INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

LIST OF DRAWINGS

000	OOVED OUEET
000	COVER SHEET

<u>ARCHITECTURAL</u>

A201 GROUND FLOOR DEMOLITION PLAN

A202 GROUND FLOOR PLAN AND ENLARGED PLAN

A203 GROUND FLOOR REFLECTED CEILING PLAN

A801 DOOR SCHEDULE, ROOM FINISH SCHEDULE, DOOR HEAD AND JAMB DETAILS

A901 INTERIOR ELEVATIONS

A902 MILLWORK ELEVATIONS

A903 MILLWORK SECTIONS

MECHANICA

M-1 MECHANICAL - HVAC

M-2 MECHANICAL - PLUMBING AND DRAINAGE

M-3 SCHEDULES AND DETAILS

M-4 MECHANICAL SPECS, LEGEND AND DRAWING LIST

ELECTRICAL

E-1.1 ELECTRICAL LEGEND AND DETAILS

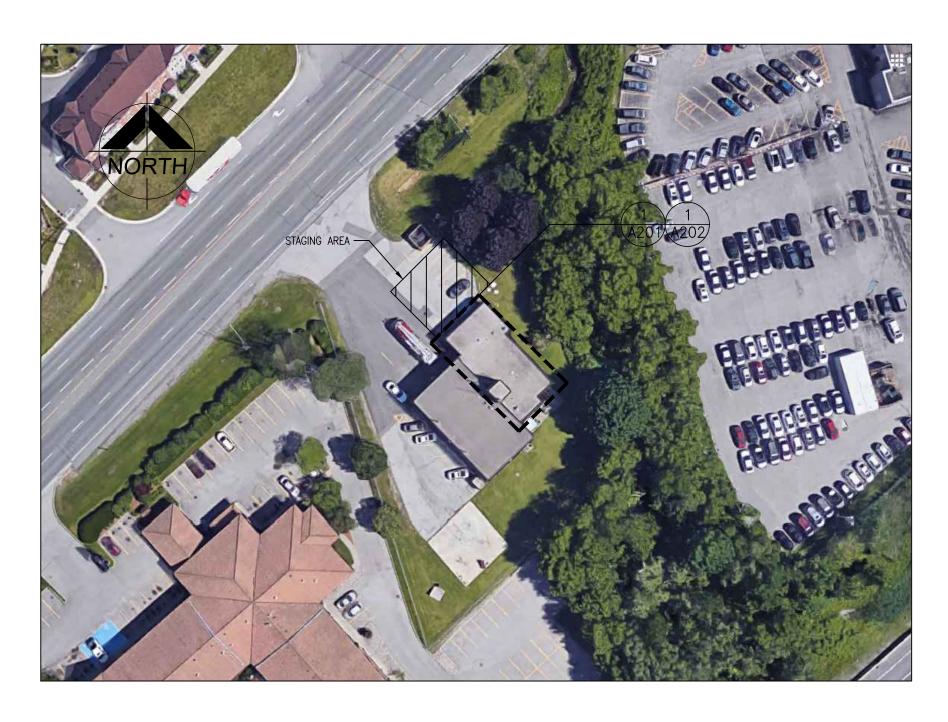
E-1.2 ELECTRICAL DETAILS

E-1.3 ELECTRICAL DETAILS

E-2.1 ELECTRICAL AND REFLECTED CEILING PLANS

E-5.1 ELECTRICAL AND REFLECTED CEILING DEMOLITION PLANS

E-7.1 ELECTRICAL SINGLE LINE DIAGRAM



	E OF PROJECT :			
LOCA 553 K	ATION OF PROJECT : KINGSTON ROAD, PIC			
	,	Ontario Building C Part 11 - Renovatio	ode Data Matrix n of Existing Building	OBC Referenc
1.00	Building Code Versio	n: O. Reg. 332/12 La	st Amendment: O. Reg. 191/14	
11.01	Project Type:	☐ Change of use	Renovation	[A] 1.1.2.
11.02	Major Occupancy Classification:	Occupancy Us	RATIONS TO FIRE HALL LIVING QUARTERS IRE HALL LIVING QUARTERS IRE HALL APPARATUS BAY	3.1.2.1.(1)
11.03	Superimposed Major Occupancies:	Yes ☑ No Description		3.2.2.7
11.04	Building Area (m ²)	Description BASEMENT 1ST FLOOR LIVING QUAI 1ST FLOOR (APPARATUS		[A] 1.4.1.2.
11.05	Building Height	1 Storeys about 5 Storeys bel		[A] 1.4.1.2 & 3.2.1.1
11.06	Number of streets/ fire fighter access:	street(s)		3.2.2.10 & 3.2.5
	Building Size: Existing Building Classification:	Change in Major Occupancy: Construction Index: Hazard Index:	(no change of major occupancy)	T.11.2.1.1.BN. 11.2.1 T11.2.1.1A T11.2.1.1B to N, 4.1.2.1(3) & 5.2.2.1.(2)
		Importance Category:	□ Low □ Normal □ High □ Post-disaster	
	Renovation Type: Occupant Load:	Basic Renovation Floor Level/ Area FIRST FLOOR FIRST FLOOR -	□ Extensive Renovation Occupancy Type Based On DESIGN Occup. Loa C DESIGN 5 F2 DESIGN 0 - - -	11.3.3.1 & 11.3.3. d 3.1.17
11.11	Plumbing Fixture Requipments:	Ratio: Male/Female = 50 Floor level/ Area FIRST FLOOR	Occupant OBC Fixtures Fixtures Load Reference Required Provided 3.7.4.6 2 3	3.7.4
11.12	Barrier-free Design:	☑ Yes Explanation	n	11.3.3.2.(2)
11.13	Reduction in Performance Level:	Structural By Increase in occupant load: By change of major occupancy: Plumbing Sewage - system:	 ☑ No ☐ Yes ☑ No ☐ Yes ☑ No ☐ Yes ☐ No ☑ Yes ☐ No ☑ Yes 	11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5
11.14	Compensating Construction:	☐ Yes ☑ No Structural By Increase in occupant load: By change of major occupancy: Plumbing Sewage - system: Extension of Combustible Construction:	 ✓ No ☐ Yes 	11.4.2.3 11.4.2.4 11.4.2.5 11.4.2.6
1.15	Compliance Alternatives Proposed:	☑ No ☐ Yes		11.5.1.
1.16	Notes:			

NAME OF CONSULTANT: BARRY BRYAN ASSOCIATES

CERTIFICATE OF PRACTICE NUMBER: 5192

ARCHITECTURAL: ELECTRICAL: MECHANICAL:



HCC ENGINEERING

DESIGN AND TECHNOLOGY SERVICES GROUP

HCC ENGINEERING LIMITED

40 EGLINTON AVENUE EAST, SUITE 401
TORONTO, ONTARIO, M4P 3A2
Tel: (416) 932-2423



SET NO.

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 1
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 SEPT. 21, 2018 BBA

 2
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 SEPT. 26, 2018 BBA

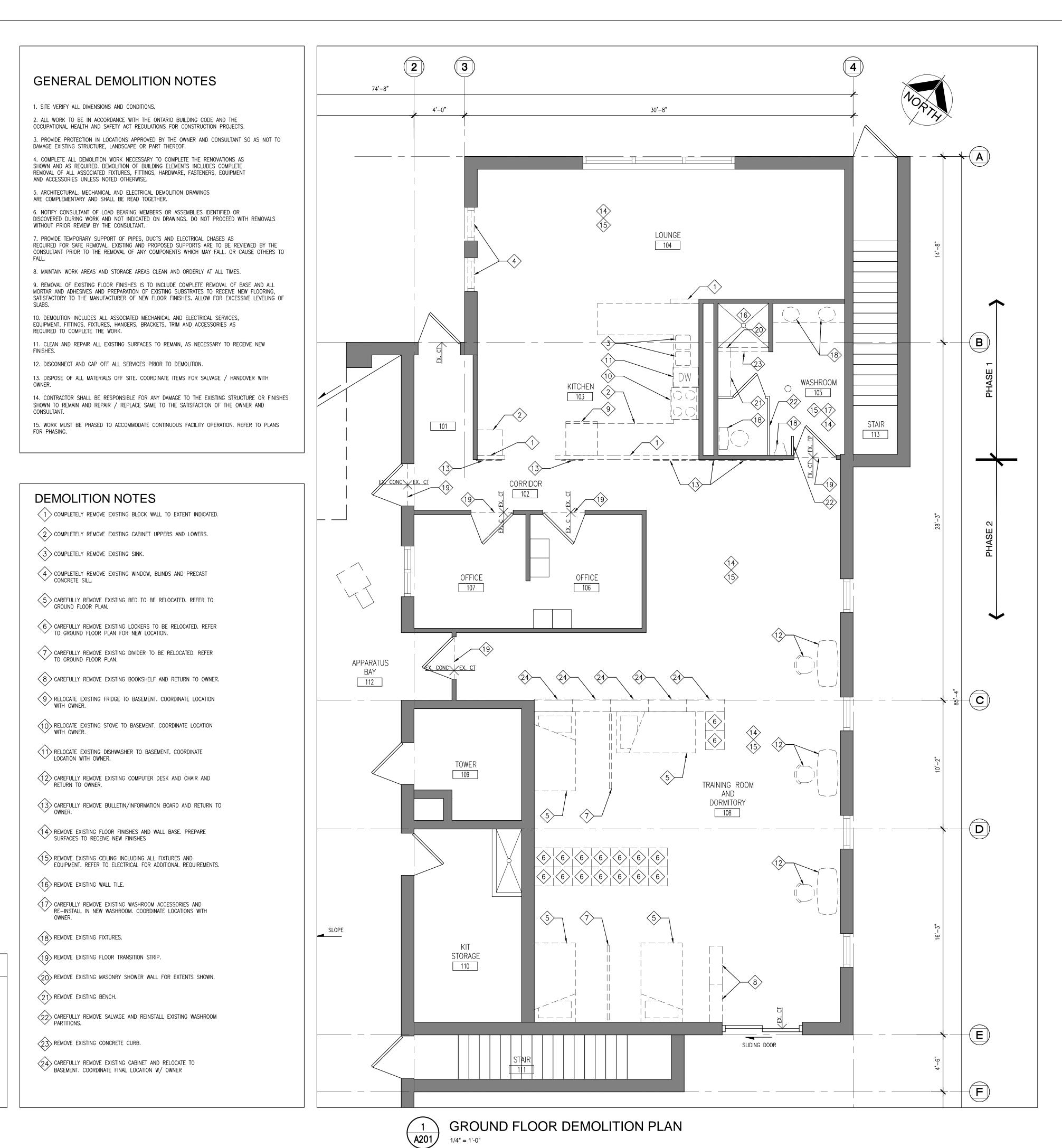
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INTERIOR ALTERATIONS TO EXISTING FIRE HA



PROJECT NO. 17216

A000



DEMOLITION LEGEND

DEMO TAG

BUILDING ELEMENT TO BE REMOVED

EX. CT EX. C EXISTING FLOOR FINISH

EXISTING WALL TO REMAIN

EXISTING DOOR, FRAME

AND TRIM TO REMAIN

CORRIDOR ROOM NAME

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PROJECT:

NO. REVISIONS

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

DATE BY

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

GROUND FLOOR DEMOLITION PLAN



ASSOCIATES Architects Engineers Project Managers 250 Water Street

Suite 201

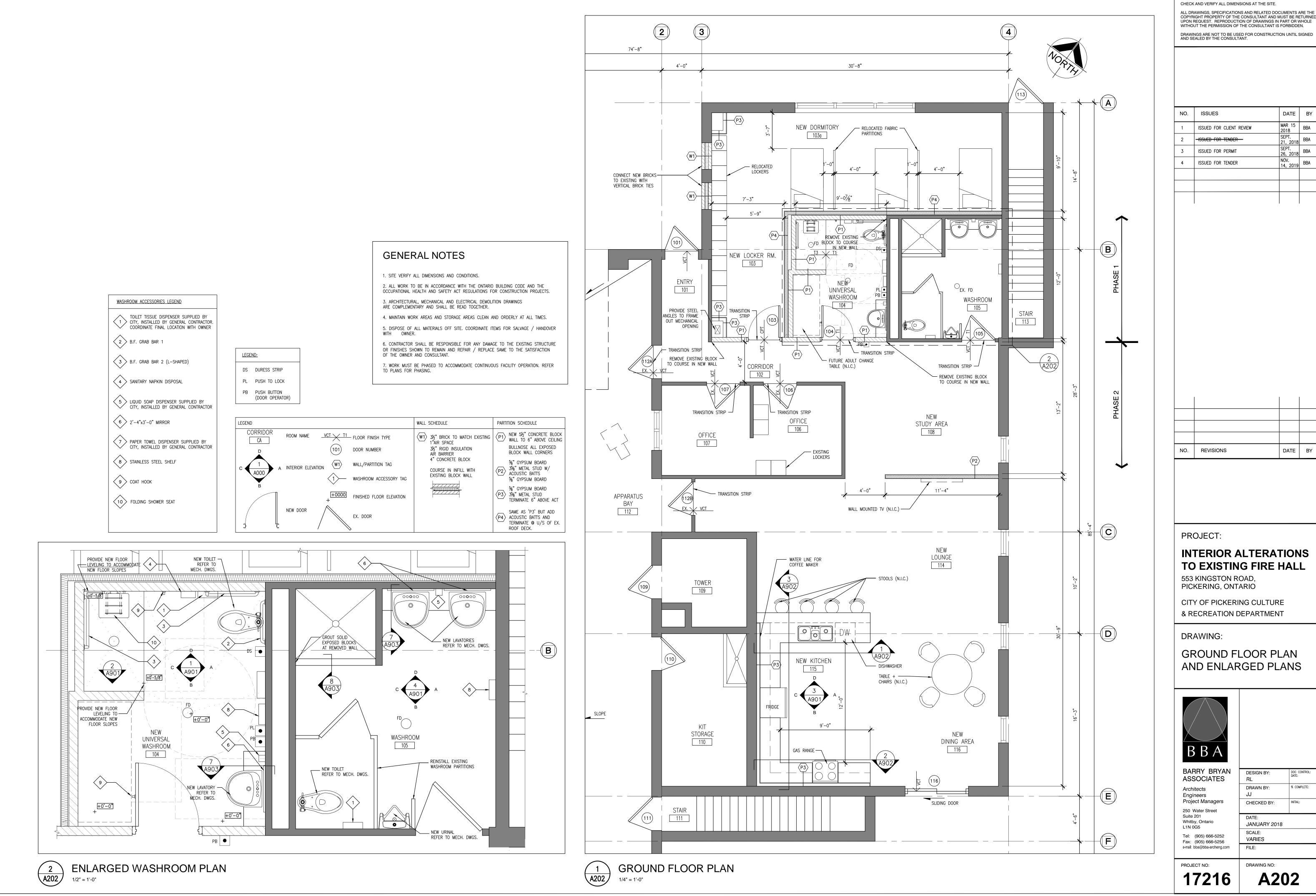
L1N 0G5

% COMPLETE: DRAWN BY: CHECKED BY: Whitby, Ontario JANUARY 2018 Tel: (905) 666-5252

DESIGN BY:

1/4" = 1'-0" Fax: (905) 666-5256 e-mail: bba@bba-archeng.com FILE: PROJECT NO: 17216

DRAWING NO: A201

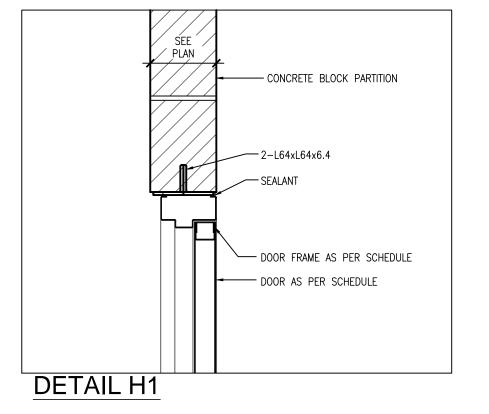


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SOLID BEARING

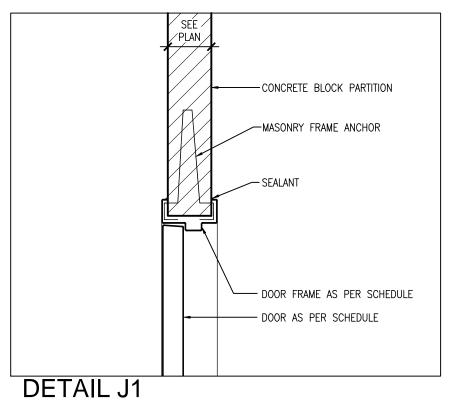
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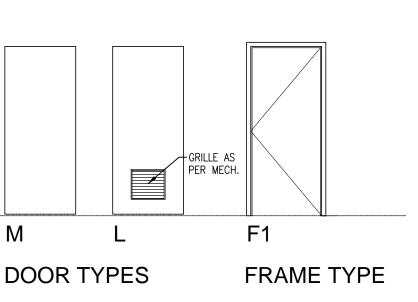
CLEAR SPAN

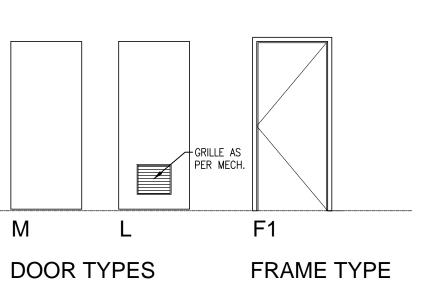
150 (6") MINIMUM EACH END (STEEL ANGLE LINTELL

* BEARING LENGTH

LINTEL DETAIL







GB PT RB VCT EP	GYPUSM BOARD PAINT RUBBER VINYL TILE EPOXY
1.	REFER TO HARDWARE SCHEDULE BY RIVETT HARDWARE
2.	ALL LOCKSETS TO BE KEYED ALIKE UNLESS NOTED OTHERWISE.

FINISH ABBREVIATION

ACOUSTIC TILE

CARPET

EXISTING

CONCRETE BLOCK

LEGEND

EX./EXIST

BUILDING MASTER LOCK SYSTEM.

3. ALL LOCKSETS TO BE KEYED TO BASE 4. SUBMIT SHOP DRAWINGS FOR ALL DOORS, FRAMES, AND HARDWARE.

					DOO	R AND	FRA	ME S	SCHE	EDUL	.E		
		DOOR						FRAME			FIRE	REMARKS	
NO.	SIZE AND THICKNESS	TYPE	MATERIAL	FINISH	GLASS	TYPE	HEAD	TAIL JAMB	MATERIAL	FINISH	RATING	REWARKS	
101	EXISTING	_	_	_	-	_	_	-	_	_	_		
103	3'-2"x7'-0"x1-3/4"	М	НМ	PT	-	F1	H1	J1	НМ	PT	-		
104	3'-2"x7'-0"x1-3/4"	L	НМ	PT	-	F1	H1	J1	НМ	PT	_		
105	EXISTING	_	_	_	-	-	_	_	_	_	_		
106	EXISTING	_	_	_	_	-	_	_	_	_	_		
107	EXISTING	_	_	_	-	-	_	_	_	_	_		
109	EXISTING	_	_	_	_	_	_	_	_	_	_		
110	EXISTING	_	_	_	-	-	_	_	_	_	_		
111	EXISTING	_	_	_	-	-	-	-	_	_	_		
112A	EXISTING	_	_	_	-	-	_	_	_	_	_		
112B	EXISTING	_	_	_	_	_	_	_	_	_	_		
113	EXISTING	_	_	_	-	-	_	-	_	_	_		
114	EXISTING	-	_	-	-	-	-	-	_	_	-		
116	EXISTING	_	_	_	-	-	_	_	_	_	-		
							1						

114	NEW LOUNGE	MAT	. EX.	EX.	GB	EX.	_	EX.		-	-		
114	INLW LOUNGE	FIN.	VCT-	1 RB-	PT-2	PT-1	_	PT-1	AC	T-1	-		
115	NEW KITCHEN	MAT	. EX.	EX.	EX.	_	EX./GB	EX./GI	3	-	-	SI	EE INTERIOR ELEVATIONS FOR EXTENTS OF WALL FINISHES
113	INEW KITCHEN	FIN.	VCT-	1 RB-	PT-1	_	PT/T	PT/T	AC	T-1	-		
116	NEW DINING AREA	MAT	. EX.	EX.	-	EX.	EX.	_		-	-		
110	INEW DINING AREA	FIN.	VCT-	1 RB-	-	PT-1	PT-1	_	AC	T-1	-		
					<u> </u>	<u> </u>	<u> </u>						
					DOC	R Ar	ND F	RAIN		SCHI	=DUI	_E	
		DOOR						F	RAME			FIRE	5514151/0
NO.	SIZE AND THICKNESS	TYPE	MATERIAL	FINISH	GLASS	TYPE	Е Н	DETAI EAD	JAMB	MATERIA	FINISH		REMARKS
101	EXISTING	_	_	_	-	_		_	_	_	_	_	
103	3'-2"x7'-0"x1-3/4"	М	НМ	PT	_	F1		H1	J1	НМ	PT	_	
104	3'-2"x7'-0"x1-3/4"	L	НМ	PT	-	F1		H1	J1	НМ	PT	_	
105	EXISTING	_	_	-	-	-		-	-	_	_	_	
106	EXISTING	_	-	_	_	_		_	_	_	_	_	
107	EXISTING	_	-	-	-			-	_	_	_	_	
109	EXISTING	_	-	-	_			-	_	_	_	_	
110	EXISTING	_		-	-			-	_	_		_	
111	EXISTING	_	_	_				-	_	_	_	_	
112A	EXISTING	_	_	_	_	<u> </u>		-	_	_	_	_	
112B	EXISTING	_	_	_	_			-	_	_	_	_	
113	EXISTING	_	-	-	_	<u> </u>		-	-	_	_	_	
114	EXISTING	_	-	-	_	<u> </u>		-	_	_	_	_	
116	EXISTING	_	-	-	-	 -		-	_	_	_	_	
1						1	- 1						

ROOM SCHEDULE

MAT. EX. EX. EX. EX. EX. - -FIN. VCT-1 RB-1 PT-1 PT-1 PT-1 ACT-1 -MAT. EX. EX. EX./CB EX. EX. EX. - -| FIN. | VCT-1 | RB-1 | PT-1 | PT-1 | PT-1 | PT-1 | ACT-1 | -MAT. EX. EX. EX. GB EX./CB EX./GB — — FIN. CPT-1 RB-1 PT-1 PT-1 PT-1 ACT-1 —

MAT. EX. EX. EX. GB EX./GB - -

FIN. CPT-1 RB-1 PT-1 PT-1 PT-1 ACT-1 MAT. EX. EX./CB EX. EX. CB GB -

FIN. | T-1/T-3 | T-1/T-3 | PT/T | PT/T | PT/T | PT/T | PT-3 | -

FIN. T-1/T-3 T-1/T-3 PT/T PT/T PT/T PT/T PT-3 -

 MAT.
 EX.
 EX.
 EX.
 EX.
 EX.
 EX.
 EX.
 EX.
 EX.
 ACT-1

MAT. EX. EX. EX. EX. EX. - -

FIN. EX. EX. EX. EX. EX. ACT-1 -

MAT. EX. EX. EX. GB EX. - -

FIN. VCT-1 RB-1 PT-1 PT-1 PT-2 PT-1 ACT-1 -

MAT. EX. EX. EX. EX. EX. EX. -

MAT. EX. EX. EX. EX. EX. EX. -

FIN. EX. EX. EX. EX. EX. EX. -MAT. EX. EX. EX. EX. EX. -

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MAT. EX. EX. EX. EX. EX. EX. FIN. EX. EX. EX. EX. EX. -

FIN. EX. EX. EX. EX. EX. EX.

MAT. EX. EX. EX. EX. EX. GB -

FLOOR BASE

ROOM

103 NEW LOCKER RM.

103a NEW DORMITORY

108 NEW STUDY AREA

110 KIT STORAGE

112 APPARATUS BAY

111 STAIR

113 STAIR

105 WASHROOM

106 OFFICE

107 OFFICE

104 NEW UNIVERSAL WASHROOM

WALLS

NORTH EAST SOUTH WEST

CEILING CEILING HEIGHT REV.

