



SECTION 00 11 13: ADVERTISEMENT FOR BIDS

The Lansing School District will receive proposals from qualified contractors for the Kitchen Equipment projects at Gardner Elementary, Ebersole Center and Dwight Rich PK-8th Grade Building.

Work includes: Food Service Equipment

Proposals may be mailed or delivered in person to:

Lansing School District
Attn. Todd Coe
519 W. Kalamazoo
Lansing, MI 48933

Proposals must be received prior to **2:00 PM Thursday, March 12, 2026**. All proposals will be open publicly and read aloud at that time at the Lansing School District Administration Office, 519 W. Kalamazoo, Lansing, MI 48933. Proposals received after this time will not be accepted.

All proposals must be sealed in envelopes, plainly labeled "**Proposal for Food Service Equipment Projects, Bid Division: "A"**".

Any questions or RFI's should be submitted in writing to David Beckering; email: djb@beckering.com

A Virtual Pre-Bid Meeting will be scheduled for Tuesday, March 3, 2026 at 2:00PM. Attendance is strongly recommended. Google link: <https://meet.google.com/fdd-dbps-ugq>

A bid security in the amount of 5% of the bid in the form of a bid bond, certified or cashiers' check is required and payable to Lansing School District.

Performance, labor and material bond costs (which cover 100% of the value of the project) should be bid separately on the line provided on the bid form. Do not include the cost of PLM Bonds in your base bid.

Applicable Michigan sales and use tax apply to this project.

Prevailing wages DO NOT apply to this project.

Bidding Documents may be examined **after February 18, 2026** at:

Beckering Construction Inc.	650 - 44th Street SE, Grand Rapids MI 49548	(616) 532-8191
Colliers Engineering & Design	560 5 th Street NW, Unit 305, Grand Rapids, MI 49504	
Builders Exchange	678 Front Ave. NW, Suite 330, Grand Rapids, MI 49504	
Builders Exchange	1240 E Saginaw Street, Lansing MI 48906	
Builders Exchange	3431 E Kilgore, Kalamazoo MI 49002	
McGraw-Hill Dodge	401 Hall Street SW, Grand Rapids, MI 49503	
CAM Room	43636 Woodward Ave, Bloomfield Hills, MI 48302	

Bidding documents are also available using the following link below:

<https://www.dropbox.com/scl/fo/vlol69hoogrkmcixn2x5/AFigDzXkea975wg6MhGPDfo?rlkey=7gv5nkmhat4m8kbwxic3cf7nq&st=bkdn0r8d&dl=0>

The Owner reserves the right to accept or reject any or all bids and to waive any irregularities in proposals. Proposals shall remain firm for sixty (60) days from date of bid opening.



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The Owner reserves the right to accept or reject any or all bids and to waive any irregularities in proposals. Proposals shall remain firm for sixty (60) days from date of bid opening.



SECTION 00 21 13: INSTRUCTIONS TO BIDDERS

The following format and descriptions for the above project is to help each bidder understand, as a guide only, their specific bid division. Bidders should include all material, plus labor etc., unless it is specifically stated to furnish material only. The contents of this bidding guide are to be used as a guide only and will not alleviate the bidding contractors from errors or omissions due to the lack of bidding investigation, both in field checking or contract documents.

There are (3) schools involved with this Bid Package: Gardner Elementary, Ebersole Center and Dwight Rick PK-8; and Bidders have the option to bid on one, two or three of the projects noted in these documents.

Prevailing wages DO NOT apply to this project.

A Sworn Statement of Familial Relationship must be submitted with your bid form. Failure to provide this document will result in the rejection of your bid, pursuant to Section 1267 of the Revised School Code - MCL 380.1267.

All proposals shall be accompanied by Affidavit of Compliance – Iran Economic Sanctions Act in compliance with “Iran linked business” within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012. Proposals that are not accompanied by this Affidavit of Compliance will not be accepted.

Bids will be awarded on a lump sum basis and will be assigned as subcontractors to Beckering Construction Inc.

A 5% bid bond or certified check in the amount of 5% of the bid is required for this project. Performance, labor, and material bond costs should be bid separately on the line provided on the bid form. Do not include the cost of PLM Bonds in your base bid. If your bid amount is less than \$50,000, it is not necessary to provide an amount for the PLM Bond. If bonds are required, they must be written by companies which are authorized to do business in and are in good standing with the State of Michigan.

Please refer to specifications and plans for detailed scope of each division. All bidders are required to comply with Division 01 – General Requirements, as it relates to their scope of work.

RFI's are to be submitted in writing to djb@beckering.com. RFI's will typically be answered by addendum.

Base Bids and Alternate Bids shall be based on the Bidding Documents including approved substitutions, and on the Bidders' evaluations of the Project Site. However, the Owner invites Voluntary Alternates or Value Engineering suggestions consistent with the intent of the Bidding Documents. Such alternates and suggestions, if submitted, shall be listed in the spaces provided on the Proposal Forms.

All subcontractors will be required to follow state and federal regulations including OSHA and MIOSHA requirements. Safety will be enforced and safety meetings for on-site people will be required. It is the responsibility of all contractors to make sure that their employees on site are trained on how to handle asbestos.



All contractors are required to provide continuous housekeeping and clean-up. Beckering Construction will provide a dumpster for removal of miscellaneous debris. All contractors must plan to clean up their debris and move the debris to the dumpster. Major debris should be hauled away by the subcontractor that created the trash or spoils. Beckering Construction will not allow masonry or drywall debris to be placed in the dumpsters. All contractors must remove their own pallets from the jobsite.

All contractors are responsible for the entire set of plans and specifications including tables, schedules, notes and elevations. Bidders shall use complete sets of bidding documents in preparing proposals. Bidders are responsible for ascertaining that the bidding documents upon which their proposals are based are complete sets. Requests from bidders for clarification or interpretation of the bidding documents will be received by the Project Team until 3 days before the bids are due. Changes and corrections to the bidding documents will be made by Addendum and distributed to the bidders by email and/or fax.

The bid documents include the following specification sections that all contractors must abide by:

Section 01 25 00	Substitution Procedures
Section 01 40 00	Quality Requirements
Section 01 33 00	Submittal Procedures
Section 01 77 00	Close Out Procedures

The School District recently added a new Close Out Requirement. In addition to the standard paperwork noted in Division 017700, each contractor must prepare and submit a single flash drive with all close-out documents organized by folders for client use.

Bidders in contention for contract awards will be asked to attend a post-bid interview and submit post-bid information such as financial statements, list of similar size projects, foreman resumes and cost saving suggestions.

The project will proceed per the following tentative schedule:

Pre-Bid Meeting	March 3, 2026
Bids Due 2:00PM	March 12, 2026
Post Bid Interviews	March 13, 2026
Board of Education Approval	Late March
Pre-Construction Meeting	April 28, 2026
Work Begins	June 8, 2026
Substantial Completion Date	August 14, 2026
Punch List	August 15-20, 2026
Final Inspections	August 19, 2026
Owner Occupancy	August 20, 2026



SECTION 00 24 13: BID DIVISIONS / SCOPE OF WORK

The following Division is included in this Bid Package

Bid Division A Food Service Equipment



BID DIVISIONS / SCOPE OF WORK

Bidders are to include all necessary labor, material and equipment, etc. to complete their scope of work unless it is specifically stated to furnish material only. The contents of this bidding guide are to be used as a guide only and will not alleviate the bidding contractors from errors or omissions due to the lack of bidding investigation, both in field checking and contract documents. All bidders are responsible for reviewing the entire set of plans and specifications and all bid divisions to include the necessary coordination between the bid divisions. All bidders must review Division 1: General Requirements and comply with this portion of the specifications.

Bid Division A **Food Service Equipment**

Section 11 40 00

Please note that contractors may bid equipment for one school, 2 schools or all 3 schools and you may provide discount packages as you see fit.

As listed in this division, the Food Service Equipment Contractor shall furnish all labor, material, work equipment, transportation, accessories, taxes, etc. for a complete and continuous installation in accordance with the requirements of these plans and specifications and related documents. Removal of existing Food Service Equipment is included in this division.

The FSEC shall familiarize themselves with local conditions affecting the cost of the work and examine the site and all Food Service Equipment contract documents including Architectural drawings, and contract documents, all of which constitute the responsibility of the FSEC.

All stainless-steel tops, back splashes, trims, etc. as detailed on the documents are included in this division.

Schedule is a vital part of these projects. Projects will begin in the 2nd week of June 2026 and all work must be completed by the 2nd week of August 2026. If your firm cannot meet these schedule requirements that information should be noted on your bid forms.

Coordination with other subcontractors:

There is a substantial amount of prep work and final connections that are included in other contracts. The Food Service Equipment Contractor can assume the following services will be provided by other subs:

Plumbing/Mechanical: Will provide rough-ins and piping with stop valves, elbows, nipples, couplers, traps, waste vents, gas regulators for water, steam, gas, etc. and will also make final connections to the equipment. The plumber will also install all equipment accessories furnished by the FSEC. The plumber will provide the required water heater and piping unless noted otherwise and plumbing, mechanical and electrical subs shall disconnect and reconnect relocated equipment if applicable.

Electrical: Will provide rough-ins, controls, panels, switches and receptacles to match equipment cords and plugs, starters, junction boxes, light and fan switches, conduit, wiring, disconnects, etc. and make final equipment accessories as required by code.



General Trades: Will provide any concrete platforms, grouting of drip pans and floor troughs and any required floor recesses for piping or ducts as noted in FSEC shop drawing submittals.

After all food service equipment is installed, the FSEC shall inspect, startup, clean, adjust and test all equipment prior to owner acceptance.

The FSEC must include the cost to provide two 8 hour training sessions and a one year guarantee period for the owner.

The FSEC is responsible for scheduling the Health Department Inspectors and meeting the Inspector on site for the inspection.

A copy of the equipment schedule for each school is attached to this scope document.

This contractor must provide Operation and Maintenance Manuals and Owner orientation on equipment and systems as noted in the specifications. As-built drawings are a critical part of this contract and documents will be reviewed on a regular basis.

This contract includes all required layout, housekeeping, clean-up and final cleaning.

GARDNER ELEMENTARY
 FOOD SERVICE EQUIPMENT SCHEDULE

EQUIPMENT SCHEDULE

Item	Qty	Description
101	1	Walk-In Freezer
101A	1	Freezer Coil
101B	1	Freezer Compressor
101C	1	Freezer Coil Heat Tape
102	2	Utility Cart **
103	32	Shelving - Wire
104	2	Portable Table
105	1	Ice Maker w/ Bin
105A	1	Ice Maker Filter
106	1	Walk-In Cooler
106A	1	Cooler Coil
106B	1	Cooler Compressor
201	2	Trash Bin- By Owner
202	1	Prep Table
202A	1	Prep Table Filter
203	1	Cooks Table
203A	1	Cooks Table Filter
204	2	Hot Food Cabinet **
205	2	Work Table
206	1	Prep Table
206A	1	Prep Table Filter
207	1	Stainless Steel Cabinet

EQUIPMENT SCHEDULE

Item	Qty	Description
301	3	Convection Oven-Double Deck
302	2	Refrigerator
401	2	Hot Food Table
402	2	Utility Counter
402A	2	Utility Counter
403	2	Cold Food Table
404	2	Drop-In Frost Top
404A	2	Sneeze Guard
405	2	Milk Cooler **
406	2	Cashier Counter
407	2	Cash Register/POS- By Owner
501	1	Pot Sink
502	2	Hand Sink w/ Side Splashes
503	1	Dishwasher *
503A	1	Drain Water Tempering Kit *
504	1	Clean Dishtable
504A	1	Soiled Dishtable
505	2	Disposal
506	1	Dishwasher Hood *
506A	1	Exhaust Fan *

* Denotes Owners Existing Equipment to remain

** Denotes Owners Existing Equipment to be relocated

DWIGHT RICH PK-8

FOOD SERVICE EQUIPMENT SCHEDULE

Equipment Schedule

Item	Qty	Description	CW (in)	HW (on)	Indirect Drain	Volts	Ph	Amps Load	Equipment Remarks
101	5	Portable Table							S.S Undershelf & Casters
102	1	Ice Maker W/ Bin	0.5		FL SK	208	1	5.1	Pipe CW thru Filter then to Ice
102a	1	Ice Maker Filter	0.5						Pipe CW thru Filter then to Ice
201	1	Spare Number							
301	1	Spare Number							
302	2	Convection Oven-Double Deck				208	3	(2) 34.0	
303	1	Freezer				120	1	11.2	
304	1	Refrigerator				120	1	4.9	
305	1	Refrigerator				120	1	8.4	
401	2	Hot Food Table	0.5		FL SK	120/208	1	28.4	
402	2	Utility Counter							
403	2	Cold Food Table			FL SK	120	1	9.5	
404	2	Drop-In Frost Top				120	1	2.4	
404A	2	Sneeze Guard				120	1	1	
405	1	Milk Cooler				120	1	3.3	
406	2	Cashier Counter						10	Dedicated Circuit & Data
407	2	Cash Register/ POS - By Owner				120	1		
501	1	Spare Number							
502	1	Disposal	0.75	0.5		208	3	6.6	
503	1	Dishwasher Hood							Stainless Steel Duct by FSEC
503A	1	Exhaust Fan				120	1	10	Roof Curb by FSEC
504	1	Clean Dishtable							S.S Undershelf
504A	1	Soiled Dishtable			FL SK				
505	1	Water Softener & Filtration		0.5	FL SK				
506	1	Dishwasher		0.5	FL SK	208	3	109.6	90 GPH 110° HW from building w/ built-in Booster Heater
506A	1	Drain Water Tempering Kit	0.5		FL SK	120	1	5	Trades to Install

EBERSOLE CENTER
 FOOD SERVICE EQUIPMENT SCHEDULE

Equipment Schedule

Item	Qty	Description	CW (in)	HW (on)	Indirect Drain	Volts	Ph	Amps Load	Equipment Remarks
101	1	Portable Table							S.S Undershelf & Casters
201	1	Work Table							
301	1	Steamer & Stand	0.75		FL SK	208	3	42	
301A	1	Drain Water Tempering Kit	0.5		FL SK				Trades to Install
302	1	Convection Oven-Double Deck				208	3	(2) 34.0	
401	1	Hot Food Table	0.5		FL SK	120/208	1	28.4	
402	1	Utility Counter							
403	2	Cold Food Table			FL SK	120	1	8.6	
404	1	Spare Number							
405	1	Milk Cooler - Double Sided				120	1	3.3	
501	1	Pot Sink	(2) .5	(2) .5	FL SK				Pipe 2" Direct Waste to G.T.
502	1	Dishwasher		0.5	FL SK	208	3	109.6	90 GPH 110° HW from Built In Booster Heater
502A	1	Drain Water Tempering Kit	0.5		FL SK	120	1	6	Trades to Install



SECTION 00 41 00: BID FORM

BID DIVISION _____ DESCRIPTION _____

BIDDER'S NAME _____

LEGAL ADDRESS _____

PHONE (____) _____ FAX (____) _____ EMAIL _____

PROJECTS: Lansing School District - 2026 FOOD SERVICE Fund Projects

Gardner Elementary
333 Dahlia Dr.
Lansing, MI 48911

Ebersole Center
3400 2nd Street
Wayland, MI 49348

Dwight Johnson PK-8
2600 Hampden Dr.
Lansing, MI 48911

TO: Lansing School District
Attn: Todd Coe
519 W. Kalamazoo
Lansing, MI 48933

The undersigned, having carefully examined drawings and thoroughly perused specifications for the above named project; further, having visited the construction site to become fully familiar with all conditions affecting the work required by those drawings and specifications, prepared by Colliers Engineering & Design; hereby proposes to provide all materials, labor, services, etc., required thereby for the base bid sum of

1. BASE BID: Gardner Elementary

_____ Dollars (\$_____).

Includes all applicable taxes.

2. BASE BID: Erbersole Center

_____ Dollars (\$_____).

Includes all applicable taxes.

3. BASE BID: Dwight Rich PK-8

_____ Dollars (\$_____).

Includes all applicable taxes.



ADDENDA: Following addenda have been received, are hereby acknowledged, and their execution is included in bid sums listed herein.

No. ___ DATED _____ No. ___ DATED _____ No. ___ DATED _____

BID SECURITY: A bid security in the form of a bid bond or certified check, will be accepted. The amount of the bid security shall be 5% of the total bid.

PAYMENT AND PERFORMANCE BOND: Cost of payment and performance bond is not to be included in base price. Provide add price for payment and performance bond.

GARDNER ELEMENTARY ADD _____

EBERSOLE CENTER ADD _____

DWIGHT RICH PK-8 ADD _____

COMBINED BID ALTERNATES:

ITEM	ADD	DEDUCT
_____	_____	_____
_____	_____	_____

VOLUNTARY ALTERNATES: It is understood that the following voluntary alternates for materials and/or equipment specified, if accepted by Owner, will be added to, or deducted from base bid. (Attach additional page if required.)

ITEM	ADD	DEDUCT
_____	_____	_____
_____	_____	_____
_____	_____	_____

FEES FOR ADDITIONAL WORK: For any additional work performed upon authorization of Owner, following fees will be used:

1. There will be a fee of 10% applied to total cost of labor. (Total cost of labor includes hourly wage rate plus all insurance, taxes, health and welfare contributions and other benefits.)
2. There will be a fee of 10% applied to total cost (less all discounts) of material. (6% sales tax is not to be included in 10% fee.)
3. There will be a fee of 7½% applied to quote of a subcontractor.

CREDIT FOR WORK DELETED: Should any work be deleted from Contract by order of Owner, full cost savings realized thereby will be credited to Owner.



PROPOSED SCHEDULE DATES:

Shop Drawing Submittals	_____
Begin Material Fabrication	_____
Material Delivery	_____
Begin Installation	_____
Complete Installation	_____

AGREEMENT: Undersigned agree(s) to execute an agreement for work covered by this proposal on subcontract agreement form and bound in the specifications, and in accordance with the General Conditions Document and other contract documents, provided he be notified of proposal's acceptance within sixty (60) days after due date of opening. Undersigned further agrees that this proposal shall remain open during such sixty (60) day period. Undersigned acknowledges that Owner reserves right to accept or reject any and all bids with or without cause, and/or to waive informalities in bidding.

FIRM NAME _____
BY _____
TITLE _____
DATE _____

SUBMIT THREE (3) COPIES OF BID FORM AND RETAIN ONE (1) COPY FOR YOUR RECORDS.

AFFIDAVIT OF BIDDER - NON-COLLUSION

**Lansing School District
AFFIDAVIT OF BIDDER
SWORN STATEMENT
“Non-Collusion”**

DATE: _____

The Bidder, by its officers and agents or representatives, present at the time of filing this bid, being duly sworn, on their oaths, say that neither they nor any of them, have in any way, directly or indirectly, entered into any arrangement or agreement with any other Bidder, whereby such affiant or affiants or either of them has paid or is to pay to such other Bidder any sum of money, or has given, or is to give, to such other Bidder anything of value whatever, or such affiant or affiants or either of them has not, directly or indirectly, entered into any arrangement or agreement with any other Bidder or Bidders, which tends to or does lessen or destroy free competition in the letting of the Contract sought for by the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid, will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of the said bid or awarding of the Contract, nor has this Bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the Contract sought by this bid.

IN TESTIMONY WHEREOF, the Bidder (an authorized individual) has agrees to the above:

(Company Name)

By: _____
(Authorized Signer)

Print or type Name and Title of Signer

Address: _____

Notary Public: _____

Subscribed and sworn to before me on this _____ day of _____, 20__

County of: _____ My Commission expires: _____

Telephone number: _____

LEGAL STATUS OF BIDDER

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS.

The Vendor and/or Bidder certifies to the best of its knowledge and belief that it and its principals: Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency; Have not within a three-year period preceding this agreement been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offences enumerated above in this certification; and Have not within a three-year period preceding this agreement had one or more public transactions (Federal, State, or local) terminated for cause or default; is not now or has been, within a three-year period preceding this date, been listed on the Excluded Parties List System website (EPLS).

Vendor/contractor will notify the Lansing School District Purchasing Office immediately upon becoming suspended or debarred if there is any current or ongoing contract or agreement in place between the district and the vendor/contractor.

Firm Name: _____
Address: _____
Phone & E-mail: _____

Name, title and signature of individual duly authorized to execute contracts:

The Owner, Principal, or Corporate Office of the responding firm is also attesting that all the information provided within this response is true.

Name: _____
Title: _____
Signature: _____

A Corporation organized and existing under the laws of the State of _____

NON-DISCRIMINATION IN EMPLOYMENT CERTIFICATION

Lansing School District Certificate of Intent to Comply with “NON-DISCRIMINATION IN EMPLOYMENT” POLICY

I have read Lansing School District’s Policy #3122, including paragraph #13 and hereby state my intent to comply with the terms and conditions contained therein. Further I agree to furnish the Michigan Civil Rights Commission with such data and records concerning employment as may be requested by that agency in determining compliance with the policy.

Print or type name of Contact Person:

Signed: _____

Title: _____

Company: _____

Date: _____



SECTION 00 72 00: GENERAL CONDITIONS

FORM OF GENERAL CONDITIONS

1.01 The General Conditions applicable to this contract are included by reference.

RELATED REQUIREMENTS

2.01 Beckering Construction Subcontract Agreement.

2.02 AIA Document A232TM – 2009 – General Conditions of the Contract for Construction with notifications, included by reference, is the General Conditions between the Owner and Contractor.

END OF DOCUMENT

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents.
 - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
 - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit documentation identifying product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: **Use form at end of this section.**
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation method cannot be provided, if applicable.
 - b. Coordination of information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitutions with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes, such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. List of similar installations for completed projects, with project names and addresses as well as names and addresses of architects and owners.

- h. Material test reports from a qualified testing agency, indicating and interpreting test results for compliance with requirements indicated.
 - i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
 - j. Detailed comparison of Contractor's construction schedule using proposed substitutions with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
 - k. Cost information, including a proposal of change, if any, in the Contract Sum.
 - l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents, except as indicated in substitution request, is compatible with related materials and is appropriate for applications indicated.
 - m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
 - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

1.4 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

1.5 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

1.6 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

1. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - b. Substitution request is fully documented and properly submitted.
 - c. Requested substitution will not adversely affect Contractor's construction schedule.
 - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - e. Requested substitution is compatible with other portions of the Work.
 - f. Requested substitution has been coordinated with other portions of the Work.
 - g. Requested substitution provides specified warranty.
 - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions for Convenience: Not allowed.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

Substitution Request (Post-Bid Period)

To:	Date:
Attn:	Project No.:
Email:	Project Name:
Phone:	Municipality/State:
Cc:	Reference:

Specification Title:

Description:

Article or Paragraph/Section/Page:

Proposed Substitution:

Manufacturer:

Address:

Phone:

Trade Name:

Model No.:

History: New Product 1-4 years 5-10 years > 10 years

Differences between proposed substitution and specified product:

Point-by-Point comparative data attached ***REQUIRED BY A/E***

Reason for not providing specified item:

Similar Installation:

Project: **Architect:**

Address: **Owner:**

Date Installed:



Proposed substitution affects other parts of Work:

No Yes; explain:

Savings to Owner for accepting substitution:

(\$ _____)

Proposed substitution changes Contract Time:

No Yes:

[Add] [Deduct] _____ days

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted By:

Signed By:

Firm:

Address:

Phone:

Email:

Response on next page



A/E's REVIEW AND ACTION

- SUBSTITUTION APPROVED - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures**
- SUBSTITUTION APPROVED AS NOTED - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures**
- SUBSTITUTION REJECTED - Use specified materials**
- SUBSTITUTION REQUEST RECEIVED TOO LATE - Use specified materials**

Signed by:

Date: _____

SUPPORTING DATA ATTACHED:

- Drawings Product Data Samples Tests Reports _____

Please call if you have any questions.

Reviewed By:

If enclosures are not as noted, please notify us at once.

SECTION 013300 - SUBMITTAL PROCEDURES

1.1 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

B. Related Requirements:

1. Section 013100 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
2. Section 014000 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
3. Section 017700 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's and Construction Manager's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.3 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and Construction Manager and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 2. Initial Submittal Schedule: Submit concurrently with startup construction schedule. Include submittals required during the first 30 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 3. Final Submittal Schedule: Submit concurrently with the first complete submittal of Contractor's construction schedule.

- a. Submit revised submittal schedule as required to reflect changes in current status and timing for submittals.
4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal Category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's and Construction Manager's final release or approval.

1.4 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
 1. Project name.
 2. Date.
 3. Name of Architect.
 4. Name of Construction Manager.
 5. Name of Contractor.
 6. Name of firm or entity that prepared submittal.
 7. Names of subcontractor, manufacturer, and supplier.
 8. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier and alphanumeric suffix for resubmittals.
 9. Category and type of submittal.
 10. Submittal purpose and description.
 11. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
 12. Drawing number and detail references, as appropriate.
 13. Indication of full or partial submittal.
 14. Location(s) where product is to be installed, as appropriate.
 15. Other necessary identification.
 16. Remarks.
 17. Signature of transmitter.
- B. Options: Identify options requiring selection by Architect.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect and Construction Manager on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
- D. Electronic Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.

- E. Submittals Utilizing Web-Based Project Software: Prepare submittals as PDF files or other format indicated by Project management software.

1.5 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 - 1. Email: Prepare submittals as PDF package and transmit to Architect by sending via email. Include PDF transmittal form. Include information in email subject line as requested by Architect.
 - a. Architect, through Construction Manager, will return annotated file. Annotate and retain one copy of file as a digital Project Record Document file.
 - 2. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project management software website. Enter required data in web-based software site to fully identify submittal.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 - 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 - 4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections, so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 1. Initial Review: Allow 10 business days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - 3. Resubmittal Review: Allow 10 business days for review of each resubmittal.

4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 20 business days for initial review of each submittal.
 - a. Division 22 and 23 Submittals.
 5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 business days for review of each submittal. Submittal will be returned through Architect before being returned to Contractor.
 - a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect and Construction Manager.
 - D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
 1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block, and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect's and Construction Manager's action stamp.
 - E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
 - F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's and Construction Manager's action stamp.
- 1.6 SUBMITTAL REQUIREMENTS
- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.

- g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams that show factory-installed wiring.
 - b. Printed performance curves.
 - c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before Shop Drawings, and before or concurrently with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data unless submittal based on Architect's digital data drawing files is otherwise permitted.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of type, color, pattern, and texture for a check of these characteristics with other materials.
 1. Transmit Samples that contain multiple, related components, such as accessories together in one submittal package.
 2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
 - a. Project name and submittal number.
 - b. Generic description of Sample.
 - c. Product name and name of manufacturer.
 - d. Sample source.
 - e. Number and title of applicable Specification Section.
 - f. Specification paragraph number and generic name of each item.
 3. Email Transmittal: Provide PDF transmittal. Include digital image file illustrating Sample characteristics and identification information for record.
 4. Web-Based Project Management Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.

5. Paper Transmittal: Include paper transmittal, including complete submittal information indicated.
 6. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 7. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units, showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, through Construction Manager, will return submittal with options selected.
 8. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect and Construction Manager will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a project record Sample.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.

4. Location within room or space.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:
 1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
 2. Installer Certificates: Submit written statements on manufacturer's letterhead, certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
 3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead, certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
 4. Material Certificates: Submit written statements on manufacturer's letterhead, certifying that material complies with requirements in the Contract Documents.
 5. Product Certificates: Submit written statements on manufacturer's letterhead, certifying that product complies with requirements in the Contract Documents.
 6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of AWS B2.1/B2.1M on AWS forms. Include names of firms and personnel certified.
- H. Test and Research Reports:
 1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for substrate preparation and primers required.
 2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
 3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - a. Name of evaluation organization.
 - b. Date of evaluation.
 - c. Time period when report is in effect.
 - d. Product and manufacturers' names.
 - e. Description of product.
 - f. Test procedures and results.
 - g. Limitations of use.

1.7 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file and three (3) paper copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.8 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect and Construction Manager.

- B. Contractor's Approval: Indicate Contractor's approval for each submittal with a uniform approval stamp indication in web-based Project management software. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 - 1. Architect and Construction Manager will not review submittals received from Contractor that do not have Contractor's review and approval.

1.9 ARCHITECT'S AND CONSTRUCTION MANAGER'S REVIEW

- A. Action Submittals: Architect and Construction Manager will review each submittal, indicate corrections or revisions required, and return.
 - 1. PDF Submittals: Architect and Construction Manager will indicate, via markup on each submittal, the appropriate action, as follows:
 - a. <Insert description of each action indicated on Architect's (and Construction Manager's) stamp>.
 - 2. Submittals by Web-Based Project Management Software: Architect and Construction Manager will indicate, on Project management software website, the appropriate action.
 - a. Actions taken by indication on Project management software website have the following meanings:
 - 1) <Insert description of each action indicated on Architect's (and Construction Manager's) stamp>.
- B. Informational Submittals: Architect and Construction Manager will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect and Construction Manager.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect and Construction Manager will discard submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.

Lansing School District
Food Service Equipment

CED Proj. #.
2600752A,25015928,25015929,26000750
PB-1, Bidding, 2/13/2026

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and quality-control requirements for individual work results are specified in their respective Specification Sections. Requirements in individual Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and quality-control services required by Architect, Owner, Commissioning Authority, Construction Manager, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Requirements:
 - 1. Section 012100 "Allowances" for testing and inspection allowances.

1.3 DEFINITIONS

- A. Experienced: When used with an entity or individual, "experienced," unless otherwise further described, means having successfully completed a minimum of three (3) previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- B. Field Quality-Control Tests and Inspections: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

- C. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, assembly, and similar operations.
 - 1. Use of trade-specific terminology in referring to a Work result does not require that certain construction activities specified apply exclusively to specific trade(s).
- D. Mockups: Physical assemblies of portions of the Work constructed to establish the standard by which the Work will be judged. Mockups are not Samples.
 - 1. Mockups are used for one or more of the following:
 - a. Verify selections made under Sample submittals.
 - b. Demonstrate aesthetic effects.
 - c. Demonstrate the qualities of products and workmanship.
 - d. Demonstrate successful installation of interfaces between components and systems.
 - e. Perform preconstruction testing to determine system performance.
 - 2. Product Mockups: Mockups that may include multiple products, materials, or systems specified in a single Section.
 - 3. In-Place Mockups: Mockups constructed on-site in their actual final location as part of permanent construction.
- E. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria. Unless otherwise indicated, copies of reports of tests or inspections performed for other than the Project do not meet this definition.
- F. Product Tests: Tests and inspections that are performed by a nationally recognized testing laboratory (NRTL) according to 29 CFR 1910.7, by a testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program (NVLAP), or by a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- G. Source Quality-Control Tests and Inspections: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. The term "testing laboratory" has the same meaning as the term "testing agency."
- I. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work, to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

- J. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work, to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Contractor's quality-control services do not include contract administration activities performed by Architect or Construction Manager.

1.4 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated Design Services Statement: Submit a statement signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

1.5 CONFLICTING REQUIREMENTS

- A. Conflicting Standards and Other Requirements: If compliance with two or more standards or requirements is specified and the standards or requirements establish different or conflicting requirements for minimum quantities or quality levels, inform the Architect regarding the conflict and obtain clarification prior to proceeding with the Work. Refer conflicting requirements that are different, but apparently equal, to Architect for clarification before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified is the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.6 ACTION SUBMITTALS

- A. Mockup Shop Drawings:
 - 1. Include plans, sections, elevations, and details, indicating materials and size of mockup construction.
 - 2. Indicate manufacturer and model number of individual components.
 - 3. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.7 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Qualification Data: For Contractor's quality-control personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility submitted to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the Statement of Special Inspections.
 - 2. Primary wind-force-resisting system or a wind-resisting component listed in the Statement of Special Inspections.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.
 - 2. Entity responsible for performing tests and inspections.
 - 3. Description of test and inspection.
 - 4. Identification of applicable standards.
 - 5. Identification of test and inspection methods.
 - 6. Number of tests and inspections required.
 - 7. Time schedule or time span for tests and inspections.
 - 8. Requirements for obtaining samples.
 - 9. Unique characteristics of each quality-control service.
- F. Reports: Prepare and submit certified written reports and documents as specified.
- G. Permits, Licenses, and Certificates: For Owner's record, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents established for compliance with standards and regulations bearing on performance of the Work.

1.8 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within ten (10) days of Notice to Proceed, and not less than five (5) days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities and to coordinate Owner's quality-assurance and quality-control activities. Coordinate with Contractor's Construction Schedule.

