MoDOT

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Missouri Department of Transportation
Patrick K. McKenna, Director

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ADDENDUM 001
Request for Bid
New Linn Maintenance Complex Project
RFB 9-161004KH

Bidders should acknowledge receipt of Addendum 001 (ONE) by signing and including it with the original bid. The due date for receipt of bids **has not** changed by this Addendum; the due date is **October 4, 2016 2:00 PM Central Time**. Accordingly, the following clarifications, and or additional information, are believed to be of general interest to all potential bidders. All other terms and conditions remain unchanged and in full force.

Name and Title of Signer (Print or type)	Name and Title of Department Authority Kristi Hixson General Services Senior Specialist
Contractor/Offeror Signature _____ (Signature of person authorized to sign)	Department of Transportation *Kristi Hixson* _____ (Authorizing Signature)
Date Signed:	Date Signed: 9/27/2016

The site will be prepared 10 inches below finished grade by MoDOT prior to the Notice to Proceed.

Submittals for product equivalents or products to exceed will not be reviewed until the project is awarded.

Contractor is responsible to replace any disturbed area with like materials.

Contractor is responsible to perform all required testing for structures; i.e. concrete, HVAC, etc.

Maintenance Building

Sheet 3 The drawings do not include a Sheet 3 – not used.

Sheet 15 Page 15 is duplicated – the same information is on both sheets 15 of 20.

Sheet 16 Note, plumbing schedule 'SK' requires an ADA sink.

Simple-Saver fabric and banding must be vented when the banding for the Simple-Saver System is on the bottom of the bar joists.

Discard Specification 14556 Jib Crane that was provided in Linn Maintenance Building Specifications and replace with the attached updated Specification 14556 Jib Crane.

Truck Wash Building

In lieu of the primed and painted walls on interior and exterior use two coats of the concrete sealer Specification: 03346 Concrete Floor Finishing, Part 2, Products, paragraph 2.1.A.

Contractor must use Drip-X for roof panels on the Truck Wash Building.

Fabric Salt Structure

Discard Specification 13120 Pre-Engineered Fabric Structure that was provided in Linn Fabric Salt Structure Specifications and replace with the attached updated Specification 13120 Pre-Engineered Fabric Structure.

Sheet 5 Fabric Salt Structure: states (2) Gather Doors provided and installed by General Contractor. One each side. Replace with **(1)** Gather Door provided and installed by General Contractor.

QUESTIONS

Question: Is the contractor or is MoDOT responsible for carrying Builders Risk Insurance?
Answer: It is the contractors responsible to carry Builders Risk Insurance.

Question: Will there be an area on site for spoils?
Answer: Yes, MoDOT will designate an area on site for spoils.

Question: What building code should be used on the pre-engineered metal building?
Answer: Use Building Code IBC 2013

Question: Sheet 10 shows the building using joist in the roof. Would it be acceptable to provide Standard PEMB Roof Purlin System in lieu of roof joist?
Answer: Value Engineering may be submitted upon award for approval. Please note, the square footage and 21' eave height cannot change.

Question: Sheet 10 shows a Low Profile Continuous Ridge Cap. Do I price a ridge cap and not a ridge vent?
Answer: Ridge caps, as long as contractor does not install purlins.

Question: Please confirm that the mezzanines are self-supporting.
Answer: The mezzanines are self-supporting.

Question: Please provide an approximate weight for the unit heaters.
Answer: Varies, depending on the unit installed.

Question: Please provide an approximate weight for the hose reels.
Answer: Varies, depending on the unit installed.

Updated Addendum 001

14556

JIB CRANE

PART 1 GENERAL

1.1 SYSTEM DESCRIPTION

A. Equal to Grainger/Dayton 7HU65, 1-ton, span 10 foot, height 12 foot, floor mounted Jib Crane with Grainger/Dayton 3YB83, 1-ton 115/230, 20 foot lift electric chain hoist, 1-ton trolley Grainger/Dayton 3MB57, festoon sytem Grainger/Dayton 33N211 or 33N207 depending on electrical cable size.

B. Floor-mounted pillar are intended to lift heavy duty and bulky items weighing from ¼ ton up to 1- tons. The floor-mounted models required a concrete base (See Construction Documents), can be rotated 360 degrees.

l.2 SUBMITTALS FOR REVIEW

A. Submit in accordance with Section 01300.
B. Shop Drawings: Showing details of construction, materials and finish, installation details, location, size and characteristics of services and components.
C. Manufacturers Literature and Data: Indicating type of lift specified Maintenance, operating and parts manuals Installation instructions.
D. Certificates: Stating that lift meets the requirements specified.

