



INMAN FOODSERVICES GROUP, L.L.C.

1808 West End Ave.
Nashville, TN 37203
(615) 321-5591

Mercy Health System
Of Maine

Project # 04166

Date: 10-19-06

WRITTEN SPECIFICATIONS
SECTION 11400



PART 1 - GENERAL

	<u>PAGE</u>	
1.01	Definitions	1
1.02	Scope of Work	1-2
1.03	Standards of Quality/Workmanship	2
1.04	Conformance to Codes and Standards	2-3
1.05	Summary of Work	3-5
1.06	Co-ordination of Trades	5
1.07	Work Performed by Other Contractors	5-7
1.08	Submittals and Adherence to Bid Documents	7-9
1.09	Qualification of Bidders and Sub-Contractors	9-10
1.10	Indemnifications	10
1.11	Review	10-11
1.12	Substitutions	11
1.13	Guarantees, Warranties, and Defect Corrections	12
1.14	Service Manuals and Agency Listings	12-13
1.15	General Notes	13
1.16	Request for Information Form	14

PART 2 - PRODUCTS

2.01	Materials and Construction	15-22
2.02	Plumbing and Mechanical	22-23
2.03	Refrigeration	23-24
2.04	Electrical Requirements	24-26
2.05	Exhaust Hoods	26-27
2.06	Shop/Field Welds	27
2.07	Walk-ins	27-28
2.08	Walk-in	28

PART 3 - EXECUTION

3.01	Delivery and Installation	29
3.02	Clean-up and Adjustment	29-30
3.03	Equipment Start-up and Demonstration	30
3.04	Final Observation	30

PART 4 - ITEMIZED SPECIFICATION

4.01-4.89		31-74
-----------	--	-------

PART 5 - FORMS AND DETAILS

5.01	Pre-Qualification Form	75-76
5.02	Bid Form with Unit Prices	77-79

**THIS DOCUMENT WAS MODIFIED ON 11-08-05 UNDER 1.16.
THIS DOCUMENT WAS MODIFIED ON 12-7-05 UNDER 1.13 (D) & 2.01 (U) (13).
THIS DOCUMENT WAS LAST MODIFIED ON 10-4-06 UNDER 2.01 (F) (6), 2.01 (T) and 2.01 (U).**

1.01 Definitions:

- (A) Provide all services defined to be the responsibility of Division 11400 as herein contained in these documents.
- (B) There is ultimately one contractor for the completion of this project. The contractor hereinafter shall be referred to as the "General Contractor". The foodservice equipment contractor hereinafter shall be referred to as the "FSEC". The FSEC shall be responsible for all items and aspects of the Section 11400 specifications except in paragraphs where the General Contractor is specifically called out. If the General Contractor is spelled out in a paragraph, the work related in any sub-paragraphs to the paragraph shall be the responsibility of the General Contractor.
- (C) "Final Connection" where referred to under Section 11400 is to be interpreted by all trades to be based on sub-sections 1.05, 1.06, & 1.07 delineating responsibilities and requiring co-ordination and co-operation.
- (D) "Complete Installation" where referred to under Section 11400 shall be interpreted as the delivery of all Foodservice and/or kitchen equipment and refrigeration, with transportation and trucking charges prepaid to the building site, removal from crates, assembled, set-in-place, leveled, ready for final connection, re-leveled, calibrated, started-up, adjusted, and demonstrated inclusive of completed training. Clean all equipment, new or existing, to a condition acceptable for intended food service. Cleaning shall be performed during the process of installation to properly maintain the equipment and prior to Owner's acceptance.

1.02 Scope of Work:

- (A) Furnish all labor, materials, equipment, tools, construction equipment and machinery, temporary facilities (i.e., storage trailers, etc.) and special utilities, and other services necessary for the construction, accomplishment, and complete installation, in a workmanlike manner, of the project, in accordance with the contract documents.
 - (1) This shall be deemed to include items and components hereinafter specified and/or shown on plans, completely assembled or erected in locations indicated, ready for final connections to service lines.
 - (a) Provision of fasteners, scribe, trim strips, closure panels, caulking/silicon, et. al., required to complete the installation (not final connection) shall be deemed included.
- (B) It is the intent of the contract documents to provide each and every item and/or component to properly function and perform in a manner equal to the manufacturer's stipulations. **[It is the intention of these documents that work of the highest quality, greatest quantity, and greatest expense shown or specified be provided. Whether or not the word "all" is used in the specification, coverage is intended to be complete, except where partial coverage is specifically and expressly noted. In all cases where an item is referred to in the singular number, it is intended that reference shall apply to as many such items as are required to complete the work].**
- (C) It is the intent of the contract documents that the specifications take precedence over the drawings; and if there is a conflict refer to the preceding descriptive paragraph. This does

not relieve the requirements imposed by the General Provisions and Sections of the Project Manual, the AIA General Conditions or Supplementary Conditions & General Requirements; all bidding documents including Architectural Specifications, Bidding Requirements and Contract Documents; **all drawings**; all addenda issued. Examine all other applicable drawings including interiors, structural, mechanical and electrical etc. for discrepancies or conflicts. **Obtain access to all project manuals and drawings before submittal of bid.**

1.03 Standards of Quality/Workmanship

- (A) All items shall meet sanitation requirements of USPHS Food Service Manual No. 9 and Manual No. 934.
- (B) The Architect/Consultant will be the sole judge of the acceptability and conformity of the equipment to the specifications.
- (C) It is required that all "fabricated" items of equipment described in the following specifications be manufactured by a fabricator who has the plant, personnel, and engineering facilities to properly design, detail and manufacture the highest quality foodservice equipment. The equipment shall be manufactured by one (1) manufacturer. The manufacturer of this equipment must be able to show that it has, for the past seven (7) years, been engaged in the manufacturing and distribution of equipment, as required under the contract, as its principle product. It is the intention of the contract documents to have this equipment installed by the manufacturer. Approved fabricators are as follows:

Carbone Metal Fabricator, Inc – Chelsea, MA (617) 884-0237

Upon completion of the fabrication, digital photos must be taken of all items under contract and/or purchase order prior to leaving fabricator's warehouse. Photos must be e-mailed to John Caldwell at john.caldwell@inman-inc.com with the name of the project in the subject line.

- (D) Replace or make satisfactory, at the Architect/Consultant's discretion, any item of equipment that fails to conform to the requirements of the Contract at the time of delivery and shall remedy any defects due to faulty material or workmanship which appear within a period of one (1) year from start-up and demonstration.
- (E) Acknowledge and conform to the standards and quality of workmanship as herein previously described in Section 1.02.B.
- (F) Unless otherwise specified or shown on drawings, all material is to be new, of best quality, perfect and without flaws, and be delivered upon completion in an undamaged condition. All workmanship is required to be the best of its respective kind. All labor is to be performed in a thorough workmanlike manner by pre-qualified (see Form 5.02), efficient, and skilled mechanics.

1.04 Conformance to Codes and Standards

- (A) All work and materials herein described shall be in full accordance with the latest rules of the U.S. Public Health Service, the National Board of Fire Underwriters, local, state and federal ordinances, State Accident Commissions, and the regulations of the State Fire Marshall; and with any prevailing rules and regulations pertaining to adequate protection and/or guarding of any moving parts or otherwise hazardous locations or materials. Applicable standards of the above, notwithstanding those of the Foodservice Equipment Industry, shall have the same force and effect and are made a part of the contract documents as if copied directly or as if published copies were bound herein. Comply with standard in effect as of date of contract documents.

- (B) All equipment manufactured or fabricated as custom must comply with current Americans with Disabilities Act (ADA) Standards.
- (C) Those standards referenced directly in the body of the contract document shall have precedence over non-referenced standards, which are recognized in industry for applicability to work; this does not relate to "governing" regulations.
- (D) The Architect/Consultant shall have ready access to manufacturing facilities, performance test data, and samples of equipment as deemed necessary to verify quality and standards of conformance to codes.
- (E) All equipment shall be manufactured in strict compliance with the standards of the National Sanitation Foundation and in full compliance with the Public Health Regulations of the state of final destination and installation. FSEC is responsible for verifying all regulations with the contract documents and notifying the Architect/Consultant immediately with any discrepancies. The FSEC will be responsible for checking each project altitude for variances in gas cooking equipment and change orifices as required.
- (F) All electrically operated and/or heated equipment--fabricated or otherwise--shall conform to the latest standards of the National Electric Manufacturer's Association (NEMA) and that of the Underwriters Laboratories, Inc. (UL); products shall bear certification of conformance with listing.
- (G) All standard steam equipment heated equipment shall be manufactured in accordance with A.S.M.E. code requirements and bear the A.S.M.E. stamp.
- (H) All items shall comply with NFPA, "National Electrical Code", and NFPA No. 96 "Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment", and NFPA No. 54 "National Fuel Gas Code", as well as UL300.
- (I) All gas equipment must be AGA Approved and Listed.
- (J) Whenever the drawings and specifications require something which will violate the "Governing Regulations", the regulations shall govern; rulings and interpretations of the enforcing agencies shall be considered a part of the regulations.
- (K) Work diligently, through the auspices of the Architect, with the State Fire Marshall's Office to expedite any required approvals for ventilation and grease removal equipment.
- (L) **NO EXTRA CHARGE** shall be incurred for furnishing items required by "Governing Regulations" even if not specifically delineated in the specifications and drawings.

1.05 Summary of Work

- (A) Any contractor performing work over the work of other contractors shall notify the Architect of any unsatisfactory conditions. Beginning of work without direction from the Architect shall constitute acceptance of the previous work and conditions.
- (B) Provide a project manager (PM), devoting his full time to this project during installation, and be available to the other trades for verification of connection location, etc., as needed. The project manager shall label by Item Number and deliver to other contractors all plumbing, steam fittings, gas fittings, and electrical parts that are furnished loose **as part of the equipment by the manufacturer**. The project manager shall counsel with other trades in order to achieve proper installation of equipment. The project manager shall direct, co-ordinate and supervise all work under this contract; and shall ascertain whether

or not the equipment provided complies with the Contract Requirements. As part of this responsibility, reject all equipment not conforming to the specifications and have it removed from the site.

