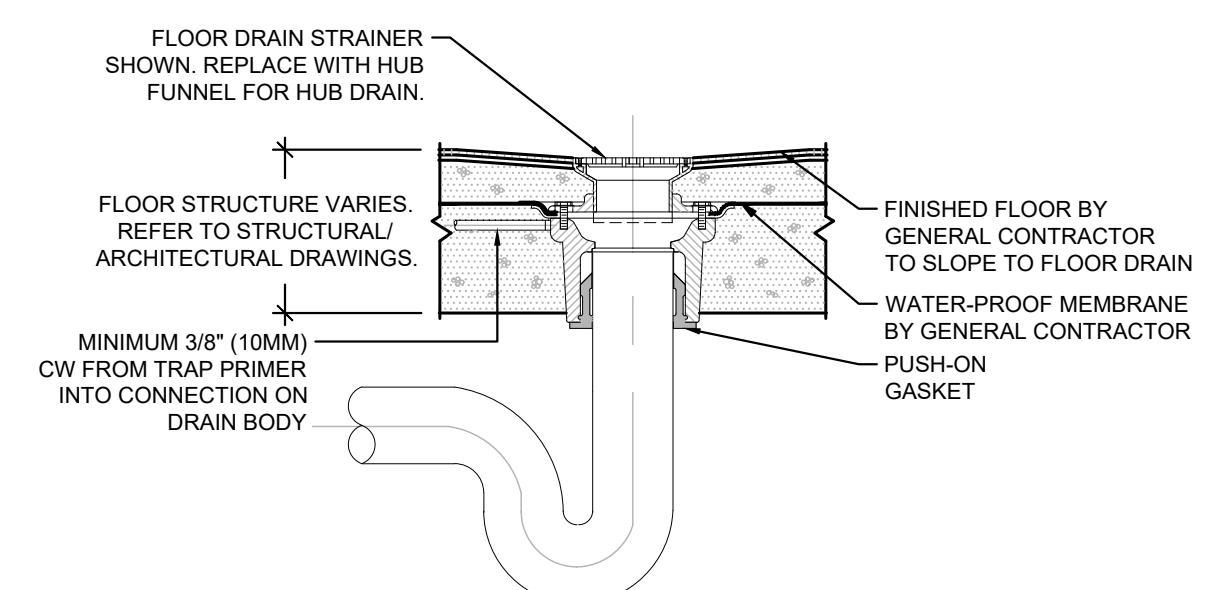


TRAP SEAL PRIMER VALVE DETAIL

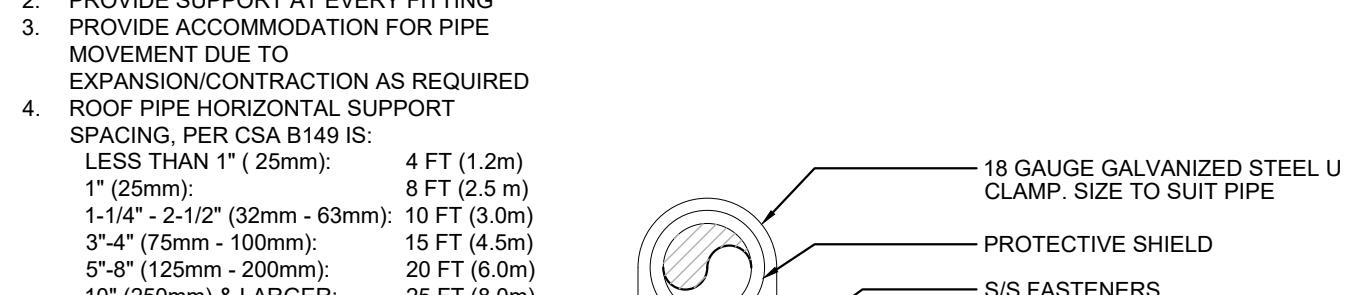
SCALE: N.T.S.



FLOOR/HUB DRAIN INSTALLATION DETAIL

SCALE: N.T.S.

- NOTES:
1. PROVIDE EXTENSION KITS AS REQUIRED FOR ELEVATED PIPING
 2. PROVIDE SUPPORT AT EVERY FITTING
 3. PROVIDE ACCOMMODATION FOR PIPE MOVEMENT DUE TO THERMAL EXPANSION/ CONTRACTION AS REQUIRED
 4. ROOF PIPE HORIZONTAL SUPPORT SPACING, PER CSA B149 IS:



NATURAL GAS PIPE SUPPORT ON ROOF DETAIL

SCALE: N.T.S.

CONTROL NOTES:

EXHAUST FAN:

EF-101

OPERATING SEQUENCE:

- CYCLE FAN ON/OFF WITH LOCAL LIGHT.

PLUMBING FIXTURE SCHEDULE				
DWG REF	DESCRIPTION	HOT	COLD	DRAIN
FD	FLOOR DRAIN- EPOXY COATED CAST IRON FLOOR DRAIN WITH ANCHOR FLANGE, REVERSIBLE CLAMPING COLLAR WITH PRIMARY AND SECONDARY WEEPHOLES, ADJUSTABLE CAST IRON (STANDARD) HUB FUNNEL, AND NO HUB (STANDARD) OUTLET. WATTS DRAINAGE - MODEL: FD-100-DD	---	---	3"
FPWH	WATTS HY-49 - NON-FREEZE WALL HYDRANT WITH BACKFLOW PREVENTER. SHALL BE EXPOSED TYPE, AUTOMATIC DRAINING, WITH VACUUM BREAKER BACKFLOW PREVENTOR, 3/4" HOSE THREAD, LOOSE TEE KEY.	---	3/4"	---

