

IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING BUREAU

CONSTRUCTION PLANS

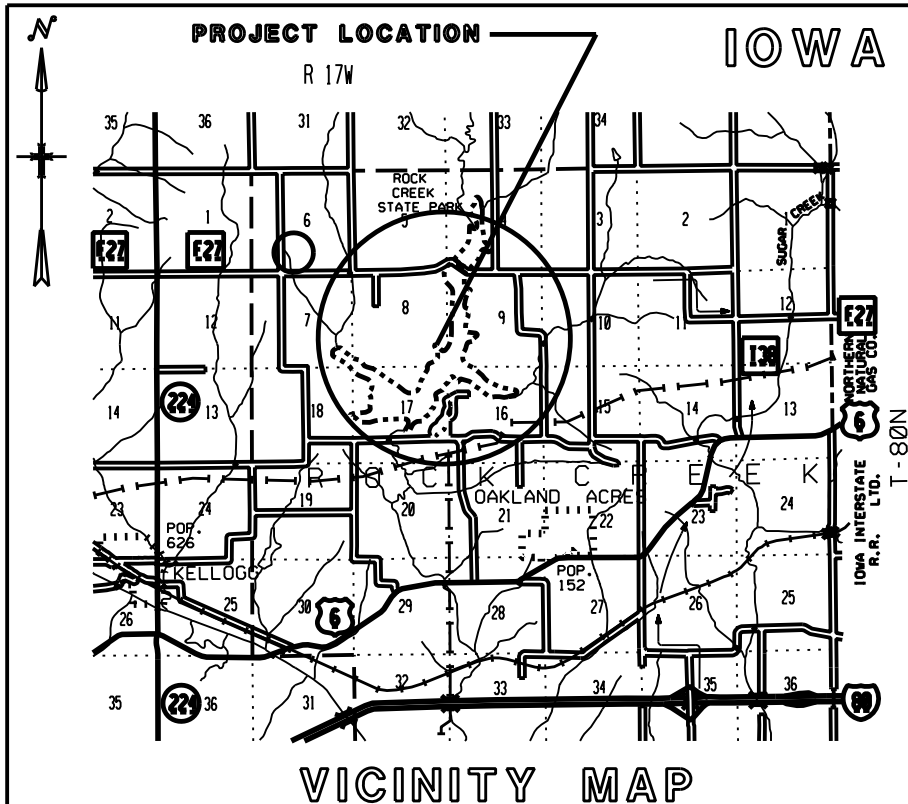
FOR

ROCK CREEK WMA

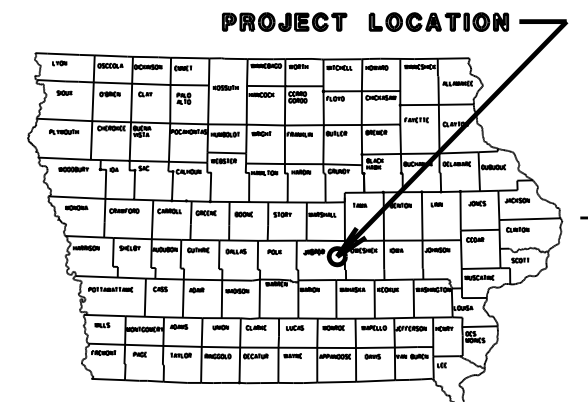
JASPER COUNTY

SILT RETENTION STRUCTURES

PROJECT NO. 11-05-50-03



VICINITY MAP



LOCATION MAP



NOTE: NPDES STORMWATER PERMITS ARE REQUIRED FOR ANY LAND DISTURBING ACTIVITY THAT EXCEEDS ONE ACRE IN SIZE.

