

**OLEAN CITY SCHOOL DISTRICT
410 WEST SULLIVAN STREET
OLEAN, NY 14760**

NOTICE TO BIDDERS

**Request for Bid
Food Service Equipment Replacement**

May 7, 2024

The Olean City School District hereby invites the submission of bids for:

**WALK-IN COOLER/FREEZER
Bid No. OCSD 24-507**

Detailed specifications and bid forms may be obtained from the district by contacting the Business Office. Olean City School District, 410 West Sullivan Street, Olean, NY 14760, on any business day between the hours of 8:30 a.m. and 3:30 p.m., local time, or by calling (716) 375-8020.

Sealed bids will be received until 1:30 p.m., local time, on the 22th day of May 2024 at the Business Office, Olean City School District, 410 West Sullivan Street, Olean, NY 14760, at which time all bids will be officially opened and read.

Bids must be submitted to the attention of Jenny Bilotta in sealed envelopes bearing the bidder's name, time, date of bid, and plainly marked "Food Service Equipment-Walk-In Freezer – OCSD 24-507" No federal, state, or local taxes are to be included. All entries must be **TYPED OR WRITTEN IN BLACK INK.**

For any questions, please contact Jenny Bilotta at (716) 375-8020.

The Olean City School District reserves the right to reject any or all bids.

Jenny Bilotta
Business Administrator
Olean City School District
410 West Sullivan Street
Olean, NY 14760

RESPONSES DUE BY: 1:30 PM on May 22, 2024

GENERAL INFORMATION/CONDITIONS

Statement of Purpose:

The Olean City School District (hereinafter referred to as “the District”) is soliciting bids for the purpose of replacement of Food Service equipment. Bids must follow the outline set forth in this document. Please submit (2) original copies of the completed qualifications and other requirements of the RFP, by hand delivery, regular mail, or courier to the address listed on the cover page. The District must receive the bid by the date indicated in the timeline below.

SCOPE OF SERVICES

The firm selected will provide equipment and services as specified in the following document: Section 114000 – Food Service Equipment and related drawings. “Turnkey” replacement of the walk-in cooler/freezer at the Middle School.

**The District may also award additional work beyond this scope and project-based upon responses to this Request for Bids.*

GENERAL REQUIREMENTS

Instructions to Bidders:

The District prohibits employees (or entities in which the employee has a financial interest, or from which the employee receives compensation) from contracting with the District to provide goods or services as an independent contractor.

The submission of a bid will indicate that the responder (1) has read the instructions, (2) will abide by the terms and conditions governing this Request for Bid, and (3) understands the requirements for delivery of the services specified.

General Instructions:

1. Specifications contained in the Request for Bid are for Food Service Equipment Replacement at the Middle School.
2. Minimum requirements are specified. The bidder may choose to exceed those minimums.
3. Failure to provide sufficient and required information may result in the bid being rejected by the District as non-responsive and not being considered.
4. Each bid must be clearly marked on the outside of the envelope with the title FOOD SERVICE EQUIPMENT – WALK-IN COOLER/FREEZER – OCSD #24-507.” Please ensure your organization’s name is included on the outside of the package. If you are using a commercial delivery company that requires the use of their shipping package or

envelope, your bid must be placed within a second sealed package labeled as detailed above. This will ensure your bid is not prematurely opened.

5. Original bids with two copies are to be mailed or delivered to: Olean City School District, 410 West Sullivan Street, Olean, NY 14760, Attn: Business Administrator; to arrive no later than the closing date and time specified in the timeline provided herein. Any received after that time will not be opened, and will be returned only upon request by, and at the expense of, the bidder(s). The bidder(s) will assume total responsibility for delivery of their bid on time at the place specified, whether sent by mail or delivered in person.
6. Telephone, facsimile, or telegraphic bids are not acceptable. Unless otherwise specified, submission by email is not permitted.
7. To assist all vendors in obtaining a clear understanding of the requirements of this bid, vendors may present clarifying questions. Questions regarding this bid must be submitted in writing via email to **Jon Woods (jon@teamfeds.com)** by 3 pm on May 10, 2024. Bidders must also provide in writing one working email address of where the District should direct its response to any questions. Responses to questions will be answered via email by May 14, 2024. The District is not responsible for non-working email addresses. District responses will also be shared with other potential proposers if they are known to the District.
8. The Food Service Equipment Contractor is responsible for conducting a full inspection of the new walk-in prior to the removal of the existing unit. This contractor is responsible for resolving any damage caused by shipping or installation.

RFP TERMS AND CONDITIONS

1. The issuance of this RFP request constitutes only an invitation to submit a response to the District. If the school District chooses to award the RFP to a selected vendor, the vendor must complete a contract with the District. The form and content of the contract will be determined by the District.
2. This Bid request does not commit the District either to award a contract or to pay any costs incurred in the preparation of a submission. Bidders shall bear all costs associated with submission preparation, submission and attendance at presentation interviews, or any other activity associated with this Bid request or otherwise.
3. All bids and accompanying documentation become the property of the District. The District shall not divulge any information presented to anyone outside the District, unless required by law, without the written approval of the individual or firm. The District reserves the right to use the information and any ideas presented in any submission in response to this RFP request, whether the submission is accepted. Submitted bids may be reviewed and evaluated by any person or outside consultant retained by the District, other than one associated with a competing applicant, as designated by the District. If a vendor believes that any information in its bid constitutes a trade secret and wishes such

information not be disclosed if requested by a member of the public pursuant to the State Freedom of Information Law, Article 6 of the Public Officers Law, the vendor shall submit with its bid a letter specifically identifying the page number, line or other appropriate designation, that information which it deems to constitute a trade secret and explain in detail why such information is a trade secret. Failure by a vendor to submit such a letter with its bid identifying trade secrets shall constitute a waiver by the applicant of any rights it may have under Section 89 (Subdivision 5) of the Public Officers Law relating to the protection of trade secrets.

4. The District neither makes nor assumes any contractual obligation by issuing this RFP request, receiving, and evaluating responses, or making preliminary responder selections. Providing a response as provided herein shall neither obligate nor entitle a bidder to enter into a contract with the District.
5. The District reserves the right to determine in its sole and absolute discretion whether any aspect of the vendor's submission satisfactorily meets the criteria established in this RFP request, the right to seek clarification from any Bidder(s), and the right to cancel and or amend, in part or entirely, the RFP request, at any time prior to a written contract.
6. It is understood that any submission received and evaluated by the District will be used as the basis for the cost and terms of a contract between the District and the bidder. In submitting a response, it is understood by the responder that the District reserves the right to accept any submission, to reject any or all submissions and to waive any irregularities or informalities that the District deems is in its best interest.
7. The District is not obligated to respond to any submission nor is it legally bound in any manner whatsoever by the submission of a response.
8. Each response shall be reviewed for completeness and for the technical and administrative requirements of the RFP request. This includes completion of Appendix items A-E. The District has the option of requesting the bidder to submit missing information or provide clarification of those issues deemed incomplete or disqualifying the bid. A bid may be disqualified for lack of response to such a request.
9. RFPs submitted to the District must be valid for a period of at least 90 days from the deadline for receipt of bid responses as defined in the time frame section of this document.
10. The selected vendor's bid will become part of any resulting legal contract, should contracts be awarded. The term of the resultant contract shall commence upon award and shall remain in effect until completion, inspection, and final acceptance of specified project(s) unless terminated, cancelled, or extended as otherwise provided herein.
11. Each bid must include the appropriate corporate officer's approval signature.
12. It is a requirement that bidders indicate specifically in the response any subcontract, alliance, partner, franchise, or other "non-employee" relationship with any resource(s) they will utilize if they are chosen as the selected bid. Note: **The District reserves the right to**

approve or reject any potential sub-contractors to be used in any of the services being proposed.

13. The District reserves the right to introduce additional factors not contained in this RFP request to obtain the most suitable solution. After submitting a bid, each respondent must be prepared to have the operational aspects of their bid reviewed in detail by District representatives.
14. Bids shall be opened publicly at the District’s Central Office location, or other duly designated location, on the “received by” date and time indicated on the cover page. The name of each bidder shall be read publicly and recorded. Unless disclosure of final bid pricing constitutes an impairment of negotiations, the proposed bid, cost, or sum of each proposer will be read publicly as well. The content of bids shall not be subject to public inspection until after contract award. After contract award, bids may be reviewed unless they, in total or in part, contain information which is exempt from disclosure pursuant to the Freedom of Information Law (e.g., a trade secret).
15. At any time prior to the specified bid due time and date, a bidder (or designated representative) may withdraw their bid.
16. The District reserves the right to award contracts for individual projects or for any combination of projects deemed to be most advantageous to the District. Notwithstanding any other provision of the RFP, the District expressly reserves the right to:
 - Waive any immaterial defect or informality; or
 - Reject any or all bids, or portions thereof; or
 - Reissue an invitation for bid.
17. The District Board of Education reserves the right to award a contract in the best interest of the District. The Board of Education’s decision will be final.

Bidders Default – Failure of the Bidder to comply with any of these provisions may be considered reason for rejection of the Bid.