EXHAUST FAN SCHEDULE												
ACCESSORIES:												
1) HANGER RODS 2) SWINGING ISOLATORS 3) BASE ISOLATOR KIT 4) FLEXIBLE CONNECTIONS - INLET AND/OR OUTLET 5) MOTORIZED BACKDRAFT DAMPER COORDINATE OPERATING VOLTAGE W/DIV. 16 6) ROOF CURB TO BE PROVIDED BY GENERAL CONTRACTOR AS DETAILED ON ARCHITECTURAL DWGS.												
7) 18" ROOF CURB BY FAN MANUFACTURER 8) DISCONNECT SWITCH 9) BELTS, DRIVES, AND PULLEYS 10) FILTER SCREEN 11) TRANSFORMER AND RELAY FOR 24V CONTROL 12) WEATHER HOOD 13) SPEED CONTROLLER	14) WALL MOUNT CONTROLLER 15) BELT DRIVE MOTOR COVERS 16) INSULATED HOUSING 17) DUCT CONNECION 18) LOUVERED WALL BOX C/W B.D. 19) REVERSE ACTING THERMOSTAT 20) ECM MOTOR C/W SPEED ADJUSTMENT	CONTROL	LGT: ENERGIZE WITH ROOM LIGHTING TMR: TIME CLOCK MSW: MANUAL SWITCH BAS: BUILDING AUTOMATION SYSTEM RAT: REVERSE ACTING THERMOSTAT, 120V GDC: BY GAS DETECTION CONTROLLER INT-EQMT TAG: INTERLOCKED WITH REFERENCED EQMT OTH: OTHER. SEE REMARKS									
DWG REF.	MANUF.	SERVING	MODEL	AIRFLOW [CFM] (L/s)	ESP [in. w.c.] (Pa)	MOTOR [HP]	RPM	SOUND [SONES]	ELECTRICAL [V / Ph / Hz]	CONTROL	ACCESSORIES	REMARKS
EF-101	GREENHECK	MECH ROOM	G-070-G	150 (71)	0.25 (62.2)	FHP	1300	1.5	120 / 1 / 60	LGT	1,2,4	CONTROL WITH LOCAL THERMOSTAT

APPROVED MANUFACTURERS: GREENHECK, COOK, DELHI, PENN BARRY

ELECTRIC UNIT HEATER SCHEDULE												
DWG REF	MANUF.	MODEL	CAPACITY [MBH] (kW)	AIRFLOW [CFM] (L/s)	MOTOR [HP]	RPM	ELECTRICAL			CONTROL	ACCESSORIES	REMARKS
							VOLT / PH / Hz	MCA	MOCP			
UH-101	MODINE	AMP090	31 (9.1)	550 (259.4)	-	-	208/1/60	-	-	T-24	--	TWO STAGE

ALTERNATE MANUFACTURERS:
MODINE, RE-VERBER (BRANT RADIANT), REZNOR, TRANE

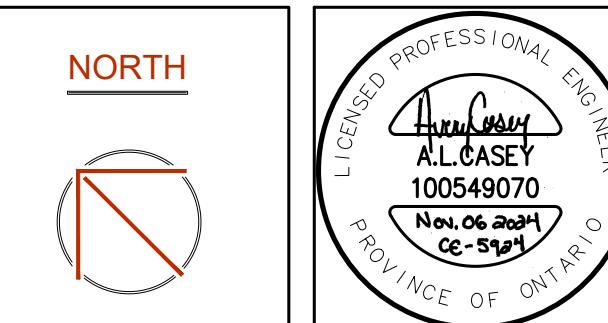
DUCTWORK LEGEND	
SYMBOL	DESCRIPTION
	DUCTWORK SHOWN DOUBLE LINE
OED	OPEN ENDED DUCT
(T)	THERMOSTAT/TEMPERATURE SENSOR
EA	EXHAUST AIR
SA	SUPPLY AIR
TC	TIMECLOCK
	DUCT DOWN - POSITIVE / NEGATIVE PRESSURE
	DUCT UP - POSITIVE / NEGATIVE PRESSURE
	SUPPLY AIR GRILLE
	RETURN AIR GRILLE
(?)	DRAWING NOTE TAG
EQUIPMENT TAG	EQUIPMENT TAG
???	EQUIPMENT TYPE EQUIPMENT NUMBER (REFER TO SCHEDULES FOR INFO)

THIS IS A STANDARD LEGEND. ALL SYMBOLS MAY NOT NECESSARILY BE USED ON DRAWINGS.

PIPING LEGEND	
ITEM	DESCRIPTION
—	NEW ITEM
—	EXISTING ITEM TO REMAIN
—x—	EXISTING ITEM TO BE REMOVED
—	BELLOW FLOOR PIPING
—	POTABLE (DOMESTIC) COLD WATER (DCW)
—	SANITARY DRAIN
—	NATURAL GAS
—	GATE VALVE
—	BALL VALVE
—	GLOBE VALVE
—TBV	TERmostatic BALANCING VALVE
—	GAS VALVE
—	ELBOW TURNED UP
—	ELBOW TURNED DOWN
E	PIPE CAP
—	PIPE SINGLE LINE CUTOFF
—CO	FLOOR CLEAN OUT
—FO	WALL CLEAN OUT
—HB	HOSE BIB
—PNH	FROST PROOF WALL HYDRANT
FD	FLOOR DRAIN; FFD: FUNNEL FLOOR DRAIN; HD: HUB DRAIN
FEX	FIRE EXTINGUISHER
—	NEW CONNECTION TO EXISTING

THIS IS A STANDARD LEGEND. ALL SYMBOLS MAY NOT NECESSARILY BE USED ON DRAWINGS.

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01	100% COORDINATION	24.10.15
02	PERMIT	24.11.07



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CHECKED	ALC	REVIEWED	ALC

PROJECT	
STARBUCKS	COBOURG

ADDRESS	
1030 DIVISION STREET,	COBOURG, ON

PROJECT NO.	
CE-5924	

DRAWING TITLE	
MECHANICAL NOTES, SCHEDULES, DETAILS	

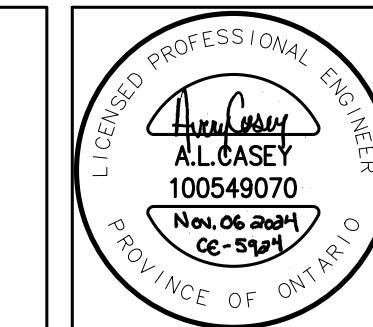
DRAWING NUMBER	
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KEYPLAN

