ITEM OPPORTUNITY SYNOPSIS

Scouting Number:	2024-215
Name of the item to be scouted:	Floor Box/Poke-Thru Device
State item to be used in:	Vermont
Describe the Item:	
Please describe the item application/the end use of the item.	Box located in floor to provide power/data/av etc. to desired locations where wall application is not available.
Supplier Information:	
Type of Supplier Being Sought (select from the list below):	
Manufacturer	x
Contract Manufacturer	
Distributor	
Other (Please Specify)	
Reason for Scouting Submission (select from the list below)	
2nd Supplier	
Price	
Re-Shore	
Past supplier no longer available	
New Product Startup	
BABA	x
Other (Please Specify)	
Summary of Technical Specifications and Performance Requirements:	
Describe the manufacturing processes (elaborate to provide as much detail as possible)	Sheet metal fabrication to produce enclosure. Separate metal cover top is fabricated and assembled with the enclosure. Third party receptacle outlets, data outlets and A/V outlets are installed within enclosure either in field or in manufacturer plant.
Provide dimensions / size / tolerances / performance specifications of the item	Refer to specification section 261400 for floor box information
List required materials needed to make the product, including materials of product components, if applicable	Fabricated sheet metals for enclosure, receptacle outlets, data outlets, and A/V outlets.
Are there applicable certification requirements?	
Yes	x
No	
Please explain:	ISO 9001 UL Other ? ANSI ? ASTM ? ADA ? AEIC ? CSA ? IEEE ? EEI ? EPA ? FM ? FCC ? FIPS Pub 94 ? ICEA ? IBC ? IEC ? IECC ? OSHA ? NEC ? NESC ? NEMA ? NFPA
Are there any applicable regulations that apply to the production of this item?	
Yes	
No	x
Please explain:	
Are there any other standards / requirements?	
Yes	x
No	
Please explain:	See provided specifications 261370 (1.4) REGULATORY REFERENCES for more information.
NAICS CODES:	
NAICS 1	335932 Noncurrent-carrying wiring device manufacturing
NAICS 2	
Additional Comments:	
Additional technical comments:	
Volume and Pricing:	
Estimated Potential Business Volume (i.e. #units per day, month, year):	19 floor boxes will be needed for this project
Estimated Target Price/Unit Cost Information:	$1,200/unit
Delivery Requirements:	

When is it needed by? (Immediate, 30 days, 6 months, etc.)	Construction is schedule to start in February of 2025.
Describe packaging requirements (i.e. individually/group packaging, etc.)	Individually wrapped
Where will this item be shipped?	Norwich University, Northfield, VT
Additional Comments:	
Is there other information you would like to include?	Contact information for questions including BABA/Buy American compliance: Jones Architecture Alya Staber alya@jonesarch.com Please copy scouting@nist.gov on all correspondence.

SECTION 261400

WIRING DEVICES

PART 1 – GENERAL

1.1 WORK INCLUDED

A. Provide wall switches.

B. Provide receptacles.

C. Provide cover plates.

1.2 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary General Conditions and other Division 01 specification sections, apply to this Section and to all Contractors, Subcontractors, or other persons supplying materials and/or labor, entering into the Project site and/or premises, directly, or indirectly.

B. The Specifications and Drawings are intended to be complementary. A particular section, paragraph or heading in a Division may not describe each and every detail concerning work to be done and materials to be furnished. The Drawings are diagrammatic and may not show all of the work required or all construction details. Dimensions are shown for critical areas only; all dimensions and actual placements are to be verified in the field. It is to be understood that the best trade practices of the Division will prevail. It remains the responsibility of the Contactor or Subcontractor to provide all items, equipment, construction, and services required to the proper execution and completion of the Work.

C. Reference listings are provided as a convenience to the Contractor or Subcontractor providing the Work of this Section and may not contain all the requirements affecting this Section. It remains the responsibility of the Contractor or Subcontractor to locate and comply with all requirements of the Contract Documents.