REMARKS

SEE INTERIOR ELEVATIONS FOR EXTENTS OF WALL FINISHES

SEE INTERIOR ELEVATIONS FOR EXTENTS OF WALL FINISHES

	& RECREATION [DEPARTMENT	
_	DRAWING:		
S	DOOR SCH FINISH SCH HEAD AND	IEDULÉ, C	OOR
	BBA		
1	BARRY BRYAN ASSOCIATES	DESIGN BY:	DOC CONTROL: DATE:
	Architects Engineers Project Managers	DRAWN BY: JJ CHECKED BY:	% COMPLETE:
	250 Water Street		

Suite 201

L1N 0G5

PROJECT NO:

Whitby, Ontario

Tel: (905) 666-5252

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17216

2	-ISSUED FOR TENDER -	SEPT. 21, 2018	BBA
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NO. ISSUES

NO. REVISIONS

PROJECT:

INTERIOR ALTERATIONS

JANUARY 2018

AS NOTED

DRAWING NO:

A801

FILE:

TO EXISTING FIRE HALL

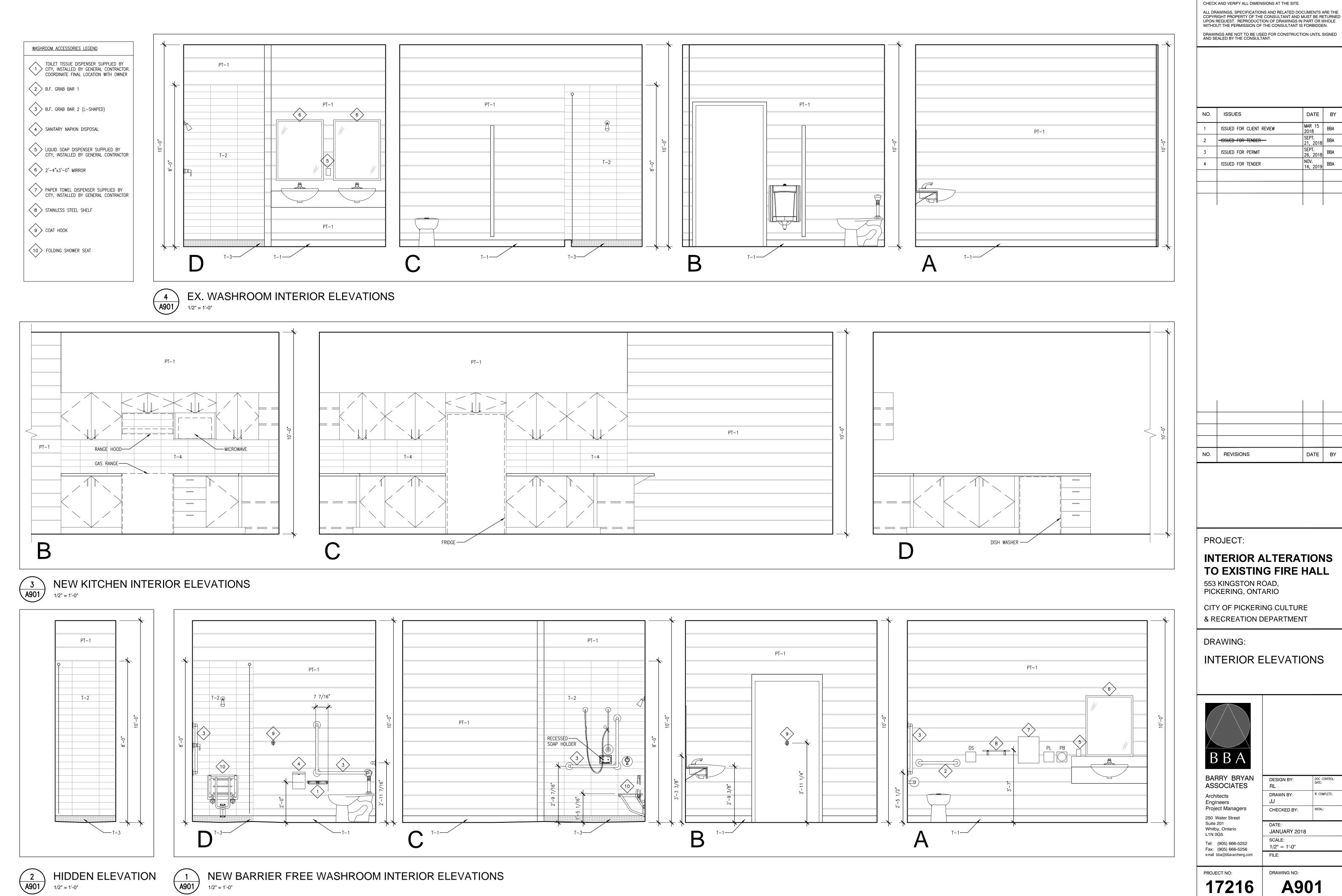
553 KINGSTON ROAD,

PICKERING, ONTARIO

CITY OF PICKERING CULTURE

DATE BY

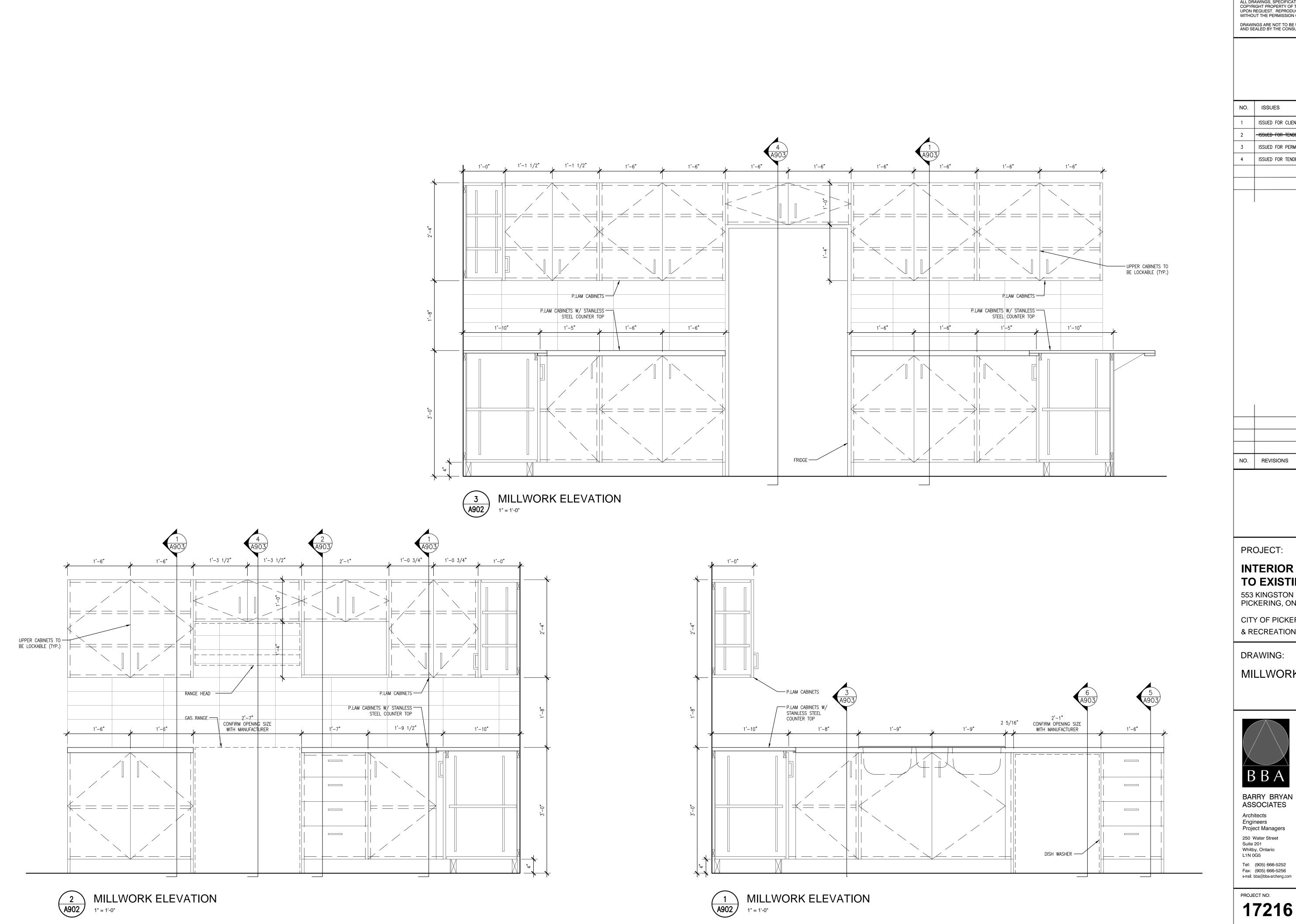
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A901

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DATE BY

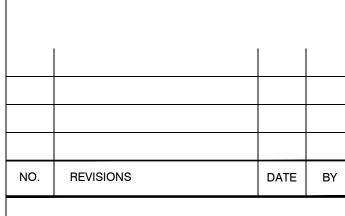


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PROJECT:

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

MILLWORK ELEVATIONS



BARRY BRYAN ASSOCIATES Architects Engineers Project Managers

250 Water Street Suite 201 Whitby, Ontario L1N 0G5

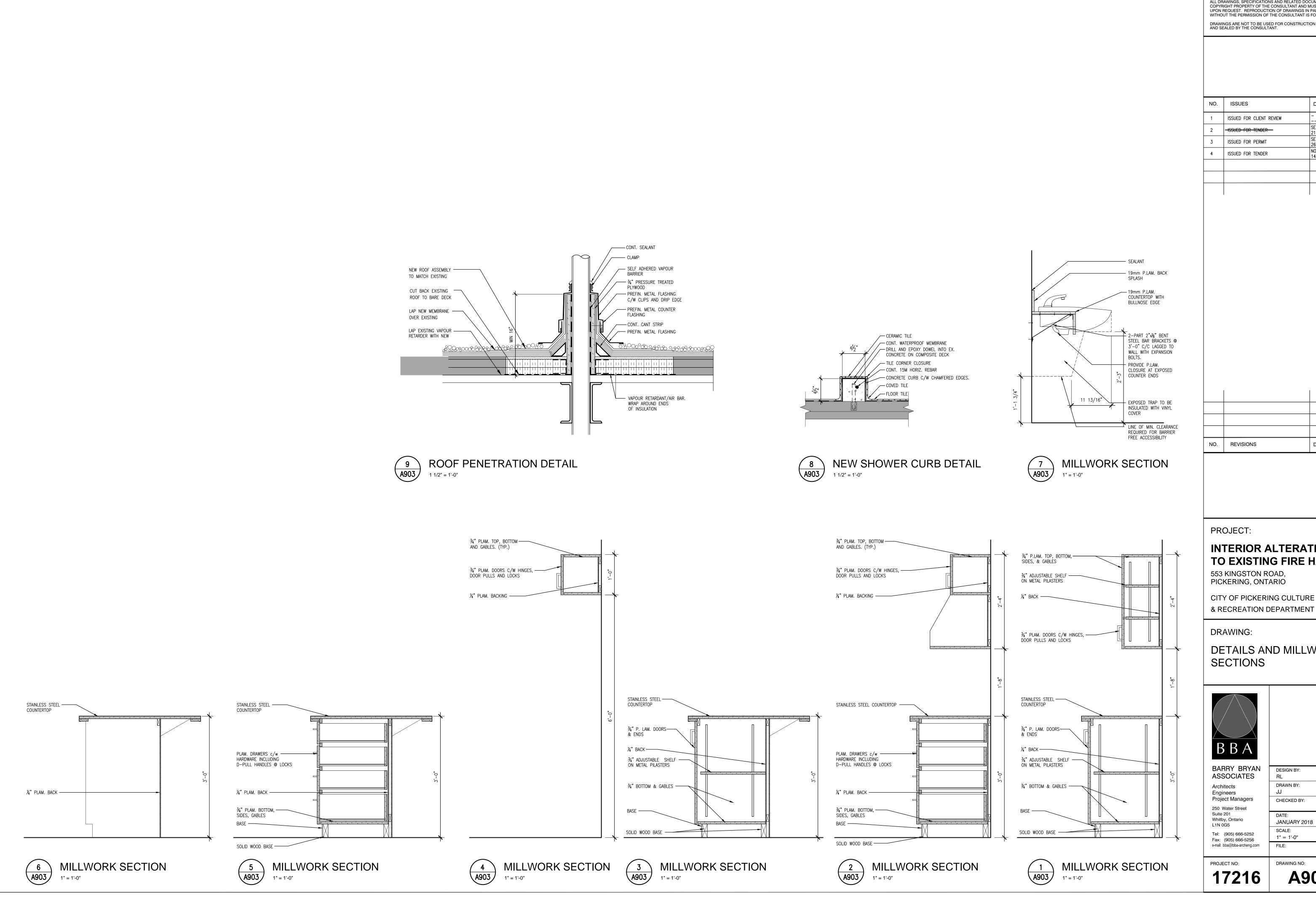
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DRAWN BY:

