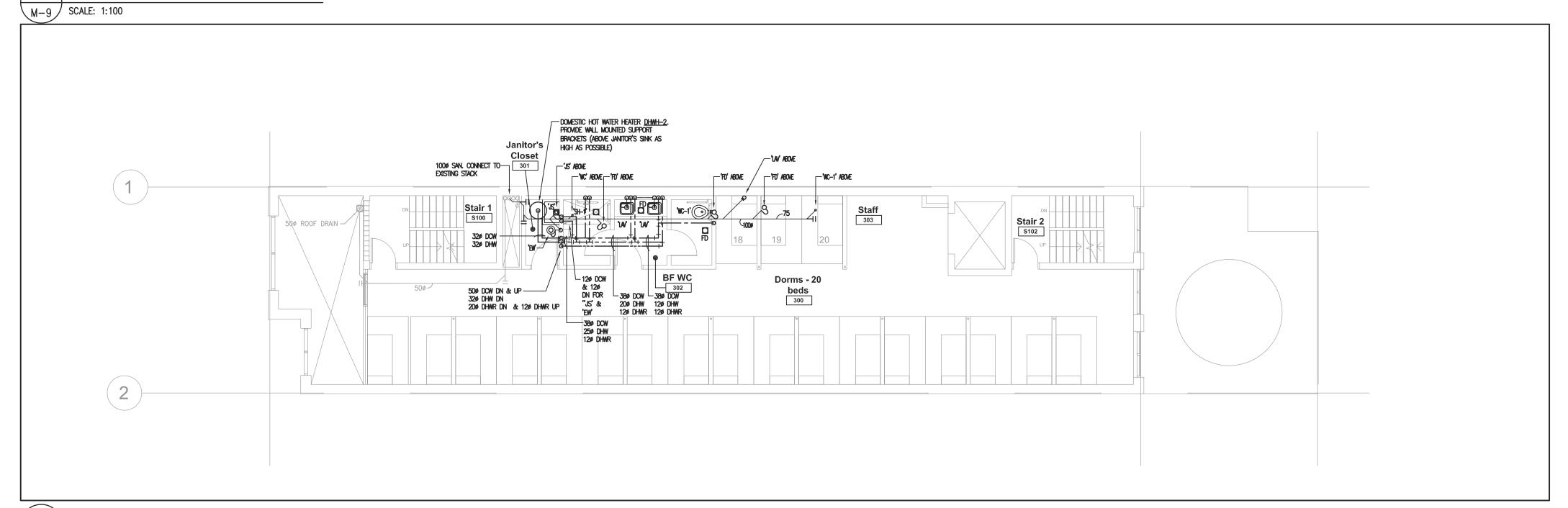
16 July 2018 Permit / Tender

Basement 1 & 2 and Level 1 Plumbing New Layout

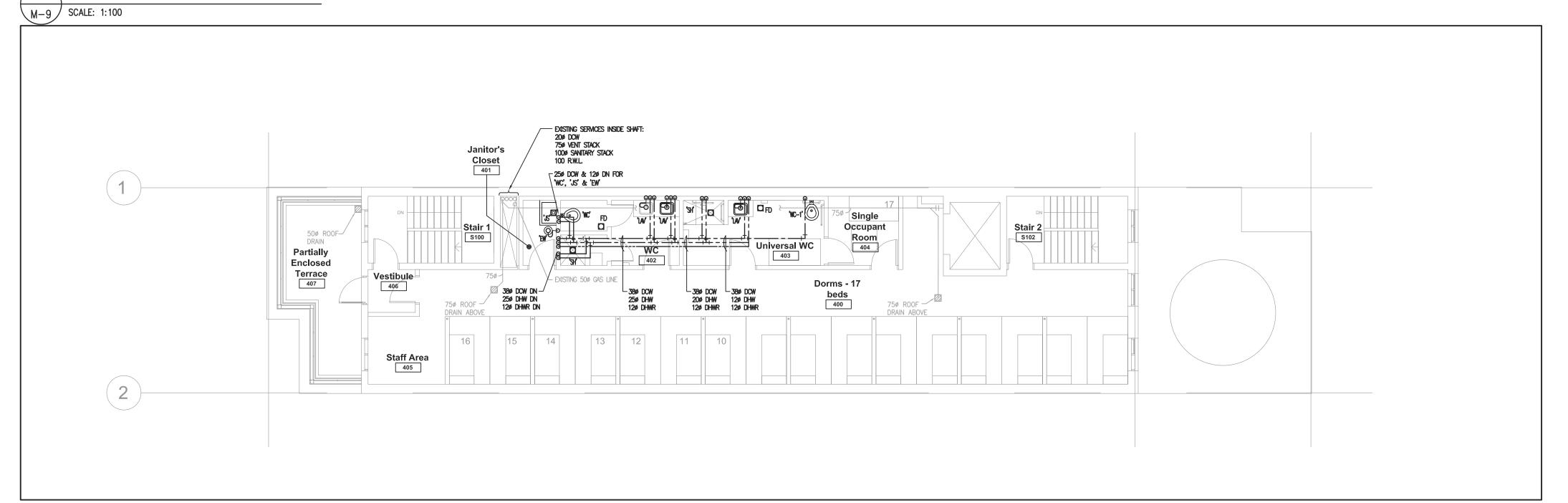




\ LEVEL 2 - PLUMBING NEW LAYOUT



\ LEVEL 3 - PLUMBING NEW LAYOUT



LEVEL 4 - PLUMBING NEW LAYOUT

M-9 SCALE: 1:100

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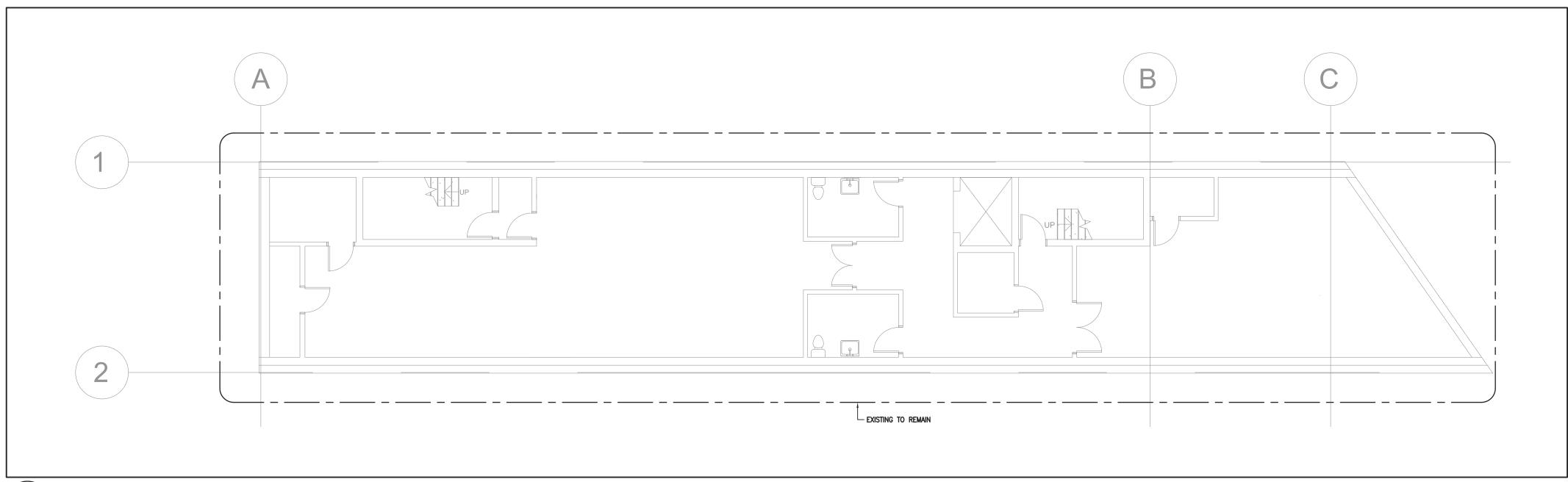
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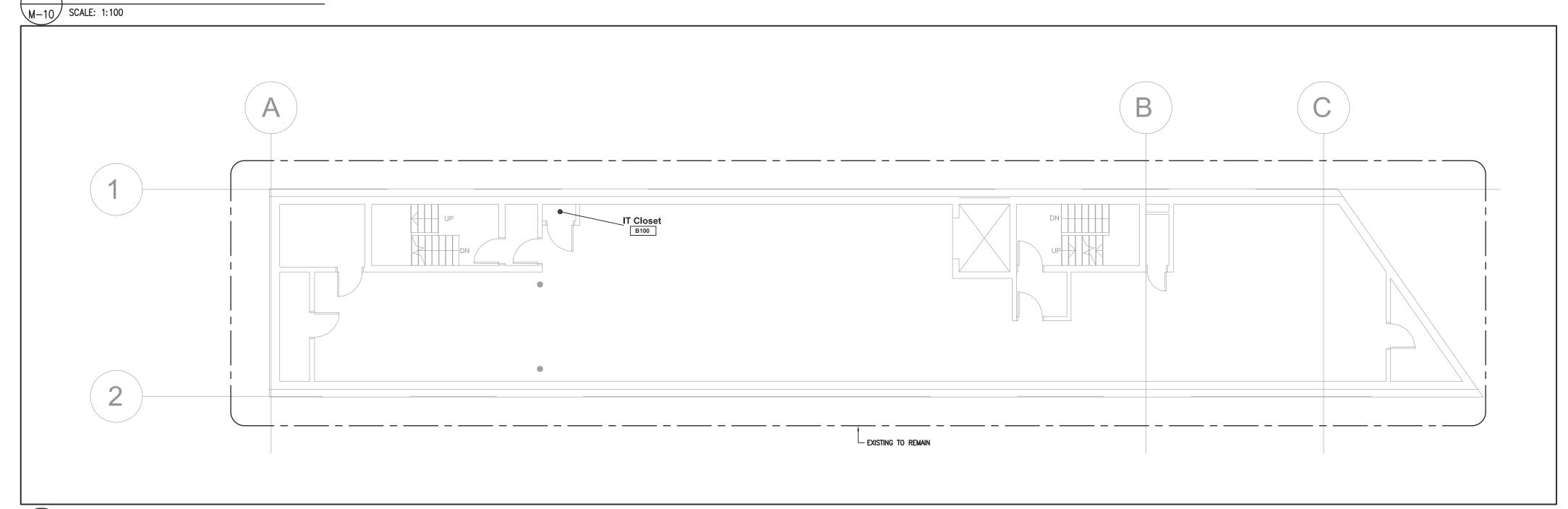
PROJECT CODE:	SCALE:
18_22	As indicated
DATE:	STATUS:
16 July 2018	Permit / Tender

Level 2, 3 & 4 Plumbing New Layout

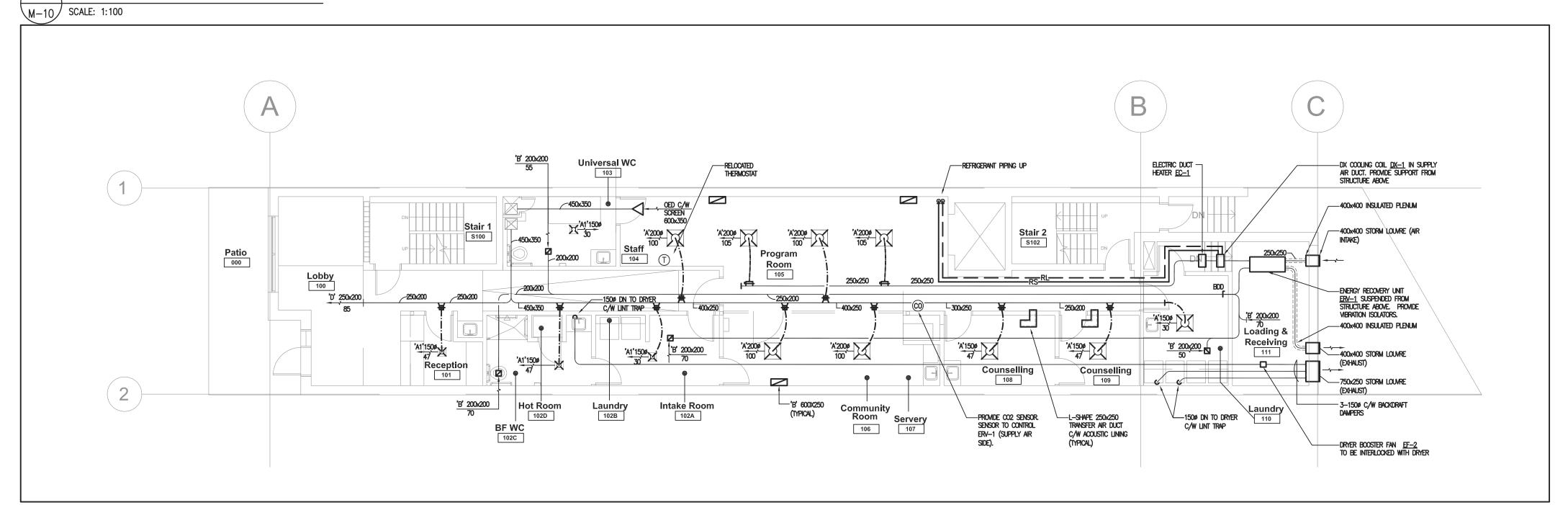




\ BASEMENT 2 − HVAC NEW LAYOUT



∖BASEMENT 1 - HVAC NEW LAYOUT



LEVEL 1 - HVAC NEW LAYOUT

M-10 SCALE: 1:100

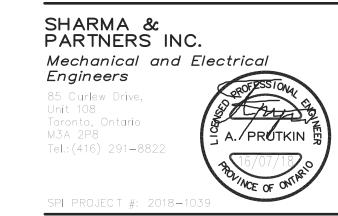
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16 July '18 16 July '18

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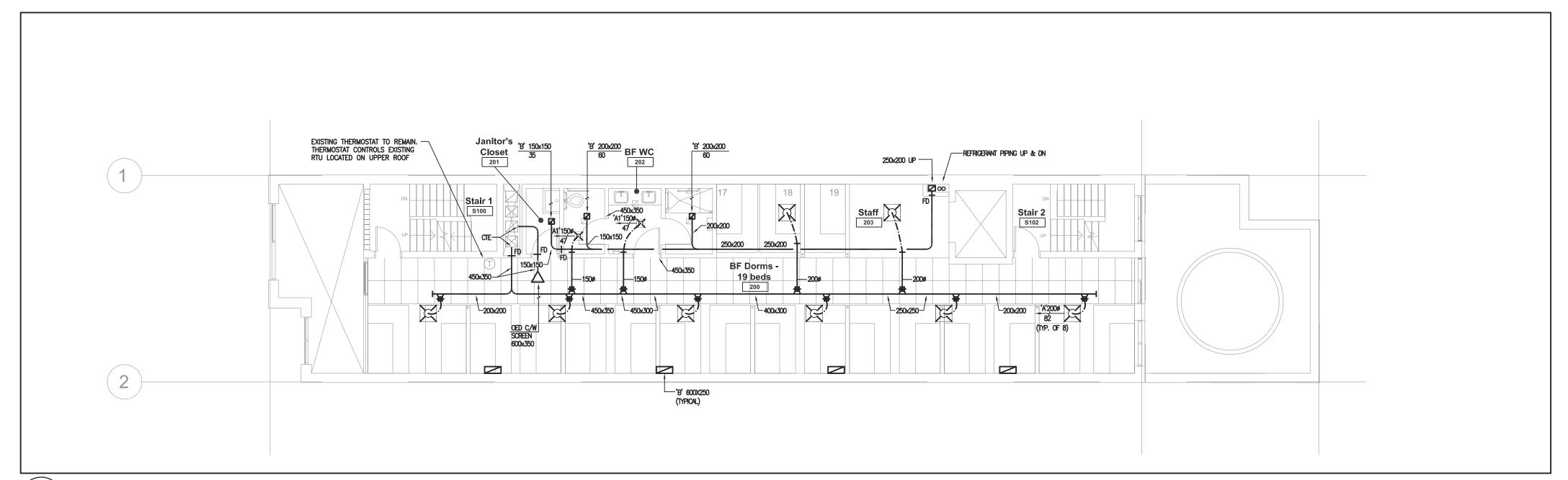
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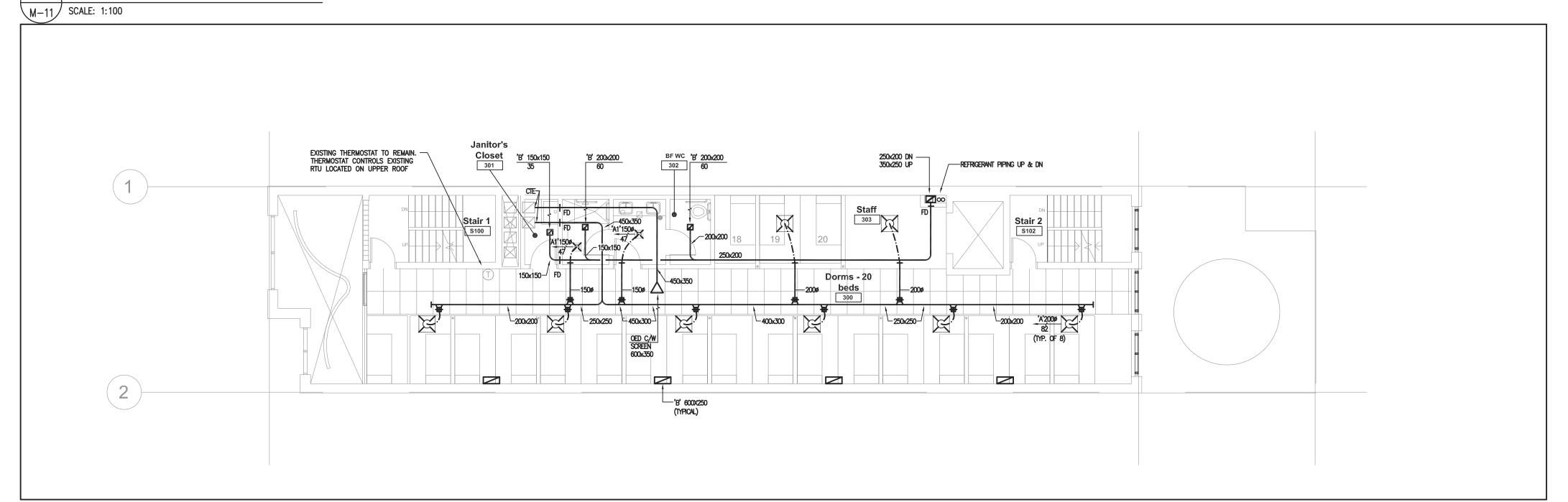
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Basement 1 & 2 and Level 1 **HVAC New Layout**

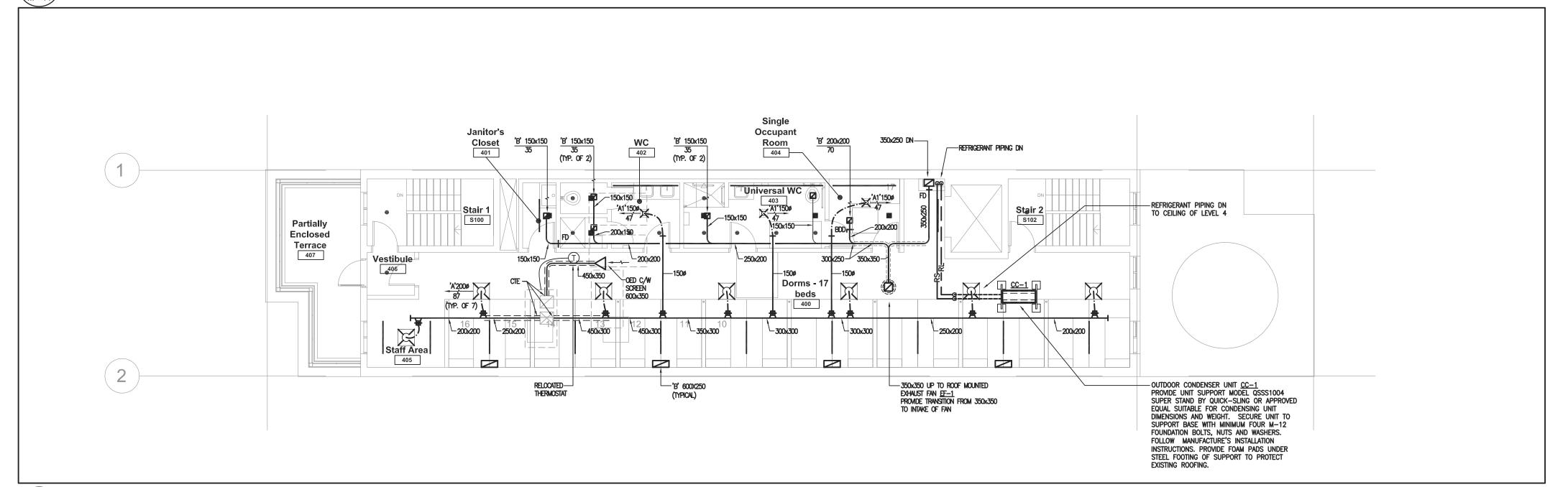




\ LEVEL 2 - HVAC NEW LAYOUT



\ LEVEL 3 - HVAC NEW LAYOUT M-11 SCALE: 1:100



\ LEVEL 4 - HVAC NEW LAYOUT

M-11 SCALE: 1:100

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16 July '18 1 Final Review

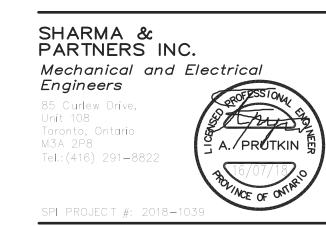
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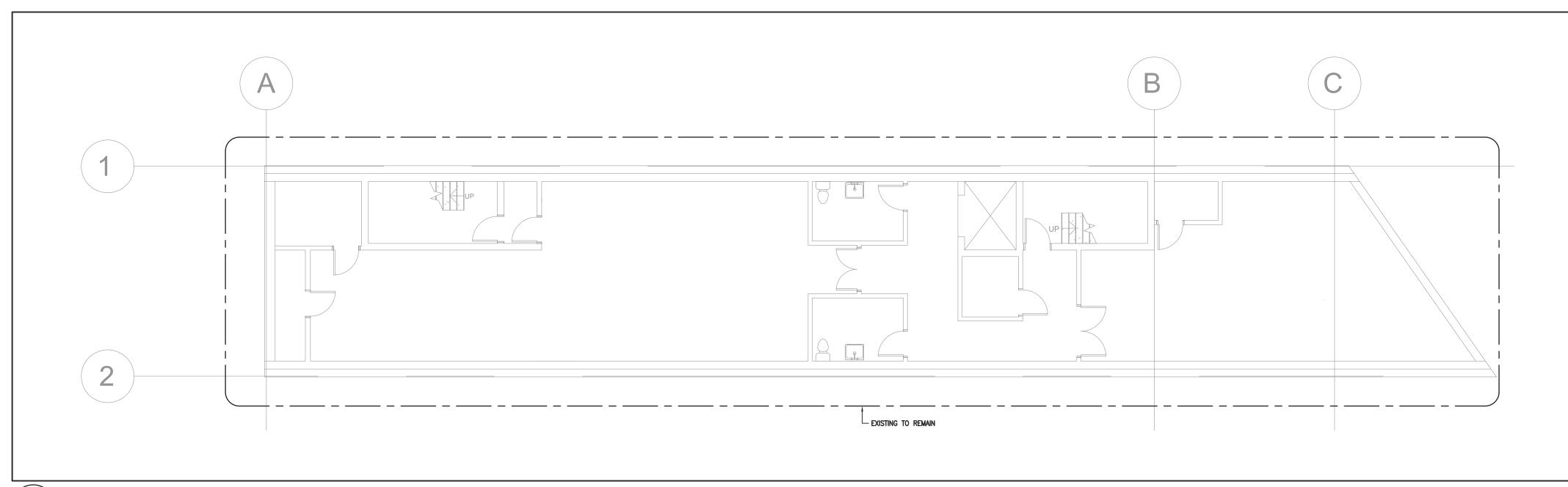
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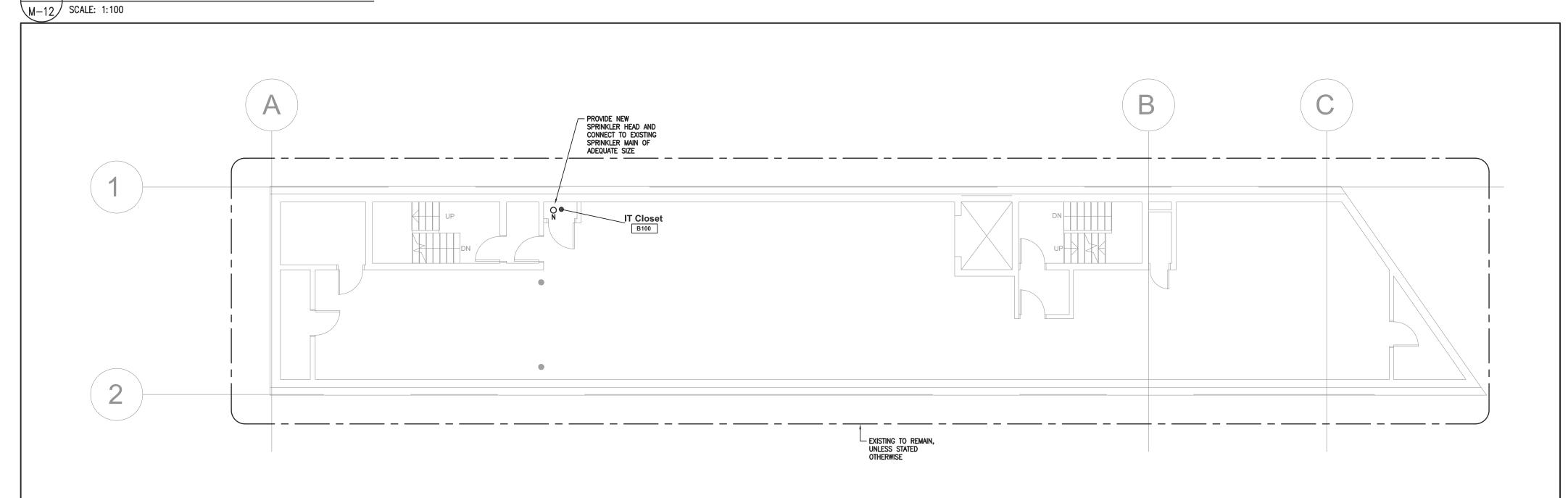
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Level 2, 3 & 4 **HVAC New Layout**

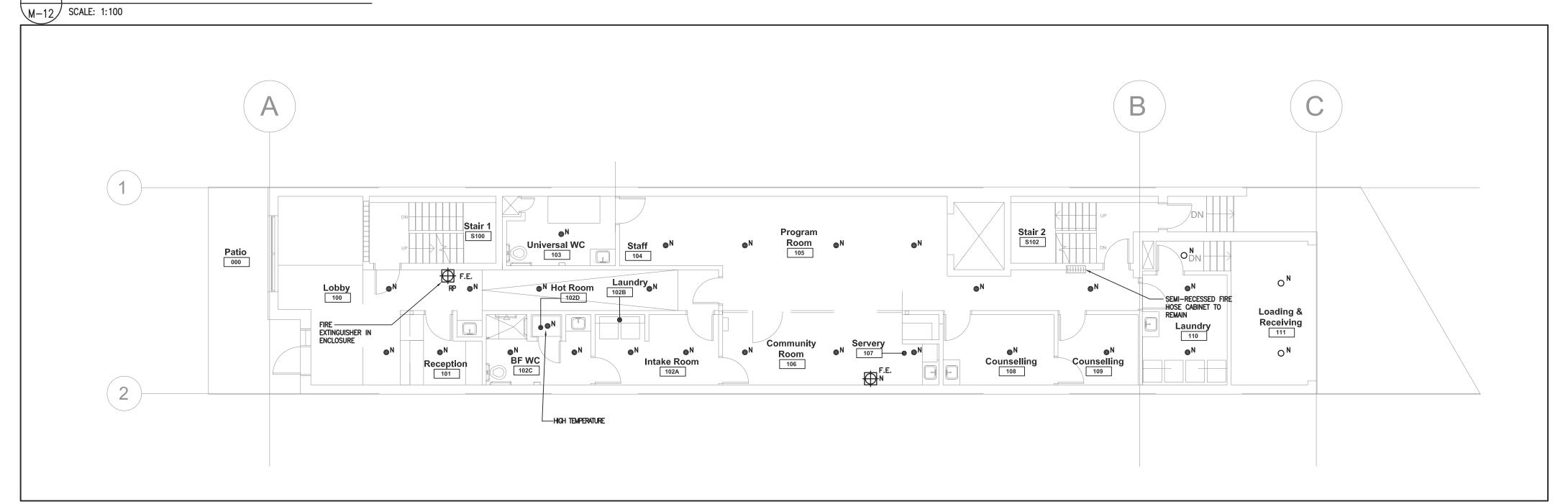




\ BASEMENT 2 - FIRE PROTECTION NEW LAYOUT



BASEMENT 1 - FIRE PROTECTION NEW LAYOUT



\ LEVEL 1 - FIRE PROTECTION NEW LAYOUT

M-12 SCALE: 1:100

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16 July '18 1 Final Review 1 Issued for Permit & Tender

> PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE 18 197188 BLD 00

O.B.C. FIRE SERVICES Johnson, David 27/Jul/2018

HVAC and PLUMBING are not part of this permit approval.

SEPARATE PERMITS REQUIRED FOR HVAC & PLUMBING. HVAC AND PLUMBING ARE NOT PART OF THIS PERMIT.



Sprinkler Systems shall comply with NFPA 13 Standard Add, remove and/or relocate sprinklers as necessary to maintain/provide coverage as per

Portable fire extinguishers shall be provided and installed in conformance with Section 6.2 of the Ontario Fire Code.

Standpipe and hose systems shall be installed in compliance with the Ontario Building Code and NFPA 14 standard. Reviewed based on a hose length of 23m

(REFER TO CA C28)

The City has Relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project.

The issuance of a permit does not imply a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contravention are subsequently noted.

