

# FOODSERVICE EQUIPMENT COORDINATION NOTES

## I. GENERAL

- G-1 Foodservice equipment will be designed and specified as a separate, distinct package or subcontract to be provided by a Kitchen Equipment Contractor (KEC) as a prime contract or as a subcontract to the General Contractor; the Owner or Architect to specify which situation will prevail.
- G-2 The work of the KEC consists of providing all labor, equipment and materials and performing all operations required for execution of the work as shown or reasonably inferred by the foodservice drawings and specifications. This work includes equipment procurement and fabrication, freight, delivery, unloading, uncrating, storage as required, handling, assembly, setting in place and leveling, all in accordance with the project schedule. Also included are the removal, alteration, relocation and reinstallation of existing equipment (if specified).
- G-3 Not included in the work of the KEC is the construction and/or installation of concrete or masonry pads, piers, stub walls, depressions, damage platforms and procurement or installation of conduit. Also not included are electrical and mechanical utility rough-ins and final connections. Should the foodservice equipment and/or relocation require any cutting or patching of other facility fixtures or finishes, the KEC will notify the Architect and General Contractor prior to the initiation of such work. It shall be the responsibility of the General Contractor to ensure that such work is accomplished by trades skilled in same, resulting in a finished product meeting with the approvals of the Owner and the Architect.
- G-4 Plumbing and electrical requirements indicated for individual items of equipment on the foodservice utility load schedules and point of connection drawings prepared by C&G are for the use of the Mechanical and Electrical Engineers. The location of the actual roughing in of these services will be shown on a dimensioned rough-in plan, which will be furnished by the KEC.
- G-5 Combining of utility lines for simplification and/or relocation due to conditions on job site shall be effected at the discretion of the Plumber, Steam Fitter or Electrician, only after obtaining approval from the Project Engineers and Architect. C&G should be notified of any changes in rough-in locations or requirements. All utility changes in the field must be given to the KEC so that adjustments can be made to custom fabricated items or equipment, if necessary. The KEC will not be responsible if written notification of change has not been made by the General Contractor.
- G-6 The KEC shall be responsible for the cost of storing the foodservice equipment prior to the time of installation. Should the Owner or General Contractor require the delivery of any foodservice equipment to the building prior to the time it can be installed therein, the General Contractor must provide safe and protected space for storage thereof and be responsible for the care thereof from the time of delivery until such time as it can be moved from its storage location and installed by the KEC.
- G-7 The General Contractor is responsible for the furnishing and installation of the following items: depressions, recesses, stub walls, blocking, pads, etc., as indicated on the Building Conditions Plan prepared by C&G. The KEC will prepare a final dimensioned drawing for field use and execution of the work.
- G-8 Utility consumption on schedule are per unit. See Quantity to determine total load.
- G-9 Provide ventilation in millwork counters where any heat generating equipment or under counter equipment is specified.

## II. ARCHITECTURAL

- A-1 **For Kitchen Floors:** Non-slip quarry tile with epoxy hydrant grout, particularly in "wet" areas such as dishrooms and pot washing areas. Other materials are available such as sheet vinyl, poured epoxy, etc. Do not use a glazed tile, ceramic or plastic floor tiles. Materials other than quarry tile should be verified with the health department.  
**For Kitchen Walls:** Stainless steel, ceramic tile, glazed concrete masonry units, smooth epoxy-paint or water-resistant gypsum wallboard on structural 16-gauge studs clad with fiberglass reinforced panels and battens. Masonry block or epoxy painted finish should be verified with the health department.
  - a. When stud walls are used, all walls intended to support wall shelving or wall mounted equipment must be provided with blocking by the General Contractor. Construction must support a minimum of 50 pounds per lineal foot.
  - b. When required, C&G will specify stainless steel, rubber or fiberglass wall corner guards and protection rails where shown on the drawings.
- For Kitchen Ceilings:** Smooth, mylar-faced 2' X 4' lay-in suspended construction. Ceiling grid system shall be a non-corrosive material. Ceiling height in the kitchen should be no less than 8'-0". When walk-in refrigerators and exhaust hoods do not extend to the ceiling, C&G will specify suitable closure panels to extend from the finished ceiling down to the top of the hood and/or walk-in. Recommended clear height at walk-ins and exhaust hoods is 10'-0" minimum. Please notify C&G if heights are less than minimum.
- A-2 Doors in kitchen shall have kick plates and vision panels to avoid employee collisions.
- A-3 All roof, ceiling, floor and wall penetrations for ducts, control lines, waste system lines, refrigerant tubing, controls and beverage system conduit, and clear paths for routing of same shall be planned and specified by the Architect/Engineers and verified by the KEC. All such penetrations shall be completely sealed to a waterproof condition by the installed trade.
- A-4 The Architect shall advise C&G as to the location of the following items (if required for this project):
  - a. Remote refrigeration systems - components and installation by KEC
  - b. Waste system components
  - c. Supply and make-up air diffusers
  - d. Kitchen hood fan(s)
  - e. Grease trap(s)
  - f. Oil Recovery
- A-5 Cart washing areas must be pitched a minimum of 1/4" per foot to a floor drain at the rear of the work area. The high point of the cart washing should be approximately 1/2" lower than the adjacent floor areas (if applicable).
- A-6 Specify a waterproof membrane under the floors throughout the foodservice "back-of-the-house" and any other place where floors will be subject to heavy water spillage during cleaning.
- A-7 Windowsill height should be at a minimum height of 4'-0" above the finished floor so as to accommodate equipment backspashes.
- A-8 Hand sinks, complete with soap and towel dispenser, will be specified by C&G.
- A-9 Provide depression in structural slab for floor troughs and walk-in refrigerators and freezers, exact depths and detailing to be determined depending on manufacturer specified, and shall be verified by the KEC. Where depression is not feasible, provide an isolated, insulated wearing slab below walk-in areas.
- A-10 General Contractor to provide and install all curbs and/or roof rails for exhaust/supply air fans and roof-mounted refrigeration compressor/condenser units.
- A-11 Separate toilet and locker facilities (and changing rooms if applicable) should be provided for foodservice employees. These areas are not to open directly into food preparation or storage areas.

