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| Revision History |
| Revision Date | Section / Nature of Revision |
| 03/01/2017 | Document Issued |
| 7/20/22 | 1.2 B. 2) G) Added entire section Garbage disposal discharge into sanitary line |

PART 1 - GENERAL

1. RELATED DOCUMENTS

 The Pinellas County Schools bidding requirements and the contractual conditions apply to the work of this Section.

2. SCOPE

Work required under this section consists of providing all necessary services, tools, equipment, material and labor required to provide and install food service equipment with related items essential to complete the work shown on the Drawings or required by the Specifications, including (but not limited to) the following:

1) The term "install" shall mean the delivery of food service equipment complete with transportation charges prepaid to the building, uncrated, set in place ready for connection to plumbing/gas/electrical, and properly anchored where required.

2) Deliver all parts which are to be built into cast-in-place concrete or into masonry in ample time for inclusion in the concrete or masonry work. Furnish necessary setting plans and instructions, oversee the installation of all parts in the masonry or concrete and be responsible for the correctness and accuracy of location and installation.

3) Cut holes and ferrules on equipment for pipes, drains, electric outlets, conduits, and similar items as required to coordinate the installation of the food service equipment with the work of other contractors.

4) Keep premises clean and remove from the site all crates, cartons, and other debris resulting from the work. Leave all areas "broom clean", and all equipment "construction clean". Final cleaning of equipment shall be done by the Food Service Equipment Subcontractor.

5) Field check and verify building measurements.

B. Mechanical, electrical work and entry way to be included in this section as follows:

1) Entryways:

a) At least one entry from outside to inside kitchen shall have an opening 48” x 84” or larger with no obstructions other than a removable mullion bar and be supplied with an air curtain.

 b) At least one opening from kitchen to each serving are be 48” x 84” or larger with no obstructions.

2) Plumbing:

a) Furnish and install all piping and fittings to connect equipment between valves, vacuum breakers, and equipment. Make ready for final connection by plumbing contractor. All exposed plumbing shall be chrome plated.

b) Furnish to the plumbing contractor for installation, chrome plated faucets specified for sinks, kettles, and other equipment. Furnish backsplash-mounted faucets with double male lead-free brass nipples having locknuts for rigidly securing faucets to backsplash.

c) Furnish and install wastes incorporated in the custom-fabricated food service equipment, complete with chrome plated tail piece.

d) Extend indirect wastes not connected to the sewage system with chrome plated tubing. Drain extensions shall drip over and into a floor sink. Where drain runs under equipment, provide proper support from bottom of equipment to eliminate interference with floor cleaning.

e) Provide properly vented gas pressure regulators on individual pieces of gas fired equipment in accordance with manufacturer's recommendations.

f) Equipment and fixtures utilized for storage, preparation and handling of food shall discharge trough an indirect waste pipe by means of an air gap.

G) All garbage disposal to discharge into sanitary line, no discharging into a scrapper device mounted on floor and then into a floor sink connected to grease trap line.

3) Electrical:

1. Interwire equipment between heating elements, switches, starters, thermostats, outlets, motors, and solenoids complete to junction box, terminal box or disconnect switch. The equipment furnished under this Food Service Equipment shall be provided in place ready for connection to the building electrical power by the electrical contractor.

b) Furnish and install switches and/or disconnects within equipment, contactors, combination starters with NON-FUSED disconnect, controls, and similar items necessary for the safe and proper operation of the equipment and for compliance with all N.E.C. requirements.

c) Furnish electrically operated portable or movable equipment with 3-wire or 4-wire heavy duty rubber insulated cord fitted with grounded plug with one leg of the cord grounded to frame of equipment.

d) Furnish and install as part of an item of equipment, grounded receptacles as specified and/or shown.

e) Furnish and install electric thermostats where required.

f) Switches, disconnects, and control devices shall be safely accessibility without reaching across or over hot equipment.

g) Each section of the serving line shall have its own electrical point of connection to eliminate extension cord need.

4) Refrigeration:

Furnish, install and thoroughly test refrigeration systems furnished as part of the food service equipment, under the direct supervision of a factory employed representative. All refrigerated equipment will consist of expansion valves (TXV) in system for the metering of Freon in the system NO CAPILARY TUBES AS A METERING DEVICE FOR REFRIGERATION SYSTEM.

5) Steam fitting:

 Furnish and install special pressure regulators, steam trap assemblies, control valves, steam thermostats, pressure gauges, strainers, and other devices required for the proper operation of steam operated equipment. Provide interconnect devices and make ready for final connection by the plumbing contractor.