PROJECT NO: 17216

DRAWING NO: A902

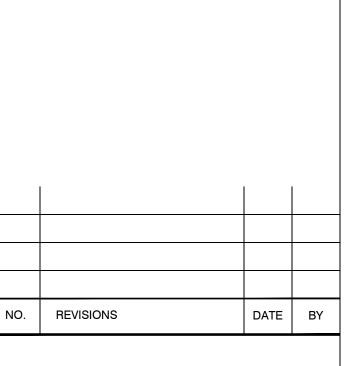


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INTERIOR ALTERATIONS TO EXISTING FIRE HALL

CITY OF PICKERING CULTURE

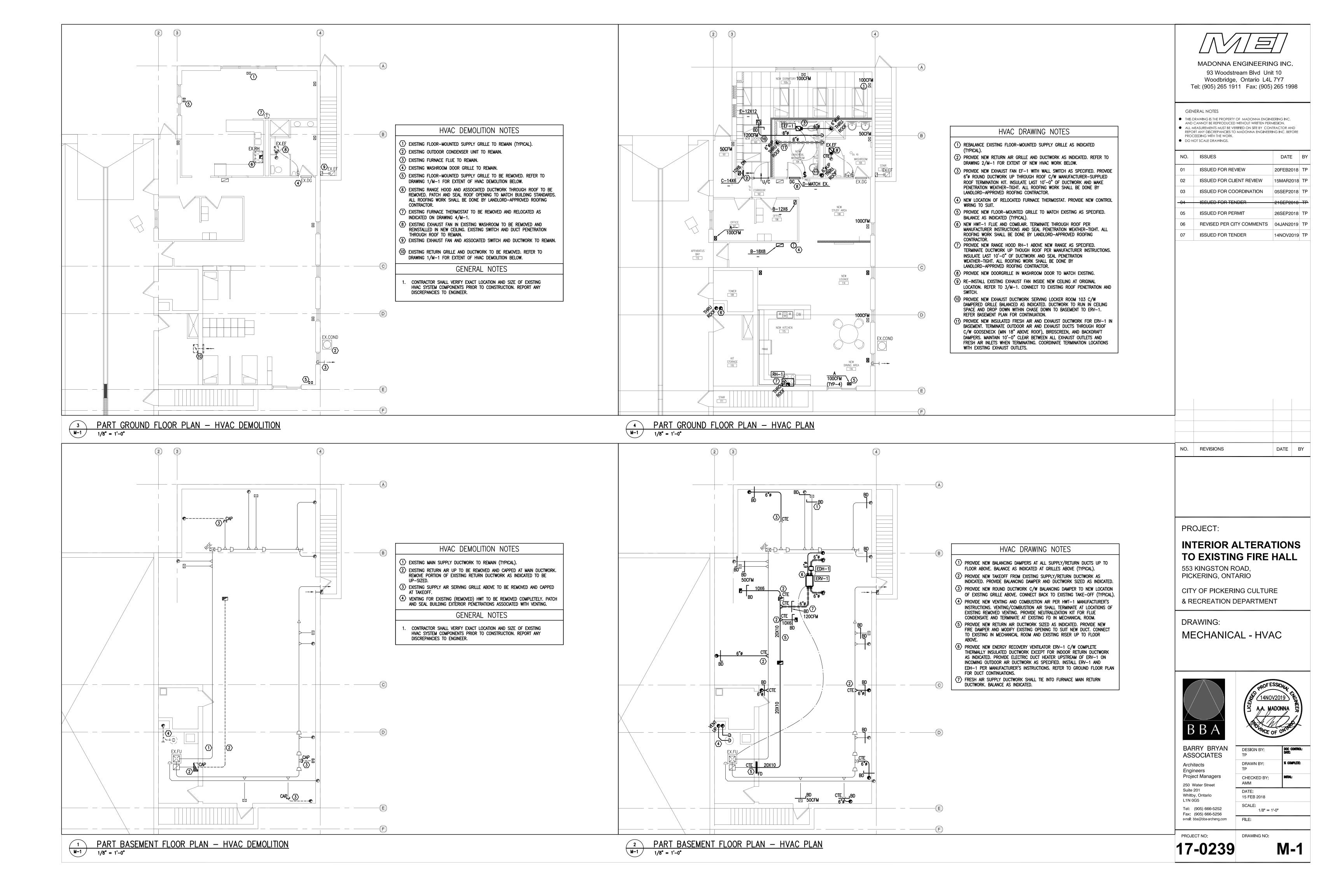
DETAILS AND MILLWORK

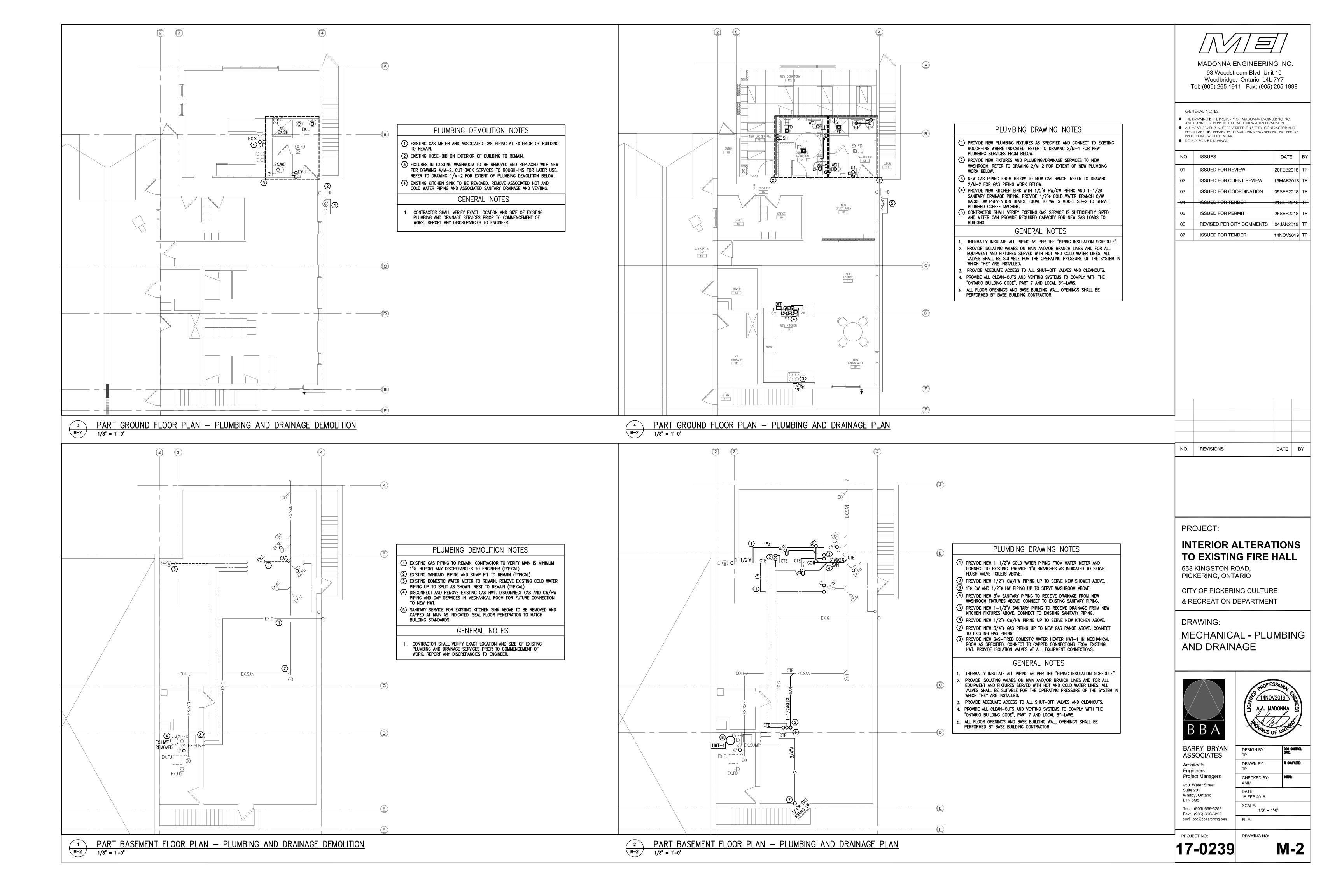
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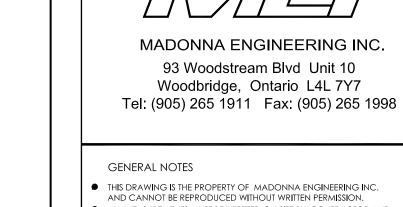
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		IDDG GGIIDDIII D			1	DIDDI	IGDD GGI		
	PLUMBING FIXTU	JRES SCHEDULE					JSER SCI	AEDULE	_
SYMBOL	FIXTURES SPECIFICATION		PIPE CONNE TRAP COLD HO WATER WATI	J SPANA MENT	RESIDENTIAL-TYP	FLOOR SUPPLY	SH REMARKS TO MATCH EXISTING. BALANCE	E AS INDICATED ON PLANS.	
WC1	FLOOR MOUNTED TOILET - VITREOUS CHINA - FOR FLUSHOMETER - EXPOSED - NO TOUCH - HARDWIRED		WATER WATER - 1" -	3" –	RESIDENTIAL—TYP	FLOOR RETURN	TO MATCH EXISTING. BALANCE	E AS INDICATED ON PLANS.	COLD WATER RIPING
	AMERICAN STANDARD MADERA FLOWISE RIGHT HEIGHT ELONGATED #3461.001.020 HET TOILET, 419 MM HIGH, VITRI GROWTH OF STAIN AND ODOR CAUSING BACTERIA MOLD AND MILDEW, ELONGATED BOWL, WHITE FINISH, FLOOR MO 6 L (1.1 US GAL TO 1.6 US GAL) PER FLUSH, CONDENSATE CHANNEL, 305 MM X 254 MM (12" X 10") WATER	DUNTED, SIPHON JET FLUSH ACTION, OPERATES IN THE RANGE OF 4.2 L TO			GRILLE TO MATCH C EH.PRICE MODEL LOUVERED—FACE	530D	LOUVERED-FACE RETURN AIR	GRILLE WITH 3/4" BLADE SPACING FOR SURFACE—MOUNT, S INDICATED ON PALNS. BALANCE AS INDICATED.	COLD WATER PIPING NEW 3/4" PIPING WITH
	BOWL, 54 MM (2-1/8") FULLY GLAZED INTERNAL TRAPWAY, FLOOR OUTLET, BOLT CAPS, 38 MM (1-1/2") DIA. TO CENTOCO #820STS.001 TOILET SEAT, EXTRA HEAVY DUTY, FOR ELONGATED BOWL, OPEN FRONT, SOLID PLASTIC, WE STAINLESS STEEL POSTS AND NUTS. SLOAN REGAL XL OPTIMA #111 XL ES-S-CP, EXPOSED FLUSHOMETER FOR	OP SPUD. WITH COVER, STAINLESS STEEL CHECK HINGES, METAL FLAT WASHERS				STG1 SIGHTPROOF _		ED TO MATCH EXISTING WASHROOM DOORGRILLE.	SHUT-OFF VALVE CONNECTED TO NEW EXPANSION TANK. LOCKED EXT
	QUIET ACTION DIAPHRAGM TYPE, INFRARED SENSOR LOCATED ON A 125 MM X 125 MM (4-15/16" X 4-15/16") CIRCUITRY, COURTESY FLUSH ELECTRONIC OVER-RIDE BUTTON, BACK-CHECK ANGLE STOP (SCREWDRIVER OPERATE SENSOR LOCATED ABOVE THE TOILET, 5 VA POWER REQUIRED PER UNIT. SENSOR TO CLEAR TOILET SEAT COVER.	STAINLESS STEEL PLATE, SOLENOID OPERATED FLUSH CONTROLLER ED), FLUSH TUBE FOR 292 MM (11-1/2") ROUGH-IN, VACUUM BREAKER,				80 EGGCRATE RETURN B1	2 EGGCRATE RETURN GRILLE FO	DR T-BAR DUCTED INSTALLATION. BALANCE AND SIZE AS	PROVIDE NEW—
	PLATE. SLOAN #EL-154, BOX MOUNT HARD WIRED TRANSFORMER, 120 VAC/ 24 VAC, 50 VA. WILL OPERATE UP MATERIAL AS THE CONNECTING PIPE DRAIN), WITH ALL BRASS BOLTS AND WITH RUBBER GASKET.				NOTE:	CONSIDERED ACCEPTABLE A			EXPANSION TANK AS SPECIFIED. REFER EXPANSION TANK
U1	WALL HUNG URINAL - FOR FLUSHOMETER - EXPOSED - NO TOUCH - HARDWIRED AMERICAN STANDARD WASHBROOK FLOWISE #6590.001.020 URINAL, VITREOUS CHINA, OPERATES IN THE RANGE OF	F 0.5 L TO 3.8 L (0.125 US GAL TO 1.0 US GAL) PER FLUSH, WALL	1-1/2" 1/2" -	1-1/2" -	7	VADDD 1			SCHEDULE.
	HUNG, EXTENDED SIDES FOR PRIVACY, WASHDOWN ACTION, WASHBROOK FLOWISE, FLUSHING RIM, 19 MM (3/4") [MM (2"), 2 WALL HANGERS, #7301242-100 CHROME PLATED, NON-METALLIC STRAINER, WHITE FINISH. SLOAN REFERENCE FOR TOP SPUD URINAL, CHROME PLATED, 1.9 L (0.5 US GAL) FACTORY SET FLOW, QUIET ACTION	GAL XL OPTIMA #REGAL XL OPTIMA 186-0.5 XL ES-S-CP, EXPOSED DIAPHRAGM TYPE, INFRARED SENSOR, SOLENOID OPERATED FLUSH			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	VAILK J	<u> </u>	SCHEDULE	FINISHED FLOOR
	CONTROLLER CIRCUITRY, BACK-CHECK ANGLE STOP (SCREWDRIVER OPERATED), FLUSH TUBE FOR 292 MM (11-1, POWER REQUIRED PER UNIT. PROVIDE 4" (102 MM) SQUARE ELECTRICAL BOX FOR MOUNTING SENSOR PLATE. SLC 50 VA. WATTS #CA-321 FIXTURE CARRIER, MOUNTED ON CONCRETE FLOOR, EPOXY COATED TOP AND BOTTOM UN	OAN #EL-154, BOX MOUNT HARD WIRED TRANSFORMER, 120 VAC/ 24 VAC, IIVERSAL STEEL HANGER PLATES, HEAVY GAUGE EPOXY COATED STEEL			REF. MANUFACTUREI	MODEL CAPACITY (GAL)	INPUT (BTU/HR) V/PH/HZ	REMARKS	7.6.1.16.(1) THERMAL EXPANSION. PROTECTION AGAINST THERMAL EXPANSION. PROTECTION AGAINST THERMAL EXPANSION. PROTECTION AGAINST THERMAL EXPANSION. A BACKFLOW PREVENTER
	OFFSET UPRIGHTS WITH WELDED FEET SUPPORTS. FOR ONE UNIT: 102 MM (4") FOR TWO TO SIX UNITS IN A ROW WATTS #WUCO URINAL WALL ACCESS CLEANOUT, TWO (2) PIECE EXPANDABLE PLUG WITH 102 MM (4") DIAMETER STEEL SCREW. CHAMPION MI—TR SERIES #MI—HUB TR DRAIN COUPLING, COUPLING, NO—HUB, TYPE 300 AISI STAIN	STAINLESS STEEL ACCESS COVER, SECURED WITH VANDAL PROOF STAINLESS NLESS STEEL BAND, TYPE 300 AISI STAINLESS STEEL EYELETS, ELASTOMERIC			HWT-1 A.O.SMITH	BTX-80 60.0	76,000 NAT.GAS 120/1/60	HEATER TO BE C/W CONCENTRIC VENT TERMINATION KIT.	PRESSURE REDUCING VALVE IS REQUIRED BY ARTICLE 7.6.3.3. A-7.6.1.16(1) THERMAL EXPANSION. CLOSED WATER SYSTEMS WITH NEED TO ACCOMMODATE THERMAL EXPANSION USING, AN EXPANSION TANK DESIGNED FOR USE ON THE COLD OR HOT PROPERTY.
	COMPOUND GASKET MEETING THE REQUIREMENTS OF ASTM C-564, TYPE 300 AISI STAINLESS STEEL SHIELD, TEST TORQUE BOLT TIGHTNESS, TESTED AND CERTIFIED TO ASTM STANDARD 1460-2012 AND CSA STANDAD B602-2010 PLUMBING CODE OF CANADA AND RELEVANT CANADIAN STANDARD (S) AND BEAR THE CUPC MARK OF CONFORMITY	O AND LISTED WITH IAPMO. ALL MODELS ARE LISTED TO THE NATIONAL				FYDANG	ION TANK	SCHEDIII E	AN EXPANSION TANK DESIGNED FOR USE ON THE COLD OR HOT P
L1	COUNTER MOUNTED SEMI-COUNTER BASIN - SINGLE HANDLE FAUCET - BELOW DECK MECHANICAL WATER MIXING AMERICAN STANDARD MEZZO #9960.403.020 BASIN, 3 HOLES, 4" (102 MM) CENTER, 559 MM X 546 MM X 210	MM (22" X 21-1/2" X 8-1/4") HIGH, VITREOUS CHINA, WHITE FINISH,	1-1/4" 1/2" 1/2	2" 1-1/4" -	REF. MANUF. MODE		ANCE VOLUME PRECHARGE PRES		
	SEMI-COUNTER, REAR OVERFLOW, FAUCET LEDGE, SPACE SAVING DESIGN, MOUNTING KIT. PROVIDE BASIN RIM SEAI FAUCET, POLISHED CHROME FINISH, CAST BRASS BODY, 5.7 LPM (1.5 GPM) PRESSURE COMPENSATING AERATOR (STOP. LAWLER #TMM-1070, BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUST	OUTLET, 117 MM $(4-5/8")$ PROJECTION REACH, INTEGRAL HOT WATER LIMIT STING DIAL, 10 MM $(3/8")$ INLETS AND OUTLET COMPRESSION FITTINGS, HIGH			EXT-1 WATTS PLT-	2.1 USG 1.2	26 USGAL 80 PSI	150 PSI —INSTALL PER DETAIL.	THERMAL EXPANSION TANK M-3 NTS
	TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 °I COLD THROUGH 46 °C (114.8 °F). PROVIDE TEE, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. MO 17 GA. (1.5 MM) MM TUBULAR 32 MM (1-1/4") TAILPIECE. MCGUIRE #LFH170BV FAUCET SUPPLIES, CHROME PLA	CGUIRE #155WC OFFSET OPEN GRID DRAIN, CAST BRASS ONE PIECE TOP, ATED FINISH POLISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE					·NERGY I	RECOVERY VENT	ILATOR SCHEDULE
	ANGLE STOPS, 13 MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN PROVIDE P-TRAP, CHROME PLATED, ADJUSTABLE ALL METAL CONSTRUCTION, 32 MM (1-1/4") SIZE, AND ESCUTCH VANDAL-RESISTANT, FLEXIBLE SEAMLESS MOULDED CLOSED-CELL PVC RESIN, FORMULATED WITH ANTI-MICROBIAL AND ANTI-MICROBIAL AND ALL PROVIDED CONTRACTOR OF THE PROVIDED CONTRACTOR O	HEON. MCGUIRE PROWRAP #PW2000WC SANITARY COVERING			REF. LOCATIO			CAP.	V/PH/HZ STARTER REMARKS
	PIPING (TO PROTECT AGAINST HEAT/CONTUSIONS) AS PER LOCAL CODES.					EDECH AID		(CFM)	O AM DISCONDIFICIT CHITTOIL MEDIATION ISSUE
SH1	PRESSURE BALANCING SHOWER VALVE SET CHICAGO FAUCETS #SH-PB1-00-000 PRESSURE BALANCING SHOWER VALVE SET, CHROME PLATED FINISH, 171 M	MM (6-3/4") DIA TRIM FACE PLATE. ON/OFF AND TEMPERATURE CONTROL	- 1/2" 1/2	2" – –	ERV-1 BASEMEN	T SUPPLY RENE	WAIRE EV-130	120 0.4IN.WC 102W 60LBS 1.3 12	20/1/60 FURNACE FAN CITY OF THE PROPERTY OF TH
	SINGLE LEVER HANDLE, INTEGRAL SERVICE STOPS, ADJUSTABLE HOT LIMIT SAFETY STOP. CHICAGO FAUCETS #620-RATE @ 80 PSI, PRESSURE COMPENSATING FLOW CONTROL DEVICE, SWIVEL BALL JOINT. CHICAGO FAUCETS #749-CHICAGO FAUCETS #624-LCP ADJUSTABLE HAND SHOWER, 5.7 LPM (1.5 GPM) FLOW RATE @ 80 PSI, PRESSURE	-LCP SHOWER HEAD, CHROME PLATED FINISH, 5.7 LPM (1.5 GPM) FLOW -016JKCP/415-021JKCP WALL MOUNT SHOWER ARM, ROUND ESCUTCHEON.					ELECT	RIC DUCT HEAT	ER SCHEDULE
	HAND SHOWER GRAB BAR/SLIDE BAR COMBINATION, CHROME PLATED FINISH STAINLESS STEEL CONSTRUCTION, 38 PERSONAL SHOWER, LOCKING WALL FLANGES, INCLUDES MOUNTING HARDWARE. CHICAGO FAUCETS #24-69NF HAND #E24JKCP HAND SHOWER IN-LINE VACUUM BREAKER, INSTALLED BETWEEN SUPPLY OUTLET AND SHOWER HOSE, N	MM (1-1/2") DIA X 914 MM (36") HIGH BAR, ADJUSTABLE BRACKET FOR D SHOWER METAL HOSE 1801 MM (70.9") LONG. CHICAGO FAUCETS			REF. LOCATIO	N FUNCTION	MANUFA. MODEL	HEATER CAPACITY V/PH/HZ AMPS	STARTER REMARKS
	PRESSURE OF 861.25 KPA PSI. CHICAGO FAUCETS #622-001CP HAND SHOWER WALL SUPPLY, CHROME PLATED F CONNECTION. CHICAGO FAUCETS #763-CP IN-WALL 3-WAY DIVERTER TRIM AND VALVE KIT, METAL LEVER HANDLE, FLOW BETWEEN THREE (3) DIFFERENT SHOWER OUTLETS. WATTS #FD-100-C-A FLOOR DRAIN, EPOXY COATED CAS	, BRASS VALVE CONSTRUCTION, ROTATIONAL CONTROL TO ALTERNATE WATER ST IRON, 5" (127 MM) ADJUSTABLE ROUND NICKEL BRONZE STRAINER,			EDH-1 BASEMEN	T ERV-1 FREEZE PREVENTION	THERMOLEC TER-6-1.5-		/ AND AIRFLOW -C/W DISCONNECT SWITCH AND INTERNAL AIR TEMI ERATURE SENSOR INTERLOCKED TO OPERATE WITH ERV-1 WHEN INCO
	REVERSIBLE CLAMPING COLLAR WITH PRIMARY & SECONDARY WEEPHOLES. PROVIDE EXTRA FLOOR DRAIN AT ENTRA CONNECTING PIPE DRAIN. SHOWER ASSEMBLY — CHASE ACCESS	ANCE OF SHOWER AREA. PROVIDE P-TRAP, SAME MATERIAL AS THE							
	KINDRED 'STEEL QUEEN' #QTCM1841/8/1 TRIPLE BOWL COUNTERTOP MOUNT SINK, 1 HOLE, 1057 MM (41-5/8")) WIDE X 460 MM (18-1/8") LONG X 203 MM (8") HIGH DEEP, COUNTER	1-1/2" 1/2" 1/2	2" 1-1/2" -	_				
	MOUNTED, BACKLEDGE, GRADE 18-10 20 GA. (0.9 MM) TYPE 302 STAINLESS STEEL, SELF-RIMMING, BRIGHT MIRE MOUNTING KIT PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3-1/2") CF CHICAGO FAUCETS #430-ABCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, ECAST CON CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7 LPM (1.5 GPM) PRESSURE COMPE PROJECTION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE. LAWLER #TMM-1070, BELOW DECK MECHAN 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-C), INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 °C (114.8 °F). PROVIDE TEE, TEMPERED WATER TO HOT SIDE OF FAUCET. MCGUIRE #LFH170BV FAUCET SUPPLIES, CHROME PLATED FINISH POLMM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLE	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RUMB CUP WASTE ASSEMBLY WITH 38 MM (1-1/2") TAILPIECE. NSTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON-AERATING) OUTLET, 241 MM (9-1/2") NICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 °F (48.8, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE LISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 ILES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C	1-1/2" 1/2" 1/2	2" 1-1/2" -					
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REF.	MOUNTED, BACKLEDGE, GRADE 18–10 20 GA. (0.9 MM) TYPE 302 STAINLESS STEEL, SELF-RIMMING, BRIGHT MIRE MOUNTING KIT PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3–1/2") CF CHICAGO FAUCETS #430-ABCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, ECAST CON CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 57. LPM (1.5 GPM) PRESSURE COMPE PROJECTION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE. LAWLER #TMM-1070, BELOW DECK MECHAN 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-7°C), INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 °C (114.8 °F). PROVIDE TEE, TEMPERED WATER TO HOT SIDE OF FAUCET. MCGUIRE #LFH170BV FAUCET SUPPLIES, CHROME PLATED FINISH POL MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDI P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, 51 MM (2") SIZE, SHALLOW WALL FLANGE AND STANDARD CAP. LOCATION FUNCTION MANUFA. MODEL CAP. (CFM) ESP RPM WEIGHT CAP. (CFM) ESP RPM WEIGHT CAP. CAP. (CFM) ESP RESENTED	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RUMB CUP WASTE ASSEMBLY WITH 38 MM (1–1/2") TAILPIECE. INSTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON—AERATING) OUTLET, 241 MM (9–1/2") INICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL,—OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 °F (48.8, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE LISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 ILES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C SEAMLESS TUBULAR WALL BEND. SCHEDULE GHT MOTOR AMPS. V/PH/HZ STARTER REMARKS - 102W 1.4 120/1/60 WALL SWITCH C/W GRILLE, DISVIBIRATION ISOLATION.	SCONNECT SWITCH, BACKION, AND WALL SWITCH.	KDRAFT DAMPER,				METAL SCREEN FRAME	ANGLE IRON REINFORCING WHERE REQUIRED. SCREEN CONTINUOUS SEAL WITH SUITABLE MASTIC OR FOIL BACKED TAPE.
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REF. EF-1 RH-1	MOUNTED, BACKLEGEE, GRADE 18-10 20 GA. (0.9 MM) TYPE 302 STAINLESS STEEL, SELF-RIMMING, BRIGHT MIRK MOUNTING KIT PROVIDED, FULLY UNDEDRECOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3-1/2") CF CHICAGO FAUCETS #430-ABCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, ECAST CON CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7 LPM (1.5 GPM) PRESSURE COMPE PROJECTION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE. LAWLER #TMM-1070, BELOW DECK MECHAN 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT- "C), INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 "C (114.8 "F). PROVIDE TEE, TEMPERED WATER TO HOT SIDE OF FAUCET. MCGUIRE #LFH170BV FAUCET SUPPLIES, CHROME PLATED FINISH POL MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVETTIBLE 1/4 TURN/LOOSE KEY HANDLY P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, 51 MM (2") SIZE, SHALLOW WALL FLANGE AND STAIL FOR THE PLATE OF THE	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RUMB CUP WASTE ASSEMBLY WITH 38 MM (1–1/2") TAILPIECE. INSTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON-AERATING) OUTLET, 241 MM (9–1/2") NICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL,OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 "F (48.8 , ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE LISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 LES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C SEAMLESS TUBULAR WALL BEND. **N SCHEDULE** GHT MOTOR AMPS. V/PH/HZ STARTER REMARKS** - 102W 1.4 120/1/60 WALL SWITCHC/W GRILLE, DISTIBLATION ISOLATION	SCONNECT SWITCH, BACKTON, AND WALL SWITCH. TING HARDWARE. INSTALL S INSTRUCTIONS.	KDRAFT DAMPER, PER OTES BELOW	1/2"x1/2" BIRDSCREEN MIN. 18" ABOVE RO	OF F	WEATHERPROOF SILICONE SEALANT COUNTER FLASHING BY MECHANICAL LASHING AND WATERPROOF MEMBRANE BY ROOFER	FRAME	REINFORCING WHERE REQUIRED. SCREEN WITH SUITABLE MASTIC OR FOIL BACKED TAPE. WATERPROOF SEAMS AND JOINTS. METAL FLA SHOULD E 4"(102mm BELOW TOI CURB FOR WELDED AS REQUIRED. BACKDRAFT DAMPER
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REF. EF-1 RH-1	MOUNTED, BACKLEDGE, GRADE 18—10 20 GA. (0.9 MM) TYPE 302 STAINLESS STEEL, SELF-RIMMING, BRIGHT MIRR MOUNTING KIT PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3—1/2") CF CHICAGO FAUCETS #430—ABCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, ECAST CON CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7 LPM (1.5 GPM) PRESSURE COMPE PROJECTION, WOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7 LPM (1.5 GPM) PRESSURE COMPE PROJECTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7 LPM (1.5 GPM) PRESSURE COMPE PROJECTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7 LPM (1.5 GPM) PRESSURE COMPE PROJECTION, VOLUME CONTROL AND HOT WATER TO HOT SIDE OF FAUCET. MCGUIRE #LFH170BV FAUCET SUPPLIES, CHROME PLATED FINISH POLIM (1/2") LD. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDI P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, 51 MM (2") SIZE, SHALLOW WALL FLANGE AND SEX HALLOW WALL FLA	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RUMB CUP WASTE ASSEMBLY WITH 38 MM (1-1/2") TAILPIECE. NSTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON-AERATING) OUTLET, 241 MM (9-1/2") NICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, -OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 "F (48.8 , ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE LISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 LES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C SEAMLESS TUBULAR WALL BEND. N SCHEDULE GHT MOTOR AMPS. V/PH/HZ STARTER REMARKS - 102W 1.4 120/1/60 WALL SWITCH C-C/W GRILLE, DISTALLATION ISOLATION - 120/1/60 BUILT-IN C-C/W ALL MOUN MAUNUFACTURER'S LATION SCHEDULE INSULATION TYPE THICKNESS REMARK D-1 1" C/W VALL SWITCH 1" C/W SWITCH 1" C/W SWITCH 1" C/W VALL SWITCH 1" C/W SWITCH 1"	SCONNECT SWITCH, BACKTON, AND WALL SWITCH. TING HARDWARE. INSTALL S INSTRUCTIONS. APOUR BARRIER; SEE NO APOUR BARRIER; SEE NO J.FT.] DENSITY WITH FACTOR	CORAFT DAMPER, DIES BELOW OTES BELOW RY APPLIED REINFORCE	MIN. 18" ABOVE RO	NOF NO STATE OF THE PARTY OF TH	WEATHERPROOF SILICONE SEALANT COUNTER FLASHING BY MECHANICAL LASHING AND WATERPROOF MEMBRANE BY ROOFER ROOFING	FRAME	REINFORCING WHERE REQUIRED. SCREEN SCREEN WITH SUITABLE MASTIC OR FOIL BACKED TAPE. WATERPROOF SEAMS AND JOINTS. METAL FLA SHOULD E 4"(102mm BELOW TOI CURB FOR DETAIL B. ANGLE RIVETED OR TACK WELDED AS REQUIRED. BACKDRAFT DAMPER 1/2"(12.7mm) SCREEN 135' MIN. CO WIT SUI
REF. EF-1 RH-1	MOUNTIED, BACKLEDGE, GRADE 18-10 20 GA. (0.9 MM) TYPE 302 STAINLESS STEEL, SELF-RIMMING, BRIGHT MIRK MOUNTING KIT PROVIDED, FULLY UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3-1/27) of CHICAGO FAUCETS #430-ABCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, ECAST CON CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE, 5.7 LPM (1.5 GPM) PRESSURE CONDENSATION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE LAWLER #IMM-1070, BELOW DECK MECHAP 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-10, INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 °C (114.8 °F). PROVIDE TEE, TEMPERED WATER TO HOT SIDE OF FAUCET. MCGUIRE #LFH170BV FAUCET SUPPLIES, CHROME PLATED FINISH POLIMM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLE P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SUP NUT, 51 MM (2") SIZE, SHALLOW WALL FLANGE AND SHALLOW AND SHALLOW AND FOLEXAMEN AND SHALLOW AND SHALLO	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RUMB CUP WASTE ASSEMBLY WITH 38 MM (1-1/2") TAILPIECE. NISTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON-AERATING) OUTLET, 241 MM (9-1/2") NICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, -OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 "F (48.8 ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE JISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 LES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C SEAMLESS TUBULAR WALL BEND. **N SCHEDULE** GHT MOTOR AMPS. V/PH/HZ STARTER REMARKS - 102W 1.4 120/1/60 WALL SWITCH -C/W GRILLE, DITY VIBRATION ISOLATI 120/1/60 BUILT-IN -C/W ALL MOUN MAUNUFACTURER'S ATTION SCHEDULE* INSULATION TYPE THICKNESS REMARK D-1 1" C/W VA **I MICROLITE INSULATION OR KNAUF DUCT WRAP, {12KG/CUBIC METRE}; [3/4LB,/CUH SHALL BE APPLIED IN STRIPS [150MM] [6"] WIDE AT NOT GREATER THAN [300M TAPE OR ADHERE FOIL WITH CHILDERS CPB2 OR BAKELITE 230-39 ADHESIVE. **INDICATION SCHEDULE** SIZE **DEMARKS**	SCONNECT SWITCH, BACKTON, AND WALL SWITCH. TING HARDWARE. INSTALL S INSTRUCTIONS. APOUR BARRIER; SEE NO APOUR BARRIER; SEE NO J.FT.] DENSITY WITH FACTOR	CORAFT DAMPER, DIES BELOW OTES BELOW RY APPLIED REINFORCE	MIN. 18" ABOVE RO	NOF NO STATE OF THE PARTY OF TH	WEATHERPROOF SILICONE SEALANT COUNTER FLASHING BY MECHANICAL LASHING AND WATERPROOF MEMBRANE BY ROOFER ROOFING	FRAME BOLTS BOLTS AND CONTRACT AND CONTR	REINFORCING WHERE REQUIRED. SCREEN WATERPROOF SEAMS AND JOINTS. METAL FLA SHOULD E: 4"(102mm BELOW TO! CURB FOR DETAIL B. ANGLE RIVETED OR TACK WELDED AS REQUIRED. BACKDRAFT DAMPER 1/2"(12.7mm) SCREEN ANGLE RIVETED OR TACK WITH SUITABLE MASTIC OR FOIL BACKED TAPE.
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REF. EF-1 RH-1 EXHAUST ENTIRE RI	MOUNTIER, BACKLEDGE, GRADE 18-10 20 GA. (0.9 MM) TYPE 302 STANLESS STEEL, SELF-RIMMING, BRICHT MIRK MOUNTING RIT PROVIDED, FULLY UNDERGOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3-1/2") of CHICAGO FAUCETS #430-ABCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, ECAST CON CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARRIEDGE, 57 LPM (1.5 CPM) PRESSURE COMPERCION OF CONTROL AND HOT WATER LIMIT STOP CARRIEDGE, 57 LPM (1.5 CPM) PRESSURE COMPEROUETION RIGIO CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE. LAWLER #1MM-1070, BELOW BECK MECHA-10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-10), INTEGRAL CHECKS, OFTER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 °C (1.4 8. °P). PROVIDE TEMPERATURE RANGE FROM FULL COLD THROUGH 46 °C (1.4 8. °P). PROVIDE TEMPERATURE FULL COLD THROUGH 46 °C (1.4 8. °P). PROVIDE TEMPERATURE FUNCHED FINISH POLIMIN (1/2"). INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLE TEMPERATURE FUNCHED HIS "POLIMIN PLANCE". SUPPLIES, CHROME PLATED FINISH POLIMIN (1/2"). SIZE, SHALLOW WALL FLANGE AND SANTARY EXHAUST FA. LOCATION FUNCTION MANUFA. MODEL CAP. (CFM) ESP RPM WERE CONTROL OF THE CONTR	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RRUMB CUP WASTE ASSEMBLY WITH 38 MM (1-1/2") TAILPIECE. ISTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON-AERATING) OUTLET, 241 MM (9-1/2") NICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, -OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 °F (48.8 , ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE LISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 LES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C SEAMLESS TUBULAR WALL BEND. N SCHEDULE GHT MOTOR AMPS. V/PH/HZ STARTER REMARKS - 102W 1.4 120/1/60 WALL SWITCH -C/W GRILLE, DISTRIBUTION ISOLATION SCHEDULE INSULATION TYPE THICKNESS REMARK D-1 120/1/60 BUILT-IN -C/W ALL MOUN MAUNUFACTURER'S INSULATION TYPE THICKNESS REMARK D-1 1" C/W VALL SHALL BE APPLIED IN STRIPS \$150MM\$ [6"] WIDE AT NOT GREATER THAN \$300M TAPE OR ADHERE FOIL WITH CHILDERS CPB2 OR BAKELITE 230-39 ADHESIVE. FION SCHEDULE SIZE 1-1/4" # TO 2" # REMARKS	SCONNECT SWITCH, BACK- ION, AND WALL SWITCH. TING HARDWARE. INSTALL S INSTRUCTIONS. APOUR BARRIER; SEE NO APOUR BARRIER; SEE NO D.FT.] DENSITY WITH FACTOR M [12"] CENTRES. BUTT	CORAFT DAMPER, DIES BELOW OTES BELOW RY APPLIED REINFORCE	SUPPORT BELOW —		WEATHERPROOF SILICONE SEALANT COUNTER FLASHING BY MECHANICAL LASHING AND WATERPROOF MEMBRANE BY ROOFER ROOFING ROOF CONSTRUCTION 1"Ø THERMAL INSULATION AT LAST	FRAME BOLTS BOLTS AND CONTRACT AND CONTR	REINFORCING WHERE REQUIRED. SCAL WITH SUITABLE MASTIC OR FOIL BACKED TAPE. WATERPROOF SEAMS AND JOINTS. METAL FLA SHOULD E 4"(102mm BELOW TOI CURB FOR DETAIL B. 12"(305mm) MIN. R=W/2 18"(457mm) MINIMUM (HEAVY SNOW AREA) 14"(356mm) MIN.
REF. EF-1 RH-1 EXHAUST ENTIRE RI	MOUNTING RIT PROVIDED, PLUT UNDERCOATE ON PROVIDED, PLUT ON PROVIDED, PLUT UNDERCOATE ON PROVIDED, PLUT ON PROVIDED AND PLUT WATER LIMIT STOP CARRIDGE, 57 LPM (1.5 GPM) PRESSURE COMPE PROJECTION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE LAWLER #MM-1070, BELOW DECK MECHAN 10 MM (3/8") INLETS AND OULLET COMPRESSION FITTINGS, HIGH TEMPERATURE TREPARATURE RANDE FROM PLUE OLD THROUGH 45° C (114.6 °F). PROVIDE TEXT '0). INTEGRAL CHECKS, OFFER TEMPERATURE REPRESTURE RANDE FROM PLUE S, CHROME PLUT ON PROVIDE TEXT TEMPERED WATER TO HOT SIDE OF FAUCET. MCQUIRE #LIFTTOON FAUCET SUPPLIES, CHROME PLUTED FINISH POLIM (1/2"). INLET X 127 MM (5") HORIZONIA EXTENSION TUBES, CONVERTIBE 1/4 TURN/LOOSE KEY HANDLE PLUT ON PROVIDE TEXT OF THE PROVIDE TO THE PROVIDE TEXT OF THE PROVIDE TO THE PROVIDE TO THE PROVIDE TEXT OF THE PROVIDE TEXT	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RRUMB CUP WASTE ASSEMBLY WITH 38 MM (1–1/2") TAILPIECE. WITHOUTON LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON-AERATING) OUTLET, 241 MM (9–1/2") WICAL WATER MIXINO VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, -0FF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 "F (48.8 , ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE JISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 LES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C SEAMLESS TUBULAR WALL BEND. **N SCHEDULE** GHT MOTOR AMPS. V/PH/HZ STARTER REMARKS - 102W 1.4 120/1/60 WALL SWITCH C-C/W GRILLE, DIY JERTATION ISOLATION SOLATION SCHEDULE* INSULATION SCHEDULE* INSULATION TYPE THICKNESS REMARK D-1 120/1/60 BUILT-IN C-C/W ALL MOUNT MAUNUFACTURER'S A MICROLITE INSULATION OR KNAUF DUCT WRAP, {12KG/CUBIC METRE} [3/4LB./CU VALL SANCE FOR ADHERE FOIL WITH CHILDERS CP82 OR BAKELITE 230–39 ADHESIVE. FION SCHEDULE SIZE 1-1/4"® TO 2"® REMARKS - TYPE P-1; SEE NOTES BELOW ROLLOK AP-T PLUS FIBERGLASS PIPE INSULATION, MANSON FIBERGLASS PIPE OLOHOW AND ASKED DEVELORATING OF 55 OR LESS. AND A SMOKE DEVELOPED RATING OF 55 OR LESS.	SCONNECT SWITCH, BACK- ION, AND WALL SWITCH. TING HARDWARE. INSTALL S INSTRUCTIONS. SAPOUR BARRIER; SEE NO APOUR BARRIER; SEE NO J.FT.] DENSITY WITH FACTOR IM} [12"] CENTRES. BUTT NOTES BELOW E INSULATION OR KNAUF G SHALL HAVE HIGH IMP. PVC FITTING COVERS A	CORAFT DAMPER, DIES BELOW OTES BELOW RY APPLIED REINFORCE EDGES OF INSULATION ACT STRENGTH, AND JACKETING SHALL	SUPPORT BELOW—ROOF DECK AS REQUIRED NOT DEPICTING FLUE VENTS PE		WEATHERPROOF SILICONE SEALANT COUNTER FLASHING BY MECHANICAL LASHING AND WATERPROOF IEMBRANE BY ROOFER ROOFING ROOF CONSTRUCTION 1"Ø THERMAL INSULATION AT LAST 10'-0" OF DUCT PRIOR TO ROOF PENETRATION APPLICATION. TERMINATE R'S INSTRUCTIONS	SEE ADDITIONAL FLASH IN THE SMACNA ARCHI METAL MANUAL. CURBS ARE PREFERAB	REINFORCING WHERE REQUIRED. SCREEN WATERPROOF SEAL WITH SUITABLE MASTIC OR FOIL BACKED TAPE. WATERPROOF SEAMS AND JOINTS. METAL FLA SHOULD E 4"(102mm BELOW TOI CURB FOR DETAIL B. 135' MIN. 12"(305mm) MIN. 14"(356mm) MIN. 12"(305mm) MIN. HING ALTERNATIVES HITECTURAL SHEET BLE FOR ALL DUCT
REF. EF-1 RH-1 EXHAUST ENTIRE RI	MOUNTED, BACKLEDGE, GRADE 18-10 20 GA. (0.9 MM) TYPE 302 STANLESS STEEL, SELF-RIMMING, BRIGHT MIRE MOUNTING KIT PROPUDED, PLUT UNDERCOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MIG.3-1/27° CHCAGO FAUCETS #430-ABCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, EGST CONCONSTRUCTION, VOLUME CONTINUE AND HOT WATER LIMIT STOP CARRIDGE, 57 LIVE (1.5 GRM) PRESSURE COMPPROJECTION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE LAWLER #IMM-1070, BELOW DECK MECHAP 100 MM (3/87) INJERS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-101, INJERSAL CHROKS, OFFER TEMPERATURE RANGE FROM PULL COLD THROUGH 40° C (114.6 °F). PROVIDE TEXT TEMPERED WATER 10 HOT SIDE OF FAUCET, MCDURE #IFHT/7080 FAUCET SUPPLIES, CHROWLE PLATED FINISH POLMM (1/27). INJERS AND STATE TO HOT SIDE OF FAUCET, MCDURE #IFHT/7080 FAUCET SUPPLIES, CHROWLE PLATED FINISH POLMM (1/27). INJERS AND MIG 57 HORIZONTAL EXTENSION TUBES, CONNECTIBE 174 TURN/TOODS EKY HANDLE P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, 51 MM (27) SIZE, SHALLOW WALL FLANGE AND STANLES AND MANUFAL MCDEL CAPP. ESP RPM WERE CAPP. LOCATION FUNCTION MANUFA. MODEL CAPP. ESP RPM WERE CAPP. C	ROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, RRUMB CUP WASTE ASSEMBLY WITH 38 MM (1–1/2") TAILPIECE. WITHOUTON LEAD FREE (EQUAL OR LESS THAN 0.25%) ECAST BRASS ENSATING LAMINAR FLOW (NON-AERATING) OUTLET, 241 MM (9–1/2") WICAL WATER MIXINO VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, -0FF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 "F (48.8 , ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE JISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 LES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C SEAMLESS TUBULAR WALL BEND. **N SCHEDULE** GHT MOTOR AMPS. V/PH/HZ STARTER REMARKS - 102W 1.4 120/1/60 WALL SWITCH C-C/W GRILLE, DIY JERTATION ISOLATION SOLATION SCHEDULE* INSULATION SCHEDULE* INSULATION TYPE THICKNESS REMARK D-1 120/1/60 BUILT-IN C-C/W ALL MOUNT MAUNUFACTURER'S A MICROLITE INSULATION OR KNAUF DUCT WRAP, {12KG/CUBIC METRE} [3/4LB./CU VALL SANCE FOR ADHERE FOIL WITH CHILDERS CP82 OR BAKELITE 230–39 ADHESIVE. FION SCHEDULE SIZE 1-1/4"® TO 2"® REMARKS - TYPE P-1; SEE NOTES BELOW ROLLOK AP-T PLUS FIBERGLASS PIPE INSULATION, MANSON FIBERGLASS PIPE OLOHOW AND ASKED DEVELORATING OF 55 OR LESS. AND A SMOKE DEVELOPED RATING OF 55 OR LESS.	SCONNECT SWITCH, BACK- ION, AND WALL SWITCH. TING HARDWARE. INSTALL S INSTRUCTIONS. SAPOUR BARRIER; SEE NO APOUR BARRIER; SEE NO J.FT.] DENSITY WITH FACTOR IM} [12"] CENTRES. BUTT NOTES BELOW E INSULATION OR KNAUF G SHALL HAVE HIGH IMP. PVC FITTING COVERS A	CORAFT DAMPER, DIES BELOW OTES BELOW RY APPLIED REINFORCE EDGES OF INSULATION ACT STRENGTH, AND JACKETING SHALL	SUPPORT BELOW — ROOF DECK AS REQUIRED NOT DEPICTING FLUE VENTS PE FOLLOWING FLA	AN APPLIANCE FLUE VENT AR APPLIANCE MANUFACTURES SHING AND ROOF REPAIR ME	WEATHERPROOF SILICONE SEALANT COUNTER FLASHING BY MECHANICAL LASHING AND WATERPROOF IEMBRANE BY ROOFER ROOFING ROOF CONSTRUCTION 1"Ø THERMAL INSULATION AT LAST 10'-0" OF DUCT PRIOR TO ROOF PENETRATION APPLICATION. TERMINATE R'S INSTRUCTIONS	SEE ADDITIONAL FLASH IN THE SMACNA ARCHI METAL MANUAL. CURBS ARE PREFERAE PENETRATIONS OF ROC	REINFORCING WHERE REQUIRED. SCREEN SCREEN WATERPROOF SEAMS AND JOINTS. METAL FLA SHOULD E 4"(102mm BELOW TOI CURB FOR DETAIL B. 135' MIN. R=W/2 18"(457mm) MINIMUM (HEAVY SNOW AREA) HING ALTERNATIVES HITGCTURAL SHEET BLE FOR ALL DUCT OFS.