SHARMA & PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive Unit 108 Toronto, Ontario M3A 2P8 Tel.: (416) 291-8822

WORKSHOP architecture inc 1157 Davenport Road Toronto Ontario M6H 2G4 T 416.901.8055 F 416.849.0383

www.workshoparchitecture.ca

SPI PROJECT #: 2018-103

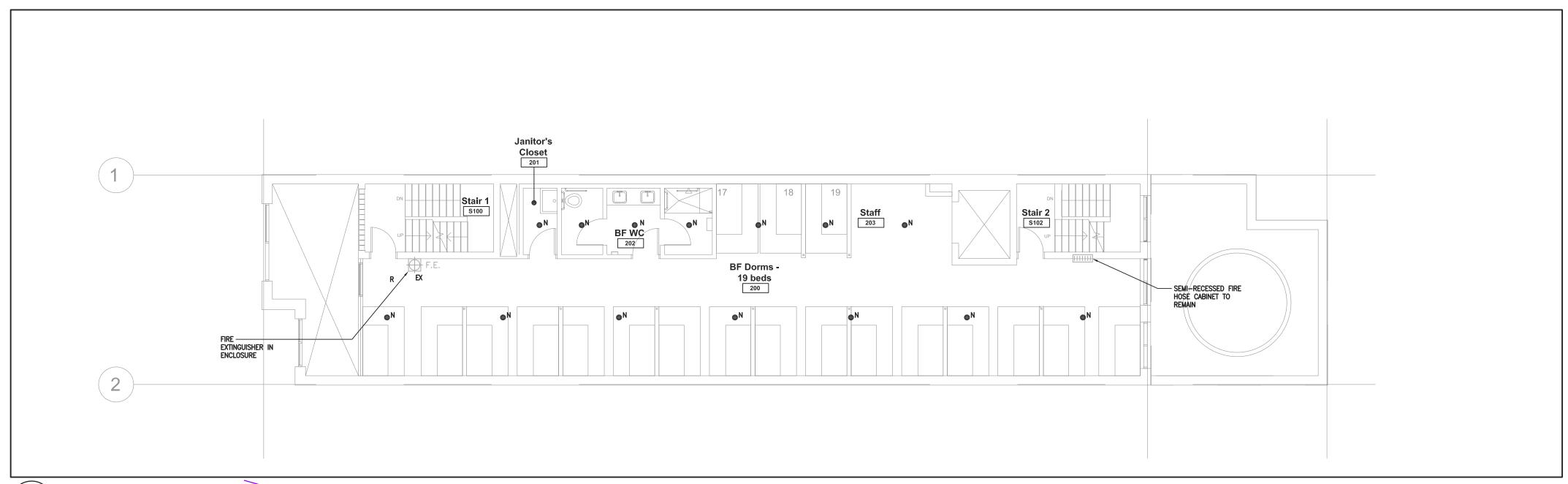
Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

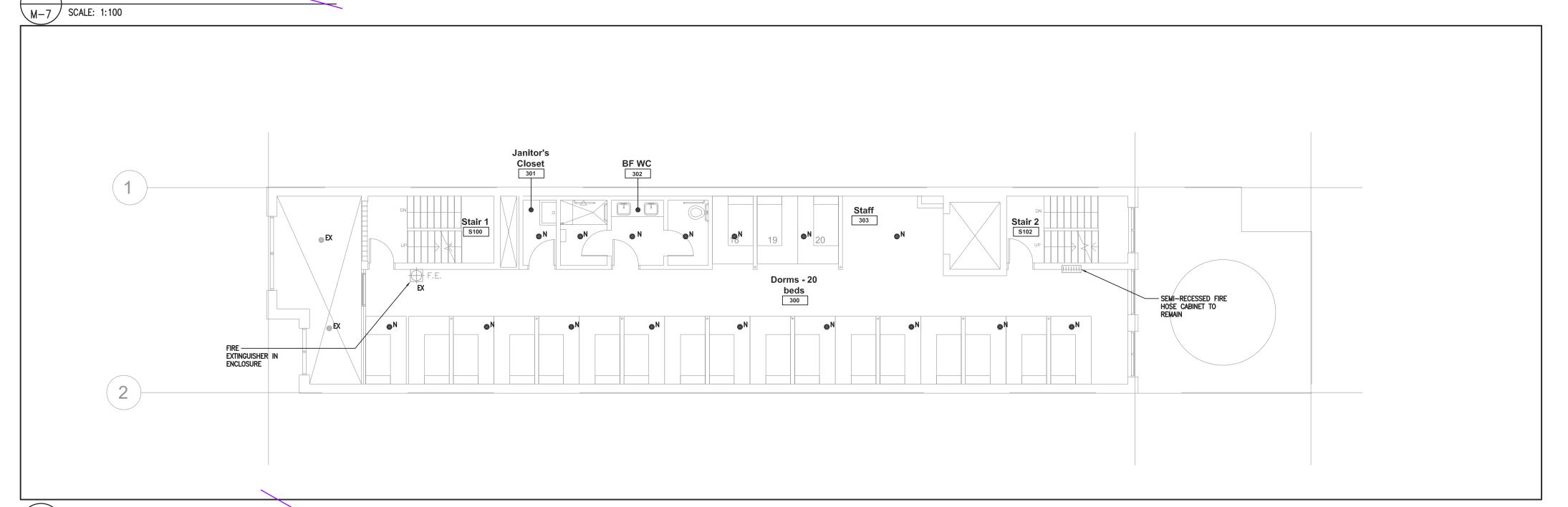
16 July 2018	Permit / Tend
DATE:	STATUS:
18_22	As indicat
PROJECT CODE:	SCALE:

Basement 1 & 2 and Level 1 Fire Protection New Layout

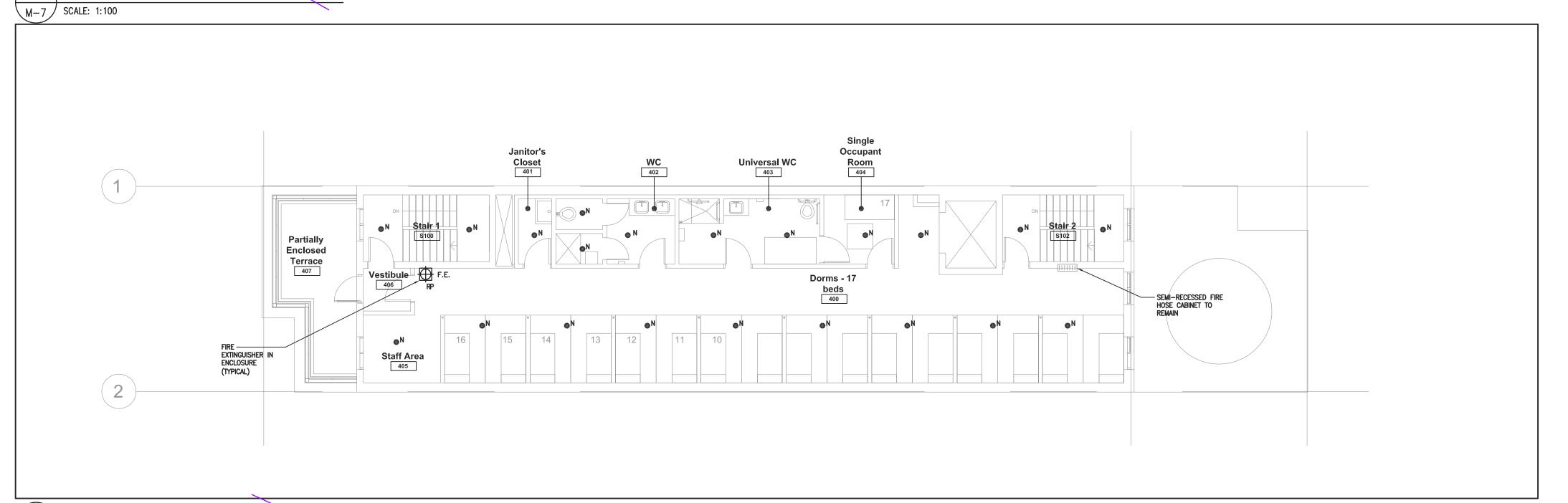




LEVEL 2 - FIRE PROTECTION DEMOLITION



LEVEL 3 - FIRE PROTECTION DEMOCITION



LEVEL 4 - FIRE PROTECTION DEMOLITION

M-7 SCALE: 1:100

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M Toronto

Portable fire extinguishers shall be provided and installed in conformance with Section 6.2 of the Ontario Fire Code.

M Toronto

Sprinkler Systems shall comply with NFPA 13 Standard

Add, remove and/or relocate sprinklers as necessary to maintain/provide coverage as per

Standpipe and hose systems shall be installed in compliance with the Ontario Building Code and NFPA 14 standard.

Reviewed based on a hose length of ____23m____ (REFER TO CA C28)

M Toronto

The City has Relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project.

The issuance of a permit does not imply a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contravention are subsequently noted.

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SPI PROJECT #: 2018-10

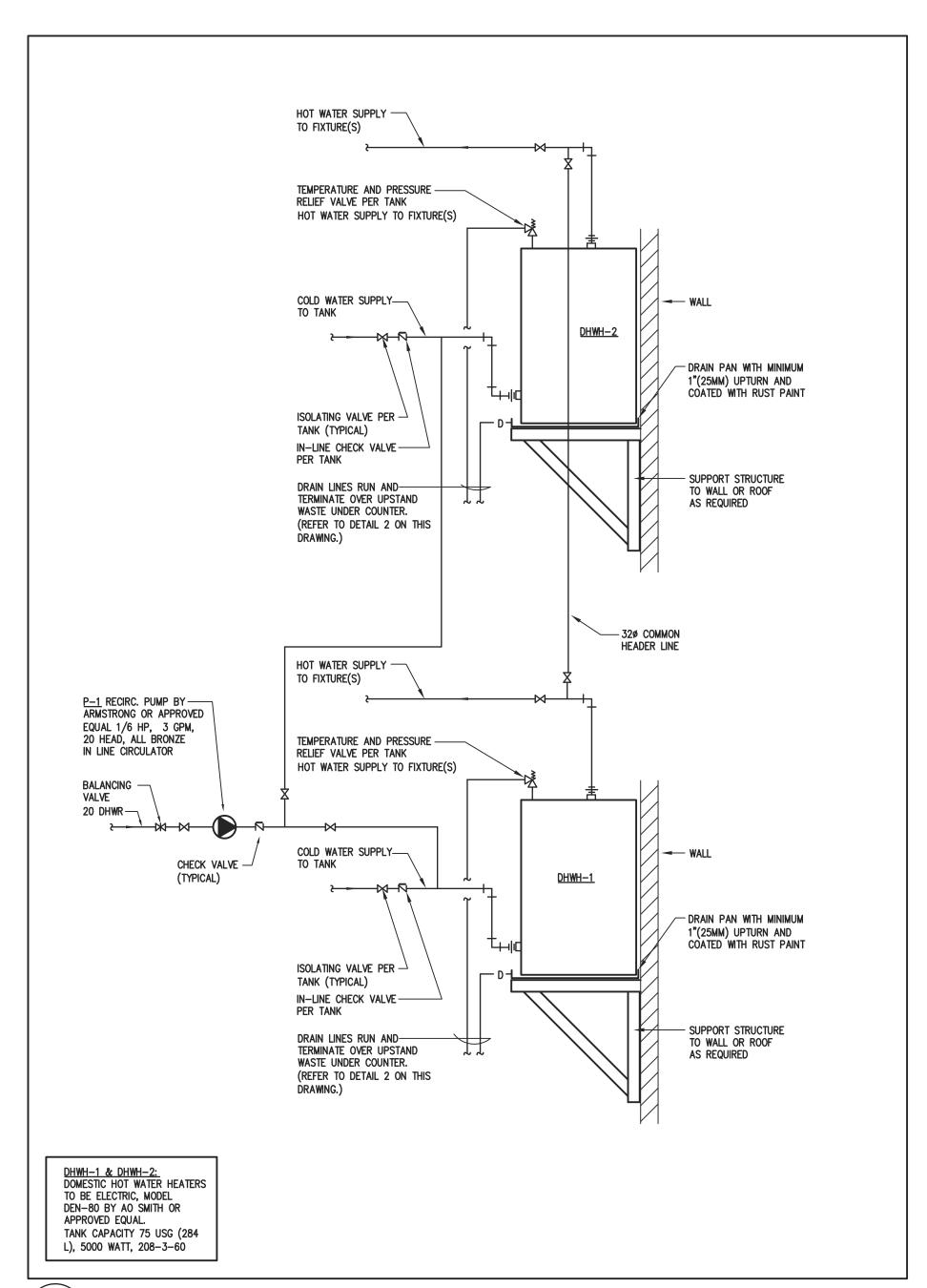
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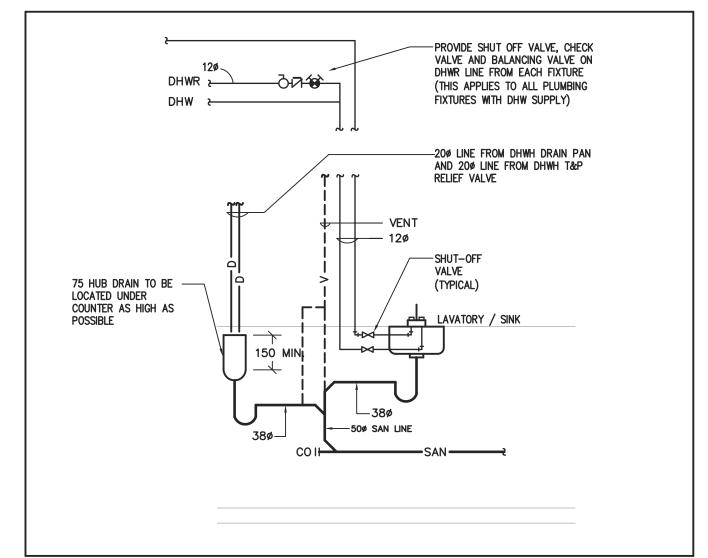
PROJECT CODE: SCALE: As indicated DATE: STATUS: Permit / Tender

Level 2, 3 & 4 Fire Protecti<mark>on New Layout</mark>

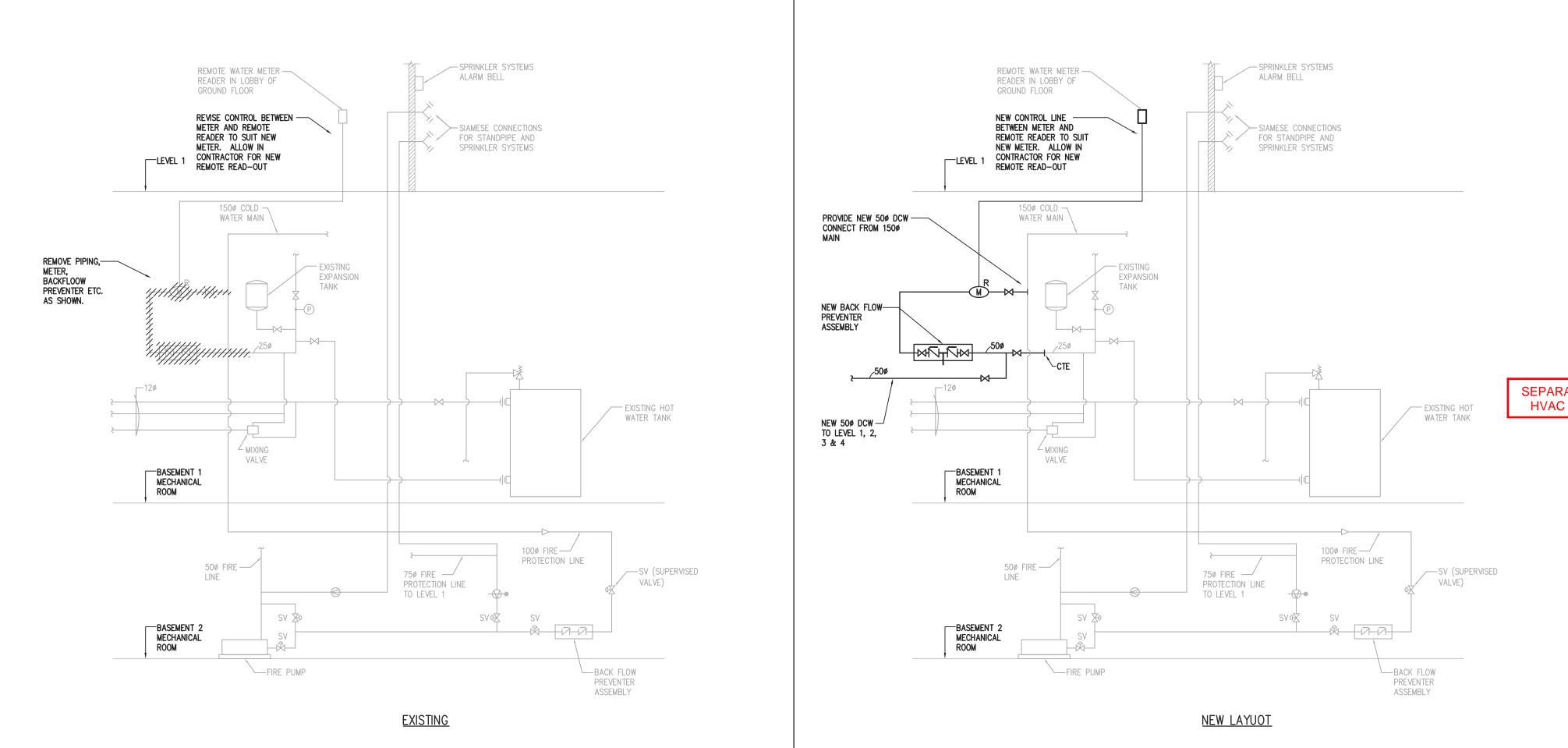








2 DETAIL OF LAVATORY / SINK PIPING WITH DRAIN FROM DHWH M-14 SCALE: N.T.S.



3 COLD WATER AND FIRE PROTECTION PIPING DIAGRAM M-14 SCALEDHICT.S.

	FAN SCHEDULE												
REF. LETTER	AREA SERVED / DESIGNATION	MANUFACTURE	MODEL	CAPACITY L/S (CFM)	E.S.P. PA ("W.G)	ELECTR V-PH-HZ		DRIVE	FAN RPM	REMARKS			
EF-1	GENERAL EXHAUST	GREENHECK	G-123-VG	565 (1200)	150 (0.6)	120-1-60	1/2	DIRECT	1318	CENTRIFUGAL ROOF EXHAUST FAN C/W BACKDRAFT DAMPER, SPEED CONTROLLER (POTENTIOMETR DIAL MOUNTED ON MOTOR), 350MM ROOF CURB WITH ALUMINUM CURB CAP, BIRD SCREEN, DISCONNECT			
EF-2	DRYER BOOSTER FAN	REVERSOMATIC	RI-150	AS DRYER	62 (0.25)	120-1-60	85W	DIRECT	2550	C/W BACKDRAFT DAMPER, DISCONNECT, WEATHERPROOF WALL BOX, SPEED CONTROLLER, FAN TO BE INTERLOCKED WITH DRYER			

HEAT RECOVERY WHEELS																	
			Ì	1	ENTERIN	G AIR	LEAVIN	IG AIR			ENTERI	NG AIR	LEAVIN	NG AIR	Ì		
.G AHU No.	I DESIGNAL	ON SEASON	SUPPLY AIR FLOV (L/S)		DB °C (°F)	WB ℃ (℉)	DB °C (°F)	WB *C (*F)	EXHAUST AIRFLOW (L/S)	PRESSURE DROP (Pa)	DB °C (°F)	WB *C (*F)	DB °C (°F)	WB ℃ (℉)	MOTOR (HP)	SELECTION	REMARKS
/_1 HRU_	-1 BASEMENT	SUMMER	385	225	32.2 (90)	23.9 (75)	24.9 (76.9)	17.9 (64.3)	480	225	23.9 (75)	16.8 (62.2)	29.7 (85.5)	21.9 971.4)	0.37	OOOK EDY WHEEL	HEAT RECOVERY WHEEL IS PART OF HEAT RECOVERY UNIT HRU-1, FACTORY
-1 nku-	DASEMENT	WINTER	385	225	-13.6 (8.5)	-13.6 (8.5) -14.6 (5.6) 17.8 (64) 9.56 (49.2) 480 225 22.2 (72) 12.8 (53.9) -2.5 (27.5) -4.4 (24.1) 0.37	COOK ERV WHEEL	INSTALLED AND WIRED									

AIR COOLED CONDENSING UNITS											
				COOLI	NG CAPACITY	ELECTRICAL DATA			REMARKS		
NO.	AREA SERVED	MAKER	REFRIGERANT	RATED	CAPACITY RANGE	V-PH-HZ	MAX. BREAKER SIZE	MCA			
				BTU/H	TON			AMP			
CC-1	LEVEL 1	MITSUBISHI	R-410A	12,000	1.0	208-1-60	20	15	C/W INDOOR DX COIL, REFRIGERANT PIPING, WIRING, CONTROLS & ROOF SUPPORT.		

		DECIST	EDC CDILLEC & DI	EELIGEDG GUUEDIII E	-						
REGISTERS, GRILLES & DIFFUSERS SCHEDULE											
			MANUFACTURER D	ATA	ODDOCED						
REF.	APPLICATION	SELECTION	MODEL DESCRIF	PTION	OPPOSED BLADE	FINISH	REMARKS				
LETTER		MFG.	AND SIZE (in)	<u> </u>	DAMPER						
Α	SQUARE PLAQUE SUPPLY AIR DIFFUSER	EH PRICE	SPD -600x600" ROUND NECK	NECK SIZE AS SHOWN ON DWGS	NO	WHITE	FRAME & BORDER TO SUIT APPLICATION				
A1	SQUARE PLAQUE SUPPLY AIR DIFFUSER	EH PRICE	SPD -300x300" ROUND NECK	NECK SIZE AS SHOWN ON DWGS	NO	WHITE	FRAME & BORDER TO SUIT APPLICATION				
В	EGGCRATE RETURN GRILLE	EH PRICE	50R 12x12x12 ALUMINUM CORE, S		NO	WHITE	FRAME & BORDER TO SUIT APPLICATION				
С	RETURN / EXHAUST GRILLE	EH PRICE	535 STEEL	SIZE AS SHOWN ON DWGS 20 MM SPACING, 35° DEFLECTION	NO	WHITE	FRAME & BORDER TO SUIT APPLICATION				
D	SUPPLY AIR GRILLE	EH PRICE	520 LOUVERED, STEEL	SIZE AS SHOWN ON DWGS 20MM SPACING DOUBLE DEFLECTION	NO	WHITE	FRAME & BORDER TO SUIT APPLICATION				
NOTES:		·									

PROVIDE BALANCING DAMPERS AT GRILLE / DIFFUSER FOR DRYWALL APPLICATIONS FOR RETURN / EXHAUST GRILLES PROVIDE PLENUM BOX FOR DUCT CONNECTION (WHERE SUITABLE)

	HEAT RECOVERY AIR HANDLING UNIT SCHEDULE												
TAG AREA		UNIT	FANS						UNIT ELECTRIC DATA		DATA		
TAG	SERVED		FUNCTION	AIR FLOW (I/s)	MIN. OUTSIDE AIR (%)	E.S.P. (PA)	FAN RPM	V-PH-HZ	MOTOR HP	V-PH-HZ	FLA	MOCP	REMARKS
ERV-1	LEVEL 1	COOK ERV-500	SUPPLY EXHAUST	210 315	100 -	275 150	1600 1750	120-1-60 120-1-60	0.5 0.5	120-1-60		20	HEAT RECOVERY UNIT TO BE C/W TEMPERATURE SENSOR, MERV 13 SUPPLY AIR FILTER, CONTROLS

DX COIL												
		AIR	FIN	FACE	FACE	ELLID TVDE	CAPACIT	Y (MBT)		AIR		DELLABIO
TAG	FUNCTION	L/S	PER IN	AREA (FT²)	VELOCITY (FPM)	FLUID TYPE	SENSIBLE	TOTAL	E.A.T.(°F) Db Wb	L.A.T.(°F) Db Wb	A.P.D. (IN.W.G.)	REMARKS
DX-1	COOLING	210	12	1.2	261	261	-	1TON	76.9 / 64.3	62.6 / 59.4	0.2	

	ELECTRIC DUCT HEATER SCHEDULE							
TAG	AIR FLOW CAPACITY (L/S)	HEATING CAPACITY (WATT)	DUCT SIZE (mm X mm)	POWER V-PH-HZ	REMARKS			
EC-1	210	5,000	250 x 250	208-1-60	PROVIDE AIR FLOW SWITCH, CONTACTORS, SAFETY CUTOUTS, CONTROL TRANSFORMER, SCR CONTROLLER ETC.			

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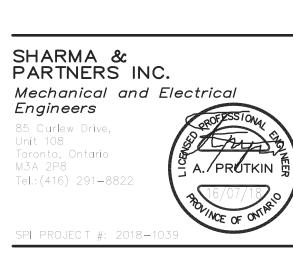
> Description 16 July '18 1 Final Review 16 July '18

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Davenport Shelter

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<u>_</u> .	
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PROJECT CODE:	SCALE:

Mechanical Details



GENERAL MECHANICAL CONDITIONS — SECTION 15050

- 1. CONFORM TO INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS AND GENERAL REQUIREMENTS.
- 2. THIS SECTION 15050 SHALL APPLY TO ALL DIVISION 15 SECTIONS.
- 3. BEFORE SUBMITTING TENDERS, EXAMINE SITE, EXISTING SERVICES AND ALL DRAWINGS. EXTRAS WILL NOT BE ALLOWED FOR FAILURE TO DO SO.
- 4. PROVIDE ALL LABOUR, MATERIALS AND EQUIPMENT NECESSARY TO EXECUTE THE WORK SHOWN AND DESCRIBED. INSTALLATION OF MATERIALS SHALL MEET ALL APPLICABLE PROVINCIAL, FEDERAL AND MUNICIPAL REQUIREMENTS.
- 5. OBTAIN PERMITS AND PAY ALL FEES FOR WORK AND REQUIRED INSPECTIONS.
- 6. MAINTAIN LIABILITY INSURANCE TO PROTECT OWNER AND THE CONTRACTOR FROM ANY AND ALL CLAIMS UNDER THE WORKER'S COMPENSATION ACT.
- 7. THE DRAWINGS SHALL BE CONSIDERED DIAGRAMMATIC ONLY. ALL MEASUREMENTS SHALL BE TAKEN FROM BUILDING SITE AND ARCHITECT'S DRAWINGS.
- 8. ALL MATERIALS SHALL CONFORM TO CSA, HEPC AND CEC REQUIREMENTS AND SHALL BEAR CSA LABEL. GAS FIRED EQUIPMENT SHALL BEAR CGA LABEL.
- 9. ALL EXISTING SERVICES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. THIS CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY LINES, ETC. SO AS TO CARRY OUT THE
- 10. TEMPORARY LIGHT, POWER AND WATER BY GENERAL CONTRACTOR.
- 11. ALL CUTTING AND PATCHING FOR MECHANICAL WORK WILL BE THE RESPONSIBILITY OF THIS SUB-CONTRACTOR. HIRE SPECIALIZED TRADES TO DO THIS WORK. X-RAY FLOORS PRIOR TO CUTTING AND COORDINATE FOR AFTER HOUR X -RAY OF THE FLOOR.
- 12. PROVIDE TEMPORARY BUILDINGS AND MATERIAL STORAGE AS REQUIRED AND BE RESPONSIBLE FOR ANY LOSS OR DAMAGE THERETO.
- 13. SUBMIT SAMPLES OF MATERIALS WHEN REQUIRED.
- 14. SUBMIT ELECTRONIC COPIES OF SHOP DRAWINGS FOR REVIEW COVERING MAJOR MANUFACTURED ITEMS, I.E. FANS, PLUMBING FIXTURES, DX COIL, CONDENSING UNIT, HOT WATER TANK, GRILLES AND DIFFUSERS, CONTROLS ETC.
- 15. WHERE SUBSTITUTIONS ARE MADE FOR EQUIPMENT SPECIFIED BY NAME OR MODEL NUMBER, BE FULLY RESPONSIBLE FOR CAPACITIES AS WELL AS PHYSICAL FIT OF SUBSTITUTED MATERIALS.
- 16. SUPPLY AND LOCATE ALL BASES, SUPPORTS, SLEEVES, CURBS, ETC. REQUIRED FOR THIS WORK. FLASHING BY ROOF TRADES. COUNTERFLASHING BY THIS CONTRACTOR.
- 17. UNLESS OTHERWISE NOTED, ALL MOTORS 1/2 HP AND UNDER SHALL BE 115/1/60, MOTORS OVER 1/2 HP SHALL BE OF 3 PHASE VOLTAGE AVAILABLE ON PROJECT.
- 18. SUPPLY PROPER STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT SWITCHES FOR POWERED MECHANICAL EQUIPMENT AND HAND OVER TO ELECTRICAL CONTRACTOR FOR INSTALLATION. THIS DOES NOT INCLUDE ISOLATION SWITCHES. UNI FSS STATED SPECIFICALLY.
- 19. ALL POWER WIRING BY ELECTRICAL CONTRACTOR, CONTROL AND INTERLOCK WIRING BY MECHANICAL CONTRACTOR. CONTROL WIRING IN RETURN AIR CEILING SPACES SHALL BE FT-6 OR INSTALLED IN CONDUIT.
- A. UNLESS SPECIFICALLY NOTED, OTHERWISE ALL WIRING BY THIS CONTRACTOR.
- 20. SUPPLY AND INSTALL ALL NECESSARY ACCESS DOORS FOR MECHANICAL EQUIPMENT INCLUDING ENTERING AND LEAVING SIDES OF ALL COILS, FIRE DAMPERS ETC.. WHERE NECESSARY, DOORS SHALL BE RATED TO SUIT FIRE ASSEMBLY RATING.
- 21. PIPE HANGERS SHALL BE CLEVIS SPLIT TYPE WITH MILD STEEL RODS. FOR COPPER PIPE USE PLASTIC INSERTS. USE OVERSIZED HANGERS AND SADDLES FOR C.W. PIPING. DO NOT SUPPORT EQUIPMENT, DUCTS OR PIPING FROM ROOF DECK WITHOUT PERMISSION FROM ARCHITECTS. SUPPLY AND INSTALL NECESSARY STEEL TO TRANSFER LOAD TO STRUCTURAL
- 22. PROVIDE CONCRETE OR METAL CURBS OR SLEEVES AROUND ALL MECHANICAL ROOM FLOOR PENETRATIONS WHERE ROOM IS NOT LOCATED ON GRADE. SEAL ALL OPENINGS WATERTIGHT.
- 23. ALL DISSIMILAR METAL (STEEL-COPPER, ETC.) SHALL BE SEPARATED USING GASKETS AND INSULATING WASHERS OR WATTS "DI-ELECTRIC" FITTINGS.
- 24. INSTALL CHROME-PLATED ESCUTCHEONS WHERE BRANCH PIPES PASS THROUGH FINISHED SURFACE.
- 25. KEEP ACCURATE RECORD OF "AS-BUILT" DRAWINGS AND SUBMIT THESE BEFORE FINAL CERTIFICATE OF COMPLETION. BURIED SERVICES MUST BE DIMENSIONED. PROVIDE A CAD DISK OF THE AS_BUILT DRAWINGS TO CONSULTANT FOR REVIEW AND VERIFICATION.
- 26. ALL SURFACES MUST BE LEFT CLEAN AND SMOOTH, READY FOR PAINTING BY GENERAL TRADES.
- 27. IDENTIFY ALL PIPING. USE STENCILS OR COLOUR CODES AND DIRECTIONAL ARROWS.
- 27. IDENTIFY ALL FILLING. USE STENOIS ON USEGON USBES AND DIRECTIONAL ANNOWS.
- 28. IDENTIFY ALL FANS, STARTERS, REMOTE CONTROL AND ALL OTHER EQUIPMENT AS TO SERVICE BY A BLACK LAMACOID ENGRAVED NAMEPLATE WITH WHITE CORE, FIRMLY AFFIXED WITH SCREWS TO EACH UNIT.
- 29. PROVIDE FIRE STOPPING AND SMOKE SEALS.
- A. PRIMERS TO MANUFACTURER'S RECOMMENDATIONS FOR SPECIFIC MATERIAL, SUBSTRATE, AND END USE.
- B.DAMMING AND BACKUP MATERIALS, SUPPORTS AND ANCHORING DEVICES TO BE TO MANUFACTURER'S RECOMMENDATIONS; AND IN ACCORDANCE WITH TESTED ASSEMBLY BEING INSTALLED AS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION.
- C.SEALANTS FOR VERTICAL JOINTS TO BE NON—SAGGING.
 D.FIRESTOP AND SMOKE SEAL AROUND MECHANICAL AND ELECTRICAL ASSEMBLIES PENETRATING NON—RATED FIRE SEPARATIONS.
- D.FIRESTOP AND SMOKE SEAL AROUND MECHANICAL AND ELECTRICAL ASSEMBLIES PENETRATING NON-RATED FIRE SEPARATIONS.