6) Serving Line:

a) Hot Wells must come with lift off or removable remove able front panel’s. Counter top height to be determined per project. Consist of 5 wells with ¾” copper drain manifold with 1- 1/4 turn ball valve on operators side at least 16” from ground to drain all five wells and Vera Guard sneeze guard with self-serve on second shelf only consisting of 2 shelves with LED lighting under bottom shelf and heat lamb and lights under top shelf. Some application may have quick switch wells installed.

b) Frost Tops/Cold Pans must come with lift off or removable remove able front panel’s refrigeration should be vented thru front and rear of cabinet. Counter top height to be determined per project. Counter top to be mechanically refrigerated cold pan or frost top with expansion valve (TXV), compressor, sight glass, temperature control and condensate evaporator located inside cabinetand Versa Guard sneeze guard with 2 shelf above with lower shelf incorporated in sneeze guard that is mechanically refrigerated with expansion valve (TXV), compressor, sight glass, temperature control separate from the cabinet top and LED lighting top shelf LED lighting. Some application may have quick switch frost top on first shelf.

c) Utility Counters shall have lift off front panels and storage on service side, 2 shelf versa guard sneeze shield with LED lighting under both shelves.

d) Cashier Counters will have cash drawer, knock out on top and lower roll out shelf.

e) Tray Slides will be 10” raised bead fold down stainless steel with height determined by project or extended top with tray slideincorporated in design.

7) Warming and Refrigerated Cabinet.

 All warming and refrigerated cabinets will be Pass-Thru or Reach-In there will be NO Roll-In or Roll-Thru and the refrigeration specs refer to Section 3 Refrigeration. All cabinets will have spring loaded door hinges with locking doors and with stainless steel legs unless otherwise specified.

8) Combi Ovens and Steamers:

1. Kitchen facilities will be on water softener there will be filter installed for chloramine or chlorine determines thru water testing from water supplied at point of connection. Condensate for drain will not be filtered.
2. All units will be pressureless units.

9) Water Softener:

a) Water Softener to be installed on hot and cold water supply for the kitchen, laundry and serving area (Food Service Area).

b) Electronic controls for the softener NO Cable control units.

c) The salt will be a pellet type salt not crushed type.

3. QUALITY ASSURANCE

A. Food Service Consultant: The Project Architect/Engineer (PA/E) has employed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as the Food Service Consultant. The "chain of command "shall be the Food Service Equipment Subcontractor, to the (General) Contractor, to the Project Architect (PA/E), to the Food Service Consultant, and vice versa.

B. Equipment, with the exception of "buy-out" or standard catalog items, shall be fabricated in a plant bearing the name of a recognized food service equipment fabricator. This fabricating firm shall have been in business at least five years, with a suitable organization to design, engineer, manufacture, deliver, and install the equipment in accordance with local union conditions. Such firm shall be able to refer to other successful installations of similar equipment and size to that specified herein which have proven satisfactory under similar operating conditions. Under no condition shall the Food Service Equipment Subcontractor sublet any portion of the fabricated equipment to any sub-contractor without the Project Architect/Engineer's (PA/E's) approval.

C. All labor shall be performed by experienced mechanics in this type of work. All work on the premises shall be done at such time as to promote the proper conduct of the Project. Provide a competent on-site superintendent to supervise the work and to provide other trades such information necessary for the proper conduct and completion of the work.

D. Food Service Equipment Subcontractors shall be one with a home office in the state of Florida with at least 10 years of experience in Food Service Equipment and with local factory representative’s. Local means around the Tampa Bay Area or state of Florida.

4. SUBMITTALS

A. Coordinate submittal due dates with the construction schedule.

B. Equipment list: Submit for approval, within sixty (60) days after notification of the School Board's award of contract, an itemized list of equipment to be furnished under this Contract, to include manufacturer's name and model number for each piece of equipment.

C. Samples: Submit for approval, hardware, drawer slides, drawers, feet, casters, brackets, and similar items, including samples of construction showing typical reinforcement of underside of tops as well as angle framing of counters.

D. Brochures:

1) Submit two complete brochures containing manufacturer's specifications (catalog pages) with all pertinent engineering and dimensional data identified for each item to the Project Architect for preliminary review and comment by his/her Food Service Consultant. One (1) brochure with comments noted will be returned for correction. Continue submitting until final approval from the PA/E is achieved. Resubmit ten (10) revised and complete brochures to the Project Architect after final approval and distribution.

