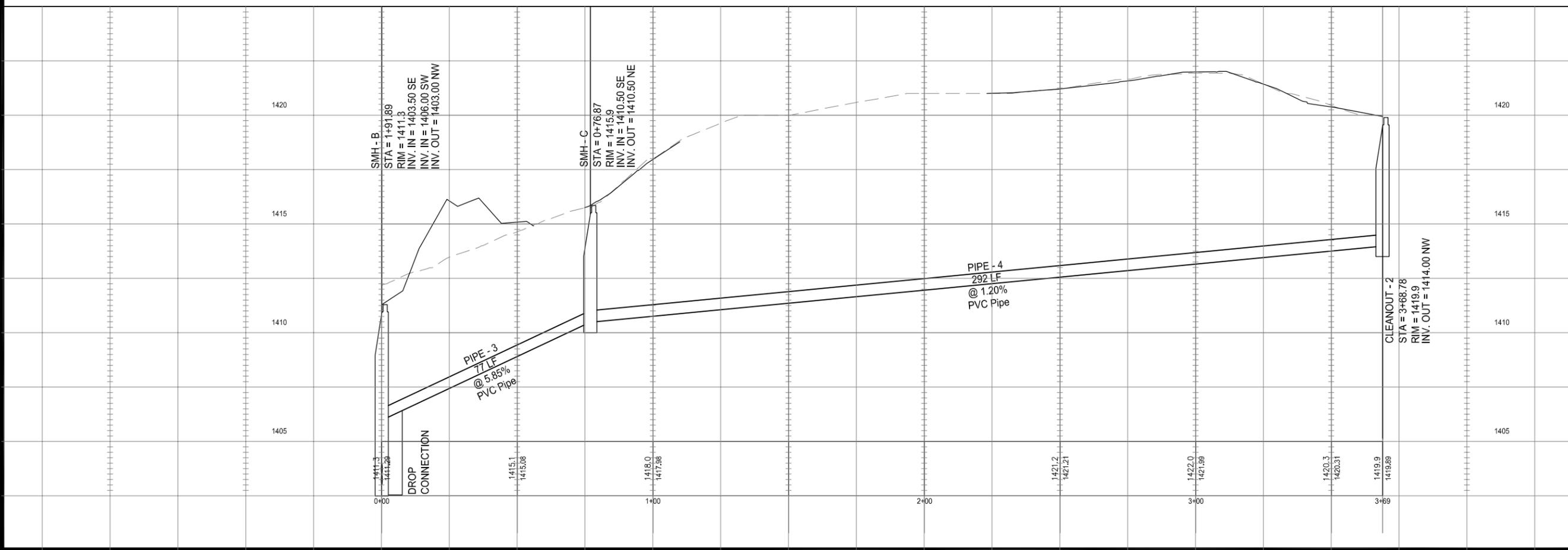
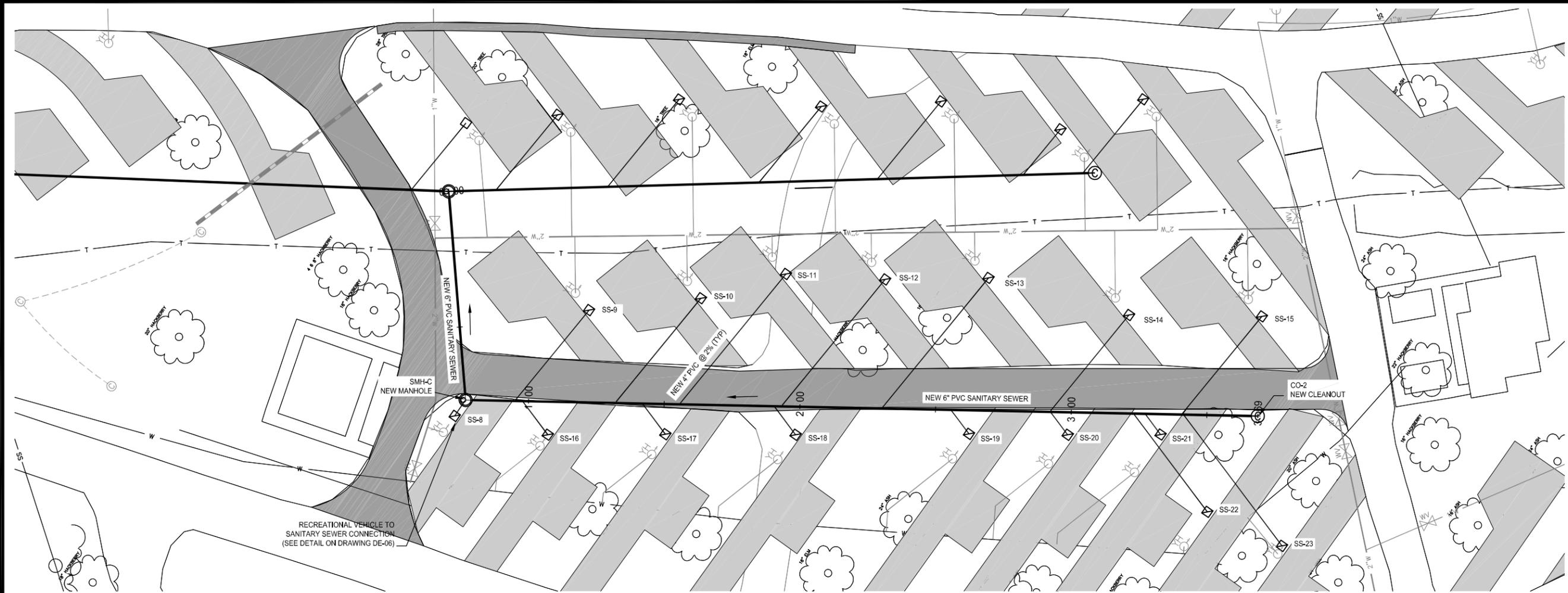
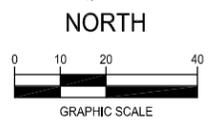


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**SANITARY SEWER
PLAN & PROFILE**



