

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD,
PICKERING, ONTARIO

LIST OF DRAWINGS

A000 OBC MATRIX, LOCATION PLAN & LIST OF DRAWINGS

ARCHITECTURAL

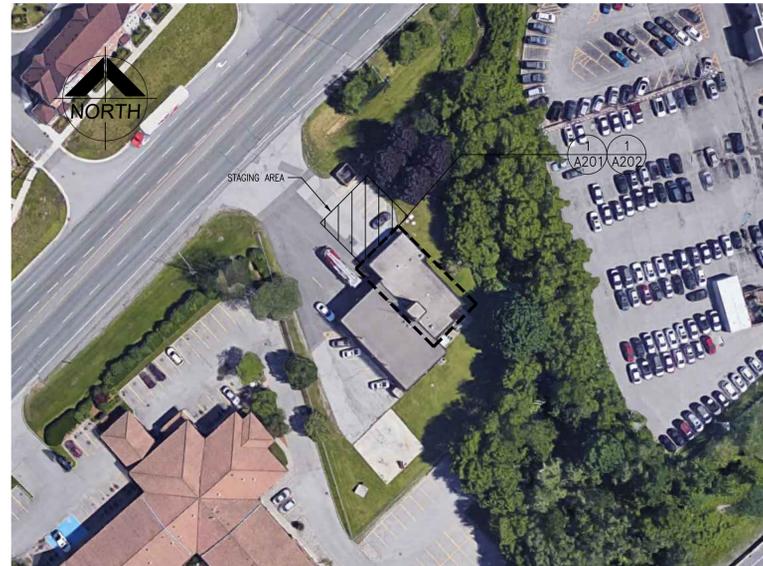
- A201 GROUND FLOOR DEMOLITION PLAN
- A202 GROUND FLOOR PLAN AND ENLARGED PLANS
- A203 GROUND FLOOR REFLECTED CEILING PLAN
- A801 DOOR SCHEDULE, ROOM FINISH SCHEDULE, DOOR HEAD AND JAMB DETAILS
- A901 INTERIOR ELEVATIONS
- A902 MILLWORK ELEVATIONS
- A903 DETAILS AND MILLWORK SECTIONS

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- M-2 MECHANICAL - PLUMBING AND DRAINAGE
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- M-4 MECHANICAL SPECS, LEGEND AND DRAWING LIST

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- E-7.1 ELECTRICAL SINGLE LINE DIAGRAM



1
A000 LOCATION PLAN
N.T.S.

NAME OF CONSULTANT : BARRY BRYAN ASSOCIATES
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NAME OF PROJECT :
 INTERIOR ALTERATIONS TO EXISTING FIRE HALL

LOCATION OF PROJECT :
 553 KINGSTON ROAD, PICKERING, ONTARIO

DATE :
 NOV 14, 2019

Ontario Building Code Data Matrix Part 11 - Renovation of Existing Building		OBC Reference
11.00 Building Code Version:	O_Reg_332/12 Last Amendment: O_Reg_191/14	
11.01 Project Type:	<input type="checkbox"/> Addition <input checked="" type="checkbox"/> Renovation <input type="checkbox"/> Addition and Renovation <input type="checkbox"/> Change of use	[A] 1.1.2.
11.02 Major Occupancy Classification:	Description INTERIOR ALTERATIONS TO FIRE HALL LIVING QUARTERS Occupancy Use C FIRE HALL LIVING QUARTERS F2 FIRE HALL APPARATUS BAY	3.1.2.1.(1)
11.03 Superimposed Major Occupancies:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Description	3.2.2.7
11.04 Building Area (m ²):	Description Existing New Total BASEMENT 66.6 0 66.6 1ST FLOOR LIVING QUARTERS 66.6 0 66.6 1ST FLOOR (APPARATUS BAY) 71.8 0 71.8 Total= 205 0 205	[A] 1.4.1.2.
11.05 Building Height:	1 Storeys above grade 9.1 (m) Above grade 1 Storeys below grade	[A] 1.4.1.2 & 3.2.1.1
11.06 Number of streets/ fire-fighter access:	1 street(s)	3.2.2.10 & 3.2.5
11.07 Building Size:	<input checked="" type="checkbox"/> Small <input type="checkbox"/> Medium <input type="checkbox"/> Large <input type="checkbox"/> > Large	T.11.2.1.1.B.-N.
11.08 Existing Building Classification:	Change in Major Occupancy: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Applicable (no change of major occupancy) Construction Index: - Hazard Index: - Importance Category: <input type="checkbox"/> Low <input type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Post-disaster	11.2.1 T11.2.1.1A T11.2.1.1B to N. 4.1.2.1(3) & 5.2.2.1.(2)
11.09 Renovation Type:	<input checked="" type="checkbox"/> Basic Renovation <input type="checkbox"/> Extensive Renovation	11.3.3.1 & 11.3.3.2
11.10 Occupant Load:	Floor Level/ Area Occupancy Type Based On Occup. Load FIRST FLOOR C DESIGN 5 FIRST FLOOR F2 DESIGN 0 - - - - -	3.1.17
11.11 Plumbing Fixture Requirements:	Ratio: Male/Female = 50:50 Except as noted otherwise Floor level/ Area Occupant Load OBC Reference Fixtures Required Fixtures Provided FIRST FLOOR 5 3.7.4.6 2 3	3.7.4
11.12 Barrier-free Design:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Explanation	11.3.3.2.(2)
11.13 Reduction in Performance Level:	Structural <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes By increase in occupant load: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes By change of major occupancy: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Plumbing <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Sewage - system: <input type="checkbox"/> No <input checked="" type="checkbox"/> 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:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Structural <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes By increase in occupant load: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes By change of major occupancy: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Plumbing <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes NEW TO MEET PART 7 Sewage - system: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes NEW TO MEET PART 8 Extension of Combustible Construction: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5 11.4.2.6 11.4.2.7
11.15 Compliance Alternatives Proposed:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	11.5.1.
11.16 Notes:		

SET NO.

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1	ISSUED FOR TENDER	SEPT. 21, 2018	BBA
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INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD,
PICKERING, ONTARIO



PROJECT NO. 17216

A000

ARCHITECTURAL:



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ELECTRICAL:



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 DESIGN AND TECHNOLOGY SERVICES GROUP
 HCC ENGINEERING LIMITED
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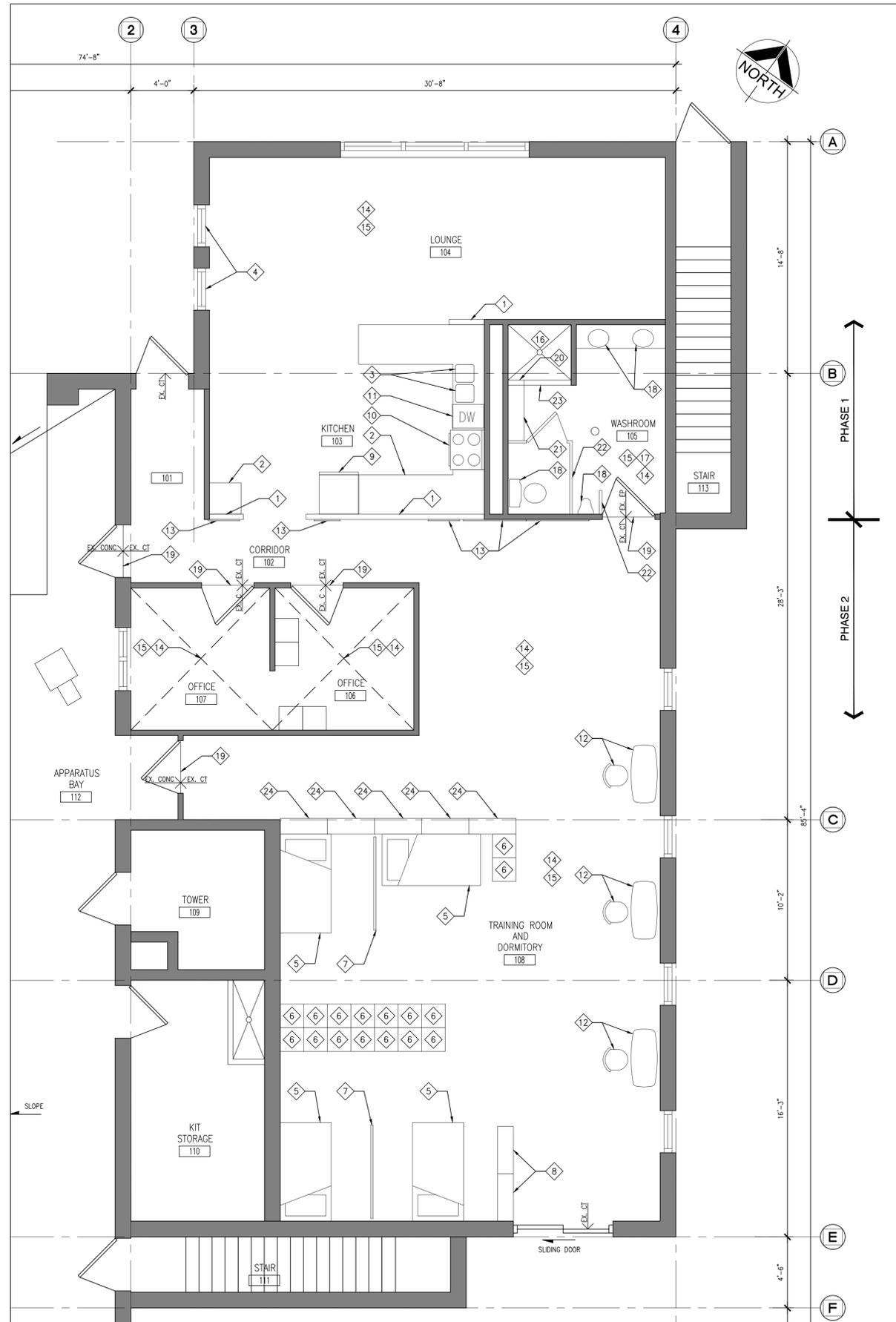
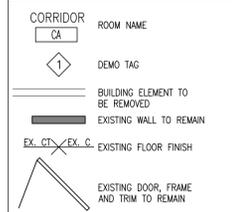
GENERAL DEMOLITION NOTES

- SITE VERIFY ALL DIMENSIONS AND CONDITIONS.
- ALL WORK TO BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE AND THE OCCUPATIONAL HEALTH AND SAFETY ACT REGULATIONS FOR CONSTRUCTION PROJECTS.
- PROVIDE PROTECTION IN LOCATIONS APPROVED BY THE OWNER AND CONSULTANT SO AS NOT TO DAMAGE EXISTING STRUCTURE, LANDSCAPE OR PART THEREOF.
- COMPLETE ALL DEMOLITION WORK NECESSARY TO COMPLETE THE RENOVATIONS AS SHOWN AND AS REQUIRED. DEMOLITION OF BUILDING ELEMENTS INCLUDES COMPLETE REMOVAL OF ALL ASSOCIATED FIXTURES, FITTINGS, HARDWARE, FASTENERS, EQUIPMENT AND ACCESSORIES UNLESS NOTED OTHERWISE.
- ARCHITECTURAL, MECHANICAL AND ELECTRICAL DEMOLITION DRAWINGS ARE COMPLEMENTARY AND SHALL BE READ TOGETHER.
- NOTIFY CONSULTANT OF LOAD BEARING MEMBERS OR ASSEMBLIES IDENTIFIED OR DISCOVERED DURING WORK AND NOT INDICATED ON DRAWINGS. DO NOT PROCEED WITH REMOVALS WITHOUT PRIOR REVIEW BY THE CONSULTANT.
- PROVIDE TEMPORARY SUPPORT OF PIPES, DUCTS AND ELECTRICAL CHASES AS REQUIRED FOR SAFE REMOVAL. EXISTING AND PROPOSED SUPPORTS ARE TO BE REVIEWED BY THE CONSULTANT PRIOR TO THE REMOVAL OF ANY COMPONENTS WHICH MAY FALL OR CAUSE OTHERS TO FALL.
- MAINTAIN WORK AREAS AND STORAGE AREAS CLEAN AND ORDERLY AT ALL TIMES.
- REMOVAL OF EXISTING FLOOR FINISHES IS TO INCLUDE COMPLETE REMOVAL OF BASE AND ALL MORTAR AND ADHESIVES AND PREPARATION OF EXISTING SUBSTRATES TO RECEIVE NEW FLOORING, SATISFACTORY TO THE MANUFACTURER OF NEW FLOOR FINISHES. ALLOW FOR EXCESSIVE LEVELING OF SLABS.
- DEMOLITION INCLUDES ALL ASSOCIATED MECHANICAL AND ELECTRICAL SERVICES, EQUIPMENT, FITTINGS, FIXTURES, HANGERS, BRACKETS, TRIM AND ACCESSORIES AS REQUIRED TO COMPLETE THE WORK.
- CLEAN AND REPAIR ALL EXISTING SURFACES TO REMAIN, AS NECESSARY TO RECEIVE NEW FINISHES.
- DISCONNECT AND CAP OFF ALL SERVICES PRIOR TO DEMOLITION.
- DISPOSE OF ALL MATERIALS OFF SITE. COORDINATE ITEMS FOR SALVAGE / HANDOVER WITH OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING STRUCTURE OR FINISHES SHOWN TO REMAIN AND REPAIR / REPLACE SAME TO THE SATISFACTION OF THE OWNER AND CONSULTANT.
- PROJECT TO OCCUR IN (2) PHASES. WORK MUST BE PHASED TO ACCOMMODATE CONTINUOUS FACILITY OPERATION. REFER TO PLANS FOR PHASING.
- CONTRACTOR IS TO PROVIDE FULL HEIGHT, DUST TIGHT HOARDING AND RELOCATE BETWEEN PHASES WITHIN THE OCCUPIED SPACE. CONTRACTOR SHALL INCLUDE TO MODIFY THE HOARDING BETWEEN THE CONSTRUCTION ZONES AND OCCUPIED BUILDING THROUGHOUT THE PROJECT.
- CONTRACTOR TO INCLUDE REMOVAL/ RELOCATION OF BEDS/ LOCKERS/ DIVIDERS FOR EACH PHASE OF THE PROJECT, (3) SEPARATE RELOCATION AND RE INSTALLATION.

DEMOLITION NOTES

- COMPLETELY REMOVE EXISTING BLOCK WALL TO EXTENT INDICATED.
- COMPLETELY REMOVE EXISTING CABINET UPPERS AND LOWERS.
- COMPLETELY REMOVE EXISTING SINK.
- COMPLETELY REMOVE EXISTING WINDOW, BLINDS AND PRECAST CONCRETE SILL.
- CAREFULLY REMOVE EXISTING BED TO BE RELOCATED. REFER TO GROUND FLOOR PLAN.
- CAREFULLY REMOVE EXISTING LOCKERS TO BE RELOCATED. REFER TO GROUND FLOOR PLAN FOR NEW LOCATION.
- CAREFULLY REMOVE EXISTING DIVIDER TO BE RELOCATED. REFER TO GROUND FLOOR PLAN.
- CAREFULLY REMOVE EXISTING BOOKSHELF AND RETURN TO OWNER.
- RELOCATE EXISTING FRIDGE TO BASEMENT. COORDINATE LOCATION WITH OWNER.
- RELOCATE EXISTING STOVE TO BASEMENT. COORDINATE LOCATION WITH OWNER.
- RELOCATE EXISTING DISHWASHER TO BASEMENT. COORDINATE LOCATION WITH OWNER.
- CAREFULLY REMOVE EXISTING COMPUTER DESK AND CHAIR AND RETURN TO OWNER.
- CAREFULLY REMOVE BULLETIN/INFORMATION BOARD AND RETURN TO OWNER.
- REMOVE EXISTING FLOOR FINISHES AND WALL BASE. PREPARE SURFACES TO RECEIVE NEW FINISHES.
- REMOVE EXISTING CEILING INCLUDING ALL FIXTURES AND EQUIPMENT. REFER TO ELECTRICAL FOR ADDITIONAL REQUIREMENTS.
- REMOVE EXISTING WALL TILE.
- CAREFULLY REMOVE EXISTING WASHROOM ACCESSORIES AND RE-INSTALL IN NEW WASHROOM. COORDINATE LOCATIONS WITH OWNER.
- REMOVE EXISTING FIXTURES.
- REMOVE EXISTING FLOOR TRANSITION STRIP.
- REMOVE EXISTING MASONRY SHOWER WALL FOR EXTENTS SHOWN.
- REMOVE EXISTING BENCH.
- REMOVE AND DISPOSE OF EXISTING WASHROOM PARTITION.
- REMOVE EXISTING CONCRETE CURB.
- CAREFULLY REMOVE EXISTING CABINET AND RELOCATE TO BASEMENT. COORDINATE FINAL LOCATION W/ OWNER.

DEMOLITION LEGEND



1
A201 GROUND FLOOR DEMOLITION PLAN
1/4" = 1'-0"

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE.
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553 KINGSTON ROAD,
PICKERING, ONTARIO
CITY OF PICKERING CULTURE
& RECREATION DEPARTMENT

DRAWING:
**GROUND FLOOR
DEMOLITION PLAN**



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250 Water Street
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e-mail: bba@bba-archeng.com

DESIGN BY: RL	DOC CONTROL: DATE:
DRAWN BY: JJ	% COMPLETE:
CHECKED BY: DM	INITIAL:
DATE: JANUARY 2018	SCALE: 1/4" = 1'-0"
FILE:	

PROJECT NO:
17216

DRAWING NO:
A201

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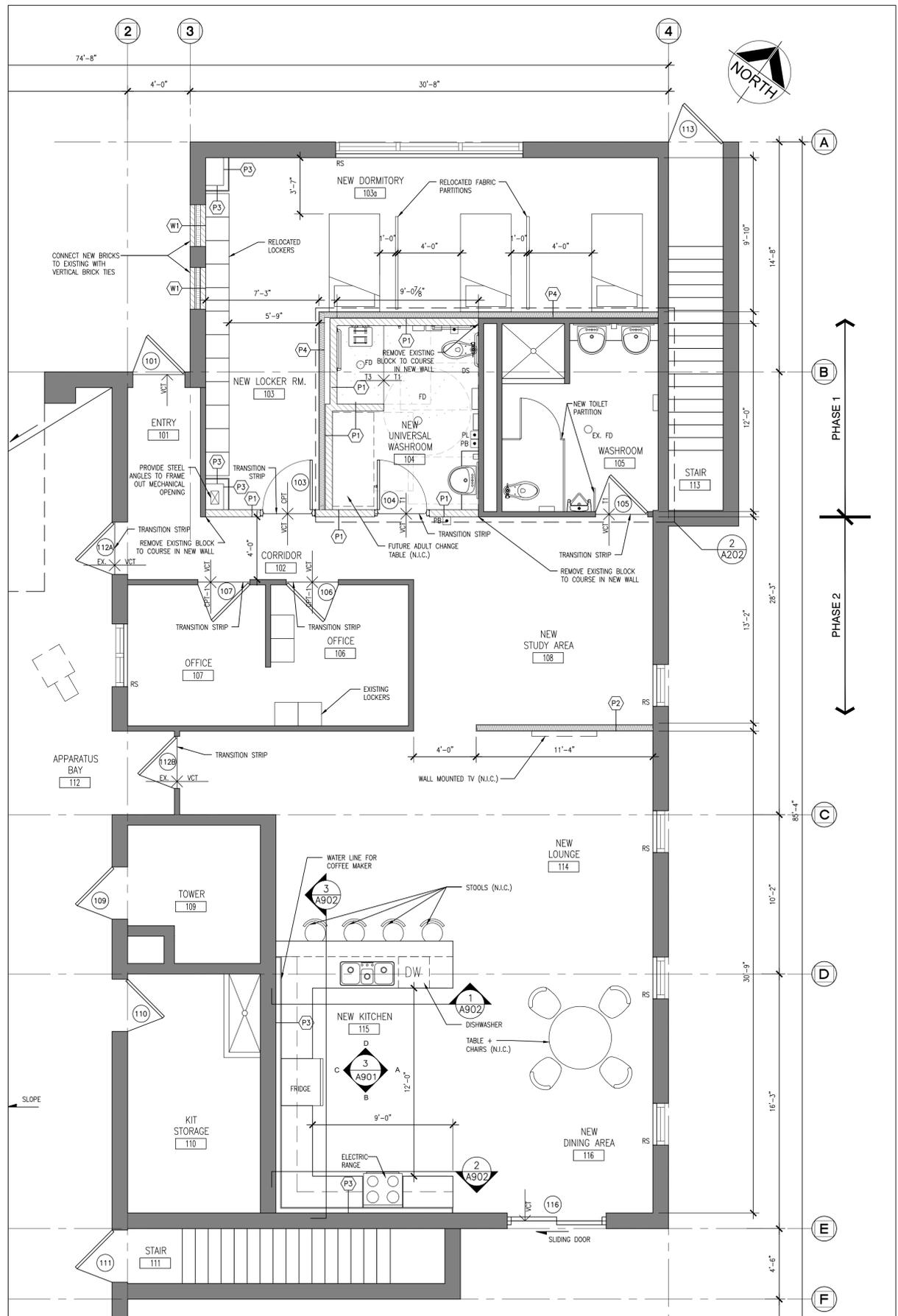
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 & RECREATION DEPARTMENT

DRAWING:
**GROUND FLOOR PLAN
 AND ENLARGED PLANS**



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PROJECT NO: **17216**
 DRAWING NO: **A202**



1
A202 GROUND FLOOR PLAN
 1/4" = 1'-0"

GENERAL NOTES

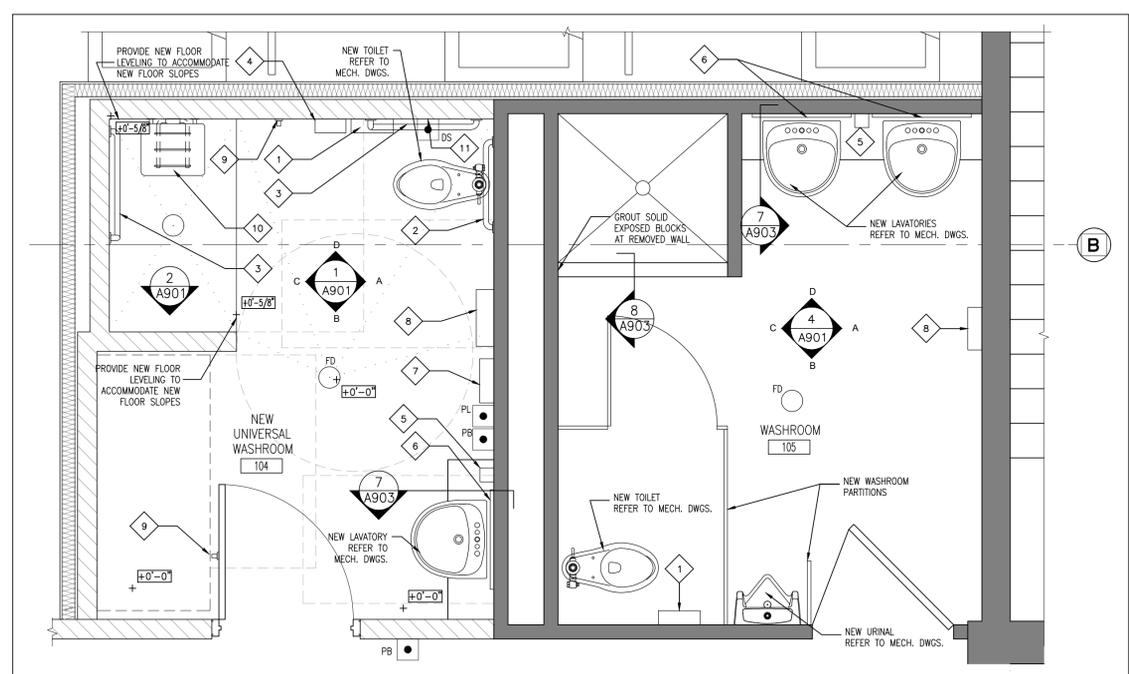
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6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE EXISTING STRUCTURE OR FINISHES SHOWN TO REMAIN AND REPAIR / REPLACE SAME TO THE SATISFACTION OF THE OWNER AND CONSULTANT.
7. WORK MUST BE PHASED TO ACCOMMODATE CONTINUOUS FACILITY OPERATION. REFER TO PLANS FOR PHASING.
8. DURESS BUTTON SIGN: AN EMERGENCY SIGN THAT CONTAINS THE WORDS " IN THE EVENT OF AN EMERGENCY, PUSH EMERGENCY STRIP AND AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE "IN LETTERS AT LEAST 25mm HIGH WITH A 5mm STROKE AND THAT IS POSTED ABOVE THE EMERGENCY STRIP AS REQUIRED BY OBC 3.8.3.12. (2)(b)

