PROJECT MANUAL
Div 1 – Div 14

Issued for Bidding: July 31, 2015
Project No.: 13-016

CITY CENTER CAMPUS
Food Service Equipment

for

Joliet Junior College
1215 Houbolt Road
Joliet, Illinois 60431

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DIVISION 1 - GENERAL REQUIREMENTS

DIVISION 11 - EQUIPMENT

SECTION 01 10 00 - SUMMARY

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:

1. Work covered by Contract Documents.
2. Phased construction.
3. Work under separate contracts.
4. Specification and drawing conventions.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. Bid scope includes the furnishing (including, but not limited to: purchase, fabrication, storage, and delivery) of Food Service Equipment noted on the Drawings and in specification section 11 40 00 as "Furnished by Using Agency." Receiving and installation of equipment is by others and is excluded from the bid scope. Vendor shall coordinate all delivery dates and times with the General Contractor responsible for installation.

B. The Drawings used for this bid package are those that were previously issued for bid in December 2014 for the Interior Build-Out of the City Center Campus, inclusive of addenda items. References to GC, EC, PC, HC, VC, and SPC are for those contracts awarded by the Capital Development Board for that project.

C. References to alternate bids shall be ignored. The FSE scope for this bid package does not include any alternate bids.

1.4 PHASED CONSTRUCTION

A. The Work shall be conducted in two phases, with each phase substantially complete as indicated:

1. Phase One: Includes all work required to furnish all exhaust hoods to installing contractor.

a. Submittals shall be provided within 2 weeks after the Notice to Proceed.
b. Delivery of exhaust hoods shall occur within 8 weeks from approval of submittals.
c. Fabrication priority shall be determined by the General Contractor

responsible for installation. If no item priority is provided by the GC, the Vendor shall assume that fabrication priority is based on floor level, starting at the highest level and proceeding downward.

2. Phase Two: Includes all work required to furnish all remaining food service equipment to installing contractor.

   a. Submittals shall be provided within 4 weeks after the Notice to Proceed.
   b. Delivery of remaining equipment shall occur no later than March 1, 2016.

1.5 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

B. Concurrent Work: Owner has awarded separate contract(s) for the following construction operations at Project site. Those operations will be conducted simultaneously with work under this Contract.

1. General Contractor: The George Sollitt Construction Co.; general coordination, receiving, and installation of food service equipment as a component of the interior build-out of the Joliet Junior College City Center Campus project.

1.6 WORK RESTRICTIONS

A. Work Restrictions, General: Comply with restrictions on construction operations.

1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.

B. Submittals will be forwarded to the General Contractor for review and coordination.

C. Coordinate delivery times and dates with the General Contractor.

D. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

E. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or

phrase.

2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.

C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 26 00 - CONTRACT MODIFICATION 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 handling and processing Contract modifications.

B. Related Requirements:

1. Section 01 25 00 "Substitution Procedures" for administrative procedures for handling requests for substitutions made after the Contract award.

1.3 MINOR CHANGES IN THE WORK

A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.4 PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Architect are not instructions either to stop work in progress or to execute the proposed change.
2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.

a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
c. Include costs of labor and supervision directly attributable to the change.
d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

e. Quotation Form: Use CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."

B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.

1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Section 01 25 00 "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use CSI Form 13.6A, "Change Order Request (Proposal)," with attachments CSI Form 13.6D, "Proposal Worksheet Summary," and Form 13.6C, "Proposal Worksheet Detail."

1.5 CHANGE ORDER PROCEDURES

A. On Owner's approval of a Work Changes Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701 .

1.6 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714 . Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT 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 necessary to prepare and process Applications for Payment.

B. Related Requirements:

1. Section 01 26 00 "Contract Modification Procedures" for administrative procedures for handling changes to the Contract.

1.3 DEFINITIONS

A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

1. The 'Itemized Food Service Equipment Proposal Form' submitted with the bid shall be used for this purpose.

1.4 APPLICATIONS FOR PAYMENT

A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Architect and paid for by Owner.

1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.

B. Payment Application Times: Submit Application for Payment to Architect by the 21st day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.

1. Submit draft copy of Application for Payment seven days prior to due date for review by Architect.

C. Application for Payment Forms: Use forms acceptable to Architect and Owner for Applications for Payment. Submit forms for approval with initial submittal of schedule of values.

D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without action.

1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

E. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.

1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
3. Provide summary documentation for stored materials indicating the following:

    a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.

F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
2. When an application shows completion of an item, submit conditional final or full waivers.
3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
4. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
5. Waiver Forms: Submit executed waivers of lien on forms, acceptable to Owner.

G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:

1. List of subcontractors.
2. Schedule of values.
3. Contractor's construction schedule (preliminary if not final).

4. Products list (preliminary if not final).
5. Submittal schedule (preliminary if not final).
6. Certificates of insurance and insurance policies.
7. Performance and payment bonds.
8. Data needed to acquire Owner's insurance.

H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.

1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:

1. Evidence of completion of Project closeout requirements.
2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
3. Updated final statement, accounting for final changes to the Contract Sum.
4. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
5. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
6. AIA Document G707, "Consent of Surety to Final Payment."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 29 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

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 provisions for coordinating construction operations on Project including, but not limited to, the following:

1. General coordination procedures.
2. Requests for Information (RFIs).

B. Related Requirements:

1. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.

1.3 DEFINITIONS

A. RFI: Request from Owner, Architect, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Use CSI Form 1.5A. Include the following information in tabular form:

1. Name, address, and telephone number of entity performing subcontract or supplying products.
2. Number and title of related Specification Section(s) covered by subcontract.
3. Drawing number and detail references, as appropriate, covered by subcontract.

B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1.5 GENERAL COORDINATION PROCEDURES

A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
3. Make adequate provisions to accommodate items scheduled for later installation.

B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.
2. Preparation of the schedule of values.
3. Delivery and processing of submittals.
4. Progress meetings.
5. Project closeout activities.

1.6 REQUESTS FOR INFORMATION (RFIs)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.

1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Architect.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.

    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to Architect.

1. Attachments shall be electronic files in Adobe Acrobat PDF format.

D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.

1. The following Contractor-generated RFIs will be returned without action:

    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for approval of Contractor's means and methods.
    d. Requests for coordination information already indicated in the Contract Documents.
    e. Requests for adjustments in the Contract Time or the Contract Sum.
    f. Requests for interpretation of Architect's actions on submittals.
    g. Incomplete RFIs or inaccurately prepared RFIs.

2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 01 26 00 "Contract Modification Procedures."

    a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within days of receipt of the RFI response.

E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Software log with not less than the following:

1. Project name.
2. Name and address of Contractor.
3. RFI number including RFIs that were returned without action or withdrawn.
4. RFI description.
5. Date the RFI was submitted.
6. Date Architect's response was received.

F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect within seven days if Contractor disagrees with response.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

SECTION 01 33 00 - SUBMITTAL 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 requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

B. Related Requirements:

1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.

1.3 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."

C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.

D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

A. Architect's Digital Data Files: Electronic digital data files of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.

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 different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.

    a. Architect and Construction Manager reserve 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 Construction Manager'sreceipt 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 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Construction Manager 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 15 days for review of each resubmittal.
4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Construction Manager, through Architect, before being returned to Contractor.

D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

    a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect and Construction Manager.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner**,** containing the following information:

    a. Project name.
    b. Date.

c. Name and address of Architect.
d. Name of Construction Manager.
e. Name of Contractor.
f. Name of firm or entity that prepared submittal.
g. Names of subcontractor, manufacturer, and supplier.
h. Category and type of submittal.
i. Submittal purpose and description.
j. Specification Section number and title.
k. Specification paragraph number or drawing designation and generic name for each of multiple items.
l. Drawing number and detail references, as appropriate.
m. Location(s) where product is to be installed, as appropriate.
n. Related physical samples submitted directly.
o. Indication of full or partial submittal.
p. Transmittal number, numbered consecutively.
q. Submittal and transmittal distribution record.
r. Other necessary identification.
s. Remarks.

E. Options: Identify options requiring selection by Architect.

F. Deviations and Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect and Construction Manager on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same identification information as related submittal.

G. 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.

H. 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.

I. 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.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Submit electronic submittals via email as PDF electronic files.

a. Architect, through Construction Manager, will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

B. 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 not suitable 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. Application of testing agency labels and seals.
f. Notation of coordination requirements.
g. Availability and delivery time information.

4. For equipment, include the following in addition to the above, as applicable:

a. Wiring diagrams showing factory-installed wiring.
b. Clearances required to other construction, if not indicated on accompanying Shop Drawings.

5. Submit Product Data in the following format:

a. PDF electronic file.

C. 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.

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.

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
3. Submit Shop Drawings in the following format:

a. PDF electronic file.

D. Coordination Drawing Submittals: Comply with requirements specified in Section 01 31 00 "Project Management and Coordination."

E. Application for Payment and Schedule of Values: Comply with requirements specified in Section 01 29 00 "Payment Procedures."

F. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 77 00 "Closeout Procedures."

G. Maintenance Data: Comply with requirements specified in Section 01 78 23 "Operation and Maintenance Data."

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Action 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. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 "Closeout Procedures."

C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, 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.

3.2 ARCHITECT'S AND CONSTRUCTION MANAGER'S ACTION

A. 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.

B. 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.

C. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

D. Submittals not required by the Contract Documents may be returned by the Architect without action.

END OF SECTION 01 33 00

SECTION 01 42 00 - REFERENCES

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 DEFINITIONS

A. General: Basic Contract definitions are included in the Conditions of the Contract.

B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.

C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."

D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."

E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.

F. Avoid revising "Furnish," "Install," and "Provide" paragraphs below because of widespread acceptance and understanding of these terms as defined.

G. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

H. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

I. "Provide": Furnish and install, complete and ready for the intended use.

J. Generally retain "Project Site" Paragraph below; revise to suit Project. See Evaluations.

K. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect

as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Retain "Publication Dates" Paragraph below unless Specifications are revised to insert dates (which is not recommended). Unreferenced standards are not applicable. Revise effective date of the standard established below to suit Project.

C. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

D. Retain "Copies of Standards" Paragraph below on projects where copies of standards are needed. A requirement to retain many standards on a project site could become expensive. See Evaluations.

E. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 42 00

SECTION 01 60 00 - PRODUCT 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 selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.

B. Related Requirements:

1. Section 012500 "Substitution Procedures" for requests for substitutions.
2. Section 014200 "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

1.4 ACTION SUBMITTALS

A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed

comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.

a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.

B. Delivery and Handling:

1. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
2. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
3. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.

C. Storage:

1. Store products off-site until ready for delivery.
2. Store products to allow for inspection and measurement of quantity or counting of units.
3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
4. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
5. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer

for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.

1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
2. See other Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
4. Where products are accompanied by the term "as selected," Architect will make selection.
5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.

B. Product Selection Procedures:

1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
3. Products:

a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with

requirements in "Comparable Products" Article for consideration of an unnamed product.

4. Manufacturers:

   a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
   b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.

2.2 COMPARABLE PRODUCTS

A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 77 00 - 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.

B. Related Requirements:

1. Section 017823 "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.3 MAINTENANCE MATERIAL SUBMITTALS

A. Schedule of Maintenance Material Items: For maintenance material submittal items specified in other Sections.

1.4 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 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.

1. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
2. 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 where applicable.

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 Construction Manager's signature for receipt of submittals.

1.5 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 according to 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.

1.6 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

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. Use CSI Form 14.1A.

1. Organize list of spaces in sequential order, proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, 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. 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.

1.7 SUBMITTAL OF PROJECT WARRANTIES

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

B. Organize warranty documents into an orderly sequence based on the table of contents of Project Manual.

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.
4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at beginning of document.

C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 77 00

SECTION 01 78 23 - OPERATION AND MAINTENANCE DATA

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 preparing operation and maintenance manuals, including the following:

1. Product maintenance manuals.

B. Related Requirements:

1. Section 013300 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect[and Commissioning Authority] will comment on whether content of operations and maintenance submittals are acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operations and maintenance manuals in the following format:

1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit on digital media acceptable to Architect.

a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.

C. Final Manual Submittal: Submit each manual in final form prior to requesting inspection

for Substantial Completion and at least [15] <Insert number> days before commencing demonstration and training. Architect[and Commissioning Authority] will return copy with comments.

PART 2 - PRODUCTS

2.1 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.

E. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

B. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

C. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of operation and maintenance manuals.

D. Comply with Section 01 77 00 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 01 78 23

PART 1 – GENERAL

1.1 WORK INCLUDES:

A. Base Bid

1. GC Provide:

a. All food service equipment indicated on the drawings and specified herein.
b. All plumbing, electrical and HVAC connections to food service equipment.

B. Alternate Bid G-2

1.2 RELATED WORK:

A. Specified Elsewhere

1. Division 22: Plumbing Contractor Provide: food service equipment plumbing connections as indicated on drawings.
2. Division 23: Ventilation Contractor Provide: food service equipment ventilation connections as indicated on drawings.
3. Division 26: Electrical Contractor Provide: food service equipment electrical connections as indicated on drawings.

1.3 DISCREPANCIES

A. Where model numbers, quantities, sizes or gauges of material differ on plans and specifications, it shall be understood that the GC shall figure the larger quantities, longest size and heavier gauge unless advised otherwise in writing.

B. Where an accessory or price of equipment is shown on elevation or plan, it shall be deemed part of the contract, even if it is not listed in the Item Specifications.

C. Where an item is listed in Item Specifications and not shown on plan or elevations, the item shall be deemed part of the contract.

1.5 MEASUREMENTS

A. All dimensions given on bidding are approximate and are as accurate as can be determined at the time. The GC shall check all measurements at the building prior to fabrication of equipment and shall bring any deviation from the dimensions shown or required by building conditions to the A/E's attention. All equipment must conform to the finished building conditions. Where obstructions occur,

equipment must be neatly scribed fitting to and around same resulting in a sanitary fixture.

B. Prior to fabrication, the A/E reserves the right to require the Contractor to make reasonable modifications in the routing of the work and relocation of the equipment. This specifically refers to conditions where interference occurs or where materials cannot be installed because of structural or mechanical conditions encountered. The Contractor will receive no additional compensation for such work.

1.6 ORDINANCES

A. Work and materials shall be in full accord with the latest rules of U.S. Public Health Service, National Board of Fire Underwriters, O.S.H.A., local and state ordinances, State Accident Commissions Safety Ordinances, regulations of the State Fire Marshal and with prevailing ordinances.

B. Ordinances including building codes, gas codes, steam codes, and other codes applying to this contract shall be followed.

C. All applicable items shall conform to latest Standards Revisions established by the National Sanitation Foundations, (NSF), Ann Arbor, Michigan.

D. Electric operated and/or heated equipment, fabricated or otherwise shall conform to the latest standards of National Electric Manufacturer's Association, Underwriters Laboratories, Inc., National Electric Code or local standards such as to be acceptable to authorities having jurisdiction.

E. Standard steam heated equipment shall be manufactured in accordance with A.S.M.E. code requirements and carry the A.S.M.E. stamp.

F. Burners for gas heated equipment shall be equipped with automatic lighters. Oven burners and other concealed burners shall have automatic safety pilots and conform to A.G.A. standards. All gas equipment is to be furnished with appliance pressure regulators.

G. The drawings and specifications shall govern whenever they require longer sizes or higher standards than are required by the ordinances.

H.. The Ordinances shall govern whenever drawings and specifications require something which will violate the ordinances.

I. No extra change will be paid for furnishing items required by local and state ordinances not specified or shown on drawings. Rulings and interpretations of the enforcing agencies shall be considered as part of the ordinances.

J. Should any change in the drawings and specifications be required to conform to the above, the A/E shall be notified when bid is submitted.

K. After entering into contract, all necessary work shall be done to meet above laws, ordinances, Fire Marshal requirements, etc., without additional expense to the Using Agency .

1.7 SAMPLES

Samples of all hardware, locks, feet, brackets, and other materials that may be requested shall be submitted for approval before use.

1.8 SCHEDULING OF WORK

The work shall be scheduled so there will be no interference with work of other trades and so that it will cause no delay. A time schedule will be worked out for the entire building and this work shall keep pace with the set schedule, working nights, Sundays and holidays, if necessary, to complete the work within the time limit.

1.9 SUBMITTALS

A. All submittals to be reviewed, stamped and dated by GC prior to sending them to the A/E. Submittals not bearing the GC's stamp will be rejected.

B. GC shall submit required number of good quality drawings, brochures and portfolios of all equipment, apparatus, materials, etc., which are applicable to this contract together with detailed specifications. Each piece of equipment, apparatus, and accessory to be checked by the GC to insure compliance with requirements of A/E's drawings and specifications and also brochures or any other item of information to be clearly marked for identification with respect to their application and installation locations. This specification page shall appear on every shop drawing.

C. Approval and/or review of shop drawings, details, and equipment by the A/E is for design and concept only and does not relieve the GC of responsibility for compliance with design drawings, details and specifications, verification of all dimensions of equipment and building conditions and reasonable adjustments due to deviations.

D. While the A/E's drawings and specifications propose to be complete in all respects as to layout, type of equipment and materials, they are not intended to serve as detailed sleeve or insert drawings, and preparation of such drawings, required or necessary for this purpose, or to set equipment accurately, are to be the responsibility of the GC .

E. GC shall submit drawings of all custom fabricated equipment within thirty (30) days after notification of contract award. Drawings to be accurately laid out and correlated with other contractors work and latest A/E's final construction plans. Equipment elevation shop drawings must be on 3/4" scale (3/4" = 1'-0").

F. Drawings to show detailed construction for each piece of equipment. Before submitting detail drawings for review, they must be checked by the GC with the specifications and shall show exactly how item will be fabricated. Construction of equipment shall not deviate from approved shop drawings without written approval from the A/E.

G. GC shall submit rough-in drawings for approval at a scale of 1/4" = 1'-0", locating accurately all utility connections for each item of equipment requiring the same. Rough-in plan to be drawn up using final A/E's building drawings. NOTE: All rough-in connections to conform with normal acceptable standards. Rough-in requirements for present or future food service equipment shall be included on all drawings.

H. GC 1/4" scale rough-in drawings are to be dimensioned from ends of finished walls. Shop drawings with dimensions from centerline of columns will not be accepted, unless approval has been given by A/E or the GC .

I. Drawings showing all dimensions of bases or platforms and depressions to be submitted on a scale of 1/4" = 1'-0".

J. Rough in connection notes are not to be listed under numbered rough in schedule, except for general purpose outlets or where drawing space is limited.

K. Equipment rough in plans are to be furnished complete with layout plan and item schedule similar to food service A/Es drawings. Plumbing, electrical, ventilation & depression plan, and base detail when required.

L. Plumbing and electrical plans are to be on separate sheets when drawings are prepared at 1/4" scale.

M. Manufacturers to strictly adhere to approved and reviewed drawings, except where field conditions require changes and in that event the A/E must be notified in writing.

N. Manufacturing of any equipment fitting between walls or between columns and walls to be withheld until actual field dimensions are set and approved by the GC . All other items which do not require field dimensions are to be manufactured upon receipt of reviewed shop drawings.

O. Upon completion of contract, the contractor is to deliver to the A/E two (2) complete sets of final working drawings and two (2) portfolios of purchased equipment bound in a binder.

P. A time schedule will be worked out for the entire building and this work shall keep pace with set schedule, working nights, Sundays, and holidays, if necessary, to complete the work within the time limit.

1.10 JOB CONDITIONS

A. It shall be the responsibility of the GC to have a qualified representative at all monthly or special job meetings to help the A/E other contractors on the job to correlate work or answer questions so that the job can progress without any obstructions.

B. GC to check the A/E's Contract Plans and visit the premises at a suitable time to determine maximum size of equipment he can safely get into the building in one piece. Field joints to be held to a minimum. Should door openings not be large enough, GC shall provide field joints in equipment as required and re-weld inside of building.

C. Rough-in cold water, hot water, waste and vent piping, duct work and electrical wiring to be installed by Plumbing, Heating, Ventilation and Electrical Trades. Such items are to be brought away from surface of floors, walls and/or ceilings by these Trades and capped prior to installation of food service equipment.

1.11 GUARANTEE

A. GC is to furnish one (1) year written guarantee for equipment starting from date of substantial completion. Guarantee to be in accordance with A/E's General Conditions.

B. All self-contained refrigeration compressors for milk coolers, ice cream cabinets, cold food counters, reach in refrigerators or freezers, etc., shall be furnished with a five (5) year compressor warranty and one (1) year refrigeration service starting from date of substantial completion.

C. All items furnished by the GC as part of this Contract, shall be guaranteed against defects in workmanship and material for a period of one (1) year.

D. Manufacturers of standard items of equipment as supplied under this Contract are to provide a one (1) year warranty on parts and labor.

E. In addition, connected pieces of equipment requiring calibration are to be so calibrated by a qualified person as part of this Contract. Commencement date for warranty purposes is date of substantial completing

1.12 DEMONSTRATION

The GC shall arrange a demonstration date with the Using Agency and at the same time check out all loose items with the Food Service Manager.

1.13 PROTECTION OF EQUIPMENT

A. Fabricated fixtures such as custom st. st. & plastic laminate items are to have fiberboard or plywood taped to tops and exposed body panels. Protective covering is to be left in place until all trades are completed.

B. Manufactured equipment is to have fiberboard or plywood tape as required per equipment shape and installation access requirements. Prohibited use of equipment tool and material storage area, workbench, Scaffold, stacking area, etc.

1.14 SHOP DRAWING REVIEW

A. By reviewing and submitting shop drawings and samples, the GC thereby represents that he has verified all construction criteria, materials, catalog numbers and similar data and that he has checked and coordinated each shop drawing and sample with the requirements of the work and of the contract documents.

B. If shop drawings and/or samples are submitted without proper identification and in the A/E's opinion it is evident that they have not been properly reviewed by the GC or if shop drawings are submitted in an unprofessional manner, they will be returned to the GC for identification and/or review and resubmission. In such an event, it will be held that the GC has not complied with the above requirements for reviewing and identifying shop drawings and samples. The GC shall bear the risk of all delays in work or in work of any other trade, the same as if no shop drawing or samples had been submitted. The above requirements will be strictly enforced.

C. By submitting prepared Buyout Booklets, the GC thereby represents that he has determined and verified voltage and phase requirements and that he has checked and coordinated each item with shop drawings and contract documents.

D. Each item in the Buyout booklet shall have a typed title page, complete with descriptive details and included accessories. See following page for sample.

SAMPLE TITLE PAGE

Food Service Equipment Contractor _____

ITEM # _____ QUANTITY _____

Description: _____

Electrical

Motor H.P. ____ Volts _____ Phase _____ Cycle _____

Heating Element: KW ____ Volts ____ Phase _____

Lighting and/or Fan Circuit: _____ Volts _____ Phase _____

Refrigeration specs.

Plumbing

Cold Water _____ 140 degree water _____ 180 degree water _____

Steam in _____ Steam Pressure _____ Pounds _____

Steam Return _____ Connected Waste _____ Floor Waste _____

Gas

Kind _____ Size _____ B.T.U. _____

Spec. Gravity _____ Pressure _____

Direction of Feed for Dishwasher

Right to Left, Left to Right, Straight Thru, Corner type, Clockwise, and Counter Clockwise (circle unit required).

Door Hinged

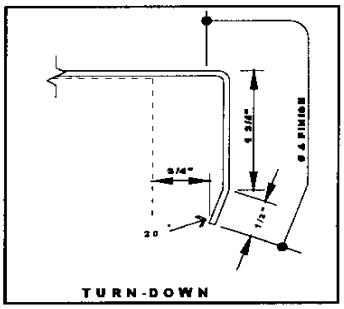
Right Side, Left side (Circle unit required).

PART 2 – PRODUCTS

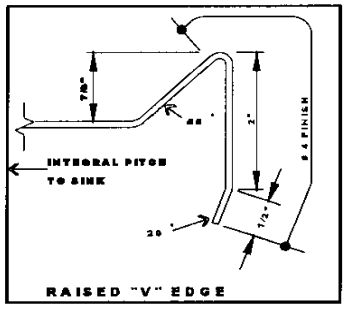
2.1 FABRICATION STANDARDS

A. Welding Requirements:

1. All food service equipment is to be constructed in strict compliance with the latest standards of the National Sanitation Foundation and to meet all requirements of the local and State Health Regulations
2. The words "weld", "welded", or "welding" as used in the item specifications, mean a metal joint continuously welded then all exposed parts ground smooth and polished to match adjoining surfaces.
3. All welding to be done in a thorough manner with welding rod of same composition as sheets or parts welded. Welds to be strong, ductile with excess metal and discoloration ground off and joint finished smooth to match adjoining surfaces.
4. Welds to be free of imperfections such as pits, runs, splatters, cracks, warping or discoloration. All welded joints to be homogeneous with parent metal itself. All fabricated equipment items where metal to metal butt joints occur to be joined and properly welded then ground and polished smooth.
5. All exposed welded joints to be ground flush with adjoining material and neatly finished to harmonies therewith.
6. Whenever material has been depressed or sunken in by welding operations, such depressions shall be suitably hammered and peened flush with adjoining surfaces to then be polished and/or buffed to match adjoining surfaces to a degree consistent with good workmanship. Care shall be exercised in all grinding operations to avoid excessive heating of metal and metal discoloration. Abrasive wheels and belts used in grinding to be iron free and not having been used on carbon steel. In all cases, the grain or rough finish to be removed by successively finer polishing operations to be consistent with reasonable care and good workmanship.
7. Where break band occurs, free of open texture or orange peel appearance, all such marks shall be removed by grinding, polishing and finishing. Wherever sheared edges occur, they shall be free from burrs, projections and fins to obviate all danger from cutting or laceration when hand is drawn over such sheared edges.
8. Where miters or bullnosed corner, they will be neatly ground to uniform condition and in no case will overlapping materials be acceptable.



TYPE "A" EDGE



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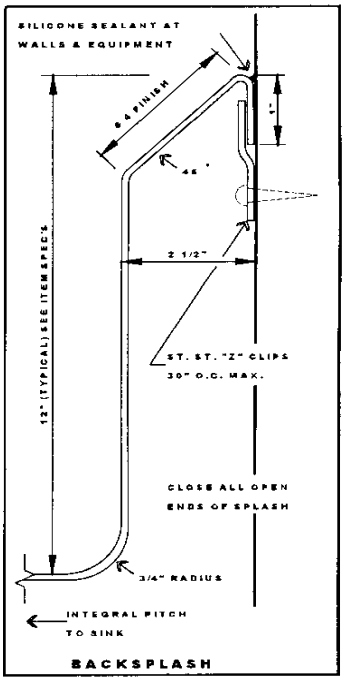

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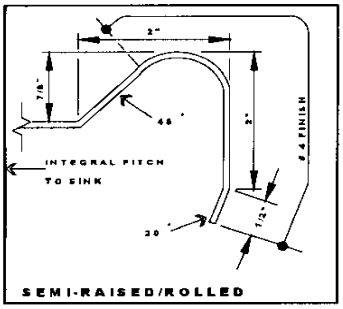

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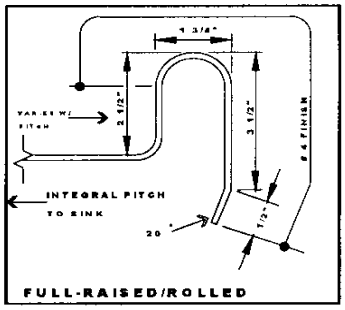

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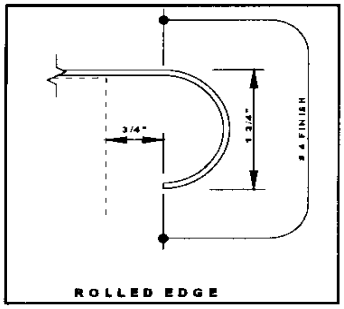

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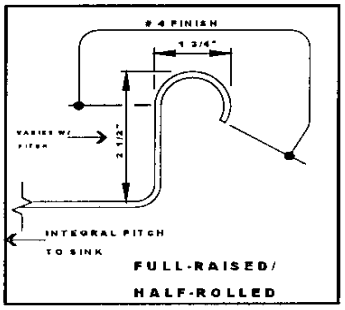

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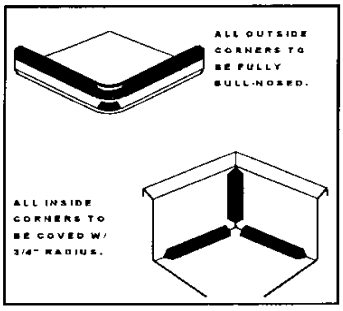

CORNERS

STANDARD EDGE DETAILS

NO SCALE

9. Equipment quality finish consistent with high grade of manufacturing practiced in industry. All exposed surfaces to be commercial mill finishes known as #4 satin finish for corrosion resistant steel. All exposed edges to be furnished with a #4 finish, unless otherwise noted in item specifications.
10. All cabinets, doors and shelves where exposed to be interpreted as meaning inside surface exposed to view when swinging door or sliding doors are opened. Unless otherwise specified, underside of shelves need not be satin finish.

B. Doors – Hinged:

1. To be full height of door opening. Each door shall not be over 30" wide for high cabinets and 24" wide for low cabinets. Doors to be double pan construction flush type and braced and thoroughly sound deadened made of 18 ga. st. st. Inner and outer pans to be sealed with 3/4" long tack welds spaces approximately 6" apart. Balance of the space to be completely sealed between tack welds with silver solder or N.S.F. approved hard solder (Silicone not approved)
2. All welds ground and polished smooth. All bracings to be on proper centers to fit door size.
3. Doors to be mounted on heavy semi concealed nickel bronze olive knuckle hinges fastened to inside ledge of door and cabinet so that only pin will be exposed to heavy st. st. piano hinges.

C. Doors – Sliding:

1. To Be Fabricated same as specified for hinged doors, except they shall operate on nylon tire wheels running on one (1) piece drawn aluminum overhead tracks. Bottom shall be guided by st. st. guide pins at center of door openings. Provide locks where called for in item specifications. Provide flush type polished handles. (Heated cabinets with sliding doors to use st. st. ball bearing wheels).
2. "High" type fixtures to be fitted with two (2) sets of doors in height, each set opening into half height of fixture.
3. "Low" type fixtures to be fitted with (1) set of full height doors. No door length to exceed 36".

D. Sinks:

1. All sinks to be made of 14 ga. st. st. unless otherwise specified. All corners shall be coved at least 5/8" radius, with all corners and joints welded, ground and polished smooth to a #4 satin finish. Sinks, unless otherwise specified, shall not be less than 14" deep. The use of solder or separate filler pieces to

obtain coved corners will not be acceptable. All sink bottoms are to be integrally pitched to insure complete drainage of sink to waste opening. Edges at table height to have exposed edges formed to match adjoining table. Edges adjacent to table to be welded to table with all welds ground and polished smooth.

2. Unless otherwise specified, all sinks to be provided with backsplash 12" high x 2-1/2" wide to allow for pipe space in rear. Flange over at ends, with top edge turned back 2-1/2" at 45 degree angle and down 1". Provide openings for combination swinging type water faucet for each compartment.
3. In sinks of two (2) or more compartments, furnish between each sink compartment a 3/4" wide full height portion integrally welded to sinks at front, back and bottom maintaining smooth 5/8" radius coved corners as described in preceding paragraph.
4. Front of multiple compartment sinks shall consist of st. st. apron same gauge as sinks having length same as overall length of sink bowls and same depth as bowls. This apron shall be "1" shaped and welded to or part of the top rim.
5. Design of apron front to be such that sinks shall have an appearance of a continuous one (1) piece front face of all overlapping joints and open spaces between sink compartments.
6. Each compartment to be furnished with rotary handle type drain, connected rear overflow, 6" tailpiece and faucet of make and model number as called for in Item Specifications. Also each sink to be furnished with 14 ga. st. st. waste handle bracket welded to underside of sink.

E. Tables & Tops – Height: All working tops to be 34" high from floor, unless otherwise stated under specific item.

F. Metal Tops:

1. Unless otherwise specified in Item Specifications, metal tops to be 14 ga. st. st. reinforced and braced on underside by framework consisting of 1-1/2" x 1-1/2" x 3/16" angles and 1" x 3" x 3/16" channels, galvanized where concealed and st. st. where exposed.
2. Framework angles to run full length and width and with angle crossbrace on not over 2'-6" centers. Channel reinforcing to run full length of tops down center of top. All tops with sinks shall be integrally pitched towards same.
3. All joints of framework to be welded with weld re-metalized. Tops to be bolted to framework in a concealed manner with st. st. bolts and cap nuts. All metal tops to appear as one piece with all field and shop joints reinforced and welded, ground smooth, and polished, also to be made of largest piece obtainable.

4. No short pieces of metal will be acceptable. St. st. tops to have a #4 satin finish and all tops of this metal to be full 1/2" cove at re-entrant corners, also where turned up in rear or in front, such as dishtables. Solder filled corners will not be acceptable.

5. Metal edges to be made as described below and/or shown on detail drawings. Top to have all edges turned down 1-3/4” then back 1/2" at a 70 degree angle all around with all corners welded, ground, and polished smooth with no cracks or openings showing. All exterior corners to be well rounded bullnosed in 1-1/4" radius.

G. Dishtables & Pot Washing Tables:

1. All free edges to be turned up 2-3/4" then rolled to 1-5/8” x 180 degrees and furnished with apron edge front, as per Edge Detail Sheet. All exposed and exterior corners to be coved at 5/8" radius with all joints welded, ground, and polished smooth.
2. Where tables abut a wall or other tall equipment, extend back and/or ends up 12" then back 2-1/2" at 45 degrees and down 1” parallel to wall. Provide with end filler pieces and all welded surfaces ground and polished smooth.
3. The underside of Dish and Pot Washing tables to be reinforced with 1-1/2” x 1-1/2” x 3/16" st. st. angles and 1” x 3" st. st. channels. Angles to run full length of tops at both front and rear of tops with crossbrace front to back on 2'-6" centers. Channel bracing to run down center, full length of tops. Tops shall be integrally pitched to dishwasher and sinks.

H. Fastening Tops to Washers and Other Equipment: Where tops are shown adjacent to dish or glass washer, etc., ends are to be turned down 1-1/2” into fixture and bolted tightly to it with approved gaskets between body and turned down edges. Backsplashes to have edge against fixture turned out 1-1/2” and tightly fitted to it. Free edges to be neatly fitted to fixture corners to prevent water from dripping on floor. All tops to have integral pitch to drain towards dishwasher.

I. Dish & Pot Table Drainage: During installation of dish tables and dishwasher, GC shall water test all counter tops to make sure of proper pitch before final plumbing and electrical connections are made. All water on counter tops shall drain with no standing puddles allowed. Should the GC fail to pitch tables properly, he shall be responsible for disconnecting plumbing and electrical connections and readjust tables to insure proper pitch. GC shall also be responsible for reconnecting all service lines after tables have been realigned.

J. Pipe Stands:

1. All equipment requiring pipe legs or stands to be provided with sufficient supports to carry superimposed load of 100 lbs. per sq. ft. Top to be fabricated of 16 ga. st. st. Tubing to be furnished with st. st. hex head bullet shaped feet as previously specified. All pipe stands to be braced with crossrails, st. st. pipe welded to legs approximately 10" above floor or braced by lower shelf as specified hereinafter. Provide st. st. gussets as previously specified, welded to framework on underside of top.

2. In place of gussets, st. st. legs may be welded to st. st. channels 5" long which shall fit into channel crossbracing. Flange of both channels to be machine bolted together. Holes for bolts to be slotted for adjustment. Provide legs on not over 5'-0" centers and additional if required or requested.
3. All pipe legs or vertical members to be set back from table top on ends and on front and back sufficient distance to offset any interference with workers, columns, walls or other items. Where tops are welded to sinks, omit pipe legs supporting top at sink location.

K. Shelves Under Tables:

1. Under tops which are mounted on pipe legs or stands, shelves under table to be fabricated of 16 ga. st. st. with all edges flanged down 1-1/2” or as otherwise noted in the Item Specifications. Shelves to fit tightly around contour of legs and welded from underside. Shelves to be made up from long lengths with all joints welded, ground, and polished smooth.

2. Short lengths will not be permitted. Reinforced, as required, to support load of 50 lbs. per sq. ft. All sharp edges, burrs, and corners to be ground smooth and removed and then be slightly rounded. All shelves in cabinet bases are to be angle reinforced.

L. Cabinet Bases:

1. Exterior cabinet bases to be constructed of 18 ga. st. st. with front face, exposed ends, rear, and corners integrally exposed with all welds ground and polished smooth to form a one piece construction appearance.
2. St. st. exterior to be mounted over a 1-1/2” x 1-1/2” x 1/8" all welded galvanized iron angle frame. Where st. st. exterior meets angle framework at drawer, door or shelf openings, exterior shall be turned in 1-1/2” over angle framework inside of openings. All drawers and doors to be flush with cabinet face.
3. All cabinet base bottoms to be enclosed with 18 ga. galvanized iron panels. Interior shelves of cabinet base to be constructed of 16 ga. st. st. and be reinforced with 1-1/2” x 1-1/2” x 1/8" angles. Rear and ends of shelves to be turned up 2" with all interior corners coved to 5/8" radius.

M. Drawers:

1. Drawer front to be 3/4" thick double pan construction with 16 ga. st. st. telescoping rear panels. Joints to be sealed same as specified for double pan hinged doors. Drawer front fitted with recessed st. st. grip handle. Drawer to be furnished with 18 ga. galvanized iron bottom with openings in front to accommodate drawer. Provide with cylinder type lock when specified under Item Specifications or shown on elevation details.

2. Opening in front to have edges turned in to fit drawer front which will be flush when drawer is closed. Bottom of enclosure to be open with edges turned in 1” on all sides.
3. All corners on enclosure to be continuously welded, then polished and ground smooth. Exposed rivets or screws will not be acceptable. Drawer insert to consist of removable die stamped 18 ga. st. st. pan approximately 20" square x 5" deep. Top edges of drawer insert to be flanged out on all sides, not less than 1/2" for resting on drawer extension glides. All sharp edges and burrs to be removed from drawer flange.
4. Housing supports to be made of 12 ga. st. st. formed into angles welded to underside of metal tops or screwed to underside of wood tops and to extend full width of top with rear enclosure, where exposed. All welded items to be ground and polished smooth. Screws for wood tops to be st. st. countersunk. Drawer housings to slide on 14 ga. st. st. telescoping channels with st. st. rollers, extension roller slides.

N. Drawers: This mechanism must be designed so that drawer will not tilt when fully opened. Provide with stop mechanism to prevent pulling the housing from slides but with suitable extension so it may be removed for cleaning.

O. Tier of Drawers:

1. To be two (2) or three (3) in number of same size as specified for above and entirely enclosed with 18 ga. st. st. same as specified under cabinet bases with openings for drawers with all joints flush welded, grounded, and polished smooth.
2. Single drawers under table tops to be one inch (1”) back of edge of fixture. All draws shall have front flush with cabinet body.

P. Fasteners: Exposed screw or bolt heads will not be permitted on fixtures. Rivets, if specified, shall be countersunk flush. Rivets to be same material as they join. Butt joints made by riveting straps under seams and then filling with solder or caulking will not be permitted or accepted.

Q. Name Plates: All buyout equipment shall be furnished with a permanently affixed metal name plate listing manufacturer's name, model number, voltage, cycle, phase, horsepower, etc., in an easily readable location. Dealers, installers, fabricators or service agencies name plate stickers shall not be fastened to any item without the approval of the A/E.

2.2 MATERIALS AND WORKMANSHIP

A. Unless otherwise specified, all material shall be new and of best quality, perfect, and without flaws and shall be delivered upon completion in an undamaged condition.

B. Stainless Steel Shall be type 304 having a standard analysis of 18% chrome and 8% nickel. Gauge to be specified under Item Specifications and furnished with #4 satin finish, unless otherwise specified.

C. Pipe legs shall be, 16 ga. st. st. (0.65" thick), tubing furnished with st. st. adjustable foot and enclosed gusset welded to underside of table top reinforcing channel.

D. Tubing to be seamless drawn, ground, and polished smooth to a #4 satin finish. Bottom of legs to be swedged for close fit to adjustable foot. Where space permits furnish 1-1/4" dia. st. st. crossrails welded to leg uprights. All welds shall have radius corners and be ground and polished smooth to a #4 satin finish.

E. All hardware and other fittings used in connection with the equipment to be cast nickel bronze or st. st. Handles to be welded or bolted to the equipment in a concealed manner. Bolts to be st. st. and hinges to be recessed in door with st. st. N.S.F. approved hinge. Hinges to be fastened in place with st. st. recessed rivets or welded in place with weld ground and polished smooth.

F. Sliding doors to be depressed type and furnished with handles. Hinges to be olive knuckle, semi concealed type of nickel bronze or st. st. piano type as described under the specific item.

G. All metal that is not st. st. is to be painted with two (2) coats of an approved rustproof paint highest quality gray enamel.

H. All receptacles are to be grounded type being both dust and moisture proof. Furnish outlets with st. st. face plates and neoprene mats. In cabinet bases, all receptacles are to be mounted in Chase with all coved corners st. st. recessed type enclosure mounted to cabinet base. Receptacles shall be prewired by GC to junction box in bottom of base cabinet left ready for final connection by Electrical Trades. All wiring between receptacles and junction box to be run in rigid conduit.

I. All counter top receptacles to be chrome plated type as specified in Item Specifications. Counter top receptacles to be pre wired to junction box in rigid conduit same as previously specified. All wiring to be in strict compliance with latest standards of the National Sanitation Foundation and Department of Health Requirements.

J. Quietness of operation of all food service equipment is a requirement and the GC shall be required to remove or repair any equipment producing objectionable noises.

2.3 PRODUCTS

A. See Appendix FS-1 for product information.

PART 3 – EXECUTION

3.1 EXAMINATION

A. The A/E, Using Agency, and/or their duly authorized representative shall have free access to the contractor's shop or shops during the construction of this equipment for the purpose of making inspections to see that the plans and specifications and detailed drawings are being adhered to carefully.

B. If items are found not to be complete per approved drawings, General Requirements and the A/E's Item Specifications, upon receiving the Punch List, the General Contractor shall correct all items on the list within thirty (30) days.

C. It shall be the responsibility of the PC, EC, HC & VC to check all rough-in connections installed by their personnel to make sure that they agree with the dimensioned rough-in drawings as prepared by the GC .

