

1 General

1.1 APPROVED EQUIPMENT LIST

- .1 The following equipment is approved for this project for manufacturer only, subject to all requirements of drawings and specifications.
- .2 The Mechanical Division and supplier shall be entirely responsible that the product shall in every respect be equivalent to and meet the same characteristics, quality and requirements, etc. outlined for this project.
- .3 Any modifications to the equipment and/or changes of product required by the Consultant to meet specified requirements at the time of the final shop drawing approval shall be provided by the supplier and the Mechanical Division without any extra charge to the Owner.
- .4 Products which are approved as equivalent in design characteristics shall all conform to space limitations.
- .5 The following is a list of manufacturers whose products are approved for this project subject to conditions outlined above (shop drawings shall be submitted for all equipment listed).

Category	Description	Manufacturer
Access	Access Doors	Acudor, Air-O-Metal, Lehage, Miami Carey, Milcor, Titus, Controlled Air, Ductmate
Air Handling Systems	Air handling units	Haakon, Engineered Air, Scott Springfield, Silent Air, Trane, Ventrol, Enviro-Tec, Titan Air Inc., ICE Western.
Air Handling Systems	Packaged modular air handling equipment	Trane, Engineered Air, Haakon, System Air, McQuay, JCI/York, Aaon, Enviro-Tec
Air Handling Systems	Packaged rooftop heat/cool units	Carrier, Lennox, York, Trane
Air Handling Systems	Direct fired make-up air units	Engineered Air, ICG, System Air, Bousquet, Titan Air Inc.
Balancing	Balancing Agencies	Chalet Balancing Inc; Tech Air Services, Absolute Test and Balance Ltd; Accu-Air Technical Services Ltd; Western Mechanical Services Ltd.
BMCS	Automatic Control Systems	Johnson, Siemens, Honeywell, Reliable, Schneider IA, Delta
Boilers	Condensing	Aerco, Buderus, Fulton, Lockinvar, Patterson-Kelly, RBI, Thermal Solutions, Viessmann, Weil McLain
Boilers	Electric Boilers	A.O. Smith, Super Hot, Ruud
Boilers	Cast Iron Boilers	Weil McLain, Hydrotherm, Bryant, Peerless, H.B. Smith
Boilers	High Mass Fire Tube Condensing	Aerco, Cleaver Brooks, Lochinvar, RBI
Boilers	Copper Water Tube Boilers (85% Eff.)	RBI Futera, Camus, Patterson-Kelley
Boilers	[Hot Water][Low Pressure Steam] packaged Water Tube Boiler	Unilux, Cleaver Brooks CB5, Bryan
Boilers	Copper/Steel Water Tube Boilers	Laars, Raypak, Super Hot, Lockinvar, RBI, A.O. Smith
Boilers	[Hot Water][Low Pressure Steam] Fire Tube Boilers	Cleaver Brooks, York Shipley

