

SECTION 11 40 00 – FOODSERVICE EQUIPMENT

PART 1 GENERAL

1.01 WORK INCLUDED

Provide labor, equipment, appliances and materials, and perform all operations in connection with the execution of the Work as stated and as represented in the drawings and specifications including that which is reasonably inferred; install and coordinate all equipment in Section 11 40 00.

- A. Equipment: Fabricate, deliver, unload, uncrate, assemble, set in place and level ready for final connection by mechanical and electrical trades.
- B. Coordination: Coordinate mechanical and electrical rough in services, manufactured equipment and fabricated equipment construction, equipment bases, curbs, ceiling heights, depressed areas, sleeves, wall openings, refrigeration lines, service access, existing building conditions that affect equipment, and all other building conditions required to accommodate the Section 11 40 00 equipment including new, existing, Owner furnished and future equipment with other trades; cut holes in equipment to accommodate pipes, drains, electrical conduit and outlets as required.
- C. Schedule: Perform work in a timely manner consistent with the construction schedule, submit written notice of any manufacturer or construction related problems that are causing a delay in the equipment delivery or installation; substitutions for failure to order equipment in a timely manner are not acceptable.
- D. Permits, Licenses and Inspections: Secure and pay for tests, permits and inspections required by authorized regulatory agencies and directly related to the construction and installation of the Section 11 40 00 foodservice equipment work.
- E. Document Inconsistencies: When drawings and specifications contain conflicting requirements, request written clarification; provide the better quality or greater quantity of work or material; costs incurred by failure to clarify conflicting requirements are the equipment contractor's responsibility.
- F. Model Number Changes and Manufacturer Sales or Bankruptcies: When equipment specified is no longer available, the Owner reserves the right to accept the manufacturer's replacement or equipment from a manufacturer specified as equal; the Owner reserves the right to reject equipment when a specified manufacturer is sold, when sale is pending, when filing for Chapter 7 or 11 status, and receive equipment from a specified equal manufacturer.
- G. FSEC Qualifications: Must be able to provide references for two projects of similar size and complexity within the past five years. These must be consultant specified projects successfully completed to the Owner's satisfaction.

1.02 RELATED WORK SPECIFIED IN MECHANICAL AND ELECTRICAL SECTIONS

- A. Services and Connections: Extending utility lines from rough in locations to connection points on the equipment and final connections, including indirect wastes to floor drains and installation of faucets and backflow prevention devices, unless otherwise specified.
- B. Interconnections: Between equipment and remote components.
- C. Disconnection: Existing equipment that is relocated or removed.

1.03 DEFINITIONS

- A. Equal: Must be comparable in critical dimensions, capacity, features, utilities and operation; if equal is submitted, pay all costs required to modify work of any trade affected to accommodate equal.
- B. Exposed: All visible surfaces — includes surfaces behind cabinet doors when the doors are open.
- C. Foodservice Equipment Contractor (FSEC): Person or organization identified as such in the Agreement as providing the Section 11 40 00 equipment
- D. Fabricated Equipment: Equipment that is not a standard catalog item and must be constructed by a singular authorized fabricator from Article 2.01, Paragraph B at their shop or on the job site to conform to the Contract Documents.
- E. Manufactured Equipment: Equipment offered as a catalog item but which is built to size for each project and generally requires a shop drawing
- F. Buy-out Equipment: Equipment offered as a catalog item by a manufacturer, including items requiring minor modifications.

1.04 REGULATORY REQUIREMENTS

- A. Laws and Ordinances: Comply with laws, ordinances, rules, codes and regulations relating to the performance of the Work; rulings and interpretations of the enforcing agencies are considered a part of the regulations; no extra charge will be paid for furnishing items required by the enforcing agency.
- B. Minimum Standards: Notify the Owner's Representative prior to equipment purchase and/or installation of any item that does not comply with the applicable regulations, including but not limited to the following:
 - 1. National Sanitation Foundation (NSF): Equipment and installation; affix the NSF label to each equipment item
 - 2. Underwriters Laboratory (UL): Electrical equipment and/or components
 - 3. American Gas Association (AGA): Gas fired equipment and installation
 - 4. American Institute of Electrical and Electronics Engineers: Electrical wiring and devices included with the equipment
 - 5. American Society of Heating, Refrigeration and Air Conditioning Engineers, Inc. (ASHRAE): Refrigeration systems
 - 6. American Society of Mechanical Engineers (ASME): Boilers
 - 7. National Electrical Code (NEC): Electrical wiring and devices included with the equipment
 - 8. National Fire Protection Association (NFPA): Exhaust hood and fire protection systems
 - 9. American Society of Tested Materials (ASTM): Metals
 - 10. American National Standards Institute (ANSI): Materials
 - 11. Occupational Safety and Health Agency (OSHA): Equipment and installation
 - 12. Sheet Metal and Air Conditioning Contractors National Association (SMACNA): Equipment and installation where required
 - 13. American Disabilities Act (ADA): Equipment and installation where required
 - 14. International Building Code (IBC) and Standard Building Code (SBCC): Equipment and installation where required
 - 15. Intertek Testing Services (ETL)
 - 16. Safe Drinking Water Act: Lead-free plumbing fittings, faucets and fixtures or more stringent state/local codes where applicable
 - 17. US Energy Independence Act 2007: Walk-in Refrigerator and Freezers and Refrigeration Systems

1.05 SUBMITTALS

- A. General: Manufacturer or fabricator changes are not acceptable after submittal review and acceptance without written authorization from Owner's Representative.
- B. Schedule: Submit within thirty (30) days from award of Contract; identify key dates and tasks that must be completed by others in order to meet the equipment installation schedule.
- C. Review: Stamp and sign each submittal indicating it has been checked for conformance to the specifications, field dimensions, compatibility with other equipment, and coordination with other trades and services.
- D. Revisions: Incorporate corrections noted by the Owner's Representative and resubmit new sets for review; repeat until corrections are incorporated.
- E. Routing: Submit one package containing Floor Plan & Schedule, Rough-Ins, Special Conditions, Brochure, and Equipment Shop Drawings for Walk-ins, Refrigeration Systems and Exhaust Hoods. Submit second package containing remainder of Equipment Shop Drawings.
- F. Drawings
 - 1. General
 - a. Match the contract drawings sheet size
 - b. Submit in roll form, not folded
 - c. Leave a 3" x 8" space for review stamps
 - d. Submit one (1) set of black and white prints
 - e. Lettering not less than 1/8" high
 - 2. Floor Plan and Schedule
 - a. Scale: 1/4" = 1' 0"
 - b. Number equipment and include a schedule on the same sheet
 - c. Use Architect's dimensioned plans to prepare plan drawing; verify field dimensions
 - 3. Rough in Plan
 - a. General: Provide a utility symbol legend; list the utility requirements, along with the equipment item number on a line extending from the symbol; show exact rough in locations and heights; stub out of walls wherever possible; make allowances for valves, fittings and other required components specified under Mechanical and Electrical Sections; if utilities are already installed, field measure locations and indicate on plan, noting any objection to installed location.
 - b. Scale: 1/4" = 1' 0"
 - c. Equipment Included: Show requirements for specified, Owner furnished, existing and future equipment; include equipment layout on drawing
 - d. Format: Provide separate drawings for mechanical and electrical rough-in plans and schedules.
 - e. Dimensioning: Dimension utility rough ins installed under floor from either existing walls, exterior walls or from column line centers; dimension other rough ins from new walls
 - f. Code Compliance: See Article 1.04
 - g. Coordination: Refer to the architectural, electrical and mechanical engineering drawings for this submission; verify that the correct utility services are available for equipment ordered; verify existing building conditions; coordinate any changes required to accommodate equipment provided
 - h. Interconnections: Include connection diagrams for equipment where one or more items are interconnected by Mechanical and Electrical Trades
 - i. Sleeves and Conduits: Include requirements for beverage lines, refrigeration lines and any other equipment interconnections
 - 4. Special Conditions (building details): Show finished dimensions of bases, depressions, curbs, special height walls and wall openings for equipment; 1/4" = 1' 0" scale; coordinate with other trades; include equipment layout on drawing

5. Equipment Shop Drawings
 - a. Scale: Detail fabricated and manufactured equipment in plan, elevation and end view at $\frac{3}{4}$ " = 1' 0" or larger; show sections at $1\frac{1}{2}$ " = 1' 0" or larger
 - b. Detail: Show fabricated equipment dimensions and materials, manufacturer and type of hardware, and other pertinent data as specified and as required for construction; where fabricated equipment adjoins other equipment, indicate partial plans and elevations to illustrate the junction condition; show stone/solid surfacing dimensions, locations, dimensions of cutouts, and countertop seam locations, required locations of support and blocking members, edge profiles, and installation details and methods; identify colors and finishes
 - c. Organization: Indicate equipment by item number and arrange on sheets in numerical sequence
 - d. Built-in and Counter-mounted Equipment: Show on fabricated equipment elevation and section drawings; dot in countertop equipment on plans; detail built-in/drop-in equipment supports and relationship to quartz top
 - e. Field Dimensions: Equipment dimensions are subject to adjustments required by field dimensions and understructure components; take measurements and coordinate with finished building conditions; field dimensions completed by a company/person approved by the custom fabricator; circle any dimensional changes on initial and subsequent submissions
 - f. Hood Fire Protection System: Submit complete detailed shop drawings including system description, configuration and system component locations; after review by design team, incorporate comments and submit to fire authorities having jurisdiction for system approval prior to fabrication
 - g. Walk-ins: Show ceiling panel lay-outs and all control and switch locations

- G. Written Materials
 1. Itemized Bid: If not required during bid submittal, provide itemized bid within 10 days of bid award date; include freight and installation within each item.
 2. General: Submit two (2) bound copies for review; if submitted electronically, they are to follow the same format as the hard copy.
 3. Equipment Brochure
 - a. Equipment List: Include item number, quantity and manufacturer
 - b. Cover Sheet: Submit a typewritten sheet — copies of project specification are not acceptable — for each item with item number and equipment description to include: model number, quantity, optional features, special construction, installation and utility service requirements for manufacturer provided; include Owner furnished, existing and future equipment
 - c. Manufacturer's Catalog Sheet: Circle relevant utility requirements, dimensions and accessories for each item; do not include advertising or sales sheets; mark item number and quantity required; mark out equipment not being supplied
 - d. Organization: Arrange sheets in numerical sequence; tab every 25th item
 4. Operation and Maintenance Manual – submit prior to equipment demonstrations
 - a. Service Agents: List manufacturers alphabetically with tabs; list equipment type; identify local service agent; list the name, address and telephone number authorized to service the equipment; list FSEC when there is no other service agent
 - b. Parts Catalog, Operating and Maintenance Instructions: Include manufacturer's original instructions for buy-out and manufactured equipment; organize alphabetically by manufacturer
 - c. Certificate of Warranty: Provide for each piece of refrigeration equipment per Article 1.07 C & D
 5. Utility Rebate Documents: For applicable equipment, provide and prepare manufacturer's rebate registration documents for submission by Owner to utility company; include pertinent equipment model/serial numbers, utility data, installation dates and other information needed to complete application.

6. LEED Information:
 - a. Refrigeration: For each item of refrigeration (self-contained and remote) identify type of refrigerant used and pounds of refrigerant used by each refrigeration system.
 - b. Spray Rinse Faucets: Identify gallons per minute flow rate.

1.06 SUBSTITUTIONS

- A. Procedure: Submit a written request to the Owner's Representative for approval not less than ten (10) days prior to the bid date; include a description of the proposed substitute, drawings, equipment cutsheets, performance test data and any other data or information necessary for complete evaluation; list separately construction and performance features that do not meet or exceed the specified item.
- B. Approval: Approval or rejection of a proposed substitution is vested in the Owner's Representative whose decision is final and binding; determination may or may not express the reason for the decision; approval by Addendum or Change Order only; verbal approval is not binding.
- C. Responsibility: If proposed substitution is approved, pay all costs required to modify work of any trade affected to accommodate substitution.

1.07 WARRANTY/CORRECTION PERIOD

- A. General: Warranty equipment and installation with full parts and labor for one (1) calendar year from date of acceptance by Owner's Representative; Owner's acceptance is defined by first date of foodservice facility operation; inoperable equipment is not considered "accepted"; inoperable equipment includes, but is not limited to, inadequate training and demonstration, defective materials and improper installation.
- B. Walk-in Refrigeration and Freezer Systems: One-year full system parts and labor warranty to cover all components and installation; five (5) year compressor/condenser warranty to cover parts and materials only; service available 24 hours per day, seven (7) days per week; contract begins on date of acceptance by Owner's Representative.
- C. Other Equipment: Compressors/Condensers: Five (5) year warranty; first year to include labor and materials without charge to Owner.
- D. Fire Protection System: Warranty and required inspections for one (1) year; provide materials without charge to Owner.
- E. Correction Period: When the complete breakdown of a piece of equipment occurs, perform service within 24 hours; make other repairs within one week.
- F. Service Agreement: Service agents listed in the Operation and Maintenance Manual must perform service as described above; repairs and/or replacements not made within the specified time will be corrected by other means and the Section 11 40 00 contractor is responsible for reasonable costs incurred.
- G. Defective Equipment: If within the first year of operation the piece of equipment has not been fully operational for 6 continuous months, the FSEC will replace the unit at their expense.

PART 2 PRODUCTS

2.01 QUALIFIED FABRICATORS

- A. Qualifications: Minimum five years' experience in similar work; produce custom fabricated equipment in one shop.
- B. Authorized Equipment Fabricators: The following companies are approved custom stainless steel equipment fabricators; request for substitutions can be made per Article 1.06.

Albers Commercial Kitchen Services
(651) 265-0603

Florida Stainless Fabricators, Inc.
(407) 971-8280

Keas Stainless Steel Fabricators, Inc.
(405) 232-0869

Servco Companies
(314) 781-3189

- C. Authorized Quartz Surface Fabricators: Minimum five years' experience fabricating quartz surface materials or granite using water-cooled cutting tools; certified fabricator/installer, certified in writing by the manufacturer.
- D. Coordination Requirements: Field dimensions and installation must be done by a fabricator approved person/company.

