

**Request for Proposals for Architectural and Engineering Services for
Alabama ABC Board Distribution Warehouse Facility/Office
(RFP RE24-010)**

I. General

The Retirement Systems of Alabama (“RSA”) is seeking proposals from qualified architectural firms to provide programming, professional design, construction administration and other construction related services for a new distribution warehouse facility/office for the State of Alabama Alcoholic Beverage Control Board (“ABC” or “ABC Board”). The anticipated location is an approximately 25-acre site on Congressman WL Dickenson Drive in Montgomery, Alabama, as shown in the image below. The final size and configuration of the project will be determined during the initial architectural phase of the project. Note that the Owner has previously secured a clear phase 1 environmental survey for this area and



The services to be provided in response to this RFP will be in addition to and in support of contracts for construction management services and multiple prime contracts. Proposals will be received until 2:00 p.m. on June 11, 2024 at RSA's place of business (noted below) at which time the submission period will be closed.

II. Scope of Work

The scope of work will generally include (without limitation) preconstruction service (by the Owner's CM) assistance and evaluation of site, budgeting, proposal of alternate systems, design review, constructability review, bidding, value engineering (if required), scheduling assistance, production of conformance drawings, purchase order assistance and construction administration in as many packages or scenarios as is expeditious or beneficial to RSA, including without limitation, for the items set forth in **Exhibit A** hereto (which are generally subject to change but provided for your reference in determining your fees and assembly of the proposed team as required to respond to this RFP) and for the following items:

- Provide for and coordinate street and site reconfiguration associated with the project. Signalization work on Hwy 231 may be required.
- Additional areas of work may be encountered during the performance of the services described herein.
- Note that the expectation is that the construction delivery will be in multiple packages to multiple prime contractors.
- The contract form will be a RSA standard AE Agreement with RSA terms and conditions as a master contract, with individual project components as described herein issued as individual work orders.

III. Qualification and Proposal Content

Interested proposers must submit qualifications on GSA standard form 330 along with any other relevant information. Joint ventures or other teaming arrangements must be fully described and the responsibility matrix for project tasks included.

In addition, proposers must include, at a minimum, the following:

a. Proposed fee structure, subdivided as follows:

- Proposed fee structure for basic services (with summary of services) as a percentage of the cost of the work subdivided by the building type (office space and warehouse space).
- Proposed special consultants
- Proposed or recommended additional services

- Proposed reimbursable expenses (no mark-up will be allowed on reimbursable expenses)
- b. Proposed project team, with descriptions of background and experience, including any proposed subcontractors.
 - c. Timeframe to commence this project.
 - d. Proposed consultants.
 - e. Experience with commercial office space.
 - f. Experience with tilt up wall construction, beverage distribution and material packaging and picking equipment.
 - g. CAD systems experience and capabilities.
 - h. Description of reimbursable expenses expected for this project.
 - i. Proposed special or limiting contract language.
 - j. Special licensing or certifications with relevance to this scope of work.

IV. Key Dates

<u>Activity</u>	<u>Date</u>
RFP to be Issued/Posted on RSA's Website	May 20, 2024
Deadline to Submit Questions	June 4, 2024
Proposal Responses Due by	June 11, 2024

V. Required Proposal Format

Interested proposers shall submit six (6) copies of their proposal loose bound in three ring binders and one electronic copy in pdf format. Each copy shall be indexed and tabbed with pages numbered for easy reference. If a proposer deems any of the material submitted to be confidential business information not subject to the requirements of the Alabama Open Records Act, proposer must also submit an additional copy of their proposal with all such information redacted.

Brochures are discouraged and will not be considered as part of the submittal.

Site examinations are allowed but must be arranged in advance. Questions may be

submitted to steve.timms@rsa-al.gov, with a copy to heather.smith@rsa-al.gov.

Finalist interviews may be required based on the level of interest in the project and the quality of the submissions.

VI. Criteria for Evaluation

A. GENERAL:

The following process will be used to evaluate submitted proposals:

- a. A review committee will evaluate each proposal submitted in response to these proposal specifications.
- b. Responses received within the time frame and in the form specified by the guidelines will first be evaluated to confirm that all proposal sections, as detailed, have been provided in the proposal response.
- c. Each proposal will be reviewed and points awarded to all items indicated on the Proposal Evaluation Form. Any proposal component may be awarded points not to exceed the maximum specified on the Proposal Evaluation Form. The total technical score available is 70 points.
- d. Each proposal component will be summed to obtain a total score.
- e. RSA may conduct interviews with the finalists.

