

**SECOND AMENDMENT TO AGREEMENT FOR GOODS AND SERVICES
(Metal Clad Switchgear Building)**

THIS SECOND AMENDMENT to the Agreement for Goods and Services (Metal Clad Switchgear Building) ("Amendment") is made as of _____, by and between the **City of Lake Worth Beach** ("CITY") and **Powell Electrical Systems, Inc.** ("CONTRACTOR").

WHEREAS, the CITY issued Invitation for Bid #23-102 for supply of Metal Clad Switchgear Building ("IFB") for City of Lake Worth Beach Electric Utility; and

WHEREAS, on July 19, 2023, the CITY and CONTRACTOR entered into the Goods and Services Agreement for the CONTRACTOR to provide the CITY with Metal Clad Switchgear Building ("Agreement"); and

WHEREAS, the term of the Agreement was for three (3) years with the option to renew for two (2) additional one (1) year terms, and

WHEREAS, on July 14, 2026, the CITY and CONTRACTOR amended the Agreement and extended the term until July 18, 2027; and

WHEREAS the Agreement states that the CITY may utilize this Agreement to purchase an additional Metal Clad Switchgear Building(s).

WHEREAS, The CONTRACTOR submitted the proposal for an additional Metal Clad Switchgear Building as specified in the EXHIBIT A of this Amendment; and

WHEREAS, the CITY finds amending the Agreement as set forth herein is in the best interest of the CITY and serves a valid public purpose.

NOW, THEREFORE, in consideration of the mutual promises contained herein, the sufficiency of which is hereby acknowledged by each party hereto, the CITY and the CONTRACTOR agree to amend the Agreement as follows:

1. **Recitals.** The above recitals are true and correct and are incorporated herein by reference.
2. **Specifications.** The specifications set forth and attached hereto as Exhibit "A" and incorporated herein, set forth further details for the furnishing of full engineering design, fabrication, testing, and delivery Metal Clad Switchgear Building for the City's Electric Utility department.
3. **Maximum Costs.** The CITY shall compensate the CONTRACTOR in accordance with the CONTRACTOR's pricing, which is attached hereto and incorporated herein as **Exhibit "A"**. The total cost to be paid by the CITY to the CONTRACTOR shall not exceed \$3,014,593 (Three Million, Fourteen Thousand, Five Hundred Ninety-Three Dollars). Since additional items and costs may be necessary to complete the scope of work identified in the CONTRACTOR's proposal, the CITY's Electric Utility Director or designee is authorized an additional contingency amount of no more than \$150,000 (One Hundred and Fifty Thousand Dollars) to complete the scope identified in the CONTRACTOR's specifications. Use of the contingency amount must be pre-approved in writing by the Electric Utility Director or designee before any additional costs are added to the CONTRACTOR's pricing and before the CITY is responsible or liable for payment of any sums from the contingency amount to the CONTRACTOR.

5. **Disclosure of Foreign Gifts and Contracts.** Pursuant to Section 286.101(3)(a), Florida Statutes, as may be amended, by entering into this Contract or performing any work in furtherance thereof, the CONTRACTOR certifies that it has disclosed to the CITY any current or prior interest of, any contract with, or any grant or gift received from a foreign country of concern where such interest, contract, or grant or gift has a value of \$50,000 or more and such interest existed at any time or such contract or grant or gift was received or in force at any time during the previous five (5) years.

6. **Counterparts.** This Amendment may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument. Either or both parties may sign this Amendment via facsimile, email or electronically and such signature is as valid as the original signature of such party.

7. **Entire Agreement.** The CITY and the CONTRACTOR agree that the Agreement, First Amendment and this Amendment set forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein. None of the provisions, terms and conditions contained in this Amendment may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto. All other terms and conditions of the Agreement (except as amended herein) remain in full force and effect.

REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOLLOWS

IN WITNESS WHEREOF, the parties hereto have made and executed this First Amendment to the Agreement for Goods and Services (Metal Clad Switchgear Building) on the day and year first above written.

CITY OF LAKE WORTH BEACH, FLORIDA

By: _____
Betty Resch, Mayor

ATTEST:

By: _____
Melissa Ann Coyne, MMC, City Clerk

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

APPROVED FOR FINANCIAL
SUFFICIENCY:

By: _____
Glen J. Torcivia, City Attorney

By: _____
Yannick Ngendahayo, Financial Services Director

CONTRACTOR: Powell Electrical Systems, Inc.

By: Bobby Joe Paul

Print Name: Bobby Joe Paul

[Corporate Seal]

STATE OF Texas
COUNTY OF Harris

THE FOREGOING instrument was acknowledged before me by means of ☒ **physical presence** or ☐ **online** notarization on this 28 day of September 2026, by Bobby Joe Paul, as the Sales Director [title] of **Powell Electrical Systems, Inc.**, a corporation authorized to do business in the State of Florida, who is ☒ **personally known to me** or ☐ **who has produced** _____ as identification, and who did take an oath under penalty of perjury that the facts stated with regard to section 787.06, Florida Statutes, are true and correct, and that he or she is duly authorized to execute the foregoing instrument and bind **Powell Electrical Systems, Inc.**, to the same.

Notary Seal:



Patricia Fielder
Notary Public Signature



PROPOSAL No. 268602 Rev3
September 3, 2026

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

City of Lake Worth Beach
1900 2nd Ave North
Lake Worth Beach, FL 33460

Attn: David Martyniuk
Email: DMartyniuk@lakeworthbeachfl.gov
Phone: 561.586.1629

We are pleased to offer the following proposal, which is our understanding of your requirements, subject to acceptance within 30 days from the above date. Please advise us if there are any misunderstandings. This quotation is also subject to change upon notice.

Powell is pleased to submit the following equipment proposal for your review and consideration.

The Equipment Descriptions and Bills of Material presented represent our best understanding of your equipment requirements based on the specifications, one-line drawings, and data sheets provided with the inquiry package.

Please review the content of our proposal and advise any changes or additions required to meet your specific project needs. Pricing submitted is based on the Bills of Material and Equipment Descriptions listed within this proposal.

Also note that any purchase order resulting from this proposal must reference the Powell proposal number in the contract documents.

Thank you for the opportunity to earn your business. Our Bill of Material and Pricing is as follows:

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

Power Control Room

Tag Number: 13TH AVE STATION PCR REV2

One (1) Powell PCR®, Power Control Room suitable for installation in an unclassified area with approximate exterior dimensions of:

20' 0" Wide with 6" wall thickness	Low ambient temperature: 0°F
60' 0" Long with 6" wall thickness	High ambient temperature: 104°F
11' 0" High less base and roof cap (interior height)	Altitude: 0 FT. above sea level

Estimated shipping dimensions and weight:

20' 9" Wide including 4.5" overhang on each side	Roof live load: 20 PSF
60' 0" Long with no overhang on each end	Floor live load: 150 PSF
13' 7" High including base and roof cap (approximate)	Basic wind speed: 200 MPH
Estimated weight including equipment: 115,822 LBS	

Structural Base:

- Welded channel construction, skid type, with structural supports and removable lifting lugs
- Steel floor, 1/4" thick with non-skid paint.
- 22 Floor penetrations, with surface mounted covers

Metal Preparation and Paint Finish:

- The welded base assembly is grit blasted to comply with the Commercial Blast Standard SSPC-SP6 as published by AISC.
- The structural base perimeter where the floor plate meets the channels are caulked to seal gaps that might allow moisture to collect.
- After blast, a primer is applied to the entire base using an industrial grade, high solid, and high build epoxy. The primer is applied to a minimum thickness of 4 mils.
- A second application of industrial grade, high solid, high-build epoxy is applied to the bottom of the base assembly. This application is BLACK in color and is applied to a minimum thickness of 4 mils.
- The sides of the base are finished using a black polyurethane paint with a minimum thickness of 2 mils.
- Total dry film thickness after coating:
 - For the top of the floor is 6 mils minimum
 - For the sides of the base is 6 mils minimum
 - For the bottom of the base is 8 mils minimum

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- Exterior interlocking panels, will be Pre-Painted White (ANSI 01) (Smooth). All interlocking panels and interior wall liners are pre-painted prior to assembly. An all-weather sealant is applied to all seams.

Exterior Wall, Interior Wall, Ceiling, and Roof Panels:

- Exterior walls and roof to be constructed of interlocking Powell, Pow-R-Loc panels. The design as a minimum, is to meet wind load requirements of FBC 2023
- Wall panels of 16 gauge stainless steel Type 304L painted White (ANSI 01) (Smooth)
- Roof panels of 18 gauge stainless steel Type 304L painted White (ANSI 01) (Smooth)
- Interior wall liner panels 16 gauge galvanized steel painted White (ANSI 01) (Smooth)
- Interior ceiling panels 12 gauge galvanized steel with integral Powl Strut System painted White (ANSI 01) (Smooth)
- Roof will have a slope of 1/4 inches per foot minimum
- 140 Linear feet of Painted Aluminum Gutter with Downspouts to Grade

Insulation for Base, Walls and Roof:

- Polyurethane spray on foam (2" R-13.4), meets ASTM E84 Flame Spread Test
- 6" code compliant wall with effective R-18.3 continuous insulation
- Code compliant roof with effective R-19.4 continuous insulation

Doors and Hardware:

- 2 Sets of stainless steel panic door hardware, with door closer & key lock
- 1 Personnel door, single wide, 3' x 7', 304L Stainless Steel with 12" X 12" viewing window
- 1 Equipment door, double wide, 6' x 8', 304L Stainless Steel with 12" X 12" viewing window
- 11 304L stainless steel equipment rear access doors without split
- 11 4" Exiscan IR Window for PowlVac
- 1 Rain canopies over personnel doors (304L SS)
- 1 Rain canopies over double wide equipment doors (304L SS)

The PCR® will include the following accessory items:

- 1 AC Panel 240/120VAC, 1 Phase, 3 Wire, 200A Main Bus, 42ckt with 150A Main Breaker, 22kAIC
- 1 Lot of Interior Vapor Tight LED lighting fixtures

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- 6 Interior LED lighting fixtures, with a minimum 90 minutes emergency battery backup
- 2 Light switches
- 2 Motion Sensor
- 12 Convenience receptacles
- 2 Exterior GFCI receptacles
- 2 Exit & Emergency Light Combo with dual LED lamps, 120/277 VAC
- 1 Lot of EMT conduit and wireway for interior and RGS for exterior building services
- 1 Lot of THHN/THWN wiring for utility lights, receptacles and space heater circuits

Equipment Power and Control Wiring and Interconnections:

- 120 Feet of cable tray 6", 12", or 18" wide x 4" deep Aluminum
- 2 Cable tray tees 4" deep 6", 12" or 18" wide
- 2 Cable tray elbows 4" deep 6", 12", or 18" wide
- PCR Power wiring limited to 90 Terminations
- PCR Control wiring limited to 44 Terminations
- PCR Instrumentation wiring limited to 150 Terminations
- PCR Communication wiring limited to 98 Terminations

Grounding System:

- 175 Linear feet of bare Copper ground bus 1/4" x 2"
- 2 Stainless steel ground pads on diagonal corners of building frame
- 16 Interconnection from each equipment ground bus to building ground loop

Exterior Devices:

- 1 Three Position (HOA) Control Switch with lighting contactor suitable for switching off exterior lights as required
- 2 General Purpose exterior light, LED Wall Pack with Photocell, 100W Metal Halide Equivalent
- 6 General Purpose exterior LED Floodlight with Photocell, 150W Metal Halide Equivalent

UPS and DC System Components:

- 1 Siemens DC Power Panel 250VDC, 250A Main Bus, 40ckt with 100A Main Breaker, 10KAIC
- 2 Battery exhaust fan and duct assembly
- 1 Hydrogen Gas Detector Powell standard