- (C) Provide a project manager experienced in the supervision of foodservice equipment installation.
- (D) Provide warehouse space for management of the standard foodservice equipment before and during the construction. Due to the possibility of damage to the equipment, it shall not be shipped directly to jobsite. It shall be shipped to a "bonded" warehouse and removed from the crates for inspection. The one exception shall be the fabricated equipment, which shall be shipped at a time when the building is ready to receive it (later herein described) directly to jobsite. Delivery shall be scheduled with the General Contractor to arrive at a time when it is conducive to all trades for final connection. Equipment is not to be delivered to jobsite until floors are acid washed, ceiling tiles are hung and walls are painted.
- (E) Verify **all** dimensions inclusive of shelving, custom fabrication, etc. The project manager shall routinely visit the jobsite and verify conditions of **all** areas of the site that could impact equipment placement, aisle space, or operational abilities of the equipment.
 - (1) Measurements as shown or indicated are approximate and are for bidding purposes only.
 - (2) Project manager shall confer with **all** contractors to establish finished dimensions.
 - (3) In instances where the serving counters are adjacent to walls and/or on a concrete curb of any kind, the FSEC will be responsible for providing corrugated plastic material templates to the fabricator prior to the fabrication process. The template shall be provided wall to wall where applicable without allowances. These templates are to include measurements at top, bottom, front and rear of applicable counter.
 - (4) Project manager shall, upon confirming dimensions, carefully examine spaces and conditions and report any discrepancies to the Architect; the project manager shall then await Architect direction as to the progress of the foodservice equipment installation.
 - (5) Project manager may attend "Pre-Construction Meetings" and **must** attend construction meeting and any other scheduled meetings as requested.
- (F) Practice due diligence in maintaining coordinated dimensions in erection of their work.
- (G) Coordinate the location of all rough-in connections related to the foodservice equipment.
- (H) No excessive cutting will be permitted, nor shall any structural members be cut without the written acceptance of the Architect. Leave all chases and openings straight, true and of the proper size in his work as may be necessary for the proper installation of work. After such work has been installed, the Contractor shall carefully fit around, close up, repair, patch and paint up same as directed to the satisfaction of the Architect.
- (I) Coordinate delivery and erection of foodservice equipment to avoid the erection of barriers impeding installation. Make sure fabricated equipment will clear all doors and hallways allowing installation.
- (J) Provide factory trained personnel at site; and be further responsible for all equipment start-up, calibration, etc., allowing for smooth owner transition.
- (K) Subsequent to turnover by the GC to the owner, provide up to three (3) days initial training of the operating personnel as relates to the operation and maintenance of each piece of equipment by factory trained personnel. After the facility has been operational for one (1)

calendar month, schedule up to an additional three (3) days of training for the operating personnel as relates to the operation and maintenance of each piece of equipment. **[All on site training shall be scheduled thru the Food Service Consultants]**

- (L) Provide operating manual and parts lists, etc., as covered by Sections 1.13 and 1.14.
- (M) Leave equipment with threaded outlets for type of connections **as standardized by the food equipment manufacturers**; allowing for "final steam, plumbing, electric, and ventilation" connections.

1.06 Co-Ordination of Trades

- (A) Co-ordinate all work with all adjacent work and co-operate to facilitate the general progress of the work.
- (B) The General Contractor shall faithfully expedite all requests for information including the processing of rough-in and shop drawings, and shall, as General Contractor, accommodate the schedule for delays caused by other contractors. This shall also apply to Contracted Completion.
- (C) Submittals made per Section 1.08 shall also be bound by the additional requirements found in the overall Requirements of the Contract Documents.
- (D) The General Contractor shall display due diligence in co-ordination to avoid the erection of barriers impeding installation.
- (E) The foodservice equipment, as received upon its arrival at jobsite, shall be signed for by the General Contractor. Display due diligence in the maintenance of the equipment until final inspection. **[The General Contractor shall also accept responsibility to keep foodservice equipment from being utilized as scaffolding, workbenches, etc.]**
- (F) Foodservice equipment **shall not** be delivered, removed from crates, set-in-place for final connections **until as a minimum** all painting has been completed; ceilings, hood, and ventilation ductwork are finished; floors have been acid cleaned; and all rough-ins are in place. Site **must** be ready for final connections.

1.07 Work Performed By Others

- (A) Plumbing, steam, gas, electrical, ventilation, slab depressions for walk-ins, concrete and masonry platforms, slab depressions for stainless trough drain assemblies and tile work required in connection with the foodservice equipment shall be performed. Rough-in to points as indicated on mechanical, plumbing, and electrical plans; with final connection being from rough-in point to "threaded outlets; at various points requiring said connections; or within pieces of equipment as required.
- (B) Provide the necessary material and labor required to perform said work as herein elaborated.
- (C) The General Contractor shall be responsible for electrical and plumbing connections to compressors, blower coils, controls, and lights, etc. The General Contractor shall make all final connections unless specifically delineated and noted otherwise in the itemized specifications.
 - (1) This work shall include interconnections required with regards to walk-in cabinet interior wiring for lights, extension from fixtures to floor drain/sinks, custom fabrication interior wiring, sink heaters, ice machines, etc.

- (a) All penetrations required for electrical and/or plumbing requirements shall be made by the FSEC and must be properly sealed. This includes all specified equipment listed in Section 11400.
 - (b) All conduit installed in walk-in boxes shall be run on **top** of the boxes; penetrations shall be properly sealed by the FSEC. Penetrations to be sealed to prevent condensation on inside or face of walk-in box.
 - (c) Provide heat tape to wrap walk-in freezer evaporator coil drain line. Heat tape to be long enough as to not expose more than 4" of copper at each wrapped interval.
- (D) Ventilating fans and all ductwork shall be furnished and installed by the General Contractor.
- (1) Necessary stainless steel seamless exhaust ducts of size and capacity required to properly operate fixtures specified, together with final approved connection, between roughed-in vent openings and ceiling connection will be furnished and installed by General Contractor.
- (E) All line and disconnect switches, safety cut-offs and fittings, convenience outlets, outlet boxes, wiring, conduit, control panels, fuse boxes or other electrical controls, fittings and connections will be furnished and installed by the General Contractor. Starting switches as provided by Foodservice Equipment Manufacturers shall be provided. Those switches shall be wired by the General Contractor, as deemed part of final connection.
- (F) All traps, grease traps, line strainers, valves, stops, shutoffs, pressure reducing valves, gas fuel shut off valves and fittings necessary will be furnished and installed by the General Contractor. Those fittings as provided by Foodservice Equipment Manufacturers shall be provided. Those fittings provided shall be installed by the General Contractor.
- (1) Water inlets shall be located above the positive level to prevent siphoning of liquids into the potable water systems. Wherever conditions shall require a submerged inlet, suitable approved type of check valve and vacuum breaker shall be provided and placed on the fixture by the General Contractor to form part of same to prevent siphoning. **If exposed** and design dictates, piping and fittings shall be chrome plated.
 - (2) FSEC to provide pressure type spring loaded vacuum breakers for Foodservice Equipment. General Contractor is to install. Where Code dictates the requirement for said. General Contractor is to provide and install.
 - (3) Provide drains for those items as detailed under Part 2--Products and Part 4--Itemized Specifications. Contractor is to provide tailpieces, floor drains, and all other necessary fittings.
 - (a) General Contractor shall notch drain covers on floor drains/sinks allowing for free flow; yet preventing water from splashing on surrounding floor and/or equipment.
- (G) The General Contractor shall provide and install a coved tile base along walls of walk-in cabinet constructed to satisfy all sanitation codes. Where called for in the itemized specifications, the General Contractor is to provide applicable flooring similar to that used on kitchen floors and satisfying same sanitation codes. Tile, poured epoxy or concrete per Architect's itemized specifications.
- (H) Any sleeves or chaseways required for refrigeration lines, syrup lines or CO² lines, shall be furnished and installed by the General Contractor. (Conduit for alarm and temporary monitoring systems to be provided by General Contractor).
- (I) General Contractor is responsible to verify that all steam and plumbing fittings are flushed free of foreign matter before final connection and start-up.

- (J) The General Contractor shall provide all openings and penetrations in walls, ceilings, roof and other architectural fixtures as requested and required; and shall complete openings to a finish approved by the Architect. Openings shall be deemed to include recessed wall for panels, disconnects, ducts, conduits, refrigeration lines, etc.
- (K) The General Contractor shall supply, install and equate wall backing where required for wall mounted equipment.
- (L) The General Contractor shall notify dates and times of all construction meetings; and shall confer on all work affecting site conditions or contractual obligations to which is bound under Section 11400.
 - (1) The General Contractor shall co-ordinate request to schedule separate meetings with other Subcontractors to expedite that work required under Section 11400.
- (M) The General Contractor shall be responsible for all concrete curbs shown in the contract documents. Curb frame for foodservice serving counters to be provided and installed by the FSEC. General Contractor shall coordinate delivery to site with FSEC. FSEC shall secure frame for General Contractor's use.

