**FARPOINTE DATA, INC.**

**RUGGED READERS AND CREDENTIALS**

**FOR ELECTRONIC ACCESS CONTROL**

**BID SPECIFICATION DOCUMENT**

**Section 28 13 00 – Access Control**

**PART 1 GENERAL**

1.1 SUMMARY

 A. Section Includes: Rugged proximity access control readers and credentials (contactless 125-kHz readers and credentials for electronic access control (EAC) based upon radio frequency identification (RFID)).

 B. Related Sections and Divisions:

INCLUDE APPROPRIATE INFORMATION BELOW, INCLUDING A REFERENCE TO ALLOWANCES, IF PROXIMITY READERS AND CREDENTIALS ARE INCLUDED IN ANY ALLOWANCE ITEMS, AND ADD ALLOWANCES TO "RELATED SECTIONS" PARAGRAPH ABOVE. OTHERWISE DELETE FOLLOWING PARAGRAPH.

 C. Allowances:

INCLUDE APPROPRIATE LANGUAGE BELOW INCLUDING A REFERENCE TO ALTERNATES, IF PRODUCTS SPECIFIED IN THIS SECTION ARE SUBJECT TO ANY ALTERNATE BID ITEMS, AND ADD SUCH ALTERNATES TO "RELATED SECTIONS" PARAGRAPH ABOVE. OTHERWISE DELETE FOLLOWING PARAGRAPH.

1. Alternates:

1.2 DEFINITIONS

1. Access Control: The management of persons and vehicles through entrances and exits of a secured area utilizing electronic systems and specialized procedures.
2. Antipassback Mode: Controller prevents successive use of credential through a specified access point.
3. Controller: An electronic device that automates the process of who, when and where someone may enter or exit an area.
4. Normal Mode: Controller grants access provided credential holder has privileges for that time and that access point.
5. Proximity Credential: A portable media (card or tag) that carries 2 or more bits of data associated with the identity of an individual or property and is based on RFID technology.
6. Proximity Reader: A device based on RFID technology that is capable of reading data from a proximity credential when the credential is presented within the device read range.
7. RF: Radio Frequency: Any of the wave frequencies that lie in the range extending from below 3 kilohertz to about 300 gigahertz and that include the frequencies commonly used for communications signals.
8. RFID: Radio Frequency Identification. Incorporating electromagnetic or electrostatic coupling in the radio frequency portion of the spectrum allowing proximity credentials and readers to communicate contactlessly through a variety of modulation and encodation schemes. Normally credential data may be contained in 2 or more bits for the purpose of providing identification to the holder of the credential. Widely considered the best identification technology to meet ADA requirements.
9. Wiegand™ Format: Electrical and physical definition of the interface between a reader and control panel. Commonly used by the security/access control industry, the electrical characteristics are loosely based upon the fundamentals of the Wiegand Effect. The Wiegand Effect is the storage of magnetic energy by a highly processed ferromagnetic wire called the Wiegand Wire.
10. ABA Track II Magnetic Stripe Format: Electrical and physical definition of an interface between a reader and control panel. Commonly used by the security/access control industry, the creation of this format was led by the American Banking Association (ABA).

1.3 SYSTEM DESCRIPTION

1. Design Requirements: Rugged proximity readers shall read user credentials without physical contact, process credential-encoded data and output data to access system controller resulting in instructions to allow/deny access.

 B. Performance Requirements:

1. Rugged proximity reader shall perform in situations that may damage a conventional reader.
2. Reader data output time to controller: <95 milliseconds nominal.
3. Transmission of radio frequency signals into the reader shall not compromise the system.
4. Presence of small metal objects, such as keys or coins, near the credential shall not alter the code nor prevent the code from being read.
5. Different types of credentials may be used interchangeably and shall be compatible with all readers in the system.
6. Reader shall be of a contactless pass-through type, reading any data programmed to the credential, regardless of credential data configuration.
7. Damage or vandalism to the reader shall not compromise any part of the access control system.

