

LEGEND - HVAC	
ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.	
REFER	DESCRIPTION
—E(NAME)—	EXISTING PIPING TO REMAIN
—RS—	REFRIGERANT SUCTION
—RL—	REFRIGERANT LIQUID
—○—	PIPING RISER UP
—◊—	PIPING DROP
—●—	PIPING RISER UP & DOWN
	TEE
	ELBOW – 90°
	ELBOW – 45°
	WYE
	REDUCER
	UNION
	FLANGE
	PUMP
	VERTICAL INLINE PUMP
	STRAINER
	SAFETY (S) OR RELIEF (R) VALVE
	DRAIN COCK
	SOLENOID ELECTRIC VALVE
	VACUUM BREAKER
	BACKFLOW PREVENTOR
	POSITIVE PRESSURE (SUPPLY) DUCT UP
	POSITIVE PRESSURE (SUPPLY) DUCT UP
	NEGATIVE PRESSURE (RETURN) DUCT UP
	POSITIVE PRESSURE (SUPPLY) DUCT DOWN
	POSITIVE PRESSURE (SUPPLY) DUCT DOWN
	NEGATIVE PRESSURE (RETURN) DUCT DOWN
	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
	NEW DUCTWORK
	SUPPLY AIR DIFFUSER (SQUARE)
	SUPPLY AIR DIFFUSER (ROUND)
	SIDEWALL GRILLE
	RETURN/EXHAUST GRILLE
	FULL RADIUS DUCT CONNECTION
	TAP-IN DUCT CONNECTION
	ROUND DUCT CONNECTION
	TURNING VANES
	FIRE DAMPER
MD	MOTORIZED DAMPER
BD	BALANCING DAMPER
OBBD	OPPOSED BLADE BALANCING DAMPER
OED	OPEN ENDED DUCT
ⓘ	THERMOSTAT
ⓇAT	REVERSE ACTING THERMOSTAT
	THERMOSTAT c/w TAMPERPROOF COVER
CAP	CAP

LEGEND - PLUMBING	
ALL SYMBOLS MAY NOT APPEAR ON DRAWINGS.	
REFER	DESCRIPTION
—E—	EXISTING PIPING
— — — — —	DOMESTIC COLD WATER PIPING
— — — — —	DOMESTIC HOT WATER PIPING
— — — — —	DOMESTIC HOT WATER RECIRC. PIPING
— — — — —	VENT PIPING
— — — — —	SANITARY PIPING ABOVE FLOOR
— — — — —	SANITARY PIPING BELOW GRADE OR FLOOR
—S—	STORM PIPING ABOVE FLOOR
—S—	STORM PIPING BELOW GRADE OR FLOOR
—NP—	NON-PORTABLE WATER PIPING
—T—	TEMPERED WATER PIPING
—GAS—	GAS PIPING
	PIPING TO BE REMOVED
	HEAT TRACED PIPING
—E— —	CONNECTION OF NEW AND EXISTING PIPING
—┐—	CAPPED PIPE
○ FD	FLOOR DRAIN
● FFD	FUNNEL FLOOR DRAIN
○ HD	HUB DRAIN
⊙ RD	ROOF DRAIN
⊙ RD	ROOF DRAIN ABOVE
⊙ CD	CANOPY DRAIN
—□ CO	CLEANOUT IN FLOOR
— CO	CLEANOUT IN LINE OR STACK
Ⓜ	WATER METER
Ⓜ	GAS METER
	NON-FREEZE WALL HYDRANT c/w VACUUM BREAKER
	HOSE BIBB c/w VACUUM BREAKER
	ISOLATION VALVE
	THROTTLING VALVE
	CHECK VALVE
	CHECK VALVE c/w BALL DRIP VALVE
	STRAINER
	GAS VALVE
	REDUCED PRESSURE BACKFLOW PREVENTOR
	VACUUM BREAKER – PRESSURE TYPE
	PRESSURE REDUCING VALVE (WATER)
	3-WAY VALVE
	TEMPERATURE & PRESSURE RELIEF VALVE
	SOLENOID VALVE
+	UNION
○ PG	PRESSURE GAUGE
T	THERMOMETER
▢ CB	CATCH BASIN
	ELECTRICALLY SUPERVISED VALVE
	DRAIN/TEST VALVE
	FLOW SWITCH
	FIRE DEPARTMENT PUMPER CONNECTION
	FIRE EXTINGUISHER – SURFACE MOUNTED
	FIRE EXTINGUISHER – CABINET
	SECURE FIRE EXTINGUISHER CABINET
●	SPRINKLER HEAD – PENDENT
✕	SPRINKLER HEAD – UPRIGHT
▶	SPRINKLER HEAD – SIDEWALL

MECHANICAL DRAWING LIST	
M1.0	MECHANICAL LEAD SHEET
M2.0	DRAINAGE FLOOR PLAN
M3.0	PLUMBING FLOOR PLAN
M4.0	SPRINKLER FLOOR PLAN
M5.0	HVAC FLOOR PLAN
M6.0	MECHANICAL SCHEDULES
M7.0	MECHANICAL DETAILS – 1
M7.1	MECHANICAL DETAILS – 2

GENERAL NOTES	
REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR COORDINATION OF GRILLES, DIFFUSERS AND OTHER ELEMENTS.	
IN ALL INSTANCES THE NEED FOR ACCESS DOORS IN GWB CEILINGS SHOULD BE AVOIDED IF POSSIBLE. WHERE INSTALLATION OF COMPONENTS WHICH REQUIRE ACCESS CANNOT BE AVOIDED, SUBMIT (DIMENSIONED) LAYOUT ON ARCHITECTURAL REFLECTED CEILING PLANS TO CONSULTANTS FOR APPROVAL PRIOR TO INSTALLATION OF COMPONENT.	
EXISTING ITEMS TO BE REMOVED REMAIN THE PROPERTY OF THE OWNER AND SHALL BE DELIVERED TO A LOCATION ON SITE DESIGNATED BY THE OWNER. IF THE OWNER DECLARES NO INTEREST IN THE REMOVED ITEMS, ASSUME OWNERSHIP AND REMOVE THE ITEMS FROM THE SITE.	
REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATION FOR PHASING AND STAGING.	


PLUMBING NOTES	
1. CONTRACTOR IS TO VERIFY CONNECTION POINTS TO SERVICES WITH OTHER TRADES ON SITE.	
2. CONTRACTOR IS TO CLEAR DUCTWORK WHEN INSTALLING NEW PIPING. CLEARANCES TO BE VERIFIED ON SITE.	
3. PROVIDE A CLEANOUT AT THE BOTTOM OF EVERY SOIL AND WASTE STACK THAT CONNECTS TO A HORIZONTAL DRAINAGE PIPE.	
4. PROVIDE A CLEANOUT FROM EACH PLUMBING FIXTURE WHERE REQUIRED BY ONTARIO BUILDING CODE, PART 7 – PLUMBING.	
5. CHECK AND VERIFY LOCATION OF ALL PIPES, DUCTS, AND EQUIPMENT WITH ALL OTHER TRADES TO PREVENT INTERFERENCE. REMOVAL OR RELOCATION OF ANY SUCH WORK INTERFERING WITH WORK OF OTHER TRADES IS THE RESPONSIBILITY OF THE MECHANICAL TRADE CONCERNED UNLESS OTHERWISE APPROVED IN WRITING.	
6. ALL PLUMBING FIXTURES INCLUDING FLOOR DRAINS (HUB, FUNNEL FLOOR DRAINS) TO BE TRAPPED AND VENTED AS REQUIRED BY ONTARIO BUILDING CODE, PART 7 – PLUMBING.	
7. FOR MOUNTING HEIGHT OF ALL PLUMBING FIXTURES REFER TO ARCHITECTURAL DRAWINGS.	
8. PROVIDE ACCESS DOOR FOR ALL VALVES LOCATED ABOVE DRY WALL CEILING.	
9. PROVIDE ACCESS DOOR FOR ALL CLEANOUTS LOCATED ABOVE DRY WALL CEILING.	
10. IN ALL INSTANCES THE NEED FOR ACCESS DOOR IN GWB CEILINGS SHOULD BE AVOIDED IF POSSIBLE. WHERE INSTALLATION OF COMPONENTS WHICH REQUIRE ACCESS CANNOT BE AVOIDED, SUBMIT (DIMENSIONED) LAYOUT ON ARCHITECTURAL REFLECTED CEILING PLANS TO CONSULTANTS FOR APPROVAL PRIOR TO INSTALLATION OF COMPONENT.	
11. PROVIDE SIGN IDENTIFYING LOCATION OF ALL VALVES INSTALLED IN CEILING SPACE.	
12. ALL WATER, SANITARY, SEWER AND VENT COPPER PIPING WITH SOLDER JOINTS SHALL BE LEAD FREE. DO NOT INSTALL WATER LINES IN OUTSIDE WALL WHERE THEY MAY FREEZE, UNLESS BOTH THE WALL AND THE PIPES ARE PROPERLY INSULATED.	
13. INSTALL SHUT-OFF VALVES AT EACH PLUMBING FIXTURE.	
14. REFER TO ARCHITECTURAL FOR OWNER SUPPLIED EQUIPMENT. CONFIRM ALL MECHANICAL REQUIREMENTS AND PROVIDE TO SUIT.	

FIRE SUPPRESSION NOTES	
1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE, NFPA STANDARDS AND THE ONTARIO BUILDING CODE.	

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF THOMAS BROWN ARCHITECT INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.		
ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
1	ISSUED FOR REVIEW	2018-05-14
2	ISSUED FOR 80% REVIEW	2018-10-02
3	ISSUED FOR 90% DESIGN DEVELOPMENT	2018-11-21
4	ISSUED FOR REVIEW	2019-01-03
5	ISSUED FOR BUILDING PERMIT	2019-03-14
6	ISSUED FOR ADDENDUM ME-1	2019-08-20
7	ISSUED FOR CONSTRUCTION	2020-02-24

PROJECT :


YORK REGION PRS
STATION #29



REGAL CONSULTING ENGINEERS INC.
CONSULTING MECHANICAL & ELECTRICAL ENGINEERS
2359 Royal Windsor Drive, Suite 201, Mississauga, Ontario L5J 4S9
PHONE: (905)655-3010
www.regal-eng.com


107 GLEN CAMERON ROAD, MARKHAM

CLIENT



THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

ARCHITECT



A
T
W:

197 SPADINA AVE, SUITE 500, TORONTO, ON
416-364-5710 EXT 101
WWW.TBROWNARCH.COM

PROFESSIONAL SEAL

Approval to Proceed

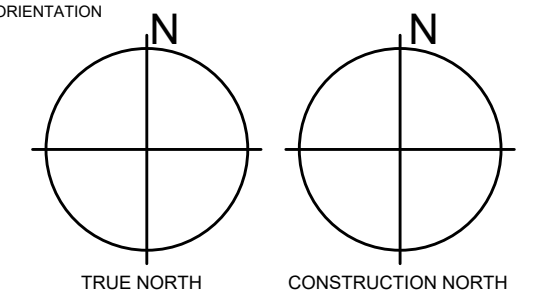
Project Phase

Authorization (signature)

DWG TITLE

LEAD SHEET

ORIENTATION



TRUE NORTH CONSTRUCTION NORTH

DATE

Jan. 03, 2019

SCALE

N.T.S.

DRAWN BY

DH

DWG STATUS :

PERMIT

PROJECT No.