ATTACHMENT A – SPECIFICATIONS

ATTACHMENT B – SIGNATURE PAGE

ATTACHMENT C – QUOTE SHEET

ATTACHMENT D – NON-COLLUSION FORM

ATTACHMENT E – CREDENTIALS OF THE FIRM AND REFERENCES

ATTACHMENT A – SPECIFICATIONS

The submitted bids must state and/or include responses to the following specifications:

See the following document: SECTION 114000 – FOOD SERVICE EQUIPMENT

ATTACHMENT B – SIGNATURE PAGE

Olean City Central School District
Request for Bid – Food Service Equipment Replacement

I have reviewed and agree to the terms, conditions and other stipulations of this RFP dated May 07, 2024, and further certify the accuracy of the information submitted as the bid:

Authorized signature: _____

Individual's name (print): _____

Title (affix seal if a corporation): _____

Business name: _____

Mailing address: _____

Business license number: _____

Date: ____ / ____ / ____

Phone: _____

Fax: _____

Bids must be signed to be valid.

ATTACHMENT C – QUOTE SHEET

Total project cost is \$ _____. This is the cost figure that your bid will be based upon. Your total compensation for the scope of equipment, labor, material, and installation services to be delivered under this contract will not exceed this dollar amount. Please note any inclusions or exclusions below.

Quote submitted by:

(Signature)

Company Represented:

(Company Name)

Company Representative:

(Printed Name of Representative)

Representative Email:

(Print valid company email address)

Subcontractor Name:

If none “write” N/A” in the space.

(Print valid company name)

ATTACHMENT D – NON-COLLUSION FORM

The pricing shown in the Bid Proposal is arrived independently and without consultation, communication, or agreement with any other contractor, bidder, or potential bidder to the Request for Proposal or bud request.

Neither the price nor the amount of the proposal, and neither the approximate pricing nor approximate amounts in the proposal, have been disclosed to any other firm or person who is a bidder or potential bidder to the Request for Proposal or bid request, and they will not be disclosed before the public opening.

No attempt has been made or will be made to induce any firm or person to refrain from responding to the Request for Proposal or bid request, or to induce them to submit pricing that is higher than the budget in this proposal, or to submit any intentionally higher or noncompetitive proposal or other form of non-responsive proposal.

The proposal and pricing prepared by our company is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive proposal.

No person or persons, firms or corporation has, had, or will receive directly or indirectly, any rebate, fee, gift, commission, or thing of value on account of such sale.

I certify under penalty of perjury under New York State law that I know the contents of this affidavit signed by me and the statements are true and correct.

Signed

Printed

Date

Title

SECTION 114000 – FOOD SERVICE EQUIPMENT

PART 1- GENERAL

1.1 SECTION INCLUDES:

- A. Foodservice Equipment as listed in the itemized specifications and listed on the contract drawings.

1.2 DEFINITIONS:

- A. Furnish -- Supply and deliver to the project site, ready for unloading, unpacking, setup, assembly, and installation.
- B. Install -- Will include the actual unloading, unpacking, assembly, erecting/setting in place, leveling, anchoring, protecting, cleaning, and related operations on the equipment to be made ready for utility connections by the Food Service Equipment Contractor.
- C. Contractor -- All references to Contractor in this Section 114000 shall refer to the Food Service Equipment Contractor (abbreviated as F.S.E.C.).

1.3 RELATED SCOPE:

- A. Work included will include provision of any wall, floor, and/or ceiling/roof openings, penetrations, recesses, sleeves, conduits, and equipment pads as required for installation of items included in this section. Also sealing of these openings, penetrations, recesses, sleeves, etc., after installation of the equipment items as required. Disconnection of existing equipment to be relocated and/or reused; and disconnection of existing equipment which will not be reused, shall be provided by the F.S.E.C. The district will be responsible for replacing, repairing, or patching floor tile and any ceiling grid and tile around the walk-in unit.
- B. Work included: Removal and disposal of existing equipment, which will not be re-used, shall be the responsibility of the Food Service Equipment Contractor. Removal of the existing walk-in and refrigeration system shall be the responsibility of the F.S.E.C. Any shelving or dunnage racks inside the existing freezer shall be removed from the walk-in and turned over to the owner. Disconnection of utilities performed by F.S.E.C. All existing equipment shall be relocated as per the contract drawings. F.S.E.C. shall be responsible for pumping down and properly recovering the existing refrigerant from any systems before demolition and provide documentation as proof of proper disposal. The F.S.E.C. is responsible for cleaning up the existing concrete pad, installation of the walk-in freezer, and installation of the refrigeration system. F.S.E.C. is to confirm the ability and sizing of the equipment to be installed and access into the space.
 - 1. The Food Service Equipment Contractor is responsible for conducting a full inspection of the new walk-in prior to the removal of the existing unit. This contractor is responsible for resolving any damage caused by shipping or installation.

1.4 STANDARDS, LAWS, AND ORDINANCES:

- A. Standards: Except and unless otherwise noted, comply with the following standards as applicable to the manufacture, fabrication, and installation of the work of this Section:

2. American with Disabilities Act (ADA): Comply with requirements, as applicable to this Project.
2. National Sanitation Foundation (NSF): Comply with the latest Standards and Revisions established by NSF for equipment and installation. Provide NSF seal of approval on each applicable manufactured item, and on items of custom fabricated work.
3. Underwriters Laboratories (UL): For electrical components and assemblies provide either UL labeled and registered products or, where no labeling service is available, recognized markings to indicate listing in the UL Recognized Component Index.
4. National Electrical Manufacturers Association (NEMA): Comply with the most current codes or standards.
5. American National Standards Institute (ANSI): Comply with current standards for gas-burning equipment and provide labels indicating name of testing agency. Comply with current codes and standards for L.P. gas cylinder connections, and with applicable standards of the Compressed Gas Association for compressed gas piping. Follow codes for water connection air gaps and vacuum breakers.
6. National Electric Code (NEC): Comply with current NFPA codes for electrical wiring and devices included with foodservice equipment, and applicable NEMA and NECA standards.
7. American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE): Comply with the applicable regulations and references of the latest edition of standards for remote refrigeration systems, components, and installation.
8. Air Conditioning and Refrigeration Institute (ARI): Comply with the applicable regulations and references of the latest edition of standards for remote refrigeration systems, components, and installation.
9. Refrigeration Service Engineers Society (RSES): Comply with the applicable regulations and references of the latest edition of standards for remote refrigeration systems, components, and installation.
10. No CFC refrigerants shall be allowed on this project under any circumstances. HFC refrigerants and components shall be used where available. R290 refrigerant should be used where possible.
11. All walk-in coolers and freezers shall meet the applicable sections of NYECC C403.10.
12. All refrigeration components installation, repairs, and/or associated work on any refrigeration system, self-contained or remote, shall be performed by a Certified Refrigeration Mechanic.
13. All applicable local codes, standards, and regulations and any special local or job site conditions shall be complied with.

1.5 **SUBSTITUTIONS:**

- A. American Panel will be accepted for this project. No other considerations will be accepted, unless provided in writing by the Food Service Consultant.

1.6 SUBMITTALS:

A. Rough-In Drawings:

1. The Food Service Equipment Contractor shall be solely responsible for the accuracy of the installation information. Rough-in drawings will not be required.

B. Shop Drawings:

1. Submit shop drawing sets directly to the Food Service Consultant within 10 days of award notice.
2. Submit CAD shop drawings in PDF format for items of custom fabrication included in this contract. Shop drawings shall be submitted at minimum 3/4 inch per foot scale, and shall show dimensions, materials, construction details, installation, and relation to adjoining work or equipment requiring cutting or close fitting. Shop drawings shall also indicate all reinforcing, anchoring, and related work required for the complete installation of these items. Drawings shall be submitted in a minimum of 24" x 36" format.
3. Before proceeding with the fabrication of any item, the Food Service Equipment Contractor will verify all necessary dimensions and details with all job site dimensions and conditions considered.

C. Submittals:

1. Foodservice Consultant review of shop drawings is for general conformance and compliance with the design concept, and contract documents. Markings, and / or comments shall not be construed as relieving the Food Service Equipment Contractor from compliance with the contract documents. The Food Service Equipment Contractor remains solely responsible for all details and accuracy and for performing their work in a safe, satisfactory, and professional manner.

1.7 OPERATION AND MAINTENANCE MANUALS:

- A. Operation and Maintenance Manuals: The Food Service Equipment Contractor will supply a set of manuals for items of standard manufacture on, or before, the date of final acceptance of installation by the owner. Manuals are to be in alphabetical order according to the manufacturer. Each set should include a blank page for quick reference, clearly marked, separating each manual and / or section within the binder. Electronic versions are acceptable unless printed versions are required by the owner.
- B. Submit with the operation and maintenance manuals a list of local service agencies complete with telephone numbers, address, and e-mail information for the authorized agencies to perform the warranty work.
- C. Provide a letter of warranty in the front of the manual complying with Section 1.14. This letter must include the actual date the warranty begins, and list all labor, service, workmanship, and factory warranty periods.

1.8 AS BUILT AND RECORD DOCUMENTS:

- A. Maintain one record set of Foodservice Equipment Plans with any related corrections, revisions, additions, deletions, changes, future items, etc. noted during construction and installation.
- B. Provide final sets of shop drawings and equipment manuals with any related corrections, revisions, additions, deletions, changes, future items, etc. noted during construction and installation as specifications record set.
- C. These documents shall be provided to the owner before the date of final acceptance of installation.