 E.RIGID DUCTS WITH DIMENSIONS GREATER THAN 1300 MM TO BE FIRE STOPPED BY BEAD OF FIRE STOPPING MATERIAL BETWEEN RETAINING ANGLE AND FIRE SEPARATION, AND BETWEEN RETAINING ANGLE AND DUCT, ON EACH SIDE OF FIRE SEPARATION.

 E.REMONE EXCESS MATERIALS AND DEPRIS AND CLEAN ADJACENT SUBFACES MATERIALS AND CLEAN ADJ
- F.REMOVE EXCESS MATERIALS AND DEBRIS AND CLEAN ADJACENT SURFACES IMMEDIATELY AFTER APPLICATION.
 G.REMOVE TEMPORARY DAMS AFTER INITIAL SET OF FIRE STOPPING AND SMOKE SEAL MATERIALS
- G.REMOVE TEMPORARY DAMS AFTER INITIAL SET OF FIRE STOPPING AND SMOKE SEAL MATERIALS
- 30. ON COMPLETION OF THE WORK, REMOVE FROM THE PREMISES ALL TOOLS, DEBRIS, SURPLUS AND WASTE MATERIALS RESULTING FROM OPERATIONS UNDER THIS SECTION. CLEAN ALL EQUIPMENT AND LEAVE ALL ITEMS IN PERFECT ORDER READY FOR OPERATION.
- 31. AFTER ACCEPTANCE, INSTRUCT OWNER IN EQUIPMENT OPERATION AND PROVIDE HIM WITH OPERATING AND MAINTENANCE MANUALS STANDARDS AND EXTENDED WARRANTY DOCUMENTS, INSPECTION CERTIFICATES AND COPIES OF SHOP DRAWINGS OF INSTALLED EQUIPMENT.
- 32. THE CONTRACTOR SHALL, BEFORE FINAL PAYMENT IS MADE, GUARANTEE ALL MATERIALS AND WORKMANSHIP SUPPLIED BY HIM IN THE PERFORMANCE OF THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE AND SHALL, WHEN CALLED UPON, MAKE GOOD WITHOUT FURTHER COST TO THE OWNER SUCH DEFECTS AS MAY APPEAR WITHIN THIS PERIOD.
- 33. SHOULD ANY DISCREPANCY APPEAR BETWEEN THESE SPECIFICATIONS AND THE DRAWINGS TO CAUSE DOUBT AS TO THE TRUE MEANING AND INTENT OF THE DRAWINGS AND SPECIFICATIONS, A RULING SHALL BE OBTAINED FROM THE ARCHITECT CONSULTANT BEFORE SUBMITTING THE TENDER. IF THIS IS NOT DONE IT WILL BE ASSUMED THAT THE MORE EXPENSIVE ALTERNATIVE HAS BEEN INCLUDED IN THE CONTRACT.
- 34. ANY ERROR OR INCONSISTENCY IN THE DRAWINGS OR SPECIFICATIONS NOTED AFTER AWARD OF CONTRACT MUST BE REPORTED TO THE ARCHITECT CONSULTANT BEFORE COMMENCING
- 35. THE OMISSION OR INCORRECT MENTION OF WORK, MATERIALS, ETC. THAT ARE INDISPENSABLE TO THE COMPLETED WORK, IS NOT TO BE INTERPRETED AS RELIEVING OF THE NECESSITY OF PROVIDING SUCH WORK, MATERIALS, ETC. AT NO EXPENSE TO THE OWNER.
- 36. ALLOW FOR CONNECTIONS TO EXISTING SYSTEMS DURING AFTER HOURS OR WEEKENDS, INCLUDING BUT NOT LIMITED TO PLUMBING AND DRAINAGE, WATER PIPING, HEATING SYSTEMS, ELECTRICAL AND CONTROL CONNECTIONS.

SPRINKLERS - SECTION 15330

- 1. ALTER THE EXISTING SPRINKLER SYSTEM TO SUIT REVISED LAYOUT.
- 2. THIS IS PERFORMANCE SPECIFICATION ONLY. PREPARE SPRINKLER SHOP DRAWINGS FOR SUBMISSION TO ENGINEER, UNDERWRITERS AND BUILDING DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION. ENGINEERS DRAWINGS INDICATE GENERAL AREAS TO BE SPRINKLERED ONLY. THIS CONTRACTOR TO PROVIDE HYDRAULIC CALCULATIONS PREPARED AND STAMPED BY PROFESSIONAL ENGINEER ON ONTARIO.
- 3. SPRINKLER WORK SHALL BEGIN INSIDE BUILDING AT MAINS ON EACH FLOOR OR WHERE INDICATED ON DRAWINGS.
- 4. SYSTEM SHALL BE COMPLETE WITH ALL NECESSARY PIPING, HANGERS, HEADS, DRIPS, DRAINS, SPARE SPRINKLERS AND CABINETS, ETC., ALL IN STRICT ACCORDANCE WITH STANDARDS AS STIPULATED IN THE NATIONAL FIRE PREVENTION ASSOCIATION NFPA 13 AS REVISED TO DATE AND/OR AS APPROVED BY THE LOCAL FIRE DEPARTMENT AND BUILDING DEPARTMENT.
- 5. ALL SHUT OFF VALVES AND ISOLATING VALVES SHALL BE SUPPLIED WITH ULC LISTED MONITOR SWITCHES FOR ELECTRICAL SUPERVISION OF VALVE.
- 6. IN GENERAL, SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH "LIGHT HAZARD OCCUPANCY" STANDARDS.
- ALL WIRING NECESSARY FOR SPRINKLER ALARMS AND ELECTRICAL SUPERVISION WILL BE DONE BY ELECTRICAL CONTRACTOR.
- 7. ALL HEADS UNLESS NOTED OTHERWISE SHALL BE EQUAL TO GRINNELL "DURO SPEED". LOW HEADS SHALL BE EQUIPPED WITH GUARDS.
- 8. WHERE SUSPENDED CEILINGS OCCUR, PIPING SHALL BE CONCEALED ABOVE CEILINGS, HEADS SHALL BE CHROME PLATED RECESSED PENDANT TYPE. IN AREAS WHERE THERE ARE NO SUSPENDED CEILINGS, HEADS SHALL BE UPRIGHT TYPE WITH PLAIN BRONZE FINISH. SUBMIT SAMPLES TO ARCHITECT FOR APPROVAL BEFORE INSTALLATION.
- 9. IN HIGH TEMPERATURE LOCATIONS I.E. ADJACENT TO UNIT HEATERS ETC., PROVIDE HEADS WITH HIGHER TEMPERATURE RATINGS. VERIFY LOCATIONS AND RATINGS WITH CONSULTANTS.
- 10. CONTRACTOR SHALL PAY ALL NECESSARY CHARGES HE INCURS FROM UNDERWRITERS FOR THEIR REVIEW OF THESE DRAWINGS.
- 11. WHERE CEILINGS ARE RAISED OR LOWERED, ADJUST HEADS TO SUIT NEW CEILING HEIGHTS.
- 12. WHERE CEILINGS ARE REMOVED AND REPLACED, REMOVE AND REPLACE HEADS AS REQUIRED TO PERMIT EXECUTION OF NECESSARY WORK.

PLUMBING & DRAINAGE INSIDE THE BUILDING - SECTION 15400

- 1. ALL WORK SHALL BE EXECUTED BY LICENSED PLUMBERS.
- 2. ALL PLUMBING AND DRAINAGE WORK SHALL BE INSTALLED AS REQUIRED BY ONTARIO BUILDING CODE, REVISED TO DATE, AND SHALL MEET THE REQUIREMENTS OF ALL PROVINCIAL AND MUNICIPAL AUTHORITIES HAVING JURISDICTION.
- 3. INCLUDE ALL PIPING, FITTINGS AND EQUIPMENT SHOWN ON DRAWINGS OR DESCRIBED IN SPECIFICATIONS. ALL ITEMS NOT MENTIONED BUT UNDERSTOOD TO BE NECESSARY TO COMPLETE THE PLUMBING SYSTEM SHALL BE INCLUDED.
- 4. CONTRACT EXTENDS AS SHOWN OR/AND DESCRIBED ON THE DRAWINGS.
- 5. MAKE ALL NECESSARY CONNECTIONS TO EXISTING SERVICES.
- 6. ALL ABOVE GROUND SANITARY AND STORM DRAINAGE PIPING SHALL BE IPEX SYSTEM 15 PVC— DWV WITH ONE STEP CEMENT. (CAST IRON MECHANICAL JOINT OR DWV COPPER). PVC PIPING IS NOT PERMITTED IN RETURN AIR CEILING SPACES OR RETURN AIR SHAFTS.
- 7. ABOVE GROUND WATER PIPING SHALL BE TYPE 'L" COPPER C/W 95/5 SOLDER JOINTS. FOR 2" (50MM) AND OVER, VITAULIC ROLL-GROOVED JOINTING WILL BE ACCEPTED.
- 8. BURIED DOMESTIC WATER PIPING SHALL BE COPPER TYPE "K" OR CEMENT LINED DUCTILE IRON. PVC APPROVED FOR MUNICIPAL POTABLE WATER. BURIED INCOMING FIRE LINE SHALL BE CEMENT LINED DUCTILE IRON.
- 9. ALL ABOVE GROUND VENT PIPING SHALL BE IPEX SYSTEM 15 PVC-DWV WITH ONE STEP CEMENT (CAST IRON WITH MECHANICAL JOINT OR DWV COPPER).
- 10. BURIED VENT PIPING MAY BE ABS PLASTIC SOLVENT WELD.
- 11. ALL FIRE PROTECTION PIPING TO BE "THINWALL" PIPE WITH GROOVED FITTINGS.
- 12. VALVES UP TO 2" (50MM) SHALL BE FULL THROAT BRONZE BALL VALVES. 2 1/2" (65MM) AND OVER SHALL BE BUTTERFLY VALVES.
- 13. VISIBLE SINK DRAINAGE TRAPS AND SUPPLY PIPING SHALL BE CHROME PLATED.
- 14. CLEANOUTS SHALL BE INSTALLED AS REQUIRED BY CODE AND WHERE SHOWN AND SHALL SUIT FLOORING MATERIAL.
- 15. PROVIDE ELECTRONIC OR PRESSURE ACTIVATED TRAP SEAL PRIMERS FOR ALL FLOOR DRAINS.
- 16. PROVIDE HAMMER ARRESTORS ON DCW AND DHW SUPPLIES TO FIXTURE (OR GROUP OF FIXTURES) AND WHERE REQUIRED.
- 17. EXISTING FIRE HOSE CABINETS TO REMAIN. PROVIDE NEW 38MM DIAM. 30M (100 FT) LONG HOSES WITH NEW NOZZLES FOR ALL FHCS IN THE BUILDING.
- 18. SUPPLY AND INSTALL ALL HOT AND COLD WATER, WASTE AND VENT CONNECTIONS REQUIRED FOR ALL PLUMBING FIXTURES
- 19. SUPPLY AND INSTALL ALL NECESSARY GAS PRESSURE AND WATER PRESSURE REGULATORS WHERE REQUIRED BY INDIVIDUAL APPARATUS AND EQUIPMENT. RUN NECESSARY VENTS TO ATMOSPHERE.
- 20. PROVIDE APPROVED BACKFLOW PREVENTORS ON ALL INSIDE AND OUTSIDE HOSE BIBBS. ON MECHANICAL EQUIPMENT CONNECTIONS, USE REDUCED PRESSURE TYPE BACKFLOW PREVENTORS.
- 21. ALL SPRINKLER INSTALLATIONS SHALL BE INSTALLED AS STIPULATED IN NFPA 13.
- 22. DOMESTIC COLD AND HOT WATER PIPING SHALL BE INSULATED WITH 1" (25MM) THICK FIBREGLAS PIPE INSULATION WITH ASJ. USE 1 1/2" (40MM) MATERIAL FOR PIPING 2" AND OVER. HORIZONTAL RUNS OF SANITARY AND STORM DRAINS SHALL BE INSULATED IN A SIMILAR MANNER. IN EXPOSED AREAS FINISH WITH CANVAS OR P.V.C. JACKETTING. INSULATE ALSO COLD WATER METERS. PVC DRAINAGE PIPING NEED NOT BE INSULATED.
- 23. ROOF DRAIN BODIES TO BE INSULATED, AND AREAS EXPOSED TO BE FINISHED WITH CANVAS OR PVC JACKETTING.
- 24. REMOVE OLD INSULATION AND PROVIDE NEW ON ALL STORM WATER LINES.
- 25. SUPPLY ALL HOT WATER TANKS AS SHOWN ON DRAWINGS.
- 26. SUPPLY AND INSTALL ALL FIRE EXTINGUISHERS AS REQUIRED BY CODE.
- 27. SUPPLY AND INSTALL AND PAY ALL CHARGES FOR INSTALLATION OF WATER METER C/W 3 VALVE BYPASS. ENTIRE INSTALLATION TO LOCAL STANDARDS.
- 28. SEE FIXTURE SCHEDULE FOR PLUMBING FIXTURE TYPES.
- 29. SUPPLY AND INSTALL WHEEL HANDLE OR SCREW FIXTURES STOP VALVE ON THE HOT AND COLD WATER SUPPLY TO EVERY FIXTURE ON THE JOB, IN ADDITION TO THE VALVE OR FAUCET
- 30. PROTECT ALL FIXTURES UNTIL HANDED OVER TO THE OWNER. ALL FIXTURES SHALL BE C/W NECESSARY TRIM, TRAP SUPPLIES, STOPS, TAIL PIECES, TRAPS, GASKETS, ETC.
- 31. ALL EXISTING DRAIN LINES TO BE PRESSURE WASHED AND VIDEO INSPECTED BY PLUMBING CONTRACTOR, PRIOR TO COMMENCEMENT OF WORK.

WARM AIR HEATING. VENTILATING & AIR CONDITIONING — SECTION 15850

- 1. SUPPLY AND INSTALL ALL HEATING, VENTILATION AND AIR HANDLING EQUIPMENT AS SHOWN ON DRAWINGS.
- SUPPLY AND INSTALL DUCTWORK AS INDICATED ON DRAWING. DUCTWORK SHALL BE FABRICATED AND INSTALLED IN STRICT ACCORDANCE WITH LATEST SMACNA STANDARDS AND SHALL BE MANUFACTURED OF GALVANIZED STEEL UNLESS SPECIFICALLY NOTED OTHERWISE.
- 3. INSTALL MANUAL BALANCING DAMPERS AT ALL BRANCH TAKEOFFS AND IN OTHER LOCATIONS WHERE NECESSARY FOR SYSTEM BALANCING.
- 4. FLEXIBLE DUCTS SHALL BE ALUMINUM HELICALLY WOUND SPIRAL DUCT, EQUAL TO FLEXMASTER T/L, MAXIMUM 10 FT. LENGTH. PROVIDE ACOUSTIC FLEX EQUAL TO FLEXMASTER MODEL T/L-A, WHERE DUCTS ARE TO BE INTERNALLY INSULATED.
- 5. INSTALL UL LABELLED FIRE DAMPERS AND FIRE STOP FLAPS WHERE SHOWN AND WHERE REQUIRED. THESE SHALL BE INSTALLED IN ACCORDANCE WITH ULC APPROVED METHODS. FOR DUCTS UNDER 12" (300MM), USE 100% FREE AIR DAMPERS. DAMPERS IN ALUMINUM AND STAINLESS STEEL DUCT SHALL BE MANUFACTURED OF STAINLESS STEEL. ADVISE DRYWALL TRADES OF APPROVED INSTALLATION METHODS IN DRYWALL PARTITIONS.
- 6. INSTALL 6" (150MM) APPROVED FLEXIBLE CONNECTOR ON DUCT CONNECTIONS TO RESILIENTLY MOUNTED FANS.
- 7. WHERE SHOWN, DUCTWORK SHALL BE LINED INTERNALLY WITH (1/2") (1") (12MM) (25MM) FACED FLEXIBLE DUCT LINER. SHOWN SIZES ARE CLEAR INSIDE DIMENSIONS, INCREASE DUCT SIZE ACCORDINGLY
 - SIMILARLY LINE SUPPLY AND RETURN DUCTS 10 FT (3M) FROM ALL ROOFTOP AC UNITS AND INDOOR AIR HANDLER/AND HEAT PUMPS.
- 8. SUPPLY ALL GRILLES AND DIFFUSERS WHERE SHOWN ON DRAWINGS. FINISH SHALL BE OFF-WHITE BAKED ENAMEL.
- 9. THE REFRIGERANT LINES SHALL BE SIZED FOR A PRESSURE DROP OF NOT MORE THAN 14 KPA (2 PSI). REFRIGERANT PIPE SHALL BE TYPE L NITROGEN CHARGED ACR GRADE COPPER WITH FORGED BRASS OR WROUGHT COPPER REFRIGERATION FITTINGS. ALL JOINTS SHALL BE BRAZED. SAE FLARED FITTINGS ARE NOT ACCEPTED.
- 10. PROVIDE SIGHT GLASSES FOR ALL LIQUID LINES AND SPORLAN LIQUID LINE DRIERS AHEAD OF EACH THERMO EXPANSION VALVE. PROVIDE SOLENOID VALVE AHEAD OF EACH EXPANSION VALVE. SUCTION LINES SHALL BE PROPERLY LOOPED IN ORDER TO ALLOW THE RETURN OF OIL TO RETURN TO THE COMPRESSOR. PROVIDE NECESSARY WIRING TO OPERATE CONDENSER AND DX SOLENOID.
- 11. REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 3/4" (19MM) THICK ARMAFLEX INSULATION, WITH CEMENTED JOINTS. LIQUID LINES OUTDOORS EXPOSED TO SUNLIGHT SHALL ALSO BE SIMILARLY INSULATED. COVER EXTERIOR INSULATION WITH ALUMINUM JACKETTING.
- 12. INCLUDE FOR STARTUP OF ALL NEW EQUIPMENT.
- 13. CENTRIFUGAL FANS SHALL BE COMPLETE WITH BELT GUARDS WITH TACHOMETER OPENINGS.
- 14. ALL BACKDRAFT AND ELECTRIC MOTORIZED DAMPERS SHALL BE LOW LEAKAGE TYPE.
- 15. ALL EXTERIOR DUCTWORK SHALL BE INTERNALLY INSULATED WITH 1/2" (12MM) OF COATED FIBREGLAS DUCT INSULATION. INSULATE THE EXTERIOR WITH 2" (50MM) OF RIGID INSULATION AND FINISH WITH ALUMINIUM JACKETTING, BANDED ON AND SEALED WITH SILICONE OR SIMILAR SEALER. (TOTAL INSULATION VALUE R-12). DUCTWORK IN UNHEATED SPACES SHALL ALSO BE INSULATED TO R-12.
- 16. EXHAUST AIR DUCTWORK WITHIN 5 FT. (1500MM) OF A WALL OR ROOF, AND ALL OUTSIDE AIR INTAKE DUCTWORK, SHALL BE EXTERNALLY INSULATED WITH 2 1/2" (38MM) THICK FOIL FACED FLEXIBLE FIBREGLAS DUCT INSULATION (R-10). APPLY USING RECOMMENDED ADHESIVE AND TAPE ALL JOINTS USING VAPOUR BARRIER TAPE. ALL AIR CONDITIONED AIR SUPPLY DUCTWORK, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE INSULATED IN A SIMILAR MANNER USING 1" MATERIAL.
- 17. SUPPLY AND INSTALL ELECTRIC DUCT HEATERS OF SIZE AND TYPE AS SHOWN ON DRAWINGS. INCLUDE AIR FLOW SWITCH, CONTACTORS, SAFETY CUTOUTS, CONTROL TRANSFORMER, SCR CONTROLLER ETC.
- 18. ENERGY RECOVERY UNIT
- A. PROVIDE ENERGY RECOVERY VENTILATOR AS SHOWN.
- TWO (2) FACTORY-BALANCED FANS WITH BACKWARD CURVED BLADES. MOTORS TO BE WITH PERMANENTLY LUBRICATED, SEALED BALL-BEARINGS TO GUARANTEE LONG LIFE AND MAINTENANCE-FREE OPERATION.
- C. ENERGY RECOVERY CORE

 AHRI CERTIFIED CORE MADE FROM WATER VAPOR TRANSPORT DURABLE POLYMER MEMBRANE THAT IS HIGHLY PERMEABLE TO HUMIDITY. THE ERV CORE IS FREEZE TOLERANT AND
 WATER WASHABLE.
- D. FROST PREVENTION

 A PRESET FROST PREVENTION SEQUENCE IS ACTIVATED AT AN OUTDOOR AIR TEMPERATURE OF 14°F (-10°C) AND LOWER. DURING THE FROST PREVENTION SEQUENCE, THE SUPPLY
 BLOWER SHUTS DOWN AND THE EXHAUST BLOWER SWITCHES INTO HIGH SPEED TO MAXIMIZE THE EFFECTIVENESS OF THE FROST PREVENTION STRATEGY. THE UNIT THEN RETURNS TO
 NORMAL OPERATION, AND CONTINUES CYCLE.
- SERVICEABILITY
 E. CORE, FILTERS, FANS AND ELECTRICAL PANEL TO BE EASILY ACCESSED FROM THE ACCESS PANEL.
- CABINET

 24 CALICE COO CALVANIZED STEEL
- 24 GAUGE G90 GALVANIZED STEEL. G. INSULATION
- INSULATED WITH 1 IN. (25 MM) OF FOIL-FACED HIGH DENSITY POLYSTYRENE FOAM AN 0.25 IN. (6 MM) OF CLOSED-CELL FOAM ON THE TOP OF THE UNIT.
- H. FILTERS
 TWO (2) WASHABLE ELECTROSTATIC PANEL TYPE OR REPLACEABLE AIR FILTERS.
 I. INSTALLATION
- PROVIDE UNIT SUPPORT AND HUNG FROM STRUCTURE ABOVE. PROVIDE VIBRATION ISOLATORS. PROVIDE FLEXIBLE CONNECTORS ON ALL DUCT CONNECTIONS TO THE UNIT.
- J. WARRANTY
 5 YEARS ON ENERGY RECOVERY CORE, 7 YEAR ON MOTORS, AND 5 YEAR ON PARTS.
- K. REQUIREMENTS AND STANDARDS

 I.COMPLIES WITH THE UL 1812 REQUIREMENTS REGULATING THE CONSTRUCTION AND INSTALLATION OF HEAT RECOVERY VENTILATORS

 II. COMPLIES WITH THE CSA C22.2 NO. 113 STANDARD APPLICABLE TO VENTILATORS
- III. COMPLIES WITH THE CSA F326 REQUIREMENTS REGULATING THE INSTALLATION OF HEAT RECOVERY VENTILATORS IV. TECHNICAL DATA WAS OBTAINED FROM PUBLISHED RESULTS OF TEST RELATING TO CSA C439 STANDARDS
- V. ERV CORE ISO 846 CERTIFIED FOR MOLD AND BACTERIA RESISTANCE
 VI. HVI CERTIFIED
- 19. PROVIDE ALL MOTORIZED DAMPERS TO OPEN AND CLOSE AS RESPECTIVE FANS START AND STOP.
- 20. SUPPLY AND INSTALL ALUMINUM WEATHER LOUVRES WHERE SHOWN. 4" (100MM) [6" (150MM)] STORMPROOF BLADE C/W BIRDSCREEN, LOUVRE COLOUR TO ARCHITECT'S APPROVAL. BLANK OFF ALL UNUSED SECTIONS WITH INSULATED SHEETMETAL.
- 21. ADJUST ALL FAN SPEEDS TO DELIVER SHOWN AIR QUANTITIES. BALANCE ALL AIR SYSTEMS AND SUPPLY WRITTEN AIR BALANCING REPORT. INCLUDE NECESSARY SPARE BELTS PULLEYS FOR FIELD ADJUSTMENT AND REPLACEMENT OF FILTERS. SET AIR SYSTEMS CONTROLS AND DEMONSTRATE OPERATION TO OWNER'S REPRESENTATIVE.
- IN RENOVATION WORK, VERIFY EXISTING AIR QUANTITIES BEFORE PROCEEDING WITH MODIFICATIONS

CONTROLS - SECTION 15950

- 1. ALL CONTROL WIRING SHALL BE CARRIED BY DIV.15: POWER WIRING SHALL BE BY DIV.16. THE CONTROL SYSTEM SHALL BE SUPPLIED AND INSTALLED COMPLETE IN ALL RESPECT AND
- FULLY FUNCTIONAL. DEMONSTRATE TO THE MECHANICAL CONSULTANT ON COMPLETION OF WORK.

 2. THIS MECHANICAL CONTRACTOR TO HIRE AND PAY FOR APPROVED CONTROL CONTRACTOR.
- 3. PROVIDE ALL CONTROLS AND WIRING INCLUDING APPURTENANCES NECESSARY FOR COMPLETE AND OPERATING SYSTEMS.
- 4. NEW THERMOSTATS SHALL MATCH BASE BUILDING (WITH LOCKABLE VENTILATED TAMPER-PROF COVER)
- 5. CLEAN AND RECALIBRATE ALL EXISTING THERMOSTATS UPON COMPLETION OF CONSTRUCTION. SUBMIT REPORT THAT THIS WORK HAS BEEN COMPLETED. RELOCATE EXISTING THERMOSTATS AS SHOWN AND RE-WIRED TO SUIT NEW LOCATION.
- 6. PROVIDE ALL NECESSARY EMT CONDUIT, FITTINGS AND WIRE TO PROVIDE A COMPLETE AND OPERATING CONTROL SYSTEM. HARD WIRE ALL ELECTRICAL CONTROL DEVICES INTO THE
- ASSOCIATED SYSTEM MAGNETIC STARTER. PROVIDE POWER TO CONTROL PANEL FROM THE NEAREST NORMAL POWER ELECTRICAL DISTRIBUTION PANEL.
- 7. ENERGY RECOVERY SYSTEM SEQUENCE OF OPERATION:
 A. ENERGY RECOVERY SYSTEM CONSISTS OF ENERGY RECOVERY VENTILATOR ERV, DX COOLING COIL AND ELECTRIC HEATING COIL.
- B. IN ADDITIONAL TO BUILT-IN CONTROLS FOR ERV UNIT PROVIDE ALL REQUIRED CONTROLS (CONTROLLERS, WIRING ETC.) TO ACHIEVE SPECIFIED SEQUENCE OF OPERATION.
 C. ERV UNIT TO OPERATE ON EXHAUST MODE (EXHAUST FAN ON) AT ALL TIMES.
 - WHENEVER SPACE CO2 SENSOR READINGS ARE ABOVE SET POINT (ABOVE 700PPM ADJUSTABLE) THE SYSTEM TO OPERATE AT FULL' MODE AS FOLLOWING:
 ERV SUPPLY AND RETURN FANS ARE ON, HEAT WHEEL IS OPERATIONAL.
 DX COOLING COIL AND ELECTRICAL HEATING COIL MODULATE IN SEQUENCE TO MAINTAIN SUPPLY AIR TEMPERATURE AT 55F/54F IN SUMMER AND 65F IN WINTER (DUCT MOUNTED
 - TEMPERATURE SENSOR). SUPPLY TEMPERATURE SETPOINTS TO BE ADJUSTABLE.

 AVOID SIMULTANEOUS HEATING AND COOLING

PROVIDE DUCT MOUNTED TEMPERATURE SENSOR DOWNSTREAM OF DX AND HEATING COILS

8. PROVIDE CONTROLS SYSTEMS TRAINING FOR CLIENT'S REPRESENTATIVES WHEN SYSTEM HAS BEEN COMPLETED AND VERIFIED AS PER SPECIFICATIONS. PROVIDE FOUR HOURS MINIMUM FOR NEW HVAC CONTROL SYSTEMS.

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Description Date

1 Final Review 16 July '18

Issued for Permit & Tender

16 July '18

TORONTO Building

PERMIT REVIEWED FOR COMPLIANCE WITH
THE ONTARIO BUILDING CODE

18 197188 BLD 00



SEPARATE PERMITS REQUIRED FOR HVAC & PLUMBING. HVAC AND PLUMBING ARE NOT PART OF THIS PERMIT.