1.3 QUALITY ASSURANCE

A. Perform Work in accordance with supplier standards.
B. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum ten years experience.
C. Installer: Company specializing in performing the work of this section and approved by jib crane equipment manufacturer.

1.4 REGULATORY REQUIREMENTS

A. Conform to ANSI/ALI ALCTV-1998 Standard.
B. Products Requiring Electrical Connection: Listed and classified by Underwriters' Laboratories Inc., suitable for the purpose specified and indicated.

1.5 WARRANTY

A. Correct defective Work within a one-year period after Date of Final Acceptance.
B. Warranty: Include coverage for lift operating equipment and devices.

PART 2 PRODUCTS

2.1 OTHER MATERIALS

A. Provide other materials, not specifically described but required for a complete and proper installation.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that electrical power is available and of the correct characteristics.

3.2 INSTALLATION

A. Install system components. Connect equipment to building utilities.
B. Provide conduit, boxes, wiring and accessories.
C. Accommodate equipment in space indicated.
D. Coordinate installation of lift building construction.
E. Adjust equipment for smooth and quiet operation.

3.3 ADJUSTING

A. Adjust for smooth lifting.

3.4 CLEANING

A. Remove protective coverings from finished surfaces.
B. Clean surfaces and components ready for inspection.

END OF SECTION

Updated Addendum 001

13120
PRE-ENGINEERED FABRIC STRUCTURE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Pre-engineered, shop-fabricated structural steel building frame.
B. Gather Doors and Louvers.

1.2 REFERENCES

A. AISC - Specification for Structural Steel for Buildings - Allowable Stress Design and Plastic Design.
B. ASTM A123 - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
C. ASTM A325 / A325M - High Strength Bolts for Structural Steel Joints.
D. ASTM A653 / A653M – Sheet Steel, Zinc-Coated (Galvanized) or Zinc Iron Alloy Coated (Galvanized) by the Hot Dip Process.
E. ASTM A501 - Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
F. ASTM A550 – Structural Steel with 60ksi Minimum Yield Point.
G. AWS A2.0 - Standard Welding Symbols.
H. AWS D1.1 - Structural Welding Code - Steel.

1.3 SUMMARY

The Missouri Department of Transportation desires the manufacturer, delivery, and on-site installation of a “Fabric Type” Stressed Skin Membrane Salt Storage Structure covering: wall louvers, passage doors, and gather service doors as referenced in this specification and shown on the drawings. The structure will be erected on concrete wall provided and installed under this contract. The structure shall be rectangular in shape, but the building profile is not restricted to the standard arch truss, gabled end, or other truss profiles meeting the height requirements will be accepted. The interior of the structure below the main trusses shall be clear span free of any structural support members and shall provide unobstructed floor space. No exterior purlins, guy ropes or cables shall be used for anchoring the structure.

1.4 ENGINEERED DESIGN REQUIREMENTS

The structure shall be designed in accordance with appropriate building code standards for the state of Missouri. Primary and secondary framing shall comply with current issues of AISC, AISI, NEMA, and ASTM specifications, as applicable. Structural members shall be designed using Allowable Stress Design (ASD) or Load Resistance Factored Design (LRFD) for the design loads given below. Appropriate safety factors to yield and ultimate strength shall be maintained. Wind load factors and coefficients used in design of structural members must be in accordance with Missouri code guidelines.

A. Design members to withstand 12 psf live load and 3 psf collateral load (minimum) or as determined by the collaboration of equipment suppliers.
B. Snow Loads: The structure shall be designed based upon a 20 psf nominal snow load.
C. Wind Loads: The structure shall be capable of withstanding wind loads of 90 mph, (3 second wind gust) (Exposure “C”).
D. Rainfall: The structure shall be capable of withstanding the effects of rainfall up to 4 inches per hour for at least 2 hours.
E. Permit movement of components without buckling, failure of joint seals, undue stress on fasteners or other detrimental effects, when subject to temperature range of -15° to +115° F.
F. Building plans to be sealed by a Professional Engineer, Licensed in the state of Missouri.
G. The structure shall be capable of being erected on concrete and of accepting differential settlement of up to 2-1/2% between truss positions.