├──HOT WATER

HOT WATER

TANK

AN EXPANSION TANK DESIGNED FOR USE ON THE COLD OR HOT POTABLE WATER SYSTEM.

7.6.1.16.(1) THERMAL EXPANSION. PROTECTION AGAINST THERMAL EXPANSION SHALL BE REQUIRED WHEN A CHECK VALVE IS REQUIRED BY ARTICLE 7.6.1.10., A BACKFLOW PREVENTER IS REQUIRED BY ARTICLE 7.6.2.2., OR A

A-7.6.1.16(1) THERMAL EXPANSION. CLOSED WATER SYSTEMS WITH NO EXPANSION TO PUBLIC WATER SYSTEMS

120/1/60 FURNACE FAN C/W DISCONNECT SWITCH, VIBRATION ISOLATION, BACKDRAFT DAMPER, ROOF TERMINATION KIT, AND SHALL BE ACTIVATED VIA FURNACE FAN OPERATION.

TEMPERATURE SENSOR INTERLOCKED TO OPERATE WITH ERV-1 WHEN INCOMING AIR TEMPERATURE IS BELOW 40F.

-C/W DISCONNECT SWITCH AND INTERNAL AIR TEMPERATURE SENSOR. EDH-1 SHALL BE

METAL FLASHING SHOULD EXTEND 4"(102mm) MIN. BELOW TOP OF

__CONTINUOUS SEAL SUITABLE MASTIC OR FOIL BACKED TYPE.

_ CONTINUOUS

SUPPORT

FLASHING 100M(4") BELOW

- THERMAL

INSULATION

ROOF CURB — EXTEND METAL

ROOF DECK

- AND CANNOT BE REPRODUCED WITHOUT WRITTEN PERMISSION. ALL MEASUREMENTS MUST BE VERIFIED ON SITE BY CONTRACTOR AND REPORT ANY DISCREPANCIES TO MADONNA ENGINEERING INC. BEFORE PROCEEDING WITH THE WORK.
- DO NOT SCALE DRAWINGS.

NO.	ISSUES	DATE	BY
01	ISSUED FOR REVIEW	20FEB2018	TP
02	ISSUED FOR CLIENT REVIEW	15MAR2018	TP
03	ISSUED FOR COORDINATION	05SEP2018	TP
-04	ISSUED FOR TENDER	21SEP2018	TP
05	ISSUED FOR PERMIT	26SEP2018	TP
06	REVISED PER CITY COMMENTS	04JAN2019	TP
07	ISSUED FOR TENDER	14NOV2019	TP

DATE BY

PROJECT:

NO. REVISIONS

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

SCHEDULES AND DETAILS





DRAWN BY:

CHECKED BY:

15 FEB 2018

ASSOCIATES Architects Engineers Project Managers 250 Water Street Suite 201 Whitby, Ontario L1N 0G5

Tel: (905) 666-5252

SCALE: 1/8" = 1'-0" Fax: (905) 666-5256 e-mail: bba@bba-archeng.com

PROJECT NO: DRAWING NO:

17-0239

M-3

GENERAL NOTES:

- ARCHITECTURAL GENERAL INSTRUCTIONS SHALL BE READ IN CONJUNCTION WITH AND FORM PART OF THIS CONTRACT. SPECIFICATIONS AND STANDARD DRAWINGS OF LOCAL AUTHORITIES HAVING JURISDICTION SHALL BE READ IN CONJUNCTION WITH AND FORM PART OF THIS CONTRACT. MAXIMUM CONDITIONS WILL GOVERN.
- 2. ALL WORK AND EQUIPMENT SHALL BE IN CONFORMANCE WITH ASHRAE 90.1.
- 3. CONFER AND CO-OPERATE WITH ALL TRADES INSTALLING EQUIPMENT WHICH MAY AFFECT THE MECHANICAL WORK AND ARRANGE THE WORK IN PROPER RELATION WITH EQUIPMENT INSTALLED UNDER ALL DIVISIONS OF THE CONTRACT FOR THE SATISFACTORY COMPLETION OF THE JOB. CO-ORDINATE INSTALLATION WITH OWNER'S INTERIOR DESIGN PLANS AND REFLECTED CEILING PLANS.
- 4. APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED. INCLUDE ALL H.S.T.
- COMPLY WITH ALL GOVERNMENT, MUNICIPAL, PROVINCIAL, FEDERAL AND UNDERWRITER'S REGULATIONS AND LOCAL BY-LAWS. CARRY OUT ALL CHANGES REQUIRED BY INSPECTORS OR AUTHORITIES HAVING JURISDICTION WITHOUT EXTRA EXPENSE TO THE OWNER.
- 6. A. PRIOR TO TENDER SUBMISSION VISIT AND EXAMINE THE SITE AND PLANS, BECOME FAMILIAR WITH ALL FEATURES WHICH AFFECT THE WORK, VERIFY ALL CONDITIONS AND DIMENSIONS, AND ALLOW FOR ANY RE-ROUTING OF INSTALLED SERVICES AND EQUIPMENT IN TENDER PRICE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY. NO EXTRAS WILL BE ALLOWED FOR ANY DIFFICULTIES ENCOUNTERED DUE TO ANY FEATURES OF THE BUILDING OR THE SITE OR THE ADJACENT PROPERTIES WHICH EXISTED UP TO THE TIME OF TENDER. B. REPORT TO THE ENGINEER ALL AMBIGUITIES, DISCREPANCIES, OMISSIONS, ERRORS AND DEPARTURES FROM BUILDING BYLAWS AND/OR FROM GOOD PRACTICE PRIOR TO
- TENDER CLOSING. PROVIDE A COMPLETE BREAKDOWN OF MATERIALS, EQUIPMENT AND LABOUR COSTS WITH EACH SUBMISSION FOR EXTRA OR DELETED WORK. FAILURE TO DO SO WILL RESULT IN BACKCHARGES FOR ADDITIONAL CONSULTING SERVICES TO PROCESS SUCH
- PROVIDE PROPER SHOP DRAWINGS OF ALL SPECIFIED PRODUCTS AND SUBMIT FOR APPROVAL TO THE ARCHITECT AND ENGINEER. SUBMIT 8 SETS OF EACH SHOP DRAWINGS.
- REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL AND CLEARLY CERTIFY AS 'CORRECT FOR REVIEW BY CONSULTANT'. SHOW COMPANY NAME, DATE AND SIGN ALL SHOP DRAWINGS. CONSULTANT REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR ERRORS, NECESSITY TO CHECK SHOP DRAWINGS, FURNISH MATERIALS AND EQUIPMENT AND PERFORM WORK REQUIRED BY THE CONTRACT DOCUMENTS.
- 10. A. ALTERNATE EQUIPMENT MAY BE PROPOSED PRIOR TO PROGRESS OF WORK PROVIDING THE QUALITY AND PERFORMANCE CHARACTERISTICS ARE EQUAL TO THE SPECIFIED PRODUCTS, AND SUBJECT TO THE APPROVAL OF THE PROPERLY SUBMITTED SHOP DRAWINGS TO THE ARCHITECT AND ENGINEER.
- DURING PROGRESS OF WORK, SUBSTITUTE PRODUCTS WILL ONLY BE CONSIDERED WHEN TENDERED PRODUCTS BECOME UNOBTAINABLE AND WRITTEN PROOF IS
- C. ASSUME RESPONSIBILITY AND PAY FOR ANY ADDITIONAL INSTALLATION COSTS INCURRED BY ALL DIVISIONS RESULTING FROM THE ALTERNATES AND/OR SUBSTITUTIONS. MAKE REVISIONS TO RECORD DRAWINGS INCORPORATING ALL ALTERNATES AND/OR SUBSTITUTIONS AND ALL RELATED CHANGES.
- D. CONTRACTOR WILL PAY TO THE ARCHITECT AND ENGINEERS FOR THEIR TIME SPENT FOR REVIEW OF ALTERNATE EQUIPMENT EVEN IF SUCH EQUIPMENT IS NOT
- . PROVIDE THE OWNER WITH A WRITTEN WARRANTY, FOR ALL LABOUR, MATERIALS AND EQUIPMENT IN THIS CONTRACT, FOR A PERIOD OF ONE YEAR COMMENCING AT SUCH TIME THAT THE OWNER, OR HIS REPRESENTATIVE, DEEMS THE WORK
- ACCEPTABLE. 12. PROVIDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS OR METHODS LISTED, MENTIONED OR SCHEDULED ON THE DRAWINGS AND/OR HEREIN SPECIFIED, INCLUDING ALL LABOUR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY AND REQUIRED

FOR THEIR COMPLETION (CURBS, MOUNTINGS, SUPPORTS, ETC.).

- 13. EXISTING SERVICES SHALL BE FIELD CHECKED BEFORE WORK COMMENCEMENT INCLUDING LOCATION, SIZE AND ELEVATION OF RELEVANT PIPING, DUCTWORK, ETC.
- 14. BEAR THE COST OF CLEAN-UP, (FLOORS, WALLS, CEILINGS ETC.), CUTTING, PATCHING AND FLASHING OF BUILDING STRUCTURE AND ROOF. EMPLOY THE OWNER'S GENERAL CONTRACTOR TO DO THE WORK. INFORM THE ENGINEER PRIOR TO PROCEEDING.
- 5. ENSURE THAT THE LABOUR UNION AFFILIATION IS COMPATIBLE WITH THAT OF THE OWNER'S GENERAL CONTRACTOR.
- 16. ALL ELECTRICAL DISCONNECT SWITCHES AND ALL MANUAL OR AUTOMATIC STARTERS FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
- 17. ALL LINE SIDE POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR (CONTRACTED BY DIV.15) AND SHALL BE TERMINATED AT A JUNCTION BOX ADJACENT TO THE EQUIPMENT OR AT THE STARTER OR AT THE DISCONNECT SWITCH OR AT THE PACKAGED EQUIPMENT CONTROL PANEL, AS INDICATED ON MECHANICAL AND/OR ELECTRICAL DRAWINGS. WHEN A JUNCTION BOX IS PROVIDED BY DIV-16 (REFER TO ELECTRICAL DRAWINGS), DIVISION-15 SHALL PROVIDE CONNECTION BETWEEN EQUIPMENT AND JUNCTION BOX. ALL LOAD SIDE AND CONTROLS WIRING SHALL BE BY THE MECHANICAL CONTRACTOR.
- 18. PROVIDE WHERE SHOWN AND/OR REQUIRED BY SITE CONDITIONS, ALL ACCESS DOORS COMPATIBLE WITH CEILING/WALL TYPES AND FINISHES. MARK IN AN APPROVED MANNER, T-BAR CEILING TILES WHICH ARE USED FOR ACCESS. PROVIDE MILCOR, LEHAGE OR APPROVED EQUAL, ACCESS DOORS. PROVIDE MINIMUM SIZE OF CEILING ACCESS OF A 4 SQUARE FEET.
- 19. THIS CONTRACTOR SHALL COMPLY WITH LANDLORD'S GENERAL REQUIREMENTS FOR WORK TO BASE BUILDING SYSTEMS.
- 20. INCLUDE FOR PREMIUM TIME FOR WORK REQUIRED OUTSIDE OF NORMAL BUSINESS
- 21. PROVIDE FIRE STOP FOR ALL PENETRATIONS THROUGH RATED PARTIONS AND SLABS. FIRE STOP MATERIAL SHALL BE ULC APPROVED AND CONFORM TO BASE BUILDING
- 22. CONDUCT AND PAY FOR X-RAYING OF CONCRETE STRUCTURE PRIOR TO CUTTING AND CORE DRILLING. SUBMIT X-RAY RESULTS AND LOCATION OF PROPOSED PENETRATIONS TO BASE BUILDING STRUCTURAL FNGINFER FOR REVIEW OBTAIN AND PAY FOR APPROVAL FROM THE BASE BUILDING STRUCTURAL ENGINEER FOR ALL NEW PENETRATIONS THROUGH THE BUILDING STRUCTURE. CUTTING AND CORE DRILLING OF THE STRUCTURE SHALL NOT COMMENCE UNTIL RECEIVING APPROVAL FROM BASE BUILDING STRUCTURAL ENGINEER. OBTAIN PERMISSION FROM LANDLORD FOR X-RAYING. WRITTEN REQUEST TO X-RAY SHALL BE SUBMITTED TO THE LANDLORD 48 HOURS PRIOR TO PROPOSED X-RAYING TIME AND DATE. ALL X-RAYING SHALL BE PERFORMED AFTER HOURS.
- 23. CHANGE NOTICE QUOTATIONS SHALL BE SUBMITTED COMPLETE WITH COST BREAKDOWN OF LABOR AND MATERIALS. FAILURE TO PROVIDE WILL RESULT IN REJECTION. ALL MECHANICAL CHANGE NOTICES SHALL BE PRICED IN ACCORDANCE WITH "MECHANICAL CONTRACTORS ASSOCIATION" (MCA). LABOR UNITS STRICTLY FOR LABOR AND FOR MATERIAL COST USE "ALL PRICER" LESS DISCOUNT, TYPICALLY 20% - 30%.
- 24. TEMPORARY FILTERS 25MM (1 IN.) SHALL BE PROVIDED AT ALL BASE BUILDING RETURN AIR OPENINGS WHICH REMAIN OPERATIONAL DURING CONSTRUCTION. FILTERS TO BE REPLACED WEEKLY. REMOVE UPON CONSTRUCTION COMPLETION. 25. BASE BUILDING HVAC COMPONENTS REMOVED I.E. GRILLES, DIFFUSERS, ETC. SHALL BE
- TURNED OVER TO THE LANDLORD/OWNER AT THEIR DIRECTIONS. 26. COMPLY WITH THE GENERAL CONTRACTORS CONSTRUCTION SCHEDULE.

FIRE PROTECTION SYSTE

FIRE EXTINGUISHER

- . PROVIDE AS REQUIRED, NATIONAL FIRE EQUIPMENT LTD., DIAMOND FIRE EXTINGUISHER MODEL ABC-050WWD 5LB MULTI-PURPOSE DRY CHEMICAL EXTINGUISHERS C/W WALL
- 2. COORDINATE FINAL LOCATION AND QUANTITY ON-SITE WITH FIRE MARSHALL.

RECORD DRAWINGS

RECORD DRAWINGS

SUITABLY STORE AND PROTECT DRAWINGS ON SITE. MARK WITH RED PEN AII REVISIONS TO DESIGN DRAWINGS AND MAKE AVAILABLE AT ALL TIMES FOR INSPECTION. TRANSFER ALL MODIFICATIONS FROM ORIGINAL DESIGN TO DIGITAL COPY USING AutoCAD SOFTWARE. UPON COMPLETION OF WORK SUBMIT A COMPLETE SET OF RECORD DRAWINGS AND DIGITAL COPY OF RECORD DRAWINGS TO ENGINEER AND BUILDING OWNER.

TENANT MUST SUBMIT A COMPLETE SET OF AS-BUILT DRAWINGS AND FINAL CERTIFICATE OF APPROVAL FRO THE BUILDING INSPECTION DEPARTMENT TO THE LANDLORD UPON PROJECT COMPLETION.

SHOW LOCATIONS OF ACCESS DOORS AND PANELS AND IDENTIFY THE EQUIPMENT AND COMPONENTS THAT THEY SERVE.

OPERATING AND MAINTENANCE MANUALS

SUBMIT ONE COPY FOR REVIEW AT LEAST TWO WEEKS BEFORE INSTRUCTIONS TO OWNER ARE COMMENCED.

SUBMIT 2(TWO) COPIES OF FINAL MANUALS TO THE ENGINEER.

ENSURE THAT THE TERMINOLOGY USED IN VARIOUS SECTIONS OF THE MANUAL IS

EACH MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION: DESCRIPTION OF EACH SYSTEM WITH DESCRIPTION OF EACH MAJOR COMPONENT OF

- COMPLETE SETS OF PAGE SIZE EQUIPMENT SHOP DRAWINGS EQUIPMENT MANUFACTURER'S INSTALLATION, STARTUP AND OPERATION MANUALS - EQUIPMENT MANUFACTURER'S RECOMMENDED SPARE PARTS LISTS - FINAL BALANCING REPORTS WARRANTY DOCUMENTATION

HVAC SYSTEM

- FABRICATE DUCTWORK FROM GALVANIZED SHEET METAL UNLESS OTHER MATERIALS ARE SPECIFICALLY NAMED. CONFORM TO FABRICATION AND INSTALLATION STANDARDS DESCRIBED IN THE LATEST EDITION OF ASHRAE AND SMACNA RECOMMENDATIONS.
- A. DUCTWORK SHALL BE SMOOTH ON THE INSIDE AND FREE FROM OBSTRUCTIONS, VIBRATIONS AND RATTLE. B. DAMPERS SHALL BE FREE TO MOVE IN EITHER DIRECTION WITHOUT BINDING AND

SHALL NOT RATTLE. DAMPERS SHALL BE CONSTRUCTED FROM 18GA

- GALVANIZED SHEET METAL. USE MANUAL QUADRANTS ON SMALL DUCTS. C. DUCT TRANSFORMATIONS SHALL BE MADE WITH EXPANSION FITTINGS HAVING SLOPES NOT EXCEEDING 1 TO 7 AND CONTRACTION FITTINGS HAVING SLOPES
- NOT EXCEEDING 1 TO 4. D. SEAL ALL JOINTS IN SUPPLY AIR AND EXHAUST AIR DUCTWORK WITH 3M
- EC-800, OR DURODYNE S-3 DUCT SEALER. E. PACK AROUND ALL DUCT OPENINGS IN ROOF AND WALLS WITH FIBERGLASS
- PROVIDE FIRE DAMPERS WHERE SHOWN ON DRAWINGS AND/OR WHERE REQUIRED BY LOCAL AUTHORITIES AND/OR APPLICABLE CODES IN DUCT SECTIONS COMPLETE WITH APPROVED ACCESS DOORS.
- 4. FIRE DAMPERS SHALL BE ULC LABELED, FABRICATED AND INSTALLED IN ACCORDANCE
- . PROVIDE FLEXIBLE CONNECTIONS BETWEEN ALL FANS AND ADJACENT DUCTWORK CONSISTING OF A PREASSEMBLED UNIT WITH 75MM (3") LONG GALVANIZED DUCT CONNECTOR AND 150 MM (6") WIDE HEAVY GLASS FIBRE FABRIC WITH ELASTOMER COATING EQUAL TO DURO DYNE 'DUROLON'.
- . NOTE THAT DUCT DIMENSIONS ON DRAWINGS ARE CLEAR INSIDE DIMENSIONS. WHERE ACOUSTIC INSULATION IS INSTALLED, INCREASE DIMENSIONS ACCORDINGLY.
- - A. PROVIDE 25 MM(1") THICK ACOUSTIC DUCT LINER WHERE SHOWN ON DRAWINGS. ACOUSTIC LINER SHALL BE JOHNS MANVILLE PERMACOTE LINACOUSTIC RECTANGULAR DUCT LINER MEETING ASTMC 1071 WITH AIR SURFACE COATED WITH ACRLIC COATING TREATED WITH EPA REGISTERED ANTI-MICROBIAL AGENT PROVEN TO RESIST MICROBIAL GROWTH AS DETERMINED BY ASTM G21 AND
 - B. INSULATE SUPPLY AND RIGID DUCTWORK WITHIN UNCONDITIONED SPACE WITH THERMAL FIBERGLASS REINFORCED FOIL—FACED RIGID VAPOR SEAL DUCT INSULATION HAVING AN R-VALUE OF 3.3 HR FT2 F/BTU.
 - C. REFER TO 'DUCTWORK INSULATION SCHEDULE'.
- 8. FLEXIBLE DUCT SHALL BE EQUAL TO FLEXMASTER TRIPLE LOCK ALUMINUM AIR DUCT AND SHALL BE THE SAME SIZE AS THE DIFFUSER NECK TO WHICH IT CONNECTS TO UNLESS OTHERWISE SHOWN. SUPPORT FLEXIBLE DUCT AT MAXIMUM 5'-0" SPACING. 9. USE GEAR CLAMPS FOR SECURING FLEXIBLE DUCTS TO RIGID DUCT CONNECTIONS SUCH AS SPIN-ON FITTINGS, ETC. AND NECKS OF DIFFUSERS AND SEAL AIR TIGHT WITH DUCT TAPE. ROUND FLEXIBLE DUCTS SHALL BE MAXIMUM 3.0M (10') LONG AND
- REMAINDER SHALL BE ROUND RIGID DUCT OF THE SAME DIAMETER.). PROVIDE BALANCING DAMPERS IN ALL BRANCHES OFF THE MAIN DUCTWORK WITH SUITABLE MEANS OF CEILING ACCESS FOR BALANCING, AND VOLUME DAMPERS FOR AL SUPPLY AIR DIFFUSERS AND REGISTERS.
- PROVIDE GRILLES, DIFFUSERS, REGISTERS AND DOOR GRILLES OF SIZE AND TYPE CALLED FOR ON THE DRAWINGS. HAND OVER DOOR GRILLES TO THE GENERAL CONTRACTOR FOR INSTALLATION IN THE DOORS.
- . PROVIDE ALL CONTROLS, WIRING AND APPURTENANCES NECESSARY FOR COMPLETE AND OPERATING SYSTEMS. CONNECT ALL ROOM THERMOSTATS, DAMPERS, BASEBOARD HEATERS AND OTHER CONTROL DEVICES AS NECESSARY.
- 3. INSTALL AIR TERMINALS IN STRICT ACCORDANCE WITH FINAL ARCHITECTURAL PLANS.
- 4. BALANCING TEST, BALANCE AND ADJUST ALL AIR SYSTEMS ENTIRELY TO OBTAIN THE DESIGN AIR QUANTITIES. MARK THE FINAL BALANCE POSITION ON ALL BALANCING DAMPERS AND ADJUSTABLE AIR TURNING DEVICES AND BALANCE FITTINGS. SUBMIT AIR SYSTEMS TEST AND BALANCE REPORT TO THE ENGINEER AND PROJECT CO-ORDINATOR. INDICATE ALL TEST RESULTS CLOSEST AND FURTHEST OUTLET SUPPLY AIR TEMPERATURES AND ROOM TEMPERATURES FOR ALL AIR SYSTEMS. THIS WORK SHALL BE PERFORMED BY A

TESTING AND BALANCING CONTRACTOR APPROVED BY THE LANDLORD AT THE EXPENSE

CONTROLS:

OF DIVISION 15.

MANUFACTURE AND INSTALLATION WHEN REQUIRED SHALL BE BY OWNER'S/LANDLORD'S APPROVED CONTRACTOR.

- NEW THERMOSTATS SHALL MATCH BASE BUILDING.
- MOUNTING HEIGHT OF OCCUPANT ADJUSTABLE THERMOSTATS SHALL BE 1200MM [3 FT. 11 IN.] FROM FINISHED FLOOR. MOUNTING HEIGHT OF NON-ADJUSTABLE THERMOSTATS SHALL BE 1500 MM [5 FT. 0 IN.] FROM FINISHED FLOOR. COORDINATE LOCATION WITH ARCHITECT/DESIGNER. DO NOT INSTALL IN VICINITY OF ELECTRICAL LIGHTING DIMMERS.