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16 July 2018	Permit / Tende
DATE:	STATUS:
18_22	As indicate
PROJECT CODE:	SCALE:

Mechanical



ELECTRICAL LEGEND

	POWER
SYMBOL	DESCRIPTION 125V, 15A DUPLEX U-GROUND RECEPTACLE UNLESS
Φ	OTHERWISE NOTED. DUPLEX RECEPTACLE AS ABOVE,
Ф _{20А}	CSA 5-20A TYPE. SAME AS ABOVE EXCEPT CONNECT TO CONTROLLED CIRCUIT.
	RECEPTACLE SHALL BE GREY COLOUR. DOUBLE DUPLEX RECEPTACLE IN A
	COMMON COVER PLATE.
Φ	125V, 15A SINGLE RECEPTACLE. VOLTAGE/AMPERAGE AND TYPE AS INDICATED.
Φ	SPECIAL RECEPTACLE. VOLTAGE/AMPERAGE AND TYPE AS INDICATED.
Ø Ø Ø	RECEPTACLES AS ABOVE BUT MOUNTED ABOVE COUNTER OR 42"AFF.
gfi \oplus wp \oplus tl \oplus	RECEPTACLE AS ABOVE SUBSCRIPTS DENOTE SPECIAL TYPE AS PER ABBREVIATION LIST.
⊕n≳B	15A DUPLEX RECEPTACLE WITH TWO USB CHARGERS, MODEL TR5262USBW BY LEGRAND OR APPROVED EQUAL
⊕ıœ	IG DENOTES ISOLATED GROUND RECEPTACLE WITH DEDICATED GROUND WIRE AND SEPARATE CIRCUIT NEUTRAL.
•	125V, 15A DUPLEX RECEPTACLE. SPLIT—WIRED WITH EACH HALF ON SEPARATE CIRCUIT.
Ф	125V, 15A CEILING MOUNTED DUPLEX RECEPTACLE AS SPECIFIED.
°	FUSED DISCONNECT SWITCH. SIZE AS NOTE. (EG. 30A/3PSN WITH 20A FUSES)
3PSN	AS ABOVE BUT C/W TIME DELAY FUSES.
	BREAKER. SIZE AS NOTED.
	UNFUSED DISCONNECT SWITCH. SIZE TO SUIT OR AS NOTED. SEE ABBREVIATION FOR OTHER SUBCRIPTS.
✓	MOTOR AS INDICATED. INCLUDE FINAL CONNECTION.
\boxtimes	COMBINATION LINE VOLTAGE MOTOR STARTER AND SWITCH.
\boxtimes	LINE VOLTAGE MOTOR STARTER. SEE SPECIFICATION FOR SCOPE OF WORK.
J	JUNCTION BOX AS INDICATED.
○PL	120V DIRECT CONNECTION FOR USE AS NOTED. INCLUDE FINAL CONNECTION. 'PL' DENOTES FOR ELECTRONIC PLUMBING FIXTURES.
	SPECIAL DIRECT CONNECTION FOR USE AS NOTE. INCLUDE FINAL CONNECTION.
P C	WALL MOUNTED FEED TO SYSTEM FURNITURE: POWER AND COMMUNICATIONS RESPECTIVELY. PROVIDE CONNECTION TO FURNITURE
•	PUSHBUTTON FOR USE AS NOTED.
LP"A" LP"B"	FLUSH OR SURFACE MOUNTED ELECTRICAL PANEL RESPECTIVELY.
≠	ELECTRIC HEATER. BASEBOARD/FORCED—AIR RESPECTIVELY. TYPE AS INDICATED.
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
A 2KW	ELECTRIC HEATER DESCRIPTION. LETTER DENOTES TYPE. NUMBER DENOTES WATTAGE.
	LIGHTING
CVADOL	
SYMBOL F1	DESCRIPTION FLUORESCENT STRIP LIGHT IN COVE OR VALENCE. LENGTH
F2 F3 -	SHOWN TO SCALE ON THE DRAWINGS. LETTER DENOTES TYPE. FLUORESCENT LUMINAIRE, CEILING OR WALL MOUNTED
F2 ////// NL	RESPECTIVELY. LETTER DENOTES TYPE. LUMINAIRE AS ABOVE BUT CONNECTED TO NIGHT LIGHT CIRCUIT.
F2 ////// EM	LUMINAIRE AS ABOVE BUT CONNECTED TO EMERGENCY OR NORMAL & EMERGENCY LIGHT CIRCUITS WITH BY-PASS UNIT - SEE SPEC FOR
L1 () L2()	MORE DETAILS CEILING OR WALL MOUNTED LUMINAIRE RESPECTIVELY. LETTER
L1 ØNL L2 NL	DENOTES TYPE. LUMINAIRE AS ABOVE BUT CONNECTED TO NIGHT LIGHT CIRCUIT.
L1 ⊘EM L2⊘EM	LUMINAIRE AS ABOVE BUT CONNECTED TO EMERGENCY OR NORMAL &
	EMERGENCY LIGHT CIRCUITS WITH BY—PASS UNIT — SEE SPEC FOR MORE DETAILS
	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN RESPECTIVELY. SINGLE OR DOUBLE FACED AS INDICATED BY FILLED IN PORTION(S) WITH ARROW(S) AS INDICATED.
K KN T KN	SURFACE MOUNTED SINGLE OF DOUBLE EMERGENCY LIGHTING
6 2	REMOTE HEAD. CEILING OR WALL MOUNTED AS SHOWN. EMERGENCY BATTERY NIT "BU1" C/W LIGHTING HEAD(S) AS
<u>B</u> BU1	SHOWN ON PLAN. 15A/20A 120V SINGLE POLE TOGGLE SWITCH(ES) WITH ONE,
\$ \$ \$	TWÓ OR THREE—GANG COVERPLATE RESPECTIVELY. SWITCHES RATING TO SUIT LIGHTING LOADS & BREAKER SIZE.
D	DIMMER. LUTRON NOVA "T", 120V OR 347V AND CAPACITY TO SUIT LOADS.
PC	PHOTOCELL. OCCUPANCY SENSOR. NUMBER DENOTES TYPE. REFER TO
OC 1	SCHEDULE.
	FIRE ALARM
SYMBOL	DESCRIPTION
ightharpoons	FIRE ALARM SPEAKER/STROBE COMBINATION.
/\	
	FIRE ALARM SPEAKER
	FIRE ALARM MANUAL PULL STATION.
	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH
	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL
	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR
SD SD/CO	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE
	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK—UP
	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK-UP FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE-OF-RISE.
	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK-UP FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE-OF-RISE. FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE (EG. 190°F)
	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK-UP FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE-OF-RISE.
SD/CO SD/CO HD SA/A R/A	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK-UP FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE-OF-RISE. FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE (EG. 190°F) FIRE ALARM DUCT MOUNTED SMOKE DETECTOR C/W REMOTE INDICATOR. S/A: SUPPLY R/A: RETURN SUPPLIED, INSTALLED AND WIRED TO FIRE ALARM SYSTEM BY DIV. 16.
SD/C0 SD/C0 → HD → SS/A	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK—UP FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE—OF—RISE. FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE (EG. 190°F) FIRE ALARM DUCT MOUNTED SMOKE DETECTOR C/W REMOTE INDICATOR. S/A: SUPPLY R/A: RETURN SUPPLIED, INSTALLED AND WIRED TO FIRE ALARM SYSTEM BY DIV.
SD/CO SD/CO HD SA/A R/A	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK—UP FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE—OF—RISE. FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE (EG. 190°F) FIRE ALARM DUCT MOUNTED SMOKE DETECTOR C/W REMOTE INDICATOR. S/A: SUPPLY R/A: RETURN SUPPLIED, INSTALLED AND WIRED TO FIRE ALARM SYSTEM BY DIV. 16. RECESSED OR SURFACE MOUNTED FIRE ALARM CONTROL PANEL/OR ANNUNCIATOR AS NOTED. FACP: FIRE ALARM CONTROL PANEL FAAP: FIRE ALARM ANNUNCIATOR PANEL FIRE PROTECTION SYSTEM SWITCH. SUPPLIED AND INSTALLED BY
SD/CO SD/CO HD SA/A R/A	FIRE ALARM MANUAL PULL STATION. FIRE ALARM MINI HORN IN RESIDENT, SWITCH C/W 10 MINUTES SILENCEABLE SWITCH FIRE ALARM BELL FIRE ALARM SMOKE DETECTOR FIRE ALARM SMOKE/CO DETECTOR WITH SOUNDER BASE SELF CONTAINED SMOKE AND CO DETECTOR (NOT CONNECTED TO FIRE ALARM SYSTEM) WITH VISUAL SIGNALING, BATTERY BACK—UP FIRE ALARM HEAT DETECTOR, COMBINATION FIXED TEMPERATURE AND RATE—OF—RISE. FIRE ALARM HEAT DETECTOR, FIXED TEMPERATURE (EG. 190°F) FIRE ALARM DUCT MOUNTED SMOKE DETECTOR C/W REMOTE INDICATOR. S/A: SUPPLY R/A: RETURN SUPPLIED, INSTALLED AND WIRED TO FIRE ALARM SYSTEM BY DIV. 16. RECESSED OR SURFACE MOUNTED FIRE ALARM CONTROL PANEL/OR ANNUNCIATOR AS NOTED. FACP: FIRE ALARM CONTROL PANEL FAAP: FIRE ALARM ANNUNCIATOR PANEL

COMMUN	ICATION / AV SYSTEM				
SYMBOL	DESCRIPTION				
▼	TELEPHONE OUTLET (SEE RISER DIAGRAM WHERE APPLICABLE)				
igwedge	DATA OUTLET (SEE RISER DIAGRAM WHERE APPLICABLE)				
lacksquare	COMBINATION TELEPHONE/DATA OUTLET.SEE RISER DIAGRAM FOR DETAIL				
\checkmark	OUTLET AS ABOVE BUT MOUNTED ABOVE COUNTER OR 42"AFF.				
© ©	SPEAKER (OTHER THAN FIRE ALARM) WITH OUTLET FOR WALL OR CEILING MOUNTED.				
TV	CATV OUTLET. REFER TO SCOPE OF WORK.				
	CEILING OR WALL MOUNTED WIRELESS ACCESS POINT				
•	INTERCOM STATION				
	SECURITY				
SYMBOL	DESCRIPTION				
DC	SECURITY SYSTEM, DOOR CONTACT.				
CR	SECURITY SYSTEM, CARD READER				
ES	SECURITY SYSTEM, ELECTRIC STRIKE				
	CCTV SYSTEM CAMERA				
	ABBREVIATIONS				
SYMBOL	DESCRIPTION				
WP	WEATHERPROOF				
GFI	GROUND FAULT INTERRUPTER				
MD	MOTORIZED DAMPER				
A-1	PANEL "A", CIRCUIT #1.				
BBH	BASEBOARD HEATER				
AFF	ABOVE FINISHED FLOOR				
TL	TWIST-LOCK				
N	NEW				
ER	DENOTES EXISTING TO BE RELOCATED				
EX	EXISTING TO REMAIN				
R	EXISTING TO BE REMOVED				
RP	RELOCATED POSITION				
CL	CEILING MOUNTED				
1D	ONE DATA OUTLET, '1' DENOTES NUMBER OF OUTLETS				
1V	ONE VOICE OUTLET, '1' DENOTES NUMBER OF OUTLETS				
DWG	DETAIL # DRAWING WHERE DETAIL IS SHOWN.				

	ELECTRICAL DRAWING LIST
NUMBER	DESCRIPTION
E-1	ELECTRICAL LEGEND, DRAWING LIST, DETAILS AND SCHEDULES
E-2	BASEMENT 1 & 2 AND LEVEL 1 - POWER DEMOLITION
E-3	LEVEL 2, 3 AND 4 - POWER DEMOLITION
E-4	BASEMENT 1 & 2 AND LEVEL 1 — LIGHTING DEMOLITION
E-5	LEVEL 2, 3 AND 4 - LIGHTING DEMOLITION
E-6	BASEMENT 1 & 2 AND LEVEL 1 — POWER NEW LAYOUT
E-7	LEVEL 2, 3 AND 4 — POWER NEW LAYOUT
E-8	BASEMENT 1 & 2 AND LEVEL 1 — LIGHTING NEW LAYOUT
E-9	LEVEL 2, 3 AND 4 — LIGHTING NEW LAYOUT
E-10	ELECTRICAL DETAILS
E-11	PANEL SCHEDULES
E-12	ELECTRICAL SPECIFICATION

HAND DRYER SPECIFICATIONS

HAND DRYERS TO BE PROVIDED BY DIVISION 16 CONTRACTOR. DRYERS TO BE SURFACE MOUNTED AIRBLADE V BY DYSON. ELECTRICAL DATA: 120V, 60HZ, 1,000 W MOTOR, NO HEATER FINISH: SPRAYED NICKEL DRYER TO BE C/W HEPA FILTER

PROVIDE MOUNTING BRACKETS

- MOUNT DRYER AT 655mm AFF FROM UNDERSIDE

EMERGENCY BATTERY UNIT SPECIFICATIONS

BATTERY UNITS

BATTERY UNIT SHALL BE LUMACELL CAT. #RG24S SERIES WITH CAPACITY AS INDICATED ON DRAWING AND EQUAL BY EMERGILITE, DUALITE OR BEGHELLI. UNITS SHALL BE FOR OPERATION ON 120 VOLT — 10 YEARS LIFE BATTERY — WITH NUMBER OF HEADS INDICATED ON THE DRAWINGS. UNITS SHALL BE PLUG—IN TYPE WITH SEALED PURE LEAD BATTERIES. THE CHARGER SHALL BE COMPLETELY AUTOMATIC, SOLID STATE TYPE BROWN OUT FEATURE, CAPABLE OF FULLY RECHARGING DISCHARGED BATTERY IN 24 HOURS. TRANSFER DEVICE SHALL AUTOMATICALLY SWITCH LOAD ON AT POWER FAILURE AND OFF ON RETURN OF NORMAL POWER. UNITS SHALL HAVE LOW VOLTAGE DISCONNECT FEATURE. PROVIDE DUPLEX POWER OUTLET FOR EACH BATTERY UNIT.

REMOTE HEADS 'DC'

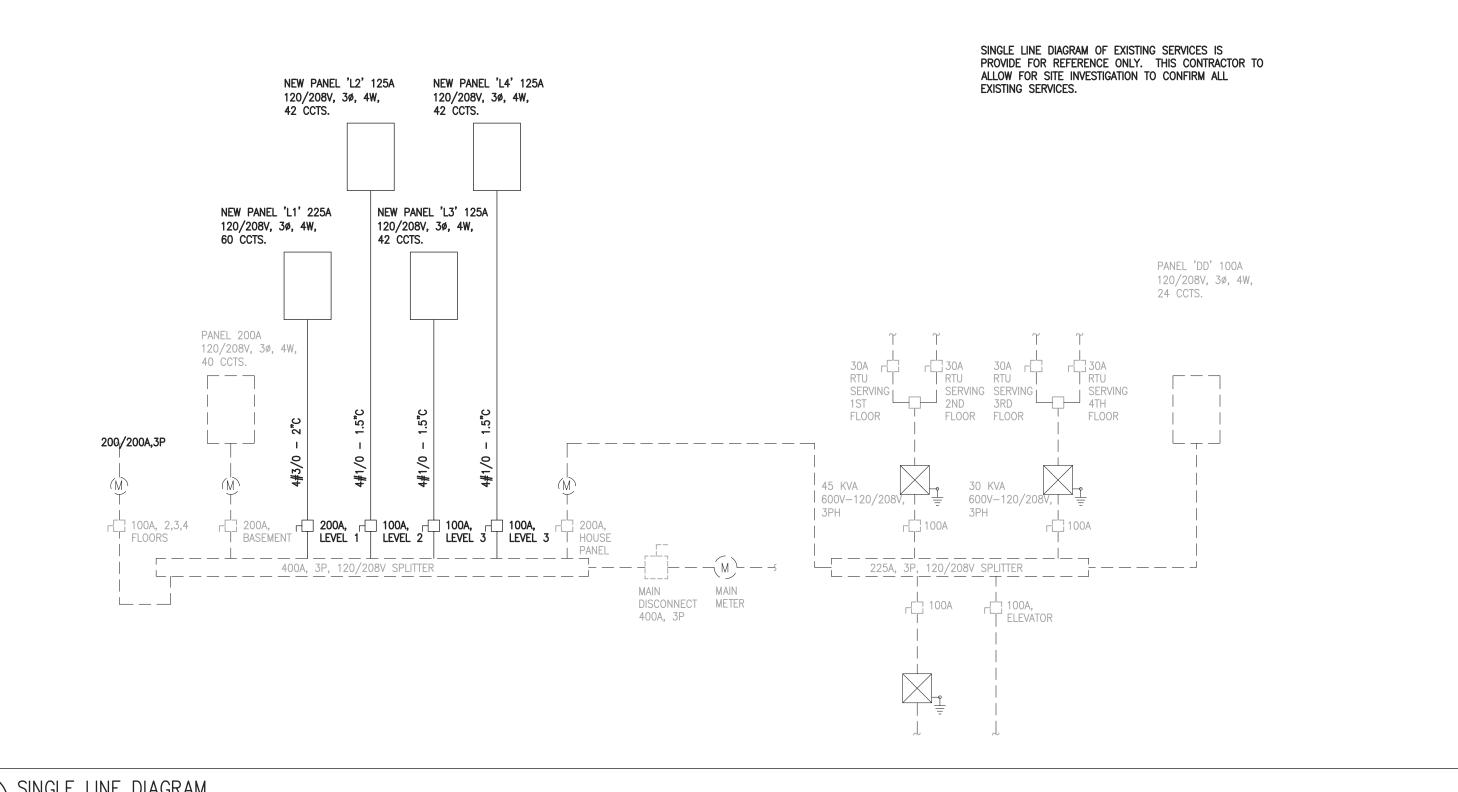
1. SINGLE AND DOUBLE REMOTE HEADS SHALL BE MR16, 24V, 6W, LED LAMPS EMERGENCY LIGHTING REMOTE HEADS SHALL BE WHITE. LUMACELL CAT. #MQM SERIES OR APPROVED EQUAL.

2. WP — SINGLE AND DOUBLE REMOTE HEADS SHALL BE MR16 24V, DC 12W, EMERGENCY LIGHTING REMOTE HEADS SHALL BE WHITE. WEATHER—PROOF.
LUMACELL CAT. #Q—BIC SERIES OR APPROVED EQUAL.

EXIT SIGN 'X'

SINGLE FACE OR DOUBLE FACE AS PER DRAWING, UNIVERSAL MOUNTED LED SIGN, GREEN RUNNING MAN PICTOGRAM, ALUMINUM HOUSING, LESS THAN 3W LED, 120VAC & 24VDC INPUT. GREEN MAN ON WHITE FACE.

LUMACELL CAT.# LA SERIES OR APPROVED EQUAL



1 SINGLE LINE DIAGRAM E-1 SCALE: N.T.S.

[ELECTRIC HEATER SCHEDULE
TYPE	DESCRIPTION
A	208V, 1PH HEAVY DUTY ELECTRIC BASEBOARD HEATER WHITE FINISH C/NTEMPER-PROOF BUILT-IN THERMOSTAT. KILOWATTAGE AS INDICATED ON DRAWING. OUELLET CAT.# OPR SERIES OR APPROVED EQUAL.
В	208V, 1PH ELECTRIC FORCED—AIR HEATER, WHITE FINISH C/W BUILT—IN THERMOSTAT. KILOWATTAGE AS INDICATED ON DRAWING. OUELLET CAT.# OAC SERIES OR APPROVED EQUAL.
NOTES:	

NOTES:

PRIOR TO REMOVAL OF OLD ELECTRIC HEATERS AND ORDERING NEW HEATERS
 THIS CONTRACTOR TO VERIFY ON SITE CAPACITY AND VOLTAGE OF EACH AND REPORT BACK TO CONSULTANT TEAM.

2. ALL HEATERS TO BE PROVIDED WITH TEMPER PROOF SCREWS

SECURITY AND P.A. SYSTEM

SECURITY AND P.A. SYSTEM SCOPE OF WORK IS BY OTHERS.

THIS CONTRACTOR TO COORDINATE WITH SYSTEMS PROVIDERS AND PROVIDE POWER SUPPLY (120V) AND EMPTY CONDUITS FOR EACH DEVICE (REFER TO FLOOR PLAN FOR DEVICES LOCATIONS). EMPTY CONDUITS TO BE PROVIDE WITH PULL STRINGS. CONDUIT SIZE IS ¾"C OR AS PER SYSTEM PROVIDER. ALLOW FOR 2" CONDUIT FROM EACH FLOOR DOWN TO BASEMENT 1 (IT ROOM) FOR EACH SYSTEM.

THIS CONTRACTOR TO ASSIST SYSTEM PROVIDER IN REMOVING OLD DEVICES AS REQUIRED.

ADDITIONAL SCOPE OF WORK

IN ADDITION TO SHOWN ON DRAWINGS ALLOW FOR THE FOLLOWING:
REMOVAL OF 10 POWER OUTLETS
REMOVAL OF 5 FIRE ALARM DEVICES
REMOVAL OF 5 VOICE OUTLETS
REMOVAL OF 5 DATA OUTLETS
REMOVAL OF EXISTING 30 M OF 1"C WITH 3#6 WIRING AND PROVISION OF NEW OF SAME LENGTH.
REMOVAL OF EXISTING 30 M OF 1"C WITH 3 CAT 6 CABLES AND PROVISION OF NEW OF SAME LENGTH.
ADDITIONAL 50M OF 3#10-20MMC

GENERAL NOTES: (APPLY TO ALL DRAWINGS)

- 1. IN GENERAL, REMOVE ALL EXISTING WIRING WITHIN RENOVATED AREAS. REMOVE DISTRIBUTION PANELS ON LEVEL 1, 2, 3, 4.
- 2. ELECTRICAL CONTRACTOR TO PROVIDE MOUNTING HARDWARE FOR LIGHT FIXTURES.
- ENSURE THAT BASE BUILDING DESIGN IS NOT ALTERED.
 ELECTRICAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DISRUPTION CAUSE BY HIS FORCES TO OPERATIONAL BUILDING SERVICES. REPAIR ANY SYSTEM
- DAMAGED DURING THE EXECUTION OF THE WORK.

 5. WHENEVER APPLICABLE: ANY SHUT-DOWN OF BUILDING SERVICES SHALL HAVE THE APPROVAL OF THE CLIENT. COORDINATE WITH THE CLIENT AND THE GENERAL CONTRACTOR TO MINIMIZE DISRUPTION TO THE EVERY OPERATION OF THE BUILDING. IF REQUIRED, CARRY OUT THE WORK AFTER WORKING HOURS OR ON WEEKENDS.

INCLUDE ALL ASSOCIATED COST IN CONTRACT.

- 6. ALL WORK REQUIRED AND/OR SHOWN ON THE DRAWINGS RELATED TO LIFE SAFETY SYSTEMS (IE, FIRE ALARM, ETC.) SHALL BE INCLUDED IN THIS CONTRACT. EMPLOY AND PAY FOR THE SERVICES OF THE SYSTEM PROVIDER WHERE FINAL CONNECTIONS, MODIFICATIONS AND PROVISIONS OF THE NEW DEVICES IN EXISTING SYSTEM CONTROL PANEL IS TO BE DONE (IE, MODULES, RELAYS, SUB-PANELS, ETC.). ENSURE THAT NEW DEVICES ARE COMPATIBLE WITH THE EXISTING SYSTEM. MAINTAIN THE INTEGRITY OF THE EXISTING SUPERVISED CIRCUITS WHEN NEW DEVICES ARE TO BE CONNECTED. THE SYSTEM SHALL BE TESTED AND CERTIFIED FOR PROPER OPERATION UPON COMPLETION OF WORK.
- 7. THE WORK SHALL BE CARRIED OUT AT ALL TIME IN A MANNER THAT DOES NOT DISTURB CURRENT BUILDING OPERATION. THE PREMISES SHALL BE LEFT IN A SAFE CLEAN CONDITION SUITABLE FOR OCCUPANT'S WORK AT THE BEGINNING OF EACH WORK DAY DURING CONSTRUCTION.
- 8. REFER TO ARCHITECT'S OR INTERIOR DESIGNER'S DRAWINGS FOR EXACT LOCATIONS OF ELECTRICAL EQUIPMENT AND DEVICES.
- PROVIDE UPDATED PANEL DIRECTORY FOR EACH EXISTING PANEL. PROVIDE NEW TYPED DIRECTORIES FOR NEW AND EXISTING PANELS.
- 10. CIRCUIT NUMBERS SHOWN ON PLANS ARE FOR GROUPING PURPOSE ONLY.
 BALANCE LOADS TO WITHIN 10% ACROSS PHASES.
- 11. ELECTRICAL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
- 12. FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT, SEE MECHANICAL DRAWINGS. CO-ORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.
- 13. ALL EXISTING EQUIPMENT AND DEVICES SHALL REMAIN UNLESS OTHERWISE NOTED.
- 14. ALLOW CUTTING AND PATCHING AT EXISTING WALLS/CEILINGS TO RUN CONDUITS/WIRING.
- 15. ALL CABLING, PATCHES TERMINATION, CABLE TESTING AND IDENTIFICATION, JACK ETC FROM ROOM OUTLETS TO IT ROOM BY THIS CONTRACTOR FOR P/A AND DATA.
- 16. ALL NEW PROPOSED SURFACE MOUNTED CONDUIT ROUTING TO BE APPROVED BY THE ARCH BEFORE INSTALLATION.
- 7 REFER TO ARCH INTERIOR FLEVATIONS AND PLANS FOR ALL SURFACE MOUN
- 17. REFER TO ARCH INTERIOR ELEVATIONS AND PLANS FOR ALL SURFACE MOUNTED CONDUIT ROUTING.
- 18. ALL EXPOSED CONDUIT AND BOXES TO BE PAINT FINISH.
- 19. COORDINATE CONTRACTION SCHEDULE WITH LONG DELIVERY TIME ITEMS.
- 20. ALL LOCATIONS OF FIRE AND SAFETY DEVICES TO BE COORDINATED WITH ARCHITECT PRIOR TO INSTALLATION

NOTES RE. VOICE/DATA SYSTEM

- VOICE AND DATA SYSTEM SHALL BE PROVIDED BY OTHERS.
- THIS ELECTRICAL CONTRACTOR SHALL PROVIDE THE FOLLOWING:

 1. TELEPHONE OUTLET SHALL BE SINGLE GANG BOX C/W 3/4"C TO ZONE CONDUIT.

3. COMBINATION TELEPHONE/DATA OUTLET SHALL BE SINGLE GANG C/W 3/4"C TO ZONE

- 2. DATA OUTLET SHALL BE SINGLE BOX C/W 3/4"C TO ZONE CONDUIT.
- 4. ALL CONDUITS SHALL BE C/W PULL STRING.
- 5. PROVIDE ZONE CONDUIT/BOXES FOR VOICE AND DATA CABLING.
- 6. CEILING PLENUM IS RETURN AIR PLENUM AND ALLOWED FOR FT6 RATING CABLES ONLY.

7. LOCATION AND QUANTITY OF OUTLETS ARE SHOWN ON FLOOR PLAN.

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Description

TORONTO Building

PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE

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The City has Relied upon the plans and drawings prepared and submitted by the qualified architects and/or engineers on this project.

The issuance of a permit does not imply a complete design review of this project has been performed and does not relieve the owner and designers from the need to comply with the Ontario Building Code and referenced standards where contravention are subsequently noted.



WORKSHOP architecture

WURKSHUP architecture inc 1157 Davenport Road Toronto Ontario M6H 2G4 T 416.901.8055 F 416.849.0383 www.workshoparchitecture.ca

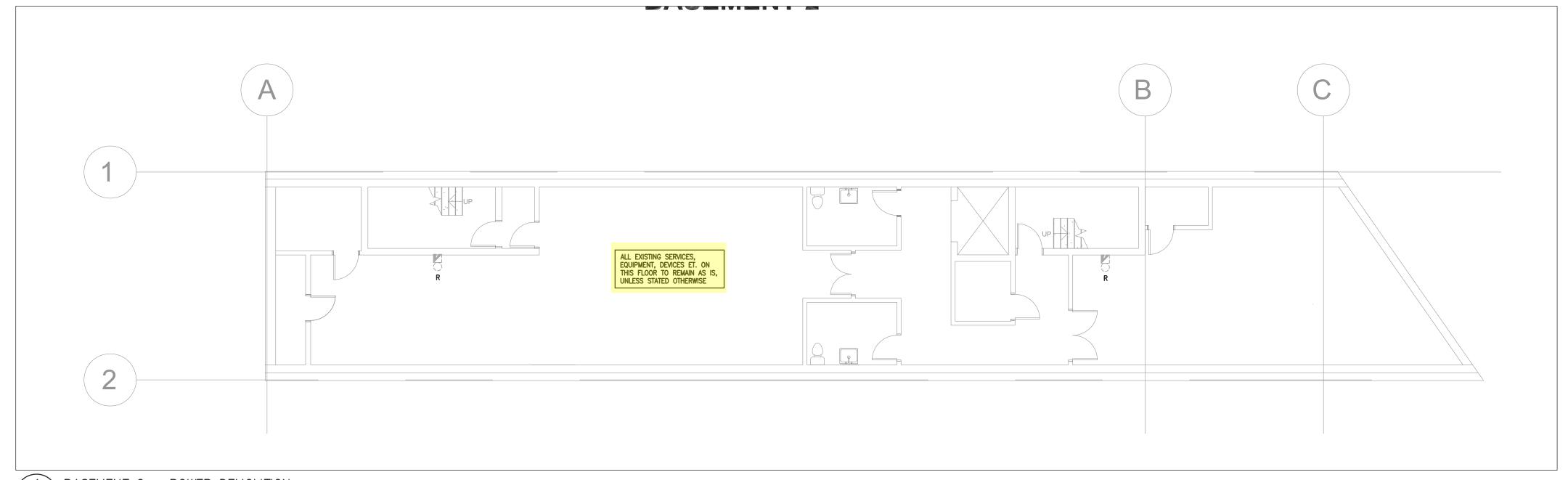
Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

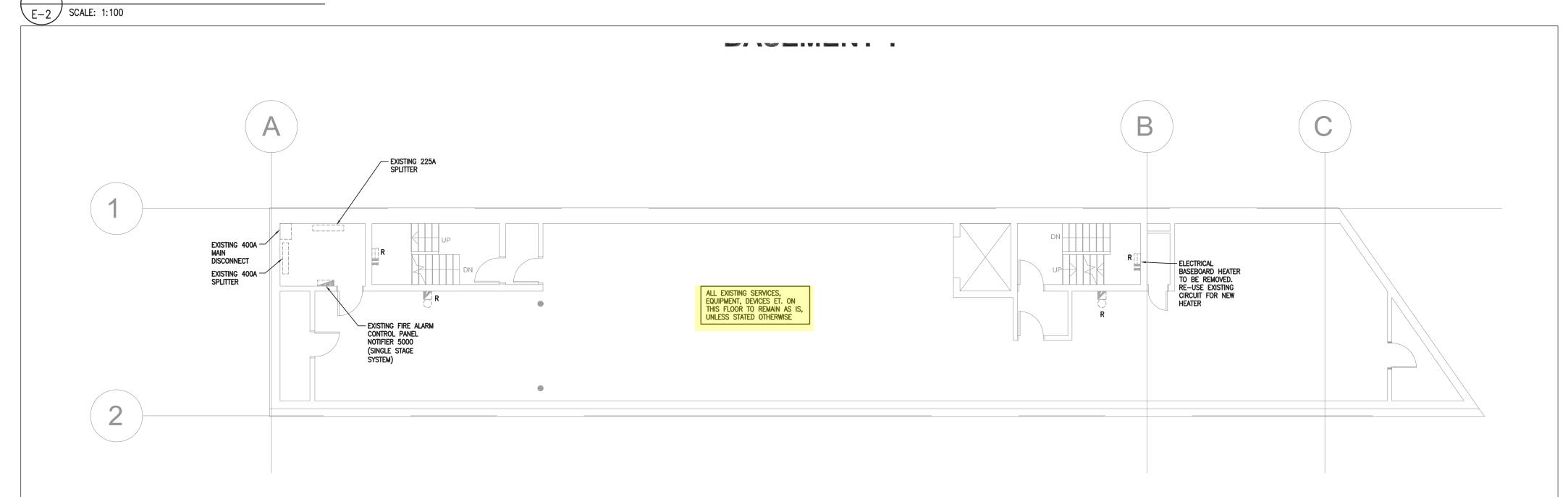
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PROJECT CODE:	SCALE:

Electrical Legend, Drawing List, Details and Schedules



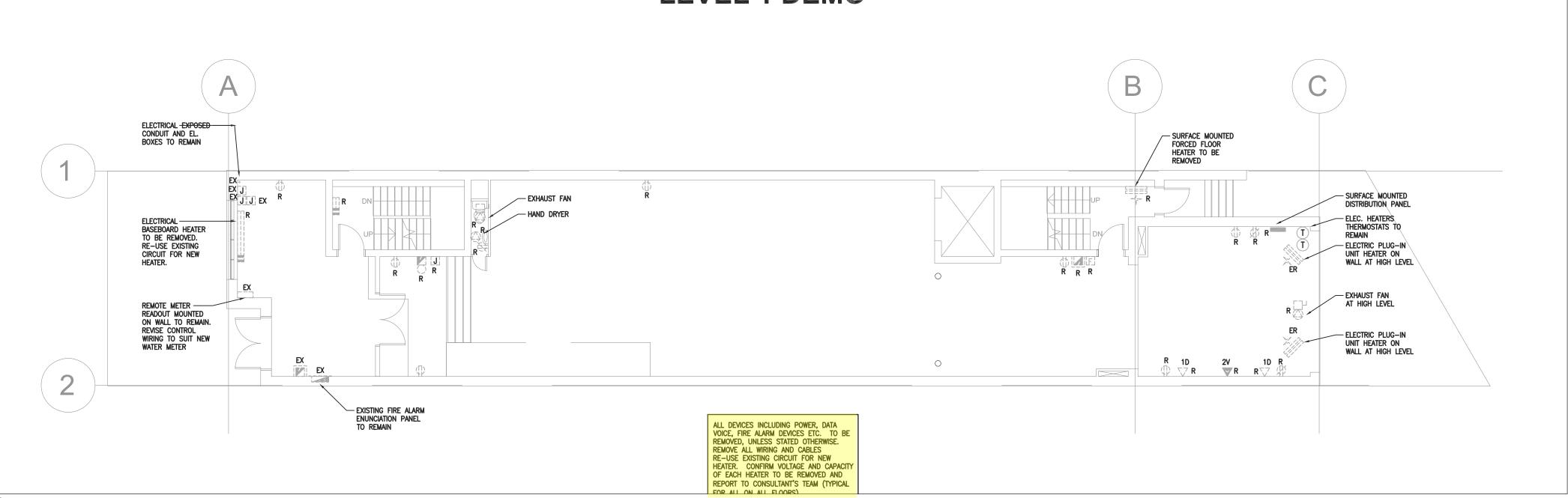


➤ BASEMENT 2 — POWER DEMOLITION



BASEMENT 1 - POWER DEMOLITION





\ LEVEL 1 - POWER DEMOLITION

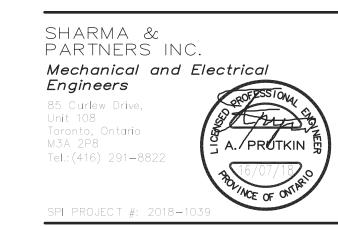
E-2 SCALE: 1:100

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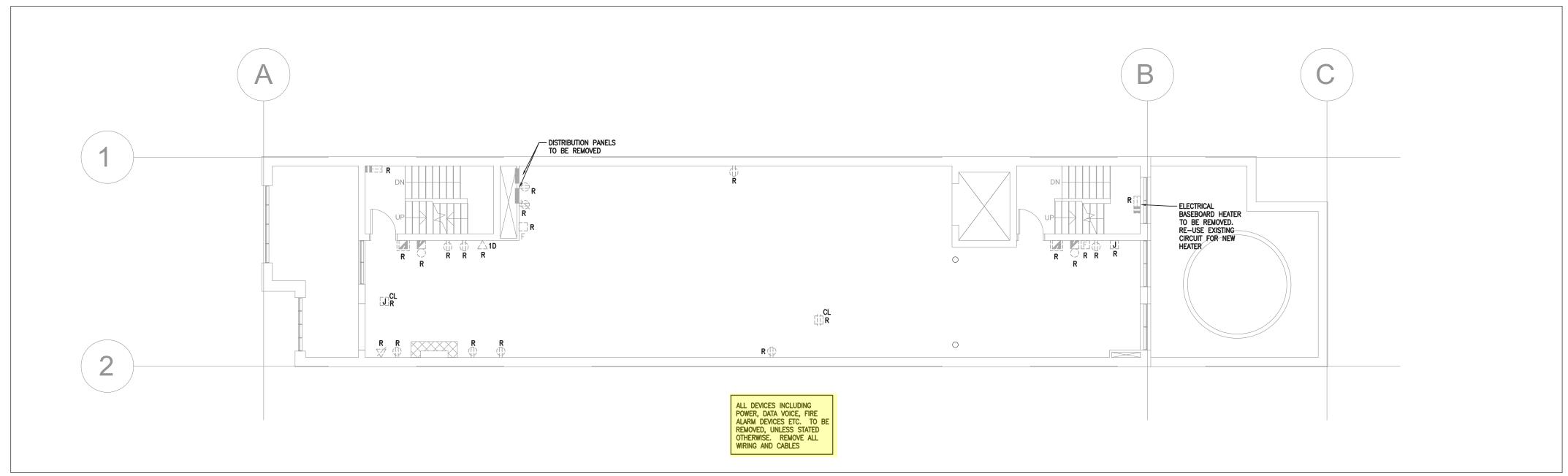
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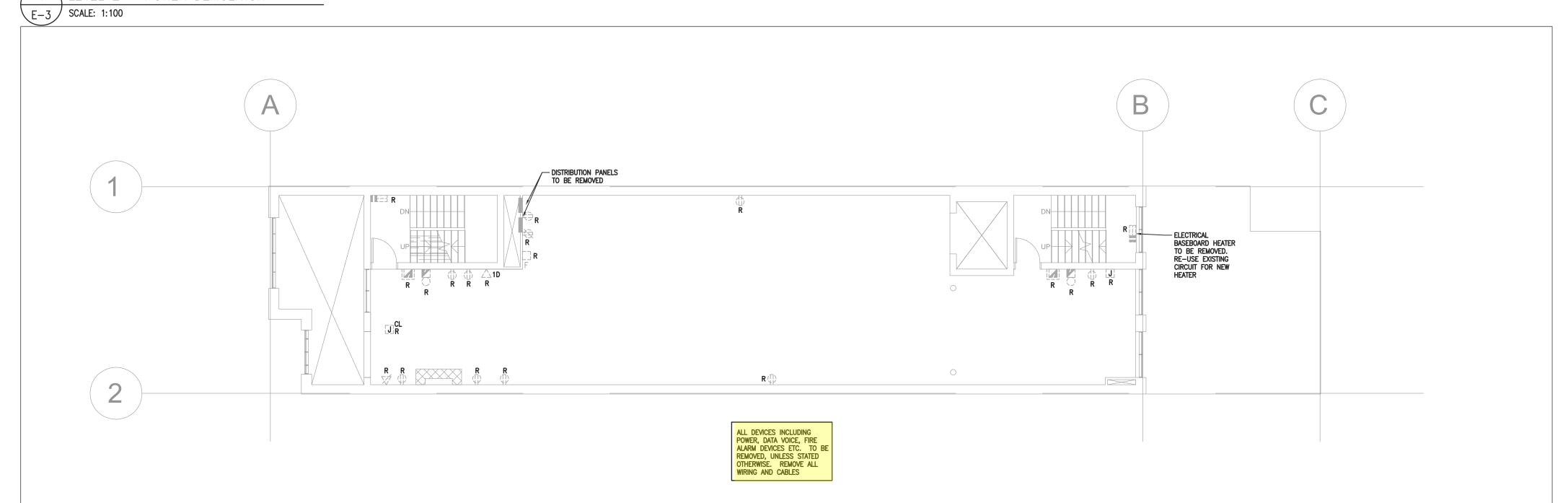
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DATE:	STATUS:
18_22	As indicated
PROJECT CODE:	SCALE:

Basement 1 & 2 and Level 1 **Power Demolition**

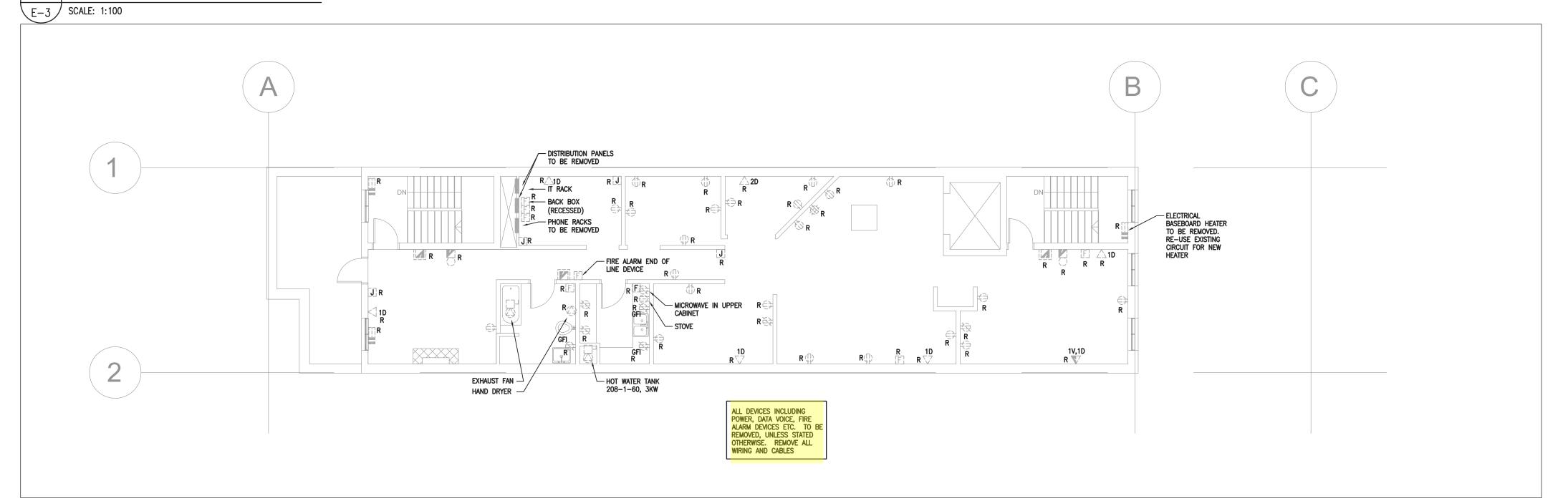




\ LEVEL 2 - POWER DEMOLITION



LEVEL 3 - POWER DEMOLITION



3 LEVEL 4 - POWER DEMOLITION

E-3 SCALE: 1:100

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SHARMA & PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive, Unit 108 Toronto, Ontario M3A 2P8 Tel.: (416) 291-8822 SPI PROJECT #: 2018-1039

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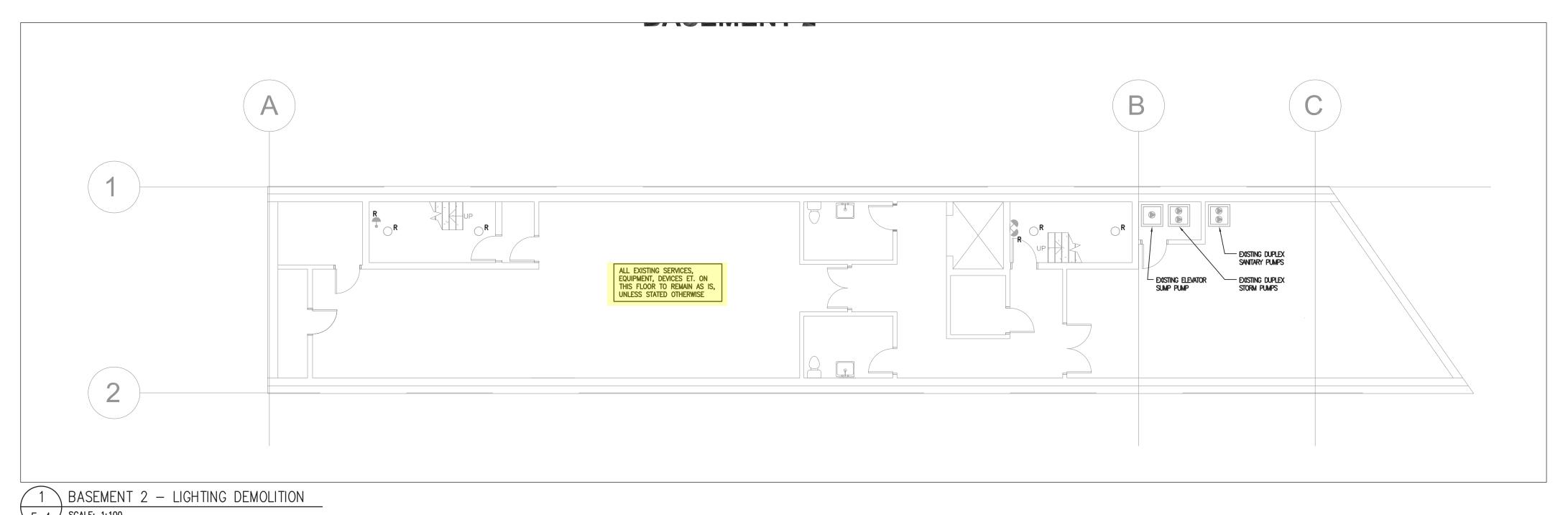
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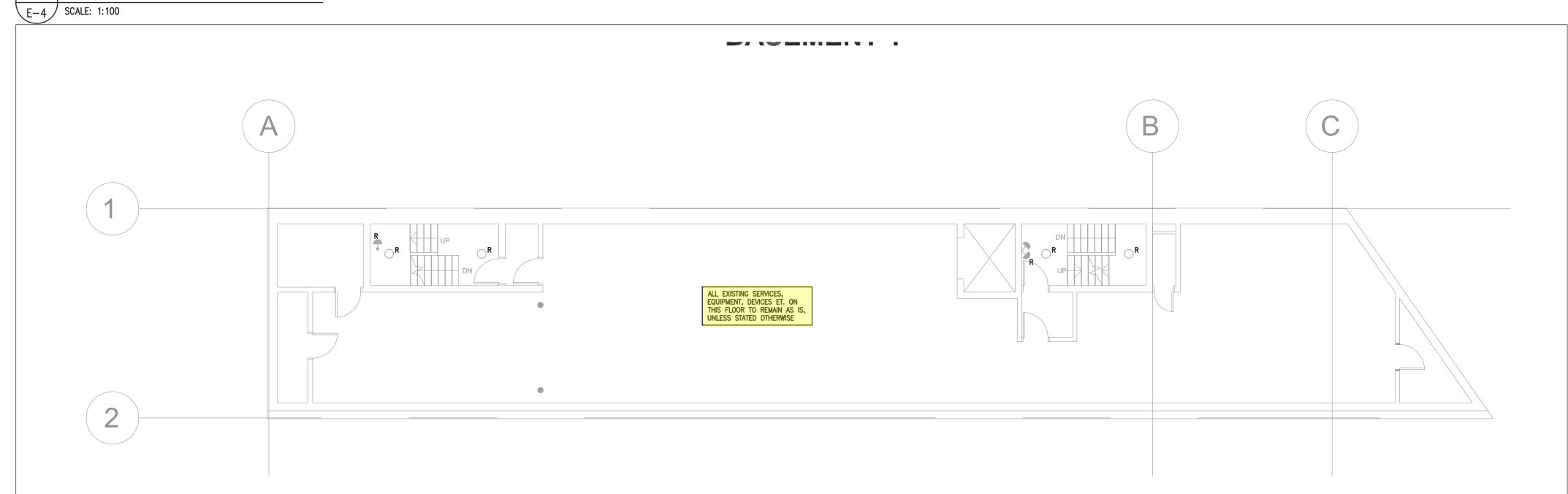
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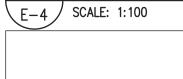
Level 2, 3 & 4 **Power Demolition**

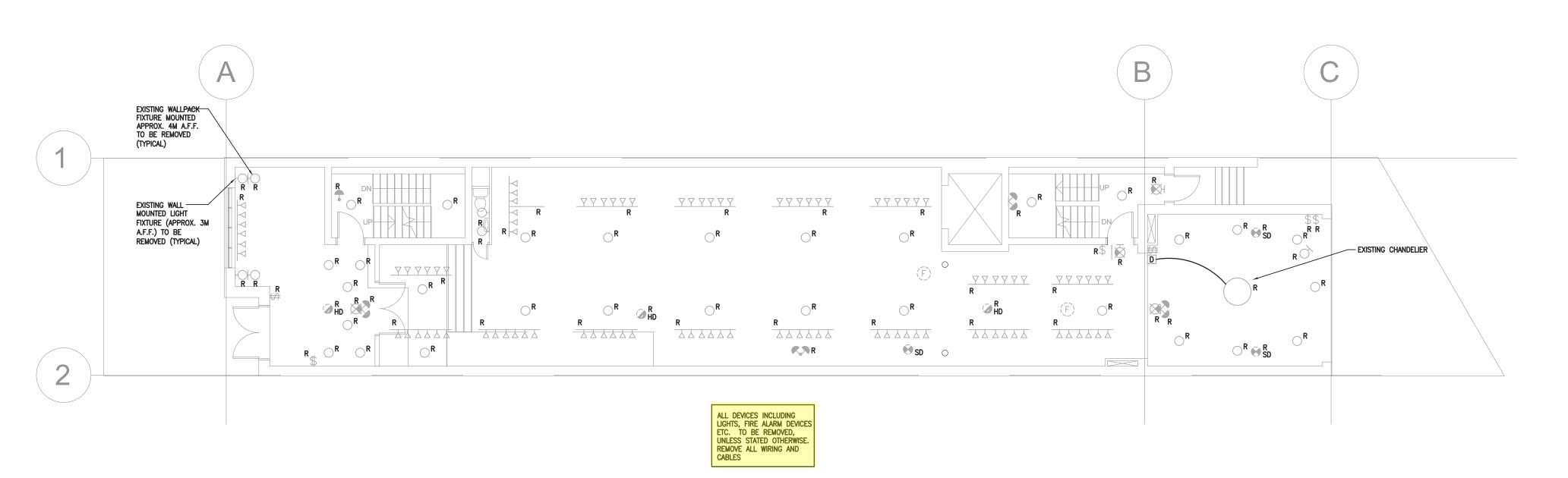






BASEMENT 1 - LIGHTING DEMOLITION





LEVEL 1 - LIGHTING DEMOLITION

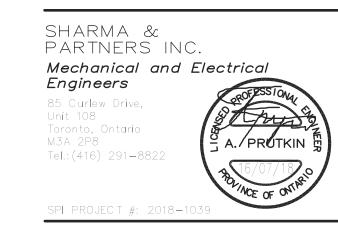
E-4 SCALE: 1:100

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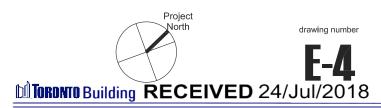
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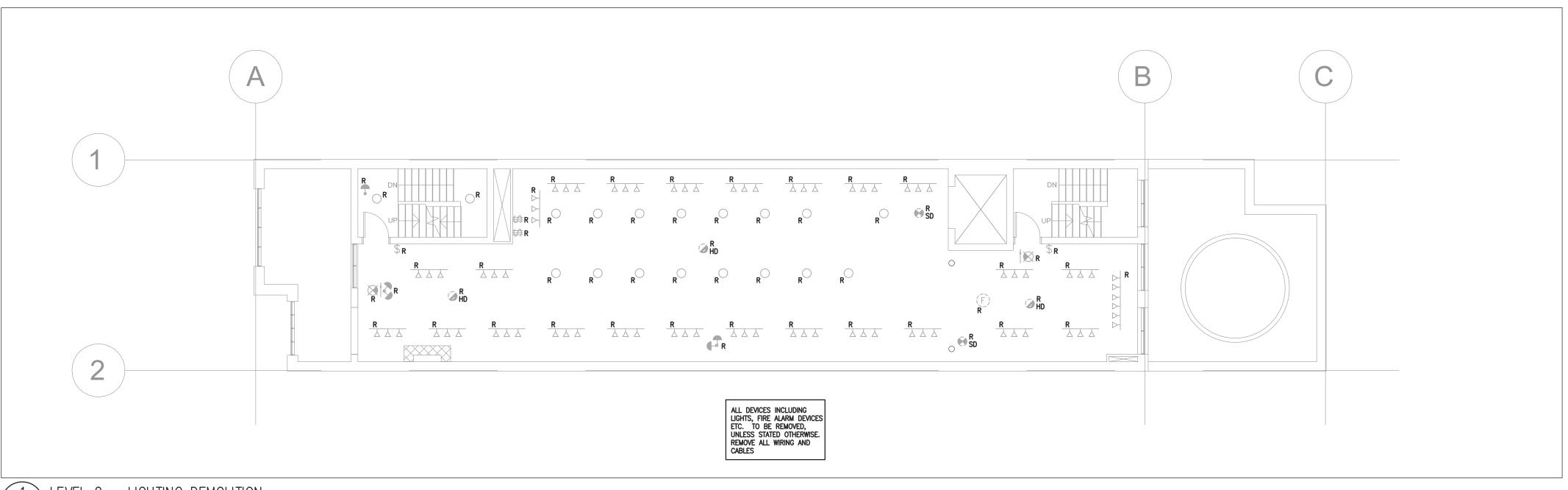
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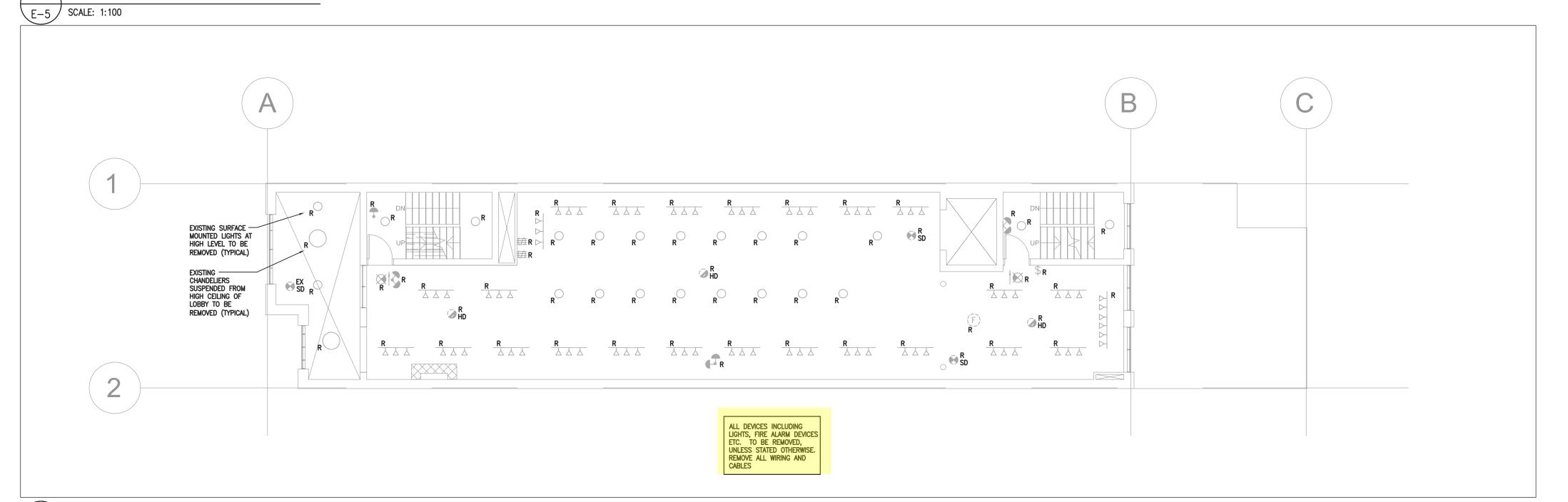
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Basement 1 & 2 and Level 1 **Lighting Demolition**

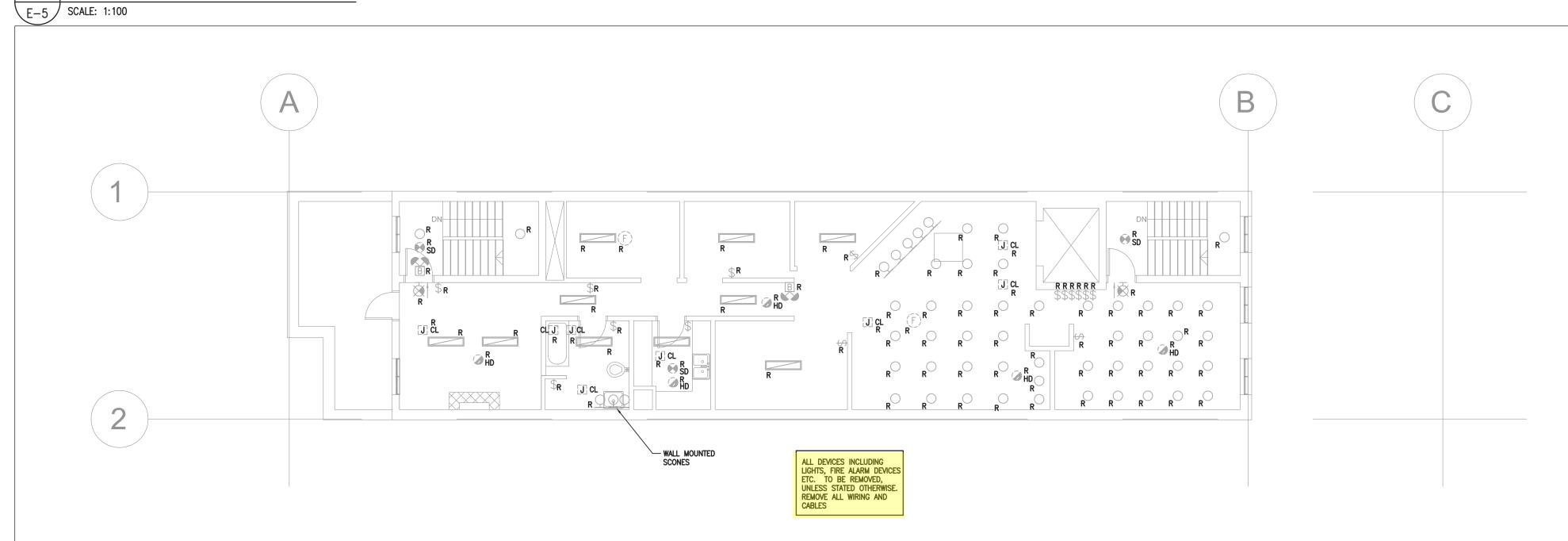




\ LEVEL 2 - LIGHTING DEMOLITION



BASEMENT 1 - LIGHTING DEMOLITION



\ LEVEL 1 - LIGHTING DEMOLITION

E-5 SCALE: 1:100

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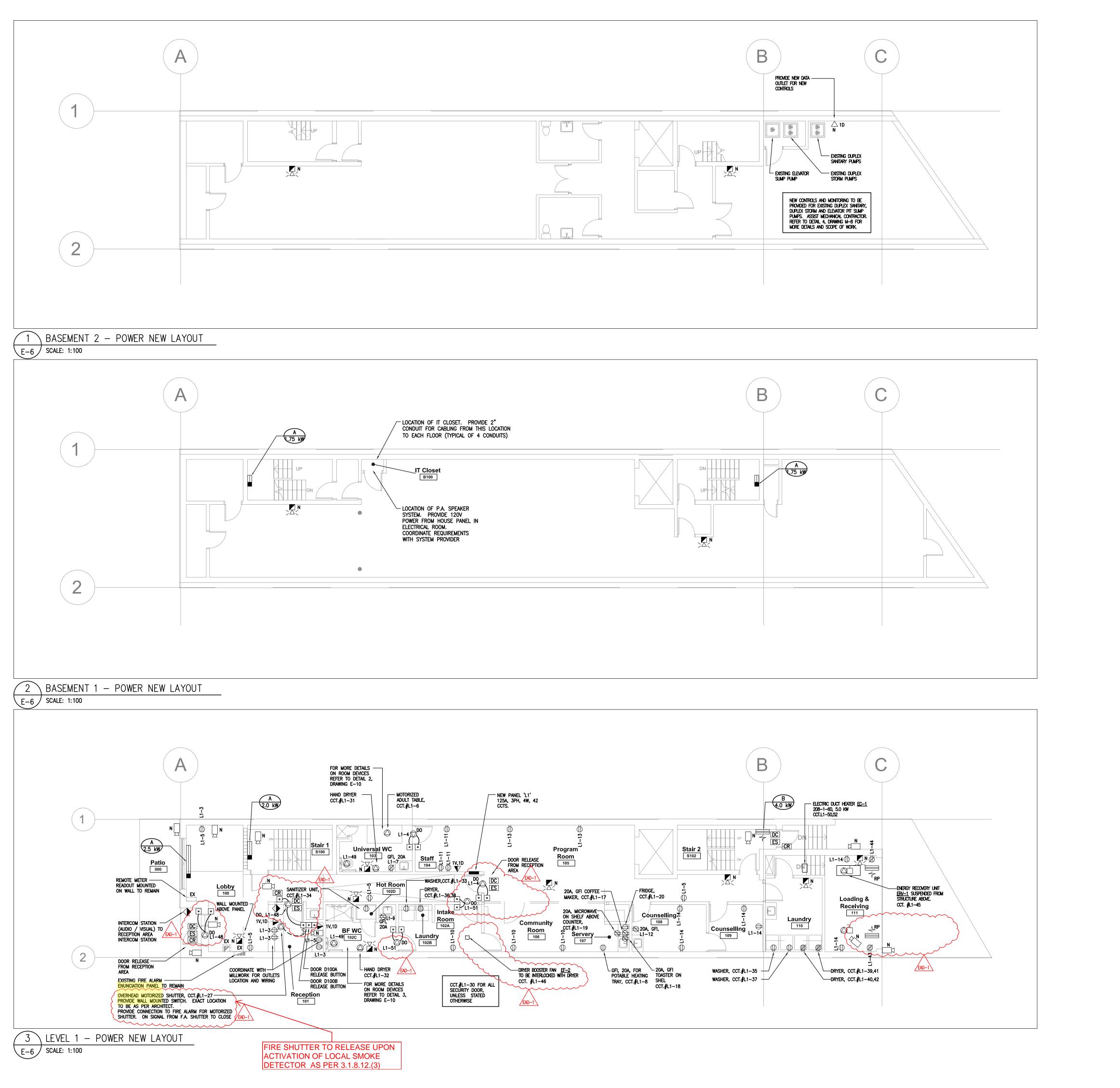
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Level 2, 3 & 4 **Lighting Demolition**







Fire alarm systems shall comply with the requirements of the Ontario Building Code. The audibility level of the alarms shall be maintained in all areas of the building. Interior finish and furnishings may have an affect on the decibel level of the fire alarm system.



Audible signal devices forming part of a fire alarm system shall be installed in a building so that alert signals and alarm signals are clearly audible throughout the floor area in which they are installed and shall comply with the applicable sound pressure levels and signal pattern described in Article 3.2.4.20.



A fire alarm system shall be designed to notify the fire department in conformance with Article 3.2.4.8.



Fire alarm systems, including those with voice communication capability, shall be installed in conformance with CAMALC-S524, "Installation of Fire Alarm Systems".



New fire alarm components shall be compatible with remaining devices. Upon completion of work all existing ancillary systems, devices, smoke control and exhaust systems shall be reconnected and shall function and operate as originally designed to operate.



Fire alarm systems, including those incorporating a voice communication system, shall be provided with an emergency power supply conforming to Sentences 3.2.7.8 (2) to (4).



The sound pressure level in a sleeping room from a fire alarm audible signal device shall be not less than 75 dBA in a building of residential occupancy when any intervening doors between the device and the sleeping room are closed as per 3.2.4.20 (5).



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18 197188 BLD 00

zoning

o.B.c. Johnson, David 07/Aug/2018

FIRE SERVICES Johnson, David 07/08/18

SHARMA & PARTNERS INC.