1.5 SUBMITTALS FOR REVIEW

A. Section 01300 - Submittals: Procedures for submittals.
B. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections, attachments, and openings; general construction details, anchorages and method of anchorage, method of installation; framing anchor bolt settings, sizes and locations from datum and foundation loads; indicate welded connections with AWS A2.0 welding symbols; provide professional seal and signature.
C. Samples: Submit two samples of fabric covering for each color selected, 6x6 inch in size illustrating color and texture of finish.
D. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
E. Erector Qualifications: Company specializing in performing the work of this section with minimum 5 years documented experience or approved by manufacturer.
F. Design structural components, develop shop drawings, and perform shop and site work under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State of Missouri.

1.6 PRE-INSTALLATION MEETING

A. Section 01039 - Coordination and Meetings: Pre-installation meeting.
B. Convene one week before starting work of this section.

1.7 WARRANTY

A. Membrane - Provide a fifteen-year prorated warranty to include coverage for exterior surfaces, including: main structure fabric, end wall fabric, and gather doors against ripping, tearing, or puncturing. Include coverage for weather tightness of building enclosure elements after installation.
   1. Five-years full coverage including material, equipment, labor, and all associated costs.
   2. Beginning on the sixth year with 100% coverage the warranty will be prorated including material, equipment, labor, and all associated costs at a rate of $1/120^{th}$ per month for the last ten years.
B. Steel – Provide a fifteen-year prorated warranty to include coverage for the steel structure including: Main Steel Framework - steel trusses, purlins, and brackets; End Steel Framework – vertical columns, horizontal members, steel door parts, and brackets.
   1. Five-years full coverage including materials and replacement parts for defects in material and workmanship under normal use and corrosion resistance.
   2. Beginning on the sixth year with 100% coverage the warranty will be prorated including materials and replacement parts at a rate of $1/120^{th}$ per month for the last ten years.

PART 2 PRODUCTS

Pre-engineered fabric storage meeting the following specifications including structural design as approved by a licensed Professional Engineer.

2.1 DESIGN REQUIREMENTS

A. Fabric including fabric doors.
   1. Novashield RU88X-6 12.5 oz. fabric or equivalent, tan in color.
   2. The building cover shall be manufactured utilizing a process, which eliminates 99% of the stretch post fabrication. In order to provide for a good finished appearance and to insure weather tightness, the membrane shall be assembled and tensioned, in a manner to minimize wrinkles in hot and cold temperatures. Each bay (frame centerline to frame centerline) shall utilize a single piece membrane with an extruded PVC core. The membrane must be attached using Keder as specified below. The PVC core will be sealed within the membrane by using a Miller Weld Master Rotary sealer designed

specifically for Keder production. The Keder will be attached to the main truss cord utilizing extruded aluminum channel, which shall be fastened using galvanized/zinc-coated screws. A single (one piece) membrane over the entire structure will not be acceptable.

3. Base Tensioning System: The membrane cladding will be provided with a mechanical tensioning system that allows the membrane to be fully tensioned around the structure perimeter. The system will be designed such that the membrane can be tightly and neatly secured over the structural frame and such that the system has a remaining range of adjustment.
4. The structure supplier will provide all materials and methods necessary to fully tension and seal the membrane material around all door, ventilation and other openings as well as around the structure perimeter below the main tensioning system. This seal shall provide a neat and finished appearance and eliminate any loose membrane cladding that could otherwise be damaged by flapping or abrasion. When a membrane skirt is required, this shall be supplied and attached at the base perimeter to allow a reasonable seal against air and water intrusion.
5. The structure membrane shall not be designed to function as a structural member such that, should any damage to or penetrations of the membrane occur, the integrity of the structural framework shall not be affected.
6. The membrane shall be tensioned in a fashion that requires minimal on going maintenance and continuous re-tensioning.

B. Building Framework

1. All structural steel shall be ASTM A 500, Grade C structural steel.
2. Minimal allowable tubing thickness of .083" or 14 gauge.
3. All structural steel is to be hot dip galvanized post fabrication to meet: CSA G164-M92 and ASTM A123 Standards Average Zinc Coating of 810 g/m2. All fabrication of steel trusses and purlins including connection plates and other related components must be fabricated prior to any galvanizing to ensure complete interior and exterior coverage of zinc coating.
    a. All manufactured component surfaces, both interior and exterior, to have a minimum of 1.75 oz/ft² (± 5%) of zinc.
        (1) 1 oz. zinc/ft² (320 g/m²) of surface = 1.7 mil (43um).
4. Painting of steel components shall only be utilized if necessary for field repairs and shall not be employed as a factory finish. Should field repair be necessary, a zinc-rich field coat shall be used.
5. Deformed, flattened, or sheared tubing is not allowed in truss design or manufacturing. Center material used to maintain truss rafter cord centers must be continuously solid sheet, or overlapping or intersecting bars. Bars to be solid or square steel tube.

a. Gaps between center material where truss rafter cords are subject to loading will not be allowed in truss design or manufacturing.