2) Brochures shall be suitably bound and complete, including the required accessories and required quantity for each item. Arrange items in numerical order following scheduled item numbers shown on the Contract Documents. No consideration will be to incomplete brochures.

E. Roughing-in or Mechanical Connection Drawing:

This Food Service Equipment Subcontractor shall:

a) Submit two (2) prints to the PA/E for preliminary review and comment by the Food Service Consultant. One (1) print with comments noted will be returned for correction. Continue submitting until final approval from the PA/E is achieved. Resubmit ten (10) revised prints to the PA/E after final approval for distribution. Distribution shall include one copy each to the (General) Contractor, PA/E, School Board Inspector, the School District's Food Service Department, the District's Maintenance Department, the Facilities Head Plant Operator, the Manufacturer, the Food Service Subcontractor, the Electrical and Plumbing Subcontractor.

b) Prepare rough-in drawings locating all equipment (new and existing to be reused) shown in the Contract Documents. Prepare shop drawings at a suitable scale and on sheets of the same size as the Contract Drawings, showing the required roughing-in (including sleeves and conduit) for electric, gas, water, steam, sanitary waste, refrigeration, ventilation, condensate drain lines, air and exhaust connections. Show characteristics and slab depression and/or other features, to include data for all services in each area. Locations of equipment shall allow for traps, switches, and/or other final connection requirements. Shop drawings shall include floor plans, elevations, section, and details as required.

c) Dimension each rough-in location accurately from column center lines and/or slab edges or other permanent "bench marks".

d) Assume responsibility for proper location of sleeves and conduits through which various utilities will be installed and for conformance of rough-in locations as required by the equipment. This Food Service Equipment Subcontractor shall compensate other trades for any necessary relocation of rough-ins. Make field inspection before concrete slabs are poured and finished floors are laid.

F. Shop drawings of custom-fabricated equipment

1) Submit two prints to the PA/E for preliminary review and comment by the Food Service Consultant. One (1) print with comments noted will be returned for correction. Continue resubmitting until final approval by the PA/E is achieved. Resubmit ten (10) revised prints to the PA/E after final approval for distribution.

2) Prepare shop drawings at a suitable scale and on sheets of the same size as the Contract Drawings, to include dimensions and details as required for the fabrication, construction and installation of equipment.

3) Do not fabricate equipment until final approvals are received for shop drawings nor until field inspection and measurements are taken by this Food Service Equipment Subcontractor. Submit any discrepancies found during field measurements to the PA/E for consideration.

5. STANDARDS

A. Manufacture and install equipment in conformance with the Williams-Steiger Occupational Safety and Health Act of 1970.

B. Except as modified by governing codes and by the Contract Documents, comply with the applicable provisions and recommendations of the following:

1) National Fire Protection Association (NFPA)

a) NFPA 96 - Installation of equipment for removal of smoke and grease-laden vapors from commercial cooking equipment, current edition.

b) NFPA 17 - Dry chemical extinguishing systems, current edition.

c) NFPA 17A - Wet Chemical Extinguishing Systems, current edition.

d) NFPA 70 - National Electrical Code, current edition.

2) National Sanitation Foundation (NSF)

3) Underwriter's Laboratories, Inc. (UL)

4) National Electric Manufacturers Association (NEMA)

5) American Gas Association (AGA)

6) American Society for Mechanical Engineers for Steam Equipment.

7) National Fuel Gas Code (NFGC)

8) State Board of Health Regulations (10-D-13)

# PART 2 – PRODUCTS

1. STANDARD MANUFACTURED OR "BUY-OUT" EQUIPMENT

A. Standard food service equipment made on a production basis may be named by catalog number in the item specification which establishes the "standard" required by that manufacturer, except for the governing paragraph. Items identified by a manufacturer's model number shall be supplied with all parts and accessories listed by that manufacturer as standard and necessary for proper functioning of equipment. Such shall be included in the Base Bid price.

B. Nameplates: Each item of manufactured or "buy-out" equipment furnished under this Contract shall be provided with identifying name plate of corrosion resistant material giving the name and address of the manufacturer, catalog, serial numbers, and other identifying information for use in securing replacement parts. The name plate shall fit snugly against the surface of the item, shall be free of rough edges, and shall be attached in such a manner as not to interfere with the cleaning of the equipment.

