

SHALL BE COMPLETED BY OWNER'S/LANDLORD'S APPROVED CONTRACTOR AND PAID FOR UNDER THIS CONTRACT.

PRINTS SHALL BE DELIVERED TO CONSULTANT FOR UPDATING DRAWING FILES TO AS-BUILT CONDITION. PDFS OF THE

OPERATING AND MAINTENANCE MANUALS CONTAINING APPROVED SHOP DRAWINGS. AIR AND WATER BALANCING REPORTS.

O CONSULTANT FAR REVIEW. MANUALS SHALL BE SEPARATED WITH DIVIDERS IN APPROPRIATE SECTIONS. MAKE ALL

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.

PIPING WITH 1 ½ TIMES THE SYSTEM PRESSURE, NATURAL GAS SYSTEMS TO CAN1-B149.1, FUEL OIL TO CSA B139, DRAINAGE

CLASS C; TRANSVERSE JOINTS AND CONNECTIONS SHALL BE MADE AIRTIGHT. AN OIL-RESISTANT POLYMER-TYPE DUCT SEALING COMPOUND IN COMBINATION WITH A POLY-VINYL COATED OPEN WEAVE FIBERGLASS TAPE. LONGITUDINAL JOINTS UNSEALED.

BED TAPE IN SEALER AND RECOAT WITH MINIMUM ONE COAT OF SEALER TO MANUFACTURER'S RECOMMENDATIONS. METALLIC

BALANCING AND VOLUME CONTROL DAMPERS SHALL BE PROVIDED IN NEW OR EXISTING DUCTWORK TO PROVIDE A COMPLETE

AND BALANCED SYSTEM. BALANCING CONTRACTOR SHALL BE A MEMBER OF AABC OR NEBC. SUBMIT BALANCING REPORT IN

REQUIRED, BALANCING WORK SHALL BE COMPLETED BY OWNER'S/LANDLORD'S APPROVED CONTRACTOR AND PAID FOR UNDER

THIS CONTRACT. PROVIDE SIX (6) ADDITIONAL HOURS OF BALANCING WORK. THIS WORK SHALL BE PERFORMED AFTER THE

FLEXIBLE DUCTWORK: SPIRAL WOUND FLEXIBLE ALUMINUM, PERFORMANCE -FACTORY TESTED TO 2.5 KPA WITHOUT LEAKAGE,

EACH VAV TERMINAL CONTROL UNIT, PROVIDE A MINIMUM OF 3 DIAMETERS OF STRAIGHT FLEA DUCT,. MAXIMUM LENGTH 1200

STRAP HANGERS: OF SAME MATERIAL AS DUCT, BUT NEXT SHEET METAL THICKNESS HEAVIER THAN DUCT. MAXIMUM SIZE OF

L200L

L100L

METAL STRAP

WITH RUBBER ISOLATORS

BUILDING STRUCTURE —

NOTE: REFER TO FLOOR PLANS FOR

SIZES AND FAN CAPACITIES

INLINE TRANSFER FAN IN CEILING SPACE

MAXIMUM RELATIVE PRESSURE DROP COEFFICIENT OF 3. SECURE TO RIGID DUCT USING GEAR CLAMPS. AT THE INLET OF

DUCTWORK AND HANGERS SHALL BE FABRICATED IN ACCORDANCE WITH THE LATEST ASHRAE AND SMACNA STANDARDS.

TRIPLICATE TO THE CONSULTANT AND THE LANDLORD INDICATING TERMINAL DESIGN AND MEASURED FLOW RATES, WHEN

AND VENTING TO APPLICABLE BUILDING CODE AND AUTHORITIES HAVING JURISDICTION, DOMESTIC WATER TO 1 ½ TIMES

NEW MATERIAL AND EQUIPMENT SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH BASE BUILDING STANDARDS.

SEALANT: OIL RESISTANT, POLYMER TYPE FLAME RESISTANT DUCT SEALANT. ACCEPTABLE MATERIAL DURO DYNE S-2.

CORRECTIONS REQUESTED BY CONSULTANT AND RESUBMIT FOR REVIEW.

COMPLY WITH THE GENERAL CONTRACTOR'S CONSTRUCTION SCHEDULE.

WORKING PRESSURE, FIRE SYSTEMS IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION

TAPE: POLYVINYL TREATED, OPEN WEAVE FIBERGLASS. ACCEPTABLE MATERIAL DURO DYNE FT-2.

RECTANGULAR FITTINGS: STANDARD RADIUS AND OR SHORT RADIUS WITH TURNING VANES.

TENANT HAS MOVED IN. AS MAY BE REQUIRED FOR COMFORT BALANCING.

VOLUME DAMPERS ON ALL BRANCH DUCT NEAR CONNECTION TO MAIN DUCT.

DUCT THICKNESS FABRICATION AND REINFORCEMENT: TO ASHRAE AND SMACNA.

40 X 40 X

40 X 40 X 3

50 X 50 X 3

<u>SPACING, MM</u>

MECHANICAL SPECIFICATIONS

BROAN

SEAL CLASSIFICATION; MAXIMUM PRESSURE OF 500 PA, SMACNA SEAL CLASS = C.

AS-BUILT FILES ALONG WITH THE CONTRACTORS ORIGINAL MARKUP SET OF PRINTS SHALL BE TURNED OVER TO THE OWNER.

COORDINATE VOLTAGE AND PHASE WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.

CONTRACTOR.

INSTALLATION.

SUIT WALL FINISH (EG. TILE.)

DISCOUNT, TYPICALLY 20%-30%.

LOW PRESSURE METALLIC DUCTWORK

DUCT TAPE IS NOT ACCEPTABLE

ROUND FITTINGS: SMOOTH RADIUS 5 PIECE.

SPLITTER DAMPER ON MAIN DUCT BRANCHES.

DUCT SUPPORTED BY STRAP HANGER IS 500MM.

1051 TO 1500

1501 TO 2100

HANGER SPACING:

1501 AND OVER

M3 / SCALE: NOT TO SCALE

<u>TF-1</u> | CASH COUNTING ROOM |

M3 / NOT TO SCALE

FLEXIBLE CONNECTION -

LINED DUCT ——

CEILING —

EGGCRATE GRILLE —

MIN. 48" LONG 1" ACOUSTICALLY

M3 / SCALE: NOT TO SCALE

M3 / SCALE: NOT TO SCALE

B FAN SCHEDULE

OVER TO THE LANDLORD/OWNER AT THEIR DIRECTIONS.

