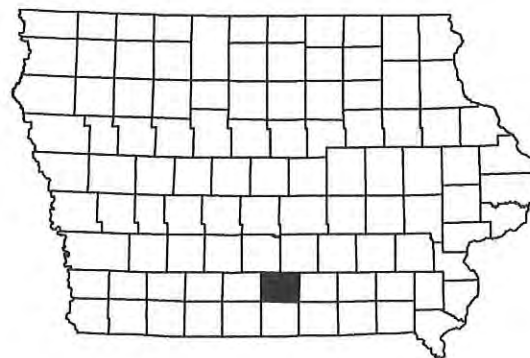


IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DOCUMENTS FOR RED HAW STATE PARK CAMPGROUND UPGRADE PROJECT LUCAS COUNTY, IOWA

DNR PROJECT #15-05-59-02



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

Jason K. Kruse 6-2-16

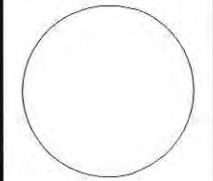
JASON K. KRUSE, IOWA REG. NO. 19718 DATE MY LICENSE RENEWAL DATE IS DECEMBER 31, 2017

PAGES OR SHEETS COVERED BY THIS SEAL: SHEETS 1-10

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CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



COVER SHEET

CAMPGROUND UPGRADE PROJECT FOR

RED HAW STATE PARK

LUCAS COUNTY, IOWA

PROJECT MANAGER		CONSTRUCTION INSPECTOR	
COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES	COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
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CITY, STATE, ZIP	INDIANOLA, IA 50125	CITY, STATE, ZIP	INDIANOLA, IA 50125
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PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF REMOVAL OF THE EXISTING CAMPGROUND CAMP PADS AND ELECTRIC AND INSTALLING NEW GRAVEL CAMP PADS AND ELECTRIC SERVICES AT RED HAW STATE PARK IN DAVIS COUNTY, IOWA.

AUTHORIZATION TO BID

Jason K. Kruse

AUTHORIZATION - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT | FORESTRY DATE

Kevin B. Beck 6/2/16

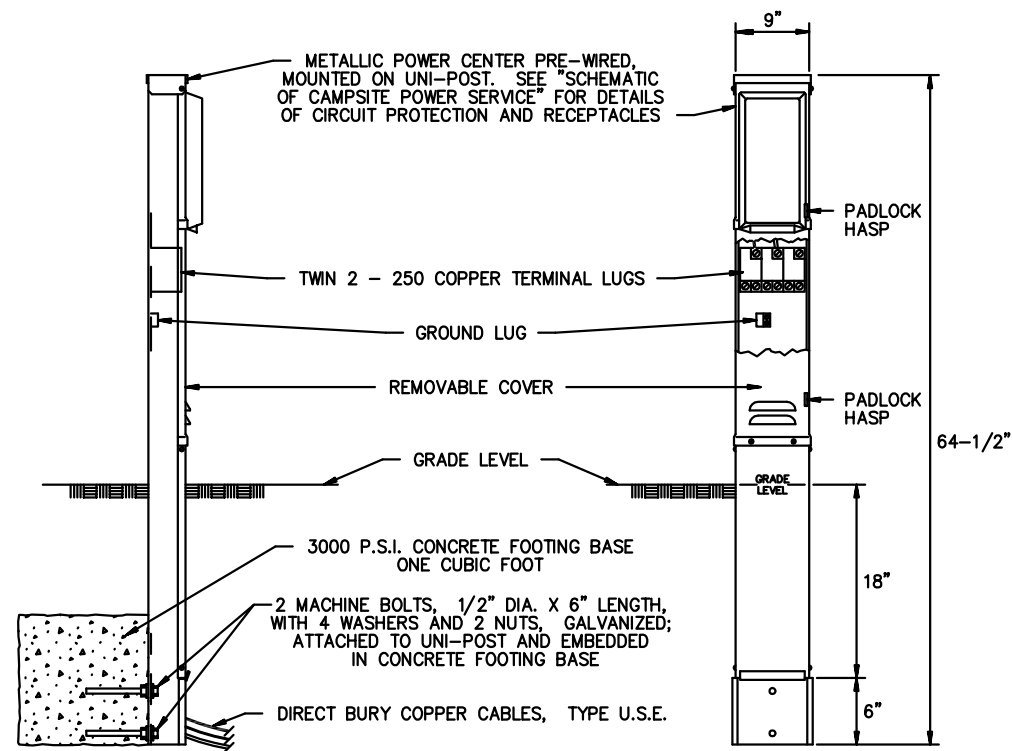
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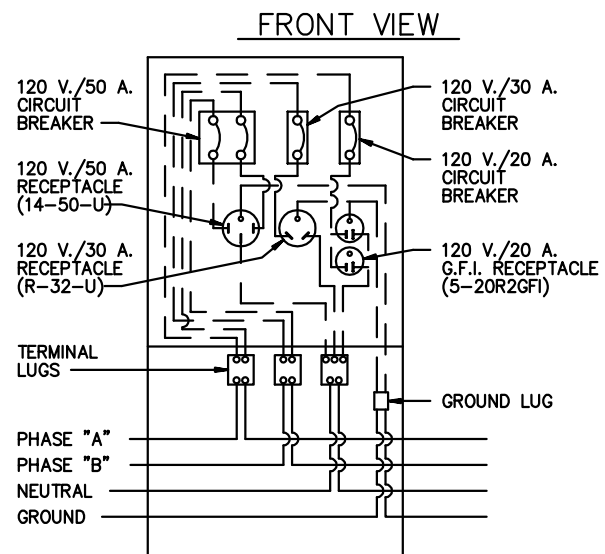
DRAWN BY: PROJECT NUMBER: 15-05-59-02