2. CUSTOM-FABRICATED EQUIPMENT

 Custom-fabricated equipment shall be constructed in strict accordance with the Contract Documents and shall be the best grade product and workman ship of one of the following or with other with at least 10 years’ experience:

1) Commercial Kitchen, Inc., 7890 West 2nd Court, Hialeah, Florida 33014; Phone (305) 823-0880

2) Tarpon Stainless Fabricators, Inc., 911 Rivo Place, Tarpon Springs, Florida 34689 Phone (813) 942-1821

3) All Southern Fabrication, LLC. 5010 126TH Avenue North Clearwater Fl. 33760

 Phone (800) 878-2732

4) Roy’s Food Equipment Installation 5580 76TH Avenue North Pinellas Park FL. 33781 Phone (727) 544-8774

3. SUBSTITUTIONS-STANDARDS

 Products of other manufacturers/fabricators will be considered under the terms set forth in Section 1B -- Paragraph 10, "Substitutions" bound into these Contract Documents.

1) Any equipment offered as a substitute to that specified must conform to space limitations of the layout. If not, the resulting cost of any deviation will be the responsibility of this Contractor at no extra cost to the Owner.

2) The name or make of any article, device, material or form of construction listed in the Item Specification shall establish the "Standard" required by that manufacturer/ fabricator, except for the governing paragraph.

3) Accepted substitutions will be noted in an addendum issued by the PA/E. No other substitutions will be permitted subsequent to the date of the Bid Opening, except by specific change order and only with sufficient cause of non-availability and with sufficient credit sum both as judged by the PA/E. Generally, substitutions after time of bid opening will not be considered.

4. MATERIALS - METAL

A. Materials: New, of prime quality, full gauge thickness, of composition indicated by name or abbreviations used in Item Specifications.

B. Gauges: Standard U.S. gauges. Unless otherwise specified, none shall be lighter than No. 20 gauge.

C. Stainless steel: Sheets, casting, and tubing shall be Type 302, of the 18-8 Series, with a content of from 17% to 19% chrome, 7% to 10% nickel and a maximum carbon content of 0.09. Exposed stainless steel surfaces shall have No. 4 mill finish. Exposed surface shall be interpreted to include inside surfaces exposed to view when any door is opened.

D. Unexposed portions shall be ground smooth to provide either a No. 80 grit finish or a first cut commercial finish.

E. Iron pipe shall have hammer tone finish. Threads shall be clean and coat threads with rust resisting coating.

F. Tubing shall be No. 16 gauge stainless steel (0.065") thick, minimum, seamless drawn or shall have seam welded continuously, ground smooth and polished.

G. Equipment color: As selected by the Project Architect from manufacturer's standard color chart.

5. FABRICATION - GENERAL

A. Joints and Welds: Equipment constructed of more than one piece or sheet of metal, shall be continuously butt-welded, ground, and polished smooth. Field joints shall be as few as possible. Welded parts shall be homogeneous, non-porous, free from pits, cracks, imperfections, and discoloration. Welding shall be electric process, with joints ground and polished smooth. Use welding rods of the same composition as sheets or parts welded.

B. Tops:

1) Table tops, counters, and like items, except where specified as wood; shall be of No. 14 gauge stainless steel of one sheet without seams, with edges terminated as indicated on detail Drawings.

2) Stud bolt tops to counter frames on 2' 6" centers, and to channel bracing of "open" fixtures. Provide chrome plated acorn cap nuts.

3) Weld, grind smooth, and polish field joints in tops only where tops exceed length of available sheets and/or where building accesses do not permit the top to be brought into the building in one piece.

C. Channels: No. 14 gauge stainless steel construction, 1" x 4" x 1", edges ground and polished. Attach channel to table tops, counters, and like items in "legs down" position. Full perimeter shall be sealed to table top with clear silicone mastic sealant. Run channels front to back at each leg location with additional channel bracing between front to back channels and down and center of the fixture. Fully weld, grind, and polish where channels intersect. Where an item of food service equipment is to be placed on a work table or counter, provide additional channel bracing to accommodate the weight and operation of the equipment items.

D. Sound Deadening: Apply Borden Chemical Company, No. 7452-L, 2" wide aluminum pressure sensitive soundproofing tape with acrylic adhesive and liner, to the underside of table and counter tops, spaced on 8" centers.

E. Sinks:

1) Construct sinks of No. 14 gauge stainless steel forming corners with a 3/4" radius, both horizontal and vertical. Sink sizes established on the Drawings shall be inside measurements. 3 and 4 compartment sinks designated for pot-pan washing shall not have an inside dimension’s less than 20 x 28.