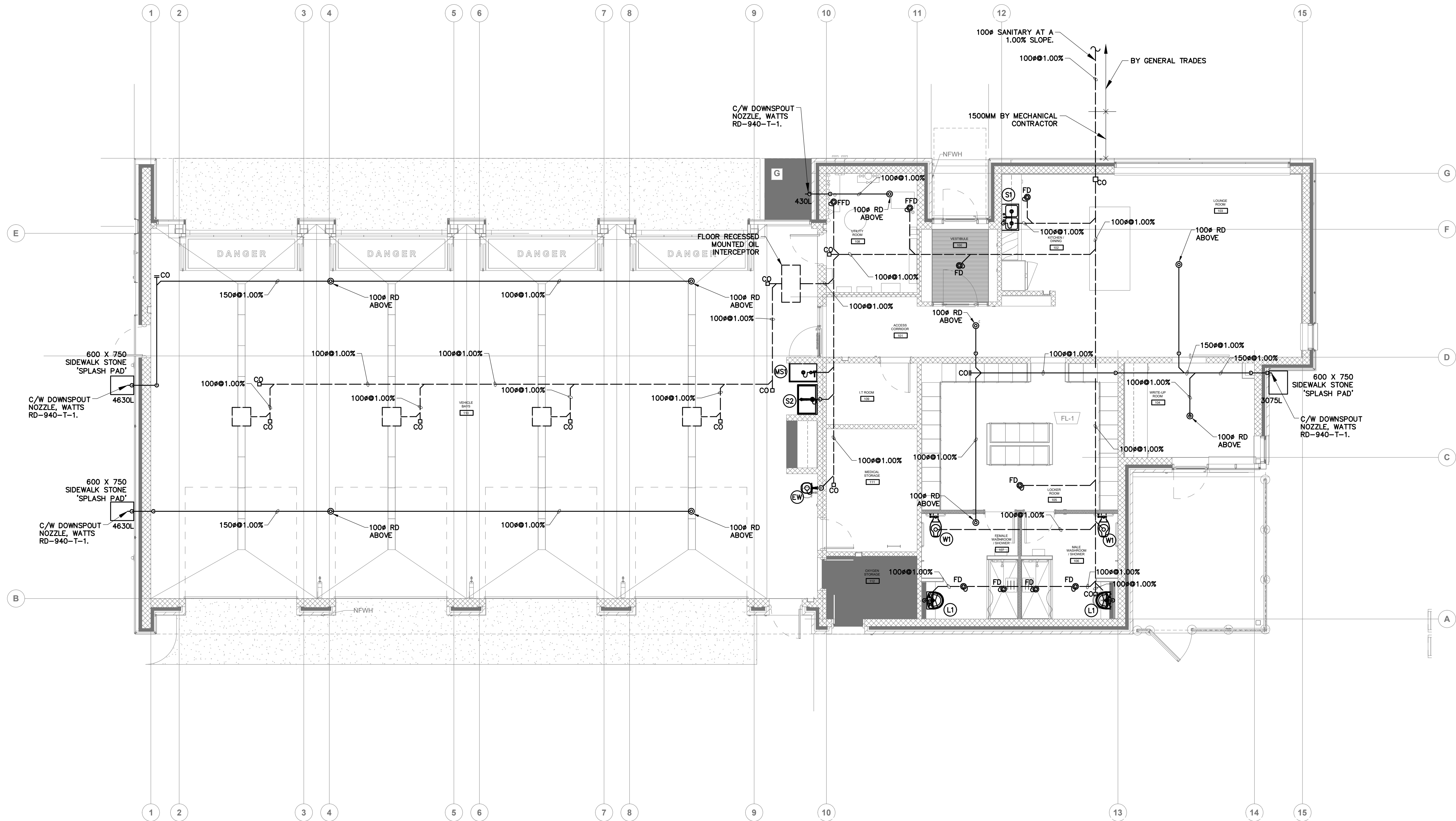
2016-147

DRAWING No.

M1.0

REVISION

--



THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS
REMAIN THE COPYRIGHT PROPERTY OF
THOMAS BROWN ARCHITECT INC.
AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
1	ISSUED FOR REVIEW	2018-05-14
2	ISSUED FOR 80% REVIEW	2018-10-02
3	ISSUED FOR 90% DESIGN DEVELOPMENT	2018-11-21
4	ISSUED FOR REVIEW	2019-01-03
5	ISSUED FOR BUILDING PERMIT	2019-03-14
6	ISSUED FOR ADDENDUM ME-1	2019-08-20
7	ISSUED FOR CONSTRUCTION	2020-02-24

PROJECT :

YORK REGION PRS STATION #29

107 GLEN CAMERON ROAD, MARKHAM



REGAL CONSULTING ENGINEERS INC.
CONSULTING MECHANICAL & ELECTRICAL ENGINEERS
2359 Royal Windsor Drive, Suite 201, Mississauga, Ontario L5J 4S9
PHONE: (905) 893-3010
www.rcengr.com



THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR
TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES
ARE TO BE REPORTED TO THE CONSULTANT.

ARCHITECT
**THOMAS BROWN
ARCHITECTS**

A 197 SPADINA AVE, SUITE 500, TORONTO, ON
T 416-364-5710 EXT 101
W WWW.TBROWNARCH.COM

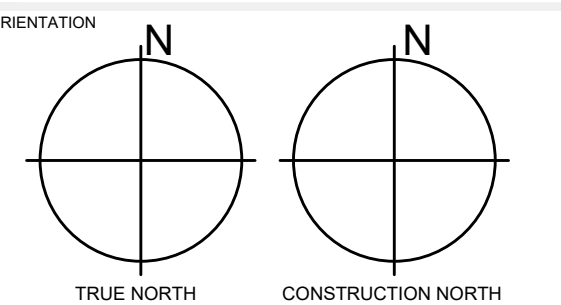
PROFESSIONAL SEAL

Approval to Proceed

Project Phase

Authorization (signature)

DWG TITLE
**DRAINAGE FLOOR
PLAN**



DATE
Jan. 03, 2019

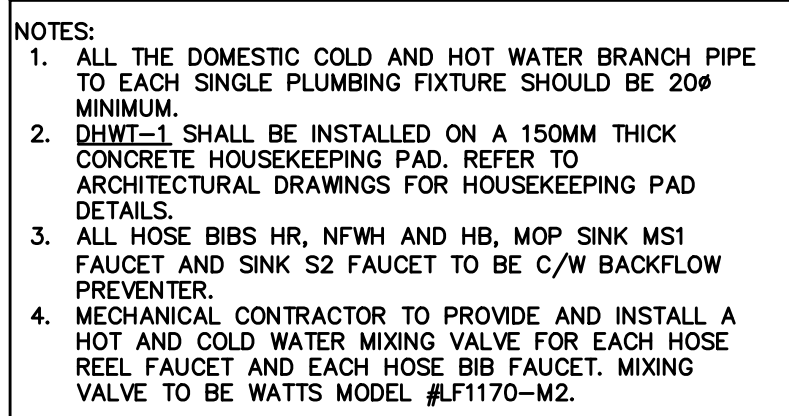
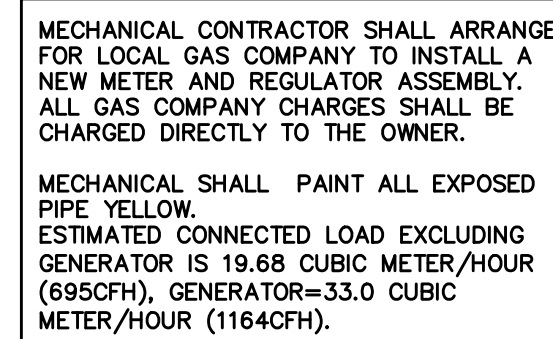
SCALE
1:75
DRAWN BY
DH

DWG STATUS :
PERMIT

PROJECT No.
2016-147

DRAWING No.
M2.0

REVISION
--



THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS
REMAIN THE COPYRIGHT PROPERTY OF
THOMAS BROWN ARCHITECT INC.
AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
1	ISSUED FOR REVIEW	2018-05-14
2	ISSUED FOR 80% REVIEW	2018-10-02
3	ISSUED FOR 90% DESIGN DEVELOPMENT	2018-11-21
4	ISSUED FOR REVIEW	2019-01-03
5	ISSUED FOR BUILDING PERMIT	2019-03-14
6	ISSUED FOR ADDENDUM ME-1	2019-08-20
7	ISSUED FOR CONSTRUCTION	2020-02-24

PROJECT: YORK REGION PRS
STATION #29

107 GLEN CAMERON ROAD, MARKHAM



REGAL CONSULTING ENGINEERS INC.
CONSULTING MECHANICAL & ELECTRICAL ENGINEERS
2359 Royal Windsor Drive, Suite 201, Mississauga, Ontario L5J 4S9
PHONE: (905)855-3010
www.regal-eng.com

IDENT



THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

THOMASBROWN
ARCHITECTS

197 SPADINA AVE, SUITE 500, TORONTO, ON
416-364-5710 EXT 101
WWW.TBROWNARCH.COM

PROFESSIONAL SEAL

Approval to Proceed

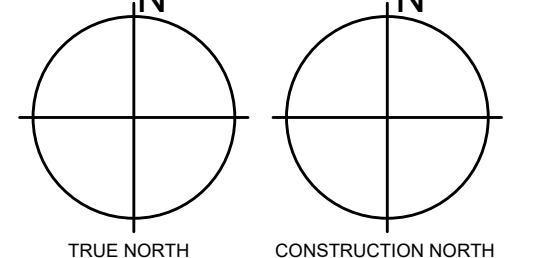
Project Phase

authorization (signature)

WORKING TITLE

PLUMBING FLOOR PLAN

IMPLEMENTATION



Jan. 03, 2019

SALE

DRAWN BY
DH

ING STATUS

PERMIT

PROJECT No.

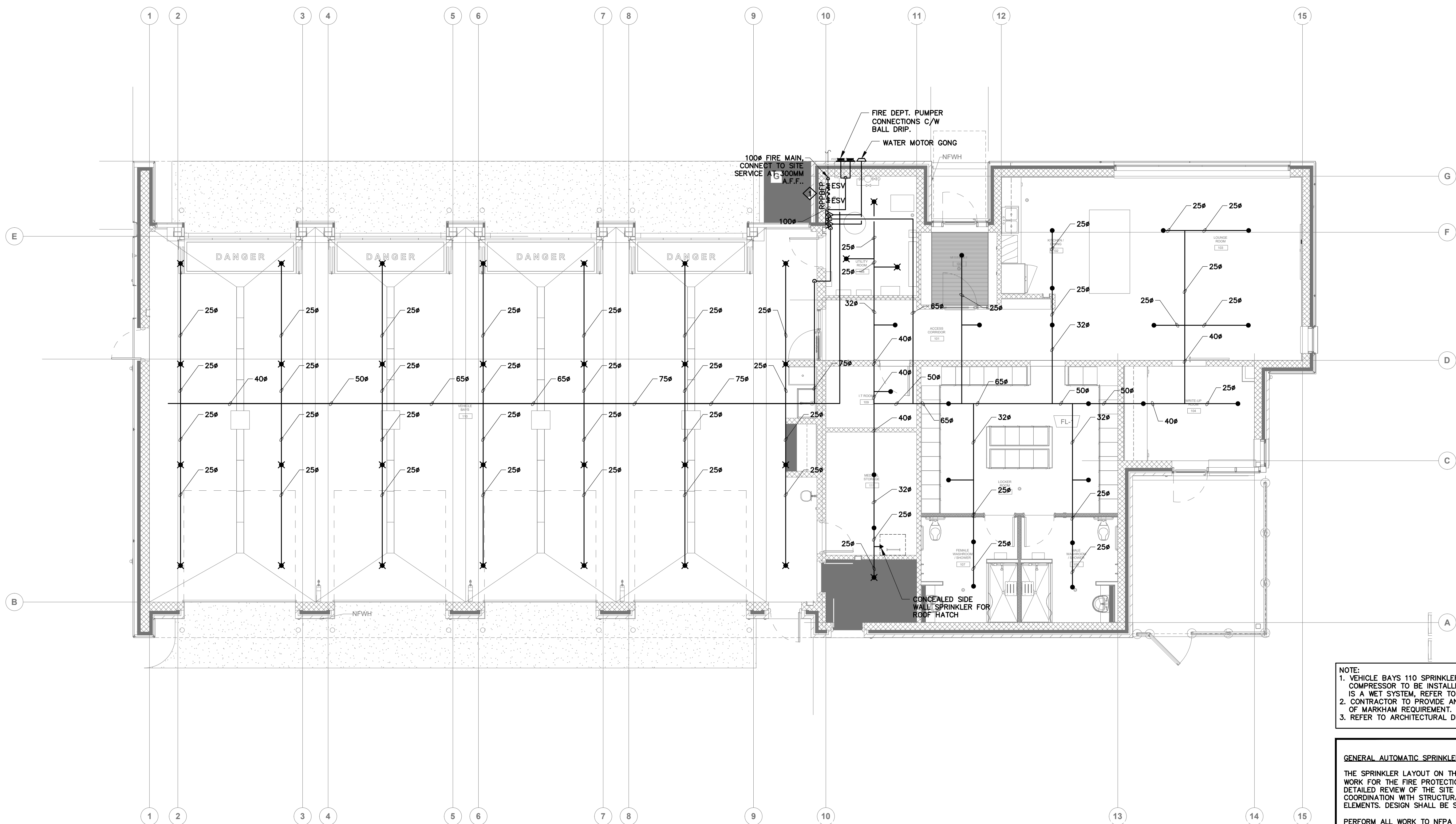
2016-147

DRAWING No.