## III. HVAC ENGINEER - VENTILATION

- V-1 When exhaust hoods (ventilators) are furnished by the KEC with connection and equipment (duct work, fans, starters, curbs) beyond the collar and above the ceiling or other exposed surface by the HVAC Contractor.
- V-2 When exhaust hoods (ventilators) are located in separate and remote locations, individual exhaust systems must be provided. C&G recommends, at the very least, individual fans for front and back of house. Number and grouping of fans to be determined by total number of hoods and their proximity to one another.

- V-3 Static pressure indicated for equipment is at the fixture connection point and is not total system static pressure.
- V-4 The HVAC Contractor shall furnish and install all mechanical supply and exhaust ventilating systems required, including ventilating fan units, motors, drives, foundation, duct work, registers and grilles, controls and all appurtenances to comply with ASHRAE Bulletin #96, latest edition or in force and all other applicable codes.
- V-5 Final connection to exhaust hood duct collar shall be by the HVAC Contractor.
- V-6 All horizontal duct work for steam vapor shall have watertight joints and be pitched back to inlet.
- V-7 In general, provide all kitchen areas involved with an air supply volume less than that of the exhausted air, so as to maintain these areas under negative pressure. Supply and exhaust of kitchen air shall be balanced so as to prevent cooking odors in public areas. Provide infusion grilles from public areas to kitchen spaces. Make-up air grilles should be provided as far away as possible from the exhaust hood locations. Provision of make-up air in this fashion will then not result in the "short cycling" of the exhaust function of the ventilators. "Short cycle" or any hood which introduces make-up air inside the hood canopy through our experience and the experience and engineering of most of the major hood manufacturers has proven that "short cycling" does not effectively capture smoke and grease laden air. Therefore we will not endorse the use of "short cycle" hoods on any project in which we are involved with the hood selection. If "short cycle" hoods are required and installed it will be with the clear understanding that C&G has no responsibility for the functioning of the hood(s), or any future work required to correct a malfunctioning condition.
- V-8 The fire suppression system(s) shall provide surface protection for the cooking appliances, hood plenums and duct collars as required. Zone sprinklers and duct protection, if required, shall be by the General Contractor.
- V-9 Mounting height of bottom edge of canopy type hoods will be at 6'-8" A.F.F. minimum, 7'-0" maximum. Average height of exhaust hood is 2'-0" to 2'-6".
- V-10 When installed indoors, the HVAC Contractor shall properly ventilate areas containing remote refrigeration compressors. General requirements are 1000 CFM per horsepower for air-cooled units and 200 CFM per horsepower for water-cooled units. Condensing unit room temperature should not exceed 90° F.
- V-11 In tabulating the rejected heat load of the equipment in foodservice areas, the HVAC Engineer shall take into account all sources of heat, including small, self-contained refrigeration compressors operating simultaneously at peak service periods.
- V-12 C&G recommends comfort conditioning of foodservice areas so as to not exceed 85° F at peak operation including food storage areas.