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PROJECT

STARBUCKS
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DRAWING TITLE

GROUND FLOOR PLAN -
PLUMBING

DRAWING NUMBER

M2 OF 5

GROUND FLOOR PLAN - PLUMBING

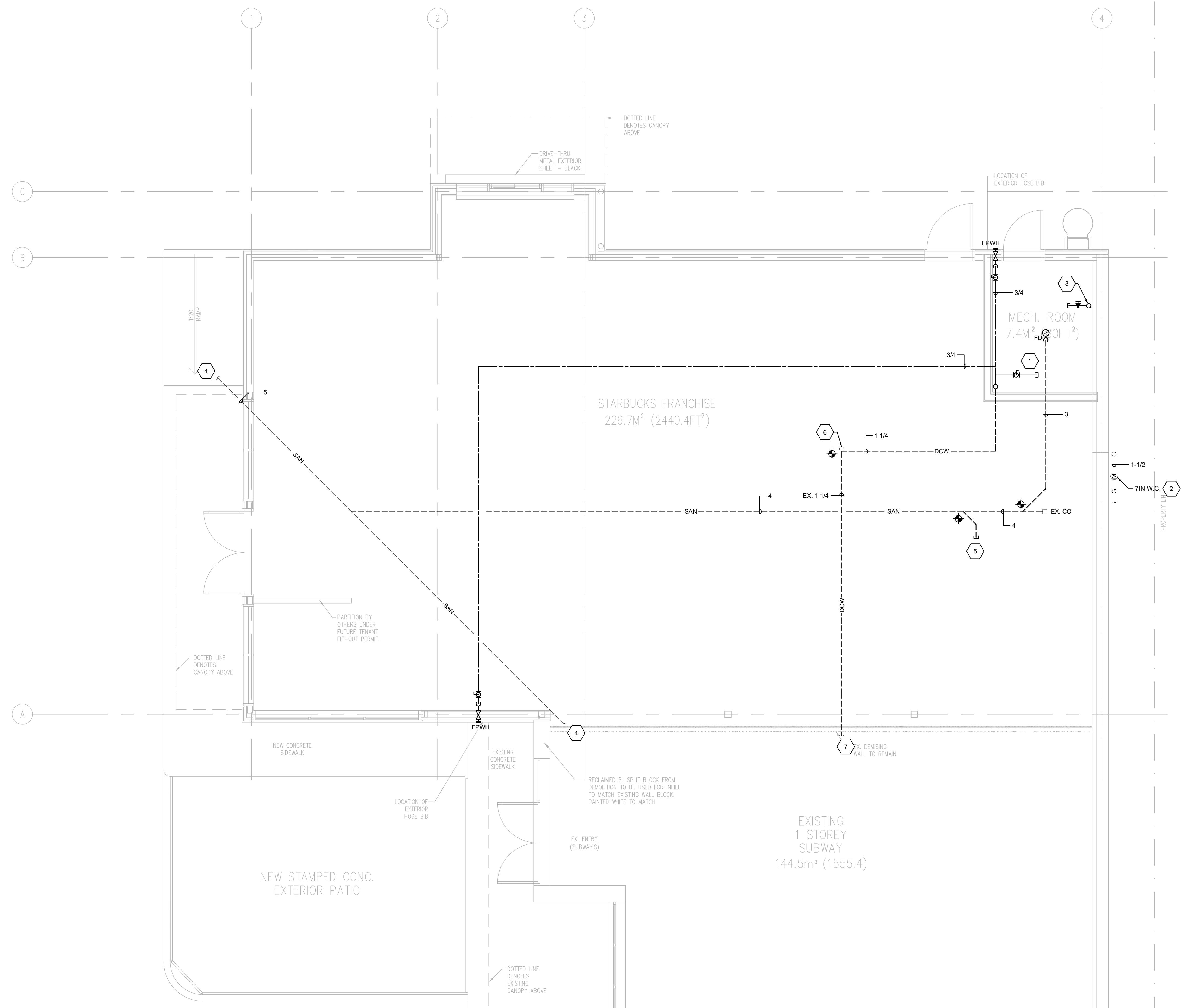
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

- THERMOSTATS MOUNTING HEIGHTS TO MATCH ADJACENT LIGHT SWITCHES OR AT 1200mm (48") FOR BARRIER FREE APPLICATIONS; 1500mm (60") OTHERWISE.

DRAWING NOTES (INDICATED BY HEXAGONS):

1. CAP DOMESTIC WATER PIPE IN MECHANICAL ROOM FOR FUTURE TENANT USE.
2. COORDINATE PROVISION OF NATURAL GAS METER AND REGULATOR BY NATURAL GAS UTILITY FROM EXISTING SITE GAS SERVICE. SIZE METER FOR NOTED INCOMING PRESSURE. ROUTE GAS PIPING UP TO ROOF THROUGH EXTERIOR PARAPET AND CAP FOR FUTURE TENANT USE.
3. COORDINATE DROPPED TEE FROM GAS PIPING ON ROOF ABOVE. CAP WITHIN TENANT SPACE FOR FUTURE GAS FIRED WATER HEATER.
4. DETERMINE EXACT LOCATIONS OF ALL EXISTING SANITARY LINES ON SITE. APPROXIMATE LOCATION AND SIZES ARE SHOWN.
5. CONNECT INTO EXISTING SANITARY AND PROVIDE A 4" CAPPED CONNECTION FOR FUTURE TENANT USE.
6. EXISTING RISER IN THIS APPROXIMATE LOCATION TO BE DEMOLISHED. CONNECT TO EXISTING UNDERGROUND PIPING AND ROUTE TO NEW MECHANICAL ROOM AS SHOWN.
7. DETERMINE EXACT LOCATION OF EXISTING UNDERGROUND DOMESTIC COLD WATER PIPING FROM SUBWAY TENANT SPACE. APPROXIMATE LOCATION SHOWN.