M3.0

REVISION

100



NOTE:
1. VEHICLE BAYS 110 SPRINKLER SYSTEM IS A DRY SPRINKLER SYSTEM. AIR COMPRESSOR TO BE INSTALLED IN UTILITY ROOM. OTHER SPRINKLER SYSTEM IS A WET SYSTEM, REFER TO THE SPRINKLER PIPING SCHEMATICS.
2. CONTRACTOR TO PROVIDE AND INSTALL BACKFLOW PREVENTER AS PER CITY OF MARKHAM REQUIREMENT.
3. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING DETAILS.

GENERAL AUTOMATIC SPRINKLER NOTES

THE SPRINKLER LAYOUT ON THESE DRAWINGS SERVES AS A GENERAL SCOPE OF WORK FOR THE FIRE PROTECTION CONTRACTOR (FPC). THE FPC SHALL DO A DETAILED REVIEW OF THE SITE AND DETERMINE THE BEST DETAILED LAYOUT IN COORDINATION WITH STRUCTURAL, MECHANICAL, ELECTRICAL AND OTHER BUILDING ELEMENTS. DESIGN SHALL BE STAMPED AND SIGNED BY THE FPC PENG.

PERFORM ALL WORK TO NFPA 13 AND AUTHORITIES HAVING JURISDICTION (OBC).

SPRINKLER HEADS SHALL BE ALIGNED IN BOTH DIRECTIONS WHERE POSSIBLE, LENGTHWISE CENTRE OF TILE AT CENTRE OR QUARTER POINTS. THE CONSULTANTS MAY REQUIRE SPRINKLER LAYOUT BE REVISED FOR APPEARANCE CONSIDERATIONS AT NO CHANGE IN PRICE FOR THE CONTRACTOR.

FPC SHALL SITE VERIFY WATER SUPPLY AND PERFORM A FLOW TEST.

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF THOMAS BROWN ARCHITECT INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
1	ISSUED FOR REVIEW	2018-05-14
2	ISSUED FOR 80% REVIEW	2018-10-02
3	ISSUED FOR 90% DESIGN DEVELOPMENT	2018-11-21
4	ISSUED FOR REVIEW	2019-01-03
5	ISSUED FOR BUILDING PERMIT	2019-03-14
6	ISSUED FOR ADDENDUM ME-1	2019-08-20
7	ISSUED FOR CONSTRUCTION	2020-02-24

PROJECT :

YORK REGION PRS STATION #29

107 GLEN CAMERON ROAD, MARKHAM



REGAL CONSULTING ENGINEERS INC.
CONSULTING MECHANICAL & ELECTRICAL ENGINEERS
2359 Royal Windsor Drive, Suite 201, Mississauga, Ontario L5J 4S9
PHONE: (905) 895-3010
WWW.RCEI-REG.COM



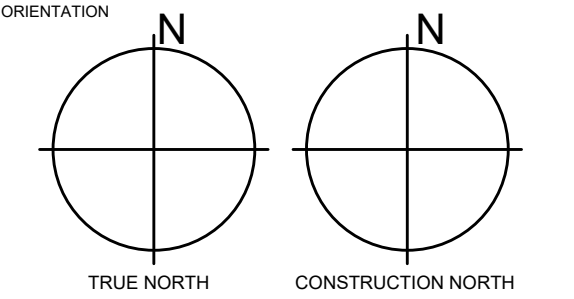
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

ARCHITECT:
**THOMASBROWN
ARCHITECTS**

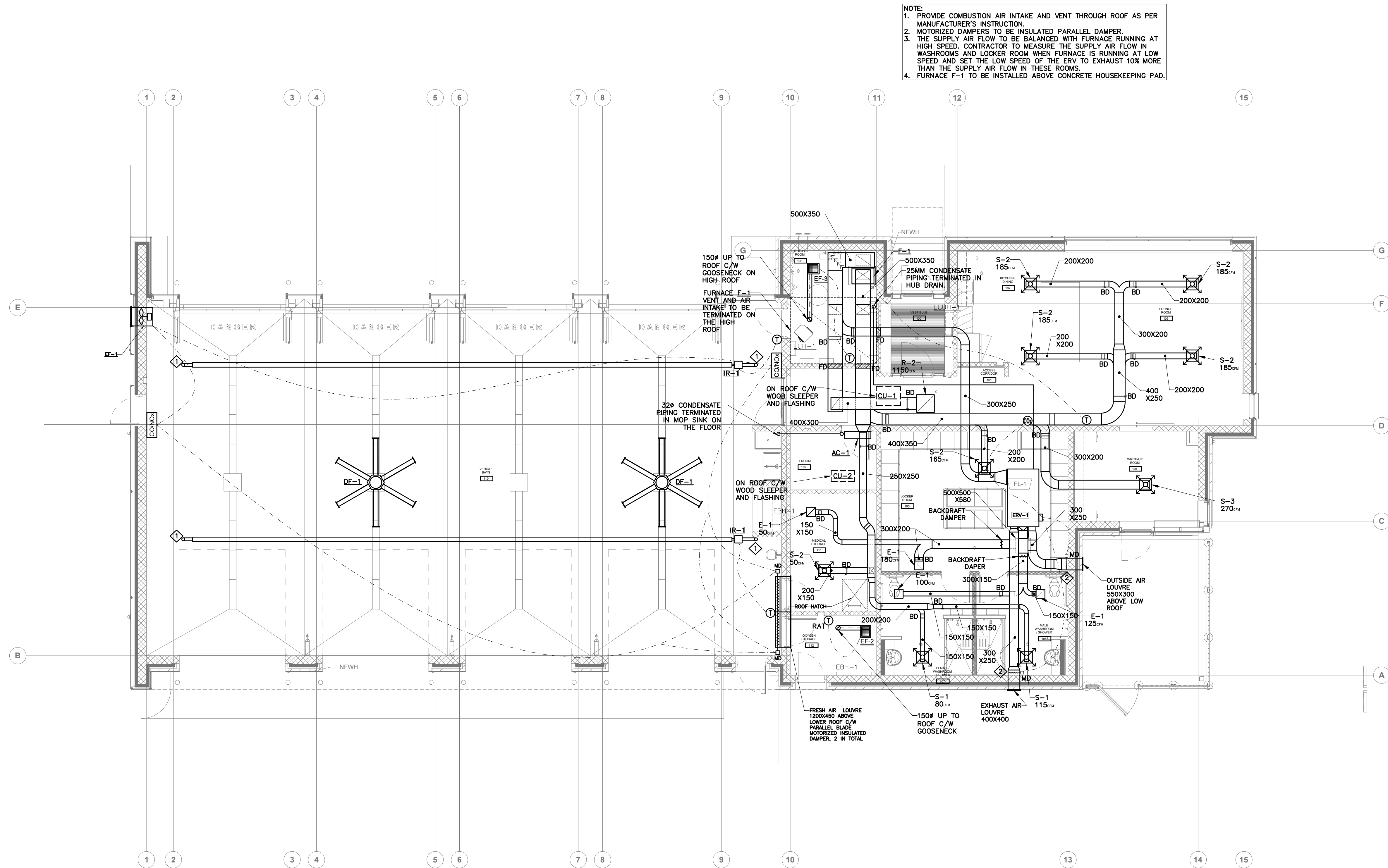
A: 197 SPADINA AVE, SUITE 500, TORONTO, ON
T: 416-364-5710 EXT 101
W: WWW.TBROWNARCH.COM

PROFESSIONAL SEAL
Approval to Proceed
Project Phase
Authorization (signature)

DWG TITLE
**SPRINKLER FLOOR
PLAN**



DATE: Jan. 03, 2019
SCALE: 1:75
DRAWN BY: DH
DWG STATUS: PERMIT
PROJECT No.: 2016-147
DRAWING No.: M4.0
REVISION: --



THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS
REMAIN THE COPYRIGHT PROPERTY OF
THOMAS BROWN ARCHITECT INC.
AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
1	ISSUED FOR REVIEW	2018-05-14
2	ISSUED FOR 80% REVIEW	2018-10-02
3	ISSUED FOR 90% DESIGN DEVELOPMENT	2018-11-21
4	ISSUED FOR REVIEW	2019-01-03
5	ISSUED FOR BUILDING PERMIT	2019-03-14
6	ISSUED FOR ADDENDUM ME-1	2019-08-20
7	ISSUED FOR CONSTRUCTION	2020-02-24

PROJECT :

YORK REGION PRS STATION #29

107 GLEN CAMERON ROAD, MARKHAM



REGAL CONSULTING ENGINEERS INC.
CONSULTING MECHANICAL & ELECTRICAL ENGINEERS
2359 Royal Windsor Drive, Suite 201, Mississauga, Ontario L5J 4S9
PHONE: (905) 855-3010
WWW.RCEI-REG.COM



THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR
TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES
ARE TO BE REPORTED TO THE CONSULTANT.

ARCHITECT
**THOMAS BROWN
ARCHITECTS**

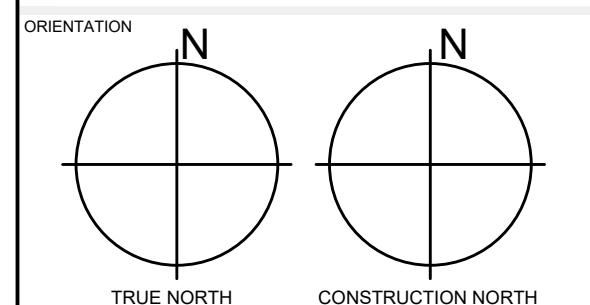
A 197 SPADINA AVE, SUITE 500, TORONTO, ON
T 416-364-5710 EXT 101
W WWW.TBROWNARCH.COM

PROFESSIONAL SEAL
Approval to Proceed

Project Phase

Authorization (signature)

DWG TITLE
HVAC FLOOR PLAN



DATE
Jan. 03, 2019

SCALE
1:75
DRAWN BY
DH

DWG STATUS :
PERMIT

PROJECT No.
2016-147

DRAWING No.
M5.0
REVISION
--

FURNACE UNIT SCHEDULE

REFER	AIRFLOW LFS (CFM)	E.S.P. Pa (IN.W.C.)	COOLING				HEATING		ELECTRICAL			MANUFACTURER, MODEL AND ACCESSORIES
			TOTAL KW (MEH)	SENSEBLE KW (MEH)	EER	REFRIGERANT	TOTAL KW (MEH)	MOTOR SIZE HP	VOLTAGE	M.C.A.	M.O.C.P.	
F-1	670 (1420)	175 (0.7)	14.1 (48.0)	—	—	R410a	29.31 (100)	1.0	120V/1/60Hz	14.7	20	CARRIER 59TP6A100E21-20 AND CASED VERTICAL N-COIL CNPVP4821ALA WITH FACTORY INSTALLED THERMOSTATIC EXPANSION VALVE. FURNACE TO BE CONTROLLED BY BAS. OUTSIDE AIR 480 CFM PROVIDED BY ERV.
CU-1			—			R410a	—	—	208V/1/60Hz	26.1	40	CARRIER 24ABC648A003

NOTES: 1. ACCEPTABLE ALTERNATES SUBJECT TO SHOP DRAWING REVIEW: TRANE, YORK.
2. REFER TO THE CONTROL SCHEMATICS AND SEQUENCES OF OPERATION.