**Emerson Bay Recreation Area
Campground
Improvements**
Dickinson County, Iowa
2311004
February 8, 2012

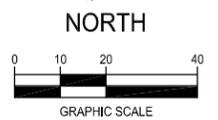
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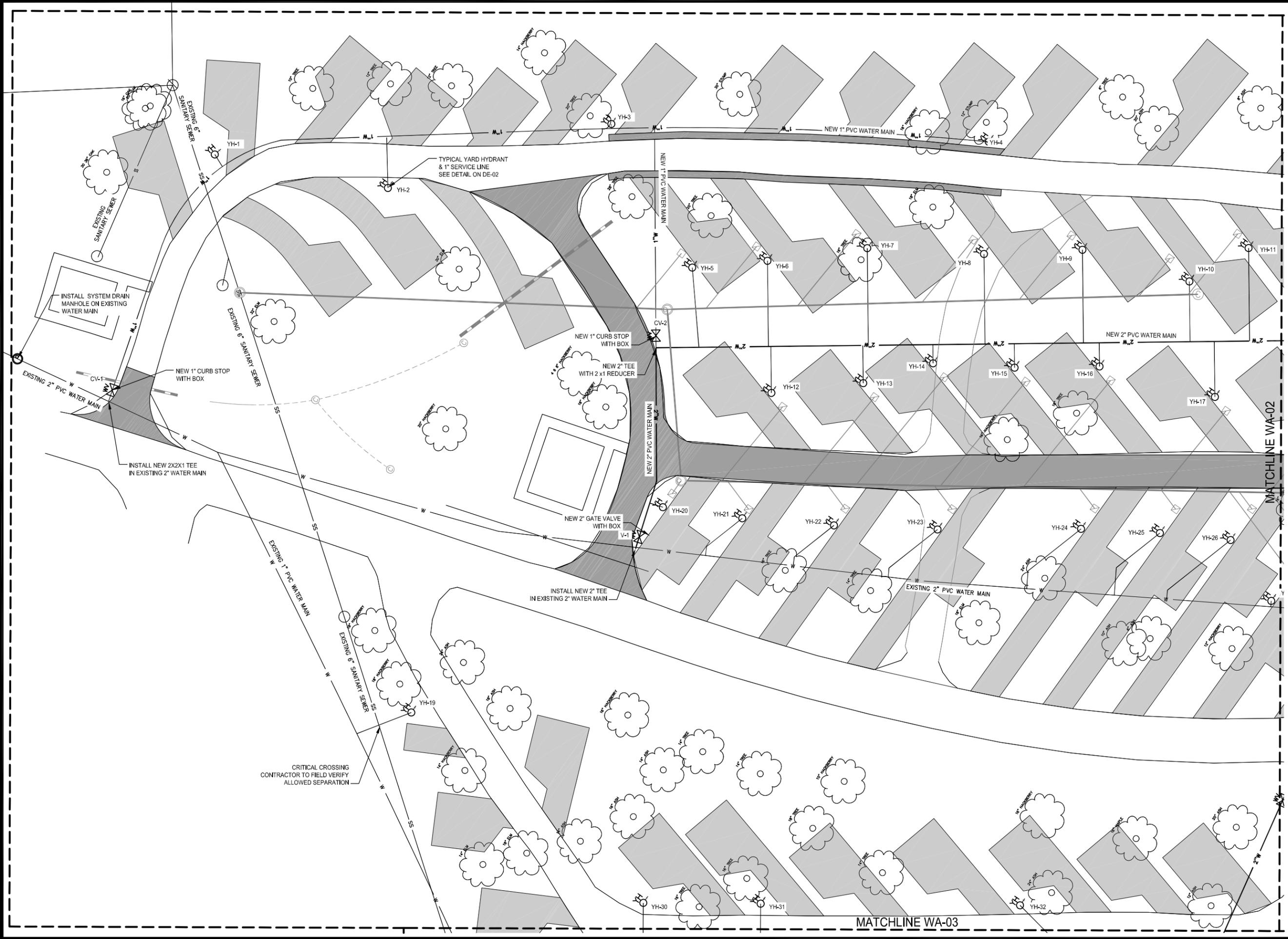
**WATER MAIN
& WATER SERVICE
PLAN**



**Emerson Bay Recreation Area
Campground
Improvements**
Dickinson County, Iowa
2311004
February 8, 2012

REVISIONS

ENGINEER G. Peterson	DRAWN BY R. Anderson
CHECKED BY C. Smith	FIELD BOOK NO. -
DRAWING NO. WA-01	SHEET NO. 20 / 26





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fax 515-964-2370

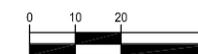
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**WATER MAIN
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PLAN**