2) Provide double wall partitions between sink compartments with 3/4" radius corners, 3/4" radius top edges, welded in place, ground smooth and polished. Fronts, bottoms and back of multiple compartment sinks shall be one piece with no overlapping joints or open crevices. Bottom of each compartment shall be creased to center and fitted with lever (1/4 Turn Ball Valve Type) operated waste with strainer plate and a brass tailpiece for slip connection. Lever waste shall be set into 1/2" deep recess assuring complete draining. Overflow shall be fitted in back of sink to maintain constant water level 1" below sink rim and/or adjoining drain board level. Such shall be factory installed.

3) Where sinks occur in tables, attach sinks to table top with continuous uninterrupted welds ground smooth and polished, with no remaining trace of welding, creating the appearance of one continuous piece.

4) Where required, sinks shall have a stainless steel backsplash, of the height specified.

5) Provide two (2) holes for specified faucets. Where adjacent equipment has a similar backsplash, match backsplash in height and design with tops joined with a top cap.

F. Drain boards and Dish Tables: Drain boards shall be constructed of No. 14 gauge stainless steel. Turn up front and ends 3" and finish with 1-1/2", 180-degree roll. Corners, both horizontal and vertical, shall have standard 3/4" radius. Exterior corners shall be rounded. Weld drain boards to sink to form an integral unit.

G. Pitch and Drainage:

1) Wherever a fixture is used with a waste or drain outlet, the surface shall have a distinct pitch or slope toward such an outlet. Dish tables and drain boards shall have a definite pitch or slope to drain. Pitch to be accomplished on table top only (not on level rim edges or back splashes).

2) Where drains are called for to be located in long tables, or where drainage is necessary, such table tops shall be provided with drains located at specific points as shown on the Drawings.

H. Faucets and Wastes:

1) This Food Service Equipment Sub-contractor shall furnish all faucets, lever handle quick opening wastes with overflow assemblies, basket wastes, straight wastes, and valves normally supplied with equipment for proper operation of a particular item. Sink mixing faucets shall be Chicago models as follows, or T & S B200 Series with Monel seat:

a) Wall type swing faucet: Chrome plated Chicago 540-LD-L9-R-748-2K, or Fisher 3250 Series, combination sink fitting, less soap dish, complete with R integral stop supply arms, and with 9" swing spout, attached to backsplash provided with 1/2" close nipple and 1/2" copper to flange sink ell.

b) Deck type swing faucet: Chrome plated Chicago 540-LD-L9-EA-748-2K, or Fisher 3310 Series, combination sink fitting, less integral stop, less soap dish, with 1/2" flanged female inlet shank with integral stop, 1/2" IP male brass. Supply with locknut, galvanized washer, galvanized coupling nut on inlet, and 9" swing spout.

c) Chrome plated lever handle, 2" I.P.S. quick opening waste with rear outlet connection for chrome plated brass overflow fittings with 1-1/4" brass tubing to be complete assembly, as manufactured by Standard-Keil, Model 1770-1020-1000 or 1720-1015-1000, or Fisher 610 Series, or Component Hardware Model D50-7215 or D10-4591

I. Enclosed Cabinets: Construct enclosed bases, cabinets, and wall cabinets and the like of No. 18 gauge stainless steel, single wall, pan type completely one piece welded construction, with no visible joints or screw attachments showing. Entire unit shall be rigidly braced with No. 14 gauge stainless steel angles or channels. All vertical corners shall be standard square break radius.

J. In lieu of enclosed cabinet construction outlined above, angle frame construction may be used. Angle stainless steel frames shall be 1-1/2" x 1-1/2" x 1/8" cross braces on 2'6" centers full length of items. At point of gusset attachment, provide No. 12 gauge stainless steel triangular plate, properly welded to bottom of frame. Joints shall be welded, and ground smooth to make a perfect joint. Spray with three (3) coats of enamel. Side, front, and rear panels shall be No. 20 gauge stainless steel.

K. Doors:

1) Double pan construction, No. 18 gauge face, No. 20 gauge rear, stainless steel, unless otherwise specified. Doors shall be 5/8" thick, filled with sound deadening material. Provide each door with a Standard-Keil Model 1257-1012-1151 door handle.

2) Sliding doors shall have limit stop fitted with neoprene grommet. Mount sliding doors on ball bearing rollers and aluminum overhead channel tracks equal to Standard-Keil 1357 Series, or Component Hardware Series B57. Provide guide pins at lower edge of door equal to Standard-Keil 1356-1010-3251. Provide each door with Standard-Keil 1263-1010-1283, or Component Hardware P63-1012, door pull.