EXHAUST FAN SCHEDULE

REFER	AREA SERVED	AIR FLOW LFS (CFM)	E.S.P. PA (IN.W.C.)	ELECTRICAL		DRIVE	FAN SPEED RPM	OPERATING WEIGHT KG (LBS)	SONES	MANUFACTURER, MODEL AND ACCESSORIES
				MOTOR SIZE	VOLTAGE					
EF-1	VEHICLE BAYS [128]	1558.1 (3300)	63.5 (0.25)	3/4 HP	115V/1ø/60Hz	BELT	1188	49.5 (109)	8.9	COOK XPD, 18XP29D132; COMPLETE WITH PRE-WIRED FLEX-CONDIT, GRAVITY BACKDRAFT DAMPER ALUM. SHUTTER GUARD-STL, FAN SPEED CONTROLLER.
EF-2	OXYGEN STORAGE [112]	47 (100)	127 (0.5)	86 WATTS	115V/1ø/60Hz	DIRECT	900	—	2.7	COOK GEMINI GC-144; COMPLETE WITH WHITE METAL FACE GRILL, 100 SERIES DAMPER AND ISOLATOR KIT. C/W LINE VOLTAGE REVERSE ACTING THERMOSTAT
EF-3	UTILITY ROOM [108]	47 (100)	127 (0.5)	86 WATTS	115V/1ø/60Hz	DIRECT	900	—	2.7	COOK GEMINI GC-144; COMPLETE WITH WHITE METAL FACE GRILL, 100 SERIES DAMPER AND ISOLATOR KIT. CONTROL BY BAS VIA TEMPERATURE SENSOR. MECHANICAL CONTRACTOR TO PROVIDE HAND-OFF-AUTO STARTER INSTALLED IN THE ROOM BY ELECTRICAL CONTRACTOR.

NOTES: 1. ALL FANS SHALL INCLUDE VIBRATION ISLOATION AND STARTERS.
2. REFER TO THE CONTROL SCHEMATICS AND SEQUENCES OF OPERATION.
3. ACCEPTABLE ALTERNATES SUBJECT TI SHOP DRAWING REVIEW: COOK, CARNES, GREENHECK, REVERSOMATIC, BROAN.

HEAT RECOVERY VENTILATOR

SYMBOL	SUPPLY FAN		EXHAUST FAN		DESIGN OUTDOOR TEMP		EXHAUST AIR TEMP		SUPPLY AIR TEMP ACROSS UNIT		RECOVERED HEAT ACROSS UNIT		TEMP. EFFICIENCY ACROSS UNIT		ELECTRICAL			REMARKS
	AIR VOLUME (CFM)	EXT. SP. (IN.W.C.)	AIR VOLUME (CFM)	EXT. SP. (IN.W.C.)	WINTER DB/WB(°F)	SUMMER DB/WB(°F)	WINTER DB/WB(°F)	SUMMER DB/WB(°F)	WINTER DB/WB(°F)	SUMMER DB/WB(°F)	WINTER TOTAL/ MBH LATENT MBH	SUMMER TOTAL/ MBH LATENT MBH	WINTER	SUMMER	VOLTAGE	MCA	MOP	
ERV-1	480	0.5	455	0.5	-5.0/ -5.0	88.0/ 73.0	72.0/ 55.0	75.0/ 63.0	62.4/ 47.5	78.0/ 70.2	34.9/ 7.7	-5.2	87.5%	77.1%	208/3/60	11.0	15.0	TEMPEFF RGSP 600 C/W EC MOTOR, MODULATION CONTROLLED BY BAS. ERV TO BE WITH REMOVABLE PANELS FOR ACCESS THE CORES ON THE SIDE OF THE UNIT.

PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	FIXTURN NAME	SANITARY		VENT		DWVS		DWVS		TEMPERED		REMARKS
		MM	INS	MM	INS	MM	INS	MM	INS	MM	INS	
W1	BARRIER FREE FLUSH VALVE WATER CLOSET	75	3.00	38	1.50	32	1.25	-	-	-	-	
L1	BARRIER FREE COUNTERTOP LAVATORY	32	1.25	32	1.25	13	0.50	13	0.50	13	0.5	
SH1	BARRIER FREE SHOWER	-	-	-	-	13	0.50	13	0.50	19	0.75	
SH1	SHOWER HEAD SET	-	-	-	-	13	0.50	13	0.50	19	0.75	
S1	SINGLE COMPARTMENT STAINLESS STEEL SINK	38	1.50	32	1.25	13	0.50	13	0.50	-	-	
S2	SINK PROVIDED BY GENERAL CONTRACTOR, REFER TO ARCHITECTURAL SPECIFICATIONS, FAUCET PROVIDE BY MECHANICAL CONTRACTOR	38	1.50	32	1.25	13	0.50	13	0.50	-	-	
MS1	MOP SINK	75	3.00	38	1.50	19	0.75	19	0.75	-	-	
EW	EMERGENCY EYE WASH	32	1.25	32	1.25	19	0.75	19	0.75	19	0.75	
HB	HOSE BIB	-	-	-	-	13	0.50	13	0.50	13	0.50	
HR	HOSE REEL	-	-	-	-	13	0.50	13	1.50	13	1.50	
NFWH	NON-FROZEN WALL HYDRANT	-	-	-	-	13	0.50	-	-	-	-	
FD	FLOOR DRAIN	75	3.00	38	1.50	10	0.38	-	-	-	-	
FFD	FUNNEL FLOOR DRAIN	75	3.00	38	1.50	10	0.38	-	-	-	-	
TSP	TRAP SEAL PRIMER	-	-	-	-	10/13	0.38/0.50	-	-	-	-	ONE - 10MM/0.38" PER FD, FFD, HD, PD

AC UNIT SCHEDULE

REFER	AIRFLOW CFM	E.S.P. IN.W.C.	COOLING				HEATING		ELECTRICAL			MANUFACTURER, MODEL AND ACCESSORIES
			TOTAL MBH	SENSEBLE MBH	EER	REFRIGERANT	TOTAL MBH	MOTOR SIZE KW	VOLTAGE	M.C.A.	M.O.C.P.	
AC-1	425	—	18.0	—	—	R410a	—	0.03	230V/1/60Hz, FROM CU-3	—	—	mitsubishi PKA-A18HA6
CU-2	—	—	18.0	—	—	R410a	—	—	230V/1/60Hz	13	15	mitsubishi PUY-A18NHA6. C/W ULTRA LOW AMBIENT KIT (-40°)

NOTES:
BASIS IF DESIGN IS MITSUBISHI. EQUIVALENT PRODUCT MATCHING THE SPECIFICATIONS BY SAMSUNG, LG DAIKIN TO BE TREATED AS EQUAL.

RETURN/ EXHAUST GRILLE SCHEDULE

SYMBOL		SIZE MM x MM (N. x IN.)	APPLICATION	NECK SIZE MM (IN.)	AIRFLOW RANGE CFM	NC RANGE	MANUFACTURER AND MODEL (BASIS OF DESIN E.H. PRICE)
R-1 CFM	E-1 CFM	300x300 (12x12)	CEILING GRILLE	—	<450	<30	800
R-2 CFM		600x600 (24x24)	CEILING GRILLE	—	<1600	<30	800

NOTE(S): 1. ACCEPTABLE ALTERNATES SUBJECT TO SHOP DRAWING REVIEW: TITUS, METALAIRE, KRUEGER.

DIFFUSER SCHEDULE

SYMBOL	SIZE MM x MM (IN x IN)	APPLICATION	NECK SIZE MM (IN)	AIRFLOW RANGE CFM	NC RANGE	MANUFACTURER AND MODEL (BASIS OF DESIGN E.H. PRICE)
S-1 CFM	600x600 (24x24)	4 WAY CEILING DIFFUSER	150 (6)	0-135	<30	SCD
S-2 CFM	600x600 (24x24)	4 WAY CEILING DIFFUSER	200 (8)	136-250	<30	SCD
S-3 CFM	600x600 (24x24)	4 WAY CEILING DIFFUSER	200 (10)	251-350	<30	SCD

NOTE(S): 1. ACCEPTABLE ALTERNATES SUBJECT TO SHOP DRAWING REVIEW: TITUS, METALAIRE, KRUEGER.

ELECTRIC CABINET UNIT HEATER SCHEDULE

SYMBOL	CAPACITY (KW)	REMARK
ECUH-1	3.00	PROVIDED AND INSTALLED BY DIV. 16

ELECTRIC BASEBOARD HEATER SCHEDULE

SYMBOL	CAPACITY (KW)	REMARK
EBH-1	0.75	PROVIDED AND INSTALLED BY DIV. 16. CONTROLLED BE BAS.

ELECTRIC UNIT HEATER SCHEDULE

SYMBOL	CAPACITY (KW)	REMARK
EUH-1	2.0	PROVIDED AND INSTALLED BY DIV. 16. CONTROLLED BY BAS.

DE-STRATIFICATION FAN SCHEDULE

SYMBOL	AREA SERVED	LOCATION	ELECTRICAL MOTOR HP	VOLTAGE	MOTOR	OPRATING WEIGHT LBS	MODEL
DF-1	APPARATUS BAY	CEILING SUSPENDED	1.0	120/1/60	ONBOARD VFD CONTROLLER	124	BIG ASS BASIC 6, FAN DIAMETER 3000MM, C/W WALL-MOUNTED KEYPAD, SAFETY CABLE. INSTALLATION HEIGHT TO BE CONFIRMED ON SITE.

RADIANT TUBE HEATER SCHEDULE

SYMBOL	CAPACITY GAS INPUT MBH	ELECTRICAL		OPERATING WEIGHT LBS	MODEL (BASIS OF DESIGN SCHWANK
		AMPS	VOLTAGE		
IR-1	200	145VA	120/1/60	518	SCHWANK MODEL UHE 200-60. HEATERS ARE TO BE MOUNTED HORIZONTALLY. EACH RADIANT TUBE HEATER TO BE CONTROLLED BY A SCHWANK TRUTEMP MEAN RADIANT TEMPERATURE THERMOSTAT THROUGH BAS AND INTERLOCKED WITH OVERHEAD DOORS AND FOLDING DOORS THROUGH BAS.

DOMESTIC HOT WATER TANK

SYMBOL/AREA	INPUT MBH	STORAGE CAPACITY GALLON	RECOVERY RATE + 100° RISE GPH	ELECTRICAL VOLTAGE	REMARKS
DHWT-1	120	60	138	120/1/60	A.O. SMITH CYCLONE MXI BTH-120(A). NATURAL GAS.

PUMP SCHEDULE

REF:	SYSTEM	PERFORMANCE			ELECTRICAL DATA			REMARKS
		FLUID	GPM	FT. HEAD	RPM	MOTOR HP	VOLTAGE	
P-1	DOMESTIC HOT WATER RECIRCULATING PUMP	WATER	4.0	3.0	1800	1/40	120/1/60	TACO MODEL PLUMB 'n' PLUG C/W AQUASTAT OR APPROVED EQUIVALENT. CONTROLLED BY BAS.

EXPANSION TANK SCHEDULE

SYMBOL	LOCATION/SERVICE	MODEL No.	TANK VOLUME LITERS (GAL.)	ACCEPTANCE VOLUME LITERS (GAL.)	REMARKS
EXP-1	MECH/ELEC ROOM 111 DOMESTIC HOT WATER RETURN	PLT-20	32.1 (8.5)	12.9 (3.4)	WATTS PLT-20

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS
REMAIN THE COPYRIGHT PROPERTY OF
THOMAS BROWN ARCHITECT INC.
AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION

NO.	ISSUED FOR	DATE
1	ISSUED FOR REVIEW	2018-05-14
2	ISSUED FOR 80% REVIEW	2018-10-02
3	ISSUED FOR 90% DESIGN DEVELOPMENT	2018-11-21
4	ISSUED FOR REVIEW	2018-01-03
5	ISSUED FOR BUILDING PERMIT	2019-03-14
6	ISSUED FOR ADDENDUM ME-1	2019-08-30
7	ISSUED FOR CONSTRUCTION	2020-02-24

PROJECT :
**YORK REGION PRS
STATION #29**
107 GLEN CAMERON ROAD, MARKHAM



REGAL CONSULTING ENGINEERS INC.
CONSULTING MECHANICAL & ELECTRICAL ENGINEERS
2359 Royal Windsor Drive, Suite 201, Mississauga, Ontario L5J 4S9
PHONE: (905) 655-2010
www.regal-rng.com

CLIENT :



THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR
TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES
ARE TO BE REPORTED TO THE CONSULTANT.