D. Should these Trades fail to check rough-in before slab is poured, they shall assume all responsibility for making necessary changes and paying all the costs involved. Should the dimensioned rough-in drawings be incorrect, it shall be the responsibility of the GC to assume costs involved for revising all connections involved in the dimensioned error.

E. GC shall coordinate with the EC the voltage and phase required for each piece of equipment that is to be supplied. Should the General Contractor fail to verify the voltage characteristics it shall be his responsibility to make all necessary changes at no cost.

F. When deemed necessary by the A/E, the GC shall meet on the job site with the appropriate prime contractor(s) to determine the best way of offsetting rough-in connections that interfere with beams, foundations or other possible field obstructions.

3.2 PREPARATION

A. All gas equipment is to be furnished with appliance pressure regulators. Electrical requirements shall be in accordance with rough-in plan and verified on the job site.

B. Should the electrical requirements and the item specifications not agree with the rough-in plan or electrical requirements on the job site, it shall be the responsibility of the GC to send a written report to the A/E advising them of the discrepancy. Should the GC fail to coordinate voltages on the job site, it shall be his full responsibility to make all necessary changes at no cost.

C. All measurements shall be verified at the building site and full responsibility for their correctness must be assumed by the Contractor.

D. The GC is responsible for verifying all dimensions and conditions at the job site. No extra charge or compensation will be allowed on account of difference between actual dimensions and the measurements indicated on the drawings. All or any differences which may be found shall be submitted to the A/E for consideration before proceeding with the work.

3.3 INSTALLATION

A. General Contractor:

1. GC shall be responsible for assembly and erection of all equipment included herein and in required location as shown on drawings, leaving same with outlets for other prime contractors to make final heating, plumbing, electrical and ventilation connections.

2. GC is to provide a competent foreman to supervise the erection and placing of equipment and to advise other Prime Trades in regards to connections at time of installation. Where applicable, he shall deliver to other Prime Trades all plumbing, heating , and electrical parts included with his equipment for their proper installation.

3. GC to have qualified personnel on job site while the Plumbing, Electrical, and HC & VC Trades are making final connections between rough-in and equipment. Where necessary, GC is to move equipment to allow these Trades to make final connections. Should the GC fail to assist the other Trades and final location of equipment is incorrect, it shall be the responsibility of the GC to move the equipment to correct location and assume the cost of disconnecting and reconnecting the service connections.

4. GC is responsible for cutting all holes thru tops, backsplashes, shelves and cabinets so the other Prime Trades can make final connections to outlets in fixtures from his rough-in.

5. Should specified equipment arrive at the job site with incorrect finish, model number, damaged, etc. A replacement item must be ordered immediately. Should the project schedule require incorrect unit for opening operation, existing unit is to be left in operation until replacement is available, at no cost to the Using Agency. It shall be the responsibility of the GC to assume all costs for restocking, reselling, etc., of the incorrect items that have been used.

6. All holes or openings must be cut in a workmanlike manner, with all edges ground and polished smooth and free of sharp edges. Opening in rear of base cabinet must not be larger than 1” bigger than pipe extending thru cabinet. Oversize cutouts with rough edges will not be approved.

7. All faucets and waste assemblies to be furnished by the GC and to be turned over to the PC for their installation. NOTE: Faucets and waste assemblies to be tagged properly to insure proper installation of these items on the correct fixtures

8. Trimming & Sealing Equipment:

   a. Space between units to walls, ceilings, and floors and adjoining units not portable and with enclosed bodies, shall be completely sealed against entrance of food particles or vermin by means of st. st. trim strips, welding or commercial joint material suitable to the nature of the equipment. Sealer when not exposed to extreme heat shall be silicone construction sealant in the appropriate color. Ends of hollow sections to be closed. Enclosed fixtures without legs mounted on masonry bases or floor shall be sealed watertight to base of floor.

   b. All equipment setting on masonry bases will be constructed to overhang to provide toe spaces, however, metal framework and/or housings are to be turned under a sufficient distance to overlap masonry base and eliminate openings at these points. Bases to be sealed with silicone sealant.

B. Ventilating Contractor:

1. This Trade will provide all ductwork to openings on top hood furnished by the GC .

C. Electrical, Heating and Plumbing Contractors:

1. These Trades shall provide all final electrical, heating and plumbing connections between fixtures and rough-in outlets in walls or floors.

2. Internal connections on booster heater and disposer to be provided by the PC and EC and proper installation of these above named items. GC shall also include detailed drawings showing proper location of all accessories. GC shall provide all masonry platforms, tile bases and floor openings.

8. Trimming & Sealing Equipment:

1. Space between units to walls, ceilings, and floors and adjoining units not portable and with enclosed bodies, shall be completely sealed against entrance of food particles or vermin by means of st. st. trim strips, welding or commercial joint material suitable to the nature of the equipment. Sealer when not exposed to extreme heat shall be silicone construction sealant in the appropriate color. Ends of hollow sections to be closed. Enclosed fixtures

without legs mounted on masonry bases or floor shall be sealed watertight to base of floor.

2. All equipment setting on masonry bases will be constructed to overhang to provide toe spaces, however, metal framework and/or housings are to be turned under a sufficient distance to overlap masonry base and eliminate openings at these points. Bases to be sealed with Dow Corning sealant #780 or approved G.E. sealant.

3.4 ADJUST & CLEAN

A. GC shall adjust and lubricate all moving parts for smooth quiet operation. The GC shall touch up scratches, marred or abraded surfaces to restore equipment to the original condition.

B. The GC shall remove all crating and packing material from the job site and shall also remove fingerprints and leave equipment and adjacent equipment or surfaces clean.

APPENDIX FS-1

ITEM #1 NOT USED

ITEM #2 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #3 WALK IN REFRIGERATOR / FREEZER

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the

insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards.

Floors to be 3.75" thick. Include a factory installed 32" long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent

personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32" long interior Ramp, 36" overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
Two (2) Vision Windows 14" x 14"

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4" thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity ("K" factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer ("U" factor) shall not exceed .033 and the resistance to heat penetration ("R" factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46" and at junction of vertical and horizontal joints by 23". Cam locks shall be foamed-in-place and anchored securely in the panel by steel "wings" integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #4 NOT USED

ITEM #5 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post

cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #6 WALK IN REFRIGERATOR SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #7 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO OR FISHER operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #8 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #9 SOILED/CLEAN DISHTABLE & POT WASH

One (1) Custom Fabricated unit in size 30" & 33" deep x length as shown plan with integral pitch to allow tables to drain towards dishwasher or table drainers.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #12

TABLE DRAINER - In top of soiled table, furnish integrally welded table drainer 6" wide x 3" deep x full width of dishtable. (Full width to mean from front vertical inside edge of rolled rim to back of vertical edge of backsplash). Inside edges both horizontally and vertically furnished with not less than ½" radius. Interior of drainer to be furnished with all coved cornered perforated strainer basket made of 16 gauge stainless steel.

Include 1/4" stainless steel rod guide handles to allow racks to slide over drainer area. Drainer pitched to drain and to have die stamped opening and furnished with basket drain, brass chrome plated with 1-1/2" tailpiece.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X or FISHER or CHICAGO FAUCET 3/4" I.P.S to fit in rear of Backsplash to accommodate 3/4" water lines , Center Pre-rinse w/ 10" "Add a Faucet" (1)

T&S Model B-0287-427-B, Remove T&S Model 114X, 12” spout and provide T&S Model 112x 10” spout.

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #10 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14” deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18” deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

See Elevation for details.

ITEM #11 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Panel section behind dishwasher to run down to top of coved tile base. GC to provide necessary cut outs for power and water supply lines.

Submit shop drawing for review and approval.

ITEM #12 3 H.P. DISPOSER AND SPRAY

QTY: One (1) Lot

MFG/MODEL: In-Sink-Erator SS-300-18B-CC101 or Salvajor 300-SA ARSS 18 or Waste King 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve/solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #13 VENTLESS DISHWASHER

QTY: One (1)

MFG/MODEL: HOBART AM-15VLT or CHAMPION #DH5000-VHR or MEIKO #DV80.2

CONST: Unit to have spring counter balanced doors arranged as shown on plan. Drawn Tank, Tank shelf and feet constructed of 16 ga. st. st. Frame to be constructed of 12 gauge st. st. Chamber to be constructed of 18 ga. st. st. Removable trim panels to be constructed of 20 ga. st. st. NOTE! Unit to meet all state and local code for ventless operation.

ACCESSORIES:

One (1) Internal condensing system
One (1) Door Lock interlock to prevent door from being opened too soon.
One (1) Single Point electrical connection
One (1) Pressure reducing valve sized for dishwasher capacity (unconnected)

One (1) Automatic tank fill
One (1) Built in 70 degree rise electric booster heater
One (1) 5 KW Tank heater
One (1) Lot of low water tank heat protection
One (1) Splash proof pump motor
One (1) Lot of interlocked door safety switches
One (1) Lot of interchangeable spray arms
One (1) Lot of st. st. front and side panels
One (1) Lot of detergent connection provisions
One (1) Lot of NSF approved gauges on rinse & wash water
One (1) NSF Pot and Pan listed 2, 4 and 6 minute Cycle
One (1) Timed wash cycles for 1,2,4 or 6 minutes
One (1) 27" door opening for 18" x 26 sheet pans or 60 qt. mixing bowl
One (1) Stainless Steel Pump and Impeller
One (1) Delime notification (field activated) and Delime Cycle
One (1) Drain Water tempering kit
Two (2) Sheet Pan Rack
Two (2) Standard 20" x 20" dish racks
Two (2) Standard 20" x 20" open racks

ELECT: Per rough in drawings.

ITEM #14 NOT USED

ITEM #15 SOAP AND RINSE DISPENSER
Not in Contract

ITEM #16 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: Two (2)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #17 30" HIGH ST. ST. WALL PANELING

One (1) Lot of Custom fabricated 18 ga. St. St. 30" high wall paneling sized and shape as per elevation detail. Paneling to be installed with flush mounted hidden fasteners. Furnish hairline butt joints at all seams GC to seal sides and edges with silicone after installation. Submit shop drawing for approval.

ITEM #18 ST. ST. WORK COUNTER/REF BASE

Eight (8) Custom fabricated unit, sized 13' - 6" per plan and elevation detail x 33" deep x 36" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per General Requirements.

Edges against equipment or where shown on plan to be furnished with 12" high integral backsplash with 1" return at 90 degree angle. Caulk with clear G. E. sealant to meet Health Department approval.

SINK In top as shown on plan and elevation furnish integrally welded sink sized 24" x 26" x 12" deep. Sink fabricated of 14 ga. st. st. with horizontal and vertical corners with not less than 5/8" integral radius. Sink bottom to be pitched to drain towards 3-1/2" dia., die stamped opening. Sink to be polished out in all corners to a #4 finish.

SINK TRIM

One (1) T& S or FISHER or CHICAGO FAUCET B-0230-LN W/ 060X 8" swing spout & B-0199-01 aerator

Furnish each faucet complete with T&S model B-0230-K or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

One (1) T&S model B-3950-01 or FISHER or CHICAGO FAUCET twist handle drain with rear overflow & 010387-45 removable Basket Strainer. Twist drain handle furnished with 14 gauge stainless steel brackets welded to underside sink.
Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

SINK ENCLOSURE Cabinet base under sink section furnished with 18 ga. st. st. louvered access door. Door to be double pan construction, sound deadened, with NSF hinges and recessed st. st. handles per General Requirements. Bottom of sink enclosure, to be furnished with

removable 16 ga. st. st. shelf, coved interior corners with rear and ends turned up 2" against cabinet interior. NOTE! shelf to be held back 8" from rear of cabinet to allow space for water and waste rough-in connections.

LEGS & FLANGE FEET Balance of top to be mounted on 1-5/8" diameter 16 gauge stainless steel tubular legs furnished with integrally welded crossrails between legs. Legs to be furnished with stainless steel gussets and stainless steel adjustable flange type feet. GC to bolt flanges to floor with st. st. lag bolts.

SHELF OVER: Over top as shown on plan furnish single deck 16 gauge stainless steel shelf with 1" rolled rim and 2" turnup against wall at 56". Shelf to be mounted on 1-1/4" diameter 16 gauge stainless steel cantilever type uprights extending up thru backsplash. Hole in backsplash cut out to fit uprights with not more than 1/16" clearance then caulked with clear silicone sealant.

ATTACHMENT RACK Above shelf as shown on elevation detail, provide two (2) bar type rack constructed of 2" x 1/4" st. st. bars welded to 12 ga. st. st. gussets at each end and reinforced thru center on approx., 36" centers with similar type gussets. (Verify mounting height). Attachment rack/shelf support uprights to be reinforced below top as required to support heavy loads.

Each bar to be furnished with st. st. sliding type pot hooks space on 6" centers. Racks to be all welded construction with all welds ground and polished smooth. Top bar to be 10" out from wall with bottom bar 3" out from wall.

STOOL & TOOL KIT STORAGE: Provide open storage and shelves sized per plan and elevation detail for stool and tool kit storage. GC to verify exact size with Using Agency.

UNDERCOUNTER REFRIGERATOR: Two (2) 18 gauge st. st. custom fabricated single compartment undercounter refrigerators. Door hardware, gaskets, etc. component all to be per manufacturers standards.

Interior of undercounter refrigerator to be 18 ga. st. st. with all coved corner welded construction, furnished with NSF approved automatic interior light, drain, three (3) adjustable chrome plated wire shelves per compartment, and a dial thermometer on cabinet per Department of Health Requirements. Include recessed blower coils, solenoids, thermostat, interior light, control switch and pilot light installed inside refrigerator. See remote refrigeration specification for details.

GC to be responsible for 100% operating system, including interconnections with item #778 and coordinate all refrigeration line runs.

ELECTRICAL: Provide pre-wired duplex receptacles furnished and installed to meet all state and local code. Receptacles to be located in backsplash as shown on elevation and rough in plan. Receptacles to be pre-wired to "J" box in base of cabinet.

Submit shop drawing for approval.

ITEM #19 STUDENT TOOL KITS

Not in Contract

ITEM #20 STUDENT STOOLS
Not in Contract

ITEM #21 UTENSIL RACK

One (1) Lot included with item #18.

ITEM #22 WALDORF STYLE COOKING BATTERY

Four (4) Garland Range or Jade or Montague Custom Waldorf Suites as shown on plan. Suites shall have combination of precision mechanical and welded stainless steel construction throughout and be hand built to custom specifications. All units shall be fully constructed and tested at the factory prior to shipment.

See elevations and sections for details. Waldorf Suite shall include the following heavy duty components:

One (1) Continuous perimeter belly bar 2" x 1/2"
Four (4) Food wells w/ drains & faucets
Two (2) Char-broilers
Four (4) Four Burner Ranges and one 12" hot top with convection ovens
Two (2) Storage cabinets
Two (2) Overhead Salamander Broilers
Two (2) Custom End Cabinets w/ stainless doors
Four (4) Recessed Duplex Receptacles (two per side on end cabinets)
One (1) Custom St. St. Tubular Over-shelf
One (1) Custom Stainless Steel Removable Center Cover
One (1) Custom Stainless Steel Back Pedestal Flue to support over-shelf and salamanders

Suite shall be provided with a single point gas connection, 1 ¼" gas pressure regulators and custom center raceway gas manifold. Suite shall have a single point electrical connection with main load center

Water, Drains, Gas and Electric Utilities per plan and rough in.

HW/SMP-60 Wells cook and hold warmer C/W Faucets Fisher, Chicago or T&S
M17B Ceramic Stone Char-broilers 45K Btu. All stainless exterior.
M43-1RC 4 burner range C/W (4) 26K Btu open burner one 12" hot-top 22K Btu and 40K Btu oven burner. Oven interior is black porcelain. All stainless exterior.
M17ES Cabinets with stainless door. Utility cabinets. All stainless exterior.
MIR-34C Salamanders with (2) 20K Btu ceramic tile burners. All stainless exterior.

GC to turn faucet assemblies over to PC for installation and connection to water source.

Submit shop drawing for review and approval.

ITEM #23 ST. ST. ISLAND EXHAUST HOODS

Furnished by Using Agency, Installed by GC, with connections by EC and VC.

Four (4) HALTON Back-to-back model #KVE – PSP commercial kitchen island style exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing. The use of end panels or rear seals to achieve required airflows, are not acceptable.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted “Override” button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal “Capture-Jet” System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1” air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, based upon ASTM F-2519-05 method of test, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will

analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by

appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

Submit shop drawings for review.

ITEM #24 FIRE SUPPRESSION SYSTEMS

Four (4) Systems completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in

accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #25 ST. ST. WALL COVERING AND CAP

One (1) Lot of 18 ga. st. st. wall paneling covering entire wall area per elevation. Paneling to be installed with flush mounted hidden fasteners. Panel to cover entire wall surface from top of tile base on all five surfaces. Provide cut outs for all utilities as required.

Submit shop drawing for approval.

ITEM #26 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #27 TRASH RECEPTACLES
Not in Contract

ITEM #28 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #29 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #30 NOT USED

ITEM #31 SECURED STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

Two (2) METRO model SEC55DCQ super erecta or Eagle or ISS 48" long x 24" chrome wire security shelving units furnished per manufacturers standards. Units to be provided with two (2) interior wire shelves, heavy duty casters, two with brakes. Locks to be provided by operator.

ITEM #32 20 QT. TILT KETTLE W/ STAND (GAS)

One (1) GROEN MODEL: TDH-20 & TS/9S or Cleveland or Vulcan 20 Qt. Kettle shall be of 304 stainless steel, one-piece welded construction. All exposed surfaces shall be stainless steel. All controls shall be contained in a gasketed enclosure. Unit shall be furnished with a heavy reinforced rim with a welded-in butterfly shaped pouring lip for maximum sanitation and durability. Right or left hand tilt handle. Faucet bracket is standard and mounted on rear of control box.

ACCESSORIES:

One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet w/ swing spout
One (1) TS/9S Equipment Stand with sliding drain drawers
One (1) Lot gas and water hoses with quick disconnects

Faucet assembly to be turned over to PC for installation and piping.

ITEM #33 ICE MAKER AND BIN
Furnished by Using Agency, Installed by GC.

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-0502A or Hoshizaki KM-515MAH or Ice-O-Matic #ICE500

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B400 30" wide bin (290# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor
One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 530 pounds of ice per 24 hours. GC to coordinate location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #34 GRIDDLE TOP/CHAR BROILER/OVEN

Furnished by Using Agency, Installed by GC.

One (1) JADE component unit consisting of JMRH-24GT, JMRH-24B & JTRH-36S or GARLAND custom or MONTAGUE custom fabricated component unit in similar configuration.

SPECIFICATIONS:

Units to be batteried together and provided per manufacturers standards.

ACCESSORIES:

One (1) Cabinet base extensions, 12"
One (1) Common 6" plate shelf, per unit
One (1) Gas hose with quick disconnects and wall restraint
One (1) 3/4" Rear connection
One (1) 3/4" Gas regulator supplied w/range
One (1) Set of four casters (2 with brakes)

UTILITY REQMTS:

Provide unit for Natural Gas.

ITEM #35 ST. ST. WALL PANELING & CAP

One (1) Lot of Custom fabricated 18 ga. wall paneling sized and shape as per elevation detail. Paneling to be installed with hidden fasteners. Include Sill cap with 1.5" turn down on all sides. Corners to be mitered and welded smooth to match original final. Paneling to run from top of wall down to top of coved base below on chefs side. Furnish hairline butt joints at all seams GC to seal sides and edges with silicone after installation.

Submit shop drawing for approval

ITEM #36 UNDERCOUNTER DISHWASHER
Furnished by Using Agency, Installed by GC, with connections by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with "auto-prime"
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators
One (1) Peg rack

One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency's soap and rinse dispensing system.

ITEM #37 SIX BURNER RANGE/CONVECTION OVEN
Furnished by Using Agency, Installed by GC, with connections by HC.

One (1) Garland Model G36-6C or JADE # JTRH-6-36C or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Convection Oven Base
One (1) Stainless steel back guard
One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #38 ST. ST. ISLAND EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON island unit sized per plan. General construction to be same as item #23, submit shop drawing for review and approval.

ITEM #39 FIRE SUPPRESSION SYSTEMS

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #40 ST. ST. DEMO COUNTER/SINK

One (1) Custom Fabricated unit sized 9' - 6" long x 36" wide x 36" high.

Top: Fabricated of 14 ga. St. St. With type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per general requirements.

Sink: In top as shown on per plan furnish integrally welded sink 18" x 21" x 12" deep. Sink fabricated of 14 ga. st. st. with horizontal and vertical corners with not less than 5/8" integral

radius. Sink bottom to be pitched to drain towards 3 1/2" dia., diestamped opening. Sink to be polished out in all corners to a #4 finish.

Sink Trim: One (1) T& S or FISHER or CHICAGO FAUCET Model B-1120-LN deck type faucet furnished with 060X, 8" swing spout with B-0199-01 aerator. Faucet caulked watertight to counter top. Faucet to be cast red brass, all chrome plated with color coded hot and cold water faucets.

One (1) T&S Model B-3950-01 (1-1/2" I.P.S) or FISHER or CHICAGO FAUCET twist handle drain with connected rear overflow assembly

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

Backsplash: Side of top to be turned up against stub wall as shown on elevation.

Undercounter Dishwasher; Provide recessed space in base cabinet sized to accommodate undercounter dishwasher and detergent bottles. See elevation for location and details.

Electrical: Provide recessed electrical receptacle in splash as shown on elevation. Receptacle to be pre-wired to "J" box in base of cabinet. Provide Electrical receptacle in A/V cabinet for computer and DVD use. All receptacles to be located on shop drawings.

Base Enclosure: Cabinet base under unit to be furnished with 18 gauge stainless steel full width access doors. Door to be double pan constructed, sound deadened with stainless steel, NSF. hinges and recessed stainless steel handle per general requirements. Bottom of sink enclosure, to be furnished with removable 16 gauge stainless steel shelf, coved interior corners with rear and ends turned up 2" against cabinet A/V Section to be provided with pull out drawer for keyboard , etc. per section detail.

Tray Storage: Provide enclosed storage area for pans as shown on elevation.

Submit shop drawing for review and approval.

ITEM #41 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

Two (2) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 in quantity as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #42 PORTABLE ST. ST. SLICER STAND
Furnished by Using Agency, Installed by GC.

One (1) Custom fabricated unit, size 30" long x 30" wide x 34" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #43 SLICER
Furnished by Using Agency, Installed by GC.

One (1) Hobart Model #H7 or Globe #3950N or Berkel #X13AE-Plus automatic slicer furnished per manufacturers standards. Provide the following standard and optional accessories:

One (1) Food Chute
One (1) Low Fence
One (1) UL Cord and plug

ITEM #44 NOT USED

ITEM #45 REACH IN BLAST CHILLER

One (1) IRINOX model #MF70.1L or American Panel # AP12BCF110-3 Delfield #T14D reach in blast chiller / shock freezer furnished per manufacturers standards. Include the following standard and optional accessories, One (1) Sous-vide Pouch core temp probe , One (1) Lot casters, two with locks, one (1) UL Cord and plug.

ITEM #46 TILT BRAISING PAN

QTY: One (1)

MFR: GROEN MODEL #BPM-40G or Cleveland #SGL40T, Vulcan #VG40

SPECIFICATIONS: Unit shall be a forty gallon, gas fired, tilting skillet. Unit to be stainless steel interior and exterior. Stainless steel clad 5/8” cooking surface, with specially designed welded heat transfer fins. Also provide unit with a torsion bar type counterbalanced cover, adjustable thermostat, and electronic intermittent pilot ignition system. Unit is standard with manual hand tilt and shall tilt past vertical for cleaning.

ACCESSORIES:

One (1) Tangent Draw Off
One (1) Lot flange feet. Secure to floor with st. st. lag bolts.
One (1) Pan Carrier
One (1) Double Pantry Faucet
One (1) Lot gas and water supply lines with quick disconnects and wall restraints

UTILITY REQMTS:

Natural Gas, 115 v, 60 Hz, single phase for controls -Hot and Cold water connections (faucet)

Faucet assembly to be turned over to PC for installation and piping.

ITEM #47 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9" x 9" x 4" deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor opening.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #48 60 GALLON TILT KETTLE

QTY: One (1)

MFG.: GROEN MODEL: DHT-60 or Cleveland #KGL-60 or Vulcan #K60GLT

SPECIFICATIONS:

Kettle shall be constructed of type 18.8, 316 stainless steel solid one piece welded construction. The unit shall have a reinforced bar rim with butterfly shaped pouring lip. Unit shall have st. st. tubular legs with level adjustable feet. Kettle shall have a fin tube burner assembly, 50 PSI Steam Jacket Rating, Variable Temperature Control, front mounted water sight glass and Electronic Ignition System. 150,000 BTU's.

ACCESSORIES:

One (1) 2" Tangent Draw-off valve
One (1) Pan Carrier
One (1) Hinged Cover Kit (#51)
One (1) Kettle Brush Kit
One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet
One (1) Lot gas and water supply lines with quick disconnects and wall restraints

UTILITY REQUIREMENTS:

Per rough in plan. Faucet assembly to be turned over to PC for installation and piping.

ITEM #49 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9" x 9" x 4" deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor opening.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #50 FRYER SYSTEM
Furnished by Using Agency, Installed by GC.

Two (2) FRYMASTER H-55SC or PITCO #SSH-55C-S/FD or ALTO SHAAM #ASF-60G Fryers

Fryers to be all st. st. construction. Frypots to be all st. st. with drain lever actuated st. st. ball type at bottom of frypot cool zone. St. st. finished back to be included.

ACCESSORIES:
One (1) Footprint filter. Filter to be located under fryers and shall be integrally piped to adjacent fryers. Include filter heater.
One (1) Lot Electronic Timers
Two (2) Lift off 16 ga. st. st. covers
One (1) Set of casters, two with brakes
Two (2) Full Size Baskets
Four (4) Twin Size Baskets
One (1) Box of filter paper
One (1) Box of filter powder
One (1) 1" Quick Disconnect with Gas Hose
One (1) "T" Rear manifold to provide single gas connection

DETAILS: Above units to be batteried together as shown on plan. Burners to be controlled by exclusive 1 degree action, centerline thermostat. Minimum shortening capacity of 40 pounds each.

ITEM #51 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on

drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet, touch screen and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication

protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD’s and then from the VFD’s to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor <u>only</u> system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

<u>Performance Criterion</u>
Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet

construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

Submit shop drawing for review and approval.

ITEM #52 FIRE SUPPRESSION SYSTEMS

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #53 ST. ST. WALL PANELING

One (1) Lot 18 ga. st. st. wall paneling to run from top of coved base to bottom edge of hood. GC to secure paneling to wall with hidden fasteners. Provide cut outs for all utilities as required.
Panel edges to be sealed with clear silicone. Submit shop drawing for review and approval.

ITEM #54 COMBI OVEN W/ STAND

One (1) CLEVELAND model #OGS-10.20 CONVOTHERM™ or RATIONAL SCCWE-102G or ALTO SHAAM #CTP10-20G , timer and core probe, 250 recipe storage capacity, cooking modes hot air, steam, combi, retherm, cook & hold, "Delta T" slow cooking and "Crisp &

Tasty", includes (4) 26" x 20" wire shelves, hand shower, (11) 18"x26" or (22) 12"x20" pan cap. , s/s interior & exterior. Include the following standard and optional accessories:

One (1) Easy Touch Controls
One (1) CST-20-OB open base cabinet with casters, two with locks.
One (1) Lot Claris Water Treatment System, includes (1) pre-filter, (1) Claris X-large steam system, (1) Claris flow meter and (1) water test kit
One (1) Chicken Grill Rack, 12" x 20" (full size), for 10.20 combi OvenSteamers
One (1) Frying Basket, Wire, 20" x 26", for 10.20 combi oven steamers
One (1) Convo Grill Rack, 13" wide x 18" deep, for ConvoTherm ovens, fits directly on pan rack guides
One (1) Lot Convo Clean Hands Free built-in automatic cleaning system: (1) 10 liter ConvoClean, (1) 1 liter Convo Care and (1) empty 10 liter container with label for mixing
One (1) Lot Gas and Water Supply Hoses with quick disconnects and wall restraint
One (1) Lot locking casters.
One (1) Lot factory start up and training

GC to verify accessories with Using Agency prior to shipping.

ITEM #55 NOT USED

ITEM #56 DRY ERASE BOARD
Not in Contract

ITEM #57 ST. ST. TABLE

One (1) Custom fabricated unit, size 30" long x 12" wide x 34" high.

TOP

Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS

Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with steel gusset, welded to channel top reinforcing. Include st. st. flange feet.

SHELF UNDER

Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #58 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #59 WALL MOUNTED CHEMICAL SHELF

One (1) Metro Chrome or Eagle Chrome or ISS Chrome wire wall shelving sized per plan. Each unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

ITEM #60 ST. ST. WALL PANELS

Two (2) Custom fabricated 18 ga. st. st. wall panel sized full width of sink x 36" high. Panels to be secured to wall with hidden fastener. Edges to be sealed with silicone. GC to provided holes in panel as required to accommodate faucet.

Submit shop drawing for review and approval.

ITEM #61 WALL MOUNTED MOP RACK
Not in Contract

ITEM #62 NOT USED

ITEM #63 NOT USED

ITEM #64 NOT USED

ITEM #65 NOT USED

ITEM #66 NOT USED

ITEM #67 NOT USED

ITEM #69 NOT USED

ITEM #70 NOT USED

ITEM #71 WALK IN REFRIGERATOR/FREEZER

QTY: One (1)

MFG: American Panel Custom or Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with waterproof marine grade plywood reinforcing under per manufacturers standards.

Floors to be 3.75" thick. Include a factory installed 32" long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32" long interior Ramp, 36" overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway

One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
Two (2) Vision Windows 14" x 14"

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4" thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity ("K" factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer ("U" factor) shall not exceed .033 and the resistance to heat penetration ("R" factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46" and at junction of vertical and horizontal joints by 23". Cam locks shall be foamed-in-place and anchored securely in the panel by steel "wings" integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #72 NOT USED

ITEM #73 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #74 WALK IN REFRIGERATOR SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #75 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

Two (2) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 in quantity as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #76 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #77 NOT USED

ITEM #78 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Panel section behind dishwasher to run down to top of coved tile base. GC to provide necessary cut outs for power and water supply lines.

Submit shop drawing for review and approval.

ITEM #79 SOILED/CLEAN DISHTABLES/ POT SINK

One (1) Custom Fabricated unit in size 30" & 33” deep x length as shown plan with integral pitch to allow tables to drain towards dishwasher or table drainers.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #84.

TABLE DRAINER - In top of soiled table, furnish integrally welded table drainer 6" wide x 3" deep x full width of dishtable. (Full width to mean from front vertical inside edge of rolled rim to back of vertical edge of backsplash). Inside edges both horizontally and vertically furnished with not less than ½" radius. Interior of drainer to be furnished with all coved cornered perforated strainer basket made of 16 gauge stainless steel.

Include 1/4" stainless steel rod guide handles to allow racks to slide over drainer area. Drainer pitched to drain and to have die stamped opening and furnished with basket drain, brass chrome plated with 1-1/2" tailpiece.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T& S or FISHER or CHICAGO FAUCET Model B-0290-112X (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, or FISHER or CHICAGO FAUCET 12" spout and provide T&S Model 112x 10" spout.

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #80 NOT USED

ITEM #81 VENTLESS DISHWASHER

QTY: One (1)

MFG/MODEL: HOBART AM-15VLT or CHAMPION #DH5000-VHR or MEIKO #DV80.2

CONST: Unit to have spring counter balanced doors arranged as shown on plan. Drawn Tank, Tank shelf and feet constructed of 16 ga. st. st. Frame to be constructed of 12 gauge st. st. Chamber to be constructed of 18 ga. st. st. Removable trim panels to be constructed of 20 ga. st. st. NOTE! Unit to meet all state and local code for ventless operation.

ACCESSORIES:

One (1) Internal condensing system
One (1) Door Lock interlock to prevent door from being opened too soon.
One (1) Single Point electrical connection
One (1) Pressure reducing valve sized for dishwasher capacity (unconnected)
One (1) Automatic tank fill
One (1) Built in 70 degree rise electric booster heater
One (1) 5 KW Tank heater
One (1) Lot of low water tank heat protection
One (1) Splash proof pump motor
One (1) Lot of interlocked door safety switches
One (1) Lot of interchangeable spray arms
One (1) Lot of st. st. front and side panels
One (1) Lot of detergent connection provisions
One (1) Lot of NSF approved gauges on rinse & wash water
One (1) NSF Pot and Pan listed 2, 4 and 6 minute Cycle
One (1) Timed wash cycles for 1,2,4 or 6 minutes
One (1) 27" door opening for 18" x 26 sheet pans or 60 qt. mixing bowl
One (1) Stainless Steel Pump and Impeller
One (1) Delime notification (field activated) and Delime Cycle
One (1) Drain Water tempering kit
One (1) Sheet Pan Rack
Three (3) Standard 20" x 20" dish racks
Three (3) Standard 20" x 20" open racks

ELECT: Per rough in drawings.

ITEM #82 NOT USED

ITEM #83 SOAP AND RINSE DISPENSER
Not in Contract

ITEM #84 3 H.P. DISPOSER AND SPRAY

QTY: One (1) Lot

MFG/MODEL: In-Sink-Erator SS-300-18B-CC101 or Salvajor 300-SA ARSS 18 or Waste King 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve/solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #85 ICE MAKER AND BIN
Furnished by Using Agency, Installed by GC, with connections by PC.

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-0502A or Hoshizaki KM-515MAH or Ice-O-Matic #ICE500

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B400 30" wide bin (290# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor
One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 530 pounds of ice per 24 hours. GC to coordinate location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #86 DRY ERASE BOARD
Not in Contract

ITEM #87 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

See Elevation for details.

ITEM #88 NOT USED

ITEM #89 NOT USED

ITEM #90 NOT USED

ITEM #91 NOT USED

ITEM #92 NOT USED

ITEM #93 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: Two (2)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #94 NOT USED

ITEM #95 NOT USED

ITEM #96 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #97 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #98 WALL MOUNTED MOP RACK
Not in Contract

ITEM #99 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #100 WALL MOUNTED CHEMICAL SHELF

One (1) Metro Chrome wire or Eagle Chrome or ISS Chrome wall shelving sized per plan. Each unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

ITEM #101 STUDENT STOOLS
Not in Contract

ITEM #102 NOT USED

ITEM #103 NOT USED

ITEM #104 ST. ST. WALL COVERING AND CAP

One (1) Lot of 18 ga. st. st. wall paneling covering entire wall area per elevation. Paneling to be installed with flush mounted hidden fasteners. Panel to cover entire wall surface from top of base on all five surfaces. Provide cut outs for all utilities as required.

Submit shop drawing for approval.

ITEM #105 30" HIGH ST. ST. WALL PANELS

One (1) Lot of Custom fabricated 18 ga. St. St. 30" high wall paneling sized and shape as per elevation detail. Paneling to be installed with flush mounted hidden fasteners. Furnish hairline butt joints at all seams GC to seal sides and edges with silicone after installation. Submit shop drawing for approval.

ITEM #106 STUDENT TOOL KITS
Not in Contract

ITEM #107 TRASH RECEPTACLES
Not in Contract

ITEM #108 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #109 ST. ST. WORK COUNTER/REF BASE

Eight (8) Custom fabricated unit, sized 13’ - 6” per plan and elevation detail x 33" deep x 36" high. NOTE Unit exposed through glass to be provide with finished st. st. back.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per General Requirements. Edges against equipment or where shown on plan to be furnished with 12" high integral backsplash with 1" return at 90 degree angle. Caulk with clear G. E. sealant to meet Health Department approval.

SINK In top as shown on plan and elevation furnish integrally welded sink sized 24" x 26" x 12" deep. Sink fabricated of 14 ga. st. st. with horizontal and vertical corners with not less than 5/8" integral radius. Sink bottom to be pitched to drain towards 3-1/2" dia., die stamped opening. Sink to be polished out in all corners to a #4 finish.

SINK TRIM

One (1) T&S B-0230-LN W/ 060X 8” swing spout & B-0199-01 aerator (FISHER, CHICAGO FAUCET)

Furnish each faucet complete with T&S model B-0230-K or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

One (1) T&S model B-3950-01 twist handle drain with rear overflow & 010387-45 or FISHER or CHICAGO FAUCET removable Basket Strainer. Twist drain handle furnished with 14 gauge stainless steel brackets welded to underside sink.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

SINK ENCLOSURE Cabinet base under sink section furnished with 18 ga. st. st. louvered access door. Door to be double pan construction, sound deadened, with NSF hinges and recessed st. st. handles per General Requirements. Bottom of sink enclosure, to be furnished with removable 16 ga. st. st. shelf, coved interior corners with rear and ends turned up 2" against cabinet interior. NOTE! shelf to be held back 8" from rear of cabinet to allow space for water and waste rough-in connections.

LEGS & FLANGE FEET Balance of top to be mounted on 1-5/8" diameter 16 gauge stainless steel tubular legs furnished with integrally welded crossrails between legs. Legs to be furnished with stainless steel gussets and stainless steel adjustable flange type feet. GC to bolt flanges to floor with st. st. lag bolts.

SHELF OVER: Over top as shown on plan furnish single deck 16 gauge stainless steel shelf with 1" rolled rim and 2" turnup against wall at 56”. Shelf to be mounted on 1-1/4" diameter 16 gauge stainless steel cantilever type uprights extending up thru backsplash. Hole in backsplash cut out to fit uprights with not more than 1/16" clearance then caulked with clear silicone sealant.

ATTACHMENT RACK Above shelf as shown on elevation detail, provide two (2) bar type rack constructed of 2" x 1/4" st. st. bars welded to 12 ga. st. st. gussets at each end and reinforced thru center on approx., 36" centers with similar type gussets. (Verify mounting height). Attachment rack/shelf support uprights to be reinforced below top as required to support heavy loads.

Each bar to be furnished with st. st. sliding type pot hooks space on 6" centers. Racks to be all welded construction with all welds ground and polished smooth. Top bar to be 10" out from wall with bottom bar 3" out from wall.

STOOL & TOOL KIT STORAGE Provide open storage and shelves sized per plan and elevation detail for stool and tool kit storage. GC to verify exact size with Using Agency.

UNDERCOUNTER REFRIGERATOR Two (2) 18 gauge st. st. custom fabricated single compartment undercounter refrigerators. Door hardware, gaskets, etc. component all to be per manufacturers standard. Interior of undercounter refrigerator to be 18 ga. st. st. with all coved corner welded construction, furnished with NSF approved automatic interior light, drain, three (3) adjustable chrome plated wire shelves per compartment, and a dial thermometer on cabinet per Department of Health Requirements. Include recessed blower coils, solenoids, thermostat, interior light, control switch and pilot light installed inside refrigerator. See remote refrigeration specification for details.

GC to be responsible for 100% operating system, including interconnections with item #778 and verify all refrigeration line runs.

ELECTRICAL: Provide pre-wired duplex receptacles furnished and installed to meet all state and local code. Receptacles to be located in backsplash as shown on elevation and rough in plan. Receptacles to be pre-wired to “J” box in base of cabinet.

Submit shop drawing for approval.

ITEM #110 UTENSIL RACKS

One (1) Lot included with item #109.

ITEM #111 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #112 NOT USED

ITEM #113 WALDORF STYLE COOKING BATTERY

Four (4) Garland Range or Jade or Montague Custom Waldorf Suites as shown on plan. Suites shall have combination of precision mechanical and welded stainless steel construction throughout and be hand built to custom specifications. All units shall be fully constructed and tested at the factory prior to shipment.

See elevations and sections for details. Waldorf Suite shall include the following heavy duty components:

One (1) Full perimeter belly bar furnished 2" x 1/2"
Four (4) Food wells w/ drains & faucets
Two (2) Char-broilers
Four (4) Four Burner Ranges and one 12" hot top with convection ovens
Two (2) Storage cabinets
Two (2) Overhead Salamander Broilers
Four (4) Recessed Duplex Receptacles (two per side on end cabinets)
Two (2) Custom End Cabinets w/ stainless doors
One (1) Custom St. St. Tubular Over-shelf
One (1) Custom Stainless Steel Removable Center Cover
One (1) Custom Stainless Steel Back Pedestal Flue to support over-shelf and salamanders

Suite shall be provided with a single point gas connection, 1 ¼" gas pressure regulators and custom center raceway gas manifold. Suite shall have a single point electrical connection with main load center
Water, Drains, Gas and Electric Utilities per plan and rough in.

HW/SMP-60 Wells cook and hold warmer C/W Faucets Fisher, Chicago or T&S
M17B Ceramic Stone Char-broilers 45K Btu. All stainless exterior.
M43-1RC 4 burner range C/W (4) 26K Btu open burner one 12" hot-top 22K Btu and 40K Btu oven burner. Oven interior is black porcelain. All stainless exterior.
M17ES Cabinets with stainless door. Utility cabinets. All stainless exterior.

MIR-34C Salamanders with (2) 20K Btu ceramic tile burners. All stainless exterior.

GC to turn faucet assemblies over to PC for installation and connection to water source.

Submit shop drawing for review and approval.

ITEM #114 ST. ST. ISLAND EXHAUST HOODS
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

Four (4) HALTON Back-to-back model #KVE – PSP commercial kitchen island style exhaust hood sized per plan. All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24"H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing. The use of end panels or rear seals to achieve required airflows, are not acceptable.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water

proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted “Override” button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal “Capture-Jet” System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1” air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, based upon ASTM F-2519-05 method of test, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In

addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

Submit shop drawing for review and approval.

ITEM #115 FIRE SUPPRESSION SYSTEMS

Four (4) System completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #116 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #117 NOT USED

ITEM #118 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

Two (2) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 pan rack in quantity as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #119 GRIDDLE TOP/CHARBROILER/OVEN BASE
Furnished by Using Agency, Installed by GC.

One (1) JADE component unit consisting of JMRH-24GT, JMRH-24B & JTRH-36S or GARLAND custom or VIKING custom fabricated component unit in similar configuration.

SPECIFICATIONS:

Units to be batteried together and provided per manufacturers standards.

ACCESSORIES:

One (1) Cabinet base extensions, 12"
One (1) Common 6” plate shelf, per unit
One (1) Gas hose with quick disconnects and wall restraint
One (1) 3/4" Rear connection
One (1) 3/4" Gas regulator supplied w/range
One (1) Set of four casters (2 with brakes)

UTILITY REQMTS:

Provide unit for Natural Gas.