1.4 SUBMITTALS

 A. Reference Section 01330‑Submittal Procedures; submit following items:

 1. Product Data: Rugged readers and credentials.

 2. Quality Assurance/Control Submittals:

 a. Manufacturer's Installation Instructions.

 3. Closeout Submittals:

 a. Operation Guides.

 b. Special Warranties.

1.5 QUALITY ASSURANCE

 A. Qualifications:

 1. Manufacturer Qualifications: Minimum one-decade experience producing RFID devices for electronic access control applications.

1.6 DELIVERY STORAGE ANDHANDLING

 A. Product Storage and Handling Requirements.

 B. Follow manufacturer's instructions.

1.7 WARRANTY

 A. Special Warranty:

 1. All Rugged Readers: Limited Lifetime.

 2. Credential Type 1: Limited Lifetime.

 3. Credential Type 2: Limited Lifetime.

 4. Credential Type 3: One year.

 5. Credential Type 4: Limited Lifetime.

 6. Credential Type 5: Limited Lifetime

**PART 2 PRODUCTS**

2.1 MANUFACTURER

 A. Manufacturer: Farpointe Data, Inc.; 1376 Borregas Avenue, Sunnyvale, CA 94089, U.S.A.; telephone +1 (408) 731-8700; fax +1 (408) 731-8705; email: info@farpointedata.com, web: www.farpointedata.com.

INSERT NAME, ADDRESS AND PHONE NUMBERS OF SYSTEM MANUFACTURERS BELOW.

1. Electronic Access Control System Manufacturer:

INSERT NAME, ADDRESS AND PHONE NUMBERS OF SYSTEM INTEGRATORS BELOW.

2. System Integrator:

B. Substitutions: Substitution Procedures.

2.2 SYSTEM COMPONENTS

1. A. Rugged Proximity Card Reader:

 1. General:

1. Reader shall function in access control system's normal or antipassback mode without changes to the reader.

CONTACT FARPOINTE FOR CERTAIN 125-KHZ PROXIMITY TECHNOLOGIES AND PROTOCOLS SUPPORTED WITH BRANDS OTHER THAN NATIVE PYRAMID SERIES PROXIMITY, HID® or AWID®.

1. 125-kHz Proximity Credential Technology Support: [Native Pyramid Series Proximity credentials only] [Certain HID® protocols and Pyramid Series credentials (Add “H” suffix to model number when specifying, i.e. P-300-H.)] [Certain AWID® protocols and Pyramid Series credentials (Add “A” suffix to model number when specifying, i.e. P-300-A.)] [Certain HID® protocols and certain AWID® protocols and Pyramid Series credentials (Add “HA” suffix to model number when specifying, i.e. PSC-1-HA.)] [Others.] [Configuration determined by programming of reader at factory.].

CONTACT FARPOINTE FOR OUTPUT DATA CONFIGURATIONS OTHER THAN WIEGAND AND MAGNETIC STRIPE.

c. Standard Output Data Configuration: [Wiegand-Standard] [ABA Track II Magnetic Stripe (clock & data)-Optional] [Output data configured to ABA Track II by presentation of Control Card (formatting).].

d. Status Indicators: Independently controlled 4-state LED (red, green, amber and off) and audio tone, unless otherwise noted.

e. Input Voltage: 5 to 14 VDC.

1. Operating Temperature Range: -40 to 150 degrees F (-40 to 65 degrees C).
2. Cabling: Color-coded, multi conductor #24 AWG (0.60 mm), #22 AWG (0.80 mm) or #18 AWG (1.20 mm) shielded minimum 4 conductor data communications cable.
3. Frequency of Operation: 125 kHz excitation.
4. Required Compliance: FCC, CE Mark.
5. Tamperproof mounting screws.
6. OEM Label Area: .9 x.35 inch (23 x 9 mm) [Private labeling], unless noted.
7. Control Cards: A selection of at least ten special control cards modifying local reader operation.