ARCHITECT

THOMASBROWN
ARCHITECTS

A 197 SPADINA AVE., SUITE 500, TORONTO, ON
T 416-364-5710 EXT 101
W WWW.TBROWNARCH.COM

PROFESSIONAL SEAL

Approval to Proceed

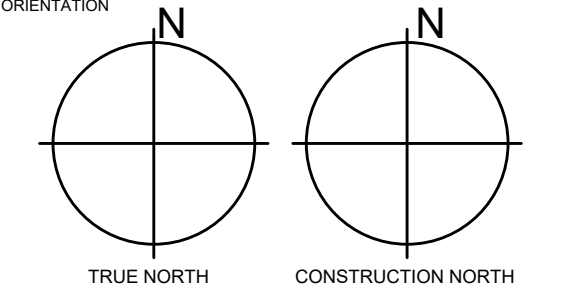
Project Phase

Authorization (signature)

DWG TITLE

**MECHANICAL
SCHEDULES**

ORIENTATION



DATE

Jan. 03, 2019

SCALE

1:75

DRAWN BY

DH

DWG STATUS :

PERMIT

PROJECT No.

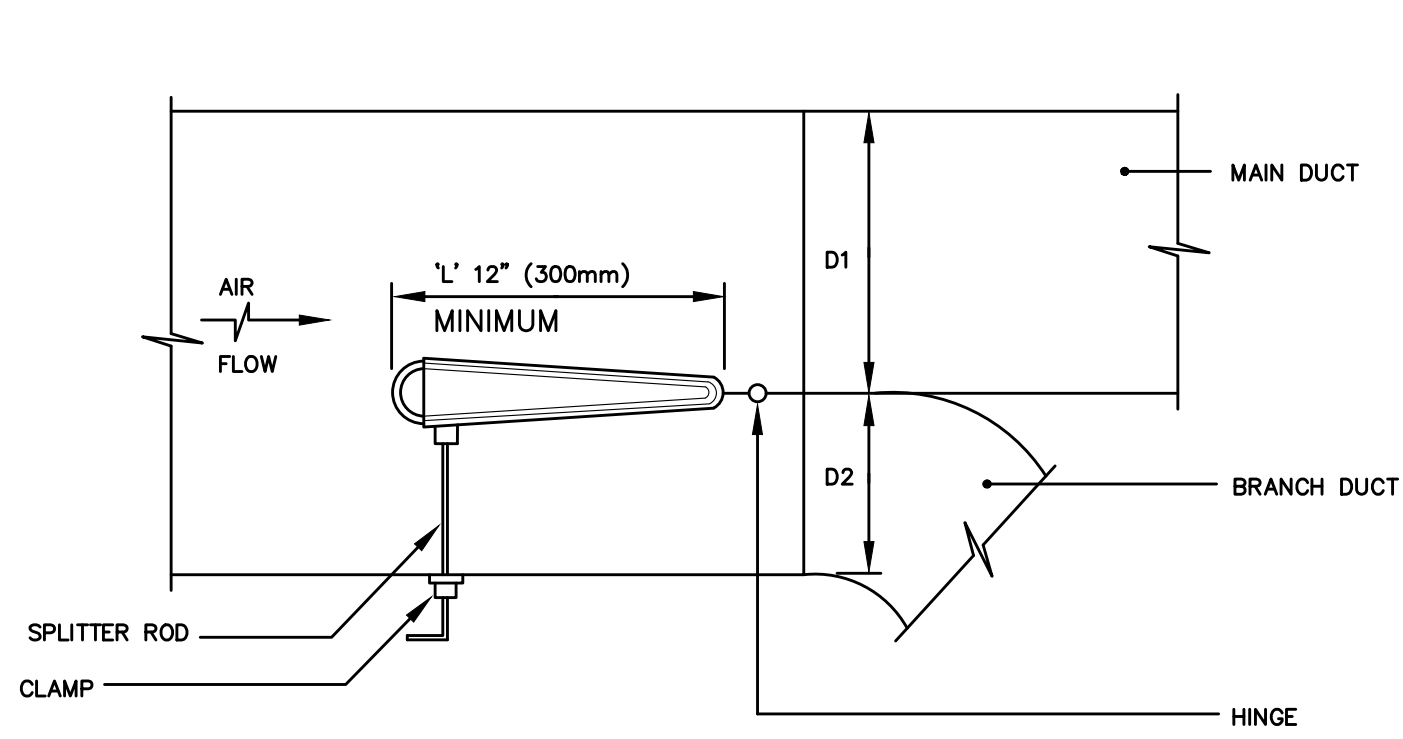
2016-147

DRAWING No.

M6.0

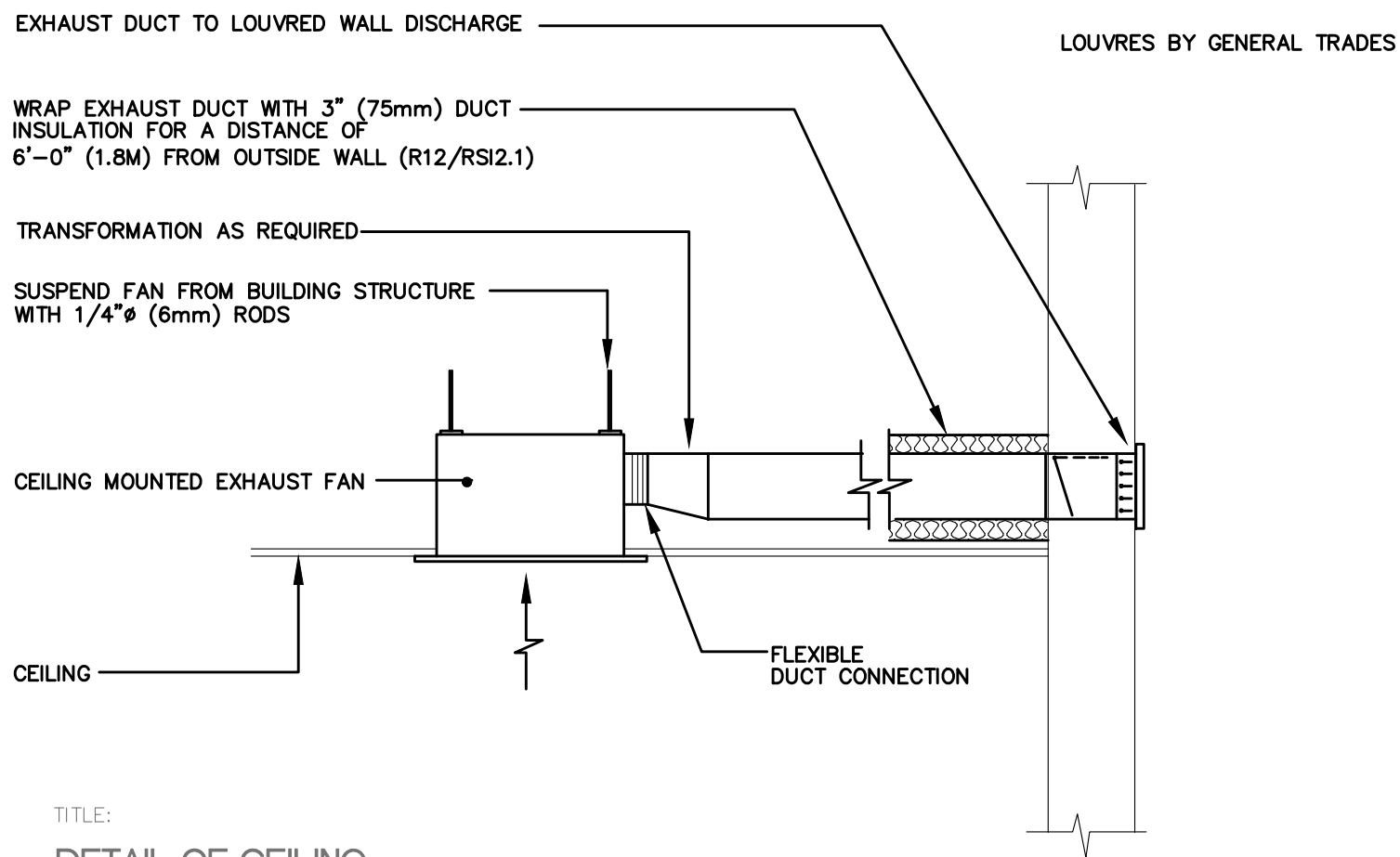
REVISION

--

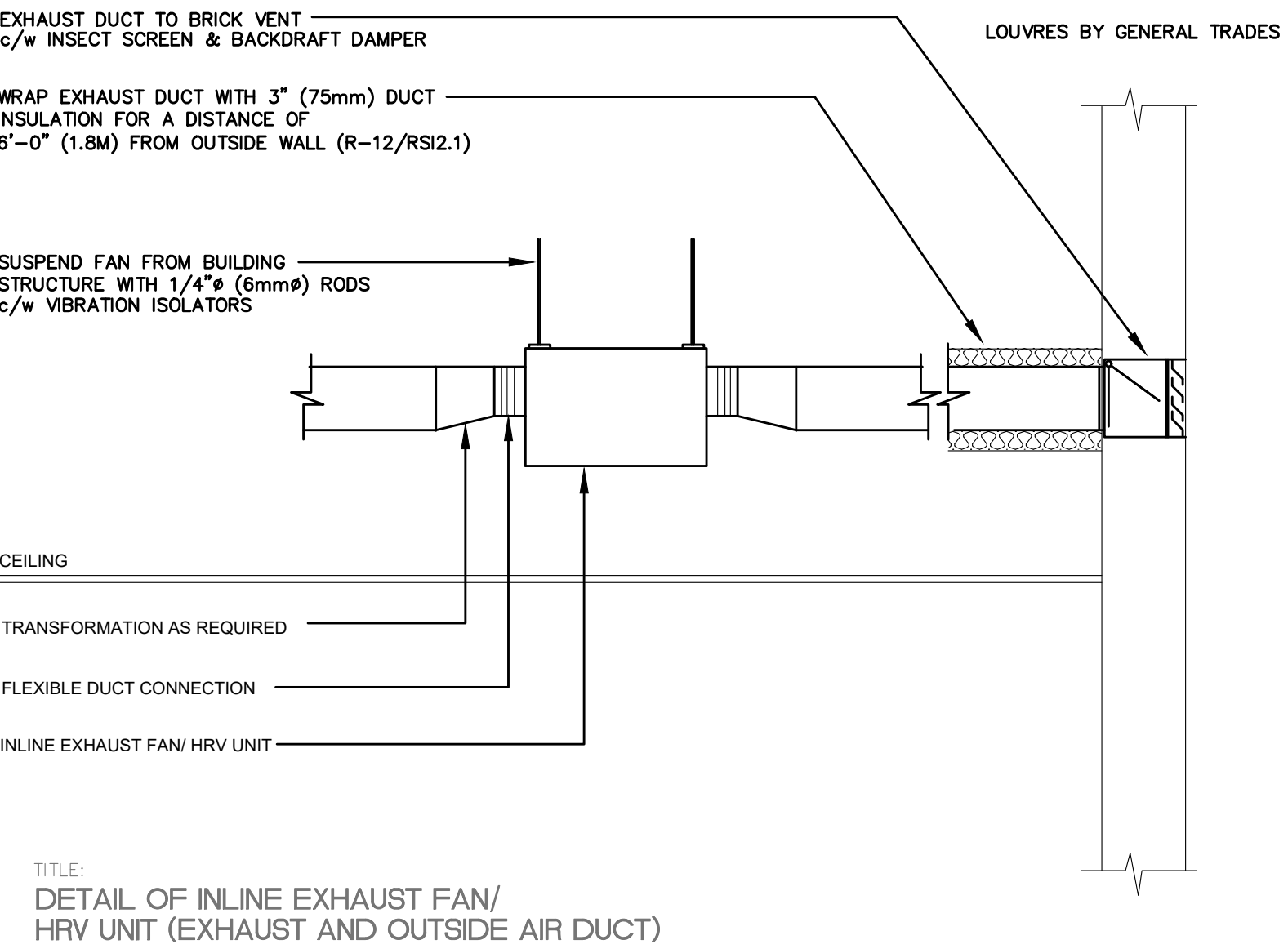


'L' = 1-1/2 D2 FOR 8" (200mm) TO 24" (600mm)
'L' = 1-1/4 D2 FOR D2 OVER 24" (600mm)