1.9 DISCREPANCIES

- A. If discrepancies are discovered between the drawings and the specifications, the F.S.E.C. will notify the Food Service Consultant in writing of any discrepancies discovered and await clarification prior to proceeding with the items or areas in question.

1.10 FOOD SERVICE EQUIPMENT CONTRACTOR QUALIFICATIONS:

- A. Submit evidence of compliance with the following qualifications and conditions.
 - 1. Manufacturers' authorized dealer, able to purchase, distribute, and install all items specified with this project.
 - 2. Seven (7) years minimum continuous operation under the same company name and ownership.
 - 3. Successfully completed at least eight (8) installations of similar scope and size during the last two (2) years. Provide references with contact information for verification.
 - 4. Maintain an installation staff or have access to qualified personnel with a minimum of seven (7) years' experience in the installation of comparable size and scope projects.
 - 5. Maintain a staff or have access to personnel experienced in the preparation of professional shop drawings and submittals as outlined in related sections.
 - 6. Maintain or have access to manufacturers authorized service personnel together with readily available stock of repair, and replacement parts.
 - 7. Maintain or have access to a fabrication shop with NSF and UL standards and officially listed with labeling requirements. If the fabricator is a subcontractor for the F.S.E.C., they shall have ten (10) years minimum experience in the fabrication of comparable size, scope, and level of quality projects. The Food Service Equipment Contractor shall submit the fabrication shop company name and credentials to the Foodservice Consultant and owner, who shall have the right of approval or disapproval of this fabricator.
- B. Any subcontractors employed by Food Service Equipment Contractor for this project shall comply with these same qualification requirements.
- C. The owner and/or Foodservice Consultant for the project shall approve the Food Service Equipment Contractor.

1.11 PRODUCT HANDLING:

- A. Storage of Materials, Equipment, and Fixtures. The Food Service Equipment Contractor is responsible for receiving and warehousing equipment and fixtures and holding items until the job site is ready for delivery and installation.
- B. Handling Materials and Equipment. Verify and coordinate conditions at the job site, particularly door, and/or wall opening sizes and clearances, to assure access for all equipment. Pieces too large for existing site conditions shall be hoisted, crane-lifted, or otherwise handled as required. All special handling equipment charges shall be arranged for and paid for by the Food Service Equipment Contractor and is to be included in the bid price, unless conditions change at the job site, after acceptance of bid through no fault of the F.S.E.C.

1.12 PRODUCT PROTECTION:

- A. The Food Service Equipment Contractor is responsible during the progress of the project to protect their equipment against theft or damage, until final acceptance by the owner. Items should not be delivered to the job site before the site is ready for installation, unless at the request of the owner or the construction manager. All scheduled deliveries should be signed for, and the delivery condition noted by the owner or the construction manager.
- B. Protect all items before, during, and after installation and protect the associated work and materials of the other trades.

1.13 WARRANTIES:

- A. Unless otherwise noted, items furnished shall be fully guaranteed against defects in workmanship and material(s) for two (2) full years from the date of the first event to occur of the following: Start-up for intended use by the owner/operator, Substantial completion of installation of kitchen equipment contract package as agreed to by the owner, or final acceptance of installation by the owner. Should a Temporary Certificate of Occupancy be issued for partial completion of work, the items furnished within that designated area shall be under warranty from the date of issue of the certificate. The Food Service Equipment Contractor or their service agent will make repairs and replacements without charge to the owner within a reasonable time.

1.14 SCHEDULE:

- A. Contract acceptance constitutes a guarantee that the contractor can and will obtain materials, equipment, and labor upon notice to proceed to permit overall completion of the entire building project on schedule. The contractor shall coordinate their work with the progress schedule as prepared and updated periodically by the owner.
- B. Anticipated delays, not through fault of the Food Service Equipment Contractor, shall be noted in a written notification to the Foodservice Consultant, and the Owner immediately upon the realization by F.S.E.C. that delays are possible, likely, or probable.
- C. Extra charges from rush orders, special handling, overnight UPS/FedEx, air shipments, etc., to meet the required schedule will be paid by the Food Service Equipment Contractor, if insufficient time was allowed in placing factory orders.

- D. Failure of manufacturers to meet promised delivery dates will not grant relief to the Food Service Equipment Contractor for failure to meet schedules unless it can be proven in writing with supporting data (i.e., proof of dates orders were placed) that orders were received by the manufacturer with reasonable lead times.

PART 2 - EQUIPMENT

2.1 GENERAL:

Refer to schedule on Foodservice Drawings and Section 4, Itemized Specifications, included in this Section.

2.2 MATERIALS:

A. Quality Standards for Metals:

1. Stainless Steel: Type 302/304, #4 finish where exposed, #2B finished where not exposed.
2. Steel Sheet: Hot-rolled carbon steel.
3. Galvanized Steel Pipe: Welded or seamless, schedule 40, galvanized or heavier.
4. Steel Structural Members: Hot rolled or cold formed, carbon steel unless stainless steel is indicated.

B. Insulation:

1. For heated type applications, use mineral wool, a minimum of one (1) inch thick.
2. All insulation shall be fully encased, or enclosed.

C. Joint Materials:

1. Sealants: Silicone based, liquid elastomeric sealant, non-solvent release type. Sealants shall be NSF listed, and FDA approved for use in food zones. Installation shall comply with applicable requirements of NSF Standards.
2. Gaskets: Solid or hollow neoprene or PVC light grey, self-adhesive or prepared for either adhesive application or mechanical attachment.

2.3 REFRIGERATION:

A. General:

1. All refrigerant and associated components shall comply with the latest code requirements and shall comply with the latest Federal Regulations for energy efficiency. Walk-In coolers or freezers need to include the following: automatic door closing device, power air curtains on doors, heated triple pane windows on cooler and freezer doors, high efficiency lighting or automatic light switches, R-25 insulation in cooler walls, doors, and ceilings, R-32 insulation

in freezer walls, doors, and ceilings, and R-28 insulation in walk-in cooler and freezer floors. Condensing units shall be equipped with PSC fan motors and evaporator fans shall utilize the ECM type fan motors. Refrigerants must comply with the latest type required by Federal Regulations and use R290 refrigerant where possible.

2. Wiring for walk-in refrigerator and freezer cabinets shall be UL approved type from exterior junction box to internal components, with insulation, unless local codes require metallic conduit (EMT or Greenfield). For freezer applications, Seal-Tite Flex or approved equal shall be used. Lighting receptacles, and door switches shall be mounted weatherproof boxes. All penetrations to be insulated with expanding foam and sealed to prevent condensation moisture buildup.
3. Furnish either single, or multiple condensing units, or a rack refrigeration system as specified and/or recommended by the manufacturer for the items on the equipment schedule. Furnish all components necessary for a complete installation of the system, including coils, receivers, compressors, motors, motor starters, mounting bases, vibration isolation units, fans, dryers, valves, piping, insulation, gauges, winter control equipment, etc.
4. All refrigerant and associated components shall comply with the latest code requirements. No CFC refrigerants or associated components shall be allowed on this Project. HFC refrigerants and components shall be used where available. HCFC refrigerants and components, with a minimum 2010 phase-out date and intermediate replacement refrigerants, are to be used only when HFC refrigerants are not available.
5. The minimum outdoor operating ambient temperature for design of units is -10 degrees Fahrenheit, unless otherwise specified. The maximum indoor design temperature for operation of compressor units is 95 degrees Fahrenheit. The maximum outdoor ambient design temperature shall not be less than 100 degrees Fahrenheit. Special attention is to be given to conditions at mounting locations of condensing units, such as sun exposure, restricted airflow and ventilation, fences, walls, roof color, and materials.

B. Components:

1. Expansion Valves: Remote refrigeration system shall be complete with thermostatic expansion valves at the evaporator coils.
2. Thermometers: Fabricated refrigerated compartments to be fitted with either flush dial or digital thermometers as specified on individual items. Thermometers shall be adjustable and calibrated after installation. Accuracy to be +/- 2 degrees Fahrenheit.
3. Hardware: Refrigerator hardware for fabricated refrigerator compartments shall be heavy-duty components, NSF Listed. Use self-closing, heavy duty edge mount style hinges, with Spring Kit. Latches to be magnetic edge mount type, with cylinder locks, unless specified or detailed otherwise. All doors and drawers for walk-in coolers/freezers and reach-in refrigerated compartments, both fabricated and standard shall be fitted with cylinder locks.

C. Refrigerated Equipment Ventilation:

1. Adequate ventilation shall be provided for custom fabricated equipment with integral refrigeration condensing units, both built-in and drop-in. If flow through ventilation cannot be

provided, provide flow direction partitions and an additional fan capable of cooling the condensing unit. If in the opinion of the Food Service Equipment Contractor or Refrigeration Subcontractor additional room ventilation is required to ensure correct operating temperatures of standard buy-out, custom fabricated, remote refrigeration condensing units, or compressor rack assemblies, they shall so state in a letter to the Owner for evaluation and decision.