CLEAN AND RECALIBRATE OF EXISTING THERMOSTATS UPON COMPLETION OF CONSTRUCTION. SUBMIT REPORT THAT THIS WORK WAS COMPLETED.

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.

GAS PIPING SYSTEM:

- PROVIDE AND INSTALL NATURAL GAS PIPING IN COMPLIANCE WITH ALL REQUIREMENTS OF APPLICABLE SECTIONS OF CSA CODE B149 SPECIFICATION, THE LATEST AMENDMENTS, THE C.G.A. UTILIZATION CODE, AND OBTAIN APPROVAL FROM THE LOCAL GAS UTILITY'S AUTHORITY PRIOR TO THE INSTALLATION OF GAS PIPING.
- . CONTRACTOR TO SUPPLY AND INSTALL ISOLATION LUBRICATED GAS COCKS AT EACH PIECE OF EQUIPMENT AND AT EACH CAPPED CONNECTION.
- . PROVIDE AND INSTALL FOR NATURAL GAS PIPING STANDARD WEIGHT BLACK STEEL PIPE (SCHEDULE - 40) WITH EITHER STANDARD WEIGHT MALLEABLE IRON SCREWED FITTINGS OR WELDED FITTINGS ACCORDING TO PIPE SIZE AND LOCATION. WELD ALL CONCEALED PIPES AND VENT LINES. VENT AND PROTECT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL GAS UTILITY. PROVIDE APPROVED TYPE LUBRICATED PLUG COCKS WITH QUARTER STOPS
- 4. CONNECT TO EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 5. SLOPE PIPING DOWN IN DIRECTION OF FLOW TO LOW POINTS.
- 6. PROVIDE CLEARANCES FOR MAINTENANCE OF EQUIPMENTS, VALVES AND FITTINGS. 7. PURGE AFTER PRESSURE TEST IN ACCORDANCE WITH CANI-B149 (1-M86).
- 8. TEST SYSTEM IN ACCORDANCE WITH CANI-B149 (1-M86).

SPACING OF SUPPORTS FOR PIPING		
NPS	MAXIMUM SPACING OF SUPPORT FT (M)	
1/2" OR LESS HORIZONTAL	6 (2)	
3/4" - 1" HORIZONTAL	8 (2.5)	
1-1/4" - 2-1/2" HORIZONTAL	10 (3)	

- 9. GAS PIPING OR TUBING SHALL BE IDENTIFIED BY ONE OF THE FOLLOWING: A) THE ENTIRE PIPING OR TUBING SYSTEM SHALL BE PAINTED YELLOW;
- B) THE PIPING OR TUBING SYSTEM SHALL BE PROVIDED WITH YELLOW BANDING THAT HAS A MINIMUM WIDTH OF 1" (25mm); OR
- C) THE PIPING OR TUBING SYSTEM SHALL BE LABELED OR MARKED "GAS" OR "PROPANE", AS APPLICABLE UTILIZING YELLOW LABELS OR MARKINGS. WHEN IDENTIFIED IN ACCORDANCE WITH ITEM B) OR C), THE IDENTIFICATION

INTERVALS SHALL NOT EXCEED 20FT (6M). PLUMBING SYSTEMS

- PROVIDE PLUMBING SYSTEMS AS PER SPECIFICATIONS, DRAWINGS, THE ONTARIO PLUMBING CODE, THE O.B.C. AND LOCAL BY-LAWS. PROVIDE ALL NECESSARY ACCESSORIES AND FITTING REQUIRED FOR COMPLETE AND OPERATIONAL SYSTEMS.
- . MAKE ALL WATER. WASTE AND VENT PIPING CONNECTIONS AS REQUIRED. PROVIDE VENTING, TRAPPING AND PRIMING AS PER THE APPLICABLE REGULATIONS.
- PROVIDE ALL CURBS, MOUNTINGS AND SUPPORTS FOR EQUIPMENT, FIXTURES AND PIPING AS REQUIRED AND SPECIFIED. ALL EXPOSED FITTINGS CONNECTED TO FIXTURES SHALL BE CHROME-PLATED BRASS. ALL EXPOSED FITTINGS AND TRIM SHALL BE CHROME PLATED. PROVIDE ESCUTCHEONS PLATES ON ALL PIPING THROUGH PARTITIONS.
- 4. ALL WALL AND FLOOR OPENINGS SHALL BE PACKED WITH AN APPROVED FIRE BARRIER MINERAL WOOL TO 25MM (1") FROM END SIDE OF OPENING ON BOTH SIDES OF FLOOR OR WALL. REMAINING PORTION SHALL BE SEALED WITH AN APPROVED AND LISTED FIRE
- FINAL LOCATION OF ALL PLUMBING FIXTURES SHALL BE CO-ORDINATED ON SITE WITH ALL TRADES. REFER TO ARCHITECTURAL & SPECIALTY EQUIPMENT CONSULTANT WITH NFPA 90A, CUA 90-1 AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION. LAYOUT DRAWINGS AND DETAILS FOR EXACT LOCATION OF FIXTURES.
 - PROVIDE NEW PLUMBING FIXTURES WHERE INDICATED ON PLANS. OF MAKE AND MODEL AS SPECIFIED ON MECHANICAL DRAWINGS. ALL FIXTURES SHALL BE OF FIRST QUALITY. CLEANED AND IN PERFECT CONDITION FOR THE TENANT OWNER TAKEOVER. FIXTURES SHALL BE PIPED COMPLETE IN A FIRST CLASS MANNER WITH ALL NECESSARY APPURTENANCES FOR A COMPLETE FIXTURE IN EVERY RESPECT. INSTALL ALL
 - COMPONENTS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. PROVIDE ISOLATING VALVES ON MAIN AND/OR BRANCH LINES AND FOR ALL EQUIPMENT SFRVFD WITH HOT AND COLD WATER LINES. ALL VALVES SHALL BE SUITABLE FOR THE
 - . PROVIDE ACCESS DOORS TO ALL PLUMBING EQUIPMENT WHERE INDICATED AND/OR REQUIRED OF SIZE TO SUIT CONVENIENT MAINTENANCE REQUIREMENTS.
 - 9. PIPING INSULATION A. COVER ALL WATER LINES, FITTINGS, VALVE, WATER METERS AND APPURTENANCES WITH JOHNS MANVILLE MICRO-LOK AP-T PLUS FIBERGLASS PIPE INSULATION WITH FACTORY APPLIED ALL PURPOSE VAPOUR BARRIER JACKET. ADHERE AT LONGITUDINAL LAPS AND JOINTS WITH 2" ALUMINUM TAPE.

OPERATING PRESSURE OF THE SYSTEM IN WHICH THEY ARE INSTALLED.

- PIPE INSULATION TO BE A MIN. OF R-4 PER INCH. REFER TO PIPING INSULATION SCHEDULE 10. PROVIDE TRAP SEAL PRIMER TO ALL HUB DRAINS, FLOOR DRAINS, FUNNEL FLOOR
- DRAINS IN ACCORDANCE WITH CODES. 11. CLEANING, FLUSHING AND DISINFECTING OF WATER PIPING

BE RESPONSIBLE FOR CARE AND CLEANING OF THE PIPING SYSTEM DURING AND

- AFTER CONSTRUCTION. PLUG ALL OPEN ENDS DURING CONSTRUCTION TO PREVENT THE ENTRANCE OF FOREIGN MATERIALS. FLUSH ALL SYSTEMS WITH CLEAN, POTABLE WATER TO REMOVE SCALE AND
- SEDIMENT IMMEDIATELY UPON FILLING. STERILIZE ALL NEW POTABLE WATER LINES TO MEET LOCAL MUNICIPAL
- 12. HORIZONTAL PIPING SHALL BE SUPPORTED AT INTERVALS AS PER LATEST EDITION OF SECTION 7.3.4 "SUPPORT OF PIPING" OF THE O.B.C.2012.
- 13. POTABLE WATER VALVES A. NEW GATE VALVES 2"Ø AND SMALLER SHALL BE MANUFACTURED BY WATTS (OR EQUAL). VALVES SHALL BE SUITABLE FOR USE IN POTABLE WATER SYSTEMS.
- TO 125psi WSP, 200psl WOG NON-SHOCK. VALVES SHALL HAVE NON-RISING STEM AND FULL PORT FLOW. B. FOR 2" AND SMALLER, BALL VALVES MAY BE PROVIDED AS SUBSTITUTE FOR GATE VALVES. PROVIDE BALL VALVES WITH BRASS OR BRONZE BOBY, CHROME PLATED SOLID BALL, PTFE SEAT AND SEALS AND FULL PORT.

VALVES SHALL BE MANUFACTURED OUT OF BRONZE AND BE PRESSURE TESTED

2"Ø AND SMALLER - SOLDERED 300 psi WOG

C. <u>STANDARD CHECK VALVES</u>

NOMINAL PIPE SIZE 2-1/2" AND LESS P-1, P-2
·
P-1 P-2
,
P-1, P-2
P-8

P-1: DWV COPPER PIPE WITH DRAINAGE FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS

- P-2: IPEX SYSTEM XFR 15-50 DWV PIPE AND FITTINGS WHICH SHALL BE CERTIFIED TO CSA B181.2 AND SHALL BE TESTED IN ACCORDANCE WITH CAN/ULC S102.2 AND SHALL BE CLEARLY MARKED WITH THE CERTIFICATION LOGO INDICATING A FLAME-SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED CLASSIFICATION NOT EXCEEDING 50.
- P-8: TYPE L HARD COPPER PIPE WITH WROUGHT COPPER FITTINGS AND 95/5 TIN/ANTIMONY SOLDER JOINTS.

MECHANICAL LEGEND

YMBOL	DESCRIPTION		MADONNA ENGIN
	NEW DUCTWORK		93 Woodstream E
	EXISTING DUCTWORK/PIPING/EQUIPMENT TO BE REMOVED		Woodbridge, Onta
CAP	CAP ON EXISTING PIPE/DUCTWORK	1	el: (905) 265 1911 Fa
CTE	CONNECT TO EXISTING PIPING/DUCTWORK		
(X)	DRAWING NOTE	C.E.	IEDAL NOTES
XX-X	EQUIPMENT TAG		IERAL NOTES DRAWING IS THE PROPERTY OF MADO
①	NEW/RELOCATED THERMOSTAT	AND	CANNOT BE REPRODUCED WITHOUT MEASUREMENTS MUST BE VERIFIED ON
(Ĵ)	EXISTING THERMOSTAT TO BE REMOVED/RELOCATED	REPO	RT ANY DISCREPANCIES TO MADONI CEEDING WITH THE WORK.
A-B C	A - GRILLE/REGISTER TYPE B - GRILLE/REGISTER SIZE C - AIR BALANCE IN CFM		OT SCALE DRAWINGS.
\boxtimes	FLOOR-MOUNTED SUPPLY GRILLE	NO.	ISSUES
	FLOOR-MOUNTED RETURN AIR GRILLE	01	ISSUED FOR REVIEW
G	GAS	02	ISSUED FOR CLIENT RE
HWT	HOT WATER TANK	03	ISSUED FOR COORDINA
DN	DOWN	-04	ISSUED FOR TENDER
FD	FLOOR DRAIN		
FFD	FUNNEL FLOOR DRAIN	05	ISSUED FOR PERMIT
СО	CLEAN-OUT	06	REVISED PER CITY COM
FU	FURNACE	07	ISSUED FOR TENDER
НВ	HOSE-BIBB		
□ #	CEILING MOUNTED CABINET EXHAUST FAN		
~	PIPE/DUCTWORK CONTINUATION		
	PIPE/DUCTWORK DOWN		
-SAN-	NEW ABOVE FLOOR SANITARY DRAIN PIPING		
	NEW COLD WATER PIPING		

DRAWING LIST

———— NEW HOT WATER PIPING

WATER METER

GAS METER

NO.	TITLE
M-1	MECHANICAL — HVAC
M-2	MECHANICAL — PLUMBING AND DRAIANGE
M-3	SCHEDULES AND DETAILS
M-4	MECHANICAL SPECS, LEGEND, AND DRAWING LIST

NNA ENGINEERING INC /oodstream Blvd Unit 10 lbridge, Ontario L4L 7Y7 265 1911 Fax: (905) 265 1998

- PROPERTY OF MADONNA ENGINEERING INC. ODUCED WITHOUT WRITTEN PERMISSION. NUST BE VERIFIED ON SITE BY CONTRACTOR AND ANCIES TO MADONNA ENGINEERING INC. BEFORE

1	NO.	ISSUES	DATE	BY
	01	ISSUED FOR REVIEW	20FEB2018	TP
	02	ISSUED FOR CLIENT REVIEW	15MAR2018	TP
_	03	ISSUED FOR COORDINATION	05SEP2018	TP
+	-04	ISSUED FOR TENDER	21SEP2018	TP
1	05	ISSUED FOR PERMIT	26SEP2018	TP
1	06	REVISED PER CITY COMMENTS	04JAN2019	TP

14NOV2019 TP

DATE BY

PROJECT:

NO. REVISIONS

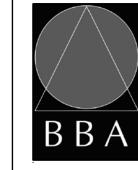
INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

MECHANICAL SPECS, LEGEND, AND DRAWING



BARRY BRYAN ASSOCIATES Architects Engineers Project Managers 250 Water Street Suite 201

Whitby, Ontario L1N 0G5 Tel: (905) 666-5252

15 FEB 2018 1/8" = 1'-0" e-mail: bba@bba-archeng.com FILE:

DRAWING NO:

DESIGN BY:

DRAWN BY:

CHECKED BY:

PROJECT NO:

Fax: (905) 666-5256

17-0239

LEGEND



EXISTING CEILING MOUNTED/SUSPENDED FIXTURE CONNECTED TO BASE BUILDING UTILITY LIGHTING CIRCUIT.

EXISTING CEILING MOUNTED/SUSPENDED FIXTURE CONNECTED TO NON-SWITCHED 24-HOUR NIGHT LIGHTING CIRCUIT.

CEILING MOUNTED/SUSPENDED FIXTURE. CONNECT TO BASE BUILDING UTILITY LIGHTING CIRCUIT.

CEILING MOUNTED/SUSPENDED FIXTURE. CONNECT TO NON—SWITCHED

24 HOUR NIGHT LIGHTING CIRCUIT.

RECESSED/PENDANT MOUNTED DOW

RECESSED/PENDANT MOUNTED DOWNLIGHT. CONNECT TO BASE BUILDING UTILITY LIGHTING CIRCUIT.

RECESSED/PENDANT MOUNTED DOWNLIGHT. CONNECT TO NON-SWITCHED 24 HOUR NIGHT LIGHTING CIRCUIT.

WALL MOUNTED LIGHT FIXTURE. CONNECT TO UTILITY LIGHTING CIRCUIT.

EMERGENCY BATTERY UNIT, TYPE 'D1', SOURCE 'M1'. BATTERY SHALL

BE MOUNTED AT HIGH LEVEL

BE MOUNTED AT HIGH LEVEL.

P2 P REMOTE EMERGENCY LIGHTING FIXTURE, TYPE 'D2' FED FROM SOURCE 'M2'.

\$ WHITE DECORA STYLE LIGHT SWITCH, VOLTAGE AND CURRENT RATINGS AS REQUIRED.

WALL MOUNTED ROOM LIGHT SWITCH WATT STOPPER LMSW-10X.
'OV1' DENOTES ONE (1) DIGITAL PUSH BUTTONS.
'OV2' DENOTES TWO (2) DIGITAL PUSH BUTTONS.
'OV3' DENOTES THREE (3) DIGITAL PUSH BUTTONS.

'OV4' DENOTES FOUR (4) DIGITAL PUSH BUTTONS.

WALL MOUNTED AREA LIGHT SWITCH WATT STOPPER LMSW-10X.
'OW2' DENOTES TWO (2) DIGITAL PUSH BUTTONS.
'OW3' DENOTES THREE (3) DIGITAL PUSH BUTTONS.
'OW4' DENOTES FOUR (4) DIGITAL PUSH BUTTONS.
'OW5' DENOTES FIVE (5) DIGITAL PUSH BUTTONS.

'OW6' DENOTES SIX (6) DIGITAL PUSH BUTTONS.

20A/120V DUPLEX RECEPTACLE, CSA 5-20R (T-SLOT). 'IG' DENOTES ISOLATED GROUND. PROVIDE GROUND WIRE BACK TO PANEL.

15AMP/120VOLT, U-GROUND DUPLEX RECEPTACLE, TAMPER RESISTANT TYPE, WALL MOUNTED. GFI DENOTES OUTLET C/W GROUND FAULT INTERRUPT PROTECTION.

DIRECT CONNECTION.

STARTER.

NON-FUSED HORSEPOWER RATED VISIBLE BLADE HEAVY DUTY DISCONNECT SWITCH C/W PADLOCK PROVISION IN OFF POSITION

VISIBLE BLADE HEAVY DUTY DISCONNECT SWITCH C/W PADLOCK PROVISION IN OFF POSITION FUSED AT '15A'

VISIBLE BLADE HEAVY DUTY RATED COMBINATION STARTER C/W FUSES, 30/15a/3P OVERLOAD PROTECTION, CONTROL TRANSFORMER, 2 NO AND 2 NC CONTACTS, PILOT LIGHT AND HOA. FUSED AT '15A'.

RP-A-X(D) CIRCUIT 'X' FED FROM RECEPTACLE PANEL 'A'. '(D)' DENOTES DESIGNATED CIRCUIT FOR ISOLATED GROUND DUPLEX RECEPTACLE.

RP-A-X(D) EXISTING CIRCUIT 'X' FED FROM RECEPTACLE PANEL 'A'. '(D)' DENOTES

DESIGNATED CIRCUIT FOR ISOLATED GROUND DUPLEX RECEPTACLE.

SW 2E2 DENOTES LOW VOLTAGE DIGITAL LIGHT SWITCH LV#2E SWITCHING LEG 2

SW 222 DENOTES LOW VOLTAGE DIGITAL LIGHT SWITCH LV#2L

E INDICATES EXISTING DEVICE TO REMAIN.

INDICATES EXISTING DEVICE TO BE REMOVED. REMOVE CONDUIT AND WIRE BACK TO SOURCE.

R DENOTES EXISTING DEVICE IN RELOCATED POSITION. PROVIDE CONDUIT AND WIRE BACK TO SOURCE.

DENOTES EXISTING DEVICE TO REMAIN. RECIRCUIT AS SHOWN. REMOVE EXISTING CONDUIT AND WIRE BACK TO EXISTING SOURCE. PROVIDE NEW CONDUIT AND WIRE BACK TO NEW SOURCE.

RM DENOTES ROOF MOUNTED

CL DENOTES CEILING MOUNTED

CK DENOTES CLOCK STYLE RECEPTACLE

4" SQUARE BACKBOX C/W SINGLE DEVICE COVER (PLASTER RING) AND 3/4" EMPTY ZONE CONDUIT ASSEMBLY FOR COMMUNICATIONS CONTRACTOR'S USE. PROVIDE A PULL STRING IN CONDUIT.

4" SQUARE DEEP BACKBOX C/W COVER PLATE AND 1 1/2" ZONE CONDUIT SYSTEM C/W PULLSTRING FOR A/V CONTRACTOR'S USE

▼_{TV} 4" SQUARE DEEP BACKBOX C/W COVER PLATE AND 1 1/2" ZONE CONDUIT SYSTEM C/W PULLSTRING FOR A/V CONTRACTOR'S USE

HANDICAP WAVE SENSOR C/W CONDUIT AND WIRES

DURESS SYSTEM COMBINATION STROBE LIGHT/HORN.

DURESS SYSTEM STATION.

DIGITAL ON/OFF/DIMMING ROOM CONTROLLER WATT STOPPER LMRC-212/LMRC-212-347 (VOLTAGE RATING AS REQUIRED TO SUIT LIGHTING LOAD)

OPEN OFFICE AREA CEILING MOUNTED OCCUPANCY SENSOR WATT STOPPER LMDC-100. SENSOR PRESET AT 20 MINUTE TIME OUT SETTING C/W MANUAL ON AND AUTO OFF AND DEFAULT DETECTION TECHNOLOGY SETTING.

NON-SWITCHED CORRIDOR CEILING MOUNTED OCCUPANCY SENSOR WATT STOPPER LMDC-100. SENSOR PRESET AT 20 MINUTE TIME OUT SETTING C/W AUTO ON AND AUTO OFF WALK THROUGH MODE ON AND DEFAULT SETTING.

PHOTOCELL SENSOR (VOLTAGE RATINGS TO SUIT LIGHTING LOADS)
SUITABLE FOR COLD WEATHER OPERATION. PRESET SENSOR AT 10FC.

EXISTING SMOKE ALARM

STANDALONE PHOTOELETRIC SMOKE ALARM WITH STROBE LIGHT, 120V WITH BATTERY BACKUP C/W BATTERY. BRK ELECTRONICS 7010BSLA ULC LISTED.

T CEILING MOUNTED PAGING SYSTEM SPEAKER ROUGH-IN.

- 1. SUBSTITUTES ARE NOT PERMITTED FOR ALL SPECIFIED PRODUCTS.
- 2. SHOP DRAWINGS ARE REQUIRED FOR ALL PRODUCTS SPECIFIED FOR THIS PROJECT INCLUDING BUT NOT LIMITED TO LIGHTING CONTROL, RECEPTACLE PANELS, LIGHTING FIXTURES, SWITCHES, RECEPTACLES, COVER PLATES AND DIMMERS.
- 3. ELECTRICAL CONTRACTOR AND ALL SUBCONTRACTORS MUST READ AND COMPLY WITH ELECTRICAL SPECIFICATIONS (ISSUED AS A SEPARATE DOCUMENT).
- 4. CIRCUITING MUST BE COMPLETED AS SHOWN ON DRAWINGS. DO NOT CHANGE CIRCUIT NUMBERS.
- 5. INSTALLATION AND MANUFACTURING OF ALL DEVICES AND SERVICES INCLUDING DISTRIBUTION, LIGHT FIXTURES, FEEDERS, BRANCH CIRCUITS, VARIOUS SYSTEMS, ETC. MUST COMPLY WITH ALL LOCAL SEISMIC RESTRAINT REQUIREMENTS.
- 6. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, MOUNTING HEIGHTS, CONSTRUCTION DETAILS, LOCATION OF LIGHT FIXTURES, FINISHES AND COLOURS
- 7. REFER TO LANDLORD'S MOST CURRENT VERSION OF THE LEASEHOLD IMPROVEMENT MANUAL FOR ADDITIONAL REQUIREMENTS (INCLUDING RISER ACCESS REQUIREMENTS AND REVIEW FEES) OVER AND ABOVE THOSE DETAILED IN THIS DRAWING PACKAGE AND IN THE ELECTRICAL SPECIFICATIONS BOOK. CONTRACTOR SHALL BE RESPONSIBLE FOR AND MUST INCLUDE IN BASE BID PRICE FOR ALL SCOPES OF WORK DETAILED IN THE LANDLORD'S DESIGN CRITERIA MANUAL, ELECTRICAL DRAWINGS AND ELECTRICAL SPECIFICATIONS BOOK.
- 8. AS BUILT DRAWING REQUIREMENTS:
- AS BUILT DRAWINGS TO BE PREPARED AND SUBMITTED IN AUTOCAD FORMAT BY THE ELECTRICAL CONTRACTOR.

 ALL DEMOLITION SCOPES OF WORK ARE TO BE ERASED FROM AS BUILT DRAWINGS.
- ROUTING OF ALL FEEDERS, BRANCH WIRING (LIGHTING, EMERGENCY LIGHTING, POWER, ETC), LOW VOLTAGE WIRING, MISCELLANEOUS SYSTEMS WIRING, MISCELLANEOUS CONDUIT SYSTEMS, ETC, TO BE SHOWN ON AS BUILT DRAWINGS.
 REFER TO DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 9. REMOVAL AND REINSTALLATION OF CEILING TILES IN OCCUPIED AREAS TO ACCOMMODATE ALL SCOPES OF WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- 10. ALL PANEL SCHEDULE DIRECTORIES MUST BE UPDATED WITH TYPEWRITTEN PANEL SCHEDULES. KROY TAPE MUST BE USED FOR ALL LABELING AT ALL OUTLETS AND LAMACOIDS FOR ENCLOSURES.
- 11. THE CONTRACTOR MUST ENSURE THAT FIRESTOPPING AND SEALANTS ARE INSTALLED AT NEW FLOOR OPENINGS IN ACCORDANCE WITH THE CURRENT FIRE CODE REQUIREMENTS AND TO PREVENT WATER LEAKAGE TO THE FLOORS BELOW. AREAS PRONE TO WATER LEAKAGE ARE TO BE WATERPROOFED PRIOR TO INSTALLATION OF THE TENANT FLOOR COVERINGS. THE OWNER WILL APPROVE THE PROPOSED WATERPROOFING METHOD PRIOR TO THE TENANT PROCEEDING WITH CONSTRUCTION.

DRAWING LIST

E-1.1 - ELECTRICAL LEGEND AND DETAILS

E-1.2 - ELECTRICAL DETAILS

E-1.3 - ELECTRICAL DETAILS

E-2.1 - ELECTRICAL PLAN - GROUND FLOOR

E-3.1 - REFLECTED CEILING PLANS

E-5.1 - ELECTRICAL DEMOLITION PLAN - GROUND FLOOR
E-6.1 - REFLECTED CEILING DEMOLITION PLANS

E-7.1 - ELECTRICAL SINGLE LINE DIAGRAM

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE.