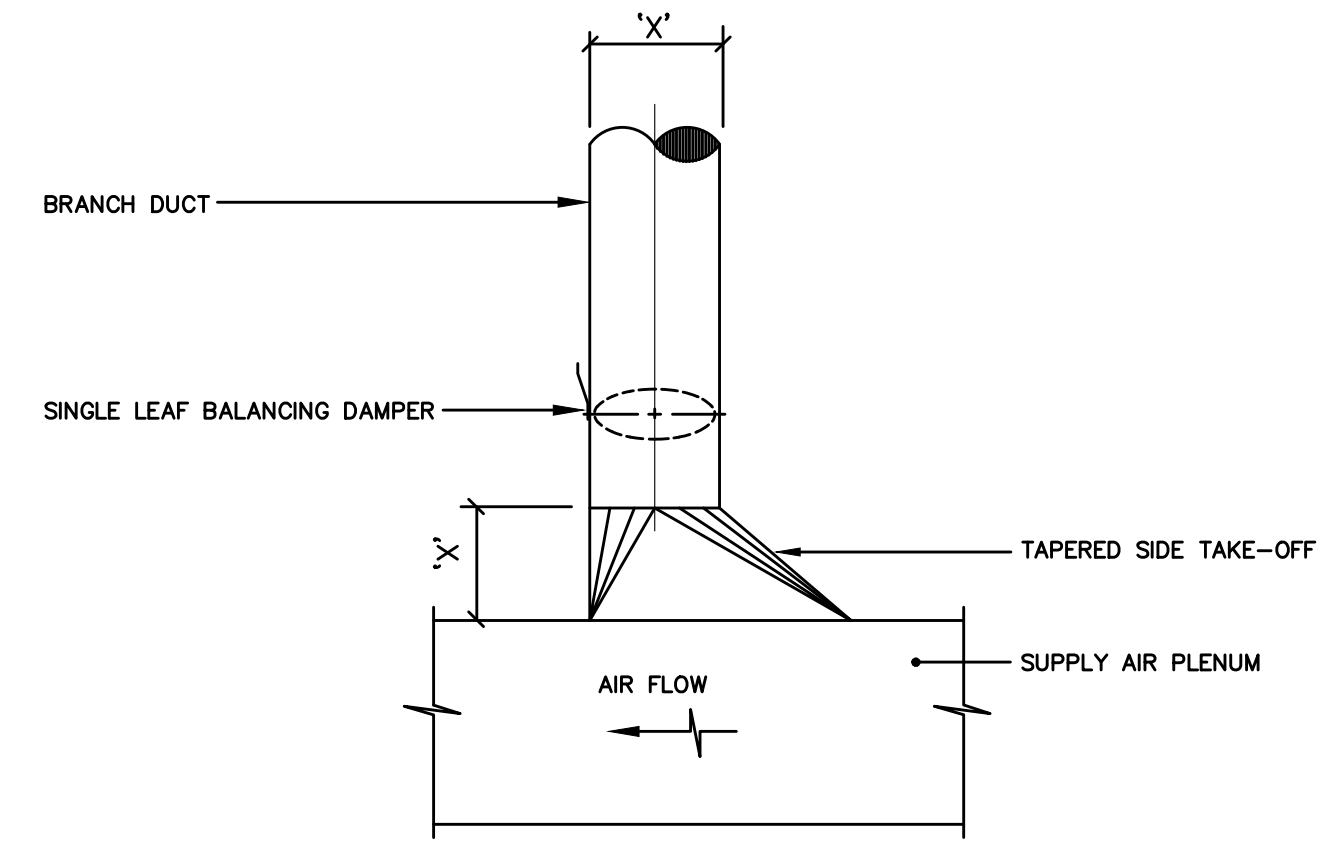
TITLE:
DETAIL OF
SPLITTER DAMPER



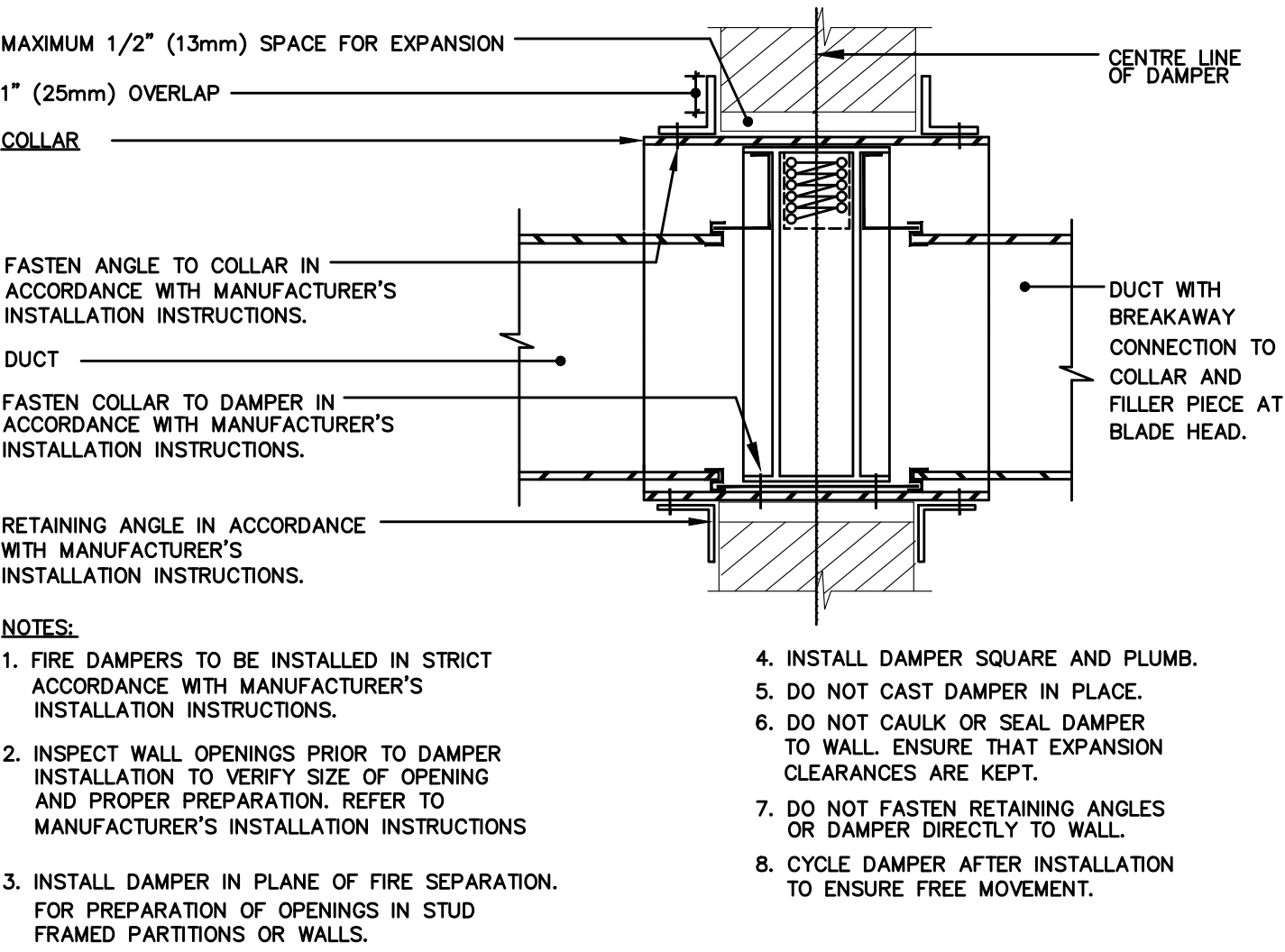
TITLE:
DETAIL OF CEILING
MOUNTED EXHAUST FAN



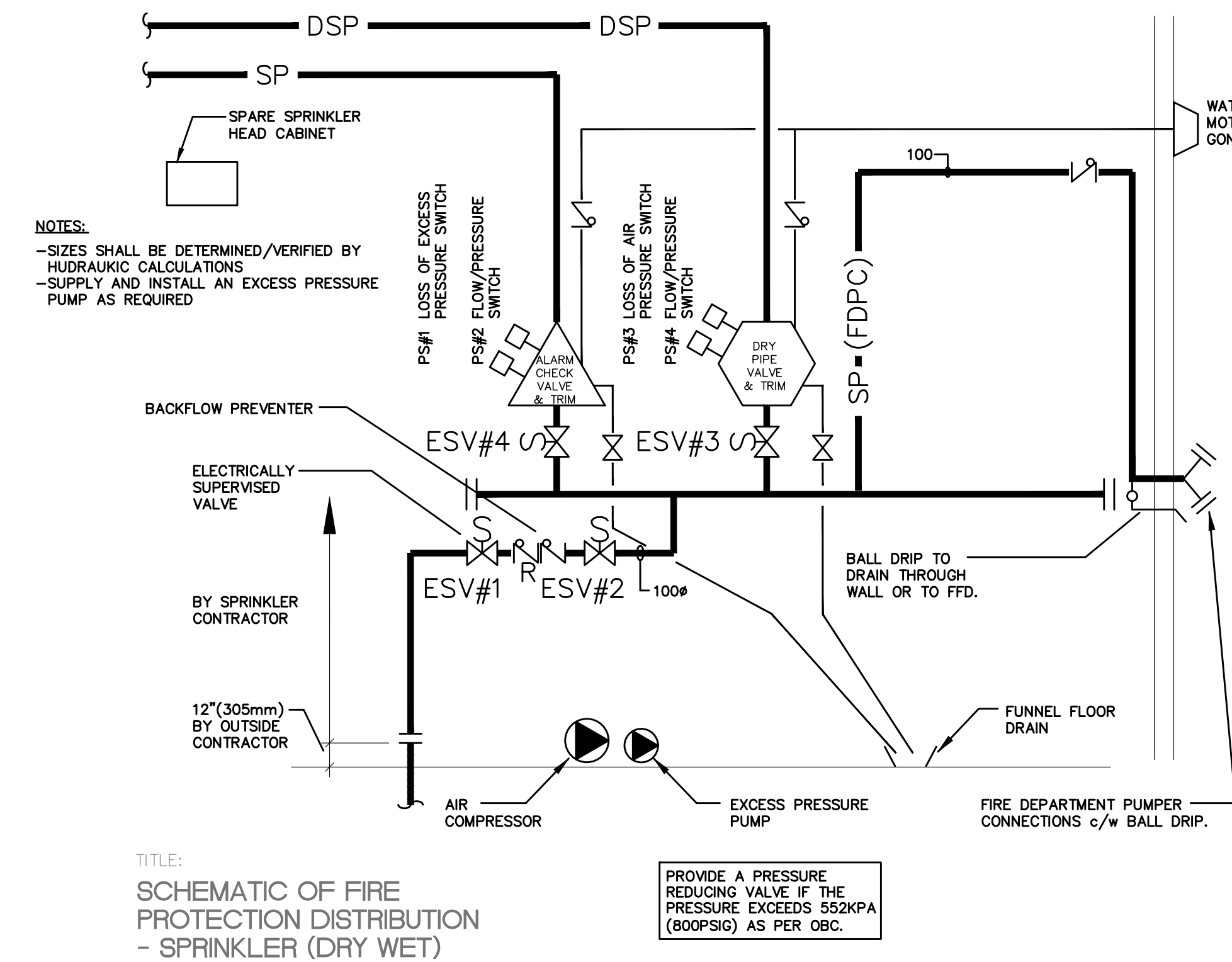
TITLE:
DETAIL OF INLINE EXHAUST FAN/
HRV UNIT (EXHAUST AND OUTSIDE AIR DUCT)