FOR STORMWATER GENERAL PERMIT ASSISTANCE, CONTACT IDNR STORMWATER COORDINATOR. (515)281-7017

PLANS PREPARED BY
NATURAL RESOURCES CONSERVATION SERVICE
AND IDNR ENGINEERING BUREAU
MANAGEMENT SERVICES DIVISION

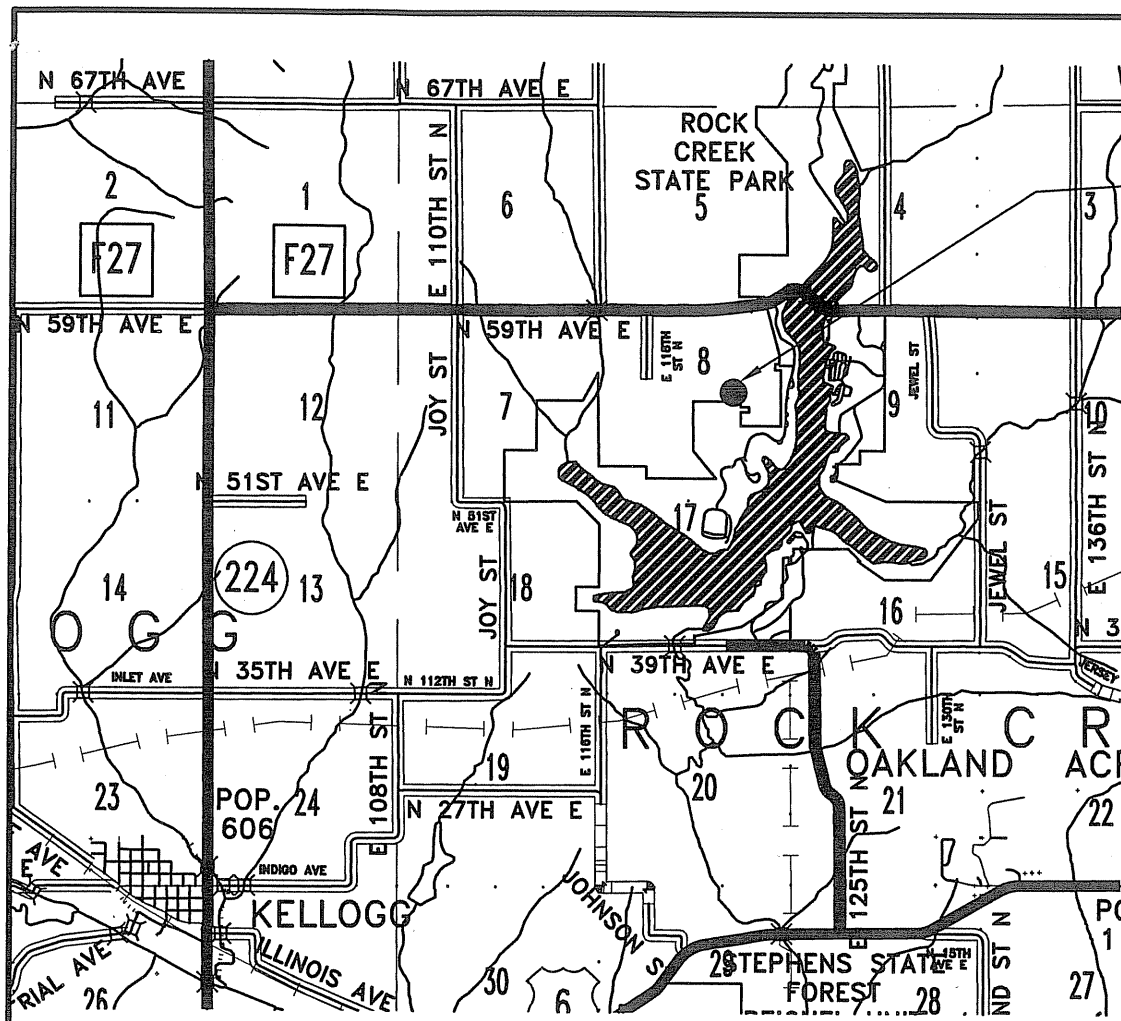
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ESTIMATE OF QUANTITIES		
ITEM NO.	DESCRIPTION	QUANTITY
1	CLEARING AND GRUBBING (ALL SITES)	LUMP SUM
2	EARTHWORK, IN PLACE FILL	38,094 C.Y.
3	PIPE, 6" DIA. HELICAL METAL, 16 GA.	138 L.F.
4	PIPE, 8" DIA. HELICAL METAL, 16 GA.	252 L.F.
5	PIPE, 10" DIA. HELICAL METAL, 16 GA.	133 L.F.
6	PIPE, 12" DIA. HELICAL METAL, 16 GA.	88 L.F.
7	ANTI-SEEP COLLAR, 48" X 48", 14 GA.	3 EACH
8	ANTI-SEEP COLLAR, 60" X 60", 16 GA.	2 EACH
9	ANTI-SEEP COLLAR, 72" X 72", 16 GA.	5 EACH
10	SEEDING, FERTILIZING & MULCHING	5.8 AC.