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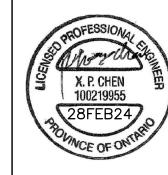
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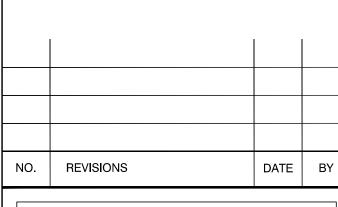
 1
 ISSUED FOR REVIEW
 02/27/18
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 2
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 09/03/18
 PC

 3
 ISSUED FOR PERMIT
 09/26/18
 PC

 4
 ISSUED FOR TENDER
 02/28/24
 PC





HCC ENGINEERING

DESIGN AND TECHNOLOGY SERVICES GROUP

HCC ENGINEERING LIMITED

40 EGLINTON AVENUE EAST, SUITE 600
TORONTO, ONTARIO, M4P 3A2
Tel: (416) 932-2423

PROJECT:

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

ELECTRICAL LEGEND
AND DETAILS





ASSOCIATES
Architects
Engineers
Project Managers
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Fax: (905) 666-5256

e-mail: bba@bba-archeng.com

PROJECT NO:

DRAWING NO:

FILE:

17264 E-1.1

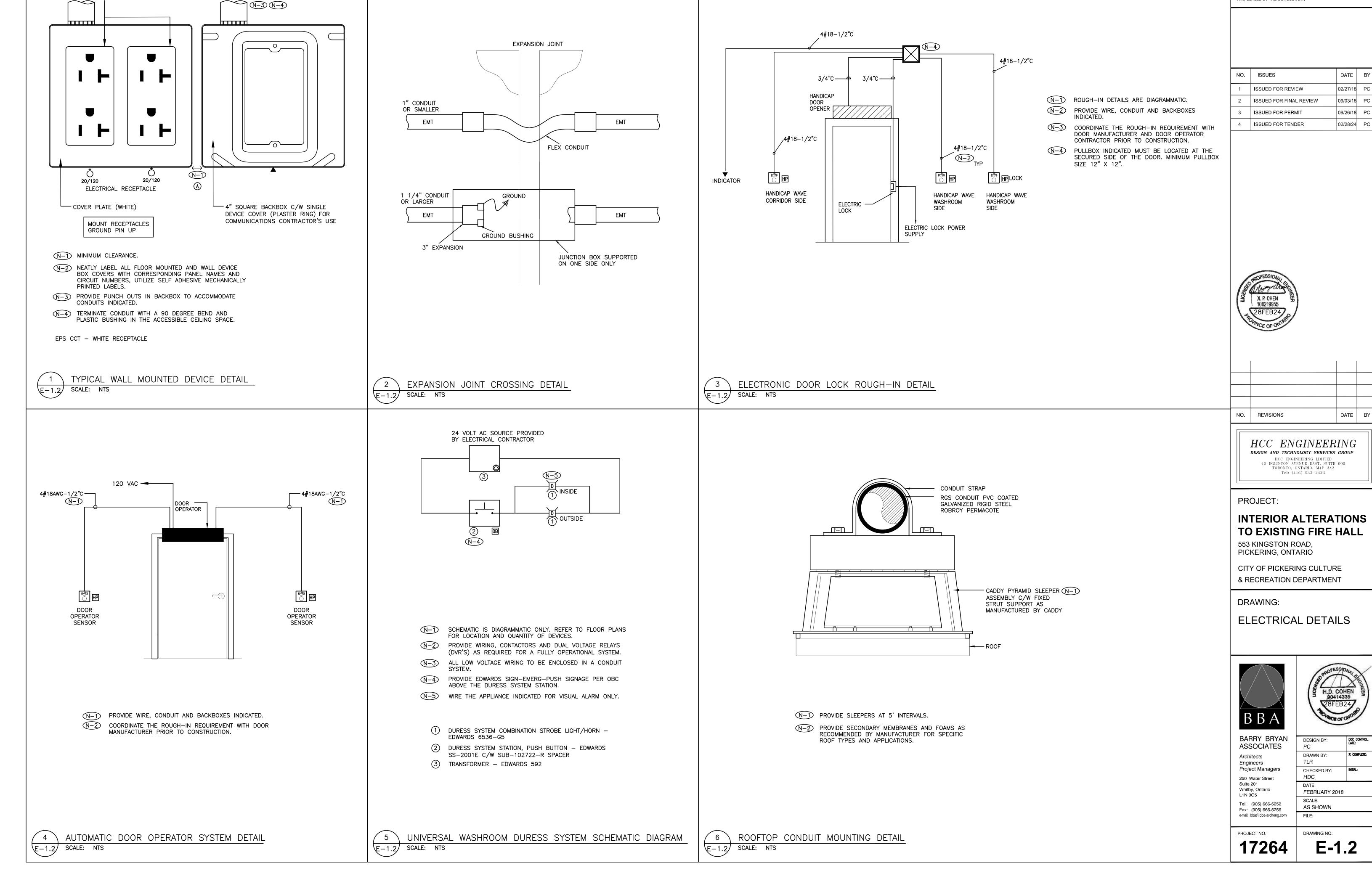
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DRAWN BY:

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AS SHOWN

FEBRUARY 2018



COMMERCIAL GRADE DECORATOR

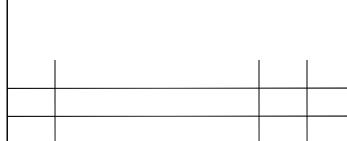
3/4" CONDUIT STYLE RECEPTACLE C/W BACK STRAP PULL STRING TO LAY-IN CEILING SPACE

3/4" EMPTY CONDUIT SYSTEM C/W

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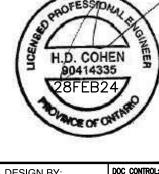
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2	ISSUED FOR FINAL REVIEW	09/03/18	РС
3	ISSUED FOR PERMIT	09/26/18	PC
1	ISSUED FOR TENDER	02/28/24	DC.





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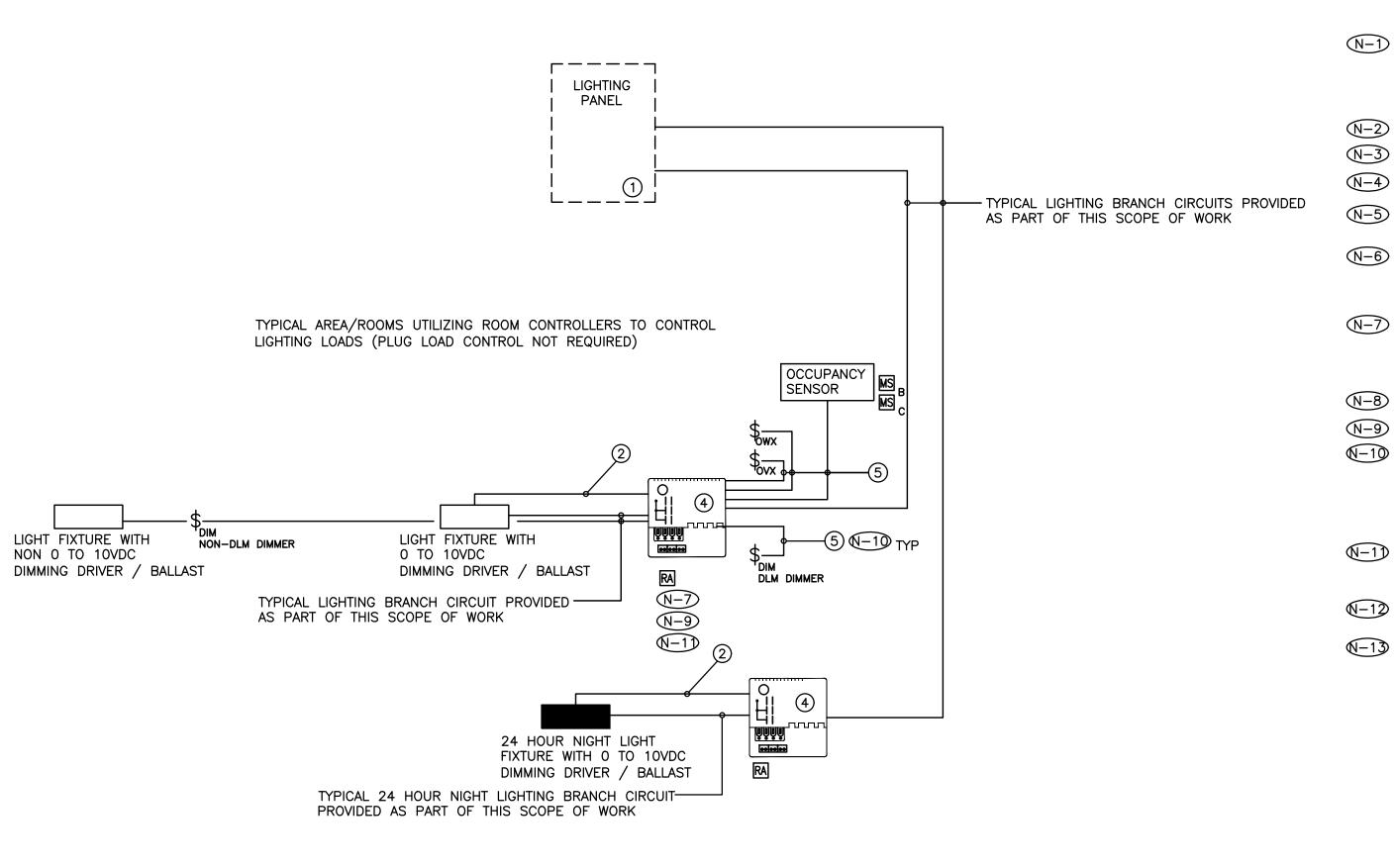
INTERIOR ALTERATIONS TO EXISTING FIRE HALL



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	DATE:	

FEBRUARY 2018

E-1.2



SCHEMATIC IS DIAGRAMMATIC ONLY. REFER TO FLOOR PLANS AND REFLECTED CEILING PLANS FOR DEVICE QUANTITY AND LOCATIONS. PROVIDE QUANTITY OF HARDWARE, ROOM CONTROLLERS, SENSORS, DEVICES, CONDUIT, WIRE, CONFIGURATION TOOLS, ETC. TO ENSURE A FULLY OPERATIONAL LOW VOLTAGE LIGHTING CONTROL SYSTEM.

N-2NOT USED.

N-3 NOT USED.

ALL LOW VOLTAGE WIRING TO BE INSTALLED IN AN ENCLOSED CONDUIT (N-4)

PROVIDE POWER, CONDUIT, BACKBOX AND WIRING IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. MINIMUM CONDUIT SIZE 3/4".

PROVIDE DEDICATED CORE DRILLED WALL AND FLOOR PENETRATIONS ON EVERY FLOOR. EXACT LOCATION OF ALL CORE DRILLS TO BE DETERMINED BY X-RAY RESULTS. ALL X-RAYS MUST BE REVIEWED AND APPROVED BY OWNER PRIOR TO CORE DRILLING.

N-7) PROVIDE ROOM CONTROLLERS TO ACCOMMODATE ALL LIGHTING ZONES IN CLOSED ROOMS (IE. OFFICES, MEETING ROOMS, ETC.) PROVIDED AS PART OF THIS SCOPE OF WORK. MAXIMUM OF TWO (2) SWITCH LEGS PER ROOM CONTROLLER.

NOT USED.

N-9 ROOM CONTROLLERS TO BE INSTALLED IN CEILING MOUNTED JUNCTION BOXES.

TERMINATE AND TEST ALL LOW VOLTAGE CONTROL CABLES PROVIDED AS PART OF THIS SCOPE OF WORK. PROVIDE TEST RESULTS FOR ALL LOW VOLTAGE CONTROL CABLES PROVIDED AS PART OF THIS SCOPE OF WORK AT THE END OF CONSTRUCTION. TEST RESULTS SHALL BE INCLUDED AS PART OF THE CLOSE OUT DOCUMENTS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

REFER TO MANUFACTURE'S INSTALLATION GUIDELINES FOR ADDITIONAL INSTALLATION REQUIREMENTS OVER AND ABOVE THOSE DETAILS ON THIS

PROVIDE POWER PACKS, AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM. POWER PACKS NOT SHOWN ON REFLECTED CEILING PLANS.

ELECTRICAL CONTRACTOR'S BASE BID PRICE SHALL INCLUDE FOUR (4) HOURS OF ON SITE COORDINATION TIME WITH WATTSTOPPER PRIOR TO ORDERING LIGHTING SYSTEM COMPONENTS TO CONFIRM DEVICES AND WIRING REQUIREMENTS. ALL CHANGES TO BE REVIEWED AND APPROVED BY CONSULTANT ON SITE PRIOR TO EXECUTION.

(1-14) LIGHT LEVEL OUTPUT (IE, DIMMING LEVEL) FOR EACH AND EVERY FIXTURE PROVIDED AS PART OF THIS SCOPE OF WORK IN ROOMS WITH DLM CONTROL TO BE FIELD ADJUSTED ON SITE WITH CLIENT POST OCCUPANCY. TARGET LIGHT LEVELS FOR EACH LOW VOLTAGE LIGHTING ZONE TO BE PROVIDED BY THE CLIENT POST OCCUPANCY. PROCURE (COORDINATE AND PAY FOR) THE SERVICES OF WATTSTOPPER TO ADJUST, PROGRAM AND COMMISSION THE LIGHTING CONTROL SYSTEM.

AS PART OF THIS SCOPE OF WORK PROCURE THE SERVICES OF A THIRD PARTY PROFESSIONAL ENGINEER TO MEASURE AND RECORD LIGHTING LEVELS IN FOOT CANDLES THROUGHOUT THE ENTIRE SCOPES OF WORK AREAS WITH A CALIBRATED LIGHT METER. AFTER ALL FIELD ADJUSTMENTS HAVE BEEN COMPLETED. READINGS SHALL BE TAKEN BASED ON A MINIMUM OF ONE READING FOR EVERY 20' CENTER IN OPEN OFFICE AREAS AND CORRIDORS / HALLWAYS AND ONE READING IN EACH CLOSED OFFICE, MEETING ROOM, BOARDROOM, ETC. ALL LIGHT LEVEL READINGS ARE TO BE TAKEN DURING NON-DAYLIGHT HOURS. PROVIDE A SEALED REPORT IDENTIFYING LIGHT LEVEL

(1) TYPICAL RECEPTACLE / LIGHTING PANEL. REFER TO DRAWING NO. E-7.1 FOR ADDITIONAL REQUIREMENTS

(2) 0 TO 10VDC CONTROL WIRING PER MANUFACTURER'S RECOMMENDATIONS

(3) NOT USED.

(4) ON / OFF / DIMMING ROOM CONTROLLER

(5) PLENUM RATED 4 PAIR CAT6 UTP CABLE AS MANUFACTURED BY WATT

INSTALL LOW VOLTAGE CONTROL SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, ASHRAE 90.1 2013, ONTARIO BUILDING CODE, ELECTRICAL SAFETY CODE AND THESE DOCUMENTS.

——— DENOTES NEW PROVIDED BY ELECTRICAL CONTRACTOR

---- DENOTES EXISTING TO REMAIN

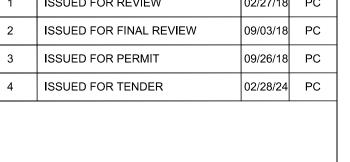
X X X DENOTES EXISTING TO BE REMOVED BY ELECTRICAL CONTRACTOR

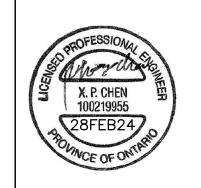
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NO.	REVISIONS	DATE	BY

HCC ENGINEERING DESIGN AND TECHNOLOGY SERVICES GROUP

HCC ENGINEERING LIMITED

40 EGLINTON AVENUE EAST, SUITE 600 TORONTO, ONTARIO, M4P 3A2

Tel: (416) 932-2423

INTERIOR ALTERATIONS

TO EXISTING FIRE HALL

CITY OF PICKERING CULTURE

& RECREATION DEPARTMENT

ELECTRICAL DETAILS

FIXTURE SCHEDULE

E-1.3 SCALE: NTS

TYPE A1 - 1' X 4' RECESSED MOUNTED FLUORESCENT FIXTURE C/W 2 X T8 LAMPS, 120V BALLASTS AND ACRYLIC LENS.

LOW VOLTAGE LIGHTING CONTROL SYSTEM WIRING SCHEMATIC

TYPE A2 - 2' X 4' RECESSED MOUNTED FLUORESCENT FIXTURE C/W 4 X T8 LAMPS, 120V BALLASTS AND ACRYLIC LENS.

TYPE A3 - 3400 LUMEN 2' X 4' RECESSED MOUNTED LED FIXTURE, SUITABLE FOR LAY-IN CEILING C/W IN LINE POWER DISCONNECT, POWER SUPPLY, 120V 0 TO 10VDC DIMMING DRIVER AND LAMP (4000K/85% CRI). COOPER

TYPE A4 - 3000 LUMEN 2' X 4' RECESSED MOUNTED LED FIXTURE, SUITABLE FOR LAY-IN CEILING C/W IN LINE POWER DISCONNECT, POWER SUPPLY, 120V 0 TO 10VDC DIMMING DRIVER AND LAMP (4000K/85% CRI). COOPER 24EN-LD2-30-UNV-L840-CD-1

TYPE A5 - SURFACE MOUNTED FIXTURE C/W 8 X INCANDESCENT LAMPS.

24EN-LD2-34-UNV-L840-CD-1

TYPE A6 - 4' SUSPENDED FLUORESCENT FIXTURE C/W 2X T8 LAMPS, BALLASTS AND WIRE

TYPE A7 - 8' WALL MOUNTED VAPOR TIGHT FLUORESCENT FIXTURE C/W 2X T8 LAMPS.

TYPE AS - WALL MOUNTED FIXTURE C/W WIRE GUARD, 2X RETROFITTED TED LED LAMPS.

TYPE A9 - 6745 LUMEN 4' SUSPENDED LED STRIP LIGHT FIXTURE C/W IN LINE POWER DISCONNECT, POWER SUPPLY, WIRE GUARD, 120V 0 TO 10VDC DIMMING DRIVER AND LAMP (4000K/85% CRI). COOPER METALUX 4SNLED-LD5-65HL-LW-UNV-L840-CD1-U WG/SNF-4FT

TYPE A10 - 15739 LUMEN 8' SUSPENDED LED LINEAR FIXTURE C/W IN LINE POWER DISCONNECT, POWER SUPPLY, 120V 0 TO 10VDC DIMMING DRIVER AND LAMP (4000K/80% CRI). COOPER 8TSNLED-LD5-150HL-LW-UNV-L840-CD1-U C/W 2 (TWO) X WG/SNF-4FT

TYPE B1 - 6" RECESSED MOUNTED DOWNLIGHT C/W 1 X CFL LAMP.

TYPE B2 - 1500 LUMEN 4" LED RECESSED ROUND DOWNLIGHT SUITABLE FOR DRYWALL CEILING C/W IN LINE POWER DISCONNECT, 120V 0 TO 10VDC DIMMING DRIVER AND WIDE BEAM LAMP (4000K 80%CRI). COOPER LIGHTING PORTFOLIO LD4B15D010 EU4B10208040 4LBW1H.

TYPE B3 - 1500 LUMEN 4" LED RECESSED ROUND DOWNLIGHT GASKETET FOR IP66 RATING SUITABLE FOR DRYWALL CEILING C/W IN LINE POWER DISCONNECT, 120V 0 TO 10VDC DIMMING DRIVER AND WIDE BEAM LAMP (4000K 80%CRI) AND IP66 GASKET KIT. COOPER LIGHTING PORTFOLIO LD4B15D010 EU4B10208040 4LBPS1MW LGSKT4IP66

TYPE B4 - SURFACE MOUNTED DOME FIXTURE C/W INCANDESCENT LAMP.

TYPE B5 - 10" RECESSED CANOPY MOUNTED DOWNLIGHT C/W LAMPS.

TYPE B6 - 1500 LUMEN 10" RECESSED LED DOWNLIGHT SUITABLE FOR CANOPY INSTALLATION C/W IN LINE POWER DISCONNECT, GROOF RING, POWER SUPPLY, 120V 0 TO 10VDC DIMMING ELECTRONIC DRIVER AND LAMP (4000K, 80% CRI). COOPER LIGHTING LDRT8B15D010 ER8B10208040 8LBW1H ABR10P

TYPE B7 - 4000 LUMEN RECESSED LED DOWNLIGHT SUITABLE FOR OUTDOOR CANOPY INSTALLATION C/W IN LINE POWER DISCONNECT, GROOF RING, POWER SUPPLY, 120V O TO 10VDC DIMMING ELECTRONIC DRIVER AND LAMP (4000K, 80% CRI), COOPER LIGHTING LDRT8B40D010 ER8B30408040 8LBW1H ABR10P

TYPE W1 - WALL MOUNTED FIXTURE C/W ACRYLIC LENS, BALLAST AND HID LAMP.

TYPE W2 - WALL MOUNTED FLOOD LIGHT FIXTURE C/W ACRYLIC LENS, BALLAST AND HPS LAMP

TYPE W3 - 13258 LUMEN WALL MOUNTED LED FIXTURE SUITABLE FOR OUTDOOR INSTALLATION C/W IN LINE POWER DISCONNECT, POWER SUPPLY, 120V 0 TO 10VDC DIMMING ELECTRONIC DRIVER AND LAMP (4000K, 80% CRI). COOPER LIGHTING XTOR12B-W-BK

TYPE W4 - 16900 LUMEN WALL MOUNTED LED FLOODLIGHT FIXTURE SUITABLE FOR OUTDOOR INSTALLATION C/W IN LINE POWER DISCONNECT, POWER SUPPLY, 120V 0 TO 10VDC DIMMING ELECTRONIC DRIVER AND LAMP (4000K, 80% CRI). COOPER LIGHTING NFFLD-C40-D-UNV-66-T-BK

TYPE D1 - EMERGENCY LIGHTING SYSTEM C/W 10 YEAR 24VOLT/720W/0.5 HOUR/BATTERY UNIT/120/347 VOLT INPUT BEGHELLI NOVA SERIES NV-24-720/WHITE IN COLOUR.

TYPE D2 - 2 X 5W MR16 24V BEGHELLI BTMR SERIES BTMR2-24V-5W LED, WHITE IN COLOUR.

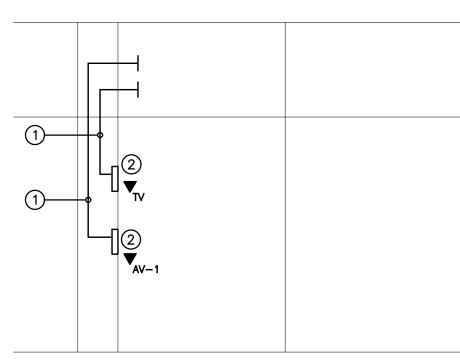
TYPE D3 - 1 X 5W MR16 24V BEGHELLI BTMR SERIES BTMR1-24V-5W LED, WHITE IN COLOUR.

TYPE D4 - 2 X 7W MR16 24V BEGHELLI BTMR SERIES BTMR1-24V-5W LED, WHITE IN COLOUR.

TYPE D5 - EMERGENCY REMOTE HEADS C/W 1 HEAD.

TYPE D5A - RECESSED MOUNTED ADJUSTABLE EMERGENCY REMOTE HEAD.

TYPE D6 - EMERGENCY REMOTE HEADS C/W 2 HEADS.



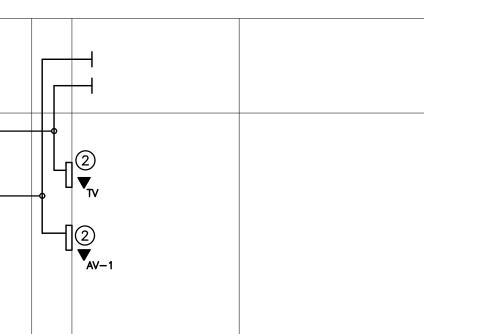
N-1 LOW VOLTAGE CABLES AND TERMINATIONS PROVIDED BY A/V CONTRACTOR.

N-2) PROVIDE NYLON INSULATED THROATS FOR ALL BUSHINGS AND CONNECTORS.

N-3 COORDINATE CONDUIT TERMINATION REQUIREMENTS ON SITE WITH A/V CONTRACTOR.

(1) 1 1/2" CONDUIT C/W PULL STRING

(2) 4" SQUARE WALL MOUNTED DEEP BACKBOX C/W WHITE COVERPLATE (PUNCHOUT AS DIRECTED ON SITE) FOR A/V CONTRACTOR'S USE



DRAWING:

PROJECT:

553 KINGSTON ROAD,

PICKERING, ONTARIO

90414335

DOC_CONTROL:

% COMPLETE:

BARRY BRYAN ASSOCIATES Architects Engineers Project Managers 250 Water Street Suite 201 Whitby, Ontario

e-mail: bba@bba-archeng.com

CHECKED BY: HDC FEBRUARY 2018 L1N 0G5 Tel: (905) 666-5252 AS SHOWN Fax: (905) 666-5256

PROJECT NO:

DRAWING NO:

DESIGN BY:

DRAWN BY:

PC

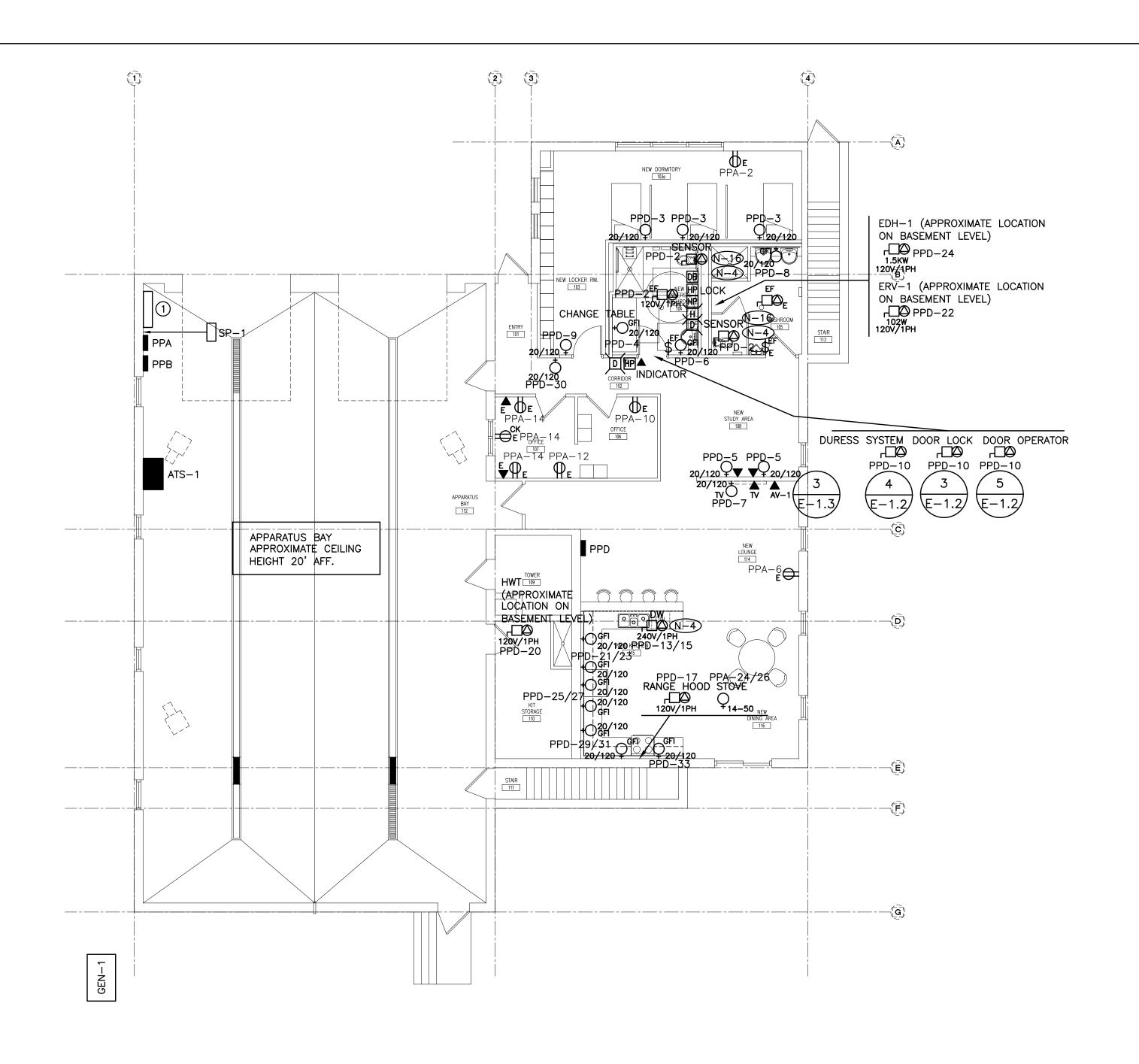
17264 E-1.3

FILE:



TV CONDUIT ROUGH-IN SYSTEM DETAIL

FIXTURE SCHEDULE E-1.3 SCALE: NTS



N-1) EXACT LOCATION OF ALL DEVICES AND RESPECTIVE HEIGHTS TO BE COORDINATED ON SITE WITH DESIGNER.

