COVER PURCHASE DESCRIPTION

FOR

STORAGE AID SYSTEM

AT

BARKSDALE AFB, LOUISIANA

BUILDINGS 4845 & 6237

CSN: GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

Table of Contents

1. SCOPE....1
1.1. GENERAL SCOPE....1

2. APPLICABLE DOCUMENTS....1
2.1. GOVERNMENT DOCUMENTS....1
2.2. NON-GOVERNMENT DOCUMENTS....2

3. REQUIREMENTS....4
3.1. SYSTEM DESCRIPTION....4
3.2. CHARACTERISTICS....4
3.2.1. NOISE LEVELS....4
3.2.2. ELECTRICAL CHARACTERISTICS....4
3.2.2.1. POWER SOURCE....4
3.2.2.2. INSTALLATION CODE....4
3.2.2.3. ENVIRONMENTAL PROTECTION....5
3.2.2.4. PROTECTION FROM MECHANICAL DAMAGE....5
3.3. DESIGN AND FABRICATION....5
3.3.1. DESIGN CRITERIA....5
3.3.1.1. MAINTAINABILITY....5
3.3.1.2. ENVIRONMENTAL CONDITIONS....5
3.3.1.3. STANDARD, COMMERCIAL COMPONENTS....5
3.3.1.4. STRUCTURAL REQUIREMENTS....5
3.3.1.5. VERIFICATION OF DIMENSIONS....5
3.3.1.6. OZONE DEPLETING SUBSTANCES (ODS)....6
3.3.1.7. SAFETY....6
3.3.1.7.1. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION....6
3.3.1.7.2. PROTECTION AGAINST MOVING PARTS....6
3.3.1.7.3. PLACARDS....6
3.3.1.7.4. CLEAN-UP....6
3.3.1.8. ERGONOMIC DESIGN....7
3.3.2. PROTECTIVE COATINGS....7
3.3.2.1. PAINTING....7
3.3.2.2. PLATING....7
3.3.2.3. GALVANIZING....7
3.3.2.4. DISSIMILAR METALS....7
3.3.3. WELDING....8
3.3.3.1. FIRE PROTECTION....8
3.3.4. CUTTING....8
3.3.5. COORDINATION....8
3.3.6. NAMEPLATES....9
3.3.7. PRECEDENCE....9
3.3.8. MATERIALS....9
3.3.8.1. STEEL....9
3.3.8.2. MECHANICAL FASTENING DEVICES....9
3.3.8.3. ANCHORS....10

3.4. DOCUMENTATION 10
3.4.1. MANAGEMENT REPORTS 10
3.4.2. SHOP DRAWINGS 10
3.4.3. EQUIPMENT MANUALS 11
3.4.4. AS-BUILT DRAWINGS 11
3.5. ORIENTATION 12
3.5.1. SYSTEM OPERATOR ORIENTATION 12
3.5.2. MAINTENANCE ORIENTATION 12

4. QUALITY ASSURANCE PROVISIONS 12
4.1. GENERAL 12
4.2. ACCEPTANCE TESTS 13
4.2.1. SYSTEM CHECKOUT TEST 13
4.2.2. QUALITY CONFORMANCE TEST 13
4.3. INSPECTIONS AND TESTING 13
4.3.1. INSPECTIONS 14
4.3.2. TESTS 14
4.4 WARRANTY 14

1. SCOPE

1.1. GENERAL SCOPE

This purchase description (PD) establishes the minimum performance, design, fabrication, installation, orientation, and test requirements for a storage aid system at Barksdale AFB, Louisiana, Buildings 4845 and 6237. The work shall be completed in accordance with this PD and Air Force (AF) Drawings GBR602-01 through -02. This PD covers all equipment, materials, and labor necessary to complete installation of the system. It also includes performing tests and making adjustments to the system as well as providing on-the-job instructions to Government personnel.

2. APPLICABLE DOCUMENTS

The following documents form a part of this PD to the extent specified herein. The issue in effect on the date the solicitation is issued shall apply.

2.1. GOVERNMENT DOCUMENTS

AIR FORCE INSTRUCTION (AFI)	
AFI 91-203	Air Force Consolidated Occupational Safety Instruction

AIR FORCE OCCUPATIONAL SAFETY AND HEALTH (AFOSH)	
AFOSH 48-20	Occupational Noise and Hearing Conservation Program
AFOSH 91-501	Air Force Consolidated Occupational Safety Standard

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS	
29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction

AIR FORCE DRAWINGS	
GBR602-01	EXISTING EQUIPMENT TO REMOVE BUILDING 4845 BARKSDALE AFB, LA

GBR602-02	PROPOSED LAYOUT BUILDING 4845 BARKSDALE AFB, LA

2.2. NON-GOVERNMENT DOCUMENTS

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)	
AISC 325	Steel Construction Manual
(Applications for copies shall be addressed to the American Institute of Steel Construction, Inc, 1 East Wacker Drive, Chicago IL 60601)	

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)	
ANSI B11.19	Performance Criteria for Safeguarding
(Applications for copies shall be addressed to the American National Standards Institute, 1430 Broadway, New York, NY 10018)	

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)	
ASTM A123	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153	Standard Specification for Zinc Coating(Hot-Dip) on Iron and Steel Hardware
ASTM A307	Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
ASTM F3125	Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi and 150 ksi Minimum Tensile Strength
ASTM B633	Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel
(Applications for copies shall be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia PA 19103)	

AMERICAN WELDING SOCIETY (AWS)	
AWS B2.1	Specification for Welding Procedure and Performance Qualification
AWS D1.1	Structural Welding Code – Steel

AWS D14.1	Specification for Welding of Industrial and Mill Cranes and Other Material Handling Equipment
AWS Z49.1	Safety in Welding, Cutting, and Allied Processes
(Applications for copies shall be addressed to the American Welding Society, Inc, 550 NW Lejeune Road, P.O. Box 35140, Miami FL 33135)	

NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA)	
NEMA ICS 6	Industrial Controls and Systems: Enclosures
(Applications for copies shall be addressed to the National Electrical Manufacturers Association, 2101 L Street, NW, Washington DC 20037)	

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)	
NFPA 51B	Standard for Fire Prevention During Welding, Cutting, and Other Hotwork
NFPA 70	National Electrical Code
(Applications for copies shall be addressed to the National Fire Protection Association, One Batterymarch Park, P.O. Box 9101, Quincy MA 02269-9101)	

SOCIETY OF AUTOMOTIVE ENGINEERS, INC (SAE)	
SAE J429	Standard for Mechanical and Material Requirements for Externally Threaded Fasteners
(Applications for copies shall be addressed to the Society of Automotive Engineers, Inc, 400 Commonwealth Drive, Warrendale PA 15906)	

UNIFIED FACILTIES CRITERIA (UFC)	
UFC 3-520-01	Interior Electric Systems
UFC 3-600-01	Fire Protection Engineering for Facilities
UFC 3-310-04	Seismic Design of Buildings

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

The following major components shall be integrated to form the complete Storage Aid System and shall be installed in accordance with this Cover PD, Appendices A-G, and AF Drawings AKR304-01 and AKR304-02.

Mezzanine	Appendix A- Mezzanine
Bin Shelving	Appendix B- Bin Shelving
Swing Reach Turret Truck	Appendix C- Turret Truck
Order Picker	Appendix D- Order Picker
Stock Assist Vehicles	Appendix E- Support Equipment
Straddle Stacker	Appendix E- Support Equipment
10K Pallet Jack	Appendix E- Support Equipment
Pipe Rack	Appendix E- Support Equipment
Sheet Metal Rack	Appendix E- Support Equipment
Plastic Storage Bins	Appendix E- Support Equipment
Enclosed Tire Rack	Appendix E- Enclosed Tire Rack
Removal and Disposal of Existing Equipment	Appendix G- Removal of Existing Equipment

3.2. CHARACTERISTICS

3.2.1. NOISE LEVELS

The Contractor shall consider noise levels in the design of the equipment. Hazardous noise shall not exceed 85 decibels A-weighted sound pressure level (dB(A)) for 8 hours in any 24-hour period or equivalent in accordance with AFOSH 48-20. Noise level measurements will be taken at a three-foot distance from the equipment producing the noise and at a level of five feet above the ground/floor in all locations in which personnel may be present during normal operations. If noise levels of installed equipment exceed this requirement, then noise shall be reduced through engineering controls; i.e., insulation, dampening, and isolation.

3.2.2. ELECTRICAL CHARACTERISTICS

3.2.2.1. POWER SOURCE

The Contractor shall run electrical power from the existing government supplies within the building. The Contractor shall furnish and install all necessary wiring and equipment for power distribution to the system and for control of the system.

3.2.2.2. INSTALLATION CODE

The installation shall, at a minimum, conform to applicable rules of NFPA 70 (National Electrical Code) and UFC 3-520-01.

3.2.2.3. ENVIRONMENTAL PROTECTION

All indoor enclosures and controls shall be in accordance with NEMA ICS 6, Type 12.

3.2.2.4. PROTECTION FROM MECHANICAL DAMAGE

No pushbuttons, control panel, conduit, shielded cable, wire, or electrical device shall be installed in such a way, that would expose it to mechanical damage during normal use. If an electrical device, which includes photo eyes, is exposed to damage by material or personnel, then it shall be guarded.

3.3. DESIGN AND FABRICATION

3.3.1. DESIGN CRITERIA

3.3.1.1. MAINTAINABILITY

The system shall be designed, fabricated, and installed to facilitate maintainability and ensure a minimum service life of 30 years on static components and 15 years on moving components.

3.3.1.2. ENVIRONMENTAL CONDITIONS

The system shall operate in a temperature range of 0 to 120 degrees Fahrenheit with up to 99 percent relative humidity. The system shall be constructed to operate in an open warehouse environment. For components located outdoors, the components shall be constructed for year-round outdoor use, operating in sun, rain, snow, and wind.

3.3.1.3. STANDARD, COMMERCIAL COMPONENTS

Standard, commercial components which have been for sale and available for purchase to the general public or government agencies for at least one year shall be used to the maximum extent possible. Where two or more units of the same type of equipment are required, these units shall be products of the same manufacturer. All equipment and materials shall be new.

3.3.1.4. STRUCTURAL REQUIREMENTS

The system shall be designed and constructed in accordance with state and local codes at Barksdale AFB, LA. The system shall also be designed to withstand the seismic conditions identified in the International Building Code for the Shreveport, LA locality and DOD regulation UFC 3-310-04.

3.3.1.5. VERIFICATION OF DIMENSIONS

The contractor shall become familiar with all details of the work, verify all dimensions in the field, and shall advise the Contracting Officer of any discrepancy before end of post award.

3.3.1.6. OZONE DEPLETING SUBSTANCES (ODS)

The Contractor shall not use or prescribe to the greatest extent possible any ODS in the installation and maintenance of the system. ODS includes, but is not limited to aerosol cans, certain cleaning solvents, and certain lubricants. If there is a question pertaining to the applicability of a substance, submit the name of the substance to the Contracting Officer for verification.

3.3.1.7. SAFETY

The Contractor shall consider the safety of personnel and equipment when designing and installing the system. Safety provisions shall be incorporated to the maximum extent possible. When possible, hazards shall be eliminated through design. When this is not possible, safety devices such as guards, interlocks, and barriers shall be installed. If this does not eliminate the hazard, warning devices such as warning signs, indicator lights, and audio devices shall be installed. Safety requirements shall include, but are not limited to, the following.