ACCESS DOORS IN INSULATED DUCTS: SANDWICH CONSTRUCTION OF SAME MATERIAL AS DUCT, ONE SHEET METAL THICKNESS HEAVIER, MINIMUM 0.6 MM THICK. COMPLETE WITH SHEET METAL ANGLE FRAME AND 25 MM THICK RIGID GLASS FIBER FLEXIBLE CONNECTIONS AT THE INLET AND OUTLET OF ALL FANS, HOODS, AND WHERE AT ADDITIONAL LOCATIONS SHOWN ON THE DRAWINGS FIRE DAMPER SHALL BE OUT OF AIR STREAM AND ULC LABELED. PROVIDE FIRE DAMPERS AS REQUIRED IN NEW AND EXISTING DUCTWORK C/W ACCESS DOORS. ACOUSTIC DUCT LINING 25MM [1 IN.] SHALL BE PROVIDED WHERE SHOWN ON DRAWINGS. SECURE WITH MECHANICAL FASTENERS PIPE INSULATION AND ADHESIVE. SEAL ROW EDGES. NOTE DUCT DIMENSIONS ARE CLEAR INSIDE. THERMAL INSULATION WITH VAPOUR BARRIER SHALL BE PROVIDED ON ALL NEW SUPPLY/EXHAUST DUCTWORK, LEAVING OR ENTERING THE BUILDING FOR THE FIRST 10 FEET. INSULATE ALL CONCEALED (INSIDE CEILING PLENUM) SUPPLY & EXHAUST DUCTWORK WITH 25MM (1") FIBREGLASS FLEXIBLE RFFRK INSULATION FLEXIBLE DUCT CONNECTIONS SHALL BE DURODYNE NEOPRENE AND INSTALLED BETWEEN ALL AIR HANDLING EQUIPMENT/FANS AND SYSTEM DUCTWORK AIR TRANSFER OPENINGS INDICATED WITHOUT DUCT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO ADVISE AND CONFIRM FAN SHEAVES SHALL BE ADJUSTED OR REPLACED AS REQUIRED TO OBTAIN DESIGN AIR QUANTITIES. COORDINATE THIS WORK WITH OWNER/LANDLORD. ACOUSTIC DUCT LINING FIBROUS GLASS DUCT LINER: AIR STREAM SIDE FACE WITH MAT FACING. FIBER FREE DUCT LINER FOR PHARMACY & MEDICAL CLINIC APPLICATION. FLAME SPREAD RATING SHALL NOT EXCEED 25. SMOKE DEVELOPMENT RATING SHALL NOT EXCEED 50 WHEN TESTED IN ACCORDANCE WITH CAN/ULC-S102. RIGID: USE ON FLAT SURFACES WHERE INDICATED, 25 MM THICK TO CGSB 51-GP-10M, FIBROUS GLASS RIGID BOARD DUCT DENSITY: 36 KG/M3 MINIMUM. ACCEPTABLE MATERIAL: RIGID COATED DUCT LINER, FIBERGLAS CANADA. CONSULTANT'S WRITTEN AUTHORIZATION. THE QUALITY AND PERFORMANCE CHARACTERISTICS OF SUBSTITUTED PRODUCT SHALL BE EQUIVALENT TO THE SPECIFIED PRODUCT. ALL SUBSTITUTE PRODUCTS SHALL BE APPROVED BY CONSULTANTS. ANY ADDITIONAL COSTS INCURRED BY ALL TRADES FOR SUBSTITUTED EQUIPMENT INSTALLATION MUST BE INCURRED BY THIS PLUMBING SYSTEM EXISTING SANITARY DRAIN LOCATIONS AND INVERT ELEVATIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONTROL WIRING AND DEVICES SHALL BE PROVIDED UNDER THIS CONTRACT FOR ALL LOW VOLTAGE ELECTRICAL DEVICES CONNECTED TO MECHANICAL EQUIPMENT, INCLUDING ALL THERMOSTATS, SENSORS, ETC. WHEN REQUIRED, CONTROL WORK DOMESTIC WATER PIPING, HOT AND COLD WATER PIPING - TYPE "L" COPPER WITH COPPER FITTINGS USE 95/5 TIN/ANTIMON SOLDER. PROVIDE TYPE "K" SOFT COPPER PIPING WITHOUT JOINTS BELOW GROUND. ELECTRICAL DEVICES SHALL BE PROVIDED FOR ALL LOAD SIDES INCLUDING WIRING, STARTERS, DISCONNECT, ETC. VERIFY AND DOMESTIC WATER PIPING ALTERNATES - IF ALLOWED BY MUNICIPALITY AND LANDLORD: ACCESS DOORS SHALL BE PROVIDED FOR ALL INACCESSIBLE MECHANICAL EQUIPMENT AND SERVICES REQUIRING INSPECTION OR 1. CPVC: IPEX "AQUARISE" SDR 11 CPVC PIPE AND FITTINGS TO CAN/CSA B137.6, 25/50 FLAME SPREAD AND SMOKE DEVELOPED RATED IN ACCORDANCE WITH CAN/ULC S102.2, CERTIFIED TO NSF/ANSI 61, COMPLETE WITH PRIMER/SOLVENT SERVICE. FINISH SHALL SUIT ARCHITECT/DESIGNERS REQUIREMENTS. ACCESS DOORS SHALL BE RECESSED AS REQUIRED TO WELD JOINTS, AND WITH A PRESSURE RATING OF 690 KPA (100 PSI) AT 82.2° C (180° F). PEX TUBING: NON-BARRIER TYPE CROSS-LINKED POLYETHYLENE PIPING IN ACCORDANCE WITH CAN/CSA-B137.5. NSF ARCHITECT/DESIGNER APPROVAL OF AIR TERMINAL, THERMOSTAT, AND ACCESS DOOR LOCATIONS MUST BE OBTAINED PRIOR TO COMPLETE WITH BRASS INSERTS AND CRIMP—RING JOINT FITTINGS AND COUPLINGS. ONE YEAR WRITTEN WARRANTY SHALL BE PROVIDED FOR THE COMPLETE MECHANICAL INSTALLATION FROM DATE OF ACCEPTANCE. CONDENSATE PIPING TO BE COPPER TYPE 'M'. CAD AS-BUILT FILES SHALL BE PRODUCED BY MECHANICAL CONSULTANT BASED ON INFORMATION OBTAINED FROM MECHANICAL DRAIN WASTE AND VENT PIPING -PLASTIC; BELOW GRADE DWV PIPING TO CSA-B181.1, CAN/CSA-B181.2, AND CONTRACTOR. CONTRACTOR SHALL ACCURATELY RECORD. ON A SET OF WHITE PRINTS, THE INSTALLED WORK INDICATING EXACT

THAN 50W OF ORIGINAL THICKNESS. BUILD UP TO SPECIFIED THICKNESS WITH APPROVED ASBESTOS FREE FINISHING CEMENT. 372, AND ASTM F876, AND TESTED FOR COMPLIANCE BY AN INDEPENDENT THIRD-PARTY AGENCY. THE PIPING IS TO BE DO NOT INSULATE TERMINAL UNIT AUTOMATIC CONTROL VALVES INSTALLED IN HOT PIPING. DO NOT INSULATE TERMINAL UNIT AUTOMATIC CONTROL VALVES WHICH ARE INSTALLED IN COLD PIPING AND WHICH ARE LOCATED OVER CONDENSATE DRAIN PANS. UNDER ALL HANGERS USED ON CHILLED WATER AND DOMESTIC COLD WATER, PROVIDE AN INSERT BETWEEN SUPPORT SHIELD AND PIPING FOR PIPING 1-1/2"Ø OR LARGER. LOCATIONS, ELEVATIONS AND SIZE OF CONCEALED WORK, DIMENSIONED FROM COLUMN/GRID LINES AND BENCHMARKS. WHITE CAN/CSA-B182.1. JOINTS; SOLVENT WELD FOR PVC: TO ASTM D2564, AND SOLVENT WELD FOR ABS: TO ASTM D2235. ABOVE GRADE SANITARY, STORM & VENT: 'IPEX' SYSTEM XFR FIRE RETARDANT PVC PLASTIC DRAINAGE PIPING AND FITTINGS PROVIDE THE FOLLOWING PIPE INSULATION TYPE AS INDICATED IN THE PIPE INSULATION TABLE BELOW. MOLDED FIBROUS WHERE APPROVED BY LOCAL AUTHORITIES GLASS PIPE INSULATION SHALL COMPLY WITH THE REQUIREMENTS OF ASTM C 547. DRAINAGE WASTE AND VENT PIPING -COPPER: CSA CLASS 4000, COPPER TUBE AND FITTINGS, ABOVE GROUND SANITARY AND 'TYPE P1' OWENS CORNING FIBERGLASS PIPE INSULATION. JOHNS MANVILLE MICRO-LOK AP-T PLUS FIBERGLAS PIPE EQUIPMENT DATA SHEETS, WRITTEN WARRANTY, OPERATING INSTRUCTIONS AND MAINTENANCE PROCEDURES SHALL BE SUBMITTED VENT TYPE DWV TO: ASTM B306. FOR URINAL DRAINS USE COPPER TUBE, HARD DRAWN, TYPE L TO ASTM B88M. SOLDER: INSULATION, MUNSON FIBERGLAS PIPE INSULATION OR KNAUF PIPE INSULATION WITH FACTORY APPLIED ALL SERVICE VAPOUR 95/5 TIN/ANTIMONY, TO ASTM B32, TYPE 50A. BARRIER JACKET DRAINAGE WASTE AND VENT PIPING -CAST IRON; CSA CLASS 4000, ABOVE GROUND SANITARY, STORM AND VENT MINIMUM NPS CHANGE NOTICE QUOTATIONS SHALL BE SUBMITTED COMPLETE WITH COST BREAKDOWN OF LABOUR AND MATERIALS. FAILURE TO 3, TO: CAN/CSA-B70, WITH ONE LAYER OF PROTECTIVE COATING. MECHANICAL JOINTS NEOPRENE OR BUTYL RUBBER PROVIDE WILL RESULT IN REJECTION. ALL MECHANICAL CHANGE NOTICES SHALL BE PRICED IN ACCORDANCE WITH "MECHANICAL COMPRESSION GASKETS WITH STAINLESS STEEL CLAMPS. ABOVE GROUND SANITARY, STORM AND VENT: TO CAN/CSA-B70. CONTRACTORS ASSOCIATION" (MCA). LABOUR UNITS STRICTLY FOR LABOUR AND FOR MATERIAL CAST USE "ALL PRICER" LESS MECHANICAL JOINTS NEOPRENE OR BUTYL RUBBER COMPRESSION GASKETS WITH STAINLESS STEEL CLAMPS. DO NOT MIX COMBUSTIBLE AND NON COMBUSTIBLE PIPING TYPES FOR ABOVE FLOOR STORM AND SANITARY PIPING. ABOVE FLOOR STORM AND SANITARY PIPING TO EITHER BE ALL NON-COMBUSTIBLE OR ALL COMBUSTIBLE WITH APPROVED FLAME AND EXISTING BASE BUILDING HVAC COMPONENTS REMOVED I.E. LIGHT TROFFERS, DIFFUSERS, VAV BOXES ETC. SHALL BE TURNED INSTALL IN ACCORDANCE WITH THE CANADIAN PLUMBING CODE, PROVINCIAL PLUMBING CODE, AND LOCAL AUTHORITY HAVING JURISDICTION. INSTALL BURIED PIPE ON 150 MM BED OF WASHED CLEAN SAND, SHAPED TO ACCOMMODATE FITTINGS, TO LINE ALL PIPE SIZES AND GRADE AS INDICATED. BACKFILL WITH WASHED CLEAN SAND. INSTALL PIPING PARALLEL AND CLOSE TO WALLS AND CEILINGS TO CONSERVE HEADROOM AND SPACE, AND TO GRADE AS INDICATED. TEST PIPING; MAINTAIN TEST PRESSURE FOR 4 HRS WITHOUT LOSS OF PRESSURE. HYDRAULICALLY TEST STEAM AND HYDRONIC