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- 1 Plumbed Eye Wash & Bowl
- 1 Mechanical installation of a Battery Charger Wall Mounted Type
- 1 Mechanical installation of a Eagle Battery Spill Pan
- 1 Furnished and install Safety Disconnect Switch, Fused, 2-Pole, NEMA 1, 100A

Fire Stop Equipment:

- 2 CO2 10 LB. fire extinguisher rated B-C

Standard HVAC System:

- 1 Building HVAC system for a non-classified area, to include:
- 2 3-Ton Wall mounted HVAC with 9.2kW electric heat unit, 208-230V, 1-phase, 60Hz to include:
 - BARD 11.0 EER HVAC part no. W36AF-A10ZXAXXJ, N+1 Redundancy
 - Aluminum air conditioner cabinet
 - Economizer for equipment building with Enthalpy sensor for operation down to -40° Fahrenheit
 - Compressor control module located on the Back side, adjustable from 30 seconds to 5 minutes
 - Phase rotation monitor
 - High and Low pressure switches with built-in auto-reset
 - Factory installed internal disconnect MCCB, padlockable
 - MERV2 1-in disposable air filter
 - Dry contracts for remote alarm or lockout
 - Auto changeover digital thermostat
 - ANSI/UL STD 60335-1 & 60335-2-40/CSA STD C22.2 #60335-1 & #60335-2-40

HVAC Accessories:

- 1 Lead lag controller with enhance alarm and Ethernet board, 2 units, MC4002-BC
- 1 High temperature alarm
- 2 Safety Disconnect Switch, Non-Fusible, 3-Pole, NEMA 3R, installed on wall mounted HVAC

Mechanical Equipment Installation:

- 1 Lot of installation of Powell furnished equipment to include:
 - 11 Sections of Medium Voltage Switchgear
 - 2 Wall Mounted HVAC Unit(s)
 - 2 Wall mounted ATS/MTS

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- 1 Wall Mounted fold-away workbench, 28"D x 48" Long, made of polyethylene, 300LBs work surface capacity
 - 2 Intrusion Alarm
 - 1 Marshalling Cabinet
 - 4 Multi Cable Transit welded to floor, Frames Only, Primed Steel, 2"D, 14"H x 31"W
-
- 1 Lot of installation of Customer furnished equipment to include:
 - 1 Security cameras (sent to Powell)
 - 1 City of Lake Worth Beach locks and cylinders for doors

Miscellaneous:

- 100 Square feet of floor space with L/360 deflection
- 1 HMI Working Station
- 1 REGENCY Double Pedestal Desk: Laminate, Oak, 2 Pedestals, 6 Drawers, Configurable, 60" W x 30" D X 29' H, Desk, Grainger part#860A18
- 1 125Vdc Interior LED Light Fixture, Marshall DC Lighting part# T8IN-2LED-125DC-20-WH
- 1 Generator Tap Box (Appleton ADJA20034-200)
- 1 Brooks Meter Socket 652U3010C13-1624
- 1 Storage Cabinet, 36"W x 18" D, Grainger part# 1UEY1
- 1 Badge Reader Provisions
- 2 Video Server SWI DVS3000 (1 included + 1 spare)
- 1 Touch screen laptop monitor (PN P4050D-U2)
- 1 Lot of Floor Paper for Floor Protection, to be installed after the floor is painted before ship
- 1 VESA Mount for 40" Touch screen laptop monitor
- 2 Lot of Internal device nameplates (devices & test switches)
- 1 Structural Analysis by Professional Engineer for the State of Florida to confirm PCR design and structural integrity per FBC 2023
- 1 State of Florida code compliance licensing fee
- Powell's PCR design shall be guided by FBC 2023 and FBCEC 2023
- Equipment clearance and egress proposed are based on the NEC 2020

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29.8kV ND Metal-Clad Switchgear

Tag Number: 27KVSWGR REV3

One (1) line-up of PowlVac-ND 27kV metal-clad switchgear with vacuum circuit breakers in accordance with ANSI/IEEE standards C37.04, C37.09, C37.20.2, C37.100.1, and rated as follows:

Maximum Voltage Class:	29.8 kV
Service Voltage:	24.94 kV
Basic Impulse Level:	125 kV
Power Frequency Withstand:	60 kV
Voltage Range (K factor):	1
Short-circuit Current Rating:	25 kA rms
Close and Latch Capacity:	65 kA Peak
Close Voltage:	125 VDC
Trip Voltage:	125 VDC
Frequency:	60 Hz

(11) Vertical sections of metal-clad switchgear each with the following common features:

- Indoor enclosure, Type 1, 11 gauge steel, 36"W x 105"H
- Basic one high construction including rear access door as an integral part of the PCR®, 110"D
- Laminated plastic mimic bus
- Instrument compartment light 120 VAC LED type with switch
- Rear cable compartment light 120 VAC LED type with switch
- 2000A main bus, silver plated copper, 3 phase, 3 wire
- Flame retardant and track resistant Bonded Epoxy bus insulation system
- Epoxy main bus pass through insulators in a glass polyester mounting
- Carbon steel Grade 5 mounting hardware, plated for corrosion protection
- Phase polarity 1 2 3 or A B C, front to back, top to bottom, left to right
- 1/4" X 2" silver plated copper ground bus, uninsulated
- Control terminal blocks, 600 volt, 30 ampere, States Type NT
- Control wiring, 14 gauge, 41 strand, type SIS with VW-1 flame retardant rating
- Control wire termination, insulated, locking fork/spade tongue, crimp type
- Current transformer shorting type terminal blocks
- Current transformer wiring, 10 gauge, 105 strand, type SIS with VW-1 flame retardant rating
- Current transformer wire termination, insulated, ring tongue, crimp type
- Wire harnesses
- Common DC bus #8 AWG SIS wire with seamless ring tongue terminations
- Raised profile nameplates

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- Wire markers, sleeve type, destination only
- Barrier behind the instrument compartment doors
- Texture powder coat paint finish
- ANSI-61, light gray exterior with white instrument panels

(1) Set of enclosure options:

- 1 Thermostat for control of space heaters
- 1 Weintek 7" Display cMT2078X + 120W Power Supply, 12-24VDC
- 11 EcoVisor Plus with (1) Set 4m Fiber Optic Probes
- 1 Moxa Converter

(2) Sets incoming line voltage monitoring equipment, each to include:

- Closed door racking type roll-out assembly complete with primary & secondary fuses
- 3 Voltage transformers, 16000:120 volt

(2) Sets switchgear main bus voltage monitoring equipment, each to include:

- Closed door racking type roll-out assembly complete with primary & secondary fuses
- 3 Voltage transformers, 16000:120 volt

(2) MAIN circuit breaker equipment sets, each to include:

- Circuit breaker cell rated 1200 ampere with OnBoard Racking™ electrical racking provisions, viewing window, integral light and remote switch, riser bus, cell studs, insulated primary spouts, automatic isolating shutters with position indicator, manual closed door trip unit, and cell interlocks as required by ANSI
- Silver plated copper runback bus assembly rated 1200A with boots
- Epoxy bus standoff assembly
- 1 **PowlVac drawout vacuum circuit breaker rated 27kV, 1200A, 25kA with closed door racking provision 27PV25SND, with 2 "a" & 2 "b" contacts**
- Circuit Breaker OnBoard Racking with Sentry Unit, ARM
- Circuit breaker switch, MOC 9 circuit (5 a & 4 b)
- Circuit breaker switch, TOC 9 circuit (5 a & 4 b)
- Shutter position indicator
- 4 Molded Case Circuit Breaker (Eaton Faz or approved equal) disconnect, 125VDC, 2 pole
- 6 Current transformers, multi ratio, standard burden
- 4 Indicating lights LED type

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- 1 Device 86 LOR, lockout relay, 3 decks, 12 contacts
- 3 SecuControl ST test switch with rear wired connection and semi-flush mount, 10-pole
- 1 SEL-787L Line Current Differential Protection Relay (0787L501ACACA7087AF30)
 - Set A-B chance ball stud with covers
- 3 Distribution Class Surge Arresters, 27 kV, polymer
- 2 Cable lugs, 1000 MCM
- 1 Lot nameplates

(1) BUS TIE circuit breaker equipment set, each to include:

- Circuit breaker cell rated 1200 ampere with OnBoard Racking™ electrical racking provisions, viewing window, integral light and remote switch, riser bus, cell studs, insulated primary spouts, automatic isolating shutters with position indicator, manual closed door trip unit, and cell interlocks as required by ANSI
- Silver plated copper tie bus assembly rated 1200A
- Epoxy bus standoff assembly
- 1 **PowlVac drawout vacuum circuit breaker rated 27kV, 1200A, 25kA with closed door racking provision 27PV25SND, with 2 "a" & 2 "b" contacts**
 - Circuit Breaker OnBoard Racking with Sentry Unit, ARM
 - Circuit breaker switch, MOC 9 circuit (5 a & 4 b)
 - Circuit breaker switch, TOC 9 circuit (5 a & 4 b)
 - Shutter position indicator
- 4 Molded Case Circuit Breaker (Eaton Faz or approved equal) disconnect, 125VDC, 2 pole
- 6 Current transformers, multi ratio, standard burden
- 3 Indicating lights LED type
- 1 Device 10, Trip selector switch
- 1 Device 43, Auto/Manual selector switch
- 3 SecuControl ST test switch with rear wired connection and semi-flush mount, 10-pole
- 1 SEL 751501ACACA7085A630
- 1 Lot nameplates

(6) FEEDER circuit breaker equipment sets, each to include:

- Circuit breaker cell rated 1200 ampere with OnBoard Racking™ electrical racking provisions, viewing window, integral light and remote switch, riser bus, cell studs, insulated primary spouts, automatic isolating shutters with position indicator, manual closed door trip unit, and cell interlocks as required by ANSI
- Silver plated copper runback bus assembly rated 1200A with boots

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- Epoxy bus standoff assembly
- 1 PowlVac drawout vacuum circuit breaker rated 27kV, 1200A, 25kA with closed door racking provision 27PV25SND, with 2 "a" & 2 "b" contacts**
- Circuit Breaker OnBoard Racking with Sentry Unit, ARM
- Circuit breaker switch, MOC 9 circuit (5 a & 4 b)
- Circuit breaker switch, TOC 9 circuit (5 a & 4 b)
- Shutter position indicator
- 4 Molded Case Circuit Breaker (Eaton Faz or approved equal) disconnect, 125VDC, 2 pole**
- 6 Current transformers, multi ratio, standard burden**
- 3 Indicating lights LED type**
- 3 SecuControl ST test switch with rear wired connection and semi-flush mount, 10-pole**
- 1 SEL 751501ACACA7085A630**
- Set A-B Chance rear grounding provision
- 3 Distribution Class Surge Arresters, 27 kV, polymer**
- 2 Cable lugs, 1000 MCM**
- 1 Lot nameplates**

(2) Sets of switchgear AC control power equipment, each to include:

- Closed door racking type roll-out assembly complete with primary fuses
- Secondary molded case circuit breaker
- Set safety interlocks primary & secondary
- Set of hard copper bus connection to CPT's primary
- Fixed mounted CPT, 50kVA, 27600-240/120V, single phase

(1) Set of switchgear accessories to include:

- 1 Manual charging handle**
- 1 Circuit breaker racking handle**
- 1 Interlock override**
- 1 Circuit breaker test cabinet with secondary disconnect plug**
- 1 Test coupler**
- 1 PowlVac Circuit Breaker Fifth Wheel**
- 1 Circuit breaker lift truck**
- 2 Quarts of touch up paint**
- 1 FT Test Kit**
- 1 Lot of Coax cable**
- 1 Installation of fiber optic cable and pads for Arc Flash Sensing**
- 9 Two handles per 27kV ND breaker**
- 1 Lot of Tape for Cable Terminations (in Lieu of Lug Boots)**

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

125 VDC System

Energys DDm Series 20 Year VRLA

125VDC 20 Year VRLA (AGM) Lead Calcium Station Battery sized per the below parameters:

Number of Cells: **60**

Minimum Temperature: **77 °F**

Number of Jars: **30**

Design Margin: **1.10**

Final volts per cell: **1.75 vpc** (average)

Aging Factor: **1.25**

Parallel Strings: **1**

Profile: Step Load

Step 1: 50.01 amps for 1 minutes

Step 2: 17.61 for 1438 minutes

Step 3: 50.01 for 1 minutes

Random Amp: N/A

Random Time: N/A

Total Time: 1440 minutes

AH Removed: 423.72

Battery:

Model: DDmP85-15

Specific Gravity: 1.300

C8 Rating to 1.75ECV @ 77f: 595Ah

Inspector kW Rating: 71.4kWh

(2.0v per cell X 60 cells X 595Ah)

% of Requirement: 111.2%

Number of Cells: 60

Number of Jars: 60

Number of Plates: 15

Jar Weight: 97.4 lbs.