3.3.1.7.1. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

The system installation practices and completed system shall meet all applicable requirements of OSHA 29 CFR 1910 and OSHA 29 CFR 1926.

3.3.1.7.2. PROTECTION AGAINST MOVING PARTS

Moving parts shall be provided with guards to protect personnel from possible injury. Guards shall be in accordance with ANSI B11.19.

3.3.1.7.3. PLACARDS

Conspicuous placards shall be mounted adjacent to areas where hazards may exist (i.e., high voltage, pinch points, and tripping hazards). Placards shall also be used to identify operating limits (i.e., capacity, speed, and incline) in a conspicuous location for operators' use.

3.3.1.7.4. CLEAN-UP

The Contractor shall, at all times, keep the work area, including storage areas, free from the accumulation of waste materials and dust which would cause a hazard or nuisance to others. The approved methods of stabilization for dust control are sprinkling, chemical treatment (non-ODS) or a similar method approved by the COTR. If there is a cutting process, the solution shall be vacuumed up during the process to prevent dust pollution and water damage. Before leaving the site, the Contractor shall remove all rubbish,

tools, equipment, and materials that are not the property of the Government. At the completion of the installation/test, the Contractor shall leave the site in a clean, neat and orderly condition satisfactory to the COTR. Waste will be removed daily from the site and shall not be allowed to accumulate to the extent that it becomes a safety or fire hazard. It shall be the Contractor's responsibility to dispose of waste in accordance with all applicable Federal, State, County and Municipal codes.

3.3.1.8. ERGONOMIC DESIGN

The system design and layout shall incorporate ergonomic design criteria so the optimal interface between operator and equipment is attained.

3.3.2. PROTECTIVE COATINGS

All system component surfaces shall be protected from corrosion by painting, plating, or galvanizing.

3.3.2.1. PAINTING

Metal surfaces, which are not galvanized or plated, shall be cleaned, treated, and painted to protect against rust, corrosion, and deterioration. The first coat of paint or primer shall be applied to a dry clean surface as soon as practicable after cleaning and treating the metal. The primer shall not interfere with the application and adhesion of subsequent coats. Paint shall last the service life of the equipment. Paint shall be lead and chromate free and meet air pollution requirements for solvent emissions. When several standard colors are available, a color selection chart shall be submitted to the COTR with the shop drawings for selection. The finish coat shall be a smooth, even surface, free from runs, sags, and defects when dry. Welded surfaces shall be cleaned and painted after the welding process is complete. Pre-painted accessories, as well as surfaces not requiring paint, shall be protected from overspray.

3.3.2.2. PLATING

All surfaces to be plated shall be thoroughly cleaned to provide a surface free of mill scale, oil, grease, dirt, rust, and any other foreign material prior to being plated. Plating at a minimum shall comply with ASTM B633, Service Condition 1, Type I unless otherwise specified.

3.3.2.3. GALVANIZING

All metal surfaces to be galvanized shall be thoroughly cleaned to provide smooth surfaces and shall comply with ASTM A153 and ASTM A123.

3.3.2.4. DISSIMILAR METALS

Materials used and their locations shall not promote galvanic corrosion. No combination of materials shall be used that form an electrolytic couple of such nature that corrosion is accelerated.

3.3.3. WELDING

Dimensional tolerances for welded construction, details of welds, and quality of welds shall be in accordance with the applicable requirements of AWS B2.1, AWS D1.1, and AWS D14.1. Safety precautions during welding shall conform to AWS Z49.1.

3.3.3.1. FIRE PROTECTION

All welding, cutting, brazing, and burning operations shall be accomplished in strict compliance with the requirements outlined in AFI 91-203 and NFPA Standard 51B. Prior to starting any welding, cutting, brazing, or burning operations, the Contractor shall obtain a permit (USAF Welding, Cutting, and Brazing AF Form 592). This permit can be obtained by contacting the Barksdale Fire Department at least 24 hours in advance. A copy of each permit will be retained at the work site until the work has been completed. Operations that produce flying, dropping slag, metal or embers shall have sufficient non-combustible materials and fire blankets on site to protect against fire damage or personal injury. In addition, the contractor shall provide a minimum of 2 portable fire extinguishers at the work site until the work has been completed. Extinguishers shall meet a rating of 4A-40BC and the requirements outlined in AFOSH 91-501, Chapter 6. At the close of their operation, the contractor shall make a thorough inspection of each building in which he/she has performed work. This inspection shall ensure that all necessary safeguards relative to potential fire hazards are in effect and operational. The contractor shall familiarize themselves and their personnel on the location of all telephones needed for fire reporting. The contractor shall maintain good housekeeping practices to reduce the risk of fire, damage, and/or personal injury. All scrap materials, rubbish, and refuse shall be removed daily from in and around the building and shall not be permitted to be strewn on adjacent property. Flammable and combustible materials used inside the building shall be kept to a minimum and removed from the building during unused periods. Storage of flammable/combustible materials shall not be permitted inside the building.

3.3.4. CUTTING

All edges produced by cutting operations shall be finished by grinding (or other method approved by the COTR) to a surface finish equivalent to that of adjacent surfaces. Sharp edges shall not be acceptable.

3.3.5. COORDINATION

The Contractor shall obtain approval from the local base civil engineering, fire, safety, and bioenvironmental offices before making any modifications to the existing structure to accommodate the new system. The modifications shall match existing work and shall

be of comparable quality. The COTR shall also approve all modifications before they are made.

3.3.6. NAMEPLATES

The Contractor shall provide and install one corrosion resistant metal nameplate for each component. A nameplate for each row of shelving/rack shall be provided such that if one row is dismantled, the nameplates will exist elsewhere. Nameplates shall be located in a visible and safe location. Nameplates shall last the life of the equipment and shall be capable of withstanding local environmental conditions. Nameplates shall be stamped, engraved, or etched in a print type not less than 1/8-inch tall. No nameplate or product marking shall be installed until all touch-up painting has been completed. The nameplate or product marking shall clearly display the following headings and corresponding information.

Type of equipment
Name of manufacturer
Model Number
Contract Number
Serial Number
Capacity
Weight
Manufacture Date, Month/Year
"Property of US Government"

3.3.7. PRECEDENCE

Where local codes and standards conflict with the contents of this PD, the more stringent requirement shall prevail.

3.3.8. MATERIALS

3.3.8.1. STEEL

The structural steel components shall meet all design property requirements of AISC 325.

3.3.8.2. MECHANICAL FASTENING DEVICES

Unless otherwise specified, all threaded connectors of diameter greater than 7/16 inch shall be either A325 bolts conforming to ASTM A325 or SAE Grade 5 bolts conforming to SAE J429. All structural joints shall be in accordance with AISC 360. Bolt hole diameters shall not exceed nominal bolt diameters by more than 1/16 inch. All bolt holes shall be free of burrs, pins, or slivers. Bolts shall extend a minimum of two threads beyond the nuts, but not more than five threads. All nuts, bolts, and other threaded fasteners shall be plated or galvanized to prevent corrosion. All threaded fasteners shall utilize plated flat or lock washers as required.

3.3.8.3. ANCHORS

Anchors shall, at a minimum, meet the requirements of ASTM A307. Anchors shall be either the drop-in expansion type or wedge type. All anchors shall be sufficient in size to withstand the calculated pullout and shear forces experienced by the equipment. Minimum anchor sizes shall be 3/8 inch in diameter or, if applicable, as specified in the appendices. Anchor lengths shall be long enough to assure that the manufacturer's minimum embedment in concrete is maintained and shall be installed properly to maintain the required minimum concrete embedment. Anchors shall be spaced so that the manufacturer's recommended minimum allowable spacing between anchors is maintained and the recommended minimum allowable edge distance is maintained. All anchors shall be torqued to the manufacturer's recommended installation torque. When required, adhesive anchors may be used; subject to approval by the COTR.

3.4. DOCUMENTATION

The Contractor shall provide documentation (data) as described below and in accordance with Table 1 below. Where possible, the Contractor shall print on recycled paper. Also, the Contractor shall not require the use of any Class I ozone depleting substance in any submittal.

3.4.1. MANAGEMENT REPORTS

The Contractor shall provide a monthly status report complete with schedule. The report shall be either Microsoft word document or a PDF file. The monthly status report shall be submitted in accordance with Table 1. Contractor format is acceptable as long as it provides the following information as a minimum;

A) A front cover sheet which includes the title of report, the contractor’s name and address, the base name, the contract number, and the date.
B) A schedule showing actual progress to date against current contract schedule through contract completion is required. In addition, forecasted delivery and other significant project milestones should address/include, at a minimum: CLIN deliveries, submission of all data items, post award site visit (if applicable), shipping of deliverables, installation, training/orientation (if required), system checkout test, quality conformance test, reliability demonstration test, etc."
C) The body of the report shall provide a summary of the progress to date. It shall identify any problem areas, any changes in schedule or contract equipment, any engineering change proposals, all significant trips, emails, or telephone calls affecting the performance or scope of the contract.

3.4.2. SHOP DRAWINGS

The Contractor shall provide shop drawings for the system and equipment layout, fire suppression drawings and design calculation stamped and submitted for approval by Base Fire. Shop drawing package shall be submitted in accordance with Table 1. Hard

copy size of drawing shall be dependent on clarity of drawing, but as a minimum shall be B size. Shop drawings shall be submitted in a time frame, which meets the contract schedule. Government shall have two weeks to review shop drawings. Any resubmittals required shall be resubmitted within one week.

3.4.3. EQUIPMENT MANUALS

The Contractor shall provide separate maintenance and Illustrated Parts Breakdown (IPB) manuals for all equipment.

3.4.4. AS-BUILT DRAWINGS

The Contractor shall provide as-built drawings of all drawings submitted as part of the shop drawing package. As-built drawings shall be submitted in accordance with Table 1.

Table 1 – Data Requirements

SUBMITTAL	DUE DATE	DISTRIBUTION LIST		
		[redacted]	Buyer identified at time of award	Base POC
Management Reports (3.4.1)	1st business day of each month starting after the month the contract is awarded	Email with attachment of report	Email with attachment of report	Email with attachment of report
Shop Drawings (3.4.2)	Due date is same as CLIN 0001	Email with attachment of drawings (AutoCAD and PDF)	Email with attachment of drawings (PDF)	Email with attachment of drawings (AutoCAD and PDF)
Equipment Manuals (3.4.3)	With delivery of equipment	Email with attachment of manuals (PDF)	Email indicating delivery of manuals completed	Email with attachment of manuals (PDF) and 3 sets of hard copies
System Checkout Certificate (4.2.1)	Due upon contractor system installation inspection completion	Email with attachment of system checkout certificate (Word Document or PDF)	Email with attachment of system checkout certificate (Word Document or PDF)	Email with attachment of system checkout certificate (Word Document or PDF)

As-built Drawings (3.4.4)	30 days after Government acceptance of system	Email with attachment of drawings (AutoCAD and PDF	Email with attachment of drawings (PDF)	Email with attachment of drawings (AutoCAD and PDF)

3.5. ORIENTATION

The Contractor shall provide technical services and materials to orient Government personnel. Fully qualified Contractor personnel who are knowledgeable of the system shall accomplish all orientation. Courses shall be combined in accordance with the Contractor's standard commercial training courses, where applicable, provided all aspects of training are included. Orientation shall be provided at Barksdale AFB, LA. The Contractor shall provide each attendee with a certificate indicating successful completion of the orientation. All orientation shall be completed prior to the start of the quality conformance test.