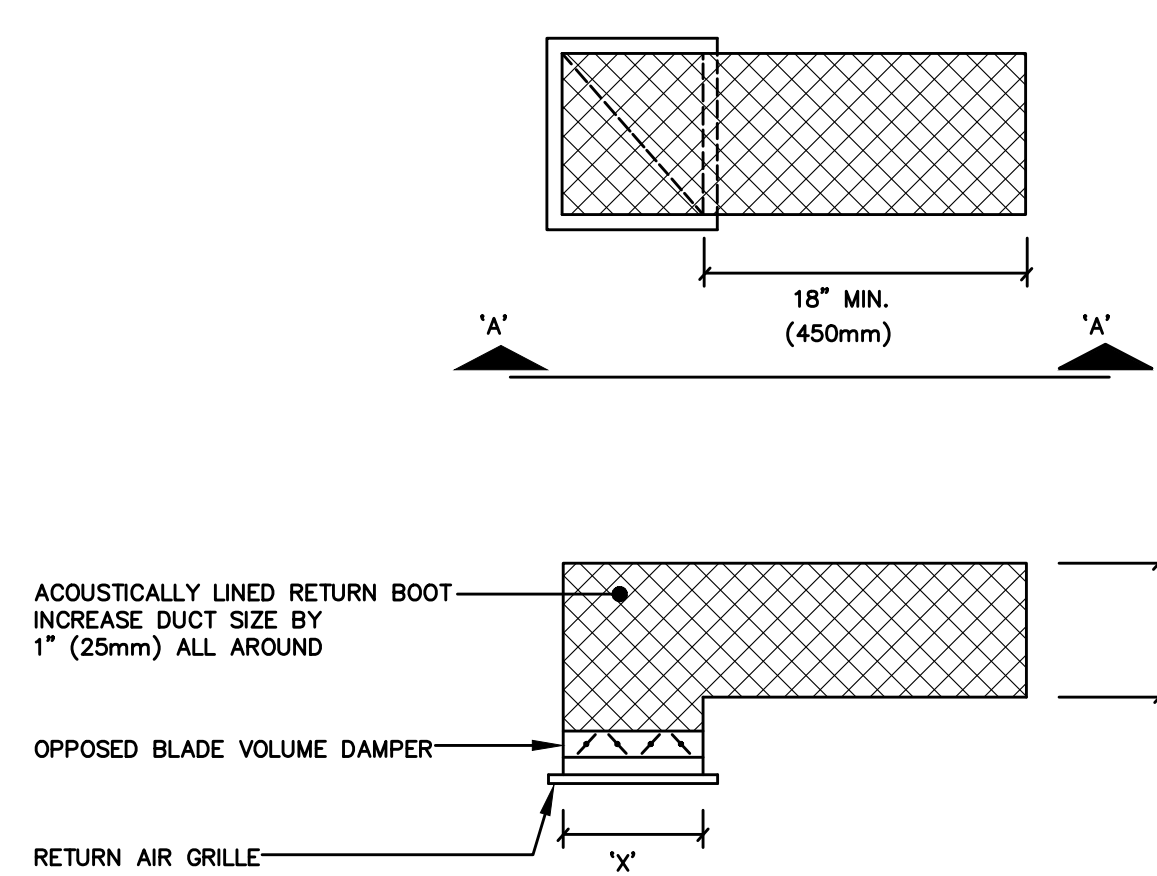
TITLE:
DETAIL OF ROUND
DUCT TAKE-OFF



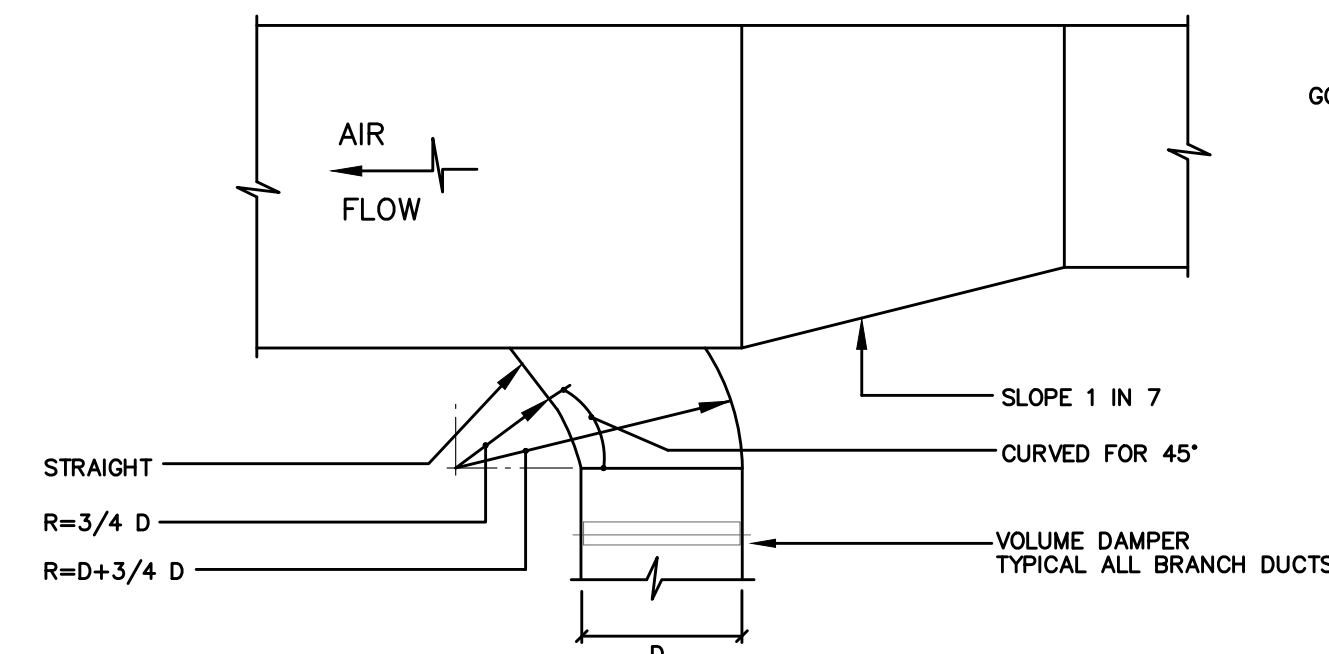
TITLE:
DETAIL OF TYPE B FIRE
DAMPER INSTALLATION-
VERTICAL



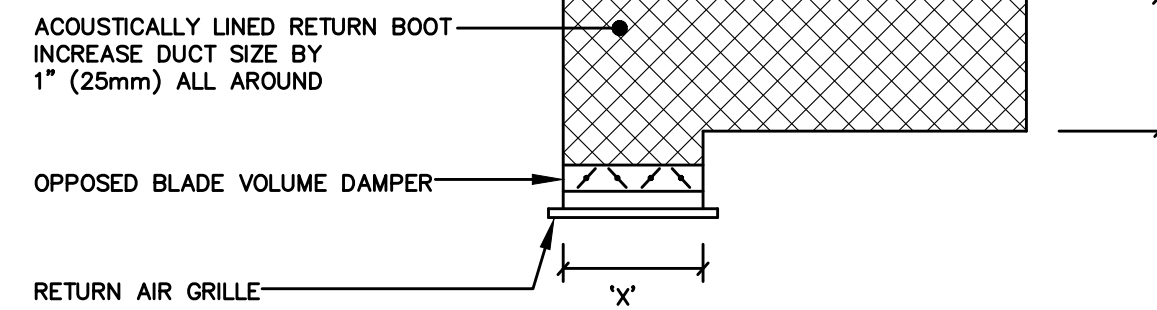
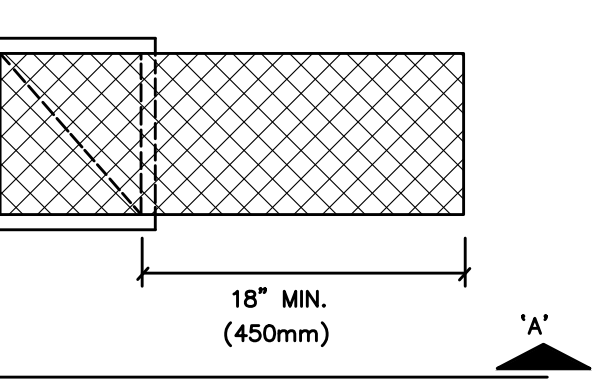
TITLE:
SCHEMATIC OF FIRE
PROTECTION DISTRIBUTION
- SPRINKLER (DRY WET)



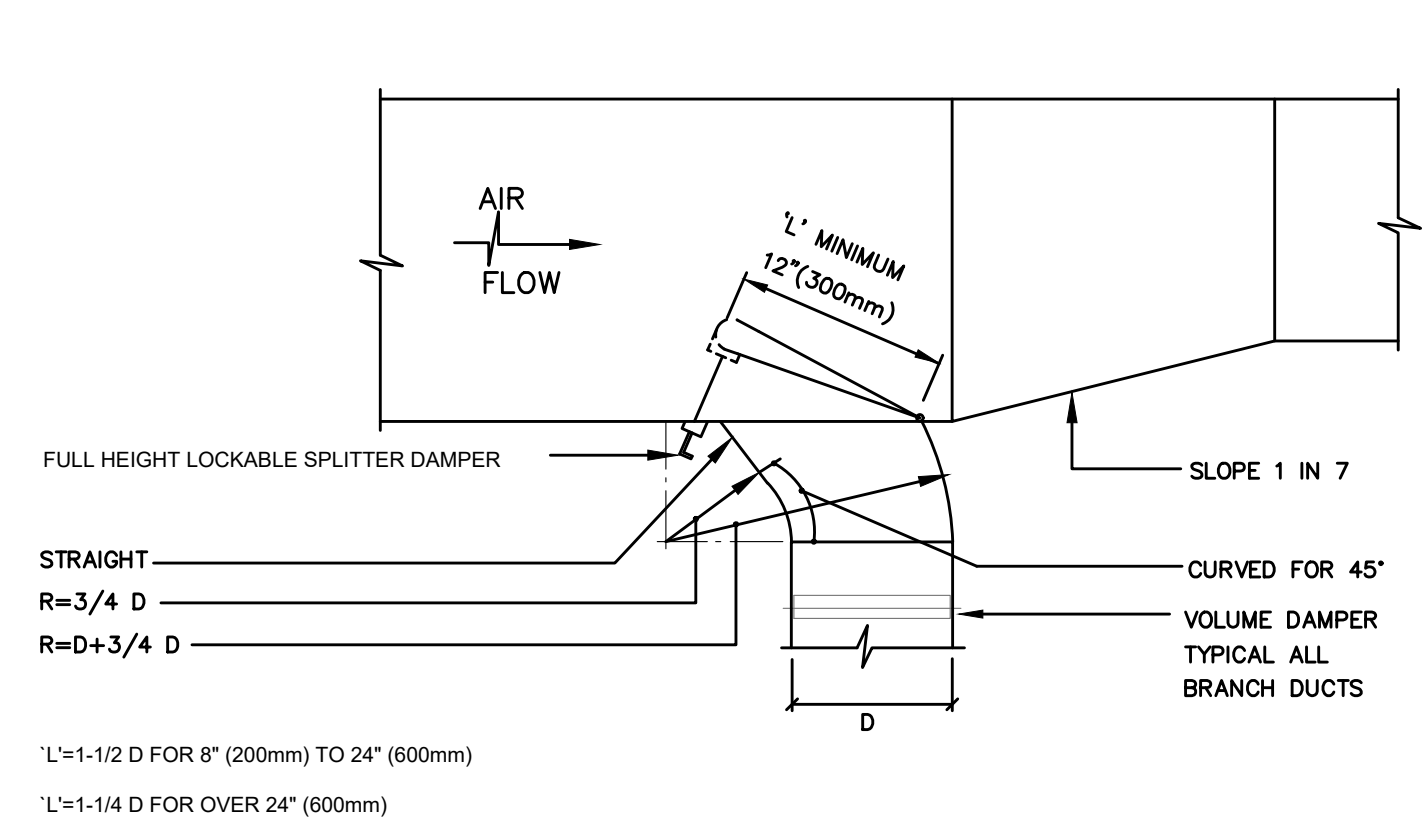
TITLE:
DETAIL OF RETURN
AIR GRILLE AND BOOT