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SPI PROJECT #: 2018-1039

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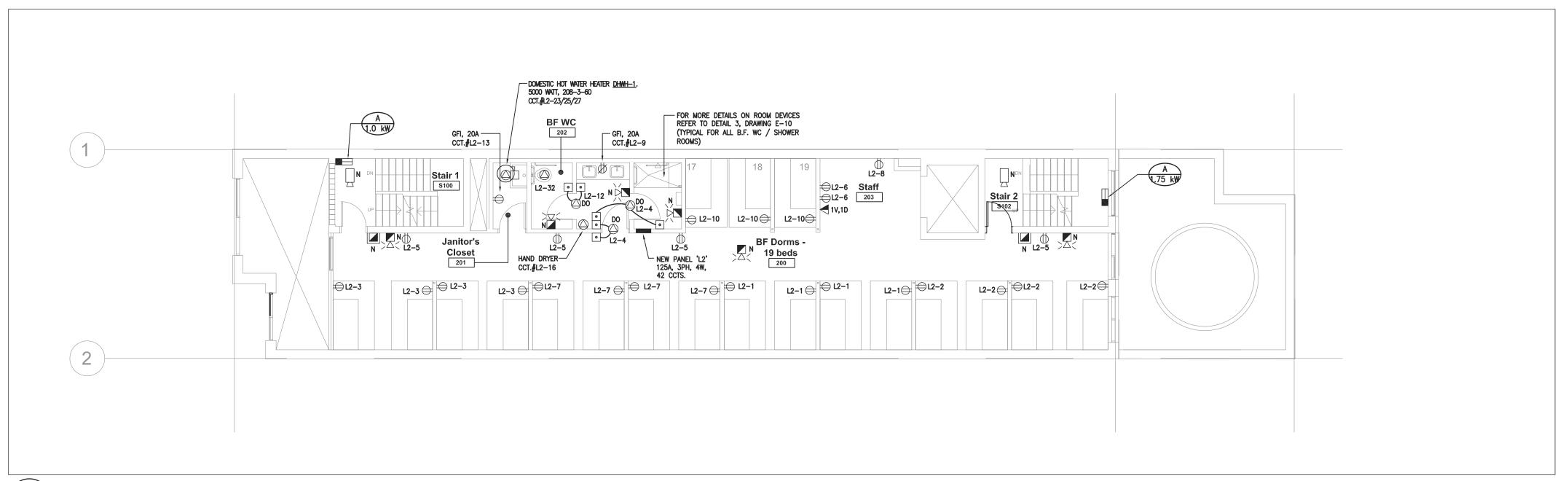
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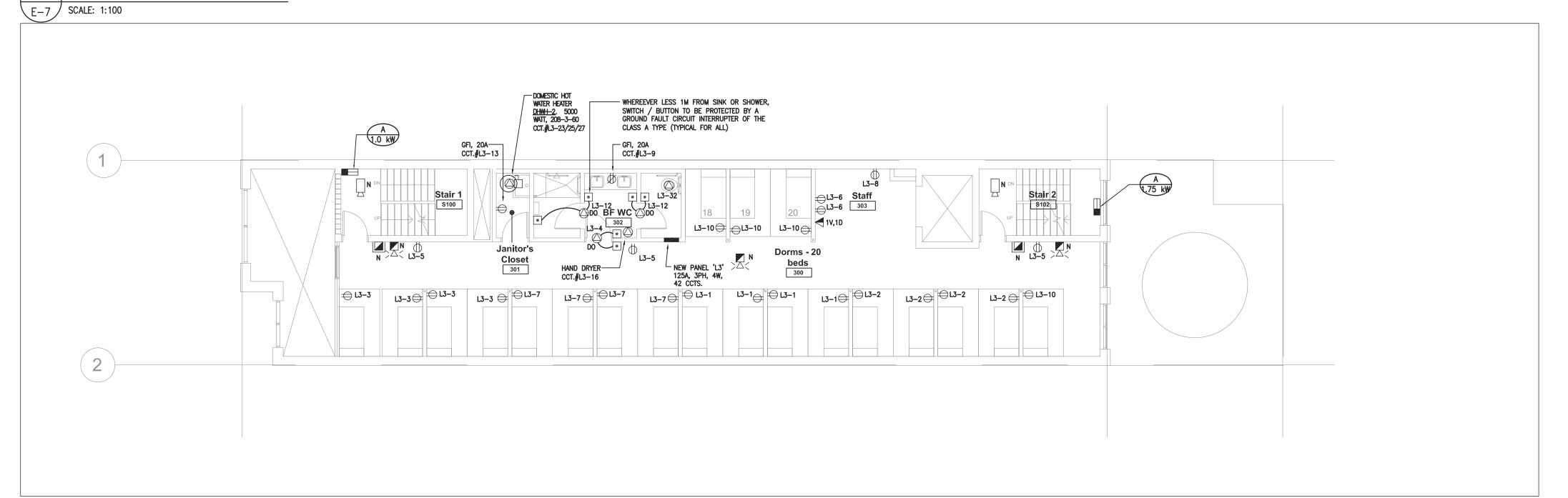
30 July 2018	Addendum #1
DATE:	STATUS:
18_22	As indicate
PROJECT CODE:	SCALE:

Basement 1 & 2 and Level 1 Power New Layout

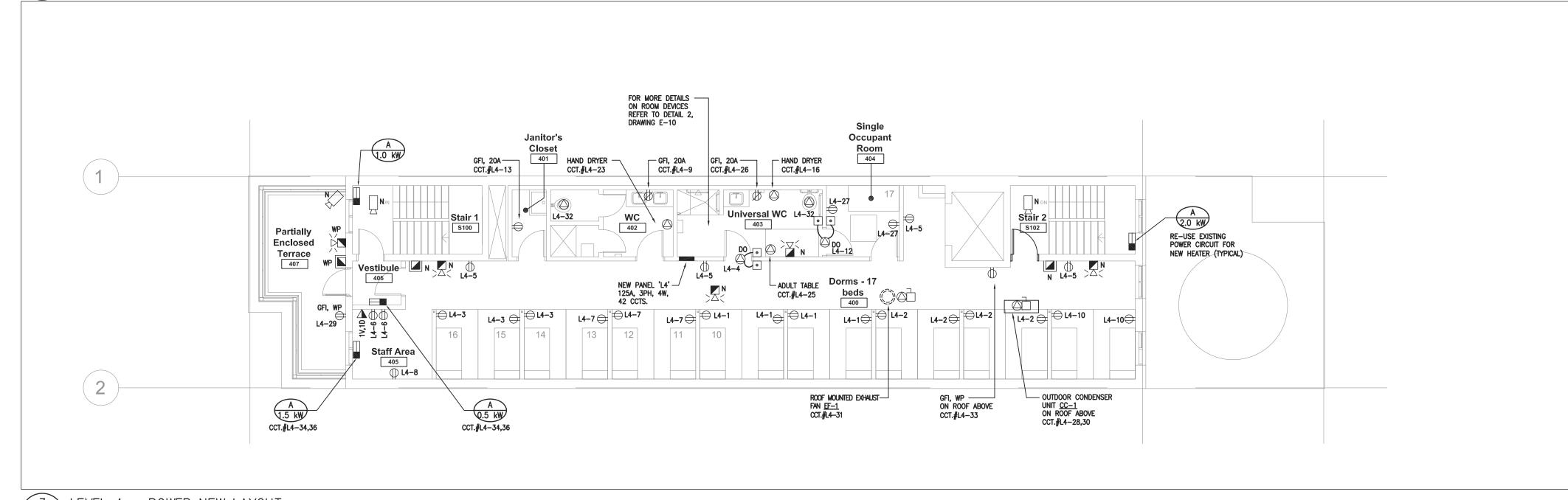




\ LEVEL 2 - POWER NEW LAYOUT



\ LEVEL 3 - POWER NEW LAYOUT E-7 SCALE: 1:100



3 LEVEL 4 - POWER NEW LAYOUT

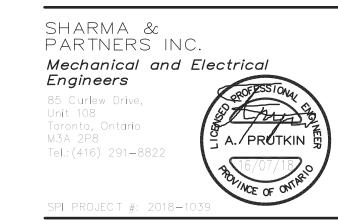
E-7 SCALE: 1:100

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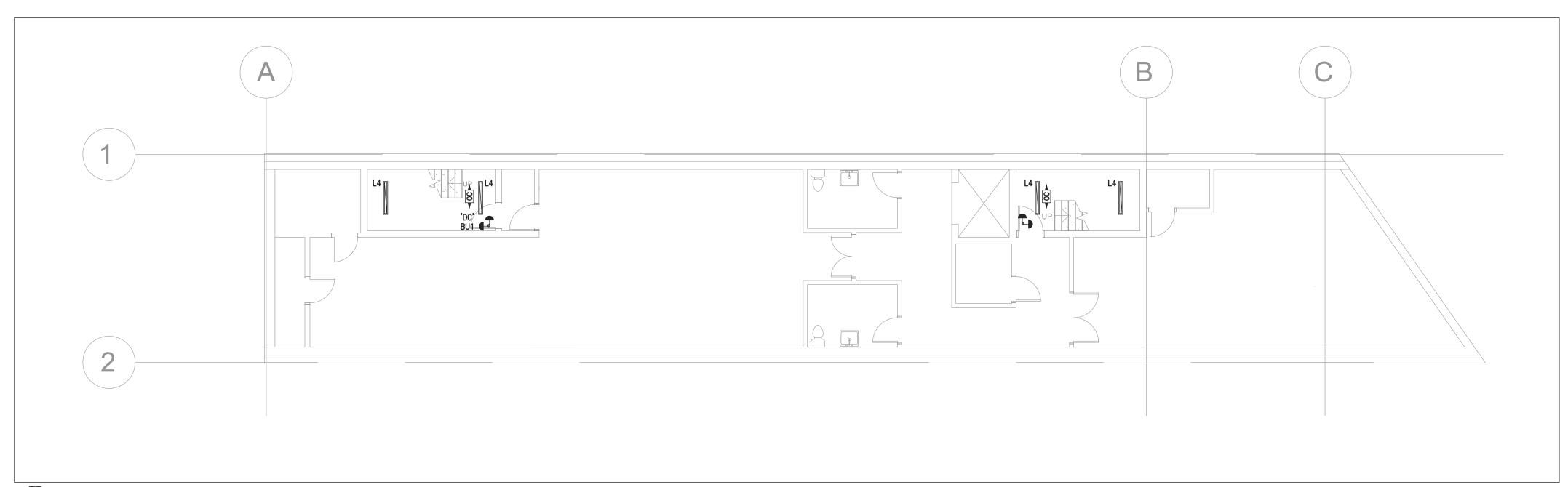
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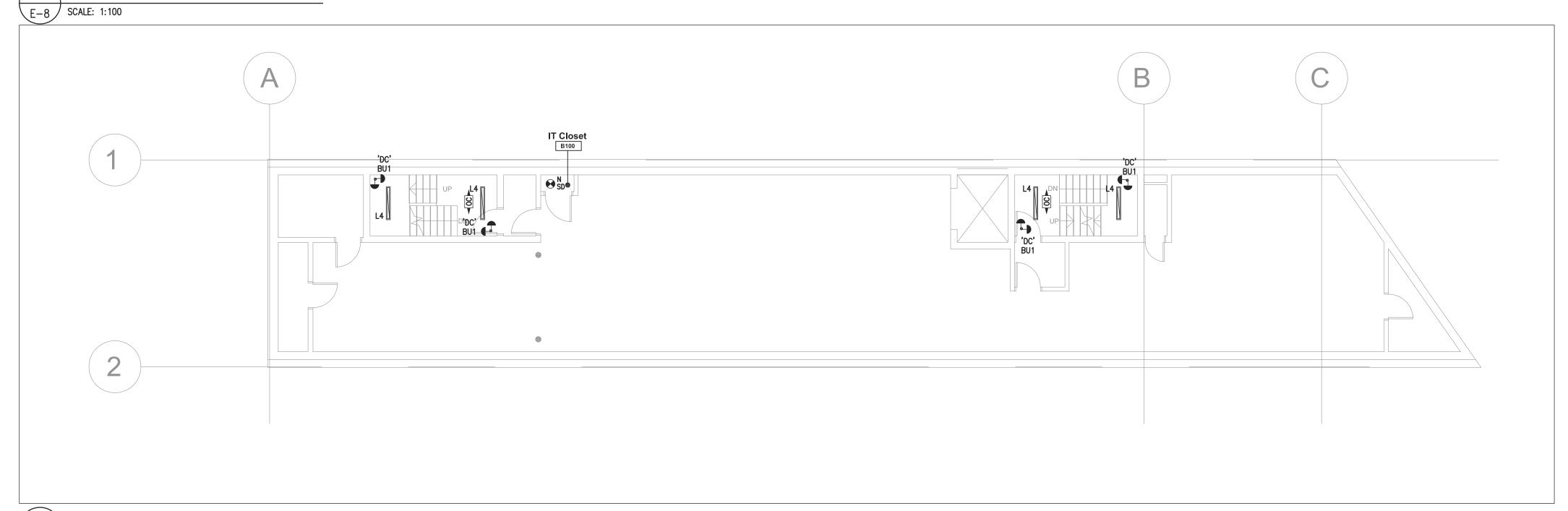
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Level 2, 3 & 4 Power New Layout

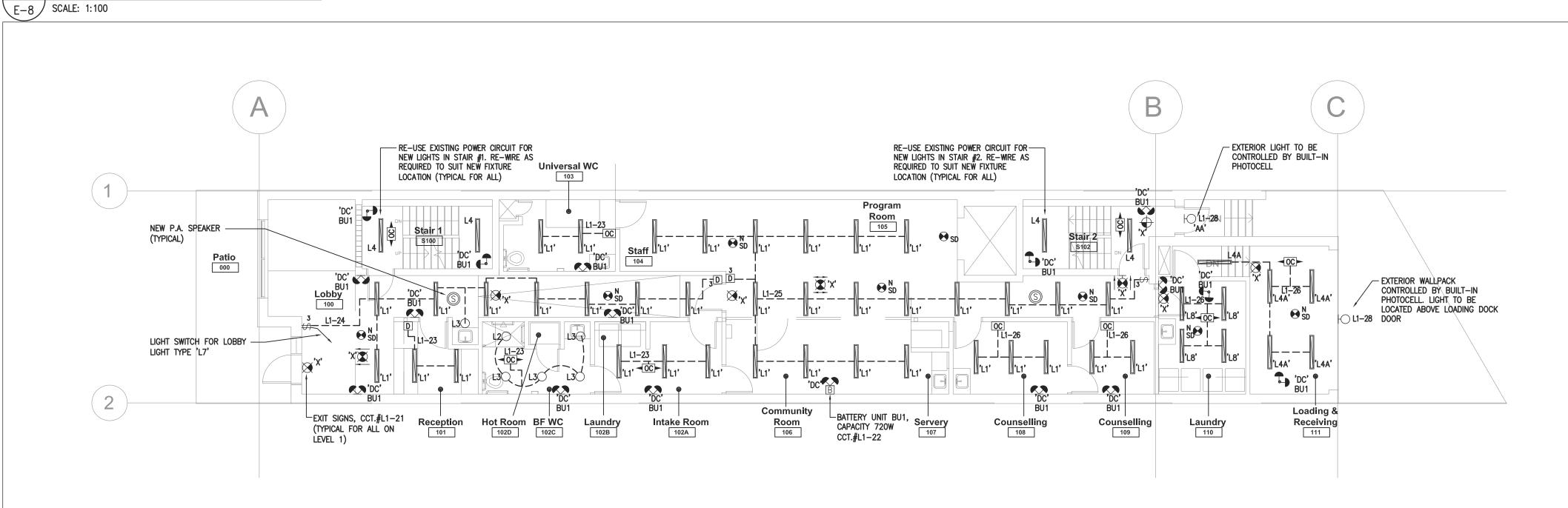




1 BASEMENT 2 - LIGHTING NEW LAYOUT



2 BASEMENT 1 - LIGHTING NEW LAYOUT



3 LEVEL 1 - LIGHTING NEW LAYOUT

E-8 SCALE: 1:100

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Description Date

16 July '18 16 July '18

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FOR EXIT SIGNS AND
EMERGENCY LIGHTING ONLY

ZONING

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FIRE SERVICES Johnson, David 27/Jul/2018

O.B.C. (S)

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(i) E001 emergency exit left;(ii) E002 emergency exit right;

(iii) E005 90-degree directional arrow; and

(iv) E006 45-degree directional arow.

Emergency lights shall be provided along paths of egress as per 3.2.7, or 9.9.12.

Exit signs shall consist of a green pictogram and white graphic symbol

conform to the dimensions indicated in ISO 7010 for the following symbols:

meeting the visibility specifications referered to in ISO 3864-1 and

Emergency lighting shall always be maintained to an average level of illumination of at least 10 lx at floor level.

Exit Signs are to be reviewed on site to ensure they are visible along all paths of egress/exits as obstructions by ducts, pipes, etc. may not be obvious on plans. Add, relocate and adjust signs and emergency lighting as required to achieve their intended performance objective. Typical



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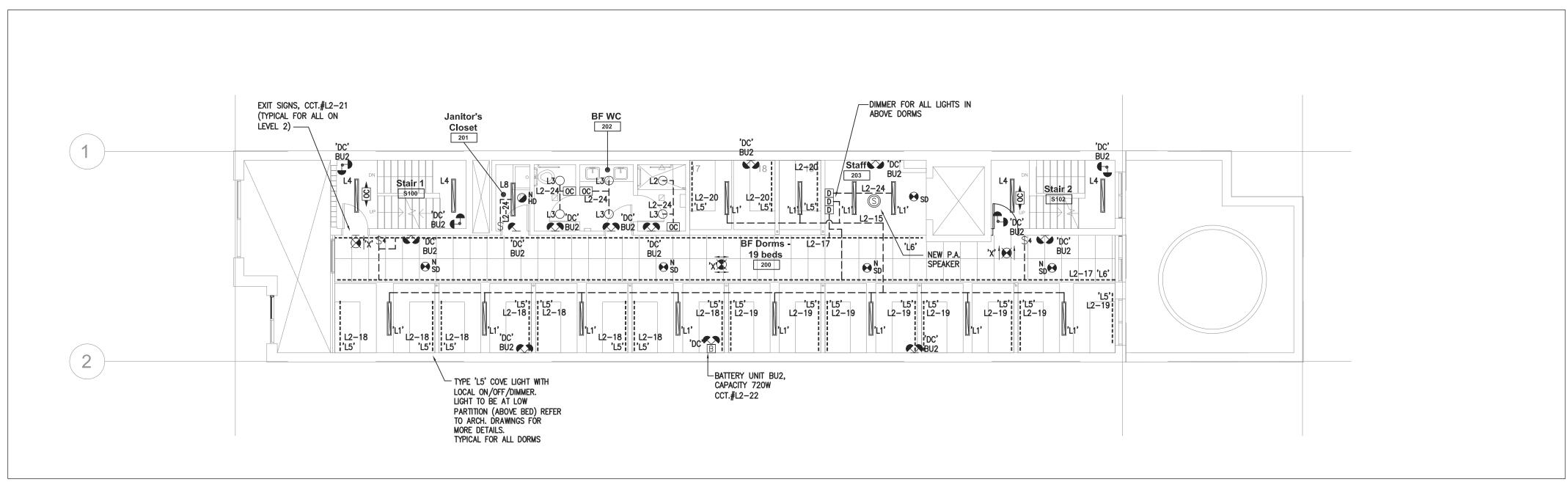
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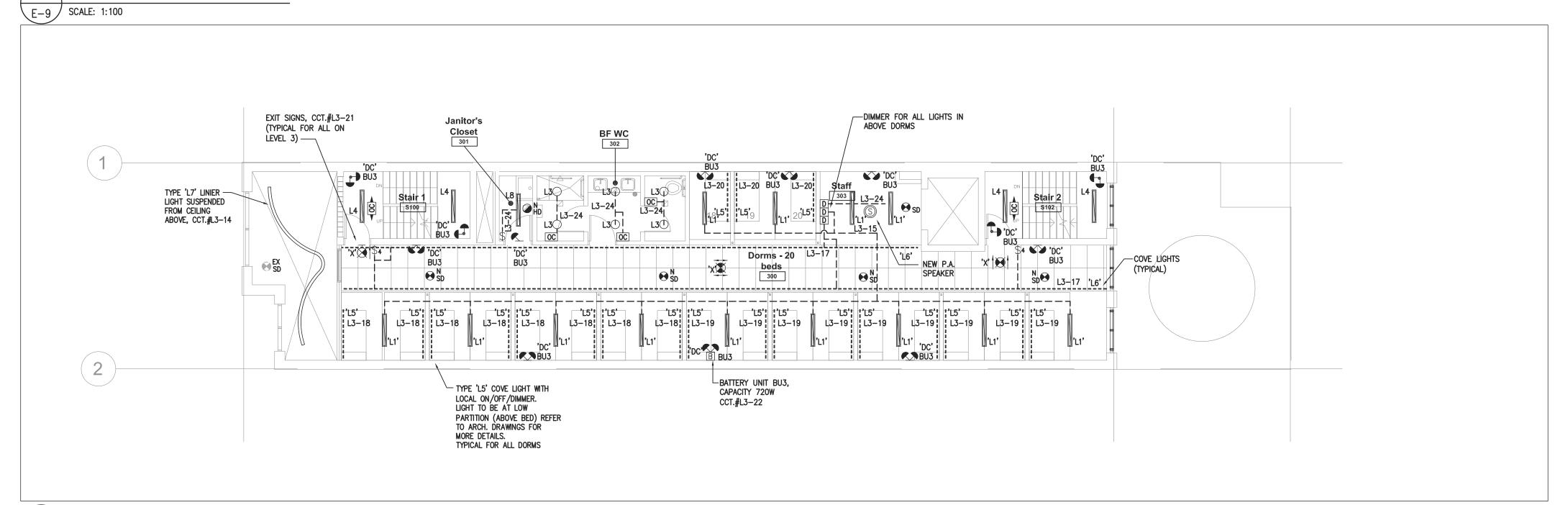
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PROJECT CODE:	SCALE:

Basement 1 & 2 and Level 1 Lighting New Layout

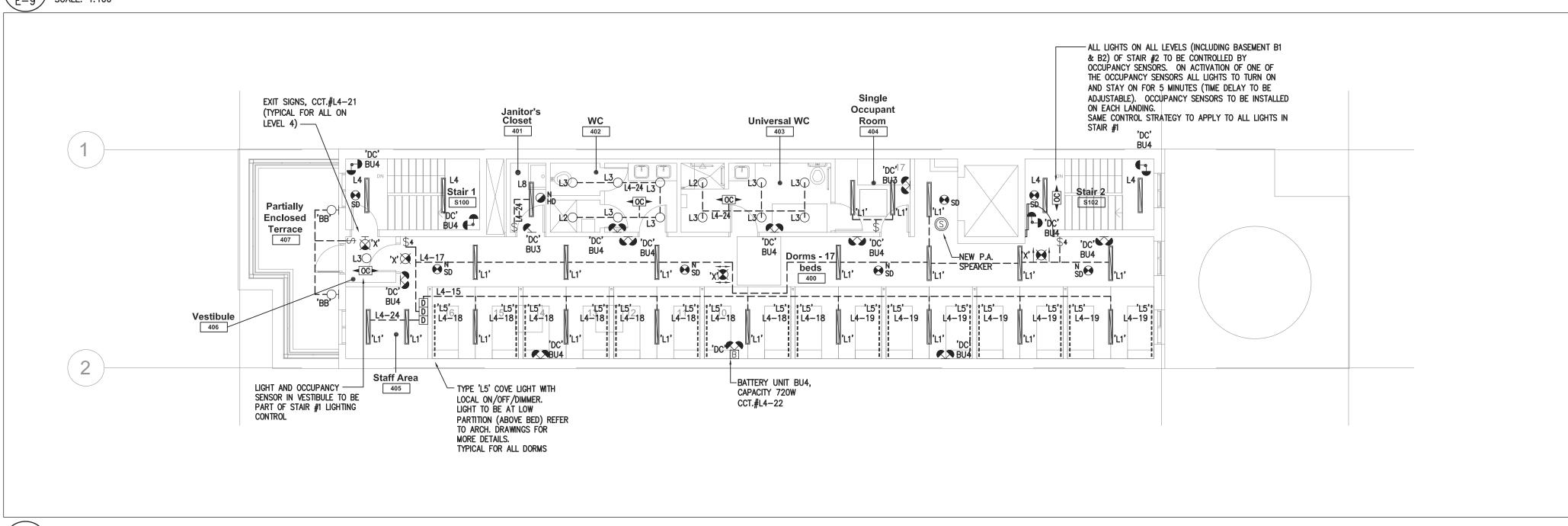




\ LEVEL 2 - LIGHTING NEW LAYOUT



\ LEVEL 3 - LIGHTING NEW LAYOUT E-9 SCALE: 1:100



\ LEVEL 4 - LIGHTING NEW LAYOUT

E-9 SCALE: 1:100

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1 Final Review 1 Issued for Permit & Tender

PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE

16 July '18

16 July '18

18 197188 BLD 00

FOR EXIT SIGNS AND **EMERGENCY LIGHTING ONLY** o.B.c. Johnson, David 27/Jul/2018 FIRE SERVICES Johnson, David 27/Jul/2018 O.B.C. (S)



Emergency lights shall be provided along paths of egress as per 3.2.7. or 9.9.12.

Emergency lighting shall always be maintained to an average level of illumination of at least 10 lx at floor level.

Exit signs shall consist of a green pictogram and white graphic symbol meeting the visibility specifications referered to in ISO 3864-1 and conform to the dimensions indicated in ISO 7010 for the following symbols: (i) E001 emergency exit left; (ii) E002 emergency exit right; (iii) E005 90-degree directional arrow; and

(iv) E006 45-degree directional arow.

Exit Signs are to be reviewed on site to ensure they are visible along all paths of egress/exits as obstructions by ducts, pipes, etc. may not be obvious on plans. Add, relocate and adjust signs and emergency lighting as required to achieve their ntended performance objective. Typical

> SHARMA & PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive Unit 108 Tel.: (416) 291-8822

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SPI PROJECT #: 2018-103

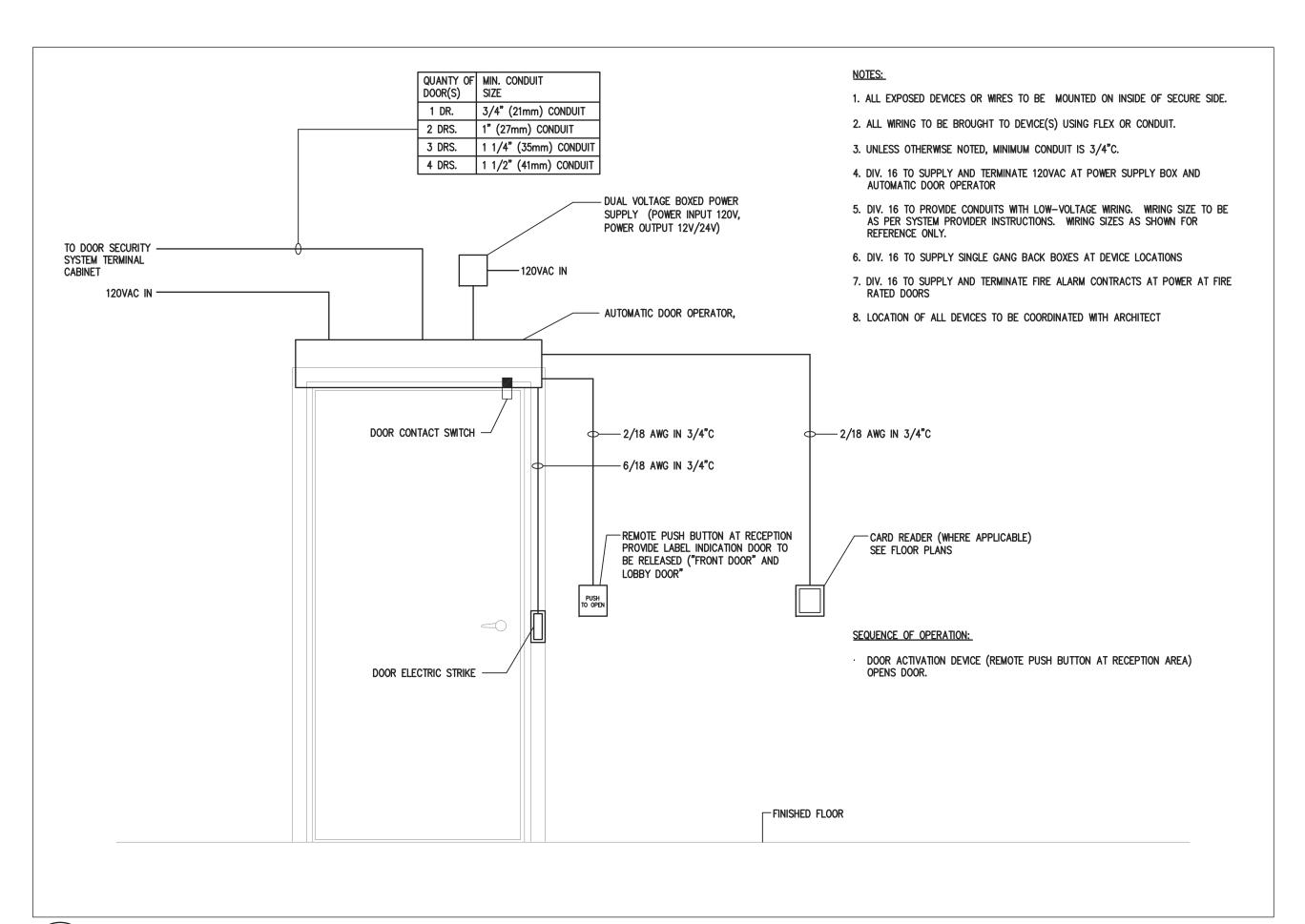
Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

PROJECT CODE: SCALE: As indicated DATE: STATUS: Permit / Tender

Level 2, 3 & 4 Lighting New Layout

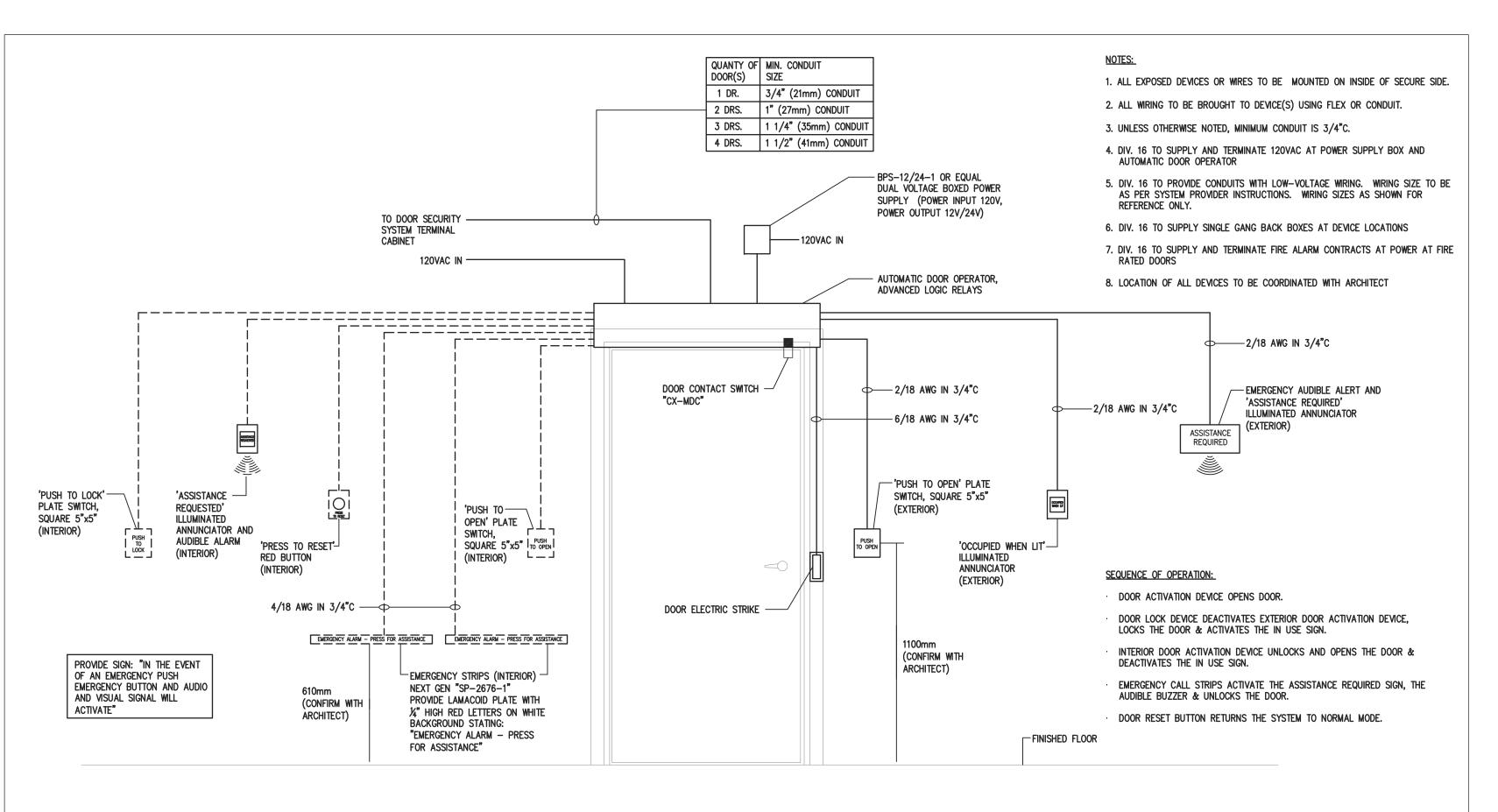




1 SECURITY DOOR DETAIL E-10 SCALE: N.T.S.

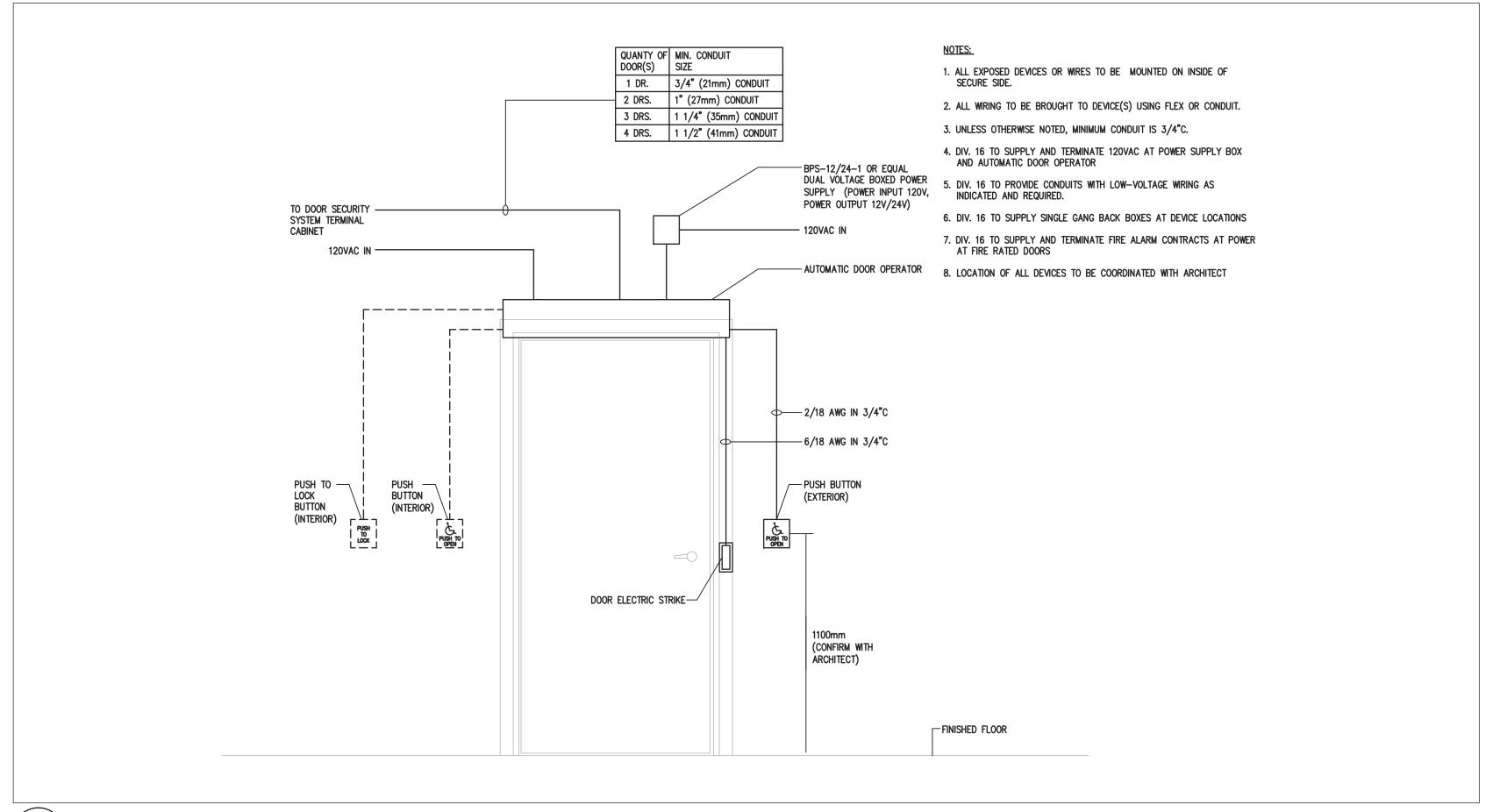
Electromagnetic locking devices not part of this permit. Separate permit required.