PROJECT SILT RETENTION STRUCTURES PROJ. NO. 11-05-50-03

AREA ROCK CREEK WMA COUNTY JASPER

KEN JACKSON - JAN 2011



CONTRACTOR IS RESPONSIBLE FOR CALLING IOWA ONE CALL 1-800-292-8989

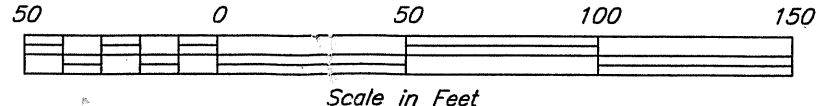
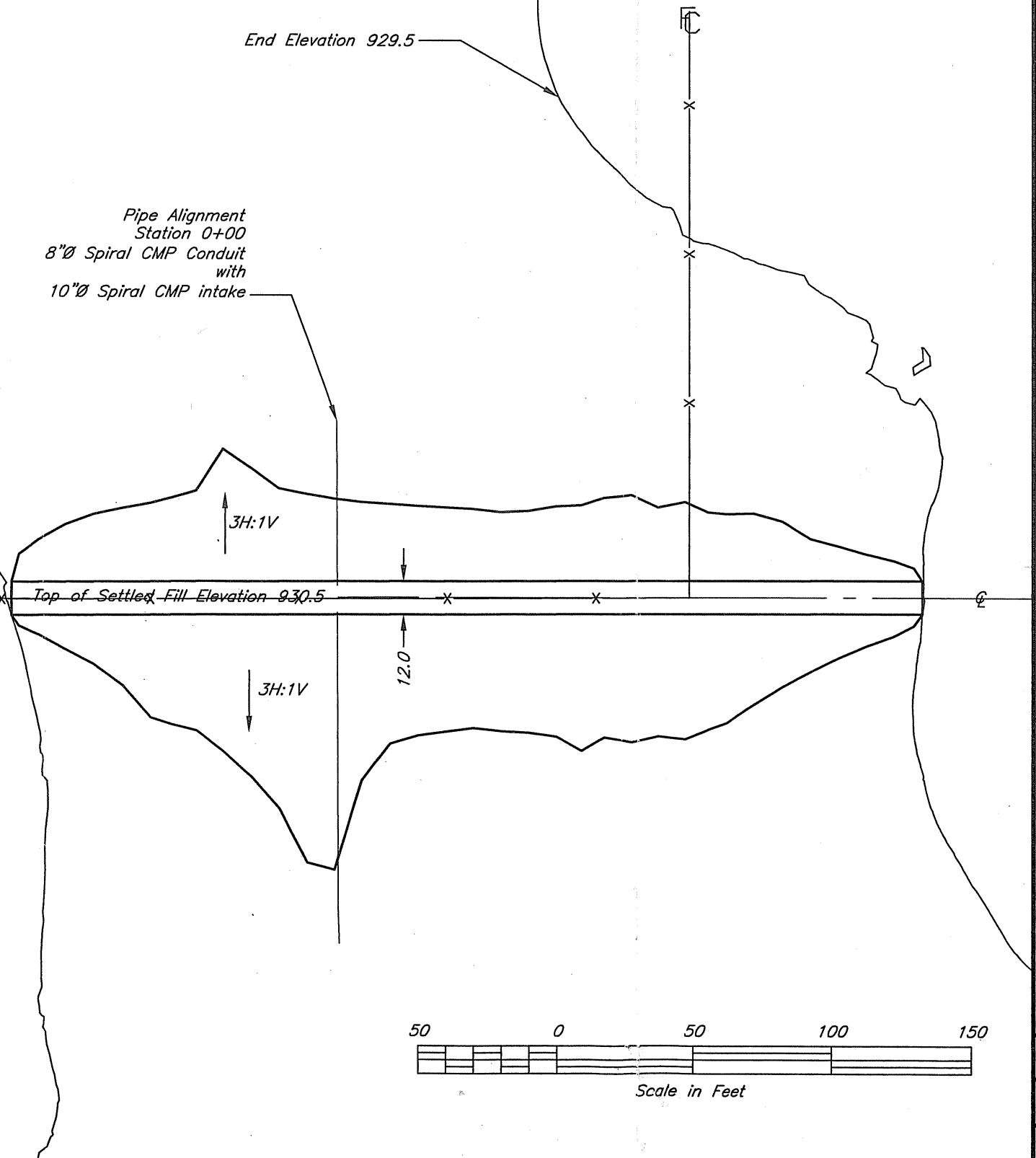
- All work shall be performed as shown on the plans and the attached specifications.
- Centerline, embankment toes, and benchmarks shall be staked in the field prior to construction.