2.4 MISCELLANEOUS:

- A. Reasonable quietness of operation of equipment is expected, and the Foodservice Contractor will be required to replace or repair any equipment producing excessive noise at no expense to the owner. This includes but is not limited to bumpers and gaskets for doors and drawers, and sound deadening or insulation where specified and practical.
- B. Manufactured Equipment Items: Furnish items as scheduled, or herein specified. Verify dimensions, spaces, rough in, and service requirements, as well as electrical characteristics before ordering. Provide trim, accessories, and miscellaneous items for complete installation.
- C. Nameplates: Whenever possible, locate nameplates and labels on manufactured items in an accessible position, but not within the normal view of customers.
- D. All items must have a visible NSF label on each piece of equipment. If equipment has an electrical component, these items must have a visible UL label in addition to the NSF label.

PART 3- EXECUTION

3.1 SITE EXAMINATION:

- A. Verify site conditions under the provisions of the General Conditions, Supplementary Conditions, and applicable provisions of other Sections. Notify the owner, in writing, of unsatisfactory conditions for proper installation of foodservice equipment specified in this section.
- B. Verify that all required service utilities are available, and of the correct characteristics in the required locations. Notify the Architect, in writing, of any problems or conflicts with foodservice equipment specified in this section.
- C. Verify wall, column, door, window, and ceiling locations and dimensions. Fabrication and installation should not proceed until dimensions and conditions have been verified and coordinated with fabrication details.
- D. Verify that necessary wall reinforcement or backing has been provided for wall-mounted equipment. Coordinate with the owner for placement of such backing during wall construction.
- E. Verify that ventilation ducts are of the correct characteristics and in the required locations.

3.2 SUPERVISION:

- A. A competent supervisor employed by the Food Service Equipment Contractor shall be always present during progress of the F.S.E.C.'s work.

- B. A competent supervisor employed by the Food Service Equipment Contractor shall be always present during work by any of the F.S.E.C.'s subcontractors.**

3.3 SITE CLEANUP:

- A. Throughout the progress of their work, the Food Service Equipment Contractor shall keep their working area free from debris, and shall remove all trash, rubbish, etc., daily. At no time is the F.S.E.C. to allow any trash, debris, rubbish, crating, boxes, packaging, etc. to accumulate at the job site. At the completion of their work, the F.S.E.C. shall leave the premises in a clean and finished condition.

3.4 INSTALLATION:

- A. Sequence installation and erection to ensure correct mechanical and electrical utility connections are achieved. Install items as per each manufacturer's installation manual.
- B. Set each item of non-mobile and non-portable equipment securely in place, leveled, and adjusted to correct height. Anchor where indicated, and where required for sustained operation and use without unnecessary movement. Conceal anchors wherever possible. Adjust counter tops and other work surfaces to a level tolerance of (+/-) 1/16" or better.
- C. Complete field assembly joints in all by welding, bolting / gasketing or as otherwise indicated and specified. Grind all welds smoothly and restore the finish to match surrounding materials as specified.
- D. Provide anchors, supports, bracing, clips, attachments, etc., as required to comply with the local seismic restraint requirements.
- E. Verify, and coordinate mounting heights of all wall shelves and equipment with equipment located below for proper clearances.
- F. Insulate contact points between dissimilar metals to prevent electrolysis. Cut, punch, and drill components for outlets, fixtures, piping, conduit, and fittings as required. Coordinate with other trades and provide holes in food service equipment for plumbing and electrical service to and through the fixtures as required or indicated. This includes welded sleeves, collars, ferrules, or escutcheons. These services are to be located so that they do not interfere with intended use, and / or servicing of the fixture.
- G. Provide sealants and gaskets around each unit to make joints airtight, waterproof, vermin-proof, and sanitary for cleaning purposes. At internal corner joints, apply sealant or gaskets to form a sanitary cove. The shape exposed surfaces of sealant slightly concave. Sealant filled or gasketed joints will be acceptable up to 3/8" joint width. Wider joints are to be provided with a matching metal closure or trim strip with sealant application to each side of strip.

3.5 ADJUSTING:

- A. Repair or replace equipment that is found to be defective in its operation, including units that are operating with excessive noise or vibration.

- B. Test and adjust equipment, controls, and safety devices to ensure proper working order and conditions.

3.6 CLEANING AND RESTORING FINISHES:

- A. Restore damaged finishes, polish exposed metal surfaces, and touch-up painted surfaces. Replace work, which cannot be successfully restored.
- B. After completion of installation, and completion of other major work in foodservice areas, remove all protective coverings, films, etc., and clean foodservice equipment.
- C. Clean and polish glass, plastic, hardware, accessories, fixtures, and fittings and leave in a condition ready for the owner to sanitize and use.

3.7 EQUIPMENT START-UP, TESTING, AND DEMONSTRATION:

- A. Prior to final connections by other trades, the Food Service Equipment Contractor is responsible for inspecting and verifying the readiness of all utilities. F.S.E.C. to coordinate a site meeting with all trades required to review and approve all rough-in and accessory items that meet the equipment requirements per the manufacturer's recommendations. A written report shall be submitted by the F.S.E.C. to the owner and/or consultant.
- B. The Food Service Equipment Contractor is to test and start up **all** equipment prior to the equipment demonstration. Any problems shall be addressed prior to the training and a written report shall be submitted by the F.S.E.C. to the owner and/or consultant.
- C. The Food Service Equipment Contractor is to make arrangements for a demonstration of foodservice equipment operation and maintenance in advance with the owner / operator. This training session for all equipment should be provided on one day or a few consecutive days pending approval by the owner/operator. Demonstrate all equipment to familiarize the owner / operator with operation and maintenance procedures including periodic preventative maintenance measures required. Include an explanation of service requirements, and simple on-site service procedures as well as information concerning the name, address, and telephone number of a qualified local source of service. The individual performing the demonstration should be knowledgeable of the operating and service aspects of the equipment. The F.S.E.C. shall provide a written attendance sheet of all attendees including owner/operator, F.S.E.C. representative, and all equipment demonstrators. Failure to provide this submittal will hinder the closeout of the project.

PART 4 - ITEMIZED SPECIFICATIONS:

ITEM: 100

MANUFACTURER: AMERICAN PANEL

MODEL: #211247

DESCRIPTION: WALK-IN COOLER/FREEZER

General – The overall size of the walk-in box shall be approximately 19'3" x 21' 2" x 8'8 ¼" Tall. The cooler and freezer compartment interior dimensions are as shown in the drawings. Verify size and shape as shown on plan and allow for 2" air gap around the walk-in unit. Walk-in shall be constructed of prefabricated modular panels as manufactured by American Panel Corporation, Ocala, Florida. All insulated panel structures to be

set up at factory prior to shipment, checked for structural and quality accuracy, photo-graphed prior to shipment. They shall be designed for easy and accurate field assembly, future enlargement by the addition of panels, or dismantling should relocation to an alternate site be desired. Construction shall be in strict compliance with NSF Standard 7 and UL. This unit shall be recessed into the floor to create a smooth transition between the walk-in floor and the concrete pad.

Panel Construction - All panels shall consist of interior and exterior metal surfaces precision roll 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, to allow 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 core material to accurately align panels during installation and to assure an airtight seal. No structural wood, steel, straps, or other non-insulating materials shall be used in panel construction. Finished panels must be UL classified building units and each should bear the Underwriters Laboratory label.

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 ½" 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 ½" where required. All panels shall be interchangeable with like panels or standard doorframe sections for fast and easy assembly.

Floor Construction – Where prefabricated floor panels are required, they shall be of similar design to other panels and shall incorporate a fully die formed ¼" NSF coved radius at all interior floor to wall junctures. Floor panels shall be reinforced with ¾" exterior grade plywood and shall be capable of supporting evenly distributed loads up to 1300 pounds per square foot or more. Floor to be: 16-gauge stainless steel integral to the floor panels.

Door Construction - Entrance doors are constructed like 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 UL listing labels. The perimeter of the door and frame shall be built of a fiberglass reinforced plastic (FRP) pultrusion weighing not less than 8.4#/lineal foot. All pultrusion's shall be non-conductive, non-corrosive, rust proof and listed by the National Sanitation Foundation. Doorjamb shall house a doorframe heater circuit, and a magnet attracting stainless steel trim strip. The doorframe 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 LED vapor proof light fixture and globe pre-wired to a rocker type light switch with pilot light. An aluminum braided heater wire with integral circuit closure providing activation while the refrigerated room is within operating temperature and a 14-gauge stainless steel threshold plate shall also be included in all door frames.

The door hardware shall be die cast zinc with brushed satin finish. Doors shall be mounted with three (3) heavy-duty cam lift hinges. The pull handle assembly shall incorporate a padlocked deadbolt handle with inside safety release handle to prevent personnel entrapment. A hydraulic closer device shall assist positive door closing and sealing.