- WASHROOM ACCESSORIES LEGEND**
- 1 TOILET TISSUE DISPENSER SUPPLIED BY CITY, INSTALLED BY GENERAL CONTRACTOR. COORDINATE FINAL LOCATION WITH OWNER
 - 2 B.F. GRAB BAR 1
 - 3 B.F. GRAB BAR 2 (L-SHAPED)
 - 4 SANITARY NAPKIN DISPOSAL
 - 5 LIQUID SOAP DISPENSER SUPPLIED BY CITY, INSTALLED BY GENERAL CONTRACTOR
 - 6 2'-4"x3'-0" MIRROR
 - 7 PAPER TOWEL DISPENSER SUPPLIED BY CITY, INSTALLED BY GENERAL CONTRACTOR
 - 8 STAINLESS STEEL SHELF 4" MAX DEPTH
 - 9 COAT HOOK 2" MAX PROJECTION
 - 10 FOLDING SHOWER SEAT
 - 11 DURESS BUTTON SIGN

LEGEND:

DS	DURESS STRIP
PL	PUSH TO LOCK
PB	PUSH BUTTON (DOOR OPERATOR)

LEGEND	ROOM NAME	VCT	TI	FLOOR FINISH TYPE	WALL SCHEDULE	PARTITION SCHEDULE
CA	CORRIDOR				(W1) 3/8" BRICK TO MATCH EXISTING 1" AIR SPACE	(P1) NEW 5/8" CONCRETE BLOCK WALL TO 6" ABOVE CEILING
D	DOOR				3/8" RIGID INSULATION AIR BARRIER	BULLNOSE ALL EXPOSED BLOCK WALL CORNERS
1	DOOR NUMBER				4" CONCRETE BLOCK	3/4" GYPSUM BOARD
A	INTERIOR ELEVATION				COURSE IN INFILL WITH EXISTING BLOCK WALL	3/8" METAL STUD W/ ACOUSTIC BATTS
1	WASHROOM ACCESSORY TAG					3/8" GYPSUM BOARD
+0000	FINISHED FLOOR ELEVATION					3/8" GYPSUM BOARD
+						3/8" METAL STUD TERMINATE 6" ABOVE ACT
+						SAME AS "P3" BUT ADD ACOUSTIC BATTS AND TERMINATE @ 1/5 OF EX. ROOF DECK.
RS	ROLLER SHADE					



2
A202 ENLARGED WASHROOM PLAN
 1/2" = 1'-0"

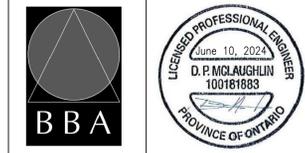
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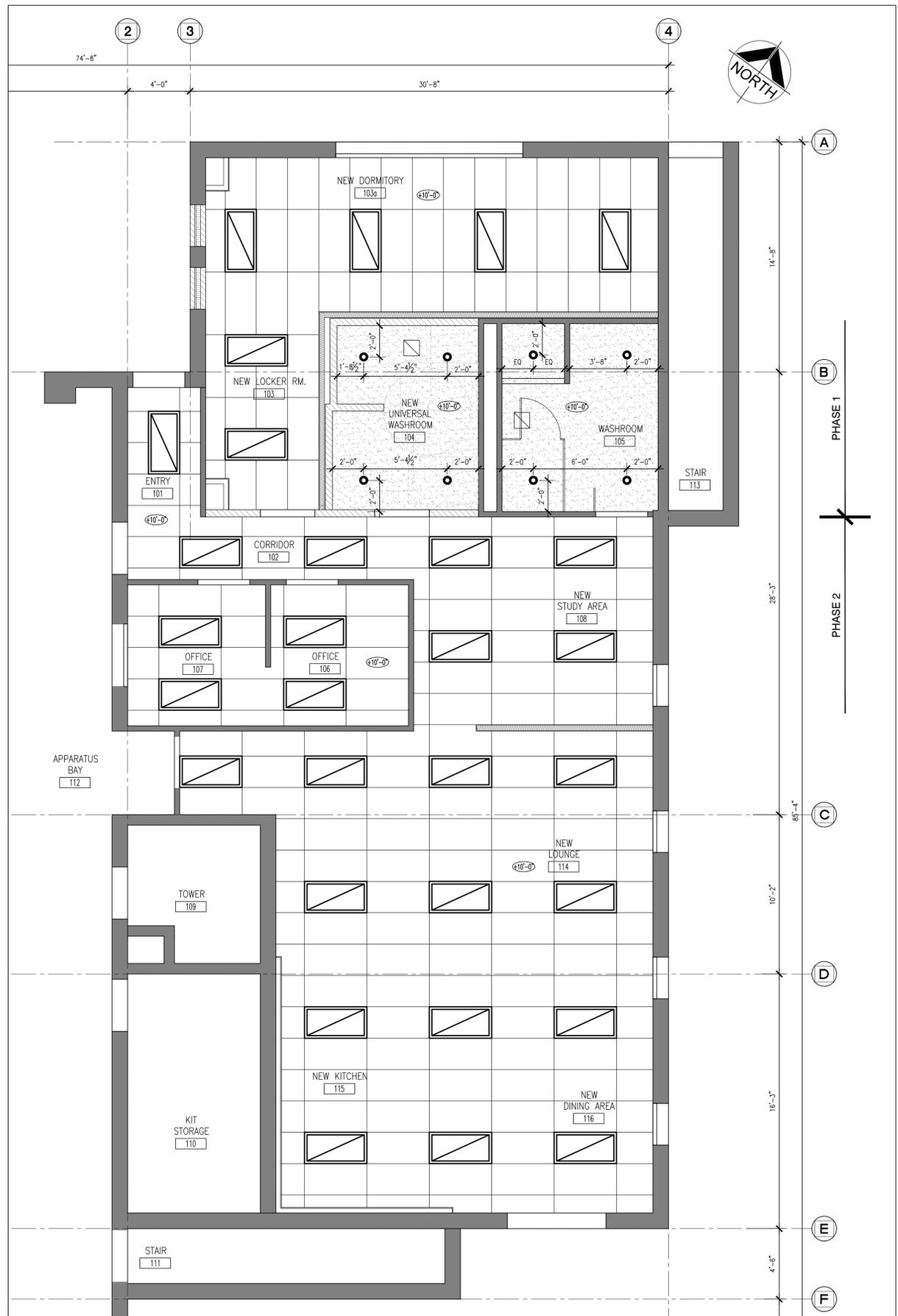
DRAWING:
GROUND FLOOR REFLECTED CEILING PLAN



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DESIGN BY: RL
 DRAWN BY: JJ
 CHECKED BY: DM
 DATE: JANUARY 2018
 SCALE: 1/4" = 1'-0"
 FILE:

PROJECT NO: **17216**
 DRAWING NO: **A203**



RCP LEGEND

	MECHANICAL VENT
	RECESSED POT LIGHT
	2'x4' LIGHT
	(C1) 2'x4' CEILING GRID
	(C2) GYPSUM BOARD CEILING
	CEILING ELEVATION A.F.F. (SEE CEILING FINISH SCHEDULE)

1
A203 FIRST FLOOR RCP
 1/4" = 1'-0"

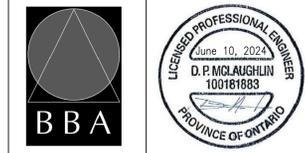
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DRAWING:
DOOR SCHEDULE, ROOM FINISH SCHEDULE, DOOR HEAD AND JAMB DETAILS



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 CHECKED BY: DM
 INITIAL:
 DATE: JANUARY 2018
 SCALE: AS NOTED
 FILE:

PROJECT NO: **17216**
 DRAWING NO: **A801**

FINISH ABBREVIATION LEGEND

ACT	ACOUSTIC TILE
CB	CONCRETE BLOCK
T	TILE
CPT	CARPET
EX./EXIST	EXISTING
GB	GYP/USM BOARD
PT	PAINT
RB	RUBBER
VCT	VINYL TILE
EP	EPOXY

- REFER TO HARDWARE SCHEDULE BY RIVETT HARDWARE
- ALL LOCKSETS TO BE KEYPED ALIKE UNLESS NOTED OTHERWISE.
- ALL LOCKSETS TO BE KEYPED TO BASE BUILDING MASTER LOCK SYSTEM.
- SUBMIT SHOP DRAWINGS FOR ALL DOORS, FRAMES, AND HARDWARE.

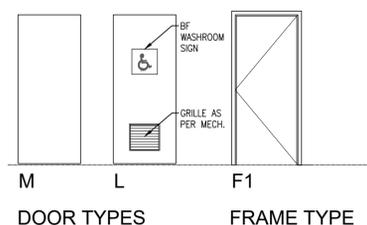
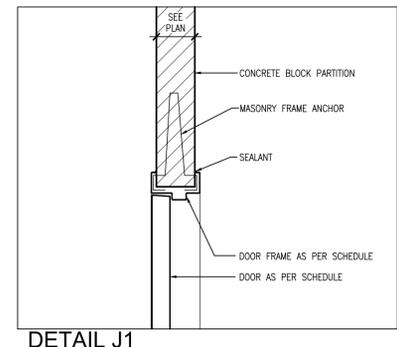
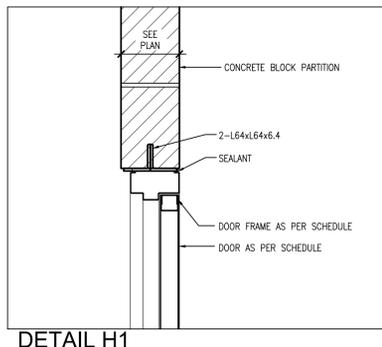
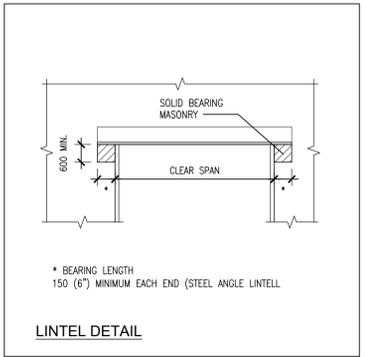
- NOTE:**
- DOOR TO THE UNIVERSAL WASHROOM SHALL BE PROVIDED WITH A SIGN INCORPORATING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY LOCATED BETWEEN 1200mm TO 1500mm ABOVE FINISHED FLOOR. OBC 11.3.3.2.(3) + 3.8.3.1.(6)
 - DOOR OPENING DEVICES SHALL BE DESIGNED TO BE OPERABLE USING A CLOSED FIST AND MOUNTED NOT LESS THAN 900mm AND NOT MORE THAN 1100mm ABOVE FINISHED FLOOR. OBC 11.3.3.2.(3)-3.8.3.3.(19)-3.8.3.3.(3)

ROOM SCHEDULE

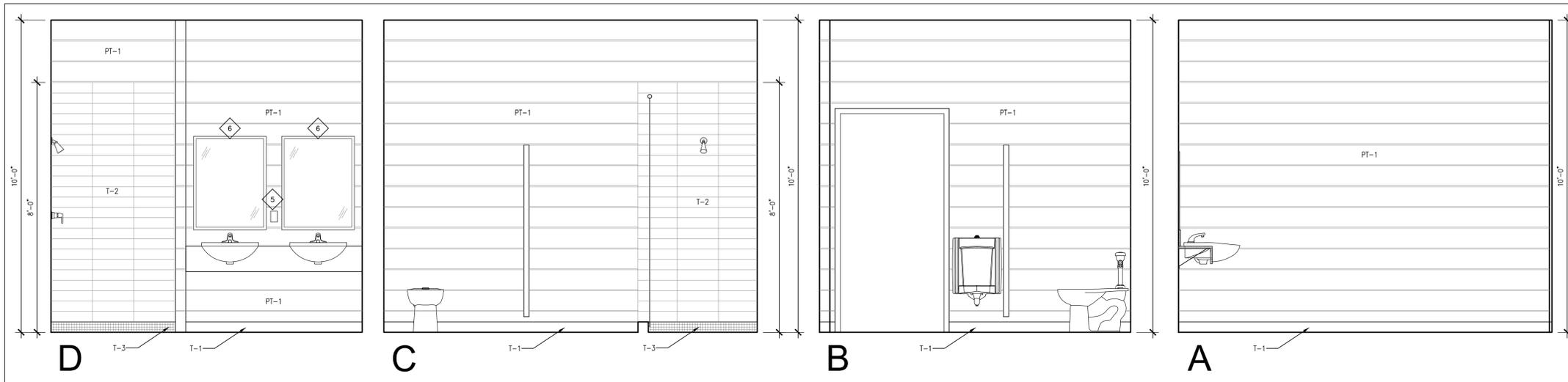
NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CEILING HEIGHT	REV.	REMARKS
				NORTH	EAST	SOUTH	WEST				
101	ENTRY	MAT.	EX.	EX.	EX.	EX.	EX.	-	-	-	
		FIN.	VCT-1	RB-1	PT-1	PT-1	PT-1	ACT-1	-	-	
102	CORRIDOR	MAT.	EX.	EX.	EX./CB	EX.	EX.	-	-	-	
		FIN.	VCT-1	RB-1	PT-1	PT-1	PT-1	ACT-1	-	-	
103	NEW LOCKER RM.	MAT.	EX.	EX.	EX.	GB	EX./CB	EX./GB	-	-	
		FIN.	CPT-1	RB-1	PT-1	PT-1	PT-1	ACT-1	-	-	
103g	NEW DORMITORY	MAT.	EX.	EX.	EX.	EX.	GB	EX./GB	-	-	
		FIN.	CPT-1	RB-1	PT-1	PT-1	PT-1	ACT-1	-	-	
104	NEW UNIVERSAL WASHROOM	MAT.	EX.	EX.	EX./CB	EX.	EX.	GB	-	-	SEE INTERIOR ELEVATIONS FOR EXTENTS OF WALL FINISHES
		FIN.	T-1/T-3	T-1/T-3	PT/T	PT/T	PT/T	PT-3	-	-	
105	WASHROOM	MAT.	EX.	EX.	EX.	EX.	EX.	GB	-	-	SEE INTERIOR ELEVATIONS FOR EXTENTS OF WALL FINISHES
		FIN.	T-1/T-3	T-1/T-3	PT/T	PT/T	PT/T	PT-3	-	-	
106	OFFICE	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	CPT-1	RB-1	EX.	EX.	EX.	ACT-1	-	-	
107	OFFICE	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	CPT-1	RB-1	EX.	EX.	EX.	ACT-1	-	-	
108	NEW STUDY AREA	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	VCT-1	RB-1	PT-1	PT-1	PT-2	PT-1	ACT-1	-	
109	TOWER	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
110	KIT STORAGE	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
111	STAIR	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
112	APPARATUS BAY	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
113	STAIR	MAT.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
		FIN.	EX.	EX.	EX.	EX.	EX.	EX.	-	-	
114	NEW LOUNGE	MAT.	EX.	EX.	GB	EX.	-	EX.	-	-	
		FIN.	VCT-1	RB-1	PT-2	PT-1	-	PT-1	ACT-1	-	SEE INTERIOR ELEVATIONS FOR EXTENTS OF WALL FINISHES
115	NEW KITCHEN	MAT.	EX.	EX.	EX.	-	EX./GB	EX./GB	-	-	
		FIN.	VCT-1	RB-1	PT-1	-	PT/T	PT/T	ACT-1	-	
116	NEW DINING AREA	MAT.	EX.	EX.	-	EX.	EX.	-	-	-	
		FIN.	VCT-1	RB-1	-	PT-1	PT-1	-	ACT-1	-	

DOOR AND FRAME SCHEDULE

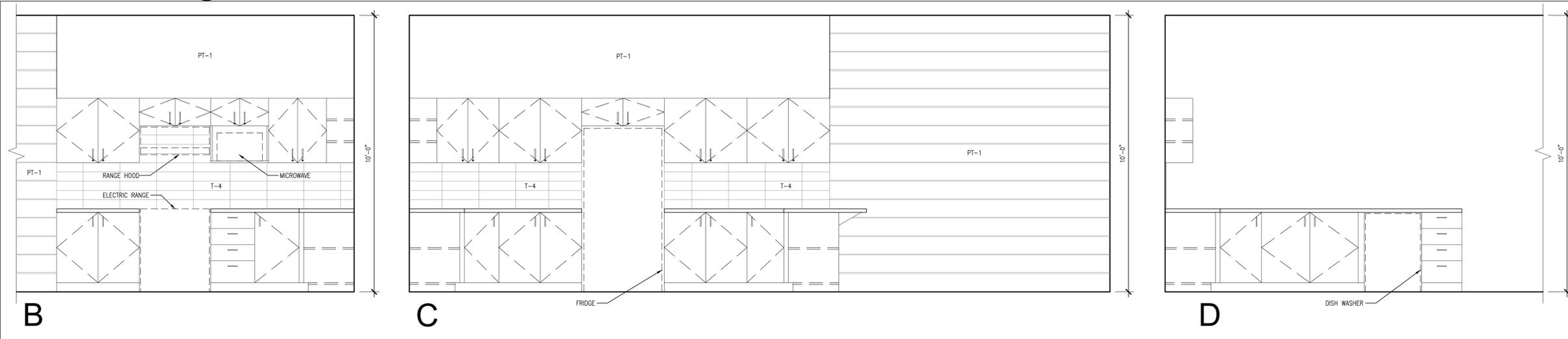
NO.	SIZE AND THICKNESS	DOOR				FRAME				FIRE RATING	REMARKS	
		TYPE	MATERIAL	FINISH	GLASS	TYPE	SEAL	JAMB	MATERIAL			FINISH
101	EXISTING	-	-	-	-	-	-	-	-	-	-	
103	3'-2"x7'-0"x1-3/4"	M	HM	PT	-	F1	H1	J1	HM	PT	-	
104	3'-2"x7'-0"x1-3/4"	L	HM	PT	-	F1	H1	J1	HM	PT	-	
105	EXISTING	-	-	-	-	-	-	-	-	-	-	
106	EXISTING	-	-	-	-	-	-	-	-	-	-	
107	EXISTING	-	-	-	-	-	-	-	-	-	-	
109	EXISTING	-	-	-	-	-	-	-	-	-	-	
110	EXISTING	-	-	-	-	-	-	-	-	-	-	
111	EXISTING	-	-	-	-	-	-	-	-	-	-	
112A	EXISTING	-	-	-	-	-	-	-	-	-	-	
112B	EXISTING	-	-	-	-	-	-	-	-	-	-	
113	EXISTING	-	-	-	-	-	-	-	-	-	-	
114	EXISTING	-	-	-	-	-	-	-	-	-	-	
116	EXISTING	-	-	-	-	-	-	-	-	-	-	



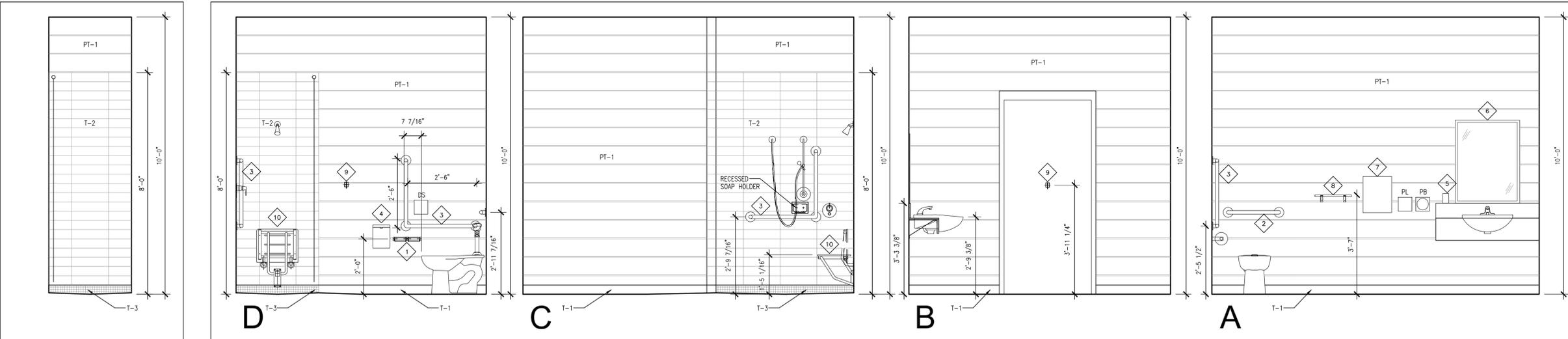
- WASHROOM ACCESSORIES LEGEND**
- 1 TOILET TISSUE DISPENSER SUPPLIED BY CITY, INSTALLED BY GENERAL CONTRACTOR COORDINATE FINAL LOCATION WITH OWNER
 - 2 B.F. GRAB BAR 1
 - 3 B.F. GRAB BAR 2 (L-SHAPED)
 - 4 SANITARY NAPKIN DISPOSAL
 - 5 LIQUID SOAP DISPENSER SUPPLIED BY CITY, INSTALLED BY GENERAL CONTRACTOR
 - 6 2'-4"x3'-0" MIRROR
 - 7 PAPER TOWEL DISPENSER SUPPLIED BY CITY, INSTALLED BY GENERAL CONTRACTOR
 - 8 STAINLESS STEEL SHELF
 - 9 COAT HOOK
 - 10 FOLDING SHOWER SEAT



4 EX. WASHROOM INTERIOR ELEVATIONS
1/2" = 1'-0"



3 NEW KITCHEN INTERIOR ELEVATIONS
1/2" = 1'-0"



NOTE: (SEE PLUMBING DRAWINGS) WATER CLOSET SHALL BE EQUIPPED WITH SEAT LOCATED 430mm TO 485mm ABOVE FINISHED FLOOR. BE EQUIPPED WITH HAND-OPERABLE AS REQUIRED BY OBC 11.3.3.2.(3)-3.8.3.3.(6)-3.8.3.9.

2 HIDDEN ELEVATION
1/2" = 1'-0"

1 NEW BARRIER FREE WASHROOM INTERIOR ELEVATIONS
1/2" = 1'-0"

CHECK AND VERIFY ALL DIMENSIONS AT THE SITE.
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DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION UNTIL SIGNED AND SEALED BY THE CONSULTANT.