1.3 SUBMITTALS

A. Submit product data in accordance with Section 260100.

B. Certifications: Provide manufacturer’s certification that all applicable products were manufactured in United States and meet the requirements of the Build America, Buy America Act (BABA) (part of Infrastructure Investment and Jobs Act).

1.4 REGULATORY REFERENCES

A. All specified items or systems shall be designed, manufactured, tested, and installed in compliance with applicable provisions of all governing codes, rules, laws, and ordinances in accordance with Section 260100.

1. If there is a conflict between applicable documents, then the more stringent requirement shall apply. All documents listed are believed to be the most current releases of the

documents. The Contractor has the responsibility to determine and adhere to all applicable documents and to the most recent release when developing the proposal for installation.

2. This document does not replace any code, either partially or wholly. The Contractor must be aware of local codes that may impact this project.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS - WALL SWITCHES

A. Subject to compliance with requirements, provide products by the following:

1. Wall switches:

a. Bryant
b. Hubbell
c. Pass & Seymour
d. Cooper Wiring Devices
e. Leviton

2. Receptacles:

a. Bryant
b. Hubbell
c. Pass & Seymour
d. Cooper Wiring Devices
e. Leviton

3. Cover plates:

a. Bryant
b. Hubbell
c. Pass & Seymour
d. Cooper Wiring Devices
e. Leviton

B. Substitutions: Items of equal quality, function and performance may be proposed for substituting by following the procedures outlined in Section 260100.

2.2 SWITCHES

A. 120-277 Volt Switches: Quiet type, toggle handle, with totally enclosed case, rated 20 ampere or as indicated on the Drawings with silver cadmium oxide contacts. Provide matching two-pole, 3-way and 4-way switches as indicated. Switches shall have a grounding terminal which shall be connected to the outlet box with a grounding conductor to establish continuity.

B. Switches shall be horsepower rated when used to control motor loads.

C. Color: To be selected by Architect from the manufacturer's full color range

D. Handles shall be lighted if indicated.

2.3 LOW VOLTAGE DIMMING SWITCH

A. Provide low voltage dimming switches with configurations and ratings suitable for the intended use and compatible with provided transformers.

B. 0-10 volt stand-alone dimming switches shall be large paddle type with captive linear dimmer slide. Switch shall be compatible with fluorescent ballasts and LED drivers that are compliant to IEC 60929 0-10V current sinking control. Provide with matching power pack for on/off control. Lutron DIVA DVTV-XX or equivalent.

C. Color: To be selected by Architect from the manufacturer's full color range.

D. Provide barrier (partition) in switch outlet boxes where low voltage dimmer switches are ganged with line voltage switches.

E. The Electrical Contractor, in cooperation with lighting control manufacturer and light fixture manufacturers, is responsible for ensuring compatibility between all LED drivers and the lighting control system components. All proposed LED fixtures shall be tested by the lighting control manufacturer at the factory to verify compatibility prior to installation in the field. If any LED fixture is determined to be not compatible with the proposed lighting control system, it is the Electrical Contractor's responsibility to work with the light fixture manufacturer to provide a driver that is compatible with the lighting control system. All 0-10 VDC LED dimming drivers shall meet the requirements of IEC 60929 for current sinking control and shall have an isolate 0-10 VDC control circuit.

2.4 OCCUPANCY SENSOR SWITCH

A. The passive infrared sensor shall be a completely self contained control system that replaces a standard toggle switch. Switching mechanism shall be a latching air gap relay, compatible with electronic ballasts, compact fluorescent, and inductive loads. Triac and other harmonic generating devices shall not be allowed. Sensor shall have ground wire and grounded strap for safety.

B. Sensor shall be capable of detecting presence in the control area by detecting changes in infrared energy. Small movements shall be detected, such as when a person is writing while seated at a desk.