2.02 MATERIALS

- A. General: Furnish new materials free from faults and defects in materials and workmanship
- B. Metals
 - 1. Gauges: U.S. Standard Gauge; not more than 5% plus or minus from thickness indicated below:

Gauge	Thickness	Gauge	Thickness
10	0.1406	16	0.0625
12	0.1094	18	0.0500
14	0.0781	20	0.0375
 - 2. Stainless Steel: ANSI Type 304, number 4 finish, 180 grit, extra low carbon, non-magnetic, 18% chrome, 8% nickel, corrosion resistant alloy steel; flat, first grade and free of buckles and surface imperfections
 - 3. Galvanized Sheet Steel: Zinc coating, smooth, free of runs, blisters, excess spelter and uncoated spots or patches; recoat welded or damaged members; finish with two coats of epoxy based gray Hammertone paint
 - 4. Aluminum Sheet Metal: ASTM sheet and plate; ASTM extrusions; 0.40 mil clear anodized finish unless otherwise specified
 - 5. Stainless Steel Tubing: Type 304, number 4 finish 180 grit; seamless or welded; 16 gauge; annealed, ground smooth and polished; heat treated and properly quenched to eliminate precipitation; drawn true to size and roundness and polished with concentric grain
 - 6. Black Iron Angle: Ductile in quality; free of hard spots, runs, checks, cracks and other surface defects; clean and properly prime with rust inhibiting primer; finish with two coats of epoxy based gray Hammertone paint

- C. Sealant:
 - 1. General: Dow Corning, Silastic or G.E. RTV 108 silver color; Type S Grade NS, Class 25; comply with Food and Drug Administration Regulation 21 CFR 177.2600 for food contact areas or equal by Kason 3700 Series Rubbaseal silicone
 - 2. Walk-in Penetrations: Low expansion, closed cell polyurethane foam
- D. Glass: Tempered 3/8" thick, unless noted otherwise
- E. Plastics: Polycarbonate or acrylic as specified; 1/4" thick
- F. Cutting Board: Richlite R50 or equal by Paperstone leather or per item specification, 1/2" thick; size as specified; 1" diameter finger hole when used below drawers
- G. Bolts, Screws and Nuts: Unacceptable on exposed surfaces; use same composition as the metal to which they are applied; space to insure suitable fastening and to prevent bulging of the metals fastened; cap threads with a zinc plated combination hexnut-lockwasher; cap screw threads that are not visible or readily accessible with a standard lock washer and nut; wherever bolts or screws are welded to the underside of trim or tops, neatly finish the reverse side; depressions at these points are not acceptable
- H. Rivets: Unacceptable as a method of fastening
- I. Sound Deadening
 - 1. Tape Sealant: Schnee Morehead, Inc., Model SM5227 Tacky Tape or Component Hardware Model Q85-5225 Tacky Tape
 - 2. Spray- On: Sink bottoms only; do not coat beyond sink front cove

2.03 FABRICATION - GENERAL

- A. Final Coordination: After approved shop drawings are issued, communicate subsequent changes to the Owner's representative before fabrication begins.
- B. Quality Standards: Include necessary reinforcing, bracing, welding, number and spacing of uprights and crossmembers for adequate strength; construct tops, shelves, exterior panels, doors and drainboards of a single metal sheet when possible; except where removable, secure flat surfaces to vertical and horizontal bracing members by welding or other approved means to eliminate buckle, warp, rattle and wobble; equipment subject to rattle or wobble is not acceptable; overlapping materials are not acceptable; unless specified, exposed joints on countertops, cabinet bases and overshelves are not acceptable.
- C. Welding: Heliarc method; same composition as materials welded; complete welds, strong and ductile, with excess metal ground off and joints finished smooth to match adjoining surfaces; free of mechanical imperfections such as gas holes, pits, runs and cracks; same finish as adjoining surfaces.
 - 1. Spot Welds: 3" maximum spacing
 - 2. Tack Welds: Minimum 1/4" welding material at 3" maximum spacing
- D. Butt Joints: Unacceptable as a method of fastening on fabricated and manufactured equipment
- E. Tops: 14-gauge seamless stainless steel; fully weld with edges as specified; pitch drainboards 1/4" per foot; 1" maximum pitch
 - 1. Edges: Detail SD-1 and as specified
 - 2. Backsplash: Detail SD-2; continuously weld rolled edges abutting splashes
- F. Sinks: Detail SD-9 & SD-10

- G. Grain of Polishing: Run in the same direction on all horizontal and on all vertical surfaces; where table or sink tops join at right angles, terminate the finish in a mitered edge; polish grain consistent in direction throughout the length of the backsplash and sink compartment.
- H. Framework
 - 1. Draintables and Worktables: Detail SD-3
 - 2. Serving Counters and Cabinet Bases: Detail SD-7, SD-8 & SD-71
- I. Counter/Table Construction
 - 1. Legs: Detail SD-4
 - 2. Crossrails: Detail SD-4
 - 3. Undershelves:
 - a. Welded: Detail SD-5
 - b. Removable: Detail SD-6
- J. Cabinet Construction: Inaccessible open areas are not acceptable; no exposed shelf standard screws
 - 1. Standard Construction: Detail SD-7, SD-26 & SD-28
 - 2. Piece Construction: When specified, Detail SD- 8 & SD-27
 - 3. General
 - a. Sink Enclosure: Detail SD-12, SD-12a & SD-13
 - b. Utility Curb: Detail SD-30
 - c. Channel Base: Detail SD-77; coordinate recessed areas in bases; inaccessible open areas are not acceptable
 - d. Access Panels: Detail SD-29
- K. Doors
 - 1. Hinged Solid: Detail SD-17; door face flush with cabinet body
 - 2. Sliding: Detail SD-21; removable for cleaning
 - 3. Hinged Louvered: Detail SD-19 or 20; door face flush with cabinet body
 - 4. Hinged Perforated Panel: Detail SD-19A; door face flush with cabinet body
- L. Drawers: Detail SD-14; drawer face flush with cabinet body
- M. Elevated Shelves:
 - 1. Wall Shelves: Detail SD-25
 - 2. Table Mounted Shelves: Detail SD-22, SD-23 & SD-24
- N. Built In Equipment: Install per manufacturer's recommendations, Article 2.11 and project details.
 - 1. General: Coordinate to provide adequate ventilation, service access and support structure; submit written notification of any design conditions that are likely to prevent proper operation or that void equipment warranty; provide supplemental fans if required for proper operation; equipment contractor is responsible for proper operation of equipment
 - 2. Food Wells: Connect drainlines to $\frac{3}{4}$ " diameter manifold and extend to a ball valve; provide chrome plated handle for drain valve and locate in stainless steel recessed cup in counter mullion; countertop temperature greater than 175°F within 2" of well opening is not acceptable
- O. Counter Mounted Equipment: Ferrule openings to accommodate cords, wiring, and/or piping.

2.04 FABRICATION – REFRIGERATION

2.05 HARDWARE COMPONENTS

- A. Cap Nuts: Component Hardware Model Q31 Series with lock washer
- B. Casters: 5" diameter polyurethane tire swivel casters; grey tire; minimum 250# capacity; NSF approved; models as follows.
 - 1. Stem Caster: Jarvis & Jarvis Model 5-40-213G-19A or Component Hardware Model CMS4-5RPB
 - 2. Stem Caster with Brake: Jarvis & Jarvis Model 5-40-213G-VL-19A with Vertilok brake or Component Hardware Model CMS4-5RBB with brake
 - 3. Plate Caster: Jarvis & Jarvis Model 5-30-213G-PLT2 or Component Hardware Model CMP1-5RPB
 - 4. Plate Caster with Brake: Jarvis & Jarvis Model 5-30-213G-VL-PTL2 with Vertilok brake or Component Hardware Model CMP1-5RBB with brake
- C. Drain Valve Recessed Cup: Vollrath, Model 47536.
- D. Drain Valve Handle: Chicago, Model 634; 3" diameter, four arm metal cross handle.
- E. Glass Capping: Component Hardware Model B70-1001; stainless steel.
- F. Locks: Component Hardware Model P30 Series; stainless steel faced; master keyed
- G. Pot Rack Hooks: Component Hardware, Model J79-4115, single prong; Model J77-4401, double prong; stainless steel.
- H. Switch/Receptacle Housing
 - 1. Recessed: Component Hardware Model R73 1210
 - 2. Pedestal: Component Hardware Model R58-1010
- I. Cash Drawer Assembly without Tray: Component Hardware Model S95-Y001

2.06 MILLWORK

- A. Materials
 - 1. Core Material: Medex exterior resin medium density fiberboard; conform to ANSI A208.2.3.3.4, as manufactured by MEDITE Corporation (Ph: 503/773-2522) or equal by Norbord MDF-MR (Ph: 800/367-6338)
 - 2. Plastic Laminate: NEMA LD3 1/16" Type I general purpose, Grade 10, color-through and high pressure; color, pattern, and finish as specified
 - 3. Backing Sheets: NEMA LD .020" thick, Type V, Grade 91 plastic laminate; apply on all surfaces not covered with plastic laminate; coordinate color with exposed surface color; comply with NSF Standard 35
 - 4. Adhesive: Formica 100 or 150
 - 5. Grain/Pattern: Coordinate on all equipment furnished under this section so that grain/pattern runs in same direction throughout project
 - 6. Wood Frames and Counter Edges
 - a. Exposed: Species, grade and finish per item specification or detail
 - b. Unexposed: Solid, choice white pine free from knots and defects
 - 7. Edge Banding: Doellken PVC 3mm thickness with beveled edge, color to match adjacent plastic laminate
- B. Construction: Detail SD-171, SD-172, SD-173 & SD-174; 1977 AWI Premium Grade Standards; factory assemble parts and prefinish; flush type fronts and overlapping ends; 3/4" core material base cabinet, ends and dividers with corner joints between frame members fully lock jointed, glued and screwed; dado and glue cabinet backs into sides and bottom; scribe

countertops and backsplashes; secure countertops to base cabinet from underside; fully cure surfaces prior to installation.

C. Hardware

1. General: Utilize expandable dowels for screws on all cabinet hardware installed on MDF
2. Hinges
 - a. Standard: Grass Institutional Series MB8000, 180°-270° opening, concealed casework hinges or approved equal by Blum; utilize doweled cup and hinge screws when installed on MDF
 - b. When Specified: Component Hardware Model M75-5003
3. Catches: Only required with Component Hardware hinge, either is acceptable
 - a. Non-Magnetic: Component Hardware Model M22-2420; adjustable tension
 - b. Magnetic: Component Hardware Model M30-2400; heavy duty; self-aligning
4. Pulls: Hafele, Model 124.02.920, anodized silver finish, Component Hardware Group, Model P46-1010, brushed stainless or as specified
5. Locks: Component Hardware Model P30 Series; stainless faced; master keyed as specified
6. Legs: Component Hardware Model A77-5048-C stainless steel with adjustable hex foot.

D. Trayslide and Counterfront: See project detail.

1. Panels: Easily removable without the use of tools; finish edges to match front surface
2. Louvered Panel and Door: Horizontal hardwood slats mounted inside panel frame; slats canted at 45° angle; space slats 3/4" apart; cover front and exposed top with finish material; cover unexposed areas with the specified backing sheet
3. Hinged Access Door: Locate where shown; finish edges to match front surface

E. Quartz Composite Materials

1. Quartz Composite: Zodiaq Quartz Surfacing, Cambria Quartz Surfacing, or Silestone Engineered Stone as detailed; NSF/ANSI 51 Certified for food contact; 3 cm thickness; color, finish and edges as indicated on elevations and details;
2. Joint Adhesive: As recommended by manufacturer; apply epoxy-type joint adhesive such as Akemi North America in accordance with specified quartz manufacturer recommendations; tinted to match quartz surfacing; silicone joint seaming is not acceptable
3. Substructure Mounting Adhesive: Provide flexible silicone, epoxy or polyester adhesive of type recommended by manufacturer for application and conditions of use
4. Support/Backing: As detailed and per manufacturer's recommendations

F. Quartz Composite Fabrication and Installation

1. Fabrication: Use sheets of maximum width and length in accordance with manufacturer's fabrication recommendations; verify dimensions by field measurement prior to fabrication; inspect material for defects prior to fabrication; materials throughout project to be from same manufacturer batch number; variation in distribution of aggregates which are within manufacturer's tolerances
2. Seams/Joints: Joints to be flush, tight fitting, level and neat; indicate seam locations on shop drawings; provide appropriate seam reinforcement where exposed to loads; indicate required locations of support and blocking members on shop drawings; flexible expansion joint between hot and cold wells as recommended by manufacturer
3. Cutouts: Corner radius as recommended by manufacturer; minimum expansion gap between cutout and drop-in equipment as recommended by manufacturer; cutout support as recommended by manufacturer so weight of drop-in equipment is not supported by countertop; use Nomex insulation and aluminum foil tape as required by manufacturer at hot and cold cutouts; indicate locations and dimensions of cutouts on shop drawings
4. Mounting Sneezeguards: Mount sneezeguards to cabinet framework in accordance with manufacturer's recommendations; allow at least 1/4" gap between countertop and upright perimeter; provide escutcheon cover to match finish on upright
5. Trayslides: Provide adequate support and reinforcement in accordance with manufacturer's recommendations

6. Edge Details: Fabricate in accordance with manufacturer's recommendations; minimize visible seams; indicate edge profile and installation details on shop drawings
 7. Installation: Field install all quartz surfaces; install materials in accordance to manufacturer's recommendations; verify that substrates supporting quartz surfaces are plumb, level, and flat and that necessary supports and blocking are in place; seal front top edge of the cabinet to underside of quartz surface with 1/16" to 1/8" diameter bead of clear flexible adhesive around perimeter
 8. Cleaning and Protection: Remove masking and excess adhesives and sealants; clean exposed surfaces; protect surfacing from damage by other Sections
 9. Warranty and Care: Provide manufacturer warranty statement and maintenance instructions with the Operations and Maintenance Manual in Section 1.05G
 10. Authorized Fabricators: Fabrication/installation by manufacturer's certified fabricator with minimum of five years' experience fabricating quartz or granite; contact manufacturer for authorized fabricators and installers.
- G. Quartz Composite Contacts
Zodiaq Ph. 877.229.3935 www.zodiaq.com
Cambria Ph. 866.226.2742 www.cambriausa.com
Silestone Ph. 800.291.1311 www.silestoneusa.com