NO.	ISSUES	DATE	BY
1	ISSUED FOR CLIENT REVIEW	MAR 15 2018	BBA
2	ISSUED FOR TENDER	SEPT 21, 2018	BBA
3	ISSUED FOR PERMIT	SEPT. 26, 2018	BBA
4	ISSUED FOR TENDER	JAN. 13, 2020	BBA
5	RE ISSUED FOR TENDER	JUNE 10, 2024	BBA

NO.	REVISIONS	DATE	BY

PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
553 KINGSTON ROAD,
PICKERING, ONTARIO
CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:
INTERIOR ELEVATIONS



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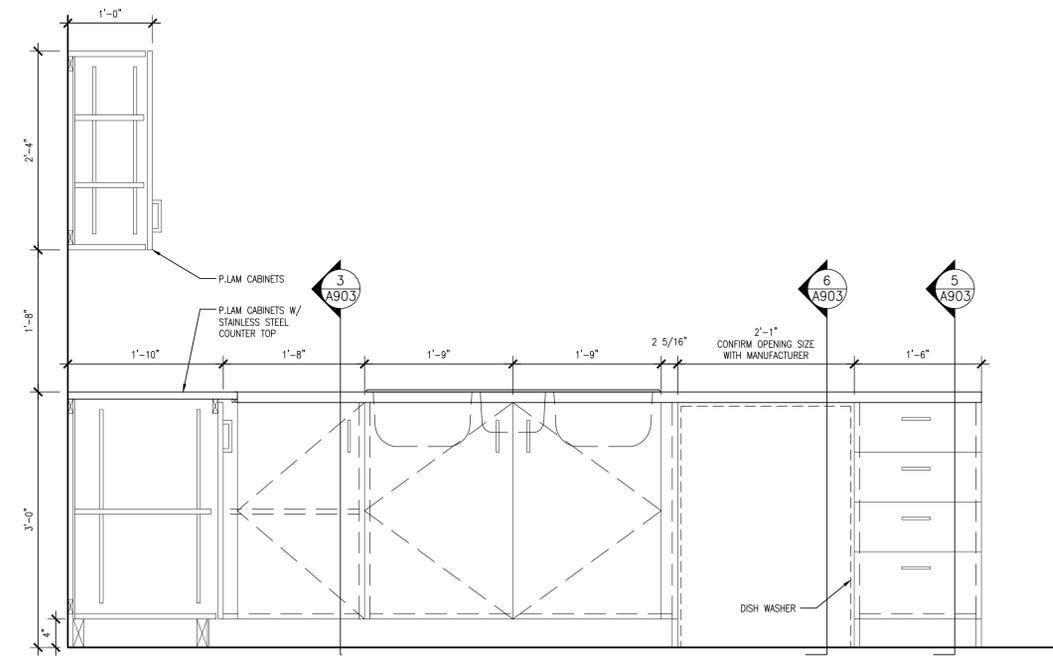
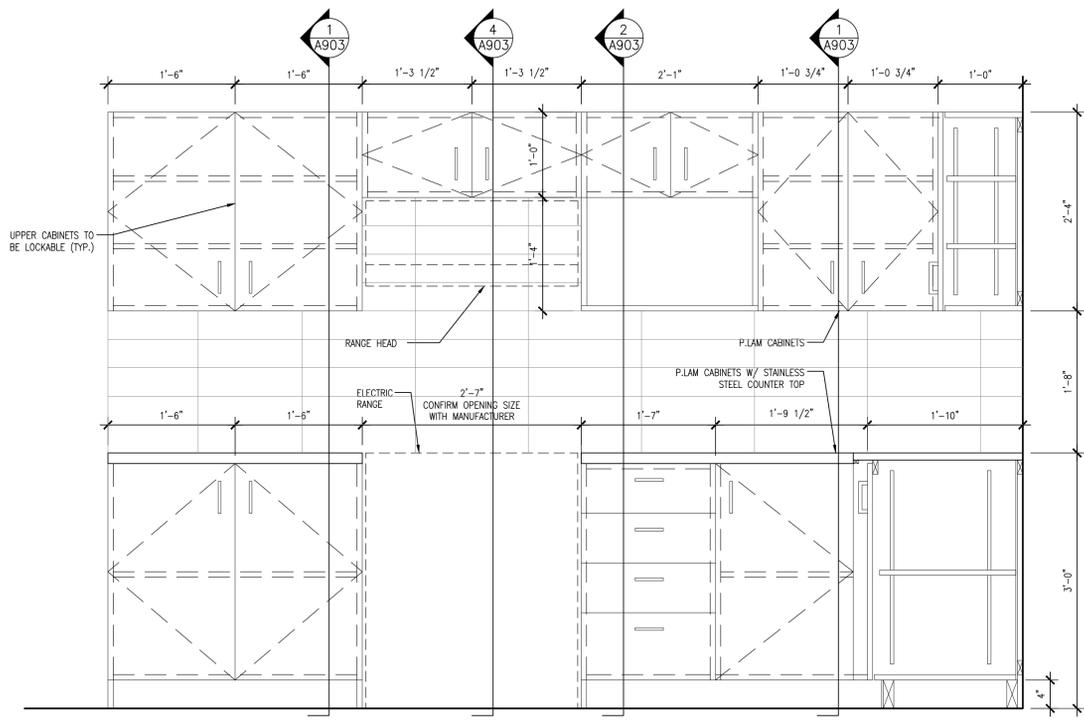
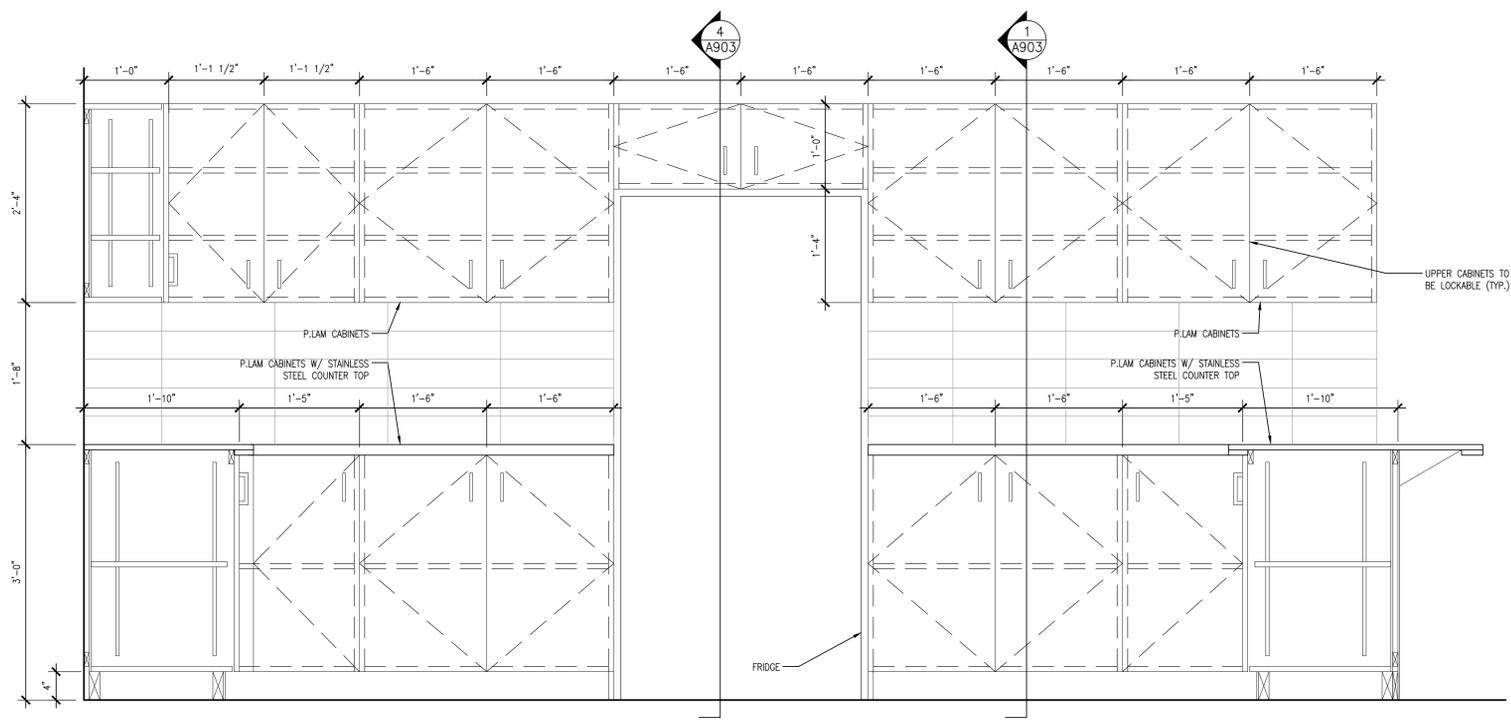
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DRAWN BY: JJ
CHECKED BY: DM
DATE: JANUARY 2018
SCALE: 1/2" = 1'-0"
FILE:

PROJECT NO: **17216**
DRAWING NO: **A901**

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5	RE ISSUED FOR TENDER	JUNE 10, 2024	BBA

NO.	REVISIONS	DATE	BY



PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
 553 KINGSTON ROAD,
 PICKERING, ONTARIO
 CITY OF PICKERING CULTURE
 & RECREATION DEPARTMENT

DRAWING:
MILLWORK ELEVATIONS



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 Fax: (905) 666-5258
 e-mail: bba@bba-archeng.com

DESIGN BY: RL
 DRAWN BY: JJ
 CHECKED BY: DM
 DATE: JANUARY 2018
 SCALE: 1" = 1'-0"
 FILE:

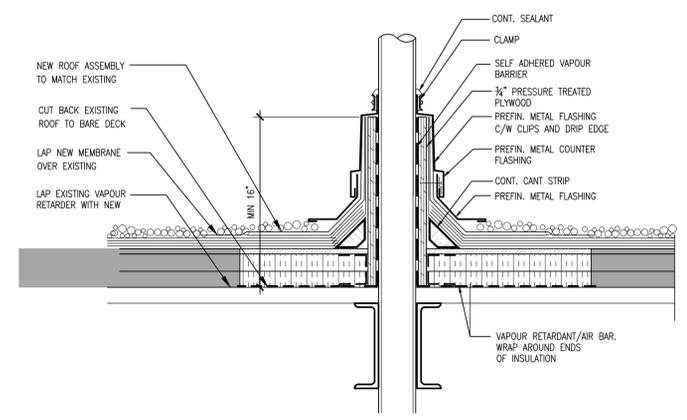
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PROJECT NO: **17216**
 DRAWING NO: **A902**

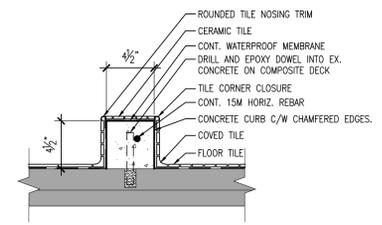
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NO.	ISSUES	DATE	BY
1	ISSUED FOR CLIENT REVIEW	—	BBA
2	ISSUED FOR TENDER	SEPT. 21, 2018	BBA
3	ISSUED FOR PERMIT	SEPT. 26, 2018	BBA
4	ISSUED FOR TENDER	JAN. 13, 2020	BBA
5	RE ISSUED FOR TENDER	JUNE 10, 2024	BBA

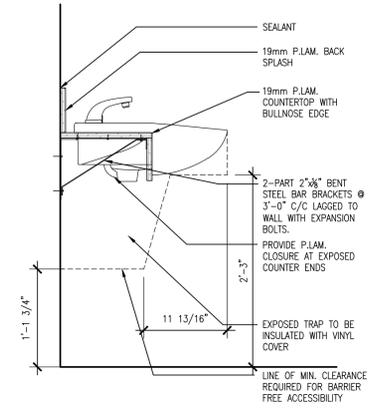
NO.	REVISIONS	DATE	BY



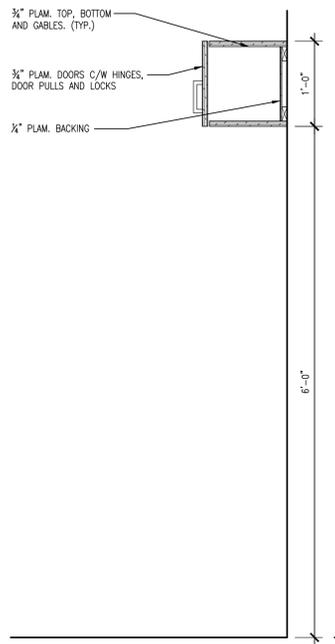
9 ROOF PENETRATION DETAIL
 A903 1 1/2" = 1'-0"



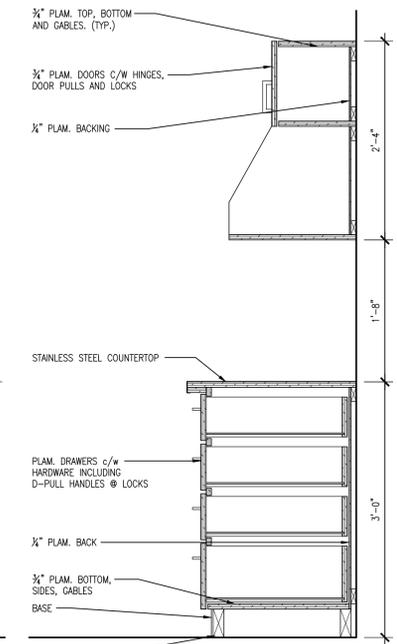
8 NEW SHOWER CURB DETAIL
 A903 1 1/2" = 1'-0"



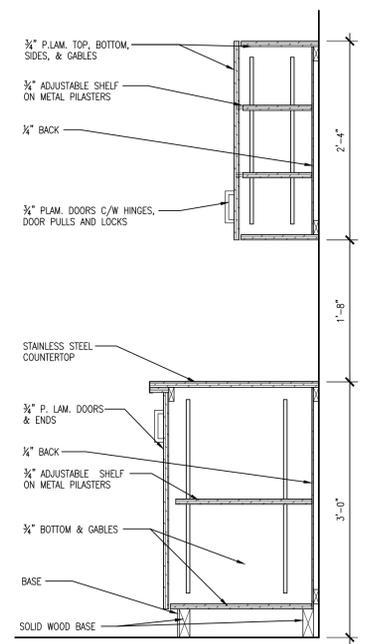
7 MILLWORK SECTION
 A903 1" = 1'-0"



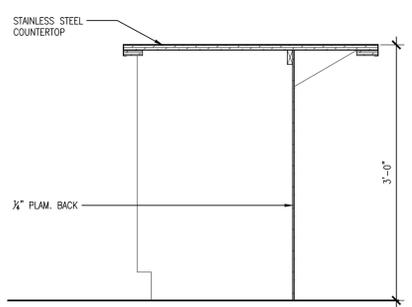
4 MILLWORK SECTION
 A903 1" = 1'-0"



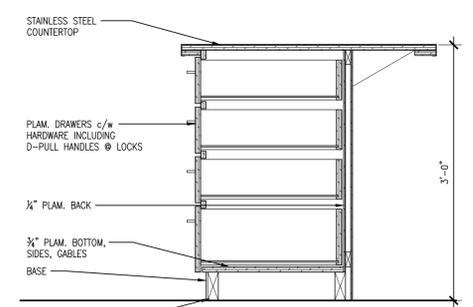
2 MILLWORK SECTION
 A903 1" = 1'-0"



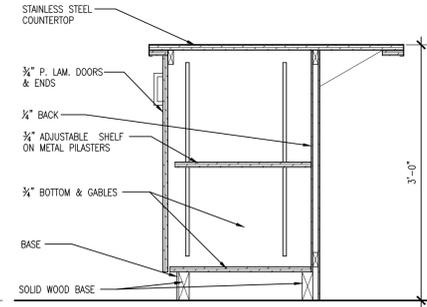
1 MILLWORK SECTION
 A903 1" = 1'-0"



6 MILLWORK SECTION
 A903 1" = 1'-0"



5 MILLWORK SECTION
 A903 1" = 1'-0"



3 MILLWORK SECTION
 A903 1" = 1'-0"

PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
 553 KINGSTON ROAD,
 PICKERING, ONTARIO
 CITY OF PICKERING CULTURE
 & RECREATION DEPARTMENT

DRAWING:
DETAILS AND MILLWORK SECTIONS



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 Architects
 Engineers
 Project Managers

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 Suite 201
 Whitby, Ontario
 L1N 0G5
 Tel: (905) 666-5252
 Fax: (905) 666-5258
 e-mail: bba@bba-archeng.com



DESIGN BY: RL
 DATE: _____
 DRAWN BY: JJ
 % COMPLETE: _____
 CHECKED BY: DM
 INITIAL: _____
 DATE: JANUARY 2018
 SCALE: 1" = 1'-0"
 FILE: _____

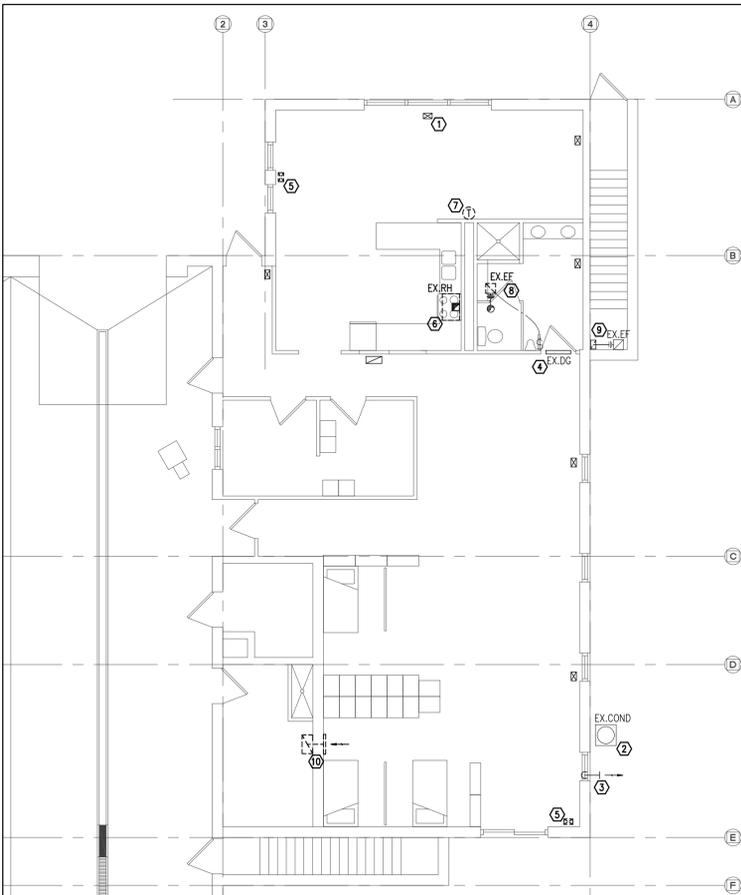
PROJECT NO: **17216** DRAWING NO: **A903**



MADONNA ENGINEERING INC.
 93 Woodstream Blvd Unit 10
 Woodbridge, Ontario L4L 7Y7
 Tel: (905) 265 1911 Fax: (905) 265 1998

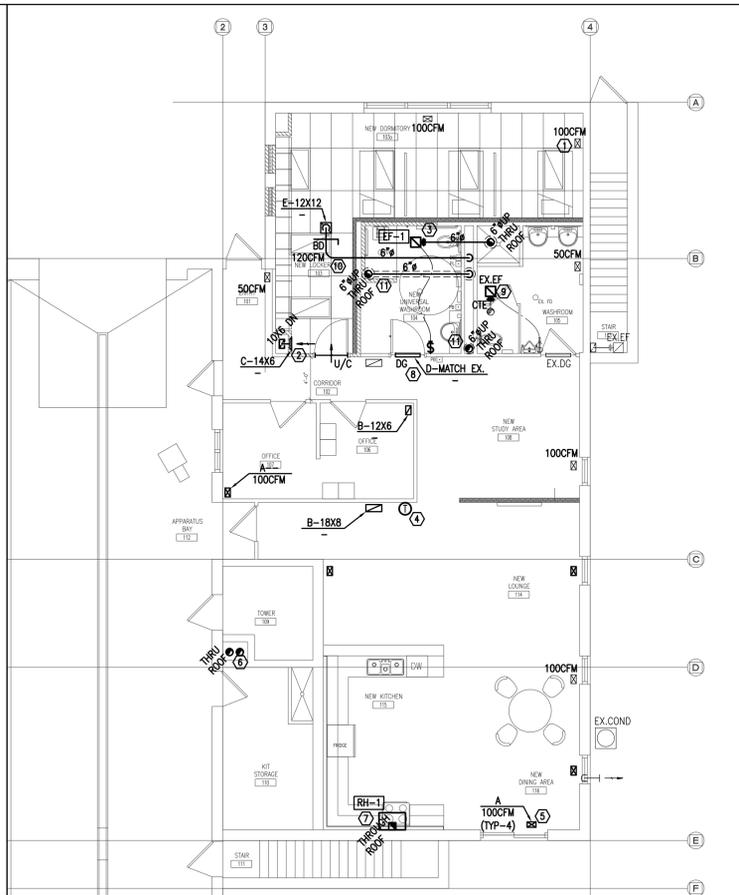
- GENERAL NOTES
- THE DRAWING IS THE PROPERTY OF MADONNA ENGINEERING INC. AND CANNOT BE REPRODUCED WITHOUT WRITTEN PERMISSION.
 - ALL MEASUREMENTS MUST BE VERIFIED ON SITE BY CONTRACTOR AND REPORT ANY DISCREPANCIES TO MADONNA ENGINEERING INC. BEFORE PROCEEDING WITH THE WORK.
 - DO NOT SCALE DRAWINGS.

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



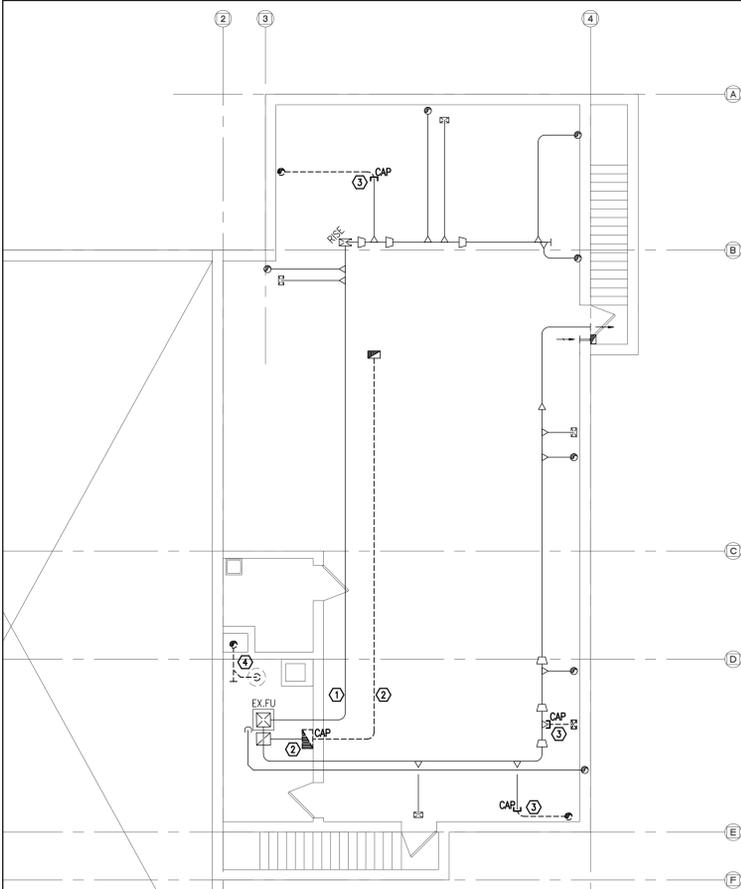
- HVAC DEMOLITION NOTES**
- EXISTING FLOOR-MOUNTED SUPPLY GRILLE TO REMAIN (TYPICAL).
 - EXISTING OUTDOOR CONDENSER UNIT TO REMAIN.
 - EXISTING FURNACE FLUE TO REMAIN.
 - EXISTING WASHROOM DOOR GRILLE TO REMAIN.
 - EXISTING FLOOR-MOUNTED SUPPLY GRILLE TO BE REMOVED. REFER TO DRAWING 1/M-1 FOR EXTENT OF HVAC DEMOLITION BELOW.
 - EXISTING RANGE HOOD AND ASSOCIATED DUCTWORK THROUGH ROOF TO BE REMOVED. PATCH AND SEAL ROOF OPENING TO MATCH BUILDING STANDARDS. ALL ROOFING WORK SHALL BE DONE BY LANDLORD-APPROVED ROOFING CONTRACTOR.
 - EXISTING FURNACE THERMOSTAT TO BE REMOVED AND RELOCATED AS INDICATED ON DRAWING 4/M-1.
 - EXISTING EXHAUST FAN IN EXISTING WASHROOM TO BE REMOVED AND REINSTALLED IN NEW CEILING. EXISTING SWITCH AND DUCT PENETRATION THROUGH ROOF TO REMAIN.
 - EXISTING EXHAUST FAN AND ASSOCIATED SWITCH AND DUCTWORK TO REMAIN.
 - EXISTING RETURN GRILLE AND DUCTWORK TO BE REMOVED. REFER TO DRAWING 1/M-1 FOR EXTENT OF HVAC DEMOLITION BELOW.
- GENERAL NOTES**
- CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF EXISTING HVAC SYSTEM COMPONENTS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO ENGINEER.