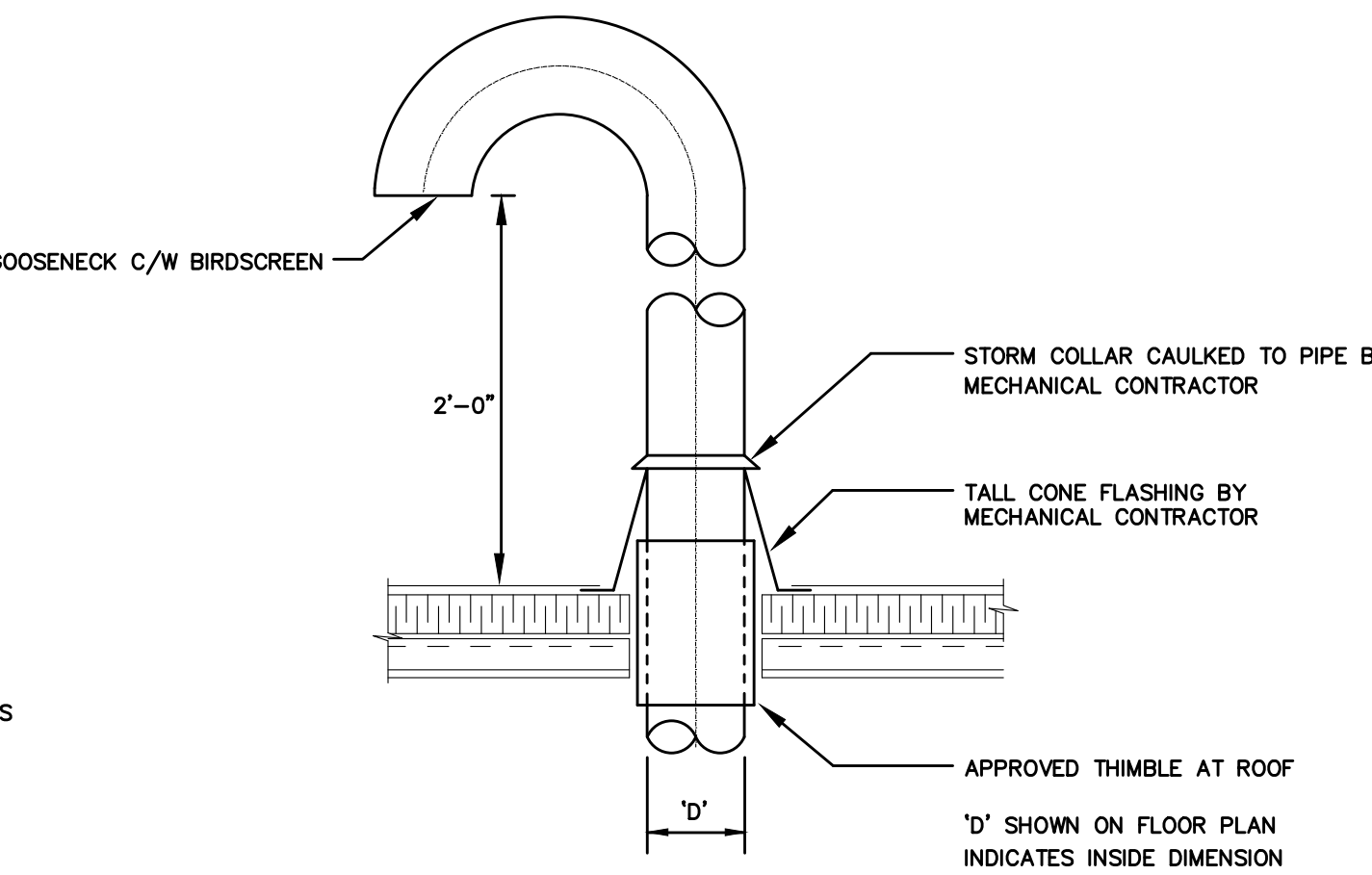
TITLE:
DETAIL OF RETURN
TAP-IN CONNECTION



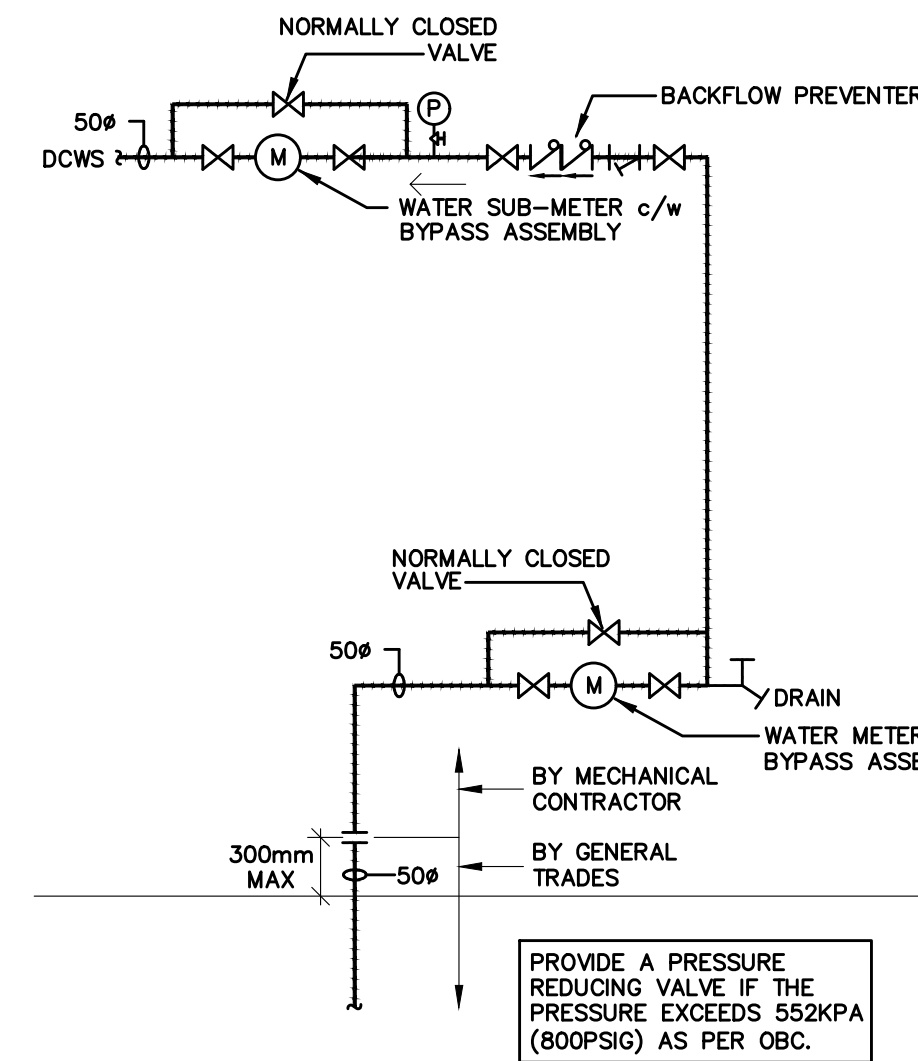
TITLE:
DETAIL OF RETURN
AIR GRILLE AND BOOT



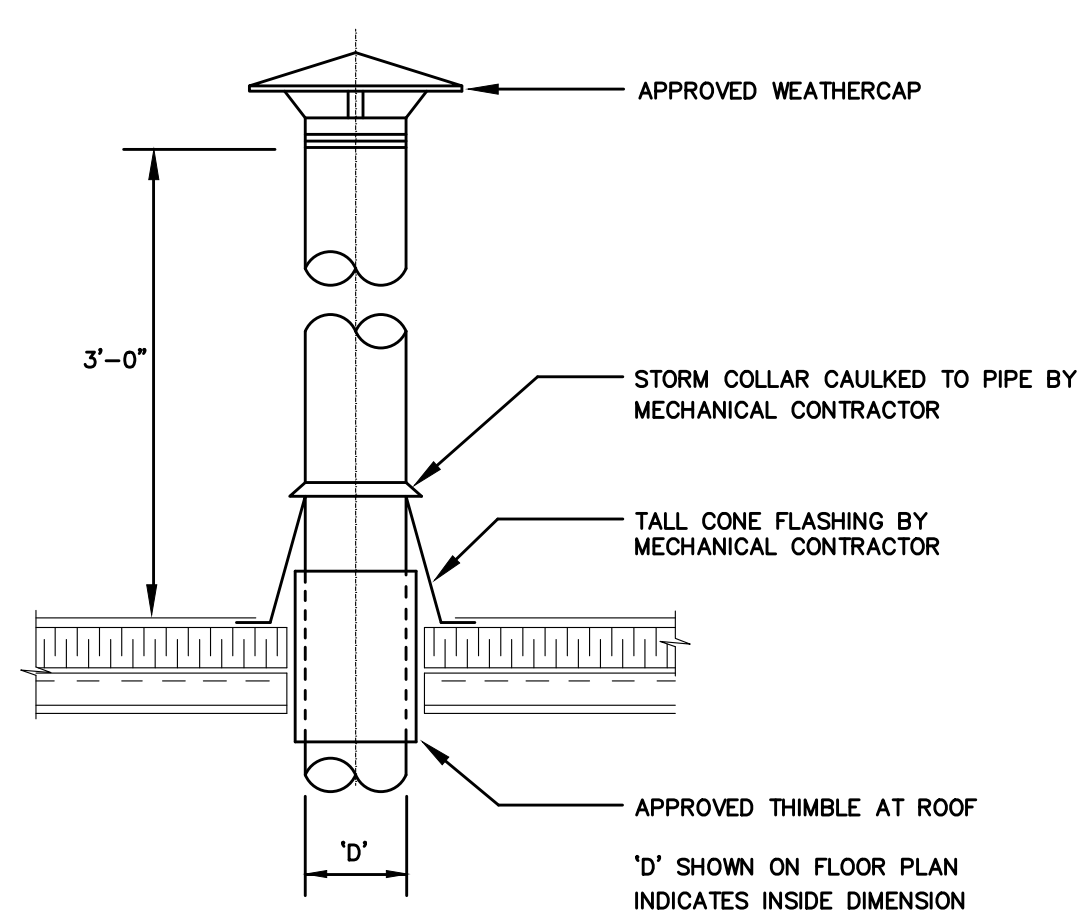
TITLE:
DETAIL OF SUPPLY
TAP-IN CONNECTION



TITLE:
DETAIL OF COMBUSTION AIR FOR RADIANT HEATERS
(AS PER MANUFACTURER'S RECOMMENDATION)



TITLE:
WATER SERVICE
SCHEMATIC



TITLE:
DETAIL OF GAS VENT FROM RADIANT HEATERS
(AS PER MANUFACTURER'S RECOMMENDATION)

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS
REMAIN THE COPYRIGHT PROPERTY OF
THOMAS BROWN ARCHITECT INC.
AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
1	ISSUED FOR REVIEW	2018-05-14
2	ISSUED FOR 80% REVIEW	2018-10-02
3	ISSUED FOR 90% DESIGN DEVELOPMENT	2018-11-21
4	ISSUED FOR REVIEW	2019-01-03
5	ISSUED FOR BUILDING PERMIT	2019-03-14
6	ISSUED FOR ADDENDUM ME-1	2019-08-20
7	ISSUED FOR CONSTRUCTION	2020-02-24

PROJECT:
**YORK REGION PRS
STATION #29**
107 GLEN CAMERON ROAD, MARKHAM



REGAL CONSULTING ENGINEERS INC.
CONSULTING MECHANICAL & ELECTRICAL ENGINEERS
2359 Royal Windsor Drive, Suite 201, Mississauga, Ontario L5J 4S9
PHONE: (905) 855-2010
www.regal-rng.com



THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR
TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES
ARE TO BE REPORTED TO THE CONSULTANT.

ARCHITECT
**THOMASBROWN
ARCHITECTS**

A 197 SPADINA AVE., SUITE 500, TORONTO, ON
T 416-364-5710 EXT 101
W WWW.TBROWNARCH.COM

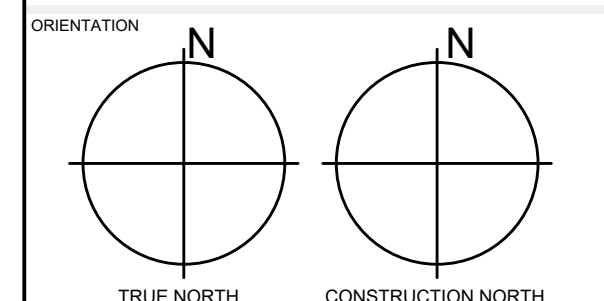
PROFESSIONAL SEAL

Approval to Proceed

Project Phase

Authorization (signature)

DWG TITLE
**MECHANICAL
DETAILS - 1**



DATE
Jan. 03, 2019

SCALE
N.T.S.
DWG STATUS:
PERMIT

PROJECT No.
2016-147

DRAWING No.
M7.0
REVISION
--