2.07 REFRIGERATION

- A. Walk In Refrigerator & Freezer Construction
1. Size: Per plan; 8'-10" minimum finished interior height; interior dimensions must accommodate shelving shown on plan
 2. General:
 - a. Wall and Ceiling Panels: 4" thick modular panels joined by not less than three (3), cam lock devices; cam locks accessed from inside walk in; cover access holes with gray plastic caps or white plastic to match white walls or ceiling; gasket to seal between panels; foamed in place CFC reduced urethane insulation, self-extinguishing UL classified according to ASTM and U B C 52.3 with flame spread of 25 or less and smoke development of 450 or less; R 25 or greater for refrigerators; R 32 or greater for freezers.
 - b. Ceiling Panels: Span shortest distance; utilize over-partition joined panels to minimize suspended ceilings; use 5" thick ceiling panels on spans greater than 15'-0"; maximum unsupported span of 17'-4"; suspended ceiling seams silicined and tar taped.
 - c. Finishes:
 - (1) Exterior Finishes: 22 gauge, Type 304 smooth stainless steel per Article 2.02B, where exposed; vertical grooves in panels are not acceptable; 22-gauge galvanized steel on unexposed surfaces
 - (2) Interior Finishes
 - (a) Wall Panels: .04" (before embossing) stucco embossed aluminum
 - (b) Ceiling Panels: .032" smooth aluminum with two coats of white, baked polyester enamel
 3. Wall Protectors (If Specified): 1-1/2" wide extruded aluminum rail with vinyl insert; field positioned; secure with unexposed sheet metal screws; end caps
 4. Diamond Tread Wall Overlay (If Specified): Provide 1/8" thick, 48" diamond-tread plate aluminum on exposed exterior; secure with oval countersunk head stainless steel screws and seal joints with silicone; install after stainless steel coved base and overlap stainless steel coved base by 1/2".
 5. Floor: See item specifications for conditions that apply to this project; prefabricated freezer floor panels must have R-28 rating or greater; verify that building is transit level prior to installing walk ins; notify Owner and Architect if sub floor ventilation or heating is required for walk in freezers; FSEC to verify that sub-floor installation conditions are acceptable prior to installing floor and box; identify any discrepancy in writing to Owner's Representative prior to installation

- a. Floorless with High Screeds: Per Detail SD-184, install extra high foam screeds in building floor recess; size screeds to extend above finished floor; coordinate height of wall panel with recess
6. Stainless Steel Coved Base: 22-gauge stainless steel on interior and exterior; 4" minimum height, 8'0" maximum length; 3/4" diameter cove; secure without exposed fasteners; overlap seams 1", miter joints at corners
7. Door: R-25 or greater for refrigerators; R-32 or greater for freezers; In fitting, flush mounted, not less than 34" x 78" clear opening; 22 gauge smooth stainless steel with no exposed fasteners; replaceable magnetic gasketing on top and sides; replaceable double sweep gasket at bottom; door jamb with replaceable heater wires; stainless steel reinforced heated threshold flush with finished floor; frame-mounted door heater control switch, label control switch as "door heater adjustment" with incremental temperature level indicator control markings (high, medium, low)
 - a. Vision Panel: Not less than 150 square inches; heated; triple pane glass
 - b. Hinges: Three, Kason Model 1346 with stainless steel cover; lift-off adjustable hinge; cam-lift spring- assisted self-closing hinges with 7-9/16" long strap; use Kason load chart to verify hinge model selection for specific door weight and width
 - c. Handle: Kason 1236 or Kason 27C with steel reinforced plate inside door panel or equal by Dent, lever action door handle with cylinder lock, padlock hole and interior safety release; provide common key for all walk-in doors
 - d. Door Closer: Kason 1092 or Kason 1094 with stainless steel hook
 - e. Kickplate: 1/8" thick diamond tread plate aluminum on both sides of door and frame; extend from door bottom to door handle; secure with counter sunk oval head stainless steel screws; seal perimeter with silicone
 - f. Incandescent Light: Delete lamp holder, bulb and shield entirely from door panel
 - g. Electrical: Wire in conduit concealed in door panel to junction box top of ceiling per Detail SD-191
8. Thermometer: -40°F to 99°F; flush-mount in door panel on latch side, 60" above floor; conceal wire through door panel to junction box on top of walk-in; provide 24-volt transformer; wire from display through door panel, and extend sensor a minimum of 6'-0" from the door, in multiple walk-in compartment application with interior door, locate display for inner compartment in outer compartment door panel below display for outer compartment
 - a. Digital Thermometer: Control Products, Inc. #TI-200-24
 - b. Digital Thermometer with Alarm: Control Products, Inc. TAI-2000D-24; audible and visible alarm; adjustable high and low set points; reset switch
 - c. Digital Thermometer with Alarm and Building Alarm Interface: Control Products, Inc. #TAL-2000D-24 or Modularm 75LC
 - d. Digital Thermometer with Building Management System Interface: Modularm 75LC Multi-Monitor with lockable security cover; 75LC Communicator remote notification and data logging system with eight connectors to link multi-monitors from each walk-in; IP-1 with illuminated push button for panic alarm and lights; MD-1 motion detector
9. Pressure Relief Port: Provide heated relief port in freezers and non-heated in refrigerators; locate in exposed wall
10. Lights: Provide minimum (or greater) foot candle light levels as required per current FDA food code or per local code requirements; see item specification for lights required for this project
 - a. LED: Component Hardware Model LED 48X762N; 52" long fixture; LED strips and driver replaceable without tools; 6000 lumens; locate as shown on plan; lighting intensity 10 foot candles or light level necessary to meet code.
 - b. Motion Sensor: Kason Model 1901A
11. Enclosure Panels & Trim Strips: Secure with no exposed fasteners; close space between walk in and ceiling with enclosure panels, maximize panel width and minimize panel height; if access is required, supply only two 36" wide removable panels; close vertical space between walk in panels and building walls with trim strips; enclosure and trim same material as wall panels per Detail SD-193.

12. Penetrations and Seams: Penetrations sealed with closed cell minimum expanding spray foam; seams sealed completely with Dow Corning 999A silicone glazing sealant to prevent condensation; tar tape on ceiling joints
 13. Receptacle for Heater Tape: Provide weather tight receptacle for freezer coil drainline heater
 14. Electrical: Prewire lights, alarm, door, window and port heaters, and receptacle for heater tape in ½" OD PVC conduit above walk in to junction box; ready for final connection by Electrical Trades per Detail SD-191; conduit within walk in is not acceptable
 15. Sprinkler Heads: When required, cut holes for sprinkler heads; provide stainless steel trim cap and seal holes per Article 2.07A, para. 13
 16. Installation: Factory representative supervision
- B. Refrigeration System: Complete operating system
1. Condensing Unit:
 - a. General: Hermetic compressor for units ¾ h.p. and under, semi-hermetic for units above ¾ h.p. to under 2 h.p. and scroll compressor for units at 2 h.p. and above (3 h.p. and above for water-cooled units) with internal starting contactors and thermal overload protection; condenser fan motors of under 1 h.p. must use electronically commutated (EC) motors or permanent split capacitor-type (PSP) motors; splash lubrication system using Mobil EAL Arctic 22 polyester synthetic refrigeration oil; oil sight glass; removable oil drain plug; label indicating oil used; high/low pressure control; suction line filter; suction and discharge service valves and copper/brass vibration isolators; receiver with fusible plug or relief valve; liquid line shut off valve; sight glass; molecular sieve filter dryer; main power supply fused disconnect switch
 - b. Air-Cooled: Air-cooled condenser with ball bearing permanently lubricated fan motor
 - c. Outdoor: Galvanized steel housing; crankcase heater and low ambient temperature controls required to ensure proper and efficient operation; fan cycling controls where ambient temperatures do not fall below 15° F; head master valve and oversized, heated, insulated receiver and lines where ambient temperatures fall below 15° F
 2. Evaporator: Forced convection style; match to condensing unit and suspend with air discharged parallel to the ceiling; lifetime sealed motors with inherent motor protection; evaporator fan motors of under 1 h.p. and less than 460 volts must use electronically commutated (EC) motors; enclose coil section and fans within aluminum housing
 - a. Refrigerator: Air defrost
 - b. Freezer and Low Temperature Refrigerator: Electric heater and controls for positive automatic defrost
 - c. Installation: Hang coils per manufacturer's recommendations using plastic or nylon threaded rod; spread coil weight evenly over ceiling panels; support long span ceiling panels as required
 - d. Refrigerator Drainline: Run copper drainline from evaporator to building floor drain; exit walk in as close to floor as possible; trap below coil inside of walk in; paint drainline with non-toxic paint, color to match wall panels; secure to walk-in wall
 - e. Freezer and Low Temperature Refrigerator Drainline: Trap outside of walk in; wrap with Frostex heater tape, manufactured by Chemlex and wired for continuous "on" operation; insulate with ½" thick Armaflex, Type AP insulation; secure to walk-in wall
 3. Refrigeration Lines: Interconnect evaporator to condensing unit; pipe between components as required with refrigeration grade, degreased, sealed, Type L-ACR, hard drawn copper tubing; slope horizontal runs toward condensing unit one-half inch per 10'-0" of length so that refrigerant or oil cannot drain back into evaporator from suction line; trap suction line as it exits evaporator coil; trap bottom of vertical runs of 5' 0" or more; if vertical run is 15'-0" or more, provide additional trap every 10'-0"; isolate refrigerant piping connected to compressors using copper/brass vibration isolators properly mounted at both ends; entire system cannot be exposed to atmosphere for more than (15) minutes; remove piping end caps just prior to soldering; braze all connections with Sil-Fos-15 solder; pass a continuous flow of nitrogen gas through the area being brazed or soldered; dismantle valves during soldering; clean pipe by pulling a clean cloth through its entire length; blow out piping prior to testing and insulating using dry nitrogen gas and pull a vacuum through the lines;

insulate refrigeration lines with Armaflex, Type AP insulation or equal by Rubatex, ½" thick for refrigerators and ¾" thick for freezers and low temperature refrigerators; verify acceptability of Armaflex or Rubatex with local codes; if refrigeration lines pass through a return air plenum, use Pittsburgh Corning Foamglass, 2" thick insulation when Armaflex is unacceptable; install sections of insulation with 10" long metal guards at hanger points; support piping at intervals of 8'-0" or less based on pipe size and code requirements, using Uni-Strut channel hangers; secure piping to channel hangers using galvanized clamps with neoprene grommets separating the piping from the clamps; seal all joints and seams with Armstrong 520 adhesive; for outdoor use, cover insulation with VentureClad, 1507B, black, VentureClad line set tape (www.venturetape.com) insulate and heat trace outdoor lines where temperatures fall below -15°F

4. Refrigeration Controls
 - a. Walk-in Refrigerator: Provide evaporator efficiency demand defrost controller for refrigerator evaporators, one per evaporator; controller mounted on front of coil without exposed conduit and labeled as "demand defrost controller"; temperature sensors to be factory installed within evaporator; controller to include microprocessor with onboard web server allowing system parameters to be monitored remotely utilizing standard TCP/ IP protocols HTML and XML communication; liquid line solenoid valve and thermostatic expansion valve for each evaporator
 - b. Walk-in Freezer and Low Temperature Refrigerator: Provide evaporator efficiency demand defrost controller for refrigerator evaporators, one per evaporator; controller mounted on front of coil without exposed conduit and labeled as "demand defrost controller"; temperature sensors to be factory installed within evaporator; controller to include microprocessor with onboard web server allowing system parameters to be monitored remotely utilizing standard TCP/ IP protocols HTML and XML communication; liquid line solenoid valve and thermostatic expansion valve for each evaporator; heater block-out relay to prevent heater from operating while compressor is running; heat exchanger and accumulator
 - c. Remote Reach-in and Roll-in Refrigerator and Freezer Systems: Provide time clock for positive "off" cycle air defrost
 5. System Operation: Complete system capable of maintaining the interior temperature specified
 - a. Refrigerators: 35° F operating temperature ± 2° with a 16-18 hour running time; design to operate at 100° F ambient temperature; size evaporator for 10° TD maximum
 - b. Freezers: -10° F operating temperature + 2° with an 18 hour running time; design to operate at 100° F ambient temperature; size evaporator for 10° TD maximum
 - c. Low Temperature Refrigerators: 28° F. operating temperature ± 2° with a 16-18 hour running time; design to operate at 100° F ambient temperature; size evaporator for 10° TD maximum
 6. Installation - see item specification condition that applies to this project
 - a. Interior: Mount on 1 ½" x 1 ½" x 1/8" angle iron rack; locate racks on floor or wall as specified in manner acceptable to the Owner's Representative; paint racks with two coats of rust inhibiting paint; provide two color etched plastic nameplate identifying equipment served by each refrigeration system
 - b. Exterior: Install and bolt down condensing units in location specified; coordinate requirements for mounting with Owner's Representative; roof curbs and penetrations are not in Section 11 40 00
 - c. Ventilation: Notify the Owner's Representative prior to installation if ventilation is not adequate
 - d. Diagrams: Furnish four (4) copies of refrigeration system control wiring and piping diagrams; frame one copy in Plexiglass and mount near refrigeration system location; chain one copy of operational maintenance manuals to system rack
- C. Buyout Equipment:
1. General: Coordinate adequate ventilation around all refrigeration/freezer compressors; submit written notification of any design conditions that prevent proper operation or void

equipment warranty; provide supplemental fans if required for proper operation; Equipment Contractor is responsible for proper operation of equipment

2. Remote Compressor: All components, interconnections and controls to provide complete operating system; condensing unit and lines per Article 2.07, para. B; coordinate refrigerant with buyout equipment; operator accessible on/off switch with pilot light; counter mounted compressor on slide-out channel frame; system to maintain code approved temperatures

2.08 EXHAUST HOODS

- A. Construction: Fully welded; all 18-gauge Type 304 stainless steel per Article 2.02, para. B stainless steel; #4 finish including exposed rear; exterior corners fully welded, ground and polished; length and depth per plan; provide duct collar; conceal plumbing and wiring; heat sensors installed at each hood duct collar to automatically activate the exhaust fan whenever cooking operations occur.
- B. Exhaust and Supply Requirements: Design for use and function at project engineered volume. Manufacturer's approved representative to measure volumes at multiple locations across the front face of the filters and average the readings and provide documentation to the consultant indicating both the measured air volumes and the design air volume at each duct collar.
- C. Code Compliance: See Article 1.04.
- D. Fire Damper (When Specified): Fusible link activated; Underwriters Laboratories listed; microswitch on duct collar for interwiring by Electrical Trades to shut down exhaust fan when damper is closed
- E. Lights: Provide minimum (or greater) foot candle light levels as required per current FDA food code or per local code requirements; prewire in conduit to junction box on top of exhaust hood; recessed vapor proof fixtures; tempered glass diffuser; wall mounted light and fan switches provided by others.
 1. LED: By hood manufacturer; suitable for grease hood; all fixtures for entire project must emit the same color.
- F. Design: See item specification for designs required for this project.
 1. Filter Hoods: Underwriters Laboratory classified stainless steel self-draining removable baffle filters; full length concealed self-draining trough pitched to built in recessed stainless steel grease cup; one filter removal tool per project
- G. Hood Installation
 1. Mounting: Height as shown, not to exceed 7' 0" above finished floor; free from vibration and distortion; coordinate with ceiling construction and ceiling heights; provide stainless steel hanger brackets, mounting angles and steel hanger rods
 2. Trim: Conceal fasten 18-gauge stainless steel trim or enclosure panels from top of hood to ceiling
 3. Interconnections: Make all plumbing and electric interconnections between adjacent sections, ready for singular final electrical and plumbing connections by respective trades
- H. Performance Guarantee: Hood manufacturer guarantees that the exhaust hood will capture grease, smoke and vapor from the cooking equipment shown on the plan at the specified air volumes without the addition of end panels, extensions to the hoods or other appurtenances. If after installation, testing and balancing the hood cannot effectively capture grease, smoke and vapor, it is the responsibility of the hood manufacturer to determine the reason the hood does not capture. If the manufacturer believes it is due to a defect in the building ventilation system, the hood manufacturer must identify the defect and prove it exists to the satisfaction of the General Contractor and Consultant. If the hood manufacturer cannot prove that a defect exists, the manufacturer will pay for all costs associated with modifying the exhaust hood, ductwork,

fan, controls, make-up air system, wiring and all associated work required for the exhaust hood to capture grease, smoke and vapor from the cooking equipment.