- B. Quality-Control Personnel Qualifications: Engage qualified personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
 - 1. Project quality-control manager may also serve as Project superintendent
 - 2. <Insert qualifications appropriate to Project>.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: In quality-control plan, include a comprehensive schedule of Work requiring testing or inspection, including the following:
 - 1. Contractor-performed tests and inspections, including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections. Distinguish source quality-control tests and inspections from field quality-control tests and inspections.
 - 2. Special inspections required by authorities having jurisdiction and indicated on the Statement of Special Inspections.
 - 3. Owner-performed tests and inspections indicated in the Contract Documents, including tests and inspections indicated to be performed by Commissioning Authority.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring the Work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports, including log of approved and rejected results. Include Work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming Work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.9 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - 1. Date of issue.
 - 2. Project title and number.
 - 3. Name, address, telephone number, and email address of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.

10. Record of temperature and weather conditions at time of sample-taking and testing and inspection.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement of whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, telephone number, and email address of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement of whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- 1.10 QUALITY ASSURANCE
- A. Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units. As applicable, procure products from manufacturers able to meet qualification requirements, warranty requirements, and technical or factory-authorized service representative requirements.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- D. Installer Qualifications: A firm or individual experienced in installing, erecting, applying, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that is similar in material, design, and extent to those indicated for this Project.
- F. Specialists: Certain Specification Sections require that specific construction activities be performed by entities who are recognized experts in those operations. Specialists will satisfy qualification requirements indicated and engage in the activities indicated.
 - 1. Requirements of authorities having jurisdiction supersede requirements for specialists.
- G. Testing and Inspecting Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspection indicated, as documented in accordance with ASTM E329, and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect, demonstrate, repair, and perform service on installations of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following Contractor's responsibilities, including the following:
 - 1. Provide test specimens representative of proposed products and construction.
 - 2. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - 3. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - 4. Build site-assembled test assemblies and mockups, using installers who will perform same tasks for Project.
 - 5. When testing is complete, remove test specimens and test assemblies, and mockups; do not reuse products on Project.

6. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect and Commissioning Authority, through Construction Manager, with copy to Contractor. Interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups of size indicated.
 2. Build mockups in location indicated or, if not indicated, as directed by Architect or Construction Manager.
 3. Notify Architect and Construction Manager seven (7) business days in advance of dates and times when mockups will be constructed.
 4. Employ supervisory personnel who will oversee mockup construction. Employ workers who will be employed to perform same tasks during the construction at Project.
 5. Demonstrate the proposed range of aesthetic effects and workmanship.
 6. Obtain Architect's and Construction Manager's approval of mockups before starting corresponding Work, fabrication, or construction.
 - a. Allow seven business days days for initial review and each re-review of each mockup.
 7. Promptly correct unsatisfactory conditions noted by Architect's preliminary review, to the satisfaction of the Architect, before completion of final mockup.
 8. Approval of mockups by the Architect does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 9. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 10. Demolish and remove mockups when directed unless otherwise indicated.
- 1.11 QUALITY CONTROL
- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspection they are engaged to perform.
 2. Payment for these services will be made from testing and inspection allowances specified in Section 012100 "Allowances," as authorized by Change Orders.
 3. Costs for retesting and reinspecting construction that replaces or is necessitated by Work that failed to comply with the Contract Documents will be charged to Contractor, and the Contract Sum will be adjusted by Change Order.

- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities, whether specified or not, to verify and document that the Work complies with requirements.
1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Engage a qualified testing agency to perform quality-control services.
 - a. Contractor will not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least twenty-four (24) hours in advance of time when Work that requires testing or inspection will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspection requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with Architect, Commissioning Authority, Construction Manager, and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect, Commissioning Authority, Construction Manager, and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the locations from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections, and state in each report whether tested and inspected Work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform duties of Contractor.
- E. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."

- F. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- G. Contractor's Associated Requirements and Services: Cooperate with agencies and representatives performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspection. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - 5. Delivery of samples to testing agencies.
 - 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 - 7. Security and protection for samples and for testing and inspection equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspection.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's Construction Schedule. Update and submit with each Application for Payment.
 - 1. Schedule Contents: Include tests, inspections, and quality-control services, including Contractor- and Owner-retained services, commissioning activities, and other Project-required services paid for by other entities.
 - 2. Distribution: Distribute schedule to Owner, Architect, Commissioning Authority, Construction Manager, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.12 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Owner will engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, as indicated in the Statement of Special Inspections attached to this Section, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures, and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect, Commissioning Authority, Construction Manager, and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect and Commissioning Authority, through Construction Manager, with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections, and stating in each report whether tested and inspected Work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected Work.
7. <Insert requirements>.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's, Commissioning Authority's, and Construction Manager's and authorities' having jurisdiction reference during normal working hours.
 1. Submit log at Project closeout as part of Project Record Documents.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspection, sample-taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 017300 "Execution."

- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION



SECTION 01 73 29 – CUTTING AND PATCHING

PART 1 – GENERAL

1.1 SUMMARY

- A. Work Included: This Section establishes general requirements pertaining to cutting (including excavating), fitting, and patching of the work required to:
 - 1. Make the several parts fit properly.
 - 2. Uncover work to provide for installation, inspection, or both, of ill-timed work.
 - 3. Remove and replace work not conforming to requirements of the Contract Documents.
 - 4. Remove and replace defective work.
- B. Related Work Described Elsewhere:
 - 1. In addition to other requirements specified, upon the Owner's request, uncover work to provide for inspection by the Owner's Representative of covered work, and remove samples of installed materials for testing.
 - 2. Do not cut or alter work performed under separate contract without the Owner's written permission.

1.2 SUBMITTALS

- A. Request For the Owner's Consent:
 - 1. Prior to cutting which affects structural safety, submit written request to the Owner for permission to proceed with cutting.
 - 2. Should conditions of the work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify the Owner and secure his written permission prior to proceeding.

1.3 QUALITY ASSURANCE

- A. Perform all cutting and patching in strict accordance with pertinent requirements of these Specifications and, in the event no such requirements are determined, in conformance with the Owner's written direction.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. For replacement of work removed, use materials and methods which comply with the pertinent Sections of these Specifications. Where new finish materials are not noted or shown on drawings match adjoining surfaces with like materials and colors to match existing. Provide samples for color selection.

PART 3 – EXECUTION

3.1 CONDITIONS

- A. Inspection:
 - 1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, backfilling, and patching.
 - 2. After uncovering the work, inspect conditions affecting installation of new work.
- B. Discrepancies: If uncovered conditions are not as anticipated, immediately notify the Owner and secure needed directions.
- C. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

3.2 PREPARATION PRIOR TO CUTTING

- A. Provide all required protection including, but not necessarily limited to, shoring, bracing, and support to maintain structural integrity of the work.



- B. All spaces and Owner's equipment within and outside of the immediate area of demolition shall be protected.

3.3 PERFORMANCE

- A. Perform all required excavating and backfilling as required under pertinent Sections of these Specifications.
- B. Perform cutting and removal by methods which will prevent damage to other portions of the work and will provide proper surfaces to receive installation of repair and new work.
- C. Patching requires filling in and restoration to match adjoining construction and surfaces with materials per Part 2 of this section.

END OF SECTION

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for Contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
- B. Related Requirements:
 - 1. Section 012900 "Payment Procedures" for requirements for Applications for Payment for Substantial Completion and Final Completion.
 - 2. Section 017823 "Operation and Maintenance Data" for additional operation and maintenance manual requirements.
 - 3. Section 017839 "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 4. Section 017900 "Demonstration and Training" for requirements to train the Owner's maintenance personnel to adjust, operate, and maintain products, equipment, and systems.

1.3 DEFINITIONS

- A. List of Incomplete Items: Contractor-prepared list of items to be completed or corrected, prepared for the Architect's use prior to Architect's inspection, to determine if the Work is substantially complete.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of cleaning agent.
- B. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- C. Certified List of Incomplete Items: Final submittal at Final Completion.

1.5 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest-control inspection.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Schedule of Maintenance Material Items: For maintenance material submittal items required by other Sections.

1.7 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's "punch list"), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of ten (10) business days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction, permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other Division 01 Sections, including Project Record Documents, operation and maintenance manuals, damage or settlement surveys, property surveys, and similar final record information.
 - 3. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Construction Manager. Label with manufacturer's name and model number.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain Owner's signature for receipt of submittals.
 - 5. Submit testing, adjusting, and balancing records.
 - 6. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.

- C. Procedures Prior to Substantial Completion: Complete the following a minimum of ten (10) business days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise Owner of pending insurance changeover requirements.
 2. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 017900 "Demonstration and Training."
 6. Advise Owner of changeover in utility services.
 7. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 8. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 9. Complete final cleaning requirements.
 10. Touch up paint and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for Final Completion.

1.8 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining Final Completion, complete the following:
1. Submit a final Application for Payment in accordance with Section 012900 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report.

5. Submit Final Completion photographic documentation.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the Work will be completed and ready for final inspection and tests. On receipt of request, Architect and Construction Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.9 LIST OF INCOMPLETE ITEMS

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor, listed by room or space number.
2. Organize items applying to each space by major element, including categories for ceilings, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:

- a. Project name.
- b. Date.
- c. Name of Architect and Construction Manager.
- d. Name of Contractor.
- e. Page number.

4. Submit list of incomplete items in the following format:

- a. MS Excel Electronic File: Architect, through Construction Manager, will return annotated file.
- b. PDF Electronic File: Architect, through Construction Manager, will return annotated file.
- c. Web-Based Project Software Upload: Utilize software feature for creating and updating list of incomplete items (punch list).
- d. Three Paper Copies: Architect, through Construction Manager, will return two copies.

1.10 SUBMITTAL OF PROJECT WARRANTIES

A. Time of Submittal: Submit written warranties on request of Architect for designated portions of the Work where warranties are indicated to commence on dates other than date of Substantial Completion, or when delay in submittal of warranties might limit Owner's rights under warranty.

- B. Partial Occupancy: Submit properly executed warranties within fifteen (15) business days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.
- D. Warranty Electronic File: Provide warranties and bonds in PDF format. Assemble complete warranty and bond submittal package into a single electronic PDF file with bookmarks enabling navigation to each item. Provide bookmarked table of contents at beginning of document.
 - 1. Submit on digital media acceptable to Architect by email to Architect.
- E. Warranties in Paper Form & Flash Drive:
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- F. Provide additional copies of each warranty to include in operation and maintenance manuals.
- G. In addition to the above, provide all close out documentation on a single flash drive (organized by folders) to be issued to the client**

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:
 - a. Clean Project site of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are not planted, mulched, or paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - g. Remove debris and surface dust from limited-access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Clean flooring, removing debris, dirt, and staining; clean according to manufacturer's recommendations.
 - i. Vacuum and mop concrete.
 - j. Vacuum carpet and similar soft surfaces, removing debris and excess nap; clean according to manufacturer's recommendations if visible soil or stains remain.
 - k. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - l. Remove labels that are not permanent.
 - m. Wipe surfaces of mechanical and electrical equipment[, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

- p. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter on inspection.
 - 1) Clean HVAC system in compliance with NADCA ACR. Section 230130.52 "Existing HVAC Air-Distribution System Cleaning." Provide written report on completion of cleaning.
- q. Clean luminaires, lamps, globes, and reflectors to function with full efficiency.
- r. Clean strainers.
- s. Leave Project clean and ready for occupancy.

C. Pest Control: Comply with pest control requirements

D. Construction Waste Disposal: Comply with waste-disposal requirements

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations required by Section 017300 "Execution" before requesting inspection for determination of Substantial Completion.

END OF SECTION



SECTION 02 22 00 – EXISTING CONDITIONS ASSESSMENT

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. section Includes
 - 1. This section outlines required familiarization and field verification of project site existing conditions, including but not limited to topography, structures, underground utilities, trees/vegetation, etc.

1.3 COORIDINATION

- A. Coordinate all work with job site superintendent and all applicable trades.

PART 2 – NOT USED

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Site Conditions/Field Verification:
 - 1. All contractors shall examine the site of the construction for ground structures and all other pertinent conditions under which work is to be performed.
 - 2. Exercise extreme caution while performing work in the area of existing underground utility services and/or recently installed underground work.
 - 3. Locate all underground utilities by careful hand excavation and provide all necessary and proper protection from damage during construction operations.
 - 4. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Owner immediately for directions as to procedure. Cooperate with the Owner, and public and private utility companies in keeping their respective services and facilities in operation. Repair damaged utilities to the satisfaction of the utility Owner.
 - 5. Under no circumstances shall existing trees or site improvements be damaged or removed without the consent of the Owner, or as indicated on the Drawings. Damaged drives, parking areas, walks and other existing site improvements shall be patched to match.
 - 6. Checking Lines and Levels:
 - a. All Contractors shall thoroughly examine the existing conditions and be familiar with work to be performed as hereinafter specified and as outlines on Drawings.



- b. Each Contractor shall compare all levels given on drawings with actual levels and shall call attention to discrepancies if any occur.
- c. Each Contractor shall verify and document with the Architect / Engineer all lines and levels and be responsible for the proper location of all their work.

END OF SECTION



SECTION 02 32 00 – SUBSURFACE CONDITIONS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. section Includes
 - 1. Bidders should visit the site and acquaint themselves with all existing conditions. Prior to bidding, bidders may make their own subsurface investigations to satisfy themselves as to site and subsurface conditions, but all such investigations shall be performed only under time schedules and arrangements approved in advance by the Owner and the Architect/Engineer.

1.3 COORIDINATION

- A. Coordinate all work with job site superintendent and all applicable trades.

1.4 QUALITY ASSURANCE

- A. Soils Engineer will be retained by the Owner to observe performance of work in connection with excavating, trenching, filling, backfilling, and grading.
- B. Adjustment of Work: Readjust all work performed that does not meet technical or design requirements but make no deviations from the Contract Documents without specific and written approval from the Owner and/or Architect/Engineer.

1.5 FIELD CONDITIONS

- A. Preliminary Investigations: The Contractor shall visit the site and make his own interpretation of conditions, based on his investigation of existing conditions and on soil conditions. Where underground services, utilities, structures, etc. are located on the drawings or given at the site, they are based on available records, but are not guaranteed to be complete or correct. They are merely available for assistance.

END OF SECTION

Lansing School District

**Gardner Elementary Food
Service Equipment
Replacement & Renovations**

**333 Dahlia Dr
Lansing, MI 48911**

Project Manual

Bid Pack 1

Date: 02/13/2026

Project No: 26000752A

Colliers Engineering & Design
560 5th St. NW
Suite 305
Grand Rapids, Michigan 49504

SECTION 11 4000 - FOOD SERVICE EQUIPMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All Drawings, General and Supplementary Conditions, Division 1, Specifications, and related contract documents apply to this section and the requirements may exceed those shown in this section. The Food Service Engineering Consultants on this project are JRA Food Service Consultants, LLC in Grand Rapids, Michigan (616-454-4433) and is responsible to the Architect and Owner for ascertaining that the Food Service Equipment Contractor complies with all the requirements of this section.

1.02 SUMMARY

- A. As listed in this division, the Food Service Equipment Contractor shall furnish all labor, material, work, equipment, transportation, accessories, taxes, etc. for a complete and continuous installation in accordance with the requirements of these plans and specifications and related documents.
- B. The FSEC shall familiarize themselves with local conditions affecting the cost of the work and examine the site and all Food Service Equipment contract documents including Architectural drawings, and contract documents, all of which constitute the responsibility of the FSEC.

1.03 SUBSTITUTIONS AND VOLUNTARY ALTERNATES:

- A. A proposed substitution on any specified equipment must be submitted to the Consultant 10 days in advance of the bid date and must include all manufacturers' shop drawings and data sheets on the proposed equipment. The supplier shall pay any additional costs incurred for changes, engineering services, utilities, construction, etc. that may be incurred by said substitutions.

1.04 INTERPRETATION OF DOCUMENTS:

- A. The "Base Manufacturer" listed in the item specifications is intended to be the "Basis of Design". All approved Alternate Manufacturers must conform to the specifications, physical size, accessories, materials, capacities, electrical & plumbing requirements, amperage, utility consumptions, drainage requirements, etc. Any additional project costs incurred due to deviations and/or nonconformance shall be the responsibility of the Food Service Equipment Contractor (FSEC).
- B. Prior to receipt of bids, all questions, clarification, and changes in the documents shall be executed by addendum. After the award of contract, all changes shall be performed by bulletin.
- C. FSEC shall submit an itemized price breakdown to the Consultant on their letterhead for each piece of equipment including labor, freight, manufacturer, quantity, taxes, etc. as applicable.
- D. Any deletions of equipment by the Owner and/or Consultant prior to approval and/or release of the shop drawings, brochures, etc. shall be credited to the Owner at the itemized price as listed in the itemized price breakdown and include all equipment costs, freight, labor, taxes etc. Pricing shall not be credited at the amount listed on the Schedule of Values.
- E. Any additions to equipment by the Owner and/or Consultant that result in cost increases after approval and/or release of shop drawings, brochures, etc. shall be immediately noted by the FSEC and a written request with prices for a bulletin shall be issued by the FSEC to the Consultant.

- F. The General Specifications are applicable to items listed in the item specifications.

1.05 ABBREVIATIONS

- A. The following abbreviations are used herein unless otherwise noted on the plans or item specifications.

Abbreviation	Meaning
A	Amps
AFF	Above Finish Floor
BTC	Branch to Connection
CFM	Cubic Feet of Air Per Minute
C.P.	Chrome Plated
CW	Cold Water - 25 PSI
DCO	Duplex Convenience Outlet - 20 amp
DFA	Drop from Above
E.C.	Electrical Contractor
FD	Floor Drain - Wade W1104
FFD	Funnel Floor Drain - Wade 1104-EF4
FL SK	Floor Sink 12" - Wade W9144-15
FPM	Feet Per Minute
FSEC	Food Service Equipment Contractor
FSC	Food Service Consultant
G	Natural Gas - 7" water column
GP	General Purpose
G.S.	General Specifications
G.C.	General Contractor
HVAC	Heating Ventilation Air Conditioning Trades
HP	Horsepower
HW	Hot Water - 140 degree - 25 PSI
J.B.	Junction Box
KW	Kilowatt
N.S.R.	No Service Required
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
NIKEC	Not in Kitchen Equipment Contract
P.C.	Plumbing Contractor
S.O.M.	Standard of Manufacturer
S.S.	Stainless Steel
SS	Steam Supply - 25 PSI
SR	Steam Return
V	Volts
VIF	Verify in Field
W	Waste Outlet
W.G.	Water Gauge - Static Pressure

1.06 CONFORMITY

- A. All equipment furnished under these specifications shall be newly manufactured and installed in strict conformity with all codes, regulations and requirements of the State Board of Health, the National Sanitation Foundation Standards, or any state or local agency.
- B. All equipment shall conform to the current standards and bear the seal of UL, NEMA, ASME, AGA, OSHA, NFPA, etc. where applicable and/or otherwise conform to the requirements of the authorities having jurisdiction.

- C. Wherever the requirements of the specifications and drawings are in excess of the regulations, the specifications and drawings shall govern. Whenever the regulations are in excess of the specifications and drawings, the regulations shall govern.
- D. Wherever the requirements of the specifications are in excess of the drawings, the specifications shall govern. Whenever the requirements of the drawings are in excess of the specifications, the drawings shall govern.

1.07 PERMITS - LICENSES - PHONE CALLS

- A. Provide to the proper authorities all notices required by law, obtain all refrigeration permits, licenses, etc., and pay any legal fees necessary for the due and faithful performance of the work, and which may arise incidental to the fulfilling of the foodservice documents. The Owner shall pay for any health department plan review or license fees.
- B. Other trades shall provide boiler permits, hook up permits, building permits, etc. The FSEC shall provide hood and refrigeration permits when applicable.
- C. Accept all collect phone calls relating to food service equipment that pertain to the project until the warranty has expired on the equipment.

1.08 SUBMITTAL OF BUYOUT BROCHURES AND SHOP DRAWINGS

- A. Shop drawing and brochure requirements may also be listed in the general requirements or other areas of the documents. Provide submittals as per those requirements or as listed below - whichever is greater.
- B. All shop drawings, rough-in drawings, equipment brochures, etc. shall be submitted at one time within 20 days of the notification of award of contract to the bidder. Said items are subject to the terms and conditions of the plans and specifications for the entire project. All drawings which are submitted for distribution shall be clear and concise and have the following notes printed on each and every sheet:

Name of the FSEC.
Name and location of the project.
Name of the Architect.
Name of the Consultant.
Name of the General Contractor.
Drawing number.
Date of drawing and revisions.

The following statement: The (name of FSEC) is solely responsible for the accuracy and completeness of these drawings and specifications, and we approve them for construction purposes. Signed: (Officer, Partner, etc.)

- C. All submitted data shall be reviewed for general compliance only and does not alleviate the FSEC from providing equipment as per the intent of the plans and specifications.
- D. Owner shall not be responsible for any equipment ordered prior to receipt of Consultant approved brochures or shop drawings.
- E. If applicable, the FSEC shall visit the site to verify requirements of existing or relocated equipment prior to submittals.

1.09 BUYOUT BROCHURES:

- A. As soon as possible, prepare a buy-out equipment brochure in PDF format with copies of manufacturer's specification sheet or literature on each item, along with a list of the model,

manufacturer, quantity, connections required, accessories, etc. for each item and component or accessories. Material on all items shall be assembled in order and no consideration will be given to partial lists submitted from time to time.

1.10 ROUGH-IN DRAWING AND MECHANICAL DATA:

- A. As soon as possible, submit an electronic drawing in PDF format at 1/4" scale to locate accurately the utility connections for each item of equipment requiring water, gas, electrical, and drain. Listed on the drawings shall be dimensions to required utilities and located from a center line of a structural column or another positive reference point.
- B. Upon final approval of data, distribute copies to all trades, Owner, Architect, health department, etc. as required.
- C. Drawings shall be at 1/4" scale or larger and indicate each electrical and mechanical rough-in required for all new, relocated, future, and/or purveyor supplied (the Owner shall provide proper data on purveyor supplied equipment) food service equipment as listed in the plans or specifications. Include all electrical and convenience outlets, gas, water, steam, ventilation, drains, floor depressions, wall openings, weights, ceiling recess or access panels, sleeves, beverage lines, roof data, refrigeration, etc. as required.
- D. Furnish all necessary assistance to the various trades and be responsible for the proper location of sleeves and conduits through which the utility lines are to be drawn. A field inspection shall be made before the finished floors are laid to make any necessary relocations of the utility sleeves, rough-ins and conduits, and immediate written notice shall be provided if rough-in problems have occurred.

1.11 SUBMITTALS OF SHOP DRAWINGS:

- A. Completely detail and submit shop drawings (S.S. fabrication, fire protection, hood and ventilation system, plastic laminate fabrication, walk-ins, sneeze guards, serving counters, etc.) in electronic PDF format showing all items to be provided under this section of the specifications. Drawings to be submitted for review at 1/2" per foot scale or larger. Upon final review of data, distribute copies to all trades, Owner, Architect, etc. as required.
- B. The drawings shall show all elevations, sections, dimensions, mechanical and electrical requirements, related details of construction, installation and related work which require cutting, close fitting, etc. as required for installation.
- C. Submit proper notifications in writing of any departures from the contract drawings or specifications which may be necessary to permit installation of the equipment. Fabrication should not be started until after final approvals are received and final field measurements are taken.

1.12 MAINTENANCE MANUALS

- A. At time of demonstration, provide to the person in charge of the kitchen a minimum of three bound current copies of kitchen plans, rough-in drawings, any and all warranties, instructions, parts lists, operating instructions for each piece of mechanical equipment, as built shop drawings, and "Buy-Out" brochures.
- B. Manuals shall include a typed list in the front of the manual listing the names, addresses, and telephone numbers of local servicing agencies and manufacturer's representatives for all equipment.

1.13 SAMPLES

- A. Submit all required samples for approval, if required, of all hardware, plastic laminate, paint,

etc. before starting fabrication. Other samples shall be supplied as required.

1.14 MEASUREMENTS

- A. Measurements required to size and place the food service equipment shall not be taken from drawings but shall be made at the structure from the actual spaces reserved therefore, and giving due consideration to any architectural, structural or mechanical discrepancies that may occur during construction of the building. Verify size of all of Owner's equipment and small wares (dishes, trays, pans, etc.) and purveyor supplied equipment (urns, soda systems, beverage dispensers, etc.), if applicable. Field dimensions shall be taken at the earliest opportunity so as not to delay deliveries.
- B. Verify in field any and all measurements before doing any work on equipment that may be affected by the physical conditions and be responsible for the correction of same.
- C. Inspect equipment for proper operation prior to relocation. Advise if equipment is defective or needs rework which is not included in the original contract and submit a written quotation for said work.
- D. Coordinate Owner's and/or purveyor supplied equipment (coffee makers, beverage equipment, cash registers, soda equipment, etc.) as required for rough-in data, installation, etc.
- E. Measurements for tight fitting equipment shall allow no more than 1/4" between the wall and equipment that shall be trimmed and/or sealed as required.

1.15 WARRANTY

- A. Provide a written warranty for all equipment against defects in workmanship and material for one (1) year from the date of substantial completion and acceptance, excluding refrigeration units which shall carry an additional four-year warranty and a ten-year warranty on all walk-in panels. This shall cover any replacements and/or repair costs of such defective material, including transportation, labor, and materials for all equipment. This one-year free service, warranty and guarantee shall be available within 24 hours of notification on all equipment except refrigeration.
- B. Provide one-year free service, warranty and guarantee within 12 hours of notification on walk-in refrigeration and units must be operational within 24 hours after service call.
- C. This warranty is not intended to cover equipment which has been overly abused or items that have not had proper periodic maintenance (door gaskets, uncleaned refrigeration condensers, etc.) during the one-year period.

1.16 DELIVERY AND STORAGE

- A. The FSEC shall furnish all labor, material, equipment, etc. as required to unload and store all equipment.
- B. No equipment shall be delivered to the site unless it has been ascertained that storage space is available.
- C. After verifying field conditions with Architect and/or related trades, the F.S.E.C. may deliver equipment 30 days prior to job installation requirements and/or completion - providing it is properly insured. F.S.E.C. shall make all arrangements to deliver, unload, and store all equipment and shall assume all responsibility for safeguarding the equipment until it is accepted by the Owner.

- D. Unless noted in the item specifications, the GC shall remove and store any existing and/or relocated equipment that is removed from the kitchen during the construction period.

PART 2 GENERAL - SPECIFICATIONS - PRODUCTS

2.01 MANUFACTURER'S STANDARDS

- A. It is the intention of these specifications to provide a type of equipment conforming to manufacturers' standards and only minor variations in construction will be accepted, provided that these variations do not detract from the finished appearance, durability, general function or in any way affect general overall size, capacity, strength, etc. of equipment.
- B. Manufacturer's catalog designation of material and/or fabricated equipment used in the following specifications are intended to illustrate and represent the standards which will be required by the owner. Equipment furnished must closely conform thereto in design, construction, capacity, and function to make and model called for. Where such catalog designations are given, the items shall be complete as described and shown in the catalog unless exceptions are in itemized specifications.
- C. When more than one manufacturer is listed in the Item Specification, only one manufacturer shall be acceptable for items of a similar nature (fabrication, cooking equipment, refrigerators, shelving, carts, etc.) to ensure uniformity of design, installation, service, etc.

2.02 FABRICATION STANDARDS

- A. Unless noted under itemized specifications or on plans, the following specifications shall govern the construction of all fabricated and buyout equipment and installation and shall apply to the individual item as if it were written therein in its entirety.

2.03 FABRICATED EQUIPMENT

- A. It is required that all custom fabricated items (counters, tables, sinks, dish tables, etc.) described in the plans and specifications, other than by name and catalog number, be constructed of 300 series S.S. and be manufactured by one fabricator. Metal-Masters Inc, Advance Tabco Co., Kevry Co., Professional Restaurant Services (PRS), LTI Co., John Boos Co., Keystone Fabricators Co., and Titan Co. are approved fabricators and have demonstrated they possess the plant, personnel and engineering facilities to properly design, detail, and manufacture high quality kitchen equipment.
- B. All work in the above category shall be standard unit assembly, by one foodservice equipment manufacturer of uniform design, material and finish.

2.04 BACKSPLASHES

- A. Where edges of the top are adjacent to walls, column, equipment or enclosures, they shall be turned up to provide a backsplash which shall be tight fitting (1/4" or less). Unless noted, all backsplashes shall be formed by turning up 10" and flanged back 2-1/2" at 45 degrees and down 1" and attach to wall with 6" by 2" S.S. "Z" clips on 3'-0" centers. Ends of backsplash shall be fitted with closure plates. Weld a full S.S. enclosure panel for exposed rear backsplash.
- B. Tops adjacent to refrigerators, ovens or cabinets shall be turned up 4" with top edges feathered slightly to form a tight fit of 1/4" or less. Seal with mastic compound.

2.05 BOLTS, SCREWS AND RIVETS

- A. All exposed surfaces of equipment shall be free of bolt, screw and rivet heads. Wherever bolts are used to fasten tops and trim to paneling, body of counters and similar equipment, such

bolts shall be of an approved type and shall be corrosion resistant metal of the same alloy as the metal to which they are fastened with acorn type nuts to eliminate sharp edges.

2.06 CASTERS

- A. Provide heavy duty casters with double ball bearing raceways, heavy Gauge fork and races and have minimum capacity of 250 pounds per caster. Casters shall be provided with brakes. Wheel shall be non-marking urethane.

2.07 CODES AND SANITATION

- A. All food service equipment under this contract shall meet the requirements and bear the label of the National Sanitation Foundation. Specifications set forth are considered minimum and are to be superseded by any superior requirements in effect as of this date by the National Sanitation Foundation or the State/County Health Department. Any differences of opinion on sanitation shall be referred to the State/County Health Department for arbitration.

2.08 CORNERS

- A. All corners shall be fully rounded and made integral and of the same sheet as the top and rolled edges. Radii of all rolled edges to be equal and rolled 2" diameter at least 180 degrees. Filler pieces or soldering shall not be used in place of all welded, seamless construction.

2.09 CUTTING BOARDS

- A. Provide Read Products or Mapletex Co. 1/2" minimum thick reversible boards as per plan as manufactured by Read Products Inc. when attached to tables or similar equipment, provide S.S. mounting brackets.

2.10 DISHTABLES

- A. Provide NSF approved series SCDT dish tables with 14 Gauge 304 S.S. coved corner construction as manufactured by Metal-masters Co. or equal with 10" backsplash as previously specified where adjacent to walls and remainder of tables to have 3" high roll rim and be mounted on 12 Gauge under-channeling, 16 Gauge S.S. cross rails and legs with S.S. gussets and S.S. adjustable bullet feet and/or flange type feet. Tops shall be pitched to dishwasher to avoid standing water and undersides shall have sound deadening material and be attached to walls with S.S. "Z" clips.
- B. Provide removable 18 Gauge S.S. under-shelving which has 2" rolled up edges at rear and roll down edge at front and be supported on S.S. cross rails on all sides. Notch all corners to fit legs and piping. Under-shelving shall not interfere with water softener or adjacent equipment.
- C. Provide S.S. recessed drain trough with drainer in all soiled dish tables. Unit shall not interfere with dishwasher control panels or adjacent equipment.
- D. Disposer cones and/or scrapping trough shall be integrally welded into top and also provided with S.S. brackets for the switch and holes in backsplash return for the vacuum breaker. Scrapping trough shall be size and shape as per plan by 6" deep with coved corner construction and sloped to disposer. Provide 20" long S.S. pan formed removable trough covers. Provide T&S Co. 2905 water inlet at shallow end of trough and every 3'-0" and at change in directions. Inlets shall be controlled by a 2600 mixing valve mounted on a S.S. bracket mounted under dish table and be interconnected to water line and solenoid so water flows thru inlets when disposer in operation.
- E. Provide integral S.S. pass thru sill extending through wall as per plans and specifications with flat side splashes and turn down front with closed ends. Provide 1" rear turndown at table at

30 degrees to ensure the sill is higher than dish table. Provide wood bracing on sill as required for support. FSEC shall verify requirements of roll up door by GC prior to installation of tables.

- F. Provide raised roll rim in lieu of 3" high roll rim at front edge of soiled dish table when used as a pass thru dish return area.

2.11 DOORS

- A. **SLIDING DOORS** - Sliding doors shall be constructed of 16 Gauge S.S. or material listed in the item specifications with roller bearing slides.
- B. **SINGLE PAN CONSTRUCTION** - 16 Gauge S.S. with 3/4" thick sound deadening fiberglass between the two thicknesses of metal. Back panel to be 20 Gauge steel. Door to operate on top hung ball bearing rollers. Bottom edge of doors to be square and fitted with a groove that rides over a S.S. pin at center point.
- C. All doors shall be fitted with stops and locks. Handles shall be die stamped S.S. flush mounted.
- D. **HINGED DOORS** All hinged doors for cabinet bodies and enclosed bases shall be double pan construction. Doors shall be flush mounted and be fitted with S.S. piano type full length hinges. They shall be furnished with friction catch and S.S. recessed handles, locks, and two rubber button noise eliminators, one at each corner on handle side.