L. Counter Legs: Standard-Keil 1072-0811-1755, or Component Hardware A52-9907, with 6" high adjustable stainless steel feet.

M. Wheels and Casters: Mount portable equipment on casters of the size specified or as provided as standard by the manufacturer but such must comply with the load rating standards of the Casters & Floor Truck Manufacturers' Association, and with the NSF sanitary requirements. Casters, forks, and guards shall be cadmium plated. Wheels shall be disc steel type with neoprene tires. Provide wheel locks where specified.

N. Undershelves - Open Base:

1) Fabricate solid removable undershelves of No. 16 gauge stainless steel with all edges formed to fit cross rails with rolled drop edges 1-1/2" deep. Grind corners and intersections and polish smooth. Cut out corners of shelves to fit snug around leg locations. Where cross rails do not occur at shelf joint, provide a 1-1/2", 90-degree turn down. Turn rear edges of undershelves up 1-1/2" with coved radius. Maximum length of sections shall be 2'-6".

2) Fabricate solid fixed undershelves of No. 16 gauge stainless steel with free edges turned down 1-1/2".

3) Notch and weld at legs. Where edges are specified to be turned up, turn up on a 3/4" radius to the height specified.

4) Weld a No. 14 gauge stainless steel channel, centered full length of underside of fixed undershelves.

O. Undershelves - Cabinet Base: Cabinet shelving shall be of pan type, removable, bottom and intermediate shelves and shall be No. 18 gauge stainless steel, unless otherwise specified, with shelf joints welded. Turn shelves up 3" at rear and ends with 1" radius cove corner. The turned up edges shall provide stainless steel guide pins for lower shelf if cabinet enclosure has sliding doors. The intermediate shelving shall be fixed, unless specifically specified otherwise.

P. Overshelves: Fabricate overshelves of No. 16 gauge stainless steel with edges rolled down or up as specified, utilize same construction as "Tops".

1) Mount shelving on No. 16 gauge stainless steel tubing of the diameter specified.

2) Cantilever mount overshelves at walls, with the upright passing down through the backsplash rim. Bolt to extended channels for support.

3) When overshelves are to be mounted to a flat top, secure with concealed fasteners.

Q. Wall Shelves: Fabricate wall shelves of No. 16 gauge stainless steel, same construction as "Overshelves". Provide with a 3" turned up rear riser. Mount 3" away from wall on No. 12 gauge stainless steel cantilever brackets. Secure brackets to wall with stainless steel screws with expansion shields. Space brackets a maximum of 4'0" o.c.

R. Legs: Legs shall be 1-5/8" O.D. No. 16 gauge stainless steel tubing. Locate legs as shown on the plan and/or sections, at spacing not to exceed 5'0" o.c. Joints between legs and undershelves or cross rails shall be welded, ground smooth, and polished. Fit each leg with Standard-Keil Model 1010-0802-1144, or Component Hardware Model A10-0852, round bottom collar and foot insert, Type #18-8 stainless steel, sized for 1-5/8" No. 16 gauge stainless tubing.

S. Leg Sockets (Gussets): Cylindrical, one piece stainless steel construction. Welded to supporting members, spot weld with sealant around remaining perimeter. Leg sockets shall fit snug, and legs or uprights shall be secured by an Allen set screw. Leg sockets shall be Standard-Keil 1020-0206-1283, or Component Hardware A20-0206, Type 18-8 stainless steel.

T. Cross Rails: 1-1/4" O.D. x 16 gauge stainless steel tubing mounted 10" above the floor, grind, and polish. Attach cross rails to every leg. Run rails front to back and full length between legs at rear and front. When fixed undershelves are specified, cross rails may be omitted.

U. Spacers: Open base equipment as walls or partitions shall be provided with spacers to secure equipment away from wall. Spacers shall be secured to wall by this Food Service Equipment subcontractor prior to final connections of utilities by the trades. Spacer shall be No. 14 gauge stainless steel, approximately 2-1/4" wide, with hole at one end to accept 1-5/8" leg. Length shall permit equipment spacing to be 3" from wall. Spacer shall have 90 degree twist to omit dirt catch. Wall end shall have 2-1/4" flush surface and shall be lag bolted to the wall.

