



SCOPE OF WORK

FOR

PHASE IV

PRIMARY POWER

DISTRIBUTION SYSTEM UPGRADE

PURPOSE

The intent of this scope of work is to define the specifications required in order to perform a PHASE IV upgrade of the primary voltage power distribution system located on Camp Blanding. This project will entail a primary **Base Bid** plus **seven (7) Alternate Bid Items**.

This Base Bid and Alternates will have their own specific attachment illustrating location by pole number and work to be performed.

The voltage of this distribution system is 13,200V phase-to-ground and 22,860V phase-to-phase.

GENERAL SCOPE

The primary **Base Bid** of this project will consist of work as outlined in their respective attachments. Attachments are broken down into segments illustrating approximate distance, approximate pole counts, locational references, and relative conductor sizing for those locations. Attachments will illustrate conductor wire sizes per the areas in which to be replaced.

The contractor is to provide all supervision, labor, material, tools, equipment, disposal and construction services necessary to complete but not limited to the work listed below.

Alternates consist of pole replacement counts plus conductor/neutral requirements for specified area.

Insulators, switches, preformed ties, and mounting hardware shall be sized accordingly for system voltage. All hardware will be either Hubbel or Chance Hardware manufacturers (or approved equivalent).

Locations of existing poles, verification of any potentially effected utilities, and distance measurements should be field verified by the contractor prior to bidding and job start.

NOTE: ANY AND ALL COPPER OF ANY SORT REMOVED DURING THIS PROJECT WILL REMAIN THE PROPERTY OF THE OWENER, CAMP BLANDING, AND RETURNED TO SUCH. CBJTC HAS THE FIRST RIGHT OF REFUSAL ON ALL DEMO'D OR REMOVED MATERIAL. MATERIAL DESIGNATED AS TRASH IS TO BE DISPOSED OF BY CONTRACTOR.

Bidders **will** familiarize themselves with Camp Blandings policies and procedures before providing a proposal.

All material installation shall be installed per manufacturer's specification/recommendations. Material and installation are to also be in accordance with all state and local codes or the local authority having jurisdiction. Contractor shall provide CBJTC project manager material submittals for approval before purchasing.

All outages will need to be approved by CBJTC 72 hours in advance along with an outage schedule.

STATEMENT OF WORK

POLES: 40/3, 35/3 Poles shall be sized and placed according to the corresponding attachments. The contractor shall be responsible for the disposal of any and all existing poles which are removed and replaced new. All poles have butt wrap pole ground #6 copper.

WIRE: Primary conductors and neutral on the Base Bid and alternates will be 4/0 for conductors and 1/0 for neutral or #2 aluminum ACSR as specified per location. Wire shall have pre-formed ties. All switch jumpers will be #4 stranded copper.

FIELD VERIFICATION OF TOTAL DISTANCE PER DESIGNATED AREA BY CONTRACTOR IS NECESSARY.

ANCHORING: Guy anchors shall be installed in the following manner: 5/8"x44 (overall length) Guy Strain Insulator between pole and guy wire; Square shaft "SS" screw anchor, 5', 10"-12" double helix (DH) configuration; 5' anchor extension; 18" tripleye guy adapter; 1.3"x96" yellow guy marker, full round; Guy wire diameter shall be 5/16".

HARDWARE: All pole insulators shall be rated at 27KV. Dead end insulators will be rated at 25 KV and be of polymer composition. Lightning arrestors shall be of polymer composition and rated at 18 KV. Contractor shall ensure lightning arrestor assemblies are installed no less than every third pole with required ground rod(s) to meet a measured Ohm resistance reading of no greater than 25 Ohms. The remaining hardware (switches, mounting hardware, etc.) shall be sized accordingly for Camp Blanding's primary line voltage. Fiber or Steel crossarms will be 8 ft. in length. New gang switches supplied by contractor will match switches on hand by Camp Blanding as follows: Chance; Type: D7; Cat: D7PS2AL. All hardware will be installed in their perspective locations per the corresponding attachments and in accordance with accompanying Florida Power & Light (FP&L) mounting and installation diagrams. **HARDWARE LOCATIONS/TYPES SHOULD BE FIELD VERIFIED BY CONTRACTOR PRIOR TO BIDDING AND JOB COMMENCEMENT.**

BASE BID

All wire to be installed in this section and in these locations shall be accomplished with either three pulls of 4/0 aluminum ACSR for phase conductors and one pull of 1/0 aluminum ACSR for the neutral for a total **approximate** distance of .3 miles (x4) **OR** three pulls of #2 aluminum ACSR for conductors and one pull of #2 aluminum ACSR for neutral for a total **approximate** distance of .12 miles (x4). All inclusive poles within this section are to be replaced for a total count of 109 ea. Line poles plus 3 ea. stub poles (35'/3). Following are locations and approximate distances:

1. Yerkes Rd Existing OH Line

Replace 18 existing poles and add 4 new poles on Yerkes Rd from Duval Road to Stevens Lake Rd (gate); pull in 2 additional conductors of #2 acsr