Condensing Units	Air cooled condensing units	Carrier, Lennox, York, Trane, Ecosaire, Engineered Air.
Compressed Air	Air compressor and accessories	Ingersoll Rand, Atlas Copco, Solair
Computer Room Air Conditioning Units		Liebert, Hiross, Carrer, Trane, Ecosaire
Chemical	Chemical Treatment	G.E. Water Technology, Keytech, Guardian, Zeotec, Pace, Chem Aqua.
Chimneys Vents	Boilers	Security, Ampco, Metalbestos PS, IPS, Van Packer, Metal-Fab PIC, Cleaver Brooks Exhaust Solutions, Selkirk, ECCO
Control Dampers	Low Leakage Damper	Arrow-Foil PBDAF & OBDAF, Honeywell Moduflow D642 and D643, Tamco 1000, Rusin CD36
Control Valves	Pressure Independent Control and Balancing Valve	Oventrop, Danfoss, Belimo
Control Valves	Self Contained Temperature Regulating Valve	Oventrop, Danfoss
Coils	Coils	Aerofin, carrier, Swirlfin, Trane, Vaporfin, Engineered Air, Heatcraft, McQuay, Rosemex
Split Cooling	Air Cooled Ductless Split Cooling Units	Mitsubishi, LG
Air Outlets and Inlets	Grilles, Registers, Diffusers:	E.H. Price, Titus, Krueger, Carnes, Nailor
Air Outlets and Inlets	Louvers	Aerolite, Ruskin, Westvent, carnes, Tamco
Air Outlets and Inlets	Roof Hoods	Penn (Airette), Westvent, Carnes, Greenheck, Loren Cook
Classroom Ventilators		Change Air, Modine, Silent Aire
Ductwork	Fire Dampers	Controlled Air, Nailor-hart, Ruskin
Ductwork	Insulation	Manson, Owens corning, Knauf, Johns Mannville, Armaflex, Rubatex, Imcoa, Roxul Calsilite, Kingspan "Koolphen K".
Ductwork	Insulation Jacketing	3M Ventureclad,
Ductwork	Backdraft Damper – Light Duty	EH Price CBD, Rusking B01/A1, Westvent
Ductwork	Backdraft Damper – Medium Duty	Airolite 625, Penn CBC+6, Rusking CBD-4
Ductwork	Backdraft Damper – Heavy Duty	Rusking BCS7
Ductwork	Access Panels	Nailor, Ventlok
Ductwork	Fabric	Duct Sox, Fabric Air
Ductwork	Flexible Duct Connectors	Duro Dyne "Durolon", Ventfabrics – "Ventlon"
Ductwork	Flexible Ductwork – Plain	Thermafex SLP10, FlexMaster FAB4, Wiremold 57
Ductwork	Flexible Ductwork – Insulated Acoustic	Thermafex MKE, Glassflex ABL-181, Wiremold WGC
Ductwork	Flexible Ductwork – Thermal	Thermafex MKC, Glassflex D-181, Wiremold WGC
Ductwork	Silencers	Vibro Acoustics, Industrial Acoustics, Bivron, Buensod, Commercial Acoustics
Ductwork	Smoke Dampers	Controlled Air, Nailor-Hart, Ruskin
Ductwork	Combination Smoke/Fire Dampers	Controlled Air Model FSD-A-81
Ductwork	Under Slab	AK Duct

Dust Collectors		Murphy, Apsco, Camfill, Torit
Fans	Centrifugal Fans	C.B & F., Carrier, Chicago, Joy, New York Blower, Trane, Aladdin, C.M.L. Twin City, Acme, Greenheck
Fans	Cabinet Fans	Carrier, C.B. & F., Delhi ,Engineered Air, Lau, Lennox, Trane, Acme
Fans	Propeller Fans	Acme, Ammerman, Carnes, C.B. & F., Greenheck, Jenn0Air, Joy, Penn, Trane, Loren Cook, Can-arm
Fans	Axial Flow Fans	C.B. & F., Chicago, Joy, Trane, Woods, C.M.L., Northern
Fans	Exhaust Fans (centrifugal)	Alpha, Delhi, Lau, Torin, Carnes
Fans	Exhaust Fans (Centrifugal, Spun Aluminum)	Carnes, Acme, Ammerman, Loren Cook, Greenheck, Jenn Air, Penn, Powerline
Fans	Local Exhausters	Acme, Greenheck, Broan, Nutone, Penn, Reversomatic, Carnes
Fans	Vent Sets	Ammerman, C.B. & F., Carrier, Chicago, Delhi, Mark Hot, Trane, Loren Cook, Acme
Fans	In-Line centrifugal Fans	Greenheck, Ammerman, Trane, Loren Cook, Acme
Fans	Circulating Down Draft Ceiling Propeller Fans	Cec, SMC, Pleasantaire, Banvil, Big Ass
Fans	Commercial Cooking Equipment Exhaust Fans	Loren Cook, Greenheck, Acme, Carnes, Jenn, Penn, Garland, Philips Lau
Filters	Air System Filters	AAF, Cambridge, Camfil, Viledon, Flanders, Circul-air
Filter Gauge	Filter Gauge	Dwyer 2000
Firestop Systems		Dow, Hilti, Tremco, 3M
Fire Suppression	Water Based Fire Suppression Systems	Victaulic, Grinnell, Wormald, Vipond, Viking, Gisbourne, Century Automatic,
Fire Suppression	Gas Extinguishing System	Chubb, Grinnell, Westech
Fire Suppression	Hand Held Fire Extinguishers	CEB, CFH, Flag, Fyr Fighter, Pyrene, Silverline, Wilson & Cousins, Incendex, WFR, National Fire Equipment
Fire Suppression	Hood & Duct Fire Protection Systems	Ansul
Fire Suppression	Hose Systems	National Fire Equipment, CEB, CFH, Flag, Fyr Fighter, Pyrene, Silverline, Wilson & Cousins, WFR
Flow Meters	Positive Displacement Meters	Trident, Rockwell
Flow Meters	Flow Meter and Balancing Assemblies	Gerand, Presso, Onicon, Ebtron, Accutrol.
Forced Air Furnace	Gas Fired Furnace	Lennox, Engineered Air, ICG, Carrier, Keeprite
Gas Fired Heaters	Infrared heaters	Schwank, Reznor, Modine
Gas Fired Heaters	Unit heaters	Engineered Air, Reznor, Sterling, Modine,
Gas Welding System	Gas Welding System	Canadian Liquid Air
Gauges & Thermometers	Gauges & Thermometers	Ametek, Ashcroft, march, Marshalltown, Taylor, Trerice, Winters & Weiss, Crosby
Glycol	Glycol	Dow Chemicals, Union Carbide
Glycol	Glycol storage tank feed systems	Axiom