VALVES CRANE OR JENKINS (JENKINS FIGURE N 1. TO 1379 KPA [200 PSI] WORKING PRESSURE		ELOW):		
	 GATE	GLOBE	BALL	
50 MM [2 IN.] AND SMALLER SOLDERED SCREWED	813 810	106-BP 106-B	34 33	
65 MM [2-1/2 IN.] AND LARGER FLANGED	454	2342	NOT APPLICABLE	
2. TO 2068 KPA [300 PSI] WORKING PRESSURE	:			
50 MM [2 IN.] AND SMALLER	GATE	GLOBE	BALL	
SOLDERED SCREWED	9024 2810	106-BP 106-B	34 33	
65 MM [2-1/2 IN.] AND LARGER FLANGED	204	162	NOT APPLICABLE	
3. CHECK VALVES: CRANE 37				
4. PROVIDE ALL BRONZE BALL TYPE SHUT OFF	VALVES ON MAIN A	AND BRANCH LINES FO	R ISOLATING FACH INDIVIDUAL PLUMBIN	G

4. PROVIDE ALL BRONZE BALL TYPE SHUT OFF VALVES ON MAIN AND BRANCH LINES FOR ISOLATING EACH INDIVIDUAL PLUMBING FIXTURE/EQUIPMENT SERVED. PLUMBING FIXTURES INCLUDING DOMESTIC HOT WATER HEATERS SHALL BE NEW, OF FIRST QUALITY, IN PERFECT CONDITION AND INSTALLED IN BEST WORKMANLIKE MANNER. VERIFY PLUMBING FIXTURE QUANTITIES AND LOCATIONS WITH ARCHITECT'S/DESIGNER'S DRAWINGS. REUSE OF DOMESTIC WATER HEATER IS NOT PERMITTED. EXPOSED PIPING AND FITTINGS WITHIN WASHROOMS SHOULD BE CHROME PLATED. PROVIDE CHROME PLATED ESCUTCHEONS ON ALL PIPING PASSING THROUGH FINISHED SURFACES AND MILLWORK. STAINLESS STEEL WATER HAMMER ARRESTORS EQUAL TO ZURN SHOKTROL SHALL BE PROVIDED ON ALL LINES SERVING GROUPS

OF FIXTURES, QUICK CLOSING VALVES END FLUSH VALVES. **CHEMICAL TREATMENT** 

PERFORM CLEANING SERVICES UNDER THE SUPERVISION OF A WATER TREATMENT SPECIALIST WHO SHALL HAVE A MINIMUM OF FIVE (5) YEARS CONTINUOUS LOCAL EXPERIENCE IN THE SUPPLY AND INSTALLATION OF WATER TREATMENT SYSTEMS. AFTER COMPLETION OF FLUSH CLEANING AND PRESSURE TESTING, CHEMICALLY CLEAN ALL PIPING SYSTEMS UTILIZING LOW FOAMING CHEMICAL DETERGENTS WHICH SHALL NOT ADVERSELY AFFECT SYSTEM COMPONENTS.

## PIPE HANGERS AND SUPPORTS

HANGERS: FOR DUCTS LARGER THAT 500MM: BLACK OR GALVANIZED STEEL ANGLE WITH BLACK OR GALVANIZED STEEL RODS AS INSERTS FOR CAST-IN-PLACE CONCRETE: GALVANIZED STEEL WEDGE TO MSS-SP-80, TYPE 18, ULC LISTED. ACCEPTABLE MATERIAL: GRINNELL FIG. 281. STEEL BEAM, BOTTOM FLANGE: COLD PIPING NPS 2 AND UNDER, MALLEABLE IRON C CLAMP TO MSS-SP-58, ACCEPTABLE MATERIAL, GRINNELL FIG. 61. NPS 2 ½ AND LARGER, GRINNELL FIG. 229. STEEL BEAM, TOP FLANGE: GRINNELL FIG. 61 NPS 2 AND UNDER, AND GRINNELL FIG. 227 NPS 2 ½ AND LARGER.

MIDDLE ROD: CARBON STEEL THREADED ROD.

STEEL JOIST: GRINNELL FIG. 60.

MOTOR POWER

127 W |120V/1ø/60Hz|

120V/1ø/60Hz

INLINE

INLINE

FAN R.P.M. DRIVE

0.125"

0.125"

DIRECT

DIRECT

PIPE ATTACHMENT: COLD PIPING, STEEL OR CAST IRON, HOT PIPING STEEL, GRINNELL FIG. 260. COLD AND HOT COPPER PIPING, COPPER PLATED ATTACHMENT, GRINNELL FIG. CT-65. SUSPENDED HOT PIPING WITH HORIZONTAL MOVEMENT IN EXCESS OF 25 MM: PIPE ROLLER, GRINNELL 174.

MAXIMUM SPACING, M ROD DIA. MM

IDENTIFICATION; IDENTIFY PIPING USING COLOUR BANDS CONFORMING TO CGSB 24-GP-3A, INTERVALS BETWEEN BANDS NOT TO

PROVIDE ALL LABOUR, MATERIALS, PRODUCTS, EQUIPMENT AND SERVICES TO SUPPLY AND INSTALL THERMAL INSULATION, VAPOUR BARRIERS AND FINISHES FOR MECHANICAL WORK AS INDICATED ON THE DRAWINGS AND SPECIFIED IN THIS SECTION OF

MAINTAIN AMBIENT TEMPERATURES AND CONDITIONS REQUIRED BY MANUFACTURERS OF ADHESIVES, MASTICS AND INSULATING

PROVIDE NON-COMBUSTIBLE INSULATION, JACKETS AND FINISHES HAVING A FLAME SPREAD/SMOKE DEVELOPED RATING OF

ATTAIN A COMPLETE AND CONTINUOUS VAPOUR BARRIER OVER INSULATION APPLIED TO COLD AND DUAL TEMPERATURE PIPING.