B. PROPOSAL EVALUATION FORM:

General Proposal Categories	Possible Points	Reviewer's Score
Experience with similar projects	15	
Description of services to be performed	15	
Timeline to begin work	15	
Relevant experience of proposed team	25	
<i>Total technical scoring (sum of above)</i>	<i>70</i>	
Cost Proposal	30	
<i>Total Possible Points</i>	<i>100</i>	

Finalist Interviews, if conducted, will allow for a possible additional 10 points.

Proposers must respond to all required components of the RFP.

VII. Special Terms and Conditions

All proposals are subject to the following terms and conditions:

1. Prohibited Contacts; Inquiries Regarding RFP. From the Release Date of this RFP until a contract is awarded, parties or persons that intend to submit, or have submitted, a Proposal are prohibited from communicating with any RSA employees to discuss the RFP or the Proposal, other than as described herein. Parties or proposers interested in submitting a Proposal may submit questions to the designated RSA contact by e-mail, seeking additional information and clarification, pursuant to the timeline set forth above. A question received after the May 30, 2024 deadline for questions regarding this RFP may not be acknowledged. Questions and answers will be published on the RSA website.
2. Nonresponsive Proposals. Any Proposal that does not satisfy requirements of the RFP may be deemed non-responsive and may be disregarded without evaluation. Clarification or supplemental information may be required from any Proposer.
3. Changes to the RFP; Changes to the Schedule. RSA reserves the right to change or interpret the RFP prior to the Proposal Due Date. Changes will be communicated via posting the changes on the RSA website; it is imperative that Proposers continue to check the RSA website for updates. Changes to the deadline for Proposals, or to the RFP timeline, or to other scheduled events may be made by RSA as RSA deems to be in its best interest.
4. Proposed Expenses. Unless otherwise specified, any reimbursable expenses to be incurred by the service provider in providing the solicited services must be disclosed in a Proposal and shall be charged at actual cost without mark-up, profit or administrative fee or charge. Only customary, necessary expenses in reasonable amounts will be reimbursable. Expenses not disclosed in the Proposal may not become part of any contract resulting from this RFP.
5. Rejection of Proposals. RSA reserves the right to reject any and all proposals and cancel this RFP if, in the exercise of its sole discretion, it deems such action to be in its best interest.
6. Expenses of Proposal. RSA will not compensate a Proposer for any expenses incurred in the preparation of a Proposal.
7. Disclosure Statement. Proposals must include one original Disclosure Statement as required by Code Section 41-16-82, et seq., Code of Alabama 1975.

Copies of the Disclosure Statement, and related information, may be downloaded from the State of Alabama Attorney General's website at:
<<http://ago.alabama.gov/Page-Vendor-Disclosure-Statement-Information-and-Instructions>>.

8. Final Terms of Engagement. Issuance of this RFP in no way constitutes a commitment by RSA to award a contract. The final terms of engagement for the service provider will be set out in a work authorization which will be effective upon its acceptance by RSA as evidenced by the signature thereon of its authorized representative. Provisions of this RFP and the accepted Proposal may be incorporated into the terms of the engagement should RSA so dictate. Notice is hereby given that there are certain terms standard to commercial contracts in the private sector use which RSA is prevented by law or policy from accepting, including indemnification and holding harmless a party to a contract or third parties, consent to choice of law other than the State of Alabama, methods of dispute resolution other than negotiation and mediation, waivers of subrogation and other rights against third parties, agreement to pay attorney's fees and expenses of litigation, and some provisions limiting damages payable by a vendor, including those limiting damages to the cost of goods or services.

9. Beason-Hammon Act Compliance. A contract resulting from this RFP will include provisions for compliance with certain requirements of the Beason-Hammon Alabama Taxpayer and Citizen Protection Act (Act 2011-535, as amended by Act 2012-491 and codified as Sections 31-13-1 through 35, Code of Alabama, 1975, as amended), as follows:

E-VERIFY ENROLLMENT DOCUMENTATION AND PARTICIPATION. As required by Section 31-13-9(b), Code of Alabama, 1975, as amended, Contractor that is a "business entity" or "employer" as defined in Code Section 31-13-3, will enroll in the E-Verify Program administered by the United States Department of Homeland Security, will provide a copy of its Memorandum of Agreement with the United States Department of Homeland Security regarding that program and will use that program for the duration of this contract.