3.5.1. SYSTEM OPERATOR ORIENTATION

This orientation shall provide instructions in the overall operational functions that are performed by the system operators. Instructions shall include the operation of all the system components. Upon completion of this course, the operators shall be able to operate all components of the system. Operators shall be able to perform these functions using only the reference manuals provided with the system relative to operations. The hands-on phase shall include actual operation of the system under the supervision and instruction of the Contractor. An estimated 6 students with possibly no experience will attend per building.

3.5.2. MAINTENANCE ORIENTATION

This orientation shall provide instructions in corrective and preventive maintenance of the system delivered. Instruction shall include installation and adjustment of all system components. Upon completion of this orientation, students shall be able to install, adjust, and maintain equipment using only the maintenance reference manual delivered. The hands-on phase shall include actual field instruction in the maintenance requirements of the installed system. An estimated 6 students with possibly no experience will attend per building.

4. QUALITY ASSURANCE PROVISIONS

4.1. GENERAL

The COTR shall monitor the installation of the system. The system delivery dates shall not be extended because of work stoppages caused by unacceptable practices and/or test failures. The Government will provide all test loads. The Contractor shall be responsible for loading and unloading all test loads and performing all inspections and

tests. The Contractor shall provide a knowledgeable and authoritative representative on site during the entire acceptance tests.

4.2. ACCEPTANCE TESTS

Three tests must be successfully completed prior to the Government accepting the system. These tests are the system checkout test, the quality conformance test, and the reliability demonstration test.

4.2.1. SYSTEM CHECKOUT TEST

Upon completion of installation, the Contractor using loads of the type specified herein and, in the appendices, shall check out the system. The Contractor shall inspect the system to assure that the system meets all the requirements of 4.3.1. The Contractor shall also test the system in accordance with the test defined in 4.3.2. All inspections and tests shall be repeated until all modifications and/or adjustments are complete and the system passes all inspections and tests. The Contractor shall submit to the Contracting Officer written certification that the system has passed the requirements of this paragraph. The COTR will schedule the quality conformance test to start within 10 days following the receipt of the written certification from the Contractor. Notification of a system checkout test shall comprise of an e-mail to the Contracting Officer, COTR, and project engineer stating:

“The system has undergone testing/inspection and successfully met all requirements within the contract and is ready to undergo the Quality Conformance Test. Any deficiencies found at the Quality Conformance Test which result in the system being failed may result in consideration.”

4.2.2. QUALITY CONFORMANCE TEST

As part of the quality conformance test, the Contractor shall provide written certification that the requirements listed in this PD have been met. This certification is required on or before the start of the quality conformance test as detailed in 4.2.1. The Contractor, in the presence of the COTR, shall inspect the system to confirm that the system meets all the requirements of 4.3.1. The Contractor, in the presence of the COTR, shall also test the system in accordance with the test defined in 4.3.2. Upon successful completion of all tests and inspections, the reliability demonstration shall start.

4.3. INSPECTIONS AND TESTING

This section defines all inspections and tests that must be completed as part of the system checkout test and repeated at the quality conformance test. The Contractor may add to this list, or question any requirement, by sending a letter to the Contracting Officer prior to the acceptance tests. The COTR will classify all deficiencies encountered into one of the defect classification listed below. Any critical or major defect found shall be cause for rejection of the system. Any combination of two or more minor defects shall leave the rejection of the system at the discretion of the COTR.

Critical Defect - A defect that judgment and experience indicate is likely to result in hazardous or unsafe conditions for individuals using, maintaining, working near, or depending upon the equipment.

Major Defect - A defect other than critical that is likely to result in failure, or reduce materially the system for its intended purpose.

Minor Defect - A defect that is not likely to reduce materially the usability of the system for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the system.

4.3.1. INSPECTIONS

The system shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of the cover purchase description (and associate appendices, if applicable). These inspections shall be completed as part of the system checkout test and again as a part of the quality conformance test.

4.3.2. TESTS

The tests in associated appendices shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Paragraph	Test	Result
1.	3.3.1.7.3.	Inspect to see that placards are provided where unsafe conditions exist.	☐ Pass ☐ Fail
2.	3.3.1.7.4.	Ensure the work site around the system is clean.	☐ Pass ☐ Fail
3.	3.3.8.3.	Bolts are embedded to the correct depth, lock washers are provided, and nuts are tightened.	☐ Pass ☐ Fail
4.	3.3.2.	Equipment is protected from the environment by either paint, coatings, galvanizing, or the type of material used.	☐ Pass ☐ Fail
5.	3.3.6.	Nameplates provided and securely attached to all equipment.	☐ Pass ☐ Fail
6.	3.4.3.	Manuals provided and are acceptable where required.	☐ Pass ☐ Fail
7.	3.5.	Ensure all training has been provided.	☐ Pass ☐ Fail

4.4 WARRANTY

The contractor shall warrant that all equipment and components furnished under this contract will be free from defects in material or workmanship and will conform with all requirements of this contract. The warranty period shall last one year after final

acceptance. When return, correction, or replacement is required, transportation charges and responsibility for the supplies while in transit shall be borne by the contractor. Any equipment or components thereof, corrected or furnished in replacement under this warranty, shall also be subject to the terms of this warranty to the same extent as supplies initially delivered. The warranty, with respect to the equipment or components thereof, shall be equal in duration to the length of the original warranty and shall run from the date of delivery of the corrected or replaced supplies. The Contracting Officer's Technical Representative (COTR) or Base Project Officer (BPO) shall notify the contractor of failures that require correction under this warranty. The contractor shall provide an email explaining the suspected cause of failure, listing the defective item(s), course of action (i.e. replace or repair), time to complete (i.e. delivery and installation or time to repair), and any other details that may be relevant.

THIS AREA LEFT BLANK INTENTIONALLY

APPENDIX A

FOR

MEZZANINE

AT

BARKSDALE AFB, LOUISIANA

BUILDING 4845

CSN GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

1. GENERAL SCOPE

This appendix establishes the minimum performance, design, fabrication, installation, and test requirements for a mezzanine at Barksdale AFB, Building 4845. The work shall be completed in accordance with this appendix, the Cover Purchase Description (PD), and Air Force (AF) Drawing GBR602-02. This appendix covers all equipment, materials, and labor necessary to complete installation of the system.

2. APPLICABLE DOCUMENTS

Applicable documents shall be in accordance with Section 2 of the Cover PD as well as ASTM A36, ASTM A446, ASTM A500, ASTM A570, ASTM A611, OSHA 1910.23 and OSHA 1910.24.

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

The mezzanine shall provide an elevated storage space within Building 4845.

3.2. CHARACTERISTICS

The mezzanine shall conform to the following requirements.

3.2.1. CONFIGURATION REQUIREMENTS

The mezzanine shall be located and configured as shown on AF Drawing GBR602-02.

3.2.2. STRUCTURE AND INSTALLATION

- **GENERAL REQUIREMENTS**
  - **Load Capacity:** All components capable of supporting a minimum capacity of 150 pounds per square foot (uniformly distributed) without permanent deflection or deformation
  - **Dimension and Clear Height:** As shown on AF Drawing GBR602-02
  - **Freestanding:** Not attached to any existing building wall or column and not require cross bracing between columns.
  - All components pre-engineered to eliminate on-site welding.
  - Designed to withstand seismic forces as specified in the International Building Code for the Shreveport, LA locality and DOD regulation UFC 3-310-04.
  - No component deflect greater than the length of the component divided by 360 (L/360) under uniformly loaded conditions

- **COLUMNS**
  - Cold formed, structural steel tubing
  - Meet or exceed requirements of ASTM A500, Grade B, FY-46KSI
  - Pre-punched for connection to beams and joists

- Minimum 6-inch by 6-inch x 3/16 inch thick

- **BASE PLATES**
  - Used under each column to distribute load
  - Factory welded to columns and prepunched for anchors
  - Anchored in accordance with manufacturers recommended procedures
  - Meet or exceed ASTM A36
  - Minimum 10-inch by 10-inch x 5/8-inch
  - Grout used in accordance with manufacturers recommended procedures

- **FRAMING**
  - Meet or exceed requirements of ASTM A570 for hot rolled structural steel members
  - Meet or exceed requirements of ASTM A500 for cold-formed structural steel members
  - Beams are structural steel and prepunched for secure connection to column and joists with A325 bolts
  - Joists are structural steel and prepunched for secure connection to beams with A325 bolts
  - Minimum 18-guage steel for structural steel bridging channels

- **DECKING**
  - Consist of a metal roof deck and composite flooring with minimum density of 60 pounds per cubic foot
  - **Metal Roof Deck**
    - Galvanized metal roof decking
    - Minimum 20-gauge, type-B roof deck meeting the requirements of ASTM A611, Grade C; or minimum 18 gauge, type-B roof deck meeting the requirements of ASTM A446, Grade A
    - Securely fastened to framing with plated, self-tapping, steel screws or equivalent
  - **Composite Flooring**
    - Resindek or equivalent
    - Minimum ¾ inch thich
    - Exterior sealant used, Acryseal or equivalent
    - Tongue and groove on long sides forming an integral surface
    - Securely fastened to framing with manufacturer's recommended installation procedures

- **STAIRS**
  - Provided at the locations shown on AF Drawing GBR602-02
  - Include stairs, structural steel stringers, railings, platforms, and all necessary hardware for installation
  - Designed in accordance with OSHA 1910.24
  - 36 inches wide
  - Platforms utilized as necessary to ensure incline does not exceed 40 degrees

- Closed tread with diamond plate
- Stringers meets or exceed requirements of ASTM A36
- Painted safety yellow
- Stair Railing:
  - Provided on the open sides of all exposed stairways and platforms
  - Designed in accordance with OSHA 1910.23
  - Either 2-rail or 3-rail type
  - Top rail between 30-34 inches above stair tread
  - Minimum 1-1/4 inch, schedule 40 steel tubing
  - Joined with galvanized fittings or pre-engineered union
  - Bolt connected or factory welded to the stringer
  - Capable of withstanding minimum 200 pound load applied in any direction at any point on the top rail

- **MEZZANINE RAILING**
  - Provided on the open sides of all exposed mezzanine floor
  - Designed in accordance with OSHA 1910.23
  - Either 2-rail or 3-rail type
  - Top rail between 42 inches above mezzanine decking
  - Minimum 1-1/2 inch, schedule 40 steel tubing
  - Joined with galvanized fittings or pre-engineered union
  - Bolt connected to structural framing beam
  - Capable of withstanding minimum 200 pound load applied in any direction at any point on the top rail
  - Support posts spaced on maximum 8-foot centers

- **KICKPLATE**
  - Provided on the open sides of the mezzanine and platforms
  - Minimum 4-inches high
  - Maximum ¼-inch clearance between floor and bottom of kickplate
  - Minimum 14 gauge steel
  - Securely fastened to mezzanine or railings

- **PALLET GATE**
  - Provided as shown on AF Drawing GBR602-02
  - Constructed of steel tubing matching the railing
  - Provide minimum opening of 60 inches
  - Only pivot types are acceptable.