BARRIER JACKET. APPLY TO PIPING, FITTINGS, VALVES AND INLINE COMPONENTS. SEAL LONGITUDINAL AND CIRCUMFERENTIAL

LAPS WITH CHILDERS CP82 OR BAKOR 230-39 ADHESIVE. IF VAPOUR BARRIER JACKET IS NOT LAPPED, SEAL JOINTS WITH

BAKOR 230-39 ADHESIVE. JACKETING WITH SELF-ADHESIVE LAPS AND SELF-ADHESIVE BARRIER TAPE WILL BE AN ACCEPTABLE

SELF—ADHERING 4" WIDE PLAIN ALUMINUM FOIL TAPE. OR ADHERE 4" WIDE ALUMINUM FOIL TAPE WITH CHILDERS CP82 OR

PROVIDE INSULATION MATERIALS WITH A MINIMUM THERMAL CONDUCTIVITY OF 0.24BTU.IN/ (HR. SQ.FT DEG.F) AT 100 DEG.F

CIRCUMFERENTIAL LAPS WITH CHILDERS CP82 OR BAKELITE 230-39 ADHESIVE. SEAL ALL PIPE TERMINATIONS, INCLUDING

FITTINGS. WALL PENETRATIONS AND PIPE SUPPORTS WITH VAPOUR BARRIER MASTIC. FOR CHILLED WATER SYSTEMS PROVIDE

INSULATE OVER FLANGES AND MECHANICAL COUPLINGS WITH SPECIFIED INSULATION AND THICKNESS, SIZED TO SUIT FLANGE

INSULATE VALVES AND INLINE COMPONENTS WITH FLEXIBLE INSULATION DENSITY (3/4 LBS. /CU.FT.) COMPRESSED NOT MARE

**THICKNESS** 

ALL WORK TO BE COMPLETED IN ACCORDANCE TO THE REQUIREMENTS OF THE LATEST EDITION OF NFPA 13 AND CAN/CSA

THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SHUTDOWNS AND/OR BYPASSES OF ANY FIRE PROTECTION SYSTEMS

WHERE DRAINING OF ANY FIRE PROTECTION SYSTEM IS REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING,

ALL FIRE PROTECTION SYSTEMS MUST BE RETURNED TO THEIR NORMAL OPERATING CONDITION UPON COMPLETION AND AT THE

SPRINKLER LOCATIONS SHOWN ARE TO BE USED UNLESS CONFLICTING WITH NFPA 13 PLACEMENT RULES. CO-ORDINATE ALL

1. HYDRAULIC CALCULATIONS FOR NEW SPRINKLER DESIGN PRIOR TO THE COMMENCEMENT OF THE WORK. HYDRAULIC

INFORMATION NOT APPLICABLE TO THE PROJECT FROM THE SHOP DRAWINGS.

SPRINKLER HEAD LAYOUT: PER NFPA 13 AND AS INDICATED ON DRAWINGS.

4. ALL PENDANT SPRINKLERS ARE TO BE CHROME, WITH CHROME ESCUTCHEON RINGS.

HANGERS: ULC LISTED FOR FIRE PROTECTION SERVICES

PROVIDE SPARE SPRINKLERS AS REQUIRED BY NFPA 13.

TESTING TO BE CONDUCTED PER NFPA 13.

BASE OF FIRE EXTINGUISHER TO BE AT LEAST 4" A.F.F.

FLEXIBLE CONNECTION ON INLET & OUTLET AND 8"Ø EXHAUST DUCT OPEN-ENDED INTO CEILING SPACE. FAN TO BE SUSPENDED FROM BUILDING STRUCTURE ON HANGER RODS AND NEOPRENE

FLEXIBLE CONNECTION ON INLET & OUTLET AND 6"Ø EXHAUST DUCT OPEN-ENDED INTO CEILING SPACE. FAN TO BE SUSPENDED FROM BUILDING STRUCTURE ON HANGER RODS AND NEOPRENE

5. ALL CONCEALED SPRINKLERS' CONCEALER PLATES ARE TO BE WHITE.

DESIGN CRITERIA: DESIGN SYSTEMS IN ACCORDANCE WITH NFPA 13, USING THE FOLLOWING PARAMETERS:

PIPE: FERROUS SCHEDULE 40, SCREWED, WELDED, FLANGED OR ROLL GROOVED TO NFPA 13.

PROVIDE ENGINEER WITH TESTING CERTIFICATE WITHIN 48 HOURS OF SUCCESSFUL TESTING.

CONTRACTOR TO CONFIRM ADEQUATE WATER SUPPLY WITH CITY OR PERFORM TEST ON WATER SUPPLY.

CALCULATIONS MUST BE REVIEWED AND APPROVED (STAMPED) BY A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE

SHOP DRAWINGS AND PRODUCT DATA SHEETS FOR ALL COMPONENTS INSTALLED ON THE SPRINKLER SYSTEM. DELETE

SPRINKLERS: ULC LISTED, NFPA 13. SPRINKLER TO BE STANDARD RESPONSE, ORDINARY TEMPERATURE, SPRINKLERS

I. INSTALL SYSTEM IN ACCORDANCE TO THE REQUIREMENTS OF NFPA 13 TO THE REQUIREMENTS OF THE AUTHORITY HAVING

TESTING TO BE WITNESSED BY THE AUTHORITY HAVING JURISDICTION. NOTIFY ENGINEER 48 HOURS PRIOR TO TESTING.

SPRINKLER SYSTEM SHALL BE TESTED AT NORMAL WORKING PRESSURE FOR A MINIMUM DURATION OF 2 HOURS.

FIRE EXTINGUISHERS SHALL BE MULTI-PURPOSE ABC DRY CHEMICAL EXTINGUISHERS, ALLOW FOR (4) EXTRA EXTINGUISHERS

FIRE EXTINGUISHERS SHALL BE PROVIDED AND INSTALLED BY THIS CONTRACTOR. VERIFY EXACT LOCATION ON SITE WITH SDM

FIRE EXTINGUISHERS TO BE INSTALLED AS PER NFPA 10. TOP OF FIRE EXTINGUISHER TO BE A MAXIMUM OF 5'-0" A.F.F. AND

NOT SHOWN ON DRAWING. PROVIDE AND INSTALL SIGNAGE (TYPE TO BE APPROVED BY SDM) FOR ALL EXTINGUISHERS.

UNLESS OTHERWISE REQUIRED BY NFPA 13 OR INDICATED ON DRAWINGS. SPRINKLER TYPE SHALL CONFORM TO LEGEND.

REFILLING AND ENSURING THAT THERE ARE NO LEAKS ON THE SYSTEM ONCE RETURNED TO NORMAL WORKING PRESSURE.

VAPOUR

ON HOT PIPING APPLICATIONS, HOLD INSULATION IN PLACE WITH FLARE TYPE STAPLES (OUTWARD CLINCH).

APPLY PIPE INSULATION OVER 1-1/2" THICKNESS IN TWO LAYERS WITH JOINTS STAGGERED.

INSULATE FITTINGS WITH FABRICATED MITERED OR PREFORMED SECTIONS OF SPECIFIED INSULATION.

DIAMETERS. FILL SPACES BETWEEN INSULATION AND ADJOINING PIPE INSULATION WITH SIMILAR MATERIAL.

ON COLD PIPING APPLICATIONS, APPLY VAPOUR BARRIER JACKET OVER INSULATION AND SEAL LONGITUDINAL AND

USE EITHER FACTORY APPLIED VAPOUR BARRIER JACKET OR FIELD APPLIED REINFORCED FOIL FLAME RESISTANT KRAFT VAPOUR

PIPE DIA. UP TO:

CONFORM TO ISO 9000 QUALITY STANDARD.

FIBER GLASS AND CERTAINTEED.

MEAN TEMPERATURE.

DOMESTIC COLD WATER

2-1/2" AND LARGER

WET PIPE SPRINKLER SYSTEM

END OF EACH WORK SHIFT.

CHANGES WITH SDM.

JURISDICTION.

PRIOR TO INSTALL

ISOLATORS. CONTROLLED BY WALL-MOUNTED REVERSE-ACTING THERMOSTAT. REVERSE-ACTING THERMOSTAT PROVIDED BY DIV. 15, INSTALLED BY DIV. 16.

ISOLATORS. CONTROLLED BY WALL-MOUNTED REVERSE-ACTING THERMOSTAT. REVERSE-ACTING THERMOSTAT PROVIDED BY DIV. 15, INSTALLED BY DIV. 16.

WHICH MAY BE AFFECTED BY THIS PROJECT.

IN WHICH THE WORK IS PERFORMED

HAZARD: AS INDICATED ON DRAWINGS

PIPE LAYOUT: PIPE SCHEDULE

HORIZONTAL STORM (RWL) AND SANITARY DRAINAGE

4" AND LESS

2" AND LESS

MIX SIMILAR PRODUCTS OF MULTIPLE MANUFACTURERS.

25/50 OR LESS, MEETING CAN/ULC S102 REQUIREMENTS.

VAPOUR SEAL PIPE TERMINATIONS EVERY FOUR PIPE SECTIONS.