NORTH



GRAPHIC SCALE

**Emerson Bay Recreation Area
Campground
Improvements**
Dickinson County, Iowa
2311004
February 8, 2012

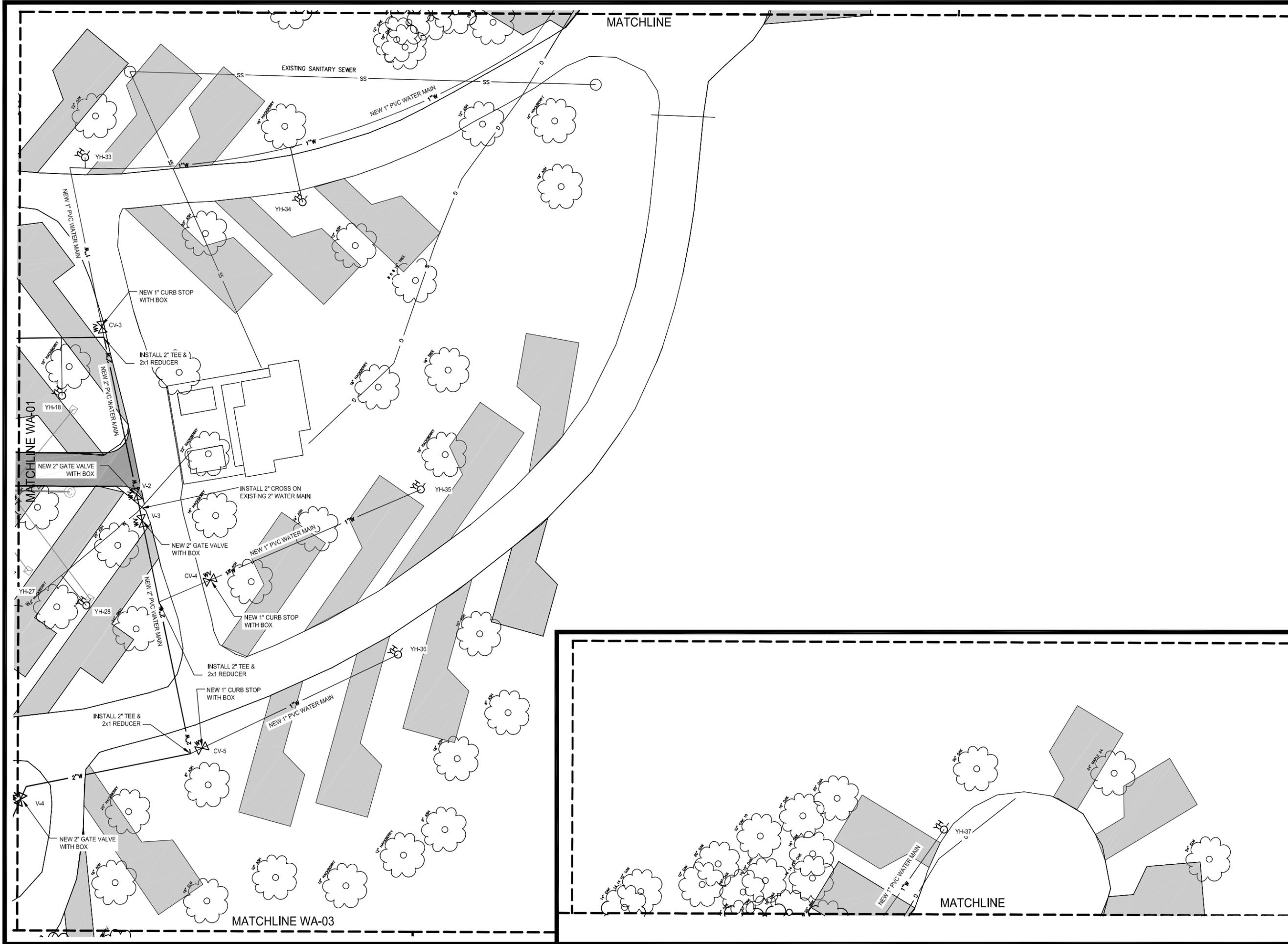
REVISIONS

ENGINEER
G. Peterson
CHECKED BY
C. Smith

DRAWN BY
R. Anderson
FIELD BOOK NO.
-

DRAWING NO.
WA-02

SHEET NO.
21 / 26





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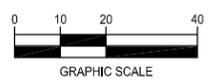
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**WATER MAIN
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 PLAN**



NORTH



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 Dickinson County, Iowa
 2311004
 February 8, 2012

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ENGINEER	DRAWN BY
G. Peterson	R. Anderson
CHECKED BY	FIELD BOOK NO.
C. Smith	-

DRAWING NO.	SHEET NO.
WA-03	22 / 26

GENERAL NOTE

DISCONNECT EXISTING CAMPGROUND ELECTRICAL SYSTEM AT THE PANEL(S) OR OTHERWISE RENDER INOPERABLE AND REMOVE THE CAMPSITE OUTLET POSTS TO A MINIMUM DEPTH OF TWO FEET BELOW GRADE AS DIRECTED BY THE D.N.R. CONSTRUCTION INSPECTOR. THE CAMPSITE OUTLET POSTS BECOME THE PROPERTY OF THE CONTRACTOR TO BE REMOVED FROM THE SITE. TAKE PRECAUTIONS TO ENSURE THAT ANY PART OF THE EXISTING SYSTEM TO REMAIN IS PROTECTED FROM DAMAGE. THE COST OF REMOVING THE EXISTING SYSTEM IS CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK AND WILL NOT BE PAID FOR SEPARATELY.

PLAN NOTES

1. DISCONNECT AND REMOVE CAMPSITE OUTLET POST.
2. DISCONNECT AND REMOVE CAMPSITE OUTLET POST; DELIVER TO IOWA D.N.R. CONSTRUCTION INSPECTOR.
3. ALLIANT ENERGY POWER TRANSFORMER.
4. METERING TRANSFORMER CABINET, METER SOCKET WITH METER AND DISTRIBUTION PANEL 1 ON FREE STANDING STRUCTURE.
5. CABLE TELEVISION UTILITY BOX TO REMAIN; PROTECT IN PLACE.
6. DISCONNECT AND REMOVE DISTRIBUTION PANEL A, METER SOCKET (AFTER ALLIANT ENERGY REMOVES METER), WIRING, CONDUIT AND FREE STANDING STRUCTURE.
7. DISCONNECT AND REMOVE WIRING AND CONDUIT TO POLE MOUNTED LIGHT FIXTURE; RETAIN POLE AND LIGHT FIXTURE.
8. DISCONNECT AND REMOVE TERMINAL BOX, WIRING AND CONDUIT.
9. POLE WITH LIGHT FIXTURE TO REMAIN; PROTECT IN PLACE.
10. DISCONNECT AND REMOVE DISTRIBUTION PANEL B, METER SOCKET (AFTER ALLIANT ENERGY REMOVES METER), WIRING, CONDUIT AND FREE STANDING STRUCTURE.
11. ALLIANT ENERGY POWER POLE TO REMAIN; PROTECT IN PLACE.

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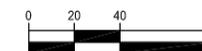
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EXISTING ELECTRICAL SITE PLAN



NORTH



GRAPHIC SCALE

Emerson Bay Recreation Area Campground Improvements

Dickinson County, Iowa

2311004

February 8, 2012

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KJC

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DLS

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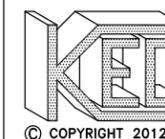
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SHEET NO.