Humidifier	Gas Fired Humidifier	Nortec, Armstrong, Dri-Steem, Neptonic
Humidifier	Electric steam humidifier	Nortec, Armstrong, Dri-Steem, Neptonic
Humidifier	Steam grid humidifiers	Nortec, Armstrong, Dri-Steem, Neptonic
Humidifier	Evaporative media humidifier	CB&F, Trane, Mark Hot, Carrier
Heat Exchangers	Shell And Tube Heat Exchangers	Armstrong, Bell & Gossett, Darling, Taco, Leithc, Secespol, SEC
Heat Exchangers	Plate Heat Exchangers	APV, BAC, Tranter, Alpha-Laval, bell& Gossett, Armstrong, Secespol, SEC
Hydronic Specialties	Chemical pot feeder, side stream filter	Axiom
Hydronic Specialties	Air-dirt separator / System separator	Taco, Armstrong, Spirotherm
Insulation	Ductwork And Breeching Insulation	Fiberglas, Manson, Owens Corning, Knauf, Certainteed Corp.
Insulation	Insulation Adhesives	Flintkote, Benjamin-Foster, 3M Company
Motors	Motor	Compliant with Section 20 02 10 - Motors
Pipe	Pipe Guides	Adsco, Flexonics, Tube-Turn
Pipe	Pipe Hangers & Supports	Anvil, Myatt, Unistrut, Taylor
Pipe	Expansion Joints and Compensators	Flexonics, Yarway, United Flexible, Metraflex
Pipe	Insulation	Manson, Owens corning, Knauf, Johns Mannville, Armaflex, Rubatex, Imcoa, Roxul Calsilite, Kingspan "Koolphen K".
Pipe	Insulation Jacketing	3M Ventureclad,
Pipe	Welded Fittings & Flanges	Jenkins, Crane, Grinnell, Ladish, Tube-Turn
Pipe	Pre-insulated buried pipe	Perma-Pipe
Plumbing	Backflow Preventers	Febco, Watts, Zurn, Conbraco
Plumbing	Flush Valves	Sloan, Delta, Powers, Zurn, Toto, Moen
Plumbing	Interceptors	Watts, Zurn, Mifab, K-Del, Jay R. Smith, Wade
Plumbing	Laboratory Fittings	T & S Brass, Cambridge Brass, Chicago Faucet, Toto, Moen Commercial
Plumbing	Mixing Valves (Pressure Actuated)	Symmons, Powers, Leonard, Bradley, Speakman
Plumbing	Mixing Valves (Temperature Actuated)	Lawler, Leonard, Powers, Symmons, Conbraco, Bradley, Speakman
Plumbing	Non Freeze Hose Bibbs	Zurn, Josam, Roto-Tech Smith, Watts, Wade
Plumbing	Plumbing Brass	American Standard, Powers Sloan, Symmons, Chicago, Delta, Zurn "Aqua Spec", Toto, Leonard, Bradley, Moen Commercial, Speakman, Gerber
Plumbing	Plumbing Fixture Carriers	Zurn, Roto-Tech Smith, Watts, Wade
Plumbing	Plumbing Fixtures	American Standard, Crane, Kohler, Western Pottery, Toto, Bradley, Intersan, Zurn, Caroma, Fiat, Franke, Gerber
Plumbing	Salon Hair Sinks	Belvedere
Plumbing	Emergency washing	Haws, Acorn, Guardian, Bradley, Speakman
Plumbing	Penal Fixtures	Acorn, Bradley
Plumbing	Pre-Sloped Trench Drains	Zurn "flo Thru", Polydrain, Wade, Mea
Plumbing	Drinking Fountains	Halsey Taylor, Haws, Elkay, Acorn
Plumbing	Roof & Floor Drains	Watts, Zurn, Jay R. Smith, Mifab, Wade
Plumbing	Stainless Steel Sinks	AMI, Franke
Plumbing	Vacuum Breakers	Febco, Watts, Conbraco
Plumbing	Water Closet Seats	Beneke, Bemis, Sperzel, Centco Olsonite, Moldex, Beneke, Telso