N-2) NEATLY LABEL ALL FLOOR MOUNTED AND WALL DEVICE BOX COVERS WITH CORRESPONDING PANEL NAMES AND CIRCUIT NUMBERS. UTILIZE SELF ADHESIVE MECHANICALLY PRINTED LABELS.

N-3 CIRCUIT NUMBERS MAY NOT BE CHANGED WITHOUT PRIOR APPROVAL FROM THE ELECTRICAL ENGINEER.

N-4 CONFIRM BREAKER AND RECEPTACLE REQUIREMENTS PRIOR TO ORDERING DISTRIBUTION.

N-5 MANUAL STARTER SWITCH/THERMOSTAT SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE CONDUIT AND WIRE.

N-6 COORDINATE WIRING REQUIREMENTS FOR MECHANICAL EQUIPMENT ON SITE WITH MECHANICAL CONTRACTOR.

N-7) CONFIRM ELECTRICAL REQUIREMENTS AND EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION OF ELECTRICAL SERVICES.

N-8 ALL FINAL CONNECTIONS TO MECHANICAL EQUIPMENT ARE TO BE IN LIQUID TIGHT FLEXIBLE CONDUIT.

N-9 ROUTE ALL CONDUIT SYSTEMS AROUND EXISTING DUCT WORK, BEAMS, NEW DUCT WORK AND PIPING AS REQUIRED TO ACCOMMODATE CONDUIT INSTALLATION. REFER TO MECHANICAL DRAWINGS AND DESIGNER DRAWINGS FOR ADDITIONAL DETAILS.

№ PROVIDE NEW COVERPLATES FOR ALL RECEPTACLES/SWITCHES DENOTED AS EXISTING TO REMAIN. REFER TO DETAIL NO. 1 ON DRAWING NO. E-1.1 FOR DEVICE AND COVER PLATE COLOUR ASSIGNMENTS. BASE BID PRICE SHALL INCLUDE FOR 6 ADDITIONAL COVER PLATES OVER AND ABOVE THOSE SHOWN ON DRAWING NO. E-2.1 AND DETAIL NO. 2 ON DRAWING NO. E-3.1.

N-1) AS PART OF THE BASE BID PRICE ELECTRICAL CONTRACTOR SHALL PROVIDE (SUPPLY AND INSTALL) AN ADDITIONAL TWO (2) CSA 5-20R DUPLEX RECEPTACLES OVER AND ABOVE THOSE SHOWN ON DRAWING NO. E-2.1 ON AN AD HOC BASIS UP TO SUBSTANTIAL COMPLETION. EACH ADDITIONAL RECEPTACLE SHALL BE ON A DEDICATED CIRCUIT COMPLETE WITH BRANCH WIRING (CONDUIT AND WIRE) AND BREAKER. BREAKER REQUIREMENTS NOT INDICATED ON PANEL SCHEDULES.

PROVIDE RECEPTACLES, CONDUIT, WIRE (100' OF 2#12AWG + G (TOTAL OF 200' WIRE PLUS G AND 100' 3/4" CONDUIT) PER RECEPTACLE), BREAKERS, TERMINATION AT PANEL BREAKER END AND AT DEVICE END, ETC. FOR FULLY FUNCTIONAL LIVE DEVICES. EXACT INSTALLATION LOCATION AND PANEL SOURCE TO BE DETERMINED ON SITE BY CLIENT DURING CONSTRUCTION. PROVIDE UPDATED TYPED PANEL SCHEDULES FOR ALL PANELS AT THE COMPLETION OF THE PROJECT.

PROVIDE LOCKONS FOR BREAKERS PROTECTING EMERGENCY LIGHTING CIRCUITS.

√13 ELECTRICAL CONTRACTOR TO ENSURE THAT DEVICES ARE NOT INSTALLED ON WALLS WITH WHITE BOARDS OR ON FEATURE WALLS. CONFIRM ALL WHITE BOARD AND FEATURE WALL LOCATIONS PRIOR TO INSTALLATION.

√14) MINIMUM WIRE SIZE #10AWG FOR ALL 120 VOLT CIRCUITS EXCEEDING 90 FEET IN LENGTH.

N-15 ALL SERVICES IN FINISHED AREAS INCLUDING THESE WITH BLOCK WALLS MUST BE CONCEALED. EXPOSED SURFACE MOUNTED CONDUIT SYSTEMS WILL NOT BE ACCEPTABLE.

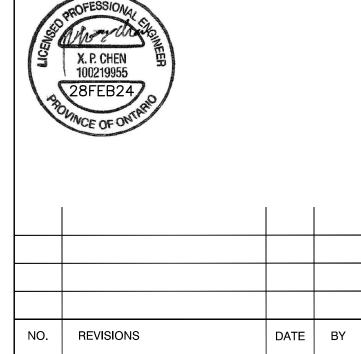
PROVIDE 120/24V TRANSFORMER FOR EACH WASHROOM APPLIANCE SENSOR (SENSOR PROVIDED BY DIVISION 15).

ALL CIRCUITS SHALL BE PROTECTED BY ARC FAULT CIRCUIT INTERRUPTERS.

(1) EXISTING METER CABINET.

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE CONSULTANT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS IN PART OR WHOLE WITHOUT THE PERMISSION OF THE CONSULTANT IS FORBIDDEN. DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE CONSULTANT.

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3	ISSUED FOR PERMIT	09/26/18	PC
4	ISSUED FOR TENDER	02/28/24	PC



HCC ENGINEERING DESIGN AND TECHNOLOGY SERVICES GROUP HCC ENGINEERING LIMITED 40 EGLINTON AVENUE EAST, SUITE 600 TORONTO, ONTARIO, M4P 3A2 Tel: (416) 932-2423

PROJECT:

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

ELECTRICAL PLAN -GROUND FLOOR





DOC CONTROL:

% COMPLETE:

ASSOCIATES Architects Engineers Project Managers 250 Water Street Suite 201 Whitby, Ontario

L1N 0G5 Tel: (905) 666-5252

FEBRUARY 2018 1/8" = 1'-0" Fax: (905) 666-5256 e-mail: bba@bba-archeng.com FILE:

HDC

DESIGN BY:

DRAWN BY:

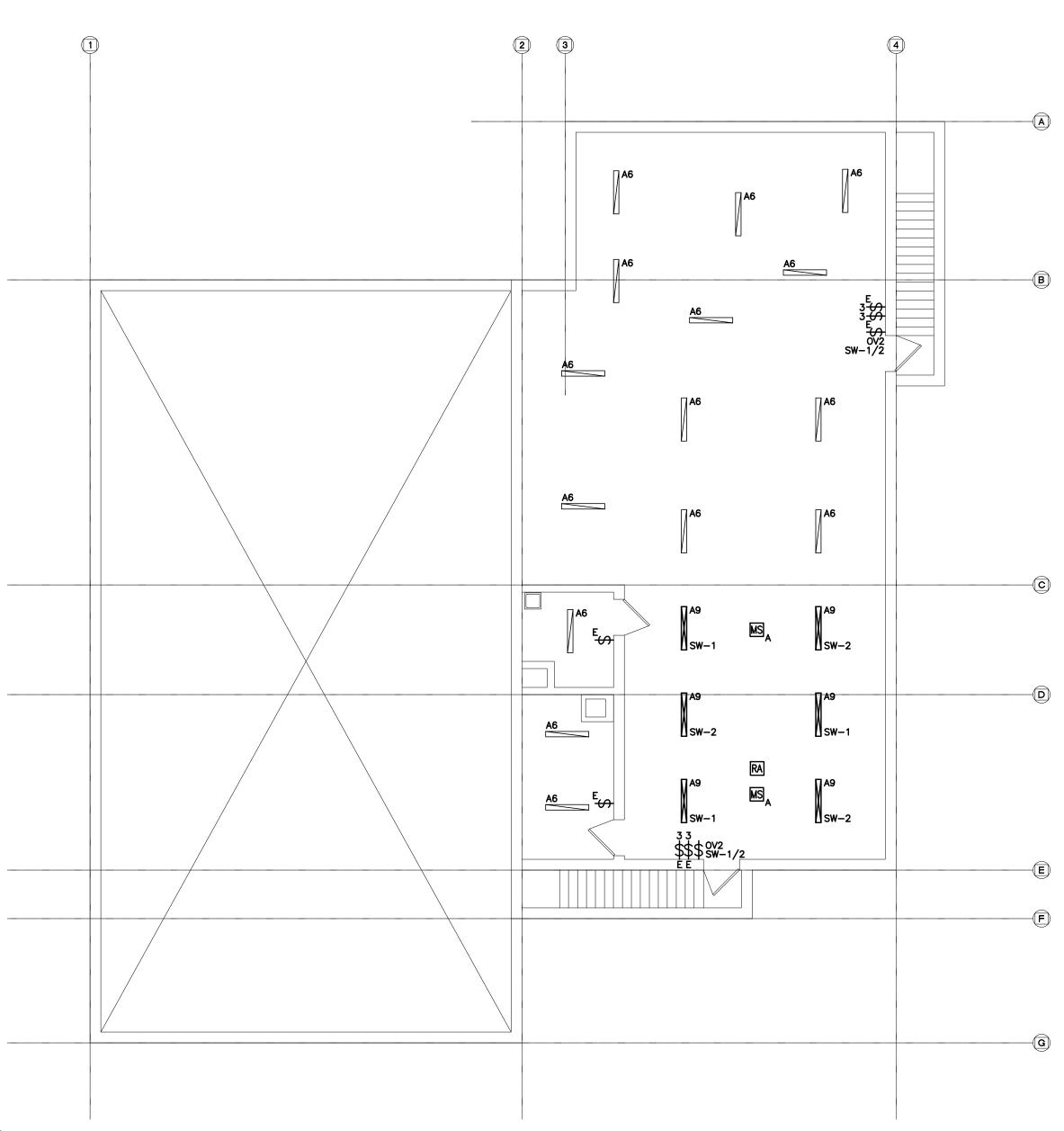
CHECKED BY:

PC

PROJECT NO: 17264

DRAWING NO:

E-2.1



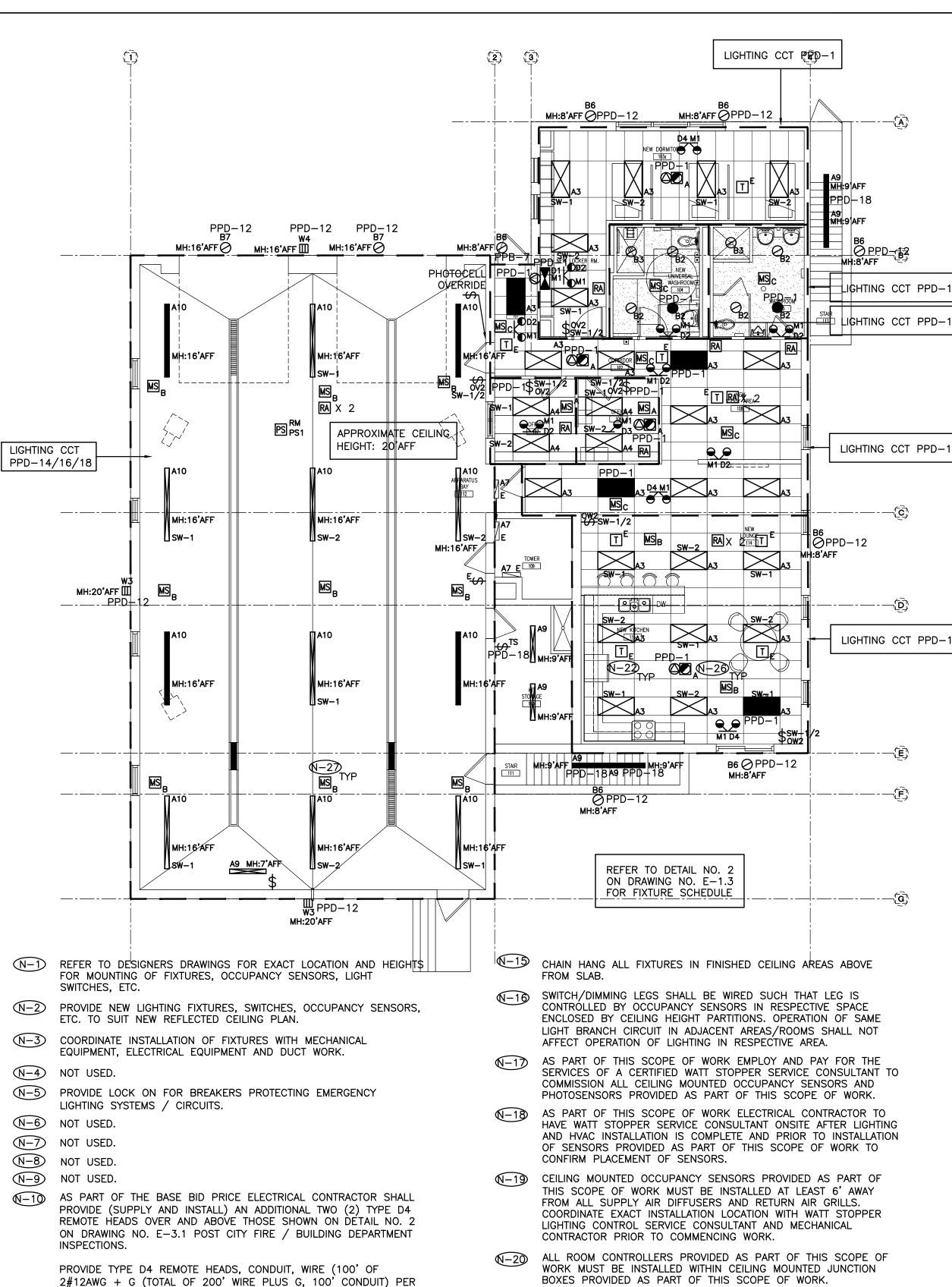
- REFER TO DESIGNERS DRAWINGS FOR EXACT LOCATION AND HEIGHTS FOR MOUNTING OF FIXTURES, OCCUPANCY SENSORS, LIGHT SWITCHES, ETC.
- PROVIDE NEW LIGHTING FIXTURES, SWITCHES, OCCUPANCY SENSORS, ETC. TO SUIT NEW REFLECTED CEILING PLAN.
- COORDINATE INSTALLATION OF FIXTURES WITH MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT AND DUCT WORK.
- (N-4) REUTILIZE EXISTING LIGHTING CIRCUITS UNLESS DENOTED OTHERWISE.
- PROVIDE LOCK ON FOR BREAKERS PROTECTING EMERGENCY LIGHTING SYSTEMS / CIRCUITS.
- N-6 PROVIDE NEW SWITCHING LEGS SHOWN ON DRAWING. REWIRE
- CHAIN HANG ALL FIXTURES IN FINISHED CEILING AREAS ABOVE

EXISTING FIXTURES IN RESPECTIVE ROOMS AS REQUIRED.

- FROM SLAB. SWITCH/DIMMING LEGS SHALL BE WIRED SUCH THAT LEG IS CONTROLLED BY OCCUPANCY SENSORS IN RESPECTIVE SPACE
- ENCLOSED BY CEILING HEIGHT PARTITIONS. OPERATION OF SAME LIGHT BRANCH CIRCUIT IN ADJACENT AREAS/ROOMS SHALL NOT AFFECT OPERATION OF LIGHTING IN RESPECTIVE AREA. AS PART OF THIS SCOPE OF WORK EMPLOY AND PAY FOR THE
- SERVICES OF A CERTIFIED WATT STOPPER SERVICE CONSULTANT TO COMMISSION ALL CEILING MOUNTED OCCUPANCY SENSORS AND PHOTOSENSORS PROVIDED AS PART OF THIS SCOPE OF WORK.
- (N-10) AS PART OF THIS SCOPE OF WORK ELECTRICAL CONTRACTOR TO HAVE WATT STOPPER SERVICE CONSULTANT ONSITE AFTER LIGHTING AND HVAC INSTALLATION IS COMPLETE AND PRIOR TO INSTALLATION OF SENSORS PROVIDED AS PART OF THIS SCOPE OF WORK TO CONFIRM PLACEMENT OF SENSORS.
- (N-1) CEILING MOUNTED OCCUPANCY SENSORS PROVIDED AS PART OF THIS SCOPE OF WORK MUST BE INSTALLED AT LEAST 6' AWAY FROM ALL SUPPLY AIR DIFFUSERS AND RETURN AIR GRILLS. COORDINATE EXACT INSTALLATION LOCATION WITH WATT STOPPER LIGHTING CONTROL SERVICE CONSULTANT AND MECHANICAL CONTRACTOR PRIOR TO COMMENCING WORK.

- ALL ROOM CONTROLLERS PROVIDED AS PART OF THIS SCOPE OF WORK MUST BE INSTALLED WITHIN CEILING MOUNTED JUNCTION BOXES PROVIDED AS PART OF THIS SCOPE OF WORK.
- (N-13) EACH AND EVERY SPACE ENCLOSED BY CEILING HEIGHT PARTITIONS (IE. OFFICES, MEETING ROOMS, ENCLAVES, ETC.) WITH DLM CONTROL TO BE WIRED WITH TWO CONTROLLABLE SWITCH-LEGS SUCH THAT THERE IS ONE CONTROL STEP OF NOT MORE THAN 50% LIGHTING POWER IN ADDITION TO AN AUTO OFF IN THE RESPECTIVE SPACE. REFER TO ASHRAE 90.1 2013 FOR ADDITIONAL REQUIREMENTS.

REFER TO DETAIL NO. 2 ON DRAWING NO. E-1.3 FOR FIXTURE SCHEDULE



CHAIN HANG ALL FIXTURES IN FINISHED CEILING AREAS ABOVE SWITCH/DIMMING LEGS SHALL BE WIRED SUCH THAT LEG IS CONTRÓLLED BY OCCUPANCY SENSORS IN RESPECTIVE SPACE ENCLOSED BY CEILING HEIGHT PARTITIONS. OPERATION OF SAME LIGHT BRANCH CIRCUIT IN ADJACENT AREAS/ROOMS SHALL NOT

 $(\sqrt{1-17})$ AS PART OF THIS SCOPE OF WORK EMPLOY AND PAY FOR THE SERVICES OF A CERTIFIED WATT STOPPER SERVICE CONSULTANT TO COMMISSION ALL CEILING MOUNTED OCCUPANCY SENSORS AND PHOTOSENSORS PROVIDED AS PART OF THIS SCOPE OF WORK.

(N-18) AS PART OF THIS SCOPE OF WORK ELECTRICAL CONTRACTOR TO HAVE WATT STOPPER SERVICE CONSULTANT ONSITE AFTER LIGHTING AND HVAC INSTALLATION IS COMPLETE AND PRIOR TO INSTALLATION OF SENSORS PROVIDED AS PART OF THIS SCOPE OF WORK TO

(N-19) CEILING MOUNTED OCCUPANCY SENSORS PROVIDED AS PART OF THIS SCOPE OF WORK MUST BE INSTALLED AT LEAST 6' AWAY FROM ALL SUPPLY AIR DIFFUSERS AND RETURN AIR GRILLS. COORDINATE EXACT INSTALLATION LOCATION WITH WATT STOPPER

WORK MUST BE INSTALLED WITHIN CEILING MOUNTED JUNCTION BOXES PROVIDED AS PART OF THIS SCOPE OF WORK.

(N-2) NOT USED.

TYPE D4 REMOTE HEAD), TERMINATION AT EMERGENCY LIGHTING

SYSTEM END AND AT DEVICE END, ETC. FOR FULLY FUNCTIONAL LIVE DEVICES. EXACT INSTALLATION LOCATION AND EMERGENCY

LIGHTING SYSTEM SOURCE TO BE DETERMINED ON SITE DURING

PROVIDE (SUPPLY AND INSTALL) AN ADDITIONAL ONE (1) DIGITAL

DETAIL NO. 2 ON DRAWING NO. E-3.1 ON AN AD HOC BASIS UP

PROVIDE WATT STOPPER LMRC-212 C/W CONDUIT, WIRE (50' OF

2#12AWG + G (TOTAL OF 100' WIRE PLUS G, 50' CONDUIT) PER

LIVE DEVICES. EXACT INSTALLATION LOCATION AND SWITCH LEGS

√12) ALL SWITCHES PROVIDED AS PART OF THIS SCOPE OF WORK TO BE

EXISTING FIXTURES IN RESPECTIVE ROOMS AS REQUIRED.

NUMBERS OF ALL FIXTURES THROUGHOUT ENTIRE FLOOR.

REFLECTED CEILING PLAN — GROUND FLOOR

TO BE DETERMINED ON SITE DURING CONSTRUCTION.

N-13 PROVIDE NEW SWITCHING LEGS SHOWN ON DRAWING. REWIRE

(N-14) AS-BUILT DRAWINGS MUST DETAIL THE ZONING AND CIRCUIT

ROOM CONTROLLER). TERMINATIONS, ETC. FOR FULLY FUNCTIONAL

DIMMING ROOM CONTROLLERS OVER AND ABOVE THOSE SHOWN ON

(N-1) AS PART OF THE BASE BID PRICE ELECTRICAL CONTRACTOR SHALL

CONSTRUCTION.

SCALE: 1/8" = 1'0"

\E-3.1/

TO SUBSTANTIAL COMPLETION.

ALIGNED WITH THERMOSTATS.

TEMPORARILY SUPPORT PAGING SYSTEM SPEAKERS DENOTED AS EXISTING TO REMAIN FROM CEILING STRUCTURE TO ACCOMMODATE THE DEMOLITION OF EXISTING CEILING AND THE INSTALLATION OF NEW CEILING PROVIDED BY GENERAL CONTRACTOR.

√23 UTILIZE CCT PPD-1 (DC SOURCES M1) TO POWER NON-SWITCHED NIGHT LIGHTING.

 $\sqrt{N-24}$ AS PART OF THE BASE BID PRICE ELECTRICAL CONTRACTOR SHALL PROVIDE (SUPPLY AND INSTALL) AN ADDITIONAL TWO (2) TYPE 'A' CEILING MOUNTED OCCUPANCY SENSORS EACH COMPLETE WITH 75'-0" OF CONDUIT AND WIRING AND A LMSW-102 DIGITAL LIGHT SWITCH OVER AND ABOVE THOSE SHOWN ON DETAIL NO. 2 ON DRAWING NO. E-3.1 POST SUBSTANTIAL COMPLETION.

 $(\sqrt{-25})$ EACH AND EVERY SPACE ENCLOSED BY CEILING HEIGHT PARTITIONS (IE. OFFICES, MEETING ROOMS, ENCLAVES, ETC.) WITH DLM CONTROL TO BE WIRED WITH TWO CONTROLLABLE SWITCH-LEGS SUCH THAT THERE IS ONE CONTROL STEP OF NOT MORE THAN 50% LIGHTING POWER IN ADDITION TO AN AUTO OFF IN THE RESPECTIVE SPACE. REFER TO ASHRAE 90.1 2013 FOR ADDITIONAL REQUIREMENTS.

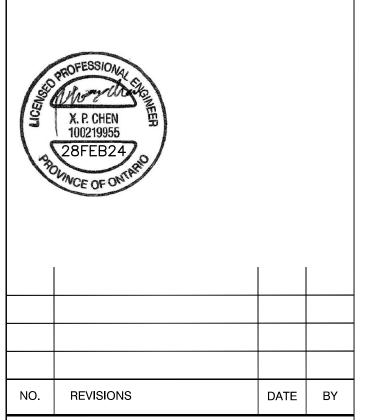
№ SMOKE ALARMS SHALL BE WIRED SUCH THAT ACTIVATION OF ONE SMOKE ALARM WILL CAUSE ALL SMOKE ALARMS WITHIN THE BUILDING TO SOUND.

 $\sqrt{(-2)}$ UTILIZE 3/4" RIGID CONDUIT TO SUSPEND OCCUPANCY SENSOR FROM CEILING STRUCTURE ABOVE. ELECTRICAL CONTRACTOR TO ENSURE THAT BOTTOM OF OCCUPANCY SENSOR IS LEVELED WITH

BOTTOM OF TYPE A10 FIXTURES.

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE CONSULTANT AND MUST BE RETURNE UPON REQUEST. REPRODUCTION OF DRAWINGS IN PART OR WHOLE WITHOUT THE PERMISSION OF THE CONSULTANT IS FORBIDDEN. DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE CONSULTANT.