CHECKED BY: DATE: 01/31/2016

SHEET NO: 1



SIDE VIEW



SCHMATIC OF CAMPSITE 50 AMP POWER SERVICE

NOTES:

1. A "SINGLE CAMPSITE OUTLET POST-50 AMP" SHALL HAVE THE FOLLOWING CONFIGURATION: AN UNMETERED, POST MOUNTED CABINET WITH A 5-20R2GFI 20 AMP DUPLEX RECEPTACLE, A R32U 30 AMP RECEPTACLE, A 14-50R 50 AMP RECEPTACLE, A SINGLE POLE 20 AMP CIRCUIT BREAKER, A SINGLE POLE 30 AMP CIRCUIT BREAKER, AND A DOUBLE POLE 50 AMP CIRCUIT BREAKER; MIDWEST MODEL U075CP6010, MILLBANK U5200-XL-75, OR APPROVED EQUAL, SHALL BE USED FOR SINGLE CAMPSITE OUTLET POST WITH METALLIC POWER CENTER.
2. SEE TRENCH DETAILS, STANDARD DRAWING NO. TS-1, FOR DETAILS OF INSTALLATION OF DIRECT BURY COPPER CABLES TO CAMPSITE OUTLET POST.
3. THE CONDUCTOR SIZES AND THE PLAN ARRANGEMENT OF THE LOADS ON EACH CIRCUIT SHALL BE SELECTED TO LIMIT THE MAXIMUM CIRCUIT VOLTAGE DROP, FROM THE TRANSFORMER TO THE FURTHEST CAMPSITE OUTLET ON THE CIRCUIT, TO 3% (3.6 VOLTS ON EACH 120 V. PHASE). ADJUST CONDUCTOR SIZE BASED ON ACTUAL ROUTING WITH NO ADDITIONAL COMPENSATION.
4. PROVIDE TWO EXTRA COMPLETE OUTLET POSTS AND TURN OVER TO OWNER.