2.12 DRAWERS

- A. All drawer inserts shall be covered corner die stamped out of one piece of 18 Gauge S.S. or plastic and shall be set loosely in a channel frame so it can be lifted out for cleaning. Top edges are to be flanged out 1/2".
- B. The supporting frame shall be welded steel channel with S.S. drawer face welded to frame so there will be no exposed screws or rivets on the face which shall extend 3/4" out at top and down 3/4" with 1/2" hemmed edge and radius corners to form drawer handle. Provide two rubber button shock stop noise eliminators, one on each side of the drawer face at the top.
- C. Provide heavy duty S.S. drawer slides with heavy duty S.S. ball bearing wheels. Slides and frame to be so designed as to allow full opening of drawers and to be reinforced to support 150 lbs. when fully extended.
- D. Adjustable stops are to be provided for each drawer at the fully open position. Drawers on open base tables shall be enclosed in an 18 Gauge housing of steel. Drawer guides are to be sloped to provide self-closing action.
- E. All drawers shall be 20" by 20" by 5" deep.

2.13 ENCLOSED BASE CABINETS

- A. All enclosed bases or cabinet bodies shall be similar to Delfield Company or equal Mark VII series and constructed with 14 Gauge S.S. tops and 18 Gauge S.S. bodies and be enclosed on the ends and sides. The bases and bottom shelves shall be reinforced with channels, angle bracing, and gussets as required. Additional angles and channel cross members shall be provided to reinforce shelves and support tops as required for countertop equipment (urn, ice dispensers, drink dispensers, etc.) as shown on plan.
- B. All free corners of enclosed bases or cabinet bodies shall be rounded on a 5/8" radius and all corners against walls and other fixtures shall be square. In the case of fixtures fitting against or between walls, the bodies shall be set 1" from the wall line, but the tops will extend back to the wall line to permit space for rough-ins and adjustment to the wall irregularities. The ends of

the cabinet bodies shall extend to the wall line and be sealed and/or trimmed as required.

- C. These fixtures shall be constructed with 6" S.S. adjustable legs, unless set on masonry or steel bases as called for in the itemized specifications.

2.14 FIELD JOINTS

- A. All field joints shall be welded with rod of same basic composition as sheets or parts welded. Welds shall be free of pits, cracks, cross graining or discolorations and shall be ground and polished to the original finish of the metal. No soldered or bolted joints shall be used unless noted in item specifications and shall be properly sealed and bolted.

2.15 GRINDING AND POLISHING

- A. All exposed welded joints shall be ground flush with the adjoining material and neatly finished to harmonize therewith. Services shall be free of depressions. Wherever sheared edges occur, they shall be free of burrs, projections and fins to eliminate all danger of cutting or laceration when the hand is drawn over such sheared edges. Where miters or bull nosed corners occur, they shall be neatly ground to a uniform condition, and in no case will overlapping material be acceptable. All exposed surfaces shall be satin finish except rim which shall be a highly polished and buffed finish. Satin finish shall be comparable to the commercial mill finish known as No. 4 for S.S. No cross graining on equipment is acceptable.

2.16 GUARDS

- A. All machines shall be furnished fully enclosed with guards built in accordance with safety codes and regulations of the State or Governmental agency having jurisdiction.

2.17 HOT FOOD WELLS

- A. Provide insulated food wells with coved corner S.S. interior and the electrical element attached to the underside of well. When units are specified with drains, the manufacturer shall provide a drain assembly with bushing and a universal joint as required to manifold and interconnect all wells with a master and individual valves and Drain handles shall be easily accessible from employee side of counter. All wells shall be inter-wired to master switch with indicator light. Provide galvanized access panel below wells to protect wiring. Units shall be heated by 120 volt or 208/240 volt 1200 watt electric elements with thermostatic control with guard ring and pilot light.

2.18 INTERIOR SHELVES

- A. All interior shelves in cabinet bodies and enclosed bases shall be 18 Gauge S.S. or as called for in the itemized specifications. Turn up on back and ends of shelf shall be 1 1/2" high and coved on 3/4" radius. The front edge shall be turned down 1-1/2" and back 1/2". All shelves shall be rigidly reinforced below to prevent sagging. Provide ferruled cutouts in shelves for drain lines, conduits, etc.

2.19 LEGS - FEET - FRAMES

- A. All legs and pipe stands for open base tables, dish tables, etc. shall be constructed of 16 Gauge S.S. tubing unless noted, with cross rails and braces of the same materials. All joints between legs, under-shelves and cross braces are to be welded and ground smooth.
- B. Cross rails must be supplied to reinforce each leg. Legs anchored to gussets at top only and without cross rails are not acceptable. Pipe stands and frames furnished on all pipe base fixtures shall have legs of 1-5/8" O.D. 16 Gauge S.S. tubing, cross rails of 1" O.D. 16 Gauge S.S. tubing unless noted.

- C. Top of stand shall be fitted into S.S. gussets welded to reinforcing structure on underside of the tabletop, spaced not over 3'-6" on centers.
- D. All legs shall be fitted with adjustable S.S. bullet-shaped feet with bottom of pipe legs to be finished off smoothly and overlap the stem to provide sanitary fitting and prevent the accumulation of grease or other debris at this joint. Provide S.S. flange type feet securely anchored for island style counters, sinks, etc.
- E. All pipe legs or vertical members are to be set back from edge of table tops a sufficient distance to offset any interference with workers, walls, columns or other equipment.
- F. Provide 6" adjustable legs with adjustable S.S. bullet foot for fabricated and/or buyout equipment with minimum capacity of 1500 pounds each.

2.20 MATERIALS AND STRUCTURAL SHAPES

- A. Angles, bars, channels, piping, pipe legs, etc. used shall be uniformly ductile in quality and free of hard spots, runs, checks, and other surface defects. Except as otherwise specified, all such sections shall be milled steel galvanized by the hot dip process, all free of runs and blisters, uncoated spots or patches. S.S. shall be 18-8 composition (302 alloy) standard with No. 4 finish and polished to 180 grit and welded as previously specified. Provide butyl sealant sound deadening between tops and all structural supports or as required.

2.21 NAME PLATES

- A. Each item of equipment shall have a corrosion resistant metal name plate with model number, serial number, name and address of the manufacturer securely fastened to equipment in a non-conspicuous area. All mechanical and electrical controls, switches, disconnects, remote compressors, etc. shall be labeled with metal or engraved phenolic plastic signage.

2.22 OVERSHELVES AND WALL SHELVES

- A. Provide 10" wide NSF 16 Gauge S.S. over-shelves or wall shelves unless noted in the plans or item specifications. Provide wall mounted shelves with rear and sides to be turned up square 1" and front edge to have sanitary roll rim. Provide heavy Gauge S.S. wall mounting brackets 6" from ends of shelf with maximum of 4'-0" on centers.
- B. Provide all over-shelves with sanitary rolled edges and bull nose corners on all four sides unless equipment is mounted on shelf (microwave, toaster, dishes, etc.) and provide 1/2" turn up at rear for that portion of the over-shelf. Provide S.S. tubular support standards as required for shelf-mounted equipment and with provisions for mounting to table or countertop.
- C. Provide all wall backing and/or structural support as required for shelves to support 50 pounds per square foot and coordinate installation of same with trades.

2.23 PAINTING

- A. All galvanized material and black steel shall be thoroughly cleansed of all oil and foreign matter and given two (2) coats of enamel paint as selected.

2.24 ROLLED RIMS AND EDGES

- A. Standard roll rim shall be covered up 3" with 1/2" diameter roll at 180 degrees and bullnose corners.
- B. Square edge shall be turned down 2" at 90 degrees with 3/4" tight hem at bottom.

- C. Marine edge shall be turned up 1/2" on a 45-degree angle and turned down 2" with 3/4" tight hem at bottom.
- D. Wherever tabletops are used in connection with sinks, the top shall be fabricated with a 1/2" high raised roll rim spillage edge unless otherwise specified. Top to be integrally raised approximately 1/2" at all edges and then rolled down 2" at 210 degrees with bull nose corners.

2.25 REINFORCED STRUCTURES

- A. Counter, table, and cabinet framework shall be constructed of steel angles horizontally and channels vertically, made in sections to permit assembly on job with tops field welded. Vertical fronts and sides of cafeteria counters and similar enclosures are to be reinforced with channels on approximately 3'-0" centers to support the tray slide brackets.
- B. Unless otherwise specified, angles or channel frames and similar cross bracing on not over 2'-0" centers to be provided under all counter and tabletops to stiffen tops and furnish fastening supports for leg flanges.

2.26 SINKS

- A. Provide 14 Gauge S.S. coved corner sink bowls integrally welded as per plan with welded seamless construction with scored bottom towards a die stamped drain outlet with a T&S Brass modular waste drain and connected overflow located 1" below drain board and shall not interfere with plumbing, adjacent walls, equipment, etc. Provide 14 Gauge S.S. bracket for drain stem. All multiple compartment sinks shall be double walled construction. When sinks are built into enclosed base counters, provide access holes for the modular waste drain lever(s).

2.27 TABLETOPS

- A. METAL - Metal tabletops to be 34" high and be constructed of 14 Gauge 302 S.S. with NSF rolled rim construction and bull nose corners unless otherwise noted. All seams and coved corners shall be welded, ground smooth and polished. Provide ferruled access holes for cutouts for water lines, cords and plugs, etc. as required in tabletops, counter tops, urn stands, etc. All open base tables shall be reinforced with 12 Gauge angles or channels. Provide welded cross angle or channel members placed at each pair of legs with gussets, welded cross rails and feet as previously specified.
- B. One angle runner, running lengthwise shall be provided on tops up to 30" wide; two provided on tops over 30" wide. All tops shall be reinforced so that there will be no noticeable deflection and all reinforcements shall be stud welded to the underside of the top. No rivets or bolts to be used through the top. Provide sound deadening material between tops and reinforcing members and underside of tops. Field joints are to be provided in the top where necessary.

2.28 CABINETS, SERVICE STATIONS, BARS

- A. Provide all plastic laminate construction as manufactured by a commercial bar equipment fabricator similar to Perlick Co. or Glas-tender Co. who has the plant, personnel and engineering facility to properly design, detail and manufacture high quality equipment. The manufacturer shall be subject to the approval of the Consultant and Owner. Units shall be constructed of Wilsonart or Formica high pressure laminate (1/16" on flat surfaces and 1/32" on radius areas) on exposed surfaces in standard colors as selected by owner. Provide backing sheet where concealed. Self-edge units shall have top sheet placed over edge sheets and placed on 3/4" or 1" smooth marine plywood to insure a ripple free surface. Use NSF non-water-soluble adhesive.

- B. Unless noted in the item specifications, provide back bars with plastic laminate exterior finish on all exposed surfaces, 4" backsplash at walls, S.S. interior, interior lights with jamb switches, locking doors, 6" S.S. legs, 2 heavy duty shelves per door, coil, compressor, controls, inter-wired to common point, etc. Provide all necessary cutouts in top and shelves for refrigeration lines, beer lines, utilities, drainers, etc.
- C. Unless noted in the item specifications, provide all front bars and bar service stations with plastic laminate bar top with suds rail, 1" vertical die with laminate on both sides, Lawrence Co. 2" brass arm rail and foot rail with brackets, etc. as per the item specifications. All upper bar equipment shall be provided by other trades unless noted on foodservice equipment documents.
- D. Provide all counters, cabinets, tops, service stations, etc. with plastic laminate finish where exposed, legs with removable kick plates, S.S. adjustable tray slides, concealed fasteners, European hardware, roller bearing drawers, etc.
- E. Provide access holes and/or chases for beverage lines, utilities, refrigeration lines, columns, etc. as required which shall be properly sealed and trimmed.

2.29 UNDERSHELVES

- A. The undershelves on open base tables, dish tables, etc. shall be a solid removable 16 Gauge S.S. shelf unless noted in the itemized specifications. Shelf is to be turned up at rear and down on all front and side (down on all island units) edges 1-1/2" with corners at legs cut out and mounted on the support stringers on all four sides. Provide ferruled access holes as required for drain lines, water lines, conduits, etc.

2.30 CORRECTIONAL PACKAGES

- A. Unless otherwise stated in the item specifications, A Corrections Package shall include but not be limited to non-removable hardware, fasteners, nuts, bolts, screws, hinges, handles, hoses, etc.
- B. All items to be fully welded and/or not removable without the use of tools. Areas filled with sealant caulk are to be provided with "No-Pick sealant".
- C. Temperature and/or pressure gauges are to be installed and/or protected in a manner that they cannot be subjected to removal without the use of tools or vandalism.
- D. There shall be no devices that may create or cause a hazard to the operator and/or the use of said device to injure other personnel.

2.31 VENTILATION – HOODS - DUCTWORK

- A. Unless otherwise stated in the item specifications, provide 300 series 18 Gauge S.S. hoods similar to Captive Air Co. or Duo Aire Co. or Accurex Co. and be manufactured in accordance with and bear the seal of NSF, UL, and NFPA 96. Hoods shall be mounted 6'-8" above finished floor and must overhang all equipment by a minimum of 6" at front (18" for drawer type broilers) sides and be furnished with a full complement of S.S. UL filters, filter frame with grease cup, recessed LED lights inter-wired to junction box on top of hood and to switch mounted on wall in hood control panel, duct collars, fire dampers, hangers, hemmed 18 Gauge S.S. end panels, S.S. closure panels from top of hood to ceiling, cutouts and trim for power distribution system or columns, etc. Provide insulated NFPA integral 3" stand-off behind hood when installed on non-rated wall. Walls for hood mounting shall be rated as required by code.
- B. All exhaust fans shall be UL-762 rated vertical discharge fans with insulated curb, hinged base with grease collection device, mounted and inter-wired starter and disconnect, adjustable drive

assembly and be sized for CFM as per plans with a sound classification of "average" and not to exceed 12 sones.

- C. All make-up air units shall be sized for CFM as per plan. Unit shall be fully factory built with supply fan, filter section with bird screen, motorized inlet dampers, metal cabinet with weather proof epoxy coated finish in color as selected by Owner, 12" legs and rails, curb, vibration eliminators, factory wired control panel and disconnect with wiring harness and pigtails (installation and conduit by E.C. as required) for interlock of exhaust fan and make-up air unit to switch panel on face of hood or remotely located. If required by code provide a pre-heat section (gas, electric, steam or hot water) which shall provide a minimum degree rise capability (as shown in item specifications and/or as required by local code) complete with full modulating controls, thermostat, etc. as required for a complete system. Provide all UL listed components.
- D. All ductwork shall be constructed and installed as per SMACNA minimum gauges and requirements. Make-up air ductwork shall be insulated and rigid metal construction. Flex duct will not be allowed. Provide welded 16 Gauge black iron exhaust grease duct as per code requirements and conform to all building requirements and obstructions with all dimensions subject to verification in field. Provide all grease ducts with cleanouts every 20'-0" of horizontal run (with pitch as per code) and within 10'-0" of changes in direction, access panel, dampers, curbs, flashing, flanges, plenums, supports, insulation, etc. as required by code and to provide a watertight system. Fireproofing shall be provided as noted on the food service plans and in the item specifications.
- E. System is to be factory tested and balanced as required for proper operation with written report to Architect and Owner.
- F. Roof openings, structural support, fireproofing, and final connections shall be by the Trades.
- G. If required by code, cooking exhaust hoods shall have an Ansul Co. R-102 or equal chemical fire protection system and will be listed separately in the item specifications.

2.32 WALK-INS AND REFRIGERATION

- A. Provide NSF and UL approved walk-ins as per the item specifications size and shape as per plan by 8'-6" high and furnished with prefabricated modular construction tongue and groove cam lock style panels for walls with covered vinyl screed, ceilings, and floors with 4" foamed in place UL-25 flame spread class No. 1 urethane insulation with a minimum "R" factor of 32 and a "K" factor of 0.121. Wall and ceiling panels shall have 0.040 stucco embossed aluminum or 20 Gauge 304 S.S. finish and floor panels shall be 0.100 smooth aluminum or 18 Gauge S.S. with a rating of 700 pounds per square foot with non-skid floor strips. All panels shall have a ten-year guarantee and be installed with a watertight seal. Provide 4" S.S. high covered base molding at all exposed exterior and interior walls securely anchored and sealed as required. Provide ceiling hangers and structural supports as required.
- B. If floorless construction is required, general trades shall provide 4" urethane insulation and vapor barriers for sub floor and tile floor. Provide covered floor screeds below wall panels anchored to red wood vapor barriers which shall extend up through and 1/8" above the level of the finished floor, 6 mil polyethylene vapor barrier, etc. as per the manufacturer's standard requirements. Supply and coordinate the installation of walk-ins to ensure proper fit of floor recesses, sizes, tile, insulation, grout, vapor barriers, drainage, etc.
- C. Provide one surface-mounted LED light fixture mounted above door for the first 50 square feet of floor space and one additional ceiling mounted fixture as shown on the plans. Lighting shall provide a minimum of 35-foot candles at 36" above floor. The light above door shall be inter-wired to switch and junction box, but all additional lights shall be installed and wired in field with conduit located outside the compartments.

- D. Provide 36" by 78" in-fitting doors with magnetic gaskets, three C.P. cam lift hinges, S.S. front, 24" high interior aluminum tread plate kick plate, cylinder locks, and automatic door closer. Doors shall be mounted in reinforced panel with FRP or S.S. door jambs with thermal break and thermostatically controlled heater strip, S.S. heavy gauge heated threshold, safety release, digital thermometer, and virgin plastic full width door curtains mounted 6" above door header. Provide non-heated relief air vents for cooler and inter-wired heated vents for all freezer compartments mounted above doors.
- E. Provide removable closure trim with concealed fasteners of same appearance as the walk-in exterior from box to all adjacent building walls and ceilings. Provide access panels and louvers as required for service.
- F. Refrigeration systems shall be complete with items as specified or as required to provide a first class system. Should any dispute arise as to the quality of equipment or workmanship, the decision shall rest with the Consultant.
- G. Hermetic or scroll compressors shall be mounted on anti-noise, anti-vibration blocks, and be factory mounted in welded angle iron frame and housing with support rails, metal curbs, timed defrost, factory installed control panel, pilot light, NEMA rated disconnects and starter, etc. Compressors to be factory preconnected for final water and electrical connections. FSEC shall verify that proper ventilation of compressors is obtained.
- H. Coil and/or compressor condensate drain lines shall be furnished as required and installed by the FSEC. Provide drain lines terminating with trap over floor drain where shown. Drain lines to be neatly insulated with material similar to Armaflex. Any drain line run through a freezer compartment shall also have a heater coil neatly wrapped over the line, pre-wired by the FSEC and shall operate continuously. No drain piping shall interfere with shelving within the compartment nor exit through the front of a compartment. All piping shall be concealed where possible.
- I. Coils shall be manufactured by Bohn, Russell or the specified walk-in panel manufacturer. Coils shall consist of the manufacturer's standard factory components and shall have timed defrost and immersion type thermostat and be connected to compressors by the equipment supplier using type "L" copper tubing soldered with Silfos and using A2L compliant refrigerants. Refrigeration lines shall be insulated in same manner and materials as coil and drain lines and shall be concealed where possible.
- J. FSEC to provide refrigeration system with expansion valves, pressure controls, strainers, solenoid valves, liquid dryers, adjustable room thermostats, hangers, king and queen valves, heat exchangers, oil separators, pump-down solenoid, low ambient controls, crankcase heater, outdoor shroud, shut-off valves, sleeves, sight glass with moisture indicator and all other items necessary for a complete system.
- K. All electrical components within each compartment shall be pre-wired by supplier to junction box on exterior top of compartment. Electrical trades shall make final connections and inter-wire to lights and from walk-in coils to compressor for timed defrost in conduit as required.
- L. After final connections by other trades, the equipment supplier shall evacuate, pressure test, charge, start up and operate system for a period of three (3) days and make all necessary adjustment of controls as required. Operate coolers at 35 degrees and freezers at 5 degrees unless noted on plans. Provide manufacturer's five-year compressor warranties and one-year free service available within 12-hour notification.

2.33 WATER INLETS

- A. Water inlet locations shall be located above positive water level to prevent siphoning of liquid into the water system.

- B. Wherever conditions require a water inlet placed below water level, a suitable pressure type siphon breaker or double check valve shall be placed on fixture to form a part of same to prevent back siphoning.
- C. Exposed siphon breakers shall be chrome plated units with chrome-plated piping and slip flanges where exposed.

2.34 MECHANICAL/ELECTRICAL MATERIALS REQUIRED IN FOOD SERVICE CONTRACT

- A. The equipment supplier shall include materials properly labeled and packaged as follows:
- B. Plumbing Appurtenances:
 - 1. Check requirements for gas, water, steam, etc. on project before ordering equipment. Information shown on drawings or specifications does not relieve the contractors of this responsibility.
 - 2. Faucets, pre-rinse units, lever wastes, vacuum breakers, to be as manufactured as described in the item specifications.
 - 3. Except as otherwise specified, provide each sink compartment with deck type or backsplash type faucet with minimum 12" swing spout soft flow. Where multiple sink compartments are provided, faucets may be located between compartments.
 - 4. C.P. brass overflow fittings shall be 1-1/2" tubing fully connected to sinks at factory with modular pull quick opening waste valves with tailpieces on each sink compartment.
 - 5. Provide all solenoids, C.P. atmospheric or pressure type vacuum breakers with C.P. stems above counter tops, shock absorbers, check valves, mixing valves, gas regulators, etc. required by code or for proper operation of equipment with mounting brackets as required. Valves shall be installed where required, accessible and convenient to the operator.
 - 6. Provide swivel gas hoses assemblies 36" or of proper length as required with quick disconnect, ball valve, caster floor locks and 3000-pound coiled restraining device, and wall brackets.
 - 7. All steam equipment shall have valves provided with heat resistant handles, traps, gauges, etc. as required for proper operation
- C. Electrical Appurtenances:
 - 1. Check voltage on project before ordering equipment. Information shown on drawings or specifications does not relieve the contractors of this responsibility.
 - 2. Except where noted under item specifications, current characteristics for motors 3/4 HP or less, solenoid valves and lighting shall be 120-volt, single phase, 60 cycle, A.C. Unless otherwise noted under item specifications, motors 3/4 HP and over shall be wound for 208/240-volt, three phase, 60 cycle, A.C.
 - 3. Provide a 120-volt control circuit on all equipment that operates on voltages on or over 208-volt. All equipment requiring 120-volt control circuits (120/480-volt, 120/208-volt, etc.) shall have transformers prewired on equipment.
 - 4. Cords and plugs and receptacles for equipment shall be three or four wire all rubber coiled retractable style cord with ground as required and match the receptacles provided and as

best suited for the equipment. Units shall be mounted in NEMA type enclosures as per code with S.S. faceplates and boxes where receptacles are exposed.

5. Thermostats, unless otherwise noted on plans or in the item specifications, shall be provided at all equipment (bain-maries, urns, dish machines, hot food tables, warming cabinets, etc.) with thermostatic control.
6. Heating elements to be of voltage and phase as specified or as required to suit the project.
7. Controls, thermostats, switches, contactors, low water cut-off, light fixtures and bulbs, etc., necessary for the installation and proper operation of equipment shall be furnished as required along with all starters and/or motor control switches for the proper function of the equipment specified. Controls mounted on vertical surfaces shall be recessed.
8. Controls that are an integral part of equipment shall be factory installed. Controls which are to be separately mounted shall be shipped loose for field installation. Coordinate all field installation to not interfere with access and/or operation.
9. Provide properly sized magnetic starters line voltage type with thermal overload relays and reset for normal operation by automatic control or pushbutton station for 208/240-volt control. Enclosures shall be general purpose NEMA type 1, A.C. voltage, unless located outdoors which will require a waterproof enclosure. Remote control motors shall have magnetic starters.
10. Disconnect switches shall be type non-fusible, single throw, heavy duty industrial, quick make, quick break. Circuit breakers may be used in lieu of above disconnects as per code.
11. Provide equipment with required internal wiring between elements, switches, motors, receptacles, starters, etc. complete to a junction box. Disconnect, starter, etc. as required and are to be "left ready" for final connections by electrical trades. All control circuits shall be 120-volt to ground.

PART 3 GENERAL SPECIFICATIONS - EXECUTION

3.01 INSTALLATION AND MATERIALS

- A. All work required under this section shall be installed by the proper trades having jurisdiction in this area concurrent with the project progress, GC's scope of work and related field conditions. Such installation shall be under the direction of a competent supervisor. A site inspection is recommended prior to bidding if applicable.
- B. Provide for the conveyance, uncrating, erection, assembling, setting in place, trim, cutting of holes and ferrules in equipment for piping, drains, electrical outlets, etc.
- C. Coordinate installation with all trades, repairing any damage done to equipment during installation, removal of debris created by installation, startup, testing, and cleaning of all equipment (new, existing, or relocated).
- D. Where necessary to move equipment to make final connections, coordinate and assist all in moving equipment and be on the project site to carefully level and adjust equipment as the connections are being made. During installation, coordinate with all trades on connection details and be responsible for meeting the individual equipment manufacturer's connection requirements. Report any infractions of installation procedure in written form.

- E. The fit of all equipment as it joins all walls, floors, and corners shall be tight (within 1/4") to adjacent walls, seal all equipment with NSF approved clear sealing compound and/or S.S. trim molding of proper size with concealed fasteners. Inspect the site and advise in writing and/or on shop drawings all necessary building requirements door sizes, etc. to receive the equipment and ensure accuracy of fit and installation.
- F. All cabinet bases and pieces of equipment which are to be set on bases or machine platforms shall be set into a sealing compound of color to match the tile mortar. Enclosures, backsplashes, and turn-backs to wall shall be pressed into a ribbon of the same material with the excess wiped out to a radius fillet. Where necessary, and to eliminate shifting and the subsequent breaking of this seal, item shall be anchored to floor and wall with suitable masonry anchors. All equipment with utility connections (island style sinks, dish tables, etc.) shall also be anchored to the floor with S.S. flange type feet.
- G. All equipment and materials shall be new, of prime quality, full gauge thickness of compositions indicated by names or abbreviations stated in itemized specifications.
- H. Equipment batteries of one manufacturer are to be pre-fitted at the factory and provide photographic proof of such work.
- I. If equipment is noted as relocated or removed during the construction period, said equipment shall be disconnected and be re-connected as directed in the GC's scope of work and removed and stored by GC unless noted in the item specifications. FSEC to coordinate and supervise this work and label equipment for reuse. FSEC to reinstall and clean equipment as per the plans and specifications. Existing equipment not scheduled for reuse shall be removed as directed by owner.

3.02 LIMIT OF OTHER SUBCONTRACTORS/TRADES RESPONSIBILITY

A. Hood Connections:

- 1. Note that kitchen grease and/or dishwasher hoods and ducts may or may not be furnished as part of this contract. Refer to the plans and item specifications. The trades shall make the final connections to hood and connect to exhaust fan and make-up air unit as indicated. All ductwork shall have welded and/or watertight joints. All roof holes, flashing, structural support, fire rating, and final connections by the trades unless otherwise noted.

B. Plumbing:

- 1. The trades shall provide rough-ins and piping with stop valves, elbows, nipples, couplers, traps, waste vents, gas regulators, for water, steam, gas, etc. and make final connections to the equipment unless otherwise noted.
- 2. The trades shall install equipment accessories (faucets, modular wastes, solenoids, valves, gas hoses, nipples, etc.) furnished by the FSEC.
- 3. The trades to provide water heater unless otherwise indicated on the plans.
- 4. The trades shall disconnect and reconnect relocated equipment if applicable.

C. Electrical:

- 1. The trades shall provide rough-ins, controls, panels, switches, wall receptacles to match equipment cords and plugs, starters, junction boxes, canopy light and fan switches, conduit, wiring, wall outlets, disconnects, etc. and make final connections to the

equipment unless otherwise noted.

2. The trades shall install equipment accessories (cords, light switches, drop-in equipment switches, wiring harnesses, disconnect switches, tracks for heat lamps, etc.) as required by code.
3. The trades shall disconnect and reconnect relocated equipment if applicable.

D. General:

1. All concrete platforms, bases, etc. will be provided by trades. Grouting of drip pans and/or floor troughs to be by trades and coordinated by FSEC.
2. All required holes and recesses for piping and ducts will be provided by the trades upon receipt of information from the FSEC as to the location, size, etc. This information is to be provided in adequate time to be incorporated in the work.
3. Unless stated in the item specifications, the trades shall provide all floor recesses, insulated sub floors, tile floors and vapor barriers for walk-ins as noted on the plans.
4. If applicable, the trades shall remove relocated equipment from kitchen and store in adjacent area during Kitchen construction period. The FSEC shall coordinate removal, inspection, storage, labeling, etc. of equipment. The FSEC shall reinstall relocated equipment as per plan after construction is completed.
5. Provide fire rated walls in kitchen for cooking equipment exhaust hoods and non-combustible materials within 18" of top of hood or as required by fire codes as directed in the Construction Manager scope of work.

3.03 TESTING

- A. After installation of equipment by FSEC and hook-up by the trades, the FSEC shall inspect, start up, clean, adjust and test all equipment under operating conditions for 48 hours prior to acceptance by Owner. If inspection or test shows defects, such defects shall be corrected then an inspection and test repeated. Equipment Supplier shall certify in writing that all equipment is performing in full compliance with the plans and specifications.

3.04 DEMONSTRATION

- A. After utility connections to the equipment are completed by other trades, schedule and conduct inspection, start up and final test of all equipment prior to final jurisdiction inspection. Schedule the demonstration with the Owner and perform the demonstration in the presence of the Owner and/or their authorized representative with a minimum of seven days notification to owner.
- B. Before final inspection, remove any and all protective covering from equipment and give all parts of all equipment a thorough cleaning and servicing, leaving items free from defects and remove trash from premises.
- C. Provide required competent personnel for two eight-hour periods as instructors to operating and maintenance personnel on the safe and proper operation and maintenance of all equipment. Provide additional instructions for up to eight additional hours during the one year guarantee period as requested by the Owner.

- D. Present all maintenance manuals and as built drawings as previously specified or requested by Consultant.

3.05 FINAL INSPECTION AND PUNCH LIST

- A. After installation is completed and tested, notify the Consultant who will review all equipment and submit a repair or punch list of all items that are not in compliance with the documents. All items shall be completed immediately and not to exceed 14 days unless written notice is submitted and approved.

3.06 SCHEDULE OF EQUIPMENT

- A. The following specifications refer to items of food service equipment on the drawings which shall form a part of these specifications and are binding as written herein, and will indicate the required quantity, size, etc. of each item.

- B. Item Specifications:

Item #101 – Walk-in Freezer - Qty. of 1

Base Manufacturer: Kolpak Co.

Base Model: R-Series

Alternate Manufacturer: Norlake Co.

Alternate Manufacturer: Bally Co.

Alternate Manufacturer: American Panel Co.

Alternate Manufacturer: Imperial/Brown Co.

Alternate Manufacturer: Tafco Co.