## IV. MECHANICAL ENGINEER - PLUMBING

- P-1 All final connections to equipment will be by the Plumbing Contractor.
- P-2 All lines (water, waste, steam, gas, air) shall be concealed in walls or columns wherever possible.
- P-3 Non-insulated piping, valves and other fittings for equipment, which is freestanding, of open tubular construction or exposed to public view shall be stainless steel or chrome-plated. All other non-insulated piping and fittings shall be finished with high-temperature aluminum paint.
- P-4 Cold water lines shall be insulated to prevent condensation formation.
- P-5 Provide service tabs on all rough-ins. Each connection to each piece of equipment shall have its own individual connection.
- P-6 The Plumbing Contractor shall provide and coordinate with the KEC vacuum breakers on water connections to equipment where required by code and not furnished as part of the equipment. In general, garbage disposers, exhaust ventilators (water wash only), service hoses and dishwashers are furnished with vacuum breakers.
- P-7 The KEC shall provide all equipment trim, including faucets, sink wastes and tail pieces. Traps are by the Plumbing Contractor. Faucets and other fittings will be supplied loose with the equipment and are to be assembled and installed by the Plumbing Contractor.
- P-8 Provide water no harder than 2.0 grains per gallon and with pH level within the range of 7.0 to 8.5 for all beverage equipment, ice machines, bain marie and sink heaters, steamers, dishmachines and equipment with self-contained steam generators (i.e., kettles). Notify C&G of adverse water conditions. C&G will specify water filtration to foodservice equipment as necessary.
- P-9 The Plumbing Contractor shall run all vent piping or waste lines concealed. Wherever possible, exposed vents for island or freestanding equipment shall be avoided. Any required exposed vents shall be submitted to the Architect for approval for ferrug-in, stainless steel sleeve or chase as an alternate.
- P-10 Provide minimum of 110° F water to booster heaters and all kitchen sinks (unless otherwise noted), or notify Architect and Consultant of variance so that interfacing equipment may be properly re-sized. Provide 110° F water to hand sinks. Hand sinks in foodservice areas will be specified by C&G as part of the foodservice equipment contract.
- P-11 All horizontal, piping lines extended and connected to equipment shall run as high as practical and not less than 6" above finish floor.
- P-12 Custom fabricated floor drains (grates, frames, etc.), as indicated on the drawings, are to be supplied by the KEC and installed by the Plumbing Contractor unless otherwise specified. KEC shall coordinate the exact location.
- P-13 The Plumbing Contractor shall connect to food waste disposers any control panels mounted under tables or in/on walls and shall extend piping from panels to ends of disintegrable garbage troughs, sinks or cones per manufacturer's directions. Flow controls, vacuum breakers, solenoids and valves for the piping from the panel to the troughs, sinks or cones shall be supplied by the KEC. All rough and disposer connections and rough-ins shall be a minimum 3/4" diameter with each rough valve provided with a globe valve for balancing of water flow.
- P-14 Indirect-wastes (funnel-type drains, floor sinks) shall not be located in passages and aisles. Where adjacent to walls, indirect-wastes shall be located as close to the wall as possible. C&G will provide locations for all drains associated with foodservice equipment. KEC to coordinate locations in field with General Contractor as per their rough-in drawing.
- P-15 Indirect-wastes from foodservice equipment, which will discharge into floor sinks, will be furnished, installed and extended over drain position by the Plumbing Contractor. Lines shall be stainless steel or chrome-plated where exposed to public view.
- P-16 The Plumbing Engineer is responsible for the design and specification of all required grease traps or interceptors to suit applicable codes for installation by the Plumbing Contractor. Recessed Grease traps shall be set flush with finished floor in a location that meets code. Avoid locating below legs of equipment. Unless required by code, disposer wastes shall by-pass grease trap. Verify proposed location with C&G.
- P-17 All floor openings shall be sealed watertight and covered with chrome-plated escutcheons with provisions for repair and/or removal, as required.
- P-18 Sleeve collars shall extend 2" above the top of the finished floor or base. Opening between collar and passing pipe shall be sealed watertight.
- P-19 The KEC shall furnish and extend condensate pan drain lines from evaporators to approved locations over floor drains for all cold storage compartments.
- P-20 Gas-fueled service equipment generally operates at 4" to 10" Water Column pressure; specify regulating

- P-20 (Cont'd) valves and equipment to maintain the pressure required by each equipment manufacturer at the equipment connections. Size fuel gas lines to supply the required BTU indicated for equipment. Specify strainers, or approved type filters, at all equipment with thermostatic controls, including ranges, ovens, fryers, etc.
- P-21 Gas service shall be dropped on both sides of extended cooking batteries and a manifold created to distribute gas pressure evenly across the battery of equipment served. Notify C&G of any specific gas shut-off or shut-down requirements by code that may impact gas-fueled cooking equipment.
- P-22 The fire suppression system installer will provide a mechanical or electrical gas shut-off solenoid valve, where applicable, to be installed by the Plumbing Contractor in the gas line serving the protected equipment. Mechanical (cable release) interconnection of the gas valve to the fire suppression system, if required, shall be by the KEC. If the valve is an electrically operated solenoid valve, interconnection shall be by the Electrical Contractor.
- P-23 The dishmachine and other warewashing components shall be shipped to the job site in one or more sections. After the machine is assembled by the KEC, the Plumbing, Mechanical and Electrical Contractors shall provide interconnecting and final connections.
- P-24 The KEC shall reconnect equipment plumbing lines which have been disconnected to facilitate the delivery or installation phase of this work, excluding those services required for specific equipment items specified under this heading which are the specific responsibility of the Plumbing Contractor.
- P-25 Generally, water pressure in the kitchen area shall not exceed 50 psi nor be less than 10 psi. KEC will furnish and install pressure-reducing valves for any item requiring less than the line pressure. Plumbing Contractor to provide greater than normal pressure to any item of equipment requiring same. Water pressure in Foodservice Area should not exceed 50 PSI in supply lines. Pressure to dishmachine and booster heater should not exceed 25 PSI. Verify all manufacturer's requirements for valves, flowrates, etc.
- P-26 For funnel floor drains (FFD), we suggest the following manufacturers: Josam, Smith or Zurn.
- P-27 Floor sinks (FS), should have a square type indirect waste receptor with nickel bronze rim and grate, acid resisting enamel interior and shallow aluminum bucket. We recommend the following manufacturers: Josam, Smith or Zurn with partial floor grate or without grate as appropriate. At dishmachines, we suggest drain without grate by Josam, Smith or Zurn. Grate type will be indicated on C&G plumbing drawing.
- P-28 All wastes, direct or indirect, should be furnished and installed by the Plumbing Contractor.
- P-29 Wall or floor sleeves or conduit as required for refrigeration lines, beverage systems, CO2 gas or compressed air lines should be furnished by Plumber, except for sleeves through cold storage rooms. All conduit should have 24" minimum radius bends and should terminate 2" out of floor, wall or curb. Conduit runs should have a maximum of four (4) bends from start to finish, unless otherwise noted. Conduit pull boxes should be located a maximum of 45'-0" center-to-center, unless noted otherwise. Verify code restrictions on use of PVC conduit in ceiling plenum spaces.
- P-30 Wall-hung hand sinks shall be furnished by the KEC, complete with mounting brackets, faucet, strainer, tailpiece and "P" trap for installation by the Plumbing Contractor.
- P-31 If water-cooled refrigeration compressor/condenser units are to be supplied, they will require approximately 1.5 gallons of 70° F cooling tower water per minute per horsepower. Advise C&G of pressure of cooling tower water.
- P-32 The Plumbing Contractor shall inter-plumb washdown system components (if specified) of exhaust ventilators as directed by manufacturer. (When Specified)
- P-33 The KEC shall furnish and the Plumbing Contractor shall connect all quick-disconnect hoses to equipment.
- P-34 The Plumbing Contractor shall furnish and install drain lines from walk-in cooler/freezer evaporator coils to indirect drain locations with 1/2" per foot minimum pitch and "P" trap in end at floor sink/drain. Drain Line Heat Tape in Walk-In Freezer compartments provided and installed by KEC.
- P-35 Fire sprinkler nozzles should not be installed into walk-in cooler/freezers. Verify with local codes.
- P-36 The Plumbing Engineer to provide shut-off at all equipment connections.