3 PART GROUND FLOOR PLAN - HVAC DEMOLITION
 1/8" = 1'-0"



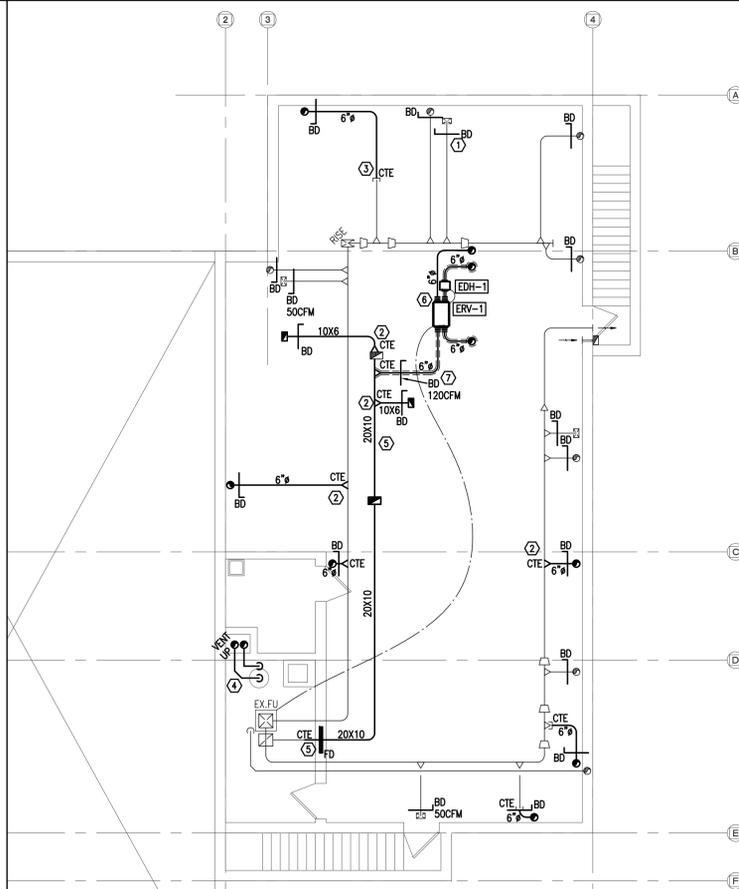
- HVAC DRAWING NOTES**
- REBALANCE EXISTING FLOOR-MOUNTED SUPPLY GRILLE AS INDICATED (TYPICAL).
 - PROVIDE NEW RETURN AIR GRILLE AND DUCTWORK AS INDICATED. REFER TO DRAWING 2/M-1 FOR EXTENT OF NEW HVAC WORK BELOW.
 - PROVIDE NEW EXHAUST FAN EF-1 WITH WALL SWITCH AS SPECIFIED. PROVIDE 6" ROUND DUCTWORK UP THROUGH ROOF C/W MANUFACTURER-SUPPLIED ROOF TERMINATION KIT. INSULATE LAST 10'-0" OF DUCTWORK AND MAKE PENETRATION WEATHER-TIGHT. ALL ROOFING WORK SHALL BE DONE BY LANDLORD-APPROVED ROOFING CONTRACTOR.
 - NEW LOCATION OF RELOCATED FURNACE THERMOSTAT. PROVIDE NEW CONTROL WIRING TO SUIT.
 - PROVIDE NEW FLOOR-MOUNTED GRILLE TO MATCH EXISTING AS SPECIFIED. BALANCE AS INDICATED (TYPICAL).
 - NEW HWI-1 FLUE AND COMB AIR. TERMINATE THROUGH ROOF PER MANUFACTURER INSTRUCTIONS AND SEAL PENETRATION WEATHER-TIGHT. ALL ROOFING WORK SHALL BE DONE BY LANDLORD-APPROVED ROOFING CONTRACTOR.
 - PROVIDE NEW RANGE HOOD RH-1 ABOVE NEW RANGE AS SPECIFIED. TERMINATE DUCTWORK UP THROUGH ROOF PER MANUFACTURER INSTRUCTIONS. INSULATE LAST 10'-0" OF DUCTWORK AND SEAL PENETRATION WEATHER-TIGHT. ALL ROOFING WORK SHALL BE DONE BY LANDLORD-APPROVED ROOFING CONTRACTOR.
 - PROVIDE NEW DOORGRILLE IN WASHROOM DOOR TO MATCH EXISTING.
 - RE-INSTALL EXISTING EXHAUST FAN INSIDE NEW CEILING AT ORIGINAL LOCATION. REFER TO 3/M-1. CONNECT TO EXISTING ROOF PENETRATION AND SWITCH.
 - PROVIDE NEW EXHAUST DUCTWORK SERVING LOCKER ROOM 103 C/W DAMPERED GRILLE BALANCED AS INDICATED. DUCTWORK TO RUN IN CEILING SPACE AND DROP DOWN WITHIN CHASE DOWN TO BASEMENT TO ERV-1. REFER BASEMENT PLAN FOR CONTINUATION.
 - PROVIDE NEW INSULATED FRESH AIR AND EXHAUST DUCTWORK FOR ERV-1 IN BASEMENT. TERMINATE OUTDOOR AIR AND EXHAUST DUCTS THROUGH ROOF C/W GOOSENECK (MIN 18" ABOVE ROOF), BIRDSCREEN, AND BACKDRAFT DAMPERS. MAINTAIN 10'-0" CLEAR BETWEEN ALL EXHAUST OUTLETS AND FRESH AIR INLETS WHEN TERMINATING. COORDINATE TERMINATION LOCATIONS WITH EXISTING EXHAUST OUTLETS.

4 PART GROUND FLOOR PLAN - HVAC PLAN
 1/8" = 1'-0"



- HVAC DEMOLITION NOTES**
- EXISTING MAIN SUPPLY DUCTWORK TO REMAIN (TYPICAL).
 - EXISTING RETURN AIR UP TO BE REMOVED AND CAPPED AT MAIN DUCTWORK. REMOVE PORTION OF EXISTING RETURN DUCTWORK AS INDICATED TO BE UP-SIZED.
 - EXISTING SUPPLY AIR SERVING GRILLE ABOVE TO BE REMOVED AND CAPPED AT TAKEOFF.
 - VENTING FOR EXISTING (REMOVED) HWI TO BE REMOVED COMPLETELY. PATCH AND SEAL BUILDING EXTERIOR PENETRATIONS ASSOCIATED WITH VENTING.
- GENERAL NOTES**
- CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF EXISTING HVAC SYSTEM COMPONENTS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO ENGINEER.

1 PART BASEMENT FLOOR PLAN - HVAC DEMOLITION
 1/8" = 1'-0"



- HVAC DRAWING NOTES**
- PROVIDE NEW BALANCING DAMPERS AT ALL SUPPLY/RETURN DUCTS UP TO FLOOR ABOVE. BALANCE AS INDICATED AT GRILLES ABOVE (TYPICAL).
 - PROVIDE NEW TAKEOFF FROM EXISTING SUPPLY/RETURN DUCTWORK AS INDICATED. PROVIDE BALANCING DAMPER AND DUCTWORK SIZED AS INDICATED.
 - PROVIDE NEW ROUND DUCTWORK C/W BALANCING DAMPER TO NEW LOCATION OF EXISTING GRILLE ABOVE. CONNECT BACK TO EXISTING TAKE-OFF (TYPICAL).
 - PROVIDE NEW VENTING AND COMBUSTION AIR PER HWI-1 MANUFACTURER'S INSTRUCTIONS. VENTING/COMBUSTION AIR SHALL TERMINATE AT LOCATIONS OF EXISTING REMOVED VENTING. PROVIDE NEUTRALIZATION KIT FOR FLUE CONDENSATE AND TERMINATE AT EXISTING FD IN MECHANICAL ROOM.
 - PROVIDE NEW RETURN AIR DUCTWORK SIZED AS INDICATED. PROVIDE NEW FIRE DAMPER AND MODIFY EXISTING OPENING TO SUIT NEW DUCT. CONNECT TO EXISTING IN MECHANICAL ROOM AND EXISTING RISER UP TO FLOOR ABOVE.
 - PROVIDE NEW ENERGY RECOVERY VENTILATOR ERV-1 C/W COMPLETE THERMALLY INSULATED DUCTWORK EXCEPT FOR INDOOR RETURN DUCTWORK AS INDICATED. PROVIDE ELECTRIC DUCT HEATER UPSTREAM OF ERV-1 ON INCOMING OUTDOOR AIR DUCTWORK AS SPECIFIED. INSTALL ERV-1 AND EDH-1 PER MANUFACTURER'S INSTRUCTIONS. REFER TO GROUND FLOOR PLAN FOR DUCT CONTINUATIONS.
 - FRESH AIR SUPPLY DUCTWORK SHALL TIE INTO FURNACE MAIN RETURN DUCTWORK. BALANCE AS INDICATED.

2 PART BASEMENT FLOOR PLAN - HVAC PLAN
 1/8" = 1'-0"

NO.	REVISIONS	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:
MECHANICAL - HVAC



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 e-mail: bbs@bbas-eng.com



DESIGN BY: TP
 DRAWN BY: TP
 CHECKED BY: AMM
 DATE: 15 FEB 2018
 SCALE: 1/8" = 1'-0"
 FILE:

PROJECT NO: **17-0239**
 DRAWING NO: **M-1**

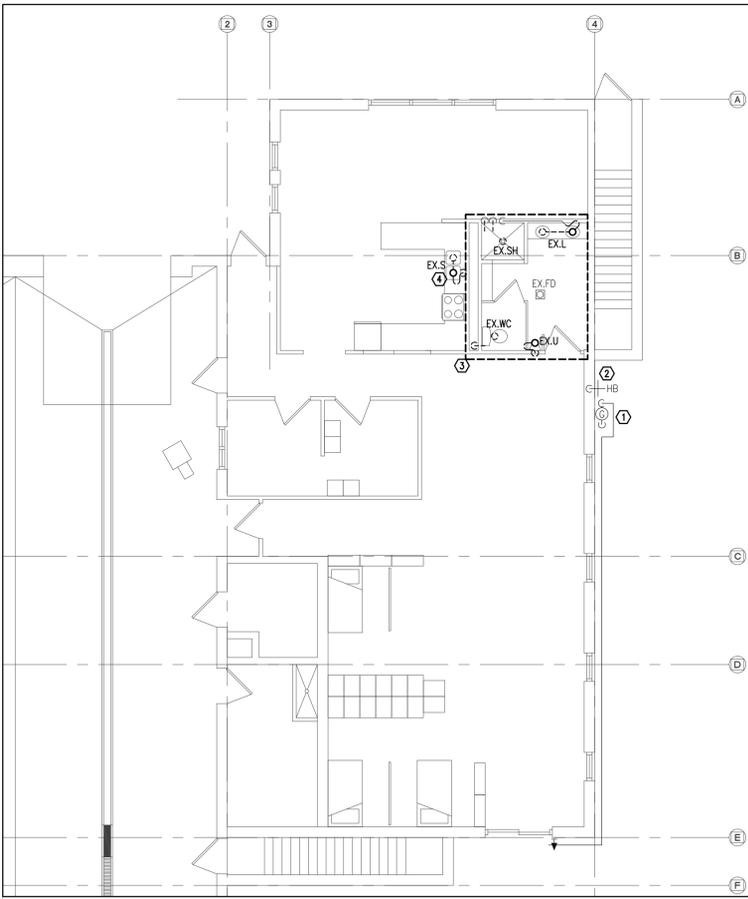


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93 Woodstream Blvd Unit 10
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Tel: (905) 265 1911 Fax: (905) 265 1998

- GENERAL NOTES
- THE DRAWING IS THE PROPERTY OF MADONNA ENGINEERING INC. 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.

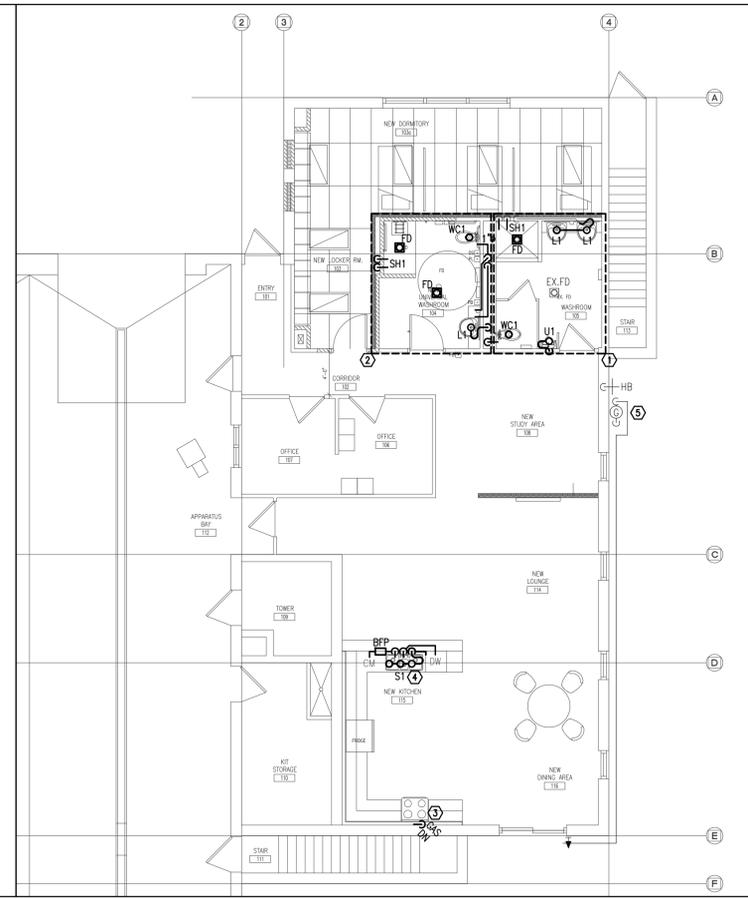
NO.	ISSUES	DATE	BY
01	ISSUED FOR REVIEW	20FEB2018	TP
02	ISSUED FOR CLIENT REVIEW	15MAR2018	TP
03	ISSUED FOR COORDINATION	05SEP2018	TP
04	ISSUED FOR TENDER	21SEP2018	TP
05	ISSUED FOR PERMIT	26SEP2018	TP
06	REVISED PER CITY COMMENTS	04JAN2019	TP
07	ISSUED FOR TENDER	14NOV2019	TP

- PLUMBING DRAWING NOTES
- PROVIDE NEW PLUMBING FIXTURES AS SPECIFIED AND CONNECT TO EXISTING ROUGH-INS WHERE INDICATED. REFER TO DRAWING 2/M-1 FOR NEW PLUMBING SERVICES FROM BELOW.
 - PROVIDE NEW FIXTURES AND PLUMBING/DRAINAGE SERVICES TO NEW WASHROOM. REFER TO DRAWING 2/M-2 FOR EXTENT OF NEW PLUMBING WORK BELOW.
 - NEW GAS PIPING FROM BELOW TO NEW GAS RANGE. REFER TO DRAWING 2/M-2 FOR GAS PIPING WORK BELOW.
 - PROVIDE NEW KITCHEN SINK WITH 1/2" HW/CW PIPING AND 1-1/2" SANITARY DRAINAGE PIPING. PROVIDE 1/2" COLD WATER BRANCH 1/4" BACKFLOW PREVENTION DEVICE EQUAL TO WATTS MODEL SD-2 TO SERVE PLUMBED COFFEE MACHINE.
 - CONTRACTOR SHALL VERIFY EXISTING GAS SERVICE IS SUFFICIENTLY SIZED AND METER CAN PROVIDE REQUIRED CAPACITY FOR NEW GAS LOADS TO BUILDING.
- GENERAL NOTES
- THERMALLY INSULATE ALL PIPING AS PER THE "PIPING INSULATION SCHEDULE".
 - PROVIDE ISOLATING VALVES ON MAIN AND/OR BRANCH LINES AND FOR ALL EQUIPMENT AND FIXTURES SERVED WITH HOT AND COLD WATER LINES. ALL VALVES SHALL BE SUITABLE FOR THE OPERATING PRESSURE OF THE SYSTEM IN WHICH THEY ARE INSTALLED.
 - PROVIDE ADEQUATE ACCESS TO ALL SHUT-OFF VALVES AND CLEANOUTS.
 - PROVIDE ALL CLEAN-OUTS AND VENTING SYSTEMS TO COMPLY WITH THE "ONTARIO BUILDING CODE", PART 7 AND LOCAL BY-LAWS.
 - ALL FLOOR OPENINGS AND BASE BUILDING WALL OPENINGS SHALL BE PERFORMED BY BASE BUILDING CONTRACTOR.

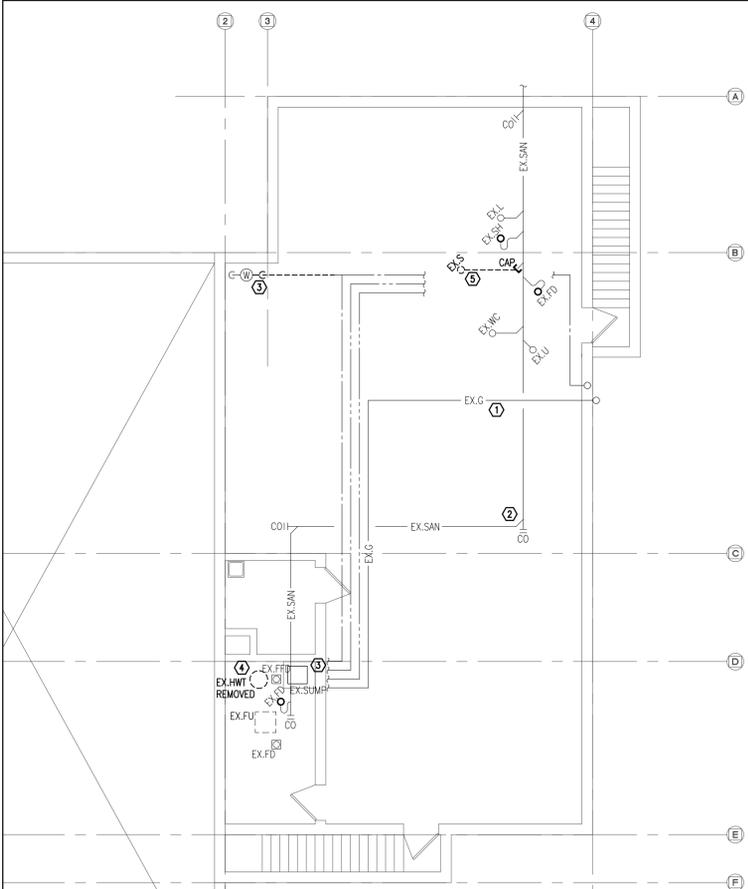


- PLUMBING DEMOLITION NOTES
- EXISTING GAS METER AND ASSOCIATED GAS PIPING AT EXTERIOR OF BUILDING TO REMAIN.
 - EXISTING HOSE-BIB ON EXTERIOR OF BUILDING TO REMAIN.
 - FIXTURES IN EXISTING WASHROOM TO BE REMOVED AND REPLACED WITH NEW PER DRAWING 4/M-2. CUT BACK SERVICES TO ROUGH-INS FOR LATER USE. REFER TO DRAWING 1/M-2 FOR EXTENT OF PLUMBING DEMOLITION BELOW.
 - EXISTING KITCHEN SINK TO BE REMOVED. REMOVE ASSOCIATED HOT AND COLD WATER PIPING AND ASSOCIATED SANITARY DRAINAGE AND VENTING.
- GENERAL NOTES
- CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF EXISTING PLUMBING AND DRAINAGE SERVICES PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO ENGINEER.

3 PART GROUND FLOOR PLAN - PLUMBING AND DRAINAGE DEMOLITION
1/8" = 1'-0"

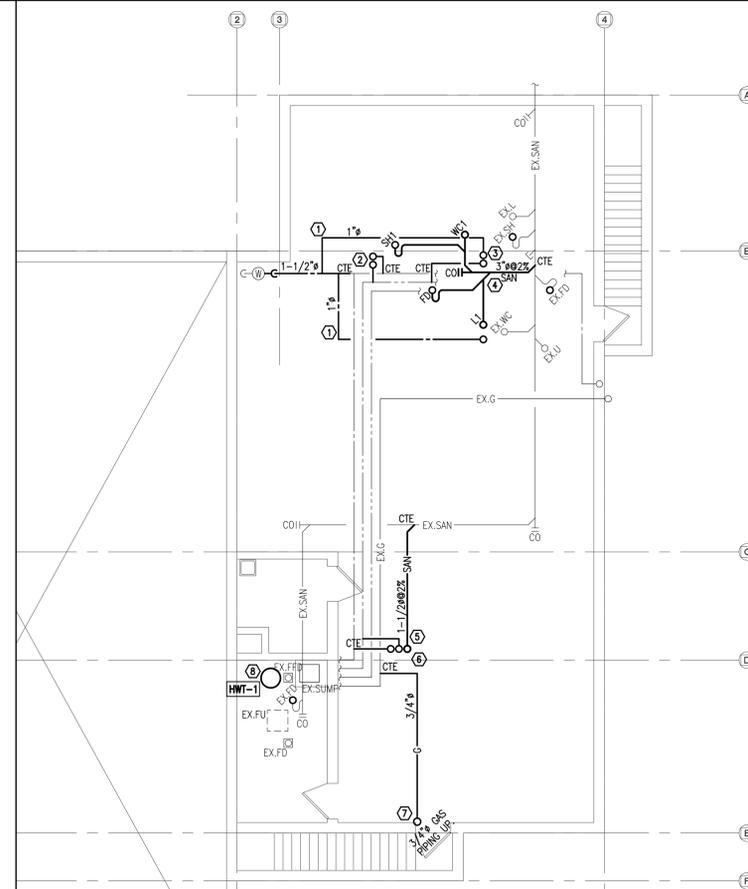


4 PART GROUND FLOOR PLAN - PLUMBING AND DRAINAGE PLAN
1/8" = 1'-0"



- PLUMBING DEMOLITION NOTES
- EXISTING GAS PIPING TO REMAIN. CONTRACTOR TO VERIFY MAIN IS MINIMUM 1". REPORT ANY DISCREPANCIES TO ENGINEER (TYPICAL).
 - EXISTING SANITARY PIPING AND SUMP PIT TO REMAIN (TYPICAL).
 - EXISTING DOMESTIC WATER METER TO REMAIN. REMOVE EXISTING COLD WATER PIPING UP TO SPLIT AS SHOWN. REST TO REMAIN (TYPICAL).
 - DISCONNECT AND REMOVE EXISTING GAS HWI. DISCONNECT GAS AND CW/HW PIPING AND CAP SERVICES IN MECHANICAL ROOM FOR FUTURE CONNECTION TO NEW HWI.
 - SANITARY SERVICE FOR EXISTING KITCHEN SINK ABOVE TO BE REMOVED AND CAPPED AT MAIN AS INDICATED. SEAL FLOOR PENETRATION TO MATCH BUILDING STANDARDS.
- GENERAL NOTES
- CONTRACTOR SHALL VERIFY EXACT LOCATION AND SIZE OF EXISTING PLUMBING AND DRAINAGE SERVICES PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO ENGINEER.