Minimum specifications:

1. NSF walk-in sized approximately 15'-5" by 15'-5" and shape as shown on plan by 8'-6" high with aluminum interior and stainless steel exposed exterior finish, aluminum interior ceilings, door heaters, gaskets, pressure relief port, etc. for all compartments. Provide digital thermometer with audio / visual alarm system with dry contactors to connect to building management system, door heaters, gaskets, door threshold, pressure relief port, etc. for all compartments.
2. Prefabricated floor shall be .080 textured aluminum with .75" exterior grade plywood backing throughout and minimum of 30" long interior ramp. Floor panels shall be 4" thick foamed-in-place rigid polyurethane with an R-Value minimum of 32 and shall utilize cam-locks for assembly. Metal floor surface and plywood underlayment shall be foamed-in-place (not over-laid).
3. Provide standard 34" wide flush mount doors with 18" by 24" heated triple pane viewport, stainless steel front, 24" high aluminum tread-plate interior kick-plate, two cam lift hinges, chrome plated hardware, and have same 4" thick foamed in place UL-25 flame spread rated urethane insulation as walls and ceiling. Provide Curtron Co. Polar Pro USDA Polar Grade self-closing hinged vinyl door curtain with .120" clear door panels and stainless-steel mounting hardware.
4. Furnish one LED light mounted over the door and extra 48" LED lights inter-wired to switch per plan. All lighting shall have a 40 Lumens per Watt efficacy or more including ballast loss.
5. Joints between the walkin and building walls and ceiling shall be closed with filler strips of same appearance as exterior of box with service access panels as required.
6. Provide one 208 Volt 3 Phase system for the freezer. Provide Copeland compressor piped to BTU matched Bohn low profile end mount coil. Freezer shall have 208 Volt 1 Phase timed electric defrost coil. Coils shall be furnished with electronically commutated motors, remote mounted (shipped loose) weatherproof time clock for timed defrost, thermostat, solenoid, "P"-trap and expansion valves mounted and wired.
7. The air cooled compressors shall be factory assembled and mounted on heavy duty steel base and be placed on roof with outdoor package in aluminum housing with hinged shroud, head pressure control with flood back, crankcase heater, sight glass, frame mounted dual pressure control, oversize condenser, drier, suction line filter, suction vibration eliminator, oversize receiver with total pump down capacity and king and queen service valves. Provide a pre-wired NEMA-3 control panel with industrial grade fused disconnect, terminal block, magnetic starters, circuit

- breakers and contactors, defrost timer and pump down switch.
8. Provide approximately 35'-0" of field piped and pressure tested insulated refrigeration lines per compartment to connect compressors to coils. Provide refrigeration with piping, controls, drain lines and heat tape, etc.
 9. Provide a 5 Year warranty on compressors and 1 Year free service plan as per G.S.
 10. Final connections, structural support, etc. are by Trades.
 11. The proposed use of this walk-in shall be standard school holding, mixed storage and prep.

Item #102 – Utility Cart – Qty. of 2 – Owner's existing equipment to be relocated by the Owner.

Item #103 - Shelving - Qty. of 32

Base Manufacturer: Eagle Co.

Base Model: 1836E

Alternate Manufacturer: Inter-Metro Co.

Minimum specifications:

1. Provide wire unit size and shape as per plan with four shelves per section.
2. Units located in the walk-in freezer shall have four 63" to 64" posts and the remaining shelving shall have four 72" to 74" posts per section.
3. Green epoxy "Sani-Gard" coating.
4. Two swivel and two locking casters.

Item #104 – Portable Table - Qty. of 2

Base Manufacturer: Eagle Group Co.

Base Model: YJRN30-SE

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications.

Minimum specifications:

1. Furnish and install 14 Gauge 304 stainless steel table as per G.S. size and shape as per plan by 34" high.
2. Stainless steel legs and gussets.
3. Sound deadened top.
4. Two 20" by 20" by 5" deep roller bearing drawer assembly with stainless-steel or plastic insert and an 18" by 24" white poly cutting board mounted below drawer.
5. 16 Gauge stainless steel under shelf.
6. 5" heavy duty locking casters.

Item #105 - Ice Maker - Qty. of 1

Base Manufacturer: Manitowac Co.

Base Model: IYT-0620A-161

Alternate Manufacturer: Hoshizaki Co.

Alternate Manufacturer: Scotsman Co.

Minimum specifications:

1. Provide self-contained air-cooled unit that operates on 208 Volt 1 Phase with half dice grid.
2. Everpure or 3M filter model # QC7I Single 4FC-S.
3. Start and adjust.
4. 5 Year compressor warranty and 3 Year free service plan.
5. D-420 bin with legs and adjustable bullet feet.

Item #105A – Ice Maker Filter – Included in Item #105.

Item #105B - Ice Maker Scoop Holder - Qty. of 1

Base Manufacturer: Manitowac Co.

Base Model: K-00461

Alternate Manufacturer: None

Minimum specifications:

1. Provide scoop holder that can be mounted vertically or horizontally.
2. Not shown on plans.

Item #106 – Walk-in Cooler - Qty. of 1

Base Manufacturer: Kolpak Co.

Base Model: R-Series

Alternate Manufacturer: Norlake Co.

Alternate Manufacturer: Bally Co.

Alternate Manufacturer: American Panel Co.

Alternate Manufacturer: Imperial/Brown Co.

Alternate Manufacturer: Tafco Co.

Minimum specifications:

1. NSF walk-in sized approximately 12'-6.5" by 11'-7" and shape as shown on plan by 8'-6" high with aluminum interior and stainless steel exposed exterior finish, aluminum interior ceilings, door heaters, gaskets, pressure relief port, etc. for all compartments. Provide digital thermometer with audio / visual alarm system with dry contactors to connect to building management system, door heaters, gaskets, door threshold, pressure relief port, etc. for all compartments.
2. Pre-fabricated floor shall be .080 textured aluminum with .75" exterior grade plywood backing throughout and minimum of 30" long interior ramp. Floor panels shall be 4" thick foamed-in-place rigid polyurethane with an R-Value minimum of 32 and shall utilize cam-locks for assembly. Metal floor surface and plywood underlayment shall be foamed-in-place (not over-laid).
3. Provide standard 34" wide flush mount doors with 18" by 24" heated triple pane viewport, stainless steel front, 24" high aluminum tread-plate interior kick-plate, two cam lift hinges, chrome plated hardware, and have same 4" thick foamed in place UL-25 flame spread rated urethane insulation as walls and ceiling. Provide Curtron Co. Polar Pro USDA Polar Grade self-closing hinged vinyl door curtain with .120" clear door panels and stainless-steel mounting hardware.
4. Furnish one LED light mounted over the door and extra 48" LED lights inter-wired to switch per plan. All lighting shall have a 40 Lumens per Watt efficacy or more including ballast loss.
5. Joints between the walkin and building walls and ceiling shall be closed with filler strips of same appearance as exterior of box with service access panels as required.
6. Provide one UL listed 208 Volt 3 Phase system for the cooler. Provide Copeland compressor piped to BTU matched Bohn low profile end mount coil. Cooler shall have 120 Volt air defrost coil. Coil shall be furnished with electronically commutated motors, remote mounted (shipped loose) weatherproof time clock for timed defrost, thermostat, solenoid, "P"-trap and expansion valves mounted and wired.
7. The air cooled compressors shall be factory assembled and mounted on heavy duty steel base and be placed on roof with outdoor package in aluminum housing with hinged shroud, head pressure control with flood back, crankcase heater, sight glass, frame mounted dual pressure control, oversize condenser, drier, suction line filter, suction vibration eliminator, oversize receiver with total pump down capacity and king and queen service valves. Provide a pre-wired NEMA-3 control panel with industrial grade fused disconnect, terminal block, magnetic starters, circuit breakers and contactors, defrost timer and pump down switch.
8. Provide approximately 35'-0" of field piped and pressure tested insulated refrigeration lines per compartment to connect compressors to coils. Provide refrigeration with piping, controls, drain lines and heat tape, etc.
9. Provide a 5 Year warranty on compressors and 1 Year free service plan as per G.S.
10. Final connections, structural support, etc. are by Trades.
11. The proposed use of this walk-in shall be standard school holding, mixed storage and prep.

Item #201 – Trash Bin – By Owner

Item #202 – Prep Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: YJРАН30-SEM-BS

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 stainless steel table as per G.S. size and shape as per plan by 34" high.
2. Stainless steel legs, gussets, and adjustable bullet feet.
3. Sound deadened top with 6" backsplash and marine edge.
4. 16 Gauge stainless steel under shelf.
5. Four 20" by 20" by 5" deep roller bearing drawer assemblies with stainless-steel or plastic insert and an 18" by 24" white poly cutting board mounted below drawer.
6. Two 18" by 24" by 14" deep "Coved" corner sinks with T&S Co. B-3990-01 modular waste drains with connected overflows, and T&S Co. or Krowne Co. 5F-8WLS12 faucet with rear connector kit.
7. 10" deep stainless steel over shelf mounted 24" above table surface as shown on plan.
8. Everpure Co. or 3M Co. filter model # QC71 Single 4FC with mounting bracket to mount to the wall.

Item #202A – Prep Table Filter – Included in Item #202.

Item #203 – Cook's Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: YJРАН60SEM

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications.

Minimum specifications:

1. Provide 14 Gauge 304 stainless steel table size and shape as per plan by 34" high.
2. Stainless steel legs, gussets, and a minimum of two adjustable flanged feet.
3. Stainless steel sound deadened top with marine edge.
4. 16 Gauge stainless steel under shelf.
5. Two 20" by 20" by 5" deep roller bearing drawer assemblies with stainless-steel or plastic insert and an 18" by 24" white poly cutting board mounted below drawer.
6. One 16" by 20" by 14" deep "Coved" corner sinks with T&S Co. B-3990-01 modular waste drain with connected overflows, T&S Co. or Krowne Co. 5F-8DLX12 faucet.
7. Everpure Co. or 3M Co. filter model # QC71 Single 4FC with mounting bracket to mount to underside of the tabletop.

Item #203A – Cook's Table Filter – Included in Item #203.

Item #204 – Hot Food Cabinet – Qty. of 2 - The FSEC shall remove the owner's existing equipment from kitchen and place in a storage area as directed by the Owner or Contractor. Upon completion of construction, FSEC to place equipment back in location as shown on the plan. Reconnection of utilities shall be by the Trades.

Item #205 – Worktable - Qty. of 2

Base Manufacturer: Eagle Group Co.

Base Model: YJРАН30-SE-BS

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. Provide 14 Gauge 304 stainless steel table size and shape as per plan by 34" high.
2. Stainless steel legs, gussets, and adjustable bullet feet.

3. Stainless steel sound deadened top with 6" backsplash at all adjacent walls.
4. 16 Gauge stainless steel under shelf.
5. Two 20" by 20" by 5" deep roller bearing drawer assembly with stainless-steel or plastic insert and an 18" by 24" white poly cutting board mounted below drawer.
6. 10" deep stainless steel over shelf mounted 24" above table surface as shown on plan.

Item #206 – Prep Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: YJRN30-SEM-BS

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 stainless steel table as per G.S. size and shape as per plan by 34" high.
2. Stainless steel legs, gussets, and adjustable bullet feet.
3. Sound deadened top with Marine edge and 6" backsplash.
4. 16 Gauge stainless steel under shelf.
5. Two 20" by 20" by 5" deep roller bearing drawer assemblies with stainless-steel or plastic insert and an 18" by 24" white poly cutting board mounted below drawer.
6. Two 18" by 24" by 14" deep coved corner sinks with T&S Co. B-3990-01 modular waste drains with connected overflows, and T&S Co. or Krowne Co. 5F-8WLS12 faucet with rear connector kit.
7. 10" deep stainless steel over shelf mounted 24" above table surface as shown on plan.
8. Everpure Co. or 3M Co. filter model # QC7I Single 4FC with mounting bracket to mount to the wall.

Item #206A – Prep Table Filter – Included in Item #206.

Item #207 – Lockable Cabinet - Qty. of 1

Base Manufacturer: Advance Tabco Co.

Base Model: CH15-72

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications.

Minimum specifications:

1. Provide 14 Gauge 304 stainless steel cabinet size and shape per plan by 78" high.
2. 6" stainless steel legs with adjustable flanged feet and wall clips.
3. Stainless steel sloped top.
4. Locking double pan hinged doors and four adjustable intermediate shelves.

Item #301 - Convection Oven - Qty. of 3

Base Manufacturer: Southbend Co.

Base Model: ES-20-SC

Alternate Manufacturer: Vulcan Co.

Alternate Manufacturer: Garland Co.

Alternate Manufacturer: Montague Co.

Minimum specifications:

1. Double deck standard depth.
2. Provide unit that operates on 208 Volt 3 Phase.
3. Stainless steel front and sides.
4. Door windows.
5. 5" heavy duty locking casters.
7. Two speed motors with solid state control panel with standard controls.

Item #302 - Refrigerator - Qty. of 2
Base Manufacturer: Traulsen Co.
Alternate Manufacturer: Victory Co.
Alternate Manufacturer: True Co.

Base Model: G10010

Minimum specifications:

1. Unit to operate on 120 Volt with cord and plug and have top mount compressor.
2. Stainless steel exterior front. One unit to have left door hinging and one unit to have right door hinging.
3. Digital thermometer.
4. Five coated shelves.
5. 5" heavy duty locking casters.
6. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.

Item #401 – Hot Food Table – Qty. of 2

Base Manufacturer: LTI Co.
Alternate Manufacturer: Randell Co.
Alternate Manufacturer: Delfield Co.
Alternate Manufacturer: Duke Co.

Base Model: EF5-CPA Modified

Minimum specifications:

1. Provide 34" high unit size and shape per plan that operates on 120/208 Volt 1 Phase with cord and plug.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Wet or dry hot food wells with drains, drain manifold with individual and master valves. Drain valves to be easily accessible from the employee side of the counter.
4. Open rear with plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
5. One 12" solid folding inverted "V" style stainless steel tray slide mounted 28" above finished floor and one 8" stainless steel solid folding work shelf mounted on rear.
6. Set of 5" heavy duty locking casters.
7. Furnish and install BSI Co. PMG Co. or ACS-Vollrath Co. Model #ZG9930 sneeze guard with brushed aluminum uprights and surface mounted hardware, slim square edge heat lamp, light, glass top, ends, and adjustable front. Unit shall meet current NSF standards. Installation of vertical posts in front of food wells or food displays are not acceptable.
8. Sneeze guard assembly and hot food table to be inter-wired to a common point to provide one electrical connection for entire unit and be supplied with a cord and plug.
9. Dormont Co. or T&S Co. W50B2Q-36 uncoated flexible water hose with LFW50QD 2-way quick disconnects at each end.
10. T&S Co. B-0208 cold water fill faucet with blue index ring.
11. Drain tailpiece and shut off valve. A garden hose style of drain connection is not acceptable.
12. Internal wiring shall be neatly installed and fastened in a manner that shall not be visible to staff or customers.

Item #402 – Utility Counter – Qty. of 2

Base Manufacturer: LTI Co.
Alternate Manufacturer: Randell Co.
Alternate Manufacturer: Delfield Co.
Alternate Manufacturer: Duke Co.

Base Model: Spec Line

Minimum specifications:

1. Provide 30" high unit as per plan.

2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. One 12" solid folding inverted "V" style stainless steel tray slide mounted 28" above finished floor.
5. Set of 5" heavy duty locking casters.

Item #402A – Utility Counter – Qty. of 2

Base Manufacturer: LTI Co.

Base Model: Spec Line

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 30" high unit as per plan.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. One 12" solid folding inverted "V" style stainless steel tray slide mounted 28" above finished floor.
5. Set of 5" heavy duty locking casters.
6. Provisions for surface mounted sneeze guard assemblies as shown on plan.
7. Top cutouts to accommodate drop-in equipment with partial apron for equipment concealment and mounting of controls.

Item #403 – Cold Food Table – Qty. of 2

Base Manufacturer: LTI Co.

Base Model: 74-CFMA Modified

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 30" high unit as per plan with NSF-7 drop-in self-contained refrigerated cold pan with drain and shut off valve, on/off switch, and pan adapter bars. Unit shall operate on 120 Volt with cord and plug. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. One 12" solid folding inverted "V" style stainless steel tray slide as shown on plan mounted 28" above finished floor.
5. Set of 5" heavy duty locking casters.
6. Furnish and install BSI Co. PMG Co. or ACS-Vollrath Co. Model #ZG9930 sneeze guard with brushed aluminum uprights and surface mounted hardware, light, glass top, ends, and adjustable front. Unit shall meet current NSF standards. Installation of vertical posts in front of food wells or food displays are not acceptable.
7. Sneeze guard assembly and cold food table to be inter-wired to a common point to provide one electrical connection for entire unit and be supplied with a cord and plug.
8. Garden hose hook style of drain connection is not acceptable.
9. Internal wiring shall be neatly installed and fastened in a manner that shall not be visible to staff or customers.

Item #404 – Drop-in Frost Top – Qty. of 2
Base Manufacturer: Delfield Co.
Alternate Manufacturer: Randell Co.

Base Model: N8230-STP

Minimum specifications:

1. Furnish drop-in self-contained refrigerated frost top with drain with shut off valve and an on/off switch. Unit shall operate on 120 Volt with cord and plug.
2. Raised stainless steel top that can accommodate one sheet pan.
3. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.

Item #404A – Sneeze Guard - Qty. of 1
Base Manufacturer: BSI Co.
Alternate Manufacturer: PMG Co.
Alternate Manufacturer: ACS-Vollrath Co.

Base Model: ZG-9930

Minimum specifications:

1. Furnish and install unit with brushed aluminum uprights, glass top, ends (where required), and adjustable front.
2. Unit shall meet current NSF standards.
3. Stainless steel thru the countertop posts with grommets and below the countertop reinforcement and mounting hardware.
4. LED light assembly. Light to be factory inter-wired to junction box located in counter base.
5. Center posts not acceptable.

Item #405 – Milk Cooler – Qty. of 2 - The FSEC shall remove the Owner's existing equipment from kitchen and place in a secure storage area. Upon completion of construction, FSEC to place equipment back in location as shown on the plan.

Item #406 – Cashier Counter – Qty. of 2
Base Manufacturer: LTI Co.
Alternate Manufacturer: Randell Co.
Alternate Manufacturer: Delfield Co.
Alternate Manufacturer: Duke Co.

Base Model: Spec Line

Minimum specifications:

1. Counter to be 34" high, size and shape as per plan.
2. Stainless steel top with latching assembly and stainless-steel undershelf
3. Plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have laminate. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. One 12" solid folding inverted "V" style stainless steel tray slide as shown on plan mounted 28" above finished floor.
5. Provide enclosed base with locking ventilated door at end and locking cash drawer.
6. 5" heavy duty locking casters.

Item #407 – Cash Registers / POS – By Owner.

Item #501 - Pot Sink - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: YJРАН2660-3-18

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 unit constructed per G.S. size and shape as per plan by 34" high.
2. 9" backsplash, 21" by 26.5" by 14" deep sinks.
3. Integral drain boards.
4. One T&S Co. or Krowne Co. 5F-8WLS12 faucet, and one 5PR-8W12-C + B-TEE-RGD spray hose unit and faucet.
5. T&S Co. B-3990-01-3X modular waste drains with connected overflows.
6. Stainless steel legs, gussets, and adjustable bullet feet.
7. Area below integral drainboards shall be furnished with 16 Gauge removable stainless steel under shelving between legs.
8. Provide 14" coated wire wall shelves and brackets mounted 24" above sink as shown on plans.
9. Integrally welded 18" disposer cone and switch bracket.

Item #502 - Hand Sink - Qty. of 2

Base Manufacturer: Eagle Group Co.

Base Model: HSA-10-LRS

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 10" X 14" X 5" deep stainless-steel sink with fully welded side splashes.
2. T&S Co. or Krowne Co. 5F-4WWX05.
3. Rear connector kit.
4. Wrist blades.
5. Soap and towel dispenser shall be provided and installed by the Contractor.

Item #503 – Dishwasher – Qty. of 1 - Owner's existing equipment to remain in place throughout construction.

Item #503A – Drain Water Tempering Kit - Qty. of 1 - Owner's existing equipment to remain in place throughout construction.

Item #504 - Clean Dish Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: CDT-NSF

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 unit constructed per G.S. size and shape as per plan by 34" high with sound deadened top and 9" high enclosed backsplash.
2. Stainless steel legs, gussets, and adjustable bullet feet.
3. Area below tables is to be furnished with 16 Gauge removable stainless steel under shelving where possible.
4. Provisions for mounting of rack limit switch.

Item #504A - Soiled Dish Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: SDT-NSF

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 unit constructed per G.S. size and shape as per plan by 34" high with sound deadened top and 9" high enclosed backsplash.
2. Stainless steel legs, gussets, and adjustable bullet feet.
4. Drain trough with removable basket prior to dish machine.
5. Area below tables is to be furnished with 16 Gauge removable stainless steel under shelving where possible.
6. Integrally welded 18" disposer cone and switch bracket.
7. Pass thru sill with 1" high side splashes and roll down front edge with capped ends.
8. FSEC to coordinate the installation of the roll down door provided and installed by the trades.

Item #505 - Disposer - Qty. of 2

Base Manufacturer: Salvajor Co.

Base Model: 200-CA-18-ARSS-LD

Alternate Manufacturer: Insinkerator Co.

Minimum specifications:

1. 18" stainless steel cone assembly with silver saver.
2. Solenoid valve.
3. Flow control.
4. T&S Co. B-0455 vacuum breaker assembly.
5. Unit shall operate on 208 Volt 3 Phase 2 HP.
6. Provide a ARSS-LD series NEMA-4X stainless steel control panel with 24 Volt circuitry, run light, interlocked disconnect, auto-reversing switch, start-stop buttons and magnetic contactors.
7. Provide T&S Co. or Krowne Co. 5PR-8W00-C + B-TEE-RGD spray hose unit with rear connector kit.

Item #506 – Dishwasher Hood & Ventilation System – Qty. of 1 - Owner's existing equipment to remain in place throughout construction.

END OF SECTION 11 4000 – FOOD SERVICE EQUIPMENT

Lansing School District
Dwight Rich Food Service
Equipment Replacement

2600 Hampden Dr
Lansing, Michigan 48911

Project Manual
Bid Pack 1

Date: 02/13/2026

Project No: 25015928A

Colliers Engineering & Design
560 5th St. NW
Suite 305
Grand Rapids, Michigan 49504

SECTION 11 4000 - FOOD SERVICE EQUIPMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All Drawings, General and Supplementary Conditions, Division 1, Specifications, and related contract documents apply to this section and the requirements may exceed those shown in this section. The Food Service Engineering Consultants on this project are JRA Food Service Consultants, LLC in Grand Rapids, Michigan (616-454-4433) and is responsible to the Architect and Owner for ascertaining that the Food Service Equipment Contractor complies with all the requirements of this section.

1.02 SUMMARY

- A. As listed in this division, the Food Service Equipment Contractor shall furnish all labor, material, work, equipment, transportation, accessories, taxes, etc. for a complete and continuous installation in accordance with the requirements of these plans and specifications and related documents.
- B. The FSEC shall familiarize themselves with local conditions affecting the cost of the work and examine the site and all Food Service Equipment contract documents including Architectural drawings, and contract documents, all of which constitute the responsibility of the FSEC.

1.03 SUBSTITUTIONS AND VOLUNTARY ALTERNATES:

- A. A proposed substitution on any specified equipment must be submitted to the Consultant 10 days in advance of the bid date and must include all manufacturers' shop drawings and data sheets on the proposed equipment. The supplier shall pay any additional costs incurred for changes, engineering services, utilities, construction, etc. that may be incurred by said substitutions.

1.04 INTERPRETATION OF DOCUMENTS:

- A. The "Base Manufacturer" listed in the item specifications is intended to be the "Basis of Design". All approved Alternate Manufacturers must conform to the specifications, physical size, accessories, materials, capacities, electrical & plumbing requirements, amperage, utility consumptions, drainage requirements, etc. Any additional project costs incurred due to deviations and/or nonconformance shall be the responsibility of the Food Service Equipment Contractor (FSEC).
- B. Prior to receipt of bids, all questions, clarification, and changes in the documents shall be executed by addendum. After the award of contract, all changes shall be performed by bulletin.
- C. FSEC shall submit an itemized price breakdown to the Consultant on their letterhead for each piece of equipment including labor, freight, manufacturer, quantity, taxes, etc. as applicable.
- D. Any deletions of equipment by the Owner and/or Consultant prior to approval and/or release of the shop drawings, brochures, etc. shall be credited to the Owner at the itemized price as listed in the itemized price breakdown and include all equipment costs, freight, labor, taxes etc. Pricing shall not be credited at the amount listed on the Schedule of Values.
- E. Any additions to equipment by the Owner and/or Consultant that result in cost increases after approval and/or release of shop drawings, brochures, etc. shall be immediately noted by the FSEC and a written request with prices for a bulletin shall be issued by the FSEC to the Consultant.

- F. The General Specifications are applicable to items listed in the item specifications.

1.05 ABBREVIATIONS

- A. The following abbreviations are used herein unless otherwise noted on the plans or item specifications.

Abbreviation	Meaning
A	Amps
AFF	Above Finish Floor
BTC	Branch to Connection
CFM	Cubic Feet of Air Per Minute
C.P.	Chrome Plated
CW	Cold Water - 25 PSI
DCO	Duplex Convenience Outlet - 20 amp
DFA	Drop from Above
E.C.	Electrical Contractor
FD	Floor Drain - Wade W1104
FFD	Funnel Floor Drain - Wade 1104-EF4
FL SK	Floor Sink 12" - Wade W9144-15
FPM	Feet Per Minute
FSEC	Food Service Equipment Contractor
FSC	Food Service Consultant
G	Natural Gas - 7" water column
GP	General Purpose
G.S.	General Specifications
G.C.	General Contractor
HVAC	Heating Ventilation Air Conditioning Trades
HP	Horsepower
HW	Hot Water - 140 degree - 25 PSI
J.B.	Junction Box
KW	Kilowatt
N.S.R.	No Service Required
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
NIKEC	Not in Kitchen Equipment Contract
P.C.	Plumbing Contractor
S.O.M.	Standard of Manufacturer
S.S.	Stainless Steel
SS	Steam Supply - 25 PSI
SR	Steam Return
V	Volts
VIF	Verify in Field
W	Waste Outlet
W.G.	Water Gauge - Static Pressure

1.06 CONFORMITY

- A. All equipment furnished under these specifications shall be newly manufactured and installed in strict conformity with all codes, regulations and requirements of the State Board of Health, the National Sanitation Foundation Standards, or any state or local agency.
- B. All equipment shall conform to the current standards and bear the seal of UL, NEMA, ASME, AGA, OSHA, NFPA, etc. where applicable and/or otherwise conform to the requirements of the authorities having jurisdiction.

- C. Wherever the requirements of the specifications and drawings are in excess of the regulations, the specifications and drawings shall govern. Whenever the regulations are in excess of the specifications and drawings, the regulations shall govern.
- D. Wherever the requirements of the specifications are in excess of the drawings, the specifications shall govern. Whenever the requirements of the drawings are in excess of the specifications, the drawings shall govern.

1.07 PERMITS - LICENSES - PHONE CALLS

- A. Provide to the proper authorities all notices required by law, obtain all refrigeration permits, licenses, etc., and pay any legal fees necessary for the due and faithful performance of the work, and which may arise incidental to the fulfilling of the foodservice documents. The Owner shall pay for any health department plan review or license fees.
- B. Other trades shall provide boiler permits, hook up permits, building permits, etc. The FSEC shall provide hood and refrigeration permits when applicable.
- C. Accept all collect phone calls relating to food service equipment that pertain to the project until the warranty has expired on the equipment.

1.08 SUBMITTAL OF BUYOUT BROCHURES AND SHOP DRAWINGS

- A. Shop drawing and brochure requirements may also be listed in the general requirements or other areas of the documents. Provide submittals as per those requirements or as listed below - whichever is greater.
- B. All shop drawings, rough-in drawings, equipment brochures, etc. shall be submitted at one time within 20 days of the notification of award of contract to the bidder. Said items are subject to the terms and conditions of the plans and specifications for the entire project. All drawings which are submitted for distribution shall be clear and concise and have the following notes printed on each and every sheet:

Name of the FSEC.
Name and location of the project.
Name of the Architect.
Name of the Consultant.
Name of the General Contractor.
Drawing number.
Date of drawing and revisions.

The following statement: The (name of FSEC) is solely responsible for the accuracy and completeness of these drawings and specifications, and we approve them for construction purposes. Signed: (Officer, Partner, etc.)

- C. All submitted data shall be reviewed for general compliance only and does not alleviate the FSEC from providing equipment as per the intent of the plans and specifications.
- D. Owner shall not be responsible for any equipment ordered prior to receipt of Consultant approved brochures or shop drawings.
- E. If applicable, the FSEC shall visit the site to verify requirements of existing or relocated equipment prior to submittals.

1.09 BUYOUT BROCHURES:

- A. As soon as possible, prepare a buy-out equipment brochure in PDF format with copies of manufacturer's specification sheet or literature on each item, along with a list of the model,

manufacturer, quantity, connections required, accessories, etc. for each item and component or accessories. Material on all items shall be assembled in order and no consideration will be given to partial lists submitted from time to time.

1.10 ROUGH-IN DRAWING AND MECHANICAL DATA:

- A. As soon as possible, submit an electronic drawing in PDF format at 1/4" scale to locate accurately the utility connections for each item of equipment requiring water, gas, electrical, and drain. Listed on the drawings shall be dimensions to required utilities and located from a center line of a structural column or another positive reference point.
- B. Upon final approval of data, distribute copies to all trades, Owner, Architect, health department, etc. as required.
- C. Drawings shall be at 1/4" scale or larger and indicate each electrical and mechanical rough-in required for all new, relocated, future, and/or purveyor supplied (the Owner shall provide proper data on purveyor supplied equipment) food service equipment as listed in the plans or specifications. Include all electrical and convenience outlets, gas, water, steam, ventilation, drains, floor depressions, wall openings, weights, ceiling recess or access panels, sleeves, beverage lines, roof data, refrigeration, etc. as required.
- D. Furnish all necessary assistance to the various trades and be responsible for the proper location of sleeves and conduits through which the utility lines are to be drawn. A field inspection shall be made before the finished floors are laid to make any necessary relocations of the utility sleeves, rough-ins and conduits, and immediate written notice shall be provided if rough-in problems have occurred.

1.11 SUBMITTALS OF SHOP DRAWINGS:

- A. Completely detail and submit shop drawings (S.S. fabrication, fire protection, hood and ventilation system, plastic laminate fabrication, walk-ins, sneeze guards, serving counters, etc.) in electronic PDF format showing all items to be provided under this section of the specifications. Drawings to be submitted for review at 1/2" per foot scale or larger. Upon final review of data, distribute copies to all trades, Owner, Architect, etc. as required.
- B. The drawings shall show all elevations, sections, dimensions, mechanical and electrical requirements, related details of construction, installation and related work which require cutting, close fitting, etc. as required for installation.
- C. Submit proper notifications in writing of any departures from the contract drawings or specifications which may be necessary to permit installation of the equipment. Fabrication should not be started until after final approvals are received and final field measurements are taken.

1.12 MAINTENANCE MANUALS

- A. At time of demonstration, provide to the person in charge of the kitchen a minimum of three bound current copies of kitchen plans, rough-in drawings, any and all warranties, instructions, parts lists, operating instructions for each piece of mechanical equipment, as built shop drawings, and "Buy-Out" brochures.
- B. Manuals shall include a typed list in the front of the manual listing the names, addresses, and telephone numbers of local servicing agencies and manufacturer's representatives for all equipment.

1.13 SAMPLES

- A. Submit all required samples for approval, if required, of all hardware, plastic laminate, paint,

etc. before starting fabrication. Other samples shall be supplied as required.

1.14 MEASUREMENTS

- A. Measurements required to size and place the food service equipment shall not be taken from drawings but shall be made at the structure from the actual spaces reserved therefore, and giving due consideration to any architectural, structural or mechanical discrepancies that may occur during construction of the building. Verify size of all of Owner's equipment and small wares (dishes, trays, pans, etc.) and purveyor supplied equipment (urns, soda systems, beverage dispensers, etc.), if applicable. Field dimensions shall be taken at the earliest opportunity so as not to delay deliveries.
- B. Verify in field any and all measurements before doing any work on equipment that may be affected by the physical conditions and be responsible for the correction of same.
- C. Inspect equipment for proper operation prior to relocation. Advise if equipment is defective or needs rework which is not included in the original contract and submit a written quotation for said work.
- D. Coordinate Owner's and/or purveyor supplied equipment (coffee makers, beverage equipment, cash registers, soda equipment, etc.) as required for rough-in data, installation, etc.
- E. Measurements for tight fitting equipment shall allow no more than 1/4" between the wall and equipment that shall be trimmed and/or sealed as required.

1.15 WARRANTY

- A. Provide a written warranty for all equipment against defects in workmanship and material for one (1) year from the date of substantial completion and acceptance, excluding refrigeration units which shall carry an additional four-year warranty and a ten-year warranty on all walk-in panels. This shall cover any replacements and/or repair costs of such defective material, including transportation, labor, and materials for all equipment. This one-year free service, warranty and guarantee shall be available within 24 hours of notification on all equipment except refrigeration.
- B. Provide one-year free service, warranty and guarantee within 12 hours of notification on walk-in refrigeration and units must be operational within 24 hours after service call.
- C. This warranty is not intended to cover equipment which has been overly abused or items that have not had proper periodic maintenance (door gaskets, uncleaned refrigeration condensers, etc.) during the one-year period.

1.16 DELIVERY AND STORAGE

- A. The FSEC shall furnish all labor, material, equipment, etc. as required to unload and store all equipment.
- B. No equipment shall be delivered to the site unless it has been ascertained that storage space is available.
- C. After verifying field conditions with Architect and/or related trades, the F.S.E.C. may deliver equipment 30 days prior to job installation requirements and/or completion - providing it is properly insured. F.S.E.C. shall make all arrangements to deliver, unload, and store all equipment and shall assume all responsibility for safeguarding the equipment until it is accepted by the Owner.