## V. STEAM

- S-1 All steam piping systems shall be designed and specified by the Mechanical Engineer for inclusion in the appropriate Mechanical or Plumbing contract hereinafter referred to as "Contractor."
- S-2 All steam lines shall be extended from rough-in to connection points on the fixtures by the Contractor, furnishing all labor and materials.
- S-3 The Contractor shall furnish and install service valves with heat resistant handles on all steam supply and return lines.
- S-4 Furnish and install line strainers on all steam supply lines to dishmachine, kettles and steamers when these equipment items are specified.
- S-5 Unions shall be provided on both sides of valves and traps and to the service side of steam supply and steam return service valves.
- S-6 Required steam pressure for foodservice equipment varies. Refer to utility information documents or individual item catalog sheets for specific requirements. Unless otherwise indicated, maximum steam pressure shall be 50 psi with pressure-reducing valves provided by the Contractor, where required, unless furnished as a part of the equipment specified by the manufacturer.
- S-7 Kettles shall have operating valve on steam supply line installed within easy reach of operator. Large kettles shall have operating valve located before union and steam inlet. All operating valves shall be chrome-plated with composition hand wheel, which will remain cool, supplied by Plumbing Contractor.
- S-8 All rough-ins shall be concealed in walls or columns wherever possible.
- S-9 Plumbing Contractor shall provide and install bleeders and/or vents with brass petcocks on all shock stops and equipment connections requiring same.
- S-10 Steam supply to foodservice equipment shall be directly off steam main when possible.
- S-11 Contractor shall provide and install strainer, pressure regulator, steam separator and steam trap on compartment steamer when this piece of equipment is specified. This item of equipment, as well as some others wherever steam comes in contact with food or is passed through portable liquids, requires that USDA-defined "clean system" only be used. Unless the steam supplied can be certified as "clean," heat exchangers will be specified.
- S-12 All steam lines, valves and other fittings for freestanding equipment, for equipment of both open tubular construction and for equipment with utilities exposed to public view shall be stainless steel or chrome-plated; all other piping and fittings shall be finished with high-temperature aluminum paint. All steam lines shall be installed as per base building specifications. Steam lines from equipment to service valves shall be non-insulated and chrome-plated. Provide stainless steel covers on exposed insulated steam lines in foodservice areas, such as lines to kettles, steamers, dishwashers, etc.
- S-13 Dishmachine may be shipped to the job site in one or more sections. After machine is assembled by the KEC, the Contractor shall interconnect steam lines between the dishmachine sections and provide final connections.
- S-14 Sleeve collars shall extend 2" above the finished floor. Openings between collar and passing pipe shall be sealed watertight.

- S-15 No modification of any manufactured utility distribution system shall be undertaken by an entity without the express written approval and/or supervision of the system manufacturer.

