

ADDENDUM NO. 1

**LJT – RUNWAY 4L-22R PAVEMENT REPLACEMENT**  
GMIA Project No. A181-14003

GENERAL MITCHELL INTERNATIONAL AIRPORT  
5300 SOUTH HOWELL AVENUE  
MILWAUKEE WISCONSIN 53207

**OFFICIAL NOTICE NO. 6961**

GENERAL MITCHELL INTERNATIONAL AIRPORT  
Milwaukee County, Wisconsin

**Prepared By:** MILWAUKEE COUNTY DEPARTMENT OF ADMINISTRATION  
ARCHITECTURE, ENGINEERING, AND ENVIRONMENTAL SERVICES  
AIRPORT ENGINEERING UNIT  
5300 SOUTH HOWELL AVENUE  
MILWAUKEE, WI 53207  
Telephone 414-747-5774

**DATE OF ADDENDUM:** September 3, 2014

**BIDS CLOSE:** 2:00 P.M., Wednesday, Sept 10, 2014

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**TO ALL BIDDERS:**

Each bidder shall read this Addendum in its entirety to determine to what extent his proposal and the contract conditions will be affected. This Addendum to the Contract Documents is issued to modify, explain, or correct the original documents and is hereby made part of the Contract Documents.

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**RECEIPT –** Sign the following receipt and attach to submitted Proposal Form.

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Receipt of Addendum No. 1, consisting of four (5) pages, for the LJL – Runway 4L-22R Pavement Replacement, Official Notice No. 6961, at LJL Airport, Milwaukee, Wisconsin, dated September 3, 2014, is acknowledged.

Date \_\_\_\_\_

Firm \_\_\_\_\_

Per \_\_\_\_\_

Address \_\_\_\_\_

**PART 1 – BIDDER'S CLARIFICATIONS**

None

**PART 2 – REVISIONS TO THE PROJECT MANUAL**

Replace existing section 34 73 L-120 (Pavement Sensor Equipment) with the attached 3 pages.

**PART 3 – REVISIONS TO THE DRAWINGS**

None

## Item L-120 Pavement Sensor Equipment

### DESCRIPTION

**120-1.1** This item shall consist of furnishing and installing a partial Runway Weather Information System as shown on the plans or as directed by the engineer and as specified herein and conforming to the current appropriate FAA Advisory Circulars and Specification including AC 150/5200-30C Airport Winter Safety and Operation for design of a –WSDDM- Weather Support to Deicing Decision Making System and by reference the RWIS system shall comply with SAE document #ARP5533 entitled “Stationary Runway Weather Information System (In-Pavement)”.

### MATERIALS

#### **120-2.1 PAVEMENT SENSOR.**

RWIS Equipment Integrator and Equipment Supplier. The RWIS is a complex system of components that must all be supplied and integrated to provide a complete and reliable Weather Information System. The existing RWIS is manufactured by Vaisala. All new equipment provided must be compatible and seamlessly integrate into the existing system. The use of alternate vendors shall be pre-approved by the Engineer prior to time of bids. The RWIS equipment vendor chosen by the Contractor must have at least 10 successful RWIS system installations at airports in North America. As part of the equipment approval process, the Engineer may ask the Contractor to provide the names of at least ten (10) agencies, with names, telephone numbers and contact person to verify said RWIS installations were successful.

Equipment and Materials All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer’s certification of compliance with the applicable specification when so requested by the Engineer.

Manufacturer’s certification shall not relieve the Contractor of the Contractor’s responsibilities to provide materials in accordance with these specification and acceptable to the Engineer. Materials supplied and/or installed that do not materially comply with these specifications shall be removed , when directed by the Engineer and replaced with materials, which do comply with these specifications, at the sole cost of the Contractor.

All materials and equipment used to construct this item shall be submitted to the Engineer for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. The Engineer reserves the right to reject any and all equipment, materials or procedures, which in the Engineer’s opinion, does not meet the system design and the standards and codes, specified herein.

Passive Pavement Sensor – FP2000 The contractor shall supply and install passive pavement sensor(s) as shown on the project plans. The passive sensor supplied shall be a single solid-state electronic device that is installed in the pavement at the locations as shown on the plans. Exact sensor placement shall be as determined by the Project Engineer with guidance from the equipment supplier.