E-01

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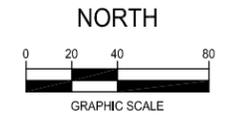
GENERAL NOTES

1. CONTRACTOR TO DETERMINE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND IS RESPONSIBLE FOR ANY OR ALL DAMAGES WHICH MAY RESULT FROM FAILURE TO LOCATE AND PRESERVE ANY AND ALL BURIED UTILITIES.
2. TRENCH OR BORE ROAD CROSSING CONDUITS UNDER ROADWAYS IN THE CAMPGROUND AS PER IOWA D.N.R. STANDARD DRAWING RC-1 ON DRAWING NO. E-04, UNLESS PERMITTED OTHERWISE BY THE IOWA D.N.R. CONSTRUCTION INSPECTOR; RV SITES ARE CONSIDERED ROADWAYS FOR INSTALLATION OF POWER WIRING UNDER RV SITES.
3. REMOVE TREES AND BRUSH IN THE WAY OF CONSTRUCTION ONLY IF DIRECTED BY THE IOWA D.N.R. CONSTRUCTION INSPECTOR. TUNNEL, INSTALL TIGHT SHEETING, HAND EXCAVATE OR EMPLOY OTHER MEANS APPROVED BY THE IOWA D.N.R. CONSTRUCTION INSPECTOR TO PROTECT EXPOSED PORTIONS AND ROOT SYSTEMS OF TREES AND OTHER VEGETATION NOT TO BE REMOVED. REPLACE TREES AND OTHER VEGETATION DAMAGED DURING TRENCHING OPERATIONS BY THE CONTRACTOR AT NO COST TO THE OWNER.
4. CONSTRUCT FREE STANDING METER STRUCTURES FOR METERING TRANSFORMER CABINETS, METER SOCKETS AND DISTRIBUTION PANELS IN ACCORDANCE WITH REQUIREMENTS OF ALLIANT ENERGY (SEE SECTION 615 AND SECTION 808, ALLIANT ENERGY ELECTRIC SERVICE RULES, JANUARY 2011).
5. SEE IOWA D.N.R. STANDARD DRAWING SC-1 AND ELECTRICAL SUPPLY EQUIPMENT LOCATION PLANS ON DRAWING NO. E-04 FOR CAMPSITE OUTLET POST INSTALLATION.

PLAN NOTES

1. EXISTING ALLIANT ENERGY POWER TRANSFORMER.
2. EXISTING METERING TRANSFORMER CABINET, METER SOCKET WITH METER AND DISTRIBUTION PANEL 1 ON FREE STANDING STRUCTURE.
3. SUGGESTED ROUTE FOR ALLIANT ENERGY UNDERGROUND PRIMARY CONDUCTORS.
4. ALLIANT ENERGY POWER TRANSFORMER ON PAD; FRONT TOWARDS ROAD.
5. METERING TRANSFORMER CABINET, METER SOCKET AND DISTRIBUTION PANEL 2 (D2) ON FREE STANDING METER STRUCTURE; INSTALL METER SOCKET ON END OF STRUCTURE NEAREST TRANSFORMER, METERING TRANSFORMER CABINET IN CENTER AND DISTRIBUTION PANEL ON END OF STRUCTURE FURTHEST FROM TRANSFORMER.
6. METERING TRANSFORMER CABINET, METER SOCKET AND DISTRIBUTION PANEL 3 (D3) ON FREE STANDING METER STRUCTURE; INSTALL METER SOCKET ON END OF STRUCTURE NEAREST TRANSFORMER, METERING TRANSFORMER CABINET IN CENTER AND DISTRIBUTION PANEL ON END OF STRUCTURE FURTHEST FROM TRANSFORMER.
7. RUN 3#12 IN 3/4" CONDUIT FROM EXISTING LIGHTING PANEL IN WEST RESTROOM BUILDING UNDERGROUND AND THEN UP RETAINED POLE TO RETAINED LIGHT FIXTURE AND CONNECT; FIELD VERIFY LIGHT FIXTURE VOLTAGE; CONNECT TO APPROPRIATE CIRCUIT BREAKER IN EXISTING LIGHTING PANEL IN WEST RESTROOM BUILDING; SEE PLAN NOTE 7 ON DRAWING NO. E-01.
8. EXISTING LIGHTING PANEL IN WEST RESTROOM BUILDING; RUN WIRING IN CONDUITS UP EXTERIOR OF WEST RESTROOM BUILDING THEN PENETRATE WALL INTO EXISTING LIGHTING PANEL.
9. METERING TRANSFORMER CABINET, METER SOCKET AND DISTRIBUTION PANEL 4 (D4) ON FREE STANDING METER STRUCTURE; INSTALL METER SOCKET ON END OF STRUCTURE NEAREST TRANSFORMER, METERING TRANSFORMER CABINET IN CENTER AND DISTRIBUTION PANEL ON END OF STRUCTURE FURTHEST FROM TRANSFORMER.
10. RUN WIRING IN CONDUIT UP WALL, PENETRATE EXTERIOR WALL LOW ON WALL, THEN THROUGH SOUTH SHOWER BUILDING TO EXISTING LIGHTING PANEL (NEAR CENTER OF BUILDING) AND CONNECT TO LINE LUGS OF EXISTING MAIN CIRCUIT BREAKER, NEUTRAL BUS AND GROUND BUS; FIELD VERIFY ROUTE AND OBTAIN PERMISSION FROM IOWA D.N.R. CONSTRUCTION INSPECTOR PRIOR TO INSTALLATION.
11. METERING TRANSFORMER CABINET, METER SOCKET AND DISTRIBUTION PANEL 5 (D5) ON FREE STANDING METER STRUCTURE; INSTALL METER SOCKET ON END OF STRUCTURE NEAREST TRANSFORMER, METERING TRANSFORMER CABINET IN CENTER AND DISTRIBUTION PANEL ON END OF STRUCTURE FURTHEST FROM TRANSFORMER.
12. ALLIANT ENERGY POWER TRANSFORMER ON PAD; FRONT TO SOUTHEAST.
13. EXISTING ALLIANT ENERGY POWER POLE.