1.08 Submittals and Adherence to Bid Documents

- (A) The following instructions for submittal are to be considered in addition to any general requirements given elsewhere in the Documents.
- (B) **Absolutely, under no circumstances, shall any fabricator begin shop drawings until a copy of the cut sheet booklet, indicating any and all equipment being used for the referenced project, is received by the fabricator's engineering department.**
- (C) Upon award of the Contract, provide the submittal within four (4) weeks. This shall include:
 - (1) Provision to the approved fabricator: a copy of the submittal book, full plans, elevations, and rough-ins for use in submitting the fabricated items;
 - (2) Submittal to the Architect/Consultant for review six (6) copies of brochures, and one (1) sepia copy and one (1) blueprinted copy of **all** shop drawings and rough-in drawings.
 - (a) Prints shall be completely legible and shall be blue line with clear background. Front sheet shall contain names of project designer, food facilities consultant, general contractor.
 - (b) Partial submittal **will not** be accepted or processed.
- (D) Upon return of one (1) copy of submitted data, revise & resubmit any and all documents noted as revise and submit, to the Architect/Consultant for dispersal.
- (E) Brochures of Regularly Manufactured Items (Submittal Book) shall be submitted in the following format:
 - (1) Front and rear hard protective covers labeled with project name.
 - (2) Front sheet indicating the name and address of the project designer, food facilities consultant, general contractor.
 - (3) A separate flysheet for each component, item, buyout, or custom equipment indicating:
 - (a) Item Number
 - (b) Name
 - (c) Quantity
 - (d) Manufacturer
 - (e) Optional Equipment or Accessories
 - (f) Modifications, if required

- (g) Utility Requirements
An item of equipment containing more than one buy-out sub-assembly or component shall have a secondary item listed in parenthesis beside the primary name (i.e., back counter [refrigerated base]).
 - (h) All manufacturer engineering data
 - (4) Catalog specification sheets and/or manufacturer's shop drawings shall be transmitted with Brochures. Xerox copies of catalog specification sheets are acceptable only if they are perfectly legible and contain all necessary data.
- (F) Rough-in drawings shall be drawn at 1/4" scale on sheets sized identical to contract drawings. Equipment not included in contract, but shown on bidding documents, shall be indicated on rough-in drawings with utilities noted and dimensioned. Rough-in drawings shall follow the same style of noting, legends, etc., as contained in the contract documents. Drawings shall be fully dimensioned to point of stub-up/out (not to connection on equipment or fixture) including those fixtures not directly connected to food service equipment. This should include, but not be limited to, the following:
- (1) Equipment layout/floor plan with itemized schedule; schedule to include power/fuel requirements, water/draining requirements.
 - (2) Electrical rough-in plan (A.F.F. dimensions required)
 - (3) Plumbing rough-in plan (A.F.F. dimensions required)
 - (4) Critical dimensions, plan sizing, and the location of:
 - (a) Exhaust vents
 - (b) Depressions in finished floor
 - (c) Slab recesses
 - (d) Raised masonry pads
 - (e) Wall openings for pass-thru equipment
 - (f) Conveyor detailing
 - (g) Future or existing equipment
 - (h) Floor drains/sinks
 - (i) Convenience outlets/drains
 - (j) Backing material required for wall mounted items.
 - (5) All connections in the walls are to be located so as not to interfere with flooring; all electrical connections are to be water tight or located at a height to prevent water from entering.
 - (6) Provide original drawings.
- (G) Provide a refrigeration system schematic piping plan indicating line sizes, line elevations, trap position, and all components specified herein to accomplish the project. The plan or attached documents are to detail parts supplied by Refrigeration Equipment manufacturer.
- (H) Provide dimensioned details, sections, and elevations for all wall openings, floor recesses, troughs, wall mounted or recessed control panels, etc. All cross-sections are to be drawn at 1 1/2" = 1'-0".
- (I) Fabrication, walk-in, and refrigeration shop drawings shall be drawn on sheets identical to contract documents, or no smaller than 24" x 36" sheet or larger than 32" x 42" sheet. Drawings shall be submitted with plan view and elevations at 3/4" = 1'-0"; sections and construction details at 1 1/2" = 1'-0". Drawings are to indicate the following:
- (1) Item number, name, and quantity.
 - (2) All construction details, sections and elevations are to reflect all requirements of the specifications and/or drawings.
 - (3) Reflect adjacent walls, columns, and equipment; clearly indicate all counter-top equipment with item number and abbreviated description. Confirm stack-up placements as required.

- (4) Reflect brand name and model number of all buyout components of a fabricated fixture; phantom/dash these components to scale in/on the fixture.
- (5) List the item numbers of all items and or details contained on each sheet at the lower right hand portion of the sheet.

- (J) Upon submittal of the floor plan and submittal books, verify and coordinate the dimensions of the refrigerated and dry storage areas to accommodate modular shelf sections as specified and designed to fit the allocated space.

- (K) Review the critical systems and components for application, performance, and capacity; and shall submit with "preliminary" the following:
 - (1) If in Section 11400, exhaust hood removal air volume, velocity, static pressure, and duct collar sizes.
 - (2) Refrigeration systems.
 - (3) If in Section 11400, exhaust hood fire suppression systems (nozzle locations, air handler and fuel interlocks, piping [i.e., distance limitations]).
 - (4) Gas, water, and steam/condensate line sizes and manifold configurations.
 - (5) Fabricated equipment load center panels (individual and total amperage calculations including circuit balance).
 - (6) Utility requirements (electrical, gas, steam) for all pieces of equipment being supplied--actual, intended or future).

- (L) Expedite color and pattern selections for finished surfaces by providing samples of plastic laminate, fiberglass panels, paint, stain finishes, or vinyl coated surface materials for Architect/Owner's verification and choice.

- (M) Obtain serviceware size and weight information from the Owner or Facility Manager for coordination of self-leveling dispensing, warewashing, and transport equipment.

- (N) During time of shop drawing submittal, review and coordinate mobile carts/carriers (i.e., pan racks, carts, dollies, dish/tray/rack dispensers) required to **fit through** or **into** fixed equipment (i.e., roll-in refrigerators, walk-ins, counter bodies, proofers, etc.). Indicate conflicts and required adjustments.

- (O) If equipment or fixtures require relocation or repositioning to coordinate the project, do so at no charge if no substantive extra work is involved.

- (P) Verify all plug types and lengths of all cords and plugs on equipment with which it is supplied. Lengths are to be of sufficient distance for the outlets available and to allow equipment to be placed in order to shield or hide controls from "customers" or as explicitly called out in the itemized specifications.

1.09 Qualification of Bidders

- (A) Attend a "Pre-Bid Conference" to further qualify to bid this project; conference date to be established by the Architect/Consultant; and also visit jobsite prior to time of bid.

- (B) General Contractor, as well as his Sub Contractors shall certify himself to possess all local, state, and federal licenses to perform the requirements of this contract; and shall provide proper authorities with notices as required by law relative to work in his/her charge; obtain and pay all required official permits; pay such proper and legal fees to public officers and others as necessary for faithful performance of the work, and which may arise incidental to fulfilling these specifications.

- (C) Regardless of acceptance of qualifications to bid by the Architect/Consultant, the Bidder shall, by submitting a bid, certify that he holds all required business licenses to perform

work that is to be performed; or that the Bidder will pay for and obtain said license prior to commencing work if awarded the contract.

- (D) It is required that all fabricated equipment such as food serving units, tables, sinks, countertops, etc., described in the following specifications other than by name and catalog numbers, be by a specified or approved fabricator who has the plant, personnel, and engineering facilities to properly design, detail and manufacture high quality food service equipment. All work in the above category is to be manufactured and installed by one (1) fabricator with uniform design and finish conforming to the Specifications.
- (E) Pay any and all fees or royalties that might occur due to performance of this contract.
- (F) Issue credit against the bid in the full amount should the owner choose to delete any item, at the prices shown on the itemized unit price list, during the ninety (90) days before and up to award of contract period; and also will provide additional quantities of items as requested at those same prices shown on the itemized unit price list during the same ninety (90) day period. Hold valid prices for same ninety (90) days.
- (G) Substantiate a working relationship with service agencies in the locale of the Project Installation and arrange for, if requested, services not purchased with the equipment nor covered by manufacturer's warranties.

1.10 Indemnifications

- (A) Upon award of the Contract, provide to the Owner/Architect a Performance Bond, and Labor and Material Payment Bonds covering faithful performance of the Contract Agreement. These bonds shall be provided within ten (10) days.
- (B) Show that the Architect is properly indemnified by way of insurance as required by AIA Document A-210 as issued by the American Institute of Architects, 1987, fourteenth edition (and any applicable supplements); indemnification shall be for no less than those amounts as stated in the Bid Form, Part 5.04. The form of the Certificate to be included with this bid shall be AIA Document G-705, Certificate of Insurance, latest edition. Furnish to the Owner/Architect copies of any endorsements that are subsequently issued amending coverage of limits.

1.11 Review

- (A) Where equipment is specified by the name of the manufacturer and model number, it represents the standard of quality; any alternates listed or approved substitution shall strictly conform to the qualities, capacities, and capabilities of the equipment specified (see Part 1.12).
- (B) In review, manufacturer's direction shall be followed in all cases where the manufacturers of articles used in this contract furnish directions or prints covering points not shown on the drawings or specifications. Assimilate any or all data associative to directions and make it a part of the submittal package.
- (C) Review and approval by the Architect/Consultant shall not be construed as a definitive final check, but only a review to ascertain that **design intent** is met. **[The review shall not provide relief from responsibility for errors that may exist and were not noted; or from meeting the stated or implied intent of the Contract Documents].**
 - (1) Drawings and specifications shall be considered complimentary to each other; items of work mentioned or indicated on one and not the other shall be included as if mentioned in both.

- (D) Inspection shall be made on the basis of the Contract Drawings and Specifications, included addenda and approved request(s) for substitution. See Part 3.04 Final Observation.