Plumbing	Laboratory Reverse Osmosis Water System	Evoqua, Culligan
Pressure Relief	Water Pressure Relief & Pressure Reducing	Cashco, Watts, Clayton, Wilkins, Conbraco, Consolidated, Sarco
Pump	Base Mounted Circulating Pumps	Armstrong, Aurora, Bell & Gossett, Canada Pumps, Taco, Grundfos, Patterson, Ebara, Johnson Pump
Pump	Fire Pump	Armstrong, Aurora, ITT, Patterson, Peerless
Pumps	Inline circulating Pumps	Armstrong, Bell & Gossett, Taco, Thrush, Grundfos, Wilo, Pentair
Pumps	Line Strainers	Armstrong, Mueller, Sarco, Crane, McAlear, Red & White, Colton Industries, Stream Flo, Pentair
Pumps	Pump Seals	Durametallic, John crane
Pumps	Rotary (Oil Transfer)	Viking, Ebara, Johnson Pump
Pumps	Submersible Sump Pumps	Aurora, Flygt, Kenco, Myers, hydroMatic, Paco, Grundfos
Pumps	Sump Pump	Patterson, Armstrong, Aurora, Bell & Gossett, Ebara, HydroMatic, Grundfos
Pumps	Water Booster System	Patterson, Armstrong, Bell & Gossett, Ebara, Grundfos
Pumps	Well Pumps	Armstrong, Deming, Jacuzzi, Monarch, Myers, Grundfos
Tanks	Aboveground Fuel Oil Storage Tanks	O'Connor, Clemmer, Gil Fab, Westeel
Tanks	Below Ground Double Wall Petroleum Products Storage Tanks	Clemmer, Westeel
Tanks	Below Ground Reinforced Fibreglass Double Wall Petroleum Products Storage Tanks	CAE Fibreglas, Greentank (ZCL Manufacturing Canada Inc.)
Tanks	Expansion Tanks	Flexcon, Clemmer Ind., O'Connor, Gil Fab, Drummond, Wessels, Bell & Gossett, Expanflex, Taco, Armstrong, Pentair
Tanks	Hot Water Storage Tanks	Cessco, Clemmer Ind., O'Connor, Gil Fab, Drummond, Wessels, A.O. Smith
Tanks	Hydropneumatic Tanks	Cessco, Clemmer Ind., O'Connor, Gil Fab, Drummond, Wessels
Terminal Unit	Terminal Boxes	E.H. Price, Titus, Kruegar, Tempmaster, Anemostat, Enviro-Tec
Terminal Unit	Baseboard Radiation	Engineered Air, Trane, Rosemex, Sterling, Slant Fin, Standard Fin-Pipe, Sigma, Jaga
Terminal Unit	Radiation	Engineered Air, Trane, Rosemex, Sterling, Slant Fin, Standard Fin-Pipe, Sigma, Jaga
Terminal Unit	Forced Air Cabinet and Unit Heaters	Trane, Engineered Air, Rosemex, Sterling, Sigma, Jaga
Terminal Unit	Fan Coil Units	Carrier, Trane, Engineered Air, Sterling, Sigma, Enviro-Tec, Jaga, Zehnder Rittling
Terminal Unit	Radiant Panels	Engineered Air, TWA Panels
	Radiant Floor Heating	Heatlink
Valves	Radiation Valves	Dahl, Red & White
Valves	Valves (General Service)	Hattersley, Crane, McAvity, Red & White, Kitz, Fortune, M & S