Battery Weight: 5844 lbs.

System Weight: 6504 lbs. (approximated)

System No.: 60-DDJ85-15_10Wx6H_2S

System Dimensions:

Length 66.7 in

Width 23.5 in

Height 60.70 in

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Battery String Information:

Float vDC: 135.00vDC Nominal Float (2.26vDC per cell)

Max vDC: 138.0 vDC Nominal Equalize (Equalize **not recommended** for VRLA product)

Electrolyte Volume:

Per cell: 1.85 gal

Per string: 111.0 gal (60 cells in the string)

Heat Loss @ 17.61 amp discharge current

Heat Generated Per 48 hr. Cycle: 12.2 kWhr

Heat Generated on 24 hr. Discharge: 3.6 kWhr

Heat Generated on 24 hr. Charge: 8.5 kWhr

Heat Generated on Float Charge: 20.1 watts

Hydrogen Evolution:

at Volts per Cell: 2.25

Per String: 213.73 ml H₂ / Hour (108 cells in the string)

at Temperature: 77.00 °F

Cell Resistance & Short Circuit:

Short Circuit Current: **4728 max. amps.** Maximum calculated Short Circuit Current in Amperes

Cell Resistance: 0.000441 ohms. Resistance expressed in ohms, for Cell + 1 Connector

Standard Jar: Polypropylene, UL94 VO. LOI>28

Safety Vent: Safety valve consisting of a pressure release vent and flame arrester

Terminals: Outward protruding tin plated copper terminal with Ohmic Ring for ease of measurement during maintenance

Spill Containment System:

Enviroguard Hawk System – EAGLE-27-70

Length 70 in.

Width 27 in.

Weight 71 lbs

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

LaMarche A98S Switchmode Charger

240V 1 phase input | 125VDC 40 amp output | Single Charger Configuration | N+1

Charger capacity calculations: $1.1 \times 423.72\text{Ah removed}/24\text{ hr. recharge} + 17.61\text{ amp continuous} = 37.03\text{ amps}$. Use 40 amp charger.

Model: A98S-60-125V-V1-X (Power shelf)

Has provisions for (3) rectifiers

60A is maximum rated DC output

OPTIONS INCLUDED.....

21P DNP3 Communication Module (RS232/RS485? Ethernet)

11Y External Temp Probe 100FT

Model: R98S-20-125-V1 (Rectifier)

Output: 20 Amps, 125 VDC b

Ac Input: 176VAC~265VAC

Fan Cooled

Quantity 3 rectifiers (2 for load, 1 spare)

Dimensions and Weight Single Charger

Height 17.5 in

Width 16.25 in

Depth 10.5 in

Weight 160 lbs

Floor mount | top cable entry

Heat Loss 575 Btu/Hr. at 100% charger capacity

Input Amps required @ 240V – 60 amps

Battery Charger Approval Drawings

Data Sheets, Schematic & Mounting Dimension Drawings with Special Markings Provided by Customer: Model Numbers, Input & Output Ratings, Input & Output Protective Device Ratings

Certified Copy of Factory Test Results

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

Fire Detection System

(1) Fire Detection System to include:

Qty.	Description	Part No.
1	Firelite Conventional Fire Alarm Control Panel	MS-5UD
3	System Sensor Photoelectric Smoke Detector	2W-B
1	Macurco H2 Gas Detector	GD-6
3	System Sensor Indoor Horn Strobe, Red	P2RLED
1	System Sensor Exterior Horn/Strobe, Red	P2GRKLED
2	Notifier Conventional Pull Station	NBG-12L
1	Space Age Multi-Voltage Relay Module	MR-204/C/R
2	Powersonic 12v 7Ah Batteries	PS1270F2

1- Lot system design & engineering

1- Lot Installation labor and installation materials

1- Final Acceptance in Powell Facility Houston, Texas.

SCOPE OF WORK:

- Provide shop drawings, calculations, and manufacturers datasheets and manual.
- Furnish labor and materials for the installation of all Pye-Barker supplied equipment.
- Testing in the presence of the Authority Having Jurisdiction at customer's facility.
- Provide "as-built" drawings and "Operation Manuals" subsequent to the completion of the installation.
- The installation of the building will take place at Powell's facility.
- Florida AHJ approval and commissioning is included in the Price Schedule of this proposal.
- H2 gas detection is provided above the battery bank in this building. This will be monitored by the fire alarm panel and relays will be available to send to the SCADA. This connection will be made by others.
- MS-5UD is made as a suitable equivalent substitution as the MS-4 is no longer available.

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

SCADA/Communication Cabinet

(1) SCADA/Communication Cabinet to include:

Design Data:

Dimensions: 90"H X 60"W X 30"D

Weight: 1,150lb

Heat Loss: 250W

External Power Circuits: 1 X 30A/2P

Wire Count: 115 wires

- 2 ENCLOSURE - 90"H X 30"W X 30"D, 11GA, STEEL, NEMA 12, FRONT 19" RACK, 48RU, OPEN BACK, HORIZONTAL UNISTRUT MOUNTED ON SIDES, ANSI-61 GRAY (Zarlec #ANDREWS26052001)
- 4 SIDE PAN - 87"H X 24"W, STEEL, WHITE (Zarlec #ANDREWS25082802)
- 2 MANAGED HARDENED GIGABIT ETHERNET SWITCH - POE+ RACK MOUNTABLE, (24) 10/100/1000BASE-T, POE+ PORTS + (4) 100/1000BASE-X SFP SLOTS + (4) 1G/10GBASE-X SFP+ SLOTS (Transition Networks #SISPM1040-3248-L3-NA)
- 1 POWER SUPPLY - INPUT VOLTAGE 85-264 VAC, 124-370 VDC, OUTPUT VOLTAGE 48-55 VDC, 5.0A, 240W (Lantronix #25104)
- 2 RTAC - 8GB RAM, 32GB SSD, 2.0GHZ (SEL #3555#9CP2)
- 1 SATELLITE-SYNCHRONIZED NETWORK CLOCK - 125/250 VDC OR VAC, COMPLETE 75FT LMR-
- 400 GPS/GLONASS INSTALLATION KIT (SEL #24880RAA1181AX23X / 2488#W1Y2)
- 1 DISCRETE PROGRAMMABLE AUTOMATION CONTROLLER (DPAC) - SEL 2440, HORIZONTAL PANEL MOUNT (SEL #24402H12A6311640 / 2440#B624)
- 4 COAX CONNECTOR - BNC MALE FOR RG-58 COAX CABLE (SEL #915900505)
- 1 MINIATURE CIRCUIT BREAKER - 2P, 30A, C-CURVE, UL489 (C3 Controls #1110-CB2C2U30-SB)
- 1 MINIATURE CIRCUIT BREAKER - UL489, 1P, 15A, TRIP CURVE C (C3 Controls #1100-CB1C2U15)
- 7 MINIATURE CIRCUIT BREAKER - 2P, 10A, UL489B, 10KA, 125VDC (C3 Controls #1110-CB2C2U10-SB)
- 110 SLIDE TYPE TERMINAL BLOCK - UGSK/S + GS, 500V, 41A (Phoenix Contact #0313085)
- 110 SLIDE - GS-GSK/S (Phoenix Contact #0305116)
- 12 END COVER - D-UGSK (Phoenix Contact #0304023)

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

- 6 TERMINAL BLOCK MARKER - UCT-TM8, 42 MARKS (Phoenix Contact #0828740)
- 2 2RU PATCH PANEL - 19"/23" EQUIPMENT RACK COMPATIBILITY, 4 ADAPTER PLATES, LC DUPLEX 24 SM OS1/2, NO PIGTAILS, 2 SPLICE TRAYS, 1 STRAIN RELIEF CLAMP (RLH Industries #PRO-2B-1-B53-N2-1)
- 8 ETHERNET CABLE - CAT 5E, BLUE, 14FT, RJ45 MALE TO RJ45 MALE (Automation Direct #C5ESTPBL-S14)
- 3 TERMINAL STRIP - 30A, 600VAC/DC, 12 POINT (Marathon #1512STD)
- 1 GROUNDING BAR - 12 PORT, #14 - #4AWG, 2/0 MAIN, TIN-PLATED COPPER (Panduit #UGB2/0-414-12)
- 30 TERMINAL BLOCK - PT 2.5, FEED- THROUGH 24A, 800V, PUSH-IN (Phoenix Contact #3209510)
- 1 END COVER - D-ST 2.5 (Phoenix Contact #3030417)
- 13 TERMINAL BLOCK GROUP MARKER - UBE/D, FOR USE WITH TS35 DIN RAIL (Phoenix Contact #0800307)
- 1 TERMINAL BLOCK MARKER - UCT-TM 5, 72 MARKS (Phoenix Contact #0828734)
- 14 END CLAMP - E/NS 35 N (Phoenix Contact #0800886)
- 8 DIN RAIL - NS 35/ 7,5 PERF 2000MM, STEEL GALVANIZED, PRICED PER 1000MM (Phoenix Contact #0801733)
- 2 GROUNDING TERMINAL BLOCK - PT 2,5-PE, PUSH IN CONNECTION (Phoenix Contact #3209536)
- 36 WIRE DUCT - 2"W X 2"H, NARROW FINGER, GREY, PRICED PER FOOT (T&B #TYD2X2NPG6)
- 36 WIRE DUCT COVER - 2", GRAY, PRICED PER FOOT (T&B #TYD2CPG6)
- 1 RECEPTACLE - 125VAC, 15A, GFCI, DIN RAIL MOUNT, 12-14AWG (Automation Direct #FA-GFCI)
- 1 POWER DISTRIBUTION UNIT - 6 + 6 OUTLETS, BUILT-IN BREAKER, PDU FRONT, BLK (Tripp Lite #RS1215-RA)
- 1 SFP PATCHCORD - SFP DIRECT ATTACH CABLE, 3.3 FT (Ubiquiti Networks #UACC-DAC-SFP10-1M)
- 3 BLANKING PLATE - 1RU X 19", ANSI 61 (Hammond #PBPS19001GY2)
- 15 BLANKING PLATE - 2RU X 19", ANSI 61 (Hammond #PBPS19003GY2)
- 4 BLANKING PLATE - 5RU X 19", ANSI 61 (Hammond #PBPS19008GY2)
- 2 BLANKING PLATE - 9RU X 19", ANSI 61 GRAY (Hammond #PBPS19015GY2)
- 3 BLANKING PLATE - 10RU X 19", ANSI 61 (Hammond #PBPS19017GY2)