1.12 Substitutions

- (A) Any prospective qualified Bidder wishing to supply alternate equipment other than that specified shall submit this request on the "...Request to Qualify Equipment for Substitution Form" (Part 5.03) to the Architect ten (10) working days prior to the established bid date.
 - (1) If a substitution is allowed, an addendum will be issued to all qualified bidders who have requested a set of bidding documents from the Architect.
- (B) Only a qualified bidder may request a substitution. Requests made by manufacturers, representatives, and salesman will not be allowed.
- (C) By utilizing the herein provided and referenced "...Substitution Form" (Part 5.03), the Bidder shall identify the equipment for which the requested substitute shall replace. Drawings, catalogs, specifications and cutsheets, performance and test data, and applicable samples shall be provided on the item for which the substitution request is made.
 - (1) Any related equipment (as Architect/Consultant deems to define) shall be by one (1) manufacturer.
 - (2) If a substitution is made for an item, this substitution must be repeated for all duplications of like items.
- (D) Successful Bidders utilizing approved substitution, shall bear the "burden of proof" regarding the merit of the substitution.
 - (1) The decision of approval or disapproval by the Architect/Consultant shall be final.
 - (2) If approved substitution requires changes in materials, equipment, or work such changes shall be made at no additional cost to the Owner; but at the cost of the successful Bidder. Any costs incurred by the Architect, Engineers, or the Foodservice Consultant due to the approval of a substitution, if supplied, shall be reimbursed by the FSEC.
- (E) By utilizing the herein provided and referenced "...Substitution Form" (Part 5.03), the FSEC shall be required to represent that it has personally investigated the proposed substitute; that the same warranty will be provided for the substitute as that provided for the specified item; and that it waives all claims for additional costs associated with the substitution; and shall coordinate the installation of the accepted substitute making such changes as may be required for the work to be completed in all respects.
- (F) With regards to "custom fabricated" items, include with an "alternate" bid, detailed and outlined construction deviations showing **all** differences of methods used to possibly enhance the "cost effectiveness" of the "custom fabricated" items. This does not apply to the submittal of "standards" for "custom" items; nor shall it apply to those items not considered "custom."
 - (1) This applies only for those listed approval fabricators and those qualified approved fabricator substitutions recognized by addendum.
- (G) No request for substitution will be entertained after the official bid opening date and time except at deference to the Owner and instances where an item has been discontinued.

1.13 Guarantees, Warranties, and Defect Corrections

- (A) Guarantee in writing all materials and workmanship under this Contract for a period of one (1) year from date of **final acceptance**. Any defects **not due** to carelessness, abuse, or misuse occurring within that time period shall be promptly rectified upon notification of the Owner or Architect/Consultant.
- (1) Components of equipment **subject to replacement** prior to one (1) year (i.e., door gaskets, etc.) are not to be included in the scope of the Guarantee.
 - (2) Components of equipment that may fail due to improper or inadequate periodic maintenance by the Owner/Operator (i.e., uncleaned refrigeration system condenser face, de-liming of steam-type equipment) are not intended to fall within the scope of this Guarantee.
 - (3) Authorized manufacturer's agent is to inspect installation.
- (B) All refrigerated equipment shall carry a one (1) year free service guarantee which shall include all parts and labor; free service shall be available within twenty-four (24) hours of notification.
- (1) In addition, all refrigeration shall carry a five (5) year warranty covering compressors.
- (C) Furnish, prior to final acceptance, a **videotape demonstration** of the equipment, inclusive of periodic maintenance requirements and schedule to the Owner. See Part 1.05.K.
- (1) Provide a typewritten sign-off sheet indicating who started-up the equipment, when it was done, if there were any problems, and when/how it was resolved for Owner's future reference.
- (D) Counters, tables etc. constructed with solid surface, granite or CaesarStone material shall carry and one year warranty from the date of final acceptance including labor and material.

1.14 Service Manuals and Agency Listings

- (A) Submit three (3) copies of instruction and maintenance manuals, to the Food Service Consultant. Manuals shall be provided at the time set for demonstration of equipment. Manuals shall be assembled in the following format:
- (1) Manuals shall be bound in hardback three (3) ring binders;
 - (2) There shall be an inserted front sheet indicating the names and addresses of:
 - (a) The Architect;
 - (b) The General Contractor; and,
 - (c) The Foodservice Consultant;
 - (3) There shall be a separate flysheet for each item, piece of equipment, or component indicating:
 - (a) Item Number and Name;
 - (b) The Manufacturer;
 - (c) The Quantity;
 - (d) Optional Equipment or Accessories;
 - (e) Modifications; and,
 - (f) Utility Requirements.An item of equipment or assembly containing more than one buy-out, sub-assembly or component shall have the secondary item(s) listed in parenthesis beside the primary item name (i.e., serving counter [cup dispenser]).
 - (4) The Instruction and Maintenance Manual shall include the catalog specification sheets and/or manufacturer's shop drawings.
 - (5) The Instruction and Maintenance Manual shall include operating and maintenance data including a user replaceable parts list. As part of the maintenance data:

- (a) Provide the name, title, and address of personnel of each respective manufacturer to be contacted for replacement parts after the guarantee period.
 - (b) Include a replacement part list for each buyout item of equipment or component.
- (B) Furnish three (3) copies of a list of all equipment and their responsible local service agencies. Indicate a contact name, the address, and telephone number. The service agencies shall be factory authorized for the equipment assigned.

1.15 General Notes

- (A) The General Contractor shall supply free use of elevators and /or hoisting equipment, together with operators for same, which may be available on the premises at time of installation.
- (B) The General Contractor shall supply access and use of electric power or other required utilities at **no charge** during the installation period.
- (C) Clean up all debris made by his workman immediately upon completion of work, each work day, and remove same from the worksite. General Contractor to provide designated site for disposal services at **no charge**.
- (D) The Owner or his/her duly authorized representative has the right to order work wholly or partially stopped predicated on objectionable work as interpreted under these specifications or to declare the contract forfeited for non-performance or lack of execution according to the intent or meaning of the drawings and/or specifications.
- (E) Forward to the Owner/Architect/Consultant access to the shops where **all** equipment is fabricated for the inspection of materials and of the general construction of the work as it proceeds before completion and shipment.

1.16 Request for Information Form

It is the intent for contractors that have any questions regarding information contained in these bid documents whether it is plans or specifications use this form and fax it to 615-321-5689 attn: John Caldwell or Brandi Hale. If the questions are general a reply will be given utilizing this same form. If the questions require a change to these documents whether it is plans or specifications then an addendum will be issued accordingly. Each item in question shall be issued separately (one item per form).

Attn: _____

Date of Inquiry _____

Contractor _____

Contractor's Fax Number _____

Item # _____

Inquiry _____

Response: _____

By: _____

Date: _____

PART 2 – PRODUCTS

It is the intent of Part 2 to identify and/or delineate the construction, construction methods, and materials to be utilized.

2.01 Materials and Construction

- (A) Non-corrodible alloy:
 - (1) Non-corrodible alloy, or stainless steel hereinafter specified, shall be type 304 stainless steel; gauge as dictated therein.
 - (2) All gauges, where specified, shall be United States standard gauge.
 - (3) All exposed surfaces shall have a No.4, 180 grit finish. Where manufacturing process and welding disturb the original finish, it shall be carefully reground and finished.

- (B) Galvanized metal:
 - (1) Where galvanized metal is specified, it shall be copper bearing galvanized iron--Armco, Toncan, or equal – re-rolled for smoothness and used in the largest possible size with as few joints as possible.

- (C) Hardware and Casters:
 - (1) All hardware shall be of heavy duty type, satin finished chromium plated brass; cast of forged or hilited stainless steel; and be of uniform design. All hardware shall be an industry recognized brand, and shall be identified by the manufacturer's name and stock number for easy replacement of broken or worn parts. Wherever possible, hardware shall bear a stamp signifying conformance to National Sanitation Foundation standards. Casters shall be heavy duty type, ball bearing, disc wheel of greaseproof rubber, neoprene, or polyurethane. Wheel shall be 6" in diameter, minimum tread width of 1 3/16"; minimum capacity per caster shall be 250 lbs., unless otherwise noted. Casters are to be provided with stainless steel rotating wheel guard. All casters shall have sealed wheel and swivel bearings, polished plate finish and bear the stamp of N.S.F. conformance. All casters shall have locks.

- (D) Thermometers:
 - (1) All refrigerated compartments, fabricated and standard, shall be fitted--at minimum--with dial type thermometers with chrome plated flush bezels. Thermometers shall be adjustable and shall be calibrated after installation.
 - (2) Walk-ins are to have 4" dia. dial face.

- (E) Faucets:
 - (1) All sinks to be equipped with T & S Brass and Bronze Works B-221 or B- 231 faucets as required for the type of sink specified and furnished, unless otherwise specified in Part 4--Itemized Specifications. All faucets shall be equipped with proper length swing spouts as required by application. Faucets shall be chrome plated. All specialty faucets (i.e., pre-rinse units, kettle fillers, etc.) shall be listed under the Item Specifications. All faucets shall have required brackets, to facilitate safe use of faucets.

- (F) Table tops (metal):
 - (1) All metal tops shall be of 14 ga. 304 stainless steel of the quality herein - before specified. They shall be turned down as required by Itemized Specification and uniform design; except where adjacent to walls or other pieces of equipment. The wall side shall be coved up a minimum of 8", returned 2 1/2" on a 45 degree angle to the wall, and an additional 1" shall be bent on a 135 degree angle to flush to the wall (except where scribing is specifically dictated); ends of splash to

be closed. Splash is to be secured to the wall with 12" long "zee" clips anchored to the wall on 24" O.C. Backsplash to be closed against wall at top and ends; and sealed to wall with N.S.F. approved silicone sealant. All exposed backsplashes shall be enclosed.

