

DEPARTMENT OF NATURAL RESOURCES

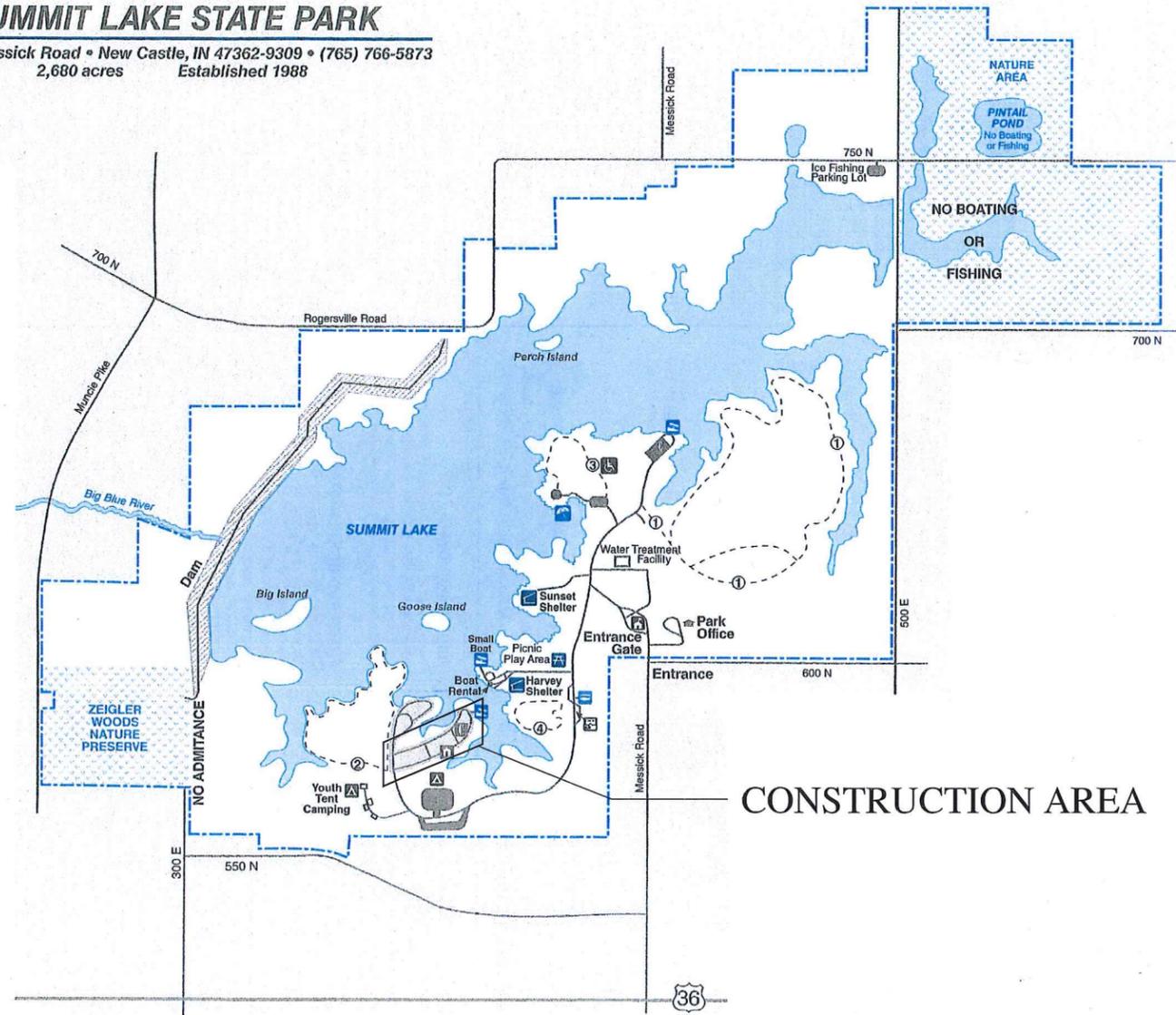
ELECTRICAL DISTRIBUTION RENOVATION @ SUMMIT LAKE CAMPGROUND

SUMMIT LAKE STATE PARK

NEW CASTLE, INDIANA
HENRY COUNTY, INDIANA
PROJECT NO. E030282

SHEET INDEX	
SHEET #	DESCRIPTION
T-1	TITLE SHEET
E-1, E-2	CAMPSITE INSTALLATION PLAN
E-3	INSTALLATION DETAILS
E-4	DISTRIBUTION PANEL, CONDUCTORS, AND CONDUIT SCHEDULE