(1) Documentation Package

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

ATS / MTS

- (1) Transfer Switches** B Frame Contactor: 200 Amps, NEMA Type-3R, Fixed Mounted
System Information: 240/120 Vac, 60hz, 1 Phase, 3 Wire, 2 poles
Transition Mode: Open Transition, Automatic Control w/900 Series Controller
Withstand and Close-On Rating: 200kA specific breaker/10kA (0.025 sec)

Standard Features: 1b, 2a, 3b, 4b, 5j, 5k, 6b, 7a, 8e, 10b, 10d, 11a, 11b,
12c, 12d, 12g, 12h, 14e, 14f, 15e, 15f, 22, 23m, 26j, 26k, 32f, 42, 48f, 48u,
49c,

Optional Features: No Optional Features

Source 1 Terminals: (1) #6-250 CU/AL
Source 2 Terminals: (1) #6-250 CU/AL
Load Side Terminals: (1) #6-250 CU/AL
Neutral Terminals: (3) 1/0-250 CU/AL

Estimated Freight Charge: \$92 each, from El Paso, TX to TX

Catalog No ATC9C2X20200WSU
Designation NEMA1 ATS

Qty List of Materials

1 ATC9C2 2 Poles 200 Amps - UL1008
1 Enclosure - Type-1
1 1b. Time Delay Normal to Emergency Adj. 0-9999 sec
1 2a. Time Delay Engine Start Adj. 0-120 sec
1 3b. Time Delay Emergency to Normal Adj. 0-9999 sec
1 4b. Time Delay Engine Cool-off Adj. 0-9999 sec
1 5j. Emergency (S2) Sensing Under Voltage/Under Freq
1 5k. Emergency (S2) Sensing Over Voltage/Over Freq
1 6b. Test Pushbutton
1 7a. Time Delay Engine Fail Adj. 0-6 sec
1 8e. Bypass All Timers
1 10b. Source Selector - Utility to Utility or Utility to Gen
1 10d. Source Selector - Generator to Generator
1 11a. ATS Health
1 11b. Maintenance Watch
1 12c. LED Indicator Normal Position
1 12d. LED Indicator Emergency Position
1 12g. LED Indicator Normal Source Available
1 12h. LED Indicator Emergency Source Available

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

1 14e/f. Source Available (1 Form C)
1 15e/f. Source Position Indication (1 Form C Micro Switch Outputs)
1 22. Ground Bar
1 23m. Auto Plant Exerciser Selectable-Disabled/Daily/Calendar Dates, 0-600 min, Load/No Load w/Fail Safe
1 26j. Normal (S1) Sensing Under-voltage/Under-frequency
1 26k. Normal (S1) Sensing Over-voltage/Over-frequency
1 32f. In-phase Transition (fallback disabled)
1 42. IBC/CBC Seismic Qualified
1 48f. MODBUS Communication
1 48u. USB Port for Memory Stick
1 49c. Multi-Tap Transformer

(1) **Transfer Switches Molded Case Breaker/Switch: 200 Amps, NEMA Type-1, Fixed Mounted**

System Information: 240/120 Vac, 60hz, 1 Phase, 3 Wire, 2 poles
Transition Mode: Open Transition, Manual Control
Withstand and Close-On Rating: 100kA

Standard Features: 15e, 15f, 22,
Optional Features: No Optional Features

Source 1 Terminals: (1) 6-300 CU/AL
Source 2 Terminals: (1) 6-300 CU/AL
Load Side Terminals: (1) #6-300 CU/AL
Neutral Terminals: (3) #4-300 CU/AL

Estimated Freight Charge: \$92 each, from El Paso, TX to TX

Catalog No MTMXP2A20200WSA
Designation NEMA1 MTS

Qty List of Materials

1 MTMXP2 2 Poles 200 Amps - UL1008
1 Enclosure - Type-1
1 15e/f. Source Position Indication (1 Form C Micro Switch Outputs)
1 22. Ground Bar

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

Plumbing and Restroom Accessories

Supply and install toilet, sink and all Restroom accessories and plumbing according to plumbing code and required standards including:

- One (1) 304 SS floor mounted Toilet W vandal-resistant SS toilet valves and accessories
- One (1) 304 SS wall mount Sink W vandal-resistant SS faucet and valves and accessories
- One (1) 3" room drain SS 304
- One (1) SS 304 storage cabinet W mirror.
- One Rheem -retex-08 on demand tankless water heater.
- Complete Accessories package/ paper holder/ no touch –soap dispenser / no touch according to detail project specs.
- All plumbing as per PCR specs.
- One (1) Flood / Leak / shut off detention monitor device

Note: Price might change with specific detail data. Plumbing will be capped out outside building for future site field connections. All plumbing penetrations on base or building walls will be done by customer.

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

COMMENTS and CLARIFICATIONS

Commercial & technical comments, clarifications and exceptions will be detailed in either:

- Powell's standard Clarification Log SAE-FO-033, or
- The customer supplied clarification log which was provided with the RFP

The applicable clarification log will accompany this proposal as a separate attachment and shall be referenced as a part of any resulting contract or purchase order.

VALUE ADD OFFERINGS and SERVICES

Powlsmart Technologies

Powell offers the following safety oriented predictive technologies to enhance equipment longevity and user experience for your large capital investment. Please reach out to your Sales Executive if any of the below solutions are of interest.

Britespot: Thermal Monitoring

The loosening of bolted bus joints and sliding contacts over time can create hotspots, necessitating preventative maintenance before equipment damage occurs. IR windows and occasional spot checks are useful, but do not provide comprehensive internal data, and may ultimately result in unplanned downtime.

Powell's BriteSpot™ Fiber Optic Thermal Monitoring System provides continuous temperature monitoring in high voltage & high current locations where devices such as RTDs and thermocouples cannot be safely applied. Britespot™ uses optical polymer fiber probes with extremely high dielectric strength, permitting safe operation in these tough environments. Configurations may be specified, but typical installations would include temperature probes on the main power bus interface points for each phase (cable connections, breaker/contactors disconnects, isolation switches, etc).

Pinpoint: Partial Discharge Monitoring

If left unaddressed, bus insulation breakdown over time can lead to catastrophic equipment failure, potentially compromising personnel safety and asset integrity. Trending of changes in observed partial discharge (PD) levels over time can deliver accurate diagnosis of the insulation integrity in your medium voltage equipment.

The PinPoint™ PD system provides 24/7 monitoring. Small noncontact antennas gather PD data, which passes through Powell's proprietary analysis algorithm. This precisely identifies the location of increased discharge activity, thus allowing personnel to take planned and preemptive action. Typical configurations will include one sensor per high voltage compartment (cable compartment, breaker cell, main bus compartment, etc).

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

Circuit Breaker Monitor:

Scheduled breaker maintenance is a costly necessity for optimizing equipment longevity. Powell's onboard Circuit Breaker Monitor (CBM) uses advanced algorithms to extract and analyze breaker operating characteristics, providing an assessment of overall breaker health. Similar to a warning light in your car, each breaker will include a local green/yellow/red status indicator for quick visual verification.

When interfaced with Powell's optional BreakerView™ software, the data can be analyzed further. With intuitive data dashboards, alert functions, maintenance reports, and data trending, you can easily isolate potential issues. This provides predictive information to assist with establishing maintenance intervals, or alert users to the need for immediate repair. BreakerView™ also contains a troubleshooting guide to support issue resolution.

Ecovisor™ System: Environmental Monitoring

Ambient environmental conditions such as temperature, relative humidity and settled dust are major factors influencing the longevity and safe operation of your electrical assets. Over time, non-optimal operating conditions may result in partial discharge issues and voltage tracking failures. Although often not considered, environmental condition monitoring is critical for maximizing equipment lifespan and protecting your investment.

Powell's EcoVisor™ system offers continuous real-time environmental monitoring and is intended for permanent installation in switchgear compartments. It arms personnel with the data needed to make targeted maintenance decisions, potentially preventing costly equipment damage and unplanned downtime. Typical configurations will include one sensor per equipment section.

Onboard® Racking:

Statistics indicate that manual breaker racking operations on live equipment carry some of the highest safety risks for personnel. At Powell, our primary goal is to innovate with safety-oriented products aimed at protecting personnel and assets.

With this in mind, Powell offers OnBoard Racking™ (OBR), a system that remotely transfers MV breakers between the connected and disconnected positions. The racking apparatus is integral to each circuit breaker. It can be operated using a local HMI, or from a remote-control room as part of a comprehensive Power Management System. This offering represents the latest in safety and practicality by removing the human factor from traditional MV operations. Please contact us for more information.

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

Field Service and Spare Parts

Powell offers the following Services to provide spare parts and to perform installation, electrical acceptance, maintenance testing, and commissioning on new and service aged Electrical Power Distribution Systems. These services are optional and not included in our base proposal unless specifically noted otherwise.

Please contact **Service-Inside_Sales@powellind.com** for additional information.

Installation Service: Powell will provide experienced and knowledgeable field technicians to install the equipment listed in this proposal per our manufacturer's recommendations.

Site Acceptance Testing: Powell will provide complete testing for medium and low voltage electrical equipment per defined procedures for testing the new equipment in its intended use environment. Whether with client specific or industry standards, Powell will meet your acceptance testing requirements.

Startup/ Commissioning Service: Powell Technicians will verify a safe start-up of your new equipment using our industry leading electrical & mechanical knowledge.

Advisory Service: Powell can offer Advisory services for all offerings listed above in-lieu of hands-on work to advise customer's maintenance or subcontractor personnel.

Spare Parts: Powell can offer spare and replacement parts for maintenance, start-up, commissioning, and emergencies.

Training: Powell has developed multiple training programs for site personnel to provide recommendations for proper operating and maintenance of medium and low voltage electrical equipment. This training can be hosted both at Powell's Facility and at customer's site.

Preventative Maintenance Service:

Short Term Maintenance: Powell will provide field technicians to visually, mechanically, and electrically inspect and test existing equipment that will meet the client's pre-planned maintenance or shutdown schedule.

Long Term Maintenance: Powell will plan, manage, schedule, and provide the necessary trained labor to develop a 1–5 year maintenance plan, which includes conducting regularly scheduled plant maintenance activities and providing full-time embedded Powell maintenance personnel.

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard**COMMERCIAL SUMMARY**

Power Control Room (PCR) 13TH AVE SW STATION PCR.....	\$974,787.00
PowlVac-ND 27kV Switchgear 27KVSWGR.....	\$1,397,670.00
DC System	\$95,792.00
Fire Systems.....	\$19,532.00
Cabinets/Relay Panels/SCADA_COMMS	\$155,143.00
ATS/MTS.....	\$14,214.00
Restroom Plumbing and Equipment	\$45,012.00
Freight DAP	\$312,443.00
Documentation Services	Included
GRAND TOTAL.....	\$3,014,593.00

Freight/Risk Transfer:

Freight Prepaid: DAP Gate at customer jobsite
(INCOTERMS 2020 – freight prepaid and added at cost +20%)
Equipment will be delivered DAP to gate at customer site by
Powell nominated carrier. Title passes at gate.