2. Stevens Lake Rd (gate) to OP Dickson New OH Line

Install 32 new poles with appropriate hardware and lightning arrestors along Treat Rd from Stevens Lake Rd (gate) to OP Dickson compound; pull in 4 conductors of #2 acsr (3 phases, 1 neutral)

3. Corner of Ave "D" & Hillsborough St continuing east down to pole 5717

(3) 4/0 Pri. (1) 1/0 N

14 Poles & Wire Distance = .3 Miles

Pole #5702 VD1 Fig 2 (100A Blades) Pole #5711 E3 Fig 1

Pole #5704 E3 Fig 2

Pole #5712 E1 Fig 1 (Single Pole)

Pole #5705 E3 Fig 1

Pole #5713 E1 Fig 1

Pole #5706 E1 Fig 2

Pole #5714 E1 Fig 1 (delete 1 pole)

Pole #5707 E1 Fig 1

Pole #5715 E1 Fig 1

Pole #5708 E3 Fig 1 (Reframe Only) Pole #5716 E1 Fig 1

Pole # 5710 E1 Fig 1

Pole #5717 ED1 Fig 3(Reframe Only)

4. Lateral from corner of Ave. "D" & Hillsborough St to PCS Warehouse (5720)

(2) #2 Pri. (1) #2 N

2 Poles & Wire Distance = .1 Miles

Pole #5720 E1 Fig 2

Pole #5721 ET2 Fig 3

5. Hillsborough 30 DE Pole 5717 to ASP (5763)

(1) #2 Pri (1) #2 N

Re-conduct only #2 ACSR

9 Poles & Wire Distance = .3 Miles

Pole #5763 UH1 Fig 1

Pole #5768 E1 Fig 1

Pole #5764 E1 Fig 1

Pole #5774 ET Fig 1

Pole #5765 E1 Fig 2

Pole #5775 ET Fig 1

Pole #5766 E1 Fig 1

Pole #5820 Single Phase Dead End

6. Pole Change out 40/3 & Re-Conduct #2 ACSR .5 Miles

(3) Pri #2 ACSR (1) N

Quincy & Avon to "D" Ave 4901 SW

Pole #5767 ET Fig 1

7. Avon Park to Quincy Ave

(3) Pri #2 ACSR (1) N

10 Poles

Pole #4980 E1 Fig 1

Pole #4985 E1 Fig 1

Pole #4981 E1 Fig 2

Pole #4986 E1 Fig 1

Pole #4982 E1 Fig 1

Pole #4987 E1 Fig 1

Pole #4983 E1 Fig 1

Pole #5850 ET 2 Fig 2 W/ Anchors

- Pole #4984 E3 Fig 1
8. Plant City to Avon Park
- (3) Pri #2 ACSR (1) N
- Pole #4990 E1 Fig 2
- Pole #4991 ET2 Fig 2 Single Phase
- Pole #4992 ED1 Fig 3 Single Phase
9. Bonifay St to Quincy Ave
- Pole change out & reframe 40/3 & Re-conduct #2 ACSR Pole
- (3) Pri #2 ACSR (1) N
- Pole #4743 E1 Fig 2
- Pole #4744 E1 Fig 1
- Pole #4777 E1 Fig 1
- Pole #4778 E2 Fig 4
10. Plant City to Bonifay St
- (3) Pri #2 ACSR (1) N
- Pole #4880 E1 Fig 1 1/0
- Pole #4881 E1 Fig 1 1/0
11. Bartow & Sarasota Pole change out 40/3 YC
- (3) Pri #2 ACSR (1) N
- Pole #3801 ET2 Fig 3
- Pole #3814 ED2 Fig 1
- Pole #3821 ET2 Fig 1
- Pole #3831 ET2 Fig 1 & Service Stub 35/3
- Pole #3832 E1 Fig 1
- Pole #3840 ED1 Fig 1 & Service Stub 35/3
12. (To Close Loop, YC) New Built, Pole change out & #2 re-conduct W. Palm Beach
- (3) Pri #2 ACSR (1) N
- Pole #3840 ED1 Fig 3
- Pole #3841 E1 Fig 1
- Pole #3842 E2 Fig 2
13. Pole change out & reframe 40/3 & re-conduct #2 ACSR Wire from Sarasota to Well #3890
- (3) Pri #2 ACSR (1) N
- Pole #3880 E1 Fig 1
- Pole #3881 ED1 Fig 3
- Pole #5851 Del
- 3 Poles**
- 12 Poles = .3 Miles**
- Pole #4779 E1 Fig 2
- Pole #4780 ED2 Fig 1 Backside 1/0
- Pole #4781 ET2 Fig 2 Backside 1/0
- Pole #4782 ET2 Fig 2 1/0 DE
- Pole #4882 ED1 Fig 3 1/0 & Stub 35/3
- Pole #4883 ET 2 Fig 2 1/0 w/ Trans
- 14 Poles = .3 Miles**
- Pole #3815 ET2 Fig 1
- Pole #3819 ET2 Fig 3
- Pole #3822 E3 Fig 2
- Pole #3874 E1 Fig 1
- Pole #3875 E1 Fig 1
- 4 Poles = .1 Miles**
- Pole #3890 E1 Fig 2
- Pole #3891 ET2 Fig 2