- **FIRE SUPPRESSION SYSTEM**
  - Wet-pipe sprinkler system installed in accordance with NFPA guidelines and applicable fire codes at Barksdale AFB.
  - Contractor shall perform a flow-test to ensure the existing building fire suppression system has sufficient flow for the new system.

- Fire suppression design and hydraulic calculations shall be sealed by a qualified registered Professional Engineer in Louisiana and provided to the COTR for approval.
- Contractor shall notify the Base Fire Department before connecting the mezzanine fire suppression system into the building system.
- Location of tie-in point TBD at time of Post Award Meeting but not to exceed 200 feet from the location of the mezzanine.

- **ELECTRICAL**
  - LED lighting provided underneath mezzanine with a minimum illuminance level of 50 foot-candles measured at 30 inches above the floor.
  - Supported by mezzanine.
  - On/off switches located as shown on AF Drawing GBR602-02
    - Enclosed, tumbler type
    - Located 52 +/- 2-inches in height from floor

- **SAFETY FEATURES**
  - Metal live load capacity signs displayed on all sides of mezzanine
  - No-step signs posted on all railings on maximum 20-foot centers
  - Minimum vertical member safety factor of 1.92 to 1
  - Minimum horizontal member safety facoty of 1.67 to 1

4. QUALITY ASSURANCE PROVISIONS

4.1. INSPECTION

The mezzanine system shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of this appendix and the Cover PD. These inspections shall be completed as part of the system checkout test and again as a part of the quality conformance test.

4.2. TESTS

The following tests shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Description	Result
1.	Maximum loads shall be placed randomly in the mezzanine. After not less than four hours, the test loads shall be removed and the mezzanine examined for signs of deformation. If any component of the system exhibits plastic or elastic deformation outside of the approved parameters, the system fails the test.	☐ Pass ☐ Fail
2.	The lighting under the mezzanine shall be turned on. Test the lighting with a light meter 30 inches from the floor. If the lighting is not a minimum of 50 foot-candles then the system shall fail the test.	☐ Pass ☐ Fail

APPENDIX B

FOR

BIN SHELVING

AT

BARKSDALE AFB, LOUISIANA

BUILDING 4845

CSN: GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

1. GENERAL SCOPE

This appendix establishes the minimum performance, design, fabrication, installation, and test requirements for bin shelving at Barksdale AFB, Building 4845. The work shall be completed in accordance with this appendix, the Cover Purchase Description (PD), and Air Force (AF) Drawing GBR602-02. This appendix covers all equipment, materials, and labor necessary to complete installation of the system.

2. APPLICABLE DOCUMENTS

Applicable documents shall be in accordance with Section 2 of the Cover PD.

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

The bin shelving shall be used to store hand-liftable items and interface with the mezzanine specified in Appendix A.

3.2. CHARACTERISTICS

Bin shelving shall conform to the following requirements.

3.2.1. CONFIGURATION REQUIREMENTS

Bin shelving shall be located and configured as shown on AF Drawing GBR602-02.

3.2.2. STRUCTURE AND INSTALLATION

- **SHELF DETAILS**
  - Shelf size shall be as shown on AF Drawing GBR602-02
  - Capacity as shown on AF Drawing GBR602-02
  - Shelf edges shall be flanged down on all sides with at least one additional return flange
  - Shelf shall have adjustable shelf clips to secure all four corners
  - Not exhibit permanent deformation and elastic deformation shall not exceed .875 percent of the unsupported span. The following formula shall be used to determine the deflection amount:

    *Deflection = [(M1 - M2) / shelf beam length] * 100*

- **SUPPORTING POSTS**
  - Posts shall be as shown on AF Drawing GBR602-02
  - Shall have capacity sufficient to support shelfs as shown on AF Drawing GBR602-02
  - Shall be adjustable by 1 or 1-1/2 inch increments
  - Shall be beaded, box, or angle upright type as defined by the Shelving Manufacturers Association

- **PANELS**
  - Back panels shall be on all shelving units
  - Side panels shall be on all shelving units

- **BASE STRIP**
  - Shall be installed between bottom shelf and floor on all units

- **FOOT PLATES**
  - Each supporting post shall have a foot plate and be secured to floor with anchor bolts
  - Foot plates shall be secured behind base strips

- **FREESTANDING STRUCTURE**
  - Shall be a rigid freestanding structure
  - Shall be installed per manufacturers instructions

- **ASSEMBLY**
  - Shall be assembled using all required components as per manufacturers instructions
  - Shelving shall be secured to the supporting posts by means of positive engaging clips

- **ALIGNMENT**
  - Shall maintain shape and positions under full load
  - Aisle alignment shall be maintained from unit to unit by 1/8 inch
  - Vertical alignment shall be within 1/4 inch
  - All leveling shims shall be secured under foot plates

- **ROW MARKERS**
  - Two card holders installed on the end of each rack section for row identification.
  - Card holders capable of holding and shielding 8.5 inch by 11 inch printed labels from debris.
  - Securely mounted between 7 feet and 10 feet from the floor.

- **COLOR**
  - Shall be as specified by COTR

4. QUALITY ASSURANCE PROVISIONS

4.1. INSPECTION

The bin shelving shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of this appendix and the Cover PD. These inspections shall be completed as part of the system checkout test and again as a part of the quality conformance test.

4.2. TESTS

The following test shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Description	Result
1.	Maximum loads shall be placed randomly in the shelf system. After not less than four hours, the test loads shall be removed and the shelving examined for signs of deformation. If any component of the system exhibits plastic or elastic deformation outside of the approved parameters, the system fails the test.	☐ Pass ☐ Fail

THIS AREA LEFT BLANK INTENTIONALLY

APPENDIX C

FOR

RAIL-GUIDED MAN-UP TURRET TRUCK

AT

BARKSDALE AFB, LA

BUILDING 4845

CSN GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

1. SCOPE

This appendix establishes the minimum performance, design, fabrication, installation, and test requirements for a rail-guided man-up turret truck system at Barksdale AFB, Building 4845. The work shall be completed in accordance with this appendix, the Cover Purchase Description (PD), and Air Force (AF) Drawing GBR602-02. This appendix covers all equipment, materials, and labor necessary to complete installation of the system.

2. APPLICABLE DOCUMENTS

Applicable documents shall be in accordance with Section 2 of the Cover PD as well as conform to ANSI B56.1 *Safety Standard for Low, High Lift Trucks.*

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

One rail-guided man-up turret truck shall be provided and installed. An additional three turret trucks shall be options, each able to be executed individually from one another. The turret trucks shall interface with existing pallet rack in Building 4845.

3.2. CHARACTERISTICS

Rail-guided man-up turret trucks shall conform to the following requirements.

3.2.1. REQUIREMENTS

- **General Requirements**
  - **Minimum Rated Load Capacity:** 3,000 pounds at 24-inch load centers
  - **Minimum Power:** 24V
  - **Minimum Amp Hour:** Continuous eight hours of operation
  - **Battery Type:** Lithium-Ion
  - **Operator Type:** Standing/Sitting
  - **Lift Height:** 240 inches to top of forks
  - **Maximum Collapsed Height:** 144 inches
  - **Fork Dimensions:** 36 [L]
  - **Fork Adjustments:** Adjustable on max 2 inch increments
  - **Minimum Travel Speed (unloaded):** 5.0 $\pm$ 2.0 MPH
  - **Minimum Travel Speed (max load):** 3.0 MPH
  - **Maximum Travel Speed (when operator platform is raised 24 $\pm$ 6 inches):** 2.0 $\pm$ 0.2 MPH
  - **Minimum Raising Speed:** 45 ft/min with rated load
  - **Maximum Lowering Speed:** 30 ft/min with rated load
  - **Load Stability:** No jerky movements that would displace load
  - **Operator Stability:** No excessive sway when positioning load at max height

  - **Mast System:** Use of both primary and auxiliary mast
- **Braking System**
  - **Type:** Mechanical and/or Electrical
  - **Braking Application:** Caster and Drive

- **Operational Capabilities**
  - **Minimum Reach Distance:** 24 inches
  - **Minimum Tilt:** 5 degrees up and 2 degrees down
  - **Minimum Side Shift:** +/- 2 inches from center
  - **Wheel Type:** Non-marking wheels
  - **Aisle Operation:** Must be able to operate with a 40 x 48-inch pallet within 66-inch aisles
  - **Speed Control:** Capable of plugging, slowing speed by reversing the speed control
  - **Rail Guidance:** Capable of rail guidance movement within aisles
  - **Fork Rotation:** Fully loaded palletized load able to rotate 180 degrees on vertical access at any height to face either side of aisle.

- **Safety Features & Indicators**
  - Hour indicator
  - Battery charge indicator
  - Highly visible red/amber flashing lights
  - Horn
  - Working spotlight
  - Operator compartment fan and light
  - Aisle lighting
  - Dead man brake
  - Overload protection to prevent lifting loads greater than 110% of the rated capacity
  - Lift limit switch with override
  - Folding seat to allow operation from sitting or standing position
  - Hinged operator restraint side rails with lockout capability
  - Operator compartment overhead safety guard with labeled anchorage point
  - Full body safety harness
  - Auxiliary lowering device
    - Accessible from ground level
    - Not require use of tools for access or operation
    - Lower speed (min/max): 40 ft/min, 100 ft/min
  - Fire extinguisher
  - Window or wire mesh between operator’s compartment and mast

- **Charging Requirements**
  - A compatible battery charger shall be installed as located on AF Drawing GBR602-02 and shall be in accordance with NFPA 70.
  - On-board charger shall be compatible with a 240-volt power source.

- Chargers shall comply with NEMA IB 6-83 standards.

- **Training**
  - Training shall be provided in accordance with ANSI B56.1 standards

4. QUALITY ASSURANCE PROVISIONS

4.1. INSPECTION

The rail-guided man up turret track shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of this appendix and the Cover PD. These inspections shall be completed as part of the system checkout test and again as part of the quality conformance test.

4.2. TESTS

The following tests shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Description	Result
1.	The turret truck shall be tested for four hours as registered by the hour meter. It shall have a fully charged battery before testing begins. The truck shall be tested while carrying a maximum load, and shall be driven down all aisles of the rack system. The truck fails the test if it is not capable of interfacing with each shelving position in the system.	☐ Pass ☐ Fail
2.	The side rails for the turret truck shall be raised and locked into position. The operator shall attempt to operate the turret truck. If the operator is able to operate the turret truck with either side rail in the raised position, the turret truck fails the test. If either side rail will not remain in the raised position, the turret truck fails the test.	☐ Pass ☐ Fail
3.	The operator shall attempt to activate the turret truck while not standing on the deadman brake. If the turret truck activates either vertically or horizontally the turret truck fails the test.	☐ Pass ☐ Fail
4.	The turret truck shall be loaded with a pallet load in excess of 3,300 pounds. An operator shall attempt to lift the load. If the turret truck can lift the load, and the overload valve does not open, then the turret truck fails the test.	☐ Pass ☐ Fail
5.	The platform shall be raised to a height of 10 feet above the warehouse floor with a 3,000-pound load. The auxiliary lowering control will be activated and the descent of the platform timed. If the lowering speed is not in the range of 40 to 100 fpm then the system fails the test. The test shall be repeated four times and the speed shall be calculated as follows: Lowering speed (fpm) = 600/Average time in seconds	☐ Pass ☐ Fail

6.	The turret truck shall be raised until the lift limit switch stops vertical travel. The operator shall attempt to move the turret truck in the horizontal direction. The operator shall use the override button to lift above the limit switch setting to full lift height. The turret truck fails the test if the limit switch does not stop the vertical travel or if the turret truck is able to move horizontally at or above the limit switch setting. The turret truck also fails the test if the operator is not able to override the limit switch and raise the turret truck to full lift height.	☐ Pass ☐ Fail
7.	The Contractor shall demonstrate the charging of the battery. If the battery cannot be charged, the turret truck fails the test.	☐ Pass ☐ Fail

THIS AREA LEFT BLANK INTENTIONALLY

APPENDIX D

FOR

RAIL-GUIDED ORDERPICKER TRUCK

AT

BARKSDALE AFB, LOUISIANA

BUILDING 6237

CSN: GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

1. GENERAL SCOPE

This appendix establishes the minimum performance, design, fabrication, installation, and test requirements for a rail-guided, orderpicker truck at Barksdale AFB, Building 6237. The work shall be completed in accordance with this appendix and the Cover Purchase Description (PD). This appendix covers all equipment, materials, and labor necessary to complete the installation of the system.