V. Cold Pans:

1) Set cold pans into openings in tables and/or counters with cold pans continuously welded in place and grind the welds smooth and polish to form integral units. Turn cold pans up to engage 1" turndown of top and provide with 1" x 1/8" breaker strip between cold pans and top. Cold pans shall be constructed of No. 14 gauge stainless steel having interior corners, both horizontal and vertical, formed to standard 3/4" radius. The depths of the units shall be measured from the table top to the bottom of the pan.

2) Provide an expansion Valve (TXV) on mechanically refrigerated cold pans. Place all operating valves inside of compartment. Set gooseneck type water inlet no higher than 2" above the table top and arrange to spill into the cold pans at least 3" above the overflow. Provide a sectional, removable, pan-shaped, No. 14 gauge, perforated, stainless steel false bottom with corners rounded to contour of the cold pan, with edges finished in channel shape, in sizes small enough to fit into and to be washed in dishwashing machine.

3) Bottom of each cold pan shall be punched and provided with a 2" chrome plated brass lever handle waste outlet with removable stainless-steel strainer basket. An overflow directly connected to the waste outlet, constructed similar to those for sinks, shall be set at proper height in each unit and provided with stainless steel strainer plate.

4) Pans shall be double wall construction. Provide 2" of urethane insulation. Between the cold pan and the adjacent top, provide a 1/4" x 2" wide breaker strip. Provide cold pan with an "on-off" toggle switch for compressor unit, located in the cabinet base.

W. Drawers: (See Details on Drawing)

1) Drawer pan shall be 20-gauge stainless steel. Vertical and horizontal corners shall have 3/4" minimum covered radius. Top of pan shall flange out and shall be removable without the use of tools.

2) Drawer slides shall be full suspension self-closing type, fitted with four (4) case-hardened ball-bearing rollers. Track attached to drawer, upper edge shaped to fit contour of roller rim to provide a position drawer guide and to prevent jarring. Outer track shall be fastened to the drawer housing and provided with limit stops. Assembly shall be Standard-Keil Model 1452-3022-1251.

3) Drawer housing shall be of No. 18 gauge stainless steel to enclose front, sides, and back of drawer assembly. Such shall extend from underside of table or counter top, down to bottom of drawer front. Fit front of housing with opening (with edges turned in 1/2"). Weld to accommodate drawer body and slides. Provide top turn-in with holes for receiving threaded studs welded to underside of table or counter top for bolting housing thereto.

4) Drawers shall be 20" x 20" x 5" deep, unless otherwise specified. Drawers shall be fitted with Kason or Component Hardware drawer pulls of high pressure die cast zinc with polished chrome finished.

X. Elevated Pan Rack:

1) Construct elevated pan rack of 1/4" x 2" stainless steel barstock, mounted on 1-5/8" diameter stainless steel tubing uprights. Cap top of uprights. Uprights shall be 7'0" overall. Where uprights pass through table top, provide sleeve by welding Standard Keil Model 1020-0206-1283 leg socket. Uprights shall extend down through top and be supported by welding to cross rail. Where required, a sleeve joint may be used at the lower end to permit access.

2) Rack shall be 3-bar style. Top bar shall have semi-circular ends with 12" radius. Rear bar shall be at same height but extend between uprights. Position lower bar 8" down from rear bar extending between uprights. Provide with Standard-Keil Model 1578-1010-1351 single and Model 1576-1010-1351 double, on 8" enters, or Component Hardware Model J79-4115 single and Model J77-4401 double.

Y. Wood Cabinetry: Comply with requirements of "Section 12A, PCSB Standard Casework".

PART 3 - EXECUTION

1. COORDINATION

 General: Coordinate with other contractors for provision and scheduling of temporary openings in walls or floors which may be required for passing large sections of equipment which cannot be accommodated through permanent openings in the building.

2. INSTALLATION

A. General: Make arrangements for receiving food service equipment and make delivery into the project site as requisitioned by installation superintendent. Do not consign any equipment to the Owner. Do not consign equipment to any other contractor without receiving written acceptance from him, and making arrangements for the payment of freight and handling charges.

B. Deliver all equipment into the appropriate building, uncrate, assemble, level and repair any damaged or abraded surfaces. Set equipment temporarily in its final location to permit other trades to take necessary measurements for the various connections of services. Move the equipment sufficiently to permit the installation of such services and then realign equipment level and plumb. Install all equipment so as to eliminate objectionable vibration.

C. Wall clearance:

1) In all locations where indicated in the Drawings and/or Specifications, the equipment shall be spaced with clearance recommended per manufactures specs and no closer than 3” if not specified away from adjoining walls, and/or equipment. This clearance is to be measured from the extreme back of the equipment.