MATERIALS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

NEW THERMOSTATS PROVIDED BY BASE BUILDING CONTRACTOR, OR IN RETROFITS TO BE TCS BASYS MODEL SZ1022SPL22. MOUNTING HEIGHT OF THE THERMOSTATS SHALL BE 1200MM (3'-11") ABOVE FINISHED FLOOR EXCEPT IN THE RETAIL AREA AND THE DISPENSARY WHERE THERMOSTATS SHALL BE MOUNTED 2400MM (8-0") CLEAN AND RECALIBRATE ALL EXISTING THERMOSTATS UPON COMPLETION OF CONSTRUCTION. SUBMIT REPORT THAT THIS WORK WAS

<u>CONTROLS</u>

INSTALLATION BY THIS CONTRACTOR.

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. ENGRAVED PLASTIC IDENTIFICATION LAMACOID PLATES SHALL BE PROVIDED AT ALL STARTERS AND THERMOSTATS.

ALL THERMOSTAT/CONTROL WIRING IS TO BE 18 AWG SHIELDED PLENUM RATED FT6 MINIMUM. SUPPORT ALL WIRING IN CEILING PLENUM USING WIRE TIES / BRIDLE RINGS. INSULATION MATERIALS MUST BE MANUFACTURED AT FACILITIES CERTIFIED AND REGISTERED WITH AN APPROVED REGISTRAR TO MECHANICAL CONTRACTOR IS TO WIRE AND INSTALL ALL THERMOSTATS AND CONTROL WIRING TO EACH MECHANICAL UNIT SHOWN ON HVAC ALL INSULATION PERTAINING TO DIVISION 15 SHALL BE CARRIED OUT BY ONE FIRM SPECIALIZING IN INSULATION WORK. DO NOT THE FOLLOWING IS ADDITIONAL CONTROL WIRING TO BE SUPPLIED AND INSTALLED BY THIS CONTRACTOR, FINAL WIRING TERMINATIONS FOR THESE COMPONENTS WILL BE DONE BY LOBLAWS ENERGY MANAGEMENT COMPANY.

LABEL AND IDENTIFY ALL CABLES FOR FUTURE CONNECTIONS. ACCEPTABLE INSULATION MANUFACTURERS ARE OWENS CORNING CANADA, JOHNS MANVILLE, MUNSON INSULATION INC. KNAUF DISCHARGE AIR SENSOR CABLE; INSTALL 2 CONDUCTOR WIRE FROM EACH THERMOSTAT TO THE DISCHARGE AIR DUCT CLOSET TO THE THERMOSTAT AND CONTROLLED BY THAT THERMOSTAT. COIL 10 FEET OF CABLE AT THE DUCT AND 10' IN THE CEILING PROVIDE INSULATION AND COVERS IN STRICT ACCORDANCE WITH AUTHORITIES GOVERNING COMBUSTIBILITY AND FIREPROOFING OF CO2 SENSORS; INSTALL 4 CONDUCTOR WIRE FROM EACH THERMOSTAT TO INSIDE THE CONTROL CABINET OF THE RTU CONTROLLED BY THAT THERMOSTAT. COIL 5 FEET OF CABLE IN THE CABINET OF THE RTU AND 10' IN THE CEILING PLENUM ABOVE THE THERMOSTAT.

BAS NETWORK; INSTALL 3 CONDUCTOR CABLE BETWEEN EACH THERMOSTAT FOR NETWORK COMMUNICATION. COIL 10 FEET OF CABLE IN THE CEILING PLENUM ABOVE EACH THERMOSTAT. REFRIGERATION EQUIPMENT; INSTALL 2 CONDUCTOR WIRE FROM EACH WALK-IN COOLER, WALK-IN FREEZER, DAIRY CASE, AND FREEZER CASE TO THE ELECTRICAL ROOM. COIL 10 FEET OF CABLE AT EACH REFRIGERATION EQUIPMENT AND 10' IN THE ELECTRICAL ROOM. UNIQUELY IDENTIFY EACH CABLE.

TEST. ADJUSTING. BALANCING (TAB)

START TAB ONLY WHEN BUILDING IS ESSENTIALLY COMPLETED, INCLUDING: INSTALLATION OF CEILINGS, DOORS, WINDOWS, OTHER CONSTRUCTION AFFECTING TAB.

- FILTERS IN PLACE, CLEAN. DUCT SYSTEMS CLEAN. DUCTS, AIR SHAFTS, CEILING PLENUMS ARE AIRTIGHT. CORRECT FAN ROTATION

 COIL FINS COMBED, CLEAN. - ACCESS DOORS, INSTALLED, CLOSED. - ALL OUTLETS INSTALLED, VOLUME CONTROL DAMPERS OPEN. DO TAB TO FOLLOWING TOLERANCES OF DESIGN VALUES: - ALL HVAC SYSTEMS: PLUS 5%, MINUS 5%.

FIRE, SMOKE, VOLUME CONTROL DAMPERS INSTALLED AND OPEN.

SUBMIT 6 COPIES OF TAB REPORT TO CONSULTANT FOR VERIFICATION AND APPROVAL, IN ENGLISH IN D-RING BINDERS, COMPLETE WITH INDEX TABS.

FD: FLOOR DRAIN ZURN (OR EQUAL) MODEL ZN-415-BZ1 SERIES ADJUSTABLE FLOOR DRAIN. EPOXY COASTED CAST IRON BODY AND CLAMP COLLAR, POLISHED 5" ROUND NICKEL BRONZE STRAINER HEAD AND GRATE: 3" CONNECTION c/w TRAP PRIMER CONNECTION AND VANDAL PROOF SCREWS.

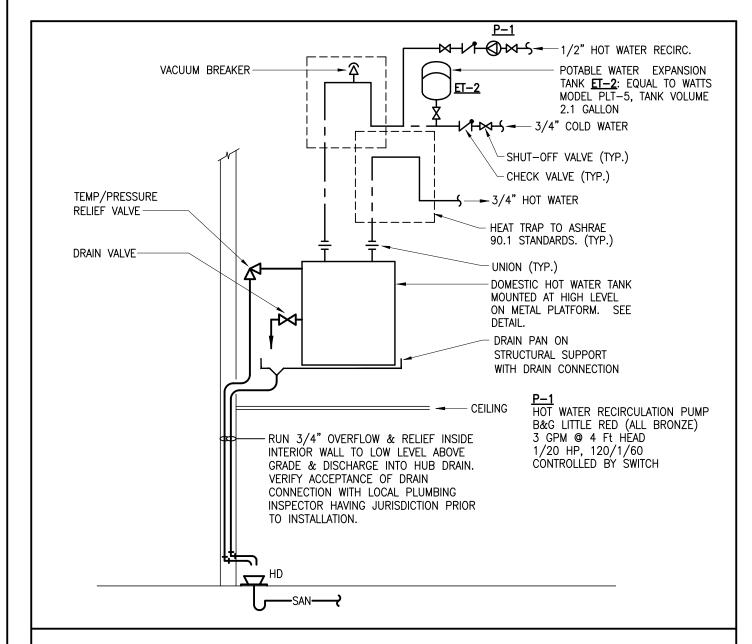
ZURN (OR EQUAL) MODEL ZN-415-BZ1 SERIES ADJUSTABLE FLOOR DRAIN c/w Z329 FUNNEL ASSEMBLY, EPOXY COASTED CAST IRON BODY AND CLAMP COLLAR, POLISHED 5" ROUND NICKEL BRONZE STRAINER HEAD AND GRATE c/w SEDIMENT BUCKET: 4" CONNECTION WITH TRAP PRIMER CONNECTION.

TRAP SEAL PRIMER: MIFAB (OR EQUAL) MODEL M-500 (FOR SINGLE) OR MI-DU, PRESSURE DROP PRIMERS.