Good faith pricing for above prepaid freight options based on:

- Gate - to - gate transport only
- Standard heavy haul tractor/trailer configurations with air ride trailers
- Approved routings based on DOT information at time of bid
- Fuel rates at time of bid
- Bucket trucks (if required)
- Permits and Escorts as required by overall weights and dimensions
- Quantity and size of each shipping section at time of bid
- Four hours of free time are included at jobsite, after which \$325 per hour demurrage charges may apply

Pricing for prepaid shipping may be impacted by the following:

- Inability of Powell's designated carrier to transport to an offload location within the customer facility using the standard

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

tractor/trailer configuration which was used as the basis of this estimate

- The requirement for specialized transport equipment such as SPMT's (self-propelled motorized transports) within the customer facility due to tight turn radius or in-plant obstructions.
- Detention/Demurrage charges due to unforeseen re-routing or delays as directed by Department of Transportation, State, or City officials. This may be due to weather conditions, new road construction, traffic accidents, or other factors beyond Powell's knowledge or control at the time of this estimate.
- Significant increases in fuel rates or surcharges.
- Scope and design changes during the project that result in increases to overall weights and dimensions of one or more shipping sections.

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

TERMS & DELIVERY

General:

Terms and Conditions of the Agreement between the City of Lake Worth Beach and Powell shall apply to any contract resulting from this quotation
Drawings shall be submitted in Powell's standard format.

Factory acceptance testing of equipment manufactured by Powell shall be per Powell's established ISO QA/QC procedures, and in accordance with applicable IEEE industry standards.

Factory acceptance testing of major buy-out items, if required, shall take place at the factory of origin and at buyer's expense. Major buy-out components may include, but are not limited to packaged HVAC systems, DC Systems, UPS systems, third-party LV motor control, VFDs, etc.

Project Schedule:

Drawings for Approval:

Submitted by 4/23/27

Shipment:

Ship date by 7/21/28

Lead-times for drawings and delivery are based on engineering and shop loading at the time of proposal submission. Lead-times may vary based on actual contract award date. Please contact your Powell Sales Representative to discuss potential expedited drawing or delivery options to meet your specific project needs.

Note: Design/Scope changes during drawing approvals and/or after RTM or Record drawing submittals may result in schedule and/or cost impacts.

Drawings & IOM Manuals:

Powell issues drawings and manuals electronically to a customer specified FTP site, or via Powell Pitstop web-based email. Powell generated drawings will be submitted as PDF, but native formats are available upon request. Electronic drawing formats from sub-suppliers will be provided as available from each sub-supplier.

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

Drawing Submittals:

For all projects, Powell will submit (4) drawing packages. The purpose and content of the packages are explained in order of submittal below.

Approval Drawings:**(See Project Schedule Above for Lead Times)**

Approval drawing lead-time is inclusive of our Technical Review Process, which allows Powell to verify that we are in receipt of the latest project design information.

Tech Review will be completed after order entry, but before submittal of approval drawings. Any resulting questions/clarifications will be submitted for customer acceptance and/or response before Powell completes and issues approval drawings.

Release to Manufacturing Drawings:

RTM drawings will incorporate approved-as-noted customer mark-ups after return of approval drawings. This submittal documents that the changes have been captured and incorporated into the final design for released to fabrication.

Record Drawing Package:

The Record drawing package will include:

- All previously submitted drawings with changes incorporated
- Detailed wiring diagrams
- PCR interconnection schedules (if applicable)
- Conduit schedules (if applicable).

Scope changes requested after completion of Record drawing package will be documented on final As-Built drawings which are submitted after shipment.

As-Built Drawings:

Certified As-Built Drawings will reflect the final design and construction of the equipment as it left the Powell factory upon completion.

Drawing Submittal Milestones:

If Powell's commercial offer is of interest, durations and timeline for the above submittals can be provided upon request, along

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

with an overall project schedule.

Pricing: Pricing is firm through Powell's quoted drawing and delivery schedule.

Taxes and Duties: None included in base proposal.

Terms of Payment: Net (30) days from invoice date.

Milestone Billing: The following progress payments are applicable to this proposal:

20% : At Order Acceptance
25% : At Approval Drawing Submittal
35% : At Release to Manufacture (RTM)
20% : At Ship

Cancellation Charges: The following cancellation percentages are applicable to this proposal:

25% : After Order Acceptance
50% : After Submittal of Approval Drawings
90% : After Release to Manufacture
100% : After Start of Fabrication

Shipping Preparation: Standard domestic preparation is included in quoted price.

Warranty: Powell standard warranty, 12 months from energization or 18 months from date of shipment, whichever occurs first.

Note: Extended warranty terms available upon request. Please contact your Powell Sales Executive for more information.

Spare Parts Quotation: Will be supplied upon completion of customer approved bill of material.

Customer Witness Testing: (5) Standard testing days (virtual or onsite), Monday thru Friday, included in quoted price. Additional days, if requested, will be billed at \$2,500 per day.

Custom or non-standard testing scenarios can be accommodated. Please consult your Powell Sales Representative for details for pricing.

REFERENCE: City of Lake Worth Beach - 13th Ave. Switchyard

Field Services:

Not included in quoted scope of supply. Please refer to attached Powell Field Service Rate Schedule.

For Proposals that specify a split-PCR shipment, Powell recommends that a factory certified technician be present in an advisory capacity to the installing contractor during re-assembly. Please provide advance notice of 7-10 working days, allowing Powell adequate time to schedule a technician for this service at your site.

Thank you for the opportunity for Powell to serve you. Should you have any questions or additional requirements please contact me.

Submitted by:



Matt Smith
Sales Representative
713.947.4656
Matt.smith@powellind.com

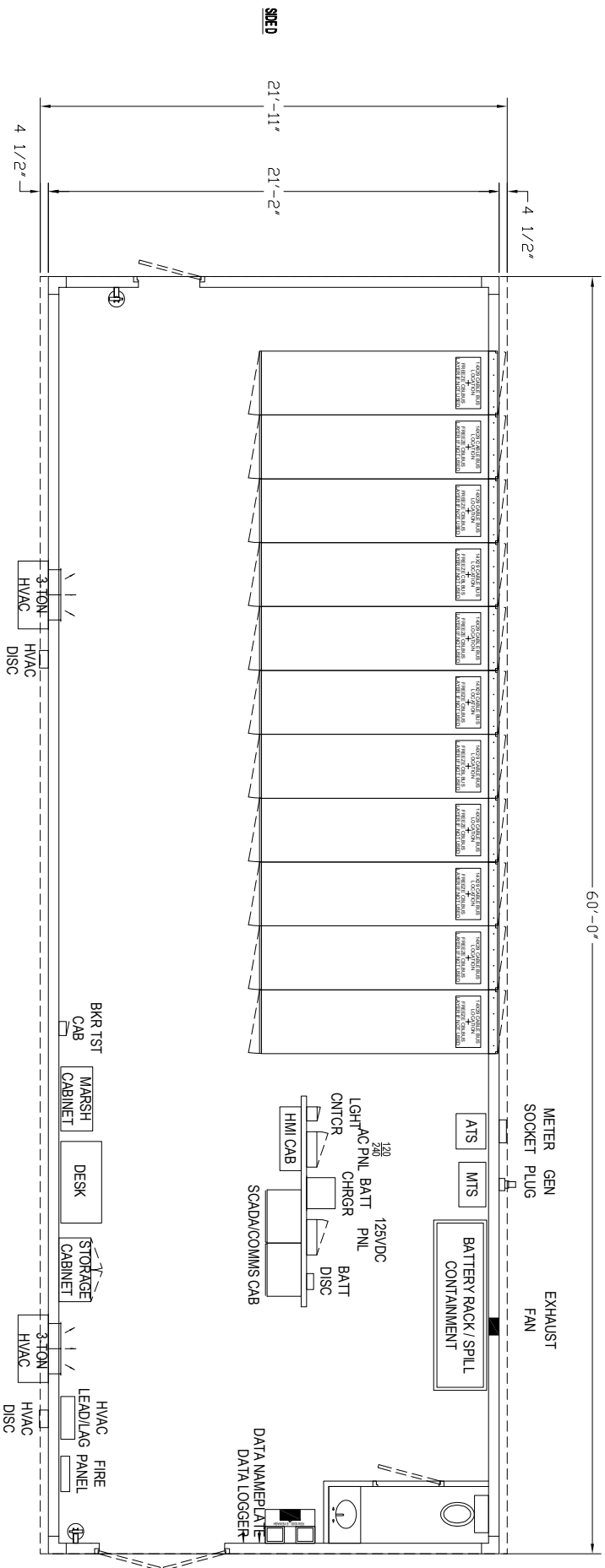


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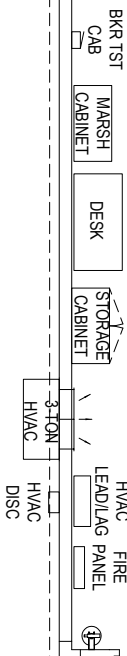
Powell Clarification and Exception Log

Client : _____
Client RFQ # : _____
Project Name : **CITY OF LAKE WORTH BEACH - 13TH AVE S**
Powell Opportunity # : **268602**
Powell Lead Division : _____
Proposal Revision # : _____

This clarification and exception log in combination with the proposal document comprises Powell's complete offer. In the event a purchase order is issued, it is understood that references on the purchase order to Powell's proposal or quotation document include this log as well. **Please note, Powell will interpret that the included comments or exceptions are acceptable to the customer if no response or feedback is provided during bid negotiations.**



PCR EQUIPMENT LAYOUT



PROPOSAL DRAWING
THIS DRAWING IS THE PROPERTY OF
POWELL ELECTRICAL MFG. CO
IT IS PROPRIETARY, AND SHALL BE
SOLELY USED FOR THE PURPOSE
OF THIS PROPOSAL

CROSS REFERENCE
REFERENCE No.
 POWELL Powered by Safety®
Powell Electrical Systems, Inc. 8550 Mokey Road Houston, Texas 77075-1160 Tel: 713.944.6900 Fax: 713.947.4453
P.O. No.

CUSTOMER NAME, PROJECT NAME & LOCATION
CITY OF LAKE WORTH BEACH
13TH AVENUE SWITCHING STATION

REVISION DESCRIPTION				
REV. BY	REV. DATE	REV. NO	DRAWN BY	DWG. No.
		00	TROY CANIFF	2686020100Q01
			DATE DRAWN	
			07-MAY-2026	

Confidential information. Not to be used in any way detrimental to Powell



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SIDE C

SDEB

SIDE D

SIDE A



Well Electrical Systems, Inc.
8550 Mosley Road
Houston, Texas 77075-1180
Tel: 713.944.6900 Fax: 713.947.4453

P.O. No.

CUSTOMER NAME, PROJECT NAME & LOCATION

CITY OF LAKE WORTH BEACH
13TH AVENUE SWITCHING STATION

DRAWING DESCRIPTION

TESTING, EQUIPMENT TYPE & I.D.