Walk-In Monitoring System IC-Plus: System to have an easy-to-read LCD display with high and low alarm set points with audible and visual alerts for alarm conditions. The system shall include Adaptive Programming

for automatic set point control. Wi-Fi connectivity included for remote notifications of alarms such as, power failure alarm, high and low temperature alarms, panic alarm, and door open alarm. The system shall have an integrated push button light switch with on/off indicator light. The system shall comply with the latest federal energy requirements by incorporating an automatic lighting shut-off. The system shall actively monitor and control door heater assembly for proper operation and lower energy consumption by having programmable initiation temperature and percentage of operation time adjustability. The system shall be supplied with dry contacts for connection to equipment that requires dry contacts such as building monitoring systems, dialers, etc. The system shall have a real-time clock and data for 100% HACCP compliant data logging. Polling frequency shall be fully programmable from the face of the controller. Memory shall be non-volatile to ensure zero loss during power outages and the system shall include a battery backup complete with integrated charging circuit. System shall have a USB interface on the face of the monitor and Wi-Fi Connectivity for automatic and on demand HACCP data extraction. The system shall be able to remotely notify over local Wi-Fi network email/SMS text communications to designated parties alarm conditions such as high/low temperature alarms, power failure, panic alarm and door ajar. The system to be supplied interior press button light switch with constant burning backlight. The system shall be supplied with a secondary temperature probe with individual alarm set points for dual zone monitoring. Coordinate remote alarm monitoring with owner and other trades as required. If possible, both digital displays should be in the exterior entrance door panel frame.

Doors to be:

Exterior entrance doors, 36" x 77" (swing as shown on drawing) to include:

- Door Closer
- Door Kick plate, 1/10" aluminum tread plate, 36" High on interior and exterior of each door
- Cam lift hinges (3)
- Deadbolt key/padlock handle with inside safety release
- Magnetic gasket
- Single Sweep gasket
- Switch with pilot light
- Monitoring System
- Interior door to be stainless steel.
- 14" x 24" Heated vision windows

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

- Exposed Exterior: 22-gauge beaded stainless steel with a #3 finish.
- Unexposed Exterior: 26-gauge stucco acrylume
- Interior walls: 26-gauge white stucco galvanized steel
- Interior ceilings: 26-gauge white stucco galvanized steel

Insulation - Insulation shall be 4" thick high-pressure impingement mixed (HPIM) foamed-in-place urethane, minimum density of 2.4 pound per cubic foot, fully heat cured, and bonded to metal finishes. The insulation shall be manufactured using HCFC-141b expanding agent, which has an ozone depletion rating of 0.1 and a global warming rating of 0.05. 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 aluminum panel (not just the core material) shall be listed by Underwriters Laboratories as a Class 1 (UL-723) building material and demonstrate a flame spread rating of 20 or less and smoke developed of 350 or less in

accordance with ASTM-E84 Standards. This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions. Foam used shall be Factory Mutual listed.

Panel Assembly - Assembly of Walk-In shall be accomplished using 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 using 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 manufacturer.

Walk-In Accessories:

- (5) LED 48" Light fixtures, high output, for low temperature applications in freezer and cooler.
- LED Vapor-proof light in each door frame
- (2) Backing for power air door with receptacle built into the door panel.
- Non-skid strips (in aisles only)
- Front exterior to have two tier bumper rails.
- Provide a vapor barrier between the concrete slab and the walk-in floor panels. (Typically, a 6-mil polyethylene sheet or a 15-pound asphalt paper with a 4" overlap at all seams). Verify with manufacturers installation instructions. **Provide documentation and photos as proof of installation.**
- Heated pressure relief port on freezer sections

Warranty - Insulated panel products are to be warranted for a period of ten (10) years after the date of installation to the original user should the panels be installed properly and be used under normal service conditions. After an inspection authorized by the manufacturer, should any part of the product prove to be defective in material or workmanship, it will be repaired or replaced free of charge, F.O.B. factory. This warranty does not apply to accessories or components supplied but manufactured by other companies who furnish their own warranties.

K.E.C. shall provide an installation workmanship warranty of three (3) years from the date of installation.

All refrigeration equipment shall comply with the Federal Regulations for energy efficiency. Walk-In coolers or freezers need to include the following: automatic door closing device, strip curtains on hinged doors, heated triple pane windows on cooler and freezer doors, high efficiency lighting or automatic light switches, R-25 insulation in cooler walls, doors, and ceilings, R-32 insulation in freezer walls, doors, and ceilings, and R-28 insulation in walk-in cooler and freezer floors.

Prior to turning on refrigeration systems, K.E.C. to "test" the walk-in boxes to verify they are air tight. A smoke test, flood light test, or other means of similar testing is required. **Provide documentation and video as proof.** If an air-tight test is not performed, the F.S.E.C. will provide a letter of workmanship warranty for a period of five (5) years covering any defects or air leaks in the walk-in unit.

ITEM: 101 & 102

MANUFACTURER: AMERICAN PANEL

MODEL: BCH0010MCACZ / BEL0095BS6AM

DESCRIPTION: WALK-IN COOLER REFRIGERATION

Walk-In cooler will be provided with a condensing unit and evaporator for refrigerating equipment in accordance with ASHRAE standards. All systems shall be supplied with complete controls for a working system. Each system shall consist of a new condensing unit suspended on a structural steel base with cover and winter controls.

Condensing units shall be accessible preassembled remote, scroll type, air-cooled units for outdoor installation with matching evaporator. Condensing units shall be equipped with PSC fan motors and evaporator fans shall utilize the ECM type fan motors. All refrigeration equipment shall comply with the Federal Regulations for energy efficiency. Refrigeration systems are to be mounted on a roof curb and secured.

Medium temperature unit shall utilize R-448a refrigerant. The manufacturer calculates heat loads and provides systems with a minimum of 105% of needed capacity to maintain holding temperature 35° F in coolers. Calculations shall take into consideration box ambient, refrigeration system ambient, airflow, and exposure to sunlight and altitude. Interconnection of refrigeration lines, insulation, and electrical wiring shall be accomplished by the appropriate trades and shall be a portion of the Kitchen Equipment Contract.

The refrigeration system on the walk-in will be equipped with the Eco-Smart on-demand de-frost controller factory mounted to the evaporator coil(s). The Eco-Smart will be custom designed for RDT refrigeration systems to control the electric expansion valve in response to true evaporator superheat and return air temperature. Power wiring for the evaporator coils will be provided by the E.C. as required. Off cycle and electric defrost is also available. Provide heater as required so product does not freeze.

Additionally, a refrigeration system containing an Eco-Smart controller will consist of the following factory-mounted parts:

- Electronic controller board with three-digit LED and push button panel interface for setup
- Three solid state temperature sensors
- Pressure transducer
- External relay to control liquid line solenoid valve or compressor contactor
- Electric expansion valve
- 24V transformer

The Eco-Smart board will contain three relay outputs: defrost heater (20A), evaporator fan (10A) and alarm (5A). The board will include connection points for alarm systems provided by others.

Medium temperature systems come with one preprogramed defrost per day if it needs to run in safe mode and to ensure oil return to the compressor if no demand defrosts are required. All other defrosts are by demand which will be activated by the 3 factory mounted sensors on the evaporator coil.

COOLER CONDENSER:

Compressors shall be scroll type and shall operate on R-448A refrigerant. Multiple compressors shall be used to satisfy load requirements. Small loads shall be combined in a multiplex arrangement and satisfied using a single compressor. Each compressor unit shall also include dual pressure control, sight glass, liquid line drier and suction and discharge vibration eliminators. Provide one (1) BCH0010 MCACZ Medium temperature, 35-degree Fahrenheit, pre-assembled remote, scroll outdoor remote refrigeration condenser (1.0 H.P.) with voltage to be 208/3. Provide and install weather-proof stainless-steel housing, low ambient controls, and a mounting stand. Low pressure bypass and ambient safety accessories are to be provided on the outdoor condensing units to protect them under extreme outside temperatures of approximately -20 F.

COOLER EVAPORATOR:

Evaporator Coils - Matching evaporators shall be provided as required to complete the system. Evaporators shall be provided with mounted expansion valve and room thermostat. Evaporators shall be provided with the Eco-Smart Controller System. Evaporators shall be off cycle, electric or reverse cycle defrost. Provide one (1) BEL0095BS6AM evaporator unit and voltage of 120/1. Low profile evaporator coil with expansion valve, thermostat, and solenoid factory mounted. Evaporators shall be forced air type designed for ceiling installation. Air discharge shall be parallel to the walk-in ceiling. Fan motors, guards, multi-fin, and tube-type coil shall be housed in heavy gauge aluminum housing. Unit shall have drain pan with suitable drainpipe connection. Defrost shall be initiated only when required by demand defrost settings and temperature terminated with built-in fail-safe control. All cooler systems are equipped with an "off cycle" timer to maximize heat transfer and maintain optimum energy efficiency. Evaporators shall be U.L. listed.

Piping Specifications:

- All refrigeration piping will be performed by the Food Service Equipment Contractor. This Contractor will install all components and piping per the manufacturer's recommendations.
- Line sizes must be appropriately sized for the length of run. If units have reverse-cycle defrost, liquid line shall be upsized one nominal size.
- F.S.E.C. will make all final connections to the evaporator and the condenser, charge and test the operation of the system.
- Copper drain lines, heated and insulated where needed, installed by the F.S.E.C.

Electrical Specifications:

- F.S.E.C. is to provide final electrical connection to the condenser, evaporator, and lights.

Wiring:

- All interior wiring shall be "liquidtight" fittings and sealed to prevent water migration.
- The use of Romex, BX, MC Cable is prohibited and shall be deemed to not meet specifications.
- All wiring and inter-wiring to be done by the Food Service Equipment Contractor.