2. APPLICABLE DOCUMENTS

Applicable documents shall be in accordance with Section 2 of the Cover PD as well as conform to ANSI B56.1 *Safety Standard for Low, High Lift Trucks.*

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

One orderpicker truck shall be provided and installed to interface with the existing pallet rack in Building 6237. The operator's platform shall travel vertically to permit picking of property at any storage level within the system.

3.2. CHARACTERISTICS

Rail-guided orderpicker truck shall confirm to the following requirements

3.2.1. REQUIREMENTS

- **General Requirements**
  - **Minimum Rated Load Capacity:** 3,000 pounds at 24-inch load centers
  - **Minimum Power:** 24V
  - **Minimum Amp Hour:** Continuous eight hours of operation
  - **Battery Type:** Lithium-Ion
  - **Operator Type:** Standing
  - **Lift Height:** 240 inches to top of forks
  - **Maximum Collapsed Height:** 120 inches
  - **Fork Dimensions:** 36 [L]
  - **Fork Adjustments:** Adjustable on max 2 inch increments
  - **Minimum Travel Speed (unloaded):** 5.0 $\pm$ 2.0 MPH
  - **Minimum Travel Speed (max load):** 3.0 MPH
  - **Maximum Travel Speed (when operator platform is raised 24 $\pm$ 6 inches):** 2.0 $\pm$ 0.2 MPH
  - **Minimum Raising Speed:** 45 ft/min with rated load
  - **Maximum Lowering Speed:** 30 ft/min with rated load
  - **Load Stability:** No jerky movements that would displace load
  - **Operator Stability:** No excessive sway when positioning load at max height

- **Braking System**
  - **Type:** Mechanical and/or Electrical
  - **Braking Application:** Caster and Drive

- **Operational Capabilities**
  - **Wheel Type:** Non-marking wheels
  - **Aisle Operation:** Must be able to operate with a 40 x 48-inch pallet within 66 inch aisles
  - **Speed Control:** Capable of plugging, slowing speed by reversing the speed control
  - **Rail Guidance:** Capable of rail guidance movement within aisles

- **Safety Features and Indicators**
  - Hour indicator
  - Battery charge indicator
  - Highly visible red/amber flashing lights
  - Horn
  - Working spotlight
  - Operator compartment fan and light
  - Aisle lighting
  - Dead man brake
  - Overload protection to prevent lifting loads greater than 110% of the rated capacity
  - Lift limit switch with override
  - Hinged operator restraint side rails with lockout capability
  - Operator compartment overhead safety guard with labeled anchorage point
  - Full body safety harness
  - Auxiliary lowering device
  - Accessible from ground level
  - Not require use of tools for access or operation
  - Lower speed (min/max): 40 ft/min, 100 ft/min
  - Fire extinguisher
  - Window or wire mesh between operator’s compartment and mast

- **Charging Requirements**
  - A compatible battery charger shall be installed in accordance with NFPA 70.
  - On-board charger shall be compatible with a 240-volt power source.
  - Chargers shall comply with NEMA IB 6-83 standards.

- **Training**
  - Training shall be provided in accordance with ANSI B56.1 standards

4. QUALITY ASSURANCE PROVISIONS

4.1. INSPECTION

The system shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of this appendix and the cover PD. These inspections shall be completed as part of the system checkout test and again as part of the quality conformance test.

4.2. TESTS

The following tests shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Description	Result
1.	The orderpicker shall be tested for four hours as registered by the hour meter. It shall have a fully charged battery before testing begins. The orderpicker shall be tested while carrying a maximum load, and shall be driven down all aisles of the rack system. The orderpicker fails the test if it is not capable of interfacing with each shelving position in the system.	☐ Pass ☐ Fail
2.	The side rails for the orderpick shall be raised and locked into position. The operator shall attempt to operate the orderpicker. If the operator is able to operate the orderpicker with either side rail in the raised position, the orderpicker fails the test. If either side rail will not remain in the raised position, the orderpicker fails the test.	☐ Pass ☐ Fail
3.	The operator shall attempt to activate the orderpicker while not standing on the deadman brake. If the orderpicker activates either vertically or horizontally the orderpicker fails the test.	☐ Pass ☐ Fail
4.	The orderpicker shall be loaded with a pallet load in excess of 3,300 pounds. An operator shall attempt to lift the load. If the orderpicker can lift the load, and the overload valve does not open, then the orderpicker fails the test.	☐ Pass ☐ Fail
5.	The platform shall be raised to a height of 10 feet above the warehouse floor with a 3,000-pound load. The auxiliary lowering control will be activated and the descent of the platform timed. If the lowering speed is not in the range of 40 to 100 fpm then the system fails the test. The test shall be repeated four times and the speed shall be calculated as follows: Lowering speed (fpm) = 600/Average time in seconds	☐ Pass ☐ Fail

6.	The orderpicker shall be raised until the lift limit switch stops vertical travel. The operator shall attempt to move the orderpick in the horizontal direction. The operator shall use the override button to lift above the limit switch setting to full lift height. The orderpicker fails the test if the limit switch does not stop the vertical travel or if the orderpicker is able to move horizontally at or above the limit switch setting. The orderpicker also fails the test if the operator is not able to override the limit switch and raise the orderpicker to full lift height.	☐ Pass ☐ Fail
7.	The Contractor shall demonstrate the charging of the battery. If the battery cannot be charged, the orderpicker fails the test.	☐ Pass ☐ Fail

THIS AREA LEFT BLANK INTENTIONALLY

APPENDIX E

FOR

SUPPORT EQUIPMENT

AT

BARKSDALE AFB, LOUISIANA

BUILDINGS 4845 & 6237

CSN GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

1. GENERAL SCOPE

This appendix establishes the minimum performance, design, fabrication, installation, and test requirements for support equipment at Barksdale AFB, Buildings 4845 and 6237. The work shall be completed in accordance with this appendix, the Cover Purchase Description (PD), and Air Force (AF) Drawing GBR602-02. This appendix covers all equipment, materials, and labor necessary to complete installation of the system.

2. APPLICABLE DOCUMENTS

Applicable documents shall be in accordance with Section 2 of the Cover PD.

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

Support equipment shall be provided as part of turn-key storage aid system.

3.2. CHARACTERISTICS

Support equipment shall conform to the following requirements.

3.2.1. CONFIGURATION REQUIREMENTS

Support equipment shall be located and configured as shown on AF Drawing GBR602-02 or as outlined below.

3.2.2. STRUCTURE AND INSTALLATION

- **Stock Assist Vehicles**
  - (3) stock assist vehicles delivered to Building 4845
  - Minimum lift height for operator platform: 118 inches
  - Operator platform capacity: 300 pounds
  - Powered load tray capacity: 200 pounds
  - Features
    - Minimum 200 amp-hour maintenance free battery pack with on board battery charger
    - Battery discharge indicators
    - Key switch
    - Front and rear strobe lights
    - Simultaneous travel and lift
    - Interlocking operator compartment gates
    - Dual feet sensors
    - Hour meter
    - Horn
    - Front and side bumpers

        - Retractable charger cord
        - Remote manual descent
        - Minimum 42” high operator compartment
        - Mast and platform storage pockets
        - Service, Parts, and Operator Manuals

- **Straddle Stacker**
    - (1) Walk behind electric straddle stacker lift delivered to Buliding 6237
    - Capacity: Minimum 2,500 pounds
    - Elevated height: Minimum 120”
    - Fork length: 42”
    - Load backrest: 40”

- **10K Pallet Jack**
    - (1) Electric pallet jack delivered to Building 6237
    - Performance Requirements
        - Load Capacity: 10,000 lbs minimum
        - Power Steering: Required
        - Fork Design: Blunt nose, compatible with 463L pallets
    - Dimensional Requirements
        - Fork Dimensions: 96 inches (length) x 54 inches (width)
        - Individual Fork Width: 10 inches
        - Clear Opening Between Forks: 36 inches
        - Load Backrest Height: 48 inches
        - Fork Height (Lowered): 3.25 inches
        - Fork Height (Raised): 9.25 inches
    - Electrical System
        - Battery Type: Lithium-Ion
        - Charger: On-board, 110V AC, compatible with standard wall outlet power sources
    - Instrumentation and Safety Features
        - Battery Discharge Indicator: Required
        - Lift Interrupt System: Required
        - Hour Meter: Required

- **Pipe Racks**
    - (4) Horizontal pipe racks configured as shown on AF Drawing GBR602-02
    - Nominal 80-inch wide x 48-inch deep x 90-inch high
    - Minimum 5,000 pound capacity
    - Single sided
    - 8 arms
    - Anchored in accordance with the manufacturer’s installation procedures

- **Sheet Metal Rack**
    - (3) Sheet Metal Racks configured as shown on AF Drawing GBR602-02
        - Nominal dimensions: 84”H x 153-1/2”D x 159”W

- Capable of storage a maximum sheet size of 72” x 144”.
- Eight storage levels able to extend 100% of its length
- Shelf capacity: minimum of 5,500 pounds
- Shelf clearance: 5-27/32”.
- Hinged shelf supports capable of collapsing when not in use

- **Plastic Storage Bins**
  - Three sizes of plastic storage bins shall be provided to interface with the bin shelving specified in Appendix B.
  - All bins shall be yellow
  - Quantities, dimensions, and example part number (or equivalent) as shown below:

Quantity	Outer Dimension	Example Part Number
2,500	11”L x 4”W x 4”H	Akro-Mils AkroBin 30224
2,500	15”L x 8”W x 7”H	Akro-Mils AkroBin 30240
2,500	18”L x 11”W x 10”H	Akro-Mils AkroBin 30260

4. QUALITY ASSURANCE PROVISIONS

4.1. INSPECTION

The pallet rack shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of this appendix and the Cover PD. These inspections shall be completed as part of the system checkout test and again as a part of the quality conformance test.

4.2. TESTS

The following tests shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Description	Result
1.	Stock Assist Vehicles delivered as specified	☐ Pass ☐ Fail
2.	Straddle Stacker delivered as specified	☐ Pass ☐ Fail
3.	10K Pallet Jack delivered as specified	☐ Pass ☐ Fail
4.	Pipe Racks installed as specified	☐ Pass ☐ Fail
5.	Sheet Metal Rack installed as specified	☐ Pass ☐ Fail
6.	Plastic Storage Bins delivered as specified	☐ Pass ☐ Fail

APPENDIX F

FOR

ENCLOSED TIRE RACK

AT

BARKSDALE AFB, LOUISIANA

BUILDING 6237

CSN GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

[redacted]

1. GENERAL SCOPE

This appendix establishes the minimum performance, design, fabrication, installation, and test requirements for an enclosed tire rack at Barksdale AFB, Building 6237. The work shall be completed in accordance with this appendix and the Cover Purchase Description (PD). This appendix covers all equipment, materials, and labor necessary to complete installation of the system.