DRAWN BY
TROY.CANIFF

DATE DRAWN
07-MAY-2026

2686020100Q0-

NOTES



Client :
Client RFQ # :
Project Name : CITY OF LAKE WORTH BEACH - 13TH AVE SWITCHYARD PCR
Powell Opportunity # : 268602
Proposal Revision # :
Clarification (C), Deviation (D), or Exception (E) Type : **General**

Item	Org	Referenced Document or Specification	Revision	Section	C / D / E	Powell Clarification or Exception Date: [Insert Date]	Client Response 1 Date: [Insert Date]	Status
1	EDH	General			C	The contents of this log clarify Powell's offer beyond the description provided in our proposal letter. Please note, Powell will interpret that the included comments or exceptions are acceptable to the customer if no response or feedback is provided during bid negotiations.		Info Only
2	EDH	General			C	Notwithstanding anything to the contrary, and without limitation, in the event of any change, enactment, adoption, promulgation, issuance, modification or repeal, after the date Supplier submits its proposal, of any applicable law (including tariffs and duties), code, regulation, permit, industry standard, and/or any material change in the interpretation of such by any state, federal or other regulatory or governing body/entity which adversely affects the cost to import, export, design, manufacture or sell the equipment, deliverables, goods or services to be delivered hereunder, Supplier and Buyer agree to negotiate an appropriate equitable adjustment of the price and/or schedule by way of Change Order.		Info Only
3	EDH				C	Powell is offering our standard comprehensive drawing and documentation package in this proposal. Please refer to attached document number PDM-DOC-003 for an outline of the documentation and submittal process quoted. In the event that project, or client specific documentation, and, or, submittal procedures are mandatory please contact your Powell sales representative for pricing.		Info Only
4	EDH	General			C	If a Power Control Room is within the supplied scope, a 3D rendering of the exterior can be made available for an additional charge at the time of record drawing submittal. 3D drawings are not available as part of the approval package and are not available with internal renderings. Please consult with your Sales Executive as additional scheduling variables may need to be considered.		Info Only
5	EDH	General			C	If batteries are provided as part of Powell's scope, they will be shipped directly to the jobsite unless otherwise explicitly stated in the purchase order.		Info Only
6	EDH	General			C	Customer driven delays: Firm pricing is based on project completion within Powell's quoted lead time. Delays caused by customer may impact cost and schedule.		Info Only
7	EDH	General			C	Sub-supplier delays: Powell's quoted lead times are based on the information available at the time of bid submittal. Powell is reliant on sub-suppliers for overall project completion. Current supply chain volatility may impact the overall project execution timeline.		Info Only
8	EDH	General			C	Freight Volatility: If requested, costs for shipping are quoted FCA only. A non-binding good faith estimate is included based on conditions at the time of bid submittal, however final pricing will be cost plus. Fluctuating market conditions could impact final shipping costs to the customer.		Info Only
9	EDH	General			C	Product Substitution: Manufacturer preferences as detailed in the governing specifications are considered. However, supply chain constraints may require a change of manufacturer to maintain contract delivery performance during project execution.		Info Only
10	EDH	General			C	Electrical studies are not included in Powell's offering. This includes coordination studies, short circuit studies, CT saturation studies, or arc flash hazard analysis. It is presumed that these studies will be conducted by the owner or engineering firm who has responsibility for the overall system design.		Info Only
11	EDH	General			C	Powell's standard process is to include a statement of origin on the commercial invoice. Additional country of origin (COO) documentation for finished products can be provided upon request.		Info Only
12	PAD	General			C	If this proposal includes Powlsmart™ technologies (Britespot, Ecovisor, OBR, CBM or Pinpoint) please consider how you plan to collect and visualize the data. Britespot, Ecovisor, and OBR include a Modbus connection to communicate with your DCS/SCADA system. Software for CBM and PinPoint solutions does require a generic Windows server for interface. Powell can provide HMTs, workstations, or Windows servers as needed to round out your control and communication system. Please contact us for more information.		Info Only
13	EDH	Marshalling Cabinet	0		C	Noted by Powell estimating team on Rev 0 and Rev 1 - Please specify type of marshalling cabinet as nothing is listed on specifications. Taking exception to providing marshalling cabinet, need more details on customer specific needs to be able to provide a quote for this. Last project, Powell did not quote marshalling cabinet but left space for future. Please provide marshalling cabinet details in specifications. We will need to present customer requirements to vendor to quote. Thank you	7/17 - Use Saginaw cabinet SCE-723618FS (H:72.00", W:36.00", D:18.00") w/subpanel SCE-60P36F1 OR similar equivalent.	Open
14	EDH	Spare Parts	1		C	7/1 - Service division would quote this after procurement of quote.	6/12 - Quote shall include, as an add-on, SAT (from field service division) and spare MVV Powell/Vac Breaker.	Open
15	EDH	Additional Requirements	1		C	7/1 - Addressed.	6/12 - See "Additional requirements" from PCR specs REVC and include in the quote, for record purposes.	Open
16	EDH	Powell Comment on PCR section of proposal	1		C	7/1 - Updating "Equipment Power and Control Wiring and Interconnections" section of proposal per request. 100 feet cable tray, 2 elbows	7/17 - Ok	Open
17	EDH	FAT	1		C	Customer to witness FAT included in bottom of proposal. Please discuss with Matt Smith as necessary.	7/17 - FAT is already included (5 days)	Open
18	EDH	Site Acceptance Testing	1		C	7/1 - Please contact Service-Inside_Sales for additional information on Site Acceptance Testing.	7/17 - SAT through contractor/Powell Field Services.	Open
19	EDH	Final Relay I/O	1.0		C	7/1 - Noted.	6/12 - Final Relay I/O to be provided by Engineering with the City.	Open
20	EDH	Mimic Bus	1.0		C	7/1 - Confirmed, Standard Powell process.	6/12 - All mimic bus shall be incorporated during factory assembly.	Open
21	EDH	Rear Access Door Mimic Bus	1		C	7/1 - Cannot confirm that mimic bus is weather proof but everything else is confirmed. Will check into this.	6/12 - Each rear access door of the switchgear unit shall be prominently labeled with both the unit number, the corresponding equipment tag, and weather resistant mimic bus	Open
22	EDH	DC Breaker/Bus Isolation	1		C	7/1 - Eaton Faz Breakers provided instead of fuses confirmed.	6/12 - Each Unit shall be equipped with a main DC breaker to enable isolation from the main DC bus	Open
23	EDH	Video Server	1		C	7/1 - Added to proposal.	6/12 - 2x Video Server needs to be included (1 installed + 1 spare). Equipment: SWI DVS3000.	Open
24	EDH	Lighting Rods	1		C	7/1 - Providing 6 General Purpose exterior LED Floodlight with Photocell, 150W Metal Halide Equivalent	6/12 - Include Lighting rods on top of the building.	Open
25	EDH	Different Desk	1		D	7/1 - Please provide details on other particular desk needed. The desk provided in quote is the exact same as last project 252993. Part number or dimension/brand details. OR any specifics needed different from what is quoted would be great. I will add "or approved equal" for now and we can discuss desks specifics at wrap up.	6/12 - Provide different desk	Open
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Client :
 Client RFQ # :
 Project Name : CITY OF LAKE WORTH BEACH - 13TH AVE SWITCHYARD PCR
 Powell Opportunity # : 268602
 Proposal Revision # :
 Clarification (C), Deviation (D), or Exception (E) Type : **Enclosure**

Item	Org	Referenced Document or Specification	Revision	Section	C / D / E	Powell Clarification or Exception Date: (Insert Date)	Client Response 1 Date: (Insert Date)	Status
1	EDH	General			C	Applicable Building and Energy Codes - The Power Control Room® design proposed in Powell's commercial offer is guided by the state enforced codes applicable to industrialized modular buildings in effect at the time of bid submission in the destination state as detailed in the body of this proposal. Notwithstanding the foregoing, and without limitation, in the event of any enactment, adoption, promulgation, issuance, modification or repeal after the effective date of Supplier's quotation of any applicable law, code, regulation, industry standard, and/or any material change in the interpretation of such by any state, federal or other regulatory or governing body/entity which adversely affects the design, manufacture or sale of the Goods or Services to be delivered hereunder, Supplier and Purchaser agree to adjust the applicable Order price in order to place Supplier in the same position as it was prior to such change(s) by way of bid revision or Change Order, as the case may be.		Info Only
2	EDH	General			C	Code Compliance Drawing Review - If this Power Control Room® is subject to plan review by the applicable authorized state reviewing agency, there may be a schedule impact created by jurisdictional drawing review. Note that drawing review may add 4 - 6 weeks into the overall schedule on average. However, the duration of the review may be outside of Powell's control. That said, Powell will make every reasonable effort to keep the drawing review on track and maintain the agreed upon schedule. Applicable Power Control Rooms will be equipped with a decal indicating that compliance has been met. Please note that approved copies of state drawing submittals are not available to the client, as they contain proprietary information.		Info Only
3	EDH	General			C	ADA Compliance - Powell has not included accessibility elements for the site or any required site improvements. Neither have we included accessibility features into the Power Control Room (PCR®) itself. With respect to the physical attributes of the PCR, it is primarily provided for the protection of machinery and is therefore most accurately described as "equipment spaces" per the International Building Code section outlined as follows. IBC 1103.2.9 - Equipment spaces Spaces frequented only by personnel for maintenance, repair or monitoring of equipment are not required to be accessible. Such spaces include, but are not limited to, elevator pits, elevator penitouses, mechanical, electrical or communications equipment rooms, piping or equipment catwalks, water or sewage treatment pump rooms and stations, electric substations and transformer vaults, and highway and tunnel utility facilities.		Info Only
4	EDH	General			C	Please note that during third party and/or state mandated plan review, the authority having jurisdiction (AHJ) could independently determine that the structure does not qualify for this exception. In the event that the AHJ rules against the exception it will be necessary to redesign certain physical aspects of the structure to allow it to meet ADA requirements. A) A negative decision by the AHJ can affect all means of entry and exit of the building and may require ramps or other means of access along with many other site modifications to accommodate compliance. B) These design considerations are not included in our base proposal and; therefore, in the event that we are required to make the PCR® comply with the American Disabilities Act (ADA), a change order and project schedule adjustments will be required. C) Please note that in addition to the possible PCR design changes it will be responsibility of the owner to construct any and all site modifications as may be required for accessibility compliance. All site modifications and accessibility designs not directly attributed to the PCR should be submitted to the local authority for approval by the owner's engineer.		Info Only
5	EDH	General			C	Restroom Facilities - For Power Control Rooms® supplied into states which are subject to IBC 2902.3.2 and/or International Plumbing Code, it will be the responsibility of the site owner to provide restroom facilities within a path of travel no more than 500 ft from the PCR. Powell has not included restroom facilities as part of the equipment space, and as such, the owner the owner's agent, and, or the installing contractor should address this requirement with the local authority having jurisdiction. Restroom facilities or provisions for such are not include in Powell's scope of supply.		Info Only
6	EDH	General			C	Energy Compliance Features - For PCR®s installed in states which have adopted IECC 2012 or ASHRAE 90.1-2010 (or later), the following items are required: o Efficient interior & exterior lighting fixtures. Powell will provide the maximum allowable number of lighting fixtures in order to meet the customer specification. However, maintaining compliance with federal D.O.E. regulations for maximum allowable wattage may limit the available foot candles. LED lighting is strongly recommended. o Bi-level switching or smart controls for lighting are recommended. o Powell will provide an ANSI-D11 white roof regardless of exterior wall color specified by the customer. This design has been ASTM tested to meet the solar reflectance and thermal emittance levels required directly above cooled or conditioned spaces per the most recent prevailing energy codes. Additional exterior wall colors are still available by customer preference or as specified. o Standard wall mount HVAC units will be rated 11EER for 2-5 TON and 10EER for 6-TON, and economizers will be provided for 5 and 6-TON HVAC systems installed in Climate Zone 2 or higher.		Info Only
7	EDH	General			C	Licensed Installation Contractors - Please note, many states require that contractors hired to install the Power Control Rooms be properly licensed by the state. Moreover some states including but not limited to Texas require Powell Electrical Systems to collect the license number of the installing contractor prior to shipment of the PCR. Please consider these requirements as you work to identify your installation/construction contractor.		Info Only
8	EDH	General			E	Structural columns or piers are outside of the quoted scope unless explicitly detailed in the quoted bill of material. Exception is taken to providing structural supports below the base of the Power Control room.		Info Only
9	EDH	General			C	Powell Power Control Rooms will be shipped in accordance with Department of Transportation regulations. As such, exterior devices and components that could create a traffic hazard must be removed prior to shipment and then be re-installed & connected at the project site. Installation of these items will be the responsibility of others unless these services have been included in Powell's scope of work as defined by this proposal. These items may include, but not be limited to: exterior light fixtures, photocells, wall-mounted HVAC units, rain canopies, etc.		Info Only
10	EDH	General			C	Exterior doors and other means of egress are provided as indicated within the RFQ documents or as detailed in the body of this proposal. Based on the final equipment arrangement NFPA 101 may mandate that additional doors be provided. The final decision regarding compliance with NFPA 101 is the sole responsibility of the client, or the specifying engineer. As space permits, Powell will be pleased to provide additional doors as requested, however, these will be subject to change order.		Info Only
11	EDH	General			C	Structural steel welding will comply with AWS D1.1 or AWS D1.2. All sheet steel welding will comply with AWS D1.3. All other sheet metal welding is done in accordance with applicable AWS code or Powell standard depending on material type and current provisions outline by the Engineer. Nondestructive examination of welds is not included in Powell's quoted scope.		Info Only