- (2) Metal table tops shall have all shop seams and corners welded, ground smooth, and polished. All vertical and horizontal seams to be peened and ground smooth. All work tops on closed based fixtures shall be reinforced on the underside with a framework of 1 1/2" stainless steel angles and 1" x 4" x 1" stainless steel channels. Cross channels are to be close and shall be placed at each pair of legs. Top shall be reinforced so that there will not be any noticeable deflection. Provide enhanced bracing as required for "heavy" table top equipment (i.e., mixers, slicers, coffee urns, etc.). All reinforcements shall be stud bolted to the underside of the top and bracing with 1/4" studs.
 - (a) All tops shall have 1/8" schnee butyl mastic rope or pads provided to separate tops from bracing and provide for sound damping.
 - (3) Studs shall be of such length that fully enclosed cap nuts can be snugged tightly, bringing down top, and eliminating all vibrations referred to as "oil-canning."
 - (4) No underbracing shall be in "plain view" except on such items as dishtables, sinks, mobile dishrack transports, etc. In such cases **"all underbracing shall be stainless steel."**
 - (5) Field joints shall be provided in tops where necessary and are to be located for practical construction methods consistent with material sizes, shipping, and accessibility into the building.
 - (6) Stainless Steel tops used for serving line counters shall be provided as follows: Top to be 30" (unless shown on plan view as different or specified otherwise) wide and fabricated from 14 ga. stainless steel with square turndown on all sides and corners fully welded, ground and polished. Where top abuts walls, an integral back splash is to be provided. Backsplash to be formed up 4" and returned 1" flat to wall.
- (G) Table Frames:
- (1) All tubular bases for "open base tables" or dishtables shall be constructed of 1 5/8" o.d., 16 ga. 304 stainless seamless tubing having stringers and crossbracing of the same material. All joints between legs and crossbracing shall be welded and ground smooth, a full 306 degree, at 1'-0" in height--unless otherwise specified. The top end of the legs shall be closely fitted into a fully enclosed collar no less than 3" high, Component Hardware A18-0206 or prior approved equal. Collar is to be fully welded to previously described "U" channel members specified under "Table Tops." Crossrails must be supplied to reinforce each leg. Legs anchored to gussets at top only and without crossrails are not acceptable except in the case of dishtables **not exceeding** 3'-0" in length. Feet to be Component Hardware A10-0851.
- (H) Bolt, screw, and rivet construction:
- (1) Wherever bolts are used to fasten top to the paneling and body of equipment or to secure any exposed sheet metal surface, such fasteners shall be of the "concealed" type.
 - (2) Stainless steel tamper proof correctional facility type bolts and screws, of the same alloy and composition of the fixture of material to which they are fastened, shall be used. It is the intention of the Architect/Consultant that when "correctional package" is called for in the itemized specifications, that **ALL** such fasteners be tamperproof; regardless of manufacturer's standard.
 - (3) Use of bolts shall conform to National Sanitation Foundation Standard No.2; wherever threads of bolts and screws occur on the inside of fixtures and are either visible or might come in contact with wiping cloths, the threads shall be properly sleeved, sheared, and/or ground smooth.

- (4) If rivets are used to fasten rear paneling to the body of a fixture, such rivets shall be stainless steel. In no case shall "iron" or aluminum rivets be used. **NO** rivets shall be used in "fabricated" items.
- (I) Enclosed Bases:
- (1) All enclosed bases or cabinet bodies shall be of 18 ga. 304 stainless steel unless otherwise specified or detailed. Bases are to be enclosed on the ends and sides as required and called for under each particular item. Ends of body to terminate at front or operator's side with a minimal 1" maximum 2" mullion. Mullion to be vertical and completely enclosed. Base shall be reinforced at top with a framework, mitered and welded solid, accommodating any "by-out, drop-in" or fabricated pieces. Body shall be reinforced with 1 1/4" x 1 1/4" stainless tubing as required. Additional angles and channels shall be provided to reinforce shelves and support tops. Where sinks or other drop-in equipment occur, bottom sides of such equipment shall be reinforced with angle or channel crosswise of the table as required by design.
- (2) In the case of fixtures fitting against or between walls, the bodies shall be set in 1" to 2" from the wall line, but the tops will extend back to the wall line. This will permit adjustments for wall irregularities. A vertical trim strip of the same material as the body shall be provided at each end of the fixture to close the gap between the back edge of the body and the wall; or preferably the end of the body shall extend back to the wall line. All free corners or enclosed bodies, and all corners against walls and other fixtures are to be square.
- (3) Free standing fixtures shall be fitted with Component Hardware A77-5048, 6" high, adjustable counter legs; or prior approved equal.
- (J) Undershelves (Open Base Tables):
- (1) All open base tables, unless specified otherwise, shall be provided with 16 ga. stainless steel undershelves; shelves to be notched to fit perfectly and around 1 5/8" o.d. tubular legs, be welded solid to the legs, and be ground and finished as previously herein specified. Shelves over 2'-0" in length shall have 1" x 4" x 1" 12 ga. G.I. channel running full length. Channel to be welded to ends of shelf.
- (2) Where specified in the Itemized Specifications, removable type undershelves shall be provided. Removable shelf is to be notched to fit around legs; shelves are to be fabricated in removable sections not to exceed 2'-0" in length; and are to be formed to overlap supporting tubular base crossrails. Abutting sections of shelves shall be turned down 1" on a 90-degree angle. Shelves shall be of 16 ga. stainless unless stated otherwise in Itemized Specification.
- (K) Interior Shelves (Cabinet Base):
- (1) Stationary shelves shall have a 1" turn up on back and ends. The front edge shall be flanged down 1 1/2" and under 1/2" and finished with "zee" bar; thus forming a completely enclosed edge allowing for maximum strength and sanitation. Shelves shall be further braced with longitudinally centered 1" x 4" x 1" 12 ga. G.I. channel.
- (L) Drawers:
- (1) Drawer pans are to be 20" x 20" x 5" except in cases where top widths or equipment sizes preclude its use; in such cases the drawer pan shall be 20" x 15" x 5", or as specifically delineated in the Itemized Specification. Drawer pans shall be 304 stainless construction, N.S.F. approved unless specifically delineated in the Itemized Specification.
- (2) Drawer chassis shall be constructed of 18 ga. 304 stainless steel. Chassis shall house stainless steel drawer slides having a 125 lb. load rating, nylon roller bearings, positive stops, and finger tip release removal. Drawer slides shall be attached to 18 ga. stainless drawer pan housing.

- (a) Housing shall have an integral gutter/deflector to be flush with top of drawer face and minimizing soiled water or food progress into drawer.
 - (3) Drawer face shall be constructed of 16 ga. stainless; and be debossed for additional rigidity; and have integral pull handle.

- (M) Pipe Chases:
 - (1) In the case of open storage where top arrangement of enclosed base tables make it necessary for plumbing and supply piping to be passed through the base, and the shelving cannot be offset from the back of the cabinet to allow for such piping, the piping shall be enclosed in a suitable pipe chase with easily removable access panels. The access panels are not to be held in place with screws or latches, but shall be formed in a pan shape and placed where access is required from the front of the fixture (i.e., sink fixtures, etc.). Unless otherwise specified, shelves shall be turned up, coved, a minimum of 1" at the edge of the chase.
 - (2) In detailing the fixtures, consult to be certain that due allowance is made for traps or their controls; particularly under lower shelves that set on masonry bases.
 - (3) Where plumbing and supply piping passes through shelves on open base tables, shelves shall be neatly punched on open base tables, shelves shall be neatly punched or die stamped and fitted with an escutcheon. **In cases where a removable undershelf is present. . . remove it.** Note the location of such pipe chases or stamped openings on the plan, detail drawings, and fabrication drawings. The contractors shall be cautioned to rough-in as near to these "chases" as possible; all risers from rough-in to final connection must be run through these existing chases and/or slots.

- (N) Elevated Shelves:
 - (1) All elevated shelves shall be of 16 ga. stainless steel. All edges shall be same as table edge, except where adjacent to walls or other fixtures; they shall then be coved up to 1 1/2". All exposed backs and ends of shelves shall be capped. Shelves shall have a 1 " x 4" x 1" stainless channel running longitudinally and centered, welded to ends.
 - (a) Gussets shall be constructed of 14 ga. stainless steel and have 1/4" minimum holes mounted in flange adjacent to wall for mounting. Hypotenuse of gusset shall be hemmed along its length.
 - (2) Table mounted shelves shall be supported by 1 5/8" o.d. 16 ga. 304 stainless tubular uprights placed where indicated on plan view drawings. Gussets and bracing shall be same as herein referenced above. The tubular uprights shall be carried through the top and are to be securely anchored to the table base lower framework.

- (O) Sinks:
 - (1) All sinks shall be of size and shape as indicated on plan view or as delineated in the Itemized Specification. Sinks shall be constructed of 14 ga. stainless. Sink backs, bottoms, and fronts shall be formed of one continuous sheet with the sides welded into place. Partitions for multiple compartment sinks shall be of the same material and electrically welded into place.
 - (2) Sinks shall have all corners, vertical and horizontal, coved on a 3/4" radius; they will be electrically welded, ground smooth, and polished. Solder in filleted corners is **not** acceptable.
 - (3) Partitions shall be double wall thickness.
 - (4) Top edges of sinks at front and ends, inclusive of drainboards (except where adjacent to wall or equipment), shall be furnished with a 1 1/2" dia. die stamped integral sanitary semi-rolled rim edge.
 - (5) Across the back of all sinks and ends adjacent to walls, unless otherwise specified or indicated on plan view drawings, there shall be a 10" O.A. high