2.09 FIRE PROTECTION SYSTEMS

- A. General: The piping and detection lines built into the hood at time of fabrication include all piping, elbows, tee's, U.L. grease seals, conduit and corner pulleys for the protection of the hood plenum(s) and exhaust duct(s); fire system and components supplied by a local authorized fire protection company.
- B. Code Compliance: See Article 1.04; comply with NFPA 13, 17 and 96, local codes and Underwriters Laboratory; submit shop drawings to code authorities and secure approval prior to system fabrication.
- C. Systems: See item specification for system required for this project.
 - 1. Wet Chemical: Automatic and remote manual actuation; stainless steel control cabinet; cable and conduit; manual reset relay when applicable; installation and certification by factory trained personnel; mount control cabinets at the ceiling where shown on plan without exposed piping and conduit; minimum of one remote flush mounted manual pull station per system; coordinate location with local fire authorities and Electrical Trades
- D. Piping: Schedule 40 black pipe and fittings; all exposed under the hood piping chrome plated with no exposed threads.
- E. Nozzles at Fire Dampers: On wet chemical and dual agent systems, if hoods have fire dampers at duct collars, provide nozzles above and below fire damper; provide welded 3/8" diameter schedule 40 black iron sleeve in ductwork for nozzle above damper.
- F. Nozzles at Tilt Skillet/Braising Pans: On wet chemical systems, if hoods have Tilt Skillet, provide four 230 S(swivel) nozzles branched from two nozzle drops per manufacturer's listing; mount nozzles 46" above appliance; align front nozzle with front edge of Tilt Skillet and direct towards hazard zone; provide additional nozzles if required per listing.
- G. Gas Shut-off Valve: Automatic electrically or mechanically activated per item specifications; installed by Mechanical Trades; equip electrical gas shut-off valve with 15-second power interruption.
- H. Follow-up Inspection: Include two semi-annual maintenance checkouts of the system by factory authorized personnel conforming to the recommendations as outlined in the manufacturer's specifications and manuals; include permits, drawings, and testing by authorized fire protection company as required by authority having jurisdiction
- I. Warranty: See Article 1.07, para. E.

2.10 CONVEYORS - Not Used

2.11 UTILITY SERVICE REQUIREMENTS

- A. General
 - 1. Interconnections: Interconnect equipment utility lines between equipment sections to single connection point; materials consistent with specifications
 - 2. Performance: Install heated and motor operated equipment as required for efficient and stable operation; provide additional vents, guards, deflectors and other accessories as necessary whether or not such items are called for on the drawings or specifications; show additional modifications on the Shop Drawings; notify the Owner's representative in writing if design prevents proper operation prior to installation

3. All plumbing components must be lead-free to conform to Safe Water Drinking Act or more stringent state/local codes where applicable
4. Coordination: Verify incoming water pressure and temperature prior to equipment installation; provide written communication to Owner's Representative if conditions will adversely affect equipment operation

B. Plumbing

1. Fabricated/Manufactured Equipment

- a. Connection Access: Provide access openings for mechanical connections
- b. Piping: Install horizontal piping at the highest possible elevation and not less than 6" above floor; conceal piping; no tool marks or more than one visible thread at exposed fittings; bright polished chrome plate exposed piping and fittings
- c. Faucets: Available through Standard Plumbing Suppliers
 - (1) Prep Sink: Chicago 540-210661AB or equal by T&S B-0230-0CS8-CR
 - (2) General Use/Dump Sink (Splash Mounted): Chicago 540-210664AB or equal by T&S B-0331-CR
 - (3) General Use/Dump Sink (Deck Mounted): Chicago 201-201289AB or equal by T&S MOD-B2867-04CR
 - (4) Hand Sink (Splash Mounted): Chicago 631-210665AB or equal by T&S MOD-B0350-04CR w/B-0199-02
 - (5) Hand Sink (Deck Mounted): Chicago 786-E35XKABCP or equal by T&S MOD-2867-04CR
 - (6) Hand Sink (Electronic Eye, Splash Mounted): Chicago 116.214. AB.1 or equal by T&S EC-3101TMVHGF10
 - (7) Hand Sink (Electronic Eye, Deck Mounted): Chicago 116.213. AB.1 or equal by T&S EC-3100TMVHGF10
 - (8) Disposer Spray Rinse: Chicago 510-210666AB with wall bracket; or equal by T&S Model B-0133-CR-BC
 - (9) Food Well Fill Faucet: Chicago 349-206098AB with "hot" water handle or equal by T&S B-0208-CR
 - (10) Pot and Pan Sink: Chicago 540-210667AB or equal by T&S B-0231-BB-CR, modify with lever handle in lieu of cross
- d. Wastes: Adjust handle length when required
 - (1) Drain: Rotary handle commercial waste drain, with flat strainer or Component Hardware DBN-8000-SPI
 - (2) Drain with Overflow: Component Hardware E50-1000
- e. Accessories/Components: Chrome plate exposed fittings
 - (1) Water Inlets: Locate above the positive water level to prevent siphoning
 - (2) Backflow Prevention: Where conditions require a submerged inlet, provide a code approved check valve or backflow prevention device with the fixture to prevent siphoning; provide with T & S B-0461 angle slip flanges where plumbing penetrates backsplash; set flanges so top of vacuum breaker is 4" above splash or per local code; tighten set screws and silicone to backsplash.
 - (3) Steam Valves: Provide with composition hand wheels
 - (4) Steam Trap Assembly: Polished chrome plated steam trap assembly for equipment operated by direct steam to include gate valve, globe valve, "Y" strainer, thermostatic steam trap and required nipples, elbows and unions
 - (5) Steam Pressure Gauges: Provide on inlet side of all steam equipment
- f. Water Filters: Furnish 3M Water Filtration Products/Cuno or equal by Everpure complete filter assemblies for new and existing beverage and ice making equipment, steamers, combi ovens, proofers and rack ovens; individual filters for vendor furnished equipment provided by vendor; if item is not serviced through a central water filter furnish one additional set of filter cartridges with each filter system; install in an operator accessible location and indicate on rough in drawings; meet peak water flow requirements of equipment being furnished; test water quality at site and provide filter system to meet the equipment manufacturer requirements; if manufacturers quality

requirement cannot be met, provide documentation to foodservice consultant; provide permanent label on filter system, indicating equipment name of item served.

- g. Gas Quick Disconnect: Dormont, Series BPQ-2SR or equal by T&S Brass; 5'-0" long with suitable length restraint to facilitate cleaning; mount restraint to prevent it lying on floor; sized to accommodate connection on equipment
- h. Water Quick Disconnect: Dormont CMB37BP2Q or equal by T&S Brass Series HW; 5'-0" long or required length; sized to accommodate connection on equipment; one hose per connection.
- i. Gas Pressure Reducing Valves: Furnish appropriate models in 5" to 15" water column pressure limits for installation by Mechanical Trades if not factory installed
- j. Gas Fired Ranges: Provide rear gas connection and stainless steel manifold end caps unless otherwise specified
- k. Indirect Wastes: Extend the following indirect wastes/drainline: condensate hood, hot and/or cold well, fabricated counter/equipment, countertop ice machines, and specified beverage equipment

C. Electrical

- 1. General: Underwriters' Laboratories (UL) listed and comply with National Electrical Code, Standards of National Electrical Manufacturers' Association and American Institute of Electrical and Electronics Engineers; wire, wind or construct equipment to conform to available electrical services; furnish wiring and connection diagrams with equipment; provide equipment rigid and free from objectionable vibration and noise
- 2. Plug in Equipment: Furnish with cords attached; match plugs to receptacles; coordinating cords and plugs are the FSEC's responsibility; modify cord to a suitable length; on mobile equipment; provide suitable length restraint to facilitate cleaning; mount restraint to prevent it lying on floor.
- 3. Fabricated Equipment: Wire internally; furnish and install electric outlets and receptacles; run lines to a junction box, load center panel, starter, or disconnect switch; neatly tag wires showing item number, voltage characteristics and load information; interconnections between sections of fabricated counters by FSEC; furnish transformers for equipment unavailable in building electrical characteristics
 - a. Built In Equipment: Install and interconnect electric controls, switches, receptacles or other units furnished separately; wire in concealed conduit to accessible junction point
 - b. Motor Driven Appliances and Electric Heating Units: UL listed control switch or starter; exposed fused disconnect at motors larger than ½ hp or per code requirements; furnish line switches, fittings and connections when not part of the equipment for installation by Electrical Trades
 - c. Motors: Drip-proof, splash-proof or totally enclosed type, having a continuous-duty cycle; ball bearings except small motors which may have sleeve bearings; windings impregnated to resist moisture; enclose when exposed to dust, lint, water or other matter; mount on vibration elimination pads
 - d. Conduit: Code approved; conceal from view
 - e. Switches and Controls: Internally wire equipment to a thermostatic control and/or on/off switch with red indicator light; locate where shown; label function with plastic nameplates with not less than ¼" high white recessed lettering, and glue to adjacent surface
 - f. Cover Plates: Stainless steel
 - g. Outlets and Receptacles: Hubbell GF-15 and GF-20 ground fault interrupt outlets mounted where shown; wire to separate j-box; Hubbell #5251S and #5252S blue colored, surge suppression receptacles for point of sale equipment
 - h. Light Fixtures: Provide ballasts and 3500° Kelvin lamps at 82 CRI (Color Rendering Index); install non-breakable sleeves or coated lamps over food areas
 - (1) Wall Cabinet: Alkco, Series SS HP-100/200 Series/RSW
 - (2) Snack/Display: Hera STICKLED 12WW LED light; provide connecting cables, power supply cables and drivers as required for complete operation
 - i. Load Center: Locate in a separate compartment; prewire electrical components built into or set on the counter to panel; conceal conduit; UL listed, three phase, four-wire

with grounded copper buss; individual ground fault interrupt breakers for each service load; identify equipment serviced on each breaker; snap-in type circuit breakers with thermo magnetic quick make/quick break trip; provide circuit breakers rated at 10,000 KAIC interrupting capacity; size each breaker for 125% of the connected load; minimum of two spare 20 amp circuits; balance the loads on each phase; shunt trip breakers for items under hood; install panel in accordance with electrical codes and regulatory requirements.

PART 3 EXECUTION

3.01 SITE INSPECTION

- A. Field Measurements: Field measure foodservice space prior to equipment construction; conform to finished building conditions; submit written notification to Owners Representative if building conditions prevent equipment from functioning properly.
- B. Site Conditions: Verify that surfaces, prepared openings, finished building dimensions, and roughed in utilities are ready for equipment; coordinate equipment with building openings and dimensions; construct and deliver equipment in sections sized to site limitations.
- C. Utilities: Verify that voltages, air volumes, water temperature and water, steam, and gas pressures are as required for equipment; coordinate changes to ensure that equipment operates properly
- D. Acceptance: Beginning of installation means acceptance of site conditions.
- E. Responsibility: Assume the expense of changes to equipment and/or cutting and patching walls, partitions, ceilings and floors necessary to receive and successfully operate equipment, caused by failure to coordinate with site conditions.

3.02 INSTALLATION

- A. Qualifications: Minimum five years' experience in similar work, including field welding.
- B. Code Compliance: Conform to current Standards and Revisions established by the National Sanitation Foundation, Ann Arbor, Michigan, and to prevailing local codes and regulations.
- C. Sealing: Seal equipment that abuts a wall or other fixed equipment with silicone sealant per Article 2.02, para. C; 1/4" maximum width.
- D. Trim: Material to match equipment surface; trim equipment in wall openings, recesses or abutting a wall that cannot be effectively sealed with silicone; exposed fasteners are not acceptable; unacceptable as a substitute for accuracy and neatness.
- E. Schedule: Comply with the Owner's construction schedule; notify the Owner's Representative in writing, not less than thirty (30) days prior to the scheduled deadline if there is a reason the schedule cannot be met.
- F. Cutting and Patching: Cut and drill tops, backs, or other elements for service outlets, fixtures, and fittings; cut and patch foodservice equipment as required for equipment installation or service
- G. Protection: Protect equipment from damage.
- H. Damage and/or Loss: Replace or repair items that are lost or damaged prior to Owner acceptance

- I. Factory Supervision: Provide factory authorized service agent supervision for installation of job-site assembled conveyors, flight-type dishmachines and pulpers; include a thorough check of utility connections, pressures and overall installation.
- J. Custom Fabrication: The fabricator must conduct or approve the person/company responsible for taking field dimensions and installing their equipment.

3.03 EXISTING EQUIPMENT

- A. Disconnection: By appropriate trade; specified in other sections of these specifications.
- B. Reused: Disassemble, if required, remove and store equipment until ready for installation; reassemble and set existing equipment in place ready for final connection; install in the same working order as when removed from service; prepare and submit a packing list identifying each piece of equipment removed and any attachments or accessories removed with it; equipment that is not in good working order should be noted; submit packing list signed by the Owner's Representative and the Section 11 40 00 Contractor.
- C. Not Reused: Owner's Representative has the option to retain existing equipment; authorized demolition contractor will remove and dispose; obtain written authorization from Owner's Representative to remove equipment from site.

3.04 CLEANING

- A. Remove masking or protective covering from stainless steel and other finished surfaces; wash, clean and polish equipment; polish glass, plastic, hardware, accessories, fixtures and fittings prior to the inspection and acceptance of the Work. Install existing equipment in the same state as when it was removed from service.

3.05 DEMONSTRATION AND TESTING

- A. Demonstration: Schedule times with the Owner's Representative to provide instruction on the maintenance and use of each item; conveyor authorized service agent to demonstrate adjustment and maintenance procedures to Owner's maintenance staff and dishroom supervisor and demonstrate pump adjustment to detergent supplier; demonstrate operation to appropriate inspectors if required; verify that copies of all instructional, operational, maintenance manuals, charts and audio and video media have been provided at least two weeks prior to demonstration as required in Article 1.05, para. G.4.
- B. Testing: Test, regulate and put into proper operating condition; calibrate controls, including thermostats; coordinate dishmachine testing with detergent supplier; properly activate water filters per manufacturer's recommendations.
- C. Chart of Completion: Provide separate charts for demonstration and testing; include item number, description of equipment, date, person/firm responsible, and Owner's initials; provide charts to Owner, Owner's Representative, and Consultant prior to Owner's acceptance.