2. APPLICABLE DOCUMENTS

Applicable documents shall be in accordance with Section 2 of the Cover PD.

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

An enclosed tire rack shall be provided as part of the storage aid system.

3.2. CHARACTERISTICS

The enclosed tire rack shall conform to the following requirements.

3.2.1. CONFIGURATION REQUIREMENTS

The enclosed tire rack shall be located adjacent to Building 6237, exact location to be determined after award.

3.2.2. STRUCTURE AND INSTALLATION

- Sized to store (6) B-52 Tires
  - 56” diameter x 16” width per tire
  - 600 pounds per tire
- Fully enclosed with flip-down, hinged, or otherwise removable side for easy loading/unloading of tires
- Tie-down rings in sufficient quantity to allow for securing to 463L pallet
- Forklift capatable for easy movement
- Collapsible when not in use

4. QUALITY ASSURANCE PROVISIONS

4.1. INSPECTION

The enclosed tire rack shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of this appendix and the Cover PD. These inspections shall be completed as part of the system checkout test and again as a part of the quality conformance test.

4.2. TESTS

The following tests shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Description	Result
1.	Enclosed Tire Rack delivered as specified.	☐ Pass ☐ Fail

THIS AREA LEFT BLANK INTENTIONALLY

APPENDIX G

FOR

REMOVAL OF EXISTING EQUIPMENT

AT

BARKSDALE AFB, LOUISIANA

BUILDING 4845

CSN GBR602

DATE: 16 JUNE 2026

PREPARED BY:

[redacted]

[redacted]

1. GENERAL SCOPE

This appendix establishes the minimum performance, design, fabrication, installation, and test requirements for demolition and removal of existing equipment at Barksdale AFB, Building 4845. The work shall be completed in accordance with this appendix, the Cover Purchase Description (PD), and Air Force (AF) Drawing GBR602-01. This appendix covers all equipment, materials, and labor necessary to complete installation of the system.

2. APPLICABLE DOCUMENTS

Applicable documents shall be in accordance with Section 2 of the Cover PD.

3. REQUIREMENTS

3.1. SYSTEM DESCRIPTION

Existing government owned bin shelving on powered mobile aisle, pallet rack on powered mobile aisle, vertical lifts, and sheet metal rack shall be removed.

3.2. CHARACTERISTICS

The demolition and removal of existing government owned equipment shall conform to the following requirements.

3.2.1. CONFIGURATION REQUIREMENTS

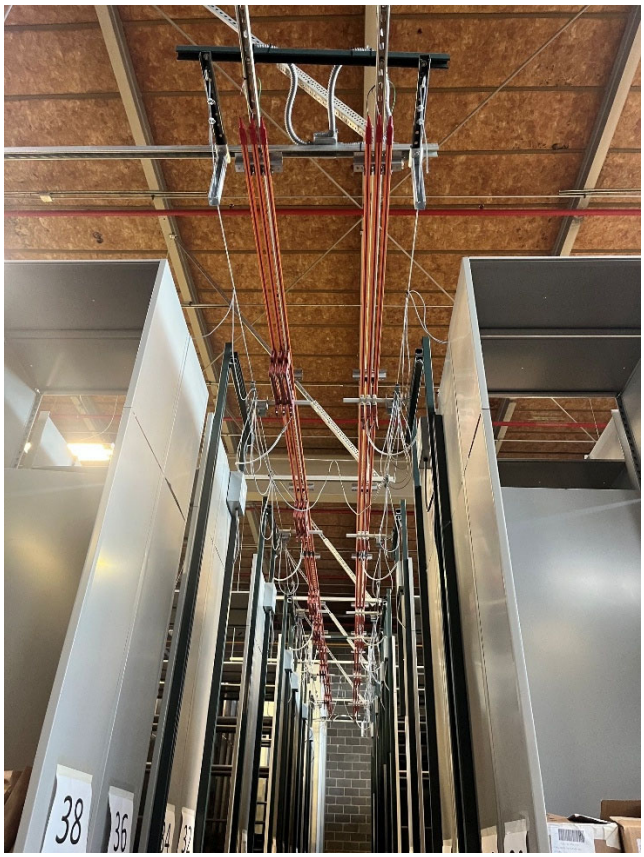
Existing government owned equipment to be removed as shown on AF Drawing GBR602-01. Any bolts left in floor from existing equipment shall be ground level to the floor and any holes filled in with an epoxy/resin.

3.2.2. EXISTING EQUIPMENT

- **Bin Shelving on Powered Mobile Aisle**
  - ~ 45’ x 92’ bin shevling on mobile aisle system shall be dissembled and disposed of
    - 36 rows of 11 bin shelves each (3’W x 18”D x 14’H)
    - 12 mobile carriages
    - 6 stationary carriages
    - All mobile aisle carriages, electrical components, and associated equipment for the operation of the powered mobile aisle system
  - Picture of existing equipment:

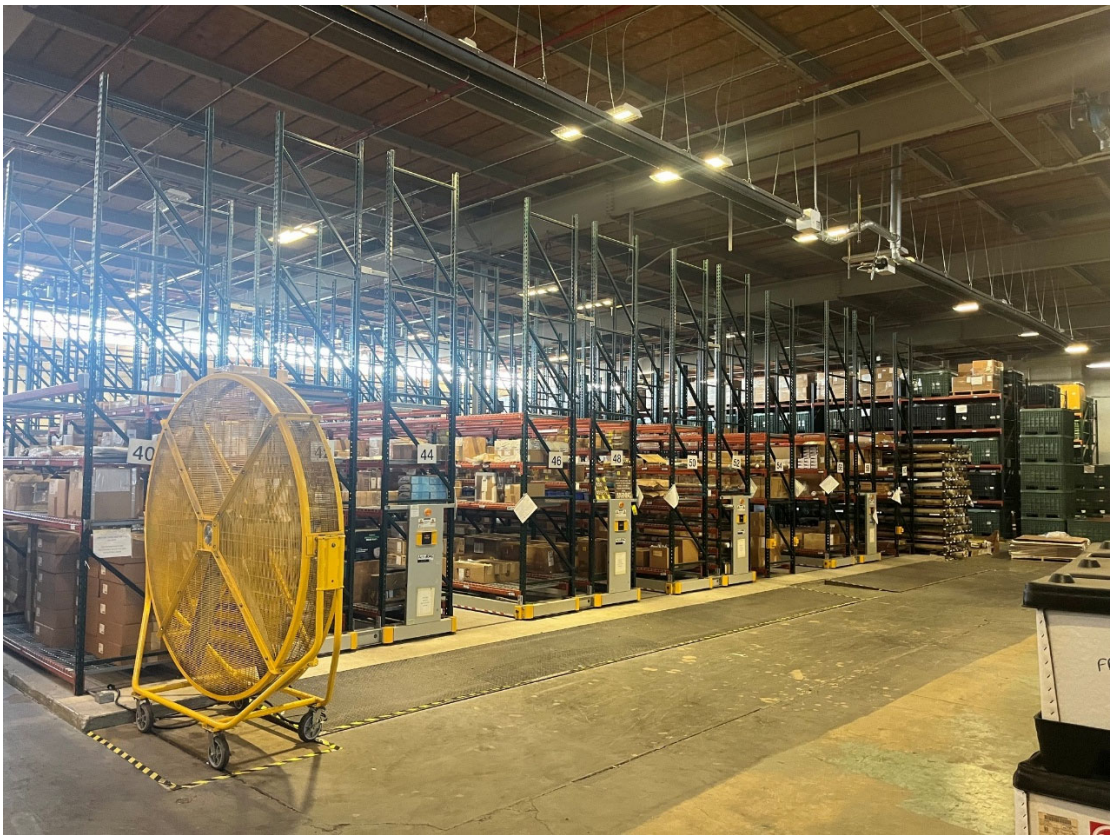
28
30
32
34
36
38

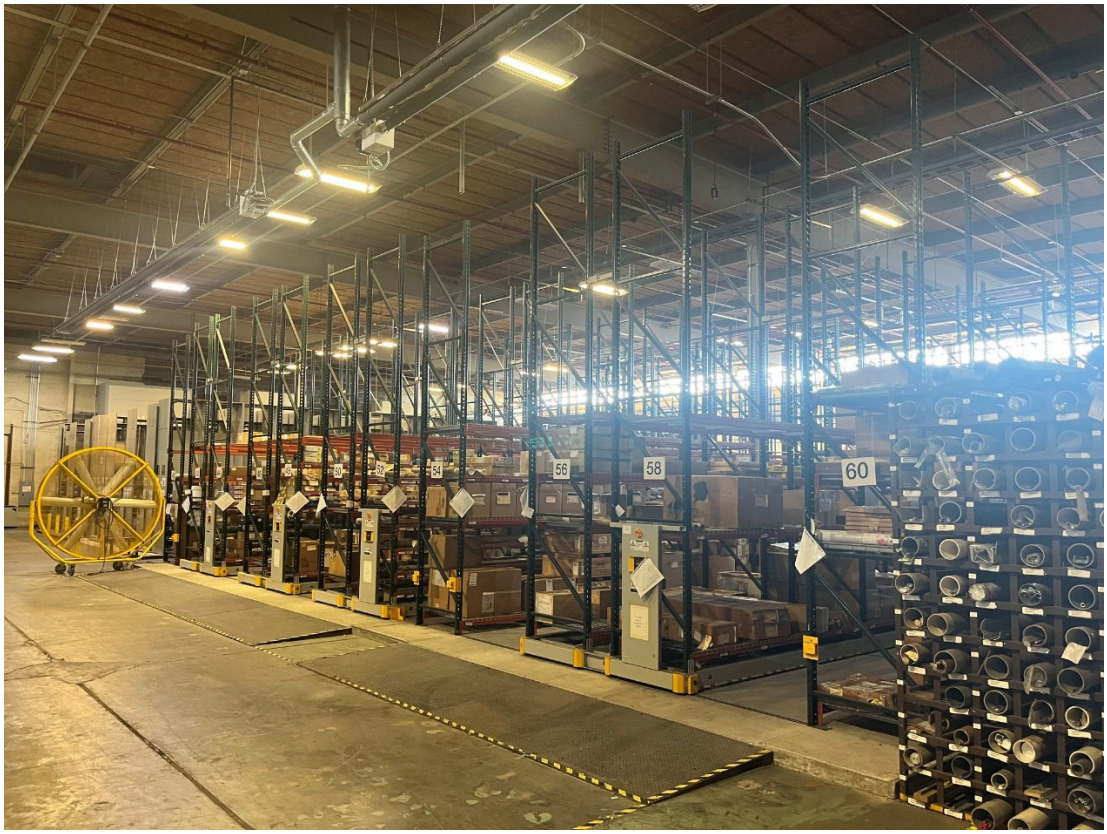
12
10
08
06
04

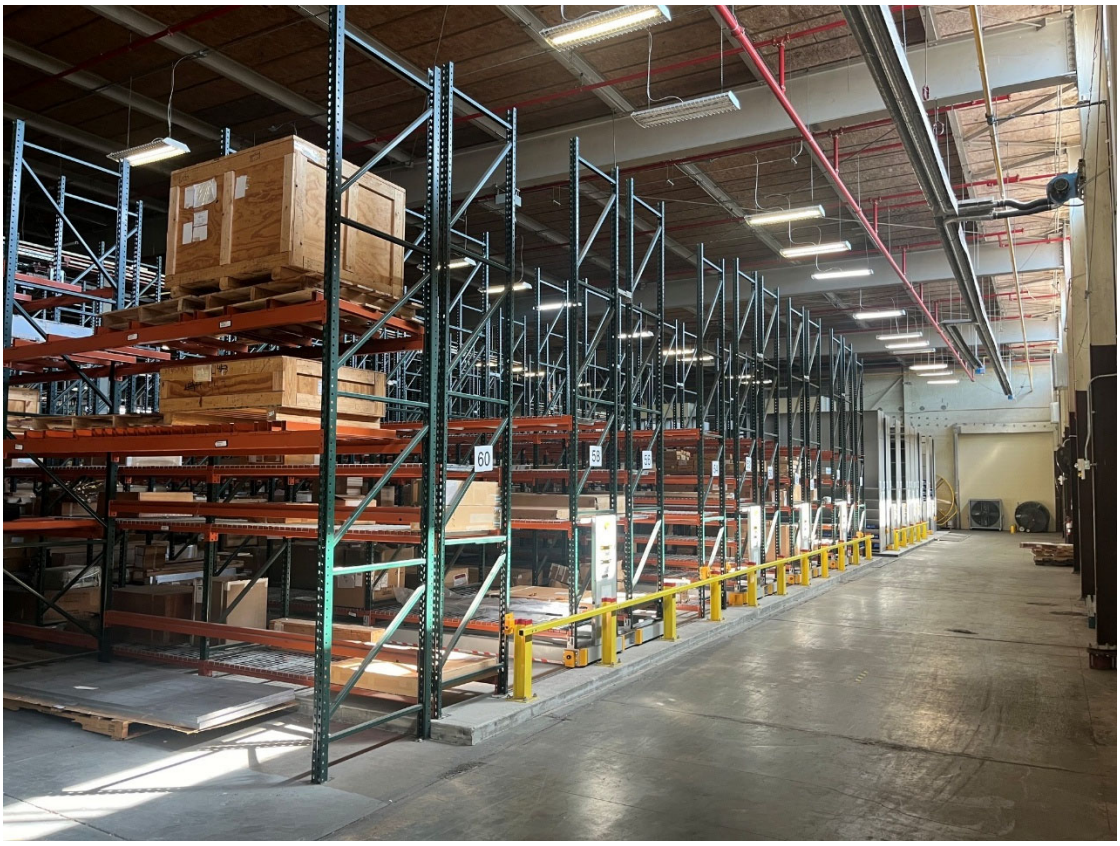

38
36

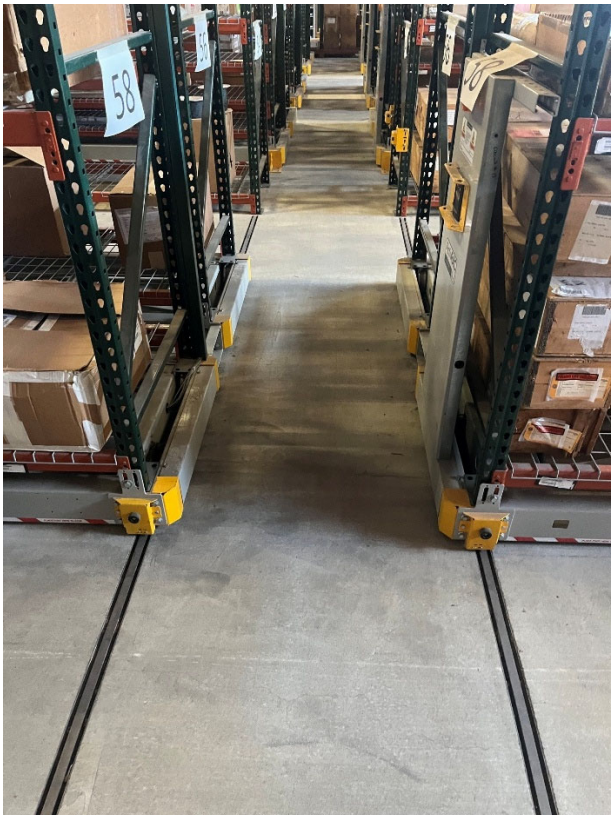
38
36
36
38

- **Pallet Rack on Powered Mobile Aisle**
  - ~ 45’ x 92’ bin shevling on mobile aisle system shall be dissembled with mobile aisle components being disposed of and pallet rack components being palletized and/or bundled together for future use
    - 44 rows of 4 pallet racks each (9’W x 3’D x 16’H)
    - 12 mobile carriages
    - 21 bays of pallet rack not on carriages contained within the mobile aisle footprint
    - All mobile aisle carriages, electrical components, and associated equipment for the operation of the powered mobile aisle system
  - Picture of existing equipment:


40
44
46
48


54
56
58
60


60


58

- **Vertical Lifts**
  - (3) Vertical Lifts
    - (1) Hanel Rotomat 970
    - (2) Hanel Lean-Lift 2460-825
  - Pictures of existing equipment:

- **Sheet Metal Racks**
  - (3) Sheet Metal Racks
  - Pictures of existing equipment:

4. QUALITY ASSURANCE PROVISIONS

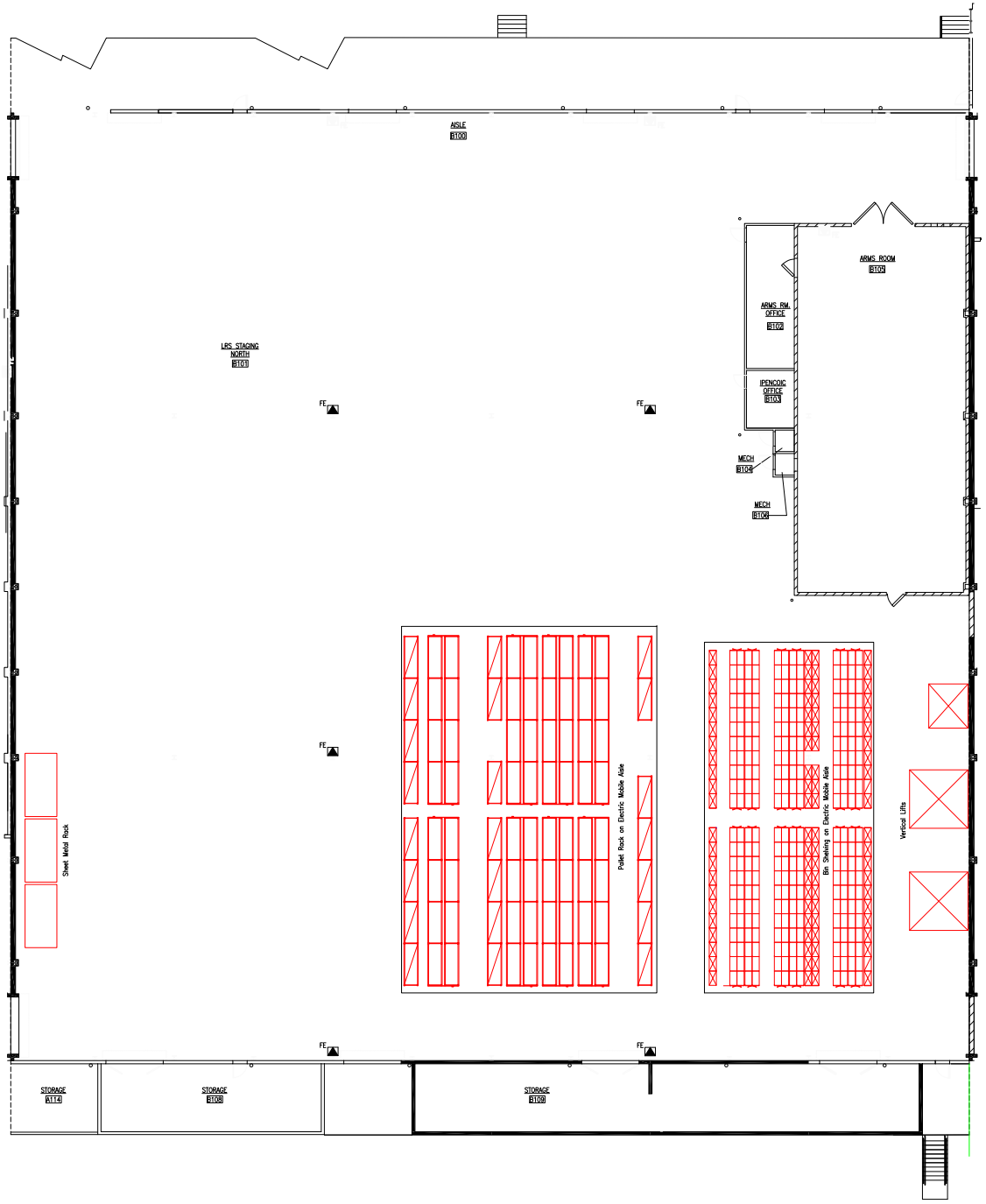
4.1. INSPECTION

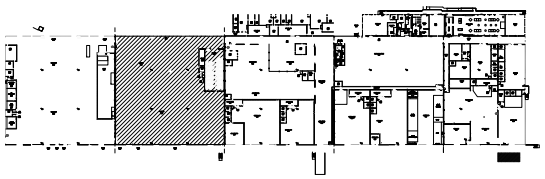
Those areas where equipment was removed shall be inspected to verify that it meets all the requirements of sections 1, 2, and 3 of this appendix and the Cover PD. These inspections shall be completed as part of the system checkout test and again as a part of the quality conformance test.

4.2. TESTS

The following tests shall be performed on the system as part of the system checkout test and again as a part of the quality conformance test.