- backsplash; backsplash to be measured from partition height and formed as specified herein 2.01.F.1. Unless otherwise specified or shown in drawings, two (2) faucet holes shall be provided over the centerline of partitions between compartments; holes to be 4" down from top of splash.
- (6) Bottom of each compartment shall be pitched or creased to the center of the drain. Drain shall be a cast brass quick opening drain valve with removable flat strainer; Component Hardware D50-7200 or prior approved equal. Handle is to have a stainless steel support bracket attached to sink body for support of rod handle.
- (7) Sink bodies shall be mounted on tubular stands as described in 2.01.G. "U" channels and bracing are to be welded to plates subsequently welded to sink bodies.
- (8) All free-standing sinks to be 2'-10" in height measured from finished floor to partition termination. Sink depth shall be measured from top of roll rim to bottom of bowl; bowls shall be 14" deep unless specified otherwise. Lengths or widths given in Itemized Specification shall be considered "bowl size."
- (P) Sink Inserts:
(1) Sink inserts shall be of one (1) piece fabricated 14 ga. stainless steel construction in the size called for in the item specifications. Sinks shall be welded integral with counter tops having no laps in-between. Sink shall be fitted with a cast brass quick opening drain as specified in 2.01.O.6. Where bowls are exposed, the exterior shall also be polished to a No. 4 finish.
- (Q) Sink Drainboards:
(1) Drainboards shall be constructed of same material as sinks and shall be welded integral to same. Drainboards shall have roll rims as described herein, with exceptions as stipulated. Drainboards shall be pitched approximately 1/8" per foot towards sink bowl(s). All free corners shall be spherical.
- (R) Dishtable Tops:
(1) Dishtable tops shall be 14 ga. stainless steel with all free edges turned up 3" terminating in herein described semi-rolled rim edge. All free corners shall be spherical. All splashes shall be 10" O.A. height and formed per 2.01.F.1. where adjacent to walls or equipment.
(2) Dishtables shall be mounted on tubular stands as described in 2.01.G.
- (S) Body Panels:
(1) Body panels shall be of fiberglass reinforced polyester (F.R.P) with smooth exterior surfaces. All fiberglass to be flame retardant per specification ASTM E-162 having a flame spread of 25 or less. Color to be "custom" and match any manufacturer's paint sample. Color to be selected by the Architect or Owner.
(2) Body panels specified as plastic laminate are to be mounted on 3/4" marine plywood unless specified differently in part four. All plastic laminate panels are to be covered on front and all edges, with laminate backing sheets. The Architect can choose from the following laminate manufacturers without a price increase with the exception of all metal laminate. Manufacturers are Wilsonart, Formica, Pionite and Nevamar.
- (T) Serving Line Quartz Top:
Color must be selected from among CaesarStone products, or equal using the following installation guide lines: Prior approved equals shall reference the manufacturers written recommendations for fabrication and installation into foodservice countertops. Top to be 2cm (3/4") thick.
(1) Cabinet must be even and level with no protrusion to cause cracking.

- (2) Support tops every 12" inches. Cantilevers over 6 inches require structural support. Provide support within 1" inch of all cut outs.
- (3) Hot and cold units must be supported from below and not rest on the CaesarStone top.
- (4) Attach CaesarStone to support frame with dabs of silicone every 6" to 12" inches, do not use a continuous bead.
- (5) Make cut outs with router and template and allow a 1/2 inch radius in the corners. Cut and sand a 1/8 inch round over on top and bottom edge of cut out.
- (6) Provide a layer of Thermo-Flow tape to line the perimeter of all hot and cold cut outs.
- (7) Hot well units must be covered with a layer of Flex-Sulation blended PVC foam sheeting. The foam may be attached to the hot well with 3M double sided aircraft tape. Stainless Steel will be required for Hot units.
- (8) Cabinets are to be ventilated to pull cool air into the cabinet and provide vent slots near the upper edge of the cabinet to expel the hot air. Temperatures in the cabinet must not exceed 170 degrees F.
- (9) Sneeze guards must be fastened to the cabinets or the floor, not directly to the CaesarStone. Holes in the CaesarStone to accommodate the sneeze guard supports must be cut 1/4 in oversize in diameter to allow expansion and contraction.
- (10) Deck seams must be reinforced with a 3 inch to 4 inch seam block. Keep seams 3 inches or more away from cut outs.
- (11) Where tops abut walls, a back splash is to be provided. Backsplash to be 4" inches high.
- (12) All seams to be pulled by the original fabricator and not subbed out to a local in the area of the site.

See Paragraph 1.13 (D) for Warranty Information

(U)

Serving Line Solid Surface Top:

Color must be selected from among DuPont Corian® products, or equal Class 1 fire rated products using the following installation guidelines. Prior approved equals shall reference the manufacturers written recommendations for fabrication and installation into foodservice countertops.

- (1) Cabinets must be even and level with no protrusions to cause cracking.
- (2) Perimeter and cross support required. Overhangs exceeding 6 inches require additional structural support. See DuPont's written instructions for further details.
- (3) Hot and cold units must be supported from below and not rest on the Corian® tops.
- (4) Attach Corian® to support frame with 5/8" dabs of silicone every 18 to 24 inches. Do not use a continuous bead or non-flexible mastics.
- (5) It is recommended that tops containing heat sections be separated from those with cold sections using a soft (silicone) expansion joint of approximately 1/8 inch. See DuPont written recommendations for variations.
- (6) Make cut outs with a router and templates, allowing a minimum of 1/2 inch radius in the corners. Sand all cut out edges smooth and radius top and bottom edges to allow even heat distribution.
- (7) Reinforce corners of rectangular cut outs with a 1/2" by 6" by 6" block of Corian® seamed to the underside at DuPont written spacing. Circular cutouts, which generate heat, do not require continuous reinforcements.
- (8) Provide insulation per, DuPont written recommendations, of all heat generating cutouts using wood, Nomex® felt, and 4 mil aluminum heat conductive tape.
- (9) Sneeze guards must be fastened to the cabinets or the floor, not directly to the Corian®. Holes in the Corian® (to accommodate supports or other accessories)

must be cut 1/4" oversize in diameter (and have a 3/16" minimum radius) to allow for expansion and contraction.

- (10) Deck seams must be reinforced with a 2 to 3" seam block of 1/2" Corian®. Keep seams 2 inches or more away from the inside corners of cut outs.
- (11) Where tops abut walls, a back splash is to be provided. Backsplash to be 4" and returned 1" to the wall.
- (12) All fabrication/Installation of Corian® countertops should comply with written recommendations of the latest DuPont Corian® Fabrication Manual; specifically Chapter 20 (Food Service Countertops).
- (13) All seams to be pulled by the original fabricator and not subbed out to a local in the area of the site.

DuPont Technical Service – 1-800-426-7426
See Paragraph 1.13 (D) for warranty information.

(V) Hot Food Units:

Dry/Moist electric hot food wells to be bottom mounted and have a 12" x 20" die stamped opening with 1/4" raised beaded edge. All food wells to be centered on the top. Each hot food well shall be provided with a 1000 watt heating element wired to a double pole thermostat for temperature control. All wells are wired to a circuit breaker mounted in the control panel for current overload protection. Hot food wells to have drains with manifold. Mount controls where accessible on back side of counter. Where counters have no rear access; mount controls in access door/louvered door as described in the itemized specifications.

(W) Cold Pan:

The mechanically cooled cold pan shall be of 18 ga. stainless steel and be 6" deep or as required. The welded watertight pan will have a continuous refrigeration coil bonded to the underside and concealed in mastic. Pan to be fully insulated with urethane insulation. A full perimeter formica breaker strip shall separate the top for the cold pan. The cold pan to have 1" open brass drain with extension to shut-off valve below base.

On/off switch to be mounted where accessible on back side of counter. Where counters have no rear access, mount switch in access door/louvered door as described in the itemized specifications.

(X) Compressor Housing:

Cross flow ventilated compartment to have two stainless steel exterior frames complete with removable stainless steel louvers. Interior of housing to have easy access slide-out channels to accommodate condensing unit.

(Y) Condensing Unit:

Unit to contain a fully hermetic condensing unit connected to the cold pan with all necessary adjustable controls for proper operation. System to be hooked-up, tested in factory and made ready for final electrical connection at job. The condensing unit to be properly sized to the evaporator load, and meet NSF 7 requirements.

(Z) Ice Cream Dispenser:

Unit shall have a fully welded stainless steel watertight interior liner with 2" of urethane foam insulation and full perimeter breaker strips at the top. An interior box temperature shall be maintained by a cold wall evaporator system with accessible thermostatic expansion valve. Openings will be fitted with high impact

throat liner and hinged insulated stainless lid leveling dispenser. Dispensing mechanism shall be constructed with automatic self-leveling elevators, enclosed in a stainless steel housing. The lowerator mechanisms shall be field adjustable without the use of tools, and be connected to a removable heavy gauge stainless steel carrier. Each compartment to be furnished with six (6) removable divider trays.

(AA) Two Tier Display:

Two tier display with sloped front stand shall have uprights constructed of 1-1/4" square stainless steel tubing with stainless cap base. Shelves to be 1/4" polished plate glass, resting on a horizontal stainless steel framework welded to the uprights. The display stand is to be enclosed on the front and ends with 1/4" polish plate glass. Front sneeze guard to be mounted on adjustable stainless steel brackets.

(BB) Single Service Buffet Food Protector:

Food protector shall have a Plexiglas sneeze guard along the long side with Plexiglas end enclosures. A removable top cap shelf mounted over the edge of the guards shall be fabricated for a minimum of 16 gauge stainless steel with all sides turned down square, and all corners fully welded, ground and polished. Unit to be mounted on 1" stainless steel tubular supports. Shield to have adjustable height from 6" opening to 12" opening at 1" increments without the use of tools.

Provide unit with Component Hardware L75 series fluorescent lighting. Wiring to be run through tubular uprights. On/off switch to be mounted where accessible on back side of counter. Where counters have no rear access, mount switch in access door/louvered door as described in the itemized specifications.

(CC) Brass Smith Inc. Sneeze Guards:

If referenced project is utilizing Brass Smith Inc. sneeze guards the fabricator will be responsible for providing angle bracket and mounting plate, "D" style as detailed by Brass Smith Inc. in the cabinet body to support the weight of the sneeze guard. The FSEC will be responsible for coordinating the location of the brackets and mounting plate with the fabricator and Brass Smith Inc.

(DD) Curb Frames:

Where curb frames are required for foodservice counters provide a minimum of 12 ga. galvanized steel. Curbs are to be built 6" above finished floor unless otherwise noted and be "C" type channel with "Z" clips bolted to floor.