- D. Unless noted in the item specifications, the GC shall remove and store any existing and/or relocated equipment that is removed from the kitchen during the construction period.

PART 2 GENERAL - SPECIFICATIONS - PRODUCTS

2.01 MANUFACTURER'S STANDARDS

- A. It is the intention of these specifications to provide a type of equipment conforming to manufacturers' standards and only minor variations in construction will be accepted, provided that these variations do not detract from the finished appearance, durability, general function or in any way affect general overall size, capacity, strength, etc. of equipment.
- B. Manufacturer's catalog designation of material and/or fabricated equipment used in the following specifications are intended to illustrate and represent the standards which will be required by the owner. Equipment furnished must closely conform thereto in design, construction, capacity, and function to make and model called for. Where such catalog designations are given, the items shall be complete as described and shown in the catalog unless exceptions are in itemized specifications.
- C. When more than one manufacturer is listed in the Item Specification, only one manufacturer shall be acceptable for items of a similar nature (fabrication, cooking equipment, refrigerators, shelving, carts, etc.) to ensure uniformity of design, installation, service, etc.

2.02 FABRICATION STANDARDS

- A. Unless noted under itemized specifications or on plans, the following specifications shall govern the construction of all fabricated and buyout equipment and installation and shall apply to the individual item as if it were written therein in its entirety.

2.03 FABRICATED EQUIPMENT

- A. It is required that all custom fabricated items (counters, tables, sinks, dish tables, etc.) described in the plans and specifications, other than by name and catalog number, be constructed of 300 series S.S. and be manufactured by one fabricator. Metal-Masters Inc, Advance Tabco Co., Kevry Co., Professional Restaurant Services (PRS), LTI Co., John Boos Co., Keystone Fabricators Co., and Titan Co. are approved fabricators and have demonstrated they possess the plant, personnel and engineering facilities to properly design, detail, and manufacture high quality kitchen equipment.
- B. All work in the above category shall be standard unit assembly, by one foodservice equipment manufacturer of uniform design, material and finish.

2.04 BACKSPLASHES

- A. Where edges of the top are adjacent to walls, column, equipment or enclosures, they shall be turned up to provide a backsplash which shall be tight fitting (1/4" or less). Unless noted, all backsplashes shall be formed by turning up 10" and flanged back 2-1/2" at 45 degrees and down 1" and attach to wall with 6" by 2" S.S. "Z" clips on 3'-0" centers. Ends of backsplash shall be fitted with closure plates. Weld a full S.S. enclosure panel for exposed rear backsplash.
- B. Tops adjacent to refrigerators, ovens or cabinets shall be turned up 4" with top edges feathered slightly to form a tight fit of 1/4" or less. Seal with mastic compound.

2.05 BOLTS, SCREWS AND RIVETS

- A. All exposed surfaces of equipment shall be free of bolt, screw and rivet heads. Wherever bolts are used to fasten tops and trim to paneling, body of counters and similar equipment, such

bolts shall be of an approved type and shall be corrosion resistant metal of the same alloy as the metal to which they are fastened with acorn type nuts to eliminate sharp edges.

2.06 CASTERS

- A. Provide heavy duty casters with double ball bearing raceways, heavy Gauge fork and races and have minimum capacity of 250 pounds per caster. Casters shall be provided with brakes. Wheel shall be non-marking urethane.

2.07 CODES AND SANITATION

- A. All food service equipment under this contract shall meet the requirements and bear the label of the National Sanitation Foundation. Specifications set forth are considered minimum and are to be superseded by any superior requirements in effect as of this date by the National Sanitation Foundation or the State/County Health Department. Any differences of opinion on sanitation shall be referred to the State/County Health Department for arbitration.

2.08 CORNERS

- A. All corners shall be fully rounded and made integral and of the same sheet as the top and rolled edges. Radii of all rolled edges to be equal and rolled 2" diameter at least 180 degrees. Filler pieces or soldering shall not be used in place of all welded, seamless construction.

2.09 CUTTING BOARDS

- A. Provide Read Products or Mapletex Co. 1/2" minimum thick reversible boards as per plan as manufactured by Read Products Inc. when attached to tables or similar equipment, provide S.S. mounting brackets.

2.10 DISHTABLES

- A. Provide NSF approved series SCDT dish tables with 14 Gauge 304 S.S. coved corner construction as manufactured by Metal-masters Co. or equal with 10" backsplash as previously specified where adjacent to walls and remainder of tables to have 3" high roll rim and be mounted on 12 Gauge under-channeling, 16 Gauge S.S. cross rails and legs with S.S. gussets and S.S. adjustable bullet feet and/or flange type feet. Tops shall be pitched to dishwasher to avoid standing water and undersides shall have sound deadening material and be attached to walls with S.S. "Z" clips.
- B. Provide removable 18 Gauge S.S. under-shelving which has 2" rolled up edges at rear and roll down edge at front and be supported on S.S. cross rails on all sides. Notch all corners to fit legs and piping. Under-shelving shall not interfere with water softener or adjacent equipment.
- C. Provide S.S. recessed drain trough with drainer in all soiled dish tables. Unit shall not interfere with dishwasher control panels or adjacent equipment.
- D. Disposer cones and/or scrapping trough shall be integrally welded into top and also provided with S.S. brackets for the switch and holes in backsplash return for the vacuum breaker. Scrapping trough shall be size and shape as per plan by 6" deep with coved corner construction and sloped to disposer. Provide 20" long S.S. pan formed removable trough covers. Provide T&S Co. 2905 water inlet at shallow end of trough and every 3'-0" and at change in directions. Inlets shall be controlled by a 2600 mixing valve mounted on a S.S. bracket mounted under dish table and be interconnected to water line and solenoid so water flows thru inlets when disposer in operation.
- E. Provide integral S.S. pass thru sill extending through wall as per plans and specifications with flat side splashes and turn down front with closed ends. Provide 1" rear turndown at table at

30 degrees to ensure the sill is higher than dish table. Provide wood bracing on sill as required for support. FSEC shall verify requirements of roll up door by GC prior to installation of tables.

- F. Provide raised roll rim in lieu of 3" high roll rim at front edge of soiled dish table when used as a pass thru dish return area.

2.11 DOORS

- A. **SLIDING DOORS** - Sliding doors shall be constructed of 16 Gauge S.S. or material listed in the item specifications with roller bearing slides.
- B. **SINGLE PAN CONSTRUCTION** - 16 Gauge S.S. with 3/4" thick sound deadening fiberglass between the two thicknesses of metal. Back panel to be 20 Gauge steel. Door to operate on top hung ball bearing rollers. Bottom edge of doors to be square and fitted with a groove that rides over a S.S. pin at center point.
- C. All doors shall be fitted with stops and locks. Handles shall be die stamped S.S. flush mounted.
- D. **HINGED DOORS** All hinged doors for cabinet bodies and enclosed bases shall be double pan construction. Doors shall be flush mounted and be fitted with S.S. piano type full length hinges. They shall be furnished with friction catch and S.S. recessed handles, locks, and two rubber button noise eliminators, one at each corner on handle side.

2.12 DRAWERS

- A. All drawer inserts shall be covered corner die stamped out of one piece of 18 Gauge S.S. or plastic and shall be set loosely in a channel frame so it can be lifted out for cleaning. Top edges are to be flanged out 1/2".
- B. The supporting frame shall be welded steel channel with S.S. drawer face welded to frame so there will be no exposed screws or rivets on the face which shall extend 3/4" out at top and down 3/4" with 1/2" hemmed edge and radius corners to form drawer handle. Provide two rubber button shock stop noise eliminators, one on each side of the drawer face at the top.
- C. Provide heavy duty S.S. drawer slides with heavy duty S.S. ball bearing wheels. Slides and frame to be so designed as to allow full opening of drawers and to be reinforced to support 150 lbs. when fully extended.
- D. Adjustable stops are to be provided for each drawer at the fully open position. Drawers on open base tables shall be enclosed in an 18 Gauge housing of steel. Drawer guides are to be sloped to provide self-closing action.
- E. All drawers shall be 20" by 20" by 5" deep.

2.13 ENCLOSED BASE CABINETS

- A. All enclosed bases or cabinet bodies shall be similar to Delfield Company or equal Mark VII series and constructed with 14 Gauge S.S. tops and 18 Gauge S.S. bodies and be enclosed on the ends and sides. The bases and bottom shelves shall be reinforced with channels, angle bracing, and gussets as required. Additional angles and channel cross members shall be provided to reinforce shelves and support tops as required for countertop equipment (urn, ice dispensers, drink dispensers, etc.) as shown on plan.
- B. All free corners of enclosed bases or cabinet bodies shall be rounded on a 5/8" radius and all corners against walls and other fixtures shall be square. In the case of fixtures fitting against or between walls, the bodies shall be set 1" from the wall line, but the tops will extend back to the wall line to permit space for rough-ins and adjustment to the wall irregularities. The ends of

the cabinet bodies shall extend to the wall line and be sealed and/or trimmed as required.

- C. These fixtures shall be constructed with 6" S.S. adjustable legs, unless set on masonry or steel bases as called for in the itemized specifications.

2.14 FIELD JOINTS

- A. All field joints shall be welded with rod of same basic composition as sheets or parts welded. Welds shall be free of pits, cracks, cross graining or discolorations and shall be ground and polished to the original finish of the metal. No soldered or bolted joints shall be used unless noted in item specifications and shall be properly sealed and bolted.

2.15 GRINDING AND POLISHING

- A. All exposed welded joints shall be ground flush with the adjoining material and neatly finished to harmonize therewith. Services shall be free of depressions. Wherever sheared edges occur, they shall be free of burrs, projections and fins to eliminate all danger of cutting or laceration when the hand is drawn over such sheared edges. Where miters or bull nosed corners occur, they shall be neatly ground to a uniform condition, and in no case will overlapping material be acceptable. All exposed surfaces shall be satin finish except rim which shall be a highly polished and buffed finish. Satin finish shall be comparable to the commercial mill finish known as No. 4 for S.S. No cross graining on equipment is acceptable.

2.16 GUARDS

- A. All machines shall be furnished fully enclosed with guards built in accordance with safety codes and regulations of the State or Governmental agency having jurisdiction.

2.17 HOT FOOD WELLS

- A. Provide insulated food wells with coved corner S.S. interior and the electrical element attached to the underside of well. When units are specified with drains, the manufacturer shall provide a drain assembly with bushing and a universal joint as required to manifold and interconnect all wells with a master and individual valves and Drain handles shall be easily accessible from employee side of counter. All wells shall be inter-wired to master switch with indicator light. Provide galvanized access panel below wells to protect wiring. Units shall be heated by 120 volt or 208/240 volt 1200 watt electric elements with thermostatic control with guard ring and pilot light.

2.18 INTERIOR SHELVES

- A. All interior shelves in cabinet bodies and enclosed bases shall be 18 Gauge S.S. or as called for in the itemized specifications. Turn up on back and ends of shelf shall be 1 1/2" high and coved on 3/4" radius. The front edge shall be turned down 1-1/2" and back 1/2". All shelves shall be rigidly reinforced below to prevent sagging. Provide ferruled cutouts in shelves for drain lines, conduits, etc.

2.19 LEGS - FEET - FRAMES

- A. All legs and pipe stands for open base tables, dish tables, etc. shall be constructed of 16 Gauge S.S. tubing unless noted, with cross rails and braces of the same materials. All joints between legs, under-shelves and cross braces are to be welded and ground smooth.
- B. Cross rails must be supplied to reinforce each leg. Legs anchored to gussets at top only and without cross rails are not acceptable. Pipe stands and frames furnished on all pipe base fixtures shall have legs of 1-5/8" O.D. 16 Gauge S.S. tubing, cross rails of 1" O.D. 16 Gauge S.S. tubing unless noted.

- C. Top of stand shall be fitted into S.S. gussets welded to reinforcing structure on underside of the tabletop, spaced not over 3'-6" on centers.
- D. All legs shall be fitted with adjustable S.S. bullet-shaped feet with bottom of pipe legs to be finished off smoothly and overlap the stem to provide sanitary fitting and prevent the accumulation of grease or other debris at this joint. Provide S.S. flange type feet securely anchored for island style counters, sinks, etc.
- E. All pipe legs or vertical members are to be set back from edge of table tops a sufficient distance to offset any interference with workers, walls, columns or other equipment.
- F. Provide 6" adjustable legs with adjustable S.S. bullet foot for fabricated and/or buyout equipment with minimum capacity of 1500 pounds each.

2.20 MATERIALS AND STRUCTURAL SHAPES

- A. Angles, bars, channels, piping, pipe legs, etc. used shall be uniformly ductile in quality and free of hard spots, runs, checks, and other surface defects. Except as otherwise specified, all such sections shall be milled steel galvanized by the hot dip process, all free of runs and blisters, uncoated spots or patches. S.S. shall be 18-8 composition (302 alloy) standard with No. 4 finish and polished to 180 grit and welded as previously specified. Provide butyl sealant sound deadening between tops and all structural supports or as required.

2.21 NAME PLATES

- A. Each item of equipment shall have a corrosion resistant metal name plate with model number, serial number, name and address of the manufacturer securely fastened to equipment in a non-conspicuous area. All mechanical and electrical controls, switches, disconnects, remote compressors, etc. shall be labeled with metal or engraved phenolic plastic signage.

2.22 OVERSHELVES AND WALL SHELVES

- A. Provide 10" wide NSF 16 Gauge S.S. over-shelves or wall shelves unless noted in the plans or item specifications. Provide wall mounted shelves with rear and sides to be turned up square 1" and front edge to have sanitary roll rim. Provide heavy Gauge S.S. wall mounting brackets 6" from ends of shelf with maximum of 4'-0" on centers.
- B. Provide all over-shelves with sanitary rolled edges and bull nose corners on all four sides unless equipment is mounted on shelf (microwave, toaster, dishes, etc.) and provide 1/2" turn up at rear for that portion of the over-shelf. Provide S.S. tubular support standards as required for shelf-mounted equipment and with provisions for mounting to table or countertop.
- C. Provide all wall backing and/or structural support as required for shelves to support 50 pounds per square foot and coordinate installation of same with trades.

2.23 PAINTING

- A. All galvanized material and black steel shall be thoroughly cleansed of all oil and foreign matter and given two (2) coats of enamel paint as selected.

2.24 ROLLED RIMS AND EDGES

- A. Standard roll rim shall be covered up 3" with 1/2" diameter roll at 180 degrees and bullnose corners.
- B. Square edge shall be turned down 2" at 90 degrees with 3/4" tight hem at bottom.

- C. Marine edge shall be turned up 1/2" on a 45-degree angle and turned down 2" with 3/4" tight hem at bottom.
- D. Wherever tabletops are used in connection with sinks, the top shall be fabricated with a 1/2" high raised roll rim spillage edge unless otherwise specified. Top to be integrally raised approximately 1/2" at all edges and then rolled down 2" at 210 degrees with bull nose corners.

2.25 REINFORCED STRUCTURES

- A. Counter, table, and cabinet framework shall be constructed of steel angles horizontally and channels vertically, made in sections to permit assembly on job with tops field welded. Vertical fronts and sides of cafeteria counters and similar enclosures are to be reinforced with channels on approximately 3'-0" centers to support the tray slide brackets.
- B. Unless otherwise specified, angles or channel frames and similar cross bracing on not over 2'-0" centers to be provided under all counter and tabletops to stiffen tops and furnish fastening supports for leg flanges.

2.26 SINKS

- A. Provide 14 Gauge S.S. coved corner sink bowls integrally welded as per plan with welded seamless construction with scored bottom towards a die stamped drain outlet with a T&S Brass modular waste drain and connected overflow located 1" below drain board and shall not interfere with plumbing, adjacent walls, equipment, etc. Provide 14 Gauge S.S. bracket for drain stem. All multiple compartment sinks shall be double walled construction. When sinks are built into enclosed base counters, provide access holes for the modular waste drain lever(s).

2.27 TABLETOPS

- A. METAL - Metal tabletops to be 34" high and be constructed of 14 Gauge 302 S.S. with NSF rolled rim construction and bull nose corners unless otherwise noted. All seams and coved corners shall be welded, ground smooth and polished. Provide ferruled access holes for cutouts for water lines, cords and plugs, etc. as required in tabletops, counter tops, urn stands, etc. All open base tables shall be reinforced with 12 Gauge angles or channels. Provide welded cross angle or channel members placed at each pair of legs with gussets, welded cross rails and feet as previously specified.
- B. One angle runner, running lengthwise shall be provided on tops up to 30" wide; two provided on tops over 30" wide. All tops shall be reinforced so that there will be no noticeable deflection and all reinforcements shall be stud welded to the underside of the top. No rivets or bolts to be used through the top. Provide sound deadening material between tops and reinforcing members and underside of tops. Field joints are to be provided in the top where necessary.

2.28 CABINETS, SERVICE STATIONS, BARS

- A. Provide all plastic laminate construction as manufactured by a commercial bar equipment fabricator similar to Perlick Co. or Glas-tender Co. who has the plant, personnel and engineering facility to properly design, detail and manufacture high quality equipment. The manufacturer shall be subject to the approval of the Consultant and Owner. Units shall be constructed of Wilsonart or Formica high pressure laminate (1/16" on flat surfaces and 1/32" on radius areas) on exposed surfaces in standard colors as selected by owner. Provide backing sheet where concealed. Self-edge units shall have top sheet placed over edge sheets and placed on 3/4" or 1" smooth marine plywood to insure a ripple free surface. Use NSF non-water-soluble adhesive.

- B. Unless noted in the item specifications, provide back bars with plastic laminate exterior finish on all exposed surfaces, 4" backsplash at walls, S.S. interior, interior lights with jamb switches, locking doors, 6" S.S. legs, 2 heavy duty shelves per door, coil, compressor, controls, inter-wired to common point, etc. Provide all necessary cutouts in top and shelves for refrigeration lines, beer lines, utilities, drainers, etc.
- C. Unless noted in the item specifications, provide all front bars and bar service stations with plastic laminate bar top with suds rail, 1" vertical die with laminate on both sides, Lawrence Co. 2" brass arm rail and foot rail with brackets, etc. as per the item specifications. All upper bar equipment shall be provided by other trades unless noted on foodservice equipment documents.
- D. Provide all counters, cabinets, tops, service stations, etc. with plastic laminate finish where exposed, legs with removable kick plates, S.S. adjustable tray slides, concealed fasteners, European hardware, roller bearing drawers, etc.
- E. Provide access holes and/or chases for beverage lines, utilities, refrigeration lines, columns, etc. as required which shall be properly sealed and trimmed.

2.29 UNDERSHELVES

- A. The undershelves on open base tables, dish tables, etc. shall be a solid removable 16 Gauge S.S. shelf unless noted in the itemized specifications. Shelf is to be turned up at rear and down on all front and side (down on all island units) edges 1-1/2" with corners at legs cut out and mounted on the support stringers on all four sides. Provide ferruled access holes as required for drain lines, water lines, conduits, etc.

2.30 CORRECTIONAL PACKAGES

- A. Unless otherwise stated in the item specifications, A Corrections Package shall include but not be limited to non-removable hardware, fasteners, nuts, bolts, screws, hinges, handles, hoses, etc.
- B. All items to be fully welded and/or not removable without the use of tools. Areas filled with sealant caulk are to be provided with "No-Pick sealant".
- C. Temperature and/or pressure gauges are to be installed and/or protected in a manner that they cannot be subjected to removal without the use of tools or vandalism.
- D. There shall be no devices that may create or cause a hazard to the operator and/or the use of said device to injure other personnel.

2.31 VENTILATION – HOODS - DUCTWORK

- A. Unless otherwise stated in the item specifications, provide 300 series 18 Gauge S.S. hoods similar to Captive Air Co. or Duo Aire Co. or Accurex Co. and be manufactured in accordance with and bear the seal of NSF, UL, and NFPA 96. Hoods shall be mounted 6'-8" above finished floor and must overhang all equipment by a minimum of 6" at front (18" for drawer type broilers) sides and be furnished with a full complement of S.S. UL filters, filter frame with grease cup, recessed LED lights inter-wired to junction box on top of hood and to switch mounted on wall in hood control panel, duct collars, fire dampers, hangers, hemmed 18 Gauge S.S. end panels, S.S. closure panels from top of hood to ceiling, cutouts and trim for power distribution system or columns, etc. Provide insulated NFPA integral 3" stand-off behind hood when installed on non-rated wall. Walls for hood mounting shall be rated as required by code.
- B. All exhaust fans shall be UL-762 rated vertical discharge fans with insulated curb, hinged base with grease collection device, mounted and inter-wired starter and disconnect, adjustable drive

assembly and be sized for CFM as per plans with a sound classification of "average" and not to exceed 12 sones.

- C. All make-up air units shall be sized for CFM as per plan. Unit shall be fully factory built with supply fan, filter section with bird screen, motorized inlet dampers, metal cabinet with weather proof epoxy coated finish in color as selected by Owner, 12" legs and rails, curb, vibration eliminators, factory wired control panel and disconnect with wiring harness and pigtails (installation and conduit by E.C. as required) for interlock of exhaust fan and make-up air unit to switch panel on face of hood or remotely located. If required by code provide a pre-heat section (gas, electric, steam or hot water) which shall provide a minimum degree rise capability (as shown in item specifications and/or as required by local code) complete with full modulating controls, thermostat, etc. as required for a complete system. Provide all UL listed components.
- D. All ductwork shall be constructed and installed as per SMACNA minimum gauges and requirements. Make-up air ductwork shall be insulated and rigid metal construction. Flex duct will not be allowed. Provide welded 16 Gauge black iron exhaust grease duct as per code requirements and conform to all building requirements and obstructions with all dimensions subject to verification in field. Provide all grease ducts with cleanouts every 20'-0" of horizontal run (with pitch as per code) and within 10'-0" of changes in direction, access panel, dampers, curbs, flashing, flanges, plenums, supports, insulation, etc. as required by code and to provide a watertight system. Fireproofing shall be provided as noted on the food service plans and in the item specifications.
- E. System is to be factory tested and balanced as required for proper operation with written report to Architect and Owner.
- F. Roof openings, structural support, fireproofing, and final connections shall be by the Trades.
- G. If required by code, cooking exhaust hoods shall have an Ansul Co. R-102 or equal chemical fire protection system and will be listed separately in the item specifications.

2.32 WALK-INS AND REFRIGERATION

- A. Provide NSF and UL approved walk-ins as per the item specifications size and shape as per plan by 8'-6" high and furnished with prefabricated modular construction tongue and groove cam lock style panels for walls with covered vinyl screed, ceilings, and floors with 4" foamed in place UL-25 flame spread class No. 1 urethane insulation with a minimum "R" factor of 32 and a "K" factor of 0.121. Wall and ceiling panels shall have 0.040 stucco embossed aluminum or 20 Gauge 304 S.S. finish and floor panels shall be 0.100 smooth aluminum or 18 Gauge S.S. with a rating of 700 pounds per square foot with non-skid floor strips. All panels shall have a ten-year guarantee and be installed with a watertight seal. Provide 4" S.S. high covered base molding at all exposed exterior and interior walls securely anchored and sealed as required. Provide ceiling hangers and structural supports as required.
- B. If floorless construction is required, general trades shall provide 4" urethane insulation and vapor barriers for sub floor and tile floor. Provide covered floor screeds below wall panels anchored to red wood vapor barriers which shall extend up through and 1/8" above the level of the finished floor, 6 mil polyethylene vapor barrier, etc. as per the manufacturer's standard requirements. Supply and coordinate the installation of walk-ins to ensure proper fit of floor recesses, sizes, tile, insulation, grout, vapor barriers, drainage, etc.
- C. Provide one surface-mounted LED light fixture mounted above door for the first 50 square feet of floor space and one additional ceiling mounted fixture as shown on the plans. Lighting shall provide a minimum of 35-foot candles at 36" above floor. The light above door shall be inter-wired to switch and junction box, but all additional lights shall be installed and wired in field with conduit located outside the compartments.

- D. Provide 36" by 78" in-fitting doors with magnetic gaskets, three C.P. cam lift hinges, S.S. front, 24" high interior aluminum tread plate kick plate, cylinder locks, and automatic door closer. Doors shall be mounted in reinforced panel with FRP or S.S. door jambs with thermal break and thermostatically controlled heater strip, S.S. heavy gauge heated threshold, safety release, digital thermometer, and virgin plastic full width door curtains mounted 6" above door header. Provide non-heated relief air vents for cooler and inter-wired heated vents for all freezer compartments mounted above doors.
- E. Provide removable closure trim with concealed fasteners of same appearance as the walk-in exterior from box to all adjacent building walls and ceilings. Provide access panels and louvers as required for service.
- F. Refrigeration systems shall be complete with items as specified or as required to provide a first class system. Should any dispute arise as to the quality of equipment or workmanship, the decision shall rest with the Consultant.
- G. Hermetic or scroll compressors shall be mounted on anti-noise, anti-vibration blocks, and be factory mounted in welded angle iron frame and housing with support rails, metal curbs, timed defrost, factory installed control panel, pilot light, NEMA rated disconnects and starter, etc. Compressors to be factory preconnected for final water and electrical connections. FSEC shall verify that proper ventilation of compressors is obtained.
- H. Coil and/or compressor condensate drain lines shall be furnished as required and installed by the FSEC. Provide drain lines terminating with trap over floor drain where shown. Drain lines to be neatly insulated with material similar to Armaflex. Any drain line run through a freezer compartment shall also have a heater coil neatly wrapped over the line, pre-wired by the FSEC and shall operate continuously. No drain piping shall interfere with shelving within the compartment nor exit through the front of a compartment. All piping shall be concealed where possible.
- I. Coils shall be manufactured by Bohn, Russell or the specified walk-in panel manufacturer. Coils shall consist of the manufacturer's standard factory components and shall have timed defrost and immersion type thermostat and be connected to compressors by the equipment supplier using type "L" copper tubing soldered with Silfos and using A2L compliant refrigerants. Refrigeration lines shall be insulated in same manner and materials as coil and drain lines and shall be concealed where possible.
- J. FSEC to provide refrigeration system with expansion valves, pressure controls, strainers, solenoid valves, liquid dryers, adjustable room thermostats, hangers, king and queen valves, heat exchangers, oil separators, pump-down solenoid, low ambient controls, crankcase heater, outdoor shroud, shut-off valves, sleeves, sight glass with moisture indicator and all other items necessary for a complete system.
- K. All electrical components within each compartment shall be pre-wired by supplier to junction box on exterior top of compartment. Electrical trades shall make final connections and inter-wire to lights and from walk-in coils to compressor for timed defrost in conduit as required.
- L. After final connections by other trades, the equipment supplier shall evacuate, pressure test, charge, start up and operate system for a period of three (3) days and make all necessary adjustment of controls as required. Operate coolers at 35 degrees and freezers at 5 degrees unless noted on plans. Provide manufacturer's five-year compressor warranties and one-year free service available within 12-hour notification.

2.33 WATER INLETS

- A. Water inlet locations shall be located above positive water level to prevent siphoning of liquid into the water system.

- B. Wherever conditions require a water inlet placed below water level, a suitable pressure type siphon breaker or double check valve shall be placed on fixture to form a part of same to prevent back siphoning.
- C. Exposed siphon breakers shall be chrome plated units with chrome-plated piping and slip flanges where exposed.

2.34 MECHANICAL/ELECTRICAL MATERIALS REQUIRED IN FOOD SERVICE CONTRACT

- A. The equipment supplier shall include materials properly labeled and packaged as follows:
- B. Plumbing Appurtenances:
 - 1. Check requirements for gas, water, steam, etc. on project before ordering equipment. Information shown on drawings or specifications does not relieve the contractors of this responsibility.
 - 2. Faucets, pre-rinse units, lever wastes, vacuum breakers, to be as manufactured as described in the item specifications.
 - 3. Except as otherwise specified, provide each sink compartment with deck type or backsplash type faucet with minimum 12" swing spout soft flow. Where multiple sink compartments are provided, faucets may be located between compartments.
 - 4. C.P. brass overflow fittings shall be 1-1/2" tubing fully connected to sinks at factory with modular pull quick opening waste valves with tailpieces on each sink compartment.
 - 5. Provide all solenoids, C.P. atmospheric or pressure type vacuum breakers with C.P. stems above counter tops, shock absorbers, check valves, mixing valves, gas regulators, etc. required by code or for proper operation of equipment with mounting brackets as required. Valves shall be installed where required, accessible and convenient to the operator.
 - 6. Provide swivel gas hoses assemblies 36" or of proper length as required with quick disconnect, ball valve, caster floor locks and 3000-pound coiled restraining device, and wall brackets.
 - 7. All steam equipment shall have valves provided with heat resistant handles, traps, gauges, etc. as required for proper operation
- C. Electrical Appurtenances:
 - 1. Check voltage on project before ordering equipment. Information shown on drawings or specifications does not relieve the contractors of this responsibility.
 - 2. Except where noted under item specifications, current characteristics for motors 3/4 HP or less, solenoid valves and lighting shall be 120-volt, single phase, 60 cycle, A.C. Unless otherwise noted under item specifications, motors 3/4 HP and over shall be wound for 208/240-volt, three phase, 60 cycle, A.C.
 - 3. Provide a 120-volt control circuit on all equipment that operates on voltages on or over 208-volt. All equipment requiring 120-volt control circuits (120/480-volt, 120/208-volt, etc.) shall have transformers prewired on equipment.
 - 4. Cords and plugs and receptacles for equipment shall be three or four wire all rubber coiled retractable style cord with ground as required and match the receptacles provided and as

best suited for the equipment. Units shall be mounted in NEMA type enclosures as per code with S.S. faceplates and boxes where receptacles are exposed.

5. Thermostats, unless otherwise noted on plans or in the item specifications, shall be provided at all equipment (bain-maries, urns, dish machines, hot food tables, warming cabinets, etc.) with thermostatic control.
6. Heating elements to be of voltage and phase as specified or as required to suit the project.
7. Controls, thermostats, switches, contactors, low water cut-off, light fixtures and bulbs, etc., necessary for the installation and proper operation of equipment shall be furnished as required along with all starters and/or motor control switches for the proper function of the equipment specified. Controls mounted on vertical surfaces shall be recessed.
8. Controls that are an integral part of equipment shall be factory installed. Controls which are to be separately mounted shall be shipped loose for field installation. Coordinate all field installation to not interfere with access and/or operation.
9. Provide properly sized magnetic starters line voltage type with thermal overload relays and reset for normal operation by automatic control or pushbutton station for 208/240-volt control. Enclosures shall be general purpose NEMA type 1, A.C. voltage, unless located outdoors which will require a waterproof enclosure. Remote control motors shall have magnetic starters.
10. Disconnect switches shall be type non-fusible, single throw, heavy duty industrial, quick make, quick break. Circuit breakers may be used in lieu of above disconnects as per code.
11. Provide equipment with required internal wiring between elements, switches, motors, receptacles, starters, etc. complete to a junction box. Disconnect, starter, etc. as required and are to be "left ready" for final connections by electrical trades. All control circuits shall be 120-volt to ground.

PART 3 GENERAL SPECIFICATIONS - EXECUTION

3.01 INSTALLATION AND MATERIALS

- A. All work required under this section shall be installed by the proper trades having jurisdiction in this area concurrent with the project progress, GC's scope of work and related field conditions. Such installation shall be under the direction of a competent supervisor. A site inspection is recommended prior to bidding if applicable.
- B. Provide for the conveyance, uncrating, erection, assembling, setting in place, trim, cutting of holes and ferrules in equipment for piping, drains, electrical outlets, etc.
- C. Coordinate installation with all trades, repairing any damage done to equipment during installation, removal of debris created by installation, startup, testing, and cleaning of all equipment (new, existing, or relocated).
- D. Where necessary to move equipment to make final connections, coordinate and assist all in moving equipment and be on the project site to carefully level and adjust equipment as the connections are being made. During installation, coordinate with all trades on connection details and be responsible for meeting the individual equipment manufacturer's connection requirements. Report any infractions of installation procedure in written form.