**CO**: CLEANOUT URN Z1454 (OR EQUAL) ADJUSTABLE FLOOR CLEANOUT. EPOXY COATED CAST IRON BODY, GAS AND WATERTIGHT TAPERED THREAD PLUG, ROUND SCORIATED EPOXY COATED CAST IRON SECURED COVER TOP C/W FLASHING FLANGE. **TD**: TRENCH DRAIN

ZURN (OR EQUAL) MODEL Z890, NOMINAL 6"WIDE, PRE-SLOPED TRENCH DRAINAGE SYSTEM, WITH 1/8"PER FOOT SLOPE, 3-0" MODULAR SECTION, #16 GAUGE TYPE 304 STAINLESS STEEL DRAIN CHANNEL WITH BOLTED FLANGED CONNECTION c/w RUBBER FLANGE GASKET, AND STAMPED REINFORCING PERFORATED, STAINLESS STEEL GRATE (HEEL-PROOF), CLASS B. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. COORDINATE LOCATION ON SITE. TOTAL LENGTH SHALL BE

DRAINAGE SPECIALITIES M3 / NOT TO SCALE



HOT WATER TANK (WH-2) DETAIL M3 / SCALE: NOT TO SCALE

TAG	CANNISTER NATIONAL EQUIPMENT	CANNISTER WEIGHT (LBS)	WALL MOUNT c/w BRACKET	CABINET SUPPLIED	ULC RATING	REMARK	
FEX	ABC-025V	5	YES	_	2A, 10BC	c/w STANDARD BRACKET	
J FIRE EXTINGUISHER SCHEDULE SCALE: NOT TO SCALE							

TAG	MANUFACTURER	MODEL	CAPACITY (US GAL.)	ELEMENT	VOLTAGE		
<u>WH-1</u>	A.O. SMITH	DEL-30	30	4.5kW (NON- SIMULTANEOUS)	208v/1ø		
<u>WH-2</u>	A.O. SMITH	DEL-10	10	1.5kW	120v/1ø		
NOTE: CSA APPROVED AND ULC LISTED. TANKS TO MEET LOCAL CODE REQUIREMENT & 2015 NATIONAL ENERGY CODE OF CANADA FOR BUILDING.							

## DOMESTIC WATER HEATER SCHEDULE M3 / SCALE: NOT TO SCALE

MODIFY EXISTING SPRINKLER SYSTEM AS REQUIRED AND IN ACCORDANCE WITH ALL CODES AND AUTHORITIES HAVING

USE HYDRAULICALLY DESIGNED SYSTEMS SYSTEM TO BE DESIGNED TO MEET ALL REQUIREMENTS OF NFPA 13 AND NFPA 24.

1"-2" PIPING TO BE BLACK STEEL, SCREWED FITTINGS OR WELDED. OVER 2" TO BE BLACK STEEL, VICTAULIC FITTINGS

PROVIDE SEMI-RECESSED WHITE SPRINKLERS, WITH WHITE ESCUTCHEON IN T-BAR CEILINGS. PROVIDE CONCEALED SPRINKLERS WITH WHITE CONCEALER PLATES IN ALL DRYWALL CEILINGS. TEST THE SYSTEM AND PROVIDE CERTIFICATE OF COMPLETION PROVIDE UPRIGHT SPRINKLERS IN AREAS WITHOUT CEILINGS.

PROVIDE WIRE GUARD ON ALL SPRINKLERS NOTED AS 'WG' OR IN MECHANICAL ROOMS ELECTRICAL ROOMS AND

ZONES INDICATED ARE FOR HAZARD GROUPS AND DENSITY ONLY AND ARE NOT INTENDED TO INDICATE SPRINKLER ZONE

CONTRACTOR SHALL PAY ALL FEES, CHARGES, AND COSTS REQUIRED FOR REVIEWS, INSPECTIONS, TESTS OR COMMENTS

SPRINKLER LAYOUT SHOWN FOR BUDGET PURPOSES ONLY. LAYOUT TO BE DETERMINED BY SPRINKLER CONTRACTOR BASED ON HYDRAULIC DESIGN. PROVIDE ALL COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION WHETHER

VALVING. ZONING TO BE AS DETERMINED BY SPRINKLER CONTRACTOR. CONTRACTOR SHALL SUBMIT ENGINEERED SEALED AND SIGNED PLANS TO THE CITY FOR APPROVAL IN ACCORDANCE WITH THEIR SPECIFIC REQUIREMENTS. NO WORK SHALL COMMENCE UNTIL APPROVALS ARE RECEIVED.

> DRUG MART, ORDINARY HAZARD GROUP 2, DENSITY OF 0.20 GPM/SQ.FT. FOR

AREA OF OPERATION OF 1500 SQ.FT.

IN REGARDS TO THIS PROJECT. SPRINKLER LAYOUT TO BE COORDINATED WITH ALL OTHER SERVICES, SUCH AS STRUCTURAL, ELECTRICAL, MECHANICAL, AND ARCHITECTURAL FINISHES. ALL PIPE HANGERS ARE TO BE INSTALLED BEFORE SPRAY FIREPROOFING HAS BEEN APPLIED TO STRUCTURAL STEEL

GENERAL AUTOMATIC SPRINKLER NOTES M3 / SCALE: NOT TO SCALE

ALL DRAIN / TEST LINES TO SLOPE MINIMUM 2%.

). HUB DRAIN 1800 - 2750 72" x 12" HIGH CAPACITY DRUM LOUVRE DIFFUSER D. FUNNEL FLOOR DRAIN CEILING RETURN GRILLE E.H. PRICE MODEL 80 SERIES CEILING RETURN GRILLE 30 - 250 24" x 6" --- B.D.D. BACK DRAFT DAMPER —⊢ SPD 500 - 1100 CEILING RETURN GRILLE 1000 - 2200 CEILING RETURN GRILLE 600 - 1600 SIDEWALL RETURN GRILLE SIDEWALL RETURN GRILLE W/ OPPOSED BLADE DAMPER & BORDER FRAME 1100 - 2000 1" WIDE, 1 SLOT | E.H. PRICE MODEL JS210 CUSTOM FLOW LINEAR SLOT DIFFUSER, TYPE 21 - EXPOSED FRAME 100 – 175 10" x 6" | E.H. PRICE MODEL 80 SERIES | CEILING EXHAUST GRILLE 270 - 720 12" x 12" | E.H. PRICE MODEL 80 SERIES | CEILING EXHAUST GRILLE 300 FD/DG 0 - 325 18" x 12" THIS IS A STANDARD LEGEND, ALL SYMBOLS MAY NOT BE USED ON DRAWINGS. ALL BRANCH DUCTWORK SERVING DIFFUSERS TO BE THE SAME SIZE AS DIFFUSER NECK UNLESS SPECIFIED OTHERWISE. PROVIDE FRAMES & & BORDERS TO SUIT CEILING TYPES. M3 / SCALE: NOT TO SCALE ́м \ GRILLE & DIFFUSER SCHEDULE M3 / SCALE: NOT TO SCALE DESCRIPTION DRAIN | VENT | HW | CW HWC | HANDICAPPED WATER CLOSET 3" |1 1/2"| 3" |1 1/2"| WC | WATER CLOSET 1 1/4" | 1 1/4" | 1/2" | HANDICAPPED LAVATORY 1/4" | 1 1/4" | 1/2" LAVATORY DOUBLE SINK - PHARMACY 1/2" | 1 1/4" | 1/2" DOUBLE SINK - STAFF ROOM 1/2"|1 1/4"| 1/2" HS HAND SINK 1/4" | 1 1/4" | 1/2" | 3" |1 1/2" | 1/2" MS MOP SINK 3" 1 1/2" FD | FLOOR DRAIN PRIMED HD | HUB DRAIN 4" |1 1/2"| PRIMED TRENCH DRAIN PRIMED

SYMBOL | AIR FLOW RANGE (CFM) | NECK SIZE/FACE SIZE | MODEL NO.

220 - 460

310 - 630

450 - 750

250 - 550

250

8"ø/ 24" x 24"

6"ø/ 24" x 24" | E.H. PRICE MODEL SPD/B12 CEILING SUPPLY (PLAQÚE) DIFFUSER

10"ø/ 24" x 24" | E.H. PRICE MODEL SPD/B12 CEILING SUPPLY (PLAQÚE) DIFFUSER

12"ø/ 24" x 24" | E.H. PRICE MODEL SPD/B12 CEILING SUPPLY (PLAQÚE) DIFFUSER

E.H. PRICE MODEL SPD/B12 CEILING SUPPLY (PLAQUE) DIFFUSER

POSED BLADE DAMPER

<u>/ERTICAL SIDEWALL LINEAR DII</u>

SYMBOL DESCRIPTION

—p

GATE VALVE

FLOOR DRAIN

—-|1 C.O.