ITEM #120 ST. ST. WALL PANELING AND CAP

One (1) Lot of Custom fabricated 18 ga. wall paneling sized and shape as per elevation detail. Paneling to be installed with hidden fasteners. Include Sill cap with 1.5” turn down on all sides. Corners to be mitered and welded smooth to match original final. Paneling to run from top of wall down to top of coved base below on chef’s side. Furnish hairline butt joints at all seams GC to seal sides and edges with silicone after installation.

Submit shop drawing for approval

ITEM #121 SIX BURNER RANGE W/ CONVECTION OVEN BASE
Furnished by Using Agency, Installed by GC.

One (1) Garland Model G36-6C D or Jade # JTRH-6-36C or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Convection Oven Base
One (1) Stainless steel back guard
One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #122 ST. ST. ISLAND EXHAUST HOODS
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON unit sized per plan. General construction to be same as item #114. Submit shop drawing for review and approval.

ITEM #123 FIRE SUPPRESSION SYSTEMS

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):

1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #124 ST. ST. DEMO TABLE W/ SINK

One (1) Custom Fabricated unit sized 10' - 6" long x 36" wide x 36" high.

Top: Fabricated of 14 ga. St. St. With type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per general requirements.

Sink: In top as shown on per plan furnish integrally welded sink 18" x 21" x 12" deep. Sink fabricated of 14 ga. st. st. with horizontal and vertical corners with not less than 5/8" integral radius. Sink bottom to be pitched to drain towards 3 1/2" dia., diestamped opening. Sink to be polished out in all corners to a #4 finish.

Sink Trim: One (1) T& S or FISHER or CHICAGO FAUCET Model B-1120-LN deck type faucet furnished with 060X, 8” swing spout with B-0199-01 aerator. Faucet caulked watertight to counter top. Faucet to be cast red brass, all chrome plated with color coded hot and cold water faucets.

One (1) T&S Model B-3950-01 (1-1/2” I.P.S) T& S or FISHER or CHICAGO FAUCET twist handle drain with connected rear overflow assembly

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

Backsplash: Side of top to be turned up against stub wall as shown on elevation.

Undercounter Dishwasher; Provide recessed space in base cabinet sized to accommodate undercounter dishwasher and detergent bottles. See elevation for location and details.

Electrical: Provide recessed electrical receptacle in splash as shown on elevation. Receptacle to be pre-wired to “J” box in base of cabinet. Provide Electrical receptacle in A/V cabinet for computer and DVD use. All receptacles to be located on shop drawings.

Base Enclosure: Cabinet base under unit to be furnished with 18 gauge stainless steel full width access doors. Door to be double pan constructed, sound deadened with stainless steel, NSF hinges and recessed stainless steel handle per general requirements. Bottom of sink enclosure, to be furnished with removable 16 gauge stainless steel shelf, coved interior corners with rear and ends turned up 2" against cabinet A/V Section to be provided with pull out drawer for keyboard , etc. per section detail. Base to be supported with 6” legs with adjustable bullet feet.

Tray Storage: Provide enclosed storage area for pans as shown on elevation.

Submit shop drawing for review and approval.

ITEM #125 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

One (1) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #126 ST. ST. SLICER STAND
Furnished by Using Agency, Installed by GC.

One (1) Custom fabricated unit, size 30" long x 30" wide x 34" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #127 SLICER
Furnished by Using Agency, Installed by GC.

One (1) Hobart Model #H7 or Globe #3950N or Berkel #X13AE-Plus automatic slicer furnished per manufacturers standards. Provide the following standard and optional accessories:

One (1) Food Chute
One (1) Low Fence
One (1) UL Cord and plug

ITEM #128 UNDERCOUNTER DISHWASHER
Furnished by Using Agency, Installed by GC, with connections by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with "auto-prime"
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators
One (1) Peg rack
One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency's soap and rinse dispensing system.

ITEM #129 FRYER SYSTEM
Furnished by Using Agency, Installed by GC.

One (1) Lot FRYMASTER H-55SC or PITCO #SSH-55C-S/FD or ALTO SHAAM #ASF-60G Fryers High Efficiency Gas Fryers & Matching st. st. spreader dump station w/ Heat Lamp.

Fryers to be all st. st. construction. Frypots to be all st. st. with drain lever actuated st. st. ball type at bottom of frypot cool zone. St. st. finished back to be included.

ACCESSORIES:

One (1) Footprint filter. Filter to be located under fryers and shall be integrally piped to adjacent fryers. Include filter heater.
One (1) Lot Electronic Timers
One (1) Lift off 16 ga. st. st. covers
One (1) Set of casters, two with brakes
One (1) Full Size Baskets
Two (2) Twin Size Baskets
One (1) Box of filter paper
One (1) Box of filter powder

One (1) Quick Disconnect with Gas Hose and restraint

DETAILS: Above units to be batteried together as shown on plan. Burners to be controlled by exclusive 1 degree action, centerline thermostat. Minimum shortening capacity of 40 pounds each

ITEM #130 REACH IN BLAST CHILLER

One (1) IRINOX model #MF70.1L or American Panel # AP12BCF110-3 or Delfield #T14D reach in blast chiller / shock freezer furnished per manufacturers standards. Include the following standard and optional accessories, One (1) Sous-vide Pouch core temp probe , One (1) Lot casters, two with locks, one (1) UL Cord and plug.

ITEM #131 EXISTING 40 TILT BRAISING PAN

One (1) Existing 40 gallon Groen unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

NOTE! GC to provide pantry style fill faucet per manufacturers standards and necessary mounting hardware. Faucet and hardware to be turned over to PC for installation and final connection.

EC to be responsible for final electrical connection (flex conduit, plug, etc.) required to properly re-connect unit per code.

GC shall provide new gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #132 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9” x 9” x 4” deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4"

centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor depression.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #133 EXISTING 40 GALLON ELECTRIC TILT KETTLE W/ FAUCET

One (1) Existing Groen 40 gallon unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code. EC to replace direct wire connection with UL approved plug type cord.

GC shall provide new gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

PC to be responsible for final connection to water source.

ITEM #134 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9” x 9” x 4” deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall

be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor depression.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #135 40 QT. KETTLE W. STAND

One (1) GROEN MODEL: TDH-40 & TS/9S or Cleveland #KGT-12-TGB or Blodgett #12G-KTT GAS Kettle shall be of 304 stainless steel, one-piece welded construction. All exposed surfaces shall be stainless steel. All controls shall be contained in a gasketed enclosure. Unit shall be furnished with a heavy reinforced rim with a welded-in butterfly shaped pouring lip for maximum sanitation and durability. Right or left hand tilt handle. Faucet bracket is standard and mounted on rear of control box.

ACCESSORIES with each:

One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet w/ swing spout
One (1) TS/9S Equipment Stand with sliding drain drawers
One (1) Lot gas and water hoses with quick disconnects

ITEM #136 FRYER SYSTEM
Furnished by Using Agency, Installed by GC.

One (1) Lot FRYMASTER H-55SC or PITCO #SSH-55C-S/FD or ALTO SHAAM #ASF-60G Fryers High Efficiency Gas Fryers & Matching st. st. spreader dump station w/ Heat Lamp .

Fryer to be all st. st. construction. Frypot to be all st. st. with drain lever actuated st. st. ball type at bottom of frypot cool zone. St. st. finished back to be included.

ACCESSORIES:

One (1) Footprint filter. Filter to be located under fryers and shall be integrally piped to adjacent fryers. Include filter heater.
One (1) Lot Electronic Timers
One (1) Lift off 16 ga. st. st. covers
One (1) Set of casters, two with brakes
One (1) Full Size Baskets
Two (2) Twin Size Baskets

One (1) Box of filter paper
One (1) Box of filter powder
One (1) Quick Disconnect with Gas Hose and restraint
One (1) SDU50 Shortening Disposal Unit

DETAILS: Above units to be batteried together as shown on plan. Burners to be controlled by exclusive 1 degree action, centerline thermostat. Minimum shortening capacity of 40 pounds each.

ITEM #137 EXISTING COMBI OVEN

One (1) Existing Cleveland unit to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

GC shall provide new gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #138 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor

will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet, touch screen and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of

the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor <u>only</u> system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

<u>Performance Criterion</u>

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed,

does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

Submit shop drawing for review and approval.

ITEM #139 FIRE SUPPRESSION SYSTEMS

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #140 UTILITY DISTRIBUTION SYSTEM

One (1) HALTON model KDS or AVTEC UDS or CADDY UDS Utility Distribution System in length as shown on plan consisting of two risers and a raceway shipped in sections for field assembly and connection to services by the appropriate trades. The risers shall also have an extension for field installation that joins to the risers at a level below the bottom of the companion exhaust hood so that the hood may be installed prior to the UDS. The exterior of the risers and the raceway shall be constructed of 304 type stainless steel, number 4 finish, not less than 18 Ga. Internal bracing shall be galvanized steel. All riser access doors shall be hinged and have pull and turn latches. Raceway panels shall be held in place by screws. The raceway shall have a peaked top to shed water. The UDS shall have a neoprene bumper strip running the full length of the raceway.

NOTE! Manufacturer to verify all voltage and loads of existing and new equipment connected to unit to insure proper sizing of Electrical and Gas Supply Feeds.

ELECTRICAL CONTRACTORS RESPONSIBILITIES:

There shall be a single point main electrical field connection to the UDS. The UDS shall have main breaker with a shunt trip sized to have a capacity at least 20% greater than the load of the originally-specified cooking equipment being connected.

The main breaker and the shunt trip shall be housed in a riser. Power shall be distributed through the raceway through suitably sized wire. Bus bars are optional. The raceway shall have removable plates on which there are mounted point of use breakers and receptacles for connection of individual appliances. Manufacturer reserves the right to substitute a direct connection for the receptacle when the electrical load is so great that supplying a receptacle is not practical. There shall be a "stop" button located on a riser to shut off the supply of electricity and fuel gas to the individual appliances in the event of an emergency.

EC to be responsible for all field joints required to join units together.

PLUMBING CONTRACTORS RESPONSIBILITIES:

There shall be a single point connection for both domestic hot and cold water. There shall be quarter-turn ball valves located in a riser to isolate the main UDS water lines should the need arise. Hot and cold water lines shall be type "L" hard-drawn copper. Branch connections shall be located at suitable points along the length of the raceway and shall consist of a quick disconnect with integral ball valve and a flexible hose. Both water lines shall be insulated with ½" open cell foam. Provide integral Backflow Prevention on water supply lines as required by code. Manufacturer to verify with state and local inspectors as to type of units required.

PC to be responsible for all field joints required to join units together.

HEATING CONTRACTORS RESPONSIBILITIES:

There shall be a single point connection for fuel gas. The fuel gas line shall be sized to have a capacity at least 20% greater than the load of the originally specified cooking equipment being connected. There shall be a quarter-turn ball valve located in a riser to isolate the main UDS fuel gas line should the need arise. Looped fuel gas systems there shall be one mechanical gas valve shipped loose for installation before the tee to the loop in the fuel gas line. The field installation of the mechanical gas valve is the responsibility of the Heating Contractor. Fuel gas lines shall be schedule 40 iron pipe. **All joints in the main gas line are to be field welded. Unions, Couplings, Bushing, Etc**., are not permitted per International Fuel Gas Code. Branch connections shall be made at suitable points along the length of the raceway and shall consist of a quarter-turn ball valve and a flexible hose.

HC to be responsible for all field joints required to join units together.

Submit shop drawing for review and approval.

ITEM #141 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

One (1) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #142 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #143 ST. ST. WALL PANELING

One (1) Lot 18 ga. st. st. wall paneling above and below UDS to cover wall up to bottom edge of hood. GC to secure paneling to wall with hidden fasteners. Provide cut outs for all utilities as required.
Panel edges to be sealed with clear silicone. Submit shop drawing for review and approval.

ITEM #144 EXISTING 40 QT. ELECTRIC KETTLE

One (1) Existing GROEN 40 qt. unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code. EC to replace direct wire connection with UL Approved plug type cord.

GC to be responsible for all final connection piping, gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

PC to be responsible for final connection to water source.

ITEM #145 NOT USED

ITEM #146 NOT USED

ITEM #147 NOT USED

ITEM #148 NOT USED

ITEM #149 NOT USED

ITEM #150 NOT USED

ITEM #151 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #152 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated

electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #153 ST. ST. SINK

One (1) Custom Fabricated Single Compartment Unit Sized per Plan and Elevation Detail. Unit to Consist of the Following:

BACKSPLASH: Rear & Sides Against Walls or Equipment to Be Furnished with 12" High Integral Backsplash. Top to Be Turned Back at 45 Degree Angle with 1" Return down Parallel to Wall. Furnish 14 Ga. St. St. "Z" Clips to Hold Backsplash Tight to Wall in Neat & Workmanlike Manner. Side Against Bakers Table to Be Furnished with 6" High Backsplash to Fit Tight Against Maple Riser. Provide Clear Silicone Sealant to Wall & Equipment per Health Department Requirements. Side splash profile to match maple top riser.

SINK: Single Compartment Integrally Welded Sink 28" Wide Overall X 30" Front to Back X 12" Deep. Bottom of Sink to Be Pitched and Furnished with Die-stamped Opening to Accommodate Waste Flange. Sink to Have All Coved Corners and Be Fabricated per General Requirements. Free Edges on Sink to Be Type "D", Except Turndown to Match Bakers Table Edge.

SINK TRIM: One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator One (1) T&S B-3950-01 (2" IPS) or FISHER or CHICAGO FAUCET Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly. Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

LEG SUPPORTS: Top & Sink to Be Mounted on EFW All St. St. One (1) Leg Supports. Gusset, Leg Crossbrace & Wall Flange to Be Constructed per General Requirements. Submit Detailed Shop Drawing for Review & Approval.

ITEM #154 ST. ST. WORK TABLE

One (1) Custom fabricated st. st. work table sized 11’- 0” long x 33” deep x 36” high to working surface Front cross rail to be omitted to allow storage space for bins. General construction to be same as previously specified. Unit to be furnished with the following:

One (1) Lot integral 6” rear and side splash – Right hand splash to match contour of adjacent sink
One (1) Type “A” Edge on Front
One (1) Lot EFW one leg supports
One (1) Lot of st. st front legs with adjustable bullet feet

Provide finished rear where exposed through glass.

Submit shop drawing for review and approval.

ITEM #155 INGREDIENT BINS
Furnished by Using Agency, Installed by GC.

Four (4) CAMBRO Model #ISB27 or Rubbermaid 27 gallon or Piper 27 gallon Bins Complete with Lids & Scoops. Units to be furnished per manufacturers standards.

ITEM #156 PORTIONS SCALE
Not in Contract

ITEM #157 NOT USED

ITEM #158 NOT USED

ITEM #159 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #160 3 H.P. DISPOSER W/ RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18” cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block

One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #161 ST. ST. THREE COMP. SINK

One (1) Custom Fabricated unit in size 33” deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #160.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12" spout and provide T&S Model 112x 10" spout Oor FISHER or CHICAGO FAUCET

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #162 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #163 UNDERCOUNTER DISHWASHER
Furnished by Using Agency, Installed by GC, with connections by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with “auto-prime”
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators
One (1) Peg rack
One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency’s soap and rinse dispensing system.

ITEM #164 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #165 NOT USED

ITEM #166 DOUGH DIVIDER/ROUNDER
Furnished by Using Agency, Installed by GC.

One (1) DOYON model #DSF030 or DoughXpress DX-JN or Dutchess # JN semi automatic divider rounder. Unit to be furnished per manufacturers standards.

ITEM #167 EXISTING ICE CREAM MAKER

One (1) Existing unit to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #168 WATER METER

One (1) GEMINI Model #SAMM200 or DOYON #DAF001 or BAXTER #WM water meter furnished per manufacturers standards. Unit to have Baked enamel coated steel housing, wall mounted at four flange connections. Provide meter with the following standard and optional accessories:

One (1) 72" Dispensing hose with nozzle
One (1) Wall Hook for nozzle

Manual temperature mixing control valve with dial (Fahrenheit). Manual water volume control valve graduated in pounds from 1 to 200 pounds. 50-75 pounds per minute. Emergency cut-off valve. Two water inlets- hot and cold 3/4" connections. Incoming water pressure to be regulated between 48-64 PSI.

Unit to be mounted in location as shown on plan and elevation.

PC to make final connections to water source.

ITEM #169 WALL MOUNTED DRAIN BASIN

One (1) ADVANCE TABCO model 7-PS-23 or Eagle Custom or John Boos Custom wall mounted Stainless Steel sink. Unit to be furnished without holes punched for faucet. Include drain assembly and tailpiece. Sink to be used for catch basin for water dispenser. GC to mount unit on wall in location as shown on plan.

PC to make final connection to waste line.

ITEM #170 ICE CREAM MAKER
Furnished by Using Agency, Installed by GC.

One (1) COLDLITE / CARPIGIANI model #LB-100B or pre-approved equal batch freezer. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot 4” high st. st. legs per Health Department
One (1) UL cord and plug
One (1) Fully automatic operation with electronic consistency control.
One (1) Lot Heavy duty drive system produces firmer product and longer life.
One (1) Unique freezing cylinder design provides faster production and smoother product.

One (1) Heavy duty, one piece auger results in a maximum clean-out with minimal flavor overlap.
One (1) Adjustable timer.

ITEM #171 EXISTING 60/30 QT. MIXER

One (1) Existing HOBART unit to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #172 PORTABLE MIXER STAND
Furnished by Using Agency, Installed by GC.

One (1) HOBART model #124078-A-HL200 Varimixer Mobile or Globe portable mixer stand furnished per manufacturers standards.

ITEM #173 20 QT. MIXER
Furnished by Using Agency, Installed by GC.

One (1) Hobart model #HL-200 or Varimixer #W20J or Globe #SP-20

CONST: Per Manufacturers Standard.

ACCESSORIES w/ each unit.

One (1) UL Approved cord and plug
One (1) Timer & automatic shut-off switch
One(1) Accessory Package
- 20 Quart Stainless Steel Bowl
- 20 Quart "B" Beater
- 20 Quart "D" Wire Whip
-20 Quart "ED" Dough Hook
-20 Quart Bowl Scraper
- 20 Quart Ingredient Chute

ELEC: .5 HP. w/ voltage and phase per rough-in drawing

ITEM #174 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #175 ST. ST. WORK TABLE

One (1) Custom fabricated unit, size 60" long x 30" wide x 28" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail. Submit shop drawing for review and approval

ITEM #176 ROTARY OVEN RACKS

Two (2) Units included with item #177.

ITEM #177 ROTARY RACK OVEN

One (1) GEMINI/SVEBA DAHLEN, model #C152 or Baxter Rotary or Revent Rotary rack oven. Unit to be gas fired with single rack capacity. Oven to be provided per manufacturers standards. Include the following standard and optional accessories:

One (1) Rear Drain
One (1) Type I hood with single point connection
One (1) Electric soft start rack rotation

One (1) Water pressure regulator and filter
Two (2) Roll-in baking racks
One (1) Built in steam generator
One (1) Door/Exhaust fan interlock
One (1) Soft start rack rotation
One (1) Standard Hinged Right Door per plan
One (1) Lot St. St. Angle Trim to close off unit to walls

HC, PC and EC to make final connections.

Submit shop drawing for review and approval.

ITEM #178 ST. ST. EXHAUST HOOD

One (1) Unit included with item #177.

ITEM #179 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and

local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):

1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #180 TWO SECTION ROLL IN PROOFER/RETARDER

One (1) DOYON model #ER236TLO or BAXTER #RPW2E 40.5T or or Hobart #HRPW2E-405 two door extra tall self contained two rack roll in retarder-proofer furnished per manufacturers standards. Include the following standard and optional accessories:

Two (2) Glass doors with st. st. bumper guard
Two (2) Roll in Racks
One (1) Rear Drain extended to IW by PC
One (1) Lot of st. st. trim to seal unit to wall.

ITEM #181 ST. ST. WALL CABINET/GLASS DOORS

One (1) Lot of Custom Fabricated Stainless Steel Wall hung cabinet with intermediate shelf. Sloping Top enhances sanitary configuration. Cabinets sized per plan and elevation detail.

All TIG welded using the TIG process. Welded seams finished to match adjacent surfaces.

Unit polished to a satin finish. 18 gauge type 430 series stainless steel. Stainless steel hinges and handles. Provide units with .25" tempered glass doors with st. st. frame.

GC to lag units to wall with heavy duty Stainless Steel lag bolts. Cabinets to support heavy loads.

Submit shop drawing for approval.

ITEM #182 ST. ST. WALL CABINET/GLASS DOORS

One (1) Lot of custom fabricated units sized per plan and elevation detail. General construction to be same as item #181. GC to coordinate length wall cabinet to fit from edge of wall to edge of windows.

Submit shop drawing for review and approval.

ITEM #183 SIX BURNER RANGE/CONVECTION OVEN BASE
Furnished by Using Agency, Installed by GC.

One (1) Garland Model G36-6C or Jade # JTRH-6-36C or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Convection Oven Base
One (1) Stainless steel back guard
One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint
One (1) Salamander Broiler, gas, 35-1/2" W, for GF36 Range, (2) 14,000 BTU infrared burners with Hi-Lo valve controls each, (3) position spring balanced rack assembly, removable grease pan, stainless steel front, sides, top, backsplash and bottom with heat shield, 28,000 BTU
One (1) Stainless steel main back (salamander)
One (1) Interconnecting gas lines from range to salamander

ITEM #184 BACKSHELF BROILER
Furnished by Using Agency, Installed by GC, with connection by HC.

One (1) Unit included with item #183.

ITEM #185 NOT USED

ITEM #186 NOT USED

ITEM #187 NOT USED

ITEM #188 EXISTING THREE DECK BAKE OVEN

One (1) Existing ADAMATIC unit to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #189 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #190 DECK OVEN

One (1) BONGARD #Soleo M3 or Sveba Dahlen DC-33 or MIWE 3 deck three pan oven furnished per manufacturers standards with stainless steel front, sides and top, full length glass windows in oven doors.

One (1) Single point electrical connection
One (1) Set of four legs with heavy duty casters, two with locks
Three (3) stone hearth decks with removable wire baking rack
Three (3) decks with self generating steam system

Oven to have three decks each with a capacity of three (3) 18" x 26" sheet pans Each deck to have top, bottom and front independent heat controls with three separate infinite setting controls. Provide built-in lights and evacuation dampers for each deck.

See rough in plan for voltage & phase. Submit shop drawing for review and approval.

ITEM #191 ST. ST. EXHAUST HOOD

Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed

by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal “Capture-Jet” System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1” air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control

System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton

M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.
A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #192 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #193 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear and side wall paneling sized per plan and elevation detail. Provide wall panels from bottom edge of hood down to top of base cove. Verify height of cove before fabrication. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #194 PORTABLE PAN RACKS
Furnished by Using Agency, Installed by GC.

Seven (7) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #195 EXISTING DOUGH SHEETER

One (1) Existing RONDO SSO615 dough sheeter to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #196 DUNNAGE RACKS

Furnished by Using Agency, Installed by GC.

One (1) CAMBRO DRS480 or Metro or Eagle heavy duty dunnage racks sized 36 & 48 x 21" as shown on plan. Unit to be furnished #180 Gray.

ITEM #197 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #198 WALK IN REFRIGERATOR/FREEZER

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards.

Floors to be 3.75” thick. Include a factory installed 32” long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46”, 57 ½” or 69” wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2” diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14” x 14” triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32" long interior Ramp, 36" overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825

Two (2) Vision Windows 14” x 14”

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4” thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity (“K” factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer (“U” factor) shall not exceed .033 and the resistance to heat penetration (“R” factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46” and at junction of vertical and horizontal joints by 23”. Cam locks shall be foamed-in-place and anchored securely in the panel by steel “wings” integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #199 NOT USED

ITEM #200 WALK IN REFRIGERATOR SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #201 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1" increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5" dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #202 ST. ST. SCALING WORK TABLE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #154. Submit shop drawing for review and approval.

ITEM #203 INGREDIENT BINS
Furnished by Using Agency, Installed by GC.

Four (4) CAMBRO Model #ISB27 or Rubbermaid 27 gallon or Piper 27 gallon ingredient bins Complete with Lids & Scoops. Units to be furnished per manufacturers standards.

ITEM #204 PORTION SCALE
Not in Contract

ITEM #205 ST. ST. & WOOD TOP DEMO COUNTER

One (1) Custom fabricated maple and st. st. top table sized per plan and elevation detail. General construction to be same as item #220, including st. st. center section under induction cook top.

Include integral end splash to match contour of adjacent st. st. sink. Counter to be provide unit with the following:

Provide recessed electrical receptacle in splash as shown on elevation. Receptacle to be pre-wired to "J" box in base of cabinet. Provide Electrical receptacle in A/V cabinet for computer and DVD use. All receptacles to be located on shop drawings.

Cabinet base under unit to be furnished with 18 gauge stainless steel full width access doors. Door to be double pan constructed, sound deadened with stainless steel, n.s.f. hinges and recessed stainless steel handle per general requirements. Bottom of enclosure, to be furnished with removable 16 gauge stainless steel shelf, coved interior corners with rear and ends turned up 2" against cabinet A/V Section to be provided with pull out drawer for keyboard , etc. per section detail.

Under top, furnish tier of three (3) 18 ga. st. st. drawers each 20" x 20" x 5" deep. Drawer inserts to be removable type with roller bearing extension slides, double pan construction drawer fronts and 18 ga. st. st. cabinet enclosure constructed per General Requirements. Base of unit to be mounted on, 6" high st. st. adjustable legs. Each drawer to be furnished with Cylinder Locks installed per Manufacturer's recommendations. All drawer locks to be keyed alike on entire job.

Submit shop drawing for review and approval.

ITEM #206 NOT USED

ITEM #207 REACH IN BLAST CHILLER

One (1) Existing Delfield #T14D reach in blast chiller to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code. EC to replace direct wire cord with UL plug type cord.

ITEM #208 TRASH RECEPTACLES
Not in Contract

ITEM #209 PORTABLE ST. ST. MIXER STANDS
Furnished by Using Agency, Installed by GC.

Four (4) HOBART model #124078-A-HL200 or Varimixer Mobile or Globe portable mixer stand furnished per manufacturers standards.

ITEM #210 20 QT. MIXERS
Furnished by Using Agency, Installed by GC.

Two (2) Hobart model #HL-200 or Varimixer #W20J or Globe #SP-20

CONST: Per Manufacturers Standard.

ACCESSORIES w/ each unit.

One (1) UL Approved cord and plug
One (1) Timer & automatic shut-off switch
One(1) Accessory Package
- 20 Quart Stainless Steel Bowl
- 20 Quart "B" Beater
- 20 Quart "D" Wire Whip
-20 Quart "ED" Dough Hook
-20 Quart Bowl Scraper
- 20 Quart Ingredient Chute

ELEC: .5 HP. w/ voltage and phase per rough-in drawing

ITEM #211 ST. ST. SINK

One (1) Custom Fabricated Single Compartment Unit Sized per Plan and Elevation Detail. Unit to Consist of the Following:

Rear against bakers table to be Furnished with 6" High Integral Backsplash with finished back. Sides to be provided with rolled edge. Provide Clear Silicone Sealant between finished splash back and bakers table. Single Compartment Integrally Welded Sink 30" Wide Overall X 24" Front to Back X 14" Deep. Bottom of Sink to Be Pitched and Furnished with Die-stamped Opening to Accommodate Waste Flange. Sink to Have All Coved Corners and Be Fabricated per General Requirements

One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator
One (1) T&S B-3950-01 (2" IPS) or FISHER or CHICAGO FAUCET Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly. Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

Sink to Be Mounted on st. st. legs with adjustable feet. per General Requirements. Submit Detailed Shop Drawing for Review & Approval.

ITEM #212 EXISTING 20 QT. MIXERS

Two (2) Existing VARIMIXER units to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #213 NOT USED

ITEM #214 DRY ERASE BOARD
Not in Contract

ITEM #215 NOT USED

ITEM #216 NOT USED

ITEM #217 ST. ST. WORK TABLE W/ SHELF

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #154, except provide full length st. st. shelf above and st. st. lower shelf per general requirements. Shelf to be supported from top below with cantilevered brackets.

Shelf mounting height to be coordinated with window for display. Provided finished rear where exposed through glass.

Submit shop drawing for review and approval.

ITEM #218 7 QT. MIXER
Furnished by Using Agency, Installed by GC.

Seventeen (17) KITCHEN AID Commercial #KSM7990WH 7 QT or Vollrath #40755 or Globe #SP8

CONST: Per manufacturers standards.

ACCESSORIES: w/ Each unit.

One (1) Lot NSF Approval
One (1) UL Approved cord and plug
One (1) Stainless Steel Bowl
One (1) Beater
One (1) Wire Whip
One (1) Dough Hook

ELEC: voltage and phase per rough-in drawing.

ITEM #219 STUDENT STOOLS

Not in Contract

ITEM #220 WOOD TOP WORK COUNTERS

Four (4) Custom fabricated units sized 12'-0" long x 5'-6" wide x 36" high to working surface. See plan and elevation for details.

Provide pre-wired duplex receptacles. All electrical to be concealed under top. Electrical to meet all state and local requirements. Counter to be provided with (4) duplex 20 amp receptacles and four (4) Single receptacles for induction cookers Per rough in drawings. EC to be responsible for final connection.

Top to be constructed of 3" Maple. Top shall be built in accordance with and bear the seal of N.S.F. Tops to be provided with 3/16" radius on top and bottom edge. Tops to be sealed in material as directed after Using Agency has reviewed samples.

Underside of top to be reinforced with stainless steel channels as called for under General requirements.

Channels to be mounted on 1 5/8 legs with stainless steel bullet type feet. Gussets to be secured to underside of table top reinforcing.

Also include stainless steel crossrails between legs, except omit crossrail in front to allow space for stools specified under Item #300. Opening shelving and tool box storage to be per elevation details.

GC to submit 12" x 12" x 1" samples of block in Mineral Oil finish for operators review and approval.

Submit shop drawing for approval.

ITEM #221 CEILING MOUNTED SHELVES

Four (4) Custom fabricated unit furnished over top of bakers tables as shown on plan and elevation details. Unit to include two (2) 14 gauge stainless steel elevated shelves mounted to six (6) stainless steel supports fastened to angle channel above ceiling. Edges of shelf to be provided with 1.5" turn down.

Shelves to be supported from six (6) heavy duty anti-sway supports from above. Shelves that sway will not be accepted. GC to coordinate with structural above to insure proper fit.

Submit shop drawing for review and approval.

ITEM #222 INDUCTION COOK TOPS (1800 WATT)
Furnished by Using Agency, Installed by GC.

Seventeen (17) COOKTEK model #MC1800G or Spring 1.8KW or Vollrath 1800 counter top cook top. Unit to be furnished per manufacturers standards. Include 72" long cord and plug.

ITEM #223 CHEMICAL STORAGE SHELVING

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #224 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #225 WALL MOUNTED MOP RACK
Not in Contract

ITEM #226 NOT USED

ITEM #227 NOT USED

ITEM #228 NOT USED

ITEM #229 NOT USED

ITEM #230 NOT USED

ITEM #231 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #232 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #233 NOT USED

ITEM #234 ST. ST. WORK TABLE/SINK

One (1) Custom Fabricated Single Compartment sink with work top sized Plan and Elevation Detail. Unit to Consist of the Following:

Backsplash: Rear & Sides as shown to Be Furnished with 6" High Integral Backsplash. Side Against Bakers scaling Table to Be Furnished with 6" High Backsplash to Fit Tight Against Maple Riser. Provide Clear Silicone Sealant to Wall & Equipment per Health Department Requirements.

Sink: Single Compartment Integrally Welded Sink 18" Wide x 21" Front to Back x 14" Deep. Bottom of Sink to Be Pitched and Furnished with Die-stamped Opening to Accommodate Waste Flange. Sink to Have All Coved Corners and Be Fabricated per General Requirements. Free Edges on Sink to Be Type "D", Except Turndown to Match Bakers Table Edge.

One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator
One (1) T&S B-3950-01 (2" IPS) or FISHER or CHICAGO FAUCET Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly. Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

Provide st. st. removable lower shelf same as previously specified. Over top include st. st. wall shelf secured with heavy duty anchors and st. st. screws.

Submit Detailed Shop Drawing for Review & Approval.

ITEM #235 NOT USED

ITEM #236 PORTION SCALE
Not in Contract

ITEM #237 ST. ST. WORK TABLE

One (1) Custom fabricated st. st. work table sized 9'- 6" long x 33" deep x 36" high to working surface Front cross rail to be omitted to allow storage space for bins. General construction to be same as previously specified. Unit to be furnished with the following:

One (1) Lot integral 6" rear and side splash – Right hand splash to match contour of adjacent sink
One (1) Type "A" Edge on Front
One (1) Lot EFW one leg supports
One (1) Lot of st. st front legs with adjustable bullet feet

Submit shop drawing for review and approval.

ITEM #238 INGREDIENT BINS

Furnished by Using Agency, Installed by GC.

Four (4) Cambro Model #ISB27 or Rubbermaid #27 gallon or Piper #27 gallon Bins Complete with Lids & Scoops. Units to be furnished per manufacturers standards.

ITEM #239 ST. ST. WORK TABLE

Two (2) Custom fabricated unit, size 4'- 6" long x 33" wide x 34" high.

TOP: Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS: Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS: Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER : Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

GC to verify size of existing sheets to insure proper fit, table length to be adjusted as needed.

Submit shop drawing for review and approval

ITEM #240 EXISTING COUNTER TOP SHEETER

One (1) Existing RONDO #STM5303 unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #241 EXISTING COUNTER TOP SHEETER

One (1) Existing RONDO #STM503 unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #242 3 H.P. DISPOSER AND RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #243 ST. ST. THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 33" deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and

workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #242.

UNDERCOUNTER DISHWASHER – Provide open space under top as shown for under counter dishwasher.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4” I.P.S) to fit in rear of Backsplash to accommodate 3/4” water lines , Center compartment Pre-rinse w/ 10” “Add a Faucet” (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12” spout and provide T&S Model 112x 10” spout. (FISHER, CHICAGO FAUCET)

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #244 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #245 UNDERCOUNTER DISHWASHER
Furnished by Using Agency, Installed by GC, with connection by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with "auto-prime"
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators
One (1) Peg rack
One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency's soap and rinse dispensing system.

ITEM #246 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #247 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of

the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #248 DOUGH SHEETER
Furnished by Using Agency, Installed by GC.

One (1) DOYON model #LMF624 or UNIVEX SFG-600 T or RONDO Floor sheeter furnished per manufacturers standards. GC to verify with Using Agency what cutting rollers and molding plates are required.

ITEM #249 EXISTING ICE CREAM MAKER

One (1) Existing unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #250 EXISTING DOUGH DIVIDER/ROUNDER

One (1) Existing unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #251 ICE CREAM MAKER
Furnished by Using Agency, Installed by GC.

One (1) COLDLITE / CARPIGIANI model #LB-100B or pre-approved equal batch freezer. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot 4” high st. st. legs per Health Department
One (1) UL cord and plug
One (1) Fully automatic operation with electronic consistency control.
One (1) Lot Heavy duty drive system produces firmer product and longer life.
One (1) Unique freezing cylinder design provides faster production and smoother product.

One (1) Heavy duty, one piece auger results in a maximum clean-out with minimal flavor overlap.
One (1) Adjustable timer.

ITEM #252 WALL MOUNTED DRAIN BASIN

One (1) ADVANCE TABCO model 7-PS-23 or Eagle Custom or John Boos Custom wall mounted Stainless Steel sink. Unit to be furnished without holes punched for faucet. Include drain assembly and tailpiece. Sink to be used for catch basin for water dispenser. GC to mount unit on wall in location as shown on plan.

PC to make final connection of waste connection.

ITEM #253 WATER METER

One (1) GEMINI Model #SAMM200 or DOYON #DAF001 or BAXTER WM water meter furnished per manufacturers standards. Unit to have Baked enamel coated steel housing, wall mounted at four flange connections. Provide meter with the following standard and optional accessories:

One (1) 72" Dispensing hose with nozzle
One (1) Nozzle hook to hold unit in place over drip sink

Manual temperature mixing control valve with dial (Fahrenheit). Manual water volume control valve graduated in pounds from 1 to 200 pounds. 50-75 pounds per minute. Emergency cut-off valve. Two water inlets- hot and cold 3/4" connections. Incoming water pressure to be regulated between 48-64 PSI.

Unit to be mounted in location as shown on plan and elevation.

PC to make final connections to water source.

ITEM #254 ST, ST, WORK TABLE

One (1) Custom fabricated unit, size 60" long x 30" wide x 28" high.

TOP

Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS

Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both

directions. Top of leg furnished with stainless steel gusset #1018-0206-1283, welded to channel top reinforcing.

CASTERS

Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER

Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #255 EXISTING 30 / 60 QT. MIXER

One (1) Existing HOBART 30 / 60 qt. unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code. EC to replace direct wire cord with UL plug type cord.

ITEM #256 DRY ERASE BOARD
Not in Contract

ITEM #257 ROLL IN ROTARY OVEN RACKS

Two (2) Units included with item #259.

ITEM #258 PORTABLE PAN RACKS
Furnished by Using Agency, Installed by GC.

Six (6) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #259 ROTARY RACK OVEN

One (1) GEMINI/SVEBA DAHLEN, model #C152 or Baxter Rack Single or Revent One rack oven. Unit to be gas fired with single rack capacity. Oven to be provided per manufacturers standards. Include the following standard and optional accessories:

One (1) Rear Drain

One (1) Type I hood with single point connection
One (1) Electric soft start rack rotation
One (1) Water pressure regulator and filter
Two (2) Roll-in baking racks
One (1) Built in steam generator
One (1) Door/Exhaust fan interlock
One (1) Soft start rack rotation
One (1) Standard Hinged Right Door per plan
One (1) Lot St. St. Angle Trim to close off unit to walls

HC, PC and EC to make final connections.

Submit shop drawing for review and approval.

ITEM #260 ST. ST. EXHAUST HOOD

One (1) Unit included with item #259.

ITEM #261 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required

under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #262 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #263 TWO SECTION PROOFER/RETARDER

One (1) DOYON model #ER236TLO or Baxter #RPW2E-40.5 or Hobart #HRPW2E-405 two door extra tall two rack roll in retarder-proofer furnished per manufacturers standards. Include the following standard and optional accessories:

Two (2) Glass doors with st. st. bumper guard
Two (2) Roll in Racks
One (1) Rear Drain piped to IW by PC
One (1) Lot of st. st. trim to seal unit to wall.

ITEM #264 ST. ST. WALL CABINET W. GLASS DOORS

One (1) Lot of custom fabricated unit sized per plan. Units to be otherwise same as item #181. Submit shop drawing for review and approval.

ITEM #265 ST. ST. WALL CABINET W. GLASS DOORS

One (1) Lot of custom fabricated unit sized per plan. Units to be otherwise same as item #181. Submit shop drawing for review and approval.

ITEM #266 SIX BURNER RANGE CONVECTION OVEN BASE
Furnished by Using Agency, Installed by GC, with connections by HC.

One (1) Garland Model G36-6C or Jade # JTRH-6-36C or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Convection Oven Base
One (1) Stainless steel back guard
One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint
One (1) Salamander Broiler, gas, 35-1/2" W, for GF36 Range, (2) 14,000 BTU infrared burners with Hi-Lo valve controls each, (3) position spring balanced rack assembly, removable grease pan, stainless steel front, sides, top, backsplash and bottom with heat shield, 28,000 BTU
One (1) Stainless steel main back (salamander)
One (1) Interconnecting gas lines from range to salamander

ITEM #267 BACKSHELF BROILER
Furnished by Using Agency, Installed by GC.

One (1) Unit included with item #266.

ITEM #268 EXISTING DONUT FRYER

One (1) Existing BELSHAW 718LCG Unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

HC shall provide new gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #269 DECK OVEN

Two (2) Units same as specified for item #190. Submit shop drawing for review and approval.

ITEM #270 NOT USED

ITEM #271 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).
There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.
Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers

and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or

an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.
Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor <u>only</u> system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

<u>Performance Criterion</u>

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and

pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #272 FIRE SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #273 NOT USED

ITEM #274 NOT USED

ITEM #275 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear and side wall paneling sized per plan and elevation detail. Provide wall panels from bottom edge of hood down to top of base cove. Verify height of cove before fabrication. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #276 DUNNAGE RACKS
Furnished by Using Agency, Installed by GC.

Two (2) CAMBRO DRS480 and DRS360 or METRO or EAGLE heavy duty dunnage racks sized 36 & 48 x 21" as shown on plan.

ITEM #277 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #278 NOT USED

ITEM #279 ST. ST. SCALING WORK TABLE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #237. Submit shop drawing for review and approval.

ITEM #280 PORTION SCALE
Not in Contract

ITEM #281 INGREDIENT BINS
Furnished by Using Agency, Installed by GC.

Four (4) CAMBRO Model #ISB27 or Rubbermaid 27 gallon or Piper 27 gallon Bins Complete with Lids & Scoops. Units to be furnished per manufacturers standards.

ITEM #282 ST. ST. & WOOD TOP DEMO TABLE

One (1) Custom fabricated unit sized per plan. Unit to be same as item #205. Submit shop drawing for review and approval.

ITEM #283 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #284 REACH IN BLAST CHILLER

One (1) IRINOX model #MF70.1L or American Panel #AP12BCF110-3 Delfield #T14D reach in blast chiller / shock freezer furnished per manufacturers standards. Include the following standard and optional accessories, One (1) Lot casters, two with locks, one (1) UL Cord and plug.

ITEM #285 TRASH RECEPTACLES
Not in Contract

ITEM #286 ST. ST. PORTABLE MIXER STAND
Furnished by Using Agency, Installed by GC.

Four (4) Hobart model #124078-A-HL200 or Varimixer #MT or Globe #MTS mixer stand furnished per manufacturers standards.

ITEM #287 20 QT. MIXER
Furnished by Using Agency, Installed by GC.

Two (2) Hobart model #HL-200 or Varimixer #W20J or Globe #SP-20

CONST: Per Manufacturers Standard.

ACCESSORIES w/ each unit.

One (1) UL Approved cord and plug
One (1) Timer & automatic shut-off switch
One(1) Accessory Package
- 20 Quart Stainless Steel Bowl
- 20 Quart "B" Beater
- 20 Quart "D" Wire Whip

-20 Quart “ED” Dough Hook
-20 Quart Bowl Scraper
- 20 Quart Ingredient Chute

ELEC: .5 HP. w/ voltage and phase per rough-in drawing

ITEM #288 ICE MAKER W/ BIN
Furnished by Using Agency, Installed by GC, with connections by PC.