REQUIRED ELECTRICAL SITE PLAN



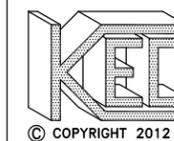
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Dickinson County, Iowa
2311004
February 8, 2012

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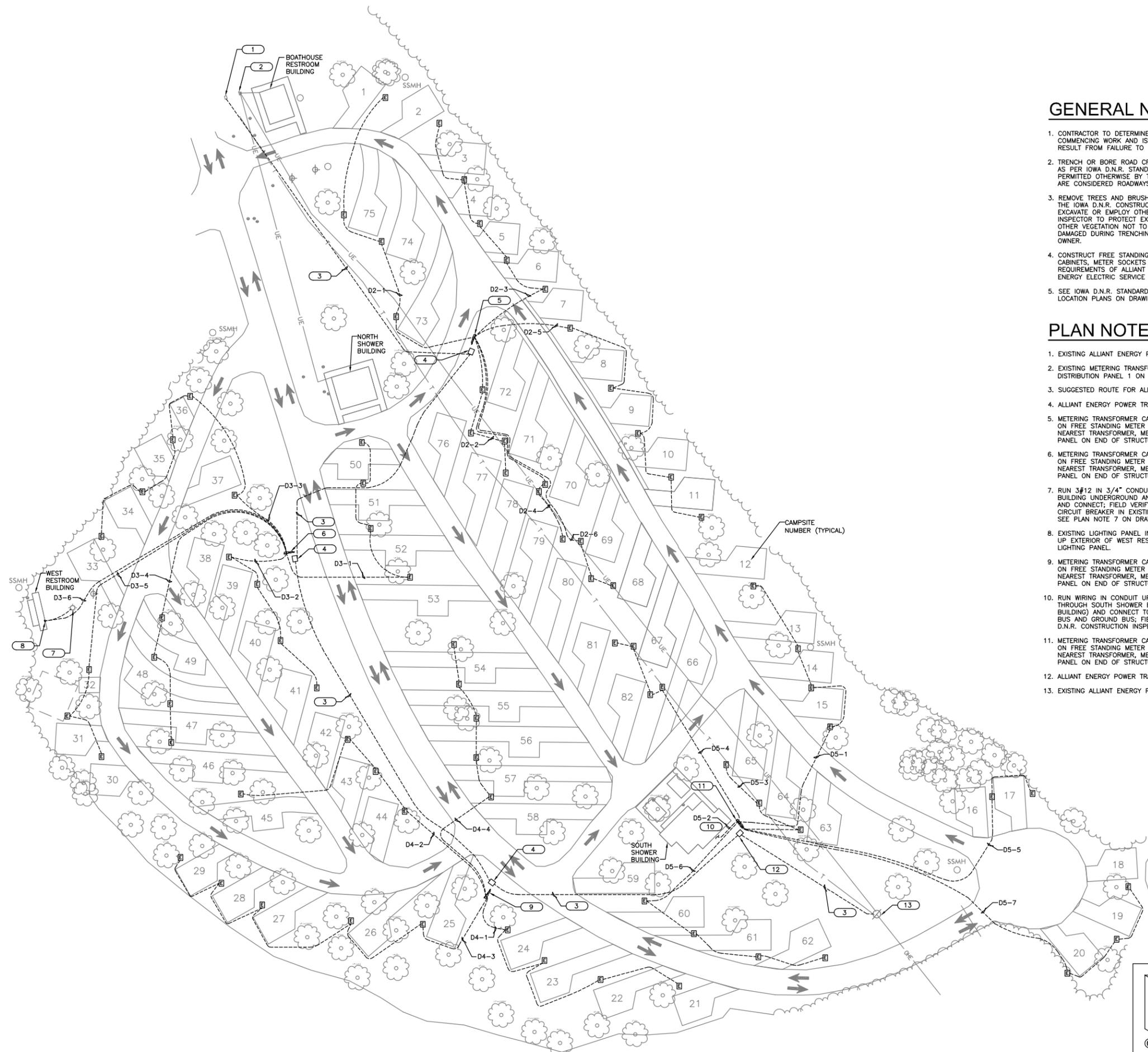
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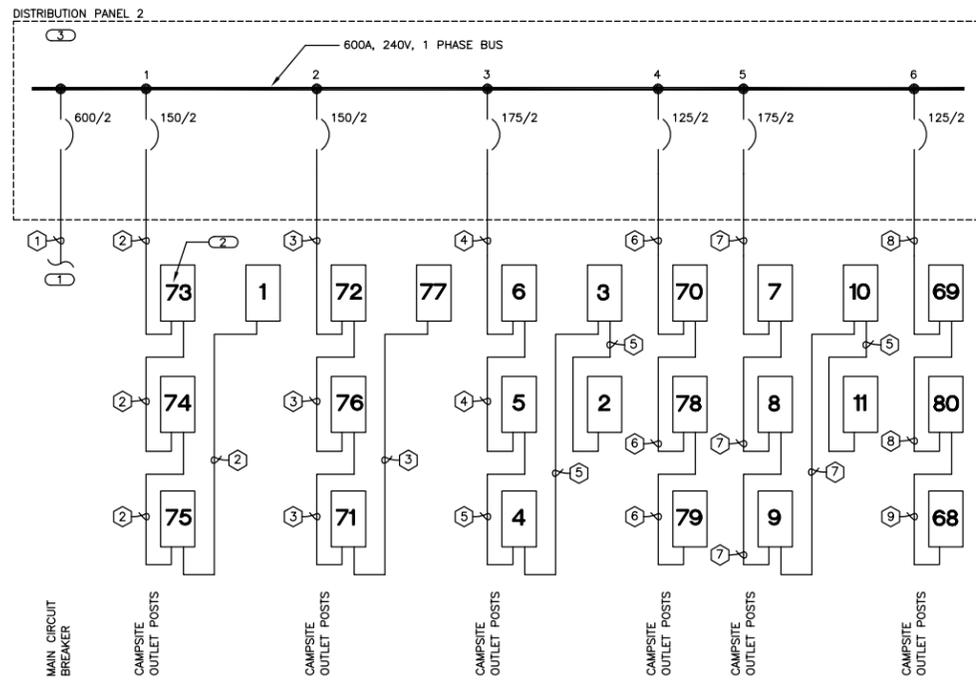
ENGINEER: KJC
DRAWN BY: DLS
CHECKED BY: RAF
FIELD BOOK NO.: -