Valves	Valves – Ball	Grinnell, Millwaukee, Nibco, Crane, Jenkins, Kitz, Watts, Victaulic 716 (Grooved end valves), Toyo, Hattersley, MAS, Apollo, Fortune
Valves	Valves – Globe	Crane, Hattersley, Jenkins, Lunkenheimer, McAvity, Persta, Rockwell, Velan, Walworth, Toyo, Watts, Kitz, Milwaukee, MAS, Nobco, Vogt, RP & C, Bonney Forge
Valves	Valves – Gate	Grinnell, Millwaukee, Crane, Jenkins, Kitz, Toyo, Hattersly
Valves	Valves – Butterfly	Grinnell, Millwaukee, Crane, Jenkins, Toyo, Kitz, Masterseal, Hattersley, Demco, DeZurik, Mueller, Watts, Nibco, Flowseal, Bray, Victaulic, Apollo, Keystone, Norris
Valves	Valves – Check Spring Loaded	Grinnell, Crane, Center Line, DeZurik, Mueller, Singer, Watts, Moygro, Milwaukee, Valmatic, Nobco, Victaulic 716 (Grooved end valves), Appollo, Dou-check II, Conbraco, Newman, Hattersley, Bonney Forge
Valves	Relief Valves	Consolidated, Crosby Aston, Farris, Kunkle, Singer, Watts
Valves	Circuit Balancing/Flow Meter	Tour & Anderson, Bell & Gossett, Armstrong, Victaulic, Nexus, Oventrop
Valves	Suction Guides/ Combination Valves	Armstrong, B & G, Taco, Victaulic 731-D/Tri Service Assembly.
Valves	Automatic Flow Control Valves	Hays, Griswold, Flow Design, Oventrop
Valves	Coil Hookup Assemblies	Victaulic, Nexus, Bell & Gossett, Griswold, Oventrop
VFD	Variable Frequency Drives less than 25 HP	Danfoss, Hitachi, Mitsubishi, Teco-Westinghouse, Yaskawa, Graham, Siemens, Allen Bradley, Schneider Electric, Eaton, Cutler Hammer, ABB
VFD	Variable Frequency Drives greater than 25 HP	[REDACTED]
Vibration	Metal Flexible Hose	Braided Flexonics, Packless, United Flexible Dynamics, Metraflex, Vibra-Flo, Stream Flo
Vibration	Vibration Isolation	Vibron, Mason Industries, Vibro Acoustics, Korfund, Unison Industrial
Water Heater	Domestic Water Heaters (Gas-Fired)	A.O. Smith, Jetglas, John Wood, Ruud/Rheem, P.V.I, State
Water Heater	Domestic Water Heaters (Oil-Fired)	Aero, Airco, John Wood, Ruud/Rheem, P.V.I.
Water Heater	Electric, Commercial/Residential	John Wood, Ruud/Rheem, PVI, A.O. Smith
Water Heater	Gas Fired (Atmospheric or Power Burner) Commercial	A.O. Smith, John Wood, PVI, Ruud/Rheem, Bradford White
Water Heater	Gas Fired (Atmospheric) Residential	A.O. Smith, Jetglas, John Wood, State, Bradford White
Water Heater	Gas Fired (Direct Vent, Condensing)	A.O. Smith
Water Heater	Gas Fired (Power Burner, Pressure Vessel) Commercial	PVI, A.O. Smith

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