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PROJECT:

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

REFLECTED CEILING PLANS





DOC CONTROL:

% COMPLETE:

BARRY BRYAN DESIGN BY: ASSOCIATES DRAWN BY: Architects Engineers Project Managers CHECKED BY: 250 Water Street Suite 201 Whitby, Ontario

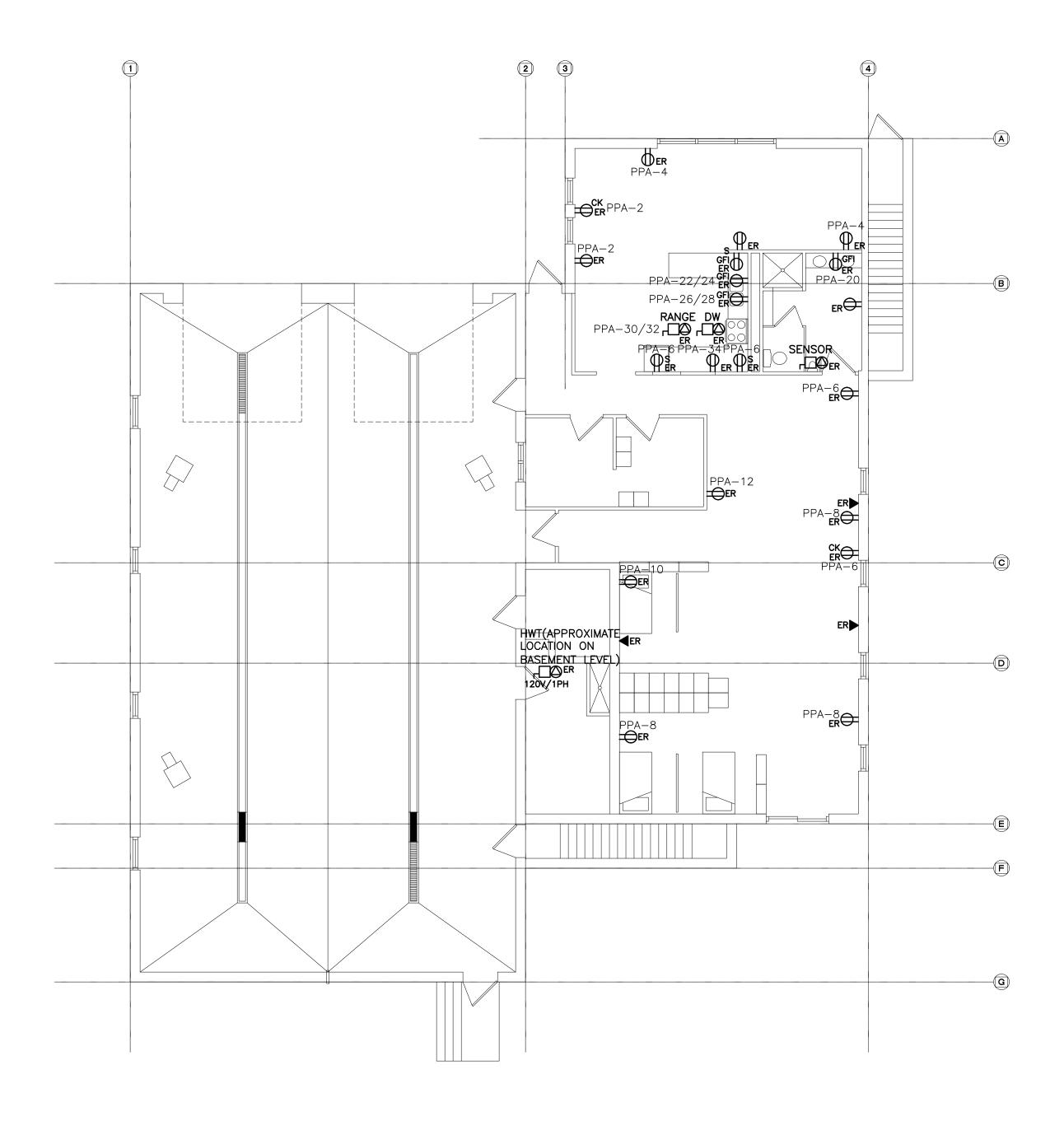
HDC FEBRUARY 2018 Tel: (905) 666-5252 AS SHOWN Fax: (905) 666-5256 e-mail: bba@bba-archeng.com FILE:

PROJECT NO: 17264

L1N 0G5

DRAWING NO: E-3.1

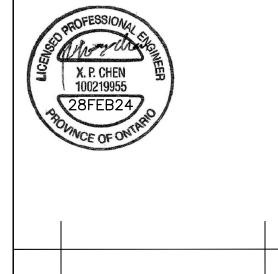
REFLECTED CEILING PLAN - BASEMENT LEVEL (E-3.1) SCALE: 1/8" = 1'0"



- N-1) ALL EXISTING BRANCH WIRING AND RACEWAYS, INCLUDING THOSE COILED IN CEILING SPACE SHALL BE REMOVED BACK TO SOURCE PANEL. REFER TO SPECIFICATIONS FOR ADDITIONAL DEMOLITION REQUIREMENTS. DO NOT REUSE EXISTING WIRING OR CONDUIT SYSTEMS.
- N-2 REMOVE ALL ABANDONED ZONE CONDUITS INCLUDING THOSE IN CEILING SPACE. EXISTING ZONE CONDUITS NOT SHOWN ON
- N-3 BASE BID PRICE SHALL INCLUDE FOR THE REMOVAL OF 3 ADDITIONAL RECEPTACLES, COMMUNICATIONS ROUGH-INS, ETC. OVER AND ABOVE THOSE SHOWN ON THIS DRAWING. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- N-4 CONFIRM DEMOLITION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO DISCONNECTING MECHANICAL EQUIPMENT.
- N-5 DO NOT REUSE ANY DEVICES, BACKBOXES, CONTROL SYSTEMS, ETC REMOVED AS PART OF THIS SCOPE OF WORK.
- N-6 REWIRE ALL EXISTING TO REMAIN DEVICES AS REQUIRED TO ENSURE CONTINUITY OF SERVICES. EXISTING TO REMAIN DEVICES NOT SHOWN ON DRAWING.
- N-7 COORDINATE DEMOLITION REQUIREMENTS WITH DIVISION 15 TO ENSURE THAT POWER AND LINE VOLTAGE CONTROL WIRING FOR DIVISION 15 DEVICES TO REMAIN IS NOT DISCONNECTED.
- N-8 ALL EXISTING CIRCUITS SHOWN ARE FOR REFERENCE PURPOSES ONLY. CONTRACTOR MUST TRACE CIRCUITS AND CONFIRM INFORMATION PRIOR TO DISCONNECTION AND REWORKING/ REMOVING OF CIRCUITS.

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE CONSULTANT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS IN PART OR WHOLE WITHOUT THE PERMISSION OF THE CONSULTANT IS FORBIDDEN. DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE CONSULTANT.

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DATE BY

PROJECT:

NO. REVISIONS

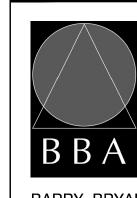
INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

ELECTRICAL DEMOLITION PLAN - GROUND FLOOR





ASSOCIATES Architects Engineers Project Managers 250 Water Street Suite 201

DRAWN BY: CHECKED BY: HDC Whitby, Ontario FEBRUARY 2018 L1N 0G5

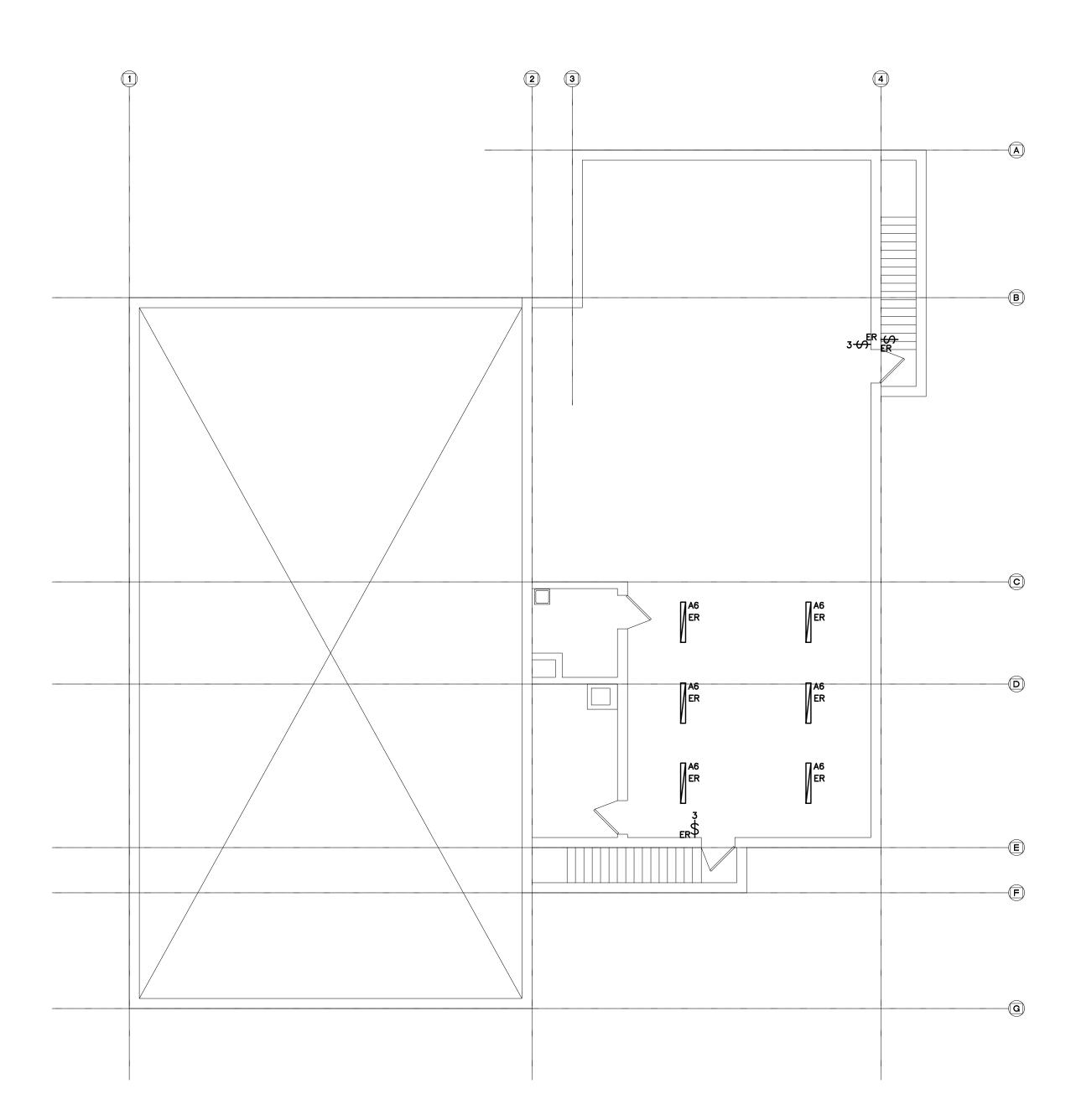
DESIGN BY:

1/8" = 1'-0"

Tel: (905) 666-5252 Fax: (905) 666-5256 e-mail: bba@bba-archeng.com

PROJECT NO:

17264 E-5.1



N-1) BASE BID PRICE SHALL INCLUDE FOR THE REMOVAL OF 2 ADDITIONAL FIXTURES OVER AND ABOVE THOSE SHOWN ON DETAIL NO. 1 ON DRAWING NO. E-6.1.

N-2 DISPOSE OF FIXTURES REMOVED AS PART OF THIS SCOPE OF WORK. RECYCLE ALL APPLICABLE COMPOUNDS AS DETAILED IN 'GREEN MEASURES' REQUIREMENTS. PROVIDE DOCUMENTATION SUPPORTING RECYCLING MEASURES.

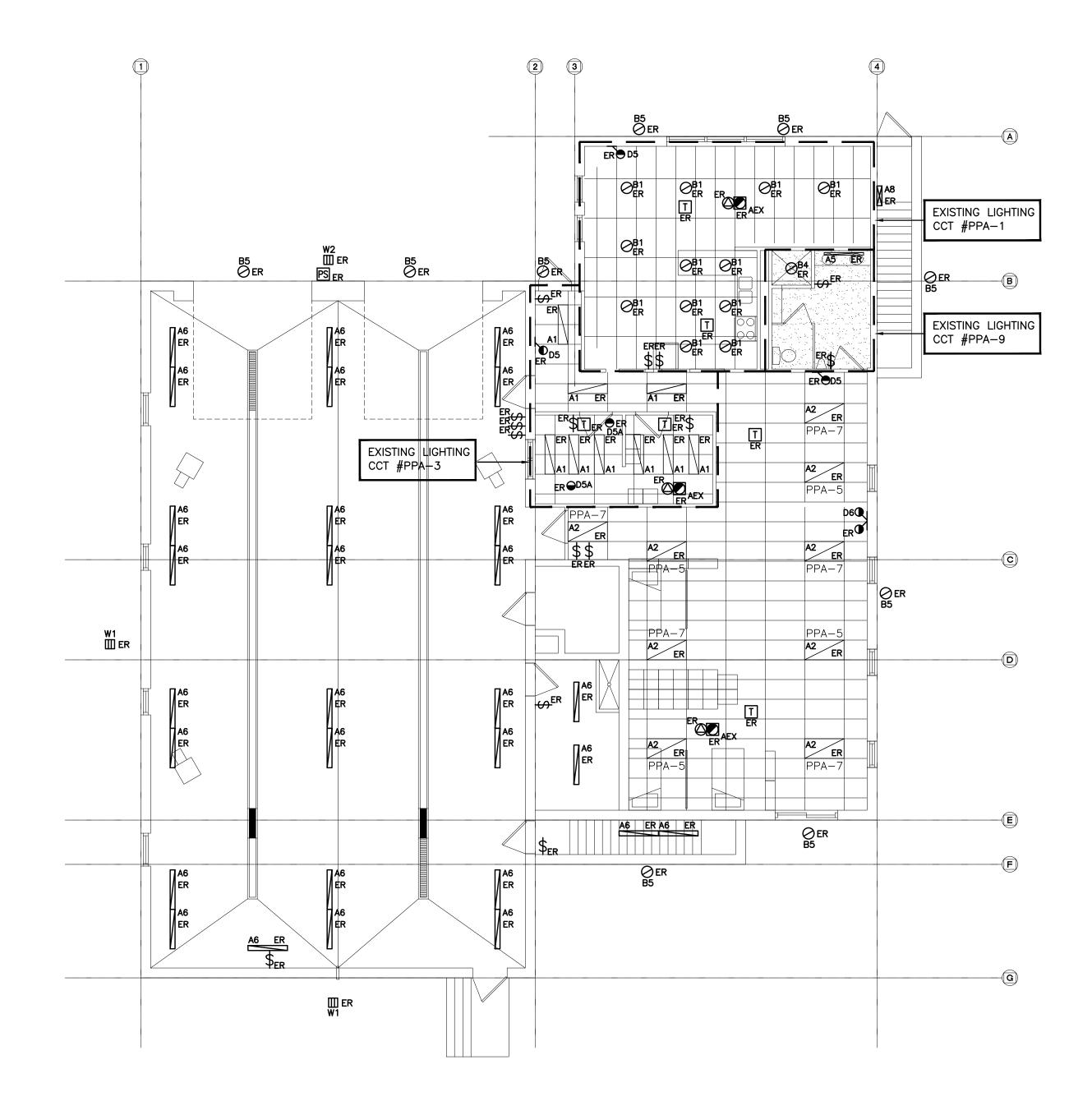
N-3 REWIRE ALL EXISTING TO REMAIN FIXTURES TO ENSURE CONTINUITY OF SERVICES.

N-4 DO NOT REUSE EXISTING DIMMERS, SWITCHES, LAMPS, ETC DENOTED AS EXISTING TO BE REMOVED AS PART OF THIS SCOPE OF WORK.

N-5 AS PART OF THIS SCOPE OF WORK ELECTRICAL CONTRACTOR MUST PROCURE (ORDER AND PAY FOR) THE SERVICES OF AEVITAS TO DISPOSE OF ALL LAMPS AND BALLASTS REMOVED AS PART OF THIS SCOPE OF WORK IN COMPLIANCE WITH MINISTRY STANDARDS AND ENVIRONMENTALLY SAFE METHODS. ELECTRICAL CONTRACTOR SHALL PROVIDE A SUBMISSION (LETTER) STATING THAT LAMPS AND BALLASTS WERE DISPOSÉD OF THROUGH ENVIRONMENTALLY SAFE METHODS. THE SUBMISSION BY THE ELECTRICAL CONTRACTOR SHALL INCLUDE THE WAYBILL DETAILING LOCATION OF DISPOSAL AND QUANTITY OF LAMPS AND BALLASTS THAT WERE DISPOSED.

N-6 ALL EXISTING CIRCUITS SHOWN ARE FOR REFERENCE PURPOSES ONLY. CONTRACTOR MUST TRACE CIRCUITS AND CONFIRM INFORMATION PRIOR TO DISCONNECTION AND REWORKING/ REMOVING OF CIRCUITS.

REFER TO DETAIL NO. 2 ON DRAWING NO. E-1.3 FOR FIXTURE SCHEDULE



N-1) BASE BID PRICE SHALL INCLUDE FOR THE REMOVAL OF 2 ADDITIONAL FIXTURES OVER AND ABOVE THOSE SHOWN ON DETAIL NO. 2 ON DRAWING NO. E-6.1.

N-2 DISPOSE OF FIXTURES REMOVED AS PART OF THIS SCOPE OF WORK. RECYCLE ALL APPLICABLE COMPOUNDS AS DETAILED IN 'GREEN MEASURES' REQUIREMENTS. PROVIDE DOCUMENTATION SUPPORTING RECYCLING MEASURES.

N-3 REWIRE ALL EXISTING TO REMAIN FIXTURES TO ENSURE CONTINUITY OF SERVICES.

N-4 DO NOT REUSE EXISTING DIMMERS, SWITCHES, LAMPS, ETC DENOTED AS EXISTING TO BE REMOVED AS PART OF THIS SCOPE OF WORK.

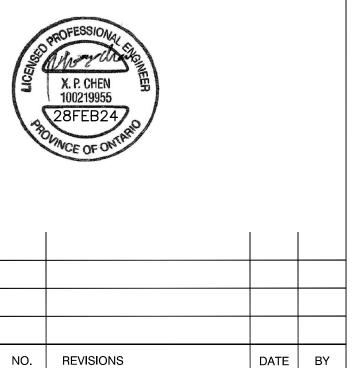
N-5 AS PART OF THIS SCOPE OF WORK ELECTRICAL CONTRACTOR MUST PROCURE (ORDER AND PAY FOR) THE SERVICES OF AEVITAS TO DISPÒSE OF ALL LAMPS AND BALLASTS REMOVED AS PART OF THIS SCOPE OF WORK IN COMPLIANCE WITH MINISTRY STANDARDS AND ENVIRONMENTALLY SAFE METHODS. ELECTRICAL CONTRACTOR SHALL PROVIDE A SUBMISSION (LETTER) STATING THAT LAMPS AND BALLASTS WERE DISPOSÉD OF THROUGH ENVIRONMENTALLY SAFE METHODS. THE SUBMISSION BY THE ELECTRICAL CONTRACTOR SHALL INCLUDE THE WAYBILL DETAILING LOCATION OF DISPOSAL AND QUANTITY OF LAMPS AND BALLASTS THAT WERE DISPOSED.

N-6 ALL EXISTING CIRCUITS SHOWN ARE FOR REFERENCE PURPOSES ONLY. CONTRACTOR MUST TRACE CIRCUITS AND CONFIRM INFORMATION PRIOR TO DISCONNECTION AND REWORKING/ REMOVING OF CIRCUITS.

REFER TO DETAIL NO. 2 ON DRAWING NO. E-1.3 FOR FIXTURE SCHEDULE

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF THE CONSULTANT AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS IN PART OR WHOLE WITHOUT THE PERMISSION OF THE CONSULTANT IS FORBIDDEN. DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE CONSULTANT.

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PROJECT:

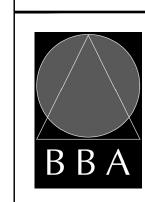
INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

REFLECTED CEILING **DEMOLITION PLANS**





BARRY BRYAN ASSOCIATES Architects Engineers Project Managers 250 Water Street Suite 201 Whitby, Ontario L1N 0G5

PROJECT NO:

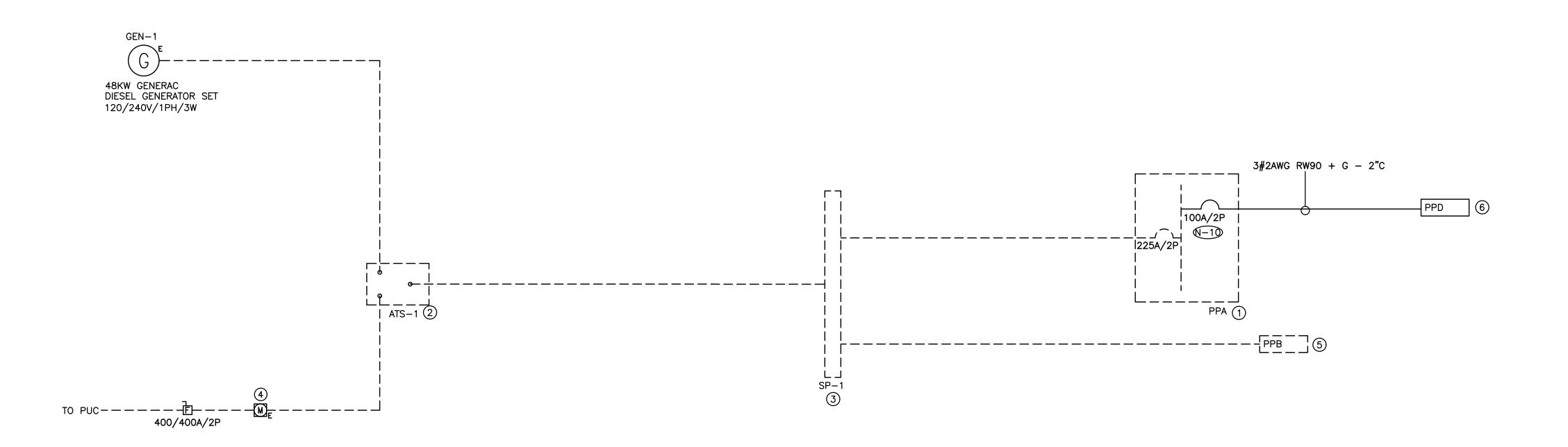
DESIGN BY: DOC CONTROL: % COMPLETE: DRAWN BY: CHECKED BY: HDC FEBRUARY 2018

Tel: (905) 666-5252 Fax: (905) 666-5256 e-mail: bba@bba-archeng.com

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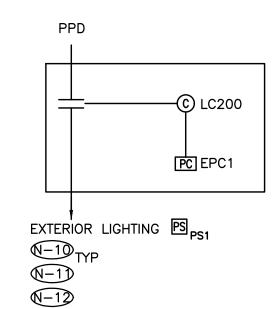
DRAWING NO: 17264 E-6.1

REFLECTED CEILING DEMOLITION PLAN - GROUND FLOOR SCALE: 1/8" = 1'0"\E-6.1/



- N-1) RISER IS DIAGRAMMATIC ONLY. REFER TO FLOOR PLANS FOR DEVICE QUANTITY AND LOCATIONS.
- N-2 PROVIDE FIRE RATED PLYWOOD BACKBOARDS FOR ALL ELECTRICAL DISTRIBUTION EQUIPMENT PROVIDED AS PART OF THIS CONTRACT AND FOR ALL PREPURCHASED / PREQUALIFIED DISTRIBUTION. PAINT BACKBOARDS WITH FIRE RETARDANT PAINT (COLOUR AS DIRECTED ON SITE BY PROJECT MANAGER). FIRE RATED STAMP MUST BE ON ALL PIECES PROVIDED AND MUST BE VISIBLE WHEN INSTALLED. DO NOT PAINT OVER STAMP.
- N-3 ALL INDOOR DISTRIBUTION PROVIDED AS PART OF THIS SCOPE OF WORK MUST BE TYPE 2 ENCLOSURE. PROVIDE COMPRESSION FITTINGS FOR SERVICES ENTERING DISTRIBUTION.
- N-4 CONFIRM BREAKER/FUSE AND RECEPTACLE/DISCONNECT REQUIREMENTS PRIOR TO INSTALLATION.
- N-5 PROVIDE TEMPORARY POWER AND LIGHTING THROUGHOUT PROJECT TO ACCOMMODATE REQUIREMENTS OF ALL TRADES. REQUIREMENTS INCLUDE PROVIDING EXTENSION CORDS, EXTENSION LIGHTING AND EQUIPMENT REQUIRED FOR THE WORK OF ALL TRADES. ALL COSTS RELATED TO THIS WORK SHALL BE INCLUDED IN THE BASE BID PRICE.
- N-6 ROUTE ALL CONDUIT SYSTEMS AROUND EXISTING DUCT WORK, BEAMS, NEW DUCT WORK AND PIPING AS REQUIRED TO ACCOMMODATE ALL INSTALLATION REQUIREMENTS. REFER TO MECHANICAL DRAWINGS AND DESIGNER DRAWINGS FOR ADDITIONAL DETAILS.
- N-7 SEAL ALL CONDUITS AT ELECTRICAL ROOM END AND AT TENANT SPACE
- N-8 ALL BREAKERS REQUIRED TO COMPLETE ALL SCOPES OF WORK TO BE NEW. DO NOT REUSE EXISTING BREAKERS.
- N-9 CONFIRM BREAKER AND RECEPTACLE REQUIREMENTS PRIOR TO ORDERING DISTRIBUTION.
- PROVIDE NEW BREAKER INDICATED. PROVIDE MOUNTING HARDWARE TO ACCOMMODATE EXISTING PANEL BUS. PROVIDE LUGS TO ACCOMMODATE WIRE SIZE INDICATED. PROVIDE THE SERVICES OF A PANEL MANUFACTURER TO EXTEND, REWORK, MODIFY AND RECERTIFY EXISTING PANEL BUS AS REQUIRED TO FACILITATE INSTALLATION OF BREAKER PROVIDED AS PART OF THIS SCOPE OF WORK.
- PROVIDE REQUIRED PENETRATIONS THROUGH ROOF AND BUILDING ENVELOP. COORDINATE WORK AND WEATHERPROOF SEALING REQUIREMENTS WITH LANDLORD.
- PROVIDE A PHOTOCELL (TORK #LC200 COMPLETE WITH ROOFTOP MOUNTED SENSOR UNIT #EPC1) TO CONTROL ALL EXISTING EXTERIOR LIGHTING AND NEW LIGHTING PROVIDED AS PART OF THIS SCOPE OF WORK. PROVIDE CONTACTOR, DVR, ETC AS REQUIRED TO CONTROL ALL OUTDOOR LIGHTING. PHOTOCELL AND CONTACTOR CCT #PPD-12
- PROVIDE OVERRIDE SWITCH FOR PHOTOCELL TO TURN LIGHTS OFF AT NIGHT. COORDINATE EXACT MOUNTING LOCATION OF OVERRIDE SWITCH ON SITE WITH PROJECT MANAGER. REFER TO DRAWING DETAIL NO. 2 ON DRAWING NO. E-3.1 FOR ADDITIONAL REQUIREMENTS.

- 1 EXISTING RECEPTACLE PANEL 120/240V/1PH/3W/225A MCB/42CCT/10KA RMS/SQD NQOB
- (2) EXISTING AUTOMATIC TRANSFER SWITCH 120/240V/1PH/3W/100KA RMS/EATON ATC-300
- ③ EXISTING SPLITTER 120/240V/1PH/3W/400A
- 4 EXISTING METER CABINET
- 5 EXISTING RECEPTACLE PANEL 120/240V/1PH/3W/200A MCB/30CCT/10KA RMS/SQD NQOB
- (6) RECEPTACLE PANEL 120/240V/1PH/3W/100A MCB/42 CCT 20"W/10KA RMS/SQD NQ



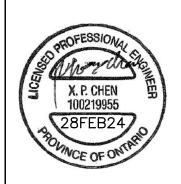
—X —X —X —X — DENOTES EXISTING TO BE REMOVED BY ELECTRICAL CONTRACTOR

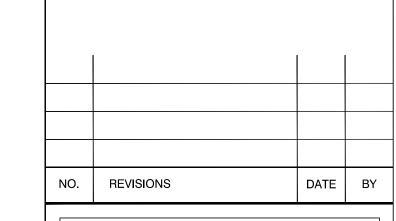
CHECK AND VERIFY ALL DIMENSIONS AT THE SITE.

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NO.	ISSUES	DATE	BY		
1	ISSUED FOR REVIEW	02/27/18	PC		
2	ISSUED FOR FINAL REVIEW	09/11/18	PC		
3	ISSUED FOR PERMIT	09/26/18	PC		
4	ISSUED FOR TENDER	02/28/24	PC		





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PROJECT:

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD, PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

ELECTRICAL SINGLE LINE DIAGRAM





DOC CONTROL:

% COMPLETE:

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DATE:
FEBRUARY 2018

SCALE:
NTS

FILE:

DESIGN BY:

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DRAWING NO:

17264