ONDON: 1385 North Routledge Park, Unit 9

London, ON N6H 5N5 P 519.472.7640

NGSTON: 1471 John Counter Blvd. Unit 301

Kingston, ON K7M 8S8 P 613.900.0845

TCHENER: 210-137 Glasgow Street, Office #141
Kitchener, ON N2G 4Y2 P 519.472.7612

Kitchener, ON N2G 4X8 P 519.472.7640

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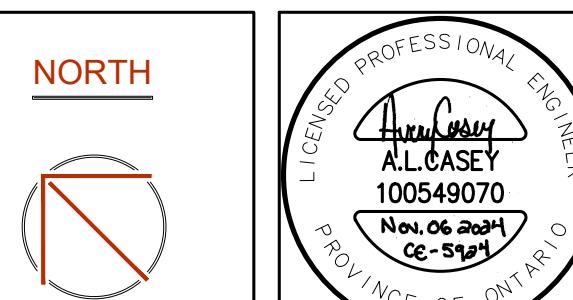
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REVIEWS

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PERMIT	24.11.07



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ADDRESS

OBJECT NO

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DRAWING TITLE

WUOLANG JIANG

13

ROOF PLAN - MECHANICAL

SCALE: 1/4" = 1'-0"

EXISTING ADJACENT COMMERCIAL ROOF

COMMERCIAL ROOF
EXISTING
1 STOREY
SUBWAY
144 5m² (1555 4)

LINE DENOTES
EXISTING
CANOPY BELOW

ROOF PLAN - MECHANICAL

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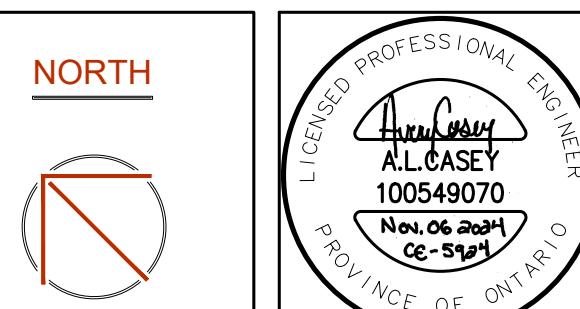
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KEYPLAN

KEYPLAN

REVIEWS

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100% COORDINATION	24.10.15
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PROJECT

STARBUCKS
TOBOURG

ADDRESS

ADDRESS

**1030 DIVISION STREET,
COBOURG, ON**

PROJECT NO.
CE-5924

PROJECT NO.

CE-5924

DRAWING TITLE

GROUND FLOOR PLAN - HVAC & FIRE PROTECTION

WING TITLE

GROUND FLOOR PLAN - HVAC & FIRE PROTECTION

DRAWING NUMBER

M4 OF 5

WING NUMBER

14

This architectural site plan illustrates the footprint of a building complex, likely a Starbucks franchise, and its surrounding environment. The plan includes the following key elements:

- Building Footprints:** The main building is labeled "STARBUCKS FRANCHISE" with a footprint of 226.7m^2 (2440.4FT^2). To the right is an "EXISTING 1 STOREY SUBWAY" with a footprint of 144.5m^2 (1555.4).
- Exterior Features:**
 - A "DRIVETHRU METAL EXTERIOR SHELF - BLACK" is located at the top center.
 - A "1:20 RAMP" leads up to the entrance on the left.
 - "NEW STAMPED CONC. EXTERIOR PATIO" is indicated at the bottom left.
 - "LOCATION OF EXTERIOR HOSE BIB" is marked on the exterior walls.
 - "EX. ENTRY (SUBWAY'S)" is shown at the bottom center.
- Interior and Adjacent Areas:**
 - A "MECH. ROOM" with a footprint of 7.4m^2 (80FT^2) is located on the right side.
 - "FEX" (likely Fire Extinguisher) stations are marked near the entrance and on the right.
 - "RECLAIMED BI-SPLIT BLOCK FROM DEMOLITION TO BE USED FOR INFILL TO MATCH EXISTING WALL BLOCK. PAINTED WHITE TO MATCH" is used for infill between existing walls.
 - "EX. DEMISING WALL TO REMAIN" is indicated by a thick grey line.
 - "PARTITION BY OTHERS UNDER FUTURE TENANT FIT-OUT PERMIT." is noted near the entrance.
 - "DOTTED LINE DENOTES CANOPY ABOVE" is shown at several locations.
 - "LOCATION OF EXTERIOR HOSE BIB" is also marked on the roofline.
- Landmarks and References:**
 - Four corner points are labeled: 1, 2, 3, and 4.
 - A vertical line labeled "PROPERTY LINE" runs along the right edge.
 - Vertical reference lines labeled A, B, C, and D are positioned on the left.

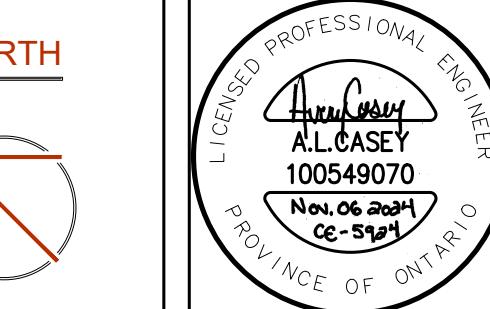
GROUND FLOOR PLAN - HVAC & FIRE PROTECTION

SCALE: 1/4" = 1'-0"

KEYPLAN

REVISIONS

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01	100% COORDINATION	24.10.15
02	PERMIT	24.11.07



DESIGN	TMC	DRAWN	TMC
CHECKED	ALC	REVIEWED	ALC

PROJECT

STARBUCKS
COBOURG

ADDRESS

1030 DIVISION STREET,
COBOURG, ON

PROJECT NO.