C. Sensor shall utilize advanced control logic based on RISC (Reduced Instruction-Set Circuit) microcontroller.

D. Detection Signature Processing (DSP) shall be used to avoid false offs and false activations and to provide immunity to RFI and EMI.

E. Continuously adjusting Zero Cross relay control shall be used to guarantee reliable operation with non-linear loads (electronic, PL lamp ballasts) even with temperature changes and product aging.

F. Sensor shall utilize SmartSet™ technology to optimize the sensor behavior to fit occupant usage patterns and adjust sensitivity and time delay to changing conditions. The use of SmartSet shall be selectable by user with a DIP switch.

G. Sensor shall have a time delay that is adjusted automatically (with the SmartSet setting) or shall have a fixed time delay of 5, 10, 15, 20, or 30 minutes, walk-through mode, or test mode, set by DIP switch. In walk-through mode, lights shall turn off 3 minutes after the area is initially occupied if no motion is detected after the first 30 seconds.

H. Sensor shall have the choice of light flash alert and/or audible alert of impending light shut off, selectable with DIP switch.

I. Sensor shall have sensitivity adjustment that is set to either automatic (SmartSet setting) or reduced sensitivity, and is set with DIP switch.

J. Sensor shall have a built-in light level feature selectable with DIP switch. During set up of light level control, sensor shall learn desired hold-off level, requiring only one step.

K. Sensor shall have automatic-ON or manual-ON operation adjustable with DIP switch.

L. Sensor shall operate at universal voltages of 100, 120, 230, or 277 V AC; 50/60 Hz.

M. Sensor shall have no minimum load requirement and shall be capable of switching 0 to 800 watts fluorescent/incandescent or 1/6 hp at 100/120V AC, 50/60 Hz; 0 to 1200 watts fluorescent or 1/6 hp at 230/277VAC, 50/60 Hz.

N. Sensor shall utilize a temperature compensated, dual element sensor, and a multi-element Fresnel lens.

O. For vandal resistance, Fresnel lens shall be made of hard, 1.0mm Poly IR 2 material that offers greater sensitivity to motion and superior detection performance. Lens shall have grooves facing in to avoid dust and residue build up which affects IR reception.

P. To assure detection at desktop level uniformly across the space, sensor shall have a two-level, 28-segment, multi-element Fresnel lens system.

Q. Sensor shall cover up to 300 sq ft for walking motion, with a field of view of 180 degrees.

R. Adjustments and mounting hardware shall be concealed under a removable, tamper resistant cover to prevent tampering of adjustments and hardware.

S. For safety, sensor shall have a 100% off switch with no leakage current to the load.

T. Sensor shall not protrude more than 3/8" from the wall and shall blend in aesthetically.

U. To ensure quality and reliability, sensor shall be manufactured by an ISO 9002 certified manufacturing facility and shall have a defect rate of less than 1/3 of 1%.

V. Sensor shall have standard 5-year warranty and shall be UL and CUL listed.

W. Wattstopper WA-200 or equivalent.

2.5 RECEPTACLES

A. Standard Duplex Receptacles:

1. Full gang size, polarized, duplex, side and back wired or pigtailed terminals, parallel blade, U grounding slot, heavy-duty specification grade (#5362), rated at 20 amperes or as indicated on the Drawings, 125 volts, designed for split feed service, NEMA Type 5 20R. Receptacles shall have a grounding terminal which shall be connected to the outlet box with a grounding conductor to establish continuity.
2. Receptacles intended for use in wet locations shall be weather-resistant, Type WR.
3. Pigtailed terminals shall be stranded wire, 6” lead.

B. Color: Ivory, unless otherwise indicated

C. Ground fault interrupter receptacles shall be specification grade rated 20 amperes with built in test and reset buttons, and shall comply with NEMA WD 1, NEMA WD 6, UL 498, Federal Specification W-C-596, and UL943, Class A. Feed through feature will protect standard receptacles located downstream. Include indicator light that is lighted when device is tripped. Must have Self-test feature (conducts an automatic test every three seconds, ensuring ground fault protection. If ground fault protection is compromised, power to the receptacle must be discontinued.)