CONTACT FARPOINTE FOR A LIST OF AVAILABLE CONTROL CARDS.

2. Type A:

1. Model: P-403 Guardian Proximity Reader.
2. Application: A rugged mullion-type reader designed for vandal and impact resistance, which may be mounted to a metal door (mullion) frame, a window frame or any flat surface.
3. Read Range: Up to 5 inches (126 mm).
4. Maximum Size (HxWxT): 5.25x2x1 inches (133x51x25 mm).
5. Current Draw: 30 mA typical, 75 mA peak @ 12 VDC.
6. Cover color: Black.

3. Type B:

1. Model: P-405 Guardian Proximity Reader.
2. Application: A rugged wall switch-type reader designed for vandal and impact resistance, which may be mounted to a metal or plastic U.S. style single-gang wall box or any flat surface.
3. Read Range: Up to 5 inches (126 mm).
4. Maximum Size (HxWxT): 4.5x3.0x1 inches (114x76x25 mm).
5. Current Draw: 30 mA typical, 75 mA peak @ 12 VDC.
6. Cover color: Black.

4. Type C:

1. Model: P-410 Guardian Proximity Reader.
2. Application: A rugged wall switch-type reader designed for vandal and impact resistance, which may be mounted to a metal or plastic U.S. style double-gang wall box or any flat surface.
3. Read Range: Up to 8 inches (202 mm).
4. Maximum Size (HxWxT): 5x5x1 inches (127x127x25 mm).
5. Current Draw: 35 mA typical, 75 mA peak @ 12 VDC.
6. Cover color: Black.

5. Type D:

1. Model: P-453 Gibraltar Proximity Reader.
2. Application: A rugged mullion-type reader designed for vandal and bullet resistance, which may be mounted to a metal door (mullion) frame, a window frame or any flat surface.
3. Read Range: Up to 1 inch (25 mm).
4. Maximum Size (HxWxT): 5.25x2x1 inches (133x51x25 mm).
5. Current Draw: 30 mA typical, 75 mA peak @ 12 VDC.
6. Color: Stainless steel with laminate face.
7. Laminate Face: Milled from antiballistic *Shot*BLOCKER® material, which is UL-752 compliant for bullet-resistant integrity.

6. Type E:

1. Model: P-455 Gibraltar Proximity Reader.
2. Application: A rugged mullion-type reader designed for vandal and bullet resistance, which may be mounted to a metal or plastic U.S. style single-gang wall box or any flat surface.
3. Read Range: Up to 1 inch (25 mm).
4. Maximum Size (HxWxT): 4.5x3x1 inches (114x76x25 mm).
5. Current Draw: 30 mA typical, 75 mA peak @ 12 VDC.
6. Color: Stainless steel with laminate face.
7. Laminate Face: Milled from antiballistic *Shot*BLOCKER® material, which is UL-752 compliant for bullet-resistant integrity.
8. Proximity Credential:

1. General:

a. Passive operation: Must be powered by the reader and not make use of a battery.

1. Operating Temperature Range: -40 to 150 degrees F (-40 to 65 degrees C).
2. Credential coding shall be derived from a population of at least 184 trillion possible unique codes.

CONTACT FARPOINTE FOR AVAILABLE CODING TYPES OTHER THAN WIEGAND AND MAGNETIC STRIPE.

1. Standard Data Configuration: [Wiegand] [ABA Track II Magnetic Stripe].
2. ID Marking: [Factory standard matches encoded] [None, offset or random numbers] [As selected by specifier from manufacturer’s standard permanent marking schemes.].

CONTACT FARPOINTE FOR CERTAIN 125-KHZ PROXIMITY TECHNOLOGIES AND PROTOCOLS SUPPORTED WITH BRANDS OTHER THAN NATIVE PYRAMID SERIES PROXIMITY, HID® or AWID®.