CE-5924

DRAWING TITLE

MECHANICAL
SPECIFICATIONS

DRAWING NUMBER

M5 OF 5

1. MECHANICAL GENERAL REQUIREMENTS:	1.23.2.2. MANUALS SHALL INCLUDE THE FOLLOWING INFORMATION: CONTACT INFORMATION OF CONSULTANTS AND CONTRACTORS COMPLETE SET OF FINAL PROJECT SHOP DRAWINGS OPERATING INSTRUCTIONS, INCLUDING START-UP AND SHUT-DOWN PROCEDURE MAINTENANCE INSTRUCTIONS, INCLUDING PREVENTIVE MAINTENANCE INSTRUCTIONS FOR COMPONENTS OF EQUIPMENT MANUFACTURERS' WARRANTIES AND GUARANTEES	3.1.5.2. SLEEVES FOR PIPING PASSING THROUGH ROOFS WILL BE SUPPLIED AND INSTALLED UNDER THIS DIVISION. 3.1.5.3. MAKE SLEEVES LARGE ENOUGH TO PASS FULL THICKNESS OF PIPE COVERING WHERE SAME IS USED, AND WITH SUFFICIENT CLEARANCE BETWEEN PIPE AND SLEEVE TO ALLOW FOR ANY LATERAL MOVEMENT OF PIPING DUE TO EXPANSION AND CONTRACTION. 3.1.5.4. FILL SLEEVES FOR FUTURE USE WITH LIME MORTAR.	3.3.2.2. APPLICATION: 3.3.2.2.1. BURIED PIPING 75 MM (3") AND SMALLER: 3.3.2.2.1.1. TYPE "K" SOFT ANNEALED COPPER TUBING WITH NO JOINTS PERMITTED BELOW GRADE, BEND TUBING USING APPROVED TUBE BENDER. 3.3.2.2.1.2. USE TYPE "K" SOFT ANNEALED COPPER TUBING FOR TRAP SEAL PRIMER PIPING TO TRAPS INSTALLED IN CONCRETE FLOORS. 3.3.2.2.2. ABOVE GROUND PIPING 75 MM (3") AND SMALLER: 3.3.2.2.2.1. TYPE "L" HARD DRAWN COPPER TUBING, PROVIDE SOLDER TO THREADED ADAPTERS AT SCREWED VALVES OR EQUIPMENT. 3.3.2.2.2.2. ALL LABELS SHALL BE OF SUFFICIENT WIDTH TO OVERLAP ITSELF. 3.3.2.2.2.3. PROVIDE LABELS OF PLASTIC COATED TAPE, WITH SELF-ADHESIVE BACKING SURFACE. FOR INSTALLATION ON INSULATED PIPE, PROVIDE ADHESIVE SUITABLE FOR THIS APPLICATION. CONFORM WITH CAN/CSB-S24-23 AND/OR OWNER STANDARDS FOR PRIMARY LABEL COLOUR, AND WITH LEGEND AND DIRECTION ARROWS IN BLACK PRINT LEGEND IN FULL WHEREVER FEASIBLE, OR A RECOGNIZED ABBREVIATION OF SERVICE INVOLVED.	6. MECHANICAL EQUIPMENT:
1.1. GENERAL:	1.1.1. MAKE SITE VISITS AS NECESSARY BEFORE BID CLOSING TO ESTABLISH AND VERIFY ALL EXISTING CONDITIONS. MAKE ALLOWANCE FOR ANY NEW OR EXISTING SERVICE AND EQUIPMENT RELOCATIONS NECESSARY TO COMPLETE THE WORK AND INCLUDE IN THE BID PRICE. EXTRAS WILL NOT BE ALLOWED FOR FAILURE TO PROPERLY EVALUATE EXISTING CONDITIONS.	3.1.5.5.5. VALVES: PROVIDE DRAIN VALVES WITH HOSE THREAD OUTLET CONNECTION, OR VALVE WITH LONG NIPPLE ON OUTLET, AT ALL LOW POINTS OF EACH WATER SYSTEM, AND ABOVE ALL RISER OR BRANCH STOP VALVES, FOR PROPER DRAINAGE OF PIPING.	3.3.2.2.3. DOWNBLAST: CENTRIFUGAL DIRECT DRIVE EXHAUST FAN WITH SPUN ALUMINUM HOUSING, MOUNT MOTOR AND DRIVE HOUSING ON VIBRATION ISOLATORS AND SEAL FROM EXHAUST AIR STREAM. CAPACITIES AND ACCESSORIES AS INDICATED IN SCHEDULE ON DRAWINGS. FAN SOUND SHALL NOT EXCEED SONES NOTED IN SCHEDULES.	
1.1.2. THE DRAWINGS SHOW THE GENERAL INTENT OF THE WORK, NOT THE DETAILS OF INSTALLATION. CO-ORDINATE THE ROUTING AND INSTALLATION OF ALL MECHANICAL SERVICES WITH ALL EXISTING CONDITIONS, STRUCTURE AND THE WORK OF ALL OTHER TRADES. PROVIDE INSTALLATION DRAWINGS AS REQUIRED.	1.1.3. DO NOT SCALE MECHANICAL DRAWINGS. TAKE FIELD DIMENSIONS PRIOR TO ANY INSTALLATION.	3.1.7. PIPE IDENTIFICATION: 3.1.7.1. LABEL PIPING INSTALLED UNDER THIS DIVISION TO INDICATE CONTENT AND DIRECTION OF FLOW. INCLUDE OPERATING PRESSURE OR VACUUM, AS APPLICABLE. 3.1.7.2. ALL LABELS SHALL BE OF SUFFICIENT WIDTH TO OVERLAP ITSELF.	3.3.2.2.4. EXHAUST FANS: 3.3.2.2.4.1. TYPE "K" SOFT ANNEALED COPPER TUBING WITH NO JOINTS PERMITTED BELOW GRADE. BEND TUBING USING APPROVED TUBE BENDER. 3.3.2.2.4.2. USE TYPE "K" SOFT ANNEALED COPPER TUBING FOR TRAP SEAL PRIMER PIPING TO TRAPS INSTALLED IN CONCRETE FLOORS.	