10. Boycott Prohibition Compliance. A contract resulting from this RFP will include the following clause:

CONTRACT PROVISION MANDATED BY SECTION 31-13-9(k). By signing this contract, the contracting parties affirm, for the duration of the agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

Note that while questions may be submitted via email, the proposal must be submitted in the format described above. Submit questions, special requests and proposals to the following address:

The Retirement Systems of Alabama

201 South Union Street

Montgomery, Alabama 36104

Attn: Steven Timms Steve.Timms@rsa-al.gov,

With copy to Heather.Smith@rsa-al.gov

P 334.517.7200

F 334.517.7001

Exhibit A – Items Specified by ABC

***The items below are included for reference and are subject to change and/or revision during design or construction.**

Item 1. Warehouse

- 250,000 square foot warehouse facility with expansion design for up to 325,000 square feet for future growth. This is based on 4 high racking with high cube storage.
- Concrete tilt wall warehouse construction is preferred but other construction methods will be considered.
- The warehouse floor to be concrete and support both dynamic and static loads based on “high cube” 4 high pallet racking as well as forklift travel with full pallet loads (Each full pallet of product averages approximately 2,200 pounds with the heaviest being approximately 3,100 pounds). Proper engineering of the concrete for load, concrete leveling, mix, use of concrete reinforcement, satisfactory curing and appropriate joint spacing must be followed to reduce potential cracking. Floor to be polished and sealed with protective nonslip coating.
- Minimum of 34’ tall clear rackable ceiling height for 4 high cube pallet racking.
- Energy Star certified low radiant heat gain reflective roofing system or equivalent.
- Separate shipping and receiving docks on opposite sides of the building.
- Shipping docks to total 10 dock doors with Kelly brand or equivalent automatic hydraulic “pit style dock levelers”. Dock heights unless indicated to be standard 48” high docks with a level concrete surface to allow trailers to “back in” upon approach.
- Two 10’ wide entry docks with ADA compliant ramps for loading and unloading access – one dock on the receiving side of the building and one dock on the shipping side of the building.
- Warehouse to be properly ventilated to provide a comfortable working environment without the use of air-conditioning. Engineered desire is that the warehouse to maintain a high no more than a 20-degree cooler to the ambient (outside) high air temperature, and 20-degrees warmer than the coolest ambient temperature.

Item 2. Warehouse Personnel Facilities

- Breakroom/lunchroom for 136 employees
- Locker facilities for 110 male warehouse personnel
- Locker facilities for 12 female warehouse personnel

- Bathroom facilities for 110 male employees – auto flush design toilets
- Bathroom Facilities for 12 female employees - auto flush design toilets
- Bathrooms for 6 male warehouse administrative employees – sensory water flow for sinks, and efficient paperless hand drying systems after hand washing
- Bathrooms for 6 female warehouse administrative employees- sensory water flow for sinks, and efficient paperless hand drying systems after hand washing

Item 3. Warehouse Parking and Truck Staging

- Dedicated warehouse parking lot to support 134 employee cars (asphalt) – separate entrance and exit locations.
- The standalone dedicated shipping drive and entrance to be constructed of 10” thick or greater 4,000 psi poured concrete with reinforcing rebar and steel mesh.
- The standalone dedicated receiving drive and entrance to be constructed of 10” thick or greater 4,000 psi concrete with reinforcing rebar and steel mesh.
- The standalone dedicated shipping truck lot is to be constructed of 10” thick or greater poured 4,000 PSI concrete with reinforcing rebar and steel mesh. The trailer staging lot to be secure and fenced.
- The standalone receiving docks to total 10 dock doors with Kelly or equivalent brand automatic hydraulic “pit style dock levelers.”
- Dock heights unless indicated to be standard 48” high docks with a level concrete surface for which trailers to “back in” upon approach. The lot is to be constructed from 10” thick or greater poured 4,000 PSI concrete with reinforcing rebar and steel mesh.
- Warehouse building perimeter and parking lot lighting sufficient to support safe work environment and provide theft deterrence. Solar pole lighting where applicable.
- A 20,000 sq. ft. secured/fenced staging lot for loaded and empty trailers.
- A receiving accumulation lane or staging sequence lot “cell phone lot” for inbound trailers to support no less than 15 tractor trailers where road staging is not necessary.

Item 4. Warehouse Management System (WMS), Warehouse Automation and Related Systems

While the ABC will provide WMS, warehouse automation and related systems and equipment, the CM will be responsible for coordinating/managing the delivery of such systems to the site and the installation/integration of such systems:

- State of the art WM solution and Warehouse Execution solution (Automation) with evolutionary updates not requiring update releases.
- Cross-docking functionality with “Front of Line” priority receiving recognition of inbounds.