3.06 ITEM SPECIFICATIONS

- A. NOTE: Provide like equipment items (upright refrigeration, serving counters, display cases, kettles, and range match cooking equipment) and items that directly interface (hoods, raceways, fire protection systems/hood control panels) from same manufacturer. Provide common locks (when specified) on all equipment from same manufacturer.
- B. NOTE: Field dimensions and installation must be completed by a person/company approved by the custom fabricator.

- 1 MOP SINK
One
See Architectural Drawings; this item is not in the 11 40 00 Contract, include utility requirements on rough-in drawings
- 2 UTILITY SHELF W/MOP HANGER
One
Existing; relocate to position shown on plan
- 3 DETERGENT DISPENSING SYSTEM
One
This item is by Owner's Vendor and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings
- 4 DETERGENT SHELVING
One
Metro Industries MetroMax i Shelving *R103
A. Features: Shelves width and length shown on plan; four solid mat reinforced polypropylene shelves per section; 74" high polymer posts; 5" diameter corrosion resistant polymer swivel casters, delete donut bumpers
B. Installation: Verify that units fit within finished wall dimension; assemble with bottom shelf 10" above floor or per local health code requirements
- 5 OPEN NUMBER
- 6 LAUNDRY STORAGE SHELVING
Three
Metro Industries Super Adjustable Super Erecta Shelving or equal by Eagle Group *R103
A. Features: Shelves width and length shown on plan; five chrome wire shelves per section; 74" high chrome posts; no common posts
B. Installation: Verify that units fit within finished wall dimensions; assemble with bottom shelf 10" above floor or per local health code requirements
- 7 MOBILE WORKTABLE
One
Advance Tabco Model SS-244 or equal by Eagle Group or Metro Industries *R103
A. Features: Length and width per plan; 36" high; 14-gauge stainless steel top and understructure; stainless steel adjustable undershelf; stainless steel legs and underbracing; rolled rim edge; paint on sound deadening under top; four 5" diameter swivel casters, two with brakes
B. Drawers: Provide (1) Component Hardware drawer assembly, Model S90-0020-N with Drawer slides, Model S52 with stainless steel bearings, located per plan
- 8 DRYER
One
This item is by Owner and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings
- 9 WASHER
One
This item is by Owner and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings
- 10 OPEN NUMBER
- 11 OPEN NUMBER

- 12 DRY STORAGE SHELVING
Fifteen
Existing; relocate to position shown on plan
- 13 DRY STORAGE SHELVING
Nine
Metro Industries Super Adjustable Super Erecta Shelving or equal by Eagle Group *R103
A. Features: Shelves width and length shown on plan; five chrome wire shelves per section; 74" high chrome posts; no common posts
B. Installation: Verify that units fit within finished wall dimensions; assemble with bottom shelf 10" above floor or per local health code requirements
- 14 DUNNAGE RACK
Fourteen
New Age Model 2000 Series or equal by Channel Manufacturing, Inc. ED Series or Eagle Group WDR Series *R103
A. Features: Stationary unit; length and width shown on plan; aluminum construction; five lateral cross bars; minimum 2000-pound capacity; 12" high
B. Installation: Verify units fit within finished wall dimensions
- 15 OPEN NUMBER
- 16 OPEN NUMBER
- 17 WALK-IN REFRIGERATOR/FREEZER COMPLEX
One
Thermo-Kool or equal by Thermalrite (Plymouth, MN location) or Imperial *R103
A. Features: Hard rail construction only, complex size and shape as shown on plan, constructed and equipped per Article 2.07; digital thermometer with alarm and building alarm interface; LED lights per Part 2.07A
B. Floor: Standard Detail SD-184; FSEC to verify that floor conditions are approved prior to installing floor and box; provide any discrepancy in writing to Owner's Representative
C. Finishes: White stucco-embossed aluminum exposed exterior; white baked enamel over smooth aluminum ceiling; stucco-embossed aluminum interior walls; galvanized steel on unexposed exterior surfaces; 1/8" thick diamond tread plate, 48" high on exposed exterior; secure with countersunk oval head screws and seal joints and edges with silicone; provide diamond tread plate loose for installation at site (with the exception of the door) for coordination with coved base; install after stainless steel coved base and overlap base by 1/2"
D. Installation: Manufacturer Authorized Installer to install walk-in compartment
E. Electrical: 120V, 1 phase
- 18 REFRIGERATOR/FREEZER SHELVING
Thirty-five
Metro Industries MetroMax Q Shelving *R103
A. Features: Shelves width and length shown on plan; four reinforced polypropylene open grid shelves per section; 63" high MetroMax i polymer posts; 5" diameter polyurethane casters, delete donut bumpers
B. Installation: Verify that units fit within finished wall dimensions; assemble with bottom shelf 10" above floor or per local health code requirements
- 19 RACKED REFRIGERATION SYSTEM
One
RDT or equal by Cold Zone or Amco w/Copeland compressor unit; Heatcraft evaporator coil or equal by HTPG *R103
A. Features: Properly sized outdoor, air-cooled scroll racked refrigeration system to serve Items # 17 Refrigerator and Freezer, #69 Refrigerator and Freezer, and #168 Refrigerator;

properly sized evaporator coils; system equipped and installed per Article 2.07B (demand defrost system without time clock)

- B. Rack: Mount individual systems, pre-piped with dual pressure control, liquid line, filter dryer and sight glass; mount on factory assembled steel frame; prewired electrical load center panel with individual circuit breakers and contactors for each system; main disconnect all accessories for single point final utility connections; construct rack to fit on roof (verify exact location) with adequate service access and clearance to load center panel and size rack to allow 3 foot minimum aisle at front and end with load center panel
- C. Installation: By manufacturer's authorized installer; coordinate ventilation requirements with General Contractor to provide adequate ventilation
- D. Electrical: 208V, 3 phase (Compressors) 120V, 1 phase (Evaporator Coil) 208V, 1 phase (Evaporator Coil)

20 OPEN NUMBER

21 MOBILE RACK

Four

New Age Industrial Model 1331 or equal by Channel Manufacturing 400A Series *R103

Features: Aluminum construction; welded angle ledge pan slides to accommodate twenty 18" x 26" sheet pans on 3" centers; perimeter bumper, four 5" diameter polyurethane swivel casters, two with brakes

22 OPEN NUMBER

23 PAN STORAGE SHELVING

Four

Metro Industries MetroMax Q Shelving *R103

A. Features: Shelves width and length shown on plan; four reinforced polypropylene open grid shelves per section; 74" high MetroMax i polymer posts; 5" diameter polyurethane casters, delete donut bumpers

B. Installation: Verify that units fit within finished wall dimensions; assemble with bottom shelf 10" above floor or per local health code requirements

24 HAND SINK

Eight

John Boos Model PBHS-W-1410-8OC or equal by Advance Tabco Model Q72045 *R103

A. Features: Stainless steel construction; 7" high integral backsplash; chrome plated P-trap, wall-mounting bracket; strainer-type waste; stainless steel side supports; provide splash-mount hand sink faucet per Article 2.11B; faucet holes on 8" centers; add welded side splashes if required by code

B. Installation: Mount 34" above floor

25 OPEN NUMBER

26 OPEN NUMBER

27 PREP COUNTER W/SINKS

One

Existing; relocate to position shown on plan; include utility requirements on rough-in drawings; modify by providing new stainless steel undershelf at drainboard on left end of counter; open under sink; modify right end to accommodate Items #42 & #43 per Elevation

28 WALL SHELF

Two

Existing; relocate to position shown on plan; include utility requirements on rough-in drawings; modify by cutting shelf in half, finishing ends, and positioning per Elevation

- 29 OPEN NUMBER
- 30 OPEN NUMBER
- 31 DISPOSER
One
Salvajor Model 200-SA-6-MRSS or equal by In-Sink-Erator *R103
A. Features: Corrosion resistant aluminum alloy exterior with smooth polished finish; 2 HP motor; MRSS control with start/stop buttons and forward/reverse switch; sink assembly with 6-1/2" sink collar with stopper; vacuum breaker; angle flanges per Article 2.11B; time delay relay, solenoid valve, flow control valve
B. Electrical: 208V, 3 phase
- 32 SPRAY RINSE
One
Component Hardware Model KLF53-1100-BR or equal by Chicago Faucet Model 510-GCTFWSLABCP *R103
Features: Flexible stainless steel hose with strain relief; chrome-plated spring; insulated hose grip; wall mounting bracket; install tri-spray head Model KLF-Y104-A
- 33 UTILITY CART
Four
Existing; relocate to position shown on plan
- 34 WORKCOUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: (4) 120V, 1 phase
- 35 OPEN NUMBER
- 36 EXHAUST HOOD (TYPE I)
One
Accurex XXEW or equal by Captive-Aire *R103
A. Features: X-tractor stainless steel type hood; 18" front tapering to 24" back high canopy; without fire damper; two filter removal tool per project; inside mounted LED lights, every 3'; equipped per Article 2.08; heat sensors installed at each hood duct collar to automatically activate the exhaust fan whenever cooking operations occur (wiring to fan by Electrical Trades)
B. Size: Per plan
C. Exhaust Requirements: The project was designed on the basis of the exhaust air volumes listed below:
D. Exhaust: One duct collar measuring 12" x 9" at 1200 CFM at 0.516" static pressure
E. Hood must comply with code authority requirements, properly ventilate the cooking equipment beneath it and be compatible with the building ventilation systems; see mechanical engineer's drawings for further requirements; FSEC to provide stickers on all sides stating-PENETRATION WITH ANY FASTENERS VIOLATES AGENCY LISTINGS
F. Fire Protection: See Item #38
G. Installation: Mount bottom edge of hood, per Elevation; temperature interlock control panel installed tight to ceiling in location shown on plan; fan and lights control through Remote Keypad, Item #82
H. Electrical: 120V, 1 phase
- 37 STAINLESS STEEL WALL PANEL
One
A. Fabricate; construct per plan, Part 2 - Products, Elevation and SD-38

- B. Features: 18-gauge continuous stainless steel panel; stainless steel sheet to extend from 6" AFF, coordinate with height of floor covering, to bottom edge of hood; conceal fasten to wall and seal perimeter; neatly finish utility openings with escutcheon covers; maximize size of sheets used
- 38 FIRE PROTECTION SYSTEM
- One
Ansul R-102 System or equal by Pyro-Chem or Range Guard *R103
- A. Features: Wet chemical fire protection system per Article 2.09 to protect exhaust hood, Item #36 and the equipment below; automatic mechanically activated gas shut-off valve; remote manual pull station; coordinate shape of empty J-box in wall (with empty conduit) by Electrical for remote pull by FSEC, all conduit to be inside wall; tanks and nozzles per UL 300; stainless steel cabinet; provide wet chemical tanks properly sized to fit within 30" high stainless steel cabinet
 - B. Testing: Provide system pre-test by factory authorized personnel to ensure proper operation prior to final test by Fire Marshal
 - C. Electrical: 120V, 1 phase
- 39 CONVECTION OVEN, 2-SEC.
- One
Blodgett Model Zephaire 100-G-ES DBL *R103
- A. Features: Double compartment oven; natural gas operation; energy star; stainless steel front, top, and sides; dual pane thermal glass windows, stainless steel doors; porcelain enamel interior; five chrome plated racks; solid state digital controls with LED display cook and hold and Pulse Plus; 1/3 HP blower motor; two-speed motor; control area cooling fan; manifold gas connections; gas pressure regulator; gas quick disconnect hose with restraining chain per Article 2.11B; 4" low profile casters, front with brakes
 - B. Electrical: (2) 120V, 1 phase; cord and plug
- 40 OPEN NUMBER
- 41 2-BURNER RANGE W/CABINET
- One
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 42 MOBILE TRASH BIN
- Four
Rubbermaid Model FG2632 32 GRAY & 2640 Dolly or equal by Continental Commercial Products *R103
Features: 32-gallon capacity; venting channels; dolly; gray color
- 43 MOBILE COMPOST BIN
- Three
Rubbermaid Model FG2632 32 DGRN & 2640 Dolly or equal by Continental Commercial Products *R103
Features: 32-gallon capacity; venting channels; dolly; dark green color
- 44 WORKCOUNTER W/OVERSHELF
- One
- A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
 - B. Electrical: (6) 120V, 1 phase
- 45 OPEN NUMBER

- 46 SHEET PAN DOLLY
One
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings; existing tray and flatware unit, modify by removing flatware dispenser -unit can be used as a sheet pan dolly
- 47 SHEET PAN DOLLY
Four
Fabricate per Standard Detail SD-70 *R103
Features: Stainless steel all welded construction; bottom shelf with capacity for (77) 18" x 26" sheet pans; four 5" diameter polyurethane swivel casters.
- 48 WORKCOUNTER W/SINK
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: (4) 120V, 1 phase
- 49 WORKCOUNTER W/SINK
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: (4) 120V, 1 phase
- 50 OPEN NUMBER
- 51 MOBILE EQUIPMENT STAND
One
Existing; relocate to position shown on plan
- 52 20 QUART MIXER
One
Hobart Model HL200 Legacy Series or equal by Univex Model SRM20 *R103
A. Features: 20-quart planetary mixer; gray powder coat finish; #12 attachment hub; stainless steel 20-quart bowl; "B" beater; "D" wire loop whip; bowl scraper; ingredient chute; stainless steel bowl guard; manual bowl lift; 15-minute timer with automatic time recall; thermal overload protection; 1/2 HP motor; 3-speed shift on-the-fly controls
B. Electrical: 120V, 1 phase; cord and plug
- 53 80 QUART MIXER
One
Hobart Model HL800 or equal by Univex Model SRM80 *R103
A. Features: 80-quart planetary mixer; gray powder coat finish; stainless steel 80-quart bowl; "B" beater; "D" wire loop whip; "ED" dough hook; bowl scraper; ingredient chute; stainless steel bowl guard; power bowl lift; bowl truck; 50-minute timer with automatic time recall; thermal overload protection; 3 HP motor; 4-speed shift on-the-fly controls; floor model
B. Electrical: 208V, 3 phase
- 54 HORIZONTAL CUTTER/MIXER
One
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 55 WATER FILTRATION SYSTEM
One
Everpure or equal by 3M Purification-Cuno or OptiPure *R103
A. Features: High flow central water filtration system with prefilter and alarm; furnish one additional set of filter cartridges with each system; properly size filter system to accommodate Item #59, Proofer and (2) Items #63, Rack Oven