DRAWING NO.: E-02
SHEET NO.: 24 / 26

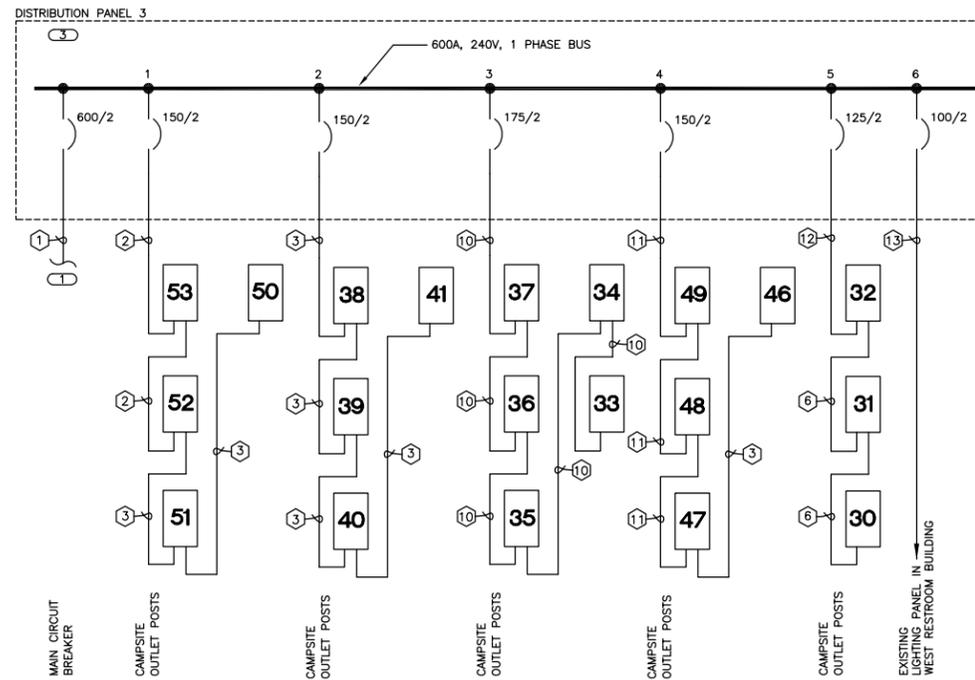


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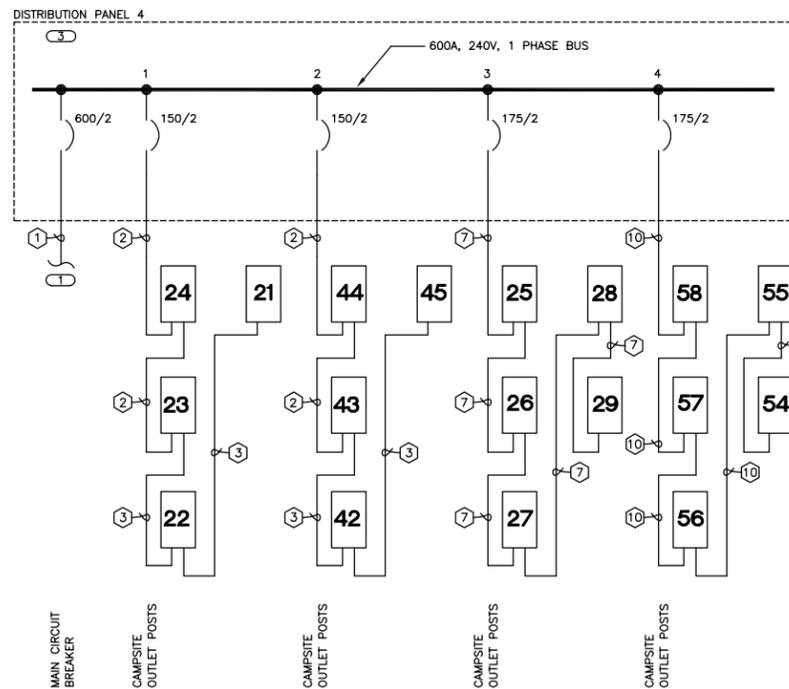




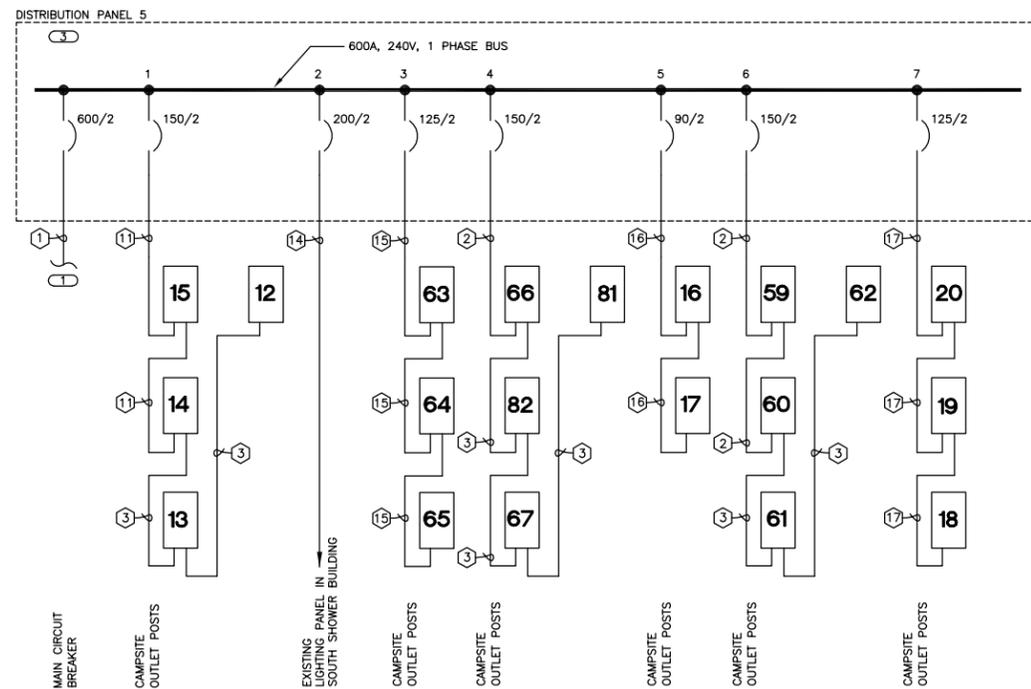
D2 POWER DISTRIBUTION SCHEMATIC
NO SCALE