## VI. ELECTRICAL ENGINEER

- E-1 All final connections to equipment by the Electrical Contractor.
- E-2 All electrical lines shall be extended from rough-in to connection point or points on the fixture by the Electrical Contractor, furnishing all labor and materials.
- E-3 All specified equipment underneath exhaust hoods shall be connected to shunt trip breakers and not GFI outlets.
- E-4 Where electrical lines are shown out of floor on drawings, the Electrical Contractor shall stub up 6" above finished floor and connect, after equipment has been set in place and leveled by Foodservice Equipment Contractor.
- E-5 All rough-ins shall be concealed in walls or columns wherever possible.
- E-6 All fabricated equipment shall be completely wired internally, and all electrical outlets and receptacles mounted on or in fabricated equipment shall be furnished and installed by the KEC who shall run all lines to suitable terminal boxes or sub-panels; starters or disconnect switches by the Electrical Contractor. Final connection shall be made by the Electrical Contractor. Where equipment wiring terminates in a junction box, switch or terminal box, the Electrical Contractor shall make all connections between the branch circuit and equipment wiring. Where terminal is a receptacle, connect branch circuit to receptacle. Where terminal is a sub-panel, connect branch circuit to the mains of the sub-panel. All receptacles shall be furnished by the Electrical Contractor, except those that are built into an item of equipment.
- E-7 The KEC shall provide all prefabricated refrigeration panels, refrigeration compressor/condenser units, evaporators, refrigerant lines, evaporator drain lines, thermostats and defrost time clocks required for a complete operating system. Primary power connections to refrigerators lights and heaters, compressor/condenser units, solenoid valves and contract switches and blower coils; inter-wiring of freezer blower coils back to the time clock and compressor racks; and inter-wiring of continuously energized drain line heaters are by the Electrical Contractor and are not a part of the KEC's work.
- E-8 All plug-in equipment receptacles shall be polarized. The Electrical Contractor shall provide the appropriate grounding type receptacles for all wall and floor mounted outlets to be used for plug-in equipment as noted on the drawings, characteristics as noted. All plug-in equipment shall have the appropriate cord and plug set furnished and installed by the KEC. The KEC and Electrical Contractor shall coordinate their work so that the receptacles provided will match the specific plugs installed as part of the plug-in equipment, and any changes in cords and plugs or receptacles in the field will be done at no cost to the Owner.
- E-9 The Electrical Contractor shall inter-wire equipment components where required, such as ventilator control panels to ventilators, fans and detergent systems, and disposer control panels to disposer motors and solenoids.
- E-10 Electric switches with thermal overload protection will be mounted on the dishwashing machine by the KEC or dishmachine manufacturer. Machine may be shipped to the job site in one or more sections. After machine is assembled by the KEC, the Electrical Contractor shall interconnect mechanical sections and provide final connections.
- E-11 The KEC shall supply, on each motor-driven appliance or electrical heating unit, a suitable control switch or starter in proper type in accordance with Underwriter's Laboratory requirements wherever such switch or starter is not furnished integrally with the equipment by its manufacturer. All other line switches, safety cut-outs, disconnect switches, control panels, line boxes, other controls, fittings and connections, when not an integral part of the unit, will be furnished and installed by the Electrical Contractor.
- E-12 All conduit, junction boxes, and other fittings for equipment which is freestanding, or open tubular construction, exposed to public view, shall be stainless steel or chrome-plated. Assemblies in non-public areas shall be epoxy-painted aluminum.
- E-13 The Electrical Contractor shall furnish and install control wiring between refrigeration and temperature alarm systems and remote monitoring panel.
- E-14 "Sealtite" type flexible conduit shall be used for all flexible conduit installations, depending on code requirements. Junction boxes for equipment requiring flexible conduit should be mounted on rigid conduit at elevations which will limit the total length of the flexible conduit to 24" overall.
- E-15 Refer to architectural plans for clocks, intercoms, time clocks, telephones, point-of-sale cash machinery and other items located in foodservice area not included in Foodservice Equipment Contract.
- E-16 Sleeve collars shall extend 2" above top of finished floor. Openings between collar and conduit shall be sealed watertight.
- E-17 The Electrical Contractor shall connect electrical supply from rough-in locations to the disposer control panel and then to the disposer motor and solenoids. Control panel contains overload and under-voltage protection and fused disconnect switch.
- E-18 The KEC shall provide microswitches as part of the fire suppression system, which, when wired to, will allow for the interruption of power to all electrically operated equipment as required in case of fire. Power source for the fire suppression system shall be inter-wired to an emergency generator or external battery system by the Electrical Contractor so that the fire system will remain energized in the event of a power failure. The Electrical Contractor shall provide adequate contactors, shunt-trips or other equipment to interrupt power as required by code and inter-wire with system as supplied by the KEC. (If Utility Distribution System is specified, shut-offs will be provided by the KEC as part of the system and the Electrical Contractor will need to inter-wire from the microswitch at the fire suppression system tanks to the terminal block in the system.)
- E-19 The Electrical Contractor shall inter-wire ventilator exhaust (and washdown system, when specified) per directions of the KEC and manufacturer. The ventilator control system shall be inter-wired to an emergency generator or external battery system so that the ventilator system is constantly energized in the event of a power failure.
- E-20 Provide computer grade, isolated ground service for electronic cash registers. Provide empty conduit between cash registers and base unit location to allow communication wiring to be installed by system manufacturer or installer.
- E-21 Light fixtures in foodservice areas shall be enclosed with a non-breakable diffuser. Lights furnished in exhaust hoods are factory installed. Electrical Contractor to provide final connection to power source and switch.
- E-22 The Electrical Engineer should advise C&G of any special voltage requirements as it relates to the specification of foodservice equipment.
- E-23 Provide duplex convenience outlets as indicated on C&G's electrical connection drawing. Provide any additional outlets as required by code or requested by Owner.
- E-24 All rough-in connections shown under equipment shall not extend more than 4" above finish floor, unless noted.
- E-25 All final connections to equipment are to be made by electrical contractor.