2.02 Plumbing and Mechanical Components/Requirements:

(A) Plumbing and mechanical shall be performed as detailed in Part 1.02, 1.05, 1.06, and 1.07.

(B) Plumbing fixtures and accessories shall be furnished with the foodservice equipment to include the following by the FSEC – whether or not specifically called for in specification.

- (1) Faucets for sinks, kettles, tilting fry pans, etc.
- (2) Drain fittings with connected overflows;
- (3) Water inlet fittings in dishtable scrapping troughs.
- (4) Blending hose bibbs, where specifically called for, to be mounted on foodservice equipment.
- (5) Control valves as provided on foodservice equipment;
- (6) Vacuum Breakers as provided on foodservice equipment;

- (7) Extensions of indirect waste fittings to 1" below fixture bodies of cold pans, front plates, refrigeration coils, milk carton dispensers, water stations and beverage counter drain troughs. Drains shall be 1" minimum, type "K" copper.
 - (8) All drainlines subject to condensation shall have 1/2" thick Armaflex insulation.
 - (9) Piping brackets and/or supports beneath dishtables or countertops.
- (C) FSEC to provide on all gas heated equipment fittings and components: Hose Master or Avtec Flex-con gas hoses – 48" minimum in length, deluxe gas connector kits.
- (D) Provide steam equipment ready for final connection.

2.03 Refrigeration Components/Requirements:

- (A) Foodservice equipment refrigeration system shall be installed complete with all refrigerant, oil, dials, dehydrators, gauges, and controls as required for the proper operation of the system.
- (B) Equipment provided with self-contained factory installed compressors shall be checked and adjusted to proper operating temperature.
- (C) Fractional horsepower compressors specified to be remotely installed in a partitioned compartment shall be mounted 4" above the bottom of the fixture body and fitted with sound absorbing isolation pads. Provide a cord/cap assembly and pre-wire to a control switch installed within the compressor compartment; control switch is to be mounted near the front or exterior as required by Item Specifications.
- (D) Refrigeration System installation shall entail:
 - (1) Refrigerant system lines by type "I" hard copper tubing, dried, and charged with inert gas and plugged suitable for a working pressure of 450 p.s.i. Fittings shall be wrought copper or brass designed for use with high temperature solder and suitable for working pressure of 45 p.s.i. Piping joints shall be made with silver solder (silfoz) under an internally inert atmosphere of dry nitrogen. Piping shall be properly suspended from and anchored to the structure with adjustable hangers 6'-0" O.C. maximum. Suction lines shall be sized to have maximum pressure drop of 3 lbs. from receiver to evaporator. All refrigerant lines **shall be graded** to prevent the trapping of oil. Install Armstrong Armaflex foam plastic insulation not less than 3/4" thick on all suction lines. Gaps between plastic insulation is not to exceed 1/16".
 - (2) Refrigerant piping shall be pressure tested before any covering is applied; using carbon dioxide or dry nitrogen and freon under pressure and in accordance with the manufacturer's recommended procedures. The pressure testing the high side shall be at 300 p.s.i.; low side shall be 150 p.s.i. With the test pressure in the system, all joints shall be sharply tapped with a rubber/rawhide mallet sufficiently hard to break loose any defective joints. Every joint shall then be swabbed with a soap solution, which shall be wiped off after testing. If any leaks are found, the pressure shall be relieved from the system, the leaking joints shall be taken apart and cleaned, and the joints shall be re-made as new joints. After the system has tested as "leak proof" by use of the aforementioned test, freon shall be introduced with an inert gas at the same pressures herein specified at the rate of one-half pound per 12,000 b.t.u.'s of refrigeration. All joints shall be checked by leak detector and any leaks found shall be repaired as specified. System shall be allowed to stand under test pressure disconnected from the pressure source for a period of 24 hours. If the system pressure is lost, with consideration for temperature changes, then further tests for leaks shall be made.

- (E) After completion of the above pressure test, the system shall be evacuated using an approved auxiliary vacuum pump. Connections for evacuation shall be in accordance with manufacturer's recommendations.
- (1) The vacuum pump shall be operated until vacuum in excess of 150 microns is obtained and has been maintained for at least four (4) hours. The vacuum shall then be broken with freon and the system shall again be evacuated as specified. Evacuation shall not be undertaken when the ambient temperature at the equipment is lower than 70 degrees F.
 - (2) Charging subsequent to the initial charge, which is contained in the condensing unit, shall be given through the charging valve in the high side passing all liquid refrigerant through a charging dehydrator. All charging lines and gauges shall then be purged of air prior to connection with the system. Refrigerant shall be unused and shall be delivered from clean containers. After the system is fully charged, it shall be started and placed in full operation.
- (F) Finish exposed refrigerant lines and drains within refrigerated compartments with chromotone paint.
- (G) Refrigeration, where applicable, shall have the following accessories:
- (1) Suction line vibration eliminator;
 - (2) Shut-off valves at condensing unit inlet and outlet;
 - (3) Shut-off valves at evaporator suction and liquid lines;
 - (4) "Catch-all" refrigerant filter/dehydrator at condensing unit outlet with "see-all" sight glass and cover;
 - (5) Thermostatic expansion valve with external equalizer;
 - (6) "Catch-all" refrigerant filter/dehydrator on liquid line;
 - (7) Time clock to indicate defrost cycles (temperature terminated).
- (H) Due to the possible negative environmental impact to the Ozone layer, and pending and subsequent legislation and treaties regarding damage caused by release of chloride from chlorofluorocarbons (CFC's), the refrigerant R-12 **will not** be permitted for use in any condensing units. This restriction is to apply to **all** condensing units specified on this project that are 1/4 h.p. and larger.
- (1) If bleeding of system is required, all environmental protection agency methods of recapture shall be implemented.

2.04 Electrical Components/Requirements

- (A) Electrical fittings and accessories provided loose for field installation shall be connected as dictated in Part 1.07.
- (B) Coordinate all foodservice equipment cord caps with related receptacles.
- (1) All 120 volt "plug-in" equipment shall have type "so" or "sjo" cord and plug with a ground wire fastened to the frame/body of the item.
 - (a) Foodservice equipment specified is to be furnished with a "Tec" or "Greitzer" cord/cap assembly of a model suited for the equipment load and voltage. Provide matching receptacles and plates to General Contractor for field installation as indicated on drawings.
 - (2) Cord lengths for fixed equipment shall be adjusted as necessary to eliminate loose-hanging excess.
 - (3) All mobile equipment **shall have** Kellems strain-relief assembly at the cord connection of the appliance.
 - (4) All mobile electrical support equipment (i.e., heated cabinets, dish carts, etc.) and counter appliances mounted on mobile stands (i.e., mixers, food cutters, etc.)

shall have an 8'-0" cord/cap assembly with cord hanger strap secured to the rear of the equipment.

- (C) Switches and Controls:
 - (1) Each motor driven appliance or electrically heated unit shall be equipped with a suitable control switch or starter of proper type in accordance with the requirements of the Underwriter's Laboratories, Inc., which shall provide for low voltage and overload protection.
 - (2) Equipment indicated on the utility requirement schedule and is connected to the building electrical system, which is not provided with built-in circuit breakers or fused terminal block, shall have a disconnect switch provided by the General Contractor unless otherwise specified.

- (D) Motors:
 - (1) 120 volt motors shall have manual tumbler type starters with thermal overload protection and interchangeable heating elements.
 - (2) 208/240 volt and 460/480 volt motors shall have magnetic starters with low voltage protection and one interchangeable overload relay per phase.

- (E) Heating Elements shall be equipped with positive low-water shut-offs.

- (F) Submerged Heating Elements shall be equipped with positive low-water shut-offs.

- (G) Receptacles and Switches:
 - (1) Receptacles mounted in enclosed base fixtures shall be pre-wired to a junction box located within 6" from the bottom of utility and compressor compartments.
 - (2) Receptacles mounted on open base fixtures shall be securely mounted to a 14 ga. stainless panel mounted to the underframe of the fixture top.
 - (a) Receptacles mounted on open base fixtures shall be run to a junction box mounted to the underside of a lower shelf or be plate mounted and secured to fixture leg. Where possible, it is preferable that wiring be run in "flex" inside equipment legs; or alternately in "thinwall" conduit.

- (H) Fabricated equipment integral components shall be pre-wired by the fabricator to junction boxes. Wiring chases or shielded "thinwall" conduit shall be provided by fabricator running along length of unit for use of General Contractor executing "final connections." Junction boxes shall be considered "threaded outlets" as defined in Part 1.07.A.

- (I) Load centers installed in or on fabricated equipment shall be provided by the FSEC. Load center selection shall be made, aside from its primary function, based on local availability of breakers, etc. Load centers are to be considered part of "final connection" as defined in Part 1.07.A.
 - (1) Load center is to be located and attached, ready for final connection, flush mounted within a utility compartment, set back 8" from access door. Location is to be determined based on accessibility requirements as described in Part 1.04.
 - (2) Type all breaker/device information on the circuit schedule in the load center door (number corresponding to breaker/device) and enclose a schematic wiring diagram of the fixture components.

- (J) Fixtures with lamps installed in/on fabricated or field assembled equipment shall be prewired to a junction box positioned as herein previously described for final connection.
 - (1) All lamps (fluorescent, incandescent, heat [bulb or strip]) shall be prewired through support posts to an apron mounted switch.

- (K) Cold storage light fixtures shall be wired through hub fittings located on top of the fixture. Install plastic sleeve through the ceiling for electrical conduit. Seal sleeve penetration airtight at both sides of the panel. See Part 1.07.C.
- (L) Provide all appliance bulbs, fluorescent or incandescent, et. al.
 - (1) All exposed appliance bulbs shall have safety "coating" limiting shatter or sleeve bulbs and provide end caps.
- (M) All electrical final connection points shall be tagged by the FSEC indicating:
 - (1) Item Number;
 - (2) Name of devices on circuit;
 - (3) Total electrical load; and,
 - (4) Voltage and Phase.