No.	Description	Result
1.	Was the bin shelving mobile aisle system removed as specified?	☐ Pass ☐ Fail
2.	Was the pallet rack mobile aisle system removed as specified?	☐ Pass ☐ Fail
3.	Were the vertical lifts removed as specified?	☐ Pass ☐ Fail
4.	Were the sheet metal racks removed as specified?	☐ Pass ☐ Fail
5.	Were all anchor bolts cut down and holes filled as specified?	☐ Pass ☐ Fail





REV LTR	BY	DESCRIPTION	DATE

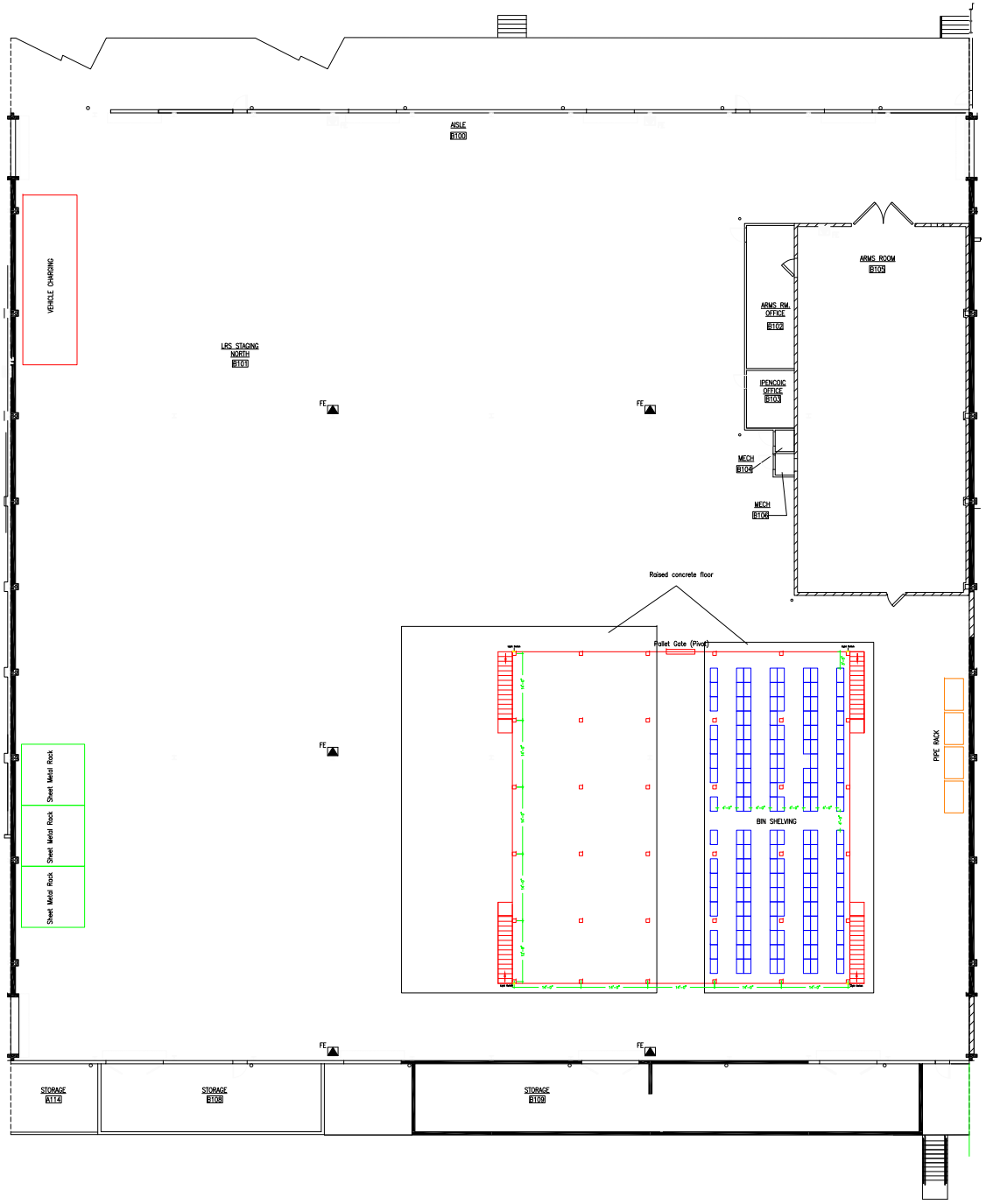
AFMC AIR FORCE MATERIEL COMMAND

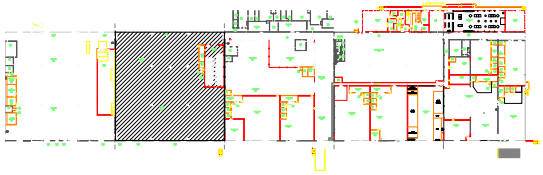
MATERIAL HANDLING ENGINEERING BRANCH
AFMC–AFLCMC/EZPAE WPAFB OH

DRAFTSMAN: ROWLAND
PROJECT ENGINEER: ROWLAND
REVIEWER: AMBROSE
DATE: 6/16/2026
SCALE: NONE

TITLE: EQUIPMENT TO REMOVE
BUILDING 4845
BARKSDALE AFB, LA

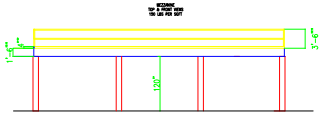
FILENAME: GBR602–01
DRAWING NO.: GBR602–01
SHEET S1 OF S1



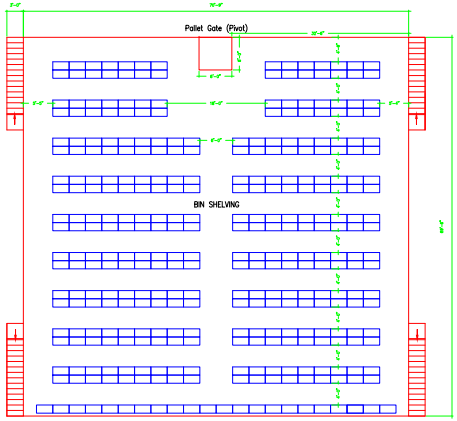


BUILDING 4845 OVERVIEW

BIN SHELVING



Front View Example



Upper Level

REV LTR	BY	DESCRIPTION	DATE

AFMC AIR FORCE MATERIEL COMMAND

MATERIAL HANDLING ENGINEERING BRANCH
AFMC–AFLCMC/EZPAE WPAFB OH

DRAFTSMAN: ROWLAND
PROJECT ENGINEER: ROWLAND
REVIEWER: AMBROSE
DATE: 6/16/2026
SCALE: NONE

TITLE: PROPOSED LAYOUT
BUILDING 4845
BARKSDALE AFB, LA

FILENAME: GBR602–02
DRAWING NO.: GBR602–02
SHEET S1 OF S1

TECHNICAL PROPOSAL QUESTIONNAIRE
FOR
STORAGE AID SYSTEM (SAS)
BARKSDALE AFB, LA
CSN: GBR602
16 JUNE 2026

This questionnaire shall be completed by the Offeror. **All entries to this questionnaire shall be typed**. The questionnaire will be used to determine the Offeror's understanding of the requirements and acceptability of the proposed equipment. Please attach product literature/cut sheets for all equipment specified.

NOTE: Even though sections may not be listed for contractor response, it still remains a requirement.

SECTION	REQUIREMENT	RESPONSE
Cover	Are all the requirements specified in the Cover Purchase Description complied with except for any exceptions taken as indicated on the attached exception sheet?	
App A	Mezzanine manufacturer	
App A	Are all components designed to support 150 pounds per square foot	
App A	Is mezzanine freestanding	
App A	Are all components pre-engineered	
App A	Clear height under mezzanine	
App A	Height of decking surface above floor	
App A	Mezzanine dimensions (L x W)	
App A	Column dimensions	
App A	Base plate dimensions	
App A	Will all beams and joists be structural steel and pre-punched for connection	
App A	Decking manufacturer	
App A	How many sets of stairs will be provided	
App A	Width of stairs	
App A	Are handrails and railings in accordance with OSHA 1910.23	
App A	Kickplate height	
App A	Width of opening provided by pallet gate	
App A	Will fire sprinklers meet all specifications	
App A	Will lighting/switches be provided as specified	
App A	Will capacity signs be provided as specified	
App A	Will no-step signs be provided as specified	
App A	Will safety harness tie-off be provided as specified	
App B	Bin shelving manufacturer	
App B	Dimensions of bin shelving (W x D x H)	
App B	Shelf part number	
App B	Shelf capacity	
App B	Shelf secured to support posts by	

App B	Supporting post capacity	
App B	Dimensions of backpanel	
App B	Will bin shelving be anchored as specified	
App C	Rail-guided man-up turret truck manufacturer	
App C	Model number	
App C	Number of turret trucks to be provided	
App C	Aisle width turret truck is capable of operating in	
App C	Load capacity	
App C	Lift Height	
App C	Min travel speed (unloaded)	
App C	Min travel speed (loaded)	
App C	Max travel speed (when platform is elevated)	
App C	Min raising speed (loaded)	
App C	Max lowering speed (loaded)	
App C	Fork dimensions	
App C	Forks able to rotate 180 degrees when loaded?	
App C	Wire guidance, embedded rails, and end of aisle slowdown provided as specified?	
App C	Are all safety features and indicators provided as specified?	
App C	Battery type	
App C	Battery voltage	
App C	Does battery charger have safety feature to prevent overcharging?	
App C	Training provided as specified?	
App D	Rail-guided orderpicker manufacturer	
App D	Model number	
App D	Number of orderpickers to be provided	
App D	Aisle width orderpicker is capable of operating in	
App D	Load capacity	
App D	Lift Height	
App D	Min travel speed (unloaded)	
App D	Min travel speed (loaded)	
App D	Max travel speed (when platform is elevated)	
App D	Min raising speed (loaded)	
App D	Max lowering speed (loaded)	
App D	Fork dimensions	
App D	Wire guidance, embedded rails, and end of aisle slowdown provided as specified?	
App D	Are all safety features and indicators provided as specified?	
App D	Battery type	
App D	Battery voltage	
App D	Does battery charger have safety feature to prevent overcharging?	

App D	Training provided as specified?	
App E	Stock assist vehicle manufacturer	
App E	Stock assist vehicle minimum lift height	
App E	Stock assist vehicle platform capacity	
App E	Stock assist vehicle load tray capacity	
App E	Number of stock assist vehicles to be provided	
App E	Straddle stacker manufacturer	
App E	Straddle stacker capacity	
App E	Straddle stacker minimum elevated height	
App E	Straddle stacker fork length	
App E	Number of straddle stackers to be provided	
App E	10k pallet jack manufacturer	
App E	10k pallet jack capacity	
App E	10k pallet jack fork dimensions	
App E	Number of 10k pallet jacks to be provided	
App E	Pipe rack manufacturer	
App E	Pipe rack model number	
App E	Pipe rack dimensions	
App E	Number of pipe racks to be provided	
App E	Sheet metal rack manufacturer	
App E	Sheet metal rack nominal dimensions	
App E	Sheet metal rack sheet size capable of storing	
App E	Sheet metal rack shelf capacity	
App E	Are shelf supports collapsible	
App E	Number of sheet metal racks to be provided	
App E	Plastic storage bin manufacturer	
App E	Dimension of small size plastic bin	
App E	Quantity of small size plastic bin	
App E	Dimension of medium size plastic bin	
App E	Quantity of medium size plastic bin	
App E	Dimension of large size plastic bin	
App E	Quantity of large size plastic bin	
App F	Enclosed tire rack manufacturer	
App F	Number of B-52 tires capable of being stored	
App F	Method for easy loading/unloading of tires (ex. flip-down, hinged, or removable side)	
App F	Forklift compatible (Yes/No)	
App F	Collapsible when not in use (Yes/No)	
App G	Will equipment be removed as specified?	
App G	Will pallet racking be disassembled and palletized for future use by Barksdale AFB as specified?	

EXCEPTIONS/RECOMMENDATIONS/DESIGN ALTERNATIVES

Attach any exceptions taken to the Purchase Descriptions. Please outline those concerns in detail. Your exceptions will be reviewed to determine acceptability.

Are exceptions taken? [ ] YES [ ] NO
Number of pages attached: _____

Attach any recommendations or design alternatives you feel may enhance operation, maintainability, or reduce system cost. Your recommendations and design alternatives will be reviewed to determine acceptability.

Are recommendations/design alternatives attached? [ ] YES [ ] NO
Number of pages attached: _____

END OF DOCUMENT