- Automated conveyor based putaway solution to stock and retrieve the top 100 SKUs in a high cube “ASRS” (Automated storage and retrieval) type storage.
- Perpetual cycle-counting functionality.
- Directed putaway.
- Supports/tracking of inventory based on lot management, serial number tracking, and product recalls.
- Solution to support both wave and waveless approaches for order fulfillment.
- Order section, receiving, replenishment and load management tracking via modern handheld mobile devices, voice recognition, and/or seamless material handling equipment (MHE) integration.
- Integrates with external multi-carrier solutions.
- Appointment Scheduling and ASN management of inbound and out bound transactions.
- Dock Door Management – scan to load inbound and outbound tracking.
- Yard Management functionality for managing inbound loads and outbound trailer staging.
- Slotting optimization.
- Robust replenishment modeling solution supporting multiple forecasting factors and exponential smoothing for inventory management/storage optimization.
- Real-time monitoring of all warehouse functions – receiving, putaway, order selection, cycle counting, manifest processes and loading.
- Real Time/automatic notifications about deviations from expected bin location picks or putaway or variance thus result in an automatic cycle count.
- On the fly adjustments to orders such as location and products/demand can be changed/corrected prior to order selection.
- Historical retail and wholesale sales modeling for store-based CGO (computer generated order) models driving distribution center inventory replenishment/ inventory levels utilizing multiple factors and smoothing best practices. (Continuous learning models creating smart order process fulfillment and optimization of inventory).
- 100% transactional tracking with alerts for human error – every transaction is tracked in real time.
- Automated bin cube to product/dim weight functionality for inbound, replenishment, and outbound pallet and truck cube.
- Real time dashboard BI (Business Intelligence) productivity metrics for LM (Labor Management) tracking. WM/LM solution to integrate with Microsoft D365, Kronos or other labor hour tracking software to determine real time productivity for all work functions – receiving, order selection, loading, replenishment, putaway and cycle counting.

- Options on paperless - scanner or voice order picking – if a bolt on software such as a voice pick solution is needed, then that software must be able to seamlessly integrate with the WM solution.
- Supports handheld or forklift mount computers for logical directed putaway.
- Validates shipping and receiving – creates ASN's and variance reports based on actual receipt versus ASN and PO (Two points of variance). Needed for both inbound shipments and out DDS (Direct Delivery Store) where we pick direct delivery orders for next day shipment delivery to the on-premises/private retail sector.
- Utilizes advanced fulfillment logic for wave management, constraint-based selection, real-time replenishment, and advanced order consolidation for routing (DM integration based on truck cube and load weight (DOT) constraints).
- Streamline receiving processes with automated full pallet putaway and retrieval, and cross-docking of immediate need items.
- Enterprise inventory management – views of all warehouses in the system to set up EOQ and min/max/safety stock for CGOs (computer generated orders).
- Multi warehouse tracking and collation of inventory to support efficient product sales/turnover. Logical internal store transfer suggestions in the system to relocate inventory to the best-selling (golden zone) location.
- KPI/dashboard reporting and analysis to track business trends.
- Material handling equipment “safe operating” features such as, pre-check for operators to perform based on log in by each operator.
- Simulate warehouse workflows before implementing new procedures – sandbox parallel workflow functionality.
- Automated putaway and retrieval of fast-moving high-volume SKUs – top 100 SKUs into bulk storage and then automated retrieval based on full pallet pick or prioritized replenishment into the pick area as designated.
- Six-lane sortation to truck loading via telescoping truck loading utilizing technology and equipment via Adjustoveyor or comparable solutions. Plus, a single divert lane from the sorter to a consolidation lane to ergonomic height adjustable palletizing station of product for the Direct Delivery Store, Military and Costco customers. From palletizing, then rolling to an auto stretch wrapping station, and then to an accumulation lane staged for truck loading.
- Minimum of 10 dedicated inbound docks, and 10 dedicated outbound doors-dock doors on the opposite sides of the warehouse.
- Effective mix of high-density pallet flow, select rack, half pallet storage, case flow, and push back rack for efficient operations.
- Structural steel racking required. Pallets of product are by GMA pallet specifications and the weight of product averages about 2,000 pounds with a small number of SKU's up to 3,000 pounds. Pallet heights average about 68” tall with about 2% of the SKUs up to 80” tall.

- Hospital discharge lane for underweight cases, damaged cases, or unreadable bar codes.
- Batch or wave picking module.
- Spiral conveyors where needed.
- Minimum of 60 and up to 100 plus CPM (cases per minute) throughput through sortation.
- Voice activated or ring scan pick.
- Forklift mounted scanners/computer.
- Locatable warehouse at all bins.
- Four pallet high density pallet storage for all full pallet locations.
- Logical putaway functions tying into potential replen or pick logic for that operator in that aisle (priority labor management multi-tasking).