All doors in means of egress to be readily openable in travelling to an exit without requiring specialized knowledge, keys or special devices.



2 UNIVERSAL WASHROOM DOOR DETAIL

E-10 SCALE: N.T.S.



3 BARRIER FREE WASHROOM DOOR DETAIL

E-10 SCALE: N.T.S.

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RevDescriptionDate1Final Review16 July '18

Issued for Permit & Tender

O.B.C. (S)

TORONTO Building

PERMIT REVIEWED FOR COMPLIANCE WITH
THE ONTARIO BUILDING CODE

16 July '18

18 197188 BLD 00

ZONING

O.B.C.

FIRE SERVICES

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SPI PROJECT #: 2018-1039

WORKSHOP architecture inc

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Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

DATE:	STATUS:
18_22	N.T.S.
PROJECT CODE:	SCALE:

Electrical Details



PANEL L1 120/208v,3PH,4W		TYPE: MAINS: MOUNTING:		12	DLT—(5 AM CESS	IPS		LOCATION: LEVEL 1	
LOAD	DESCRIPTION	BREAKER		CIR	CIRCUITS		BREAKER	DESCRIPTION	LOAD
-	SPARE	15A	1	+	+	2	15A	SPARE	_
-	RECEPTION	15A	3		+	4	15A	DOOR OPERATOR	-
-	CONVENIENCE RECEPTS	15A	5	+	╁	6	15A	ADULT TABLE, UNIVERSAL WC	_
-	GFI RECEPT, UNIVERSAL WC	20A	7	+	+	8	20A	GFI, POTABLE HEATING TRAY	_
-	GFI RECEPT, B.F. WC	20A	9	\parallel	+	10	15A	RECEPTS, COMMUNITY ROOM	_
-	RECEPTS, OFFICE	15A	11	+	\dashv	12	20A	GFI RECEPT, CONSULTING ROOM	_
-	RECEPTS, PROGRAM ROOM	15A	13	+		14	15A	RECEPT, CONSULTING ROOM	-
-	SPARE		15	\mathbb{H}	+	16	15A	RECEPT, LOADING AND RECEIVING	-
-	GFI, COFFEE MAKER	20A	17	\blacksquare	+	18	20A	GFI, TOASTER	-
-	MICROWAVE	20A	19	-		20	15A	FRIDGE	-
-	EXIT SIGNS	15A	21	\mathbb{H}	+	22	15A	BATTERY UNIT BU1	-
_	LIGHTS	20A	23	\mathbb{H}	\dashv	24	20A	LIGHTS	-
-	LIGHTS	20A	25	+	+	26	20A	LIGHTS	_
_	MOTORIZED SHUTTER	15A	27	\mathbb{H}	+	28	15A	EXTERIOR LIGHTS	_
_	SPACE	_	29	\mathbb{H}	+	30	15A	DOOR CONTROLS	-
IKW	HAND DRYER	20A	31	+	+	32	20A	HAND DRYER	1KW
_	WASHER	15A	33	\mathbb{H}	+	34	15A	SANITIZER UNIT	_
_	WASHER	15A	35	\mathbb{H}	+	36	30A	DDV/FD	
_	WASHER	15A	37	-		38	2P	DRYER	
	DRYER	30A 2P	39 41			40	30A 2P	DRYER	
	RECEPT, HEATER IN LOADING AREA	20A	43	H	\top	44	20A	RECEPT, HEATER IN LOADING AREA	
	ERV-1	20A	45	1		46	15A	DRYER BOOSTER FAN EF-2	
	MECHANICAL CONTROLS	15A	47	1		48	15A	WATER FOUNTAIN	
	PLUMBING	15A	49	1		50	30A		
	SPARE	15A	51	† 		52	2P	ELECTRIC DUCT HEATER EC-1	5KW
	SPARE	15A	53	† 		54	15A	SPARE	
	SPARE	15A	55	1		56	15A	SPARE	
	SPARE	15A	57	1		58	15A	SPARE	
	SPARE	15A	59			60	15A	SPARE	

NOTE: PROVIDE TEMPER-PROOF LOCKABLE PANEL DOORS

PANEL L2 120/208V,3PH,4W		TYPE: MAINS: MOUNTIN			DLT- 25 / ECES	AMP	S		LOCATION: LEVEL 2	
LOAD	DESCRIPTION	BREAKER		CII	CIRCUITS BR		BREAKER	DESCRIPTION	LOAD	
_	RECEPTS, DORMS	15A	1	+	+	+	2	15A	RECEPTS, DORMS	_
-	RECEPTS, DORMS	15A	3	+	╅	+	4	15A	DOOR OPERATOR	_
-	CONVENIENCE RECEPTS	15A	5	+	+	+	6	15A	RECEPTS, STAFF ROOM	-
-	RECEPTS, DORMS	20A	7	•	+	+	8	15A	RECEPTS, STAFF ROOM	_
-	GFI RECEPT, B.F. WC	20A	9	+	+	+	10	15A	RECEPTS, DORMS	_
-	SPARE	15A	11	+	+	+	12	12A	DOOR OPERATOR	-
-	GFI RECEPT, JANITOR'S ROOM	20A	13	+	+	+	14	15A	SPARE	_
-	LIGHTS	20A	15	+	+		16	15A	HAND DRYER	1KW
-	LIGHTS	20A	17	+	+	+	18	20A	LIGHTS	_
-	LIGHTS	20A	19	+	+		20	20A	LIGHTS	-
_	EXIT SIGNS	15A	21	+	+	\blacksquare	22	15A	BATTERY UNIT BU2	-
		20A /	23	+	+	+	24	20A	LIGHTS	-
5KW	DHWH-2		25	+	+	+	26	15A	SPARE	-
			27	+	╅	+	28	15A	SPARE	_
-	SPACE	_	29	1	+	\downarrow	30	15A	SPARE	_
-	SPACE	-	31	+	+	+	32	15A	PLUMBING	
-	SPACE	_	33	+	\downarrow	+	34	15A	SPARE	_
-	SPACE	-	35	\parallel	+	+	36	15A	SPARE	_
-	SPACE	-	37	1	+	+	38	15A	SPARE	-
-	SPACE	_	39	1	+	+	40	15A	SPARE	-
-	SPACE	-	41	1	+	+	42	15A	SPARE	-
NOTE:	PROVIDE TEMPER-PROOF LOCKABLE	PANEL DOORS	3	_	_	-		•	•	•

PAN 120/2	TYPE: MAINS: MOUNTIN	IG:	BOL 125 REC	A۱	/IPS		LOCATION: LEVEL 3		
LOAD	DESCRIPTION	BREAKER		CIRC	CUIT	S	BREAKER	DESCRIPTION	LOAD
-	RECEPTS, DORMS	15A	1	+		2	15A	RECEPTS, DORMS	_
-	RECEPTS, DORMS	15A	3	H		4	15A	DOOR OPERATOR	-
-	CONVENIENCE RECEPTS	15A	5		H	6	15A	RECEPTS, STAFF ROOM	-
_	RECEPTS, DORMS	20A	7	-		8	15A	RECEPTS, STAFF ROOM	-
-	GFI RECEPT, B.F. WC	20A	9	-		10	15A	RECEPTS, DORMS	-
-	SPARE	15A	11		H	12	12A	DOOR OPERATOR	-
_	GFI RECEPT, JANITOR'S ROOM	20A	13	-		14	15A	LOBBY LIGHT	-
-	LIGHTS	20A	15	H		16	15A	HAND DRYER	1KW
-	LIGHTS	20A	17	\vdash	H	18	20A	LIGHTS	_
-	LIGHTS	20A	19	-		20	20A	LIGHTS	_
-	EXIT SIGNS	15A	21	H		22	15A	BATTERY UNIT BU3	_
		20A /	23		H	24	20A	LIGHTS	_
5KW	DHWH-2		25	-		26	15A	SPARE	_
			27	-		28	15A	SPARE	_
-	SPACE	_	29		H	30	15A	SPARE	_
-	SPACE	_	31	 		32	15A	PLUMBING	
-	SPACE	-	33	-		34	15A	SPARE	-
-	SPACE	-	35	-	H	36	15A	SPARE	_
-	SPACE	_	37	-		38	15A	SPARE	_
-	SPACE	-	39	H		40	15A	SPARE	-
-	SPACE	_	41	-	H	42	15A	SPARE	_

PANEL L4 120/208V,3PH,4W			TYPE: MAINS: MOUNTING:			N PS ED		LOCATION: LEVEL 4	
LOAD	DESCRIPTION	BREAKER		CIRCUITS		BREAKER	DESCRIPTION	LOAD	
-	RECEPTS, DORMS	15A	1	+	\mathbb{H}	2	15A	RECEPTS, DORMS	_
_	RECEPTS, DORMS	15A	3	₩	\vdash	4	15A	DOOR OPERATOR	_
-	CONVENIENCE RECEPTS	15A	5	+	┥	6	15A	RECEPTS, STAFF ROOM	_
-	RECEPTS, DORMS	20A	7	-	Н	8	15A	RECEPTS, STAFF ROOM	_
-	GFI RECEPT, WC	20A	9	₩	\vdash	10	15A	RECEPTS, DORMS	_
-	SPARE	15A	11	+	┝	12	12A	DOOR OPERATOR	_
-	GFI RECEPT, JANITOR'S ROOM	20A	13	-	Н	14	15A	SPARE	_
-	LIGHTS	20A	15	\mathbb{H}	\vdash	16	15A	HAND DRYER	1K₩
-	LIGHTS	20A	17	+	┝	18	20A	LIGHTS	_
-	LIGHTS	20A	19		Н	20	20A	LIGHTS	_
_	EXIT SIGNS	15A	21	₩	H	22	15A	BATTERY UNIT BU4	_
1KW	HAND DRYER	15A	23		┝	24	20A	LIGHTS	-
-	ADULT TABLE, UNIVERSAL WC	15A	25	-	Н	26	15A	GFI RECEPT, UNIVERSAL WC	-
_	RECEPTS, SINGLE OCCUPANT ROOM	15A	27	₩	\vdash	28	15A /	OUTDOOD COMPENSING HAIT OO 4	
-	OUTDOOR RECEPT. GFI, WP	20A	29	+	┝	30	1P	OUTDOOR CONDENSING UNIT CC-1	_
-	EXHAUST FAN EF-1	15A	31		Н	32	15A	PLUMBING	_
-	GFI, WP OUTDOOR RECEPT. ON ROOF	20A	33	\mathbb{H}	\vdash	34	20A /	NEW BACEBOARD HEATERS	
-	SPACE	-	35		╽	36	1P	NEW BASEBOARD HEATERS	2.0KW
_	SPACE	_	37		H	38	15A	SPARE	_
-	SPACE	-	39	1	H	40	15A	SPARE	_
_	SPACE	_	41		╽╽	42	15A	SPARE	_

LUMINAIRE SCHEDULE

TYPE 'L1'

RECESSED LINEAR LIGHT (4FT LONG), LED, KOLIKA-L3KOL STANPRO, FOR CEILING TYPE REFER TO ARCH. DRAWINGS. FINISH: WHITE

LAMP: LED, 3500K, 4000LM/4FT, VOLTAGE: 120V, DIMMIMG DRIVER 0-10VDC. LENS: FLUSH SINK SYMMETRIC MANUFACTURER: STANPRO KOLIKA, CAT#L3KOL-4LS4D OR APPROVED EQUAL

TYPE 'L2'

SAME AS TYPE L3 BUT WATERPROOF

150mm (6") DIAMETER RECESSED COMPACT LED DOWNLIGHT. FRAME TO SUIT CEILING TYPE (REFER TO ARCH. DRAWINGS), WHITE TRIM RING.

FINISH: WHITE. LAMP: LED, 3500K, 1800LM, CLEAR LENS VOLTAGE: 120V, DIMMING 0-10V

MANUFACTURER: STANPRO, CR6 SERIES OR APPROVED EQUAL. CAT# CR61880-WWW/35K-W-L

SURFACE MOUNTED LINIER STRIP, LED, DAY-BRITE BY PHILIPS, FINISH: WHITE

LAMP: LED, 4000K, 3000LM/4FT, 23W VOLTAGE: 120V, DIMMIMG DRIVER 0-10V. MANUFACTURER: PHILIPS CAT#LF4FR3035UDZT OR APPROVED EQUAL

TYPE 'L4A'

SAME AS TYPE 'L4' BUT SUSPENDED. PROVIDE AIRCRAFT CABLE KIT WITH. INSTALLATION HEIGHT AS PER ARCHITECT.

TYPE 'L5'

LED SLIM STRIP WITH LENS LED, L2SSS STANPRO, OVERALL FIXTURE LENGTH 6FT, PROVIDE DIMMER/ON/OFF SWITCH FOR EACH 6FT FOR INSTALLATION DETAILS TYPE REFER TO ARCH. DRAWINGS. FINISH: WHITE LAMP: LED, 3500K, 3900LM/4FT, 30W

VOLTAGE: 120V, DIMMIMG DRIVER 0-10V. MANUFACTURER: STANPRO CAT#L2SSS-48LS1-W/35K OR APPROVED EQUAL

LINIER COVE LIGHT, EW COVE QLX POWERCORE, 12IN (305MM), WIDE BEAM ANGLE, HIGH OUTPUT LINEAR LED COVE LIGHT WITH POLYCARBONATE LENS. LENGTH: TO SUIT COVE LENGTH - REFER TO ARCHITECTURAL DRAWING LUMENS: 235 LUMENS, 3500K POWER: 120V, 6W MAX.

MANUFACTURER: PHILIPS LIGHTING CAT# EW COVE QLX POWER CORE SERIES OR APPROVED EQUAL.

CUSTOM SUPER=G MODULE SYSTEM LIGHT FIXTURE BY ZANEEN, SURFACE SHAPE AND LENGTH TO MATCH SHAPE AND LENGTH ASSHOWN ON ARCHITECTURAL DRAWING. PROVIDE ALL COMPONENTS TO ACHIEVE REQUIRED SHAPE, INCLUDE MOUNTING KIT

FINISH: AS PER ARCHITECT LAMP: LED, 4000K, 0–10V DIIMING POWER: 120V,

MANUFACTURER: ZANEEN SUPER=G MODULE SYSTEM OR APPROVED EQUAL.

TYPE 'L8'

RECESSED 1FT X 4FT, LED, L3TSB STANPRO, FOR CEILING TYPE REFER TO ARCH. DRAWINGS. FINISH: WHITE LAMP: LED, 3500K, 4880LM/4FT, 42W
VOLTAGE: 120V, DIMMIMG DRIVER 0-10V.
LENS: PRISMATIC ACRYLIC MANUFACTURER: STANPRO CAT#L3TSB-1-LS2A-A/35K OR APPROVED EQUAL

TYPE 'AA'

OUTDOOR CUT-OFF WALL PACK, LED, WP2-L STANPRO, WITH BUILT-IN

FINISH: BRONZE LAMP: LED, 4000K, 4772LM, 59W VOLTAGE: 120V

MANUFACTURER: STANPRO CAT#WP2-LS23-W/40K OR APPROVED EQUAL

TYPE 'BB'

OUTDOOR WALL PACK, LED, BUA-L STANPRO, FINISH: BRONZE

LAMP: LED, 4000K, 1674LM, 20W VOLTAGE: 120V

MANUFACTURER: STANPRO CAT#BUA-LS1C-W/F OR APPROVED EQUAL

COORDINATE ORDERING AND DELIVERY WITH CONSTRUCTION SCHEDULE DUE TO LONG LEAD DELIVERY TIME ON ANY OF FIXTURES

OCCUPANCY SENSOR SCHEDULE

- FLUSH WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH: - AUTO-ON WITH MANUAL OFF SWITCH. - FITS A STANDARD SWITCH BOX WITH DECORA COVER PLATE. - ADJUSTABLE TIME DELAY BETWEEN 30 SECONDS AND 30 MINUTES. - ADJUSTABLE INTEGRATED NATURAL LIGHT LEVEL SENSOR BETWEEN 2 AND 200 FOOT CANDLES.
 - 5 YEAR WARRANTY. WATT-STOPPER CAT.# DW-100-120-1.
- SURFACE CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, ROOM SENSORS. - UP TO 1000 SQ.FT. COVERAGE.

- SENSITIVITY ADJUSTMENT.

- ADJUSTABLE TIME DELAY BETWEEN 1 SECONDS TO 30 MINUTES. 5 YEAR WARRANTY. ARROWS INDICATE ORIENTATION OF TRANSMITTERS. WATT-STOPPER CAT.# LMDC-100 SERIES.

NOTES:

- 1. ADJUST SENSITIVITY OF SENSORS TO SUIT ROOM SIZE AND CONFIGURATION TO PREVENT SENSORS FROM "SEEING" OUTSIDE THE ROOM. 2. ADJUST LIGHT LEVEL SENSORS TO 65 FOOT CANDLES.
- 3. ADJUST TIME DELAY TO 30 MINUTES. 4. ALLOW IN CONTRACT LABOUR TO ADJUST SENSORS A SECOND TIME TO
- OWNER'S DIRECTIVES.
- 5. PROVIDE MINIMUM TWO TIMES SETTING BY WATTS-STOPPER REPRESENTATIVE.
- 6. COORDINATE WITH WATTS-STOPPER AND ALLOW IN CONTRACTOR TO HIRE WATTS-STOPPER REPRESENTATIVE FOR SETTING, PROGRAM, TRAINING OWNER STAFF, ETC.. TO INSURE WATTS-STOPPER CONTROL SYSTEM IN GOOD OPERATIONAL CONDITION.

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Description

16 July '18

16 July '18

1 Final Review

1 Issued for Permit & Tender



ZONING	
O.B.C.	
FIRE SERVICES	
O.B.C. (S)	

SHARMA & PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive, Unit 108 Tel.: (416) 291-8822

WORKSHOP

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SPI PROJECT #: 2018-1039

Davenport Shelter

348 Davenport Road Toronto, ON M5R 1K6

16 July 2018	Permit / Tend
DATE:	STATUS:
18 22	N.T.S.
PROJECT CODE:	SCALE:

Panes Schedules



GENERAL ELECTRICAL CONDITIONS - SECTION 16050

- 1. COMPLY WITH GENERAL CONDITIONS OF THE CONTRACT AND DIVISION 15, MECHANICAL SPECIFICATIONS. DIVISION 15 SHALL BE THE PRIME CONTRACTOR.
- 2. THIS SECTION APPLIES TO ALL SECTIONS OF DIVISION 16.
- 3. PROVIDE EACH ITEM MENTIONED OR INDICATED OF QUALITY AND SUBJECT TO QUALIFICATIONS NOTED; PERFORM ACCORDING TO CONDITIONS STATED EACH OPERATION PRESCRIBED; AND PROVIDE THEREFORE ALL LABOUR, MATERIAL, EQUIPMENT, INCIDENTALS AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION.
- 1. PAINTING OF EXPOSED CONDUITS, DUCTS AND UNFINISHED ELECTRICAL EQUIPMENT: UNDER DIVISION 15.
- CONCRETE WORK UNDER DIVISION 16. CUTTING AND PATCHING WILL BE BY DIVISION 16. PATCHING SHALL BE OF SAME MATERIAL AS SURROUNDING AREA AND SHALL BE PAINTED OR FINISHED TO MATCH EXISTING.
- MAKE A SET OF WHITE PRINTS AND AS THE JOB PROGRESSES, MARK ON CHANGES MADE THROUGH ANY APPROVED CHANGE ORDER AS WELL AS THE LOCATION OF FEEDERS, CONDUIT RUNS, JUNCTION BOXES, AND ALL CHANGES IN CIRCUITING, LOCATION OF EQUIPMENT, RUNS OF CONDUITS, WIRING, ETC. FROM THAT ORIGINALLY SHOWN, SO THAT ON THE COMPLETION OF THE JOB THE RECORD DRAWINGS WILL SHOW THE EXACT LOCATION AS ACTUALLY INSTALLED. RECORD DRAWINGS SHALL BE KEPT AT THE SITE AND SHALL BE BROUGHT UP TO DATE AS THE WORK PROGRESSES. SUBMIT COMPLETED RECORD DRAWINGS BEFORE FINAL CERTIFICATE OF JOB ACCEPTANCE IS ISSUED.
- 6. THE FOLLOWING DOCUMENTS SHALL BE SUBMITTED TO THE CONSULTANT ON THE COMPLETION OF THE PROJECT AS DESCRIBED ABOVE:

FLECTRICAL INSPECTION CERTIFICATE

- AS_BUILT DRAWINGS
- DATA BOOKS GUARANTEE
- OTHER CERTIFICATES SPECIFIED.
- 7. ALL MATERIAL SHALL BE STORED NEATLY AND OUT OF THE WAY. CLEAN UP DAILY ALL REFUSE CAUSED BY WORK.
- 8. BIND WITHIN A HARD_COVERED, LOOSE_LEAF BINDER, A COMPLETE SET OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS SHOWING ALL MAJOR ELECTRICAL EQUIPMENT AND SYSTEMS. INCLUDE SHOP DRAWINGS AND DETAIL DRAWINGS. INSTRUCTIONS SHALL BE COMPLETE FOR INSTALLATION, OPERATION AND MAINTENANCE. SPARE PART SUPPLIERS, LISTS AND ADDRESSES SHALL BE INCLUDED. MAKE ANY ADDITIONS AND/OR CORRECTIONS REQUIRED BY THE CONSULTANT AND SUBMIT TWO CORRECT COPIES TO THE CONSULTANT. INSTRUCTIONS SHALL BE REVIEWED WITH THE OPERATING PERSONNEL TO ENSURE A THOROUGH UNDERSTANDING OF THE EQUIPMENT AND ITS OPERATION.
- 9. EXAMINE THE SITE, EXISTING EQUIPMENT AND THE LOCAL CONDITIONS AFFECTING THE WORK UNDER THIS CONTRACT. NO ALLOWANCE WILL BE MADE SUBSEQUENTLY FOR ANY OBVIOUS CONSIDERATIONS OVERLOOKED.
- 10. AFTER THE WORK IS COMPLETE BUT BEFORE FINAL PAYMENT, GIVE THE OWNER A WRITTEN GUARANTEE THAT YOU WILL, AT NO CHARGE TO THE OWNER, REPLACE OR REPAIR ANY DEFECTS IN WORKMANSHIP AND MATERIALS NOT DUE, IN THE OPINION OF THE ARCHITECT TO MISUSE OR NEGLECT. GUARANTEE SHALL COVER A PERIOD OF 12 MONTHS FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE ARCHITECT. THIS GUARANTEE SHALL IN NO WAY SUPPLANT ANY OTHER GUARANTEE OR GUARANTEES OF LONGER PERIOD, BUT SHALL BE BINDING ON ALL OTHER WORK NOT OTHERWISE COVERED.
- 11. ALL WORK SHALL COMPLY STRICTLY TO THE REQUIREMENTS OF THE LATEST EDITIONS OF THE CANADIAN ELECTRICAL CSA CODE AS ADOPTED AND AMENDED BY PROVINCIAL REGULATIONS AND THE BUILDING CODE. THESE CODES AND ANY ADDITIONAL REQUIREMENTS OF THE POWER UTILITY SHALL FORM AN INTEGRAL PART OF THIS SPECIFICATION. WHERE
- DRAWINGS CALL FOR EQUIPMENT, WIRING OR OTHER REQUIREMENTS EXCEEDING THE MINIMUM REQUIREMENTS OF THE CODE, THE DRAWINGS SHALL BE FOLLOWED. 12. BEFORE STARTING ANY WORK, SUBMIT THE REQUIRED NUMBER OF COPIES OF THE ELECTRICAL DRAWINGS TO THE POWER AUTHORITY AND ELECTRICAL INSPECTION DEPARTMENT
- REGIONAL OFFICE, FOR THEIR APPROVAL AND COMMENTS. 13. PAY ALL FEES FOR EXAMINATION OF DRAWINGS AND OBTAIN ALL PERMITS REQUIRED AND PAY ALL PERMIT AND INSPECTION FEES.
- 14. ARRANGE FOR INSPECTION OF ALL WORK BY THE POWER AUTHORITY AND INSPECTION DEPARTMENT. ON COMPLETION OF THE WORK, PRESENT TO THE OWNER THE FINAL UNCONDITIONAL
- 15. ON AWARD OF CONTRACT, SUBMIT FOR REVIEW LIST OF DELIVERY DATES AND 7 COPIES OF SHOP DRAWINGS FOR ALL EQUIPMENT. 16. ALL MATERIALS SHALL BE NEW AND FREE FROM DEFECTS, NOISE AND VIBRATION. ALL EQUIPMENT SHALL BE CSA APPROVED.
- 17. SCHEDULE AND COORDINATE ALL WORK WITH OTHER TRADES. RELOCATE OR REPLACE CONDUIT OR EQUIPMENT WHICH INTERFERES WITH OTHER TRADES DUE TO LACK OF COORDINATION
- 18. THE OWNER SHALL HAVE TEMPORARY USE OF INSTALLATION PRIOR TO FINAL ACCEPTANCE.
- 19. ALL CLAIMS FOR EXTRAS SHALL BE SUPPORTED BY WRITTEN AUTHORIZATION AND SHALL BE SUBMITTED WITH ITEMIZED MATERIAL AND LABOUR COSTS BREAKDOWNS. THE FORMAT OF THE BREAKDOWN SHALL FOLLOW THAT OF THE CHANGE DOCUMENT (I.E. THAT OF THE NOTICE OF CHANGE, SITE INSTRUCTION, CHANGE DIRECTIVE, ETC.). MATERIALS SHALL BE PRICED

AT COST INCLUDING ANY DISCOUNT, LABOUR UNITS SHALL BE BASED ON CECA AND NECA LABOUR UNIT TABLES SUITABLE FOR THE TYPE OF WORK INVOLVED. THERE SHALL BE NO

20. ALL ELECTRICAL EQUIPMENT MOUNTED AND CONNECTED BY THIS CONTRACTOR, WHETHER SUPPLIED BY HIM OR NOT, SHALL BE IDENTIFIED BY MEANS OF PLASTIC NAMEPLATES.

EXTRA CLAIM FOR RELOCATION OF ANY EQUIPMENT WITHIN 10 FEET (3M) FROM THE ORIGINAL LOCATION, PROVIDED THAT THE CHANGE IS MADE BEFORE INSTALLATION.

- ALL WIRING SHALL BE CONCEALED EXCEPT IN UNFINISHED AREAS AND IN AREAS NOTED WHERE WIRING MAY BE INSTALLED IN SURFACE CONDUITS.
- 2. RIGID STEEL CONDUITS SHALL BE USED IN:
- ALL EXPOSED WIRING SUBJECT TO MECHANICAL DAMAGE, ALL AREAS REQUIRED BY CODE.
- 3. EMT CONDUITS MAY BE USED WHERE PERMITTED BY CODE:

WITH OTHER TRADES.