OPERATION AND MAINTENANCE REQUIREMENTS:

- Remove sediment build-up in basin channel and around the intake to maintain the required capacity.
- Repair sections of the basin which have eroded or have excessive settlement.
- Reseed and fertilize, as needed, to maintain good vegetation.
- Repair or replace intake as needed.
- Remove trash from around and in the tile intake.
- Inspect, and remove any trash or sediment accumulated at the outlet.
- Control weeds, brush, and trees by mechanical methods or chemicals.
- Do not operate farm equipment on steep front slopes and/or back slopes.

Location:
SW4NE4 & NW4SE4
Section 8 T80N R17W

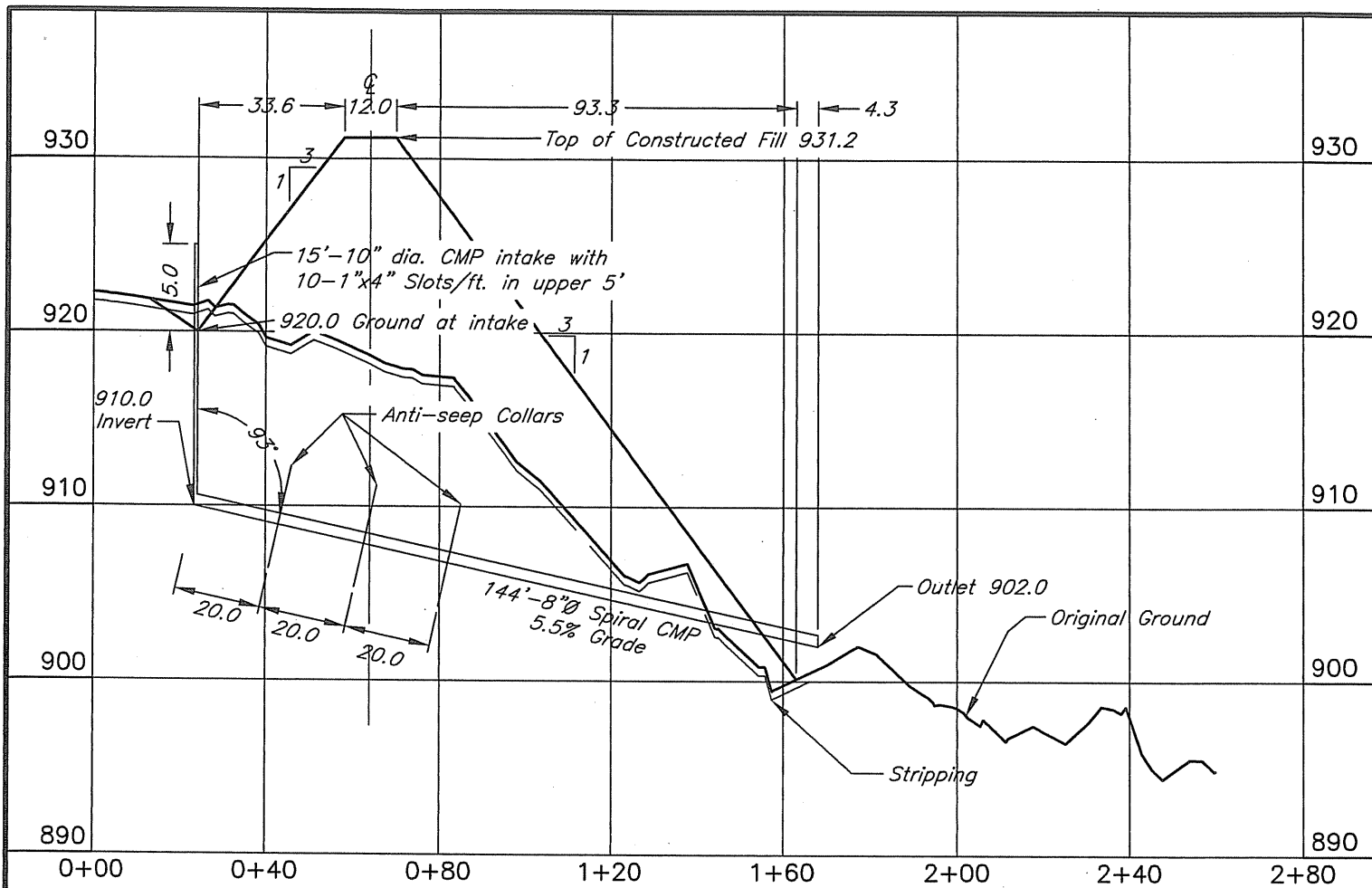
If a cultural resource is identified during construction, stop immediately and notify the Natural Resources Conservation Service Archeologist at (515) 284-4370.



Date	3-2009
Designed	RHathcock
Drawn	RHathcock
Checked	WBecker
Approved	Blaylock, Baku
	5-09
	5-26-09

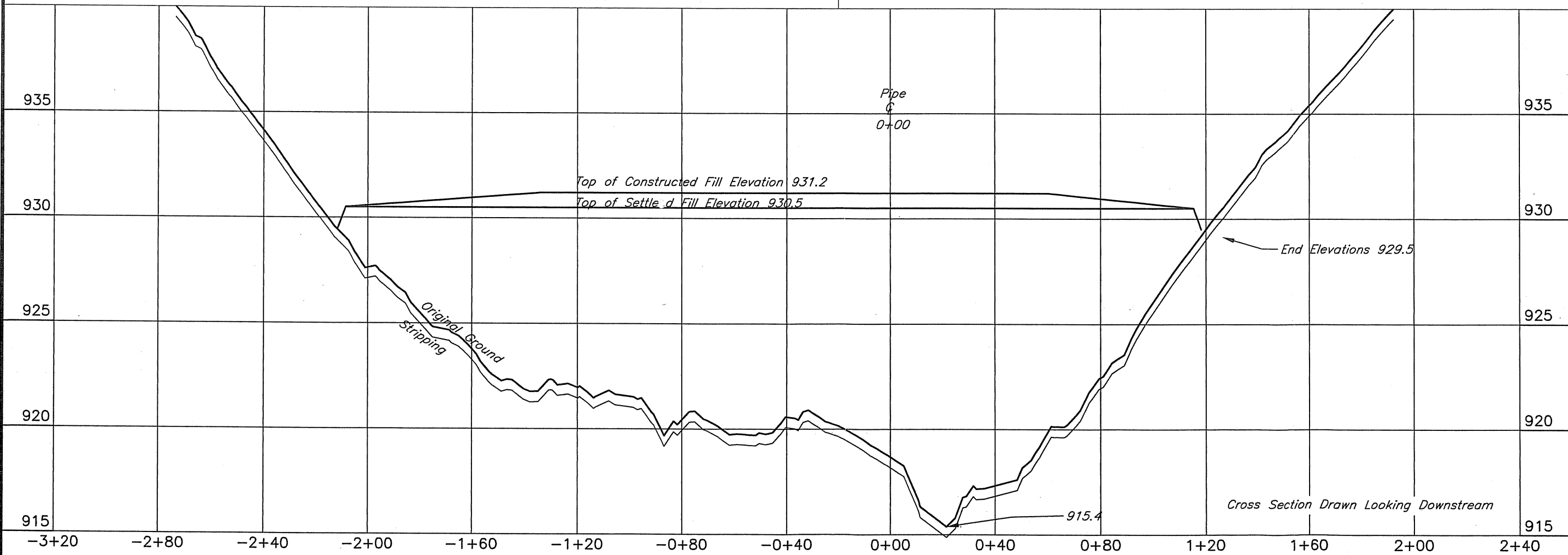
Jasper County, IA
Rock Creek Lake, Site 1
Job Class III
Site 1
PLAN VIEW