SUMMIT LAKE STATE PARK
5993 N. Messick Road • New Castle, IN 47362-9309 • (765) 766-5873
2,680 acres Established 1988



SUMMIT LAKE STATE PARK
LOCATION MAP



Certified by:

CAMPGROUND ELECTRICAL RENOVATION
SUMMIT LAKE STATE PARK
DEPT. OF NATURAL RESOURCES
5993 N. MESSICK RD.
NEW CASTLE, INDIANA 47362



STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENGINEERING
ROOM W239, INDIANA GOVERNMENT CENTER SOUTH
402 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA 46204
TEL 317-232-4150, FAX 317-233-1205

Revisions:

Project Number: E030282

Requisition Number:

Designer: RGP Drawing Date: 9/29/14

Drafter: JSP Drawing Scale: NO SCALE

DNR Approval:

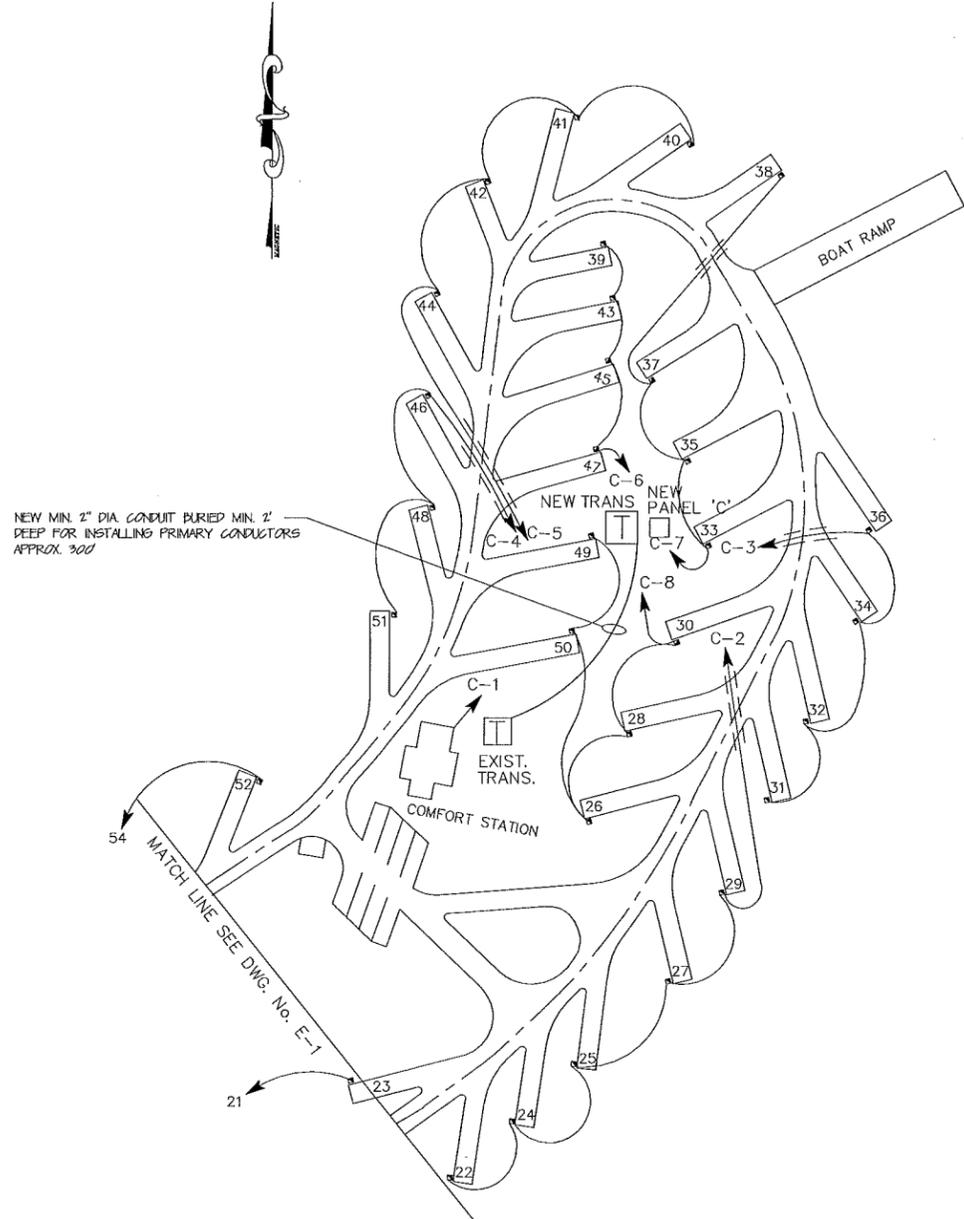
Client Approval:

File Number: 31-29

Drawing Number:

Sheet: 1 of 5

Sep 29, 2014 - 10:56am SEC:\COMMON\Drawings\2014\Projects\2014\WORKING DRAWINGS\SUMMIT\LOCPT\LOCPT\SUMMIT.LOCPTS.dwg

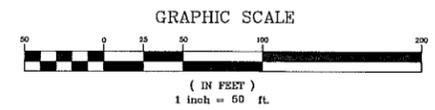


NEW MIN. 2" DIA. CONDUIT BURIED MIN. 2' DEEP FOR INSTALLING PRIMARY CONDUCTORS APPROX. 300'

CAMPGROUND INSTALLATION PLAN
SCALE: 1"=50'

NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND INDUSTRY STANDARDS.
2. THE NATIONAL ELECTRIC CODE (NEC) AND NATIONAL ELECTRICAL CONTRACTOR ASSOCIATION (NECA) STANDARDS SHALL BE CONSIDERED MINIMUM INSTALLATION STANDARDS.
3. THIS SITE PLAN DOES NOT SHOW CHANGES IN ELEVATION. NO CHANGE IN BID PRICE WILL BE ALLOWED FOR CHANGES IN ELEVATION OR INACCURACY OF THE SCALE OF THIS SITE PLAN. CONTRACTOR SHALL VISIT THE SITE AND MAKE NECESSARY MEASUREMENTS TO DETERMINE THE QUANTITY OF TRENCHING AND WIRE REQUIRED.
4. THIS SITE PLAN SHALL BE USED TO DETERMINE THE QUANTITY AND ORDER IN WHICH EACH ELECTRICAL PEDESTAL IS TO BE CONNECTED INTO EACH CIRCUIT, THE SIZE AND NUMBER OF WIRES BETWEEN PEDESTALS, THE SIZE, LOCATION, AND NUMBER OF DISTRIBUTION PANELS, AND A GENERAL ROUTE FOR TRENCHING AND WIRE TO FOLLOW.
5. THE MINIMUM CLEARANCE BETWEEN THE BASE OF ANY TREE AND A TRENCH SHALL BE TEN (10) FEET. IF TWO TREES ARE LESS THAN TWENTY (20) FEET APART, THE CLEARANCE MAY BE REDUCED TO ONE-HALF THE DISTANCE BETWEEN THE TWO TREES. CONTACT THE OWNER REPRESENTATIVE FOR APPROVAL OF TRENCH LOCATION WHERE CLEARANCE IS LESS THAN FIVE (5) FEET FROM THE BASE OF THE TREE.
6. CONTRACTOR SHALL STAKE THE LOCATION OF EACH PEDESTAL USING DETAILS ON SHEETS E-1 & E-2. SOME CAMPSITES/RECREATION VEHICLE SITES HAVE IRREGULAR SHAPES. THE LOCATION OF POWER OUTLET PEDESTALS SHALL BE APPROVED BY THE OWNER REPRESENTATIVE PRIOR TO INSTALLATION.
7. ALL TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE AFTER THE INSTALLATION OF THE CONDUCTORS. IF ANY TRENCH IS LEFT OPEN AND UNATTENDED, IT SHALL BE COVERED BY MIN. 3/4" THICK BY MIN. TWO FEET WIDE PLYWOOD SECURED TO PREVENT ANY PERSON(S) OR ANIMAL FROM FALLING INTO THE EXCAVATION.
8. AT ALL PAVED AND/OR CHIP & SEAL CAMPSITE, ROADWAY, AND WALKWAY CROSSINGS CONTRACTOR SHALL PUSH FROM ONE SIDE TO THE OTHER SIDE A CONTINUOUS 2-1/2" DIA. GALVANIZED RIGID STEEL OR 11W PVC SCHEDULE 80 CONDUIT LOCATED MIN. 24" BELOW EXISTING GRADE. CONDUIT SHALL EXTEND MIN. FIVE (5) FEET BEYOND EACH SIDE OF THE PAVED FEATURE.
9. ALL DISTURBED GROUND BY EITHER DEMOLITION OR INSTALLATION SHALL BE COMPACTED, LEVELED AND SEEDED. ANY SETTLEMENT OF GROUND SHALL BE RELEVELED AND RE-SEEDED. CONTRACTOR SHALL PROVIDE FROM OFF THE PROPERTY ADDITIONAL TOP SOIL IF REQUIRED TO LEVEL ANY SETTLEMENT.
10. ALL ROCK LARGER THAN 4" IN DIAMETER OR NOT SUITABLE FOR BACKFILL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY BY THE CONTRACTOR.
11. CONTRACTOR SHALL FURNISH TWO (2) SPARE PEDESTALS FOR THE PROPERTY.
12. CONTRACTOR SHALL RUN NEW CONDUCTORS TO THE COMFORT STATIONS PER THE PANEL SCHEDULES SHOWN ON SHEET E-4. IF EXISTING CONDUIT TO MAIN DISCONNECT SWITCH IS ADEQUATE SIZE PER NEC, CONDUIT MAY BE REUSED. IF INADEQUATE INSTALL NEW CONDUIT AND PULL NEW CONDUCTORS PER SCHEDULE.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO WATER LINES, SEWERS, DRAINS, PIPE, COMMUNICATION LINES, ELECTRICAL LINES, STRUCTURES, OTHER UTILITIES, OR OTHER PROPERTY AS A RESULT OF CONTRACTOR'S ACTIVITY. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT AT CONTRACTOR EXPENSE. REPAIR AND/OR REPLACEMENT SHALL MEET THE APPROVAL OF THE OWNER.
14. WHERE PLOWING OR TRENCHING IS USED BY THE CONTRACTOR, PATH SHALL GO OUT AROUND THE PAD AREA, NOT CUT ACROSS THE PAD, AS DEFINED BY THE OWNER REPRESENTATIVE.
15. CONTRACTOR SHALL PROVIDE AND INSTALL UNDERGROUND CONDUIT FOR USE BY THE UTILITY TO INSTALL PRIMARY CONDUCTORS TO NEW TRANSFORMERS.