1.2. DESCRIPTION: PROVIDE WORK IN ACCORDANCE WITH FULL, INTENT AND MEANING OF DRAWINGS AND SPECIFICATIONS. THE WORD "PROVIDE" WHERE USED IN THE CONTRACT DOCUMENTS, IS TO BE INTERPRETED AS "SUPPLY AND INSTALL" ALONG WITH ALL ASSOCIATED HARDWARE AND CONNECTIONS.	1.23.3. THE DRAWINGS SHOW THE GENERAL INTENT OF THE WORK, NOT THE DETAILS OF INSTALLATION. CO-ORDINATE THE ROUTING AND INSTALLATION OF ALL MECHANICAL SERVICES WITH ALL EXISTING CONDITIONS, STRUCTURE AND THE WORK OF ALL OTHER TRADES. PROVIDE INSTALLATION DRAWINGS AS REQUIRED.	3.1.7.3. PVC WITH NO JOINTS BELOW GRADE. COLD WATER ONLY.	6.2. UNIT HEATER (SEPARATED COMBUSTION): UNIT HEATER, MINIMUM 20 GA. COATED GALVANIZED STEEL CASING. HEAT EXCHANGER TO BE STAINLESS STEEL. BLOWER TO BE DWDI FORWARD CURVED DYNAMICALLY AND STATICALLY BALANCED CENTRIFUGAL FAN WHEEL WITH BELT DRIVE OPEN DRIP PROOF MOTOR.	
1.3. WORKMANSHIP: PROVIDE ALL NEW MATERIALS AND EQUIPMENT WITH THE APPROPRIATE LISTING (IE. CSA, UL, CETL, ETC.) ALL WORKMANSHIP SHALL BE FIRST CLASS, CONFORMING TO INDUSTRY STANDARD PRACTICES FOR SAFETY, ACCESSIBILITY, DURABILITY AND NEATNESS FOR ACCEPTANCE BY THE OWNER'S REPRESENTATIVES.	1.4. SLEEVES, HANGERS, INSERTS: PROVIDE ALL SLEEVES, INSERTS AND HANGERS REQUIRED FOR THE MECHANICAL WORK. TREAT ALL SLEEVES OR HOLES PIERCING ACoustical SEPARATIONS FOR INSTALLATIONS OF THE DIVISION TO MAINTAIN ACoustical RATING. ALL GAPS SHALL BE PACKED WITH ACCOUStIC INSULATION AND SEALED AT BOTH ENDS WITH ACCOUStIC CALLUM TAPE. PROVIDE OPENING AND INSULATION AS REQUIRED. THIS DIVISION IS FOR FIRE OR SMOKE SEPARATIONS WITH AN APPROVED WATERTIGHT SMOKE AND FIRE STOP SEALANT.	3.1.7.4. PVC-FOR-38 MM (1-1/2") AND SMALLER:		
1.5. INTERPRETATION: THE WORK AND SERVICES PROVIDED ARE SOLELY FOR THE CONTRACTOR'S RESPONSIBILITY. NEITHER THE OWNER NOR CONSULTANT ASSUMES ANY RESPONSIBILITY TO ACT AS AN ADVISER TO ESTABLISH SUBCONTRACT TERMS BETWEEN SECTORS OR DISCIPLINES OF WORK.	1.24. FIRESTOPPING AND SMOKE SEAL:	3.1.7.5.1. PROVIDE LABELS OF PLASTIC COATED TAPE, WITH SELF-ADHESIVE BACKING SURFACE. FOR INSTALLATION ON INSULATED PIPE, PROVIDE ADHESIVE SUITABLE FOR THIS APPLICATION. CONFORM WITH CAN/CSB-S24-23 AND/OR OWNER STANDARDS FOR PRIMARY LABEL COLOUR, AND WITH LEGEND AND DIRECTION ARROWS IN BLACK PRINT LEGEND IN FULL WHEREVER FEASIBLE, OR A RECOGNIZED ABBREVIATION OF SERVICE INVOLVED.		
1.6. COORDINATION BETWEEN TRADES: CO-ORDINATE THE WORK OF THIS TRADE WITH ALL OTHER TRADES ON THE JOB SO THAT THIS WORK MAY PROCESS WITHOUT ANY DELAY. SCHEDULE AND PHASE DEMOLITION AND NEW WORK TO REDUCE INTERFERENCE AND DOWNTIME OF EXISTING SYSTEMS. NOTIFY OWNER'S REPRESENTATIVE OF ALL DOWNTIME PRIOR TO PROCEEDING WITH WORK.	1.24.2. DETAILED SHOP DRAWINGS TO THE CONSULTANT FOR REVIEW, INCLUDING: - MANUFACTURER'S TECHNICAL PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH SPECIFIC TYPE AND LOCATION OF PENETRATION - CERTIFICATION THAT PROPOSED FIRESTOPPING MATERIALS AND ASSEMBLIES COMPLY WITH CAN-4515-M - ULC LISTINGS WITH COPIES OF ULC DATA SHEETS FOR EACH SPECIFIC TYPE AND LOCATION OF PENETRATION	3.1.7.5.2. LOCATE LABELS AS FOLLOWS: AT EVERY END OF EVERY PIPE RUN, ADJACENT TO VALVE OR ITEM OF EQUIPMENT SERVICES. ON EACH EXPOSED PIPE PASSING THROUGH A PARTITION OR FLOOR, AT A DISTANCE OF 15 M (50') ALONG EACH EXPOSED PIPE RUN, EXCLUDING 15 M (50') IN LENGTH, AT EVERY ACCESS POINT ON CONCEALED PIPING.		
1.7. DISCREPANCY: IF A DISCREPANCY IS FOUND IN THE SPECIFICATION OR ON THE DRAWINGS, REQUEST CLARIFICATION PRIOR TO THE END OF THE QUESTION PERIOD SO THAT CLARIFICATION CAN BE PROVIDED IN WRITING.	1.25. MECHANICAL PROJECT COMPLIANCE:	3.1.7.6. NATURAL GAS:		
1.8. REGULATORY REQUIREMENTS: CONFORM TO GOVERNING MUNICIPAL AND PROVINCIAL CODES, RULES AND REGULATIONS AND/OR AUTHORITIES HAVING JURISDICTION.	1.25.1. THE FOLLOWING DOCUMENTS AND/OR CONFIRMATION IS REQUIRED TO ALLOW THE CONSULTANT TO ISSUE OUR LETTER OF GENERAL REVIEWS: - FIRE EXTINGUISHERS INSTALLED	3.4.1. ABOVE GRADE PIPING (EXPOSED) PIPING 50 MM (2") AND SMALLER, SCHEDULE 40 ERW OR CW BLACK CARBON STEEL PIPE CONFORMING TO ASTM A 53/A53M-98 GRADE B, WITH THREADED ENDS. FITTINGS CLASS 150 BLACK MALLEABLE IRON SCREWED FITTINGS CONFORMING TO ASTM A 197/A197M-98 AND ASME B16.3-1998.		
1.9. CODES AND STANDARDS:	2. MECHANICAL INSULATION:	3.4.2. ABOVE GRADE PIPING (CONCEALED) PIPING 50 MM (2") AND SMALLER, SCHEDULE 40 ERW OR CW BLACK CARBON STEEL PIPE CONFORMING TO ASTM A 53/A53M-98 GRADE B, WITH BEVELLED ENDS. FITTINGS: SCHEDULE 40 CARBON STEEL BUTTWELD FITTINGS CONFORMING TO ASTM A 234/A234M-99 WPB GRADE B AND ASME B16.9-1993.		