BILL OF MATERIALS

144'-8"Ø Spiral Corrugated Metal Pipe (CMP). 2' is connected to intake/riser with a flanged end; 6-20' intermediate sections each with two flanged ends; 1-22' outlet section. Outlet section shall have one end flanged and one end protected with an animal guard.
15'-10"Ø Spiral (CMP) Intake. Top 5' with 10-1"x4" slots per foot and 2'-8"Ø stub with flange welded 1' from the bottom at 93° vertical angle.
2 gallon Asphaltic Mastic Sealer
3-72" x 72" Antiseep collars
6,403 CY Earthwork—Includes 0.5' Stripping
1.2 ac Seeding



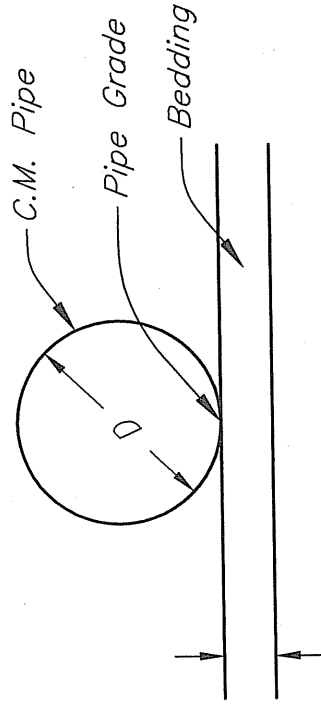
CROSS SECTIONS
Site 1

Date 3-2009
 Designed RHathcock
 Drawn RHathcock
 Checked DV Baker
 Approved 5-09

Jasper County, IA
 Rock Creek Lake, Site 1



File No. 091.DWG
 Drawing No.
 3/30/09 4:02 PM
 Sheet 2 of 3

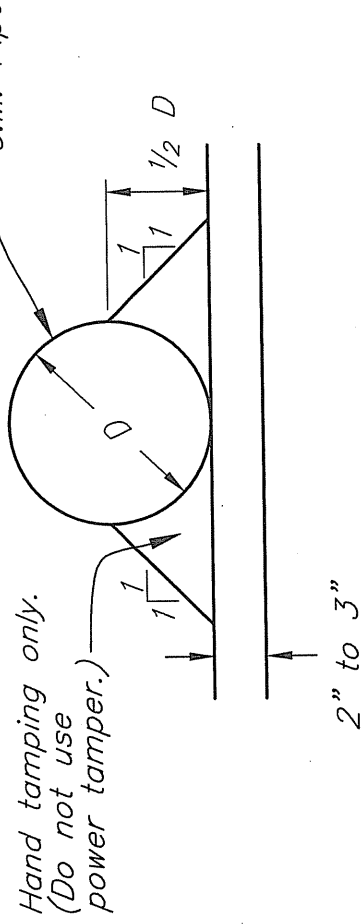


Excavate 2 to 3 inches below pipe grade. Then backfill with damp friable soil free from lumps and raked or graded to a true plane before placing C.M. Pipe. No compaction of bedding is required.