- EXPOSED WIRING. IN FURRED WALLS.
- 4. ARMOURED FLEXIBLE CABLE TYPE AC90 (BX CABLE) MAY BE USED AS DROP CABLE FROM JUNCTION BOX TO LIGHT FIXTURES, RECEPTACLES AND MOTORS IF RUN IN HOLLOW PARTITIONS OR IN DRY ACCESSIBLE CEILING SPACES. MAXIMUM LENGTH 20FT. FLEXIBLE CONDUIT SHALL BE USED FOR FINAL SHORT CONNECTIONS BETWEEN OUTLET AND ELECTRICAL EQUIPMENT SUCH AS RECESSED FIXTURES, MOTORS, TRANSFORMERS, MOTORIZED
- EQUIPMENT AND FIXED APPLIANCES. FLEXIBLE CONDUIT IN MECHANICAL ROOMS AND ON THE EXTERIOR WALL SHALL BE PVC JACKETED, LIQUID TIGHT. 6. HOME RUNS OF WIRING TO PANELS SHALL BE IN CONDUITS.
- 22. ALL LOW VOLTAGE AND MULTI CONDUCTOR CABLES SHALL BE INSTALLED IN CONDUIT.
- 23. ALL CONDUCTORS SHALL BE COPPER 600 VOLT GRADE WITH INSULATION TYPE RW90. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG AND COLOUR CODED. WIRE CONNECTIONS SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS CONNECTORS WITH VINYL INSULATING CAPS AND LOCKING RINGS.
- 1. MAXIMUM LENGTH FOR 15 AMP, 120/208 VOLT BRANCH CIRCUIT HOME RUNS SHALL BE AS FOLLOWS:
 - LOAD #12 AWG #10 AWG RECEPTACLE 65 FT (20M) OVER 65 FT (20M)
- LIGHTING 90 FT (27M) OVER 90 FT (27M)
- 24. UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL AND ELECTRICAL DRAWINGS, MOUNTING HEIGHTS OF EQUIPMENT ABOVE FINISHED FLOOR FROM CENTRE LINE OF THE MOUNTING BOX SHALL BE AS FOLLOWS:
- 1. TOP OF PANEL BOARD 78" (1980MM) 2. LIGHT SWITCH - 47" (1200MM)
- MOTOR STARTER/THERMOSTAT SAME AS LIGHT SWITCH
- RECEPTACLE, TELEPHONE, DATA, ETC. 18" (460MM)
- 5. RECEPTACLES IN MECHANICAL ROOMS AND OTHER UNFINISHED AREAS 47" (1200MM)
- 25. IF NUMBER OF CONDUCTORS IN ANY ONE CONDUIT EXCEEDS 6 LINE CONDUCTORS, CONDUCTOR SIZE SHALL BE INCREASED TO ALLOW FOR DERATING AS REQUIRED BY CODE. 26. MECHANICAL TRADE WILL SUPPLY ALL STARTERS, CONTROL TRANSFORMERS AND CONTROLS FOR EQUIPMENT SUPPLIED BY THEM AND WILL MOUNT ALL THESE EXCEPT FOR WALL MOUNTED STARTERS AND WALL MOUNTED LINE VOLTAGE CONTROLS, WHICH SHALL BE MOUNTED BY ELECTRICAL TRADE. ELECTRICAL TRADE SHALL DO ALL POWER WIRING, WHICH IS WIRING THAT CARRIES THE LOAD CURRENT OF THE MOTOR, HEATER, HOT WATER TANK OR OTHER EQUIPMENT SUPPLIED BY MECHANICAL TRADE. MECHANICAL TRADE WILL DO ALL OTHER RELATED
- 27. ALL CONDUITS AND OUTLET BOXES SHALL BE SUPPORTED FROM THE BUILDING SURFACES AND SHALL NOT BE SUPPORTED FROM OTHER CONDUITS, DUCTS OR PIPES.
- 28. PROVIDE FIRE STOPS. FIRE STOPS SHALL SEAL OFF ALL FIRE RATED WALLS AND CEILINGS. FIRE STOPS SHALL BE CSA AND UL LISTED AND SHALL BE DESIGNED FOR APPLICATION REQUIRED TO MEET THE VARIOUS FIRE RATED SEPARATIONS. FIRE STOP SHALL BE HILTI, TREMSTOP MANUFACTURED BY TREMCO, 3M OR EQUAL.

RACEWAY, ELECTRICAL DEVICES AND CONTROLS - SECTION 16100

- 1. PROVIDE ALL MATERIAL, EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE INSTALLATION OF ELECTRICAL MATERIALS AS SHOWN ON THE DRAWINGS AND AS
- 2. SWITCHES SHALL BE UNLESS OTHERWISE INDICATED, PASS & SEYMOUR, WHITE, DECORA TYPE AS FOLLOWS:
- SPECIFICATION GRADE 15A SINGLE POLE 120V 2601-W 2621-W 3 WAY 120V 2603-W 2623-W 4_WAY 120V 2604-W 2624-W

DESCRIBED HEREIN.

- .2 SWITCHES OF EQUAL QUALITY AS MANUFACTURED BY BRYANT, ARROW HART, LEVITON, HUBBLE.
- 3. COVERPLATES FOR RECEPTACLES, LIGHT SWITCHES, TELEPHONE, DATA AND TV OUTLETS SHALL BE SMOOTH THERMOPLASTIC FROM THE SAME MANUFACTURER AS FOR WRING DEVICES. COLOUR SHALL MATCH COLOUR OF WIRING DEVICES.
- 4. OUTLET BOXES SHALL BE ELECTRO GALVANIZED AND MADE OF CODE GAUGE STEEL, WHERE MORE THAN ONE DEVICE IS SHOWN ON PLAN, A MULTI-GANG BOX SHALL BE USED. OFFSET OUTLET BOXES, SHOWN BACK TO BACK IN PARTITIONS, HORIZONTALLY TO MINIMIZE NOISE TRANSMISSION BETWEEN ADJACENT AREAS. OUTLET BOX FOR DEVICES MOUNTED SIDE BY SIDE OR ONE ABOVE THE OTHER SHALL BE SEPARATED BY A MINIMUM OF ONE INCH (25MM).

SERVICES AND DISTRIBUTION - SECTION 16400

10KA RMS SYMMETRICAL FOR SINGLE POLE.

- 1. PROVIDE ALL MATERIAL, EQUIPMENT AND LABOUR REQUIRED FOR A COMPLETE AND ADEQUATE DISTRIBUTION SYSTEM AS DESCRIBED HEREIN.
- 2. POWER PANELS SHALL CONTAIN CIRCUIT BREAKERS OR FUSIBLE UNITS. FUSIBLE UNITS WILL NOT BE ACCEPTED IN LIEU OF BREAKERS AND VICE VERSA. PANELS SHALL BE AS MANUFACTURED BY SCHNEIDER, CUTLER-HAMMER OR SIEMENS.
- 3. FUSIBLE UNITS SHALL HAVE QUICK-MAKE, QUICK-BREAK MECHANISM AND SHALL BE FRONT OPERATED. UNIT SHALL BE INDIVIDUALLY ENCLOSED WITH INSULATED END BARRIERS. FUSE CLIPS SHALL BE HIGH PRESSURE TYPE SUITABLE FOR AND COMPLETE HRC FUSES.
- 4. CIRCUIT BREAKERS SHALL HAVE AMPACITY AND FRAME SIZE SHOWN ON THE DRAWINGS. BREAKERS SHALL HAVE DEFINITE OFF AND TRIP POSITIONS WITH PROVISIONS FOR PADLOCKING. BREAKERS SHALL BE BOLTED TO THE BUS. TWO AND THREE POLE BREAKERS SHALL HAVE COMMON TRIPS.
- 5. UNLESS OTHERWISE NOTED, TWO AND THREE POLE MOULDED CASE CIRCUIT BREAKERS SHALL HAVE A MINIMUM INTERRUPTING CAPACITY OF 22KA RMS SYMMETRICAL, AND
- 6. EACH FUSIBLE UNIT OR BREAKER SHALL HAVE A LAMACOID NAMEPLATE ATTACHED WITH CONTACT CEMENT OR SCREWS. NAMEPLATE SHALL CARRY NAME OF EQUIPMENT OR PANEL SERVED BY THE UNIT OR BREAKER.
- 7. DISCONNECT SWITCHES SHALL BE TYPE A, HORSEPOWER RATED, "SWITCHMATIC" BY FEDERAL PIONEER OR EQUAL BY SQUARE D, CUTLER-HAMMER, SIEMENS.
- 8. FUSES SHALL BE HRC FORM 1. FUSES PROTECTING MOTORS OR TRANSFORMERS SHALL BE TIME DELAY TYPE.
- 9. SUBMIT SHOP DRAWINGS FOR SWITCHBOARD, PANELS, TRANSFORMERS. SUBMIT SHORT CIRCUIT CALCULATIONS AT PANELS AND PROVIDE ALL REQUIRED ADJUSTMENT ON EQUIPMENT TO SUIT.

SECTION 16450 - LIGHTING

- 1. SUPPLY AND INSTALL ALL LIGHTING FIXTURES, LAMPS, AND ALL REQUIRED ACCESSORIES AS INDICATED ON THE DRAWINGS BY LETTER TYPE AND AS HEREINAFTER SPECIFIED.
- 2. SUBMIT SHOP DRAWINGS FOR EACH LIGHTING FIXTURE TYPE.
- 3. REPLACE AND INSTALL WITHOUT EXTRA COST TO THE OWNER:
- ALL DEFECTIVE OR NOISY BALLASTS OR DRIVERS FOR A PERIOD OF ONE YEAR
- ANY INCANDESCENT OR LOW VOLTAGE LAMP WHICH FAILS WITHIN 30 DAYS OF TAKEOVER
- ANY FLUORESCENT OR H.I.D. LAMP WHICH FAILS WITHIN 90 DAYS OF TAKEOVER. LED LIGHTS WITHIN 90 DAYS
- 4. INCANDESCENT LAMPS SHALL BE 130V STANDARD SERVICE TYPE AS MANUFACTURED BY G.E., PHILIPS, OR SYLVANIA, UNLESS OTHERWISE NOTED.
- 5. COMPACT FLUORESCENT LAMPS SHALL BE 3500K TYPE OR AS SPECIFIED WITH CRI OF 82 AS MANUFACTURED BY G.E., PHILIPS OR SYLVANIA. BALLASTS FOR COMPACT FLUORESCENT LAMPS SHALL BE HIGH POWER FACTOR, ELECTRONIC.
- 6. FLUORESCENT T_8 LAMPS SHALL BE BI_PIN, RAPID START, 3500K WITH CRI OF 85, INITIAL LUMENS OF 3000 FOR F32 T_8, AS MANUFACTURED BY G.E., PHILIPS, OSRAM, OR SYLVANIA, UNLESS OTHERWISE NOTED.
- 7. BALLASTS FOR FLUORESCENT T_8 LAMPS SHALL BE HIGH FREQUENCY ELECTRONIC, RAPID START WITH CLASS "A" SOUND RATING, MINIMUM POWER FACTOR OF 95%, MAXIMUM TOTAL HARMONIC DISTORTION OF 15% MINIMUM BALLAST FACTOR OF 85% AND MAXIMUM CREST FACTOR OF 1.7. BALLASTS SHALL MEET ANSI/IEEE SPECIFICATION C62.41 FOR TRANSIENT AND SURGE IMMUNITY, AND FCC PART 18 SUBPART C FOR NON CONSUMER LIMITS FOR EMI AND RFI EMISSION. BALLASTS SHALL BE MANUFACTURED TO CERTIFIED BALLAST MANUFACTURERS STANDARDS AND AS MANUFACTURED BY G.E./MOTOROLA, ADVANCE/E.B.T., MAGNETEK, FLOTRONIC (347V ONLY) OR OSRAM.
- 8. DRIVERS FOR LED LIGHTS TO BE DIMMABLE (0-10) WHERE DIMMING CONTROL IS SHOWN
- 9. ALL LIGHTING FIXTURES, INCLUDING THOSE MOUNTED IN SUSPENDED CEILING, TO BE SUPPORTED FROM BUILDING STRUCTURE.
- 10. COORDINATE THE INSTALLATION OF LIGHTING FIXTURE WITH ALL TRADES TO PROVIDE SPACING INTENDED.
- FIXTURES SHALL BE PROPERLY CLEANED AND LEFT CLEAN AND DUST_FREE. ANY FIXTURE SHOWING MARKS OR SCRATCHES DUE TO HANDLING OR TOOL MARKS SHALL BE REPLACED

WORKING IN EXISTING BUILDING AND CONTINUITY OF SERVICES - SECTION 16500

- 1. MECHANICAL AND ELECTRICAL ALTERATIONS AND ADDITIONS ARE BEING MADE IN THE EXISTING AREAS AS NOTED ON MECHANICAL DRAWINGS AND SPECIFICATIONS.
- VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AND ALL TENDERING DOCUMENTS, DRAWINGS AND SPECIFICATIONS. MAKE ALL NECESSARY ALLOWANCES IN TENDER PRICE FOR REMOVAL, RELOCATION, RECOUTING, RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT AND WIRING AS MAY BE NECESSARY FOR THE EXECUTION AND COMPLETION OF THIS PROJECT. NO ALLOWANCE WILL BE MADE LATER FOR ANY EXPENSE INCURRED BY THIS TRADE THROUGH FAILURE TO MAKE THIS EXAMINATION.
- 3. REMOVE AND/OR RELOCATE AND REINSTALL ALL WIRING AND EQUIPMENT AS NECESSARY TO ACCOMMODATE MECHANICAL ALTERATIONS AND ADDITIONS INDICATED ON THE DRAWINGS. WIRING LOCATED IN AREAS BEING ALTERED OR DEMOLISHED, BUT FEEDING OUTLETS OR EQUIPMENT REQUIRED TO REMAIN IN SERVICE SHALL BE REROUTED AS REQUIRED TO MAINTAIN THE CONTINUITY OF THESE SERVICES.
- 4. EXISTING ELECTRICAL EQUIPMENT REMOVED AND INDICATED FOR REUSE SHALL BE CLEANED BEFORE INSTALLATION. ALL UNUSED CONDUIT ENTRANCE OPENINGS SHALL BE SEALED, ALL DEFECTIVE COMPONENTS SHALL BE REPLACED BEFORE REINSTALLATION.
- 5. ALL WIRING SHALL BE RUN CONCEALED WHERE POSSIBLE EXCEPT THAT CONDUITS IN UNFINISHED AREAS AND ON EXISTING WALLS AND CEILING MAY BE INSTALLED ON
- 6. REWORK EXISTING POWER SERVICE AND DISTRIBUTION TO SUIT MECHANICAL EQUIPMENT REVISIONS. PROVIDE NEW POWER PANEL, SPLITTER AND FUSIBLE UNITS, ETC., AS
- 7. SUPPLY, INSTALL AND MAINTAIN ALL REQUIRED TEMPORARY WIRING TO OCCUPIED AREAS AT ALL TIMES. PROVIDE ADEQUATE PROTECTION TO EXISTING WIRING AND EQUIPMENT SERVING THE EXISTING AND NEW WORK AND PARTICULARLY WHERE WIRING AND ELECTRICAL EQUIPMENT HAVE BECOME EXPOSED TO MECHANICAL INJURY OR MOISTURE IN THE COURSE OF ALTERATIONS OR NEW WORK.
- 8. POWER SHUTDOWN, IF REQUIRED, MUST BE COORDINATED WITH CLIENT'S REPRESENTATIVE.
- 9. CERTAIN ITEMS ARE IDENTIFIED ON THE DRAWINGS AS EXISTING EQUIPMENT TO BE "REMOVED". DISCONNECT SAID EQUIPMENT AND MAKE SAFE. OBSOLETE CONDUITS AND CABLES SHALL BE DISCONNECTED FROM THEIR SOURCE OF SUPPLY, CUT BACK TO A SUITABLE POINT.
- 10. ALL UNUSED FUSED SWITCHES AND CIRCUIT BREAKERS SHALL BECOME SPARE. PROVIDE NEW, UP-DATED DIRECTORIES FOR PANELS.
- 11. CERTAIN ITEMS ARE IDENTIFIED ON THE DRAWINGS AS EXISTING EQUIPMENT "RELOCATED". DISCONNECT SAID EQUIPMENT FROM ITS PRESENT SOURCE AND AFTER RELOCATION, RECONNECT AND REINSTALL ALL ELECTRICAL COMPONENTS. PROVIDE NEW DISCONNECTS TO SUIT EQUIPMENT RATING.
- 12. ALL EXISTING EQUIPMENT AND MATERIAL NOT REQUIRED IN THE FINAL INSTALLATION SHALL BE CAREFULLY REMOVED AT THE APPROPRIATE TIME AND SHALL BE DISPOSED OF EXCEPT STARTERS FOR MECHANICAL EQUIPMENT BEING HANDED BACK TO THE CLIENT.

<u>FIRE ALARM SYSTEM - SECTION 16720</u>

- 1. THE FIRE ALARM SYSTEM IS EXISTING.
- 2. NEW SMOKE DETECTOR, SPEAKERS, HORN/STROBE, PULL STATION AND ALL F.A DEVICES AND ACCESSORIES SHALL BE COMPATIBLE WITH THE EXISTING SYSTEM.
- 3. COMPLETE INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF CAN/ULC-S524 "STANDARD FOR THE INSTALLATION OF FIRE ALARM SYSTEMS" AND SHALL BE VERIFIED TO CAN/ULC-S537 "STANDARD FOR THE VERIFICATION OF FIRE ALARM SYSTEMS". WHERE THE REQUIREMENTS OF THIS SECTION EXCEED THE MINIMUM REQUIREMENTS OF THE ULC STÄNDARD, THESE SPECIFICATIONS SHALL GOVERN.
- .1 SEPARATION OF WIRING SHALL ADHERE TO SUGGESTED WIRING AND INSTALLATION GUIDE OF CAN/ULC-S524. .2 WRING SHALL BE SIZED IN ACCORDANCE WITH CLASS 2 REQUIREMENTS, BUT SHALL BE PROTECTED FROM MECHANICAL INJURY OR OTHER INJURIOUS CONDITIONS SUCH AS MOISTURE, EXCESSIVE HEAT OR CORROSIVE ACTION IN ACCORDANCE WITH CLASS I REQUIREMENTS. CONDUCTORS SHALL BE SOLID COPPER. THE MINIMUM SIZE OF ANY CONDUCTOR
- .1 FOR ALARM RECEIVING CIRCUIT #18 AWG TWISTED SHIELDED PAIRS. IN NO CASE SHALL THE WIRE RESISTANCE IN THESE CIRCUITS EXCEED 50 OHMS. .3 FOR AUDIBLE SIGNAL CIRCUITS #14 AWG FOR 1 OR 2 CONDUCTORS IN A CABLE, #18 AWG FOR 3 OR 4 CONDUCTORS IN A CABLE. IN NO CASE SHALL THE VOLTAGE DROP
- TO ANY SIGNAL EXCEED 10%. .4 RATING OF CABLE SHALL BE 90 DEGREES C AND 300 VOLT MINIMUM.
- WIRING SHALL BE INSTALLED IN CONDUIT AND IN ANY CASE SHALL CONFORM TO THE SYSTEM MANUFACTURER'S RECOMMENDATIONS. ALL CONDUITS SHALL BE GROUNDED PER CLASS 1 WIRING. VERIFICATION AND CERTIFICATION OF EQUIPMENT
- THAT THE TYPE OF EQUIPMENT INSTALLED IS THAT DESIGNATED IN THE SPECIFICATIONS. THAT THE WIRING CONNECTIONS TO ALL EQUIPMENT COMPONENTS SHOW THAT THE INSTALLER UNDERTOOK TO HAVE OBSERVED ULC AND CSA REQUIREMENTS.
- .3 THAT EQUIPMENT OF THE MANUFACTURER'S MANUFACTURE HAS BEEN INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND THAT ALL SIGNALING DEVICES OF WHATEVER MANUFACTURE HAVE BEEN OPERATED OR TESTED TO VERIFY THEIR OPERATION. THAT THE SUPERVISORY WIRING OF THOSE ITEMS OF EQUIPMENT CONNECTED TO A SUPERVISED CIRCUIT IS OPERATING AND THAT THE GOVERNMENTAL REGULATIONS, IF ANY,
- CONCERNING SUCH SUPERVISORY WIRING. HAVE BEEN MET TO THE SATISFACTION OF INSPECTING OFFICIALS. .5 THE MANUFACTURER SHALL SUPPLY REASONABLE AMOUNTS OF TECHNICAL ASSISTANCE WITH RESPECT TO ANY CHANGES NECESSARY TO CONFORM TO THE ABOVE. DURING THE PERIOD OF INSPECTION BY THE MANUFACTURER, MAKE AVAILABLE TO THE MANUFACTURER ELECTRICIANS AS DESIGNATED BY THE MANUFACTURER.
- S OPEN FLAME AND SMOKE ARE NOT TO BE USED FOR TESTING 6. COMPLETION OF THE INSPECTION AND WHEN ALL OF THE ABOVE CONDITIONS HAVE BEEN COMPLIED WITH, THE MANUFACTURER SHALL ISSUE TO THE CONSULTANT:
- .1 A COPY OF THE INSPECTING TECHNICIAN'S REPORT SHOWING LOCATION OF EACH DEVICE AND CERTIFYING THE TEST RESULTS OF EACH DEVICE.
- .2 A CERTIFICATE OF VERIFICATION CONFIRMING THAT THE INSPECTION HAS BEEN COMPLETE AND SHOWING THE CONDITIONS UPON WHICH SUCH INSPECTION AND CERTIFICATION HAVE BEEN RENDERED.

PROOF OF LIABILITY INSURANCE FOR THE INSPECTION. ALL COSTS INVOLVED IN THIS INSPECTION SHALL BE INCLUDED IN THE TENDER PRICE.

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Description

1 Final Review Issued for Permit & Tender

> PERMIT REVIEWED FOR COMPLIANCE WITH THE ONTARIO BUILDING CODE

> > 18 197188 BLD 00

16 July '18

16 July '18



SHARMA &: PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive Unit 108 Toronto, Ontario Tel.: (416) 291-8822 SPI PROJECT #: 2018-10

1157 Davenport Road

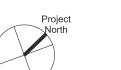
Davenport Shelter

Toronto Ontario M6H 2G4 T 416.901.8055 F 416.849.0383 www.workshoparchitecture.ca

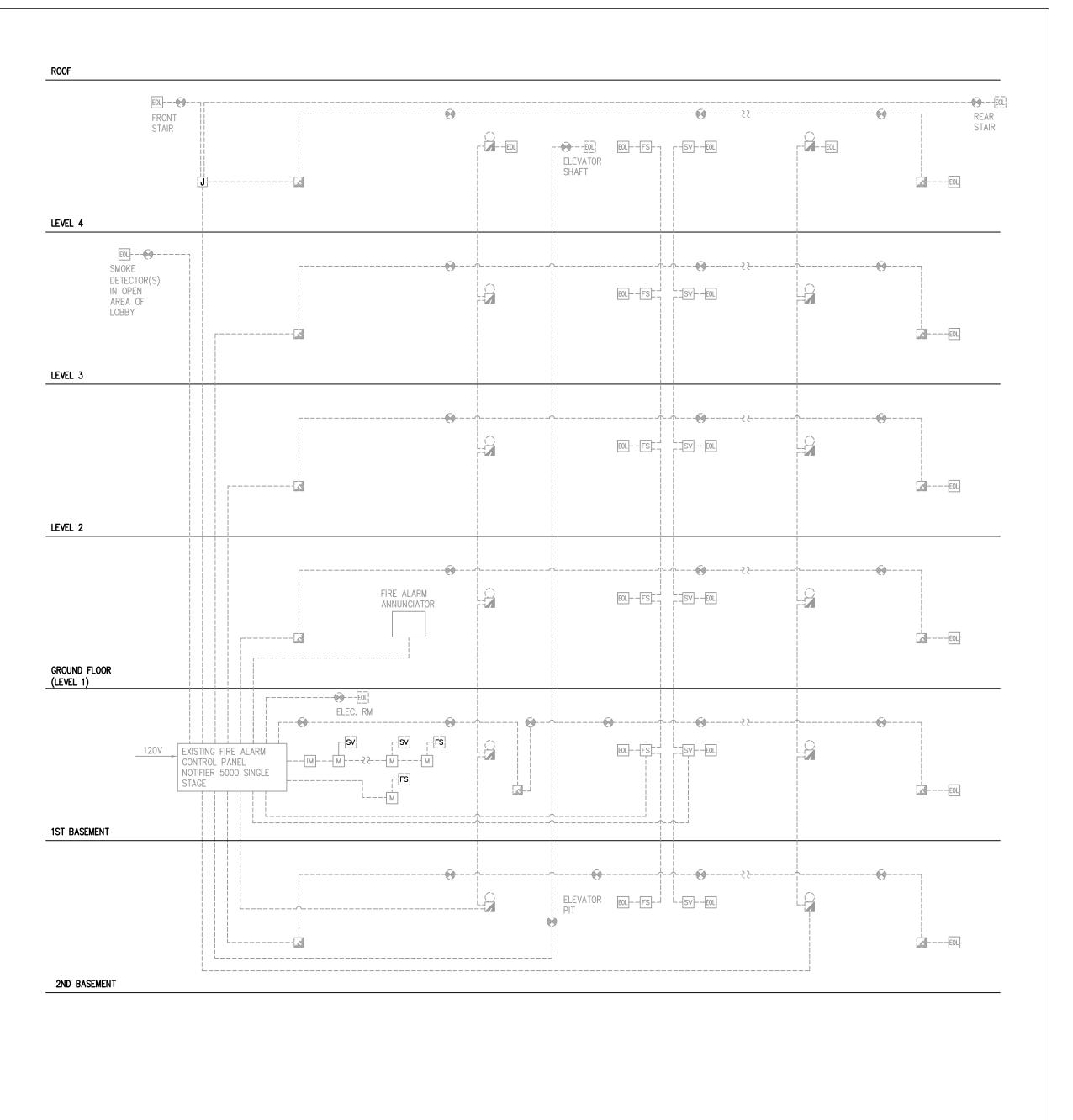
348 Davenport Road Toronto, ON M5R 1K6

16 July 2018	Permit / Tende
DATE:	STATUS:
18_22	N.T.S.
PROJECT CODE:	SCALE:

Electrical Specification



MIORONTO Building RECEIVED 24/Jul/2018



<u>Notes:</u>

1. EXISTING FIRE ALARM DIAGRAM IS PROVIDED FOR REFERENCE

ONLY. THIS CONTRACTOR TO ALLOW FOR SITE INVESTIGATION TO CONFIRM WIRING, EXISTING DEVICES ETC.

2. FOR NUMBER AND LOCATION OF DEVICES REFER TO FLOOR

3. REWIRE EXISTING ZONES WHERE SHOWN OR REQUIRED TO

SUIT NEW DEVICES. RE-WIRE CONSTITUTES NEW WIRING FROM NEW DEVICES TO FIRE ALARM PANEL.

E-13 SCALE: N.T.S.

M MODULES

FS FLOW SWITCH

SV SUPERVISED VALVE

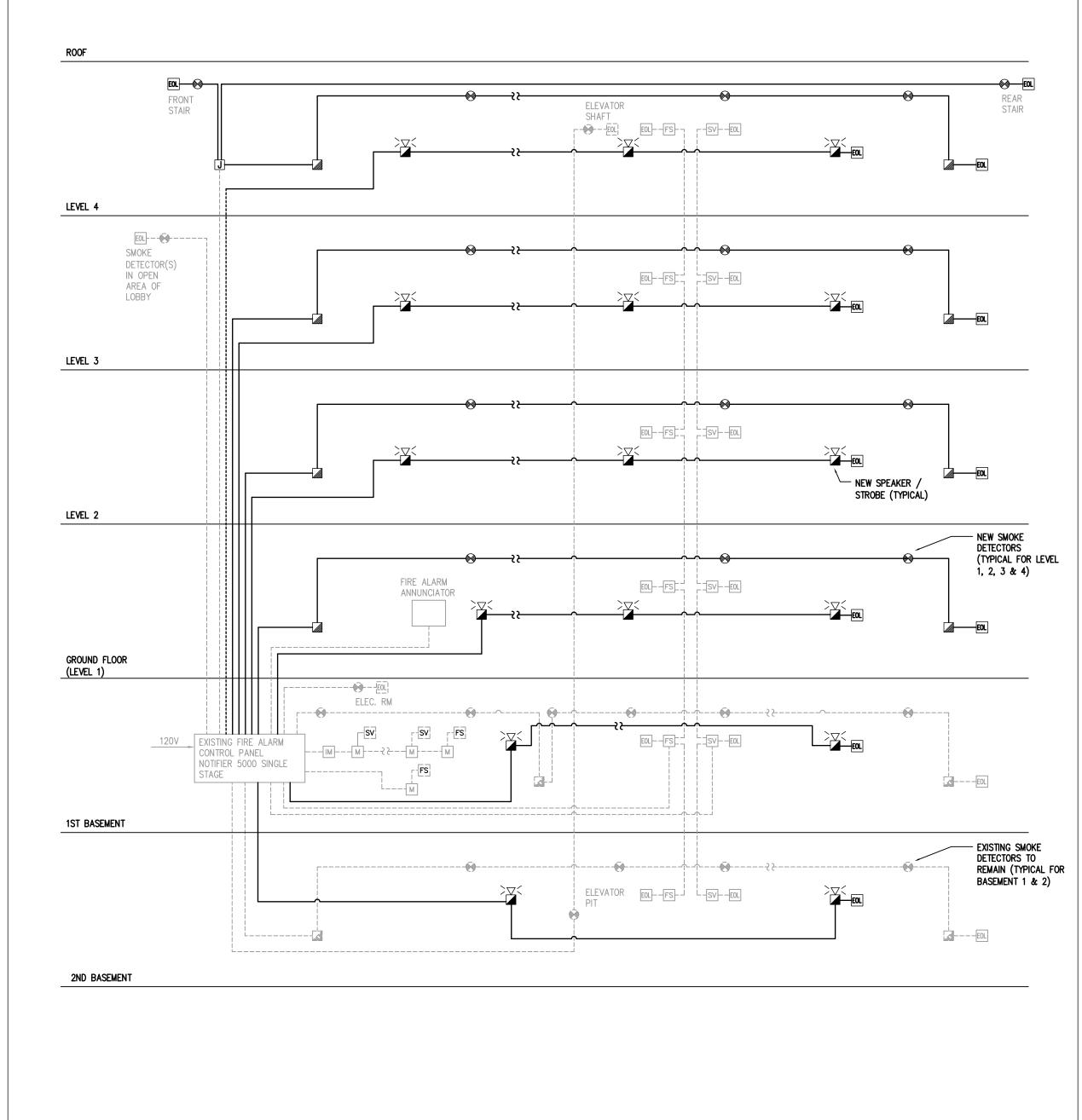
EOL END OF LINE DEVICE

DRAWING LEGEND

IM ISOLATION / ZONE MODULES

THIS LINE TYPE DENOTES NEW

THIS LINE TYPE DENOTES EXISTING



2 FIRE ALARM RISER DIAGRAM - NEW LAYOUT

E-13 SCALE: N.T.S.

	ISTING FIRE ALARM ZONING SCHEDULE
NO.	DESCRIPTION
1	2ND BASEMENT
2	1ST BASEMENT
3	GROUND FLOOR (LEVEL 1)
4	LEVEL 2
5	LEVEL 3
6	LEVEL 4
7	FRONT STAIR TOP
8	REAR STAIR TOP
9	3RD FLOOR OPEN AREA SMOKE
10	ELEVATOR SHAFT PIT AND SHAFT
11	ELECTRICAL ROOM BASEMENT 1
12	2ND BASEMENT SPRINKLER FLOW SWITCH
13	1ST BASEMENT SPRINKLER FLOW SWITCH
14	GROUND FLOOR (LEVEL 1) SPRINKLER FLOW SWITCH
15	LEVEL 2 SPRINKLER FLOW SWITCH
16	LEVEL 3 SPRINKLER FLOW SWITCH
17	LEVEL 4 SPRINKLER FLOW SWITCH
18	SPRINKLER MAIN VALVE
19	SPRINKLER CHECK VALVE
20	SPRINKLER LOSS OF PRESSURE (LOW PRESSURE ALARM)
21	FIRE PUMP SUPERVISED VALVE
22	2ND BASEMENT SUPERVISED VALVE
23	1ST BASEMENT SUPERVISED VALVE
24	GROUND FLOOR (LEVEL 1) SUPERVISED VALVE
25	LEVEL 2 SUPERVISED VALVE
26	LEVEL 3 SUPERVISED VALVE
27	LEVEL 4 SUPERVISED VALVE
28	
29	
30	

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16 July '18 1 Final Review 2 Issued for Permit & Tender 16 July '18 3 Issued for Addendum EAD-1 30 July '18



FIRE SERVICES O.B.C. (S)

SHARMA & PARTNERS INC. Mechanical and Electrical Engineers 85 Curlew Drive. Unit 108 M3A 2P8 Tel.: (416) 291-8822 SPI PROJECT #: 2018-1039

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Davenport Shelter

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30 July 2018	Addendum #1
DATE:	STATUS:
18 22	N.T.S.
PROJECT CODE:	SCALE:



Fire Alarm System