12	EDH	General			C	The Power Control Room base bid includes wiring for building services including lights, switches, receptacles and space heaters. Additional power, control, instrumentation, and communication wiring is included per the quantity of terminations as indicated in the body of this proposal. Quantity of included interconnect terminations are limited to the information available at the time of bid. The client is responsible for providing interconnect details for equipment that will be free issued to Powell and if additional wiring is added during the engineering stage, those costs shall be passed on to the client as a change order.		Info Only
13	EDH	General			C	Powell's current design standard for equipment clearances and means of egress references the 2017 edition of the NEC. For states that have not adopted NEC 2020 or NEC 2023, and for customers who do not follow NEC requirements, Powell will continue to provide clearances using the 2017 edition of the NEC as a reference standard. In situations where a newer edition of the NEC has been adopted by a state, or is required by project specifications: • Powell's interpretation of NFPA 70; NEC (2020) Sec. 110.26(C)(2) for equipment opposite each other, and sharing a common aisle way, will be based on a minimum of 24" of egress clearance with one door open (not both opposing doors open simultaneously). • Powell's interpretation of NFPA 70; NEC (2023) Sec. 110.26(C)(2) for equipment opposite each other, and sharing a common aisle way, will be based on a minimum of 24" of egress clearance with both doors open simultaneously. • These interpretations shall be applied to both low voltage and medium voltage equipment. Notwithstanding the foregoing, and without limitation, in the event of any enactment, adoption, promulgation, issuance, modification or repeal after the effective date of Supplier's quotation of any applicable law, code, regulation, industry standard, and/or any material change in the interpretation of such by any state, federal or other regulatory or governing body/entity which adversely affects the design, manufacture or sale of the Goods or Services to be delivered hereunder, Supplier and Purchaser agree to adjust the applicable Order price in order to place Supplier in the same position as it was prior to such change(s) by way of bid revision or Change Order, as the case may be.		Info Only
14	EDH	General			C	A galvanized structural base is not part of Powell's standard offer, but can be included for installation in corrosive environments. This can be provided upon request for an additional charge. Please consult the factory.		Info Only
15	EDH	General			C	Fire Suppression: As FM200 has been phased out, and suppression agents such as FK-5-1-12 (commonly known as Novec) have become prominent, please be aware that the volume of agent and space requirement for storage tanks has increased. In turn, this increases the overall square footage of the Power Control Room in certain cases. We must also recognize the importance of fire suppression operating philosophy as it relates to the accurate sizing of the system. If the operating philosophy dictates that electrical equipment operating above 480 volts shall remain operational upon release of suppression agent, this will require a higher concentration of agent, thus increasing the overall size of the tank storage system. Unless otherwise stated in this proposal, Powell's assumption for operating philosophy is that the equipment operating above 480 volts will shut down prior to the release of suppression agent. If a different philosophy is required for the project, it will likely result in cost and footprint increases.		Info Only
16	EDH	General			C	Powell's current design standard for battery clearance and segregation is based on the 2017 edition of the NEC. Clearances are determined based on operating voltage. In situations where the 2021 edition of the IBC has been adopted by a state, or is required by project specifications, additional clearance considerations are required per the accompanying IFC standards. IFC 2021 requirements are as follows: • IFC (2021) 1207.5.1 states that Electrochemical Energy Storage Systems (batteries) shall be segregated into groups not exceeding 50 kWh (400 AH@125VDC). Each group shall be separated a minimum of 3 feet from other groups and from walls in the storage room or area. • IFC (2021) 1207.5.5 states that rooms and areas within buildings and walk-in units containing electrochemical ESS with a 70kWh (560AH @ 125VDC) capacity or 50 gallons of electrolyte, or greater shall be protected by an automatic fire suppression system. Notwithstanding the foregoing, and without limitation, in the event of any enactment, adoption, promulgation, issuance, modification or repeal after the effective date of Supplier's quotation of any applicable law, code, regulation, industry standard, and/or any material change in the interpretation of such by any state, federal or other regulatory or governing body/entity which adversely affects the design, manufacture or sale of the Goods or Services to be delivered hereunder, Supplier and Purchaser agree to adjust the applicable Order price and schedule in order to place Supplier in the same position as it was prior to such change(s) by way of bid revision or Change Order, as the case may be.		Info Only
17	EDH	General			C	SPECIAL NOTE FOR CUSTOMER FURNISHED BATTERIES. IF THE CLIENT CHOOSES TO FURNISH THE BATTERIES TO POWELL FOR INTEGRATION INTO THE PCR/PDC, BATTERY SIZES (KWH), RACK SIZES, AND HYDROGEN EVOLUTION INFORMATION MUST BE PROVIDED PRIOR TO PLACEMENT OF A PURCHASE ORDER. AS NOTED ABOVE, THE TYPE OF BATTERIES AND/OR BATTERY SYSTEM MAY EXCEED CERTAIN SYSTEM SIZES AND RESULT IN MAJOR CHANGES TO THE PCR/PDC SIZE AND SCOPE IN ORDER TO MEET THE REQUIRED BUILDING AND FIRE CODES. IF THE INFORMATION IS NOT PROVIDED DURING THE PROPOSAL STAGE, POWELL DISCLAIMS ALL LIABILITY FOR THE IMPACTS TO COST AND SCHEDULE TO MEET THE BUILDING AND FIRE CODE REQUIREMENTS. ALL PRICE AND SCHEDULE IMPLICATIONS FOR COMPLIANCE WILL BE BORNE BY THE CLIENT. THE SAFEST PATH FOR BOTH PARTIES IS TO ALLOW POWELL TO REQUEST AND PROCURE THE REQUIRED BATTERY SYSTEMS SO ALL SIZING AND FIRE SAFETY CONSIDERATIONS ARE PROPERLY ACCOUNTED FOR.		Info Only
18	EDH	General			C	Please note that Powell uses formed galvanized wireway as standard for routing PCR utility and services wiring. Customer wiring for control, power and communication shall be installed as specified in project documentation.		Info Only
19	EDH	General			C	Unless explicitly stated in our proposal, large power cables (4/0 or larger) are not included in Powell's interconnect scope if they cross a shipping split. Based on experience, these cables are likely to be damaged during roll back and reinstallation. As such, they should be supplied and installed in the field, by others. Powell will be pleased to provide a quote for reel(s) of ship loose cable upon request. The customer can opt to install the cables themselves, or seek a quote from Powell Service Division for on-site assistance.		
20	EDH	PCR Layout	0		C	Original layout dimensions for width, doors, etc used as much as possible, referred back to old job to have a similar layout. Exception taken to insulation for Base.	7/17 - Ok	Open
21	EDH	PCR Specifications	0		E	Insulation for base was used a polyurethane spray on foam (3" R-20.1), meets ASTM E84 Flame Spread Test. This was used to better accommodate size and insulation for building envelope. Exception take to insulation for roof.	8/4 - Match 6th Ave.	Open
22	EDH	PCR Specifications	0		E	Effective R-35.6 continuous insulation.	8/4 - Match 6th Ave.	Open
23	EDH	PCR Layout	0		C	Please specify if layout is not sufficient or you need other specifications.	7/17 - Layout Accepted	Open

24	EDH	PCR Miscellaneous Items	0		C	Part numbers from original project were added to PCR Misc items to use. Please specify if any of these items are not what you are looking for. Heavy Duty Industrial-Rated Desk, 46" W x 22.5" D, Desk, Grainger part# 420G87 125Vdc Interior LED Light Fixture, Marhsall DC Lighting part# T8IN-2LED-125DC-20-WH Generator Tap Box (Appleton ADJA 1033-125-RS) Brooks Meter Socket 652U3010C13-1624 Storage Cabinet, 36"W x 18" D, Grainger part# 1UEY1	7/17 - Heavy Duty desk shall be different.	Open
25	EDH	PCR - Badge Provisions & Security Cameras	0		C	Please specify who customer anticipates installing badge scanners so we can adjust quote accordingly. For security cameras, we are considering those Customer Furnished Equipment and will be installed on sight by customer. Please let us know if you would like for Powell to install.	7/17 - Include 2x Video Server needs to be included (1 installed + 1 spare). Equipment: SWI DVS3000.	Open
26	EDH	PCR Layout	1		C	7/1 - Building layout updated, see new design document.	6/12 - Refer to the provided preliminary general layout. We are looking to reduce the overall PCR footprint to accommodate a single building without splits. This can be achieved by using either a rack- or wall-mounted arrangement (both options are acceptable) located on the center-east side of the building to install some of the equipment. Additionally, using VRLA batteries instead of flooded lead-acid batteries would significantly reduce the required floor space.	Open
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Client :
Client RFQ # :
Project Name : CITY OF LAKE WORTH BEACH - 13TH AVE SWITCHYARD PCR
Powell Opportunity # : 268602
Proposal Revision # :
Clarification (C), Deviation (D), or Exception (E) Type : **MV**