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Architect:   543 Massachusetts Ave, West Acton, MA 01720 www.omr-architects.com t: 978.264.0160	Consulting Engineer:  <div style="text-align: center;">  </div>	Registration:  Project Name and Address:  <div style="text-align: center;"> <h2 style="margin: 0;">Concord-Carlisle Regional High School</h2> <p style="margin: 0;">500 Walden Street Concord, MA 01742</p> </div>	Issue Submissions: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.:</th> <th>Date:</th> <th>Description:</th> </tr> </thead> <tbody> <tr> <td>08/15/2012</td> <td></td> <td>Design Development Submission</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.:	Date:	Description:	08/15/2012		Design Development Submission										Title:  <h2 style="margin: 0;">Foodservice Coordination Notes</h2>	Project No.: 1102.00 Drawing No.: <h1 style="margin: 0;">K0.1</h1> © omr architects inc
No.:	Date:	Description:																		
08/15/2012		Design Development Submission																		
Date: 15 August 2012		Scale: 12" = 1'-0"		Drawn: KRT	Checked: KGS															



Equipment Utility Schedule 1-86																							
No.	Qty.	Description	HVAC Utilities			Plumbing Utilities							Electrical Utilities										Comment
			ECFM	Collar Size	SP	HW	CW	DW	IW	MBTUS	Gas Size	Plumbing Height	Voltage	Phase	HP	Amperage	KW	Hard Connection	Plug	NEMA Config	Electrical Height		
1	13	Dry Storage Shelving																					
2	1	Janitor Shelf																					
3	1	Mop Sink				1/2"	1/2"	2"															
4	1	Walk-In Cooler/Freezer										(2) 120	1		(2) 15.0		X				VFY		
5	13	Walk-In Freezer Shelving																					
6	2	Freezer Coil						(2) 3/4"				(2) 208/230	3		(2) 2.6		X				VFY	EC - Interconnect to Emergency Power System.	
6A	1	Drain Line Heat Tape									(2) 120	1		(2) 14.8			X	X	5-15P		VFY	EC - Utilities for Drain Line Heat Tape	
7	1	Freezer Condensing Unit									208/230	3	3.9	21.2			X				VFY	EC - Interconnect to Emergency Power System	
8	13	Walk-In Cooler Shelving																					
9	2	Cooler Coil						(2) 3/4"				(2) 208/230	1		(2) 0.9		X				VFY	EC - Interconnect to Emergency Power System.	
10	1	Cooler Condensing Unit									208/230	3	1.5	12.2			X				VFY	EC - Interconnect to Emergency Power System.	
11	1	Spare Number																					
12	1	Spare Number																					
13	1	Spare Number																					
14	1	Spare Number																					
15	1	Spare Number																					
16	1	Spare Number																					
17	2	Pan Rack																					
18	2	Mobile Heated Cabinet - BY OWNER									(2) 120	1		(2) 12.0	1.5			X	5-15P	18"			
19	1	Touchless Soap Dispenser																					
20	1	Handsink				1/2"	1/2"	1-1/2"				120	1		2.0			X	5-15P	16"		PC - Provide 110 degree incoming water.	
21	1	Touchless Paper Towel Dispenser																				Battery operated.	
22	1	Double Stack Combi-Oven - EXISTING					(2) 1/2"		(2) 2"	105/168	(2) 3/4"	6"/46"	(2) 120	1	3.7/3.85	0.4/0.6	X	X	(2) 6-15P	(2) 18"		EC - Two (2) 15A dedicated circuits required. One (1) for each oven.	
23	1	Water Filtration System					3/4"															PC - Filtered water to feed Item No. 22 - Double Stack Combi-Oven.	
24	1	Double Stack Combi-Oven - EXISTING					(2) 1/2"		(2) 2"	105/168	(2) 3/4"	6"/46"	(2) 120	1	3.7/3.85	0.4/0.6	X	X	(2) 6-15P	(2) 18"		EC - Two (2) 15A dedicated circuits required. One (1) for each oven.	
25	1	Water Filtration System					3/4"															PC - Filtered water to feed Item No. 24 - Double Stack Combi-Oven.	
26	1	Exhaust Hood	3300	(2) 10 X 15	0.68								120	1	15.0			X			CEILING	EC - Interconnect Lights with Power & Switch	
27	1	Spare Number																					
28	1	Spare Number																					
29	1	Floor Trough							4"														
30	1	Floor Trough							4"														
31	1	4-Burner Range/36" Griddle w/ Ovens								238	1"	30"											
32	1	Griddle w/ Convection Oven								95	3/4"	30"											
33	1	40 Gal. Tilting Kettle - BY OWNER				3/8"	(3) 3/8"						120 & 208	1 & 3	1.0 & 66.6				X	5-15P	4"		