1 PART BASEMENT FLOOR PLAN - PLUMBING AND DRAINAGE DEMOLITION
1/8" = 1'-0"



2 PART BASEMENT FLOOR PLAN - PLUMBING AND DRAINAGE PLAN
1/8" = 1'-0"

- PLUMBING DRAWING NOTES
- PROVIDE NEW 1-1/2" COLD WATER PIPING FROM WATER METER AND CONNECT TO EXISTING. PROVIDE 1" BRANCHES AS INDICATED TO SERVE FLUSH VALVE TOILETS ABOVE.
 - PROVIDE NEW 1/2" CW/HW PIPING UP TO SERVE NEW SHOWER ABOVE.
 - 1" CW AND 1/2" HW PIPING UP TO SERVE WASHROOM ABOVE.
 - PROVIDE NEW 3" SANITARY PIPING TO RECEIVE DRAINAGE FROM NEW WASHROOM FIXTURES ABOVE. CONNECT TO EXISTING SANITARY PIPING.
 - PROVIDE NEW 1-1/2" SANITARY PIPING TO RECEIVE DRAINAGE FROM NEW KITCHEN FIXTURES ABOVE. CONNECT TO EXISTING SANITARY PIPING.
 - PROVIDE NEW 1/2" CW/HW PIPING UP TO SERVE NEW KITCHEN ABOVE.
 - PROVIDE NEW 3/4" GAS PIPING UP TO NEW GAS RANGE ABOVE. CONNECT TO EXISTING GAS PIPING.
 - PROVIDE NEW GAS-FIRED DOMESTIC WATER HEATER HWI-1 IN MECHANICAL ROOM AS SPECIFIED. CONNECT TO CAPPED CONNECTIONS FROM EXISTING HWI. PROVIDE ISOLATION VALVES AT ALL EQUIPMENT CONNECTIONS.
- GENERAL NOTES
- THERMALLY INSULATE ALL PIPING AS PER THE "PIPING INSULATION SCHEDULE".
 - PROVIDE ISOLATING VALVES ON MAIN AND/OR BRANCH LINES AND FOR ALL EQUIPMENT AND FIXTURES SERVED WITH HOT AND COLD WATER LINES. ALL VALVES SHALL BE SUITABLE FOR THE OPERATING PRESSURE OF THE SYSTEM IN WHICH THEY ARE INSTALLED.
 - PROVIDE ADEQUATE ACCESS TO ALL SHUT-OFF VALVES AND CLEANOUTS.
 - PROVIDE ALL CLEAN-OUTS AND VENTING SYSTEMS TO COMPLY WITH THE "ONTARIO BUILDING CODE", PART 7 AND LOCAL BY-LAWS.
 - ALL FLOOR OPENINGS AND BASE BUILDING WALL OPENINGS SHALL BE PERFORMED BY BASE BUILDING CONTRACTOR.

NO.	REVISIONS	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:
MECHANICAL - PLUMBING AND DRAINAGE



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DESIGN BY: TP	DOC CONTROL: DML
DRAWN BY: TP	% COMPLETE
CHECKED BY: AMM	REVISIONS
DATE: 15 FEB 2018	
SCALE: 1/8" = 1'-0"	
FILE:	

PROJECT NO:
17-0239
DRAWING NO:
M-2

PLUMBING FIXTURES SCHEDULE

SYMBOL	FIXTURES SPECIFICATION	PIPE CONNECTION (mm)				
		TRAP	COLD WATER	HOT WATER	DRAIN	VENT
WC1	FLOOR MOUNTED TOILET - VITREOUS CHINA - FOR FLUSHMETER - EXPOSED - NO TOUCH - HARDWIRED AMERICAN STANDARD MADERA FLOWISE, RIGHT HEIGHT ELONGATED #3461.001.020 HET TOILET, 419 MM HIGH, VITREOUS CHINA WITH EVERGLEAN ANTIMICROBIAL SURFACE WHICH INHIBITS THE GROWTH OF STAIN AND ODOR CAUSING BACTERIA MOLD AND MILDEW, ELONGATED BOWL, WHITE FINISH, FLOOR MOUNTED, SIPHON JET FLUSH ACTION, OPERATES IN THE RANGE OF 4.2 L TO 6 L (1.1 US GAL TO 1.6 US GAL) PER FLUSH, CONDENSATE CHANNEL, 305 MM X 254 MM (12" X 10") WATER SURFACE, SIPHON JET FLUSH ACTION, CONDENSATE CHANNEL, ELONGATED BOWL, 54 MM (2-1/8") FULLY GLAZED INTERNAL TRAPWAY, FLOOR OUTLET, BOLT CAPS, 38 MM (1-1/2") DIA. TOP SPUD. CENTOCO #8205TS.001 TOILET SEAT, EXTRA HEAVY DUTY, FOR ELONGATED BOWL, OPEN FRONT, SOLID PLASTIC, WITH COVER, STAINLESS STEEL CHECK HINGES, METAL FLAT WASHERS STAINLESS STEEL POSTS AND NUTS. SLOAN REGAL XL OPTIMA #111 XL ES-5-CP, EXPOSED FLUSHMETER FOR TOP SPUD TOILET, CHROME PLATED, 6 L (1.6 US GAL) FACTORY SET FLOW, QUIET ACTION DIAPHRAGM TYPE, INFRARED SENSOR LOCATED ON A 125 MM X 125 MM (4-15/16" X 4-15/16") STAINLESS STEEL FLUSH CONTROLLER. CIRCUITRY, COURTESY FLUSH ELECTRONIC OVER-RIDE BUTTON, BACK-CHECK ANGLE STOP (SCREWDRIVER OPERATED), FLUSH TUBE FOR 292 MM (11-1/2") ROUGH-IN, VACUUM BREAKER, SENSOR LOCATED ABOVE THE TOILET, 5 VA POWER REQUIRED PER UNIT. SENSOR TO CLEAR TOILET SEAT COVER. PROVIDE 4" (102 MM) SQUARE ELECTRICAL BOX FOR MOUNTING SENSOR PLATE. SLOAN JEL-154, BOX MOUNT HARD WIRED TRANSFORMER, 120 VAC/ 24 VAC, 50 VA. WILL OPERATE UP TO 10 "OPTIMA" FLUSH WALL UNITS. PROVIDE FLOOR FLANGE, (SAME MATERIAL AS THE CONNECTING PIPE DRAIN), WITH ALL BRASS BOLTS AND WITH RUBBER GASKET.	-	1"	-	3"	-
U1	WALL HUNG URINAL - FOR FLUSHMETER - EXPOSED - NO TOUCH - HARDWIRED AMERICAN STANDARD WASHBROOK FLOWISE #6590.001.020 URINAL, VITREOUS CHINA, OPERATES IN THE RANGE OF 0.5 L TO 3.8 L (0.125 US GAL TO 1.0 US GAL) PER FLUSH, WALL HUNG, EXTENDED SIDES FOR PRIVACY, WASHDOWN ACTION, WASHBROOK FLOWISE, FLUSHING RIM, 19 MM (3/4") DIA. TOP SPUD, ELONGATED RIM, INTEGRAL P-TRAP, OUTLET CONNECTION 51 MM (2"), 2 WALL HANGERS, #7301242-100 CHROME PLATED, NON-METALLIC STRAINER, WHITE FINISH. SLOAN REGAL XL OPTIMA #REGAL XL OPTIMA 186-0.5 XL ES-5-CP, EXPOSED FLUSHMETER FOR TOP SPUD URINAL, CHROME PLATED, 1.9 L (0.5 US GAL) FACTORY SET FLOW, QUIET ACTION DIAPHRAGM TYPE, INFRARED SENSOR, SOLENOID OPERATED FLUSH CONTROLLER CIRCUITRY, BACK-CHECK ANGLE STOP (SCREWDRIVER OPERATED), FLUSH TUBE FOR 292 MM (11-1/2") ROUGH-IN, VACUUM BREAKER, LOCATED ABOVE THE URINAL, 5 VA POWER REQUIRED PER UNIT. PROVIDE 4" (102 MM) SQUARE ELECTRICAL BOX FOR MOUNTING SENSOR PLATE. SLOAN JEL-154, BOX MOUNT HARD WIRED TRANSFORMER, 120 VAC/ 24 VAC, 50 VA. WATS #04-321 FIXTURE CARRIER, MOUNTED ON CONCRETE FLOOR, EPOXY COATED TOP AND BOTTOM UNIVERSAL STEEL HANGER PLATES, HEAVY GAUGE EPOXY COATED STEEL OFFSET UPRIGHTS WITH WELDED FEET SUPPORTS, FOR ONE UNIT: 102 MM (4") FOR TWO TO SIX UNITS IN A ROW: 152 MM (6") FINISHED METAL STUD WALL TO BACK OF PIPE SPACE. WATS #MUO URINAL WALL ACCESS CLEANOUT, TWO (2) PIECE EXPANDABLE PLUG WITH 102 MM (4") DIAMETER STAINLESS STEEL ACCESS COVER, SECURED WITH VANDAL PROOF STAINLESS STEEL SCREW. CHAMPION M-TR SERIES #M-HUB TR DRAIN COUPLING, COUPLING, NO-HUB, TYPE 300 ANSI STAINLESS STEEL BAND, TYPE 300 ANSI STAINLESS STEEL EYELETS, ELASTOMERIC COMPOUND GASKET MEETING THE REQUIREMENTS OF ASTM C-564, TYPE 300 ANSI STAINLESS STEEL SHIELD, TESTED TO MAINTAIN 4.3 PSI OF WATER PRESSURE AT 60 INCH LB MIN/MAX TORQUE BOLT TIGHTNESS, TESTED AND CERTIFIED TO ASTM STANDARD 1460-2012 AND CSA STANDARD B602-2010 AND LISTED WITH IAPMO. ALL MODELS ARE LISTED TO THE NATIONAL PLUMBING CODE OF CANADA AND RELEVANT CANADIAN STANDARD (S) AND BEAR THE CUPC MARK OF CONFORMITY. NON CONSTANT TEMPERATURE RATING IS 140°F	1-1/2"	1/2"	-	1-1/2"	-
L1	COUNTER MOUNTED SEMI-COUNTER BASIN - SINGLE HANDLE FAUCET - BELOW DECK MECHANICAL WATER MIXING VALVE 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. SEMI-COUNTER, REAR OVERFLOW, FAUCET LEADER, SPACE SAVING DESIGN, MOUNTING KIT PROVIDED. SPACE SAVING DESIGN, MOUNTING KIT PROVIDED. AMERICAN STANDARD MONTERREY #6114.111.002 SINGLE HANDLE FAUCET, POLISHED CHROME FINISH, CAST BRASS BODY, 5.7 LPM (1.5 GPM) PRESSURE COMPENSATING AERATOR OUTLET, 117 MM (4-5/8") PROJECTION REACH, INTEGRAL HOT WATER LIMIT STOP. LAWLER #1MM-1070, BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 °F (48.8 °C), INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 °C (114.8 °F). PROVIDE TEE, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. MCGUIRE #155WC OFFSET OPEN GRID DRAIN, CAST BRASS ONE PIECE TOP, 17 GA. (1.5 MM) TUBULAR 32 MM (1-1/4") TAILPIECE. MCGUIRE #FH1709 FAUCET SUPPLIES, CHROME PLATED FINISH POLISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. PROVIDE P-TRAP, CHROME PLATED, ADJUSTABLE ALL METAL CONSTRUCTION, 32 MM (1-1/4") SIZE, AND ESCUTCHEON. MCGUIRE PROWRAP #PW200WC SANITARY COVERING VANDAL-RESISTANT, FLEXIBLE SEAMLESS MOULDED CLOSED-CELL PVC RESIN, FORMULATED WITH ANTI-MICROBIAL ADDITIVE TO LIMIT THE GROWTH OF FUNGUS AND BACTERIA, TO EXPOSED PIPING (TO PROTECT AGAINST HEAT/CONTUSIONS) AS PER LOCAL CODES.	1-1/4"	1/2"	1/2"	1-1/4"	-
SH1	PRESSURE BALANCING SHOWER VALVE SET CHICAGO FAUCETS #SH-PB1-00-000 PRESSURE BALANCING SHOWER VALVE SET, CHROME PLATED FINISH, 171 MM (6-3/4") DIA TRIM FACE PLATE, ON/OFF AND TEMPERATURE CONTROL SINGLE LEVER HANDLE, INTEGRAL SERVICE STOPS, ADJUSTABLE HOT LIMIT SAFETY STOP. CHICAGO FAUCETS #620-LCP SHOWER HEAD, CHROME PLATED FINISH, 5.7 LPM (1.5 GPM) FLOW RATE @ 80 PSI, PRESSURE COMPENSATING FLOW CONTROL DEVICE. SWIVEL BALL JOINT. CHICAGO FAUCETS #749-016JKCP/415-021JKCP WALL MOUNT SHOWER ARM, ROUND ESCUTCHEON. CHICAGO FAUCETS #624-LCP ADJUSTABLE HAND SHOWER, 5.7 LPM (1.5 GPM) FLOW RATE @ 80 PSI, PRESSURE COMPENSATING FLOW CONTROL DEVICE. CHICAGO FAUCETS #9600-030CP HAND SHOWER GRAB BAR/SLIDE BAR COMBINATION, CHROME PLATED FINISH STAINLESS STEEL CONSTRUCTION, 38 MM (1-1/2") DIA X 914 MM (36") HIGH BAR, ADJUSTABLE BRACKET FOR PERSONAL SHOWER, LOCKING WALL FLANGES, INCLUDES MOUNTING HARDWARE. CHICAGO FAUCETS #24-69NF HAND SHOWER METAL HOSE 1801 MM (70.9") LONG. CHICAGO FAUCETS #24JKCP HAND SHOWER IN-LINE VACUUM BREAKER, INSTALLED BETWEEN SUPPLY OUTLET AND SHOWER HOSE, MAXIMUM HOT WATER TEMPERATURE OF 60 °C (140 °F), MAXIMUM WORKING PRESSURE OF 861.25 KPA PSI. CHICAGO FAUCETS #622-001CP HAND SHOWER WALL SUPPLY, CHROME PLATED FINISH, 13 MM (1/2") NPT FEMALE THREAD INLET, 13 MM (1/2") HOSE CONNECTION. CHICAGO FAUCETS #763-CP IN-WALL 3-WAY DIVERTER TRIM AND VALVE KIT, METAL LEVER HANDLE, BRASS VALVE CONSTRUCTION, ROTATIONAL CONTROL TO ALTERNATE WATER FLOW BETWEEN THREE (3) DIFFERENT SHOWER OUTLETS. WATS #100-C-A #100-C-A #100-C-A CAST IRON, 5" (127 MM) ADJUSTABLE ROUND NICKEL BRONZE STRAINER, REVERSIBLE CLAMPING COLLAR WITH PRIMARY & SECONDARY WEEPHOLES. PROVIDE EXTRA FLOOR DRAIN AT ENTRANCE OF SHOWER AREA. PROVIDE P-TRAP, SAME MATERIAL AS THE CONNECTING PIPE DRAIN. SHOWER ASSEMBLY - CHASE ACCESS	-	1/2"	1/2"	-	-
FD	FLOOR DRAIN - FINISHED AREA WATS #FD-103-C-A5-1-7 FLOOR DRAIN - EPOXY COATED CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY WEEPHOLES, TRAP PRIMER CONNECTION WITH PLUG, 376 (76 MM) NO HUB OUTLET WATS #45-1 5" (127 MM) DIAMETER NICKEL BRONZE, ADJUSTABLE ROUND STRAINER.	3"	-	-	3"	-
S1	COUNTERTOP MOUNT SINK - SINGLE HANDLE FAUCET - BELOW DECK MECHANICAL WATER MIXING VALVE 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 MOUNTED, BACKLEDGE, GRADE 18-10 20 GA. (0.9 MM) TYPE 302 STAINLESS STEEL, SELF-RIMMING, BRIGHT MIRROR FINISH RIM, SATIN FINISH BOWLS, RADIUS COVED BOWLS CORNERS, MOUNTING KIT PROVIDED, FULLY UNDERGOATED TO REDUCE CONDENSATION AND RESONANCE, 89 MM (3-1/2") CRUMPS CUP WASTE ASSEMBLY WITH 38 MM (1-1/2") TAILPIECE. CHICAGO FAUCETS #430-ADCP SINGLE HANDLE FAUCET, CHROME PLATED FINISH, CENTER HOLE ONLY, ECOST CONSTRUCTION LEAD FREE (EQUAL OR LESS THAN 0.25%) ECOST STRAINER CONSTRUCTION, VOLUME CONTROL AND HOT WATER LIMIT STOP CARTRIDGE. 5.7 LPM (1.5 GPM) PRESSURE COMPENSATING LAMINAR FLOW (NON-HEATING) OUTLET, 241 MM (9-1/2") PROJECTION RIGID CAST BRASS SPOUT, SINGLE METAL LEVER HANDLE. LAWLER #1MM-1070, BELOW DECK MECHANICAL WATER MIXING VALVE, BRONZE BODY, TEMPERATURE ADJUSTING DIAL, 10 MM (3/8") INLETS AND OUTLET COMPRESSION FITTINGS, HIGH TEMPERATURE THERMOSTATIC LIMIT STOP, SHUT-OFF WITH AUTOMATIC RESET WHEN TEMPERATURE EXCEEDS 120 °F (48.8 °C), INTEGRAL CHECKS, OFFER TEMPERATURE RANGE FROM FULL COLD THROUGH 46 °C (114.8 °F). PROVIDE TEE, ADAPTORS AND FLEX. COPPER TUBING TO SUIT INSTALLATION. PROVIDE TEMPERED WATER TO HOT SIDE OF FAUCET. MCGUIRE #FH1709 FAUCET SUPPLIES, CHROME PLATED FINISH POLISHED BRASS, COMMERCIAL DUTY 1/4 TURN BALL VALVE ANGLE STOPS, 13 MM (1/2") I.D. INLET X 127 MM (5") HORIZONTAL EXTENSION TUBES, CONVERTIBLE 1/4 TURN/LOOSE KEY HANDLES, ESCUTCHEON AND FLEXIBLE COPPER RISERS. MCGUIRE #8904C P-TRAP, HEAVY CAST BRASS ADJUSTABLE BODY, WITH SLIP NUT, 51 MM (2") SIZE, SHALLOW WALL FLANGE AND SEAMLESS TUBULAR WALL BEND.	1-1/2"	1/2"	1/2"	1-1/2"	-

EXHAUST FAN SCHEDULE

REF.	LOCATION	FUNCTION	MANUFA.	MODEL	CAP. (CFM)	ESP	RPM	WEIGHT	MOTOR	AMPS.	V/PH/HZ	STARTER	REMARKS
EF-1	UNIVERSAL WR	SANITARY EXHAUST	CARNES	VCDD015C	140	0.25IN.WC	-	-	102W	1.4	120/1/60	WALL SWITCH	-C/W GRILLE, DISCONNECT SWITCH, BACKDRAFT DAMPER, VIBRATION ISOLATION, AND WALL SWITCH.
RH-1	KITCHEN/LOUNGE	RANGE HOOD	BRON	BKSM130SS	300	-	-	-	-	-	120/1/60	BUILT-IN	-C/W ALL MOUNTING HARDWARE. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

DUCTWORK INSULATION SCHEDULE

APPLICATION	INSULATION TYPE	THICKNESS	REMARKS
EXHAUST DUCTS BETWEEN BUILDING EXTERIOR AND FAN OR LAST 3000MM OF DUCT	D-1	1"	C/W VAPOUR BARRIER; SEE NOTES BELOW
ENTIRE RUN OF ERV-1 DUCTS (LESS RETURN AIR DUCTWORK FROM LOCKER ROOM)	D-1	1"	C/W VAPOUR BARRIER; SEE NOTES BELOW

1. TYPE D1: OWENS CORNING FLEXIBLE DUCT INSULATION, JOHN MANVILLE MICRO-LOK TYPE 75 DUCT WRAP, MANSON MICROLOTE INSULATION OR KNAUF DUCT WRAP. {12KG/CUBIC METRE} {3/4LB/CU.FT.} DENSITY WITH FACTORY APPLIED REINFORCED FIBER FACING. ADHERE INSULATION TO DUCT SURFACE WITH CHILDERS CP82 OR BAKELITE 230-39 ADHESIVE, WHICH SHALL BE APPLIED IN STRIPS (150MM) (6") WIDE AT NOT GREATER THAN (300MM) (12") CENTRES. BUTT EDGES OF INSULATION TIGHTLY TOGETHER, AND SEAL BREAKS AND JOINTS OF FACING WITH SELF-ADHERING (100MM) (4") WIDE ALUMINUM TAPE OR ADHERE FOIL WITH CHILDERS CP82 OR BAKELITE 230-39 ADHESIVE.

PIPING INSULATION SCHEDULE

APPLICATION	NOMINAL PIPE SIZE	REMARKS
D.C.W.	1/2"	TYPE P-1 C/W VAPOUR BARRIER; SEE NOTES BELOW
D.H.W. & REIRC.	1"	TYPE P-1; SEE NOTES BELOW

PIPING INSULATION NOTES:

- P-1 INSULATION SHALL BE OWENS CORNING 850 PIPE INSULATION, JOHN MANVILLE MICRO-LOK AP-1 PLUS FIBERGLASS PIPE INSULATION, MANSON FIBERGLASS PIPE INSULATION OR KNAUF PIPE INSULATION. RECOVER INSULATION WITH HEAVY-GAUGE PVC FITTING COVERS AND JACKETING EQUAL JOINT MANVILLE TESTON 300 SERIES. PVC FITTING COVERS AND JACKETING SHALL HAVE HIGH IMPACT STRENGTH, OPERATING TEMPERATURE LIMIT OF UP TO 150°F, HIGH UV RESISTANCE, FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS. PVC FITTING COVERS AND JACKETING SHALL HAVE A MINIMUM THICKNESS OF 0.020" PVC FITTING COVERS SHALL BE FACTORY-FABRICATED CONSISTING OF PRE-MOLDED PVC WITH FIBERGLASS INSERTS. PROVIDE IDENTIFICATION MARKINGS FOR ALL PIPING AS PER THE MECHANICAL SPECIFICATIONS.
- VAPOUR BARRIER SHALL BE FACTORY APPLIED ALL PURPOSE VAPOUR BARRIER JACKET.
- USE PREFORMED INSULATION ON FITTING AND ELBOWS.

DIFFUSER SCHEDULE

TYPE	MODEL NO.	FINISH	REMARKS
A	RESIDENTIAL-TYPE FLOOR SUPPLY GRILLE TO MATCH EXISTING	-	TO MATCH EXISTING. BALANCE AS INDICATED ON PLANS.
B	RESIDENTIAL-TYPE FLOOR RETURN GRILLE TO MATCH EXISTING	-	TO MATCH EXISTING. BALANCE AS INDICATED ON PLANS.
C	EH.PRICE MODEL 530D LOUVERED-FACE RETURN GRILLE.	-	LOUVERED-FACE RETURN AIR GRILLE WITH 3/4" BLADE SPACING FOR SURFACE-MOUNT, DUCTED INSTALLATION. SIZE AS INDICATED ON PLANS. BALANCE AS INDICATED.
D	EH.PRICE MODEL STG1 SIGHTPROOF DOORGRILLE.	-	SIGHTPROOF DOORGRILLE SIZED TO MATCH EXISTING WASHROOM DOORGRILLE.
E	EH.PRICE MODEL 80 EGGRATE RETURN GRILLE	B12	EGGRATE RETURN GRILLE FOR T-BAR DUCTED INSTALLATION. BALANCE AND SIZE AS INDICATED.

NOTE: NAULOR AND TITUS WILL BE CONSIDERED ACCEPTABLE ALTERNATIVES.

WATER HEATER SCHEDULE

REF.	MANUFACTURER	MODEL	CAPACITY (GAL)	INPUT (BTU/HR)	V/PH/HZ	REMARKS
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.