6. Provide steel tube fabric rub rail at base plate connections.
7. Center material that requires venting for hot dip galvanizing must be uniformly vented with methods that promote strength and coating quality. Center material that is vented with grinding wheels, cut slots or irregular circles produced by torch method will not be allowed.
8. The Contractor is responsible for the design of the structural support members and the installation of the end wall louvers as specified and shown on the drawings.
9. Purlin spacing to provide for structural stability and to provide for installation of accessory items, the main structural trusses shall be laterally braced by tubular purlins at intervals required by the truss design.

C. End Wall Framework

1. End wall structural framework to be engineered cold formed tube steel with minimum properties of 50 KSI yield.
2. All end wall framework components to be hot dipped galvanized to ASTM A123.
    a. All end wall component surfaces, both interior and exterior, to have a minimum of 1.25 oz/ft² (± 5%) of zinc.
        (1) 1 oz. zinc/ft² (320 g/m²) of surface = 1.7 mil (43um).
3. End wall frame material at doors and vents to be engineered cold formed "C", "Z", and "L" or engineered structural tubing or W-beams.

4. Minimum allowable tubing thickness of .083” or 14 gauge.
5. Fabricate in such a way that splicing and connections are minimized.
6. Deformed, flattened, or sheared tubing is not allowed in end wall design or manufacturing.

D. Bolts, Nuts, and Washers
1. Bolts subject to extreme stress and wear shall be structural bolts of Grade 5 and plated / galvanized or upgraded with Sun Seal corrosion resistance. All bolts shall be installed and securely torqued so as to prevent change in tightness. Those subject to removal or adjustment shall not be swaged, peened, staked, or otherwise installed.
2. ASTM A325 minimum grade specification, galvanized to ASTM A153.
3. All connections to use a retaining compound.

E. Plate or bar stock to be ASTM A529 / ASTM A529M.

F. All welds must conform to American Welding Standards D1.1; type required for materials being welded.

G. Garage Doors: Provide vertical fabric doors size and locations as shown on plans. The gather door(s) is of the same material as the main structure fabric. Gather door is lifted by stainless steel cable and ~~**manual**~~ wench mounted to the end wall. Wench sized as required by structure manufacturer for an operable system.
1.

H. Passage Doors
1. Provide passage door(s) as shown on plans.

I. Ventilation Louvers
1. Provide (2) 48” x 48” louver at each end wall as shown, non-operable, with a galvanized bird and insect screen. Contractor to provide adequate blocking for louvers.

J. Grout: ASTM C1107, Non-shrink type, premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents, capable of developing minimum compressive strength of 2,400 psi in two days and 7,000 psi in 28 days.

PART 3 EXECUTION

3.1 EXAMINATION

A. Section 01039 - Coordination and Meetings: Verification of existing conditions before starting work.

B. Verify that foundation, floor slab, mechanical and electrical utilities and placed anchors are in correct position.

3.2 INSPECTION, QUALITY CONTROL

A. Inspections will be made during the building installation. Inspections will be made to ensure the quality of the materials and the procedures for installation are being followed. The Owner and the Engineer shall be held harmless of any and all responsibility for the overall safety of the job site for construction activity normally associated with OSHA requirements.
1. The Contractor shall be responsible for OSHA compliance for his/her personnel and sub-contractors.

B. The Contractor shall provide on-site finished, quality products as specified and shown on the drawings. Burning, cutting, welding, or other on-site modifications to the structure, doors, or louvers will not be allowed unless approved by the Owner and/or the Engineer.

C. Once started, installation shall be continuous until completion.

3.3 ERECTION - FRAMING

A. Erect framing in accordance with AISC Specification.

B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. No permanent bracing shall intrude upon specified minimum clearance height.

C. Set base plates with non-shrink grout to achieve full plate bearing.

D. Do not field cut or alter structural members without approval.

3.4 ERECTION - WALL AND ROOFING SYSTEMS

A. Install in accordance with manufacturer's instructions.
B. Exercise care when cutting pre-finished material to ensure cuttings does not remain on finish surface.
C. Fasten fabric system to structural supports, aligned level and plumb.

3.5 TOLERANCES

A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.

END OF SECTION