----- COLD WATER PIPING

SAN SANITARY PIPING (BELOW FLOOR)

———— DOMESTIC HOT WATER PIPING

————— DOMESTIC HOT WATER RECIRC PIPING

SOLENOID VALVE

FIRE DAMPER

SPLITTER DAMPER

THERMOSTAT

**HUMIDISTAT** 

NEW DUCTWORK

CLEAN OUT (FLOOR MOUNTED)

CLEAN OUT (CEILING MOUNTED)

BALANCING DAMPER (SQUARE)

BALANCING DAMPER (ROUND)

THERMOSTAT c/w LOCKABLE COVER

REVERSE-ACTING THERMOSTAT

EXISTING DUCTWORK TO REMAIN

DUCT SIZE BY 1" ON ALL SIDES.

NEW UPRIGHT WHITE SPRINKLER HEAD

NEW DRY UPRIGHT SPRINKLER HEAD

DENOTES DOOR TO BE UNDERCUT 1

CEILING IN

SALES AREA

LINE OF CEILING

IN VESTIBULE —

OF VESTIBULE

250 SUPPLY GRILLE

NETURN

GRILLE

- BACK WALL

S-7 VERTICAL

**⊸** 

NEW DRY SPRINKLER HEAD

CEILING FIRE DAMPER

\<u>MECHANICAL LEGEND</u>

RETURN &

DUCTING

EXISTING DUCTWORK TO BE REMOVED

NDICATES 1" INTERNAL LINING. INCREASE

FIRE EXTINGUISHER, MULTI-PURPOSE DRY CHEMICAL

NEW SEMI RECESSED WHITE PENDANT SPRINKLER HEAD

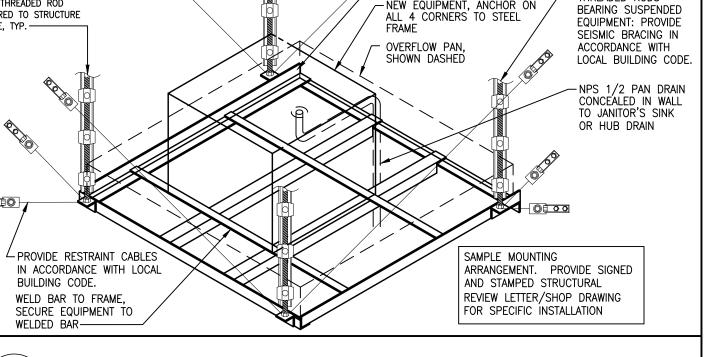
NEW FULLY RECESSED CONCEALED SPRINKLER HEAD WITH WHITE CONCEALER PLATE

— RETURN AIR

- SUPPLY AIR

— D≠<I CIRCUIT BALANCE VALVE

PLUMBING FIXTURE PIPING SIZE SCHEDULI  $\setminus$  SECTION AT VESTIBUL M3 / SCALE: NOT TO SCALE M3 / SCALE: NOT TO SCALE -TYPICAL FOR ALL THREADED RODS BEARING SUSPENDED SECURED TO STRUCTURE 4 CORNERS TO STEEL QUIPMENT: PROVIDE SEISMIC BRACING IN ACCORDANCE WITH LOCAL BUILDING COD CONCEALED IN WALL JANITOR'S SINK OR HUB DRAIN PROVIDE RESTRAINT CAR SAMPLE MOUNTING IN ACCORDANCE WITH LOCAL ARRANGEMENT. PROVIDE SIGNED

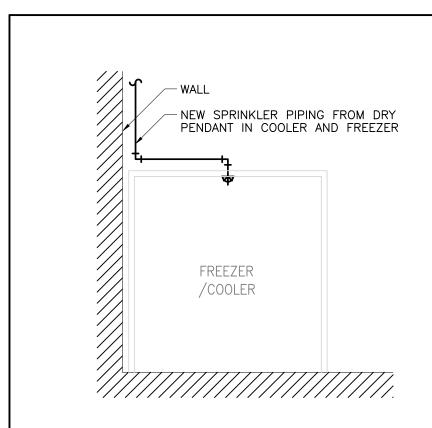


HOT WATER TANK SUPPORT DETAIL

- ALL SANITARY VENTING TO BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF NATIONAL

· ALL FLOOR DRAINS TO BE TRAPPED, VENTED AND PRIMED BELOW FLOOR.

- 'H' DENOTES HANDICAP ACCESSIBLE FIXTURE



DRY PENDANT SPRINKLER A M3 SCALE: NOT TO SCALE COOLER/FREEZER

FAUCET & SET TEMPERATURE AT

SUPPLY AND INSTALL MOP

HANGER (TRIPLE). BUMPER

SYMBOL	ITEM	DESCRIPTION	MANUFACTURER / MODEL NO.	TRIM NO.	REMARKS	
н <b>w</b> с	HANDICAPPED WATERCLOSET	FLOOR MOUNTED FOR FLUSH VALVE, VITREOUS CHINA, ELONGATED BOWEL, WHITE FINISH, 6 LPF. CSA APPROVED. ADA COMPLIANCE.	AMERICAN STANDARD MODEL: 3461.001.020 RIGHT HEIGHT ELGONATED. SLOAN G2 OPTIMA PLUS MODEL 8115–1.28–CP EXPOSED FLUSH VALVE, 1.28 GPF, FLUSH ELECTRONIC OVER-RIDE BUTTON, BATTERY OPERATED.	CENTOCO MODEL 820STSS.001, HEAVY DUTY SEAT c/w COVER FOR ELONGATED BOWL, S.S. SELF-SUSTAINING CHECK HINGES, METAL FLAT WASHERS. S.S. POSTS & NUTS. FLOOR FLANGE.	FLUSH VALVE CONTROL TO BE ON NON-GRAB BAR SIDE. INSTALL TRIM VACUUM BREAKER SO SENSOR IS 3-1/2" ABOVE TOILET SEAT. SEAT COVER TO BE INSTALLED AS PER REGIONAL REQUIREMENT AND SENSOR TO BE INSTALLED AT HEIGHT ABOVE SEAT COVER OPEN POSITION.	
wc	WATERCLOSET	FLOOR MOUNTED FOR FLUSH VALVE, VITREOUS CHINA, ELONGATED BOWEL, WHITE FINISH, 6 LPF. CSA APPROVED.	AMERICAN STANDARD MODEL: 3451.001.020 ELGONATED. SLOAN G2 OPTIMA PLUS MODEL 8115—1.28—CP EXPOSED FLUSH VALVE, 1.28 GPF, FLUSH ELECTRONIC OVER—RIDE BUTTON, BATTERY OPERATED.	CENTOCO MODEL 820STSS.001, HEAVY DUTY SEAT c/w COVER FOR ELONGATED BOWL, S.S. SELF-SUSTAINING CHECK HINGES, METAL FLAT WASHERS. S.S. POSTS & NUTS. FLOOR FLANGE.	INSTALL TRIM VACUUM BREAKER SO SENSOR IS 3-1/2" ABOVE TOILET SEAT. SEAT COVER TO BE INSTALLED AS PER REGIONAL REQUIREMENT AND SENSOR TO BE INSTALLED AT HEIGHT ABOVE SEAT COVER OPEN POSITION.	
HL	HANDICAPPED LAVATORY	VITREOUS CHINA, WALL HUNG BASIN, CENTRE HOLE, WHITE FINISH. CSA APPROVED AND ADA COMPLIANCE.	AMERICAN STANDARD MODEL WHEELCHAIR 9140.047.020, CENTRE HOLE ONLY. SLOAN SF-2450 SF-2000 SERIES ELECTRONIC FAUCET, BATTERY OPERATED, CHROME PLATED FINISH, BRASS, CENTRE HOLE ONLY c/w SFP-46 (0.5 GPM) VANDAL RESISTANT, NON-AERATING MULTI-LAMINAR FLOW SPRAY OUTLET.	MCGUIRE MODEL 155WC, OFFSET OPEN GRID DRAIN. MCGUIRE MODEL LFH170BVRB, POLISHED BRASS FAUCET SUPPLIES. MCGUIRE - CAST BARRIER FREE WASTE, P-TRAP. WATTS MODEL WCA-411-WC, BASIN CARRIER. MCGUIRE MODEL PROWRAP - PW2000WC, SEAMLESSPRE-WRAPPED CAST P-TRAP INSULATION KIT c/w SUPPY COVERS.	LAWLER 570 UNDER COUNTER THERMOSTATIC MIXING VALVE	
L	LAVATORY	VITREOUS CHINA, WALL HUNG BASIN, CENTRE HOLE, WHITE FINISH. CSA APPROVED.	AMERICAN STANDARD MODEL LUCERNE 0356.421.020, CENTRE HOLE ONLY. SLOAN SF-2450 SF-2000 SERIES ELECTRONIC FAUCET, BATTERY OPERATED, CHROME PLATED FINISH, BRASS, CENTRE HOLE ONLY c/w SFP-46 (0.5 GPM) VANDAL RESISTANT, NON-AERATING MULTI-LAMINAR FLOW SPRAY OUTLET.	MCGUIRE MODEL 155A, OPEN GRID DRAIN. MCGUIRE MODEL LFH170BVRB, POLISHED BRASS FAUCET SUPPLIES. MCGUIRE MODEL 8872C, P-TRAP. WATTS MODEL WCA-411, BASIN CARRIER.	LAWLER 570 UNDER COUNTER THERMOSTATIC MIXING VALVE	
DS-1	PHARMACY DOUBLE SINK	KINDRED COMMERCIAL QCLA2027R— COMPARTMENT, 3—HOLES, 8" CENTE (38MM) TAILPIECES AND SOUND DE CENTER, 8" PROJECTION RIGID/SWII VALVE. PROVIDE SUPPLIES, C.P. W 1—1/2" (38MM) WITH CLEANOUT, U	SUPPLY AND INSTALL MIXING VALVE SERVING HOT WATER FOR FAUCET & SET TEMPERATURE AT 95F. DEG. MAXIMUM.			
DS-2	STAFF ROOM DOUBLE SINK	KURAIDORI S.S. SINK, 20-1/2" x 3 FINISHED RIM AND BOWL, WITH SPII (89MM) CRUMB CUP. CHICAGO FA 1/4 TURN CERAMIC DISC VALVE CA OUTLET, AND CANOPY-SINGLE WING PROVIDE 'P' TRAP, CAST BRASS 1-				
		FRANKE COMMERCIAL LBS9106-1 S.S. SINK 13-5/8" x 13-3/4" x 6" DEEP, COUNTER MOUNTED, 20 GAUGE STAINLESS STEEL, SINGLE COMPARTMENT, 1 HOLE SATIN FINISHED RIM AND BOWL, SELF RIMMING, WITH CRUMB CUP STRAINERS, 1-1/2" (38MM) TAILPIECES AND SOUND DEADENING, STRAINER, 3-1/2" VALVE SERVING HOT WATER (30MM) CRIMAR CUP DELTA FAMORIE MODEL 105015 OR SINGLE MOUNTED, SOUND BASIS FARRIGATED, BODY, CERAMIC DISK VALVE CARTIFICES 6"				