EXPANSION TANK SCHEDULE

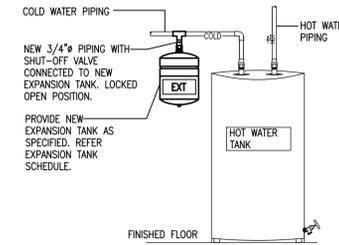
REF.	MANUF.	MODEL	TANK VOLUME	ACCEPTANCE VOLUME	PRECHARGE PRESSURE	MAXIMUM PRESSURE	REMARKS
EXT-1	WATS	PLT-5	2.1 USG	1.26 USGAL	80 PSI	150 PSI	-INSTALL PER DETAIL.

ENERGY RECOVERY VENTILATOR SCHEDULE

REF.	LOCATION	FUNCTION	MANUFA.	MODEL	CAP. (CFM)	ESP	MOTOR	WEIGHT	FLA	V/PH/HZ	STARTER	REMARKS
ERV-1	BASEMENT	FRESH AIR SUPPLY	RENEWARE	EV-130	120	0.4IN.WC	102W	60LBS	1.3	120/1/60	FURNACE FAN	-C/W DISCONNECT SWITCH, VIBRATION ISOLATION, BACKDRAFT DAMPER, ROOF TERMINATION KIT, AND SHALL BE ACTIVATED VIA FURNACE FAN OPERATION.

ELECTRIC DUCT HEATER SCHEDULE

REF.	LOCATION	FUNCTION	MANUFA.	MODEL	HEATER CAPACITY	V/PH/HZ	AMPS	STARTER	REMARKS
EDH-1	BASEMENT	ERV-1 FREEZE PREVENTION	THERMOLEC	TER-6-1.5-120	1.5KW	120/1/60	~12.5	ERV AND AIRFLOW TEMPERATURE SENSOR	-C/W DISCONNECT SWITCH AND INTERNAL AIR TEMPERATURE SENSOR. EDH-1 SHALL BE INTERLOCKED TO OPERATE WITH ERV-1 WHEN INCOMING AIR TEMPERATURE IS BELOW 40°F.



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 PRESSURE REDUCING VALVE IS REQUIRED BY ARTICLE 7.6.3.3.
A-7.6.1.16(1) THERMAL EXPANSION, CLOSED WATER SYSTEMS WITH NO EXPANSION TO PUBLIC WATER SYSTEMS NEED TO ACCOMMODATE THERMAL EXPANSION USING AN EXPANSION TANK DESIGNED FOR USE ON THE COLD OR HOT POTABLE WATER SYSTEM.

1 THERMAL EXPANSION TANK

NTS



MADONNA ENGINEERING INC.
93 Woodstream Blvd Unit 10
Woodbridge, Ontario L4L 7Y7
Tel: (905) 265 1911 Fax: (905) 265 1998

GENERAL NOTES

- THE DRAWING IS THE PROPERTY OF MADONNA ENGINEERING INC. 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

NO.	REVISIONS	DATE	BY

PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
553 KINGSTON ROAD,
PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:
SCHEDULES AND DETAILS



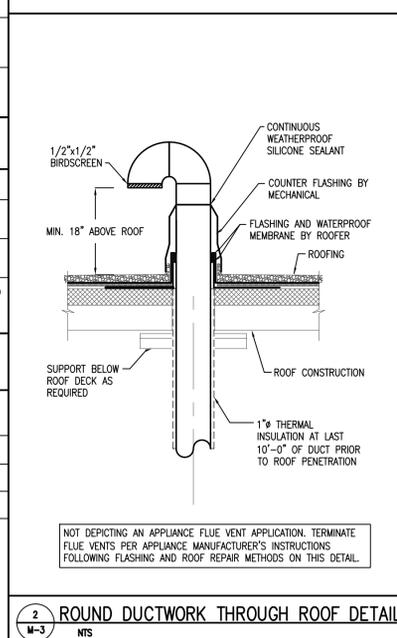
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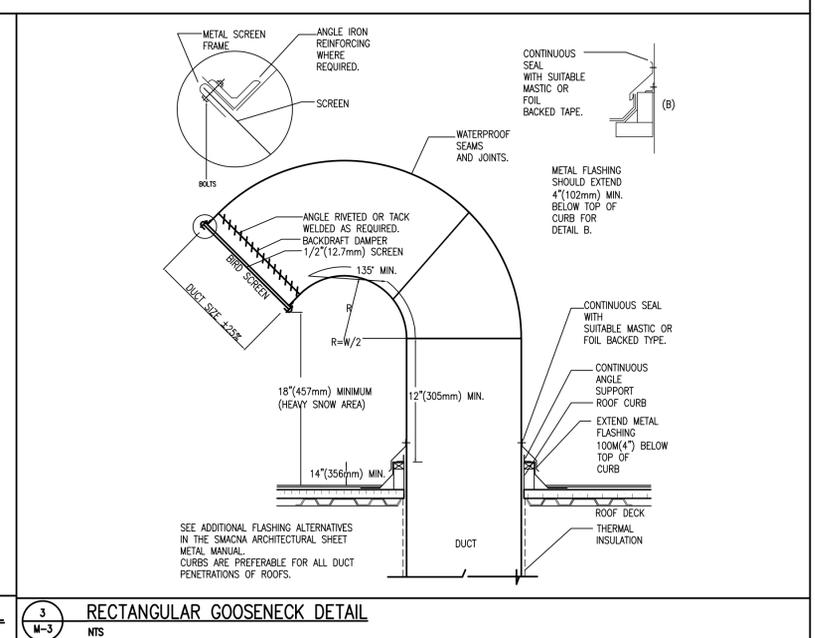


DESIGN BY: TP
DRAWN BY: TP
CHECKED BY: AMM
DATE: 15 FEB 2018
SCALE: 1/8" = 1'-0"
FILE:

PROJECT NO: **17-0239**
DRAWING NO: **M-3**



2 ROUND DUCTWORK THROUGH ROOF DETAIL
NTS



3 RECTANGULAR GOOSENECK DETAIL
NTS

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.
- ALL WORK AND EQUIPMENT SHALL BE IN CONFORMANCE WITH ASHRAE 90.1.
- 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.
- 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.
- 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 CLAIMS.
- PROVIDE PROPER SHOP DRAWINGS OF ALL SPECIFIED PRODUCTS AND SUBMIT FOR APPROVAL TO THE ARCHITECT AND ENGINEER. SUBMIT 8 SETS OF EACH SHOP DRAWING.
- 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.
- 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.
B. DURING PROGRESS OF WORK, SUBSTITUTE PRODUCTS WILL ONLY BE CONSIDERED WHEN TENDERED PRODUCTS BECOME UNOBTAINABLE AND WRITTEN PROOF IS SUBMITTED.
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 ACCEPTABLE.
- 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.
- 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.).
- EXISTING SERVICES SHALL BE FIELD CHECKED BEFORE WORK COMMENCEMENT INCLUDING LOCATION, SIZE AND ELEVATION OF RELEVANT PIPING, DUCTWORK, ETC.
- 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.
- ENSURE THAT THE LABOUR UNION AFFILIATION IS COMPATIBLE WITH THAT OF THE OWNER'S GENERAL CONTRACTOR.
- ALL ELECTRICAL DISCONNECT SWITCHES AND ALL MANUAL OR AUTOMATIC STARTERS FOR MECHANICAL EQUIPMENT SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
- 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.
- 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 4 SQUARE FEET.
- THIS CONTRACTOR SHALL COMPLY WITH LANDLORD'S GENERAL REQUIREMENTS FOR WORK TO BASE BUILDING SYSTEMS.
- INCLUDE FOR PREMIUM TIME FOR WORK REQUIRED OUTSIDE OF NORMAL BUSINESS HOURS.
- PROVIDE FIRE STOP FOR ALL PENETRATIONS THROUGH RATED PARTITIONS AND SLABS. FIRE STOP MATERIAL SHALL BE ULC APPROVED AND CONFORM TO BASE BUILDING STANDARDS.
- 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 ENGINEER 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.
- 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%.
- 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.
- BASE BUILDING HVAC COMPONENTS REMOVED I.E. GRILLES, DIFFUSERS, ETC. SHALL BE TURNED OVER TO THE LANDLORD/OWNER AT THEIR DIRECTIONS.
- COMPLY WITH THE GENERAL CONTRACTORS CONSTRUCTION SCHEDULE.

FIRE PROTECTION SYSTEM

- FIRE EXTINGUISHER**
- PROVIDE AS REQUIRED, NATIONAL FIRE EQUIPMENT LTD., DIAMOND FIRE EXTINGUISHER MODEL ABC-050W0 5LB MULTI-PURPOSE DRY CHEMICAL EXTINGUISHERS C/W WALL HOOK.
 - 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 ALL 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 FROM 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 CONSISTENT.
- EACH MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION:
- DESCRIPTION OF EACH SYSTEM WITH DESCRIPTION OF EACH MAJOR COMPONENT OF SYSTEM
- 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 SMANOA 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 INSULATION.
 - 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.
 - FIRE DAMPERS SHALL BE ULC LABELED, FABRICATED AND INSTALLED IN ACCORDANCE WITH NFPA 90A, CUA 90-1 AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION.
 - 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.
 - DUCTWORK INSULATION (PER ASHRAE 90.1)
 - PROVIDE 25 MM(1") THICK ACOUSTIC DUCT LINER WHERE SHOWN ON DRAWINGS. ACOUSTIC LINER SHALL BE JOHNS MANVILLE PERMACOTE LINACOUSTIC RECTANGULAR DUCT LINER MEETING ASTM 1071 WITH AIR SURFACE COATED WITH ACRYLIC COATING TREATED WITH EPA REGISTERED ANTI-MICROBIAL AGENT PROVEN TO RESIST MICROBIAL GROWTH AS DETERMINED BY ASTM G21 AND G22.
 - 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".
 - FLEXIBLE DUCT SHALL BE EQUAL TO FLEXMASTER TRIPLE LOCK ALUMINUM AIR DUCT AND SHALL BE THE SAME SIZE AS THE DIFFUSER NEAR TO WHICH IT CONNECTS TO UNLESS OTHERWISE SHOWN. SUPPORT FLEXIBLE DUCT AT MAXIMUM 5'-0" SPACING.
 - 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 ALL 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.
 - INSTALL AIR TERMINALS IN STRICT ACCORDANCE WITH FINAL ARCHITECTURAL PLANS.
 - 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 OF DIVISION 15.
- CONTROLS:**
- 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.
 - CONNECT TO EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - SLOPE PIPING DOWN IN DIRECTION OF FLOW TO LOW POINTS.
 - PROVIDE CLEARANCES FOR MAINTENANCE OF EQUIPMENTS, VALVES AND FITTINGS.
 - PURGE AFTER PRESSURE TEST IN ACCORDANCE WITH CAN-B149 (1-M86).
 - TEST SYSTEM IN ACCORDANCE WITH CAN-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) |
- GAS PIPING OR TUBING SHALL BE IDENTIFIED BY ONE OF THE FOLLOWING:
 - THE ENTIRE PIPING OR TUBING SYSTEM SHALL BE PAINTED YELLOW.
 - THE PIPING OR TUBING SYSTEM SHALL BE PROVIDED WITH YELLOW BANDING THAT HAS A MINIMUM WIDTH OF 1" (25mm); OR
 - 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.
- 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 BARRIER SILICONE.
- FINAL LOCATION OF ALL PLUMBING FIXTURES SHALL BE CO-ORDINATED ON SITE WITH ALL TRADES. REFER TO ARCHITECTURAL & SPECIALTY EQUIPMENT CONSULTANT 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 SERVED WITH HOT AND COLD WATER LINES. ALL VALVES SHALL BE SUITABLE FOR THE OPERATING PRESSURE OF THE SYSTEM IN WHICH THEY ARE INSTALLED.
- PROVIDE ACCESS DOORS TO ALL PLUMBING EQUIPMENT WHERE INDICATED AND/OR REQUIRED OF SIZE TO SUIT CONVENIENT MAINTENANCE REQUIREMENTS.
- PIPING INSULATION
 - COVER ALL WATER LINES, FITTINGS, VALVE, WATER METERS AND APPURTENANCES WITH JOHNS MANVILLE MICRO-LOK AP-7 PLUS FIBERGLASS PIPE INSULATION WITH FACTORY APPLIED ALL PURPOSE VAPOR BARRIER JACKET. ADHERE AT LONGITUDINAL LAPS AND JOINTS WITH 2" ALUMINUM TAPE.
 - PIPE INSULATION TO BE A MIN. OF R-4 PER INCH.
 - REFER TO PIPING INSULATION SCHEDULE.
- PROVIDE TRAP SEAL PRIMER TO ALL HUB DRAINS, FLOOR DRAINS, FUNNEL FLOOR DRAINS IN ACCORDANCE WITH CODES.
- 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 REQUIREMENTS.
- POTABLE WATER VALVES
 - NEW GATE VALVES 2" AND SMALLER SHALL BE MANUFACTURED BY WATTS (OR EQUAL). VALVES SHALL BE SUITABLE FOR USE IN POTABLE WATER SYSTEMS. VALVES SHALL BE MANUFACTURED OUT OF BRONZE AND BE PRESSURE TESTED TO 125psi W.P. 200psi WOG NON-SHOCK. VALVES SHALL HAVE NON-RISING STEM AND FULL PORT FLOW.
 - FOR 2" AND SMALLER, BALL VALVES MAY BE PROVIDED AS SUBSTITUTE FOR GATE VALVES. PROVIDE BALL VALVES WITH BRASS OR BRONZE BODY, CHROME PLATED SOLID BALL, PIPE SEAT AND SEALS AND FULL PORT.
- STANDARD CHECK VALVES

2" AND SMALLER - SOLDERED 300 psi WOG

PLUMBING SYSTEM PIPE AND FITTINGS MATERIAL	
APPLICATION	NOMINAL PIPE SIZE
ABOVE GROUND SANITARY DRAIN	P-1, P-2
ABOVE GROUND VENT PIPING	P-1, P-2
ABOVE GROUND DOMESTIC HOT, COLD AND RECIRC. WATER	P-8
PIPING MATERIAL	
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

SYMBOL	DESCRIPTION
	NEW DUCTWORK
	EXISTING DUCTWORK/PIPING/EQUIPMENT TO BE REMOVED
	CAP ON EXISTING PIPE/DUCTWORK
	CONNECT TO EXISTING PIPING/DUCTWORK
	DRAWING NOTE
	EQUIPMENT TAG
	NEW/RELOCATED THERMOSTAT
	EXISTING THERMOSTAT TO BE REMOVED/RELOCATED
	A - GRILLE/REGISTER TYPE B - GRILLE/REGISTER SIZE C - AIR BALANCE IN CFM
	FLOOR-MOUNTED SUPPLY GRILLE
	FLOOR-MOUNTED RETURN AIR GRILLE
	GAS
	HOT WATER TANK
	DOWN
	FLOOR DRAIN
	FUNNEL FLOOR DRAIN
	CLEAN-OUT
	FURNACE
	HOSE-BIBB
	CEILING MOUNTED CABINET EXHAUST FAN
	PIPE/DUCTWORK CONTINUATION
	PIPE/DUCTWORK DOWN
	NEW ABOVE FLOOR SANITARY DRAIN PIPING
	NEW COLD WATER PIPING
	NEW HOT WATER PIPING
	WATER METER
	GAS METER

DRAWING LIST

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

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 - 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	24SEP2018	TP
05	ISSUED FOR PERMIT	26SEP2018	TP
06	REVISED PER CITY COMMENTS	04JAN2019	TP
07	ISSUED FOR TENDER	14NOV2019	TP

NO.	REVISIONS	DATE	BY

PROJECT:

INTERIOR ALTERATIONS TO EXISTING FIRE HALL

553 KINGSTON ROAD,
PICKERING, ONTARIO

CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:

MECHANICAL SPECS, LEGEND, AND DRAWING LIST

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PROFESSIONAL ENGINEER
14NOV2019
A.A. MADONNA
PROVINCE OF ONTARIO

DESIGN BY: TP	DOC CONTROL: TP
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CHECKED BY: AMM	REVISIONS
DATE: 15 FEB 2018	
SCALE: 1/8" = 1'-0"	
FILE:	

PROJECT NO: **17-0239** DRAWING NO: **M-4**

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 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.
	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 BUTTON. '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, OVERLOAD PROTECTION, CONTROL TRANSFORMER, 2 NO AND 2 NC CONTACTS, PILOT LIGHT AND HOA. FUSED AT '15A'.
	CIRCUIT 'X' FED FROM RECEPTACLE PANEL 'A'. '(D)' DENOTES DESIGNATED CIRCUIT FOR ISOLATED GROUND DUPLEX RECEPTACLE.
	EXISTING CIRCUIT 'X' FED FROM RECEPTACLE PANEL 'A'. '(D)' DENOTES DESIGNATED CIRCUIT FOR ISOLATED GROUND DUPLEX RECEPTACLE.
	DENOTES LOW VOLTAGE DIGITAL LIGHT SWITCH LV#2E SWITCHING LEG 2
	INDICATES EXISTING DEVICE TO REMAIN.
	INDICATES EXISTING DEVICE TO BE REMOVED. REMOVE CONDUIT AND WIRE BACK TO SOURCE.
	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.
	DENOTES ROOF MOUNTED
	DENOTES CEILING MOUNTED
	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
	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 PHOTOELECTRIC SMOKE ALARM WITH STROBE LIGHT, 120V WITH BATTERY BACKUP C/W BATTERY. BRK ELECTRONICS 7010BSLA ULC LISTED.
	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

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4	ISSUED FOR TENDER	02/28/24	PC
5	RE-ISSUED FOR TENDER	06/10/24	PC



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HCC ENGINEERING LIMITED
 40 EGLINTON AVENUE EAST, SUITE 600
 TORONTO, ONTARIO, M4P 3K2
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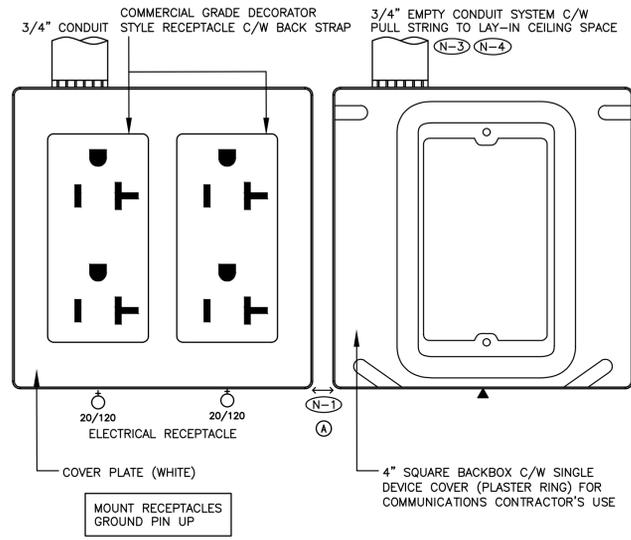
PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
 553 KINGSTON ROAD,
 PICKERING, ONTARIO
 CITY OF PICKERING CULTURE
 & RECREATION DEPARTMENT

DRAWING:
ELECTRICAL LEGEND AND DETAILS

BBA

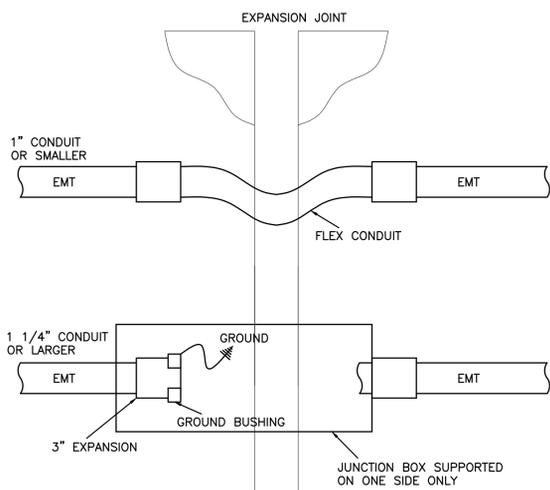
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CHECKED BY: HDC	INITIAL:
DATE: FEBRUARY 2018	
SCALE: AS SHOWN	
FILE:	

PROJECT NO: **17264** DRAWING NO: **E-1.1**

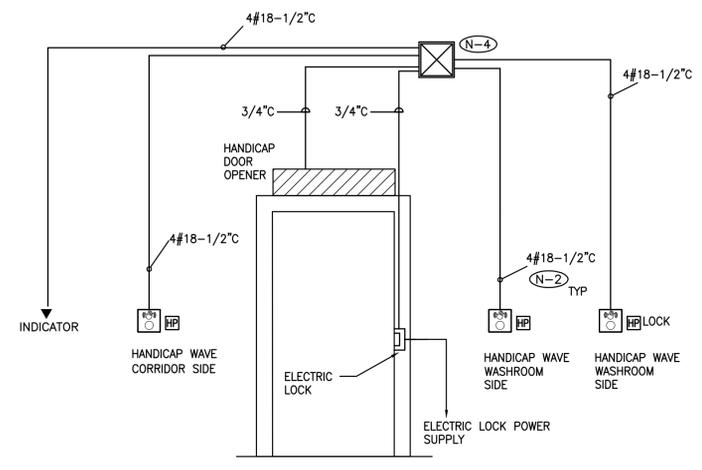


- (N-1) MINIMUM CLEARANCE.
 - (N-2) NEATLY LABEL ALL FLOOR MOUNTED AND WALL DEVICE BOX COVERS WITH CORRESPONDING PANEL NAMES AND CIRCUIT NUMBERS. UTILIZE SELF ADHESIVE MECHANICALLY PRINTED LABELS.
 - (N-3) PROVIDE PUNCH OUTS IN BACKBOX TO ACCOMMODATE CONDUITS INDICATED.
 - (N-4) TERMINATE CONDUIT WITH A 90 DEGREE BEND AND PLASTIC BUSHING IN THE ACCESSIBLE CEILING SPACE.
- EPS CCT - WHITE RECEPTACLE

1 TYPICAL WALL MOUNTED DEVICE DETAIL
E-1.2 SCALE: NTS

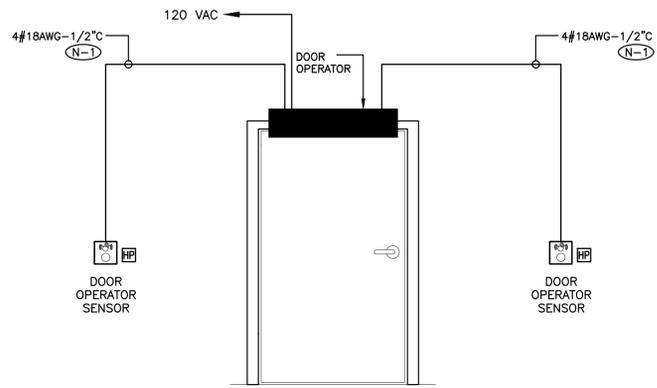


2 EXPANSION JOINT CROSSING DETAIL
E-1.2 SCALE: NTS



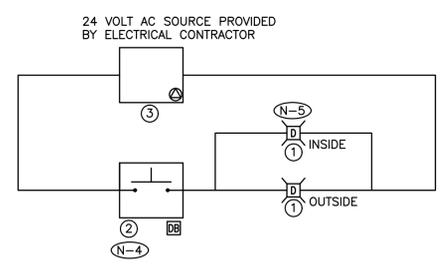
- (N-1) ROUGH-IN DETAILS ARE DIAGRAMMATIC.
- (N-2) PROVIDE WIRE, CONDUIT AND BACKBOXES INDICATED.
- (N-3) COORDINATE THE ROUGH-IN REQUIREMENT WITH DOOR MANUFACTURER AND DOOR OPERATOR CONTRACTOR PRIOR TO CONSTRUCTION.
- (N-4) PULLBOX INDICATED MUST BE LOCATED AT THE SECURED SIDE OF THE DOOR. MINIMUM PULLBOX SIZE 12" X 12".

3 ELECTRONIC DOOR LOCK ROUGH-IN DETAIL
E-1.2 SCALE: NTS



- (N-1) PROVIDE WIRE, CONDUIT AND BACKBOXES INDICATED.
- (N-2) COORDINATE THE ROUGH-IN REQUIREMENT WITH DOOR MANUFACTURER PRIOR TO CONSTRUCTION.