1.9.1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO BUILDING CODE, THE ONTARIO FIRE CODE AND ANY OTHER LOCAL REGULATIONS HAVING JURISDICTION OVER THE WORK OF THIS TRADE.	2.1. WHERE A CODE OR STANDARD IS REFERENCED, THE LATEST VERSION OF THE CODE OR STANDARD REFERENCED IN THE APPLICABLE BUILDING CODE IS TO BE APPLIED.	3.4.3. ABOVE GRADE CONTINUOUS PIPING (CONCEALED) PIPING 50 MM (2") AND SMALLER: CORRUGATED STAINLESS STEEL TUBING COMPLYING WITH ANSI C 1 AND LISTED WITH CSA ASTM A240 TYPE 300 CORRUGATED STAINLESS STEEL TUBING WITH MINIMUM WALL THICKNESS OF 0.019". JACKETING OR UV RESISTANT POLYETHYLENE MEETING THE REQUIREMENT OF ASME B16.9-1993 AND ASME B16.9M-1993. FITTINGS ARE SAE 3080 BRASS INCORPORATING DOUBLE WALL FLARE SEALING AND "JACKET LOCK" JACKET CAPTURES FOR STEEL TUBING PROTECTION. SIZING LISTED ON DRAWINGS IS BASED ON STEEL PIPING, UNLESS SPECIFICALLY STATED OTHERWISE. ADJUST SIZING ACCORDINGLY WHEN USING CORRUGATED PIPING.		
1.9.2. WHERE A CODE OR STANDARD IS REFERENCED, THE LATEST VERSION OF THE CODE OR STANDARD REFERENCED IN THE APPLICABLE BUILDING CODE IS TO BE APPLIED.	2.2. WHERE INSULATION THICKNESS IS NOT IDENTIFIED, COMPLY WITH ASHRAE 90.1 REQUIREMENTS.	4. FIRE PROTECTION SYSTEM:		
1.10. SAFETY: COMPLY WITH ALL PROVINCIAL/FEDERAL AND/OR LOCAL SAFETY REGULATIONS, INCLUDING THE OCCUPATIONAL HEALTH AND SAFETY ACT. IN ADDITION, COMPLY WITH ALL OF THE OWNER'S HEALTH AND SAFETY REQUIREMENTS.	2.3. PROVIDE A CONTINUOUS VAPOUR BARRIER ON ALL COLD SYSTEMS.	4.1. FIRE EXTINGUISHERS: 4.1.1. LOCATE FIRE EXTINGUISHERS WHERE INDICATED ON DRAWINGS. WHERE RECESSED CABINETS ARE SHOWN, CONTRACTOR TO VERIFY DIMENSIONS OF RECESSED CABINET WILL FIT WITHIN WALL.		
1.11. PERMITS AND FEES: OBTAIN ALL PERMITS REQUIRED FOR INSTALLATION OF MECHANICAL TRADES WORK. ARRANGE FOR INSPECTIONS TESTS THEREWITH AND PAY ALL COSTS FOR PERMITS, INSPECTIONS, AND ASSOCIATED FEES. THIS INCLUDES ANY TSO INSPECTION AND/OR CERTIFICATION. OBTAIN PERMITS IMMEDIATELY AFTER NOTIFICATION OF AWARD OF CONTRACT.	2.4. DEFINITIONS:	4.1.1.2. SURFACE MOUNT: MULTI-PURPOSE DRY CHEMICAL EXTINGUISHERS WITH A RATING OF 2A10BC. COMPLETE WITH WALL BRACKET.		
1.12. TAXES: ENSURE THAT PROVINCIAL AND/OR FEDERAL TAXES ARE INCLUDED WHERE REQUIRED.	2.5. INSULATION TYPES:	5. PLUMBING SYSTEM:		
1.13. WARRANTY: PROVIDE A ONE YEAR WARRANTY FOR ALL MATERIALS AND LABOUR FOR THE ONE YEAR PERIOD TO BEGIN AT THE TIME OF SUBSTANTIAL COMPLETION. COMPLETE ALL WARRANTY REGISTRATION DOCUMENTATION ON BEHALF OF THE BUILDING OWNER. INCLUDE COPIES OF COMPLETED DOCUMENTATION IN OPERATIONS AND MAINTENANCE MANUALS.	2.6. PIPING:	5.1. REFERENCES STANDARDS:		
1.14. CERTIFICATION: PROVIDE MANUFACTURER'S WRITTEN CERTIFICATION OF THE INSTALLATION AND OPERATION OF ALL SYSTEMS AND MAJOR EQUIPMENT.	2.6.1. DO NOT INSULATE FLANGES OR UNIONS AT CONNECTION TO EQUIPMENT.	5.1.1. CONFORM TO ALL APPLICABLE CODES INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: 5.1.1.1. CSA-B64-10; SELECTION AND INSTALLATION OF BACKFLOW PREVENTERS		
1.15. EXISTING SERVICE:	2.6.2. VALVE OPERATORS AND BALANCING VALVE TEST PORTS TO BE ACCESSIBLE WITHOUT REMOVAL OF INSULATION.	5.1.1.2. CSA-B149.1; NATURAL GAS INSTALLATION CODE		
1.16. SITE PROTECTION AND CLEANLINESS: PROTECT ALL WORK AND MATERIALS, BEFORE AND AFTER ERECTION, FROM WEATHER AND OTHER HAZARDS. AND KEEP IN A CLEAN AND ORDERLY MANNER. AVOID ACCUMULATION OF DEBRIS AS THE WORK PROGRESSES. ON COMPLETION OF THE CONSTRUCTION AND PRIOR TO THE FINAL INSPECTION AND ACCEPTANCE BY THE OWNER, CLEAN AND REMOVE FROM THE SITE ALL SCRAP MATERIALS RESULTING FROM THE WORK OF THIS TRADE.	2.6.3. PIPE INSULATION INSERTS AND SHIELDS: PROVIDE RIGID INSERTS AND SHIELDS AT ALL PIPING JOINTS. PROVIDE RIGID INSULATED INSERT THICKNESS TO MATCH INSULATION THICKNESS. INSERT TO BE IN-YOURGUS CALUM SILICATE RIGID PIPE INSULATION. INSERT AND SHIELD TO PROTECT BOTTOM HALF OF PIPE. SHIELD TO BE FABRICATED FROM GALVANIZED STEEL. SHIELD COLOUR TO MATCH COLOUR OF INSULATION FINISH. SHIELD AND INSERT LENGTH TO BE AS FOLLOWS:	5.2. VENTING: PLUMBING VENTING MAY NOT BE SHOWN ON DRAWINGS. PROVIDE A COMPLETE PLUMBING VENTING SYSTEM FOR ALL PLUMBING FIXTURES SHOWN, IN ACCORDANCE WITH OBC SECTION 7.5.		