GUARDS (ALUMINUM), MOP SINK DRAIN GASKET, STAINLESS STEEL BACK SPLASH PANELS ON TWO | SIDES. PROVIDE 'P' TRAP. CHARLAND THERMOJET INC. MODEL RC13002 SS, RETRACTABLE HOSE REEL WITH 25 FEET OF 3/8" I.D. RUBBER HOSE. UNIT IS FURNISHED WITH A HOSE BUMPER AND PRE—RINSE STANDARD LEVER—OPERATED SPRAY VALVE WITH AN INSULATED HANDLE, A STAY OPEN CLIP, A RUBBER BUMPER SPRAY HEAD, AND A BODY MOUNTED VACUUM BREAKER. UNIT HAS A 3/8" FEMALE INLET ON REEL.

(89MM) CRUMB CUP. DELTA FAUCETS MODEL 1959LF C.P. SINGLE HOLE MOUNTED. SOLID BRASS FABRICATED BODY, CERAMIC DISK VALVE CARTRIDGE, 6"

C.P. WITH METAL ANGLE STOPS, ADAPTORS, ESCUTCHEONS AND METAL FLEXIBLE RISERS. PROVIDE 'P' TRAP, CAST BRASS 1-1/2" (38MM) WITH CLEANOUT,

152MM) LONG SWING SPOUT, 5.7 LPM (1.5 GPM) FLOW AERATOR OUTLET AND SINGLE LEVER HANDLE. LAWLER MODEL #570-86820, POINT OF USE

CONSULT ROOM | THERMÓSTATIC WATER MIXING VALVE, NICKEL PLATÉD BRONZE BODY, TEMPERATURE ADJUSTING SPINDLE, 10MM (3/8") INLETS & OUTLETS FNPT CONNECTIONS

FIAT MODEL 2424 MSB OR

FLOOR MOUNTED SERVICE BASIN | STERN WILLIAMS MODEL MTB2424

HAND SINK | INTEGRAL CHECKS, OFFER TEMPERATURE RANGE BETWEEN 35°C (95°F) & 46°C (114.8°F). SET VALVE TEMPERATURE AT 46°C (114.8°F). PROVIDE SUPPLIES,

P PLUMBING FIXTURES M3 / SCALE: NOT TO SCALE

24" x 24" MOLDED STONE,

FIAT FAUCET SET MODEL 830-AA

OR TECK MODEL 28T9

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DESCRIPTION REVISIONS 1930 Blue Heron Drive London, ON N6H 5L9 Tel: 519-472-3688 Fax: 519-472-4322 INTEGRATED engineering IE Project No. 7370

www.integratedengineering.ca 25.04.28 CONSTRUCTION 25.02.27 TENDER PERMIT 24.11.01 DESCRIPTION DATE ISSUED FOR

T. SINGH 100569650 APR 28/25

ALTERATIONS TO EXISTING RETAIL BUILDING SHOPPERS DRUG MART NASHVILLE HEIGHTS KLEINBURG. ONTARIO

GLH/PAB KJM DRAWING TITLE: MECHANICAL SPECIFICATIONS, SCHEDULES,

DETAILS & LEGEND 3/16" = 1'-0"

2024-## OF 4

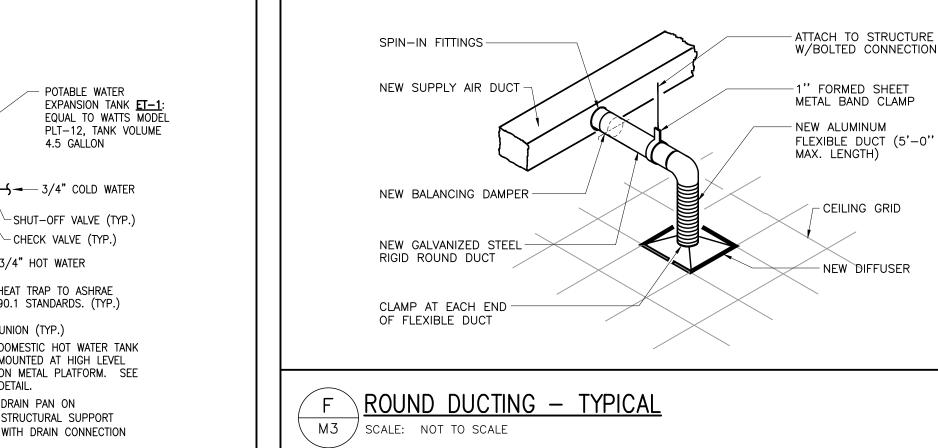
AIR FLOW SPLITTER DAMPER - BRANCH DUCT BRANCH OF DUCT TRANSITION

MAIN DUCT **-₩-**

- POTABLE WATER VACUUM BREAKER EXPANSION TANK **ET-1**: EQUAL TO WATTS MODE PLT-12. TANK VOLUME 4.5 GALLON <del>-|√<mark>Î-|</mark>x|-∫----</del> 3/4" COLD WATER  $^{ackslash}$  SHUT-OFF VALVE (TYP.) TEMP/PRESSURE ← CHECK VALVE (TYP.) RELIEF VALVE — - HEAT TRAP TO ASHRAE DRAIN VALVE-90.1 STANDARDS. (TYP.) - DOMESTIC HOT WATER TANK MOUNTED AT HIGH LEVEL ON METAL PLATFORM. SEE DRAIN PAN ON STRUCTURAL SUPPORT WITH DRAIN CONNECTION CEILING RUN 3/4" OVERFLOW & RELIEF INSIDE INTERIÓR WALL TO LOW LEVEL ABOVE GRADE & DISCHARGE INTO MOP SINK. VERIFY ACCEPTANCE OF DRAIN CONNECTION WITH LOCAL PLUMBING INSPECTOR HAVING JURISDICTION PRIOR TO INSTALLATION.

<u> HOT WATER TANK (WH-1) DETAIL</u>

M3 / SCALE: NOT TO SCALE



M3 / SCALE: NOT TO SCALE