Warranty:

The successful bidder shall provide written warranties that specify, subject to normal and accepted use, at a minimum:

- Five Year Compressor Warranty
- Three Year Service / Workmanship Warranty on refrigeration installation.
- One Year Manufacturer's Warranty on all other components.

ITEM: 103 & 104

MANUFACTURER: AMERICAN PANEL

MODEL: BCH0045LCACZ / BEL0130BS6EE

DESCRIPTION: WALK-IN FREEZER REFRIGERATION

Walk-In Freezer will be provided with a condensing unit and evaporator for refrigerating equipment in accordance with ASHRAE standards. All systems shall be supplied with complete controls for a working system. Each system shall consist of a new compressor unit mounted on a structural stainless-steel base with cover and winter controls.

Compressor units shall be accessible preassembled remote, scroll type, air cooled units for outdoor installation with matching evaporator. The condenser shall be equipped with EC fan motors and evaporator fans shall

utilize the ECM type two-speed fan motors. All refrigeration equipment shall comply with the Federal Regulations for energy efficiency. Refrigeration systems are to be mounted on a roof curb and secured.

Low temperature unit shall utilize R-448a refrigerant. The manufacturer calculates heat loads and provide systems with a minimum of 105% of needed capacity to maintain holding temperature -10° F in freezers. Calculations shall take into consideration box ambient, refrigeration system ambient, airflow, and exposure to sunlight and altitude. Interconnection of refrigeration lines, insulation, and electrical wiring shall be accomplished by the appropriate trades and shall be a portion of the Kitchen Equipment Contract.

The refrigeration system on the walk-in will be equipped with an Eco-Smart on-demand defrost controller factory mounted to the evaporator coil(s). The Eco-Smart will be custom designed for refrigeration systems to control the electric expansion valve in response to true evaporator superheat and return air temperature. Power wiring for the evaporator coils will be provided by the F.S.E.C. as required. Off cycle and electric defrost is also available. Provide heater as required so product does not freeze.

Additionally, a refrigeration system containing an on-demand controller will consist of the following factory-mounted parts:

- Electronic controller board with three- digit LED and push button panel interface for setup
- Three solid state temperature sensors
- Pressure transducer
- External relay to control liquid line solenoid valve or compressor contactor.
- Electric expansion valve
- 24V transformer

The Eco-Smart Controller board will contain three (3) relay outputs: defrost heater (20A), evaporator fan (10A) and alarm (5A). The board will include connection points for alarm systems provided by others.

Low temperature systems come with two (2) preprogrammed defrost per day if it needs to run in safe mode and to ensure oil return to the compressor if no demand defrosts are required. All other defrosts are by demand which will be activated by the three (3) factory mounted sensors on the evaporator coil.

The Eco-Smart Controller system will: Float the head pressure, reduce system refrigerant charge by a minimum of one third, and reduce the defrost time when hot gas is used to defrost the coil. Any proposed alternatives must perform the energy-saving functions of all three features.

FREEZER CONDENSER:

Compressors shall be hermetic/scroll type and shall operate on R-448A refrigerant. Multiple compressors shall be used to satisfy load requirements. Small loads shall be combined in a multiplex arrangement and satisfied using a single compressor. Each compressor unit shall also include dual pressure control, sight glass, liquid line drier and suction and discharge vibration eliminators. One (1) BCH0045LCACZ Low temperature, -10° F, pre-assembled remote, scroll type outdoor remote refrigeration condenser (4.5 H.P.) and voltage to be 208/3. Provide and install stainless-steel housing, low ambient controls, and a roof mounting curb. Low temperature units also are to include evaporator drain line heaters. Low pressure bypass and ambient safety accessories are to be provided on the outdoor condensing units to protect them under extreme outside temperatures of approximately -20 F. Verify voltage and phase with site conditions.

FREEZER EVAPORATOR:

Matching evaporators shall be provided as required to complete the system. Evaporators shall be provided with mounted expansion valve and room thermostat. Evaporators shall be provided with the On-Demand Defrost Control System. Evaporators shall be off cycle, electric or reverse cycle defrost. Provide one (1)

BEL0130BS6EE evaporator unit with voltage of 208/1. Low profile evaporator coil with expansion valve, thermostat, and solenoid factory mounted. Evaporators shall be forced air type designed for ceiling installation. Air discharge shall be parallel to the walk-in ceiling. Fan motors, guards, multi-fin, and tube-type coil shall be housed in heavy gauge aluminum housing. Unit shall have drain pan with suitable drainpipe connection. Freezer evaporators shall utilize electric defrost and heated drain pan. Defrost shall be initiated only when required by demand defrost settings and temperature terminated with built-in fail-safe control. Evaporators shall be U.L. listed. Verify voltage and phase with site conditions.

Piping Specifications:

- All refrigeration piping will be performed by the Food Service Equipment Contractor. This Contractor will install all components and piping per the manufacturer's recommendations.
- Line sizes must be appropriately sized for the length of run. If units have reverse-cycle defrost, liquid line shall be upsized one nominal size.
- F.S.E.C. will make all final connections to the evaporator and the condenser, charge and test the operation of the system.
- Copper drain lines, heated and insulated where needed, installed by the F.S.E.C.
- The heat tape is to be powered from a separate circuit connected by the F.S.E.C.

Electrical Specifications:

- F.S.E.C. is to provide final electrical connection to the condenser, evaporator, and lights.

Wiring:

- All interior wiring shall be "liquidtight" fittings and sealed to prevent water migration.
- The use of Romex, BX, MC Cable is prohibited and shall be deemed to not meet specifications.
- All wiring and inter-wiring to be done by the Food Service Equipment Contractor.

Warranty:

The successful bidder shall provide written warranties that specify, subject to normal and accepted use, at a minimum:

- Five Year Compressor Warranty
- Three Year Service / Workmanship Warranty on refrigeration installation.
- One Year Manufacturer's Warranty on all other components.

ITEM: 105

MODEL: SLC07-1042A-SS

DESCRIPTION: POWER AIR CUTRAIN (2 REQUIRED)

Sanitation Series Low Profile Air Curtain, 36" wide, unheated, 1/5 H.P motor, for doors up to 7' high, exterior mounting, UL listed.

- 120/60/1 with cord and plug
- Stainless-steel exterior finish
- Door Sensor
- Five-year parts warranty

ITEM: 106

MANUFACTURER: METRO

MODEL: MQ-G SERIES

DESCRIPTION: WALK-IN COOLER SHELVING

Each unit is to consist of four (4) posts and four (4) shelves.

- (16) Model #MQ2448G Metro-Max Q Shelf, 48" wide x 24" deep, removable open grid polymer with Microban antimicrobial protection, epoxy coat steel frame, wedge connectors with quick adjust corner releases, NSF.
- (8) Model #MQ2442G Metro-Max Q Shelf, 42" wide x 24" deep, removable open grid polymer with Microban antimicrobial protection, epoxy coat steel frame, wedge connectors with quick adjust corner releases, NSF.
- (8) Model #MQ2436G Metro-Max Q Shelf, 36" wide x 24" deep, removable open grid polymer with Microban antimicrobial protection, epoxy coat steel frame, wedge connectors with quick adjust corner releases, NSF.
- (32) Model #MQ74PE Metro-Max Q Post, 74" high, adjustable foot, epoxy coated steel with built in Microban antimicrobial product protection, NSF.
- Use "S" hooks in front corners where possible.
- Verify sizes with site conditions and verify shelf spacing with owner.