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-0502A or Hoshizaki KM-515MAH or Ice-O-Matic #ICE500

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B400 30” wide bin (290# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor
One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 530 pounds of ice per 24 hours. GC to verify location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #289 EXISTING 20 QT. MIXERS

Two (2) Existing HOBART 20 qt. mixers to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #290 EXISTING 50 QT. SPIRAL MIXER

One (1) Existing DAUB-VERHOEVEN unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #291 EXISTING 60 QT. MIXER

One (1) Existing VARIMIXER to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code. EC to replace existing 1 foot long plug type cord with UL approved 6 foot plug type cord.

ITEM #292 NOT USED

ITEM #293 NOT USED

ITEM #294 WALK IN REFRIGERATOR/FREEZER

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction. Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards.

Floors to be 3.75" thick. Include a factory installed 32" long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32” long interior Ramp, 36” overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
Two (2) Vision Windows 14” x 14”

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4” thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity (“K” factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer (“U” factor) shall not exceed .033 and the resistance to heat penetration (“R” factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46” and at junction of vertical and horizontal joints by 23”. Cam locks shall be foamed-in-place and anchored securely in the panel by steel “wings” integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #295 NOT USED

ITEM #296 PORTABLE WALK IN REFRIG. SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #297 PORTABLE WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5" dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #298 7 QT. MIXERS
Furnished by Using Agency, Installed by GC.

Sixteen (16) KITCHEN AID Commercial #KSM7990WH 7 QT or Vollrath #40755 or Globe #SP8

CONST: Per manufacturers standards.

ACCESSORIES: w/ Each unit.

One (1) Lot NSF Approval
One (1) UL Approved cord and plug
One (1) Stainless Steel Bowl

One (1) Beater
One (1) Wire Whip
One (1) Dough Hook

ELEC: voltage and phase per rough-in drawing.

ITEM #299 ST. ST. SINK

One (1) Custom Fabricated Single Compartment Unit Sized per Plan and Elevation Detail. Unit to Consist of the Following:

Rear against bakers table to be Furnished with 6" High Integral Backsplash with finished back. Sides to be provided with rolled edge. Provide Clear Silicone Sealant between finished splash back and bakers table. Single Compartment Integrally Welded Sink 30" Wide Overall X 24" Front to Back X 14" Deep. Bottom of Sink to Be Pitched and Furnished with Die-stamped Opening to Accommodate Waste Flange. Sink to Have All Coved Corners and Be Fabricated per General Requirements

One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator
One (1) T&S B-3950-01 (2" IPS) or FISHER or CHICAGO FAUCET Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly. Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

Sink to Be Mounted on st. st. legs with adjustable feet. per General Requirements. Submit Detailed Shop Drawing for Review & Approval.

ITEM #300 STUDENT STOOLS
Not in Contract

ITEM #301 WOOD TOP WORK TABLE

Four (4) Custom fabricated units sized 12'-0" long x 5'-6" wide x 36" high to working surface. See plan and elevation for details.

Provide pre-wired duplex receptacles. All electrical to be concealed under top. Electrical to meet all state and local requirements. Counter to be provided with (4) duplex 20 amp receptacles

Top to be constructed of 3" Maple. Top shall be built in accordance with and bear the seal of N.S.F. Tops to be provided with 3/16” radius on top and bottom edge. Tops to be sealed in material as directed after Using Agency has reviewed samples.

Underside of top to be reinforced with stainless steel channels as called for under General requirements.

Channels to be mounted on 1 5/8 legs with stainless steel bullet type feet. Gussets to be secured to underside of table top reinforcing.

Also include stainless steel crossrails between legs, except omit crossrail in front to allow space for stools specified under Item #300. Opening shelving and tool box storage to be per elevation details.

GC to submit 12" x 12" x 1" samples of block in Mineral Oil for operators review and approval.

EC to make final electrical connections.

Submit shop drawing for approval.

ITEM #302 CEILING MOUNTED ST. ST. SHELVES

Four (4) Custom fabricated unit furnished over top of bakers tables as shown on plan and elevation details. Unit to include two (2) 14 gauge stainless steel elevated shelves mounted to six (6) stainless steel supports fastened to angle channel above ceiling. Edges of shelf to be provided with 1.5" turn down.

Shelves to be supported from six (6) heavy duty anti-sway supports from above. Shelves that sway will not be accepted. GC to coordinate with structural above to insure proper fit.

Submit shop drawing for review and approval.

ITEM #303 INDUCTION COOKTOPS
Furnished by Using Agency, Installed by GC.

Seventeen (17) COOKTEK model #MC1800G Spring 1.8 kw or Vollrath 1800 counter top cook top. Unit to be furnished per manufacturers standards. Include 72" long cord and plug.

ITEM #304 WALL MOUNTED MOP RACKS
Not in Contract

ITEM #305 ST. ST. WALL PANELS

One (1) Lot Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #306 WIRE WALL CHEMICAL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Each unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

ITEM #307 NOT USED

ITEM #308 NOT USED

ITEM #309 NOT USED

ITEM #310 NOT USED

ITEM #311 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #312 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #313 CHOCOLATE TEMPERING MACHINE
Furnished by Using Agency, Installed by GC.

Two (2) BRAVO model #K24 EVO chocolate tempering machines furnished per manufacturers standards.

ITEM #314 7 QT. MIXER
Furnished by Using Agency, Installed by GC.

Sixteen (16) KITCHEN AID Commercial #KSM7990WH 7 QT or Vollrath #40755 or Globe #SP8

CONST: Per manufacturers standards.

ACCESSORIES: w/ Each unit.

One (1) Lot NSF Approval
One (1) UL Approved cord and plug
One (1) Stainless Steel Bowl
One (1) Beater
One (1) Wire Whip
One (1) Dough Hook

ELEC: voltage and phase per rough-in drawing.

ITEM #315 ST. ST. WORK COUNTER/SINK/CABINETS

One (1) Custom fabricated st. st. work counter with stone top and st. st. wall cabinets sized per plan and elevation details. General construction be same as previously specified for base cabinet, hinged doors and tier of drawers. Include Stainless Steel Wall hung cabinet with intermediate shelf. Sloping Top enhances sanitary configuration.

All TIG welded using the TIG process. Welded seams finished to match adjacent surfaces.

Unit polished to a satin finish. 18 gauge type 430 series stainless steel. Stainless steel hinges and handles.

GC to lag units to wall with heavy duty Stainless Steel lag bolts. Cabinets to support heavy loads.

Submit shop drawing for review and approval.

ITEM #316 TWO SECTION REACH IN FREEZER

One (1) Existing unit to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

ITEM #317 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #318 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #319 NOT USED

ITEM #320 ST. ST. THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 33" deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

UNDERCOUNTER DISHWASHER – Provide open space under top as shown for under counter dishwasher.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X or FISHER or CHICAGO FAUCET (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12" spout and provide T&S Model 112x 10" spout.

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #321 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #322 UNDERCOUNTER DISHWASHER
Furnished by Using Agency, Installed by GC, with connection by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with "auto-prime"
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators

One (1) Peg rack
One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency's soap and rinse dispensing system.

ITEM #323 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #324 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #325 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #326 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #327 SIX BURNER RANGE CONVECTION OVEN BASE
Furnished by Using Agency, Installed by GC, with connection by HC.

One (1) Garland Model G36-6C or Jade # JTRH-6-36C or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Stainless steel back guard

One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #328 CANDY STOVE
Furnished by Using Agency, Installed by GC, with connection by HC.

Two (2) GARLAND model #G20-SPH or Jade JSP18 or Montague 18" single burner stock pot ranges furnished per manufacturers standards. Each unit to be provided with one (1) Gas hose with quick disconnects and wall restraint.

ITEM #329 EXISTING DOUBLE DECK COMBI OVEN

One (1) Existing Rational Double Deck SCC62 combi oven to be moved from existing kitchen on main campus to new location as shown on plan after PC, HC and EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

HC to be responsible for all final gas connection piping, gas flex hoses,& regulator. PC to be responsible for vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #330 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF)

standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).
There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings. Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the

MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor <u>only</u> system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

<u>Performance Criterion</u>

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain

to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #331 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosure . Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):

1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #332 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear and side wall paneling sized per plan and elevation detail. Provide wall panels from bottom edge of hood down to top of base cove. Verify height of cove before fabrication. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #333 STONE TOP INSTRUCTORS TABLE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #339. Provide backsplash against sink item #341 as shown. Note, base cabinet and top to be reinforced as needed to support display monitor support pole. See architectural drawings for details.

Submit shop drawing for review and approval.

ITEM #334 PORTABLE PAN RACKS

Furnished by Using Agency, Installed by GC.

Two (2) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #335 INDUCTION COOK TOPS

Furnished by Using Agency, Installed by GC.

Seventeen (17) COOKTEK model #MC1800G Spring 1.8 kw or Vollrath 1800 counter top cook top. Unit to be furnished per manufacturers standards. Include 72" long cord and plug.

ITEM #336 MICROWAVE OVENS

Furnished by Using Agency, Installed by GC.

Four (4) PANASONIC model #NE-1064 1000 or AMANA #RMS10TS or SOLWAVE #MW100SS 1000 watt microwave oven furnished per manufacturers standards with stainless steel cabinet and cavity, bottom energy feed, 10 programmable memory pads, Braille keypad, 20-memory capability, double quantity key, 6 power levels, 2- and 3-stage cooking, programmable lock, unique "quick pick" preset times and self-diagnostics,

ITEM #337 ST. ST. AIR BRUSH STATION

Furnished by Using Agency, Installed by GC.

One (1) CHEF'S RUBBER #10011303 St. St. Air Brush Station. Unit to be furnished per manufacturers standards. Overall Dimensions: 6' High x 2' 8" wide x 2' 10" deep Caster base with 2 swivel casters and 2 swivel casters with locks 7.5", 925 CFM fan with 1/3 HP, 120 volt enclosed fan cooled motor, Includes 4 paper filters.

ITEM #338 ST. ST. WORK COUNTER/WALL CABINETS

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #315.

ITEM #339 STONE TOP STUDENT TABLES

Four (4) Custom fabricated unit sized 8'-0" long x 60" wide x 36" high.

GRANITE TOP

Provide 5 cm polished granite tops with eased edges. Granite is to be set on 14 ga. galvanized sub top reinforced with st. st. hat channels. Provide rubber mat between sub top and granite. Color of granite is to be determined at a later date. Allowance is to be made for the following colors based on availability and actually supplied sample *Bianco Romano, Kashmir White, Silver Silk, or Blanco Gabrielle,* NSF STANDARD 51 granite.

5 cm Granite selections are available from Sensa by Consentino, City Center Chicago; NSF Certified by Arizona Tile, Tempe; MS International, Inc., Orange, CA.

Counter manufacturer to submit large sample 12” x 12” x 5 cm for review and approval prior to fabrication.

NOTE! 3cm slab with built up 5cm edge will not be accepted.

LEGS

Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset welded to channel top reinforcing. Bottom of legs to be provided with adjustable st. st. bullet feet.

SHELF/TRAY STORAGE UNDER

Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail. Per Elevation detail, provide angle slides sized to accommodate 18” x 26” trays each on each end. Two per side.

Submit shop drawing for review and approval.

ITEM #340 REACH IN BLAST CHILLER

Two (2) IRINOX model #MF70.1L or American Panel # AP12BCF110-3 Delfield #T14D reach in blast chiller / shock freezer furnished per manufacturers standards. Include the following standard and optional accessories, One (1) Lot casters, two with locks, one (1) UL Cord and plug.

ITEM #341 ST. ST. SINK

One (1) Custom Fabricated Single Compartment Unit Sized per Plan and Elevation Detail. Unit to Consist of the Following:

Rear against bakers table to be Furnished with 6" High Integral Backsplash with finished back. Sides to be provided with rolled edge. Provide Clear Silicone Sealant between finished splash back and bakers table. Single Compartment Integrally Welded Sink 30" Wide Overall X 24" Front to Back X 14" Deep. Bottom of Sink to Be Pitched and Furnished with Die-stamped Opening to Accommodate Waste Flange. Sink to Have All Coved Corners and Be Fabricated per General Requirements

One (1) T&S B-0230-LN Faucet Body w/ 060X or FISHER or CHICAGO FAUCET 8" Swing Spout (1) T&S B-0199-01 Aerator One (1) T&S B-3950-01 (2" IPS) Twist Handle Drain

w/removable Flat Strainer, Connected Rear Overflow Assembly. Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

Sink to Be Mounted on st. st. legs with adjustable feet. per General Requirements. Submit Detailed Shop Drawing for Review & Approval.

ITEM #342 WALL MOUNTED POT FILLER HOSE

One (1) T&S model #B-0610 or Chicago Filler hose or Fisher wall mounted filler hose with built in vacuum breaker and wall hook per manufactures standards. GC to turn unit over to PC for installation.

ITEM #343 NOT USED

ITEM #344 ST. ST. WORK TABLE w/ SHELF

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #154, except provide full length st. st. shelf above and st. st. lower shelf per general requirements. Shelf to be supported from backsplash with st. st. uprights and cantilever supports.

Provide finished rear where exposed through glass.

Shelf mounting height to be coordinated with window for display. Submit shop drawing for review and approval.

ITEM #345 WALL MOUNTED MOP RACK
Not in Contract

ITEM #346 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #347 CHEMICAL STORAGE SHELVING

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #348 – 400 NOT USED

ITEM #401 WALK IN REFRIG/FREEZER & CURING ROOM

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Wall between Refrigerator and Meat Curing/Drying room to be provided with transfer fan and thermostat to provided cooling as required. Curing room to be furnished with reinforced wall panels to support drying bars and heavy loads. Include two (2) flush mounted GFCI duplex receptacles in walls for portable humidifier and dehumidifier. Exact details to be determined on shop drawing submittal.

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide

permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards.

Floors to be 3.75" thick. Include a factory installed 32" long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent

personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32" long interior Ramp, 36" overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
One (1) Lot Heated Vision Windows 14" x 14"

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4" thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity ("K" factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer ("U" factor) shall not exceed .033 and the resistance to heat penetration ("R" factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46" and at junction of vertical and horizontal joints by 23". Cam locks shall be foamed-in-place and anchored securely in the panel by steel "wings" integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Shop drawing: Submit shop drawing for review and approval.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #402 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #403 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #404 WALK IN REFRIG. SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center

cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5" dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #405 NOT USED

ITEM #406 NOT USED

ITEM #407 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #408 HORIZONTAL ST. ST. DRYING BARS

Five (5) Custom Fabricated 1/4" x 2" Pot rack band material approx. 5'- 6" long. GC to coordinate with walk in manufacturer to insure proper reinforcing is installed.

Units are to have specially fabricated channel brackets designed to slide on ends and be tack welded in place. Each bracket is to be fabricated with four (4) bolts holds designed for 2" st. st. anchor bolts.

Each pot rack band is to be furnished with sliding pot rack hooks model # J77-4401. Rack is to hold approx. 300 pounds.

GC to submit shop drawing for approval. Verify mounting height with chef prior

ITEM #409 NOT USED

ITEM #410 NOT USED

ITEM #411 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #412 ST. ST. TWO COMPARTMENT SINK

One (1) Custom fabricated unit sized per plan x 34" high to working surface.

TOP Fabricated of 14 ga. st. st. with front and exposed end furnished with type "C" raised rolled edges. Working surface to have integral pitch towards sink with top of rim parallel with floor.

Top reinforcing and No. 4 finish furnished in accordance with General Requirements and Standard Edge Detail.

BACKSPLASH :Rear and sides as shown on plan, against walls or equipment to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

SINKS: In top, furnish two compartment integrally welded sinks 21" x 26" x 12" deep. Bottom of sink compartment to be pitched and furnished with die stamped opening to accommodate waste flange. Sink to be all coved cornered and fabricated per General Requirements.

SINK TRIM: One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator Two (2) T&S B-3950-01 (2" IPS) Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly (FISHER, CHICAGO FAUCET). Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

LEG SUPPORTS: Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg, crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER: Under top, per plan or elevation, furnish 16 gauge stainless steel removable shelves. Shelves to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelves to be all coved cornered fabricated at not less than 5/8" radius.

DRAWERS & ENCLOSURE: Under top, furnish two tiers of three (3) 18 ga. st. st. drawers each 20" x 20" x 5" deep. Drawer inserts to be removable type with roller bearing extension slides, double pan construction drawer fronts and 18 ga. st. st. cabinet enclosure constructed per General Requirements. Base of unit to be mounted on, 6" high st. st. adjustable legs.

CYLINDER LOCKS: Each drawer to be furnished with Cylinder Locks installed per Manufacturer's recommendations. All drawer locks to be keyed alike on entire job.

DRAWER: Under top as shown on plan 18 gauge stainless steel drawers 20" x 20" x 5" deep. Drawer insert to be removable type with roller bearing extension slides, double pan construction drawer front and 18 gauge stainless steel cabinet enclosure constructed per General Requirements.

SHELF OVER: Over tops as shown on plan furnish single deck 16 gauge stainless steel shelf with 1" rolled rim and 2" turnup against wall. Shelf to be mounted on 1-1/4" diameter 16 gauge stainless steel cantilever type uprights extending up thru backsplash. Hole in backsplash cut out to fit uprights with not more than 1/16" clearance then caulked with clear silicone sealant.

SHOP DRAWING : Submit shop drawing for review and approval.

ITEM #413 ST. ST. WALL PANELING

One (1) Lot of Custom fabricated 18 ga. St. St. 30" high wall paneling sized and shape as per elevation detail. Paneling to be installed with flush mounted hidden fasteners. Furnish hairline butt joints at all seams GC to seal sides and edges with silicone after installation. Submit shop drawing for approval.

ITEM #414 TWO SECTION REFRIGERATOR

One (1) Existing unit to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

ITEM #415 PORTABLE ST. ST. WORK TABLE

Two (2) Custom fabricated unit, size 48" long x 30" wide x 34" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

DRAWER: Under top as shown on plan 18 gauge stainless steel drawers 20" x 20" x 5" deep. Drawer insert to be removable type with roller bearing extension slides, double pan construction drawer front and 18 gauge stainless steel cabinet enclosure constructed per General Requirements.

SHELF UNDER : Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #416 PORTION SCALE
Not in Contract

ITEM #417 EXISTING GRINDER/SAUSAGE STUFFER

One (1) Existing unit relocated and reused by Using Agency. Not in Contract

ITEM #418 EXISTING BUFFALO CHOPPER

One (1) Existing unit relocated and reused by Using Agency. Not in Contract

ITEM #419 NOT USED

ITEM #420 ICE MAKER W/ BIN
Furnished by Using Agency, Installed by GC , with connections by PC.

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-0502A or Hoshizaki KM-515MAH or Ice-O-Matic #ICE500

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B400 30" wide bin (290# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor
One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 530 pounds of ice per 24 hours. GC to verify location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #421 SECURITY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

Two (2) METRO model SEC53DCQ super erecta or Eagle Chrome or ISS Secure 40" long x 24" chrome wire security shelving units furnished per manufacturers standards. Units to be provided with two (2) interior wire shelves, heavy duty casters, two with brakes. Locks to be provided by operator.

ITEM #422 UNDERCOUNTER DISHWASHER
Furnished by Using Agency, Installed by GC, with connection by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with “auto-prime”
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators
One (1) Peg rack
One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency’s soap and rinse dispensing system.

ITEM #423 ST. ST. WALL PANELING

One (1) Lot of Custom fabricated 18 ga. St. St. 30" high wall paneling sized and shape as per elevation detail. Paneling to be installed with flush mounted hidden fasteners. Furnish hairline butt joints at all seams GC to seal sides and edges with silicone after installation. Submit shop drawing for approval.

ITEM #424 ST. ST. THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 33” deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3"

against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #425.

UNDERCOUNTER DISHWASHER – Provide open space under top as shown for under counter dishwasher.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12" spout and provide T&S Model 112x 10" spout. (FISHER, CHICAGO FAUCET)

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #425 3 H.P. DISPOSER W/ RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18” cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #426 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14” deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18” deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #427 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #428 SPREADER

One (1) Custom fabricated unit, size 18" long x 30" Deep x 36" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edge on front and sides. Rear to be turned up 6" with integral backsplash. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing. Legs to be provided with adjustable bullet feet.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #429 COMBI OVEN W/ STAND

One (1) CLEVELAND model #OGS-10.20 CONVOTHERM™ or RATIONAL SCCWE-102G or ALTO SHAAM #CTP10-20G , timer and core probe, 250 recipe storage capacity, cooking modes hot air, steam, combi, retherm, cook & hold, "Delta T" slow cooking and "Crisp & Tasty", includes (4) 26" x 20" wire shelves, hand shower, (11) 18"x26" or (22) 12"x20" pan cap. , s/s interior & exterior. Include the following standard and optional accessories:

One (1) Easy Touch Controls
One (1) CST-20-OB open base cabinet with casters, two with locks.
One (1) Lot Claris Water Treatment System, includes (1) pre-filter, (1) Claris X-large steam system, (1) Claris flow meter and (1) water test kit
One (1) Chicken Grill Rack, 12" x 20" (full size), for 10.20 combi OvenSteamers
One (1) Frying Basket, Wire, 20" x 26", for 10.20 combi oven steamers
One (1) Convo Grill Rack, 13" wide x 18" deep, for ConvoTherm ovens, fits directly on pan rack guides

One (1) Lot Convo Clean Hands Free built-in automatic cleaning system: (1) 10 liter ConvoClean, (1) 1 liter Convo Care and (1) empty 10 liter container with label for mixing
One (1) Lot Gas and Water Supply Hoses with quick disconnects and wall restraint
One (1) Lot locking casters.
One (1) Lot factory start up and training

GC to verify accessories with Using Agency prior to shipping.

ITEM #430 60 GALLON TILT KETTLE

QTY: One (1)

MFG.: GROEN MODEL: DHT-60 or Cleveland #KGL-60 or Vulcan #K60GLT

SPECIFICATIONS:

Kettle shall be constructed of type 18.8, 316 stainless steel solid one piece welded construction. The unit shall have a reinforced bar rim with butterfly shaped pouring lip. Unit shall have st. st. tubular legs with level adjustable feet. Kettle shall have a fin tube burner assembly, 50 PSI Steam Jacket Rating, Variable Temperature Control, front mounted water sight glass and Electronic Ignition System. 150,000 BTU's.

ACCESSORIES:

One (1) 2" Tangent Draw-off valve
One (1) Pan Carrier
One (1) Hinged Cover Kit (#51)
One (1) Kettle Brush Kit
One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet
One (1) Lot gas and water supply lines with quick disconnects and wall restraints

PT to mount faucet and make final connection to water source.

UTILITY REQUIREMENTS: Per rough in plan

ITEM #431 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9" x 9" x 4" deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor opening.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #432 CHAR BROILER W/ CABINET BASE
Furnished by Using Agency, Installed by GC.

One (1) GARLAND model #MST24B 24" or Montague UFS-24R or Jade V24C-NG w/ Cabinet base 24" wide gas fired charbroiler furnished per manufacturers standards. Provide unit with the following:

One (1) Lot casters, two with locks
One (1) St. st. cabinet base
One (1) Gas hose with quick disconnects and wall restraint
One (1) Rear Gas Connection

ITEM #433 SIX BURNER RANGE/CON OVEN BASE
Furnished by Using Agency, Installed by GC.

One (1) Unit same as item #37, except provide convection oven base.

ITEM #434 WALL MOUNTED POT FILLER

One (1) T&S model B-0598 or FISHER #4230 or CHICAGO #515-CP wall mounted pot filler with double jointed 24" spout wall mounted faucet with heat resistant on/off control. Furnish unit complete with one (1) B-0230-K 1/2 " NPT female inlets for wall mounting. GC to turn unit over to PC for installation. Verify mounting height with Using Agency to insure proper fit over stock pot.

ITEM #435 TWO BURNER RANGE/CABINET BASE
Furnished by Using Agency, Installed by GC.

Two (2) GARLAND model #MS4 or MONTAGUE M12-4 or JADE V18B20NG w/ Stand gas fired two burner range furnished per manufacturers standards. Provide unit with the following:

One (1) Lot casters, two with locks
One (1) St. st. cabinet base with hinged doors
One (1) Gas hose with quick disconnects and wall restraint
One (1) Rear Gas Connection with front caps and covers

ITEM #436 SMOKER
Furnished by Using Agency, Installed by GC.

One (1) ENVIRO PAK (800-223-OVEN) model #CVU-200E truck style food processing oven. Include the following standard and optional accessories:

MP-1000 Microprocessor control system
Internal product temperature recorder
Automatic control of product shower
Automatic control of liquid smoke
Automatic control of natural smoke
Automatic control of in-duct wash/rinse
Automatic detergent siphon
Automatic control of steam cook
EMG-1 Liquid smoke system
EVS-1 Steam generator
EG-BIG natural smoke generator with duct to oven
Cooling coils for cold smoking complete with refrigeration valves
Variable speed blower
6 tier st. st. smoke truck
20 st. st. smoke sticks
6 st. st. shelf screens
Built on refrigeration condensing unit for cold smoke

Submit shop drawing for review and approval.

ITEM #437 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

Provide front filler section to give hood item #437 and 440 continuous front, single hood appearance.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with

finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-

Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #438 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the stainless steel enclosure . Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #439 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear and side wall paneling sized per plan and elevation detail. Provide wall panels from bottom edge of hood down to top of base cove.

Verify height of cove before fabrication. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #440 ST. ST. EXHAUST HOOD

Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water

proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted “Override” button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal “Capture-Jet” System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1” air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In

addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.
A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #441 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire

System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #442 NOT USED

ITEM #443 PORTABLE PAN RACKS
Furnished by Using Agency, Installed by GC.

Four (4) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #444 ST. ST. INSTRUCTORS TABLE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #40, Except omit dishwasher recess and provide st. st. angles for cutting board storage. Note, base cabinet and top to be reinforced as needed to support display monitor support pole. Counter fabricator to verify exact requirements with A/E.

Submit shop drawing for review and approval.

ITEM #445 NOT USED

ITEM #446 ST. ST. PORTABLE SLICER TABLE

One (1) Custom fabricated unit, size 30" long x 30" wide x 34" high.

TOP: Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS: Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS: Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER : Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #447 EXISTING SLICER

One (1) Existing unit relocated and reused by Using Agency. Not in Contract

ITEM #448 ST. ST. STUDENT TABLES

Eight (8) Custom fabricated st. st. work tables with cabinet base sized per plan and elevation detail. General construction to be same as #18, except omit refrigerated base and overhead attachment rack. Provide cutting board storage area with removable st. st. dividers for cleaning.

GC to coordinate overshelf with mixer size and locations based on brand provided.

Submit shop drawing for review and approval.

ITEM #449 7 QT. MIXERS
Furnished by Using Agency, Installed by GC.

Seventeen (17) KITCHEN AID Commercial #KSM7990WH 7 QT or Vollrath #40755 or Globe #SP8

CONST: Per manufacturers standards.

ACCESSORIES: w/ Each unit.

One (1) Lot NSF Approval
One (1) UL Approved cord and plug
One (1) Stainless Steel Bowl
One (1) Beater
One (1) Wire Whip

ELEC: voltage and phase per rough-in drawing.

ITEM #450 STUDENT STOOLS
Not in Contract

ITEM #451 STUDENT TOOL KITS
Not in Contract

ITEM #452 CHEMICAL STORAGE SHELVING

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #453 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #454 WALL MOUNTED MOP RACKS
Not in Contract

ITEM #455 NOT USED

ITEM #456 NOT USED

ITEM #457 NOT USED

ITEM #458 NOT USED

ITEM #459 NOT USED

ITEM #460 NOT USED

ITEM #461 ST. ST. WORK TABLE W/ SINK

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as previously specified. Provided finished rear panel where visible through glass.

Submit shop drawing for review and approval.

ITEM #462 NOT USED

ITEM #463 NOT USED

ITEM #464 NOT USED

ITEM #465 NOT USED

ITEM #466 PANINI GRILL
Furnished by Using Agency, Installed by GC.

One (1) EQUIPEX model #MAJESTIC or STAR #GR28IT or WARING #WFG300 double sandwich press furnished with smooth top and bottom plates. Unit to be furnished per manufacturers standards. See rough in plan for voltage.

ITEM #467 TURBO CHEF OVEN

One (1) TURBO CHEF model i3 or Merrychef #402S or DUKE ion furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) NEMA 6-50-P Cord and plug
One (1) Aluminum Paddle (103284)
One (1) Bottle Oven Cleaner (103180)
One (1) Bottle Oven Guard (103181)
Two (2) Trigger Sprayers (103182)
Two (2) Teflon Baskets (NGC-1331

ITEM #468 SINGLE SECTION UNDER COUNTER REFRIGERATOR

One (1) TRUE model #TUC-27LP or HOSHIZAKI #CRMR27LP or CONTINENTAL #SW27LP one compartment undercounter refrigerator. Unit to be sized 27" wide x 31-7/8" high.

Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot low profile casters to fit under 34" high counter
One (1) Cord and plug
One (1) Exterior thermometer
One (1) Additional interior shelf

Unit to be shipped to counter fabricator to insure proper fit.

ITEM #469 POP UP TOASTER

One (1) HATCO model #TPT-120 TOASTMASTER 4 slice or WARING WCT708 four slice pop up toaster. See rough in plan for voltage.

ITEM #470 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #471 WALK IN REFRIGERATOR/FREEZER

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide

permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards.

Floors to be 3.75" thick. Include a factory installed 32" long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent

personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32" long interior Ramp, 36" overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
Two (2) Vision Windows 14" x 14"

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4" thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity ("K" factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer ("U" factor) shall not exceed .033 and the resistance to heat penetration ("R" factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46" and at junction of vertical and horizontal joints by 23". Cam locks shall be foamed-in-place and anchored securely in the panel by steel "wings" integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

Walk-In Monitoring System 100B

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #472 NOT USED

ITEM #473 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #474 WALK IN REFRIG. SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #475 ST. ST. THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 33” deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 24 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4” I.P.S) to fit in rear of Backsplash to accommodate 3/4” water lines , Center compartment Pre-rinse w/ 10” “Add a Faucet” (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12” spout and provide T&S Model 112x 10” spout. (FISHER, CHICAGO FAUCET)

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #476 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #477 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #478 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #479 NOT USED

ITEM #480 ST. ST. SOILED/CLEAN DISHTABLES

One (1) Custom Fabricated unit in size 30" deep x length as shown plan with integral pitch to allow tables to drain towards dishwasher or table drainers.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #485

TABLE DRAINER - In top of soiled table, furnish integrally welded table drainer 6" wide x 3" deep x full width of dishtable. (Full width to mean from front vertical inside edge of rolled rim to back of vertical edge of backsplash). Inside edges both horizontally and vertically furnished with not less than ½" radius. Interior of drainer to be furnished with all coved cornered perforated strainer basket made of 16 gauge stainless steel.

Include 1/4" stainless steel rod guide handles to allow racks to slide over drainer area. Drainer pitched to drain and to have die stamped opening and furnished with basket drain, brass chrome plated with 1-1/2" tailpiece.

Submit shop drawing for review and approval.

ITEM #481 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Panel section behind dishwasher to run down to top of coved tile base. GC to provide necessary cut outs for power and water supply lines.

Submit shop drawing for review and approval.

ITEM #482 NOT USED

ITEM #483 VENTLESS DISHWASHER

QTY: One (1)

MFG/MODEL: HOBART AM-15VLT or CHAMPION #DH5000-VHR or MEIKO #DV80.2

CONST: Unit to have spring counter balanced doors arranged as shown on plan. Drawn Tank, Tank shelf and feet constructed of 16 ga. st. st. Frame to be constructed of 12 gauge st. st. Chamber to be constructed of 18 ga. st. st. Removable trim panels to be constructed of 20 ga. st. st. NOTE! Unit to meet all state and local code for ventless operation.

ACCESSORIES:

One (1) Internal condensing system
One (1) Door Lock interlock to prevent door from being opened too soon.
One (1) Single Point electrical connection
One (1) Pressure reducing valve sized for dishwasher capacity (unconnected)
One (1) Automatic tank fill
One (1) Built in 70 degree rise electric booster heater
One (1) 5 KW Tank heater
One (1) Lot of low water tank heat protection
One (1) Splash proof pump motor
One (1) Lot of interlocked door safety switches
One (1) Lot of interchangeable spray arms
One (1) Lot of st. st. front and side panels
One (1) Lot of detergent connection provisions
One (1) Lot of NSF approved gauges on rinse & wash water
One (1) NSF Pot and Pan listed 2, 4 and 6 minute Cycle
One (1) Timed wash cycles for 1,2,4 or 6 minutes
One (1) 27" door opening for 18" x 26 sheet pans or 60 qt. mixing bowl
One (1) Stainless Steel Pump and Impeller
One (1) Delime notification (field activated) and Delime Cycle
One (1) Drain Water tempering kit
One (1) Sheet Pan Rack
Three (3) Standard 20" x 20" dish racks
Three (3) Standard 20" x 20" open racks

ELECT: Per rough in drawings.

PC and EC to make all final connections.

ITEM #484 SOAP AND RINSE DISPENSER
Not in Contract

ITEM #485 3 H.P. DISPOSER AND RINSE SPRAY

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #486 WALL MOUNTED RACKING SHELF

One (1) ADVANCE TABCO model DT-6R-22 or EAGLE or Custom fabricated tubular wall mounted racking shelf. Unit to be furnished per manufacturers standards. GC to be secured to wall with heavy duty st. st. lag bolt and anchors.

ITEM #487 CASH REGISTERS / POS
Not in Contract

ITEM #488 NOT USED

ITEM #489 NOT USED

ITEM #490 VERTICAL ROTISSERIE
Furnished by Using Agency, Installed by GC.

One (1) WOODSTONE model #WS-GVR-10 gas fired vertical rotisserie. Unit to be furnished per manufacturers standards.

The cabinet of the rotisserie is constructed of 16-gauge polished 304 stainless steel (#4 finish). The unit is powered by three gas burners: two programmable IR burners, and a radiant flame post, located in the center of the unit. The IR burners operate on a ten minute cycle, and can be programmed to burn for any percentage of that cycle.

Include the following standard and optional accessories:

One (1) Lot Casters, two with locks
One (1) Lot Gas and water hoses with quick disconnects
One (1) Wall Restraint

ITEM #491 NOT USED

ITEM #492 COMBI OVEN W/ STAND

One (1) CLEVELAND model #OGS-10.20 CONVOTHERM™ or RATIONAL SCCWE-102G or ALTO SHAAM #CTP10-20G , timer and core probe, 250 recipe storage capacity, cooking modes hot air, steam, combi, retherm, cook & hold, "Delta T" slow cooking and "Crisp & Tasty", includes (4) 26" x 20" wire shelves, hand shower, (11) 18"x26" or (22) 12"x20" pan cap. , s/s interior & exterior. Include the following standard and optional accessories:

One (1) Easy Touch Controls
One (1) CST-20-OB open base cabinet with casters, two with locks.
One (1) Lot Claris Water Treatment System, includes (1) pre-filter, (1) Claris X-large steam system, (1) Claris flow meter and (1) water test kit
One (1) Chicken Grill Rack, 12" x 20" (full size), for 10.20 combi OvenSteamers
One (1) Frying Basket, Wire, 20" x 26", for 10.20 combi oven steamers
One (1) Convo Grill Rack, 13" wide x 18" deep, for ConvoTherm ovens, fits directly on pan rack guides
One (1) Lot Convo Clean Hands Free built-in automatic cleaning system: (1) 10 liter ConvoClean, (1) 1 liter Convo Care and (1) empty 10 liter container with label for mixing
One (1) Lot Gas and Water Supply Hoses with quick disconnects and wall restraint

One (1) Lot locking casters.
One (1) Lot factory start up and training

GC to verify accessories with Using Agency prior to shipping.

ITEM #493 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be

0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted “Override” button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal “Capture-Jet” System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1” air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In

addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.
A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #494 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire

System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #495 UTILITY DISTRIBUTION SYSTEM

One (1) HALTON model KDS or AVTEC UDS or CADDY UDS Utility Distribution System in length as shown on plan consisting of two risers and a raceway shipped in sections for field assembly and connection to services by the appropriate trades. The risers shall also have an extension for field installation that joins to the risers at a level below the bottom of the companion exhaust hood so that the hood may be installed prior to the UDS. The exterior of the risers and the raceway shall be constructed of 304 type stainless steel, number 4 finish, not less than 18 Ga. Internal bracing shall be galvanized steel. All riser access doors shall be hinged and have pull and turn latches. Raceway panels shall be held in place by screws. The raceway shall have a peaked top to shed water. The UDS shall have a neoprene bumper strip running the full length of the raceway.

NOTE! Manufacturer to verify all voltage and loads of existing and new equipment connected to unit to insure proper sizing of Electrical and Gas Supply Feeds.

ELECTRICAL CONTRACTORS RESPONSIBILITIES:

There shall be a single point main electrical field connection to the UDS. The UDS shall have main breaker with a shunt trip sized to have a capacity at least 20% greater than the load of the originally-specified cooking equipment being connected.

The main breaker and the shunt trip shall be housed in a riser. Power shall be distributed through the raceway through suitably sized wire. Bus bars are optional. The raceway shall have removable plates on which there are mounted point of use breakers and receptacles for connection of individual appliances. Manufacturer reserves the right to substitute a direct connection for the receptacle when the electrical load is so great that supplying a receptacle is not practical. There shall be a “stop” button located on a riser to shut off the supply of electricity and fuel gas to the individual appliances in the event of an emergency.

EC to be responsible for all field joints required to join units together.

PLUMBING CONTRACTORS RESPONSIBILITIES:

There shall be a single point connection for both domestic hot and cold water. There shall be quarter-turn ball valves located in a riser to isolate the main UDS water lines should the need arise. Hot and cold water lines shall be type “L” hard-drawn copper. Branch connections shall be located at suitable points along the length of the raceway and shall consist of a quick disconnect

with integral ball valve and a flexible hose. Both water lines shall be insulated with ½" open cell foam. Provide integral Backflow Prevention on water supply lines as required by code. Manufacturer to verify with state and local inspectors as to type of units required.

PC to be responsible for all field joints required to join units together.

HEATING CONTRACTORS RESPONSIBILITIES:

There shall be a single point connection for fuel gas. The fuel gas line shall be sized to have a capacity at least 20% greater than the load of the originally specified cooking equipment being connected. There shall be a quarter-turn ball valve located in a riser to isolate the main UDS fuel gas line should the need arise. Looped fuel gas systems there shall be one mechanical gas valve shipped loose for installation before the tee to the loop in the fuel gas line. The field installation of the mechanical gas valve is the responsibility of the Heating Contractor. Fuel gas lines shall be schedule 40 iron pipe. **All joints in the main gas line are to be field welded. Unions, Couplings, Bushing, Etc**., are not permitted per International Fuel Gas Code. Branch connections shall be made at suitable points along the length of the raceway and shall consist of a quarter-turn ball valve and a flexible hose.

HC to be responsible for all field joints required to join units together.

Submit shop drawing for review and approval.

ITEM #496 NOT USED

ITEM #497 WORK TOP W/ FREEZER BASE

One (1) TRUE model #TWT-27F or HOSHIZAKI #CRMF-27W or CONTINENTAL #SWF27-BS one compartment work top freezer. Unit to be sized 27" wide x 34" high. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot casters
One (1) Cord and plug
One (1) Exterior thermometer
One (1) Additional interior shelf

ITEM #498 FRYERS W/ DUMP

One (1) Lot FRYMASTER H-55SC or PITCO #SSH-55C-S/FD or ALTO SHAAM #ASF-60G Fryers High Efficiency Gas Fryers & one (1) Matching st. st. spreader dump station w/ Heat Lamp.

Fryer to be all st. st. construction. Frypot to be all st. st. with drain lever actuated st. st. ball type at bottom of frypot cool zone. St. st. finished back to be included.

ACCESSORIES:

One (1) Footprint filter. Filter to be located under fryers and shall be integrally piped to adjacent fryers. Include filter heater.
One (1) Lot Electronic Timers
One (1) Lift off 16 ga. st. st. cover
One (1) Set of casters, two with brakes
One (1) Full Size Baskets
Two (2) Twin Size Baskets
One (1) Box of filter paper
One (1) Box of filter powder
One (1) Quick Disconnect with Gas Hose and restraint
One (1) SDU50 Shortening Disposal Unit

DETAILS: Above units to be batteried together as shown on plan. Burners to be controlled by exclusive 1 degree action, centerline thermostat. Minimum shortening capacity of 40 pounds each.

ITEM #499 EXISTING COUNTER TOP FRYER

One (1) Existing ANETS unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

HC to be responsible for final gas connection.

GC to be responsible, gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #500 EXISTING REFRIGERATED EQUIPMENT STAND

One (1) Existing LaROSSA unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #501 EXISTING CHARBROILER/RANGE

One (1) Existing US RANGE unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

HC to be responsible for final gas connection

GC shall provide gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #502 TEN BURNER RANGE / CONVECTION OVEN BASE

One (1) Garland Model G60-10RR D or Viking, #V60B/(2)V35SO or Jade JSR-10-2436 ten burner Range, gas, 60" W, (10) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Double Convection Oven Base
One (1) Stainless steel back guard
Two (2) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #503 40 QT. GALLON TILT KETTLES W/ STAND

Two (2) GROEN MODEL: TDH-40 & TS/9S or Cleveland #KGT-12-TGB or Blodgett #12G-KTT GAS Kettle shall be of 304 stainless steel, one-piece welded construction. All exposed surfaces shall be stainless steel. All controls shall be contained in a gasketed enclosure. Unit shall be furnished with a heavy reinforced rim with a welded-in butterfly shaped pouring lip for maximum sanitation and durability. Right or left hand tilt handle. Faucet bracket is standard and mounted on rear of control box.

ACCESSORIES with each:

One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet w/ swing spout
One (1) Equipment Stand with sliding drain drawers
One (1) Lot gas and water hoses with quick disconnects

PC mount faucet and make final connection to water source.

ITEM #504 SIX BURNER RANGE W/ CONVECTION OVEN

One (1) Garland Model G36-6C or Jade JTRH-6-36C or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Stainless steel back guard
One (1) Extra Oven Rack

One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #505 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.
All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted “Override” button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal “Capture-Jet” System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1” air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers

mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.
A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #506 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #507 MICROWAVE OVEN
Furnished by Using Agency, Installed by GC.