- B. Installation: Mount where indicated as close to the ceiling as possible to minimize exposed piping; coordinate system installation requirements with Mechanical Trades
 - C. Electrical: 120V, 1 phase; cord and plug
- 56 FIRE PROTECTION SYSTEM
One
Ansul R-102 System or equal by Pyro-Chem or Range Guard *R103
- A. Features: Wet chemical fire protection system per Article 2.09 to protect exhaust hoods, (2) Item #63, Rack Oven; automatic mechanically activated gas shut-off valve; remote manual pull station; coordinate shape of empty J-box in wall (with empty conduit) by Electrical for remote pull by FSEC, all conduit to be inside wall; tanks and nozzles per UL 300; stainless steel cabinet; provide wet chemical tanks properly sized to fit within 30" high stainless steel cabinet
 - B. Testing: Provide system pre-test by factory authorized personnel to ensure proper operation prior to final test by Fire Marshal
 - C. Electrical: 120V, 1 phase
- 57 FLOOR GRATE & FRAME
One
IMC Teddy Model FT with SG-ADA grating or equal by Gates or SteelKor *R103
- A. Features: Stainless steel standard floor trough, with seepage flange and weep holes to capture overflow; size and position per plan; provide optional stainless steel beehive strainer; built-in pitch towards waste; SG-ADA grating, with 7/16" clearance between each bar; 304 stainless steel grating construction with 3/16" x 1" high bars and 1/2" stabilizer rods welded at each joint; provide shop drawing
 - B. Installation: Coordinate location of waste outlets with Mechanical; furnish trough assembly to Mechanical for installation; trough must be flush with finished floor; proper location of the trough is the responsibility of the FSEC
- 58 HOSE STATION
One
T&S B-2312-CR MOD w/ B-0963, (2)1359-40, B-0056-H2A *R103
Features: Self-closing spray valve; quick disconnect socket; flex hose with polyurethane inner hose; mixing valve; vacuum breaker; hose hook; three quick connect nozzles, regular spray, jet spray and hose nozzle; delete B-0968 AVB, replace with B-0963 SVB and (2) 001359-40 Adapters; install at least 72" AFF
- 59 ROLL-IN PROOFER, 4 RACK
One
Baxter Model PW2E-60.5" D *R103
- A. Features: Four single end or side load capacity proofer; stainless steel exterior and interior; quick disconnect steam system; digital temperature display; solid state humidity controls; hold-open door feature; stainless steel interior and exterior coved base; (without floor or with stainless floor); interior light; water filter per Article 2.11B; provide stainless steel trim at opening in ceiling around proofer
 - B. Electrical: 120V, 1 phase (Controls)
208V, 3 phase (Heat)
- 60 OPEN NUMBER
- 61 OVEN RACK
Nine
Baxter Model BSR SB-20 *R103
Features: Heavy-duty 16-gauge stainless steel rack construction; single end load rack; capacity for (20)18" x 26" pans on 3" slides; four 4" diameter swivel casters; sized to fit into Proofer, Item # 59 and Rack Oven, Item #63

62 FLOOR GRATE & FRAME

One

IMC Teddy Model FT with SG-ADA grating or equal by Gates or SteelKor *R103

- A. Features: Stainless steel standard floor trough, with seepage flange and weep holes to capture overflow; size and position per plan; provide optional stainless steel beehive strainer; built-in pitch towards waste; SG-ADA grating, with 7/16" clearance between each bar; 304 stainless steel grating construction with 3/16" x 1" high bars and 1/2" stabilizer rods welded at each joint; provide shop drawing
- B. Installation: Coordinate location of waste outlets with Mechanical; furnish trough assembly to Mechanical for installation; trough must be flush with finished floor; proper location of the trough is the responsibility of the FSEC

63 RACK OVEN, 1-SEC.

Two

Baxter Model OV500G1-EE *R103

- A. Features: Single rack oven; capacity for one single oven rack; natural gas operation; stainless steel exterior and interior; self-contained steam generator; air flow system; insulated door with full-length window; standard rack lift system; self-adjusting rotor clutch; programmable digital controls; manual backup control; interior fluorescent light; pre-assembled panels with built-in leveling device; integral Type I exhaust hood with grease filters; automatic operation; Fire Protection System, Item #10; ventilator fan provided by Electrical Contractor; oven-powered connection point for automatic fan operation with interconnection from fan to oven provided by Mechanical Contractor; FSEC to provide stainless steel trim flange at opening in ceiling around oven and stainless steel enclosure panels from top of oven to ceiling; FSEC to provide stainless steel coved exterior base; water filter per Article 2.11B; coordinate building entrance requirements and provide split oven if requirements cannot be met
- B. Installation: Provide complete installation and start-up by factory authorized installers.
- C. Electrical: 120V, 1 phase (Controls)
208V, 3 phase (Heating Circuit)

64 DIVIDER ROUNDER

One

Gemini Model GBE-DR 4/36 Semi-Automatic Divider/Rounder or equal by Oliver Model 625 *R103

- A. Features: Manual dough dividing; powered rounding action; automatic motor switch; cast iron foot on wheels; stainless steel dividing knife; coated anodized aluminum fixed dividing disc; forward tilting system; 36-part divider, 1-4 ounce pieces
- B. Electrical: 208V, 3 phase; cord and plug

65 OPEN NUMBER

66 WORKCOUNTER

One

- A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- B. Electrical: (3) 120V, 1 phase

67 WORKCOUNTER W/RICHLITE TOP

One

- A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- B. Electrical: (3) 120V, 1 phase; 208V, 3 phase

- 68 MOBILE INGREDIENT BIN
Three
Rubbermaid Model FG360100 WHT equal by Cambro or Continental Commercial Products *R103
Features: Seamless construction; sliding hinged lid; integral scoop holder; casters; must fit beneath countertop as shown on plan
- 69 WALK-IN REFRIGERATOR/FREEZER COMPLEX
One
Thermo-Kool or equal by Thermalrite (Plymouth, MN location) or Imperial *R103
A. Features: Hard rail construction only; complex size and shape as shown on plan, constructed and equipped per Article 2.07; digital thermometer with alarm and building alarm interface; LED lights per Part 2.07A
B. Floor: Standard Detail SD-184; FSEC to verify that floor conditions are approved prior to installing floor and box; provide any discrepancy in writing to Owner's Representative
C. Finishes: White stucco-embossed aluminum exposed exterior; white baked enamel over smooth aluminum ceiling; stucco-embossed aluminum interior walls; galvanized steel on unexposed exterior surfaces; 1/8" thick diamond tread plate, 48" high on exposed exterior; secure with countersunk oval head screws and seal joints and edges with silicone; provide diamond tread plate loose for installation at site (with the exception of the door) for coordination with coved base; install after stainless steel coved base and overlap base by 1/2"
D. Installation: Manufacturer Authorized Installer to install walk-in compartment
E. Electrical: 120V, 1 phase
- 70 OPEN NUMBER
- 71 OPEN NUMBER
- 72 OPEN NUMBER
- 73 MOBILE WORKTABLE
One
Advance Tabco Model SS-240 or equal by Eagle Group, Metro Industries or John Boos *R103
Features: Length and width per plan; 36" high; 14-gauge stainless steel top and understructure; stainless steel adjustable undershelf; stainless steel legs and underbracing; rolled rim edge; paint on sound deadening under top; four 5" diameter swivel casters, all with brakes
- 74 BUN SLICER
One
Oliver Model 704-N or equal by Dutchess Bakers or DoughXpress *R103
A. Features: Gourmet bun slicer; stainless steel construction; 1/2 HP motor; 3" maximum product height; 6-1/2" maximum product width; blade braking system; soft touch door for gentle discharge of product; adjustable cutting blade; cut variety of product; quick release knob
B. Electrical: 120V, 1 phase; cord and plug
- 75 OPEN NUMBER
- 76 OPEN NUMBER
- 77 SHEETER/MOULDER
One
Oliver/Bloemhof Inc. Simplex Model 4-24-5 *R103
A. Features: Capacity from 1 ounce - 4 pounds; 40" long pressure plate; telescoping infeed tube; removable scraper assemblies; enclosed chain and sprocket drive; 4" diameter x 23"

long synthetic rollers and scrapers; 3/4 HP; polyester 24" wide belt; in-feed guard bar with automatic shut-off; 6", 9" and 12" x 40" long flat plates standard; verify with Owner if additional plates are required prior to ordering

B. Electrical: 120V, 1 phase; cord and plug

78 EXHAUST HOOD (TYPE I)

One

Accurex XXDW or equal by Captive-Aire *R103

A. Features: X-Tractor stainless steel, filter-type hood; 24" high canopy; double shell front; without fire damper; two filter removal tool per project; inside mounted LED lights, every 3'; equipped per Article 2.08; exhaust air balancing baffle; heat sensors installed at each hood duct collar to automatically activate the exhaust fan whenever cooking operations occur (wiring to fan by Electrical Trades)

B. Size: Per plan

C. Exhaust Requirements: The project was designed on the basis of the exhaust air volumes listed below:

D. Exhaust: Two duct collars, each measuring 26" x 9" for a total of 5406 CFM at 0.628" static pressure

E. Hood must comply with code authority requirements, properly ventilate the cooking equipment beneath it and be compatible with the building ventilation systems; see mechanical engineer's drawings for further requirements; FSEC to provide stickers on all sides stating-PENETRATION WITH ANY FASTENERS VIOLATES AGENCY LISTINGS

F. Fire Protection: See Item #81

G. Installation: Mount bottom edge of hood, per Elevation; temperature interlock control panel installed tight to ceiling in location shown on plan; fan and light control trough Remote Keypad, Item #82

H. Electrical: 120V, 1 phase

79 STAINLESS STEEL WALL PANEL

One

A. Fabricate; construct per plan, Part 2 - Products, Elevation and SD-38

B. Features: 18-gauge continuous stainless steel panel; stainless steel sheet to extend from 6" AFF, coordinate with height of floor covering, to bottom edge of hood; conceal fasten to wall and seal perimeter; neatly finish utility openings with escutcheon covers; maximize size of sheets used

80 OPEN NUMBER

81 FIRE PROTECTION SYSTEM

One

Ansul R-102 System or equal by Pyro-Chem or Range Guard *R103

A. Features: Wet chemical fire protection system per Article 2.09 to protect exhaust hood, Item #78 and the equipment below coverage for Tilting Fry Pan, Item #86, refer to Article 2.09 F; automatic mechanically activated gas shut-off valve; remote manual pull station; coordinate shape of empty J-box in wall (with empty conduit) by Electrical for remote pull by FSEC, all conduit to be inside wall; tanks and nozzles per UL 300; stainless steel cabinet; provide wet chemical tanks properly sized to fit within 30" high stainless steel cabinet

B. Testing: Provide system pre-test by factory authorized personnel to ensure proper operation prior to final test by Fire Marshal

C. Electrical: 120V, 1 phase

82 DEMAND CONTROL VENTILATION SYSTEM

One

Accurex Model Vari-Flow *R103

A. Features: System to automatically reduce exhaust and supply airflow quantities while maintaining hood performance; two variable frequency drives (VFD) with auto fan speed reducer during idle time, furnished and installed by Electrical Contractor; direct digital

- controls mounted in stainless steel utility cabinet; temperature sensors mounted in capture tank to modulate fan speed; remote mounted keypad with independent light and fan controls; each exhaust fan to operate independently; system has two exhaust fans (EF-1 & EF-4); additional fire contacts to service Items #38 and #81; BMS interface with remote monitoring ability (BACnetMSTP); provide shop drawing, showing all components, required locations, clearances and interconnections
- B. Systems: One system to service the hoods below:
System to service Exhaust Hoods, Items #36, and #78 and Fire Protection panels, Items #38 and #81; controls mounted on wall, per plan
 - C. Installation: Factory install and prewire components in exhaust hood; Electrical Contractor to wire from the controller to the VFD and from the VFD to the fan motors; Electrical Contractor to wire from room sensor to controller and from data port to building MAU system; complete energy-saving control system coordinated with Mechanical and Electrical Contractors; VFD's to be located within 100' of fans; VFD's located per engineers.
 - D. Testing: Assist Mechanical Contractor with start-up and testing of system; prepare report stating results of test and submit to Architect/Engineer.
 - E. Electrical: 120V, 1 phase (Touch Screen Controls)
- 83 COMBI OVEN, 2-SEC.
Four
Alto Shaam Model (2) CTP7-20G *R103
- A. Features: Two section combination oven/steamer; capacity for (7) 18 x 26 sheet pans and (14) 12 x 20 pans per section; two stainless steel side racks with seven pan supports per section; total of eight stainless steel wire shelves; natural gas operation; electronic ignition; boilerless steam system with heat exchange assembly; removable drip trays; PROtouch controls; multi-shelf timers; USB port; HACCP data access; single point core temperature probe; automatic tablet cleaning system; retractable spray hose; stacking hardware; heavy-duty swivel casters, front with brakes; mechanical start-up check; gas quick disconnect with restraining chain and water quick disconnect hoses per Article 2.11B; test water quality at site and provide water filter per Manufacturer's requirements and Article 2.11B
 - B. Electrical: (2) 120V, 1 phase; cord and plug
- 84 STEAMER, BOILERLESS, 2-SEC
One
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 85 OPEN NUMBER
- 86 TILTING FRY PAN, 40 GALLON
One
Cleveland Model SGL-40-T1 or equal by Groen *R103
- A. Features: 40 gallon capacity; 9" deep stainless steel pan; electronic thermostat; electronic spark ignition; spring assisted cover; high limit safety switch; hot and cold water fill faucet with swing spout and mixing valve; reinforced faucet mounting bracket; 2" tangent draw-off valve, position as shown on plan and Elevation; natural gas operation; gas pressure regulator; gas quick disconnect hose with restraining chain per Article 2.11B; open base design with four stainless steel legs with leveling feet
 - B. Electrical: 120V, 1 phase; cord and plug
- 87 FLOOR GRATE & FRAME
One
IMC Teddy Model FT with SG-ADA grating or equal by Gates or SteelKor *R103
- A. Features: Stainless steel standard floor trough, with seepage flange and weep holes to capture overflow; size and position per plan; provide optional stainless steel beehive strainer; built-in pitch towards waste; SG-ADA grating, with 7/16" clearance between each bar; 304 stainless steel grating construction with 3/16" x 1" high bars and 1/2" stabilizer rods welded at each joint; provide shop drawing