D3 POWER DISTRIBUTION SCHEMATIC
NO SCALE



D4 POWER DISTRIBUTION SCHEMATIC
NO SCALE



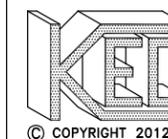
D5 POWER DISTRIBUTION SCHEMATIC
NO SCALE

WIRE SCHEDULE			
PLAN MARK	CONDUCTORS	CONDUIT	SEE NOTE
①	6-350 kcmil	4"	1,2
②	3#3/0 & 1#3	2 1/2"	3
③	3#1/0 & 1#6	2"	3
④	3#3/0 & 1#4	2 1/2"	3
⑤	3#2/0 & 1#6	2 1/2"	3
⑥	3#2/0 & 1#3	2 1/2"	3
⑦	3-250 kcmil & 1#3	3"	3
⑧	3#3/0 & 1#2	2 1/2"	3
⑨	3#1/0 & 1#4	2"	3
⑩	3#4/0 & 1#3	2 1/2"	3
⑪	3#4/0 & 1#2	2 1/2"	3
⑫	3#4/0 & 1#1	3"	3
⑬	3#1 & 1#8	2"	3
⑭	3#3/0 & 1#6	2 1/2"	1
⑮	3#1 & 1#6	2"	3
⑯	3#2/0 & 1#4	2 1/2"	3
⑰	3-250 kcmil & 1#1	3"	3

NOTE
 1. TYPE XHHW OR XHHW-2 INSULATION; INSTALL IN CONDUIT.
 2. TWO CONDUCTORS PER PHASE AND TWO GROUNDED CONDUCTORS.
 3. RUN IN CONDUIT BELOW DISTRIBUTION PANEL TO 24" BELOW GRADE AND 24" OUT FROM PANEL, AND WHERE SPECIFIED, SHOWN OR NOTED ON DRAWINGS.

PLAN NOTES

- FROM METERING TRANSFORMER CABINET.
- CAMPSITE OUTLET POST (TYPICAL); NUMBER INDICATES CAMPSITE NUMBER ON DRAWING NO. E-02.
- BOND NEUTRAL BUS IN METERING TRANSFORMER CABINET TO GROUND LUG IN METERING TRANSFORMER CABINET WITH #2/0 AWG; INSTALL GROUND ROD BELOW DISTRIBUTION PANEL AND SECOND GROUND ROD BEHIND DISTRIBUTION PANEL, MINIMUM TEN FEET BETWEEN GROUND RODS; RUN #2/0 AWG GROUNDING ELECTRODE CONDUCTOR IN 3/4" RIGID METAL CONDUIT FROM GROUND BAR IN DISTRIBUTION PANEL TO BELOW GRADE; BOND GROUNDING ELECTRODE CONDUCTOR TO GROUND RODS BELOW GRADE; BOND GROUNDING ELECTRODE CONDUCTOR TO ENTRY AND EXIT ENDS OF CONDUIT WITH GROUNDING TYPE BUSHING.



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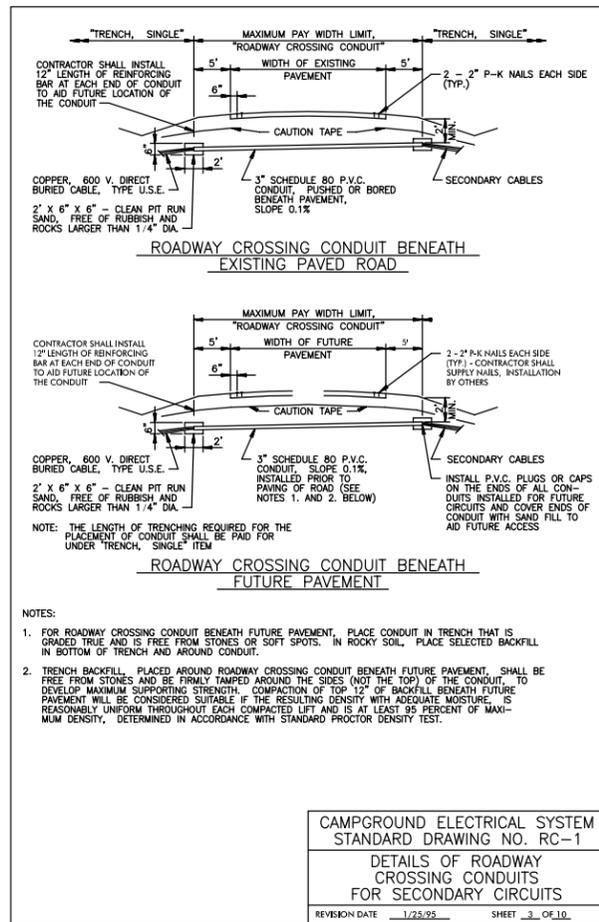
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ELECTRICAL POWER DISTRIBUTION SCHEMATICS

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 2311004
 February 8, 2012

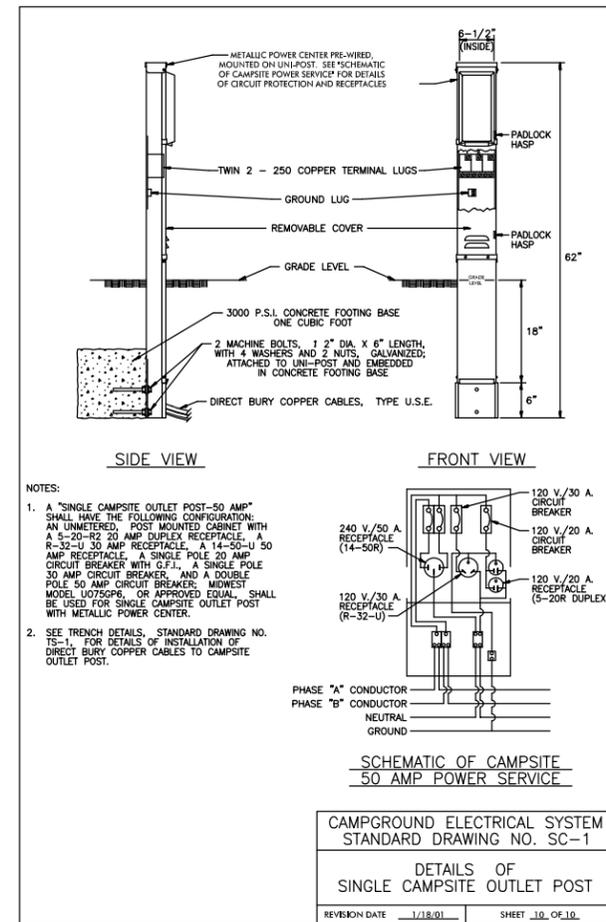
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ENGINEER KJC	DRAWN BY DLS
CHECKED BY RAF	FIELD BOOK NO. -
DRAWING NO. E-03	SHEET NO. 25 / 26