2) Where cabinets and other items of equipment butt against walls, such shall be sealed at such points with clear silicone sealant equal to Dow Corning #732 RTV. Excess sealant shall be cleaned out of the joints to a radius fillet.

3) Where necessary to seal a cabinet to the wall, provide scribing or filler strips of material matching that used in the cabinet construction. Seal the strips to the wall with clear silicone sealant.

3. TESTING, DEMONSTRATING; INSTRUCTING OWNER'S DESIGNATED PERSONNEL

 \*NOTE: In addition to the stipulated retainage of payment as required in Division One -Contractual Conditions, the Owner shall retain an additional (3%) three percent of the line item applicable to "Food Service Equipment" as listed in the Contractor's Schedule of Values. This additional retainage will be released only after the requirements of this paragraph 13 of these Specifications are met in their entirety, and to the complete satisfaction of the Owner's Director of Food Service.

A. After complete installation, all items of equipment furnished under this Contract shall be operated and thoroughly tested to insure proper and safe operation. This School Board’s Inspector shall be notified of this testing in a timely manner.

B. The Food Service Equipment Subcontractor shall be responsible for scheduling a demonstration meeting participated in by authorized representatives of the equipment manufacturers. This meeting time shall be satisfactory to the School District's Director of Food Services. Each manufacturer's representative shall at this meeting:

1) Demonstrate to and instruct the Owner's designated personnel as to the operation, use, care, cleaning, and maintenance of all items of equipment.

2) Provide the Food Service Department's designated representative with the name, address and phone number of a designee of each manufacturer and state which designee shall be responsible to quickly respond to warranty work, 24 hours a day, 365 days a year. This is to be a direct contact. The Owner's Food Service Department may contact such warranty representative designee directly and such designee may respond without voiding any responsibility or warranties of the manufacturer, or of the Food Service Subcontractor or of the Contractor. Service charges for this warranty representative, no matter what the resolution of the problem may be, shall be the responsibility of the Manufacturer, the Subcontractor and the Contractor. In any event, the Contractor shall be responsible to immediately pay, upon invoice, charges by the warranty representative in order to keep the warranty representative responsive. Whether the plumbing, electrical, food service equipment or other subcontractor (or even the Owner) should be back charged will be resolved later.

3) Provide the Food Service Department's representative with one (1) set of operating and maintenance manuals for each item of equipment furnished under this Contract. This set shall be neatly bound in a hard bound loose-leaf binder. The delivery of this shall be receipted.

4) Attendance at the demonstration meeting is required of all manufacturers' designated representatives providing equipment under this Contract.

4. GUARANTEES AND WARRANTIES

A. Guarantees: The manufacturer of each item of equipment, the Food Service Equipment Subcontractor, and the (General) Contractor shall each guarantee every item of equipment to be free of defect in material and workmanship.

B. Warranties: The manufacturer of each item of equipment, the Food Service Equipment Subcontractor, and the Contractor shall each Warrant every item of equipment to be free of defect in material and workmanship, and such equipment shall serve its obvious intended purpose. They shall agree to repair, replace, or otherwise correct any defective equipment promptly and at the Owner's convenience, without additional costs to the Owner. These Warranties shall cover for a time period of one (1) year for all equipment, except for refrigeration compressors, which shall be covered for a period of five (5) years. Warranty time periods shall commence on the Date of Substantial Completion of the entire project (or Substantial Completion of the portion of the total project in which the Food Service Equipment in housed (whichever is earlier). The Dates of Substantial Completion shall be as established and certified by the Project Architect/Engineer. The cost of Warranties shall be included in the bid proposal and Contract sum, and shall serve as a prepaid service contract.

C. Provide a listing of factory authorized service agencies and copies of written service and Warranty agreements on all items of equipment provided under this contract.

D. Service contracts on refrigeration systems must be contracted for by the Food Service Equipment Contractor with authorized local service organizations capable of providing prompt and efficient service. Submit five copies of all service contracts to the Project Architect upon completion of the installation of the equipment.

# PART 4 - SCHEDULE OF EQUIPMENT

**NOTE**: **DELETE THIS INSTRUCTIONAL PARAGRAPH FROM THE PUBLISHED DOCUMENT.**

 (The Project Architect's Food Service Equipment Consultant shall include as this Part 4, a schedule and listing of each item of equipment to be provided under this Contract. Such schedule shall be keyed to the Drawings.

**END OF SECTION**