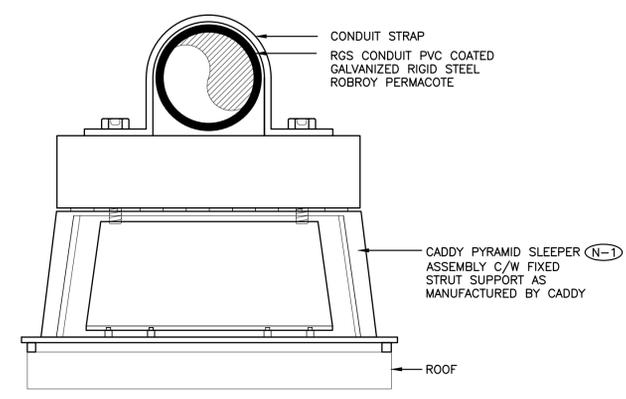
4 AUTOMATIC DOOR OPERATOR SYSTEM DETAIL
E-1.2 SCALE: NTS



- (N-1) SCHEMATIC IS DIAGRAMMATIC ONLY. REFER TO FLOOR PLANS FOR LOCATION AND QUANTITY OF DEVICES.
- (N-2) PROVIDE WIRING, CONTACTORS AND DUAL VOLTAGE RELAYS (DVR'S) AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM.
- (N-3) ALL LOW VOLTAGE WIRING TO BE ENCLOSED IN A CONDUIT SYSTEM.
- (N-4) PROVIDE EDWARDS SIGN-EMERG-PUSH SIGNAGE PER OBC ABOVE THE DURESS SYSTEM STATION.
- (N-5) WIRE THE APPLIANCE INDICATED FOR VISUAL ALARM ONLY.

- ① DURESS SYSTEM COMBINATION STROBE LIGHT/HORN - EDWARDS 6536-G5
- ② DURESS SYSTEM STATION, PUSH BUTTON - EDWARDS SS-2001E C/W SUB-102722-R SPACER
- ③ TRANSFORMER - EDWARDS 592

5 UNIVERSAL WASHROOM DURESS SYSTEM SCHEMATIC DIAGRAM
E-1.2 SCALE: NTS

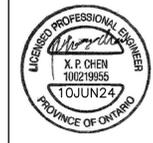


- (N-1) PROVIDE SLEEPERS AT 5' INTERVALS.
- (N-2) PROVIDE SECONDARY MEMBRANES AND FOAMS AS RECOMMENDED BY MANUFACTURER FOR SPECIFIC ROOF TYPES AND APPLICATIONS.

6 ROOFTOP CONDUIT MOUNTING DETAIL
E-1.2 SCALE: NTS

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PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
553 KINGSTON ROAD,
PICKERING, ONTARIO
CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:
ELECTRICAL DETAILS



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DATE: FEBRUARY 2018	SCALE: AS SHOWN
FILE:	

PROJECT NO: **17264**
DRAWING NO: **E-1.2**

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PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
 553 KINGSTON ROAD,
 PICKERING, ONTARIO
 CITY OF PICKERING CULTURE & RECREATION DEPARTMENT

DRAWING:
ELECTRICAL DETAILS



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DATE: FEBRUARY 2018	
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PROJECT NO:
17264
 DRAWING NO:
E-1.3

- (N-1) 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-2) NOT USED.
- (N-3) NOT USED.
- (N-4) ALL LOW VOLTAGE WIRING TO BE INSTALLED IN AN ENCLOSED CONDUIT SYSTEM.
- (N-5) PROVIDE POWER, CONDUIT, BACKBOX AND WIRING IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. MINIMUM CONDUIT SIZE 3/4".
- (N-6) 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.
- (N-8) NOT USED.
- (N-9) ROOM CONTROLLERS TO BE INSTALLED IN CEILING MOUNTED JUNCTION BOXES.
- (N-10) 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.
- (N-11) REFER TO MANUFACTURER'S INSTALLATION GUIDELINES FOR ADDITIONAL INSTALLATION REQUIREMENTS OVER AND ABOVE THOSE DETAILS ON THIS SCHEMATIC.
- (N-12) PROVIDE POWER PACKS, AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM. POWER PACKS NOT SHOWN ON REFLECTED CEILING PLANS.
- (N-13) 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.

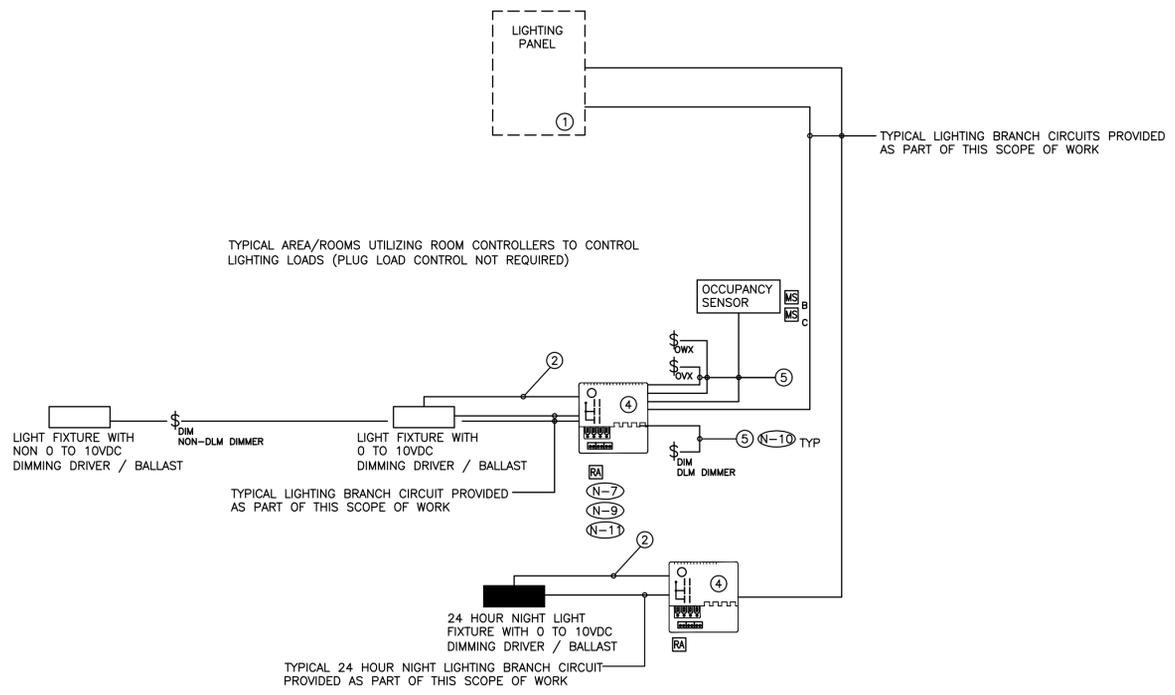
(N-14) LIGHT LEVEL OUTPUT (IE, DIMMING LEVEL) FOR EACH AND EVERY FIXTURE PROVIDED AS PART OF THIS SCOPE OF WORK IN ROOMS WITH DLM CONTROL TO BE FIELD ADJUSTED ON SITE WITH CLIENT POST OCCUPANCY. TARGET LIGHT LEVELS FOR EACH LOW VOLTAGE LIGHTING ZONE TO BE PROVIDED BY THE CLIENT POST OCCUPANCY. PROCURE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

- 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 STOPPER

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
 * * * * * DENOTES EXISTING TO BE REMOVED BY ELECTRICAL CONTRACTOR

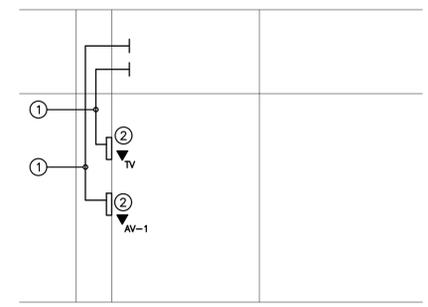


1 LOW VOLTAGE LIGHTING CONTROL SYSTEM WIRING SCHEMATIC
 E-1.3 SCALE: NTS

FIXTURE SCHEDULE

TYPE A1 - 1' X 4' RECESSED MOUNTED FLUORESCENT FIXTURE C/W 2 X T8 LAMPS, 120V BALLASTS AND ACRYLIC LENS.	TYPE B7 - 4000 LUMEN RECESSED LED DOWNLIGHT SUITABLE FOR OUTDOOR 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 LDRT8B40D010 ER8B30408040 8LBW1H ABR10P
TYPE A2 - 2' X 4' RECESSED MOUNTED FLUORESCENT FIXTURE C/W 4 X T8 LAMPS, 120V BALLASTS AND ACRYLIC LENS.	TYPE W1 - WALL MOUNTED FIXTURE C/W ACRYLIC LENS, BALLAST AND HID LAMP.
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 24EN-LD2-34-UNV-L840-CD-1	TYPE W2 - WALL MOUNTED FLOOD LIGHT FIXTURE C/W ACRYLIC LENS, BALLAST AND HPS LAMP
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 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 A5 - SURFACE MOUNTED FIXTURE C/W 8 X INCANDESCENT LAMPS.	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 A6 - 4' SUSPENDED FLUORESCENT FIXTURE C/W 2X T8 LAMPS, BALLASTS AND WIRE GUARD.	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 A7 - 8' WALL MOUNTED VAPOR TIGHT FLUORESCENT FIXTURE C/W 2X T8 LAMPS.	TYPE D2 - 2 X 5W MR16 24V BEGHELLI BTMR SERIES BTMR2-24V-5W LED, WHITE IN COLOUR.
TYPE A8 - WALL MOUNTED FIXTURE C/W WIRE GUARD, 2X RETROFITTED TED LED LAMPS.	TYPE D3 - 1 X 5W MR16 24V BEGHELLI BTMR SERIES BTMR1-24V-5W LED, WHITE IN COLOUR.
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 D4 - 2 X 7W MR16 24V BEGHELLI BTMR SERIES BTMR1-24V-5W LED, WHITE IN COLOUR.
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 8TNSLED-LD5-150HL-LW-UNV-L840-CD1-U C/W 2 (TWO) X WG/SNF-4FT	TYPE D5 - EMERGENCY REMOTE HEADS C/W 1 HEAD.
TYPE B1 - 6" RECESSED MOUNTED DOWNLIGHT C/W 1 X CFL LAMP.	TYPE D5A - RECESSED MOUNTED ADJUSTABLE EMERGENCY REMOTE HEAD.
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 D6 - EMERGENCY REMOTE HEADS C/W 2 HEADS.
TYPE B3 - 1500 LUMEN 4" LED RECESSED ROUND DOWNLIGHT GASKET 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	

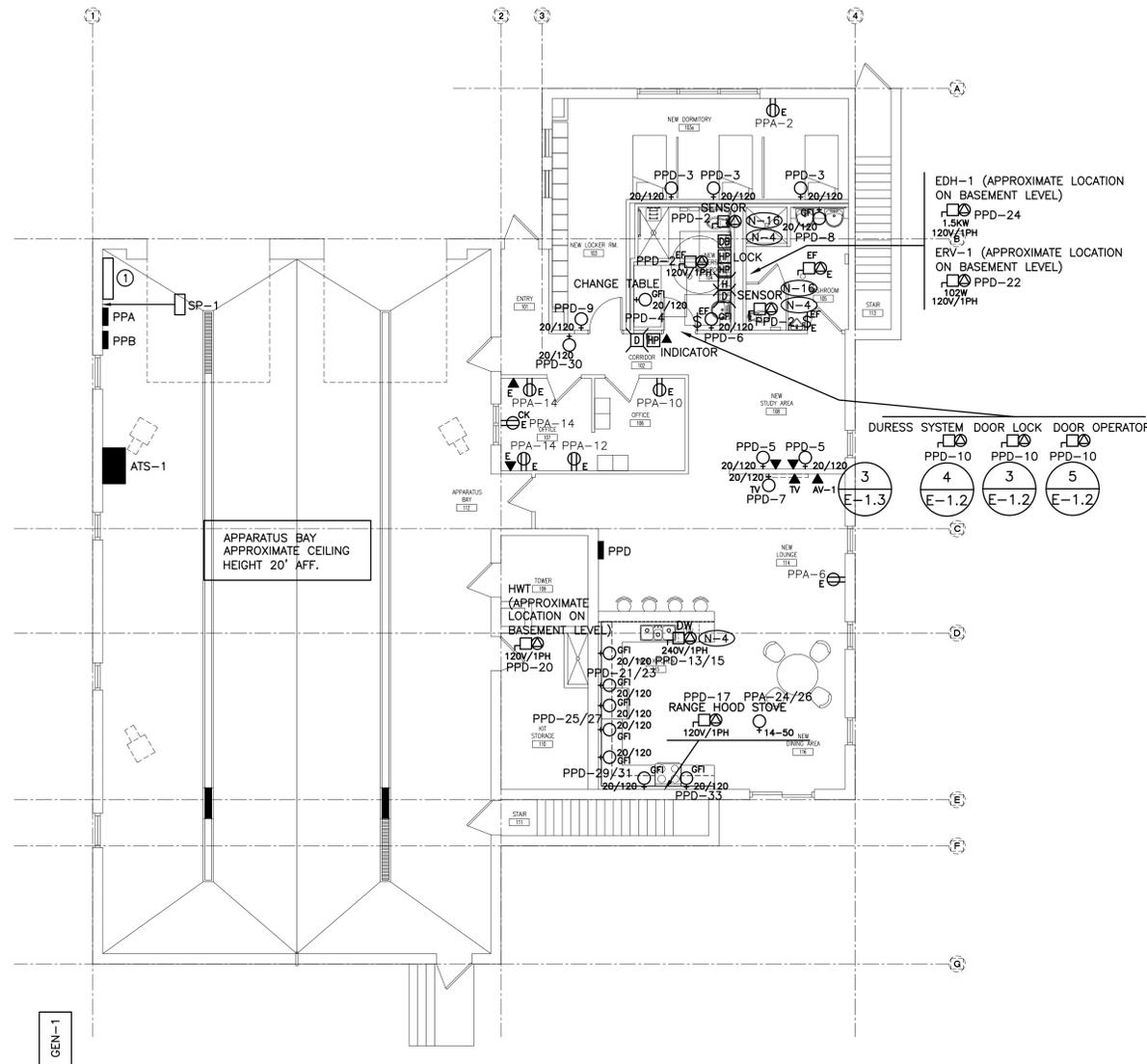
2 FIXTURE SCHEDULE
 E-1.3 SCALE: NTS



- (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

3 TV CONDUIT ROUGH-IN SYSTEM DETAIL
 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.
- (N-10) 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-11) 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.
- (N-12) PROVIDE LOCKONS FOR BREAKERS PROTECTING EMERGENCY LIGHTING CIRCUITS.
- (N-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.
- (N-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.
- (N-16) PROVIDE 120/24V TRANSFORMER FOR EACH WASHROOM APPLIANCE SENSOR (SENSOR PROVIDED BY DIVISION 15).
- (N-17) ALL CIRCUITS SHALL BE PROTECTED BY ARC FAULT CIRCUIT INTERRUPTERS.

(1) EXISTING METER CABINET.

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NO.	ISSUES	DATE	BY
1	ISSUED FOR REVIEW	02/27/18	PC
2	ISSUED FOR FINAL REVIEW	09/03/18	PC
3	ISSUED FOR PERMIT	09/26/18	PC
4	ISSUED FOR TENDER	02/28/24	PC
5	RE-ISSUED FOR TENDER	06/10/24	PC



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) 952-2423

PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
553 KINGSTON ROAD,
PICKERING, ONTARIO
CITY OF PICKERING CULTURE
& RECREATION DEPARTMENT

DRAWING:
**ELECTRICAL PLAN -
GROUND FLOOR**



BARRY BRYAN ASSOCIATES
Architects
Engineers
Project Managers
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L1N 0G5
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e-mail: bba@bba-archeng.com



DESIGN BY: PC	DOC CONTROL: DATE:
DRAWN BY: TLR	% COMPLETE:
CHECKED BY: HDC	INITIAL:
DATE: FEBRUARY 2018	
SCALE: 1/8" = 1'-0"	
FILE:	

PROJECT NO: **17264**
DRAWING NO: **E-2.1**

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NO.	ISSUES	DATE	BY
1	ISSUED FOR REVIEW	02/27/18	PC
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3	ISSUED FOR PERMIT	09/26/18	PC
4	ISSUED FOR TENDER	02/28/24	PC
5	RE-ISSUED FOR TENDER	06/10/24	PC

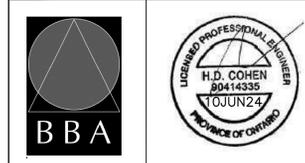


NO.	REVISIONS	DATE	BY

HCC ENGINEERING
 DESIGN AND TECHNOLOGY SERVICES GROUP
 HCC ENGINEERING LIMITED
 40 EGLINTON AVENUE EAST, SUITE 600
 TORONTO, ONTARIO, M4P 3A2
 Tel: (416) 952-2423

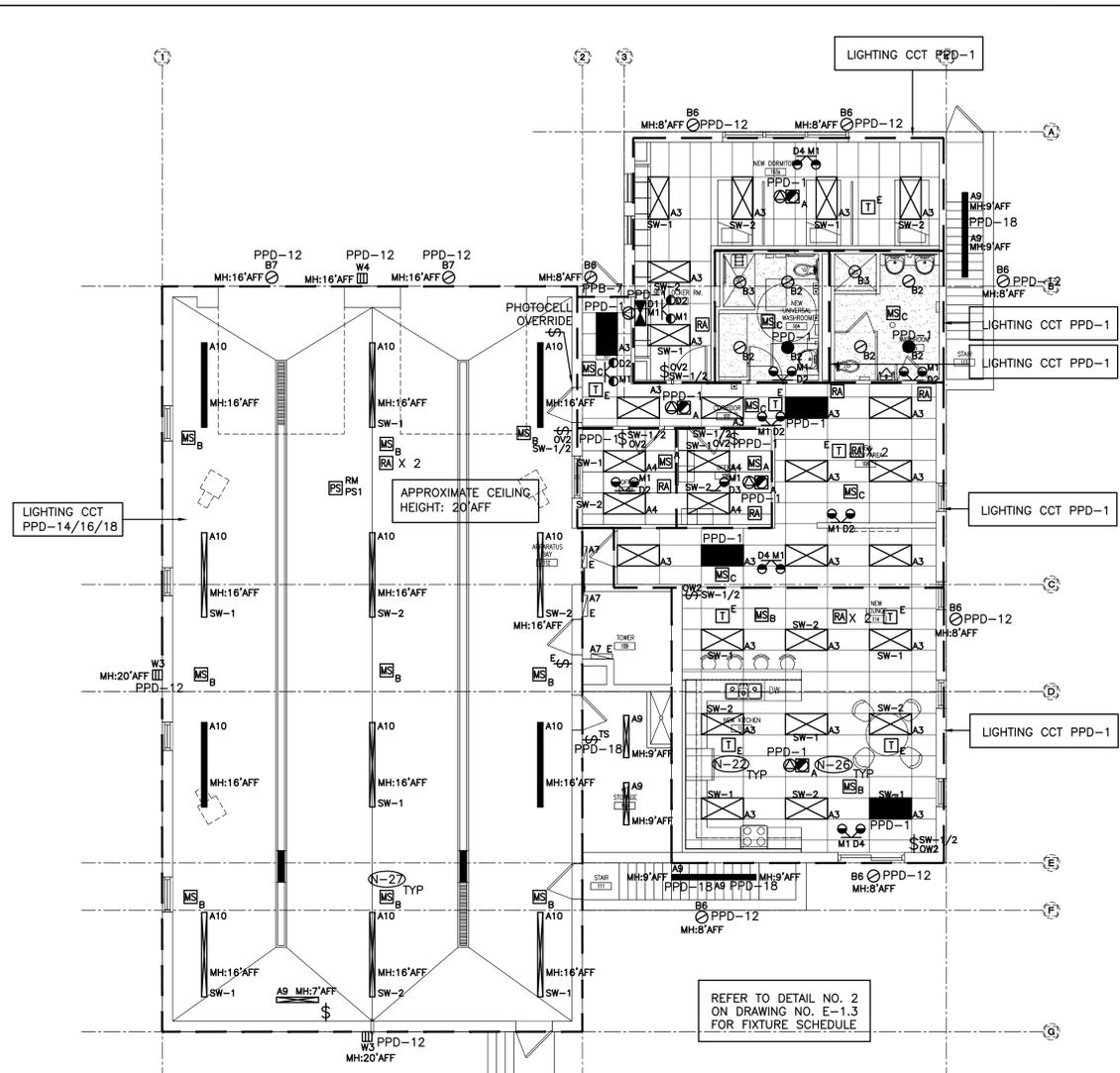
PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
 553 KINGSTON ROAD,
 PICKERING, ONTARIO
 CITY OF PICKERING CULTURE
 & RECREATION DEPARTMENT

DRAWING:
REFLECTED CEILING PLANS



BARRY BRYAN ASSOCIATES
 Architects
 Engineers
 Project Managers
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 Suite 201
 Whitby, Ontario
 L1N 0G5
 Tel: (905) 666-5252
 Fax: (905) 666-5250
 e-mail: bba@bba-archeng.com

DESIGN BY: PC
 DATE: FEBRUARY 2018
 CHECKED BY: HDC
 INITIAL: AS SHOWN
 FILE:
 PROJECT NO: **17264**
 DRAWING NO: **E-3.1**

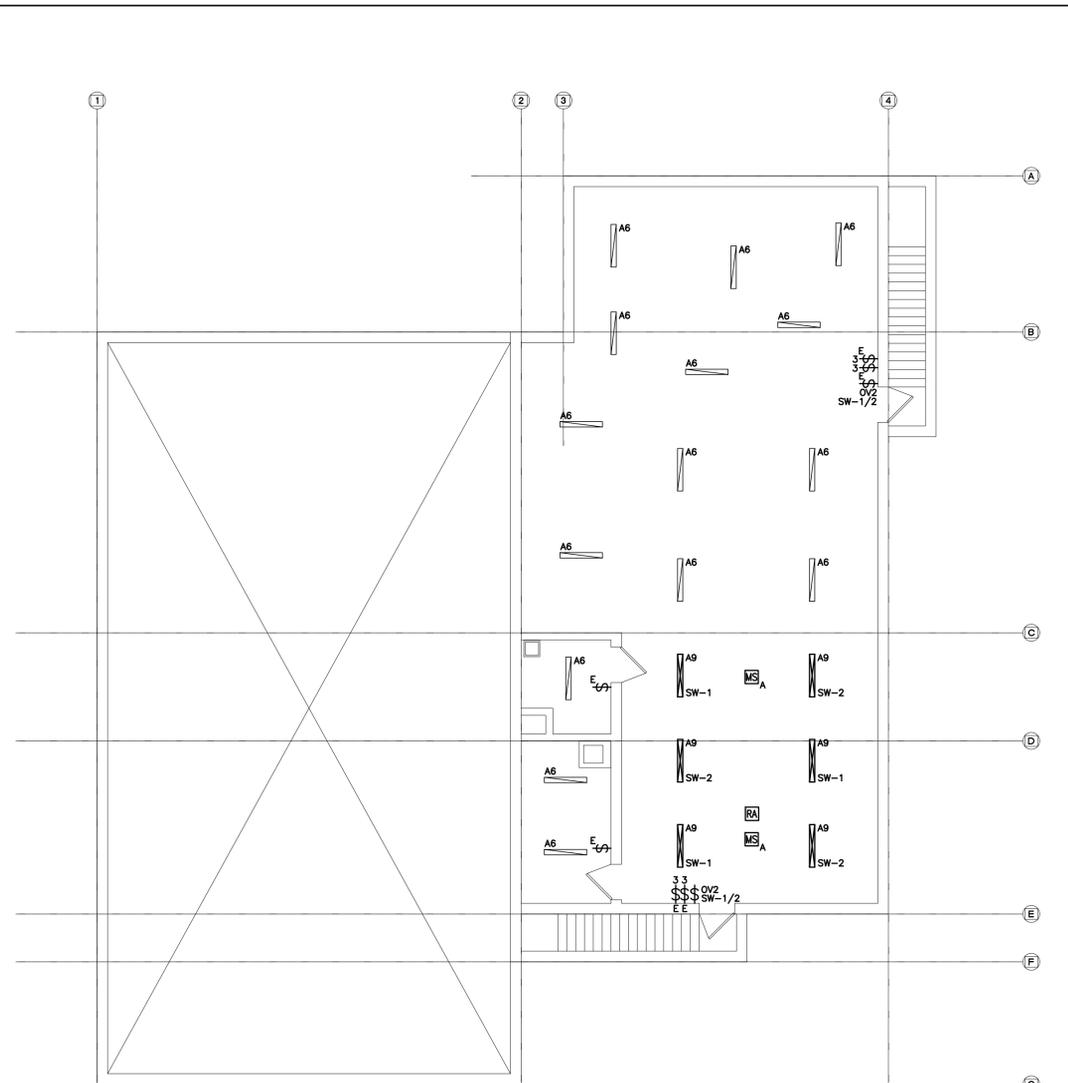


- (N-1) REFER TO DESIGNERS DRAWINGS FOR EXACT LOCATION AND HEIGHTS FOR MOUNTING OF FIXTURES, OCCUPANCY SENSORS, LIGHT SWITCHES, ETC.
- (N-2) PROVIDE NEW LIGHTING FIXTURES, SWITCHES, OCCUPANCY SENSORS, ETC. TO SUIT NEW REFLECTED CEILING PLAN.
- (N-3) COORDINATE INSTALLATION OF FIXTURES WITH MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT AND DUCT WORK.
- (N-4) NOT USED.
- (N-5) PROVIDE LOCK ON FOR BREAKERS PROTECTING EMERGENCY LIGHTING SYSTEMS / CIRCUITS.
- (N-6) NOT USED.
- (N-7) NOT USED.
- (N-8) NOT USED.
- (N-9) NOT USED.
- (N-10) AS PART OF THE BASE BID PRICE ELECTRICAL CONTRACTOR SHALL PROVIDE (SUPPLY AND INSTALL) AN ADDITIONAL TWO (2) TYPE D4 REMOTE HEADS OVER AND ABOVE THOSE SHOWN ON DETAIL NO. 2 ON DRAWING NO. E-3.1 POST CITY FIRE / BUILDING DEPARTMENT INSPECTIONS.