- E. The fit of all equipment as it joins all walls, floors, and corners shall be tight (within 1/4") to adjacent walls, seal all equipment with NSF approved clear sealing compound and/or S.S. trim molding of proper size with concealed fasteners. Inspect the site and advise in writing and/or on shop drawings all necessary building requirements door sizes, etc. to receive the equipment and ensure accuracy of fit and installation.
- F. All cabinet bases and pieces of equipment which are to be set on bases or machine platforms shall be set into a sealing compound of color to match the tile mortar. Enclosures, backsplashes, and turn-backs to wall shall be pressed into a ribbon of the same material with the excess wiped out to a radius fillet. Where necessary, and to eliminate shifting and the subsequent breaking of this seal, item shall be anchored to floor and wall with suitable masonry anchors. All equipment with utility connections (island style sinks, dish tables, etc.) shall also be anchored to the floor with S.S. flange type feet.
- G. All equipment and materials shall be new, of prime quality, full gauge thickness of compositions indicated by names or abbreviations stated in itemized specifications.
- H. Equipment batteries of one manufacturer are to be pre-fitted at the factory and provide photographic proof of such work.
- I. If equipment is noted as relocated or removed during the construction period, said equipment shall be disconnected and be re-connected as directed in the GC's scope of work and removed and stored by GC unless noted in the item specifications. FSEC to coordinate and supervise this work and label equipment for reuse. FSEC to reinstall and clean equipment as per the plans and specifications. Existing equipment not scheduled for reuse shall be removed as directed by owner.

3.02 LIMIT OF OTHER SUBCONTRACTORS/TRADES RESPONSIBILITY

A. Hood Connections:

- 1. Note that kitchen grease and/or dishwasher hoods and ducts may or may not be furnished as part of this contract. Refer to the plans and item specifications. The trades shall make the final connections to hood and connect to exhaust fan and make-up air unit as indicated. All ductwork shall have welded and/or watertight joints. All roof holes, flashing, structural support, fire rating, and final connections by the trades unless otherwise noted.

B. Plumbing:

- 1. The trades shall provide rough-ins and piping with stop valves, elbows, nipples, couplers, traps, waste vents, gas regulators, for water, steam, gas, etc. and make final connections to the equipment unless otherwise noted.
- 2. The trades shall install equipment accessories (faucets, modular wastes, solenoids, valves, gas hoses, nipples, etc.) furnished by the FSEC.
- 3. The trades to provide water heater unless otherwise indicated on the plans.
- 4. The trades shall disconnect and reconnect relocated equipment if applicable.

C. Electrical:

- 1. The trades shall provide rough-ins, controls, panels, switches, wall receptacles to match equipment cords and plugs, starters, junction boxes, canopy light and fan switches,

2. conduit, wiring, wall outlets, disconnects, etc. and make final connections to the equipment unless otherwise noted.
3. The trades shall install equipment accessories (cords, light switches, drop-in equipment switches, wiring harnesses, disconnect switches, tracks for heat lamps, etc.) as required by code.
4. The trades shall disconnect and reconnect relocated equipment if applicable.

D. General:

1. All concrete platforms, bases, etc. will be provided by trades. Grouting of drip pans and/or floor troughs to be by trades and coordinated by FSEC.
2. All required holes and recesses for piping and ducts will be provided by the trades upon receipt of information from the FSEC as to the location, size, etc. This information is to be provided in adequate time to be incorporated in the work.
3. Unless stated in the item specifications, the trades shall provide all floor recesses, insulated sub floors, tile floors and vapor barriers for walk-ins as noted on the plans.
4. If applicable, the trades shall remove relocated equipment from kitchen and store in adjacent area during Kitchen construction period. The FSEC shall coordinate removal, inspection, storage, labeling, etc. of equipment. The FSEC shall reinstall relocated equipment as per plan after construction is completed.
5. Provide fire rated walls in kitchen for cooking equipment exhaust hoods and non-combustible materials within 18" of top of hood or as required by fire codes as directed in the Construction Manager scope of work.

3.03 TESTING

- A. After installation of equipment by FSEC and hook-up by the trades, the FSEC shall inspect, start up, clean, adjust and test all equipment under operating conditions for 48 hours prior to acceptance by Owner. If inspection or test shows defects, such defects shall be corrected then an inspection and test repeated. Equipment Supplier shall certify in writing that all equipment is performing in full compliance with the plans and specifications.

3.04 DEMONSTRATION

- A. After utility connections to the equipment are completed by other trades, schedule and conduct inspection, start up and final test of all equipment prior to final jurisdiction inspection. Schedule the demonstration with the Owner and perform the demonstration in the presence of the Owner and/or their authorized representative with a minimum of seven days notification to owner.
- B. Before final inspection, remove any and all protective covering from equipment and give all parts of all equipment a thorough cleaning and servicing, leaving items free from defects and remove trash from premises.
- C. Provide required competent personnel for two eight-hour periods as instructors to operating and maintenance personnel on the safe and proper operation and maintenance of all equipment. Provide additional instructions for up to eight additional hours during the one year guarantee period as requested by the Owner.

- D. Present all maintenance manuals and as built drawings as previously specified or requested by Consultant.

3.05 FINAL INSPECTION AND PUNCH LIST

- A. After installation is completed and tested, notify the Consultant who will review all equipment and submit a repair or punch list of all items that are not in compliance with the documents. All items shall be completed immediately and not to exceed 14 days unless written notice is submitted and approved.

3.06 SCHEDULE OF EQUIPMENT

- A. The following specifications refer to items of food service equipment on the drawings which shall form a part of these specifications and are binding as written herein, and will indicate the required quantity, size, etc. of each item.

- B. Item Specifications:

Item #101 – Portable Table - Qty. of 5

Base Manufacturer: Eagle Group Co.

Base Model: YJRN30-SE

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications.

Minimum specifications:

1. Furnish and install 14 Gauge 304 stainless steel table as per G.S. size and shape as per plan by 34" high.
2. Stainless steel legs and gussets.
3. Flat sound deadened top.
4. Two 20" by 20" by 5" deep roller bearing drawer assembly with stainless-steel or plastic insert and an 18" by 24" white poly cutting board mounted below drawer.
5. 16 Gauge stainless steel under shelf.
6. 5" heavy duty locking casters.

Item #102 - Ice Maker - Qty. of 1

Base Manufacturer: Manitowac Co.

Base Model: IYT-0620A-161

Alternate Manufacturer: Hoshizaki Co.

Alternate Manufacturer: Scotsman Co.

Minimum specifications:

1. Provide self-contained air-cooled unit that operates on 208 Volt 1 Phase with half dice grid.
2. Everpure or 3M filter model # QC7I Single 4FC-S.
3. Start and adjust.
4. 5 Year compressor warranty and 3 Year free service plan.
5. D-420 bin with legs and adjustable bullet feet.

Item #102A – Ice Maker Filter – Included in Item #102.

Item #102B - Ice Maker Scoop Holder - Qty. of 1

Base Manufacturer: Manitowac Co.

Base Model: K-00461

Alternate Manufacturer: None

Minimum specifications:

1. Provide unit that can be mounted vertically or horizontally.
2. Not shown on plans.

Item #201 – Spare Number

Item #301 – Spare Number

Item #302 - Convection Oven - Qty. of 2

Base Manufacturer: Southbend Co.

Base Model: ES-20-SC

Alternate Manufacturer: Vulcan Co.

Alternate Manufacturer: Garland Co.

Alternate Manufacturer: Montague Co.

Minimum specifications:

1. Double deck standard depth.
2. Provide unit that operates on 208 Volt 3 Phase.
3. Stainless steel front and sides.
4. Door windows.
5. 5" heavy duty locking casters.
7. Two speed motors with solid state control panel with standard controls.

Item #303 – Freezer - Qty. of 1

Base Manufacturer: Traulsen Co.

Base Model: G22010

Alternate Manufacturer: Victory Co.

Alternate Manufacturer: True Co.

Minimum specifications:

1. Unit to operate on 120 Volt with cord and plug and have top mount compressor.
2. Stainless steel exterior front and standard door hinging.
3. Digital thermometer.
4. Five coated shelves per door.
5. 5" heavy duty locking casters.
6. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.

Item #304 - Refrigerator - Qty. of 1

Base Manufacturer: Traulsen Co.

Base Model: G10010

Alternate Manufacturer: Victory Co.

Alternate Manufacturer: True Co.

Minimum specifications:

1. Unit to operate on 120 Volt with cord and plug and have top mount compressor.
2. Stainless steel exterior front and right door hinging.
3. Digital thermometer.
4. Five coated shelves.
5. 5" heavy duty locking casters.
6. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.

Item #305 - Refrigerator - Qty. of 1

Base Manufacturer: Traulsen Co.

Base Model: G30013

Alternate Manufacturer: Victory Co.

Alternate Manufacturer: True Co.

Minimum specifications:

1. Unit to operate on 120 Volt with cord and plug and have top mount compressor.

2. Stainless steel exterior front and standard door hinging.
3. Digital thermometer.
4. Five coated shelves per door.
5. 5" heavy duty locking casters.
6. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.

Item #401 – Hot Food Table – Qty. of 2

Base Manufacturer: LTI Co.

Base Model: EF5-CPA Modified

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 34" high unit size and shape per plan that operates on 120/208 Volt 1 Phase with cord and plug.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Wet or dry hot food wells with drains, drain manifold with individual and master valves. Drain valves to be easily accessible from the employee side of the counter.
4. Open rear with plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
5. One 12" solid folding inverted "V" style stainless steel tray slide mounted 28" above finished floor and one 8" stainless steel solid folding work shelf mounted on rear.
6. Set of 5" heavy duty locking casters.
7. Furnish and install BSI Co. PMG Co. or ACS-Vollrath Co. Model #ZG9930 sneeze guard with brushed aluminum uprights and surface mounted hardware, slim square edge heat lamp, light, glass top, ends, and adjustable front. Unit shall meet current NSF standards. Installation of vertical posts in front of food wells or food displays are not acceptable.
8. Sneeze guard assembly and hot food table to be inter-wired to a common point to provide one electrical connection for entire unit and be supplied with a cord and plug.
9. Dormont Co. or T&S Co. W50B2Q-36 uncoated flexible water hose with LFW50QD 2-way quick disconnects at each end.
10. T&S Co. B-0208 cold water fill faucet with blue index ring.
11. Drain tailpiece and shut off valve. A garden hose style of drain connection is not acceptable.
12. Internal wiring shall be neatly installed and fastened in a manner that shall not be visible to staff or customers.

Item #402 – Utility Counter – Qty. of 2

Base Manufacturer: LTI Co.

Base Model: Spec Line

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 30" high unit as per plan.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. One 12" solid folding inverted "V" style stainless steel tray slide mounted 28" above finished floor.
5. Set of 5" heavy duty locking casters.

Item #403 – Cold Food Table – Qty. of 2

Base Manufacturer: LTI Co.

Base Model: 74-CFMA Modified

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 30" high unit as per plan with NSF-7 drop-in self-contained refrigerated cold pan with drain and shut off valve, on/off switch, and pan adapter bars. Unit shall operate on 120 Volt with cord and plug. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. One 12" solid folding inverted "V" style stainless steel tray slide as shown on plan mounted 28" above finished floor.
5. Set of 5" heavy duty locking casters.
6. Furnish and install BSI Co. PMG Co. or ACS-Vollrath Co. Model #ZG9930 sneeze guard with brushed aluminum uprights and surface mounted hardware, light, glass top, ends, and adjustable front. Unit shall meet current NSF standards. Installation of vertical posts in front of food wells or food displays are not acceptable.
7. Sneeze guard assembly and cold food table to be inter-wired to a common point to provide one electrical connection for entire unit and be supplied with a cord and plug.
8. Garden hose hook style of drain connection is not acceptable.
9. Internal wiring shall be neatly installed and fastened in a manner that shall not be visible to staff or customers.

Item #404 – Drop-in Frost Top – Qty. of 2

Base Manufacturer: Delfield Co.

Base Model: N8230-STP

Alternate Manufacturer: Randell Co.

Minimum specifications:

1. Furnish drop-in self-contained refrigerated frost top with drain with shut off valve and an on/off switch. Unit shall operate on 120 Volt with cord and plug.
2. Raised stainless steel top that can accommodate one sheet pan.
3. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.

Item #404A – Sneeze Guard - Qty. of 2

Base Manufacturer: BSI Co.

Base Model: ZG-9930

Alternate Manufacturer: PMG Co.

Alternate Manufacturer: ACS-Vollrath Co.

Minimum specifications:

1. Furnish and install unit with brushed aluminum uprights, glass top, ends (where required), and adjustable front.
2. Unit shall meet current NSF standards.
3. Stainless steel thru the countertop posts with grommets and below the countertop reinforcement and mounting hardware.
4. LED light assembly. Light to be factory inter-wired to junction box located in counter base.
5. Center posts not acceptable.

Item #405 - Milk Cooler - Qty. of 1

Base Manufacturer: Beverage Air Co.

Base Model: SMF58HC-1-S

Alternate Manufacturer: True Co.

Alternate Manufacturer: Traulsen Co.

Minimum specifications:

1. Self-contained forced air unit that operates on 120 Volt with cord and plug.
2. Dial thermometer.
3. Lid locking device.
4. Stainless steel exterior.
5. Heavy duty locking casters.

Item #406 – Cashier Counter – Qty. of 2

Base Manufacturer: LTI Co.

Base Model: Spec Line

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Counter to be 34" high, size and shape as per plan.
2. Stainless steel top.
3. Plastic laminate front and end panels in color as selected by the Architect. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. One 12" solid folding inverted "V" style stainless steel tray slide as shown on plan mounted 28" above finished floor.
5. Provide enclosed base with locking ventilated door at end, one locking cash drawer and stainless steel interior under shelf.
6. Latch assembly.
7. 5" heavy duty locking casters.

Item #407 – Cash Registers / POS – By Owner.

Item #501 – Spare Number

Item #502 - Disposer - Qty. of 1

Base Manufacturer: Salvajor Co.

Base Model: 200-CA-18-ARSS-LD

Alternate Manufacturer: Insinkerator Co.

Minimum specifications:

1. 18" stainless steel cone assembly with silver saver.
2. Solenoid valve.
3. Flow control.
4. T&S Co. B-0455 vacuum breaker assembly.
5. Unit shall operate on 208 Volt 3 Phase 2 HP.
6. Provide a ARSS-LD series NEMA-4X stainless steel control panel with 24 Volt circuitry, run light, interlocked disconnect, auto reversing switch, start-stop buttons and magnetic contactors.
7. Provide T&S Co. or Krowne Co. 5PR-8W00-C + B-TEE-RGD spray hose unit with rear connector kit.

Item #503 - Dishwasher Hood – Qty. of 1

Base Manufacturer: Captive Aire Co.

Base Model: Pantleg

Alternate Manufacturer: Z-Vent Co.

Alternate Manufacturer: Accurex Co.

Minimum specifications:

1. Provide two welded 18 Gauge stainless steel vent stacks from dishwasher vent cowls to 6" above ceiling with stainless steel collar at ceiling penetration.
2. Welded 20 Gauge stainless steel duct from hood to fan located on roof.
3. Provide UL approved 120 Volt vertical discharge exhaust fan with starter and electrical disconnect and all accessories as required for a complete system. The fan shall be installed by the FSEC.
4. All equipment shall be sized for CFM as shown on drawing and shall conform to all applicable codes.
5. Wiring from fan to dishwasher control panel shall be furnished and installed by the trades.
6. System is to be tested and balanced as required for proper operation by the FSEC.
7. Wall openings, structural support, and final connections shall be by the trades.

Item #504 - Clean Dish Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: CDT-NSF

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 unit constructed per G.S. size and shape as per plan by 34" high with sound deadened top and 9" high enclosed backsplash.
2. Stainless steel legs, gussets, and adjustable bullet feet.
3. Area below tables is to be furnished with 16 Gauge removable stainless steel under shelving where possible.
4. Provisions for mounting of rack limit switch.

Item #504A - Soiled Dish Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: SDT-NSF

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 unit constructed per G.S. size and shape as per plan by 34" high with sound deadened top and 9" high enclosed backsplash.
2. Stainless steel legs, gussets, and adjustable bullet feet.
3. Drain trough with removable basket prior to dish machine.
4. Area below tables is to be furnished with 16 Gauge removable stainless steel under shelving where possible.
5. Integrally welded 18" disposer cone and switch bracket.

Item #505 – Water Softener & Filtration – Included in Item #506.

Item #506 – Dishwasher – Qty. of 1

Base Manufacturer: Hobart Co.

Base Model: CL-44E-E-RL

Alternate Manufacturer: Meiko Co.

Alternate Manufacturer: Stero Co.

Minimum specifications:

1. Furnish and install a high temperature (180 Degree rinse) machine that operates on 208 Volt 3

- Phase with single point electrical connection.
2. Stainless steel frame and feet and insulated front doors.
 3. Stainless steel side and front panels.
 4. Auto-timer control package, regulated electric tank heat with low water protection, thermal overload, disconnect switch (wall mounting by E.C.).
 5. 2 peg dish racks and 2 open style dish racks, 2 sheet pan racks.
 6. Extended vent hoods with locking dampers.
 7. Splash guards, button rack limit switch with hinged cover, inter-wired to common point.
 8. DWT-1 drain water tempering kit and all associated hardware.
 9. Factory start-up & training.
 10. Unit shall be furnished with a built-in booster heater with stainless steel tank, and low water cutoff, pressure relief valve, inter-wired and inter-plumbed. Unit shall have a 70 degree rise capability and be preset to provide 180 Degree hot water to dish machine.
 11. Chemical system shall be provided by purveyor.
 12. Provide self-contained point of use Water Softening System mounted under dish table.
 13. Prior to ordering equipment, the FSEC shall perform a water test. If the water levels are within acceptable standards, the Water Softening System may be removed. The contract will be adjusted as required.

Item #506A – Drain Water Tempering Kit – Included in Item #506.

END OF SECTION 11 4000 – FOOD SERVICE EQUIPMENT

Lansing School District
Ebersole Center Food Service
Equipment Replacement &
Renovations

3400 2nd St
Wayland, Michigan 49348

Project Manual
Bid Pack 1

Date: 02/13/2026

Project No: 26000750A

Colliers Engineering & Design
560 5th St. NW
Suite 305
Grand Rapids, Michigan 49504

SECTION 11 4000 - FOOD SERVICE EQUIPMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All Drawings, General and Supplementary Conditions, Division 1, Specifications, and related contract documents apply to this section and the requirements may exceed those shown in this section. The Food Service Engineering Consultants on this project are JRA Food Service Consultants, LLC in Grand Rapids, Michigan (616-454-4433) and is responsible to the Architect and Owner for ascertaining that the Food Service Equipment Contractor complies with all the requirements of this section.

1.02 SUMMARY

- A. As listed in this division, the Food Service Equipment Contractor shall furnish all labor, material, work, equipment, transportation, accessories, taxes, etc. for a complete and continuous installation in accordance with the requirements of these plans and specifications and related documents.
- B. The FSEC shall familiarize themselves with local conditions affecting the cost of the work and examine the site and all Food Service Equipment contract documents including Architectural drawings, and contract documents, all of which constitute the responsibility of the FSEC.

1.03 SUBSTITUTIONS AND VOLUNTARY ALTERNATES:

- A. A proposed substitution on any specified equipment must be submitted to the Consultant 10 days in advance of the bid date and must include all manufacturers' shop drawings and data sheets on the proposed equipment. The supplier shall pay any additional costs incurred for changes, engineering services, utilities, construction, etc. that may be incurred by said substitutions.

1.04 INTERPRETATION OF DOCUMENTS:

- A. The "Base Manufacturer" listed in the item specifications is intended to be the "Basis of Design". All approved Alternate Manufacturers must conform to the specifications, physical size, accessories, materials, capacities, electrical & plumbing requirements, amperage, utility consumptions, drainage requirements, etc. Any additional project costs incurred due to deviations and/or nonconformance shall be the responsibility of the Food Service Equipment Contractor (FSEC).
- B. Prior to receipt of bids, all questions, clarification, and changes in the documents shall be executed by addendum. After the award of contract, all changes shall be performed by bulletin.
- C. FSEC shall submit an itemized price breakdown to the Consultant on their letterhead for each piece of equipment including labor, freight, manufacturer, quantity, taxes, etc. as applicable.
- D. Any deletions of equipment by the Owner and/or Consultant prior to approval and/or release of the shop drawings, brochures, etc. shall be credited to the Owner at the itemized price as listed in the itemized price breakdown and include all equipment costs, freight, labor, taxes etc. Pricing shall not be credited at the amount listed on the Schedule of Values.
- E. Any additions to equipment by the Owner and/or Consultant that result in cost increases after approval and/or release of shop drawings, brochures, etc. shall be immediately noted by the FSEC and a written request with prices for a bulletin shall be issued by the FSEC to the Consultant.

- F. The General Specifications are applicable to items listed in the item specifications.

1.05 ABBREVIATIONS

- A. The following abbreviations are used herein unless otherwise noted on the plans or item specifications.

Abbreviation	Meaning
A	Amps
AFF	Above Finish Floor
BTC	Branch to Connection
CFM	Cubic Feet of Air Per Minute
C.P.	Chrome Plated
CW	Cold Water - 25 PSI
DCO	Duplex Convenience Outlet - 20 amp
DFA	Drop from Above
E.C.	Electrical Contractor
FD	Floor Drain - Wade W1104
FFD	Funnel Floor Drain - Wade 1104-EF4
FL SK	Floor Sink 12" - Wade W9144-15
FPM	Feet Per Minute
FSEC	Food Service Equipment Contractor
FSC	Food Service Consultant
G	Natural Gas - 7" water column
GP	General Purpose
G.S.	General Specifications
G.C.	General Contractor
HVAC	Heating Ventilation Air Conditioning Trades
HP	Horsepower
HW	Hot Water - 140 degree - 25 PSI
J.B.	Junction Box
KW	Kilowatt
N.S.R.	No Service Required
NFPA	National Fire Protection Association
NSF	National Sanitation Foundation
NIKEC	Not in Kitchen Equipment Contract
P.C.	Plumbing Contractor
S.O.M.	Standard of Manufacturer
S.S.	Stainless Steel
SS	Steam Supply - 25 PSI
SR	Steam Return
V	Volts
VIF	Verify in Field
W	Waste Outlet
W.G.	Water Gauge - Static Pressure

1.06 CONFORMITY

- A. All equipment furnished under these specifications shall be newly manufactured and installed in strict conformity with all codes, regulations and requirements of the State Board of Health, the National Sanitation Foundation Standards, or any state or local agency.
- B. All equipment shall conform to the current standards and bear the seal of UL, NEMA, ASME, AGA, OSHA, NFPA, etc. where applicable and/or otherwise conform to the requirements of the authorities having jurisdiction.

- C. Wherever the requirements of the specifications and drawings are in excess of the regulations, the specifications and drawings shall govern. Whenever the regulations are in excess of the specifications and drawings, the regulations shall govern.
- D. Wherever the requirements of the specifications are in excess of the drawings, the specifications shall govern. Whenever the requirements of the drawings are in excess of the specifications, the drawings shall govern.

1.07 PERMITS - LICENSES - PHONE CALLS

- A. Provide to the proper authorities all notices required by law, obtain all refrigeration permits, licenses, etc., and pay any legal fees necessary for the due and faithful performance of the work, and which may arise incidental to the fulfilling of the foodservice documents. The Owner shall pay for any health department plan review or license fees.
- B. Other trades shall provide boiler permits, hook up permits, building permits, etc. The FSEC shall provide hood and refrigeration permits when applicable.
- C. Accept all collect phone calls relating to food service equipment that pertain to the project until the warranty has expired on the equipment.

1.08 SUBMITTAL OF BUYOUT BROCHURES AND SHOP DRAWINGS

- A. Shop drawing and brochure requirements may also be listed in the general requirements or other areas of the documents. Provide submittals as per those requirements or as listed below - whichever is greater.
- B. All shop drawings, rough-in drawings, equipment brochures, etc. shall be submitted at one time within 20 days of the notification of award of contract to the bidder. Said items are subject to the terms and conditions of the plans and specifications for the entire project. All drawings which are submitted for distribution shall be clear and concise and have the following notes printed on each and every sheet:

Name of the FSEC.
Name and location of the project.
Name of the Architect.
Name of the Consultant.
Name of the General Contractor.
Drawing number.
Date of drawing and revisions.

The following statement: The (name of FSEC) is solely responsible for the accuracy and completeness of these drawings and specifications, and we approve them for construction purposes. Signed: (Officer, Partner, etc.)

- C. All submitted data shall be reviewed for general compliance only and does not alleviate the FSEC from providing equipment as per the intent of the plans and specifications.
- D. Owner shall not be responsible for any equipment ordered prior to receipt of Consultant approved brochures or shop drawings.
- E. If applicable, the FSEC shall visit the site to verify requirements of existing or relocated equipment prior to submittals.

1.09 BUYOUT BROCHURES:

- A. As soon as possible, prepare a buy-out equipment brochure in PDF format with copies of manufacturer's specification sheet or literature on each item, along with a list of the model,

manufacturer, quantity, connections required, accessories, etc. for each item and component or accessories. Material on all items shall be assembled in order and no consideration will be given to partial lists submitted from time to time.

1.10 ROUGH-IN DRAWING AND MECHANICAL DATA:

- A. As soon as possible, submit an electronic drawing in PDF format at 1/4" scale to locate accurately the utility connections for each item of equipment requiring water, gas, electrical, and drain. Listed on the drawings shall be dimensions to required utilities and located from a center line of a structural column or another positive reference point.
- B. Upon final approval of data, distribute copies to all trades, Owner, Architect, health department, etc. as required.
- C. Drawings shall be at 1/4" scale or larger and indicate each electrical and mechanical rough-in required for all new, relocated, future, and/or purveyor supplied (the Owner shall provide proper data on purveyor supplied equipment) food service equipment as listed in the plans or specifications. Include all electrical and convenience outlets, gas, water, steam, ventilation, drains, floor depressions, wall openings, weights, ceiling recess or access panels, sleeves, beverage lines, roof data, refrigeration, etc. as required.
- D. Furnish all necessary assistance to the various trades and be responsible for the proper location of sleeves and conduits through which the utility lines are to be drawn. A field inspection shall be made before the finished floors are laid to make any necessary relocations of the utility sleeves, rough-ins and conduits, and immediate written notice shall be provided if rough-in problems have occurred.

1.11 SUBMITTALS OF SHOP DRAWINGS:

- A. Completely detail and submit shop drawings (S.S. fabrication, fire protection, hood and ventilation system, plastic laminate fabrication, walk-ins, sneeze guards, serving counters, etc.) in electronic PDF format showing all items to be provided under this section of the specifications. Drawings to be submitted for review at 1/2" per foot scale or larger. Upon final review of data, distribute copies to all trades, Owner, Architect, etc. as required.
- B. The drawings shall show all elevations, sections, dimensions, mechanical and electrical requirements, related details of construction, installation and related work which require cutting, close fitting, etc. as required for installation.
- C. Submit proper notifications in writing of any departures from the contract drawings or specifications which may be necessary to permit installation of the equipment. Fabrication should not be started until after final approvals are received and final field measurements are taken.

1.12 MAINTENANCE MANUALS

- A. At time of demonstration, provide to the person in charge of the kitchen a minimum of three bound current copies of kitchen plans, rough-in drawings, any and all warranties, instructions, parts lists, operating instructions for each piece of mechanical equipment, as built shop drawings, and "Buy-Out" brochures.
- B. Manuals shall include a typed list in the front of the manual listing the names, addresses, and telephone numbers of local servicing agencies and manufacturer's representatives for all equipment.

1.13 SAMPLES

- A. Submit all required samples for approval, if required, of all hardware, plastic laminate, paint,

etc. before starting fabrication. Other samples shall be supplied as required.

1.14 MEASUREMENTS

- A. Measurements required to size and place the food service equipment shall not be taken from drawings but shall be made at the structure from the actual spaces reserved therefore, and giving due consideration to any architectural, structural or mechanical discrepancies that may occur during construction of the building. Verify size of all of Owner's equipment and small wares (dishes, trays, pans, etc.) and purveyor supplied equipment (urns, soda systems, beverage dispensers, etc.), if applicable. Field dimensions shall be taken at the earliest opportunity so as not to delay deliveries.
- B. Verify in field any and all measurements before doing any work on equipment that may be affected by the physical conditions and be responsible for the correction of same.
- C. Inspect equipment for proper operation prior to relocation. Advise if equipment is defective or needs rework which is not included in the original contract and submit a written quotation for said work.
- D. Coordinate Owner's and/or purveyor supplied equipment (coffee makers, beverage equipment, cash registers, soda equipment, etc.) as required for rough-in data, installation, etc.
- E. Measurements for tight fitting equipment shall allow no more than 1/4" between the wall and equipment that shall be trimmed and/or sealed as required.

1.15 WARRANTY

- A. Provide a written warranty for all equipment against defects in workmanship and material for one (1) year from the date of substantial completion and acceptance, excluding refrigeration units which shall carry an additional four-year warranty and a ten-year warranty on all walk-in panels. This shall cover any replacements and/or repair costs of such defective material, including transportation, labor, and materials for all equipment. This one-year free service, warranty and guarantee shall be available within 24 hours of notification on all equipment except refrigeration.
- B. Provide one-year free service, warranty and guarantee within 12 hours of notification on walk-in refrigeration and units must be operational within 24 hours after service call.
- C. This warranty is not intended to cover equipment which has been overly abused or items that have not had proper periodic maintenance (door gaskets, uncleaned refrigeration condensers, etc.) during the one-year period.

1.16 DELIVERY AND STORAGE

- A. The FSEC shall furnish all labor, material, equipment, etc. as required to unload and store all equipment.
- B. No equipment shall be delivered to the site unless it has been ascertained that storage space is available.
- C. After verifying field conditions with Architect and/or related trades, the F.S.E.C. may deliver equipment 30 days prior to job installation requirements and/or completion - providing it is properly insured. F.S.E.C. shall make all arrangements to deliver, unload, and store all equipment and shall assume all responsibility for safeguarding the equipment until it is accepted by the Owner.

- D. Unless noted in the item specifications, the GC shall remove and store any existing and/or relocated equipment that is removed from the kitchen during the construction period.

PART 2 GENERAL - SPECIFICATIONS - PRODUCTS

2.01 MANUFACTURER'S STANDARDS

- A. It is the intention of these specifications to provide a type of equipment conforming to manufacturers' standards and only minor variations in construction will be accepted, provided that these variations do not detract from the finished appearance, durability, general function or in any way affect general overall size, capacity, strength, etc. of equipment.
- B. Manufacturer's catalog designation of material and/or fabricated equipment used in the following specifications are intended to illustrate and represent the standards which will be required by the owner. Equipment furnished must closely conform thereto in design, construction, capacity, and function to make and model called for. Where such catalog designations are given, the items shall be complete as described and shown in the catalog unless exceptions are in itemized specifications.
- C. When more than one manufacturer is listed in the Item Specification, only one manufacturer shall be acceptable for items of a similar nature (fabrication, cooking equipment, refrigerators, shelving, carts, etc.) to ensure uniformity of design, installation, service, etc.

2.02 FABRICATION STANDARDS

- A. Unless noted under itemized specifications or on plans, the following specifications shall govern the construction of all fabricated and buyout equipment and installation and shall apply to the individual item as if it were written therein in its entirety.

2.03 FABRICATED EQUIPMENT

- A. It is required that all custom fabricated items (counters, tables, sinks, dish tables, etc.) described in the plans and specifications, other than by name and catalog number, be constructed of 300 series S.S. and be manufactured by one fabricator. Metal-Masters Inc, Advance Tabco Co., Kevry Co., Professional Restaurant Services (PRS), LTI Co., John Boos Co., Keystone Fabricators Co., and Titan Co. are approved fabricators and have demonstrated they possess the plant, personnel and engineering facilities to properly design, detail, and manufacture high quality kitchen equipment.
- B. All work in the above category shall be standard unit assembly, by one foodservice equipment manufacturer of uniform design, material and finish.

2.04 BACKSPLASHES

- A. Where edges of the top are adjacent to walls, column, equipment or enclosures, they shall be turned up to provide a backsplash which shall be tight fitting (1/4" or less). Unless noted, all backsplashes shall be formed by turning up 10" and flanged back 2-1/2" at 45 degrees and down 1" and attach to wall with 6" by 2" S.S. "Z" clips on 3'-0" centers. Ends of backsplash shall be fitted with closure plates. Weld a full S.S. enclosure panel for exposed rear backsplash.
- B. Tops adjacent to refrigerators, ovens or cabinets shall be turned up 4" with top edges feathered slightly to form a tight fit of 1/4" or less. Seal with mastic compound.

2.05 BOLTS, SCREWS AND RIVETS

- A. All exposed surfaces of equipment shall be free of bolt, screw and rivet heads. Wherever bolts are used to fasten tops and trim to paneling, body of counters and similar equipment, such

bolts shall be of an approved type and shall be corrosion resistant metal of the same alloy as the metal to which they are fastened with acorn type nuts to eliminate sharp edges.

2.06 CASTERS

- A. Provide heavy duty casters with double ball bearing raceways, heavy Gauge fork and races and have minimum capacity of 250 pounds per caster. Casters shall be provided with brakes. Wheel shall be non-marking urethane.