D. Special Receptacles: Provide special receptacles of type and located as indicated on the Drawings. Type shall be suitable for intended equipment. Receptacles shall have a grounding terminal which shall be connected to the outlet box with a grounding conductor to establish continuity.

E. Isolated Ground Receptacles: Provide isolated ground receptacle where indicated. Receptacle shall be orange. Receptacles shall have a grounding terminal which shall be connected to the outlet box with a grounding conductor to establish continuity.

F. Corrosion-Resistant Receptacles: Polarized, side and back wired, duplex, screw-type terminals, parallel blade, U-grounding slot, heavy-duty specification grade - rated at 20 amperes, 125-volt. Receptacle shall be constructed of grey urea. All metal parts shall be either stainless steel or nickel plated brass, NEMA Type 5-20R. Receptacles shall have a grounding terminal which shall be connected to the outlet box with a grounding conductor to establish continuity.

G. Tamper Resistant Receptacles:

1. Back and side wired, 20-amp, 125V with dual mechanical shutter system to prevent insertion of foreign objects.
2. Specification grade with high impact resistant nylon face and thermoplastic back body.

H. USB charging duplex receptacles shall be rated for 15 amperes with dual USB charging ports and a minimum charging capacity of 2.1A at 5 VDC.

I. Schedule of Use:

1. Corrosion-resistant receptacles shall be used in areas of high moisture and in all process areas.
2. Standard receptacles shall be used in interior dry locations including electrical room.
3. Isolated ground receptacles shall be used where indicated on the Drawings for power to computers and control terminals.
4. Ground fault interrupter receptacles shall be used where required by NEC and where indicated on the Drawings.
5. Tamper Resistant Receptacles shall be used in all areas as required by the NEC and where indicated on the Drawings.

2.6 DROP CORD RECEPTACLE

A. The drop cord receptacle shall be provided using a retractable extension cord unit. The extension cord shall be industrial-duty of heavy-gauge steel with lifetime lubrication, heavy-duty main spring, steel mounting flange, disengagable ratchet lock, 50-foot, three conductor #12 AWG SO cable and 20A, 125V receptacle with cable grips.

2.7 COVER PLATES

A. Materials:

1. Stainless Steel: 0.040-inch-thick minimum, accurately die cut, protected with release paper.
2. Cast Metal: Die cast profile, ribbed for strength, flash removed, primed with grey enamel, furnished complete with four mounting screws and sealing gaskets.
3. Thermoplastic: Smooth face, rounded edge, heavy-duty of nylon, fiberglass or high impact resistant plastic nylon and screws with heads colored to match plate.
4. Gaskets: Resilient rubber or closed cell foam urethane.
5. Galvanized Steel: Hot dipped galvanized, heavy-duty stamped steel.
6. Flush-Mount Weatherproof While-in-Use Covers: Polycarbonate self-closing receptacle cover rated NEMA 3R. Weatherproof when attachment plug cap is inserted. Two (2) exit ports for 12/3 cord. Complies with NEC 406-9 and UL 514D. Typical to Pass & Seymour WIUFC10. The cover shall be identified as "extra duty."

B. Schedule of Use:

1. Stainless Steel: To be used in interior dry locations including lab and public area subject to high abuse.
2. Thermoplastic: To be used in interior dry locations unless otherwise indicated.
3. Cast Metal: To be used in exterior locations, areas of high moisture or where a weatherproof type device is indicated. All cast type boxes shall have a cast gasketed cover.
4. Galvanized steel to be used in interior dry utility areas including electrical and mechanical areas.
5. Weatherproof while in use: To be used for all exterior receptacles or areas of high moisture.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Switches:

1. Mount switches at the height indicated on the drawings, above floor to center of device unless otherwise indicated.
2. Switches shall be located to agree with architectural features and shall not interfere with work by other Trades.
3. The location of all devices shall be subject to the approval of the Engineer. The Drawings show approximate locations only.
4. Where groups of switches are shown, they shall be installed in approved gangable boxes with one piece faceplates that completely cover opening in wall.
5. Low voltage dimmer shall be connected electrically before transformers or as otherwise required by manufacturer.