ITEM: 107

MANUFACTURER: METRO

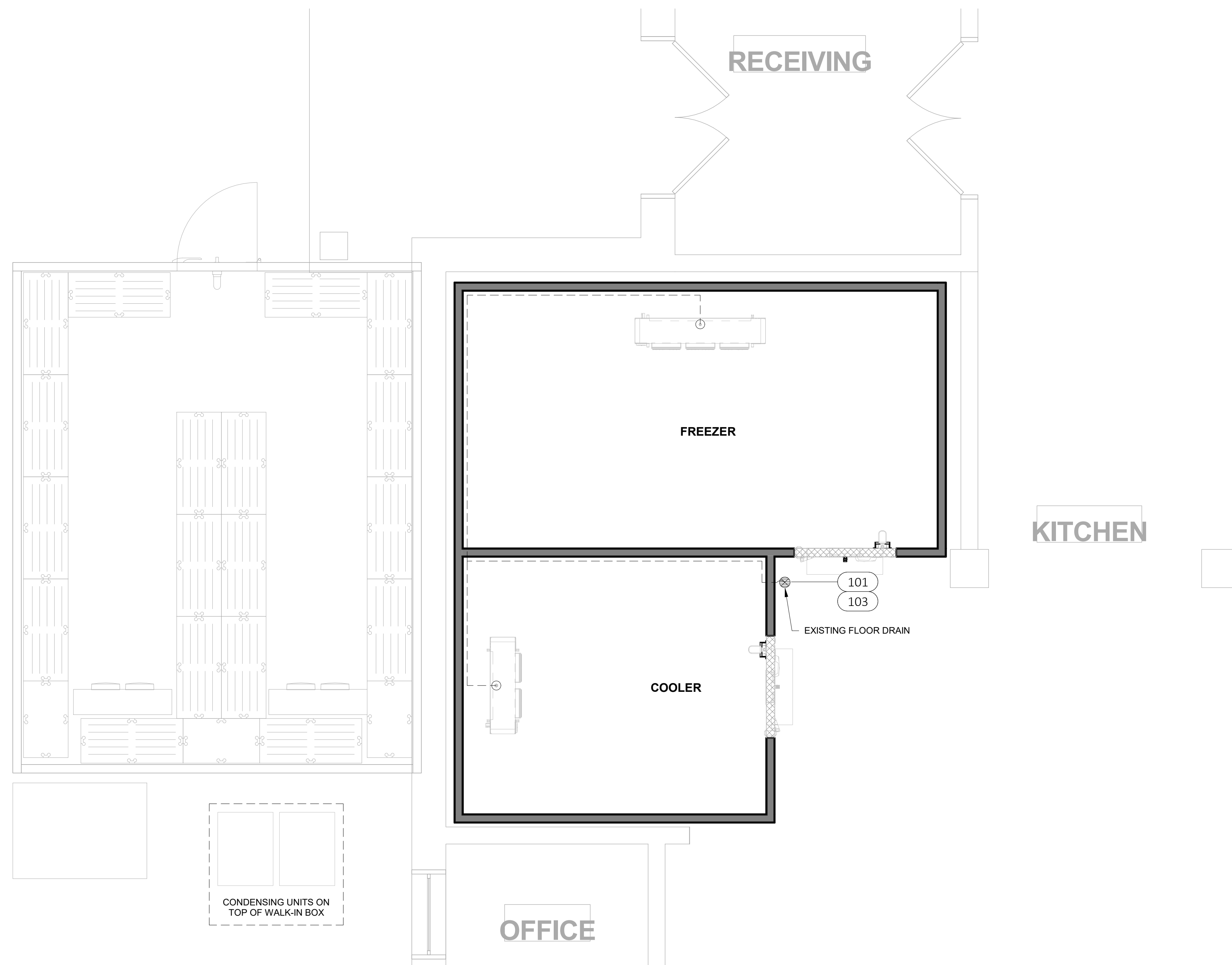
MODEL: MQ-G SERIES

DESCRIPTION: WALK-IN FREEZER SHELVING

Each unit is to consist of four (4) posts and four (4) shelves.

- (20) Model #MQ2448G Metro-Max Q Shelf, 48" wide x 24" deep, removable open grid polymer with Microban antimicrobial protection, epoxy coat steel frame, wedge connectors with quick adjust corner releases, NSF.
- (16) Model #MQ2442G Metro-Max Q Shelf, 42" wide x 24" deep, removable open grid polymer with Microban antimicrobial protection, epoxy coat steel frame, wedge connectors with quick adjust corner releases, NSF.
- (8) Model #MQ2436G Metro-Max Q Shelf, 36" wide x 24" deep, removable open grid polymer with Microban antimicrobial protection, epoxy coat steel frame, wedge connectors with quick adjust corner releases, NSF.
- (44) Model #MQ74PE Metro-Max Q Post, 74" high, adjustable foot, epoxy coated steel with built in Microban antimicrobial product protection, NSF.
- Use "S" hooks in front corners where possible.
- Verify sizes with site conditions and verify shelf spacing with owner.

END OF SECTION 114000



1 FOOD SERVICE PLUMBING PLAN - WALK IN
3/8" = 1'-0"

FOOD SERVICE PLUMBING SCHEDULE - WALK IN				
NO.	QTY.	CATEGORY	IW SIZE	REMARKS
101	1	WALK-IN COOLER EVAPORATOR	3/4"	IW TO EXISTING FLOOR DRAIN
103	1	WALK-IN FREEZER EVAPORATOR	3/4"	IW TO EXISTING FLOOR DRAIN

PLUMBING LEGEND		
ABBR.	DESCRIPTION	SYMBOL
CW	COLD WATER	●
HW	HOT WATER	○
W	DIRECT WASTE	●
IW	INDIRECT WASTE	○
FD	FLOOR DRAIN	⊗
FS	FLOOR SINK	⊗
	GAS CONNECTION LP/NG	↕
ACH	ABOVE COUNTER HEIGHT	
AFF	ABOVE FINISHED FLOOR	
BFF	BELOW FINISHED FLOOR	
MBTUH	THOUSAND BTU PER HOUR	

GENERAL PLUMBING NOTES	
THE FOLLOWING NOTES ARE TYPICAL. SEE SPECIFICATIONS FOR PROJECT SPECIFIC DETAILS	
1. ALL CONNECTIONS SHOWN ARE RELATIVE TO FOOD SERVICE EQUIPMENT ONLY.	
2. F.S.E.C. SHALL PROVIDE ALL ROUGH-IN AND FINAL CONNECTIONS TO ALL FOOD SERVICE EQUIPMENT.	
3. DO NOT RUN ANY EXPOSED LINES WHERE POSSIBLE.	
4. THE F.S.E.C. SHALL PROVIDE PRE-ASSEMBLED REMOTE REFRIGERATION COMPONENTS AS REQUIRED BY THE EQUIPMENT SPECIFICATIONS. F.S.E.C. TO INSTALL, CONNECT, CHARGE REFRIGERATION LINES AND SYSTEMS, AND RUN AND TEST SYSTEMS FOR PROPER OPERATION.	
5. F.S.E.C. TO PROVIDE AND INSTALL DRAIN LINES FROM EVAPORATOR.	

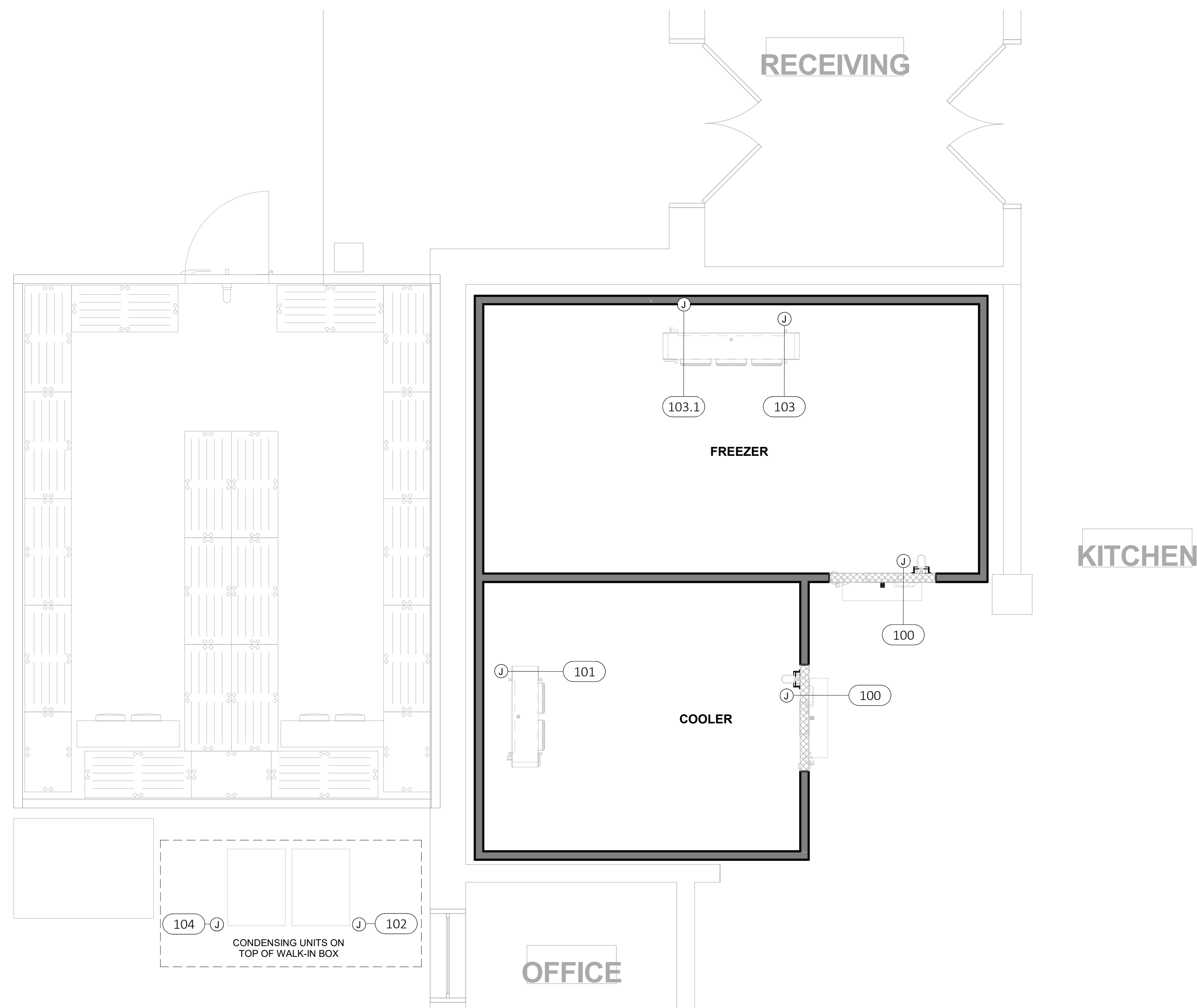
*REFER TO ARCHITECT'S PLUMBING DRAWINGS FOR ADDITIONAL BUILDING PLUMBING REQUIREMENTS.