1. 125-kHz Proximity Credential Technology Support: [Native Pyramid Series Proximity credentials only] [Certain AWID® protocols and Pyramid Series credentials (Add “A” suffix to model number when specifying, i.e. PSC1-A.)] [Certain HID® protocols and Pyramid Series credentials (Add “H” suffix to model number when specifying, i.e. PSC-1-H.)] [Others.] [Configuration determined by programming of credential at factory.].

2. Type 1:

a. PSC-1 Standard Light Proximity Card; clamshell-type plastic card with reinforced slot punch and beveled edges.

b. Maximum Size: 3.4x2.2x0.06 inches (86x54x1.5 mm).

c. Read Range: Up to 8 inches (202 mm) with P-500; dependent on reader.

d. Slot Punch: [Vertical].

e. Graphics: [None] [Dye sublimation using PVC Adhesive Overlay.]

3. Type 2:

 a. PSI-4 Image Technology Proximity Card; thicker credit card (LxW) size plastic credential. Front and back surfaces suitable for edge-to-edge dye sublimation printing

 b. Maximum Size: 3.3x2.1x0.031 inches (86x54x0.84 mm).

1. Read Range: Up to 7 inches (176 mm) with P-500; dependent on reader.
2. Slot Punch Indicators: [Vertical] [Horizontal].
3. Finish:
* Front: [Printable gloss] white.
* Back: [Printable gloss] white with slot punch indicators and small logo.
1. Graphics: [None] [Front] [and] [Back] [Custom color graphics using customer supplied artwork].

4. Type 3:

1. PSM-2 Multi Technology Proximity Card; thin credit card size plastic credential conforming to ISO 7813. Front and back surfaces suitable for edge-to-edge dye sublimation printing.
2. Maximum Size: 3.3x2.1x0.031 inches (86x54x0.84 mm).
3. Read Range: Up to 7 inches (176 mm) with P-500; dependent on reader.
4. Slot Punch Indicators: [Vertical] [Horizontal].
5. Finish:
* Front: [Printable gloss] white.
* Back: [Printable gloss] white with slot punch indicators and small logo.
1. Graphics: [None] [Front] [and] [Back] [Custom color graphics using customer supplied artwork].
2. Magnetic Stripe: [None] [3-track high coercivity].
3. Smart Module: [None] [Smart module-type per customer specification]

5. Type 4:

 a. PDT-1 Proximity Disc Tag; thin credential appropriate for adhering to another device, such as an existing card, mobile phone or wallet.

 b. Maximum Size: 1.5x1.2x0.20 inches (38x29x5 mm).

 c. Read Range: Up to 3.5 inches (88 mm) with P-500; dependent on reader.

 d. Attachment: Strong adhesive.

 e. Graphics: [None] [Front] [Custom graphics using customer supplied artwork].

2.3 FABRICATION

 A. Reader:

 1. Electronics: Enclosed in epoxy potting preventing access to reader electronics.

2. Enclosure: [Monolithic polycarbonate] [Stainless steel and antiballistic *Shot*BLOCKER® laminate material]

 3. Core: Potted polycarbonate module.

**PART 3 EXECUTION**

3.1 EXAMINATION

 A. Examine substrates upon which readers will be installed.

1. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

 C. Commencement of work by installer is acceptance of substrate.

3.2 INSTALLATION

1. Follow manufacturer's instructions.

3.3 FIELD QUALITY CONTROL

 A. Site Tests: As appropriate, test each reader for proper LED and audio tone function, as well as read range and data output accuracy.

3.4 CLEANING

 A. Clean components soiled by work as recommended by manufacturer.

1. Remove surplus materials and debris from site.

3.5 DEMONSTRATION

 A. Demonstrate proper operating procedures to owner's representative.

COMPLETE FOLLOWING SCHEDULES OR PROVIDE SIMILAR SCHEDULES ON DRAWINGS. EXPAND SCHEDULES AS REQUIRED.

3.6 READER SCHEDULE



* 1. CREDENTIAL SCHEDULE