34	1	Spare Number																					
35	1	40 Gallon Tilting Skillet - EXISTING				3/8"	3/8"			126	3/4"	26"	120	1	6.0			X	5-15P	18"			
36	1	Exhaust Hood	3300	(2) 10 X 15	0.68								120	1	15.0			X			CEILING	EC - Interconnect Lights with Power & Switch	
37	1	Touchless Soap Dispenser																					
38	1	Handsink				1/2"	1/2"	1-1/2"					120	1	2.0			X	5-15P	16"		PC - Provide 110 degree incoming water.	
39	1	Touchless Paper Towel Dispenser																				Battery operated.	
40	1	Pan Rack																					
41	4	Locker																					
42	1	Fire Suppression System											120	1	15.0			X			108"	Connect to Building Alarm System.	
43	1	Fire Suppression System											120	1	15.0			X			108"	Connect to Building Alarm System.	
44	1	Spare Number																					
45	1	Spare Number																					
46	1	Spare Number																					
47	1	Melink Intelli-Hood System											120	1	20.0			X				VFY	
48	1	Melink Intelli-Hood System											120	1	20.0			X				VFY	
49	1	Water Filtration System					3/8"															PC - Filtered water to feed Item No. 50 - Ice Flaker w/ Bin.	
50	1	Ice Flaker w/ Bin					1/2"		(2) 3/4"				120	1	11.4			X				70"	
51	1	Floor Trough						4"															
52	1	Prep Table w/ Sinks				1/2"	1/2"		(2) 2"				(2) 120	1	(2) 15.0				X	5-15P	36"	EC - Provide unit with two (2) splash mounted convenience outlets.	
53	1	Work Table				1/2"	1/2"		(2) 2"				(2) 120	1	(2) 15.0				X	5-15P	36"	EC - Provide unit with two (2) splash mounted convenience outlets.	
54	1	Touchless Paper Towel Dispenser																				Battery operated.	
55	1	Handsink				1/2"	1/2"	1-1/2"					120	1	2.0			X	5-15P	16"		PC - Provide 110 degree incoming water.	
56	1	Touchless Soap Dispenser																					
57	1	Microwave Oven											120	1	13.3	1.0			X	5-15P	48"		
58	1	Work Table											(3) 120	1	(3) 15.0				X	5-15P	36"	EC - Provide unit with three (3) splash mounted convenience outlets.	
59	1	Work Table											(3) 120	1	(3) 15.0				X	5-15P	36"	EC - Provide unit with three (3) splash mounted convenience outlets.	
60	1	Undercounter Refrigerator											120	1	9.7			X	5-15P	12"			
61	1	Undercounter Refrigerator											120	1	9.7			X	5-15P	12"			
62	1	Food Processor - BY OWNER											120	1	3	15.0			X	5-15P	32"		
63	1	Overshelf/Utensil/Pot Rack																					
64	1	Touchless Soap Dispenser																					
65	1	Handsink				1/2"	1/2"	1-1/2"					120	1	2.0			X	5-15P	16"		PC - Provide 110 degree incoming water.	
66	1	Touchless Paper Towel Dispenser																				Battery operated.	
67	1	Wall Shelf																					
68	1	60 Qt. Mixer - EXISTING											208	3	2.7	10.0			X			54"	
69	1	Overshelf/Utensil/Pot Rack																					
70	1	Food Processor - BY OWNER											120	1	3	15.0			X	5-15P	32"		
71	1	Disposer/Controls					1/2"	3"					208	3	3.0	6.0			X				
72	1	Prep Table w/ Sinks				1/2"	1/2"		2"				(2) 120	1	(2) 15.0				X	5-15P	36"	EC - Provide unit with two (2) splash mounted convenience outlets.	
73	1	Disposer/Controls					1/2"	3"					208	3	3.0	6.0			X				
74	1	Slicer											120	1	1/2	6.0			X	5-15P	48"		
75	1	Work Table				1/2"	1/2"		2"				(2) 120	1	(2) 15.0				X	5-15P	36"	EC - Provide unit with two (2) splash mounted convenience outlets.	
76	1	Touchless Paper Towel Dispenser																				Battery operated.	
77	1	Handsink				1/2"	1/2"	1-1/2"					120	1	2.0			X	5-15P	16"		PC - Provide 110 degree incoming water.	
78	1	Touchless Soap Dispenser																					
79	1	Touchless Paper Towel Dispenser																				Battery operated.	
80	1	Handsink				1/2"	1/2"	1-1/2"					120	1	2.0			X	5-15P	16"		PC - Provide 110 degree incoming water.	
81	1	Touchless Soap Dispenser																					
82	1	Touchless Soap Dispenser																					
83	1	Handsink				1/2"	1/2"	1-1/2"					120	1	2.0			X	5-15P	16"		PC - Provide 110 degree incoming water.	
84	1	Touchless Paper Towel Dispenser																				Battery operated.	
85	1	Spare Number																					
86	1	Spare Number																					