2.05 Exhaust Hoods (If included in Section 11400)

- (A) Exhaust hoods, even as identified by manufacturer and model number, shall be considered a "custom" item that will be Underwriter's Laboratory (UL) listed.
 - (1) Sizes shall be as indicated; 24" high.
- (B) The body of the hood shall be 18 ga. stainless steel with seams welded, ground, and polished; this applies to exterior and interior.
- (C) Hoods are to have Component Hardware NSF-8240-RS-2 recess mounted fluorescent fixtures running full length of hood; installed and sealed to prevent seepage; meeting NFPA requirements and those stated in Part 1.04.
- (D) Provide removable grease extractor filters; Component Hardware F50-2020 or sized as required to fit grease bank. Provide integral grease trough sloping to removable grease container located at each end of the filter banks.
- (E) Provide a "furring cap" of 3" x 2" stainless steel channel having welded corners, polished as previously herein described. Increase as required at supply/air diffusers.
- (F) Capture area is to be a minimum of 6" of overhang at free ends; 1'-0" at front of equipment. Height as dictated per Part 1.04.
- (G) Exhaust air duct openings and collars shall be provided in such size and quantity as indicated. Provide duct collar with a spring loaded, weighted 10 ga. G.I. self-closing fire damper activated by three 325 degree fusible links connected in a series. Coordinate fire protection piping for damper clearance with collar height. See Part 2.02.C.
- (H) Hood shall be hung from structure above ceiling with 1/2" O.D. stainless threaded rod on 48" O.C. See Parts 1.05, 1.06, and 1.07. General contractor is to be responsible for structure above ceiling.
- (I) Provide exhaust hood closure panels to protrude 1" above finish "hung ceiling" height; or snugly fitted against sheetrock ceiling. Panels are to be 18 ga. stainless, formed as pans having 1/2" flange and mounted on perimeter "furring cap."
- (J) Where dictated by Part 1.04 and/or specified, provide 18 ga. stainless 1" thick (or as required) stainless wall panels having "fire rating" as required by Code. Provide all trim and mounting hardware as required by Part 1.02.A.
- (K) Provide an exhaust hood extinguishing system installed in accordance with manufacturer's recommendation, applicable codes, and standards. Submit installation certification form to the Architect.

- (1) As required by NFPA Bulletin No. 96 and local Fire Marshall's regulations, provide an automatic chemical system in all exhaust hood/duct assemblies. Refer to Contract Drawings for quantity of exhaust fan units serving single or multiple exhaust hoods and coordinate with hood/fan controls.
- (2) Install chemical cylinders where accessible on side of hood or where shown on plan view, and install piping to exhaust hoods in a totally concealed manner. Unless stated otherwise, mount cylinders 6'-0" A.F.F.
- (3) Exposed piping/fittings within cylinder and exhaust hood is to be chrome plated or sleeved with stainless steel tubing. Exposed pipe threads in/above the "food zone" is not acceptable.
 - (a) **Submit a schematic** diagram of installation and confirm critical distances from cylinders to nozzles.
- (4) Provide manual releases located as directed by local code and/or Fire Marshall. Accommodation for these manual releases shall be provided by General Contractor per Part 1.07.D. and K.

2.06 Field Welds

- (A) When a field joint is required as described in Part 2.01.F.4, it shall be performed in one of the following manners:
 - (1) Draw unit tight to a hairline seam, fully weld, grind and polish to match shop fabricated standards;
 - (2) If the backsplash of a fixture requiring a field joint is inaccessible from the back, because installation **must** be done prior to welding, the vertical field weld is to terminate 1" above the coved corner. The remaining height of the field joint is to be a hairline butt joint with offset draw angles behind. **Locate and note on shop drawings at time of "preliminary submittal."**

2.07 Pre-Fabricated Cold Storage Assemblies

- (A) Specific size, shape, and finishes, to be provided as detailed in itemized specification. Height to be generally 9'-0", unless otherwise noted in itemized specification or as required due to architectural constraints.
- (B) Wherever compartment dimensions exceed the clear-span ability of the ceiling panels, provide "I" beam support on the exterior of the ceiling or utilize properly lagged spline hangers. Install 1/2" diameter galvanized steel rods through the beam or hangers. Exposed beams or posts within compartments are not acceptable.
 - (1) Walk-in manufacturer is responsible for ceiling load calculations based on fixture application.
- (C) All door jambs shall be furnished with a **replaceable** full perimeter thermostatically controlled heater cable. Install threshold as specified in Itemized Specification.
- (D) Floorless assemblies shall be as follows:
 - (1) 6 mil polyethylene sheets shall be laid in slab recess with all joints lapped 6" and sealed water-tight.
 - (2) Provide two (2) layers of 2" thick rigid polyurethane board insulation having staggered joints and set in mastic.
 - (3) Provide a slip sheet over the insulation having 6" lapped joints flashed up the height of the finished floor base.
 - (4) Level and square the perimeter and partition wall panels. Anchor to slab recess. Cover exposed surfaces of panels for protection.
- (E) Provide with each compartment with a thermometer; mounting position of the bulb or sensor at sufficient length to read ambient air temperature; yet not be affected by defrost cycle.

- (1) Bulb to be protected by stainless impact cover.
- (F) Closure panels & trim strips per itemized specification and drawings.
- (G) The General Contractor shall provide adequate support for walk-in cooler/freezer assemblies. This includes but is not limited to concrete pad, rack for roof mount and/or rack for mounting to side of exterior building. Exact location to be determined by the Architect/Engineer.
- (H) Whenever track type shelving is specified walk-in manufacturer shall provide reinforcement to floor panels to reduce damage that maybe caused over time from weight distribution.

2.08 Cold Food Storage Systems

- (A) Bank type pre-wired, pre-piped refrigeration shall be installed as specified in the Itemized Specification; installation **shall be performed** by factory technicians or factory "authorized" and trained technicians.
 - (1) All parts and labor warranty shall be provided by manufacturer of refrigeration.

PART 3 - EXECUTION

3.01 Delivery and Installation

- (A) All work performed shall be as required by Parts 1.02, 1.05, and 1.06.G; and any other applicable Contract Documents.
- (B) Field assembled "fixed" equipment that is integrated into the structure of the facility (i.e., walk-ins, exhaust hoods, floor troughs, ceiling mounted racks or shelves, etc.) are to be coordinated with the General Contractor and sent to jobsite as project schedule demands. As per Part 1.05, installation supervisor shall be present to coordinate with all other trades during the installation of field assembled "integrated" pieces.
- (C) Damaged equipment shall be documented and action be taken for repair or replacement; notify the General Contractor of these actions and coordinate so as not to delay the project.
- (D) Fabricated equipment installation as referenced in Part 1.03.C and 1.09.I shall fall under the following conditions:
 - (1) The fabricator shall travel to jobsite, observe the site conditions, and assume responsibility for taking the fabricated equipment "field dimensions."
 - (2) The fabricator shall in coordination as referenced in Part 1.05.D, deliver, set-in-place, level, field weld and seal custom equipment with factory trained personnel. Insure that all work is in conformance with general specifications.
 - (3) Fabricator is not responsible for final clean-up.
 - (4) Plumbing and electrical connections, or final connections, are as detailed in Part 1.07 of these documents.
 - (5) Have integral pieces (i.e., dishwasher, booster heaters, re-circulators, faucets, etc.) on jobsite to make fabrication installation as smooth and efficient as possible.
 - (6) Fabricator is to include in its price: delivery and installation of equipment to/on jobsite.
 - (7) Fabricator shall include any/all field welds for his equipment in his price for installation. All fabricated equipment field welds shall be considered included in the Contract Bid price.

3.02 Clean-up and Adjustment

- (A) Equipment shall have been routinely kept clean throughout the installation process as stipulated in Part 1.06.G. Thoroughly clean and polish interiors/exteriors of all foodservice equipment prior to demonstration and final observation. It shall be the responsibility of the FSEC to either take dated pictures and/or have the General Contractor sign off on equipment after the initial cleaning. If this method is not used, the FSEC will be responsible for any additional cleaning of equipment (which may be required) prior to Owner acceptance.
- (B) All equipment shall be re-leveled, calibrated, sealed, etc. per Part 1.01.C definition of "complete installation." This shall entail polishing of burns, burnishing, et. al.
- (C) Lubricate and adjust all drawer slides, hinges, and casters.
- (D) Adjust pressure regulating valves, timed-delay relays, thermostatic controls, temperature sensors, exhaust hood grilles, etc.
- (E) Clean or replace any damaged eschuteons, aerators, divider bars, etc.; touch up painted finishes; refinish scratched or scarred stainless surfaces.

- (F) Start-up and check operation of all refrigeration systems for at least seventy-two (72) hours prior to final observation.
- (G) Accumulate & present the owner with all keys to equipment; labeled identifying correlation.

3.03 Equipment Start-Up/Demonstration

- (A) Carefully test, adjust and regulate all equipment in accordance with the manufacturer's instructions and certify to the Owner that the installation, adjustments and performance are in full compliance. See Parts 1.02, 1.05.J & K, 1.13.C, & 1.14.

3.04 Final Observation

- (A) Final observation shall be made when certified that it has completed its work, made a thorough review of the installation/operation of each item in the contract; and further attests that the project is in compliance with the Construction Documents.
- (B) The Owner, Architect, and/or Foodservice Consultant or their assigns shall have access to the foodservice equipment per Part 1.15.E., the "bonded" warehouse, and the site of final destination during installation. Correct any errors found during inspection(s) with the greatest possible speed.
- (C) Repetitive Final Observations (more than two) and all costs associated thereto, which may be incurred due to the failure to comply with the requirements of the Contract Documents, will be invoiced at an hourly rate with addition of travel expense.