CAMPGROUND ELECTRICAL SYSTEM
STANDARD DRAWING NO. SC-1

DETAILS OF
CAMPSITE OUTLET POST

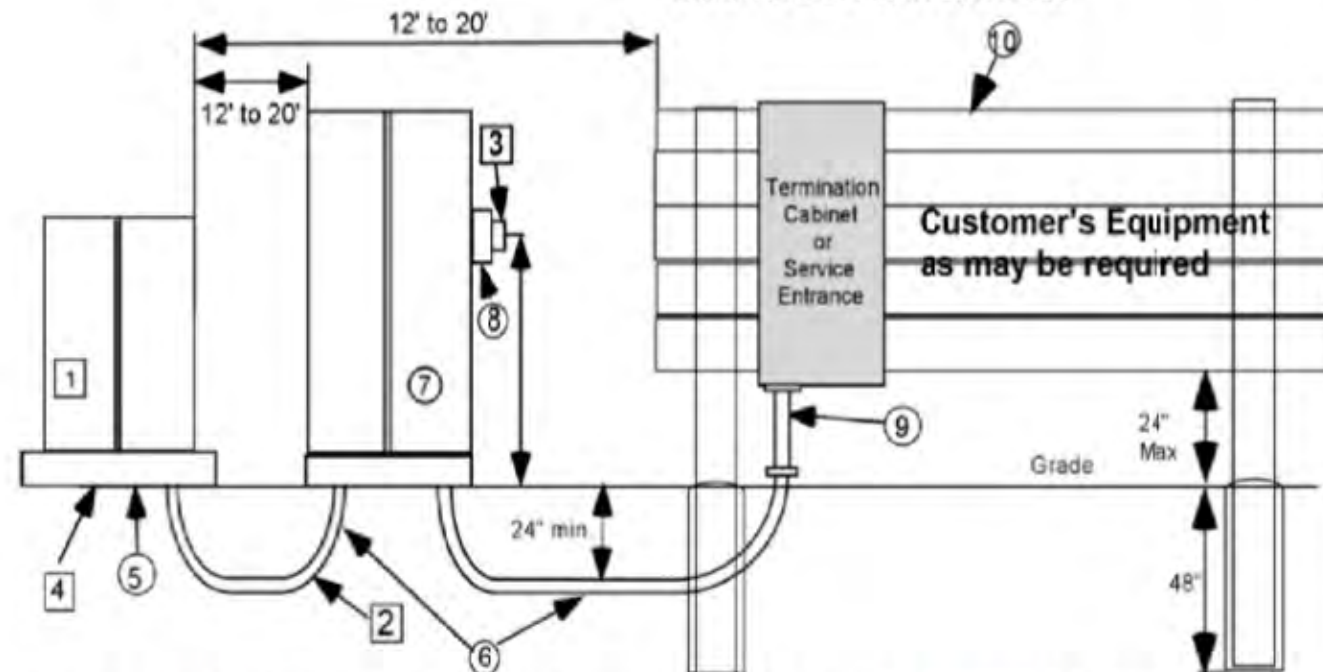
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FARM SERVICES

808. UNDERGROUND SERVICE TO A FARM, FROM A PAD-MOUNT TRANSFORMER, WITH PAD-MOUNT CURRENT TRANSFORMER CABINET, 301 - 3000 AMPS.

- Utility furnishes, installs & maintains
- Customer furnishes, installs, & maintains

1. Pad-mounted transformer
2. Service lateral in conduit
3. Meter
4. Box Pad for 1 phase transformer
5. Concrete transformer Pad - 3 phase
6. Rigid conduit
7. Pad-mounted instrument transformer cab.
8. Approved meter socket
9. Expansion joint
10. Field-built structure - requires treated 6"X 6" posts, 2"X 6" planks, galvanized hardware & set in concrete



1. Any instrument metered service may utilize pad-mount metering equipment. However, it is recommended that Instrument Cabinets, larger than 1200 amps, not be mounted on field built structures.
2. A Clear space of 10 feet shall be provided in front of the transformer to provide "Hot Stick" operation by Alliant Energy employees.
3. If the transfer switch is service entrance rated equipment and has a sufficiently high fault current rating, then a separate service overcurrent device is not required.
4. Customer to install primary conduit into the transformer - see section 409.
5. Sites with multiple service points require each service point to be identified per National Electrical Code Section 547.9

CONSULTANT:

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ELECTRICAL DETAILS

CAMPGROUND UPGRADE PROJECT FOR:

RED HAW STATE PARK

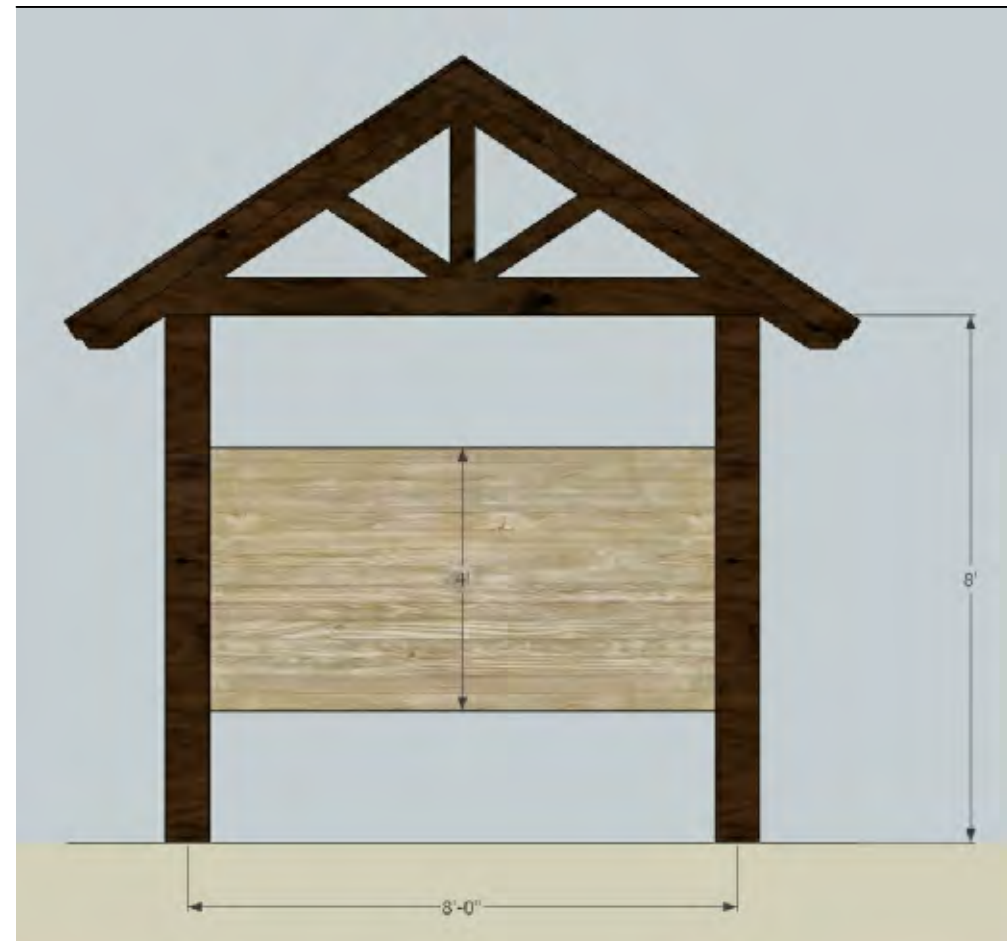
LUCAS COUNTY, IOWA

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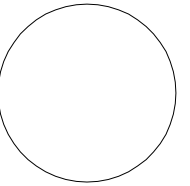
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KIOSK NOTES:

1. KIOSK SHALL BE ON 12'X12' CONCRETE SLAB, 6" THICK
2. COLUMNS SHALL BE 8"X8" MCQ TREATED, 4' BELOW GRADE
3. TOP & BOTTOM CHORD SHALL BE 8"X8" ROUGH SAWN DOUGLAS FIR
4. WEB SHALL BE 4"X8" ROUGH SAWN DOUGLAS FIR
5. ROOF DECKING: 2"X6" TONGUE & GROOVE RED CEDAR
6. SHINGLES: CERTANTEED LANDMARK TL, WEATHERED WOOD COLOR
7. PANELS: 2"X6" TONGUE & GROOVE RED CEDAR
8. HARDWARE: ALL HEAVY TIMBER BOLTS PAINTED WITH BLACK EPOXY
9. TWO COATS OF TWP (COLOR TO BE DETERMINED) TO ALL WOOD

CONSULTANT:



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ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



KIOSK

CAMPGROUND UPGRADE PROJECT FOR:

RED HAW STATE PARK

LUCAS COUNTY, IOWA

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