One (1) PANASONIC model #NE-1064 1000 or AMANA #RMS10TS or SOLWAVE #MW100SS 1000 watt microwave oven furnished per manufacturers standards with stainless steel cabinet and cavity, bottom energy feed, 10 programmable memory pads, Braille keypad, 20-memory capability, double quantity key, 6 power levels, 2- and 3-stage cooking, programmable lock, unique “quick pick” preset times and self-diagnostics,

ITEM #508 SINGLE SECTION REFRIGERATOR

QTY: One (1)

MFG/MODEL: VICTORY #RSA-1D-S1-EW OR TRAULSEN #AH132WUT-FHS OR RANDELL #2010E

CONST: Per manufacturers standards.

ACCESSORIES:

One (1) Finished Rear Back and Compressor housing
One (1) Full height hinged door
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves

Details: Compressor to be top mounted, air cooled unit. Include self closing door, cylinder locks & flush mounted digital thermometer. Door swing hinged per plan.

ITEM #509 ST. ST. CHEF'S COUNTER/WELLS/SINK

One (1) RANDELL or DELFIELD or Custom Fabricated st. st. chefs counter sized 15’ – 9” long x 48” deep x 36” high to working surface. Counter construction to be per General Requirements. Counter to be furnished with the following components:

One (1) 48” long raised rail self contained sandwich prep with refrigerated base
One (1) 54” three pan hot food counter with fill faucet and individual controls
One (1) 27” wide single compartment sink section with faucet and drainer assembly
One (1) 60” long raised rail self contained sandwich prep with refrigerated base
One (1) 60” St. St. work top filler full to fill space behind raised rail adjacent to sink
Two (2) 36” long double heat lamps with remote controls

One (1) Double St. St. overshelf with attachment rack and hooks
One (1) Lot of duplex receptacles as shown on elevation and rough in
One (1) 10'- 8" x 36" high st. st. utility cabinet 15" deep with st. st. open shelves
One (1) Lot st. st. legs with adjustable feet

Heat lamps and duplex receptacles to be pre-wired to base of unit left ready for final connections.

See elevations for additional details. Submit shop drawing for review and approval.

ITEM #510 HEAT LAMPS

One (1) Lot included with item #509.

ITEM #511 COUNTER TOP ICE CREAM MAKER
Furnished by Using Agency, Installed by GC.

One (1) COLDLITE / CARPIGIANI model #LB-100B or pre-approved equal batch freezer. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot 4" high st. st. legs per Health Department
One (1) UL cord and plug
One (1) Fully automatic operation with electronic consistency control.
One (1) Lot Heavy duty drive system produces firmer product and longer life.
One (1) Unique freezing cylinder design provides faster production and smoother product.
One (1) Heavy duty, one piece auger results in a maximum clean-out with minimal flavor overlap.
One (1) Adjustable timer.

ITEM #512 TRAY RETURN CARTS
Furnished by Using Agency, Installed by GC.

Five (5) www.forbesindustries.com Model #6872 or PIPER Custom or LAKESIDE Custom Modified soiled tray return carts. Unit to be sized 21" wide x 30" deep x 75" high. Include the following standard and optional accessories:

One (1) Modified depth to accommodate two 14 x 18 trays per shelf
One (1) Lot premium laminate sides – Color and pattern to be determined by Architect.
Four (4) 5" swivel casters with two locks on each cart

Submit shop drawing for review and approval.

ITEM #513 ST. ST. WORK TABLE W/ SHELF

Two (2) Custom fabricated unit, size 5' - 9" long x 30" wide x 34" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing. Each leg to be provided st. st. st. adjustable bullet feet.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

SHELF OVER: Per plan and elevation detail provide st. st. overshelf with turned down edges on all sides. Shelf to be supported with 4 st. st. uprights extended thru top and support be supported from below.

Submit shop drawing for review and approval

ITEM #514 ST. ST. WORK COUNTER SINK W/ SHELF

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as previously specified. Provide st. st. wall shelf as shown. Shelf to be lagged to wall with heavy duty anchors and st. st. screws.

Undercounter refrigerator and freezer. Units to be same as undercounter units previously specified with NSF interiors, adjustable shelves, lights and coils. Units to be provided with self contained air cooled compressors sized to accommodate two (2) refrigerator and two freezer compartments. Compressor section to be furnished with louvered, removable access panel. Counter manufacturer to be responsible for 100% operation system. Units to comply with NSF 7 refrigeration requirements.

Submit shop drawing for review and approval.

ITEM #515 TWO SECTION UNDERCOUNTER REFRIGERATOR

One (1) Custom fabricated unit included with item #514.

ITEM #516 TWO SECTION UNDERCOUNTER FREEZER

One (1) Custom fabricated unit included with item #514

ITEM #517 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #518 7 QT. MIXER
Furnished by Using Agency, Installed by GC.

One (1) KITCHEN AID Commercial #KSM7990WH 7 QT or Vollrath #40755 or Globe #SP8

CONST: Per manufacturers standards.

ACCESSORIES: w/ Each unit.

One (1) UL Approved cord and plug
One (1) Stainless Steel Bowl
One (1) Beater
One (1) Wire Whip
One (1) Dough Hook

ELEC: voltage and phase per rough-in drawing.

ITEM #519 PLATES AND BOWLS
Not in Contract

ITEM #520 COLD FOOD PAN

One (1) ATLAS model #RM-3 or RANDELL #9943SCA or DELFIELD #N8143B drop in NSF-7 cold pan. Unit to be furnished per manufacturers standards. Provide unit with cord and plug and two (2) st. st. adapter bars. Cold pan to be shipped to counter fabricator for installation. PTs to extend drain line to building indirect waste per code.

ITEM #521 TRACK LIGHTS

One (1) Lot HATCO #Decorative or MERCO #Contempo or NEMCO #deco heat lamp and track as shown on plan. Provide the following:

One (1) (2) DL-TRACK-4B 4'- 0" tracks (black)
Three (3) DL-500-RTL furnished with type "RT" mounts. (black)
Three (3) WHITE 250 watt clear coated bulbs

GC to turn units over to EC for installation and wiring.

NOTE! Verify color and style of shades & track with architect before ordering.

ITEM #522 PROTECTO WITH LIGHTS

One (1) Lot VERSA-GARD VG15SK four position or BSI #ZG9930 or ENGLISH #AMA-100 adjustable served / self serve food protector sized per plan with 15" deep shelf and (2) sets of sliding 1/4" clear Tempered glass end panels: 1/4" clear tempered glass Front: 3/8" clear tempered glass shelf: (2) front and (2) rear 1" OD supports: slimline LED light fixture - Remote power supply - 120 volt - 3500 K: surface Mount hardware: satin clear Anodized brushed aluminum finish

Units to be turned over to counter fabricator for installation and wiring. Fabricator to show all protectos on their plans drawn to scale with manufacturers cad symbols to insure proper fit. Final electrical connections to be made in field by EC.

Protectos shown are for general arrangement. GC to coordinate units and number of uprights with counter fabricator and sneeze guard to insure the fewest uprights and fittings are used.

Submit shop drawing for review and approval.

ITEM #523 HOT FOOD WELLS

One (1) ATLAS model #WIH-3 or RANDELL #9560-3 or DELFIELD #N8745-D drop hot individually heated hot wells. Unit to be furnished per manufacturers standards. Provide unit with cord and plug. Hot food pan to be shipped to counter fabricator for installation. PTs to extend drain line to building indirect waste per code.

ITEM #524 SERVING COUNTER

One (1) Custom Fabricated counter sized per plan and elevation detail x 34" High to Working Surface. Top and base cabinet depth to be coordinated in field by GC to insure roll down closure aligns with counter top and does not come in contact with sneeze guards. Finished panel on the cabinet front needs to align with the face of the gyp board header in the ceiling.

TOP: Top & side splash to be fabricated of solid surface material per manufacturers standards. Include all cut outs, recesses, etc., for drop in and push in equipment as shown on plan and

elevation. GC to coordinate edge detail and exact color of material with architect. Material and Color as defined in Section 12 36 61.

NOTE GC to coordinate installation of side splash with overhead closure tracks.

BASE CABINET & SHELVES: Basic configuration to be 3/16" powder coated or stainless steel end panels connected by galvanized horizontal supports using mechanical fasteners. Counter front décor panels to be supported by 14 ga. galvanized spars creating a utility chase. Interior to be made up of 16 ga. stainless steel, removable bottom shelf and 18 ga. stainless steel. Stainless Steel top to be adhered to galvanized horizontal supports and be installed to meet manufacturer's guidelines for application.

Provide hinged doors and access panels as shown on elevation detail. Doors to be fabricated per general requirements.

One (1) Lot 6" high st. st. legs with adjustable bullet feet. Provide st. snap on/off st. st. kickplates secured with Kick Plate Clamps. Kickplates to be turned back on top and bottom edge for increased rigidity.

COUNTER FRONT: Cabinet front/customer side to furnished with monolithic solid surface panel covering entire face of counter. Fabricator to join material as to appear as a single seamless piece of material.

PROTECTOS: GC to coordinate installation of protecto's as shown on plan and elevation detail. GC to provide counter manufacturer drawing files to insure upright locations, light switch locations and heat lamp control locations.

CUT OUTS/THERMAL BREAK: Provide cut outs in top for drop in hot/cold units. Cut outs to be provided with Thermal Break consisting of a st. st. 1/2 x 1" st. st. tube wrapped with three layers of NOMEX ® covered with aluminum tape. The insulated tube shall be supported by angle channel below top. Thermal Break is required to insulated hot/cold wells from solid surface top.

FILL FAUCET: Provide T&S, FISHER or CHICAGO hot/cold pantry fill faucets in locations as shown on plan and elevation details. Faucets to be turned over to PC for installation and hook up to water source.

RECESS: Provide st. st. lined recess for undercounter refrigerator item #468.

ELECTRICAL: Counter fabricator to provide all electrical as shown on rough-in plan. Pre-wiring to meet all local and state codes.

APPROVALS: Entire counter assembly to meet UL and NSF standards and bear appropriate stickers. All internal wiring, "J" boxes, receptacles, switches, etc. to be pre-wired by counter manufacturer See rough-in plan for details and receptacle locations. GC to Coordinate NEMA configurations.

Submit shop drawing for approval.

ITEM #525 NOT USED

ITEM #526 CUPS AND LIDS
Not in Contract

ITEM #527 ICE AND SODA DISPENSER
Not in Contract

ITEM #528 TOP MOUNTED ICE MAKER
Furnished by Using Agency, Installed by GC, with connections by PC

One (1) MANITOWOC model #ID-0452A Hoshizaki KM-515MAH or Ice-O-Matic #ICE500 air cooled top mounted 30" wide Energy Star ® ice maker. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) UL Cord and plug
One (1) Luminice Growth Inhibitor
One (1) Artic Pure Water Filter System

Unit to be mounted to top of owner provide ice and soda dispenser. GC to verify requirements and provided necessary mounting hardware, etc.

GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #529 BAG AND BOX SYSTEM
Not in Contract

ITEM #530 AIR POT COFFEE BREWER
Not in Contract

ITEM #531 AIR POTS AND DISPLAY RACK
Not in Contract

ITEM #532 PORTABLE ST. ST. TABLE

One (1) Custom fabricated unit, size 48" long x 24" wide x 36" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in

both directions. Top of leg furnished with stainless steel gussets, welded to channel top reinforcing. Each leg to be provided with heavy duty caster, front two legs to have locks.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #533 ICE MAKER W/ BIN
Furnished by Using Agency, Installed by GC, with connections by PC.

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-0502A or Hoshizaki KM-515MAH or Ice-O-Matic #ICE500

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B400 30" wide bin (290# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor
One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 530 pounds of ice per 24 hours. GC to coordinate location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #534 NOT USED

ITEM #535 ST. ST. MIXER STAND
Furnished by Using Agency, Installed by GC.

One (1) Hobart model #124078-A-HL200 or Varimixer #MT or Globe #MTS mixer stand furnished per manufacturers standards.

ITEM #536 20 QT. MIXER
Furnished by Using Agency, Installed by GC.

One (1) Hobart model #HL-200 or Varimixer #W20J or Globe #SP-20

CONST: Per Manufacturers Standard.

ACCESSORIES w/ each unit.

One (1) UL Approved cord and plug
One (1) Timer & automatic shut-off switch
One(1) Accessory Package
- 20 Quart Stainless Steel Bowl
- 20 Quart "B" Beater
- 20 Quart "D" Wire Whip
-20 Quart "ED" Dough Hook
-20 Quart Bowl Scraper
- 20 Quart Ingredient Chute

ELEC: .5 HP. w/ voltage and phase per rough-in drawing

ITEM #537 ST. ST. SLICER STAND
Furnished by Using Agency, Installed by GC.

One (1) Custom fabricated unit, size 30" long x 30" wide x 34" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #538 SLICER
Furnished by Using Agency, Installed by GC.

One (1) Hobart Model #H7 or Globe #3950N or Berkel #X13AE-Plus automatic slicer furnished per manufacturers standards. Provide the following standard and optional accessories:

One (1) Food Chute
One (1) Low Fence
One (1) UL Cord and plug

ITEM #539 NOT USED

ITEM #540 NOT USED

ITEM #541 CHEMICAL STORAGE WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Each unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

ITEM #542 ST. ST. WALL PANELS

One (1) Lot Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #543 WALL MOUNTED MOP RACK
Not in Contract

ITEM #544 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9" x 9" x 4" deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor opening.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #545 TILT BRAISING PAN

QTY: One (1)

MFR: GROEN MODEL #BPM-40G or Cleveland #SGL40T, Vulcan #VG40

SPECIFICATIONS: Unit shall be a forty gallon, gas fired, tilting skillet. Unit to be stainless steel interior and exterior. Stainless steel clad 5/8" cooking surface, with specially designed welded heat transfer fins. Also provide unit with a torsion bar type counterbalanced cover, adjustable thermostat, and electronic intermittent pilot ignition system. Unit is standard with manual hand tilt and shall tilt past vertical for cleaning.

ACCESSORIES:

One (1) Tangent Draw Off
One (1) Lot flange feet. Secure to floor with st. st. lag bolts.
One (1) Pan Carrier
One (1) Double Pantry Faucet
One (1) Lot gas and water supply lines with quick disconnects and wall restraints

GC to turn faucet assembly over to PC for installation and connection to water source.

ITEM #546 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9" x 9" x 4" deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall

be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor opening.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #547 60 GALLON TILT KETTLE

QTY: One (1)

MFG.: GROEN MODEL: DHT-60 or Cleveland #KGL-60 or Vulcan #K60GLT

SPECIFICATIONS:

Kettle shall be constructed of type 18.8, 316 stainless steel solid one piece welded construction. The unit shall have a reinforced bar rim with butterfly shaped pouring lip. Unit shall have st. st. tubular legs with level adjustable feet. Kettle shall have a fin tube burner assembly, 50 PSI Steam Jacket Rating, Variable Temperature Control, front mounted water sight glass and Electronic Ignition System.

ACCESSORIES:

One (1) 2” Tangent Draw-off valve
One (1) Pan Carrier
One (1) Hinged Cover Kit (#51)
One (1) Kettle Brush Kit
One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet
One (1) Lot gas and water supply lines with quick disconnects and wall restraints

GC to turn faucet assembly over to PC for installation and connection to water source.

ITEM #548 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with

finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-

Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #549 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #550 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear and side wall paneling sized per plan and elevation detail. Provide wall panels from bottom edge of hood down to top of base cove.

Verify height of cove before fabrication. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #551 NOT USED

ITEM #552 SIX BURNER RANGE W/ CONVECTION OVEN
Furnished by Using Agency, Installed by GC.

One (1) Garland Model G36-6C or Jade JTRH-6-36C or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Convection Oven Base
One (1) Stainless steel back guard
One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #553 FRYER SYSTEM
Furnished by Using Agency, Installed by GC.

Two (2) FRYMASTER H-55SC or PITCO #SSH-55C-S/FD or ALTO SHAAM #ASF-60G Fryers.

Fryers to be all st. st. construction. Frypots to be all st. st. with drain lever actuated st. st. ball type at bottom of frypot cool zone. St. st. finished back to be included.

ACCESSORIES:

Two (2) 18” St. St. Splash shield mounted to right & left hand side of Fryer as required by code.
One (1) Footprint filter. Filter to be located under fryers and shall be integrally piped to adjacent fryers. Include filter heater.
One (1) Lot Electronic Timers
Two (2) Lift off 16 ga. st. st. covers
One (1) Set of casters, two with brakes
Two (2) Full Size Baskets
Four (4) Twin Size Baskets
One (1) Box of filter paper
One (1) Box of filter powder
One (1) 1” Quick Disconnect with Gas Hose
One (1) “T” Rear manifold to provide single gas connection

DETAILS: Above units to be batteried together as shown on plan. Burners to be controlled by exclusive 1 degree action, centerline thermostat. Minimum shortening capacity of 40 pounds each. Units to be furnished for natural gas at 160,000 BTU's total.

ITEM #554 WOK RANGE
Furnished by Using Agency, Installed by GC.

One (1) TOWN model #MF1-SS or JADE #JCR-1 or Imperial Range single wok furnished per manufacturers standards. Include gas and water hoses. GC to verify burner arrangement with Using Agency prior to ordering. Submit shop drawing for review and approval.

ITEM #555 EXISTING DOUBLE DECK COMBI OVEN

One (1) Existing Rational Double Deck SCC62 combi oven to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after HC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

HC to be responsible for final gas connection.

GC shall provide, gas flex hoses, regulators, vacuum breakers, etc. to properly re-connect unit per code.

ITEM #556 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

Provide st. st. filler at column area to give appearance of continuous hood facia.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI

and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD’s and then from the VFD’s to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.
A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet

construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #557 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #558 UTILITY DISTRIBUTION SYSTEM

One (1) HALTON model KDS or AVTEC UDS or CADDY UDS Utility Distribution System in length as shown on plan consisting of two risers and a raceway shipped in sections for field assembly and connection to services by the appropriate trades. The risers shall also have an extension for field installation that joins to the risers at a level below the bottom of the companion exhaust hood so that the hood may be installed prior to the UDS. The exterior of the risers and the raceway shall be constructed of 304 type stainless steel, number 4 finish, not less than 18 Ga. Internal bracing shall be galvanized steel. All riser access doors shall be hinged and have pull and turn latches. Raceway panels shall be held in place by screws. The raceway shall have a peaked top to shed water. The UDS shall have a neoprene bumper strip running the full length of the raceway.

ELECTRICAL CONTRACTORS RESPONSIBILITIES:

There shall be a single point main electrical field connection to the UDS. The UDS shall have main breaker with a shunt trip sized to have a capacity at least 20% greater than the load of the originally-specified cooking equipment being connected.

The main breaker and the shunt trip shall be housed in a riser. Power shall be distributed through the raceway through suitably sized wire. Bus bars are optional. The raceway shall have removable plates on which there are mounted point of use breakers and receptacles for connection of individual appliances. Manufacturer reserves the right to substitute a direct connection for the receptacle when the electrical load is so great that supplying a receptacle is not practical. There shall be a "stop" button located on a riser to shut off the supply of electricity and fuel gas to the individual appliances in the event of an emergency.

EC to be responsible for all field joints required to join units together.

PLUMBING CONTRACTORS RESPONSIBILITIES:

There shall be a single point connection for both domestic hot and cold water. There shall be quarter-turn ball valves located in a riser to isolate the main UDS water lines should the need arise. Hot and cold water lines shall be type "L" hard-drawn copper. Branch connections shall be located at suitable points along the length of the raceway and shall consist of a quick disconnect with integral ball valve and a flexible hose. Both water lines shall be insulated with ½" open cell foam. Provide integral Backflow Prevention on water supply lines as required by code. Manufacturer to verify with state and local inspectors as to type of units required.

PC to be responsible for all field joints required to join units together.

HEATING CONTRACTORS RESPONSIBILITIES:

There shall be a single point connection for fuel gas. The fuel gas line shall be sized to have a capacity at least 20% greater than the load of the originally specified cooking equipment being connected. There shall be a quarter-turn ball valve located in a riser to isolate the main UDS fuel gas line should the need arise. Looped fuel gas systems there shall be one mechanical gas valve shipped loose for installation before the tee to the loop in the fuel gas line. The field installation of the mechanical gas valve is the responsibility of the Heating Contractor. Fuel gas lines shall be schedule 40 iron pipe. **All joints in the main gas line are to be field welded. Unions, Couplings, Bushing, Etc**., are not permitted per International Fuel Gas Code. Branch connections shall be made at suitable points along the length of the raceway and shall consist of a quarter-turn ball valve and a flexible hose.

HC to be responsible for all field joints required to join units together.

Submit shop drawing for review and approval.

ITEM #559 SECURITY STORAGE SHELVING

Furnished by Using Agency, Installed by GC.

One (1) METRO model SEC53DCQ super erecta or Eagle Chrome or ISS Secure chrome 40" long x 24" chrome wire security shelving units furnished per manufacturers standards. Units to be provided with two (2) interior wire shelves, heavy duty casters, two with brakes. Locks to be provided by operator.

ITEM #560 ST. ST. PORTABLE WORK TABLE

One (1) Custom fabricated unit, size 4'- 6" long x 30" wide x 34" high.

TOP: Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS: Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS: Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER : Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #561 ST. ST. DEMO COUNTER W/ SINK

One (1) Custom Fabricated unit sized 13' - 0" long x 36" wide x 36" high.

Top: Fabricated of 14 ga. St. St. With type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per general requirements.

Sink: In top as shown on per plan furnish integrally welded sink 18" x 21" x 12" deep. Sink fabricated of 14 ga. st. st. with horizontal and vertical corners with not less than 5/8" integral radius. Sink bottom to be pitched to drain towards 3 1/2" dia., diestamped opening. Sink to be polished out in all corners to a #4 finish.

Sink Trim: One (1) T& S or FISHER or CHICAGO FAUCET Model B-1120-LN deck type faucet furnished with 060X, 8" swing spout with B-0199-01 aerator. Faucet caulked watertight to counter top. Faucet to be cast red brass, all chrome plated with color coded hot and cold water faucets.

One (1) T&S Model B-3950-01 (1-1/2" I.P.S) T& S or FISHER or CHICAGO FAUCET twist handle drain with connected rear overflow assembly

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

Backsplash: Side of top to be turned up against stub wall as shown on elevation.

Undercounter Dishwasher; Provide recessed space in base cabinet sized to accommodate undercounter dishwasher and detergent bottles. See elevation for location and details.

Electrical: Provide recessed electrical receptacle in splash as shown on elevation. Receptacle to be pre-wired to "J" box in base of cabinet. Provide Electrical receptacle in A/V cabinet for computer and DVD use. All receptacles to be located on shop drawings.

Base Enclosure: Cabinet base under unit to be furnished with 18 gauge stainless steel full width access doors. Door to be double pan constructed, sound deadened with stainless steel, NSF hinges and recessed stainless steel handle per general requirements. Bottom of sink enclosure, to be furnished with removable 16 gauge stainless steel shelf, coved interior corners with rear and ends turned up 2" against cabinet A/V Section to be provided with pull out drawer for keyboard , etc. per section detail. Base to be supported with 6" legs with adjustable bullet feet.

Tray Storage: Provide enclosed storage area for pans as shown on elevation.

Submit shop drawing for review and approval.

ITEM #562 ST. ST. PORTABLE WORK TABLE

One (1) Custom fabricated unit, size 4'- 6" long x 30" wide x 34" high.

TOP: Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS: Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS: Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER : Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #563 UNDERCOUNTER DISHWASHER
Furnished by Using Agency, Installed by GC, with connections by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with “auto-prime”
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators
One (1) Peg rack
One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency’s soap and rinse dispensing system.

ITEM #564 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #565 WALK IN REFRIG/FREEZER

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards.

Floors to be 3.75" thick. Include a factory installed 32" long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-

corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable **WALK-IN MONITORING SYSTEM 100B** featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove_ to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32" long interior Ramp, 36" overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
Two (2) Vision Windows 14" x 14"

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume

- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4" thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity ("K" factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer ("U" factor) shall not exceed .033 and the resistance to heat penetration ("R" factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46" and at junction of vertical and horizontal joints by 23". Cam locks shall be foamed-in-place and anchored securely in the panel by steel "wings" integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #566 NOT USED

ITEM #567 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5" dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #568 PORTABLE PAN RACKS
Furnished by Using Agency, Installed by GC.

Seven (7) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #569 WALK IN REFRIGERATOR SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake

wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5" dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #570 NOT USED

ITEM #571 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: Three (3)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #572 3 H.P. DISPOSER AND RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #573 NOT USED

ITEM #574 ST. ST. THREE COMP. SINK

One (1) Custom Fabricated unit in size 33" deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

SHELF OVER: Over top as shown on plan furnish single deck 16 ga. st. st. shelf with 1" rolled rim and 2" turn up against wall. Shelf to be mounted on 1-1/4" dia., st. st. cantilever uprights extending up thru backsplash. Hole in backsplash to be cut out to fit upright with not more than 1/16" clearance, then caulked with clear silicone sealant.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #572.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4” I.P.S) to fit in rear of Backsplash to accommodate 3/4” water lines , Center compartment Pre-rinse w/ 10” “Add a Faucet” (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12” spout and provide T&S Model 112x 10” spout. (FISHER, CHICAGO FAUCET)

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 T& S or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #575 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #576 ST. ST. SOILED/CLEAN DISHTABLES

One (1) Custom Fabricated unit in size 30" deep x length as shown plan with integral pitch to allow tables to drain towards dishwasher or table drainers.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #576.

TABLE DRAINER - In top of soiled table, furnish integrally welded table drainer 6" wide x 3" deep x full width of dishtable. (Full width to mean from front vertical inside edge of rolled rim to back of vertical edge of backsplash). Inside edges both horizontally and vertically furnished with not less than ½" radius. Interior of drainer to be furnished with all coved cornered perforated strainer basket made of 16 gauge stainless steel.

Include 1/4" stainless steel rod guide handles to allow racks to slide over drainer area. Drainer pitched to drain and to have die stamped opening and furnished with basket drain, brass chrome plated with 1-1/2" tailpiece.

Submit shop drawing for review and approval.

ITEM #577 ST. ST. WALL PANELS

One (1) Lot of 18 ga. st. st. wall paneling size and shape as per elevation detail. Provide st. st. wall cap as shown on plan and elevation detail. Wall cap to be provided with 2” turn down as shown. Paneling to be installed with flush mounted hidden fasteners. Panel to cover entire wall surface from top of tile base on all four sides. Include st. st. vertical trim on ends. Submit shop drawing for approval.

ITEM #578 3 H.P. DISPOSER AND RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow Control Valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #579 VENTLESS DISHWASHER

QTY: One (1)

MFG/MODEL: HOBART AM-15VLT or CHAMPION #DH5000-VHR or MEIKO #DV80.2

CONST: Unit to have spring counter balanced doors arranged as shown on plan. Drawn Tank, Tank shelf and feet constructed of 16 ga. st. st. Frame to be constructed of 12 gauge st. st. Chamber to be constructed of 18 ga. st. st. Removable trim panels to be constructed of 20 ga. st. st. NOTE! Unit to meet all state and local code for ventless operation.

ACCESSORIES:

One (1) Internal condensing system
One (1) Door Lock interlock to prevent door from being opened too soon.
One (1) Single Point electrical connection
One (1) Pressure reducing valve sized for dishwasher capacity (unconnected)
One (1) Automatic tank fill
One (1) Built in 70 degree rise electric booster heater
One (1) 5 KW Tank heater
One (1) Lot of low water tank heat protection
One (1) Splash proof pump motor

One (1) Lot of interlocked door safety switches
One (1) Lot of interchangeable spray arms
One (1) Lot of st. st. front and side panels
One (1) Lot of detergent connection provisions
One (1) Lot of NSF approved gauges on rinse & wash water
One (1) NSF Pot and Pan listed 2, 4 and 6 minute Cycle
One (1) Timed wash cycles for 1,2,4 or 6 minutes
One (1) 27" door opening for 18" x 26 sheet pans or 60 qt. mixing bowl
One (1) Stainless Steel Pump and Impeller
One (1) Delime notification (field activated) and Delime Cycle
One (1) Drain Water tempering kit
One (1) Sheet Pan Rack
Three (3) Standard 20" x 20" dish racks
Three (3) Standard 20" x 20" open racks

PC and EC to be responsible for final connections.

ITEM #580 SOAP AND RINSE SYSTEM
Not in Contract

ITEM #581 NOT USED

ITEM #582 ST. ST. WALL PANELS

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Panel section behind dishwasher to run down to top of coved tile base. GC to provide necessary cut outs for power and water supply lines.

Submit shop drawing for review and approval.

ITEM #583 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14” deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18” deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #584 WALL MOUNTED RACKING SHELF

One (1) ADVANCE TABCO model DT-6R-22 or Eagle 2 rack or Custom fabricated Tubular wall mounted racking shelf. Unit to be furnished per manufacturers standards. GC to be secured to wall with heavy duty st. st. lag bolt and anchors.

ITEM #585 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #586 TWO SECTION FREEZER

QTY: One (1)

MFG/MODEL: VICTORY #FSA-2D-S1-EW OR TRAULSEN ALT232WUT-FHS OR RANDELL 2020FE

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Freezer to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #587 TWO SECTION REFRIGERATOR

QTY: One (1)

MFG/MODEL: VICTORY #RSA-2D-S1-EW OR TRAULSEN #AH232WUT-FHS OR RANDELL #2020E

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Refrigerator to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #588 TWO SECTION FREEZER

QTY: One (1)

MFG/MODEL: VICTORY #FSA-2D-S1-EW OR TRAULSEN ALT232WUT-FHS OR RANDELL 2020FE

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Freezer to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #589 ICE MAKER W/ BIN
Furnished by Using Agency, Installed by GC, with connections by PC

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-0502A or Hoshizaki KM-515MAH or Ice-O-Matic #ICE500

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B400 30" wide bin (290# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor
One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 530 pounds of ice per 24 hours. GC to verify location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #590 PORTABLE PAN RACKS
Furnished by Using Agency, Installed by GC.

Four (4) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #591 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated

electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #592 TWO SECTION REFRIGERATOR

QTY: One (1)

MFG/MODEL: VICTORY #RSA-2D-S1-EW OR TRAULSEN #AH232WUT-FHS OR RANDELL #2020E

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Refrigerator to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #593 ST. ST. WORK TABLE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #154, except provide full length st. st. shelf above. Shelf to be supported with st. st. uprights and cantilever bracket. Submit shop drawing for review and approval.

ITEM #594 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #595 STUDENT STOOLS
Not in Contract

ITEM #596 UTENSIL RACKS

One (1) Lot included with item #597.

ITEM #597 ST. ST. WORK COUNTER/REF BASE

Eight (8) Custom fabricated unit, sized 15' - 6" per plan and elevation detail x 30" deep x 36" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per General Requirements.

Edges against equipment or where shown on plan to be furnished with 12" high integral backsplash with 1" return at 90 degree angle. Caulk with clear G. E. sealant to meet Health Department approval.

SINK In top as shown on plan and elevation furnish integrally welded sink sized 24" x 26" x 12" deep. Sink fabricated of 14 ga. st. st. with horizontal and vertical corners with not less than 5/8" integral radius. Sink bottom to be pitched to drain towards 3-1/2" dia., die stamped opening. Sink to be polished out in all corners to a #4 finish.

SINK TRIM

One (1) T&S B-0230-LN W/ 060X T& S or FISHER or CHICAGO FAUCET 8" swing spout & B-0199-01 aerator

Furnish each faucet complete with T&S model B-0230-K or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

One (1) T&S model B-3950-01 T& S or FISHER or CHICAGO FAUCET twist handle drain with rear overflow & 010387-45 removable Basket Strainer. Twist drain handle furnished with 14 gauge stainless steel brackets welded to underside sink.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

SINK ENCLOSURE Cabinet base under sink section furnished with 18 ga. st. st. louvered access door. Door to be double pan construction, sound deadened, with NSF hinges and recessed st. st. handles per General Requirements. Bottom of sink enclosure, to be furnished with removable 16 ga. st. st. shelf, coved interior corners with rear and ends turned up 2" against cabinet interior. NOTE! shelf to be held back 8" from rear of cabinet to allow space for water and waste rough-in connections.

LEGS & FLANGE FEET Balance of top to be mounted on 1-5/8" diameter 16 gauge stainless steel tubular legs furnished with integrally welded crossrails between legs. Legs to be furnished with stainless steel gussets and stainless steel adjustable flange type feet. GC to bolt flanges to floor with st. st. lag bolts.

SHELF OVER: Over top as shown on plan furnish single deck 16 gauge stainless steel shelf with 1" rolled rim and 2" turnup against wall at 56”. Shelf to be mounted on 1-1/4" diameter 16 gauge stainless steel cantilever type uprights extending up thru backsplash. Hole in backsplash cut out to fit uprights with not more than 1/16" clearance then caulked with clear silicone sealant.

ATTACHMENT RACK

Above shelf as shown on elevation detail, provide two (2) bar type rack constructed of 2" x 1/4" st. st. bars welded to 12 ga. st. st. gussets at each end and reinforced thru center on approx., 36" centers with similar type gussets. (Verify mounting height). Attachment rack/shelf support uprights to be reinforced below top as required to support heavy loads.

Each bar to be furnished with st. st. sliding type pot hooks space on 6" centers. Racks to be all welded construction with all welds ground and polished smooth. Top bar to be 10" out from wall with bottom bar 3" out from wall.

STOOL STORAGE Provide open storage sized per plan and elevation detail for stool storage. GC to verify exact size with Using Agency.

UNDERCOUNTER REFRIGERATOR Two (2) 18 gauge st. st. custom fabricated two compartment undercounter refrigerators. Door hardware, gaskets, etc. component all to be per manufacturers standards.

Interior of undercounter refrigerator to be 18 ga. st. st. with all coved corner welded construction, furnished with NSF approved automatic interior light, drain, three (3) adjustable chrome plated wire shelves per compartment, and a dial thermometer on cabinet per Department of Health Requirements. Include recessed blower coils, solenoids, thermostat, interior light, control switch and pilot light installed inside refrigerator. See remote refrigeration specification for details.

GC to be responsible for 100% operating system, including interconnections with item #779. GC to coordinate all refrigeration lines runs to insure proper installation.

ELECTRICAL: Provide pre-wired duplex receptacles furnished and installed to meet all state and local code. Receptacles to be located in backsplash as shown on elevation and rough in plan. Receptacles to be pre-wired to "J" boxes in base of cabinet. See electrical plan for quantities.

Submit shop drawing for approval.

ITEM #598 WALDORF STYLE COOKING SUITES

Four (4) Garland Range or Jade Custom or Montague Custom Waldorf Suites as shown on plan shall have combination of precision mechanical and welded stainless steel construction throughout and be hand built to custom specifications. All units shall be fully constructed and tested at the factory prior to shipment.

See elevations and sections for details. Waldorf Suite shall include the following heavy duty components:

Four (4) Hot food wells w/ drains & faucets
Four (4) Char-broilers
Four (4) Six Burner Ranges with convection ovens
Two (2) Overhead Salamander Broilers
Four (4) Recessed Duplex Receptacles (two per side on end cabinets)
Two (2) Storage cabinets
Two (2) Custom End Cabinets w/ stainless doors.
One (1) Custom St. St. Tubular Over-shelf
One (1) Custom Stainless Steel Removable Center Cover
One (1) Custom Stainless Steel Back Pedestal Flue to support overshelf and salamanders
One (1) Full perimeter belly bar with clear space to accommodate $1/9^{th}$ size pans on all sides.

Suite shall be provided with a single point gas connection, 1 ¼" gas pressure regulators and custom center raceway gas manifold. Suite shall have a single point electrical connection with main load center Water, Drains, Gas and Electric Utilities per plan and rough in.

N8717-D Hot food wells C/W Faucets Fisher, Chicago or T&S
M17B Ceramic Stone Char broilers 45K Btu. All stainless exterior
M43RC 6 burner range C/W (6) 26K Btu open burner and 40K Btu oven burner. Oven interior is black porcelain. All stainless exterior
M24ES Cabinets with stainless door. Utility cabinets. All stainless exterior

MIR-34C Salamanders with (2) 20K Btu ceramic tile burners. All stainless exterior.

GC to turn faucet assemblies over to PC for installation and connection to water source.

Submit shop drawing for review and approval.

ITEM #599 ST. ST. ISLAND STYLE EXHAUST HOODS
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

Four (4) HALTON Back-to-back model #KVE – PSP commercial kitchen island style exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing. The use of end panels or rear seals to achieve required airflows, are not acceptable.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input

voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, based upon ASTM F-2519-05 method of test, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air

fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

Submit shop drawings for review.

ITEM #600 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN utility cabinets on end of hoods as shown on plan.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #601 TRASH RECEPTACLES
Not in Contract

ITEM #602 ST. ST. HAND SINK

QTY: Three (3)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #603 ST. ST. WORK TABLE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #560, except provide full length st. st. shelf above and st. st. lower shelf per general requirements. Shelf to be supported with st. st. uprights extending thru top. Shelf to have turn up on back to allow tight fit against reach in refrigerator. Submit shop drawing for review and approval.

ITEM #604 TWO SECTION REFRIGERATOR

QTY: One (1)

MFG/MODEL: VICTORY #RSA-2D-S1-EW OR TRAULSEN #AH232WUT-FHS OR RANDELL #2020E

CONST: Per manufacturers standards.

ACCESSORIES:

One (1) Finished back and compressor housing
Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Refrigerator to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #605 PORTABLE TOOL BOX RACKS
Not in Contract

ITEM #606 ST. ST. WORK TABLE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #560, except provide full length st. st. shelf above and st. st. lower shelf per general requirements. Shelf to be supported with st. st. uprights extending thru top. Shelf to have turn up on back to allow tight fit against reach in refrigerator. Submit shop drawing for review and approval.

ITEM #607 TWO SECTION REFRIGERATOR

QTY: One (1)

MFG/MODEL: VICTORY #RSA-2D-S1-EW OR TRAULSEN #AH232WUT-FHS OR RANDELL #2020E

CONST: Per manufacturers standards.

ACCESSORIES:

One (1) Finished back and compressor housing.
Two (2) Full height hinged doors hinged per plan

One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Refrigerator to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #608 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #609 TWO SECTION FREEZER

QTY: One (1)

MFG/MODEL: VICTORY #FSA-2D-S1-EW OR TRAULSEN ALT232WUT-FHS OR RANDELL 2020FE

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks

One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Freezer to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #610 ST. ST. WALL COVERING AND CAP

One (1) Lot of 18 ga. st. st. wall paneling covering entire wall area per elevation. Paneling to be installed with flush mounted hidden fasteners. Panel to cover entire wall surface from top of tile base on all five surfaces. Provide cut outs for all utilities as required.

Submit shop drawing for approval.

ITEM #611 ST. ST. WALL PANELING

One (1) Lot of 18 ga. st. st. wall paneling size and shape as per elevation detail. Provide st. st. wall cap as shown on plan and elevation detail. Wall cap to be provided with 2” turn down as shown. Paneling to be installed with flush mounted hidden fasteners. Panel to cover entire wall surface from top of tile base on all four sides. Include st. st. vertical trim on ends. Submit shop drawing for approval.

ITEM #612 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear wall paneling sized per plan and elevation detail. Provide wall panels from above and below UDS as shown on elevation detail. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #613 REACH IN FREEZER

QTY: One (1)

MFG/MODEL: VICTORY #FSA-2D-S1-EW OR TRAULSEN ALT232WUT-FHS OR RANDELL 2020FE

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan

One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Freezer to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #614 NOT USED

ITEM #615 NOT USED

ITEM #616 NOT USED

ITEM #617 NOT USED

ITEM #618 NOT USED

ITEM #619 NOT USED

ITEM #620 NOT USED

ITEM #621 ST. ST. COUNTER/SINK/CABINETS

Five (5) Custom fabricated units sized approximately 48" long x 30" wide x 34" high.

TOP

Fabricated of 14 gauge stainless steel with type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per General Requirements.

Edges against equipment or walls as shown on plan to be furnished with 6" high integral backsplash with 1" return at 90 degree angle. Caulk with clear sealant to meet Health Department approval.

SINK

In top, furnish single compartment integrally welded sinks 15" x 20" x 12" deep. Bottom of sink compartment to be pitched and furnished with die stamped opening to accommodate waste flange. Sink to be all coved cornered and fabricated per General Requirements.

SINK TRIM:

One (1) Faucet furnished with 8" swing spout & aerator. Faucet caulked watertight to counter top. Faucet to be cast red brass, all chrome plated with color coded hot and cold water faucets.

One (1) 1-1/2" I.P.S. twist handle drain with connected rear overflow assembly with Stainless Steel tailpiece 6" long.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

CABINET BASE

Entire top to be mounted on cabinet base, fabricated of 18 ga. Stainless Steel reinforced with 1-1/2" x 1-1/2" x 1/8" Galv. Iron framework running horizontally and vertically. Cabinet to be constructed per General Requirements.

Interior of cabinet furnished with lower and center 16 ga. Stainless Steel shelves. Shelves to have 2" turn-up on rear and ends with made in removable sections and reinforced under with 1/1/2" x 1-1/2" x 18" galvanized iron angles .

Per elevation detail provide hinged access doors with louvers. Doors construction to be per general requirements.

WALL CABINETS

Stainless Steel wall cabinets sized per plan and elevation detail. Provide units with hinged locking doors. Interior of cabinets to be furnished with two adjustable interior shelves. Wall cabinet construction to be similar to ADVANCE #WCH-1548. GC to lag units to wall with heavy duty Stainless Steel lag bolts. Cabinets to support heavy loads.

Submit shop drawing for approval.

ITEM #622 RESIDENTIAL SIX BURNER RANGE

Five (5) WOLF model #GR366 or VIKING # VGCC or DÉCOR # ER36G 6 Burners gas range furnished per manufacturers standards. Unit to be turned over to counter fabricator for installation. HC to be responsible for final connections.

ITEM #623 ST. ST. EXHAUST HOOD

Furnished by Using Agency, Installed by GC, with connections by EC and VC.