14.“A” Ave to Lake City St, Pole change out & reframe 40/3 & re-conduct #2
ACSR from 2708 to 2715

(3) Pri #2 ACSR (1) N

9 Poles = .2 Miles

Pole #2709 ET 1 Fig 1

Pole #2712 ET Fig 1

Pole #2710 E1 Fig 2

Pole #2713 ET1 Fig 1

Pole #2711 ET1 Fig 1

Pole #2714 E1 Fig 2

15.Recreation Department, Pole change out

(3) Pri #2 ACSR (1) N

Pole #1530 ET2 Fig 2

16.Conference Center, Pole change out

(3) Pri #2 ACSR (1) N

Pole #1515 E1 Fig 1

Pole #1516 ET2 Fig 2

ALTERNATE JOBS

ABI #1

- Reframe from Duval to Yerkes (Hardware and Transfer)

(3) Pri #2 ACSR (1) N

10 Poles = .6 Miles

Pole #4909 E1 Fig 1

Pole #6001 E1 Fig 2

Pole #4910 E2 Fig 3 Single Phase take off

Pole #4911 E1 Fig 2

Pole #6002 E1 Fig1

Pole #4920 E1 Fig 1

Pole #6003 E1 Fig1

Pole #4921 E1 Fig 1

Pole #6005 E1 Fig 1

Pole #6000 E1 Fig 1

ABI #2

- Yerkes Rd pole change out 40/3

(3) Pri #2 ACSR (1) N

16 Poles = 1.5 Miles

Pole #6500 ED1 Fig 3 Stub 35/3, 2 LAD w/Switch

Pole #6604 E1 Fig 1

Pole #6605 VD1 Fig 2 (100A Blades)

Pole #6607 E1 Fig 2

Pole #6608 ET1 Fig 1

Pole #6612 ET1 Fig 1 (Reframe Only)

Pole #6616 ET1 Fig 1 (Reframe Only)

Pole #6622 ET1 Fig 1 (Reframe Only)

Pole #6624 E1 Fig 2

Pole #6634 E1 Fig 1

Pole #6630 E1 Fig 2

Pole #6635 E1 Fig 1

Pole #6631 E3 Fig 1

Pole #6636 E1 Fig 2

Pole #6633 E1 Fig 2

Pole #6637 ET1 Fig 1

ABI #3

- Corner of Ave “D” & Hillsborough St to MATES (5750)

(3) #2 Pri (1) #2 N

1 Pole & Wire Distance = 1 Span

Pole #5750 ET2 Fig 3 Re-conduct #2 ACSR & Pole 40/3

ABI #4

- #4317-#4321

(3) 4/0 Pri, (1) 1/0 N

5 poles-wire only = .1 Miles

Pole #4317 Pole #4318 Pole #4319 Pole #4320 Pole #4321

ABI #5

- Cocoa and “D” Ave.

(2) 4/0 Pri, (1) 1/0 N

7 Poles-Wire only = .3 Miles

Pole #4234

Pole #4235

Pole #4236

Pole #4237

Pole #4238

Pole #4230

ABI #6

- Front gate to “D” Ave. Need pole upgrade from 40/5 to 40/3, “D” around to “B” Avenue **(OR)** “D” Ave needs stub R&R 35/3. All inclusive poles within this section are to be replaced for a total count of 29 ea. Plus 1 stub. Cocoa Street needs upgraded to 4/0 wire pri 1/0 N wire & poles. Wire 4234 to 4239.

29 Poles, 1 Stub = .39 Miles

Pole #04 E3 Fig 1

Pole #3285 E1 Fig 2

Pole #05 E3 Fig 1

Pole #3288 E1 Fig 2

Pole #06 E1 Fig 2

Pole #3289 E1 Fig 1

Pole #07 E1 Fig 1

Pole #4201 E1 Fig 1

Pole #08 ED1 Fig3

Pole #4203 E1 Fig 1

Pole #09 E1 Fig 2

Pole #4206 E1 Fig 1

Pole #11 E3 Fig 1

Pole #4208 E1 Fig 2

Pole #3128 X1 Fig 1

Pole #4210 E1 Fig 1

Pole #3201 E1 Fig 1

Pole #4212 ED1 Fig 3 & Stub 35/3

Pole #3203 ER1 Fig 1

Pole #4240 E1 Fig 2

Pole #3205 E1 Fig 1

Pole #4241 E3 Fig 1

Pole #3207 E1 Fig 3

Pole #4244 UH1 Fig 1

Pole #3209 XD1 Fig 1

Pole #4245 ED1 Fig 1

Pole #3280 ED1 Fig 3

Pole #3281 E1 Fig 2

Pole #3283 E1 Fig 1

ABI #7

Transformer replacements

Single Phase Pole Mount 25KVA - Quantity - 20 Single Phase Pole Mount
50KVA - Quantity - 12

Primary Taps: No Taps

2)Cover Mounted High Voltage Polemount Bushings

3)Sidewall Mounted Low Voltage Polemount Bushings

Non-PCB Mineral Oil

Double Bushing/Single Hanger - Conventional Units