2.07 CODES AND SANITATION

- A. All food service equipment under this contract shall meet the requirements and bear the label of the National Sanitation Foundation. Specifications set forth are considered minimum and are to be superseded by any superior requirements in effect as of this date by the National Sanitation Foundation or the State/County Health Department. Any differences of opinion on sanitation shall be referred to the State/County Health Department for arbitration.

2.08 CORNERS

- A. All corners shall be fully rounded and made integral and of the same sheet as the top and rolled edges. Radii of all rolled edges to be equal and rolled 2" diameter at least 180 degrees. Filler pieces or soldering shall not be used in place of all welded, seamless construction.

2.09 CUTTING BOARDS

- A. Provide Read Products or Mapletex Co. 1/2" minimum thick reversible boards as per plan as manufactured by Read Products Inc. when attached to tables or similar equipment, provide S.S. mounting brackets.

2.10 DISHTABLES

- A. Provide NSF approved series SCDT dish tables with 14 Gauge 304 S.S. coved corner construction as manufactured by Metal-masters Co. or equal with 10" backsplash as previously specified where adjacent to walls and remainder of tables to have 3" high roll rim and be mounted on 12 Gauge under-channeling, 16 Gauge S.S. cross rails and legs with S.S. gussets and S.S. adjustable bullet feet and/or flange type feet. Tops shall be pitched to dishwasher to avoid standing water and undersides shall have sound deadening material and be attached to walls with S.S. "Z" clips.
- B. Provide removable 18 Gauge S.S. under-shelving which has 2" rolled up edges at rear and roll down edge at front and be supported on S.S. cross rails on all sides. Notch all corners to fit legs and piping. Under-shelving shall not interfere with water softener or adjacent equipment.
- C. Provide S.S. recessed drain trough with drainer in all soiled dish tables. Unit shall not interfere with dishwasher control panels or adjacent equipment.
- D. Disposer cones and/or scrapping trough shall be integrally welded into top and also provided with S.S. brackets for the switch and holes in backsplash return for the vacuum breaker. Scrapping trough shall be size and shape as per plan by 6" deep with coved corner construction and sloped to disposer. Provide 20" long S.S. pan formed removable trough covers. Provide T&S Co. 2905 water inlet at shallow end of trough and every 3'-0" and at change in directions. Inlets shall be controlled by a 2600 mixing valve mounted on a S.S. bracket mounted under dish table and be interconnected to water line and solenoid so water flows thru inlets when disposer in operation.
- E. Provide integral S.S. pass thru sill extending through wall as per plans and specifications with flat side splashes and turn down front with closed ends. Provide 1" rear turndown at table at

30 degrees to ensure the sill is higher than dish table. Provide wood bracing on sill as required for support. FSEC shall verify requirements of roll up door by GC prior to installation of tables.

- F. Provide raised roll rim in lieu of 3" high roll rim at front edge of soiled dish table when used as a pass thru dish return area.

2.11 DOORS

- A. **SLIDING DOORS** - Sliding doors shall be constructed of 16 Gauge S.S. or material listed in the item specifications with roller bearing slides.
- B. **SINGLE PAN CONSTRUCTION** - 16 Gauge S.S. with 3/4" thick sound deadening fiberglass between the two thicknesses of metal. Back panel to be 20 Gauge steel. Door to operate on top hung ball bearing rollers. Bottom edge of doors to be square and fitted with a groove that rides over a S.S. pin at center point.
- C. All doors shall be fitted with stops and locks. Handles shall be die stamped S.S. flush mounted.
- D. **HINGED DOORS** All hinged doors for cabinet bodies and enclosed bases shall be double pan construction. Doors shall be flush mounted and be fitted with S.S. piano type full length hinges. They shall be furnished with friction catch and S.S. recessed handles, locks, and two rubber button noise eliminators, one at each corner on handle side.

2.12 DRAWERS

- A. All drawer inserts shall be covered corner die stamped out of one piece of 18 Gauge S.S. or plastic and shall be set loosely in a channel frame so it can be lifted out for cleaning. Top edges are to be flanged out 1/2".
- B. The supporting frame shall be welded steel channel with S.S. drawer face welded to frame so there will be no exposed screws or rivets on the face which shall extend 3/4" out at top and down 3/4" with 1/2" hemmed edge and radius corners to form drawer handle. Provide two rubber button shock stop noise eliminators, one on each side of the drawer face at the top.
- C. Provide heavy duty S.S. drawer slides with heavy duty S.S. ball bearing wheels. Slides and frame to be so designed as to allow full opening of drawers and to be reinforced to support 150 lbs. when fully extended.
- D. Adjustable stops are to be provided for each drawer at the fully open position. Drawers on open base tables shall be enclosed in an 18 Gauge housing of steel. Drawer guides are to be sloped to provide self-closing action.
- E. All drawers shall be 20" by 20" by 5" deep.

2.13 ENCLOSED BASE CABINETS

- A. All enclosed bases or cabinet bodies shall be similar to Delfield Company or equal Mark VII series and constructed with 14 Gauge S.S. tops and 18 Gauge S.S. bodies and be enclosed on the ends and sides. The bases and bottom shelves shall be reinforced with channels, angle bracing, and gussets as required. Additional angles and channel cross members shall be provided to reinforce shelves and support tops as required for countertop equipment (urn, ice dispensers, drink dispensers, etc.) as shown on plan.
- B. All free corners of enclosed bases or cabinet bodies shall be rounded on a 5/8" radius and all corners against walls and other fixtures shall be square. In the case of fixtures fitting against or between walls, the bodies shall be set 1" from the wall line, but the tops will extend back to the wall line to permit space for rough-ins and adjustment to the wall irregularities. The ends of

the cabinet bodies shall extend to the wall line and be sealed and/or trimmed as required.

- C. These fixtures shall be constructed with 6" S.S. adjustable legs, unless set on masonry or steel bases as called for in the itemized specifications.

2.14 FIELD JOINTS

- A. All field joints shall be welded with rod of same basic composition as sheets or parts welded. Welds shall be free of pits, cracks, cross graining or discolorations and shall be ground and polished to the original finish of the metal. No soldered or bolted joints shall be used unless noted in item specifications and shall be properly sealed and bolted.

2.15 GRINDING AND POLISHING

- A. All exposed welded joints shall be ground flush with the adjoining material and neatly finished to harmonize therewith. Services shall be free of depressions. Wherever sheared edges occur, they shall be free of burrs, projections and fins to eliminate all danger of cutting or laceration when the hand is drawn over such sheared edges. Where miters or bull nosed corners occur, they shall be neatly ground to a uniform condition, and in no case will overlapping material be acceptable. All exposed surfaces shall be satin finish except rim which shall be a highly polished and buffed finish. Satin finish shall be comparable to the commercial mill finish known as No. 4 for S.S. No cross graining on equipment is acceptable.

2.16 GUARDS

- A. All machines shall be furnished fully enclosed with guards built in accordance with safety codes and regulations of the State or Governmental agency having jurisdiction.

2.17 HOT FOOD WELLS

- A. Provide insulated food wells with coved corner S.S. interior and the electrical element attached to the underside of well. When units are specified with drains, the manufacturer shall provide a drain assembly with bushing and a universal joint as required to manifold and interconnect all wells with a master and individual valves and Drain handles shall be easily accessible from employee side of counter. All wells shall be inter-wired to master switch with indicator light. Provide galvanized access panel below wells to protect wiring. Units shall be heated by 120 volt or 208/240 volt 1200 watt electric elements with thermostatic control with guard ring and pilot light.

2.18 INTERIOR SHELVES

- A. All interior shelves in cabinet bodies and enclosed bases shall be 18 Gauge S.S. or as called for in the itemized specifications. Turn up on back and ends of shelf shall be 1 1/2" high and coved on 3/4" radius. The front edge shall be turned down 1-1/2" and back 1/2". All shelves shall be rigidly reinforced below to prevent sagging. Provide ferruled cutouts in shelves for drain lines, conduits, etc.

2.19 LEGS - FEET - FRAMES

- A. All legs and pipe stands for open base tables, dish tables, etc. shall be constructed of 16 Gauge S.S. tubing unless noted, with cross rails and braces of the same materials. All joints between legs, under-shelves and cross braces are to be welded and ground smooth.
- B. Cross rails must be supplied to reinforce each leg. Legs anchored to gussets at top only and without cross rails are not acceptable. Pipe stands and frames furnished on all pipe base fixtures shall have legs of 1-5/8" O.D. 16 Gauge S.S. tubing, cross rails of 1" O.D. 16 Gauge S.S. tubing unless noted.

- C. Top of stand shall be fitted into S.S. gussets welded to reinforcing structure on underside of the tabletop, spaced not over 3'-6" on centers.
- D. All legs shall be fitted with adjustable S.S. bullet-shaped feet with bottom of pipe legs to be finished off smoothly and overlap the stem to provide sanitary fitting and prevent the accumulation of grease or other debris at this joint. Provide S.S. flange type feet securely anchored for island style counters, sinks, etc.
- E. All pipe legs or vertical members are to be set back from edge of table tops a sufficient distance to offset any interference with workers, walls, columns or other equipment.
- F. Provide 6" adjustable legs with adjustable S.S. bullet foot for fabricated and/or buyout equipment with minimum capacity of 1500 pounds each.

2.20 MATERIALS AND STRUCTURAL SHAPES

- A. Angles, bars, channels, piping, pipe legs, etc. used shall be uniformly ductile in quality and free of hard spots, runs, checks, and other surface defects. Except as otherwise specified, all such sections shall be milled steel galvanized by the hot dip process, all free of runs and blisters, uncoated spots or patches. S.S. shall be 18-8 composition (302 alloy) standard with No. 4 finish and polished to 180 grit and welded as previously specified. Provide butyl sealant sound deadening between tops and all structural supports or as required.

2.21 NAME PLATES

- A. Each item of equipment shall have a corrosion resistant metal name plate with model number, serial number, name and address of the manufacturer securely fastened to equipment in a non-conspicuous area. All mechanical and electrical controls, switches, disconnects, remote compressors, etc. shall be labeled with metal or engraved phenolic plastic signage.

2.22 OVERSHELVES AND WALL SHELVES

- A. Provide 10" wide NSF 16 Gauge S.S. over-shelves or wall shelves unless noted in the plans or item specifications. Provide wall mounted shelves with rear and sides to be turned up square 1" and front edge to have sanitary roll rim. Provide heavy Gauge S.S. wall mounting brackets 6" from ends of shelf with maximum of 4'-0" on centers.
- B. Provide all over-shelves with sanitary rolled edges and bull nose corners on all four sides unless equipment is mounted on shelf (microwave, toaster, dishes, etc.) and provide 1/2" turn up at rear for that portion of the over-shelf. Provide S.S. tubular support standards as required for shelf-mounted equipment and with provisions for mounting to table or countertop.
- C. Provide all wall backing and/or structural support as required for shelves to support 50 pounds per square foot and coordinate installation of same with trades.

2.23 PAINTING

- A. All galvanized material and black steel shall be thoroughly cleansed of all oil and foreign matter and given two (2) coats of enamel paint as selected.

2.24 ROLLED RIMS AND EDGES

- A. Standard roll rim shall be covered up 3" with 1/2" diameter roll at 180 degrees and bullnose corners.
- B. Square edge shall be turned down 2" at 90 degrees with 3/4" tight hem at bottom.

- C. Marine edge shall be turned up 1/2" on a 45-degree angle and turned down 2" with 3/4" tight hem at bottom.
- D. Wherever tabletops are used in connection with sinks, the top shall be fabricated with a 1/2" high raised roll rim spillage edge unless otherwise specified. Top to be integrally raised approximately 1/2" at all edges and then rolled down 2" at 210 degrees with bull nose corners.

2.25 REINFORCED STRUCTURES

- A. Counter, table, and cabinet framework shall be constructed of steel angles horizontally and channels vertically, made in sections to permit assembly on job with tops field welded. Vertical fronts and sides of cafeteria counters and similar enclosures are to be reinforced with channels on approximately 3'-0" centers to support the tray slide brackets.
- B. Unless otherwise specified, angles or channel frames and similar cross bracing on not over 2'-0" centers to be provided under all counter and tabletops to stiffen tops and furnish fastening supports for leg flanges.

2.26 SINKS

- A. Provide 14 Gauge S.S. coved corner sink bowls integrally welded as per plan with welded seamless construction with scored bottom towards a die stamped drain outlet with a T&S Brass modular waste drain and connected overflow located 1" below drain board and shall not interfere with plumbing, adjacent walls, equipment, etc. Provide 14 Gauge S.S. bracket for drain stem. All multiple compartment sinks shall be double walled construction. When sinks are built into enclosed base counters, provide access holes for the modular waste drain lever(s).

2.27 TABLETOPS

- A. METAL - Metal tabletops to be 34" high and be constructed of 14 Gauge 302 S.S. with NSF rolled rim construction and bull nose corners unless otherwise noted. All seams and coved corners shall be welded, ground smooth and polished. Provide ferruled access holes for cutouts for water lines, cords and plugs, etc. as required in tabletops, counter tops, urn stands, etc. All open base tables shall be reinforced with 12 Gauge angles or channels. Provide welded cross angle or channel members placed at each pair of legs with gussets, welded cross rails and feet as previously specified.
- B. One angle runner, running lengthwise shall be provided on tops up to 30" wide; two provided on tops over 30" wide. All tops shall be reinforced so that there will be no noticeable deflection and all reinforcements shall be stud welded to the underside of the top. No rivets or bolts to be used through the top. Provide sound deadening material between tops and reinforcing members and underside of tops. Field joints are to be provided in the top where necessary.

2.28 CABINETS, SERVICE STATIONS, BARS

- A. Provide all plastic laminate construction as manufactured by a commercial bar equipment fabricator similar to Perlick Co. or Glas-tender Co. who has the plant, personnel and engineering facility to properly design, detail and manufacture high quality equipment. The manufacturer shall be subject to the approval of the Consultant and Owner. Units shall be constructed of Wilsonart or Formica high pressure laminate (1/16" on flat surfaces and 1/32" on radius areas) on exposed surfaces in standard colors as selected by owner. Provide backing sheet where concealed. Self-edge units shall have top sheet placed over edge sheets and placed on 3/4" or 1" smooth marine plywood to insure a ripple free surface. Use NSF non-water-soluble adhesive.

- B. Unless noted in the item specifications, provide back bars with plastic laminate exterior finish on all exposed surfaces, 4" backsplash at walls, S.S. interior, interior lights with jamb switches, locking doors, 6" S.S. legs, 2 heavy duty shelves per door, coil, compressor, controls, inter-wired to common point, etc. Provide all necessary cutouts in top and shelves for refrigeration lines, beer lines, utilities, drainers, etc.
- C. Unless noted in the item specifications, provide all front bars and bar service stations with plastic laminate bar top with suds rail, 1" vertical die with laminate on both sides, Lawrence Co. 2" brass arm rail and foot rail with brackets, etc. as per the item specifications. All upper bar equipment shall be provided by other trades unless noted on foodservice equipment documents.
- D. Provide all counters, cabinets, tops, service stations, etc. with plastic laminate finish where exposed, legs with removable kick plates, S.S. adjustable tray slides, concealed fasteners, European hardware, roller bearing drawers, etc.
- E. Provide access holes and/or chases for beverage lines, utilities, refrigeration lines, columns, etc. as required which shall be properly sealed and trimmed.

2.29 UNDERSHELVES

- A. The undershelves on open base tables, dish tables, etc. shall be a solid removable 16 Gauge S.S. shelf unless noted in the itemized specifications. Shelf is to be turned up at rear and down on all front and side (down on all island units) edges 1-1/2" with corners at legs cut out and mounted on the support stringers on all four sides. Provide ferruled access holes as required for drain lines, water lines, conduits, etc.

2.30 CORRECTIONAL PACKAGES

- A. Unless otherwise stated in the item specifications, A Corrections Package shall include but not be limited to non-removable hardware, fasteners, nuts, bolts, screws, hinges, handles, hoses, etc.
- B. All items to be fully welded and/or not removable without the use of tools. Areas filled with sealant caulk are to be provided with "No-Pick sealant".
- C. Temperature and/or pressure gauges are to be installed and/or protected in a manner that they cannot be subjected to removal without the use of tools or vandalism.
- D. There shall be no devices that may create or cause a hazard to the operator and/or the use of said device to injure other personnel.

2.31 VENTILATION – HOODS - DUCTWORK

- A. Unless otherwise stated in the item specifications, provide 300 series 18 Gauge S.S. hoods similar to Captive Air Co. or Duo Aire Co. or Accurex Co. and be manufactured in accordance with and bear the seal of NSF, UL, and NFPA 96. Hoods shall be mounted 6'-8" above finished floor and must overhang all equipment by a minimum of 6" at front (18" for drawer type broilers) sides and be furnished with a full complement of S.S. UL filters, filter frame with grease cup, recessed LED lights inter-wired to junction box on top of hood and to switch mounted on wall in hood control panel, duct collars, fire dampers, hangers, hemmed 18 Gauge S.S. end panels, S.S. closure panels from top of hood to ceiling, cutouts and trim for power distribution system or columns, etc. Provide insulated NFPA integral 3" stand-off behind hood when installed on non-rated wall. Walls for hood mounting shall be rated as required by code.
- B. All exhaust fans shall be UL-762 rated vertical discharge fans with insulated curb, hinged base with grease collection device, mounted and inter-wired starter and disconnect, adjustable drive

assembly and be sized for CFM as per plans with a sound classification of "average" and not to exceed 12 sones.

- C. All make-up air units shall be sized for CFM as per plan. Unit shall be fully factory built with supply fan, filter section with bird screen, motorized inlet dampers, metal cabinet with weather proof epoxy coated finish in color as selected by Owner, 12" legs and rails, curb, vibration eliminators, factory wired control panel and disconnect with wiring harness and pigtails (installation and conduit by E.C. as required) for interlock of exhaust fan and make-up air unit to switch panel on face of hood or remotely located. If required by code provide a pre-heat section (gas, electric, steam or hot water) which shall provide a minimum degree rise capability (as shown in item specifications and/or as required by local code) complete with full modulating controls, thermostat, etc. as required for a complete system. Provide all UL listed components.
- D. All ductwork shall be constructed and installed as per SMACNA minimum gauges and requirements. Make-up air ductwork shall be insulated and rigid metal construction. Flex duct will not be allowed. Provide welded 16 Gauge black iron exhaust grease duct as per code requirements and conform to all building requirements and obstructions with all dimensions subject to verification in field. Provide all grease ducts with cleanouts every 20'-0" of horizontal run (with pitch as per code) and within 10'-0" of changes in direction, access panel, dampers, curbs, flashing, flanges, plenums, supports, insulation, etc. as required by code and to provide a watertight system. Fireproofing shall be provided as noted on the food service plans and in the item specifications.
- E. System is to be factory tested and balanced as required for proper operation with written report to Architect and Owner.
- F. Roof openings, structural support, fireproofing, and final connections shall be by the Trades.
- G. If required by code, cooking exhaust hoods shall have an Ansul Co. R-102 or equal chemical fire protection system and will be listed separately in the item specifications.

2.32 WALK-INS AND REFRIGERATION

- A. Provide NSF and UL approved walk-ins as per the item specifications size and shape as per plan by 8'-6" high and furnished with prefabricated modular construction tongue and groove cam lock style panels for walls with covered vinyl screed, ceilings, and floors with 4" foamed in place UL-25 flame spread class No. 1 urethane insulation with a minimum "R" factor of 32 and a "K" factor of 0.121. Wall and ceiling panels shall have 0.040 stucco embossed aluminum or 20 Gauge 304 S.S. finish and floor panels shall be 0.100 smooth aluminum or 18 Gauge S.S. with a rating of 700 pounds per square foot with non-skid floor strips. All panels shall have a ten-year guarantee and be installed with a watertight seal. Provide 4" S.S. high covered base molding at all exposed exterior and interior walls securely anchored and sealed as required. Provide ceiling hangers and structural supports as required.
- B. If floorless construction is required, general trades shall provide 4" urethane insulation and vapor barriers for sub floor and tile floor. Provide covered floor screeds below wall panels anchored to red wood vapor barriers which shall extend up through and 1/8" above the level of the finished floor, 6 mil polyethylene vapor barrier, etc. as per the manufacturer's standard requirements. Supply and coordinate the installation of walk-ins to ensure proper fit of floor recesses, sizes, tile, insulation, grout, vapor barriers, drainage, etc.
- C. Provide one surface-mounted LED light fixture mounted above door for the first 50 square feet of floor space and one additional ceiling mounted fixture as shown on the plans. Lighting shall provide a minimum of 35-foot candles at 36" above floor. The light above door shall be inter-wired to switch and junction box, but all additional lights shall be installed and wired in field with conduit located outside the compartments.

- D. Provide 36" by 78" in-fitting doors with magnetic gaskets, three C.P. cam lift hinges, S.S. front, 24" high interior aluminum tread plate kick plate, cylinder locks, and automatic door closer. Doors shall be mounted in reinforced panel with FRP or S.S. door jambs with thermal break and thermostatically controlled heater strip, S.S. heavy gauge heated threshold, safety release, digital thermometer, and virgin plastic full width door curtains mounted 6" above door header. Provide non-heated relief air vents for cooler and inter-wired heated vents for all freezer compartments mounted above doors.
- E. Provide removable closure trim with concealed fasteners of same appearance as the walk-in exterior from box to all adjacent building walls and ceilings. Provide access panels and louvers as required for service.
- F. Refrigeration systems shall be complete with items as specified or as required to provide a first class system. Should any dispute arise as to the quality of equipment or workmanship, the decision shall rest with the Consultant.
- G. Hermetic or scroll compressors shall be mounted on anti-noise, anti-vibration blocks, and be factory mounted in welded angle iron frame and housing with support rails, metal curbs, timed defrost, factory installed control panel, pilot light, NEMA rated disconnects and starter, etc. Compressors to be factory preconnected for final water and electrical connections. FSEC shall verify that proper ventilation of compressors is obtained.
- H. Coil and/or compressor condensate drain lines shall be furnished as required and installed by the FSEC. Provide drain lines terminating with trap over floor drain where shown. Drain lines to be neatly insulated with material similar to Armaflex. Any drain line run through a freezer compartment shall also have a heater coil neatly wrapped over the line, pre-wired by the FSEC and shall operate continuously. No drain piping shall interfere with shelving within the compartment nor exit through the front of a compartment. All piping shall be concealed where possible.
- I. Coils shall be manufactured by Bohn, Russell or the specified walk-in panel manufacturer. Coils shall consist of the manufacturer's standard factory components and shall have timed defrost and immersion type thermostat and be connected to compressors by the equipment supplier using type "L" copper tubing soldered with Silfos and using A2L compliant refrigerants. Refrigeration lines shall be insulated in same manner and materials as coil and drain lines and shall be concealed where possible.
- J. FSEC to provide refrigeration system with expansion valves, pressure controls, strainers, solenoid valves, liquid dryers, adjustable room thermostats, hangers, king and queen valves, heat exchangers, oil separators, pump-down solenoid, low ambient controls, crankcase heater, outdoor shroud, shut-off valves, sleeves, sight glass with moisture indicator and all other items necessary for a complete system.
- K. All electrical components within each compartment shall be pre-wired by supplier to junction box on exterior top of compartment. Electrical trades shall make final connections and inter-wire to lights and from walk-in coils to compressor for timed defrost in conduit as required.
- L. After final connections by other trades, the equipment supplier shall evacuate, pressure test, charge, start up and operate system for a period of three (3) days and make all necessary adjustment of controls as required. Operate coolers at 35 degrees and freezers at 5 degrees unless noted on plans. Provide manufacturer's five-year compressor warranties and one-year free service available within 12-hour notification.

2.33 WATER INLETS

- A. Water inlet locations shall be located above positive water level to prevent siphoning of liquid

into the water system.

- B. Wherever conditions require a water inlet placed below water level, a suitable pressure type siphon breaker or double check valve shall be placed on fixture to form a part of same to prevent back siphoning.
- C. Exposed siphon breakers shall be chrome plated units with chrome-plated piping and slip flanges where exposed.

2.34 MECHANICAL/ELECTRICAL MATERIALS REQUIRED IN FOOD SERVICE CONTRACT

- A. The equipment supplier shall include materials properly labeled and packaged as follows:
- B. Plumbing Appurtenances:
 - 1. Check requirements for gas, water, steam, etc. on project before ordering equipment. Information shown on drawings or specifications does not relieve the contractors of this responsibility.
 - 2. Faucets, pre-rinse units, lever wastes, vacuum breakers, to be as manufactured as described in the item specifications.
 - 3. Except as otherwise specified, provide each sink compartment with deck type or backsplash type faucet with minimum 12" swing spout soft flow. Where multiple sink compartments are provided, faucets may be located between compartments.
 - 4. C.P. brass overflow fittings shall be 1-1/2" tubing fully connected to sinks at factory with modular pull quick opening waste valves with tailpieces on each sink compartment.
 - 5. Provide all solenoids, C.P. atmospheric or pressure type vacuum breakers with C.P. stems above counter tops, shock absorbers, check valves, mixing valves, gas regulators, etc. required by code or for proper operation of equipment with mounting brackets as required. Valves shall be installed where required, accessible and convenient to the operator.
 - 6. Provide swivel gas hoses assemblies 36" or of proper length as required with quick disconnect, ball valve, caster floor locks and 3000-pound coiled restraining device, and wall brackets.
 - 7. All steam equipment shall have valves provided with heat resistant handles, traps, gauges, etc. as required for proper operation
- C. Electrical Appurtenances:
 - 1. Check voltage on project before ordering equipment. Information shown on drawings or specifications does not relieve the contractors of this responsibility.
 - 2. Except where noted under item specifications, current characteristics for motors 3/4 HP or less, solenoid valves and lighting shall be 120-volt, single phase, 60 cycle, A.C. Unless otherwise noted under item specifications, motors 3/4 HP and over shall be wound for 208/240-volt, three phase, 60 cycle, A.C.
 - 3. Provide a 120-volt control circuit on all equipment that operates on voltages on or over 208-volt. All equipment requiring 120-volt control circuits (120/480-volt, 120/208-volt, etc.) shall have transformers prewired on equipment.
 - 4. Cords and plugs and receptacles for equipment shall be three or four wire all rubber coiled

retractable style cord with ground as required and match the receptacles provided and as best suited for the equipment. Units shall be mounted in NEMA type enclosures as per code with S.S. faceplates and boxes where receptacles are exposed.

5. Thermostats, unless otherwise noted on plans or in the item specifications, shall be provided at all equipment (bain-maries, urns, dish machines, hot food tables, warming cabinets, etc.) with thermostatic control.
6. Heating elements to be of voltage and phase as specified or as required to suit the project.
7. Controls, thermostats, switches, contactors, low water cut-off, light fixtures and bulbs, etc., necessary for the installation and proper operation of equipment shall be furnished as required along with all starters and/or motor control switches for the proper function of the equipment specified. Controls mounted on vertical surfaces shall be recessed.
8. Controls that are an integral part of equipment shall be factory installed. Controls which are to be separately mounted shall be shipped loose for field installation. Coordinate all field installation to not interfere with access and/or operation.
9. Provide properly sized magnetic starters line voltage type with thermal overload relays and reset for normal operation by automatic control or pushbutton station for 208/240-volt control. Enclosures shall be general purpose NEMA type 1, A.C. voltage, unless located outdoors which will require a waterproof enclosure. Remote control motors shall have magnetic starters.
10. Disconnect switches shall be type non-fusible, single throw, heavy duty industrial, quick make, quick break. Circuit breakers may be used in lieu of above disconnects as per code.
11. Provide equipment with required internal wiring between elements, switches, motors, receptacles, starters, etc. complete to a junction box. Disconnect, starter, etc. as required and are to be "left ready" for final connections by electrical trades. All control circuits shall be 120-volt to ground.

PART 3 GENERAL SPECIFICATIONS - EXECUTION

3.01 INSTALLATION AND MATERIALS

- A. All work required under this section shall be installed by the proper trades having jurisdiction in this area concurrent with the project progress, GC's scope of work and related field conditions. Such installation shall be under the direction of a competent supervisor. A site inspection is recommended prior to bidding if applicable.
- B. Provide for the conveyance, uncrating, erection, assembling, setting in place, trim, cutting of holes and ferrules in equipment for piping, drains, electrical outlets, etc.
- C. Coordinate installation with all trades, repairing any damage done to equipment during installation, removal of debris created by installation, startup, testing, and cleaning of all equipment (new, existing, or relocated).
- D. Where necessary to move equipment to make final connections, coordinate and assist all in moving equipment and be on the project site to carefully level and adjust equipment as the connections are being made. During installation, coordinate with all trades on connection details and be responsible for meeting the individual equipment manufacturer's connection requirements. Report any infractions of installation procedure in written form.

- E. The fit of all equipment as it joins all walls, floors, and corners shall be tight (within 1/4") to adjacent walls, seal all equipment with NSF approved clear sealing compound and/or S.S. trim molding of proper size with concealed fasteners. Inspect the site and advise in writing and/or on shop drawings all necessary building requirements door sizes, etc. to receive the equipment and ensure accuracy of fit and installation.
- F. All cabinet bases and pieces of equipment which are to be set on bases or machine platforms shall be set into a sealing compound of color to match the tile mortar. Enclosures, backsplashes, and turn-backs to wall shall be pressed into a ribbon of the same material with the excess wiped out to a radius fillet. Where necessary, and to eliminate shifting and the subsequent breaking of this seal, item shall be anchored to floor and wall with suitable masonry anchors. All equipment with utility connections (island style sinks, dish tables, etc.) shall also be anchored to the floor with S.S. flange type feet.
- G. All equipment and materials shall be new, of prime quality, full gauge thickness of compositions indicated by names or abbreviations stated in itemized specifications.
- H. Equipment batteries of one manufacturer are to be pre-fitted at the factory and provide photographic proof of such work.
- I. If equipment is noted as relocated or removed during the construction period, said equipment shall be disconnected and be re-connected as directed in the GC's scope of work and removed and stored by GC unless noted in the item specifications. FSEC to coordinate and supervise this work and label equipment for reuse. FSEC to reinstall and clean equipment as per the plans and specifications. Existing equipment not scheduled for reuse shall be removed as directed by owner.

3.02 LIMIT OF OTHER SUBCONTRACTORS/TRADES RESPONSIBILITY

A. Hood Connections:

- 1. Note that kitchen grease and/or dishwasher hoods and ducts may or may not be furnished as part of this contract. Refer to the plans and item specifications. The trades shall make the final connections to hood and connect to exhaust fan and make-up air unit as indicated. All ductwork shall have welded and/or watertight joints. All roof holes, flashing, structural support, fire rating, and final connections by the trades unless otherwise noted.

B. Plumbing:

- 1. The trades shall provide rough-ins and piping with stop valves, elbows, nipples, couplers, traps, waste vents, gas regulators, for water, steam, gas, etc. and make final connections to the equipment unless otherwise noted.
- 2. The trades shall install equipment accessories (faucets, modular wastes, solenoids, valves, gas hoses, nipples, etc.) furnished by the FSEC.
- 3. The trades to provide water heater unless otherwise indicated on the plans.
- 4. The trades shall disconnect and reconnect relocated equipment if applicable.

C. Electrical:

- 1. The trades shall provide rough-ins, controls, panels, switches, wall receptacles to match equipment cords and plugs, starters, junction boxes, canopy light and fan switches,

2. conduit, wiring, wall outlets, disconnects, etc. and make final connections to the equipment unless otherwise noted.
3. The trades shall install equipment accessories (cords, light switches, drop-in equipment switches, wiring harnesses, disconnect switches, tracks for heat lamps, etc.) as required by code.
4. The trades shall disconnect and reconnect relocated equipment if applicable.

D. General:

1. All concrete platforms, bases, etc. will be provided by trades. Grouting of drip pans and/or floor troughs to be by trades and coordinated by FSEC.
2. All required holes and recesses for piping and ducts will be provided by the trades upon receipt of information from the FSEC as to the location, size, etc. This information is to be provided in adequate time to be incorporated in the work.
3. Unless stated in the item specifications, the trades shall provide all floor recesses, insulated sub floors, tile floors and vapor barriers for walk-ins as noted on the plans.
4. If applicable, the trades shall remove relocated equipment from kitchen and store in adjacent area during Kitchen construction period. The FSEC shall coordinate removal, inspection, storage, labeling, etc. of equipment. The FSEC shall reinstall relocated equipment as per plan after construction is completed.
5. Provide fire rated walls in kitchen for cooking equipment exhaust hoods and non-combustible materials within 18" of top of hood or as required by fire codes as directed in the Construction Manager scope of work.