B. Receptacles:

1. Mount receptacles at the height indicated on the drawings, above finished floor or grade to center of device, unless otherwise noted on the Drawings, with grounding pole at bottom.
2. Outlets shall be located to agree with architectural features and shall not interfere with work by other trades.
3. All receptacles shall be labeled as follows; Circuit #1, Receptacle 1 of 2, Circuit #1, Receptacle 2 of 2.

4. Do not megger test any circuits when TVSS is connected.

C. Cover plates:

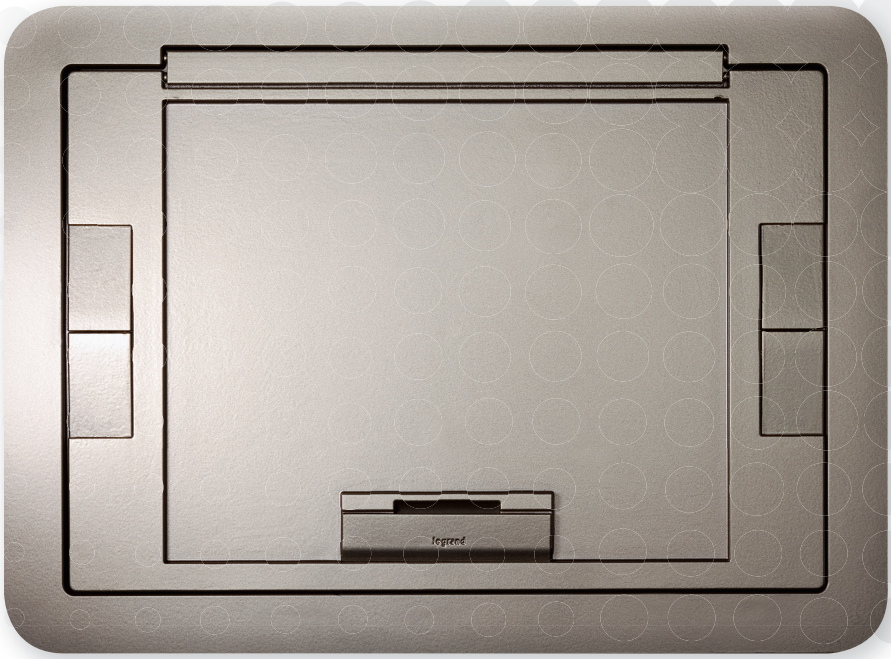
1. Install cover plates on all wiring devices.
2. Metal faceplates shall be grounded.
3. Provide label indicating panelboard identification and circuit number.
4. Provide red colored faceplates for all devices wired to emergency or standby power. Provide label indicating the panelboard and circuit # the device is powered from.

D. Identification:

1. Identify each receptacle with panelboard identification and circuit number with durable wire markers or tags inside outlet boxes.

END OF SECTION

1 BOX.



3 FLOOR TYPES.

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1 FLOOR BOX

WORKS IN ANY FLOOR TYPE.

For a long time, different floor types called for different floor box styles. The idea that a single floor box could be used across multiple floor constructions was inconceivable. But with the Evolution Series Floor Box, the way we think and work has changed. It's more than just a floor box. It's a more efficient way to do business.

Evolution Series Floor Boxes are designed for every type of floor construction. Whether used in wood, concrete or raised floors, the Evolution Series Floor Box installs with ease. They can be installed before or after the floor covering has been put down and they are fully adjustable pre- and post-concrete pour. In addition, all boxes are TopGuard™ protected, keeping out water, dirt and debris.

So, no matter where you work, installing one box provides countless benefits.