Item 5. Warehouse and Support Areas

- Six offices and eight cubicles to support warehouse manager, leadership team, and IT support staff
- One men's restroom
- One lady's restroom
- IT Room – temperature controlled (separately) 10' X 12' space
- One Meeting / training multipurpose room
- Breakroom
- Separate receiving area / docks
- Separate shipping area / docks
- MHE – battery changing area for equipment
- Maintenance and equipment area – 2,000 square feet space, including an enclosed / secure dust free storage space for replacement parts and equipment
- Mezzanine for Hospital and breakage area (routed off the sorter)
- Misc. Supplies, surplus, and workshop for store equipment – total 15,000 square feet
- "Bottle Pick" area for future use – 25,000 square feet

Item 6. Offices Attached to Warehouse

- Two-story office building attached to the warehouse and consisting of approximately 50,000 sq. ft. of office space (with a footprint of 25,000 sq. ft.)
- Office space to support 220 employees with adequate bathrooms, breakrooms, cafeteria with a full kitchen, conference rooms and 1,500 sq. ft. board room adequate for courtroom style operations

- Office to cubicle mix to be approximately 135 offices and 85 cubicle type offices positions to support the following departments and headcount with potential growth for ten plus years:
 - o Administration – 42 employees
 - o Finance and Services– 26 employees
 - o Human Resources – 15 employees
 - o Information Technology (IT) – 32 employees
 - o Licensing and Compliance – 25 employees
 - o Product Management – 19 employees
 - o Stores Support – 22 Employees
 - o Tax and Trade – 22 employees
 - o Growth factors for each department
- Office parking lot to support 200 employees (Asphalt)
- Office parking entrance and exit to be separate from any shipping and receiving truck traffic
- Office building perimeter and parking lot lighting sufficient to support a safe work environment, meet security protocols, and provide theft deterrence
- Office building to include a freight and passenger elevator – one of each

Item 7. IT and Security Requirements

IT Data Center:

- 1500 sq. foot room w/ separate HVAC and thermostat control
- Dedicated power and backup generator

IT Equipment Storage:

- 10' x 12' secure room

Equipment Staging & ERP Lab Setup:

- 12 x 18 room w/ 4 quad power and data jacks on each wall
- Installation & Configuration of registers, pc's, printers, other equipment

Infrastructure Requirements:

- Include 1500 sq. ft. Technology component/IT room/Main Distribution Frame (MDF) with separate HVAC system and separate thermostat control

with remote option. This space is separate from the offices needed for IT. In addition, this room will require a standalone fire suppression system, chemical-based agents, to absorb the heat of a fire such as the 3M Novec 1230 or equivalent.

- Raised floor according to industry standard best practices.
- MDF room temperature of 65 to 68 degrees with 30 to 55 percent humidity control with the full complement of equipment in the room.
- Intermediate Distribution Frame (IDF) HVAC should be ducted in and designed to maintain a room temperature of 68 to 74 degrees with 30 to 55 percent humidity control with the full complement of equipment in the room.
- Backup generator to supply emergency power to MDF to ensure uninterrupted network services supporting ABC stores.
- All work associated with MDF, and Network Facilities (NF) will comply with the National Electrical Code, and with state and local building codes. Follow the guidelines developed by ANSI/TIA/EIA and BICSI in both design and construction. ABC IT must approve all variances.
- All usable personnel office space, breakrooms, and conference rooms to be wired at a minimum with two duplex CAT6A outlets in accordance with industry standards and best practices.
- IT network equipment will not be installed in the IDFs until they are completely built, cleaned, and secured with ABC IT-approved key.
- Doors and Locks for NFs — A windowless, solid core door measuring 36" wide by 80" tall and swinging open out of the room is the minimum requirement. All doors will integrate with Physical Access Control System.
- MDF and IDF installed with fire suppression in accordance with NEC and NFPA standards 75 & 76.
- Riser or distribution cables entering/exiting the IDF shall be via four-inch (4") conduits w/ sleeved cores or cable tray. Include two additional conduits, sleeved cores, or cable trays above the current requirement to allow for future growth.
- MDF shall have at a minimum one complete wall with fire rated $\frac{3}{4}$ " plywood and painted with 2 coats of a neutral color fire retardant paint; the fire rated stamp must be visible. Paint should be (or be equal to): Flame Control Coatings, LLC. Flame Control NO. 20-20A. Fire Hazard Classification, ATSM E-84 (NFPA 255) Class "A."
- IDF's shall have at a minimum 4' x 8' fire rated $\frac{3}{4}$ " plywood, painted with 2 coats of a neutral color fire retardant paint; the fire rated stamp must be visible. Paint should be (or be equal to): Flame Control Coatings, LLC. Flame Control NO. 20-20A. Fire Hazard Classification, ATSM E-84 (NFPA 255) Class "A."
- Lighting shall be LED with lighting levels and control in compliance with local code.