1.17. ADJUSTMENT AND OPERATION OF SYSTEMS: WHEN WORK IS COMPLETE, ADJUST ALL EQUIPMENT ITEMS, OF VARIOUS SYSTEMS, FOR PROPER OPERATION WITHIN FRAMEWORK OF DESIGN INTENT, AND OPERATING CHARACTERISTICS AS PUBLISHED BY EQUIPMENT MANUFACTURER.	3.3. MATERIALS OF CONSTRUCTION:	5.3. STERILIZATION OF POTABLE (DOMESTIC) WATER SYSTEMS:		
1.18. MISCELLANEOUS STEEL SUPPLY, AND INSTALL MISCELLANEOUS STRUCTURAL SUPPORTS, PLATES, FORMS, AND BRACES, AS REQUIRED TO HANG OR SUPPORT ALL EQUIPMENT, PIPING, DUCTWORK AND SIMILAR ITEMS.	3.4. INSULATION TYPE AND THICKNESS:	5.3.1. FLUSH EACH SYSTEM, AFTER COMPLETION, BY ALLOWING FULL FLOW OF WATER THROUGH SYSTEM FOR A PERIOD OF FIFTEEN MINUTES, OR LONGER WHEN DIRECTED BY CONSULTANT.		
1.19. EQUIPMENT INSTALLATION: INSTALL AND START UP ALL ITEMS OF EQUIPMENT, DEVICES AND SYSTEMS IN ACCORDANCE WITH THE CONTRACT. CONTRACTOR IS RESPONSIBLE FOR ASCERTAINING MANUFACTURERS' INSTALLATION GUIDELINES AND RECOMMENDATIONS. TOUCH-UP ALL SHOP PAINTED EQUIPMENT DAMAGED IN TRANSIT OR DURING INSTALLATION TO MATCH ORIGINAL SHOP FINISH.	3.4.1. PLUMBING: 3.4.1.1. POTABLE (DOMESTIC) COLD WATER AND CITY WATER (PGF): 25 MM (1") 3.4.1.2. SANITARY DRAIN (PGF): 25 MM (1")	5.3.2. AFTER FLUSHING OF THE SYSTEM IS COMPLETED, PROVIDE A 24 HOUR CONTACT STERILIZATION TREATMENT BY TREATING THE WATER WITH 50 PPM OF CHLORINE AS RECOMMENDED IN AWWA SPECIFICATION C-651. AFTER STERILIZATION PERIOD HAS ELAPSED, FLUSH SYSTEM TO REDUCE CHLORINE CONTENT TO AN ACCEPTABLE LEVEL.		
1.20. CUTTING AND PATCHING: PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS TRADE. ALL CUTTING AND PATCHING SHALL BE PERFORMED BY TRADE SPECIALIZING IN THE MATERIAL TO BE PATCHED. INCLUDE ALL COSTS FOR CUTTING AND PATCHING RELATED TO THE WORK OF THIS TRADE IN THE BID PRICE WHERE PIPES OR DUCTS ARE SHOWN PASSING THROUGH EXISTING WALLS, FLOORS, ANS ROOF. CUT AND PATCH THE NECESSARY OPENINGS. SHOULD CUTTING, REPAIRING, AND PATCHING OF PREVIOUSLY FINISHED WORK, OF OTHER TRADES, BE REQUIRED, PAY FOR REPAIR AND INSTALLATION OF MECHANICAL TRADE, PAY ALL COSTS FOR TRADE SECTION CONCERNED TO PERFORM WORK.	3.4.5. APPLICATION: 3.4.5.1. COMPLETELY INSULATE THE FOLLOWING SYSTEMS: - POTABLE (DOMESTIC) COLD WATER	5.4. CONNECTIONS SERVICES:		
1.21. CHANGES TO THE DIVISIONS TO THE CONTRACT REQUIRE ADDITIONS TO OR DELETIONS FROM THE WORK OF THIS DIVISION SHALL BE CARRIED OUT UPON WRITTEN REQUEST OF THE CONSULTANT. EXTRAS TO THE CONTRACT OR CREDITS SHALL BE SUBMITTED WITH A COMPLETE COST BREAKDOWN AS FOLLOWS:	3.4.6. PIPING SYSTEMS:	5.4.1. NATURAL GAS SERVICE: MAKE ARRANGEMENTS WITH LOCAL GAS UTILITY FOR INSTALLATION OF UNDERGROUND GAS SERVICE, GAS METER, MAIN PRESSURE REDUCING STATION, AND CONNECTION THERETO AT LOCATION INDICATED. PAY FOR COSTS LEVIED BY GAS UTILITY FOR PROVISION, INSTALLATION AND CONNECTION OF THIS SERVICE.		
- MATERIALS, QUANTITIES AND UNIT PRICES FOR ALL EQUIPMENT REQUIRED OR DELETED	3.1. GENERAL:	5.5. VALVES:		
- UNIT HOURS	3.1.1. EXPANSION AND CONTRACTION: INSTALL ALL PIPING SO AS TO BE FREE FROM STRAIN AND DISTORTION DUE TO EXPANSION AND CONTRACTION AS GOVERNED BY REQUIREMENTS OF ANSI B31.1, EXCEPT AS HEREINAFTER MODIFIED. ALLOW FOR EXPANSION AND CONTRACTION BY OFFSETS, EXPANSION U-BENDS OR LOOPS. DO NOT USE EXPANSION JOINTS OF ANY TYPE UNLESS SPECIFICALLY INDICATED ON DRAWINGS.	5.5.1. SUBMIT SHOP DRAWINGS FOR ALL VALVES.		
- TOTAL MATERIAL COST	3.1.2. LINES, GRADES AND SLOPES: 3.1.2.1. INSTALL LIQUID AND AIR PIPING FREE OF POCKETS AND PITCH TO DRAIN, AT LOW POINTS IN PIPING, WITH VALVES OR TRAPS INSTALLED AS REQUIRED FOR DRAINAGE OF THE PIPING.	5.5.2. POTABLE (DOMESTIC		