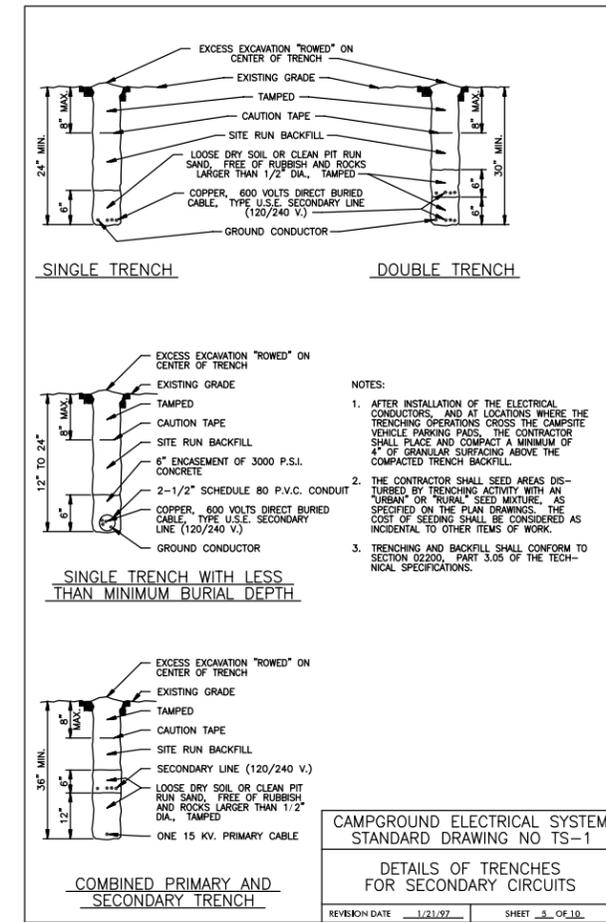


IOWA D.N.R.
STANDARD DRAWING RC-1

NOTE
ROADWAYS CONSTRUCTED OR RESURFACED AS PART OF CAMPGROUND IMPROVEMENTS PROJECT CAN BE CONSIDERED FUTURE PAVEMENT (NOT EXISTING PAVED ROAD) FOR TRENCHING IN WIRING AND CONDUIT INSTALLED PRIOR TO ROADWAY CONSTRUCTION OR RESURFACING.



IOWA D.N.R.
STANDARD DRAWING SC-1

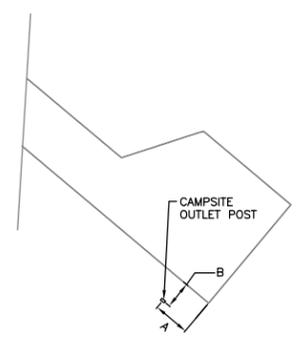


IOWA D.N.R.
STANDARD DRAWING TS-1

NOTE
MINIMUM COVER DEPTH IS MEASURED FROM TOP SURFACE OF CONDUIT OR DIRECT BURIED CONDUCTORS TO TOP SURFACE OF FINISHED GRADE, NOT BOTTOM OF TRENCH AS SHOWN IN IOWA D.N.R. STANDARD DRAWING TS-1.

BACK-IN RV SITES

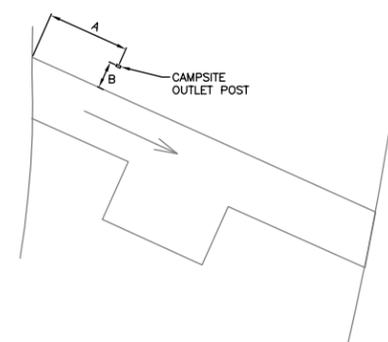
CAMPSITE NUMBER	DISTANCE (FEET)	
	A	B
3	15	5
5	8	5
10	11	6
13	12	5
14	15	5
16	8	5
17	14	6
23	14	6
27	11	5
28	11	5
33	1	6
36	2	5
42	14	6
43	4	6
44	4	6
60	8	5
61	10	5
78	2	5
ALL OTHERS	8	6



BACK-IN RV SITES

PULL-THROUGH RV SITES

CAMPSITE NUMBER	DISTANCE (FEET)	
	A	B
45	35	6
46	27	5
47	40	6
48	25	5
49	20	5
50	20	5
51	30	5
52	25	5
53	42	6
54	55	6
55	45	5
56	44	6
57	25	6
58	16	5
66	60	5



PULL-THROUGH RV SITES

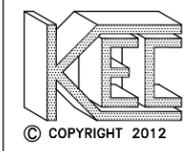
ELECTRICAL SUPPLY EQUIPMENT LOCATION PLANS

NO SCALE

NOTE
INSTALL CAMPSITE OUTLET POST WITH FRONT PARALLEL TO AND FACING RV SITE.

ELECTRICAL LEGEND

- A AMPERE
- D.N.R. DEPARTMENT OF NATURAL RESOURCES
- KV KILOVOLT
- KVA KILOVOLT-AMPERES
- KW KILOWATT
- RV RECREATIONAL VEHICLE
- V VOLT
- CIRCUIT CONTINUOUS
- D1-1 NUMBER INDICATES CIRCUIT NUMBER
- EQUIPMENT CONNECTION
- 15/2 CIRCUIT BREAKER 15-AMPERE RATING 2-NUMBER POLES
- PLAN NOTE
- CAMPSITE OUTLET POST
- POLE MOUNTED LIGHT FIXTURE



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ELECTRICAL
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