The sensor shall be constructed of materials that have thermal characteristics similar to common pavement materials. The top of the sensor shall approximate the roadway pavement color and texture. It shall be installed with epoxy sealer so the top is flush with the surrounding roadway surface. The sensor shall be thermally passive, providing stable operation over a temperature range from -40°C to 80°C (-40°F to 176°F). Weather conditions, traffic, or ice control chemicals shall not degrade its performance. The sensor shall be supplied with 91 m (300 ft) of attached molded cable, that is waterproofed and sealed as an integral part of the assembly. Each sensor shall be capable of operating at extended cable lengths up to 1524 m (5000 ft) from the RPU by splicing to direct burial sensor extension cable. The sensor shall electronically sample the following pavement parameters:

- Surface temperature at the sensor head.
- Dry pavement condition.
- Wet pavement condition above 0°C (32°F).
- Pavement status information.

In addition, the pavement sensors shall supply data for the RWIS to determine the following pavement surface conditions when sufficient water is present on the pavement, and atmospheric data from precipitation, RH, and air temperature sensors is available:

- Water on the pavement at or below 0°C (32°F).
- Snowy or icy pavement at or below 0°C (32°F).
- Freezing point temperature of the water/ice-control-chemical solution present on the surface of the pavement sensor for selected ice-control-chemicals.
- Depth of the water/ice-control-chemical solution present on the surface of the pavement sensor up to a depth of 12 mm (0.5 inches).
- Percentage of ice particles present in the water/ice-control-chemical solution resident on the surface of the pavement sensor.

The Contractor shall supply all miscellaneous materials (splice kit, cable sealant for saw kerf, etc.) according to the equipment manufacturer's recommendations and installation manual for installing the sensors to function properly with the existing system.

Flexible sealant and backer rod shall conform to the requirements of P-605.

Top soil required for turf repair shall be per requirements of T-905.

Seeding required for turf repair shall be per requirements of T-901.

Hydro mulching required for turf repair shall be per requirements of T-908.

## CONSTRUCTION METHODS

**120-3.1 PAVEMENT SENSOR.** The contractor shall be required to have a manufacturer's representative on site for the installation of the pavement sensor and re-commissioning of the RPU equipment after installation. This requirement is to insure that the lifetime factory warranty on the sensors will not be voided.

The Contractor shall install all equipment in accordance with the manufacturer's instructions and shop drawings; or as directed by the Engineer.

Saw cut flexible sealant shall be installed in accordance with the manufacturer's instructions and in accordance with Section P-605.

All incidental parts which are necessary to complete the installation, but are not specified herein or on the plans, shall be provided as necessary to provide a complete and properly operating system.

All communication connections shall be through a fiber optic modem and a communication panel consisting of fiber optic cable patch panel, fiber optic patch cords, data cables and/or terminal blocks.

Trenching required for direct bury of cable is to be done per NEC and shall be considered incidental to the cost of furnishing and install pavement sensor.

**120-3.2 WARRANTY.** The equipment vender shall provide a limited manufacturer's warranty covering all equipment for a 12-month period from the RWIS commissioning date.

#### METHOD OF MEASUREMENT

**120-4.1** Installation of pavement sensor equipment and assembly, furnished by others, and furnishing of one (1) surface sensor will be measured for payment as the number of units installed, tested and made fully operational.

#### BASIS OF PAYMENT

**120-5.1** Payment will be made at the contract unit price per full installation of pavement sensor. The price shall be full compensation for furnishing all materials, labor, tools, equipment, testing, calibrating, and incidentals as necessary to complete the work. Payment for the manufacturer's representative visit shall be included under this item.

Trenching required for direct bury of cable is to be done per NEC and shall be considered incidental to the cost of furnishing and install pavement sensor.

Top soiling, seeding and hydro mulching shall be paid for per the requirements of specifications T-905, T901, T908 respectively.

Payment will be made under:

- Item L-120-5.1a Provide and install new pavement sensor and direct bury cable to existing RPU equipment.
- Item L-120-5.1b Commission and test unit assembly

END OF ITEM L-120