3.03 TESTING

- A. After installation of equipment by FSEC and hook-up by the trades, the FSEC shall inspect, start up, clean, adjust and test all equipment under operating conditions for 48 hours prior to acceptance by Owner. If inspection or test shows defects, such defects shall be corrected then an inspection and test repeated. Equipment Supplier shall certify in writing that all equipment is performing in full compliance with the plans and specifications.

3.04 DEMONSTRATION

- A. After utility connections to the equipment are completed by other trades, schedule and conduct inspection, start up and final test of all equipment prior to final jurisdiction inspection. Schedule the demonstration with the Owner and perform the demonstration in the presence of the Owner and/or their authorized representative with a minimum of seven days notification to owner.
- B. Before final inspection, remove any and all protective covering from equipment and give all parts of all equipment a thorough cleaning and servicing, leaving items free from defects and remove trash from premises.
- C. Provide required competent personnel for two eight-hour periods as instructors to operating and maintenance personnel on the safe and proper operation and maintenance of all equipment. Provide additional instructions for up to eight additional hours during the one year guarantee period as requested by the Owner.

- D. Present all maintenance manuals and as built drawings as previously specified or requested by Consultant.

3.05 FINAL INSPECTION AND PUNCH LIST

- A. After installation is completed and tested, notify the Consultant who will review all equipment and submit a repair or punch list of all items that are not in compliance with the documents. All items shall be completed immediately and not to exceed 14 days unless written notice is submitted and approved.

3.06 SCHEDULE OF EQUIPMENT

- A. The following specifications refer to items of food service equipment on the drawings which shall form a part of these specifications and are binding as written herein, and will indicate the required quantity, size, etc. of each item.

- B. Item Specifications:

Item #101 – Portable Table - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: YJRN30-SE

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications.

Minimum specifications:

1. Furnish and install 14 Gauge 304 stainless steel table as per G.S. size and shape as per plan by 34" high.
2. Stainless steel legs and gussets.
3. Flat sound deadened top.
4. 16 Gauge stainless steel under shelf.
5. 5" heavy duty locking casters.

Item #201 – Worktable - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: YJRN30-SE-BS

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. Provide 14 Gauge 304 stainless steel table size and shape as per plan by 34" high.
2. Stainless steel legs, gussets, and adjustable bullet feet.
3. Stainless steel sound deadened top with 6" backsplash at all adjacent walls.
4. 16 Gauge stainless steel under shelf.
5. One 20" by 20" by 5" deep roller bearing drawer assembly with stainless-steel or plastic insert and an 18" by 24" white poly cutting board mounted below drawer.
6. 10" deep stainless steel over shelf mounted 24" above table surface as shown on plan.

Item #301 – Steamer & Stand – Qty. of 1

Base Manufacturer: Accu-Temp Co.

Base Model: E62083E150 SGL

Alternate Manufacturer: None

Minimum specifications:

1. Furnish and install an electric single compartment convection steamer that operates on 208 Volt 3 Phase with cord and plug.
2. Steam Vector technology with cook mode and variable hold temperature mode and service access panel.
3. Pressure type vacuum breaker, front mounted drain valve, automatic water fill and drain, low water cutoff.

4. Digital Controls with digital temperature display and digital electronic timer.
5. Steam and fan shut off controls.
6. Cast aluminum heating element and steamer cavity constructed of 304 series stainless-steel.
7. Heavy duty field-reversible door, hinged right from the factory.
8. Six 12" by 20" by 2.5" deep pan capacity.
9. Unit to be mounted on 33" high stainless-steel stand with heavy duty locking casters.
10. Cool Drain Flow Co. DTV-15 drain water tempering kit and all associated hardware.
11. Dormont Co. or T&S Co. W50B2Q-36 uncoated flexible water hose with 2-way quick disconnects on each end.

Item #301A – Drain Water Tempering Kit – Included in Item #301.

Item #302 - Convection Oven - Qty. of 1

Base Manufacturer: Southbend Co.

Base Model: ES-20-SC

Alternate Manufacturer: Vulcan Co.

Alternate Manufacturer: Garland Co.

Alternate Manufacturer: Montague Co.

Minimum specifications:

1. Double deck standard depth.
2. Provide unit that operates on 208 Volt 3 Phase.
3. Stainless steel front and sides.
4. Door windows.
5. 5" heavy duty locking casters.
7. Two speed motors with solid state control panel with standard controls.

Item #401 – Hot Food Table – Qty. of 1

Base Manufacturer: LTI Co.

Base Model: EF5-CPA Modified

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 34" high unit size and shape per plan that operates on 120/208 Volt 1 Phase with cord and plug.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Wet or dry hot food wells with drains, drain manifold with individual and master valves. Drain valves to be easily accessible from the employee side of the counter.
4. Enclosed base with plastic laminate exterior panels in color as selected by the Architect and sliding doors on one side. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
5. Two 12" solid folding inverted "V" style stainless steel tray slides mounted 32" above finished floor.
6. Set of 5" heavy duty locking casters.
7. Furnish and install BSI Co. PMG Co. or ACS-Vollrath Co. Model #ZG9930 double sided sneeze guard with brushed aluminum uprights and surface mounted hardware, slim square edge heat lamp, light, glass top, ends, and adjustable front. Unit shall meet current NSF standards. Installation of vertical posts in front of food wells or food displays are not acceptable.
8. Sneeze guard assembly and hot food table to be inter-wired to a common point to provide one electrical connection for entire unit and be supplied with a cord and plug.
9. Dormont Co. or T&S Co. W50B2Q-36 uncoated flexible water hose with LFW50QD 2-way quick disconnects at each end.

10. T&S Co. B-0208 cold water fill faucet with blue index ring.
11. Drain tailpiece and shut off valve. A garden hose style of drain connection is not acceptable.
12. Internal wiring shall be neatly installed and fastened in a manner that shall not be visible to staff or customers.

Item #402 – Utility Counter – Qty. of 1

Base Manufacturer: LTI Co.

Base Model: Spec Line

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 34" high unit as per plan.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Enclosed base with plastic laminate exterior panels in color as selected by the Architect and sliding doors on one side. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. Two 12" solid folding inverted "V" style stainless steel tray slides mounted 32" above finished floor.
5. Set of 5" heavy duty locking casters.

Item #403 – Cold Food Table – Qty. of 2

Base Manufacturer: LTI Co.

Base Model: 50-CFMA Modified

Alternate Manufacturer: Randell Co.

Alternate Manufacturer: Delfield Co.

Alternate Manufacturer: Duke Co.

Minimum specifications:

1. Provide 34" high unit as per plan with NSF-7 drop-in self-contained refrigerated cold pan with drain and shut off valve, on/off switch, and pan adapter bars. Unit shall operate on 120 Volt with cord and plug. Provide a 5 Year warranty on compressor and 1 Year free service plan as per G.S.
2. Stainless steel top, latching assembly and stainless-steel undershelf.
3. Enclosed base with plastic laminate exterior panels in color as selected by the Architect and sliding doors on one side. All panels and doors exposed to customers shall have plastic laminate surfaces. All laminate panels to receive matching 3MM PVC or stainless steel edge-banding and square edge profile where exposed.
4. Two 12" solid folding inverted "V" style stainless steel tray slides as shown on plan mounted 32" above finished floor.
5. Set of 5" heavy duty locking casters.
6. Furnish and install BSI Co. PMG Co. or ACS-Vollrath Co. Model #ZG9930 sneeze guard with brushed aluminum uprights and surface mounted hardware, light, glass top, ends, and adjustable front. Unit shall meet current NSF standards. Installation of vertical posts in front of food wells or food displays are not acceptable.
7. Sneeze guard assembly and cold food table to be inter-wired to a common point to provide one electrical connection for entire unit and be supplied with a cord and plug.
8. Garden hose hook style of drain connection is not acceptable.
9. Internal wiring shall be neatly installed and fastened in a manner that shall not be visible to staff or customers.

Item #404 – Spare Number

Item #405 - Milk Cooler - Qty. of 1

Base Manufacturer: Beverage Air Co.

Base Model: STF49HC-1-S

Alternate Manufacturer: True Co.

Alternate Manufacturer: Traulsen Co.

Minimum specifications:

1. Self-contained forced air unit that operates on 120 Volt with cord and plug.
2. Dial thermometer.
3. Lid locking device.
4. Stainless steel exterior.
5. Heavy duty locking casters.
6. Double sided access.

Item #501 - Pot Sink - Qty. of 1

Base Manufacturer: Eagle Group Co.

Base Model: YJLAN2660-3-18

Alternate Manufacturer: Approved Manufacturer as listed in Section 2.03 of the General Specifications

Minimum specifications:

1. 14 Gauge 304 unit constructed per G.S. size and shape as per plan by 34" high.
2. 9" backsplash, 21" by 26.5" by 14" deep sinks.
3. Integral drain boards.
4. One T&S Co. or Krowne Co. 5F-8WLS12 faucet, and one 5PR-8W12-C + B-TEE-RGD spray hose unit and faucet.
5. T&S Co. B-3990-01-3X modular waste drains with connected overflows.
6. Stainless steel legs, gussets, and adjustable bullet feet.
7. Area below integral drainboards shall be furnished with 16 Gauge removable stainless steel under shelving between legs.
8. Provide two 14" coated wire wall shelves and brackets mounted 24" above sink as shown on plans.

Item #502 – Dishwasher – Qty. of 1

Base Manufacturer: Hobart Co.

Base Model: CL-54E-E-RL

Alternate Manufacturer: Meiko Co.

Alternate Manufacturer: Stero Co.

Minimum specifications:

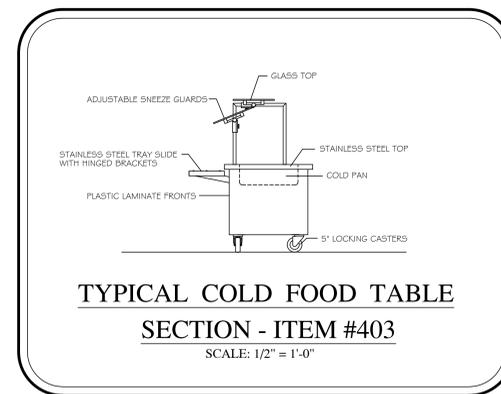
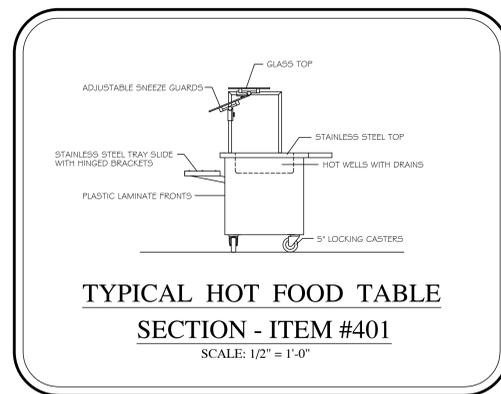
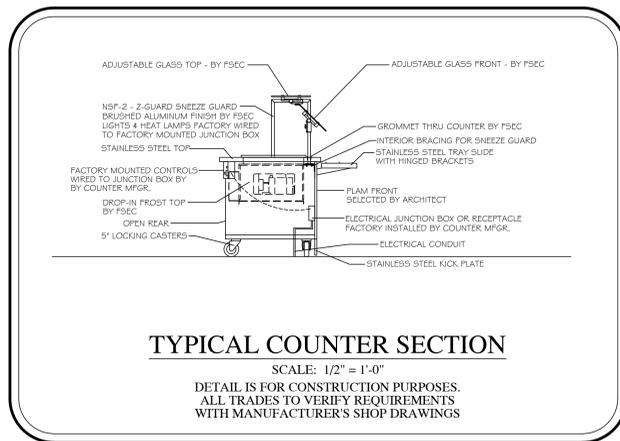
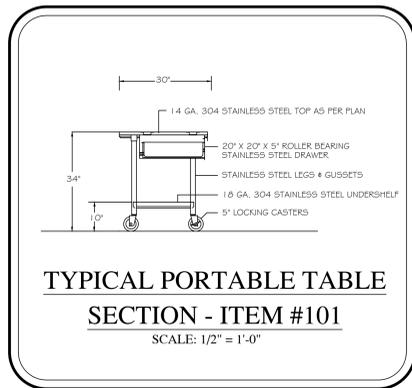
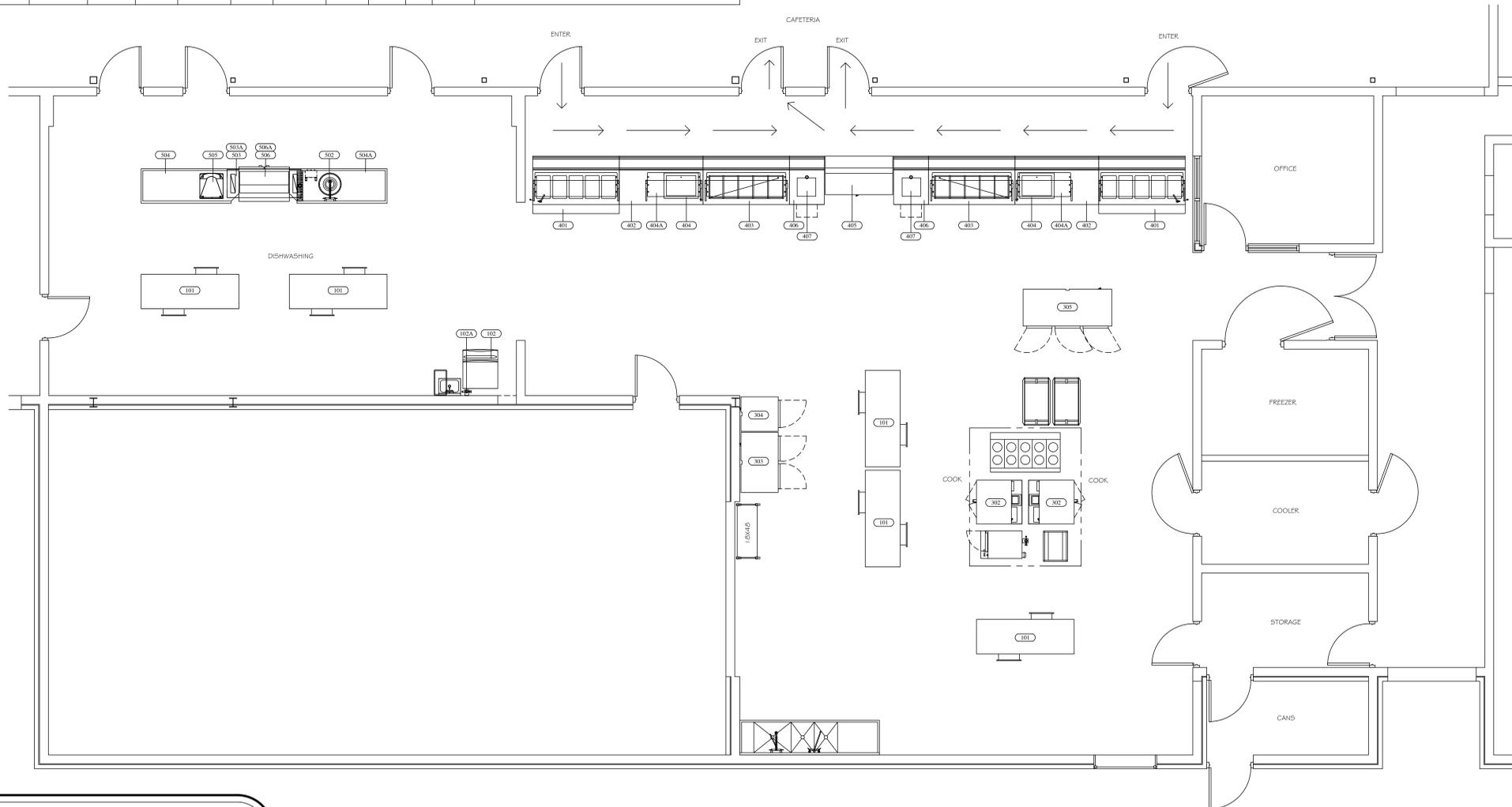
1. Furnish and install a high temperature (180 Degree rinse) machine that operates on 208 Volt 3 Phase with single point electrical connection.
2. Stainless steel frame and feet and insulated front doors.
3. Stainless steel side and front panels.
4. Auto-timer control package, regulated electric tank heat with low water protection, thermal overload, disconnect switch (wall mounting by E.C.).
5. 2 peg dish racks and 2 open style dish racks, 2 sheet pan racks.
6. Extended vent hoods with locking dampers.
7. Splash guards, button rack limit switch with hinged cover, inter-wired to common point.
8. DWT-1 drain water tempering kit and all associated hardware.
9. Factory start-up & training.
10. Unit shall be furnished with a built-in booster heater with stainless steel tank, and low water cutoff, pressure relief valve, inter-wired and inter-plumbed. Unit shall have a 70 degree rise capability and be preset to provide 180 Degree hot water to dish machine.
11. Chemical system shall be provided by purveyor.
12. Provide self-contained point of use Water Softening System mounted under dish table.
13. Prior to ordering equipment, the FSEC shall perform a water test. If the water levels are within acceptable standards, the Water Softening System may be removed. The contract will be adjusted as required.

Item #502A – Drain Water Tempering Kit – Included in Item #502.

END OF SECTION 11 4000 – FOOD SERVICE EQUIPMENT

EQUIPMENT SCHEDULE

Item	Qty	DESCRIPTION	CW (in)	HW (in)	INDIRECT DRAIN	DIRECT DRAIN (IN)	GAS (in)	MBTUH	EXH DUCT	EXH CFM	MUA DUCT	MUA CFM	Volts	Ph	Amps load	Equipment Remarks
101	5	PORTABLE TABLE														S.S. UNDERSHELF & CASTERS
102	1	ICE MAKER W/ BIN	0.5		FL SK								208	1	5.1	PIPE CW THRU FILTER THEN TO ICE MAKER
102A	1	ICE MAKER FILTER	0.5													PIPE CW THRU FILTER THEN TO ICE MAKER
201	1	SPARE NUMBER														
301	1	SPARE NUMBER														
302	2	CONVECTION OVEN - DOUBLE DECK											208	3	(2) 34.0	
303	1	FREEZER											120	1	11.2	
304	1	REFRIGERATOR											120	1	4.9	
305	1	REFRIGERATOR											120	1	8.4	
401	2	HOT FOOD TABLE	0.5		FL SK								120/208	1	28.4	
402	2	UTILITY COUNTER														
403	2	COLD FOOD TABLE			FL SK								120	1	9.5	
404	2	DROP-IN FROST TOP											120	1	2.4	
404A	2	SNEEZE GUARD											120	1	1.0	
405	1	MILK COOLER											120	1	3.3	
406	2	CASHIER COUNTER														
407	2	CASH REGISTER/POS - BY OWNER											120	1	10.0	DEDICATED CIRCUIT & DATA
501	1	SPARE NUMBER														
502	1	DISPOSAL	0.75	0.5		2							208	3	6.6	
503	1	DISHWASHER HOOD						8" X 8"								STAINLESS STEEL DUCT BY FSEC
503A	1	EXHAUST FAN							750				120	1	10.0	ROOF-CURB BY FSEC
504	1	CLEAN DISHTABLE														S.S. UNDERSHELF
504A	1	SOILED DISHTABLE			FL SK											
505	1	WATER SOFTENER & FILTRATION		0.5	FL SK											
506	1	DISHWASHER		0.5	FL SK								208	3	109.6	90 GPH 110° HW FROM BUILDING - BUILT-IN BOOSTER HEATER
506A	1	DRAIN WATER TEMPERING KIT	0.5		FL SK								120	1	5.0	TRADES TO INSTALL



NOTE:

1. VERIFY ROUGHIN REQUIREMENTS FOR FUTURE, PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC.
2. REUSE EXISTING ROUGHINS WHERE APPLICABLE.
3. DISCONNECT, REMOVE, STORE & RECONNECT ANY EXISTING EQUIPMENT AS REQUIRED FOR CONSTRUCTION PURPOSES.
4. EQUIPMENT NOT BEING REUSED TO BE DISCONNECTED AND STORED OR DISCARDED AS DIRECTED BY OWNER.
5. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE DISCONNECTED AND RELOCATED AS PER PLANS AND SPECIFICATIONS.

FOODSERVICE DESIGN BY:



Food Service Consultants
JRA FOOD SERVICE CONSULTANTS, LLC
401 HALL STREET SW - SUITE 185H
GRAND RAPIDS, MI 49503
PH: (616) 454-4433

ARCHITECT:
COLLIERS ENGINEERING & DESIGN
560 5TH STREET NW, SUITE 305
GRAND RAPIDS, MI 49504

PROJECT:
LANSING SCHOOL DISTRICT
DWIGHT RICH PK-8 SCHOOL
2600 HAMPDEN DRIVE
LANSING, MI 48911

SHEET TITLE:
FOOD SERVICE EQUIPMENT FLOOR PLAN
SCALE 1/4" = 1'-0"

DATE CODE	PROJECT PHASE	BY
02/13/26 LSDRD2FP	BIDS	BR

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SHEET NUMBER:

FSE-1

EQUIPMENT SCHEDULE

Item	Qty	DESCRIPTION	CW (in)	HW (in)	INDIRECT DRAIN	DIRECT DRAIN (IN)	GAS (in)	MBTUH	EXH DUCT	EXH CFM	MUA DUCT	MUA CFM	Volts	Ph	Amps load	Equipment Remarks
101	1	PORTABLE TABLE														S.S. UNDERSHELF & CASTERS
201	1	WORK TABLE														
301	1	STEAMER & STAND	0.75		FL SK								208	3	42.0	
301A	1	DRAIN WATER TEMPERING KIT	0.5		FL SK											TRADES TO INSTALL
302	1	CONVECTION OVEN - DOUBLE DECK											208	3	(2) 34.0	
401	1	HOT FOOD TABLE	0.5		FL SK								120/208	1	28.4	
402	1	UTILITY COUNTER														
403	2	COLD FOOD TABLE			FL SK								120	1	8.6	
404	1	SPARE NUMBER														
405	1	MILK COOLER - DOUBLE SIDED											120	1	3.3	
501	1	POT SINK	(2) 0.5	(2) 0.5	FL SK		2									PIPE 2" DIRECT WASTE TO GREASE TRAP
502	1	DISHWASHER		0.5	FL SK								208	3	109.6	90 GPH 110° HW FROM BUILDING - BUILT-IN BOOSTER HEATER
502A	1	DRAIN WATER TEMPERING KIT	0.5		FL SK								120	1	5.0	TRADES TO INSTALL

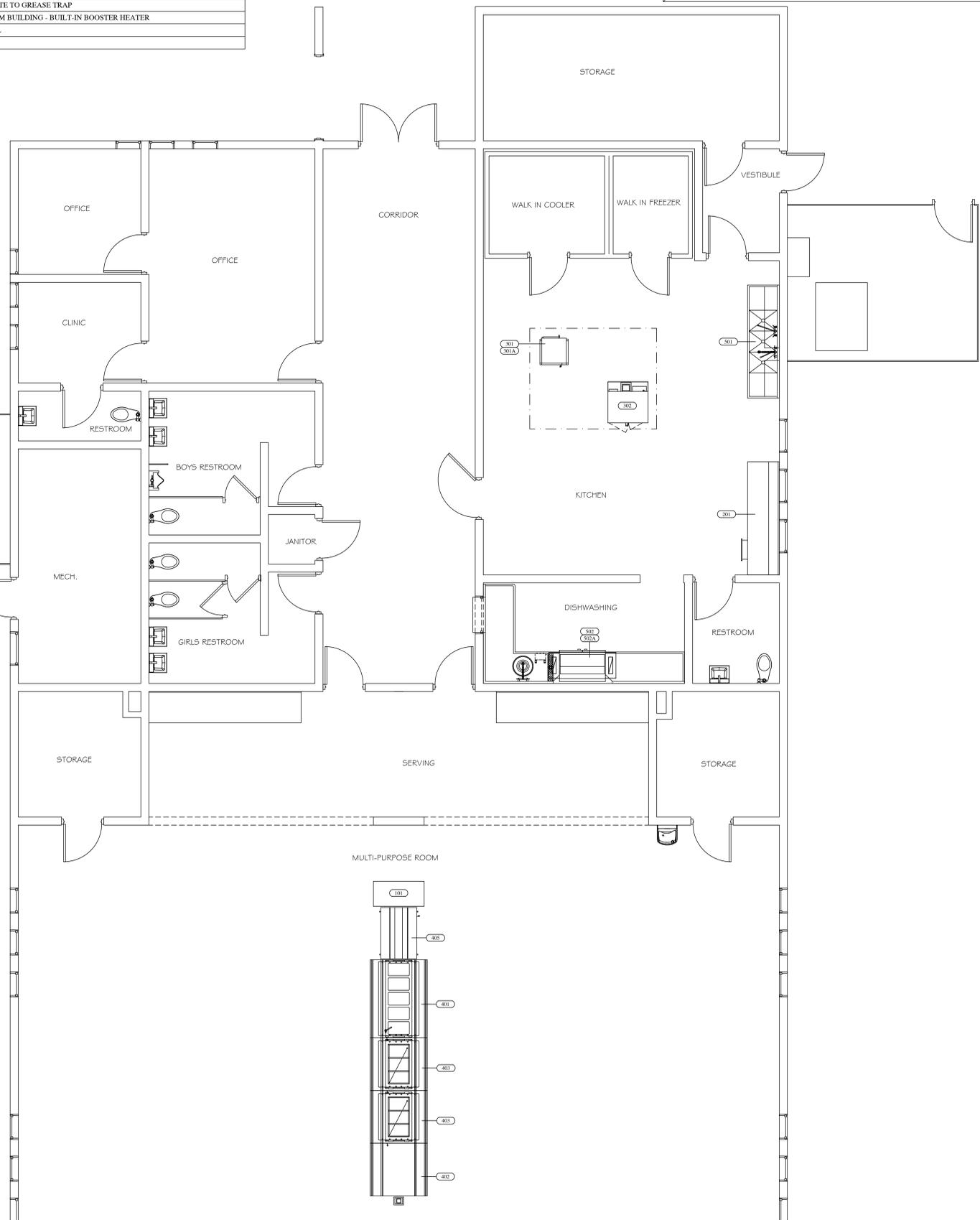
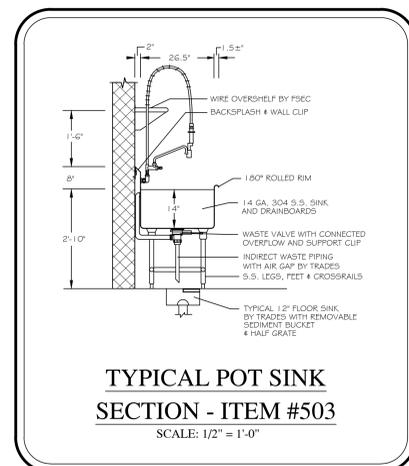
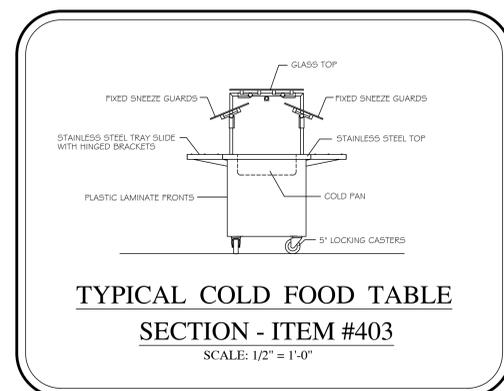
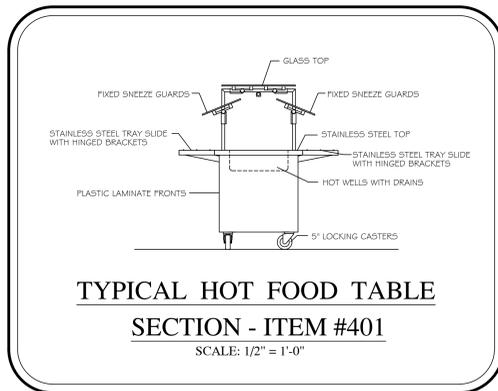
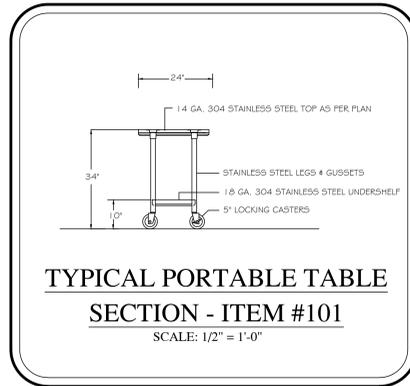
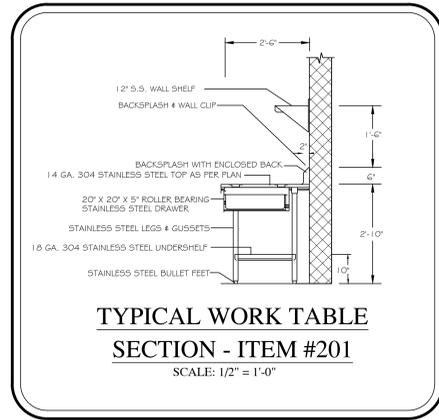
NOTE:

1. VERIFY ROUGHIN REQUIREMENTS FOR FUTURE. PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNER SUPPLIED EQUIPMENT, ETC.
2. REUSE EXISTING ROUGHINS WHERE APPLICABLE.
3. DISCONNECT, REMOVE, STORE & RECONNECT ANY EXISTING EQUIPMENT AS REQUIRED FOR CONSTRUCTION PURPOSES.
4. EQUIPMENT NOT BEING REUSED TO BE DISCONNECTED AND STORED OR DISCARDED AS DIRECTED BY OWNER.
5. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE DISCONNECTED AND RELOCATED AS PER PLANS AND SPECIFICATIONS.

FOODSERVICE DESIGN BY:



Food Service Consultants
 JRA FOOD SERVICE CONSULTANTS, LLC
 401 HALL STREET SW - SUITE 1050
 GRAND RAPIDS, MI 49503
 PH: (616) 454-4433



ARCHITECT:
 COLLIER ENGINEERING & DESIGN
 560 5TH STREET NW, SUITE 305
 GRAND RAPIDS, MI 49504

PROJECT:
 LANSING SCHOOL DISTRICT
 EBERSOLE CENTER
 3400 2ND ST.
 WAYLAND, MI 49348

SHEET TITLE:
 FOOD SERVICE
 EQUIPMENT
 FLOOR PLAN
 SCALE 1/4" = 1'-0"

DATE CODE	PROJECT PHASE	BY
02/13/26 LSEC2FP	BIDS	BR

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SHEET NUMBER:

FSE-1

EQUIPMENT SCHEDULE

Item	Qty	DESCRIPTION
101	1	WALK-IN FREEZER
101A	1	FREEZER COIL
101B	1	FREEZER COMPRESSOR
101C	1	FREEZER COIL HEAT TAPE
**102	2	UTILITY CART
103	32	SHELVING - WIRE
104	2	PORTABLE TABLE
105	1	ICE MAKER W/BIN
105A	1	ICE MAKER FILTER
106	1	WALK-IN COOLER
106A	1	COOLER COIL
106B	1	COOLER COMPRESSOR
201	2	TRASH BIN - BY OWNER
202	1	PREP TABLE
202A	1	PREP TABLE FILTER
203	1	COOKS TABLE
203A	1	COOKS TABLE FILTER
**204	2	HOT FOOD CABINET
205	2	WORK TABLE
206	1	PREP TABLE
206A	1	PREP TABLE FILTER
207	1	STAINLESS STEEL CABINET
301	3	CONVECTION OVEN - DOUBLE DECK
302	2	REFRIGERATOR
401	2	HOT FOOD TABLE
402	2	UTILITY COUNTER
402A	2	UTILITY COUNTER
403	2	COLD FOOD TABLE
404	2	DROP-IN FROST TOP
404A	2	SNEEZE GUARD
**405	2	MILK COOLER
406	2	CASHIER COUNTER
407	2	CASH REGISTER/POS - BY OWNER
501	1	POT SINK
502	2	HAND SINK W/ SIDE SPLASHES
*503	1	DISHWASHER
*503A	1	DRAIN WATER TEMPERING KIT - EXISTING
504	1	CLEAN DISHTABLE
504A	1	SOILED DISHTABLE
505	2	DISPOSAL
*506	1	DISHWASHER HOOD
*506A	1	EXHAUST FAN

* DENOTES OWNERS EXISTING EQUIPMENT TO REMAIN
 ** DENOTES OWNERS EXISTING EQUIPMENT TO BE RELOCATED

NOTE:

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DATE CODE	PROJECT PHASE	BY
02/13/26 LSEC3FP	BIDS	CG

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