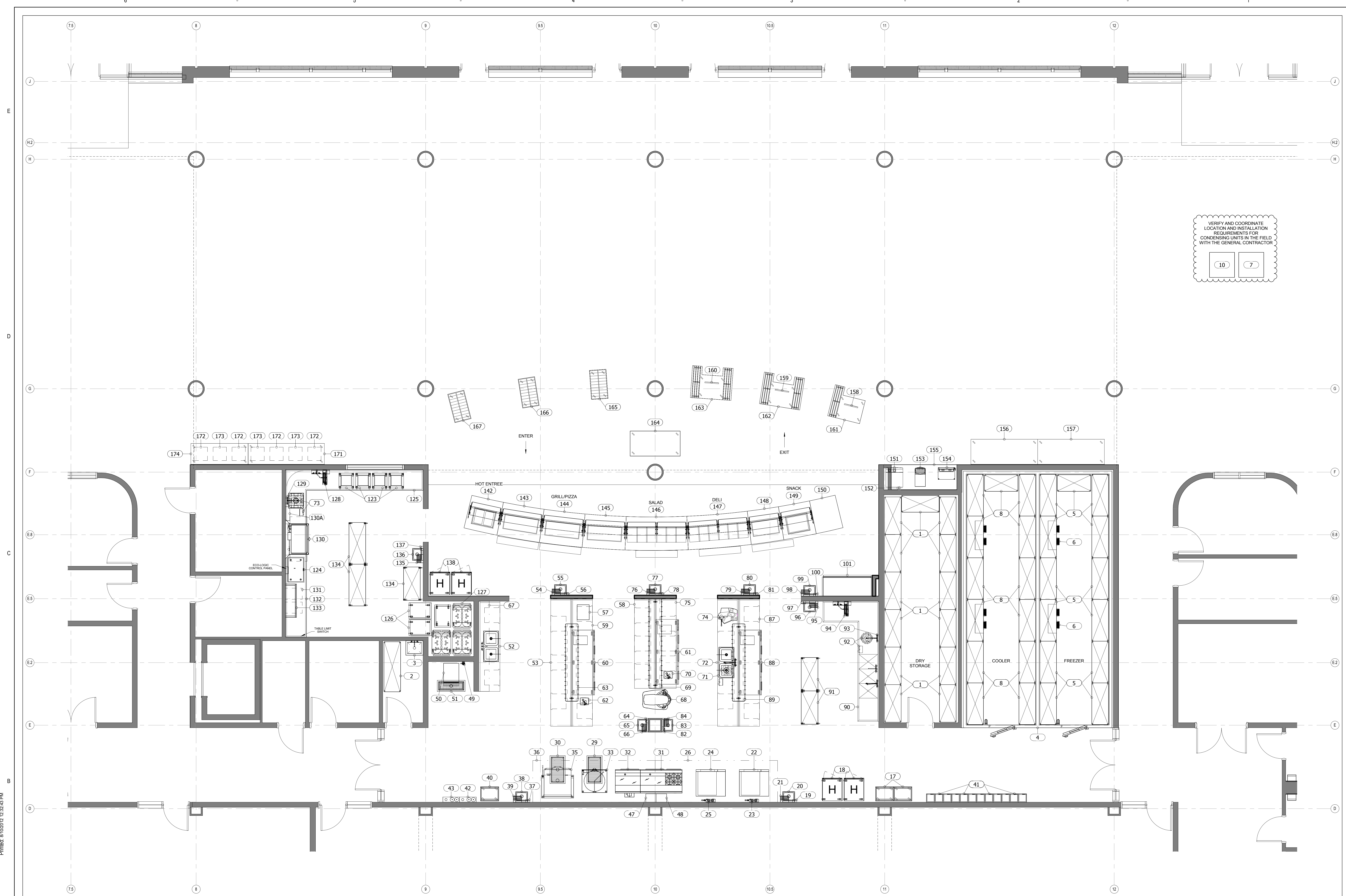
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Architect:  543 Massachusetts Ave, West Acton, MA 01720 www.omr-architects.com t: 978.264.0160	Consulting Engineer:	Registration: 	Project Name and Address: <h3 style="text-align: center;">Concord-Carlisle Regional High School</h3> 500 Walden Street Concord, MA 01742	Issue Submissions: No.:    Date:    Description: 08/15/2012    Design Development Submission	Title: <h2 style="text-align: center;">Foodservice Utility Schedule</h2>		Project No.: 1102.00	
					Date: 15 August 2012    Scale:		Drawing No.: <h1 style="text-align: center;">K1.1</h1>	

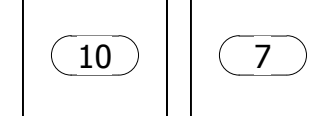








VERIFY AND COORDINATE  
LOCATION AND INSTALLATION  
REQUIREMENTS FOR  
CONDENSING UNITS IN THE FIELD  
WITH THE GENERAL CONTRACTOR



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Architect:  543 Massachusetts Ave, West Acton, MA 01720 www.omr-architects.com t: 978.264.0160	Consulting Engineer:	Registration: 	Project Name and Address: <h3 style="text-align: center;">Concord-Carlisle Regional High School</h3> <p style="text-align: center;">500 Walden Street Concord, MA 01742</p>	Issue Submissions: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	No.	Date	Description																			Title: <h3 style="text-align: center;">Foodservice Equipment Layout</h3>	Project No.: <b>1102.00</b> Drawing No.: <h2 style="text-align: center;">K2.1</h2>
No.	Date	Description																									
				Date: 15 August 2012    Scale: 1/4" = 1'-0"    Drawn: Author    Checked: Checker		© omr architects inc																					