Five (5) Halton Low Proximity model #KVL2 commercial kitchen backshelf style exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. The installation (including mounting height A.F.F.) shall

be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed. Side panels of hood to be tapered as indicated on drawings. Hood to include stainless steel ceiling enclosures on all exposed sides to finished ceiling as indicated on drawings.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets if required shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations based on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing. The use of full depth end panels or rear seals to achieve required airflows, are not acceptable.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System along the front of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5

microns and 98% on particles with a diameter of 15 microns or larger, based upon ASTM F-2519-05 method of test, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Hood exhaust air volume and induction system measurements shall be taken at integral TAB ports by air balancer. Air balancer is to adjust the air flow until design air volumes are achieved.

Hood provided with Appliance Interlock Temperature Sensor to comply with IMC 2006 requirement, section 507.2.1.1.

Specified product/system must meet the design, construction, performance and operational intent of the project. It is the responsibility of the primary purchasing/ installation contractor to verify interface of the system with all associated trades including, but not limited to; electrical, mechanical, sheet metal, plumbing and controls.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #624 FIRE SYSTEM

Five (5) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in

accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #625 DOUBLE ELECTRIC WALL OVEN

Five (5) WOLF model #DO30F/S or VIKING # VEDO5302SS or DÉCOR # RNO230S 30" built in double wall oven furnished per manufacturers standards. Unit to be turned over to A/E Millwork fabricator for installation. EC to be responsible for final connections.

ITEM #626 ST. ST. PORTABLE WORK TABLE

Five (5) Custom fabricated unit, size 6'- 0" long x 30" wide x 34" high.

TOP: Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS: Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing. Each leg to be provided with adjustable bullet foot.

SHELF UNDER : Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #627 PORTABLE THREE TIER CART
Furnished by Using Agency, Installed by GC.

Five (5) LAKESIDE model #422 or piper three tier st. st. or cambro poly three tired utility carts. Units to be furnished per manufacturers standards.

ITEM #628 ST. ST. COUNTER W/ WALL CABINET

Five (5) Custom fabricated units sized per plan and elevation detail. General construction to be same as item #621, except omit sink section.

Submit shop drawing for review and approval.

ITEM #629 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #630 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #631 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: Four (4)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #632 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #633 THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 33" deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

UNDERCOUNTER DISHWASHER – Provide open space under top as shown for under counter dishwasher.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 24 x 28" x 14" deep. Bottom of each sink compartment furnished with die-

stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12" spout and provide T&S Model 112x 10" spout. (FISHER, CHICAGO FAUCET)

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 T& S or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #634 UNDERCOUNTER DISHWASHER

Furnished by Using Agency, Installed by GC, with connection by PC.

One (1) Hobart model #LXeH, or Jackson #AVENGER HT or Champion #UH230B High Temperature undercounter dishwasher. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Detergent and Rinse aid pumps with "auto-prime"
One (1) UL Approved power cord and plug
One (1) Water Hammer Arrestor Kit
One (1) Drain water tempering kit
One (1) Built in 70 degree rise booster heater
One (1) Low Chemical alert indicators
One (1) Peg rack
One (1) Open rack

Dishwasher to be furnished complete with all necessary piping to accept Using Agency's soap and rinse dispensing system.

ITEM #635 NOT USED

ITEM #636 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #637 NOT USED

ITEM #638 THREE COMPARTMENT ROLL IN REFRIG

QTY: One (1)

MFG/MODEL: TRAULSEN ARI332HUT-FHS or Victory #RISA-3D-S1 or Delfield #SARRI3-3

CONST: Per manufacturers standards

ACCESSORIES:

Three (3) Roll in racks
Three (3) Ramps
Three (3) Full height hinged doors (Hinging per plans)

DETAILS: Ramps and bottom of unit to be sealed to floor with clear silicone. GC to trim unit to wall on sides.

ITEM #639 TWO SECTION REACH IN FREEZER

QTY: One (1)

MFG/MODEL: VICTORY #FSA-2D-S1-EW OR TRAULSEN ALT232WUT-FHS OR RANDELL 2020FE

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section
Details: Freezer to have 52 cu. Ft. Capacity, size 58" x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #640 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #641 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #642 CHEMICAL STORAGE SHELVING

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #643 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #644 WALL MOUNTED MOP RACK

Not in Contract

ITEM #645 – 652 NOT USED

ITEM #653 ST. ST. THREE COMPARTMENT SINK

One (1) ADVANCE TABCO model #K7-CS-22 (Eagle, Custom fabricated) st. st. three compartment sink furnished per manufactures standards. Unit to be furnished with

One (1) T&S Model B-0133-ADF12-B or FISHER or CHICAGO FAUCET Pre-rinse unit w/ 12" "Add a Faucet" (1/2" I.P.S) to fit in rear of Backsplash to Accommodate ½ " water lines. Furnish unit complete with T&S Model B-0230-K Assembly to facilitate fastening to Backsplash and Three (3) Twist Handle Drains with removable basket strainers

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #654 ST. ST. WALL PANELING

One (1) Lot of Custom fabricated 18 ga. St. St. 30" high wall paneling sized and shape as per elevation detail. Paneling to be installed with flush mounted hidden fasteners. Furnish hairline butt joints at all seams GC to seal sides and edges with silicone after installation. Submit shop drawing for approval.

ITEM #655 WALL MOUNTED MOP RACK
Not in Contract

ITEM #656 WALL MOUNTED CHEMICAL STORAGE SHELF

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Each unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

ITEM #657 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #658 2 SECTION BUILT IN REFRIG/FREEZER

One (1) SUBZERO model #BI-48S or VIKING #VCSB5482SS or DÉCOR # DYF48BIWS st. st. side by side reach in refrigerator / freezer furnished per manufacturers standards. Unit to be turned over to architectural millwork fabricator for built in installation.

ITEM #659 NOT USED

ITEM #660 EXISTING UNDERCOUNTER DISHWASHER

One (1) Existing CHAMPION unit to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

PC to be responsible for final plumbing connections.

GC to Shall provided hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #661 NOT USED

ITEM #662 NOT USED

ITEM #663 HEATED DRAWERS

One (1) WOLF model WWD30 or VIKING # RVEWD330SS or DÉCOR #MRWD30 built in warming drawer furnished per manufacturers standards. Unit to be turned over to Architectural Millwork fabricator for installation. EC to be responsible for final connections.

ITEM #664 SINGLE WALL OVEN

One (1) WOLF model #SO30F/S 30" or VIKING # VESO5302SS or DÉCOR # RNO130S built in single wall oven furnished per manufacturers standards. Unit to be turned over to Architectural Millwork fabricator for installation. EC to be responsible for final connections.

ITEM #665 UNDERCOUNTER SINGLE DOOR WINE COOLER
Furnished by Using Agency, Installed by GC, with connection by EC.

One (1) SUBZERO model #424G/S/PH or ULINE #3024WC or MARVEL #MPR06DZE-BS-24" wide built in undercounter wine refrigerator. Unit to be furnished per manufacturers standards including locking door. Unit to be turned over to Millwork fabricator for installation. EC to be responsible for final connections.

ITEM #666 DROP IN INDUCTION COOK TOP

One (1) WOLF model #CT15I/S or VIKING or MIELE #CS12211 drop in 15" induction cook top furnished per manufacturers standards. Unit to be turned over to Millwork fabricator for installation. EC to be responsible for final connections.

ITEM #667 36" DROP IN RANGE

One (1) WOLF model #SRT364CG or VIKING # VGRT36 or DÉCOR # EG366 4 Burners, r, Griddle range top furnished per manufacturers standards. Unit to be turned over to Millwork fabricator for installation. EC to be responsible for final connections.

ITEM #668 NOT USED

ITEM #669 VENTILATED CEILING

Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) Halton model # VCS - Ventilated Ceiling System™

The Ventilated Ceiling System™ shall be supplied and installed in accordance with the manufacturer's drawing and is custom designed for the space. Sized per bid set drawings.

The Ventilated Ceiling System™ shall be comprised of:

Structural grid c/w hanger brackets fabricated of 300 series, #4 finish stainless steel in accordance with the manufacturer's drawing.

Removable, washable, high-efficiency centrifugal extractor cassettes fabricated of 300 series, #4 finish stainless steel. The location and quantity to be supplied in accordance with the manufacturer's drawing.

Plenum boxes c/w balancing dampers, all welded, liquid tight steel construction to capture and contain vapor exhausted by extractor cassettes. The number, location to be supplied in accordance with the manufacturer's drawing.

Perforated supply air panels fabricated of 300 series, #4 finish stainless steel. The location and quantity to be supplied in accordance with the manufacturer's drawing.

Blank or passive tiles fabricated of 300 series, #4 finish stainless steel. The location and quantity to be supplied in accordance with the manufacturer's drawing.

LED lighting panels. The location and quantity to be supplied in accordance with the manufacturer's drawing.

The Ventilated Ceiling System™ manufacturer will provide factory trained personnel to supervise installation of the system as well as to assume responsibility for its start-up and commissioning.

The Ventilated Ceiling System™ shall be ULC/ETL listed and installed in accordance with applicable codes.

Please consult the manufacturer's drawing, which forms an integral part of this specification, dimensions, for electrical and mechanical requirements and dimensions.

Submit shop drawing for review and approval.

ITEM #670 FIRE SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #671 PORTABLE HEATED BANQUET CART
Furnished by Using Agency, Installed by GC.

One (1) FWE model #BT-120 or Alto Shaam #100-BQ2/128 or American Foodservice #BQ-96E portable banquet carts Units to be furnished per manufacturers standards. Carts to have capacity of 120 11" plates with covers 2.625" tall. Cart will have 96 11' plate capacity with 3.125" covers.

One (1) Lot of casters, two with locks
One (1) UL Approved cord and plug

ITEM #672 EXISTING PORTABLE DISH DOLLIES
Not in Contract

ITEM #673 PORTABLE HEATED CARTS

Three (3) FWE model #MTU-12 or Alto Shaam #1200-UP or Carter Hoffman #HBU18-12J1XM-D portable hot food cart. Units to be sized to accommodate both 12 x 20 & 18 x 26 pans and trays. Provide units with the following standard and optional accessories:

One (1) Lot of locking casters
One (1) UL Approved cord and plug

ITEM #674 DOUBLE DECK CONVECTION OVEN

Three (3) GARLAND #MCO-GS-20-S or JADE JCO-240B or MONTAGUE #R2-85A Convection Oven, gas, double-deck, (2) speed fan, Solid state controls with 1 hour timer, electric ignition, dependent 60/40 doors with windows, stainless steel front, sides & top, porcelain cavity, 6-1/2" legs, EnerLogic Technology,

Two (2) 120v/60/1ph, 3/4 hp, 9.8 amps, NEMA 5-15P , standard
One (1) Set Low profile casters with front brakes
Two (2) Oven Racks
One (1) Gas hose with quick disconnects and wall restraint

ITEM #675 SIX BURNER RANGE/CONVECTION OVEN BASE
Furnished by Using Agency, Installed by GC.

One (1) Garland Model G36-6C or Jade # JTRH-6-36c or Montague #136-5C Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Convection Oven Base
One (1) Stainless steel back guard
One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #676 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified.

Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal

foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor <u>only</u> system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

<u>Performance Criterion</u>

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs.

extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #677 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required

under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #678 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear and side wall paneling sized per plan and elevation detail. Provide wall panels from bottom edge of hood down to top of base cove. Verify height of cove before fabrication. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #679 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #680 EXISTING HEATED BANQUET CARTS

Three (3) Existing 150 plate Hot Food Box, Inc., units to be moved from existing kitchen at Ren Cen Campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

ITEM #681 FRYER SYSTEM

Two (2) FRYMASTER H-55SC or PITCO #SSH-55C-S/FD or ALTO SHAAM #ASF-60G Fryers.

Fryers to be all st. st. construction. Frypots to be all st. st. with drain lever actuated st. st. ball type at bottom of frypot cool zone. St. st. finished back to be included.

ACCESSORIES:

Two (2) St. St. Splash shield mounted to right & left hand side of Fryer as required by code.
One (1) Footprint filter. Filter to be located under fryers and shall be integrally piped to adjacent fryers. Include filter heater.
One (1) Lot Electronic Timers
Two (2) Lift off 16 ga. st. st. covers
One (1) Set of casters, two with brakes
Two (2) Full Size Baskets
Four (4) Twin Size Baskets
One (1) Box of filter paper
One (1) Box of filter powder
One (1) 1" Quick Disconnect with Gas Hose
One (1) "T" Rear manifold to provide single gas connection

DETAILS: Above units to be batteried together as shown on plan. Burners to be controlled by exclusive 1 degree action, centerline thermostat. Minimum shortening capacity of 40 pounds each. Units to be furnished for natural gas.

ITEM #682 STEAMER

QTY: One (1)

MFG: GROEN model (2)SSB-5GF or CLEVELAND # 24CGA10.2 or MARKET FORGE #EPT-10G

SPECIFICATIONS:

Steamer to be a two (2) compartment unit with a capacity of ten (10) 12" x 20" x 2 1/2" deep pans, five (5) in each compartment. Construction shall be all stainless steel. Each compartment shall have an individual electronic timer with continuous steam, timed steam modes and stop button. The unit shall have powerful side mounted blowers and a gas heated steam reservoir.

ACCESSORIES:

One (1) Lot st. st. legs with adjustable feet
One (1) Lot gas and water hoses with quick disconnects
Two (2) Lot UL Cord and plugs
One (1) Lot Water Treatment System with extra set of filters
One (1) Waste water tempering kit.

UTILITY REQUIREMENTS:

Natural Gas -115 v, 60Hz, 1 phase for controls

ITEM #683 STEAMER

One (1) Unit same as item #682.

ITEM #684 CHARBROILER
Furnished by Using Agency, Installed by GC.

One (1) GARLAND model #GTGG48-GT48M or JADE model #JGT-4824 or SOUTHBEND #HDC-48 gas char broiler finished per manufacturers standards. Provide unit with gas hose with quick disconnects. Unit to be located on top of item #685.

ITEM #685 REFRIGERATED EQUIPMENT STAND

One (1) VICTORY model #GRS-1-S1 or CONTINENTAL model #DL48G or SOUTHBEND model #20048SB self contained refrigerated equipment stand. Unit to be furnished per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Casters, two with locks
One (1) Wall restraint
One (1) Lot 12 x 20 x 4" deep pans to fill drawers
One (1) Thermometer
One (1) Condensate Evaporator

Unit to be sized ot accommodate item #684.

ITEM #686 60 GALLON TILT KETTLE

QTY: One (1)

MFG.: GROEN MODEL: DHT-60 or Cleveland #KGL-60 or Vulcan #K60GLT

SPECIFICATIONS:

Kettle shall be constructed of type 18.8, 316 stainless steel solid one piece welded construction. The unit shall have a reinforced bar rim with butterfly shaped pouring lip. Unit shall have st. st. tubular legs with level adjustable feet. Kettle shall have a fin tube burner assembly, 50 PSI Steam Jacket Rating, Variable Temperature Control, front mounted water sight glass and Electronic Ignition System.

ACCESSORIES:

One (1) 2" Tangent Draw-off valve
One (1) Pan Carrier
One (1) Hinged Cover Kit (#51)
One (1) Kettle Brush Kit
One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet
One (1) Lot gas and water supply lines with quick disconnects and wall restraints

PC to be responsible for installation and connection of faucet to water source.

ITEM #687 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9” x 9” x 4” deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor opening.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #688 TILT BRAISING PAN

QTY: One (1)

MFR: GROEN MODEL #BPM-40G or Cleveland #SGL40T, Vulcan #VG40

SPECIFICATIONS: Unit shall be a forty gallon, gas fired, tilting skillet. Unit to be stainless steel interior and exterior. Stainless steel clad 5/8” cooking surface, with specially designed welded heat transfer fins. Also provide unit with a torsion bar type counterbalanced cover, adjustable thermostat, and electronic intermittent pilot ignition system. Unit is standard with manual hand tilt and shall tilt past vertical for cleaning.

ACCESSORIES:

One (1) Tangent Draw Off
One (1) Lot flange feet. Secure to floor with st. st. lag bolts.
One (1) Pan Carrier
One (1) Double Pantry Faucet
One (1) Lot gas and water supply lines with quick disconnects and wall restraints

PC to be responsible for installation and connection of faucet to water source.

ITEM #689 ST. ST. FLOOR DRAINER

One (1) Custom Fabricated unit size and shape as per plan fabricated of 14 ga. st. st. with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius.

NOTE: Drainer size and installation location to be coordinated with tilt kettle or braising pan manufacturer and model number. GC to verify exact requirements.

Front, rear and end edges shall be 2" channel type with edge turned down and out and fit finish floor as shown on section detail. GC To verify floor material to insure proper fit.

Drain trough to be fitted with an integrally welded 14 ga. st. st. box type drain with st. st. sleeve fitting ready for caulked type waste connection furnished by the PC.

Drain to be furnished with 16 ga. st. st. perforated basket with all welded construction with all horizontal and vertical corners coved on not less than 5/8" radius. Basket shall be approximately 9” x 9” x 4” deep and furnished with a 3/8" dia. st. st. rod handle and 1/8" dia. holes on 1/4" centers. Furnish drain trough with a recessed removable st. st. close mesh grating. Grate shall be constructed and fabricated with 10 ga. st. st. perimeter, 12 ga. st. st. inner bars on 3/4" centers with 3/8" dia. st. st. reinforcing rods.

GC shall verify the exact height and location of drain lines on job site and fabricated depth of pan accordingly for proper fit of trough in floor opening.

GC shall deliver trough to job site before finished floor is installed and turn over to the plumbing contractor for installation with supervision by GC . Grouting material to be furnished by the PC.

Submit shop drawing for review and approval.

ITEM #690 GRIDDLE TOP RANGE/OVEN BASE
Furnished by Using Agency, Installed by GC.

One (1) Garland Model G36-G36R or Jade #V36B/V35G griddle top or Montague #136-8 Griddle Range, gas, 36" W, (6) 33,000 BTU open burners, with cast iron top & ring grates, standard oven with 3 position rack guides with oven rack, stainless steel front, sides, plate rail.

One (1) Griddle top
One (1) Stainless steel back guard
One (1) Extra Oven Rack
One (1) Lot Adjustable height swivel casters with front brakes (set of 4)
One (1) Gas hose with quick disconnects and wall restraint

ITEM #691 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with

finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-

Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #692 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):

1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #693 ST. ST. WALL PANELING

One (1) Lot Custom Fabricated 18 ga. Stainless steel rear and side wall paneling sized per plan and elevation detail. Provide wall panels from bottom edge of hood down to top of base cove. Verify height of cove before fabrication. Provide panels with finish to match hood and in lengths to match hood(s) section(s) wherever possible. Panels to butt together with hairline joint and be installed with concealed fasteners. Submit shop drawing for review and approval.

ITEM #694 NOT USED

ITEM #695 ST. ST. TWO COMPARTMENT SINK

One (1) Custom fabricated unit sized per plan x 34" high to working surface.

TOP Fabricated of 14 ga. st. st. with front and exposed end furnished with type "C" raised rolled edges. Working surface to have integral pitch towards sink with top of rim parallel with floor. Top reinforcing and No. 4 finish furnished in accordance with General Requirements and Standard Edge Detail.

BACKSPLASH :Rear and sides as shown on plan, against walls or equipment to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

SINKS: In top, furnish two compartment integrally welded sinks 24" x 26" x 12" deep. Bottom of sink compartment to be pitched and furnished with die stamped opening to accommodate waste flange. Sink to be all coved cornered and fabricated per General Requirements.

SINK TRIM: One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator Two (2) T&S B-3950-01 (2" IPS) or FISHER or CHICAGO FAUCET Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly. Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

LEG SUPPORTS: Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg, crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER: Under top, per plan or elevation, furnish 16 gauge stainless steel removable shelves. Shelves to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelves to be all coved cornered fabricated at not less than 5/8" radius.

DRAWER: Under top as shown on plan 18 gauge stainless steel drawers 20" x 20" x 5" deep. Drawer insert to be removable type with roller bearing extension slides, double pan construction

drawer front and 18 gauge stainless steel cabinet enclosure constructed per General Requirements.

SHELF OVER: Over tops as shown on plan furnish single deck 16 gauge stainless steel shelf with 1" rolled rim and 2" turnup against wall. Shelf to be mounted on 1-1/4" diameter 16 gauge stainless steel cantilever type uprights extending up thru backsplash. Hole in backsplash cut out to fit uprights with not more than 1/16" clearance then caulked with clear silicone sealant.

SHOP DRAWING : Submit shop drawing for review and approval.

ITEM #696 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval.

ITEM #697 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #698 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #699 WALK IN REFRIGERATOR/FREEZER

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards.

Floors to be 3.75" thick. Include a factory installed 32" long interior ramp. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6” x 6” x 60” high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) 32” long interior Ramp, 36” overall
One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
Two (2) Vision Windows 14” x 14”

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4” thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity (“K” factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer (“U” factor) shall not exceed .033 and the resistance to heat penetration (“R” factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46” and at junction of vertical and horizontal joints by 23”. Cam locks shall be foamed-in-place and anchored securely in the panel by steel “wings” integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench,

thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #700 NOT USED

ITEM #701 WALK IN REFRIGERATOR SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #702 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #703 CUP AND GLASS RACKS
Not in Contract

ITEM #704 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant. Paneling to run down to tile base behind dishwasher section. GC to provide cut out for all utility stubs.

Submit shop drawing for review and approval

ITEM #705 ST. ST. SOILED & CLEAN DISHTABLE

One (1) Custom Fabricated unit in size 30" deep x length as shown plan with integral pitch to allow tables to drain towards dishwasher or table drainers.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #710

TABLE DRAINER - In top of soiled table, furnish integrally welded table drainer 6" wide x 3" deep x full width of dishtable. (Full width to mean from front vertical inside edge of rolled rim to back of vertical edge of backsplash). Inside edges both horizontally and vertically furnished with not less than ½" radius. Interior of drainer to be furnished with all coved cornered perforated strainer basket made of 16 gauge stainless steel.

Include 1/4" stainless steel rod guide handles to allow racks to slide over drainer area. Drainer pitched to drain and to have die stamped opening and furnished with basket drain, brass chrome plated with 1-1/2" tailpiece.

Submit shop drawing for review and approval.

ITEM #706 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #707 ST. ST. EXHAUST DUCTS

Two (2) Custom Fabricated 4" x 16" Exhaust ducts fabricated of 18 ga. st.st. with all welded construction. Duct shall be extended from top of dishwasher to ceiling above approx., 9'-0" above finished floor line.

Include 18 ga. st.st. ceiling trim collar with feathered edges and welded corners. Submit shop drawing for review and approval.

ITEM #708 CONVEYOR DISHWASHER

QTY: One (1)

MFG./MODEL: HOBART MODEL CL66e or CHAMPION #66DR or JACKSON #CREW 66 Conveyor Style dishmachine with electric tank heat and built in booster heater.

CONST: Tank, chamber, frame, legs, control box, doors and panels are constructed of stainless steel.

ACCESSORIES:

Two (2) Stainless steel vent hoods w/ locking type damper
Five (5) Peg type dishracks
Five (5) Combination type dishracks
One (1) Sheet Pan Rack
One (1) 30KW booster heater
One (1) Lot Single Point Connection for Tank Heat, Motors and Controls
One (1) Built In Booster Heater (Separate Electrical Connection)
One (1) Drain water tempering kit

DETAILS: Provide as standard equipment; Power wash section and Opti-rinse final rinse system. Automatic fill, energy saving auto-timer, low temperature alert. Rapid return conveyor drive system with a ball detent clutch. Horizontally mounted stainless steel self draining pump and impeller. Horizontally mounted splash proof, ventilated, grease packed ball bearing motor with inherent motor overload protection. Scrap screen and deep basket system. Top mounted programmable controls. Door actuated drain closures. Insulated hinged double doors with

interlock switches. Vent fan control. One electrical connection for motors and controls and tank heat and one connection for built in SST chamber booster heater.

PC and EC to be responsible for final connections.

ITEM #709 SOAP AND RINSE SYSTEM
Not in Contract

ITEM #710 3 H.P. DISPOSER AND RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #711 WALL MOUNTED RACKING SHELF

One (1) ADVANCE TABCO model DT-6R-24 or Custom fabricated tubular wall mounted racking shelf. Unit to be furnished per manufacturers standards. GC to be secured to wall with heavy duty st. st. lag bolt and anchors.

ITEM #712 QUEEN MARY CARTS
Furnished by Using Agency, Installed by GC.

Two (2) AMERICAN FOODSERVICE model #TR-52-4-AF or FWE #UCU-512 or Custom Fabricated soiled dish return carts. Submit shop drawing for review and approval.

ITEM #713 NOT USED

ITEM #714 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #715 3 H.P. DISPOSER AND RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18” cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #716 ST. ST. THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 33” deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3"

against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

SHELF OVER: - Provide st. st. shelf over per plan and elevation detail.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #715.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 28 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12" spout and provide T&S Model 112x 10" spout. (FISHER, CHICAGO FAUCET)

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #717 NOT USED

ITEM #718 ST. ST. WALL PANELING & CAP

One (1) Lot of 18 ga. st. st. wall paneling size and shape as per elevation detail. Provide st. st. wall cap as shown on plan and elevation detail. Wall cap to be provided with 2" turn down as shown. Paneling to be installed with flush mounted hidden fasteners. Submit shop drawing for approval.

ITEM #719 TWO SECTION ROLL IN REFRIGERATOR

QTY: One (1)

MFG/MODEL: TRAULSEN ARI232LUT-FHS or VICTORY RIA-2-S1 or RANDELL SARRI2-2

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors (Hinging per plans)
Two (2) Roll in Racks
One (1) U.L. Approved NEMA 5-20P cord and plug
One (1) Automatic Non-Electric Condensate Evaporator

DETAILS: "L-Height" roll-in refrigerator. Supplied with easy to operate Intela-Traul microprocessor controls, top mounted balanced refrigeration system with scroll blower type evaporator fan and exterior and interior. Full Length doors with locks, guaranteed for life cam lift hinges and guaranteed for life horizontal work flow door handles.

GC to seal unit to floor. Unit to accommodate 66" high racks

ITEM #720 ROLL IN RACKS

Two (2) Units included with item #719.

ITEM #721 ST. ST. PORTABLE MIXER STAND
Furnished by Using Agency, Installed by GC.

One (1) Hobart model #124078-A-HL200 or Varimixer #MT or Globe #MTS mixer stand furnished per manufacturers standards.

ITEM #722 20 QT. MIXER
Furnished by Using Agency, Installed by GC.

One (1) Hobart model #HL-200 or Varimixer #W20J or Globe #SP-20

CONST: Per Manufacturers Standard.

ACCESSORIES w/ each unit.

One (1) UL Approved cord and plug
One (1) Timer & automatic shut-off switch
One(1) Accessory Package
- 20 Quart Stainless Steel Bowl
- 20 Quart "B" Beater
- 20 Quart "D" Wire Whip

-20 Quart “ED” Dough Hook
-20 Quart Bowl Scraper
- 20 Quart Ingredient Chute

ELEC: .5 HP. w/ voltage and phase per rough-in drawing

ITEM #723 ST. ST. WORK TABLE W/ SINK

One (1) Custom fabricated unit sized 11’ – 4” long x 30” deep. General construction to be same as previously specified including 1/2” faucet and drainer assemblies. See elevation and section for details. Submit shop drawing for review and approval.

GC to turn faucet and drain assembly over to PC for installation and connection to water source.

ITEM #724 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

One (1) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #725 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #726 EXISTING PORTABLE DISH DISPENSERS
Not in Contract

ITEM #727 ST. ST. PLATING TABLE

One (1) Custom fabricated unit, size 15'- 0" long x 54" wide x 36" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gussets, welded to channel top reinforcing. Provide st. st. adjustable bullet feet on center legs. Four outside legs to be provide with flange feet secured to floor with st. st. screws.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

SHELF OVER: Per plan and elevation provide single st. st. full length overshelf mounted in center of table as shown. Uprights to extend thru top and be secured to inverted gussets below. GC to seal openings were uprights pass thru counter top per General Requirements. Shelf to have turned down edge all sides.

Provide pedestal and recessed electrical receptacles as shown on elevation detail. All wiring to meet state and local approval. Electrical to be concealed under top. See rough in plan and general requirements for electrical details.

EC to be responsible for final connections.

Submit shop drawing for review and approval

ITEM #728 ST. ST. WORK TABLE

One (1) Custom fabricated unit, size 60" long x 30" wide x 36" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gussets, welded to channel top reinforcing. Provide st. st. adjustable bullet feet.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

SHELF OVER: Per plan and elevation provide single st. st. full length overshelf mounted to rear of table. Shelf to have turned down edge on front and sides. Rear to be turned up. Table and shelf turn up to butt tight to adjacent table item #729.

Submit shop drawing for review and approval

ITEM #729 ST. ST. WORK TABLE

One (1) Custom fabricated unit, size 60" long x 30" wide x 36" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gussets, welded to channel top reinforcing. Provide st. st. adjustable bullet feet.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

SHELF OVER: Per plan and elevation provide single st. st. full length overshelf mounted to rear of table. Shelf to have turned down edge on front and sides. Rear to be turned up. Table and shelf turn up to butt tight to adjacent table item #728.

Submit shop drawing for review and approval

ITEM #730 NOT USED

ITEM #731 ICE MAKER W/ BIN
Furnished by Using Agency, Installed by GC, with connections by PC & EC.

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-1402A or Hoshizaki KM-1601 SAH or Ice-O-Matic #ICE1406A

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B970 48” wide bin (710# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor

One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 1500 pounds of ice per 24 hours. GC to verify location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #732 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #733 TWO COFFEE URN
Not in Contract

ITEM #734 SINGLE COFFEE URN
Not in Contract

ITEM #735 ST. ST. WORK COUNTER W/ SINK

One (1) Custom fabricated units sized 14'-0" long x 30" wide x 34" high,

TOP: Fabricated of 14 gauge stainless steel with type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per General Requirements.

BACKSPLASH :Rear and sides as shown on plan, against walls or equipment to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat

and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

SINKS: In top, furnish single compartment integrally welded sink 18" x 21" x 12" deep. Bottom of sink compartment to be pitched and furnished with die stamped opening to accommodate waste flange. Sink to be all coved cornered and fabricated per General Requirements.

SINK TRIM: One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator one (1) T&S B-3950-01 (2" IPS) Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly (FISHER, CHICAGO FAUCET). Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

LEG SUPPORTS: Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg, crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

CABINET BASE: Entire top to be mounted on cabinet base, fabricated of 18 ga. st. st. reinforced with 1-1/2" x 1-1/2" x 1/8" Galv. Iron framework running horizontally and vertically. Cabinet to be constructed per General Requirements. Sink section to be provided with hinged access door. Open shelves to be provided per elevation detail.

SHELF OVER: Per plan and elevation detail provide single tier cantilever overshelves mounted two st. st. uprights extending through backsplash per general requirements.

URN TROUGH: Provide st. st. urn trough with st. st. anti splash covers similar to ADVANCE TABCO recessed unit. PC to extend trough waste to building floor sink.

CUP RACK STORAGE

Below top furnish three (3) section with st. st. angles designed to hold 20" x 20" cup racks. (Verify height with owner of racks.)

Submit shop drawing for approval.

ITEM #736 PORTABLE ICE CART
Furnished by Using Agency, Installed by GC.

One (1) CAMBRO ICS100L or Metro IC125 or Rubbermaid ICE120 Slant Top 100 lb. capacity Ice Caddy It shall be constructed of double-wall, high-density polyethylene and thick foam injected polyurethane. It shall have rounded corners and molded-in side grips. It shall have 4 sturdy thumbscrews to secure top lid tightly in place for safe transporting. It shall have a front nylon latch. It shall be 28 3/4” high. It shall have a NSF listed, no-drip, recessed, threaded faucet

with standard hose hook up. It shall include one polycarbonate interior drain shelf. It shall be available with 4 each 5" wheels and 2 locking front brakes

Ship unit to counter manufacturer to insure proper undercounter fit. GC to submit color samples for approval.

ITEM #737 CUP AND GLASS RACKS
Not in Contract

ITEM #738 ST. ST. WORK COUNTER/GLASS FILLER

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #735, except for the following:

1. Omit urn trough
2. Provide cut out and reinforce top for drop in soda/ice dispenser
3. Provide modified top and backsplash to accommodate column – Verify size
4. Provide 22 x 22 x 8" deep sink for glass rack filling
5. One (1) T&S Model B-0133-ADF12-B Pre-rinse unit w/ 12" "Add a Faucet" (1/2" I.P.S) to fit in rear of Backsplash to Accommodate ½ " water lines. Modify Pre-rinse unit by Removing T&S Model B-0107 Spray Valve Assembly & Provide T&S Model 002864-40 Straight Nozzle w/ Self Closing Cartridge in its place. Furnish unit complete with T&S Model B-0230-K Assembly to facilitate fastening to Backsplash or Fisher #805586 or Chicago Faucet
6. Omit base cabinet section and provide open storage for glass rack dollies

Submit shop drawing for review and approval.

GC to turn faucet and drainer assemblies over to PC for installation and connection to water source.

ITEM #739 DROP IN SODA DISPENSER/ICE BIN
Not in Contract

ITEM #740 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #741 BAG AND BOX SODA SYSTEM
Not in Contract

ITEM #742 NOT USED

ITEM #743 NOT USED

ITEM #744 NOT USED

ITEM #745 NOT USED

ITEM #746 NOT USED

ITEM #747 NOT USED

ITEM #748 NOT USED

ITEM #749 NOT USED

ITEM #750 NOT USED

ITEM #751 NOT USED

ITEM #752 POS SYSTEM
Not in Contract

ITEM #753 REFRIGERATED DISPLAY CASE

One (1) FEDERAL model #CGR5048CD or STRUCTURAL CONCEPTS # GMDS6R or RPI #SCXMD glass refrigerated deli case furnished per manufacturers standards. See plan and elevation for sizes. Include the following standard and optional accessories:

One (1) Lot Premium laminate/veneer base finish – Color TBD by A/E
One (1) Lot Package shelf on rear
One (1) Lot Reflective Ends
One (1) Step Riser
One (1) Reflective Rear Door
One (1) Mezzanine Shelf

One (1) Lot front and rear door locks
One (1) Lot special Trim – Color TBD by A/E
One (1) UL Cord and plug

Submit shop drawing for review and approval. . Interior shelving arrangement to be verified with Using Agency prior to ordering.

ITEM #754 NON REFRIGERATED DISPLAY CASE

One (1) FEDERAL model #CGD5048 or STRUCTURAL CONCEPTS # GMDS6R modified to ambient or RPI #SXHMD modified to ambient glass dry display case furnished per manufacturers standards. See plan and elevation for sizes. Include the following standard and optional accessories:

One (1) Lot Premium laminate/veneer base finish – Color TBD by A/E
One (1) Lot Package shelf on rear
One (1) Lot Reflective Ends
One (1) Lot Glass display Shelves
One (1) Reflective Rear Door
One (1) Lot front and rear door locks
One (1) Lot special Trim – Color TBD by A/E
One (1) UL Cord and plug

Submit shop drawing for review and approval. Interior shelving arrangement to be verified with Using Agency prior to ordering.

ITEM #755 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #756 TWO SECTION DISPLAY REFRIGERATOR

QTY: One (1)

MFG/MODEL: VICTORY #RSA-2D-S7-EW or TRAULSEN AH232WUT-FHG or RANDELL 2021E

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged glass doors hinged per plan
One (1) Lot Interior light
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Refrigerator to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #757 CUPS AND LIDS
Not in Contract

ITEM #758 COUNTER TOP SOUP WELL
Furnished by Using Agency, Installed by GC.

One (1) WELLS model #HW-SMP or APW4-2 or Vollrath #72435 two hole cook and hold soup warmer furnished per manufacturers standards. Unit to include two (2) 7 qt. inserts with lids, cord and plug.

ITEM #759 HEATED DISPLAY CASE
Furnished by Using Agency, Installed by GC.

One (1) HATCO model #FDWD-2X or APW #HDC-4 or STAR #18MCP hot food display case. Unit to be furnished per manufacturers standards. Include four (4) interior racks/shelves and cord and plug.

ITEM #760 NOT USED

ITEM #761 COFFEE GRINDER
Not in Contract

ITEM #762 COFFEE MAKER
Not in Contract

ITEM #763 NOT USED

ITEM #764 NOT USED

ITEM #765 HOT DISPLAY CASE

One (1) FEDERAL model #CG5048HD or STRUCTURAL CONCEPTS #GMS4H or RPI # SCXMDH curved glass hot deli case fabricated per manufacturers standards. Include the following standard and optional accessories:

One (1) Lot Premium laminate/veneer base finish – Color TBD by A/E
One (1) Lot Package shelf on rear
One (1) Lot Reflective Ends
One (1) Reflective Rear Door
One (1) Lot front and rear door locks
One (1) Lot special Trim – Color TBD by A/E
One (1) UL Cord and plug

PC to extend drain line to building floor drain. Submit shop drawing for review and approval. . Interior shelving arrangement to be verified with Using Agency prior to ordering.

ITEM #766 NOT USED

ITEM #767 NOT USED

ITEM #768 MOP RACK
Not in Contract

ITEM #769 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #770 WALL MOUNTED CHEMICAL SHELF

One (1) Metro Chrome wire (Eagle, ISS) wall shelving sized per plan. Each unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts.

ITEM #771 - 777 NOT USED

ITEM #778 ROOF MOUNTED REFRIGERATION RACK

Contractor shall furnish and install. U.L. approved COOLTEC, Custom COLDZONE Custom or RDI Custom "parallel-pak" outdoor air-cooled remote refrigeration package, with control panel, 480 volts, 3 phase, 60 hz. Refrigeration system shall be housed in a weather protected enclosure. The frame, enclosure, and panels shall be fabricated of galvanized steel. Entire frame shall be pre-assembled, welded, cleaned, and painted with a prime coat of zinc chromate then finished with a coat of baked enamel epoxy based paint. The condenser shall be removable, with rifled tube slotted finned and shall be designed for 20 FTD. Condenser fan motors shall be mounted on the top of the enclosure. Unit to provided refrigeration for all items as shown on plan and elevations with remote refrigeration.

GC to visit site with refrigeration sub-contractor to verify all refrigeration line piping routes to insure proper installation.

Parallel-rack air-cooled refrigeration system

Parallel compressor unit shall employ three parallel-piped scroll compressors, a control panel, oversized condenser and receiver all mounted on one common structural steel frame. The control panel shall contain all the necessary controls for food service fixtures. Compressors motors shall be factory wired. The interconnected motor compressors shall act as one condensing unit with 30 percent extra capacity. Control is obtained by cycling individual compressors using a CPC E-2 solid state facility management system to the three parallel piped refrigeration compressors with one set of cut-in / cut-out suction pressure settings, fan sequencing, time delays, time schedules, and operational memory

Each unit shall be equipped with a replaceable core liquid line filter- drier, moisture indicator and hand valve mounted between the receiver outlet valve and the liquid manifold. There shall also be a replaceable core-suction line filter mounted between each compressor and the main suction header.

Fixture thermostat and liquid line solenoid valve combinations shall be employed for accurate temperature and humidity control.

All condensing units shall be new and factory assembled to operate with the refrigerant specified in the refrigeration engineering summary sheet. R-404a refrigerant shall be used on medium and low temperature units.

Oil equalization system

Each unit shall be equipped with an oil separator in conjunction with an oil equalization system to assure a proper amount of oil to each compressor whether running or cycled off for continuous proper lubrication.

Each oil equalization system shall be equipped with oil separator, oil reservoir, oil return filter/drier automatic oil level regulators for each compressor and interconnecting tubing per schematic diagram. The oil level control system shall incorporate isolation valves to facilitate serviceability and minimize system contamination.

Pre-piping

All refrigerant lines shall be extended to one side of the package in a neat and orderly manner. Suction line for all temperature units must be insulated with Armaflex (minimum 3/4" thick).

All tubing shall be securely supported and anchored with clamps.

Ends of lines shall be capped against contamination after the unit is complete. These capped ends are to be opened only at final connection of the package to fixtures.

Control panel

The package shall have factory mounted and pre-wired control panel complete with interlocked main-fused disconnect, compressor circuit breakers, contactors and wired for single-point power connection. E-2 management system shall be used to control refrigeration system operation, sequencing the compressors and fans, time delay, operational memory, the E-2 management system will be able to be monitored through pc stations.(interconnection to maintenance department network by others)

Electrical contractor shall provide and install main power lines to panel and provide wire harness wiring for control and defrost heater between and the defrost clock and the refrigeration fixtures, all in accordance with the wiring diagram and local codes.

Distribution manifold

Provide a factory manufactured manifold for liquid and suction distribution to be located inside the facility at the direction of the facilities maintenance department. Manifold assembly shall be prewired for single electrical connection for power and interconnection from the cpc-2 controller on the rack for thermostic control, defrost, and compressor isolation. Solenoid valves shall be provided for liquid refrigerant as well as isolation valves.

Evaporator coils

Evaporator coils shall be direct expansion type fabricated of copper tubes with aluminum fins. All evaporator coils shall be provided with solenoid valve, thermostatic expansion valve, and thermostat. Piped and wired to a junction box. Each evaporator shall be equipped with ball valves. Each ball valve shall be equipped with shrader valve for access.

Evaporator shall be equipped with energy saving "EC" motors.

Evaporative coil shall be defrosted by electric defrost as scheduled through the R-2 controller.

Submit shop drawing for review and approval. GC to be responsible for 100% operation system after final plumbing and electrical connection have been made by respective trades.

EC and PC to be responsible for final connections.

Submit shop drawing for review and approval.

ITEM #779 ROOF MOUNTED REFRIGERATION RACK

One (1) Unit sized per plan and detail sheet. Unit to be otherwise same as specified for item #778. Submit shop drawing for review and approval.

ITEM #780 NOT USED

ITEM #781 THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 30" deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL - Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

UNDERCOUNTER DISHWASHER – Provide open space under top as shown for under counter dishwasher.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 24 x 26" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X or FISHER or CHICAGO FAUCET (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12" spout and provide T&S Model 112x 10" spout.

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 or FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #782 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #783 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #784 EXISTING VACUUM SEALER

One (1) Existing vacuum sealer to be relocated and reused as is by Using Agency. Not in Contract

ITEM #785 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: Four (4)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #786 ICE CREAM MAKER
Furnished by Using Agency, Installed by GC.

One (1) COLDLITE / CARPIGIANI model #LB-100B batch freezer.