Electrical Requirements for NFs:

- All convenience electrical outlets shall be installed to a side wall in order that power cables can be run along the telecommunication racks. This will minimize the possibility of tripping hazards. There should be, at a minimum, one quad convenience outlet on every wall immediately to the left and right of the door for general purpose use. These should be installed at industry standard height.
- At a minimum one 240-volt 30 AMP dedicated circuit with a NEMA L6-30R receptacle will be installed at each 7' floor mount rack at a height of 7 feet. Conduit and outlets shall be connected to the outside of the basket tray facing the rear of the equipment racks. At a minimum, there must be four 120-volt 20-Amp NEMA 5-20R dedicated outlets with each pair on a dedicated circuit with emergency generator back-up. These outlets must be located at a height of 7 feet. Conduit and outlets shall be connected to the outside of the basket tray facing the rear of the equipment racks.
- All telecommunication electrical circuits are to be clearly labeled on circuit breaker panels and the circuit id number to be on the face plate of the outlet in the IDFs.
- A grounding bar measuring 12" long by 2" wide by ¼" thick with pre-drilled ¼" holes shall be installed on the top right corner of ¾" plywood. The ground bar must accept 2-hole lug connectors. The ground bar shall be connected to the main building ground using #2 or greater AWG copper wire.

NF Equipment and Terminations:

- ABC IT must approve the design and layout for the placement of racks, rack hardware, and wall fields within the IDFs.
- IDF & MDF Equipment Racks — Heavy duty, aluminum, 73.6" floor mount racks with cable management channels on both sides and mounting rails for 24" equipment is required on equipment racks. Racks must be able to support 3kW per rack and be 42" deep. All racks are to be properly anchored, with space allocated between racks for installation of vertical cable managers. Racks are to be mounted side by side.
- Patch Panels — All jacks will be Category 6E and Category 6A. Different colors are assigned to the various types of network connections. The exposed front of the jack must be the correct color. The jack colors are assigned as follows:
 - o Red General purpose, office, and lab connection — other than Category 6A
 - o Blue General purpose, office, and conference rooms, break rooms, etc. — Category 6A
 - o Yellow Wireless access point connection

o Purple Security camera and security device

- Rack Mounted Hardware — For MDF, a minimum of eight Units (8U) are reserved at the top of each rack for fiber enclosures. For IDFs, a minimum of six Units (6U) are reserved at the top of each rack for fiber enclosures.

Infrastructure Wiring and Cable Paths:

- MDF must have entrance paths for carrier data and phone circuits.
- All cable trays and racks are to be grounded to the main building ground using #2 or greater AWG copper wire. Rack-mounted electrical outlets must be grounded to the rack ground in addition to any other NEC, state, or local building code grounding requirements.
- To facilitate the proper installation, routing and placement of cables, NFs will be located to comply with TIA/EIA distance limitations and stacked one above the other whenever possible.
- The total distance of the cable path between the telecommunication outlet and its termination in the NFs will be less than 90 meters.
- No plumbing, HVAC, or electrical conduit will pass through or above the IDF, except for sprinkler systems. Sprinkler heads will be caged and rated high temperature.
- Under no circumstances will electrical or any other utility panels be in an IDF.
- All network wiring shall be run using suspension hooks, conduits, or approved cable tray. Cable should never attach to the ceiling grid support system.
- Pull string shall be installed with cable when it is pulled in conduit that does not contain inner ducts.
- Cable Trays — Basket tray of 12” width shall be installed on three (3) walls at a height of 7’ whenever possible with minimum clearance of 4” from ceiling. Basket tray spanning the width of the room shall be installed on top of the telecommunication racks. Radius drop-outs are to be used where the cable exits the tray to a lower elevation.
- All cable labeling completed in accordance with ANSI TIA 606-B Cable Labeling Standards to include a Wire Color Code for Data, Security, and WAP cabling. (See NF Equipment and Terminations section above).
- Horizontal cabling will be 100 percent terminated in the MDF and IDF to an approved, 19-inch, rack mountable, 48-port, 8-pin modular-to-Insulation Displacement Connector (IDC) that meets Category 6 performance standards, pinned to T568B standards.
- IDC color codes shall mimic color standards above.
- 24-strand multi-mode fiber installed and terminated on LC patch panels between MDF and IDFs.
- The multi-mode fiber strands utilized in the cable specified shall conform to ANSI/TIA/EIA-568-C, IEEE, and TIA-492AAAC-A specifications.