VERIFICATION NOTE	
1. ALL UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE DEEMED TO BE ACCURATE AT THE TIME OF CREATION.	
2. EQUIPMENT MANUFACTURER'S RESERVE THE RIGHT TO CHANGE OR UPDATE THE EQUIPMENT REQUIREMENTS. THE CONSULTANT AND/OR ARCHITECT ARE NOT RESPONSIBLE FOR ANY OF THESE CHANGES.	
3. THE FOOD SERVICE EQUIPMENT CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS AND UTILITY INFORMATION PRIOR TO ORDERING AND INSTALLATION. THIS CONTRACTOR IS TO PROVIDE ALL TRADES WITH THE MOST CURRENT INFORMATION AT ALL TIMES.	

GENERAL CONDITIONS:
 THIS PLAN IS A GENERAL ARRANGEMENT OF FOOD SERVICE EQUIPMENT PREPARED FOR THE CONVENIENCE OF CONTRACTORS. PLUMBING, ELECTRICAL, AND VENTILATION DETAILS ARE TO BE PROVIDED BY THE CONTRACTOR. CONTRACTORS ARE TO VERIFY ALL DIMENSIONS AND TO VERIFY THE EQUIPMENT TO BE SUPPLIED. HOWEVER, ALL DIMENSIONS ARE TO BE FIELD VERIFIED BY ALL CONTRACTORS(S). CONTRACTORS ARE TO MAKE ALLOWANCE FOR, AND SUPPLY ALL NECESSARY ELBOWS, TRAPS, VALVES, FAUCETS, STARTING SWITCHES, ETC. AND ARE TO MAKE FINAL CONNECTIONS TO THE EQUIPMENT. RESPONSIBILITY FOR ELECTRICAL, MECHANICAL, AND PLUMBING CONNECTIONS FROM THE EQUIPMENT TO SUBCONTRACTORS. FSDS DOES NOT ACCEPT RESPONSIBILITY FOR CHANGES MADE NECESSARY BY LOCAL BUILDING CODES, ORDINANCES, STRUCTURAL CONDITIONS, OR BY THE SUBSTITUTION OR CHANGES IN EQUIPMENT SHOWN ON THIS PLAN. THESE PLANS ARE FOR INFORMATION ONLY. FSDS DESIGN SOLUTIONS AND CANNOT BE USED OR REPRODUCED WITHOUT THE WRITTEN CONSENT OF FSDS DESIGN SOLUTIONS. FSDS IS FULLY PROTECTED UNDER THE COPYRIGHT LAWS OF THE UNITED STATES.

OLEAN MS
WALK-IN COOLER / FREEZER

PROJ. NUMBER: 21-523
 DATE: 05.03.2024
 DRAWN BY: DL
 CHECKED BY: JW
FOOD SERVICE PLUMBING PLAN - WALK IN
 SHEET NUMBER:



1 FOOD SERVICE ELECTRICAL PLAN - WALK IN
3/8" = 1'-0"

FOOD SERVICE ELECTRICAL SCHEDULE - WALK IN								
NO.	QTY.	CATEGORY	VOLTS	PH	AMPS	CONNECTION	AFF	REMARKS
100	1	WALK-IN COOLER / FREEZER	120	1	5.0 A	DIRECT	DFA	(2) CONNECTIONS REQUIRED
101	1	WALK-IN COOLER EVAPORATOR	120	1	2.0 A	DIRECT	DFA	
102	1	WALK-IN COOLER CONDENSER	208	3	15.0 A	DIRECT		SEE WALK-IN DRAWINGS FOR DETAILS. POWER THROUGH #101
103	1	WALK-IN FREEZER EVAPORATOR	208	1	14.1 A	DIRECT	DFA	
103.1	1	WALK-IN FREEZER DRAIN LINE HEATER	120	1	10.0 A	DIRECT	78"	
104	1	WALK-IN FREEZER CONDENSER	208	3	20.0 A	DIRECT		SEE WALK-IN DRAWINGS FOR DETAILS. POWER THROUGH #103

ELECTRICAL LEGEND

ABBR.	DESCRIPTION	SYMBOL
DIRECT	ELECTRICAL CONNECTION	⊕
DR	DUPLEX RECEPTACLE	⊕
SR1	SINGLE RECEPTACLE (120V)	⊕
SR2	SINGLE RECEPTACLE (208V)	⊕
	FIRE SUPPRESSION PULL BOX	⊕
JB	JUNCTION BOX	⊕
SW	SWITCH	⊕
E	UDS ELECTRICAL	⊕
FS	UDS FIRE FUEL SHUT-OFF	⊕
F	HOOD FAN CONTROL	⊕
L	HOOD LIGHT CONTROL	⊕
POS	CATS DATA CABLE	▽
V	VOLTAGE	
PH	PHASE	
KW	KILOWATTS	
HP	HORSEPOWER	
A	AMPERE	
AFF	ABOVE FINISHED FLOOR	
DFA	DOWN FROM ABOVE	

GENERAL ELECTRICAL NOTES

THE FOLLOWING NOTES ARE TYPICAL. SEE SPECIFICATIONS FOR PROJECT SPECIFIC DETAILS

1. ALL CONNECTIONS SHOW RELATIVE TO FOOD SERVICE EQUIPMENT ONLY.
2. F.S.E.C. SHALL PROVIDE ALL ROUGH-IN AND FINAL CONNECTIONS TO ALL FOOD SERVICE EQUIPMENT.
3. F.S.E.C. TO BRANCH CONNECTIONS AS REQUIRED.
4. F.S.E.C. TO SUPPLY ALL FIXTURES AND COMPONENTS SPECIFIED IN EQUIPMENT SPECIFICATIONS. ELECTRICAL CONTRACTOR SHALL INSTALL AND CONNECT ALL ELECTRICAL COMPONENTS TO MAKE FINAL CONNECTIONS UNLESS OTHERWISE NOTED.
5. SWITCHES, STARTERS, LOCK-OUT DEVICES, DISCONNECTS, AND ANY OTHER REQUIRED ELECTRICAL COMPONENTS, WILL BE MOUNTED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL MEET ALL O.S.H.A. AND CODE REQUIREMENTS.
6. DO NOT RUN ANY EXPOSED LINES WHERE POSSIBLE.
7. ALL MAIN BREAKER PANELS, DISCONNECT SWITCHES, RECEPTACLES, AND RECEPTACLE COVER PLATES ARE TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
8. F.S.E.C. IS TO PROVIDE AND INSTALL ALL DRAIN LINE HEATER CABLE ON WALK-IN FREEZER DRAIN LINES.
9. F.S.E.C. IS RESPONSIBLE TO INSTALL AND MAKE ELECTRICAL CONNECTIONS FOR ANY ADDITIONAL LIGHTING, TIME CLOCKS, OR OTHER ELECTRICAL ACCESSORIES SPECIFIED FOR THE WALK-IN UNITS.
10. F.S.E.C. TO PROVIDE ELECTRICAL SERVICE FOR THE WALK-IN DOOR HEATERS, LIGHTS, EVAPORATORS AND CONDENSERS, AND PROVIDE ELECTRICAL DISCONNECTS AT CONDENSERS.
11. THE F.S.E.C. SHALL PROVIDE PRE-ASSEMBLED REMOTE REFRIGERATION COMPONENTS AS REQUIRED BY THE EQUIPMENT SPECIFICATIONS. F.S.E.C. TO INSTALL, CONNECT, CHARGE REFRIGERATION LINES AND SYSTEMS, AND RUN AND TEST FOR PROPER OPERATION.
12. VERIFY FINAL EQUIPMENT REQUIREMENTS PRIOR TO INSTALLATION. REVISIONS TO EQUIPMENT MAY AFFECT THE ELECTRICAL CONTRACTOR'S SCOPE OF WORK OR MATERIAL REQUIREMENTS.

*REFER TO ARCHITECT'S ELECTRICAL DRAWINGS FOR ADDITIONAL BUILDING ELECTRICAL REQUIREMENTS.

VERIFICATION NOTE

1. ALL UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE DEEMED TO BE ACCURATE AT THE TIME OF CREATION.
2. EQUIPMENT MANUFACTURER'S RESERVE THE RIGHT TO CHANGE OR UPDATE THE EQUIPMENT REQUIREMENTS. THE CONSULTANT AND/OR ARCHITECT ARE NOT RESPONSIBLE FOR ANY OF THESE CHANGES.
3. THE FOOD SERVICE EQUIPMENT CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS AND UTILITY INFORMATION PRIOR TO ORDERING AND INSTALLATION. THIS CONTRACTOR IS TO PROVIDE ALL TRADES WITH THE MOST CURRENT INFORMATION AT ALL TIMES.

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OLEAN MS

WALK-IN COOLER / FREEZER

PROJ. NUMBER: 21-523

DATE: 05.03.2024

DRAWN BY: DL

CHECKED BY: JW

FOOD SERVICE ELECTRICAL PLAN - WALK IN

SHEET NUMBER:

FS102