ITEM #787 PORTABLE ST. ST. TABLE

One (1) Custom fabricated unit, size 24" long x 30" deep x 28" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail. Submit shop drawing for review and approval

ITEM #788 WALL MOUNTED MOP RACK
Not in Contract

ITEM #789 ST. ST. WALL PANELS

Two (2) Custom Fabricated 18 ga. st.st. wall panels sized 24" wide x 36" high. Panels to be notched/punched as necessary to fit around faucet assembly. Paneling to be fastened to wall with hidden adhesive. Seal top and sides of paneling with silicone. GC to verify mop sink size prior to fabrication. Panels to be sized to match mop sink.

Submit shop drawing for approval.

ITEM #790 CHEMICAL STORAGE SHELVING

QTY: One (1)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #791 WALK IN REFRIGERATOR/FREEZER

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator/Freezer provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls. Interiors to have finished clear height of 8' – 4.25".

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction.
Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish - NSF 1/8" diamond aluminum treadplate with NSF Coved corners per manufacturers standards. Panels to be set in 4" deep recessed depression.

Floors to be 3.75" thick. Panel transition between walls and floors to be coved to meet NSF and Health Department Approval. Provide threshold between walk in and kitchen area, threshold to be secured to the floor, edges to be sealed with clear silicone.

Panels shall be fabricated in a similar manner to other panels in the walk-in with panel edges to have foamed-in-place tongue and groove with Posi-Loc locking assemblies foamed-in-place at time of fabrication All edges and corners to be coved in accordance with NSF Standard 7 and completely foamed-in-place.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum

braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14" x 14" triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8" aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36" high x width of door.

Provide 48" long LED ceiling mounted light fixtures in each compartment and one (1) LED vapor proof fixture above each door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2" wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) Lot exterior wall bumpers where exposed
One (1) Lot of LED lights at doorway
One (1) Lot of LED Tube Light Fixtures on ceiling
One (1) Flex Strip Curtain
One (1) Heated Pressure Relief Vent Model 1825
Two (2) Vision Windows 14" x 14"

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box and bottom of floor to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4" thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity ("K" factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer ("U" factor) shall not exceed .033 and the resistance to heat penetration ("R" factor)

shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46" and at junction of vertical and horizontal joints by 23". Cam locks shall be foamed-in-place and anchored securely in the panel by steel "wings" integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #792 ST. ST. WORK TABLE

One (1) Custom fabricated st. st. work table sized 7'- 0" long x 30" deep x 36" high to working surface General construction to be same as previously specified. Unit to be furnished with the following:

One (1) Lot integral 6" rear splash
One (1) St. St. Lower shelf
One (1) Type "A" Edge on Front and sides
One (1) Lot EFW one leg supports with adjustable bullet feet
One (1) Full length st. st. shelf above per elevation detail.

Submit shop drawing for review and approval.

ITEM #793 WALK IN REFRIGERATOR SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5” dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #794 WALK IN FREEZER SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1) Set arranged per plan

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5" dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #795 DRY STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: (1) One lot arranged per plan.

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to have F04-004 hex head leveler and C03-002 post insert for the purpose of leveling the shelving.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 86" high posts. Shelving size and quantity to be sized per plan. Shared uprights will not be accepted.

ITEM #796 HANGING HEAT LAMPS W/ TRACKS

One (1) Lot HATCO or MERCO or NEMCO decorative heat lamp and track as shown on plan. Provide the following:

Two (2) DL-TRACK-4B 4'- 0" tracks (black)
Six (6) DL-500-RTL furnished with type "RT" mounts. (black)
Six (6) WHITE 250 watt clear coated bulbs

GC to turn units over to EC for installation and wiring.

NOTE! Verify color and style of shades & track with architect before ordering.

ITEM #797 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #798 NOT USED

ITEM #799 ICE MAKER W/ BIN
Furnished by Using Agency, Installed by GC, with connections by PC.

QTY: One (1)

MFG/MODEL: MANITOWOC Model #ID-1402A or Hoshizaki KM-1601 SAH or Ice-O-Matic #ICE1406A

CONST: Unit to be furnished per manufacturers standards.

ACCESSORIES:

One (1) UL Cord and plug
One (1) B970 48” wide bin (710# Capacity)
One (1) Lot of start up and inspection
One (1) Artic Pure Water Filter
One (10 Lot Luminice Growth Inhibitor

One (1) Set of extra filter cartridges

DETAILS: Unit to have capacity of 1500 pounds of ice per 24 hours. GC to verify location of electrical connection and water filter to assure unit will fit in correct location. GC to turn filter assembly over to PC for installation and connection to water source.

ITEM #800 ST. ST. TWO COMPARTMENT SINK

One (1) Custom fabricated unit sized per plan x 34" high to working surface.

TOP Fabricated of 14 ga. st. st. with front and exposed end furnished with type "C" raised rolled edges. Working surface to have integral pitch towards sink with top of rim parallel with floor. Top reinforcing and No. 4 finish furnished in accordance with General Requirements and Standard Edge Detail.

BACKSPLASH :Rear and sides as shown on plan, against walls or equipment to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

SINKS: In top, furnish two compartment integrally welded sinks 21" x 26" x 12" deep. Bottom of sink compartment to be pitched and furnished with die stamped opening to accommodate waste flange. Sink to be all coved cornered and fabricated per General Requirements.

SINK TRIM: One (1) T&S B-0230-LN Faucet Body w/ 060X 8" Swing Spout (1) T&S B-0199-01 Aerator Two (2) T&S B-3950-01 (2" IPS) Twist Handle Drain w/removable Flat Strainer, Connected Rear Overflow Assembly (FISHER, CHICAGO FAUCET). Twist Handle to Be Furnished with 14 Ga. St. St. Bracket Welded to Underside of Sink as Shown on Elevation.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

LEG SUPPORTS: Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg, crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER: Under top, per plan or elevation, furnish 16 gauge stainless steel removable shelves. Shelves to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelves to be all coved cornered fabricated at not less than 5/8" radius.

DRAWER: Under top as shown on plan 18 gauge stainless steel drawers 20" x 20" x 5" deep. Drawer insert to be removable type with roller bearing extension slides, double pan construction drawer front and 18 gauge stainless steel cabinet enclosure constructed per General Requirements.

SHOP DRAWING : Submit shop drawing for review and approval.

ITEM #801 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #802 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports . Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #803 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #804 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

One (1) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #805 TWO SECTION REACH IN REFRIG.

QTY: Two (2)

MFG/MODEL: VICTORY #RSA-2D-S1-EW OR TRAULSEN #AH232WUT-FHS OR RANDELL #2020E

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Refrigerator to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #806 ST. ST. WORK TABLE W/ SINK

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #800, except provide single compartment sink as shown. Submit shop drawing for review and approval.

GC to turn faucet and drainer assemblies over to PC for installation and connection to water source.

ITEM #807 TWO SECTION REACH IN FREEZER

QTY: Two (2)

MFG/MODEL: VICTORY #FSA-2D-S1-EW OR TRAULSEN ALT232WUT-FHS OR RANDELL 2020FE

CONST: Per manufacturers standards.

ACCESSORIES:

Two (2) Full height hinged doors hinged per plan
One (1) Set 5" dia. Casters with wheel locks
One (1) UL. approved grounded cord & plug
One (1) Automatic condensate evaporator
Six (6) Adjustable wire shelves per section

Details: Freezer to have 52 cu. Ft. Capacity, size 58” x 36" x 84" high. Compressor to be top mounted, air cooled unit. Include self closing doors, cylinder locks & flush mounted digital thermometer. Door swings hinged per plan.

Elect: Per rough-in plan.

ITEM #808 CUP AND GLASS RACKS

Not in Contract

ITEM #809 ST. ST. SOILED & CLEAN DISHTABLES

One (1) Custom fabricated “L” Shaped unit size and shape as per plan with integral pitch to allow tables to drain towards dishwasher, scrap collector and table drainer.

TOP

Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH

Rear and sides where shown on plan, against walls or equipment to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEG SUPPORTS AGAINST WALL

Top and sink to be mounted on EFW all stainless steel one (1) leg support. Gusset, leg crossbrace and wall flange fabricated in accordance with isometric detail drawing attached to contract drawings.

SHELF UNDER

Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #815.

TABLE DRAINER

In top of soiled table, where shown on plan, furnish integrally welded table drainer 6" wide x 3" deep x full width of dishtable. (Full width to mean from front vertical inside edge of rolled rim to back of vertical edge of backsplash). Inside edges both horizontally and vertically furnished with not less than 1/2" radius. Interior of drainer to be furnished with all coved cornered perforated strainer basket made of 16 gauge stainless steel.

Include 1/4" stainless steel rod guide handles to allow racks to slide over drainer area. Drainer pitched to drain and to have die stamped opening and furnished with Fisher or Standard-Keil basket drain, brass chrome plated with 1-1/2" tailpiece.

Provide basket drain in bottom of soiled table as shown on plan.

RACKING SHELF WITH STORAGE OVER

One (1) unit approx 7'- 6" long constructed of 14 ga. st. st. and mounted over soiled dishtable. Shelf to be constructed deep enough to hold a 20" x 20" rack in a slanted position within easy reach of operator. (Verify largest dish rack size & ceiling height).

Underside of shelf to be reinforced with 12 ga. st. st. channels and be supported from dishtable by 1-5/8" dia. st. st. tubular uprights. Uprights to have 12 ga. st. st. welded cantilever brackets and be rigidly reinforced to underside of dishtable.

Shelf to be furnished with "V" shaped integrally welded and pitched drain troughs. End of troughs to be furnished with clear plastic 1" dia. drain hose, extending down to dishtable.

Open ends of shelf to be welded closed. Furnish center support up to structure above with all 1-5/8" st. st. uprights. Install flange at ceiling.

Over top racking shelf, furnish a rack storage shelf constructed of 1-1/4" dia. st. st. all welded tubular stock as shown on section detail. Storage shelf to be supported by 1-5/8" dia., st. st. uprights. Uprights to have smooth radius bends, 90^{o} angles will not be acceptable.

See elevation for additional construction information.

DISH RETURN TRAY REST

Where shown on plan, furnish 8" wide sloped dish return sill. See section for exact details.

Submit shop drawing for review.

ITEM #810 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #811 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Panel section behind dishwasher to run down to top of coved tile base. GC to provide necessary cut outs for power and water supply lines.

Submit shop drawing for review and approval.

ITEM #812 ST. ST. EXHAUST DUCTS

Two (2) Custom Fabricated 4" x 16" Exhaust ducts fabricated of 18 ga. st.st. with all welded construction. Duct shall be extended from top of dishwasher to ceiling above approx., 10'-0" above finished floor line.

Include 18 ga. st.st. ceiling trim collar with feathered edges and welded corners. Submit shop drawing for review and approval.

ITEM #813 CONVEYOR DISHWASHER

QTY: One (1)

MFG./MODEL: HOBART MODEL CL44e or CHAMPION #44DR or JACKSON #CREW 44 Conveyor Style dishmachine with electric tank heat and built in booster heater.

CONST: Tank, chamber, frame, legs, control box, doors and panels are constructed of stainless steel.

ACCESSORIES:

Two (2) Stainless steel vent hoods w/ locking type damper
Five (5) Peg type dishracks
Five (5) Combination type dishracks
One (1) Sheet Pan Rack
One (1) 30KW booster heater
One (1) Lot Single Point Connection for Tank Heat, Motors and Controls
One (1) Built In Booster Heater (Separate Electrical Connection)
One (1) Drain water tempering kit

DETAILS: Provide as standard equipment; Power wash section and Opti-rinse final rinse system. Automatic fill, energy saving auto-timer, low temperature alert. Rapid return conveyor drive system with a ball detent clutch. Horizontally mounted stainless steel self draining pump and impeller. Horizontally mounted splash proof, ventilated, grease packed ball bearing motor with inherent motor overload protection. Scrap screen and deep basket system. Top mounted programmable controls. Door actuated drain closures. Insulated hinged double doors with interlock switches. Vent fan control. One electrical connection for motors and controls and tank heat and one connection for built in SST chamber booster heater.

EC and PC to be responsible for final connections.

ITEM #814 SOAP AND RINSE SYSTEM
Not in Contract

ITEM #815 3 H.P. DISPOSER AND RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg

One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 or FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #816 OVERHEAD RACKING SHELF

One (1) lot included with item #809.

ITEM #817 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #818 TRASH RECEPTACLES
Not in Contract

ITEM #819 ST. ST. PORTABLE MIXER STAND
Furnished by Using Agency, Installed by GC.

One (1) Hobart model #124078-A-HL200 or Varimixer #MT or Globe #MTS mixer stand furnished per manufacturers standards.

ITEM #820 20 QT. MIXER
Furnished by Using Agency, Installed by GC.

One (1) Hobart model #HL-200 or Varimixer #W20J or Globe #SP-20

CONST: Per Manufacturers Standard.

ACCESSORIES w/ each unit.

One (1) UL Approved cord and plug
One (1) Timer & automatic shut-off switch
One(1) Accessory Package
- 20 Quart Stainless Steel Bowl
- 20 Quart "B" Beater
- 20 Quart "D" Wire Whip
-20 Quart "ED" Dough Hook
-20 Quart Bowl Scraper
- 20 Quart Ingredient Chute

ELEC: .5 HP. w/ voltage and phase per rough-in drawing

ITEM #821 ST. ST. WORK TABLE W/ SINK

One (1) Custom fabricated unit, sized 6' - 4" long x 2'-9" wide x 36" high. See Elevation for details.

TOP: Fabricated of 14 gauge stainless steel with type "A" edges on all open sides. Top to have bullnosed corners with No. 4 finish and reinforcing angles/channels under, per General Requirements.

SINK: Per plan furnish integrally welded sink 18" x 21" x 12" deep. Sink fabricated of 14 ga. st. st. with horizontal and vertical corners with not less than 5/8" integral radius. Sink bottom to be pitched to drain towards 3-1/2" dia., die stamped opening. Sink to be polished out in all corners to a #4 finish.

SINK TRIM: One (1) T&S Model B-0220-LN or Fisher or Chicago deck type faucet furnished with 060X, 8" swing spout with B-0199-01 aerator. Faucet caulked watertight to counter top. Faucet to be cast red brass, all chrome plated with color coded hot and cold water faucets.

One (1) One (1) T&S Model B-3950-01 or Fisher or Chicago Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

SINK ENCLOSURE: Cabinet base under sink section furnished with 18 ga. st. st. louvered access door. Door to be double pan construction, sound deadened, hinges and recessed st. st. handles per General Requirements. Bottom of sink enclosure, to be furnished with removable 16 ga. st. st. shelf, coved interior corners with rear and ends turned up 2" against cabinet interior. NOTE! shelf to be held back 8" from rear of cabinet to allow space for water and waste rough-in connections.

ELECTRICAL: Per rough-in plan furnish duplex receptacle recessed as shown on electrical plan. Receptacle to be all pre wired in approved conduit per electrical code to junction box ready for final connection by EC. Junction box to be located below drawer enclosure. See electrical plan for outlet locations.

Receptacle to be duplex unit set in stainless steel recessed receptacle holder. Include mat gasket and stainless steel faceplate. Receptacle to be three (3) prong grounded type installed to meet all safety and electrical codes.

SHELF UNDER: Under top, where shown on plan furnish 16 gauge stainless steel removable shelf with all free edges rolled over 90 degrees to match contour of crossrails. Edge against drawer enclosure to be turned up 2" with coved interior corners. Shelf to be made in two (2) removable sections with edges turned down 1" at 90 degree bend at all joints. Shelf to be open type accessible from both sides of work table. Sink section to be provided with hinged access door fabricated per general requirements.

SHELF OVER: Over top as shown on plan furnish single deck 16 ga. st. st. shelf with 1" rolled rim on all sides. Shelf to be mounted on 1-1/4" dia., st. st. cantilever uprights extending up thru top Holes in top to be cut out to fit upright with not more than 1/16" clearance, then caulked with clear silicone sealant. Shelf to be sized to accommodate microwave on end as shown on plan

LEGS: Cabinet base to be mounted on 6" high st. st. adjustable legs with flange feet. Flanges to be secured to floor with heavy duty st. st. bolts.

Submit shop drawing for review and approval.

ITEM #822 SLICER

One (1) Hobart Model #H7 or Globe #3950N or Berkel #X13AE-Plus automatic slicer furnished per manufacturers standards. Provide the following standard and optional accessories:

One (1) Food Chute
One (1) Low Fence
One (1) UL Cord and plug

ITEM #823 ST. ST. PORTABLE SLICER STAND

One (1) Custom fabricated unit, size 30" long x 30" wide x 34" high.

TOP Fabricated of 14 gauge stainless steel with type "A" edges on all sides. Top to have bullnosed corners, polished finish and reinforcing under per General Requirements.

LEGS Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset, welded to channel top reinforcing.

CASTERS Each leg to be furnished with heavy duty casters with wheel locks and N.S.F. approval. Caster to be 5" diameter with black solid neoprene tired wheels.

SHELF UNDER: Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval

ITEM #824 40 QT. TILT KETTLES

Two (2) GROEN MODEL: TDH-40 & TS/9S or Cleveland #KGT-12-TGB or Blodgett #12G-KTT GAS Kettle shall be of 304 stainless steel, one-piece welded construction. All exposed surfaces shall be stainless steel. All controls shall be contained in a gasketed enclosure. Unit shall be furnished with a heavy reinforced rim with a welded-in butterfly shaped pouring lip for maximum sanitation and durability. Right or left hand tilt handle. Faucet bracket is standard and mounted on rear of control box.

ACCESSORIES with each:

One (1) Faucet Mounting Bracket
One (1) Double Pantry Faucet w/ swing spout
One (1) TS/9S Equipment Stand with sliding drain drawers
One (1) Lot gas and water hoses with quick disconnects

CG to turn faucet assembly over to PC for installation and connection to water source.

ITEM #825 TILT KETTLE STANDS

Two (2) Units included with item #824.

ITEM #826 EXISTING SMOKER

One (1) Existing SOUTHERN PRIDE SCM-200-SC Smoker to be moved from existing kitchen on main campus to new location as shown on plan after PC and or EC have disconnected utilities. GC shall coordinate the relocation dates of the existing equipment which is to occur during phase 2 of the project when the existing labs have been shut down for summer.

EC to be responsible for final electrical connection (flex conduit, plugs, etc.) required to properly re-connect unit per code.

GC to be responsible for all final connection piping, gas flex hoses, regulators, vacuum breakers, etc. required to properly re-connect unit per code.

ITEM #827 DROP IN INDUCTION HOB / ST. ST. CABINET BASE
Furnished by Using Agency, Installed by GC.

One (1) COOKTEK Model #MCD-3502S or Montague #MI2-7.0 DI or Garland model #GI-SH/DU/IN 7000 drop in induction cooker furnished per manufacturers standards. Unit to be mounted in custom fabricated st. st. cabinet sized 36" wide x 30" deep x 35.5" high to working surface. Base to be similar to Advance Tabco #HB-SS-303 st. st. enclosed cabinet with hinged doors. Base cabinet to be mounted on 6" casters, two with locks. Induction controls to be mounted on bracket inside cabinet base.

Induction cooker to be wired to "J" Box in base of cabinets. Fabricator to provide single cord and plug sized to fit wall receptacle.

Submit shop drawing for review and approval.

ITEM #828 PORTABLE PROOF CABINET

One (1) FWE model #PHU-12 or PIPER model #1012 or CARTER HOFFMAN model #HWU-18 portable proof carts. Provide units with the following standard and optional accessories:

One (1) 1650 watt heating element
One (1) Lot of locking casters
One (1) UL Approved cord and plug

ITEM #829 COMBI OVEN W/ STAND

One (1) CLEVELAND model #OGS-10.20 CONVOTHERM™ or RATIONAL SCCWE-102G or ALTO SHAAM #CTP10-20G , timer and core probe, 250 recipe storage capacity, cooking modes hot air, steam, combi, retherm, cook & hold, "Delta T" slow cooking and "Crisp & Tasty", includes (4) 26" x 20" wire shelves, hand shower, (11) 18"x26" or (22) 12"x20" pan cap. , s/s interior & exterior. Include the following standard and optional accessories:

One (1) Easy Touch Controls
One (1) CST-20-OB open base cabinet with casters, two with locks.
One (1) Lot Claris Water Treatment System, includes (1) pre-filter, (1) Claris X-large steam system, (1) Claris flow meter and (1) water test kit
One (1) Chicken Grill Rack, 12" x 20" (full size), for 10.20 combi OvenSteamers
One (1) Frying Basket, Wire, 20" x 26", for 10.20 combi oven steamers

One (1) Convo Grill Rack, 13" wide x 18" deep, for ConvoTherm ovens, fits directly on pan rack guides
One (1) Lot Convo Clean Hands Free built-in automatic cleaning system: (1) 10 liter ConvoClean, (1) 1 liter Convo Care and (1) empty 10 liter container with label for mixing
One (1) Lot Gas and Water Supply Hoses with quick disconnects and wall restraint
One (1) Lot locking casters.
One (1) Lot factory start up and training

GC to verify accessories with Using Agency prior to shipping.

ITEM #830 PORTABLE HEATED CABINET (12x20 PAN)

One (1) FWE #MT-2020-6/6 or CRES COR #H-135-SUA-11 or ALTO SHAAM model #1000-UP or hot hold cabinet. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #831 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000. Systems to be Furnished by Using Agency, Installed by GC.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required

under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #832 ST. ST. EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Wall Mounted style model #KVE-PSP commercial kitchen exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. Provide a 3" deep air gap integral with rear of hood with finished bottom and ends. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD's for the exhaust fan will be provided by hood manufacturer. The VFD's must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI

and ISO standard protocol. Components to be provided with “plug & play” interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD’s and then from the VFD’s to the exhaust/supply fan motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.

Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive

application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

ITEM #833 ST. ST. WALL PANELING

One (1) Lot of Custom fabricated st. st. wall paneling under hood same as previously specified. Submit shop drawing for review and approval.

ITEM #834 TWO BURNER INDUCTION COOK TOPS
Furnished by Using Agency, Installed by GC.

Two (2) Cook Tek model #MC3502F or Electrolux #601610 or Spring #SM-251-2CR counter top double induction cook top furnished per manufacturers standards.

ITEM #835 FUTURE COUNTER TOP ELECT. FRYER
Not in Contract

ITEM #836 WOOD TOP WORK TABLE

One (1) Custom fabricated Stainless Steel work table sized 6'- 0" long x 2'-9" wide x 36" high.

TOP: Top to be constructed of Standard 2" Maple top as manufactured by Michigan Maple Block or John Boos. Top shall be built in accordance with and bear the seal of N.S.F. Top to be provided with 3/16" radius on top and bottom edge.

Top to be finished with two (2) coats of non-toxic sealer applied in approved manner.

Underside of top to be reinforced with Stainless Steel Channels as called for under general requirements..

LEGS

Top to be mounted on 1-5/8" diameter, 16 gauge stainless steel tubular legs furnished with integrally welded 1-1/4" diameter, stainless steel crossrails running between leg uprights in both directions. Top of leg furnished with stainless steel gusset welded to channel top reinforcing. Each leg to be provided with Stainless Steel adjustable bullet foot.

SHELF UNDER

Under top, furnish 16 gauge stainless steel removable shelf with all outside edges rolled over 90 degrees to match contour of crossrail.

Submit shop drawing for review and approval.

ITEM #837 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #838 COUNTER PIZZA DOUGH ROLLER
Furnished by Using Agency, Installed by GC.

One (1) ANETS model #SDR-21 or SOMERSET #CDR2100M or Dough-Pro DPR3000 dough roller. Unit to be furnished per manufacturers standards.

ITEM #839 WALDORF COOKING SUITE

One (1) Garland Range or Jade Custom or Montague Custom Waldorf Suite as shown on plan. Suite shall have combination of precision mechanical and welded stainless steel construction throughout and be hand built to custom specifications. All units shall be fully constructed and tested at the factory prior to shipment.

See elevations and sections for details. Waldorf Suite shall include the following heavy duty components:

One (1) Full perimeter belly bar with offset to hold 1/9th size pans on all sides.
Two (2) Hot food wells w/ drains & faucets
Two (2) Char-broilers
One (1) Six Burner Ranges with convection ovens
Two (2) Four Burner Ranges with convection ovens
One (1) Two hot-top 17" each, 45K Btu per top. All stainless exterior
Two (2) Overhead Salamander Broilers
Two (2) Storage cabinets
Two (2) Twin Basket Fryers
Two (2) Custom End Cabinets w/ stainless. Doors
Four (4) Recessed Duplex Receptacles (two per side on end cabinets)
One (1) Custom St. St. Tubular Overshelf
One (1) Custom Stainless Steel Removable Center Cover
One (1) Custom Stainless Steel Back Pedestal Flue to support overshelf and salamanders

Suite shall be provided with a single point gas connection, 1 ¼" gas pressure regulators and custom center raceway gas manifold. Suite shall have a single point electrical connection with main load center Water, Drains, Gas and Electric Utilities per plan and rough in.

N8717-D Hot food wells C/W Faucets Fisher, Chicago or T&S
M24B Ceramic Stone Char broilers 60K Btu. All stainless exterior.
M43RC 6 burner range C/W (6) 26K Btu open burner and 40K Btu oven burner. Oven interior is black porcelain. All stainless exterior.
M44RC 4 burner range C/W (4) 35K Btu two piece open burner and 40K Btu oven burner. Oven interior is black porcelain. All stainless exterior.
M46S 2 17" hot tops 45K Btu each storage base with stainless door. All stainless exterior.
M35SS 35LB Twin basket fryer flat bottom tank. 110k Btu. All stainless exterior.
M34ES Cabinets with stainless door. Utility cabinets. All stainless exterior.
M17ES Cabinets with stainless door. Utility cabinets. All stainless exterior.

GC to turn faucet assemblies over to PC for installation and connection to water source.

Submit shop drawing for review and approval.

ITEM #840 ST. ST. ISLAND EXHAUST HOOD
Furnished by Using Agency, Installed by GC, with connections by EC and VC.

One (1) HALTON Back-to-back model #KVE – PSP commercial kitchen island style exhaust hood sized per plan.

All exposed surfaces shall be 18-gauge stainless steel with a #4 brushed finish. Unexposed surfaces are 18-gauge stainless steel. The installation shall be in accordance with the manufacturer's recommendations and conform to NFPA-96 guidelines and all applicable local codes. The hood height shall not exceed 24" H. The overall lengths of the hoods shall be as indicated on drawings and/or equipment schedule. Use of Capture Walls to create a seal between cooking equipment and wall shall not be used as they require cooking equipment to be located further from wall reducing isle space. Bottom edge of hood front panels to be square, chamfered front shall not be allowed as they reduce front overhang and jeopardize capture and containment over tall cooking equipment.

Seams and joints shall be welded liquid tight in accordance with National Fire Protection Association (NFPA) bulletin #96. Exposed external welds shall be ground and polished to match original material finish. The hood shall be Underwriters Laboratories (UL) Classified. Construction shall conform to the requirements of National Sanitation Foundation (NSF) standard 2 and the NSF seal shall be displayed on the front face of the hood. Hanger brackets shall be threaded ½-13 and located on approximately five foot centers.

The exhaust airflow will be calculated based on the convective heat generated by the appliances underneath each canopy. Submittal shall include convective heat calculations base on the input power of the appliance served as defined by ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air volume calculations shall comply with the hood listing. The use of end panels or rear seals to achieve required airflows, are not acceptable.

The hood exhaust collars shall be equipped with UL Listed Automated Balancing Damper (ABD) as required and shown on submittal drawings.

LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts. The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless steel ring with a high temperature silicone seal. Junction box to accept standard ½" NPT fitting. Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood application. All wiring is in accordance with the National Electric Code (NFPA 70).

There shall also be an illuminated flush mounted "Override" button mounted on the face of each of the hoods as shown on contract drawings. Hood light switch shall be provided and installed by E.C. in field. The E.C. will be responsible for providing and installing the wiring required from wall-mounted light switch to light junction box located on hoods as indicated on drawings.

Hood will include an active internal “Capture-Jet” System on all open sides of the hood that will allow for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall be pulled into a 1” air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800 FPM. Slot type, passive devices or “Short-Cycle” discharge is not acceptable.

The hood shall be equipped with model KSA (High Efficiency) multi-cyclone stainless steel grease extractors. The grease extraction efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of 15 microns or larger, based upon ASTM F-2519-05 method of test, as tested by an independent testing laboratory. The pressure loss over the extractor shall not exceed 0.50" of water (w.c.) at flow rates approved by UL for heavy load cooking. Sound levels shall not exceed an NC rating of 55. Baffle or slot type extractors shall not be used.

Recessed MUA ceiling plenums and diffusers shall be provided with a white powder coat finish to match the drop ceiling tiles in the kitchen. MUA plenums shall not exceed 150 cfm/ per lineal foot of plenum using a 10% open perforation diffuser material to reduce possibility of air disturbance the front edge of the hood.

Include Halton M.A.R.V.E.L. II DCV System which is an independent custom programmed demand control system. It provides for the complete and independent modulation of exhaust air volumes for multiple hood sections utilizing a single exhaust fan while operating each hood section independently of each other by use of UL Listed ABD – Automated Balancing Dampers and a single MUA unit with capability for Halton F.O.R.M. to monitor and control predetermined control points. The system shall come equipped with hood mounted infrared cooking activity sensors capable of measuring appliance surface temperatures. Infrared sensor will read appliance surface temperature which will be translated by the specific calculation algorithm for that appliance and will respond proactively to any change in cooking status. Infrared sensor and exhaust collar mounted temperature sensor work in concert on differential temperature reading back to the controller.

System to also come equipped with utility cabinet and VFD(s) to control fan speeds. VFD’s for the exhaust fan will be provided by hood manufacturer. The VFD’s must be programmed by the hood manufacturer. The M.A.R.V.E.L. II system shall automatically control the speed of the exhaust fan. System will output a 0-10v proportional signal to the BMS to control make-up air fan. Signal is proportional of exhaust 0-100% of design flow, based on appliances status, cooking activities and exhaust air temperatures.

The system is equipped with a manual override switch on the face of the hood. Normal hood function is automatically regulated based on the appliance status. The integrated PLC will analyze signals from the cooking activity sensors, temperature sensors and pressure transducers mounted in the hood and then send a signal to the and VFD to adjust the exhaust fan and supply fan speed to satisfy current cooking load conditions. The system shall be monitored with an internet connected web browser from either a local or remote location. Marvel Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment

viewable in real time. Such a model will be accessible thru an broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, duct temperature, space temperature, grease sensor and VFD status. System will include 1 year monitoring service with automated alarm signaling to the Using Agency or BMS. System will also be accessible by the Using Agency thru the Web for this one year term.

Provide a M.A.R.V.E.L. control panel (as shown on drawings) that will display all hood sections it is controlling/monitoring. The M.A.R.V.E.L. II system shall come with a HMI color touch screen capable of monitoring parameters including but not limited, hood status (off, idle, cooking), real time airflow monitoring, exhaust temperature, damper position and energy savings. HMI will indicate any current faults that need operator attention. Some features are password protected for security purposes. HMI touch screen to be housed in stainless steel surface mounted control box. Master control panel utilized BACnet interface communication protocol for building automation and control network compatibility, all to be ASHRAE, ANSI and ISO standard protocol. Components to be provided with "plug & play" interconnections as indicated on drawings.

The Demand Control System may be utilized as a single autonomous device, or as a part of a network. The Demand Control System when controlling 4 hoods or more shall be capable of monitoring and controlling up to 3 typical roof top units. The optional expansion of the MARVEL system to include such features as, but not limited to, monitoring building power, monitor a walk in cooler or a walk in freezer, with a total of up to 12 inputs without additional control hardware. Upgrading to Facilities Optimization and Resource Management (FORM) is project specific and if applicable, outlined in the specification. The Demand Control System shall support one UART-based serial interface that is jumper selectable to provide an RS-232 or an RS-485 interface to an external device (e.g., power meter), or to an internal daughterboard for supporting another communications interface (e.g., wireless sensor network connection). All of the controllers within the Demand Control System cooperate and share information to optimize the overall energy performance of the facility. M.A.R.V.E.L. II Demand Control System shall be provided with a graphical display of the kitchen hood(s) and cooking equipment viewable in real time. Such a model will be accessible thru a broadband connection (installed per specification) and show real time status and function of the exhaust hoods, current exhaust airflow, damper position, duct temperature, space temperature sensor(s) (shipped loose and to be installed by the E.C. in field), grease sensors and VFD status. M.A.R.V.E.L. shall include ABD damper diagnostics. It will have the capability to monitor the status of each individual actuator or damper blade assuring proper operation of the dampers at all times.

Demand Control Ventilation system shall include the Halton KGS duct safety and monitoring system sensor in the plenum of the exhaust hood with the highest grease producing appliances. In addition, appropriate duct sensors as shown in plans. Installation of duct sensors will be by appropriate trade. Sensor capable of determining deposition levels as determined by NFPA 96 guidelines. Operator to be alerted when duct requires cleaning.

EC will be responsible for wiring between the supplied Halton M.A.R.V.E.L. II control panel and the hood mounted sensors. EC will also be responsible for wiring between the Halton M.A.R.V.E.L. II control panel and the VFD's and then from the VFD's to the exhaust/supply fan

motors. Halton to provide inter-connectivity cables between the hoods and associated control panels. Halton to provide room temperature sensor. Electrician to provide labor to run cables and required control power per submittal drawings. Field start-up to be performed by Halton Authorized Service Agency.

A duct mounted temperature sensor only system will not be permitted. A duct mounted temperature sensor in conjunction with a smoke detector will not be permitted.
Submit shop drawing for review and approval.

Performance Criterion

Other manufacturers wishing to offer an alternate to the specified manufacturer must apply for permission to do so, in writing, from the office of the specifying A/E. A/E must receive application at least ten working days prior to the bid date. Any alternate system must meet construction and performance requirements and efficiencies as outlined in this specification. Requests for approval must include grease filtration performance data (micron size vs. extraction) for mechanical extractor and manufacturer's own exhaust airflow calculations based on convective heat load of cooking equipment beneath the hood. Efficiency comparison data to be performed in accordance with ASTM Standard F1704-96 and include results for exhaust rate for capture and containment of convective plume, Temperature rise of exhaust air and Heat Gain to the space (kBtu/h).Test results must be based on the same physical height of the specified system and not include rear seals and/or side skirts. Results of walk-by test without side skirts must be disclosed. An additional load cannot be placed on the kitchen HVAC system. Manufacturer must provide a written guarantee of performance, ensuring the specifying A/E that the system will perform to the A/E's satisfaction when installed and balanced according to design airflows and results of ASTM Standard F1704-96 test. (As determined by TAB ports and pressure vs. air flow curves). A/E reserves the right to reject any system which, when installed, does not perform to ASTM Standard F1704-96 for heat gain according to the specification. Rejected system must be replaced with specified system, with all replacement costs paid by manufacturer of rejected system. Any changes in the specified sizing of power wiring or gas lines due to the use of any system other than that which is specified is the responsibility of the alternate hood manufacturer, and must be coordinated by the hood manufacturer and contractors involved.

Submit shop drawings for review.

ITEM #841 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000. Systems to be Furnished by Using Agency, Installed by GC.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC JOB SITE REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½” conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o’clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½” conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #842 PANINI GRILL
Furnished by Using Agency, Installed by GC.

One (1) EQUIPEX model #SAVOY or STAR #GC14 or WARING #WFG150 single sandwich press furnished with smooth top and bottom plates. Unit to be furnished per manufacturers standards. See rough in plan for voltage.

ITEM #843 ST. ST. CHEFS COUNTER/HOT WELLS

One (1) Custom fabricated counter in size and shape per plan. Top, Cabinet Base, Attachment Rack, Etc., to be fabricated in accordance with E. F. Whitney's typical standard details, elevations, general requirements and architectural sheet A9-61.

TOP

Top to be constructed of 14 ga. st. st. type 304. Front and ends to be turned down to cabinet base with type "A" edge. Reinforce under with Galv. iron angles and channel framework per General Requirements.

CABINET BASE

Top to be mounted on 18 ga. st. st. cabinet base reinforced with 1-1/2" x 1-1/2" x 18 ga. Galv. iron angles running both horizontally and vertically and lengthwise of entire fixture. Bottom of cabinet to be sealed with 18 ga. Galv. iron sheet enclosure fastened to the bottom side of angle framework. Where necessary, furnish offsets and cutouts for floor drains and rough-in connections.

Include cross braces every 48" and furnish offsets in base shelves around floor drains. Floor drains are not to be hidden.

Cabinet base to be mounted on 6" high NSF approved st. st. adjustable legs. Furnish legs on 42" centers, and a 16 ga. st. st. "snap on" style kickplate. Kickplates to be furnished with the necessary offsets and cutouts for floor drains and rough-in connections.

See efw elevation #86 on sheet #146 and architectural sheet A9-61 for additional details for millwork shelving and door face construction.

COOKS SINK

Section to be furnished sink sized per plan x 12" deep. Sinks to have all coved corners and be integrally welded counter top. Provide each sink with T&S, Fisher or Chicago rotary handle drain with crumb cup strainer, connected rear overflow, and 6" chrome plated tailpiece.

Include Two (2) T&S, Fisher or Chicago Deck Type faucet with 8" swivel gooseneck spout and aerator.

Under sink sections, furnish 18 ga. st. st. double pan hinged louvered access door, with recessed st. st. handles, sound deadening, full length st. st. hinges and positive catches for providing access to rough-in connections for sink area. Base cabinet to be furnished with 16 ga. st. st. lower shelf extending full width and depth of cabinet. Shelf to be turned up 2" on rear and sides with all coved corners to meet NSF approval. Under sink area furnish factory fabricated pipe space to allow for sink rough-in. Shelf around pipe space to be turned up 2" and furnished complete with 18 ga. st. st. cap with necessary holes cut out in neat manner around water and waste connections.

GC to turn all faucet and drain assemblies over to PC for installation and connection to water source.

HOT FOOD SECTION

In top furnish drop in Four (4) Hot Food Wells furnished with die stamped raised edge to accommodate 12" x 20" pans. Die stamped edges shall be turned down into food well with coved interior corners. (Square corners will not be approved) Each opening to be furnished with 1.2 KW hot well unit with voltage and phase per rough-in plan.

Include individual thermostats with pilot lights for each well. Controls to be all internally wired to circuit breaker panel in approved conduit. Controls to be mounted on st. st. hinged type control panel mounted in center of plate shelf as shown on elevation detail.

Each well to be furnished with individual drain manifolded to one (1) common drain valve & extended to building floor drain. Wells are to be pre piped with a common fill line. Hot food wells to be insulated per manufacturers recommendation,

Under top at hot food section, per plan and elevation detail furnish 16 ga. st. st. plate shelf with rear and ends turned up approx., 8" with all coved corners. Under plate shelf area, furnish lower 16 ga. st. st. shelf with coved interior corners turned up 2" on rear and sides. Also include center 18 ga. st. st. removable shelf mounted on st. st. angles for access to hot food wells.

Per plan furnish one (1) T&S, Fisher or Chicago cold water fill faucet.

TRASH STORAGE

UNDERCOUNTER REFRIGERATORS

One (1) 18 ga. st. st. custom fabricated three (3) door undercounter refrigerator with raised rail refrigerated prep area. Include the following accessories:

Two (2) Refrigerated openings with st. st. liners & telescoping removable st. st. covers.
One (1) Lot of 1/6 size x 6” deep st. st. pans to fill openings

One (1) Lot of st. st. baffles under openings in top, necessary to keep food from dripping down to the lower compartment from above.

Interior of undercounter refrigerators to be 18 ga. st. st. with all coved corner welded construction, furnished with NSF approved automatic interior light, drain, three (3) adjustable chrome plated wire shelves per compartment, and a dial thermometer on cabinet per Department of Health Requirements. Include Bohn slimline blower type cooling coil, control switch and pilot light installed inside refrigerator with all controls ready for remote refrigeration systems.

NOTE! Temperature is to be 38 degrees and meet NSF-7 criteria. Transfer fans and or cold wall refrigeration lines to be used as needed.

ELEVATED SHELVES

Over top as shown on plan, section detail and elevation detail furnish overhead 14 ga. st. st. shelves x length shown on plan. Shelves shall be turned down on all sides. Edge to be turned down 1" at 90^{o} bend then back 2" at 20^{o} return. Shelves to have polished edges to match counter top. Shelves to be supported by 1-5/8" dia. 16 ga. st. st. uprights extending from the base of the cabinet and continuing on to become curved supports for pan rack over as shown on plan. Shelf to have die stamped openings with 1/16" of uprights. Cantilever supports to be 12 ga. st. st. all welded construction. Attachment rack uprights to be curved with smooth 12" radius with slight extension for easy reach of hooks on cooks side.

Cross bars for each rack to be made of 3/16" x 2" bar polished to #4 finish. Each bar to be furnished with nickel-plate or chrome plated metal sliding type hooks on 6" centers. Rack uprights shall extend down through top to bottom of base cabinet and anchored to cabinet framework.

Underside of shelves to be furnished with stud welded screws to accommodate heat lamps. Include all wiring, recessed switches, etc. to accommodate heat lamps. All exposed conduit to be st. st.

HEAT LAMPS

Furnish, install & pre wired to circuit breaker panel eight (8) double wide units sized 36 long as shown on elevation detail. NOTE! DO NOT INSTALL MORE THAN FOUR (4) UNITS PER CONTROL.

All wiring to be mounted in st. st. sleeves. Heat Lamps are to be wired to infinite controls mounted in recessed enclosure in face of counter.

CUTTING BOARDS

One (1) Lot of 1/2” full length white poly cutting boards. Boards to be provided in equal sections for easy cleaning

CIRCUIT BREAKER SECTION

Under top furnish UL approved electrical distribution panel service disconnect sized to meet electrical requirements of the entire counter. All wiring and conduit to be factory wired for one (1) final connection on the job site by the EC. All wiring to meet local & state electrical codes.

GC shall furnish balanced wiring diagram on shop drawing for all fabricated items that include internal wiring.

This section to be furnished with double pan st. st. louvered doors, complete with recessed handles and flush type cylinder locks.

PLATE STORAGE CABINET

One (1) Fabricated unit 44" high x length & depth as shown on plan.

Top to be fabricated of 14 ga. st. st. and overhang cooks table side as shown on section detail. Underside to be reinforced with angle and channel framework and be properly lagged down to prevent waves in top at heat lamp areas. Edges to be turned down with type "A" edge.

HEATED & UNHEATED SECTIONS

Under full length of top, per elevation and section detail. Furnish cabinet base 18 ga. st. st. reinforced with 1-1/2" x 1-1/2" x 18 ga. Galv. iron framework running horizontally and vertically.