GENERAL NOTES:

1. ALL CAMPSITE PADS AND ROADS ARE EXISTING GRAVEL UNLESS OTHERWISE NOTED.
2. LOT LINES ARE FOR REFERENCE ONLY AND DO NOT DEPICT ACTUAL LOT CORNERS.
3. ACCESSIBLE SITES ARE EXISTING ASPHALT BASE.
4. EXISTING ROUTES OF UNDERGROUND ELECTRIC RUNS ARE SHOWN AS APPROXIMATE ONLY AND MAY VARY IN DETAIL IN ORDER TO CLEAR TREES, PHYSICAL OBSTRUCTIONS ETC. . .
5. ALL EXISTING LOCATIONS, SIZES AND INVERTS OF EXISTING UTILITIES ARE SHOWN BASED ON BEST INFORMATION POSSIBLE. HOWEVER, THE ENGINEER DOES NOT GUARANTEE OR ASSURE THAT SUCH INFORMATION IS TRUE OR EVEN APPROXIMATE. THIS CONTRACTOR SHALL DETERMINE WHICH UTILITIES MAY CONFLICT WITH HIS WORK AND VERIFY THEIR LOCATIONS, SIZES AND INVERTS, ETC., ADJUST HIS WORK ACCORDINGLY, AND BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE. CONTRACTOR SHALL REFER TO APPLICABLE SECTIONS OF THE SPECIFICATIONS RELATIVE TO THE ABOVE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PERMIT ISSUING AGENCIES WITHIN THE TIME FRAME SPECIFIED BY THAT AGENCY PRIOR TO CONSTRUCTION.
7. NOTIFY UTILITY OF INCREASED CAPACITY SERVICE BEING INSTALLED. PROVIDE AND INSTALL ALL NEW ELECTRICAL GEAR AS PRESCRIBED BY THE UTILITY: HENRY COUNTY REMC.

"HOLEY MOLEY" SAYS CALL AT LEAST TWO FULL WORKING DAYS BEFORE YOU DIG. IT'S THE LAW



1-800-382-5544
CALL TOLL FREE



Certified by:

CAMPGROUND ELECTRICAL RENOVATION
SUMMIT LAKE STATE PARK
DEPT. OF NATURAL RESOURCES
5993 N. MESSICK RD.
NEW CASTLE, INDIANA 47362



STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENGINEERING
ROOM W399, INDIANA GOVERNMENT CENTER SOUTH
402 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA 46204
TEL: 317-232-4159, FAX: 317-232-7125

Revisions:

Project Number: E030282

Requisition Number:

Designer: RGP Drawing Date: 10/27/14

Drafter: JEB Drawing Scale: AS NOTED

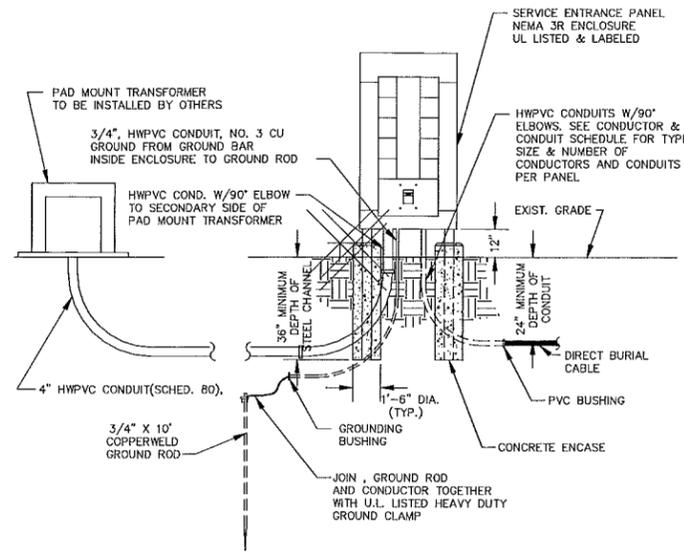
DNR Approval:

Client Approval:

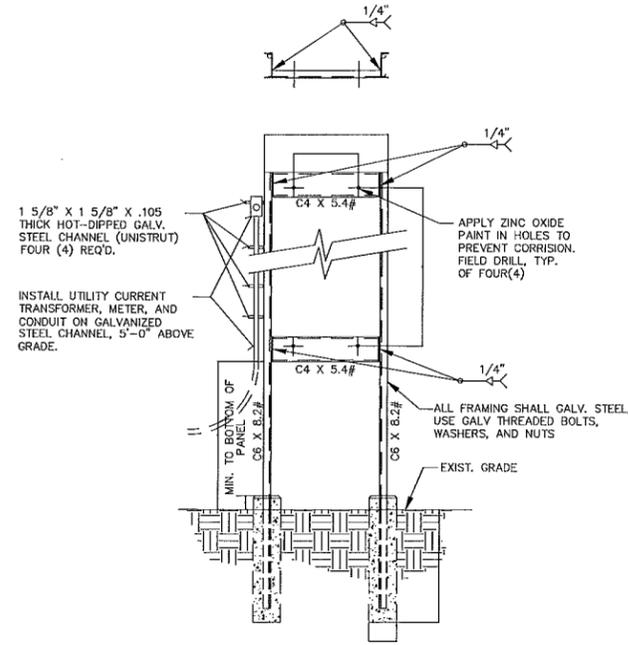
File Number: 31-29

Drawing Number: E-2

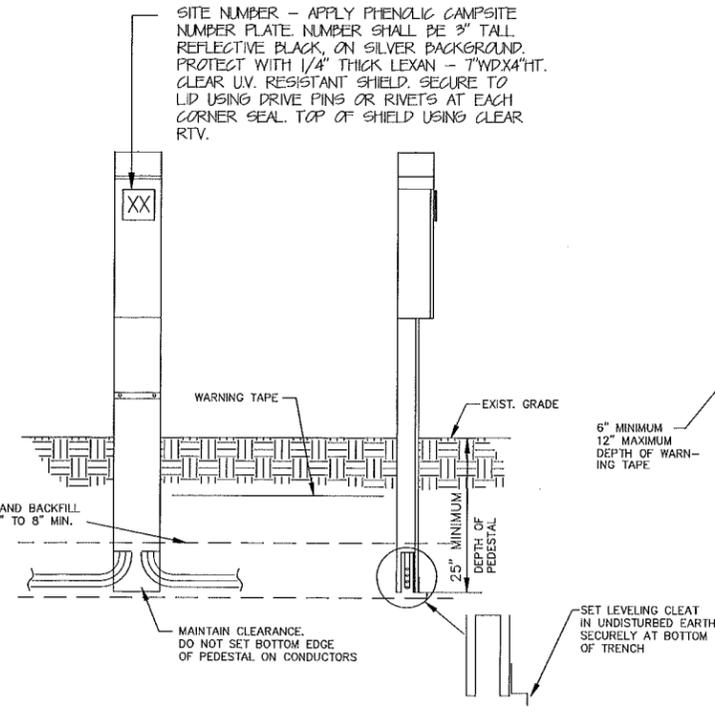
Sheet: 3 of 5



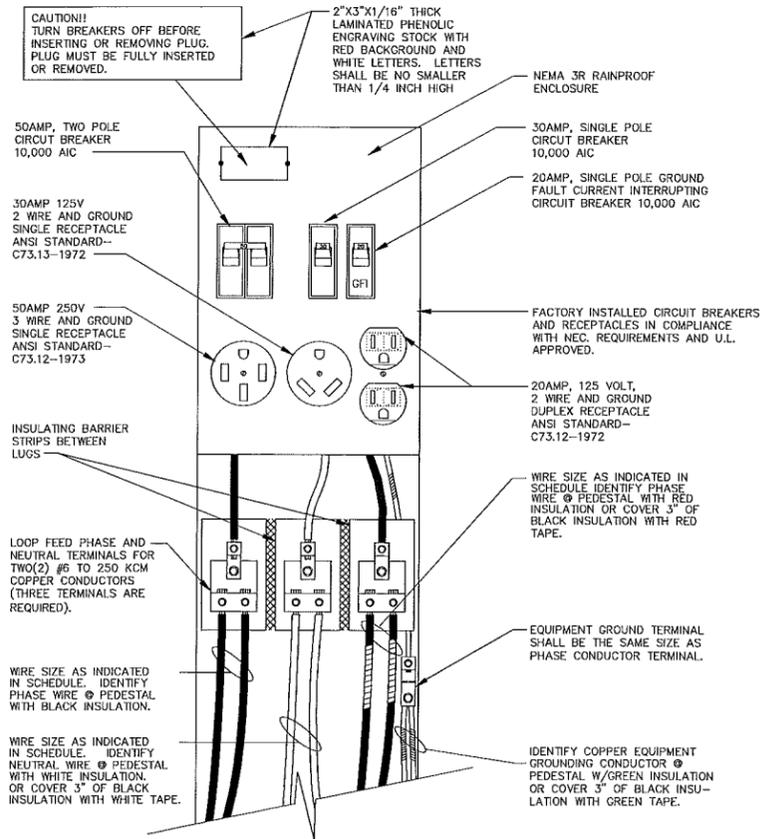
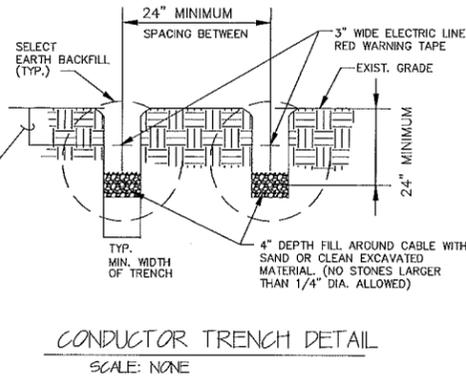
TRANSFORMER & DISTRIBUTION PANEL DETAILS
SCALE: NONE



PANEL MOUNTING DETAIL
SCALE: NONE

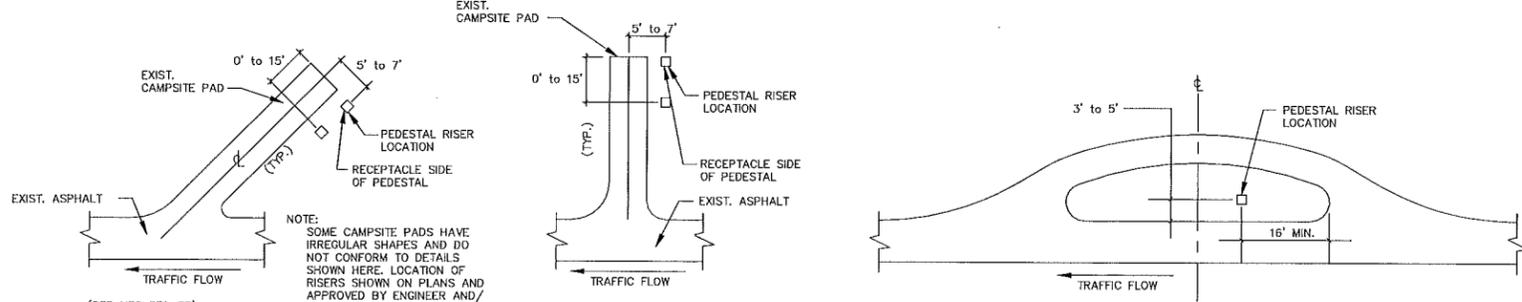


PEDESTAL RISER DETAIL
SCALE: NONE



TYPE 2 PEDESTAL RISER WIRING DETAILS
SCALE: NONE

NOTE:
SITE #S SHALL BE INSTALLED ON OUTSIDE COVER OF PEDESTALS - BLACK REFLECTIVE VINYL LETTERING (2") SILVER BACKGROUND.