 PROVIDE TYPE D4 REMOTE HEADS, CONDUIT, WIRE (100' OF 2#12AWG + G (TOTAL OF 200' WIRE PLUS G, 100' CONDUIT) PER 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 CONSTRUCTION.
- (N-11) AS PART OF THE BASE BID PRICE ELECTRICAL CONTRACTOR SHALL PROVIDE (SUPPLY AND INSTALL) AN ADDITIONAL ONE (1) DIGITAL DIMMING ROOM CONTROLLERS OVER AND ABOVE THOSE SHOWN ON DETAIL NO. 2 ON DRAWING NO. E-3.1 ON AN AD HOC BASIS UP TO SUBSTANTIAL COMPLETION.

 PROVIDE WATT STOPPER LMRC-212 C/W CONDUIT, WIRE (50' OF 2#12AWG + G (TOTAL OF 100' WIRE PLUS G, 50' CONDUIT) PER ROOM CONTROLLER). TERMINATIONS, ETC. FOR FULLY FUNCTIONAL LIVE DEVICES. EXACT INSTALLATION LOCATION AND SWITCH LEGS TO BE DETERMINED ON SITE DURING CONSTRUCTION.
- (N-12) ALL SWITCHES PROVIDED AS PART OF THIS SCOPE OF WORK TO BE ALIGNED WITH THERMOSTATS.
- (N-13) PROVIDE NEW SWITCHING LEGS SHOWN ON DRAWING. REWIRE EXISTING FIXTURES IN RESPECTIVE ROOMS AS REQUIRED.
- (N-14) AS-BUILT DRAWINGS MUST DETAIL THE ZONING AND CIRCUIT NUMBERS OF ALL FIXTURES THROUGHOUT ENTIRE FLOOR.
- (N-15) CHAIN HANG ALL FIXTURES IN FINISHED CEILING AREAS ABOVE FROM SLAB.
- (N-16) 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.
- (N-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 CONFIRM PLACEMENT OF SENSORS.
- (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 LIGHTING CONTROL SERVICE CONSULTANT AND MECHANICAL CONTRACTOR PRIOR TO COMMENCING WORK.
- (N-20) 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-21) NOT USED.
- (N-22) 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.
- (N-23) UTILIZE CCT PPD-1 (DC SOURCES M1) TO POWER NON-SWITCHED NIGHT LIGHTING.
- (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.
- (N-25) EACH AND EVERY SPACE ENCLOSED BY CEILING HEIGHT PARTITIONS (I.E. 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.
- (N-26) SMOKE ALARMS SHALL BE WIRED SUCH THAT ACTIVATION OF ONE SMOKE ALARM WILL CAUSE ALL SMOKE ALARMS WITHIN THE BUILDING TO SOUND.
- (N-27) 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.

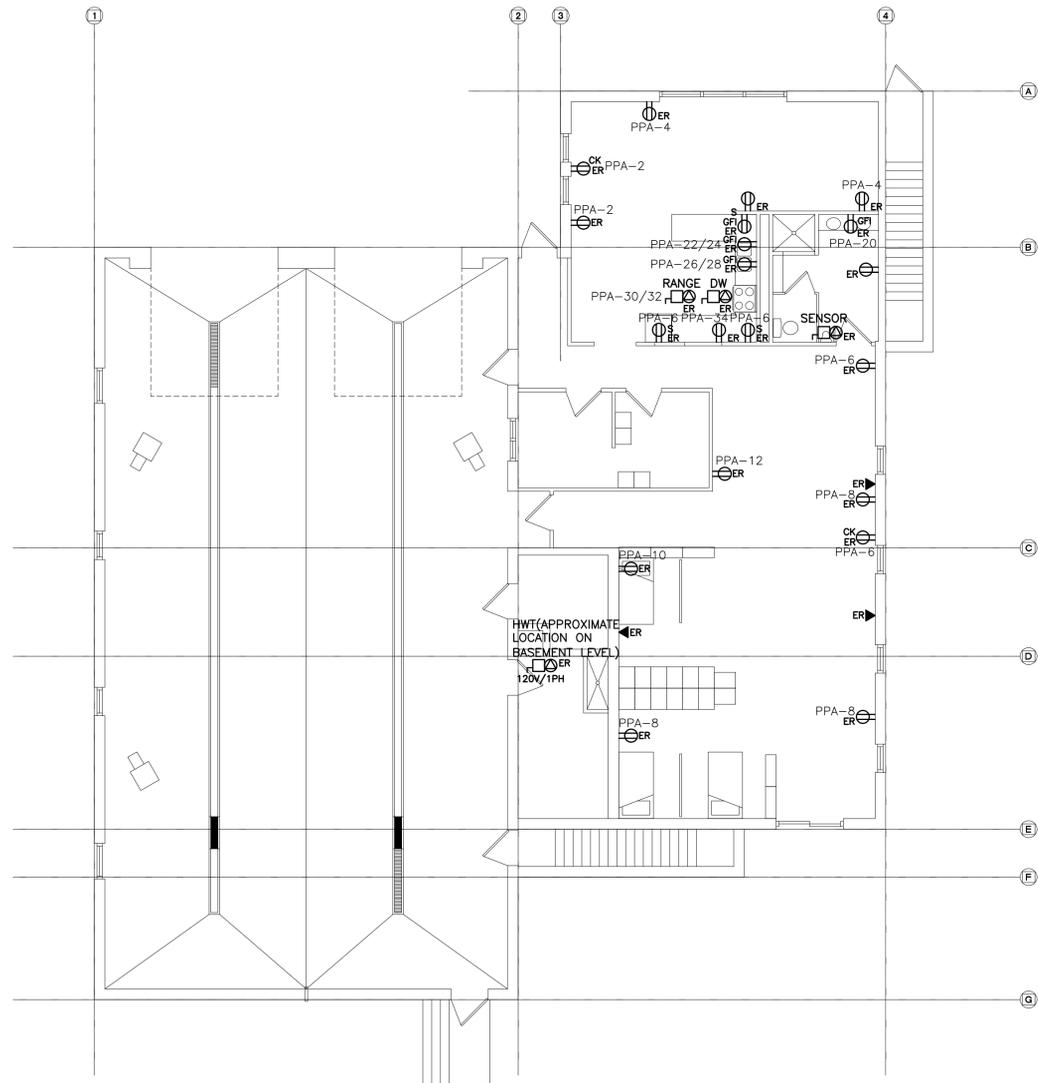
2 REFLECTED CEILING PLAN – GROUND FLOOR
 E-3.1 SCALE: 1/8" = 1'0"



- (N-1) REFER TO DESIGNERS DRAWINGS FOR EXACT LOCATION AND HEIGHTS FOR MOUNTING OF FIXTURES, OCCUPANCY SENSORS, LIGHT SWITCHES, ETC.
- (N-2) PROVIDE NEW LIGHTING FIXTURES, SWITCHES, OCCUPANCY SENSORS, ETC. TO SUIT NEW REFLECTED CEILING PLAN.
- (N-3) COORDINATE INSTALLATION OF FIXTURES WITH MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT AND DUCT WORK.
- (N-4) REUTILIZE EXISTING LIGHTING CIRCUITS UNLESS DENOTED OTHERWISE.
- (N-5) PROVIDE LOCK ON FOR BREAKERS PROTECTING EMERGENCY LIGHTING SYSTEMS / CIRCUITS.
- (N-6) PROVIDE NEW SWITCHING LEGS SHOWN ON DRAWING. REWIRE EXISTING FIXTURES IN RESPECTIVE ROOMS AS REQUIRED.
- (N-7) CHAIN HANG ALL FIXTURES IN FINISHED CEILING AREAS ABOVE FROM SLAB.
- (N-8) 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.
- (N-9) 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-11) 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.
- (N-12) 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 (I.E. 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

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 DRAWING.
- (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.
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1	ISSUED FOR REVIEW	02/27/18	PC
2	ISSUED FOR FINAL REVIEW	09/03/18	PC
3	ISSUED FOR PERMIT	09/26/18	PC
4	ISSUED FOR TENDER	02/28/24	PC
5	RE-ISSUED FOR TENDER	06/10/24	PC



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HCC ENGINEERING
 DESIGN AND TECHNOLOGY SERVICES GROUP
 HCC ENGINEERING LIMITED
 40 EGLINTON AVENUE EAST, SUITE 600
 TORONTO, ONTARIO, M4P 3K2
 Tel: (416) 952-2123

PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
 553 KINGSTON ROAD,
 PICKERING, ONTARIO
 CITY OF PICKERING CULTURE
 & RECREATION DEPARTMENT

DRAWING:
ELECTRICAL DEMOLITION PLAN - GROUND FLOOR



BARRY BRYAN ASSOCIATES
 Architects
 Engineers
 Project Managers
 250 Water Street
 Suite 201
 Whitby, Ontario
 L1N 0G5
 Tel: (905) 666-5252
 Fax: (905) 666-5250
 e-mail: bba@bba-archeng.com



DESIGN BY: PC	DOC CONTROL: DATE:
DRAWN BY: TLR	% COMPLETE:
CHECKED BY: HDC	INITIAL:
DATE: FEBRUARY 2018	
SCALE: 1/8" = 1'-0"	
FILE:	

PROJECT NO: **17264**
 DRAWING NO: **E-5.1**

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PROJECT:
INTERIOR ALTERATIONS TO EXISTING FIRE HALL
 553 KINGSTON ROAD,
 PICKERING, ONTARIO
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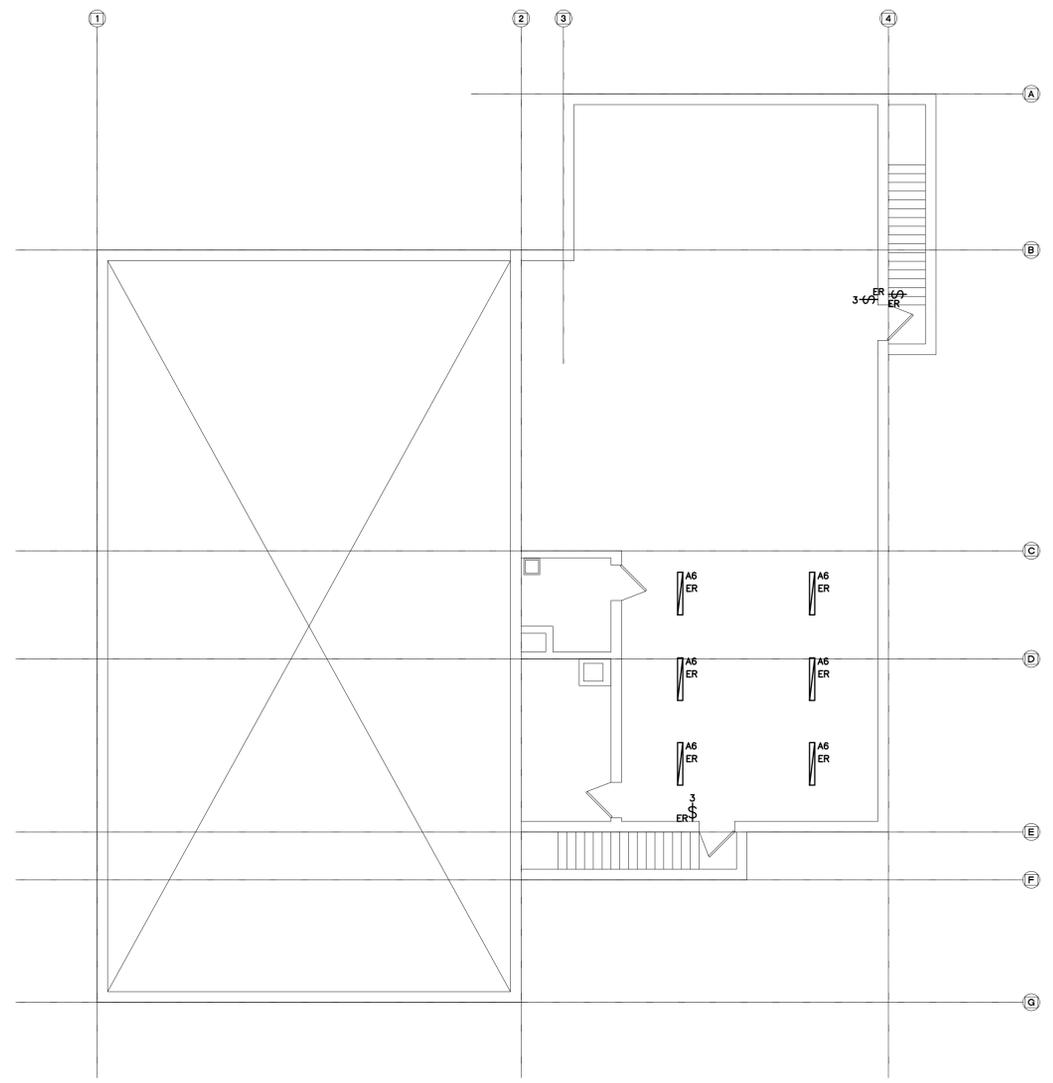
DRAWING:
**REFLECTED CEILING
 DEMOLITION PLANS**




BARRY BRYAN ASSOCIATES
 Architects
 Engineers
 Project Managers
 250 Water Street
 Suite 201
 Whitby, Ontario
 L1N 0G5
 Tel: (905) 666-5252
 Fax: (905) 666-5250
 e-mail: bba@bba-archeng.com

DESIGN BY: PC	DOC CONTROL: DATE:
DRAWN BY: TLR	% COMPLETE:
CHECKED BY: HDC	INITIAL:
DATE: FEBRUARY 2018	
SCALE: AS SHOWN	
FILE:	

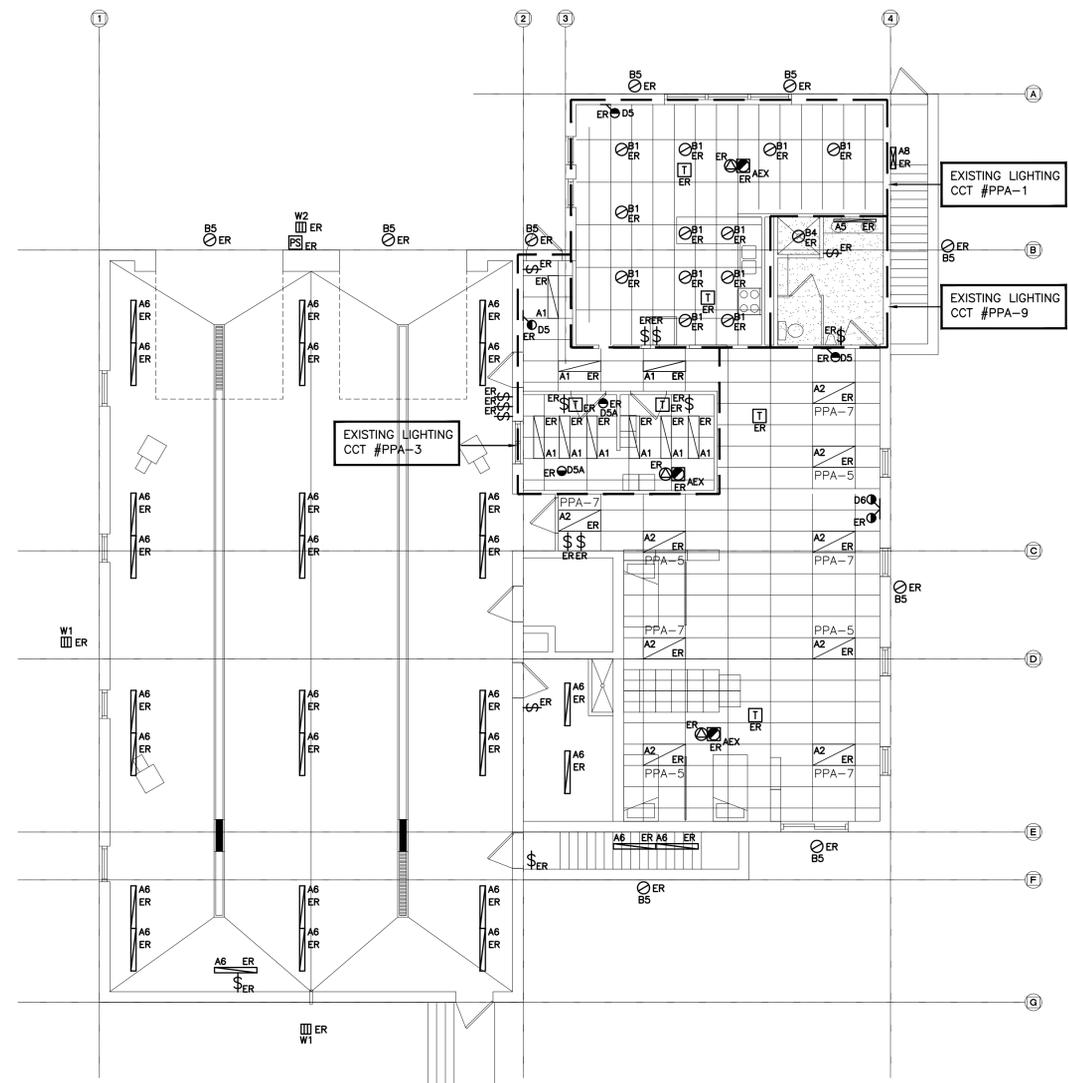
PROJECT NO: **17264**
 DRAWING NO: **E-6.1**



- (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 DISPOSED 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

1 REFLECTED CEILING DEMOLITION PLAN – BASEMENT LEVEL
 E-6.1 SCALE: 1/8" = 1'0"

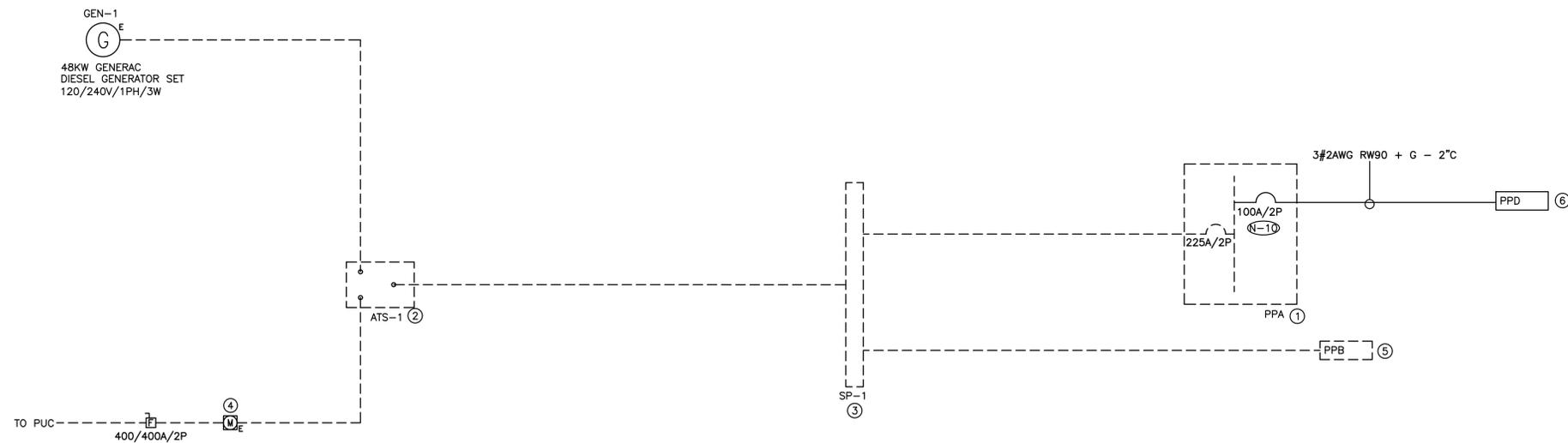


- (N-1) BASE BID PRICE SHALL INCLUDE FOR THE REMOVAL OF 2 ADDITIONAL FIXTURES OVER AND ABOVE THOSE SHOWN ON DETAIL NO. 2 ON DRAWING NO. E-6.1.
- (N-2) DISPOSE OF FIXTURES REMOVED AS PART OF THIS SCOPE OF WORK. RECYCLE ALL APPLICABLE COMPOUNDS AS DETAILED IN 'GREEN MEASURES' REQUIREMENTS. PROVIDE DOCUMENTATION 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 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 DISPOSED 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.
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REFER TO DETAIL NO. 2 ON DRAWING NO. E-1.3 FOR FIXTURE SCHEDULE

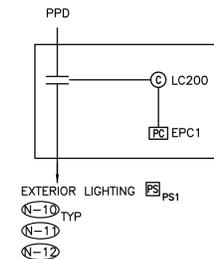
2 REFLECTED CEILING DEMOLITION PLAN – GROUND FLOOR
 E-6.1 SCALE: 1/8" = 1'0"

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- (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 END.
- (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.
- (N-10) 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.
- (N-11) PROVIDE REQUIRED PENETRATIONS THROUGH ROOF AND BUILDING ENVELOP. COORDINATE WORK AND WEATHERPROOF SEALING REQUIREMENTS WITH LANDLORD.
- (N-12) 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
- (N-13) 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



————— DENOTES NEW PROVIDED BY ELECTRICAL CONTRACTOR
 - - - - - DENOTES EXISTING TO REMAIN
 -X-X-X-X-X- DENOTES EXISTING TO BE REMOVED BY ELECTRICAL CONTRACTOR

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 CITY OF PICKERING CULTURE
 & RECREATION DEPARTMENT

DRAWING:
ELECTRICAL SINGLE LINE DIAGRAM



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PROJECT NO: **17264** DRAWING NO: **E-7.1**