- B. Installation: Coordinate location of waste outlets with Mechanical; furnish trough assembly to Mechanical for installation; trough must be flush with finished floor; proper location of the trough is the responsibility of the FSEC
- 88 40 GALLON KETTLE
Two
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 89 OPEN NUMBER
- 90 OPEN NUMBER
- 91 ICE MAKER W/BIN
One
Manitowoc Model UY-0240A *R103
A. Features: 225-pound ice production capacity per 24 hours; half dice cubes; 80-pound storage bin; stainless steel exterior; luminice growth inhibitor; 6" high stainless steel adjustable legs; slide up, tuck under bin door; air-cooled condensing unit; front access controls; front breathing; water filter per Manufacturer recommendation and Article 2.11B
B. Electrical: 120V, 1 phase; cord and plug
- 92-105 OPEN NUMBER
- 106 TRAY CART
Five
Custom Fabricate or equal by Piper Products Model D160-33 *R103
Fabricate; construct per plan, Part 2 - Products and SD-127; Piper Product Model to be clad with plastic laminate to match counters & include bumpers on this project
- 107 SERVING COUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: 120/208V, 3 phase; load center panel "A"
- 108 PROTECTOR SHELF
One
BSI, LLC Z-Guard Model ZG9915 *R103
Features: 1" round diameter tubing; brushed stainless steel finish on all components; 3/8" tempered, rounded glass panels on adjustable brackets; 1" radius corners; 12" angled front glass panel; 14" horizontal top glass panel; top clips in lieu of brackets; modify with square end panels; position end panels on far ends only; heavy-duty flange undercounter mount (SSU3); 20-1/2" post height above counter; undercounter mount extension, welded to cabinet framework per SD-120
- 109 DROP-IN COLD PAN, 5-WELL
One
Low Temp Industries Temp-est Aire Model DI-2063TA-H *R103
A. Features: Circulating cold air refrigerated drop-in cold pan; stainless steel construction; 1/3 HP compressor; fully insulated; self-contained condensing unit; two fans; stainless steel drain with strainer; FSEC to extend to floor drain; accommodates five 12" x 20" pans; standard depth model; removable divider bars; remote on/off thermostatic controls mounted in counter per Elevation; provide flat flange with hugged edge; verify location and direction of condenser to ensure proper ventilation and serviceability; provide muffin fans as needed for proper ventilation; ship unit to Fabricator for installation in counter and coordination; provide shop drawing
B. Electrical: 120V, 1 phase; cord and plug

- 110 OPEN NUMBER
- 111 HOT FOOD WELL, 1-WELL
One
Wells Model MOD-100TD *R103
 - A. Features: Heavy-duty modular food warmer; stainless steel construction; insulated sides and bottom; accommodate one 12" x 20" steamtable pan; suitable for wet operation only; individual thermostatic control with "on" light; individual drain valve with screen, FSEC to provide master drain valve and extend to floor drain; flexible conduit and control panel
 - B. Electrical: 208V, 1 phase; cord and plug
- 112 DROP-IN COLD PAN, 2-WELL
Two
Low Temp Industries Temp-est Aire Model DI-2025TAH *R103
 - A. Features: Circulating cold air refrigerated drop-in cold pan; stainless steel construction; 1/3 HP compressor; fully insulated; self-contained condensing unit; one fan; stainless steel drain with strainer; FSEC to extend to floor drain; accommodates two 12" x 20" pans; standard depth model; removable divider bars; remote on/off thermostatic controls mounted in counter per Elevation; provide flat flange with hugged edge; verify location and direction of condenser to ensure proper ventilation and serviceability; provide muffin fans as needed for proper ventilation; ship unit to Fabricator for installation in counter and coordination; provide shop drawing
 - B. Insert: Custom Fabricate stainless steel insert, 26" high length sections, finger holes to lift out, perforated
 - C. Electrical: 120V, 1 phase; cord and plug
- 113 OPEN NUMBER
- 114 ROLL-THRU REFRIGERATOR, 2-SEC.
One
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 115 OPEN NUMBER
- 116 MOBILE RACK
Two
Existing; relocate to position shown on plan
- 117 WORKCOUNTER W/SINK
One
Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- 118 TRASH BIN
Four
Rubbermaid Model FG354060 GRAY or equal by Continental Commercial Products or Carlisle *R103
Features: 23-gallon capacity; 30" high; venting channels; molded-in handles and base grips; gray color
- 119 COMPOST BIN
Three
Rubbermaid Model FG354007 GRN or equal by Continental Commercial Products or Carlisle *R103
Features: 23-gallon capacity; 30" high; venting channels; molded-in handles and base grips; green color
- 120 OPEN NUMBER

- 121 OPEN NUMBER
- 122 ACCELERATED OVEN
One
Turbo Chef Model i3 *R103
A. Features: Stainless steel interior and exterior; ergonomic handle; dual motors, hot air convection and microwave; integral recirculating catalytic converter; variable speed blower motor; fully programmable, self-diagnostic control panel; include programming training and assistance; aluminum paddle, oven cleaner, oven guard, trigger sprayers and two Teflon baskets
B. Electrical: 208V, 3 phase; cord and plug
- 123 PASS-THRU REFRIGERATED/HEATED CABINET, 2-SEC.
Two
Traulsen Model ADH232WPUT-HHS or equal by Victory Ultra Spec Series or Continental Designer Line *R103
A. Features: Stainless steel exterior; aluminum interior; stainless steel thermal breaks; tubular heaters; 20 gauge stainless steel, self-closing half-height doors, hinged per plan; common door locks with other upright refrigeration on this project; five chrome plated shelves per refrigerated section, eight per heated section; automatic condensate evaporator; LED display; visual & audible alarm warnings; built-in digital thermometer; self-contained refrigeration system; automatically activated interior lights; 6" high stainless steel legs; stainless steel perimeter wall trim on both sides
B. Electrical: 120/208V, 1 phase; cord and plug
- 124 WORKCOUNTER W/SINK
One
Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- 125 OPEN NUMBER
- 126 WORKCOUNTER W/SINK
One
Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- 127 SERVING COUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: 120/208V, 3 phase; load center panel "B"
- 128 PROTECTOR SHELF SYSTEM W/HEAT
One
BSI, LLC Z-Guard Model ZG9915/ZG9930 *R103
A. Features: 1" round diameter tubing; brushed stainless steel finish on all components including housing; 3/8" tempered, rounded glass panels on adjustable brackets; 1" radius corners; 12" angled front glass panel; 14" horizontal top glass panel; top clips in lieu of brackets; modify with square end panels; position end panels on far ends only; 13" O.C. front to rear post dimension at end supports; Stealth warmer (Model 490) centered over Item #132; remote infinite controller; heavy-duty flange undercounter mount (SSU3); 20-1/2" post height above counter; undercounter mount extension, welded to cabinet framework per SD-120
B. Electrical: 208V, 1 phase

- 129 DROP-IN COLD PAN, 3-WELL
Four
Low Temp Industries Temp-est Aire Model DI-2037TAH *R103
A. Features: Circulating cold air refrigerated drop-in cold pan; stainless steel construction; 1/3 HP compressor; fully insulated; self-contained condensing unit; one fan; stainless steel drain with strainer; FSEC to extend to floor drain; accommodates three 12" x 20" pans; standard depth model; removable divider bars; remote on/off thermostatic controls mounted in counter per Elevation; provide flat flange with huggd edge; verify location and direction of condenser to ensure proper ventilation and serviceability; provide muffin fans as needed for proper ventilation; ship unit to Fabricator for installation in counter and coordination; provide shop drawing
B. Electrical: 120V, 1 phase; cord and plug
- 130 OPEN NUMBER
- 131 OPEN NUMBER
- 132 HOT/COLD PAN, 4-WELL
Two
Low Temp Industries Model QSCHP-4H *R103
A. Features: Stainless steel construction; fully welded and insulated pan; self-contained refrigeration system; thermal break between top and refrigerated interior; individually controlled wells; 500 watt heating system per well; wet or dry use; remote control panel with 30" wip, mount in apron of counter per Elevation; accommodates four 12" x 20" pans; removable divider bars; manifold individual well drains to a single drain connection, FSEC to extend to floor drain; provide loose brass ball valves for installation by FSEC; provide flat flange with huggd edge; modify flange width to cover counter thermal break; verify location and direction of condenser to ensure proper ventilation and serviceability; provide muffin fans as needed for proper ventilation; ship unit to Fabricator for installation in counter and coordination; provide shop drawing; two year parts and labor warranty
B. Modify with 6" flange between center 2 wells, per plan, to accommodate upright for BSI Protector Shelf
C. Electrical: 120/208V, 1 phase
- 133 SERVING COUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: 120/208V, 3 phase; load center panel "C"
- 134 PROTECTOR SHELF SYSTEM W/HEAT
One
BSI, LLC Z-Guard Model ZG9915/ZG9930 *R103
A. Features: 1" round diameter tubing; brushed stainless steel finish on all components including housing; 3/8" tempered, rounded glass panels on adjustable brackets; 1" radius corners; 12" angled front glass panel; 14" horizontal top glass panel; top clips in lieu of brackets; modify with square end panels; position end panels on far ends only; 13" O.C. front to rear post dimension at end supports; Stealth warmer (Model 490) centered over Item # 132; remote infinite controller; heavy-duty flange undercounter mount (SSU3); 20-1/2" post height above counter; undercounter mount extension, welded to cabinet framework per SD-120
B. Electrical: 208V, 1 phase
- 135 OPEN NUMBER
- 136 OPEN NUMBER

- 137 SERVING COUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: 120/208V, 3 phase; load center panel "D"
- 138 PROTECTOR SHELF SYSTEM
One
BSI, LLC Z-Guard Model ZG9915/ZG9930 *R103
Features: 1" round diameter tubing; brushed stainless steel finish on all components including housing; 3/8" tempered, rounded glass panels on adjustable brackets; 1" radius corners; 12" angled front glass panel; 14" horizontal top glass panel; top clips in lieu of brackets; modify with square end panels; position end panels on far ends only; 13" O.C. front to rear post dimension at end supports; heavy-duty flange undercounter mount (SSU3); 20-1/2" post height above counter; undercounter mount extension, welded to cabinet framework per SD-120
- 139 DISPLAY WARMER
Six
Hatco Model GR3SDS-39D *R103
A. Features: Dual slant heated glass shelves; tempered glass end panels; adjustable dividers; thermostatically controlled hardcoated heat base and glass shelf, dual heat source; fluorescent display lights; 5" protector shelf on Customer side, both upper and lower shelves; 4" adjustable legs; modify unit by removing stainless steel divider bars, customer doesn't want to use for displaying product
B. Electrical: 120/208, 1 phase; cord and plug
- 140 OPEN NUMBER
- 141 SERVING/ALA CARTE COUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: 120/208V, 3 phase; load center panel "E"
- 142 PROTECTOR SHELF SYSTEM
One
BSI, LLC Z-Guard Model ZG9915/ZG9930 *R103
Features: 1" round diameter tubing; brushed stainless steel finish on all components including housing; 3/8" tempered, rounded glass panels on adjustable brackets; 1" radius corners; 12" angled front glass panel; 14" horizontal top glass panel; top clips in lieu of brackets; modify with square end panels; position end panels on far ends only; 13" O.C. front to rear post dimension at end supports; heavy-duty flange undercounter mount (SSU3); 20-1/2" post height above counter; undercounter mount extension, welded to cabinet framework per SD-120
- 143 MOBILE WARMING CABINET
Two
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 144 WORKCOUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: (3) 120V, 1 phase
- 145 OPEN NUMBER
- 146 OPEN NUMBER

- 147 WORKCOUNTER
One
A. Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
B. Electrical: (2) 120V, 1 phase
- 148 REACH-IN REFRIGERATOR, 2-SEC.
One
Traulsen Model AHT232WUT-HHS or equal by Victory Ultra Spec Series, True Spec Series or Continental Designer Line *R103
A. Features: Stainless steel exterior, aluminum interior; stainless steel thermal breaks; 20-gauge stainless steel, self-closing, half-height doors, hinged per plan; built-in digital thermometer; automatically activated interior lights; self-contained refrigeration; automatic hot gas condensate evaporator; common door locks with other upright refrigeration on this project; 6" high stainless steel legs; five chrome-plated wire shelves per section; 4' cord and plug set
B. Electrical: 120V, 1 phase; cord and plug
- 149 EXHAUST HOOD (TYPE I)
One
Accurex XXDW or equal by Captive-Aire or Halton *R103
A. Features: X-Tractor filter-type hood; 24" high canopy; double shell front; without fire damper; two filter removal tool per project; inside mounted LED lights, every 3'; equipped per Article 2.08; exhaust air balancing baffle; heat sensors installed at each hood duct collar to automatically activate the exhaust fan whenever cooking operations occur (wiring to fan by Electrical Trades)
B. Size: Per plan
C. Exhaust Requirements: The project was designed on the basis of the exhaust air volumes listed below:
D. Exhaust: One duct collar measuring 17" x 9" at 1755 CFM at 0.526" static pressure
E. Hood must comply with code authority requirements, properly ventilate the cooking equipment beneath it and be compatible with the building ventilation systems; see mechanical engineer's drawings for further requirements; FSEC to provide stickers on all sides stating-PENETRATION WITH ANY FASTENERS VIOLATES AGENCY LISTINGS
F. Fire Protection: See Item #152
G. Installation: Mount bottom edge of hood, per Elevation; temperature interlock control panel installed tight to ceiling in location shown on plan; separate fan and light switches wall mounted in Owner accessible location
H. Electrical: 120V, 1 phase
- 150 OPEN NUMBER
- 151 STAINLESS STEEL WALL PANEL
One
A. Fabricate; construct per plan, Part 2 - Products, Elevation and SD-38
B. Features: 18-gauge continuous stainless steel panel; stainless steel sheet to extend from 6" AFF, coordinate with height of floor covering, to bottom edge of hood; conceal fasten to wall and seal perimeter; neatly finish utility openings with escutcheon covers; maximize size of sheets used
- 152 FIRE PROTECTION SYSTEM
One
Ansul R-102 System or equal by Pyro-Chem or Range Guard *R103
A. Features: Wet chemical fire protection system per Article 2.09 to protect exhaust hood, Item #149 and the equipment below; automatic mechanically activated gas shut-off valve; remote manual pull station; coordinate shape of empty J-box in wall (with empty conduit) by Electrical for remote pull by FSEC, all conduit to be inside wall; tanks and nozzles per UL 300; stainless steel cabinet located on end of exhaust hood; provide lift-off door; double