Item	Org	Referenced Document or Specification	Revision	Section	C / D / E	Powell Clarification or Exception Date: [Insert Date]	Client Response 1 Date: [Insert Date]	Status
1	EDH	General			C	The table below identifies the spare contacts/signals that will be wired to terminal blocks in addition to the identified specific use contacts/signals when devices are available. No other contacts will be wired out. 2 NO & 2NC breaker mechanism operated contacts (MOC) 1 NO & 2 NC truck operated contacts (TOC) 2 NO & 2 NC lock out contact from each lockout relay (86) if available 1 NO & 1 NC auxiliary relay contact if available 1 NO & 1 NC alarm contact if available No RTD to terminal blocks (all field RTD wiring shall be directed to the protective relay) No analog signals For multi ratio CTs the unused taps shall not be wired beyond the shorting block. Multifunction relay wire alarm contact & relay fail contact to terminal block, no signal or I/O terminal will be wired to terminal block.		Info Only
2	EDH	General			C	Powell Industries purchases products with the most recent version of the firmware. If the firmware revision changes during the duration of manufacture and the customer requests we provide the most recent version, then we reserve the right to seek a change order to accomplish this.		Info Only
3	EDH	General			C	Please note that all SEL 700 Series protective relays have an inherent design limitation with respect to terminals and control cable gauge size. The maximum control wire that can be utilized on the 700 series units is 14 AWG, therefore; Powell can provide a maximum 14 AWG control to SEL 700 series relays. With respect to the SEL 700 series units this notation over rides and supersedes other Proposal notations indicating that Powell offers 12 gauge control wire. When so noted the 12 gauge control wire will be run to all devices designed to handle that gauge wire.		Info Only
4	EDH	General			C	Please note that seamless lugs for control wiring are currently in short supply. If specified, deviations in lug design or supplier may be requested in order to maintain your project schedule.		Info Only
5	EDH	General			C	Powell's standard offering for nameplates is a raised profile nameplate (RPN). Phenolic nameplates can be provided upon request. The master nameplate (shop number and equipment ratings) will always be phenolic.		Info Only
6	EDH	General			C	Unless otherwise stated on the quote proposal, Powell is providing our standard Mega Power Systems brand test switches.		Info Only
7	EDH	General			C	Please note, relay class ratings will vary based on the ratio of the current transformer. The ranges are as follow: MV SWGR standard burden: C10 to C200 MV SWGR high burden: C10 to C400 MV MCC standard burden: C10 to C50 CT cutsheet can be provided upon request.		Info Only
8	EDH	27kV Main Bus Voltage	0.0		D	Data sheet states 2000A main bus (same as copy job) but one lines and layout have 1200A. Using 1200A for mains. Please direct if otherwise.	7/17 - Keep 2000A Bus. SLD and documentation to be updated.	Open
9	EDH	27kV Layout	0.0		C	Please see layout diagrams. Very similar to general arrangement provided. Specify if needed otherwise.	7/17 - Layout Accepted.	Open
10	EDH	27kV MTM	1.0		C	7/1 - Removed.	6/12 - Main Tie Main is not required. This scope is provided by others.	Open
11	EDH	27kV MTM	1		C	7/1 - Removed, duplicate of above	6/12 - No MTM required. Remove entire section.	Open
12	EDH	27kV CPTs	1		C	7/1 - Updated in proposal.	6/12 - 2 CPTs - One on each Main Line Side	Open
13	EDH	27kV Fuses	1		C	7/1 - Updated in proposal	6/12 - Use Eaton Faz Breakers or equivalent for all low voltage control circuits. Fuses are not allowed. Apply across the board.	Open
14	EDH	27kV SEL 787L Devices	1		C	7/1 - Updated in proposal. SEL 0787L501ACACA7087AF30	6/12 - Main Breakers use SEL-787. See REV'C for PN	Open
15	EDH	27kV Cable Lugs	1		C	7/1 - Changed 750 MCM to 1000 MCM for Cable Lugs		Open
16	EDH	27kV Breaker Handles	1		C	7/1 - Confirming breakers have handles.	6/12 - Each Medium Voltage PowVac Vacuum Breaker shall be equipped with handles on the front cover to facilitate safe and efficient movement.	Open
17	EDH	27kV Fuses	1		C	7/1 - Updated in proposal.	6/12 - Eaton Faz breakers, or approved equal, shall be used for all low voltage wiring protection. No fuses in control cabinets.	Open
18	EDH	27kV Manual Racking	1.0		C	7/1 - Confirmed.	6/12 - Manual racking of the breaker shall be feasible via the door, eliminating the requirement to open it.	Open
19	EDH	27kV Nameplates for Test Switches	1.0		C	7/1 - Confirmed. Customer will need to provide the naming conventions before engineering drawing phase of project.	6/12 - Phenolic nameplates shall be provided for the test switches. Coordination with City Engineering will determine the appropriate naming conventions.	Open
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Client :
Client RFQ # :
Project Name : CITY OF LAKE WORTH BEACH - 13TH AVE SWITCHYARD PCR
Powell Opportunity # : 268602
Proposal Revision # :
Clarification (C), Deviation (D), or Exception (E) Type : LV

Item	Org	Referenced Document or Specification	Revision	Section	C / D / E	Powell Clarification or Exception Date: <u>Insert Date</u>	Client Response 1 Date: <u>Insert Date</u>	Status
1	EDH	General			C	The table below identifies the spare contacts/signals that will be wired to terminal blocks in addition to the identified specific use contacts/signals when devices are available. No other contacts will be wired out. 2 NO & 2NC breaker mechanism operated contacts (MOC) 1 NO & 2 NC truck operated contacts (TOC) 2 NO & 2 NC lock out contact from each lockout relay (86) if available 1 NO & 1 NC auxiliary relay contact if available 1 NO & 1 NC alarm contact if available No RTD to terminal blocks (all field RTD wiring shall be directed to the protective relay) No analog signals For multi ratio CTs the unused taps shall not be wired beyond the shorting block. Multifunction relay wire alarm contact & relay fail contact to terminal block, no signal or I/O terminal will be wired to terminal block.		Info Only
2	EDH	General			C	Powell Industries purchases products with the most recent version of the firmware. If the firmware revision changes during the duration of manufacture and the customer requests we provide the most recent version, then we reserve the right to seek a change order to accomplish this.		Info Only
3	EDH	General			C	Please note that all SEL 700 Series protective relays have an inherent design limitation with respect to terminals and control cable gauge size. The maximum control wire that can be utilized on the 700 series units is 14 AWG, therefore, Powell can provide a maximum 14 AWG control to SEL 700 series relays. With respect to the SEL 700 series units this notation over rides and supersedes other Proposal notations indicating that Powell offers 12 gauge control wire. When so noted the 12 gauge control wire will be run to all devices designed to handle that gauge wire.		Info Only
4	EDH	General			C	Please note that seamless lugs for control wiring are currently in short supply. If specified, deviations in lug design or supplier may be requested in order to maintain your project schedule.		Info Only
5	EDH	General			C	Powell's standard offering for nameplates is a raised profile nameplate (RPN). Phenolic nameplates can be provided upon request. The master nameplate (shop number and equipment ratings) will always be phenolic.		Info Only
6	EDH	General			C	Unless otherwise stated on the quote proposal, Powell is providing our standard Mega Power Systems brand test switches.		Info Only
7	EDH	General			C	Please note, relay class ratings will varies based on the ratio of the current transformer. The ranges are as follow: LV SW GR standard burden: C10 to C200 CT cutsheet can be provided upon request.		Info Only
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Client :
Client RFQ # :
Project Name : CITY OF LAKE WORTH BEACH - 13TH AVE SWITCHYARD PCR
Powell Opportunity # : 268602
Proposal Revision # :
Clarification (C), Deviation (D), or Exception (E) Type : Other

Item	Org	Referenced Document or Specification	Revision	Section	C / D / E	Powell Clarification or Exception Date: [Insert Date]	Client Response 1 Date: [Insert Date]	Status
1	PAD	General- Transfer Scheme	0.0		C	This proposal is based on the understanding that all wiring, networking configurations, etc. are in accordance with the Powell Automation standard offering.	7/17 - No MTM from Powell. To be programmed in the relays by others.	Open
2	PAD	General- Transfer Scheme	0.0		C	All relays shall have the ability to be configured for IEC 61850.	7/17 - Yes. It's part of the PN of all relays in the switchgear.	Open
3	PAD	General- Transfer Scheme	0.0		C	A Sequence of operation was not provided during the proposal preparation time and the proposal is based on the Powell Automation standard MT(T)M open transition scheme. Any deviation from this scheme shall result in a review of the proposal and is potentially subjected to additional cost.	7/17 - No MTM from Powell. To be programmed in the relays by others.	Open
4	PAD	General- Transfer Scheme	0.0		C	Any programming or configuration to support communication with devices not listed in this proposal is outside of the scope of Powell Automation	7/17 - No MTM from Powell. To be programmed in the relays by others.	Open
5	PAD	General- Transfer Scheme	0.0		C	Simulation of devices not present during the FAT shall be performed to verify proper operation of the system.	7/17 - No MTM from Powell. To be programmed in the relays by others.	Open
6	PAD	General- Transfer Scheme	0.0		C	Field service is not included in this proposal.	7/17 - Ok	Open
7	PAD	General- Transfer Scheme	0.0		C	Training is not included in this proposal	7/17 - Ok	Open
8	PAD	General	0.0		C	PAD is not providing any IED Programming for protection settings or SCADA communications.	7/17 - Ok	Open
9	PAD	General	0.0		C	SCADA Hardware or programming is not included int this proposal.	7/17 - Ok	Open
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Clarification (C), Deviation (D), or Exception (E) Type : Buyout

Item	Org	Referenced Document or Specification	Revision	Section	C / D / E	Powell Clarification or Exception Date: <u>(Insert Date)</u>	Client Response 1 Date: <u>(Insert Date)</u>	Status
1	EDH	HVAC Spec	0.0		E	Exception taken to request for 2 6-Ton HVAC systems. Heat loss will not be as great as last job done, so less HVAC system will be needed. Our calcs suggest 2 3-Ton systems will be sufficient.	7/17 - Ok	Open
2	EDH	ATS/MTS Spec	0.0		C	We did not see ATS/MTS specifications provided in spec document. Please notify us what is currently in quotation will be sufficient (sourced from Eaton similar to last project).	7/17 - Eaton MTS and ATS shall be included as part of the AC System. Use same part number as from last job.	Open
3	EDH	DC System / Charger Quote	0.0		E	The Alpha charger on the previous quote is no longer manufactured. The LaMarche A98S is the equivalent unit and what was quoted.	7/17 - Ok	Open
4	EDH	Vendor Quote for Battery	1.0		C	7/1 - Got with battery vendor and updated proposal.	6/12 - This is flood lead acid, we're looking for maintenance free VRLA with the additional intension of reducing footprint. See REVC for extra details. Also Multi Tier Rack shall be used. Battery bank and charger shall be sized according to new switchgear and number of breakers.	Open
5	EDH	Comms Cabinet	1.0		C	7/1 - Got with comm cabinet vendor and updated proposal.	6/12 - Comm Cabinet: All equipment in comm Panel shall be fed from DC Panel	Open
6	EDH	Comms Cabinet	1.0		C	7/1 - Got with comm cabinet vendor and updated proposal.	6/12 - Comm Cabinet: Just one Comm cabinet, remove spare.	Open
7	EDH	Comms Cabinet	1.0		C	7/1 - Got with comm cabinet vendor and updated proposal.	6/12 - Comm Cabinet: Update Etn. Switches with PN: SISPM1040-3248-L3-25104	Open
8	EDH	Comms Cabinet	1.0		C	7/1 - Got with comm cabinet vendor and updated proposal.	6/12 - Comm Cabinet: Replace SecuControl for slinding link (Phoenix Contact 0313085 or equivalent	Open
9	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	1. Quote is based on the BOM provided - Customer to confirm part numbers and quantities		Open
10	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	2. Customer to confirm number of wires	7/17 - Unclear	Open
11	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	3. Zarlec's standard enclosure has been provided to meet the required 90"H X 30"W X 30"D dimensions. Handcraft		Open
12	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	#HCUSC45-01 may also be considered, as it is the closest available size, with dimensions of 90"H X 34"W X 28"D. Use of the		Open
13	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	Handcraft enclosure in lieu of the enclosure provided in our quote would result in an additional cost of \$3,300 per panel		Open
14	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	4. SecuControl #SAX03BTB01H has been replaced by SecuControl #SAX03GAA0AA		Open
15	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	5. SecuControl #STP01BTB01H has been replaced by SecuControl #STP01GAA0AA		Open
16	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	6. Two bay enclosure has been provided: one equipped with blanking panels only, and the other fully populated with the	7/17 - If price remain the same, then keep second unit.	Open
17	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	required devices/equipment, including complete internal wiring (matching bldg layout provided and prev project	7/17 - Unclear	Open
18	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	7. A single 25104 power supply is included as redundant does not appear to have been required	7-17 - All equipment shall be fed from DC Panel	Open
19	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	8. Faster delivery available - note SEL has become very long lead - hence the longer schedule	7/17 - Understood	Open
20	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	9. ***Critical - Customer to review BOM to confirm offering is per requirements for this project to ensure alignment***	7/17 -	Open
21	EDH	SCADA/Comms Cabinet Supplier Clarifications	1.0		C	10. Transition Networks #SISPM1040-3248-L3-NA + Lantronix #25104 is the same as Transition Networks #SISPM1040-3248-L3-25104	7-17 - Ok, as long as we use #SISPM1040-3248-L3-25104	Open
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