- 12-strand single-mode fiber installed and terminated on LC patch panels between MDF and IDFs.
- The single-mode fiber strands utilized in the cable specified shall conform to ANSI/TIA/EIA-568-C and IEEE specifications.
- For cabling to Wireless Access Point (WAP) locations, run two Category 6E cables and install two jacks at each location to accommodate future needs.
 - o Jacks shall be installed in a visible and accessible location, preferably below the ceiling or on the walls.
 - o For maintenance purposes, WAP/wall jack must be mounted in a space no higher than 10-feet high avoiding objects like air conditioning units, vents, sprinkler systems, or anything that will interfere with the performance of WAP.
 - o ABC IT must approve the design and layout for the placement of the WAP cabling.
- For cabling to camera locations, run two Category 6E cables and install two jacks at each location to accommodate future needs
 - o Request that a certified Video Security Systems Design contractor engineer camera location layout based on final facility floorplan.
 - o Include a Security Room with Video Display Wall capable of displaying all camera feeds simultaneously for security personnel to monitor.
 - o Include a complete Physical Access Control system throughout the facility entry ways.
 - o ABC IT must approve the design and layout for the placement of security camera, access control, and alarm system devices.
- To facilitate frequent additions, moves, and changes to the telecommunication systems, communications conduits are generously sized and labeled on both sides (to and from locations).
 - o Conduits entering the building are to be a minimum of 4" with some type of sub-space partitioning.
 - o Conduits between building telecom rooms are to be a minimum of 4".
 - o Conduits outer diameter will be located within 4" of room walls
 - o Conduit's servicing end user spaces are usually 1". Exceptions are made for outlets for wall phones, etc. where only one cable is needed. This conduit may be 3/4".
 - o The use of flexible conduit is discouraged. If it is the only solution, increase its size by one trade size.

- o Conduits between floors that interconnect telecom rooms are stubbed 2” into the rooms.
- o The 1” conduits servicing end users’ information outlets are to be “stubbed” to above the ceiling, and from there to the nearest corridor/hallway telecommunications horizontal pathway leading to the IDFs.
- o Minimum radii for conduit bends are:
 - a. Internal diameter of less than 2” — bending radius is 6 times the internal diameter.
 - b. Internal diameter of 2” or more — bending radius is 10 times the internal diameter.
 - c. All sleeves must be fire sealed. Initial sealing of the sleeve penetration is to be completed by the sleeve installer.
 - d. To prevent cable damage, all sleeves will be reamed, and grommets placed before cable installation.
- Riser and distribution cables leaving the MDF to IDF spaces shall be via four-inch (4”) conduit, sleeved cores with basket cable tray for horizontal runs. At least two additional conduits, sleeved core or cable tray with sufficient available space must be included in the design to provide for future growth. The number and size of conduits are determined by building square footage. All conduits will be sealed with appropriate fire stopping materials.
- The MDF must have sufficient conduit runs to all IDFs. Two additional cores/conduits must be provided for future growth.

Definitions:

- Main Distribution Frame (MDF) is the main telecommunications service entrance into the building. It may or may not be where the BDF is located.
- Intermediate Distribution Frame (IDF) provides for demarcation between the per-floor horizontal customer service cabling and the building’s video, data, and voice backbone cabling.
- This room contains the electronic equipment that transitions between the building backbone and the end user's telecommunications equipment. This securable room is to be dedicated to this purpose, with no other building services sharing the space.
- Network Facilities (NF) is the term used to describe rules that apply to all three types of distribution facilities on campus (MDF/BDF/IDF).

Item 8. Parking Lot Requirements

The ABC Board will require three main parking areas to support its new facility:

1. Office Parking Lot – 220 employees (asphalt).
2. Warehouse Employee Parking Lot – 134 employees (asphalt).
3. Secured Tractor Trailer Staging/Parking Lot – must be large enough to securely park, stage, and maneuver up to 40 tractor trailers on-site. The tractors will be day cab, and the trailer size is 53' X 102". Consideration of static and dynamic loads means this lot will need to support up to 85,000 pounds on the surface area of the tractor trailer. This will require the need for a concrete staging lot with load bearing thickness and strength qualities to support such loads. This lot should be fenced with secure access with a lot monitoring system.

Parking Features:

The parking lot must foremost deal with the functional/operational need for the ABC Board in providing for safe and efficient passage of the automobile and driver. This includes ADA compliance, security systems, adequate solar lighting systems, and solar derived parking and exterior building lighting solutions. This is a very complex challenge as automotive, engineering, and traffic issues relative to the site location must be integrated to create the appropriate solution. Since the ABC Board is looking for a 10 and 25-year solution the complexity of parking and changing environmental automotive requirements (electric vehicles) must also be taken into consideration.