- pan back so there are no screws in hood; provide wet chemical tanks properly sized to fit within 30" high stainless steel cabinet
 - B. Testing: Provide system pre-test by factory authorized personnel to ensure proper operation prior to final test by Fire Marshal
 - C. Electrical: 120V, 1 phase
- 153 DISPLAY REFRIGERATOR, 1-SEC.
One
True Model GDM-26-HC~TSL01 or equal by Beverage Air *R103
- A. Features: Glass door merchandiser; door locks; single section; self-contained 1/3 HP bottom mount compressor; foamed-in-place insulation; black aluminum interior; stainless steel interior bottom; black laminated vinyl exterior; black bottom front grill; four epoxy-coated, black wire shelves; self-closing door, hinged per plan; LED interior lighting; 4" diameter swivel casters, two with brakes; illuminated sign panel, verify with Owner prior to ordering
 - B. Electrical: 120V, 1 phase; cord and plug
- 154 OPEN NUMBER
- 155 OPEN NUMBER
- 156 OPEN NUMBER
- 157 UNDERMOUNT SINK
One
Advance Tabco Model 1620A-12 or equal by Custom Fabricate *R103
- A. Features: Stainless steel construction; undermount sink bowl; 16" x 20" x 12" deep; deck-mounted general use faucet per Article 2.11B
 - B. Installation: Per manufacturer's requirements
- 158 ESPRESSO MACHINE
One
Bunn Sure Tamp 1-Step Automatic Espresso Machine *R103
- A. Features: Features: Stainless steel brew chamber; two hoppers; drink menu; adjustable cup height; refrigerated cabinet; provide manufacturer recommended water filter with replacement cartridge and Article 2.11B; cleaning tablets; include installation, calibration, training and three-year wellness/maintenance package (preventative maintenance visits at 3 and 9 months, plus 2 non-warranty service calls)
 - B. Electrical: 208V, 1 phase; cord and plug
- 159 OPEN NUMBER
- 160 OPEN NUMBER
- 161 SNACK SHELVING
Three
Metro Industries Super Erecta Designer Qwik Slot Shelving *R103
- A. Features: Shelf width and length as shown on plan; standard Super Erecta designer top/bottom shelves; five adjustable designer qwik-slot drop-mat shelves per section; 63" high posts with black post caps; 1" high shelf ledge on front of each shelf; black designer color on all components; (4) 5" casters with brakes, remove donut bumpers
 - B. Installation: Assemble with bottom shelf 10" above floor
- 162 P.O.S. SYSTEM
Four
This item is by Owner and is not in the 11 40 00 Contract; include utility requirements on rough-in drawings

- 163 MILK CABINET
Two
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 164 CONDIMENT DISPENSER
Six
Dispense-Rite Model HVCD-3BT *R103
Features: Polystyrene construction; three section; black color
- 165 OPEN NUMBER
- 166 FLATWARE DISPENSER
Six
Dispense-Rite Model CTSH-6BT *R103
Features: Countertop unit; durable polystyrene construction; 6 compartment; 13" x 10 $\frac{1}{8}$ " x 15 $\frac{3}{8}$ "; includes drop-in silverware holder inserts
- 167 NAPKIN DISPENSER
Six
This item is by Owner and is not in the 11 40 00 Contract
- 168 WALK-IN REFRIGERATOR
One
Thermalrite (Plymouth, MN location) or equal by Thermal-Kool or Imperial *R103
A. Features: Hard rail construction only; complex size and shape as shown on plan, constructed and equipped per Article 2.07; digital thermometer with alarm and building alarm interface; LED lights per Part 2.07A
B. Floor: Per SD-184; FSEC to verify that floor conditions are approved prior to installing floor and box; provide any discrepancy in writing to Owner's Representative
C. Finishes: White stucco-embossed aluminum exposed exterior; white baked enamel over smooth aluminum ceiling; stucco-embossed aluminum interior walls; galvanized steel on unexposed exterior surfaces; 1/8" thick diamond tread plate, 48" high on exposed exterior; secure with countersunk oval head screws and seal joints and edges with silicone; provide diamond tread plate loose for installation at site (with the exception of the door) for coordination with coved base; install after stainless steel coved base and overlap base by 1/2"
D. Manufacturer Authorized Installer to install walk-in compartment
E. Electrical: (2) 120V, 1 phase
- 169 OPEN NUMBER
- 170 OPEN NUMBER
- 171 REFRIGERATED DISPLAY CASE
Three
Structural Concepts Model B4732 *R103
A. Features: Self-service display case; length per plan; plastic laminate exterior including front, top and solid end panels; black lower front panel; black interior; mirrored interior end panels; pull down night curtain; four black shelves; LED shelf lights; self-contained Breeze refrigeration; clean sweep coil cleaner; condensate pan; on/off switch; floor drain; low profile casters; provide shop drawing for approval prior to fabrication
B. Electrical: 208V, 1 phase; cord and plug

- 172 MILK CABINET
One
Norlake Model AR124-A or equal by Beverage Air *R103
A. Features: Dual access; stainless steel hinged top lids and drop-down side lids; polyurethane insulation; exterior dial thermometer; cylinder locks; four swivel casters, two with brakes; heavy-duty wire racks; stainless steel interior
B. Electrical: 120V, 1 phase; cord and plug
- 173 MOBILE CASHIER STAND
Three
Custom fabricate; construct per plan, Part 2-Products and Standard Detail SD-123 *R103
A. Features: Size per plan; 34" height; 14 gauge stainless steel top; full plastic laminate front and end panels, color as approved by Consultant; full-depth stainless steel bottom shelf; 8" wide, flat, stainless steel lift-off/fold down trayside, mounted flush with top on both sides of counter on two units per plan and on one side of unit on the third counter per plan; convenience duplex receptacle in apron to serve Owners POS System, Item #162; stainless steel lockable cash drawer; hole in countertop to accommodate cords; polyurethane heavy-duty swivel casters, two with brakes; all components wired to a single common 9'-0" right-angle cord and plug set, with cord wrap, mounted below undershelf on Operator's side
B. Electrical: 120V, 1 phase; cord and plug
- 174 OPEN NUMBER
- 175 OPEN NUMBER
- 176 OPEN NUMBER
- 177 COMPOST BIN
Three
Rubbermaid Model FG262000 DGRN w/ 2640 Dolly or equal by Continental Commercial or Carlisle *R103
Features: 20-gallon capacity; dolly; dark green color
- 178 RECYCLING BIN
Three
Rubbermaid Model FG262000 BLUE w/2640 Dolly *R103
Features: 20-gallon capacity; dolly; blue
- 179 MOBILE TRASH BIN
Three
Rubbermaid Model FG262000 GRAY w/ 2640 Dolly or equal by Continental Commercial or Carlisle *R103
Features: 20-gallon capacity; dolly; gray color
- 180 MOBILE TRASH COUNTER
Three
Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- 181 TRAY RETURN W/SOILED DISHTABLE
One
Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details

- 182 DISPOSER
Two
Salvajor Model 200-SA-6-MRSS or equal by In-Sink-Erator *R103
A. Features: Corrosion resistant aluminum alloy exterior with smooth polished finish; 2 HP motor; MRSS control with start/stop buttons and forward/reverse switch; sink assembly with 6-1/2" sink collar with stopper; vacuum breaker; angle flanges per Article 2.11B; time delay relay, solenoid valve, flow control valve
B. Electrical: 208V, 3 phase
- 183 SPRAY RINSE
Two
Component Hardware Model KLF53-1100-BR or equal by Chicago Faucet Model 510-GCTFWSLABCP *R103
Features: Flexible stainless steel hose with strain relief; chrome-plated spring; insulated hose grip; wall mounting bracket; install tri-spray head Model KLF-Y104-A
- 184 EXHAUST DUCT RISER
Two
A. Fabricate; construct per plan, Part 2-Products and Elevation
B. Features: 18-gauge stainless steel vapor-proof welded construction; extend riser to 6" above finished ceiling, include stainless steel trim flange at ceiling
C. Installation: Install on dishmachine per Manufacturer's instructions
- 185 BOOSTER HEATER
One
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 186 DISHMACHINE
One
Existing; relocate to position shown on plan; include utility requirements on rough-in drawings
- 187 FLOOR GRATE & FRAME
One
IMC Teddy Model FT with SG-ADA grating or equal by Gates or SteelKor *R103
A. Features: Stainless steel standard floor trough, with seepage flange and weep holes to capture overflow; size and position per plan; provide optional stainless steel beehive strainer; built-in pitch towards waste; SG-ADA grating, with 7/16" clearance between each bar; 304 stainless steel grating construction with 3/16" x 1" high bars and 1/2" stabilizer rods welded at each joint; provide shop drawing
B. Installation: Coordinate location of waste outlets with Mechanical; furnish trough assembly to Mechanical for installation; trough must be flush with finished floor; proper location of the trough is the responsibility of the FSEC
- 188 CLEAN DISHTABLE
One
Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- 189 WALL SHELF
One
Existing; relocate to position shown on plan
- 190 OPEN NUMBER

- 191 MOBILE RACK DOLLY
Three
Piper Products Model 750 or Custom Fabricate *R103
Features: 14-gauge stainless steel construction; accommodates 20" X 20" racks; drainage hole; full perimeter bumper; four 4" diameter polyurethane swivel casters
- 192 HOSE REEL
Two
T & S Brass Model B-7122 CO1 w/B-2339-LR Control Cabinet *R103
A. Features: Retractable hose reel; stainless steel cover; HW-4B-36 flexible water connector to hose reel with quick disconnect; provide (1) each EB-0107 spray rinse, B-0108-H high flow spray rinse and spray gun MV-2522-44 with adapter 001359-40 with 30' of rubber hose; T&S Model B-2339-LR Reel Control Cabinet; code approved backflow preventer by Mechanical Trades; volume control and coupling
B. Installation: Furnish components to Mechanical for installation, coordinate plumbing requirements so that all piping is concealed in wall; mounting height per detail
- 193 EYE/FACE WASH STATION
One
T & S Brass Model EW-7656WC *R103
A. Features: Stainless steel recessed cabinet; swing down eye/face wash unit; one spray head; built-in flow control; stainless steel drain pan; universal emergency eyewash sign; spray head automatically activated when unit is pulled open
B. Installation: Install flush in wall with exterior panic bar at 48" maximum above finished floor for operation with spray heads at 34" above finished floor; hot and cold water mixing valve by Mechanical Trades; coordinate wall opening requirements with Architectural Trades
- 194 MOP SINK
One
See Architectural Drawings; this item is not in the 11 40 00 Contract, include utility requirements on rough-in drawings
- 195 OPEN NUMBER
- 196 UTILITY SHELF W/MOP HANGER
One
Advance Tabco Model K-245 or equal by Eagle Group *R103
Features: Stainless steel construction; 8" wide; two mop hangers; three rag hooks; mount over mop sink, Item #194, so mops do not interfere with sink use when positioned in mop hangers
- 197 POT & PAN SINK
One
Fabricate; construct per plan, Part 2-Products, Elevation and Standard Details
- 198 MOBILE WORKTABLE (**SHOWN ON SHEET A110G**)
Seven
Advance Tabco Model SS-306 or equal by Eagle Group or Metro Industries *R103
Features: Length and width per plan; (6) units 36" high and (1) unit 32" high for ADA station; 14-gauge stainless steel top and understructure; stainless steel adjustable undershelf; stainless steel legs and underbracing; rolled rim edge; paint on sound deadening under top; four 5" diameter swivel casters, all with brakes
- 199 OPEN NUMBER
- 200 OPEN NUMBER

201 WALK-IN REFRIGERATOR W/DISPLAY DOORS (CONCESSIONS)

One

Thermalrite (Plymouth, MN location) or equal by Thermo-Kool or American Panel *R103

- A. Features: Hard rail construction only, complex size and shape as shown on plan, constructed and equipped per Article 2.07; digital thermometer with alarm and building alarm interface; LED lights per Part 2.07A
- B. Display Doors: Anthony Model 101 or equal by Styleline Hybrid (field reversible); insulated perimeter frames; door and frame heat for condensation free doors; field reversible doors; tool for adjustment of door tension; self-closing hinged doors; width per plan, 75" height; double pane tempered safety glass; magnetic door gaskets on door; coordinate with Item #203 merchandising shelves; Opti Max 2 LED System, low-power option for maximum energy savings, 5 year warranty on light strip and driver
- C. Finishes: Pre-painted smooth galvanized steel, on front exposed exterior with display doors, color per Architect; white stucco-embossed aluminum exposed exterior; stucco embossed anodized aluminum on interior; galvanized steel on unexposed exterior; white enamel over smooth aluminum ceiling
- D. Floor: Per Standard Detail SD-184; FSEC to verify that floor conditions are approved prior to installing floor and box; provide any discrepancy in writing to Owner's Representative
- E. Installation: Manufacturer to install walk-in compartment; pre-wire all electrical components with in walk-in; wire display door lights to separate light switch on Operator side
- F. Electrical: 120V, 1 phase

202 REFRIGERATION SYSTEM (CONCESSIONS)

One

RDT or equal by Cold Zone or Amco w/Copeland compressor unit; Heatcraft evaporator coil or equal by HTPG *R103

- A. Features: Properly sized, outdoor, air cooled condensing unit, position as shown; properly sized evaporator coil; system equipped and installed per Article 2.07B (demand defrost system without time clock); install coil as tight to ceiling as possible without affecting operation
- B. Electrical: 120V, 1 phase (Evaporator Coil)
208V, 3 phase (Condensing Unit)

203 BOTTLED BEVERAGE SHELVING (CONCESSIONS)

Four

Anthony Gravity Flow Master or equal by Styleline *R103

Features: Provide gravity flow shelving; size to fit in front of walk-in display door; provide product separation rails as required for Owner's product; verify what type of product Owner uses for each rack prior to ordering, minimum of seven shelves per unit; provide product stops; shelving to be easily adjustable for various products and shelf heights

204 REFRIGERATOR/FREEZER SHELVING (CONCESSIONS)

Four

Metro Industries MetroMax Q Shelving *R103

- A. Features: Shelves width and length shown on plan; four reinforced polypropylene open grid shelves per section; 63" high MetroMax I polymer posts; 5" diameter polyurethane casters, delete donut bumpers
- B. Installation: Verify that units fit within finished wall dimensions; assemble with bottom shelf 10" above floor or per local health code requirements

205 DUNNAGE RACK (CONCESSIONS)

Five

New Age Model 2000 Series or equal by Channel Manufacturing, Inc. ED Series or Eagle Group WDR Series *R103

- A. Features: Stationary unit; length and width shown on plan; aluminum construction; five lateral cross bars; minimum 2000-pound capacity; 12" high
- B. Installation: Verify units fit within finished wall dimensions

206 HAND SINK (CONCESSIONS)

One

John Boos Model PBHS-W-1410-8OC or equal by Advance Tabco Model Q72045 *R103

- A. Features: Stainless steel construction; 7" high integral backsplash; chrome plated P-trap, wall-mounting bracket; strainer-type waste; stainless steel side supports; provide splash-mount hand sink faucet per Article 2.11B; faucet holes on 8" centers; add welded side splashes if required by code
- B. Installation: Mount 34" above floor

END OF SECTION