ELECTRIC PEDESTAL RISER LOCATION DETAILS
SCALE: NONE



Certified by:

CAMPGROUND ELECTRICAL RENOVATION
SUMMIT LAKE STATE PARK
DEPT. OF NATURAL RESOURCES
5093 N. MESSICK RD
NEW CASTLE, INDIANA 47362



STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENGINEERING
ROOM W399, INDIANA GOVERNMENT CENTER SOUTH
402 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA 46204
TEL: 317-232-4100, FAX: 317-232-1425

Project Number:	E030282
Requisition Number:	
Designer:	REP
Drawing Date:	10/27/14
Checker:	JEP
Drawing Scale:	NO SCALE
DNR Approval:	
Client Approval:	
File Number:	31-29
Drawing Number:	E-3
Sheet:	4 of 5

PANELBOARD-"A" SCHEDULE									
PANEL # NEW DISTRIBUTION PANEL - "F"					LOCATION: TRANSFORMER "F" NEMA 3R RAINPROOF				
PANEL RATING		MAIN C/B FRAME 1200A		SUB-FEED C/B FRAME 150A		SUB-FEED C/B TRIP 11/2A		DESCRIPTION	
DESCRIPTION	CR.	POLE/AMPS	LOAD (KW)	CR.	LOAD (KW)	POLE/AMPS	CR.	DESCRIPTION	CR.
A-1	1.	2P-200A	48.0	BLACK	38.4	2P-175A	2.	A-2	
	3.			RED			4.		
	5.			BLACK			6.		
A-3	7.	2P-200A	48.0	RED	48.0	2P-200A	10.	A-4	
	9.			BLACK			12.		
	11.			RED			14.		
A-5	13.	2P-200A	48.0	BLACK	48.0	2P-200A	16.	A-6	
	15.			RED			18.		
TOTAL LOAD:			144.0	+	134.4	=	278.4		

LOAD BALANCE CHECK: BLACK = 144.0 KW
RED = 134.4 KW

PANELBOARD-"B" SCHEDULE									
PANEL # NEW DISTRIBUTION PANEL - "B"					LOCATION: TRANSFORMER "B" NEMA 3R RAINPROOF				
PANEL RATING		MAIN C/B FRAME 800A		SUB-FEED C/B FRAME 150A		SUB-FEED C/B TRIP 11/2A		DESCRIPTION	
DESCRIPTION	CR.	POLE/AMPS	LOAD (KW)	CR.	LOAD (KW)	POLE/AMPS	CR.	DESCRIPTION	CR.
B-1	1.	2P-175A	38.4	BLACK	48.0	2P-200A	2.	B-2	
	3.			RED			4.		
	5.			BLACK			6.		
B-3	7.	2P-175A	38.4	RED	19.2	2P-80A	10.	B-4	
	9.			BLACK			12.		
	11.			RED			14.		
	13.			BLACK	19.2	2P-80A	16.	B-6	
	15.			RED			18.		
TOTAL LOAD:			76.8	+	86.4	=	163.2		

LOAD BALANCE CHECK: BLACK = 76.8 KW
RED = 86.4 KW

GENERAL NOTES

- CONTRACTOR SHALL INSTALL TYPE 2 50AMP 240VOLT PEDESTAL (COPPER INTERIOR) WITH GFCI CIRCUIT BREAKER
- THE LOAD ON ALL BRANCH CIRCUITS TO THE 120 VOLT RECEPTACLES SHALL BE BALANCED EQUALLY BETWEEN THE TWO PHASE CONDUCTORS BY THE METHOD OF ALTERNATING THE PHASE WIRE LOADING AT EACH PEDESTAL.