Functional Requirements of Parking Areas:

- The facility should account for the complex spatial needs of the driver and the automobile:
- The size and turning radius of current automobiles as well as past and future trends of automobile size and statistical quantity must be considered (parking geometries).
- The streets surrounding the facility and their traffic flow must be taken into consideration when planning entrances and exits and deciding on ramp designs if applicable.
- The entrances and exits are very important to the smooth functioning of the facility, with the type of use again determining the length from the opening and placement of the entry security booths, as well as the quantity of entrances and exits.
- The type of equipment and the necessity of a security booth and truck security office are also determined by the needs of the ABC Board.
- Zoning issues require the number of spaces for parked automobiles. The designer must work within local codes to meet these requirements.

- Optimizing site potential, by choice of site and its relationship to walking, driving, other transportation linkages and good design opportunities to the office and warehouse entrances.
- Accommodate technological tools for future upgrades of operational systems and facility expansion.
- Plan for a backup power system for lighting in the event of power outage or emergency event.
- Lighting is a crucial aspect of parking and type, placement, and quantity needs to be carefully studied to provide enough light for the users of the parking garage and not to spill out of the parking facility affecting surroundings.
- Employee growth and future needs must be planned – figure 2% growth per year in parking: both tractor trailer staging and employee parking lots.
- Propose solutions for electric battery charged vehicles and charging stations, especially beyond 2035.
- The parking lots should include a plan for bicycle commute and spots for motorcycles.

Item 9. Facilities Design Attributes

The ABC Board intends to use this facility to support its entire operation including its distribution to ABC retail and wholesale stores.

General Office:

The offices of the ABC Board is a dynamic workplace supporting multiple departments and functions. The design build should incorporate flexible and technologically advanced working environments that are safe, healthy, comfortable, durable, aesthetically pleasing, sustainable and accessible. The offices must be able to accommodate the specific space and equipment needs for each department. As a state agency, special attention should be made to the entry spaces, conference rooms and other areas with public access reflective of the ABC Board.

Types of Space:

The design of the attached office building should incorporate several space types to meet the needs of staff and visitors. These will include:

- Courtroom style layout for board meetings and public reviews
- Offices and cubicles
- Conference rooms
- Employee/Visitor Support Spaces
- Lobby/central location for building directory, schedules, and general information
- Common Space Informal, multi-purpose

- Cafeteria with food preparation area with kitchen
- Restrooms
- Administrative support spaces
- Executive and administrative offices
- Operation and maintenance spaces
- General Storage: For items such as stationery, equipment, and instructional materials
- Computer/Information Technology (IT) Closets or data processing areas
- Maintenance Closets
- Security room with camera viewing area
- One passenger elevator and one freight elevator

Materials and Resource:

- Building materials and resources should be durable and sustainable to reduce environmental impacts, long-term operations and maintenance costs, and promote indoor environmental quality.
- The design should incorporate water saving fixtures and equipment to protect and conserve water. Also plan for landscaping that requires little to no water use. Recover non-sewage and graywater for on-site use (landscape irrigation), and more generally, consider the water quality requirements of each water use.

Commissioning:

With the continuation of improved building technologies and controls it is crucial that high-performance buildings such as the new ABC Board distribution warehouse facility/office is properly commissioned as part of a comprehensive quality assurance plan. This includes “Preventive” and “Predictive” maintenance plans.

IT/Technology:

Because of the computer and electronic equipment housed within the ADP (automatic data processing) PC, the spaces require regulated temperature and humidity (usually accomplish by zoned systems), and reliable power 24 hours per day. Typical features of ADP PC space types include the list of applicable design objectives elements as outlined herein below.

Functional/Operational:

- Occupancy: Occupancy Classification for ADP PC is Business Occupancy B2, with sprinkler protected construction and GSA Acoustical Class B2 for spaces with concentrations of noisy equipment.

- Raised floors: Raised floors are the preferred system for distribution of critical services (power, voice, data, and HVAC) in ADP PC space types. Raised floors for ADP PC may have low-pressure high induction diffusers and be constructed of concrete filled metal pans at 24", modules with pedestal and stringer support, with intermediate support.
- Raised flooring offers ease of access and storage of distribution systems.
- Dual path service lines for power: Dual path service lines ensure a constant power supply, which is critical to the operations of ADP PC with concentrations of noisy equipment.
- Redundant cooling unit: ADP PC space types are usually equipped with redundant cooling capacity to maintain the low temperature required by the computer equipment. This could consist of a split air-cooled, air-conditioning unit with 24-hour operation and setback thermostats.
- Acoustical transfer ducts should be installed at all acoustically rated partitions for noise control.
- The computer room should have chemical solution fire suppression.

END