1 BOX. MULTIPLE FLOOR TYPES AND SURFACES.

Wood Floor

Concrete Floor

Raised Floor

Carpet, tile, wood, terrazzo and polished concrete surfaces

1 BOX. 6 FINISHES.

Aluminum

Nickel

Brass

Bronze

Gray

Black

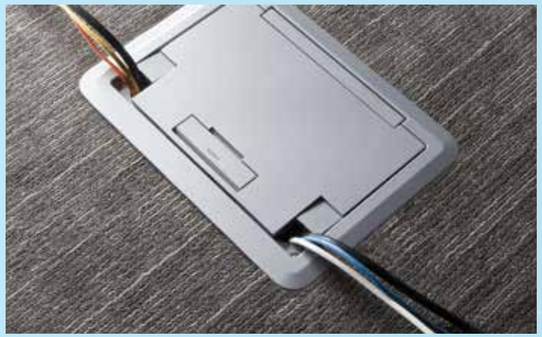
Covers are available in the above six finishes. There is also the option for a carpet insert or solid cover for surface and flush mount applications.

Standard Floor Boxes
For raised, wood and above-grade concrete floors. Available in 4, 5, 6, 8 and 10-gang and furniture feed versions.

On-Grade Floor Boxes
For on-grade applications. Available in 4, 5, 6, 8 and 10-gang and furniture feed versions.

Fire Classified Floor Boxes
For fire rated above-grade applications (up to two hours). Available in 4, 5, 6, 8 and 10-gang versions.

1 BOX. MANY BENEFITS.



Sliding Doors Reduce Trip Hazards – Auto-close egress doors lock into position when slid open and automatically wrap around cables when the cover is closed, reducing trip hazards.

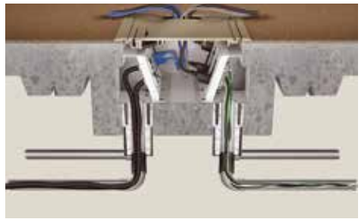
Easy Interior Access – Cover opens 180°, providing easy access when working inside the box.

Plug Load Control up to 30 Feet – Tested with Pass & Seymour® Wireless RF receptacles to control plug loads up to a distance of 30 feet when the cover is closed.

High Capacity Furniture Feed – Boxes are designed for concrete, wood and raised floor applications.

Accepts Standard Size Device Plates – Including single, double and triple standard size wall plates.

Keeps Cables Organized – Built-in cable management guides keeps cables orderly in the egress location, freeing up one hand when activating devices.



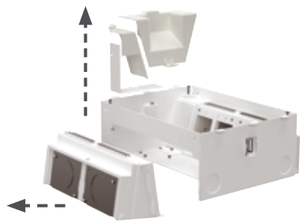
Two Hour Fire Rating – Fire classified for up to two hours and pre-assembled for fast, efficient installation. Just install conduit caps (included), position and secure the box to the desired height in the floor opening.

1 BOX. MAXIMUM CAPACITY.

Fully Finished White Painted Interior – Every floor box features a fully finished white painted interior, offering a professional and aesthetically pleasing look.

Maximum Depth Behind Modules – All boxes give the end user maximum plug and hand access. There is 3½" of wire space behind the device plate, offering maximum capacity for the deeper A/V style devices.

Removable Modules for Easy Changes – For easy installation, moves, adds and changes, modules can be removed out of the top and back. In addition, they can move from point "A" to point "B" without disconnecting services.



Tunnel Provides Additional Capacity – Built-in tunnel allows for services to be wrapped to the other side of the box for additional capacity.

Open System for Flexibility – Accepts a wide range of communications and A/V devices from leading manufacturers.

Various Knockout Sizes – The Evolution Series Floor Box knockouts range from ¾" trade size up to 2" trade size.

High Capacity – Able to accommodate between four and ten gangs.

Configure an Evolution Floor Box to fit your needs: www.legrand.us/evolution

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Electrical Wiring Systems

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