ALLOWABLE CONDUCTOR TYPES:

- (2) 1/0, TYPE USE WIRE, (#2/N): UL LISTED, ANNEALED CU, WITH VULCANIZED INTERLOCKED POLYETHYLENE INSULATION (600V); DIRECT BURIAL
- (1) 1/0, BRONZE WIRE, BARE OR INSULATED (GREEN) CU, SOFT DRAWN, STANDARD PER ASTM CLASS "B" OR "C", DIRECT BURIAL

PANELBOARD-"C" SCHEDULE									
PANEL # NEW DISTRIBUTION PANEL - "C"					LOCATION: TRANSFORMER "C" NEMA 3R RAINPROOF				
PANEL RATING		MAIN C/B FRAME 1200A		SUB-FEED C/B FRAME 150A		SUB-FEED C/B TRIP 11/2A		DESCRIPTION	
DESCRIPTION	CR.	POLE/AMPS	LOAD (KW)	CR.	LOAD (KW)	POLE/AMPS	CR.	DESCRIPTION	CR.
C-1	1.	2P-200A	48.0	BLACK	48.0	2P-200A	2.	C-2	
	3.			RED			4.		
	5.			BLACK			6.		
C-3	7.	2P-175A	38.4	RED	38.4	2P-175A	10.	C-4	
	9.			BLACK			12.		
	11.			RED			14.		
C-5	13.	2P-175A	38.4	BLACK	38.4	2P-175A	16.	C-6	
	15.			RED			18.		
	17.			BLACK	48.0	2P-200A		C-8	
				RED					
TOTAL LOAD:			163.2	+	172.8	=	336.0 KW		

LOAD BALANCE CHECK: BLACK = 163.2 KW
RED = 172.8 KW

CONDUCTOR SCHEDULE							
CIR.	NO. & TYPE OF CONDUCTOR	RISER	CONDUIT	FROM	TO	SERVICE	VOLTS / COND. AMP RATING
A-1	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.	DIRECT BURIAL	DISTRIBUTION PANEL - "C"	SITES 1,3,5,7&9	REC. VEHICLE SITE POWER	120/240V 200AMP
A-2	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 2,4,6&8		120/240V 175AMP
A-3	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 74,72,70,68&66		120/240V 200AMP
A-4	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 73,71,69,67&65		120/240V 200AMP
A-5	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 16,14,12,11&10		120/240V 200AMP
A-6	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.	↓	↓	SITES 59,61,62,63&64	↓	120/240V 200AMP
B-1	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.	DIRECT BURIAL	DISTRIBUTION PANEL - "B"	SITES 19,17,15&13	REC. VEHICLE SITE POWER	120/240V 175AMP
B-2	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 52,54,56,58&59		120/240V 200AMP
B-3	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 53,55,57&60		120/240V 175AMP
B-4	#4 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 20&18		120/240V 80AMP
B-6	#4 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.	↓	↓	SITES 23&21	↓	120/240V 80AMP
C-1	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.	DIRECT BURIAL	DISTRIBUTION PANEL - "D"	COMFORT STATION	REC. VEHICLE SITE POWER	120/240V 200AMP
C-2	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 22,24,25,27&29		120/240V 200AMP
C-3	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 31,32,34&36		120/240V 175AMP
C-4	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 51,48&46		120/240V 175AMP
C-5	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 40,41,42&44		120/240V 175AMP
C-6	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 39,43,45&47		120/240V 175AMP
C-7	2/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.			SITES 38,37,35&33		120/240V 175AMP
C-8	3/0 CU./PH. & N #6 CU. GROUNDING	2" MIN. DIA.	↓	↓	SITES 49,50,26,28&30	↓	120/240V 200AMP
NEW	(4) 350 KCMIL CU. / PH. & N	(2) 4" MIN. DIA.	(2) 4" PVC	TRANSFORMER "A" 157 KVA	PANEL - "A" 1200 AMP	CAMPGROUND	120/240V (4) 300AMP
EXIST	(2) 350 KCMIL CU. / PH. & N	4" MIN. DIA.	(2) 4" PVC	TRANSFORMER "B" 75 KVA	PANEL - "B" 600 AMP	CAMPGROUND	120/240V (2) 300AMP
NEW	(4) 350 KCMIL CU. / PH. & N	(2) 4" MIN. DIA.	(2) 4" PVC	TRANSFORMER "C" 167 KVA	PANEL - "C" 1200 AMP	CAMPGROUND	(4) 300AMP



Certified by:

CAMPROUND ELECTRICAL RENOVATION
SUMMIT LAKE STATE PARK
DEPT. OF NATURAL RESOURCES
5999 N. MESSICK RD.
NEW CASTLE, INDIANA 47962



STATE OF INDIANA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENGINEERING
ROOM 1009, INDIANA GOVERNMENT CENTER SOUTH
402 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA 46204
TEL: 317-232-4150, FAX: 317-232-1205

Revisions:

Project Number: E0302802

Requisition Number:

Designer: REP Drawing Date: 10/27/14

Drafter: JEP Drawing Scale: NO SCALE

DNR Approval:

Client Approval:

File Number: 31-29

Drawing Number: E-4

Sheet 5 of 5