Cabinet construction to be per General Requirements. Interior shelves in unheated section to be 16 ga. st. st. with 2" turn up on rear and ends with coved interior corners. Cabinet front to be furnished with millwork doors per elevation detail. See sheet A9-61 for details.

Cabinet to be heated in the Left and right sections. Furnish the heated sections with insulated doors. Doors are to be reinforced to prevent buckling do to the heat. Cabinet to be insulated on sides, rear, bottom and top. The cabinet is to be double wall construction with 18 ga. st. st. interior, and exterior back wall not exposed to view 18 ga. Galv. iron.

NOTE! Cabinet to be heated up in shop with doors installed to be sure that the doors do not warp.

Heated plate cabinet to be furnished with one (1) lot of heaters capable of heating plates to a temperature of 100^{o} to 200^{o} F. Cabinet to be furnished with recessed control knob, pilot light indicator, and on/off switch. Heating strips are to be located under shelves and where exposed to be furnished with st. st. wire guards to prevent burns when reaching into the cabinet. Include all heat resistant wiring, conduit, etc., and all electrical is to be pre wired to circuit breaker panel.

Heated cabinet to be furnished with lower and two (2) center 16 ga. st. st. shelves. Lower shelf to be solid type with center shelves being perforated to allow for better heat distribution.

Non heated cabinet and doors to be same as specified for heated cabinet except omit the heating elements and furnish with standard 18 ga. st. st. sound deadened sliding doors.

ELECTRICAL RECEPTACLES

Per layout and rough-in plan, furnish duplex receptacles recessed in side of cabinet drawer enclosure, or in chrome plated pedestal deck type housing. Receptacle to be all pre wired in approved conduit, per electrical code to junction box in base of cabinet ready for one (1) final connection by the EC.

Receptacle to be set in st. st. recessed receptacle, and or deck type pedestal housing. Include neoprene mat gasket and st. st. faceplate. Receptacle to be three (3) prong grounded type installed to meet all safety and electrical codes.

Submit shop drawing for review and approval.

ITEM #844 HEAT LAMPS

One (1) Lot included with item #843

ITEM #845 ICE AND SODA DISPENSER
Not in Contract

ITEM #846 COFFEE GRINDER
Not in Contract

ITEM #847 COFFEE MAKER
Not in Contract

ITEM #848 ICED TEA MAKER
Not in Contract

ITEM #849 CUP AND GLASS RACKS
Not in Contract

ITEM #850 ST. ST. CHEFS COUNTER

One (1) Custom fabricated unit in size and shape as shown on plan and elevation details. General construction to be same as item #843. Include the following sections:

Two (2) Sink Areas, one with st. st. splash guards for hand sink
One (1) Raised Rail/Three door undercounter refrigerator
One (1) Two Door/Two Drawer undercounter refrigerator
One (1) Lot Rear Dry storage area
One (1) 36” high back to back dry storage area

One (1) Double St. St. Overshelf
One (1) Monolithic seamless st. st. front in finished as determined by A/E
One (1) Marble top dining surface as shown on plan. See Section 06 41 16 for details.
One (1) Foot Rail – See Section 06 41 16 for details.

Submit shop drawing for review and approval.

ITEM #851 ST. ST. BEVERAGE COUNTER

One (1) Custom fabricated units sized approximately 13'-4" long x 30" wide x 34" high. See plan and elevation for additional details.

TOP

Fabricated of 14 gauge stainless steel with type "A" edges on all open sides. Top to have bullnosed corners with polished finish and reinforcing angles/channels under, per General Requirements.

Edges against equipment or where shown on plan to be furnished with 6" high integral backsplash with 1" return at 90 degree angle. Caulk with clear G.E. sealant to meet Health Department approval. Provide cut out for owner provided drop in soda/ice dispenser.

SINK

In top, furnish single compartment integrally welded sinks 18" x 21" x 12" deep. Bottom of sink compartment to be pitched and furnished with die stamped opening to accommodate waste flange. Sink to be all coved cornered and fabricated per General Requirements.

SINK TRIM: One (1) T&S, Fisher or Chicago Faucet deck type faucet furnished with 8" swing spout with aerator. Faucet caulked watertight to counter top. Faucet to be cast red brass, all chrome plated with color coded hot and cold water faucets.

One (1) T&S, Fisher or Chicago 1-1/2" I.P.S. twist handle drain with connected rear overflow assembly with st. st. tailpiece.

Sink trim to be furnished with identification tags and signed over to PC for internal and final connections to rough-in locations.

CABINET BASE

Entire top to be mounted on cabinet base, fabricated of 18 ga. st. st. reinforced with 1-1/2" x 1-1/2" x 1/8" Galv. Iron framework running horizontally and vertically. Cabinet to be constructed per General Requirements.

Interior of cabinet furnished with lower and center 16 ga. st. st. shelves. Shelves to have 2" turn-up on rear and ends with made in removable sections and reinforced under with 1/1/2" x 1-1/2" x 18" galvanized iron angles .

Per elevation detail provide hinged access doors with louvers. Doors construction to be per general requirements.

Provide recess for undercounter built in warming drawers.

WARMING DRAWERS: Per plan and elevation provide recess for tier of three warming drawings.

RACK STORAGE: Per plan and elevation detail provide open storage area for 20x20 glass racks. Racks to be supported from st. st. angle slides.

LEGS

Unit to be mounted on 6" high st. st. legs with adjustable feet. See elevation for details.

Submit shop drawing for approval.

ITEM #852 POS SYSTEMS
Not in Contract

ITEM #853 HEATED TIER OF DRAWERS

One (1) ALTO SHAAM model #500-3D or HATCO #HDW-3 or WELLS #RW-3HD three drawer warmer. Unit to be furnished per manufacturers standards. Provide unit with the following standard and optional accessories:

One (1) Lot Electronic Controls
One (1) UL Cord and Plug
One (1) Built in Trim Kit

Unit to be shipped to counter manufacturer for built in installation.

ITEM #854 BAG AND BOX SODA SYSTEM
Not in Contract

ITEM #855 ST. ST. WORK COUNTER/SINK/REF. BASE

One (1) Custom fabricated counter in size and shape per plan. Top, Cabinet Base, Attachment Rack, Etc., to be fabricated in accordance with E. F. Whitney's typical standard details, elevations as included with plans and bid documents. Counter to be fabricated as follows:

TOP to be constructed of 14 ga. st. st. type 304. Front and ends to be turned down to cabinet base with type "A" edge. Reinforce under with Galv. iron angles and channel framework per General Requirements.

CABINET BASE

Top to be mounted on 18 ga. st. st. cabinet base reinforced with 1-1/2" x 1-1/2" x 18 ga. Galv. iron angles running both horizontally and vertically and lengthwise of entire fixture. Bottom of cabinet to be sealed with 18 ga. Galv. iron sheet enclosure fastened to the bottom side of angle framework. Where necessary, furnish offsets and cutouts for floor drains and rough-in connections.

Include cross braces every 48" and furnish offsets in base shelves around floor drains. Floor drains are not to be hidden.

Cabinet base to be mounted on 6" high NSF approved st. st. adjustable legs. Furnish legs on 42" centers

SINK: Sink to be sized 18” x 16” x 12" deep. Sinks to have all coved corners and be integrally welded counter top. Provide each sink with 1-1/2" T&S or Fisher or Chicago rotary handle drain with crumb cup strainer, connected rear overflow, and 6" chrome plated tailpiece. Include Fisher or T&S or Chicago Deck Type faucet with 8" swivel gooseneck spout and aerator.

Under sink sections, furnish 18 ga. st. st. double pan hinged louvered access door, with recessed st. st. handles, sound deadening, full length st. st. hinges and positive catches for providing access to rough-in connections for sink area. Base cabinet to be furnished with 16 ga. st. st. lower shelf extending full width and depth of cabinet. Shelf to be turned up 2" on rear and sides with all coved corners to meet NSF approval. Under sink area furnish factory fabricated pipe space to allow for sink rough-in. Shelf around pipe space to be turned up 2" and furnished complete with 18 ga. st. st. cap with necessary holes cut out in neat manner around water and waste connections.

GC to turn faucet and drainer assemblies over to PC for installation and connection to water source.

UNDERCOUNTER REFRIGERATORS

One (1) Three door undercounter refrigerator same as previously specified. Include the following accessories:

Two (2) Refrigerated openings with st. st. liners & telescoping removable st. st. covers.
One (1) Lot of st. st. baffles under openings in top, necessary to keep food from dripping down to the lower compartment from above.

Interior of undercounter refrigerators to be 18 ga. st. st. with all coved corner welded construction, furnished with NSF approved automatic interior light, drain, three (3) adjustable

chrome plated wire shelves per compartment, and a dial thermometer on cabinet per Department of Health Requirements. Include Bohn slimline blower type cooling coil, control switch and pilot light installed inside refrigerator with all controls ready for remote refrigeration systems.

NOTE! Temperature is to be 38 degrees and meet NSF-7 criteria. Transfer fans and coils to be used as needed.

ELEVATED SHELVES

Over top as shown in section detail and elevation detail furnish overhead 14 ga. st. st. shelves x length shown on plan. Shelves shall be turned down on all sides. Edge to be turned down 1" at 90^{o} bend then back 2" at 20^{o} return. Shelves to have polished edges to match counter top. Shelves to be supported by 1-5/8" dia. 16 ga. st. st. uprights extending from the base of the cabinet and continuing on to become curved supports for pan rack over as shown on plan. Shelf to have die stamped openings with 1/16" of uprights. Cantilever supports to be 12 ga. st. st. all welded construction. Attachment rack uprights to be curved with smooth 12" radius with slight extension for easy reach of hooks on cooks side.

Cross bars for each rack to be made of 3/16" x 2" bar polished to #4 finish. Each bar to be furnished with chromed metal sliding type hooks on 6" centers. Rack uprights shall extend down through top to bottom of base cabinet and anchored to cabinet framework.

Underside of shelves to be furnished with stud welded screws to accommodate heat lamps.

CUTTING BOARDS

One (1) Lot of 3/4" x full length of raised rail white poly cutting boards in equal sections.

ELECTRICAL RECEPTACLES

Per layout and rough-in plan, furnish duplex receptacles recessed in side of cabinet base and counter top mounted pedestal as shown. Receptacle to be all pre wired in approved conduit, per electrical code to junction box in base of cabinet ready for one (1) final connection by the EC.

Submit shop drawing for review and approval.

ITEM #856 ST. ST. WORK COUNTER/SINK/REF. BASE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #855. Submit shop drawing for review and approval.

ITEM #857 ST. ST. WORK COUNTER/SINK/REF. BASE

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #855. Submit shop drawing for review and approval.

ITEM #858 ST. ST. WORK COUNTER/SINK

One (1) Custom fabricated unit sized per plan and elevation detail. General construction to be same as item #855, Except omit refrigerated base. Submit shop drawing for review and approval.

ITEM #859 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #860 NOT USED

ITEM #861 GAS FIRED OPEN HEARTH OVEN (6’)

QTY: One (1)

MFG/MODEL: Woodstone model #WS-MS-6-RFG or Beech #RND1800 or Earthstone #160-PAG gas fired pizza oven

CONST: Per manufacturer standards and per elevation & plan details

ACCESSORIES:

One (1) Air Cooled View Window per plan
One (1) Auto Hood Start Control
One (1) Stainless Steel Mantle
One (1) U.L. approved st. st. type 1 exhaust hood per plan and elevation.
One (1) Floor brush set with one extra head
One (1) Large peel

One (1) Utility peel
One (1) Stainless Steel tool hangers. Bracket to be secured to wall with heavy duty Stainless Steel lag bolts and wall anchors.

NOTE! Unit shipping weight is over 3600 pounds. CG to verify access in to building and coordinate size of specific unit with available space.

EC and HC to be responsible for final connections.

ITEM #862 ST. ST. EXHAUST HOOD

One (1) Unit included with item #861. Submit shop drawing for review and approval.

ITEM #863 FIRE SUPPRESSION SYSTEM

One (1) system completely installed ANSUL R102 or KIDDE or RANGE GUARD Wet Chemical Restaurant Kitchen Fire Suppression System sized to meet job requirements in accordance with the manufacturer's specifications and installed only by an authorized Fire System Distributor. This system must be installed in accordance with UL-300, BOCA, NFPA-17A, NFPA-96 and the authority having jurisdiction. The installing company must carry complete Operations Liability Insurance of a minimum of $1,000,000.

NOTE! Units MUST BE INSTALLED IN the factory stainless steel enclosures. Any Fire System not completely installed in an authorized cabinet must be approved by the A/E in writing prior to such substitution. Cabinet installation must comply with CABO/ANSI A117.1-1992.

NOTE! Mechanical Gas Valves must be used for automatic shut-off. Any Fire System installed using an Electric Gas Valve must have written approval from the A/E prior to such installation.

System to provide automatic fire suppression for the plenum area of Exhaust Hood, connecting exhaust ducts.

STANDARD: All equipment and the complete system shall conform to NFPA #96, vapor removal from cooking equipment Underwriters Laboratories File #EX2458.

APPROVALS: All devices furnished shall be constructed and installed in accordance with this specification and shall be U.L. approved.

MATERIAL: Exhaust Hood, Duct, and Cooking Appliance Fire Suppression shall be manufacturers standard wet suppression agent.

INSTALLATION: System shall be installed in conformance with the latest edition of applicable standard of NFPA 17A, NFPA 96, BOCA, Manufacturer's manual and all applicable state and local codes.

1. Installer shall visit the job site, take all field measurements and verify all conditions affecting the work unless shown on attached plan.

2. Obtain and pay for any permits specifically required for the fire suppression installation.

3. Provide shop drawings showing the piping and mechanical detail of the fire system to the authority having jurisdiction.

TEST: Upon completion of installation, seller to perform all tests necessary to fulfill requirement of the authority having jurisdiction.

SPECIFIC REQUIREMENTS: System to be provided with Two (2) Micro switches (DPDT) mounted in the Control cabinet. Second switch to be interfaced with the building Fire Alarm, if required.

System installer to provide a manual reset relay to the Electrical Contractor for installation into the fuel shut-off system.

The installer to provide the Heating Contractor one mechanically operated automatic gas shut-off valve, for each fire suppression system, sized for the job requirements. HC is to install the valve. System installer is to connect the gas valve cable to the Control cabinet.

The Fire System must be located where shown on the food service equipment drawings.

NOTE! ANY RELOCATION of the Fire System MUST BE APPROVED by the A/E in writing prior to such relocation.

The Fire System installer shall be responsible for cutting or punching holes in walls, ceilings and floors for installation of the equipment. The installer will be responsible for furnishing trim flanges or patching and painting of any holes required for the installation of the fire system.

PIPING: Fire System to be per manufacturers standards. All piping and conduit of the fire system is to be concealed where possible and all piping and conduit to be either chrome plated, chrome sleeved or stainless steel where exposure is necessary.

HEATING CONTRACTORS RESPONSIBILITIES: The Heating Contractor shall be responsible for the installation of the automatic gas shut-off valve required for the automatic shut-off of the gas supply to all gas operated appliances under Exhaust Hood.

The valve shall be installed as near as possible to the subject cooking equipment and should not be installed in a location that would affect the shutdown of the gas supply to any gas operated equipment not located under the Exhaust Hood. The mechanical gas shut-off valve required under this specification shall be furnished to the Heating Contractor by the Fire System installing company.

ELECTRICAL CONTRACTOR'S RESPONSIBILITIES: The Electrical Contractor shall be responsible for all labor and materials required to completely connect the cooking fuel shut-off system.

The Electrical Contractor shall be responsible for installing a ½" conduit and flush-mounted standard 4" X 4" electrical octagon box with screws at 2 & 8 o'clock for each fire system. Verify height requirement with Authority Having Jurisdiction.

This is to be used for the manual pull station to activate the Fire System. The ½" conduit should extend approximately 15" above the finished ceiling.

The following must be completed by the Electrical Contractor (See electrical drawings for details):
1. All electrical under the Exhaust Hood must shut down upon activation of the Fire System. This includes all outlets, hard-piped appliances and all refrigeration stands.

2. All Make-up Air Units for the Exhaust Hoods in the kitchen must shut down.

3. Exhaust Hood Fans must continue to run.

4. If an electrical gas valve is used, a manual reset relay must be used. This relay is to be supplied by the fire system installer.

5. If Fire Alarm notification is required, one of the micro switches is to be used for this purpose.

6. No electrical connections to be made inside the Control cabinet.

ITEM #864 POS SYSTEMS
Not in Contract

ITEM #865 NOT USED

ITEM #866 BACKBAR REFRIGERATOR (BEER / BEER)
Furnished by Using Agency, Installed by GC.

One (1) GLASTENDER model #BB60BB-L6-SNH(RR) or PERLICK #BBS60BW or KROWNE #BS60-BW-L Back bar cooler on 6" legs furnished per manufacturers standards. GC to verity door finish with A/E prior to ordering unit. Provide unit with locking glass doors

Submit shop drawing for laminate selection, review and approval.

ITEM #867 24" BACKBAR DRY STORAGE CABINET
Furnished by Using Agency, Installed by GC.

One (1) GLASTENDER model #LPDS24-6SN(R) or PERLICK #DB24 or KROWNE #BD24 dry storage furnished per manufacturers standards. Units to include 6" st. st. legs to match adjacent back bar coolers. Provide unit with locking doors. GC to verify door finish with A/E Prior to ordering.

Submit shop drawing for review and approval.

ITEM #868 BACKBAR REFRIGERATOR (RED/WHITE WINE)
Furnished by Using Agency, Installed by GC.

One (1) GLASTENDER model #BB60RW-R6-SNH(RR) or PERLICK #BBS60BW or KROWNE #BS60-BW-R Back bar cooler on 6" legs furnished per manufacturers standards. GC to verity door finish with A/E prior to ordering unit. Provide unit with locking glass doors

Submit shop drawing for laminate selection review and approval.

ITEM #869 BACKBAR KEG REFRIGERATOR
Furnished by Using Agency, Installed by GC.

One (1) GLASTENDER model #KC84-L6-SNH(LLL) or PERLICK #DDS84/6952604TT or KROWNE #BSK84L Back bar cooler on 6" legs furnished per manufacturers standards. Unit to include chrome four tap tower w/ drainer. Location of tap/drainer to be coordinated in field with A/E. Provide unit with locking doors. GC to verity door finish with A/E prior to ordering unit. Drainer to be extended to indirect waste in floor by PC.

Submit shop drawing for laminate selection review and approval.

ITEM #870 UNDERBAR ICE BIN

One (1) GLASTENDER model #CBA-36R-CP10 or PERLICK #TS36I/SR-S36/BW6-36 or KROWNE #KR180M36L-10 St. st. combo ice bin section. Unit to be furnished per manufacturers standards with bottle holders on right hand side. Include one (1) SSR-36 single speed rail. Provide locking speed rail cover.

Submit shop drawing of entire arrangement for review and approval. Underbar equipment should be single manufacturer to insure units line up properly.

ITEM #871 UNDERBAR MUG CHILLER

One (1) GLASTENDER model #MF-36-S1 or PERLICK #FR-36 or KROWNE # MC36S st. st. underbar mug froster furnished per manufacturers standards including 3.5" casters, two with locks.

Submit shop drawing of entire arrangement for review and approval.

ITEM #872 UNDERBAR THREE COMPARTMENT SINK

One (1) GLASTENDER model #TSB-60-S or PERLICK #TS53C/2648PVC/7055A46 or KROWNE # KR2153 three compartment sink. Unit to be furnished per manufacturer standards. Sinks to be provide with faucet and drainer assembly.

Submit shop drawing of entire bar arrangement for review. Underbar equipment should be single manufacturer to insure units line up properly.

GC to turn faucet and drainer assemblies over to PC for installation and connection to water source.

ITEM #873 UNDERBAR DRAINBOARD SECTION

One (1) GLASTENDER model DBB-30 or PERLICK #TDS-30 or KROWNE # KR21-GS30 drainboard section furnished per manufacturers standards.

Submit shop drawing of entire arrangement for review and approval. Underbar equipment should be single manufacturer to insure units line up properly.

ITEM #874 TRASH RECEPTACLES

Not in Contract

ITEM #875 UNDERBAR HAND SINK

One (1) GLASTENDER model #HSB-12-AD or PERLICK #TS12HSN or KROWNE # KR-21-DST st. st. underbar hand sinks furnished per manufacturers standards.

Submit shop drawing of entire arrangement for review and approval. Underbar equipment should be single manufacturer to insure units line up properly.

PC to be responsible for final connections.

ITEM #876 UNDERBAR ICE BIN W/ SODA GUN

One (1) GLASTENDER model #CBA-36L-CP10 or PERLICK #TS36IC/SR-S36/BW6-36 KROWNE #KR180M36L-10 St. st. combo ice bin section. Unit to be furnished per manufacturers standards with bottle holders on left hand side. Include one (1) SSR-36 single speed rail & Soda gun chase on holder. Provide locking speed rail cover.

Submit shop drawing of entire arrangement for review and approval. Underbar equipment should be single manufacturer to insure units line up properly.

ITEM #877 NOT USED

ITEM #878 NOT USED

ITEM #879 PORTABLE SOAK SINK
Furnished by Using Agency, Installed by GC.

One (1) ADVANCE TABCO model #9-FSC-20 or EAGLE MSS2020SC or Custom fabricated st. st. portable silver soak sink.

Submit shop drawing for review and approval.

ITEM #880 NOT USED

ITEM #881 NOT USED

ITEM #882 NOT USED

ITEM #883 NOT USED

ITEM #884 NOT USED

ITEM #885 NOT USED

ITEM #886 NOT USED

ITEM #887 NOT USED

ITEM #888 NOT USED

ITEM #889 NOT USED

ITEM #890 NOT USED

ITEM #891 WALK IN REFRIGERATOR

QTY: One (1)

MFG: American Panel Custom, Bally Custom or Kolpak Custom

CONST:

Walk-In Refrigerator provided under this portion of the specifications shall be prefabricated of modular design and construction. They shall be constructed to allow convenient and accurate field assembly.

See plan for sizing and configuration. Panel sizing to fit openings with not more than 2" clearance to surrounding walls.

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision formed to exact dimensions with double 90° edges to enhance overall panel rigidity. The finished metal surfaces shall be fitted with a teardrop profile gasket and placed in precision tooled fixtures where they are injected with *Foamed-in-Place* urethane insulation. Curing of the insulating core shall take place at a controlled temperature within the foaming fixture to provide permanent adhesion to the metal surfaces, allowing for uniform foam expansion and to maximize finished panel strength. Panel edges shall have a molded urethane tongue and groove profile of insulation factor equal to material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, high density urethane or other non-insulating materials shall be used in panel construction. Finished panels must be UL classified building units.

Finished panels will be 4" thick and will be provided in 11 ½", 23", 34 ½" and 46" widths to conform to project drawings. Corner panels shall be one piece 90° angled construction and shall measure 12" x 12" or 12" x 6 ¼" where required. For units with multiple compartments, specially designed "tee" panels shall be provided to form partition wall to outside wall junctures. "Tee" panels shall measure 23" x 12" or 23" x 6 ¼" where required. All panels shall be interchangeable with like panels or standard door frame sections for fast and easy assembly.

Floor Construction and Finish: Walk in to be installed with NSF Screeds fastened to floor. A/E to be responsible finished floor wear surface. Cooler floor will be un-insulated.

Door Construction - Entrance doors are constructed similar to other panels and shall be flush mount, magnetic in-fitting type. Door sections shall be constructed to conform to Underwriters Laboratories Standards for electrical safety and shall bear all appropriate U.L. listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusions weighing not less than 11 ounces per lineal foot. All pultrusions shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Door jamb shall house a door frame heater circuit and a magnet attracting stainless steel trim strip. Door frame shall be equipped with flexible bellows type vinyl door gasket with magnetic core and flexible EPDM (ethylene propylene diene monomer) door sweep. Standard door frame sections 46", 57 ½" or 69" wide shall be equipped with a vapor proof light fixture and globe pre-wired to a pushbutton type light switch with pilot light and a 2 1/2" diameter dial-type thermometer. An aluminum braided heater wire with integral circuit closure providing activation while refrigerated room is within operating temperature and a 16 gauge stainless steel threshold plate shall also be included in all door frames.

Door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with two (2) heavy duty cam lift hinges. Pull handle assembly shall incorporate a keyed cylinder deadbolt style lock, provision for Using Agency supplied padlock and an inside safety release to prevent personnel entrapment. Positive door closing and sealing shall be assisted by a hydraulic closer device.

Per code, provide clear vinyl strip curtains at door openings.

ACCESSORIES:

View-Through Window: To provide vision in the walk-in room, a 14” x 14” triple-pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated glass shall be used. Window shall be neatly trimmed and designed for replacement in the field.

Monitoring System: fully programmable featuring audio/visual temperature alarm with digital thermometer, high & low set points, 115V output, energy saving door frame heater wire, vapor proof light & switch with pilot light.

Cylinder Lock: A cylinder locking device shall be installed on reach-in doors as required. It shall consist of a cylinder lock and locking cam with a non-conductive housing.

Thru-Ceiling Electrical: A thru-ceiling electrical assembly shall be factory installed at the entrance door to allow the door electrical components to be pre-wired through to the exterior ceiling. It shall consist of a flexible cord with plug on the door section and receptacle installed in the ceiling panel.

Kickplate: Provide 1/8” aluminum diamond kickplate on interior and exterior of all entrance doors. Kickplate to be 36” high x width of door.

Provide 48” long LED ceiling mounted light fixtures and one (1) LED vapor proof fixture above door. Exposed conduit on interior ceiling is not permitted. GC to be responsible for installation of light fixtures. Loose box of fixtures turned over to EC is not acceptable. See drawings for quantities and locations. All conduit and wiring to be by EC.

GC to mount lights and leave ready for interwiring and final connections to switch(s) and building power supply by EC..

NOTE! Per code, The light intensity shall be at least 110 lux (10 foot candles) at a distance of 75 cm (30 inches) above the floor, in walk-in refrigeration units, dry food storage areas and in other areas during periods of cleaning. Manufacturer to provide fixture quantities to meet these requirements.

Wall Protectors: To prevent damage to Walk-Ins in heavy traffic areas, the following bumper rail shall be supplied on the exposed walls:

A 1-1/2” wide extruded aluminum rail with vinyl insert. Field mounted with unexposed with sheet metal screws/supplied with end caps.

Closure Panels: Furnish removable closure panels to enclose the area between the building and the walk-in ceilings. Panels to be fabricated of same material as walk-in exterior.

Trim Strips: Furnish trim strips between walk-in and building walls where shown. Constructed and finished of same material as exterior of walk-in.

Corner Guard: Provide 16 gauge stainless steel corner guards 6" x 6" x 60" high on exposed exterior corner of walk-in.

Base Cove: GC to provide base cove to seal walk-in to building floor and facilitate easy cleaning.

One (1) Lot exterior wall bumpers where exposed
One (1) LED light at doorway
One (1) LED Tube Light Fixture on ceiling
One (1) Flex Strip Curtain
One (1) Vision Windows 14" x 14"

DETAILS:

Finishes - The interior and exterior finish on panel surfaces is to be manufactured from a combination of the following premium grade materials. The gauge or thickness of the metal material listed is rated prior to embossing.

- Interior walls shall be .032. Stucco Aluminum
- Interior ceilings shall be .032. Stucco Aluminum
- Exposed Exterior walls shall be .032. Stucco Aluminum
- Exterior ceiling shall be .032. Stucco Aluminum
- Unexposed top of box to be 26 Ga. Acrylume
- Exposed Exterior Front shall be 032. Stucco Aluminum

Insulation - Insulation shall be 4" thick high pressure impingement mixed (HPIM) foamed-in-place urethane, minimum 2.4 lb. per cubic foot density, fully heat cured and bonded to metal finishes. The insulation shall be manufactured using an HFC 245fa expanding agent. The thermal conductivity ("K" factor) shall not exceed 0.133 BTU/Hour/Square Foot/Degree Fahrenheit/Inch of Thickness across the entire width of the panel. Overall coefficient of heat transfer ("U" factor) shall not exceed .033 and the resistance to heat penetration ("R" factor) shall not be less than 30. The insulation shall have a 97% closed cell structure to prevent absorption of liquids. The finished panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building unit and demonstrate a flame spread rating of 20 or less. The core material smoke developed Underwriters Laboratory rating shall be no greater than 300 as documented by and in accordance with ASTM Standards.

Panel Assembly - Assembly of walk-in shall be accomplished by the use of cam-action locking mechanisms precisely positioned along the outside tongue or groove edges of each panel to exactly correspond with a matching mechanism in the adjacent panel. Cam lock spacing on vertical joints shall not exceed 46" and at junction of vertical and horizontal joints by 23". Cam locks shall be foamed-in-place and anchored securely in the panel by steel "wings" integral to the lock housing. Cam locks shall be operated through access ports by the use of a hex wrench, thereby, pulling the panels together and establishing an airtight seal. All access ports shall be located on the walk-in interior to facilitate assembly when close to building structures and shall

be covered by vinyl snap-in caps after final assembly. Complete step-by-step assembly instructions and erection drawings shall be supplied by the walk-in manufacturer and installing contractor must be factory authorized!

System shall have an integrated, push button light switch with on/off indicator light. System shall comply with IECC 2012 federal energy requirements by incorporating an automatic lighting shut-off. System shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature, termination temperature and percentage of operation time adjustability.

System to have 115V output for connection to external alarms, dialers, etc. that run on standard 115V input. The system shall be supplied with a dry contact kit for connection to equipment that requires dry contacts.

Electrical Contractors Responsibilities to be as indicated on drawings.

Shop drawing: Submit shop drawing for review and approval.

ITEM #892 ST. ST. REFRIGERATED WORK TOP TABLES
Furnished by Using Agency, Installed by GC.

Eight (8) RANDELL custom fabricated work tables sized 10' – 0" long x 33" deep x 36" high to working surface. See plan, elevation and section for additional construction details. Include integral 12" high back splash. Note, four units in center of room to be bolted together with joint sealed with silicone on top and base.

TOP: Top to be fabricated of 14 ga. st. with integral scrap trough and frost top with Blue Poly Cutting Board in equal sections to allow for easy removal and cleaning.

SINK: 16" x 20" x 10" deep sink to be provided with removable st. st. perforated insert, 8" splash mounted faucet with swivel spout and lever waste per manufacturers standards. Trough to be provided with extension to allow debris to fall into basket and not between basket and sink wall. GC to turn faucets and drainer assemblies over to PC for installation and connection to water source.

CABINET BASE: Base to be furnished with hinged access door at sink compartment, and hinged, louvered access door for frost top compressor access. Compressor to be mounted on anti vibration legs per manufacturers standards.

SHELF OVER: Per manufacturers standards, include cantilevered shelf over with 1" turn up against rear wall. Shelf to be tight to rear wall. Top edge of shelf and upright penetrations through backplash to be sealed with clear silicone.

CUTTING BOARD STORAGE: Per elevation detail, provide vertical storage for cutting boards.

FX DRAWER: Provide FX-1WSA single section self contained refrigerated/freezer drawer in base cabinet as shown on elevation detail. Include all st. st. lined open storage space below drawer. Interior to have all coved corners.

ELECTRICAL: Provide approved cord and plugs. Plug access to wall receptacles to be thru rear of cabinet base in frost top compressor location. Include flush mounted backplash mounted receptacle pre-wired per electrical plan and general requirements.

LEGS: Base cabinet to be mounted on 6” high st. st. legs with adjustable feet.

See elevation #68/69 on page 145 for details for center four counters. Units to be bolted together with partial section of backsplash and overshelves removed to allow 8’- 0” wide open center section for instructor demonstrations.

Submit shop drawing for review and approval.

ITEM #893 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18” of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #894 ST. ST. THREE COMPARTMENT SINK

One (1) Custom Fabricated unit in size 33” deep x length as shown plan with integral pitch to allow tables to drain towards sink compartments. See elevation for details.

TOP - Fabricated of 14 gauge stainless steel with front and exposed ends furnished with type "D" raised rim with apron type edge. Working surface to have integral pitch to drain surface area of

any excess water. Top of rim to be parallel with floor. Reinforcing under and polish to be furnished in accordance with General Requirements and standard edge details.

BACKSPLASH - Rear and sides were shown on plan, against walls to be furnished with 12" high integral backsplash. Top to be turned back at 45 degree angle with 1" return down parallel to wall. Furnish 14 gauge stainless steel "Z" clips to hold backsplash tight to wall in neat and workmanlike manner. Provide clear silicone sealant to wall and equipment per Department of Health Requirements. See Edge Detail type "G" for construction requirements.

LEGS - Top and sink to be st. st. legs with adjustable feet.

SHELF UNDER - Under top as shown on plan or elevation, furnish 16 gauge stainless steel removable shelf. Shelf to be rolled over crossrails in front and sides. Rear to be turned up 3" against walls or side equipment. Shelf to have all coved corners at not less than 5/8" radius. Omit crossrail and undershelf under clean dishtable for dish cart storage.

DISPOSER CUTOUTS - Where shown, top to be cut out to accommodate disposer cone specified under separate item. Cone to be continuously welded around full perimeter, then ground and polished smooth to a #4 satin finish. Under top furnish 14 ga. st. st. bracket to accommodate disposer control panel or switch. Rear backsplash to be punched out to accommodate vacuum breaker assembly specified under disposers item #906.

SINKS: In top, furnish three (3) integrally welded sink compartments per plan location. Sink compartments to be 24 x 28" x 14" deep. Bottom of each sink compartment furnished with die-stamped opening to accommodate waste flange. Sink bottom all coved cornered, pitched to waste and fabricated per General Requirements.

SINK TRIM: Three (3) compartment unit to be furnished with the following:

Three (3) T&S Model B-0290-112X (3/4" I.P.S) to fit in rear of Backsplash to accommodate 3/4" water lines , Center compartment Pre-rinse w/ 10" "Add a Faucet" (1) T&S Model B-0287-427-B, Remove T&S Model 114X, 12" spout and provide T&S Model 112x 10" spout. Or FISHER or CHICAGO FAUCET.

Furnish each faucet complete with T&S Model B-0427 or FISHER or CHICAGO FAUCET Assembly to facilitate fastening to Backsplash

Three (3) T&S Model B-3950-01 FISHER or CHICAGO FAUCET Twist Handle Drains with connected rear overflow & 010387-45 removable basket strainers. Twist Handle Drains Furnished with 14 ga. st. st. bracket welded to underside of sink.

Sink trim to be furnished with identification tags and signed over to PC for their internal and final connections to rough-in locations.

Submit shop drawing for review and approval.

ITEM #895 WIRE WALL SHELVING

One (1) Lot Metro #SuperBright or Eagle model #Eaglebright or ISS model #Plating Plus Shelving. wire wall shelving sized per plan. Unit to consist of two (2) 14" deep chrome shelves with two (2) 2WD14C chrome wire wall supports & one (1) 18" deep chrome shelves with two (2) 2WD18C chrome wire wall supports. Each chrome wire wall support consists of one shelf support and mount plate with two caps. GC to mount wire shelf supports to wall with heavy duty SST lag bolts. See Elevation for details.

ITEM #896 HOSE REEL ASSEMBLY

One (1) T&S model #B-1439 or FISHER # or KROWNE #24-502 open hose reel unit with trigger water gun. Unit to be turned over to PC for installation and piping. See elevation for details.

ITEM #897 SECURED STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

Two (3) METRO model SEC55DCQ super erecta or Eagle model #Eaglebright or ISS model #Plating Plus 48" long x 24" chrome wire security shelving units furnished per manufacturers standards. Units to be provided with two (2) interior wire shelves, heavy duty casters, two with brakes. Locks to be provided by operator.

ITEM #898 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.
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ITEM #899 STORAGE SHELVING
Furnished by Using Agency, Installed by GC.

QTY: Three (3)

MFG & MODEL: InterMetro Industries Corp model #Super Brite Super Erecta or Eagle model #Eaglebright or ISS model #Plating Plus Shelving.

CONST: All carbon steel construction. Shelves to have 10 ga. mat wires spaced 21/32" apart. Mat wires to be supported by 6 ga. support wire. Support wire spacing specific to shelf size. Shelf width greater than 18" include one to two 7 ga. snake wire supports running the length of the shelf. Shelf frame to be made up of 7 ga. snake wire with two 6 ga. snake support wire. A round 1 1/2" steel collar is welded at each corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. Round tubes notched every 1" of the post. A polypropylene post cap will be installed on the top of each post. The bottom of the post to be furnished with heavy duty casters, two with locks.

Finish will be Super Brite, a zinc based chromate bath.

DETAILS: Each shelving to be furnished five (5) tiers high with four (4) 84" high posts. Shelving size and quantity to be sized per plan.

ITEM #900 DUNNAGE RACK
Furnished by Using Agency, Installed by GC.

One (1) CAMBRO DRS600 or Eagle model #Eaglebright or ISS model #Plating Plus heavy duty dunnage racks sized 60 x 21" as shown on plan. Unit to be furnished #180 Gray.

ITEM #901 WALL MOUNTED DRYING RACKS

One (1) Custom fabricated unit sized per plan and elevation detail x two (2) bar type rack constructed of 2" x 1/4" st. st. bars welded to 12 ga. st. st. gussets at each end and reinforced thru center on approx., 36" centers with similar type gussets. (Verify mounting height). Gusset type bracket to be fastened to wall on 24" centers with heavy duty lag bolts secured properly to support heavy loads.

Each bar to be furnished with st. st. sliding type pot hooks space on 6" centers. Racks to be all welded construction with all welds ground and polished smooth. Top bar to be 10" out from wall with bottom bar 3" out from wall.

Submit shop drawing for review and approval.

ITEM #902 PORTABLE WALK IN REFRIG SHELVING
Furnished by Using Agency, Installed by GC.

QTY: One (1)

MFG/MODEL: InterMetro Industries Corp Super Erecta Metroseal3 or Eagle #Eagleguard or ISS #GreyBond Shelving

CONST: Shelves to have # 10 gauge mat wires spaced 21/32" on centers with #6 gauge cross braces a maximum of 8" on centers and running perpendicular to crosswires. Additional center cross bracing is augmented with 1/4" snake wire support on shelves with depth 21" and greater. Side construction to consist of 1/4" diameter top and bottom support wires with 7 gauge snake wire welded between the top and bottom support wires. The top and bottom support wires are to be welded to round 1 1/4" i.d. collar to form corner. All contact points are to be welded.

Posts are to be provided as 1" O.D. round tubes grooved at 1 " increments and numbered at 2" increments. Posts are double-grooved every 8" for easy identification. A round plastic post cap will be installed on the top of each post. A slip sleeve will be provided for each collar to stay at selected position on the post.

ACCESSORIES:

One (1) Set of 5" dia., swivel casters, 2 with locks to be provided with each section of shelving.

DETAILS:

Shelving to be furnished four (4) tiers high with One (1) set of posts per unit. Post sized to allow mobile units to be rolled in and out of 75" doors while on 5" casters. GC to coordinate shelving length with walk in interior to insure proper fit.

ITEM #903 NOT USED

ITEM #904 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #905 ST. ST. WALL PANELING

One (1) Lot of Custom Fabricated 18 ga. st. st. rear and side wall paneling 30" high by length and width as shown on plan. Furnish paneling hair line butt joints. Paneling to be sealed on sides and top with clear silicone sealant.

Submit shop drawing for review and approval

ITEM #906 3 H.P. DISPOSER W/ RINSE

QTY: One (1) Lot

MFG/MODEL: IN-SINK-ERATOR SS-300-18B-CC101 OR SALVAJOR 300-SA ARSS 18 OR WASTE KING 3000-3 PC-2024 18

CONSTRUCTION: Unit shall be a commercial, heavy-duty disposer with three (3) horsepower motor, stainless steel and chrome plated finish. Control Panel shall be 18 gauge st. st. NEMA 4, waterproof enclosure.

ACCESSORIES:

One (1) 18" cone w/ two fixed nozzles
One (1) St. St. Removable Cover and Scrap Block
One (1) Automatic Reversing Feature
One (1) Time Delay Relay set for 30 seconds
One (1) 24 volt line voltage transformer, controls operate on 24 volts
One (1) Line Disconnect Switch, Interlocks with front cover
One (1) Start/Stop Push Button
One (1) Flow control valve and solenoid
One (1) St. st. support leg
One (1) 14 gauge st. st. mounting bracket
One (1) T&S B-2278 OR FISHER OR CHICAGO FAUCET Pre-rinse unit w/ built in vacuum breaker
One (1) T&S B-0456 or FISHER or CHICAGO FAUCET Vacuum Breaker Assembly w/ chrome plated pipe extension & elbows above backsplash area

DETAILS: Cone to be continuously welded to top with all welds ground and polished smooth. Control panel bracket welded to underside to top and set back so disconnect handle does not project beyond edge of table. Backsplash to be pre-drilled on exact centers to accommodate Vacuum Breaker Assembly. GC shall tag all accessories with item numbers and locations of equipment. Accessories are then to be delivered to Plumbing and Electrical Contractors for their internal and final connections. GC shall furnish detailed drawings showing proper installation of loose accessories and piping details.

ITEM #907 ST. ST. HAND SINK

QTY: One (1)

MFG/MODEL: Advance Tabco model #7-PS-51 or Eagle #HSA-10-FOE or John Boos #PHHS-W-1410-1

CONST: Sink to be constructed of st. st. Sink to be furnished with 8" backsplash with 2" return to wall and flange down.

ACCESSORIES: Furnish with strainer type 6" tailpiece and "P" trap all to be chrome plated brass. Faucet shall be T & S EC 1301 TMV, CHICAGO or FISHER , hands free operated electronic gooseneck faucet, aerator, mixing valve. Soap and towel dispenser to be provided by Using Agency. Faucet, tailpiece and trap to be turned over to PC for installation.

NOTE! Sinks within 18" of adjoining pieces of equipment to have splash shield(s) on right and or left side as required by the Health Department. GC to review installation location and provide shields as needed.

DETAILS: Sink to be mounted with rim 34" above finished floor with rough-in for water and waste located 4-7/8" below the 6-1/2" deep sink.

ITEM #908 PORTABLE PAN RACK
Furnished by Using Agency, Installed by GC.

One (1) ADVANCE TABCO model #PR20-3W or New Age #1331 or Eagle #4331 in quantity as shown on plan. Units to be front load all welded portable pan rack. Unit to be furnished per manufacturers standards. Include heavy duty casters, two with locks.

ITEM #909 NOT USED

ITEM #910 NOT USED

END OF SECTION 11 40 00