CORRUGATED OR SMOOTH METAL PIPE
PRINCIPAL SPILLWAY
BEDDING DETAIL

Note

Begin backfill immediately after pipe has been placed.



CORRUGATED OR SMOOTH METAL PIPE
PRINCIPAL SPILLWAY
BACKFILL DETAIL

STANDARD DWG. IA-1205

DATE July 2008 SHEET 1 OF 1

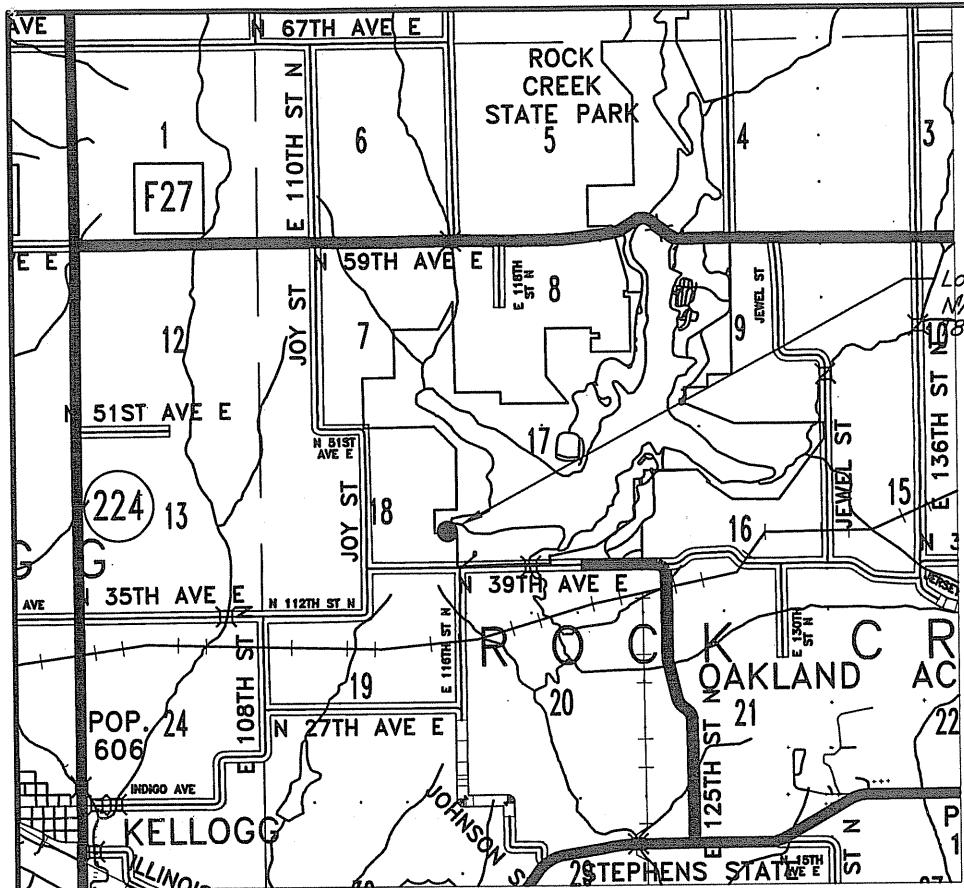


Natural Resources Conservation Service
United States Department of Agriculture

DETAILS OF CORRUGATED OR
SMOOTH METAL PIPE PRINCIPAL
SPILLWAY BEDDING AND BACKFILL

Rock Creek Lake, Site 1

D Designed	RHathcock	Date	3-2009	File Name
Drawn	RHathcock		3-2009	Drawing Name
Checked	DV Baker		5-09	
Approved	Alongford, W. Baker		5-26-09	Sheet 3 of 3



Location:
N 1/2 SE 1/4 Sec. 18
T48N R17W Rock Creek Twp.

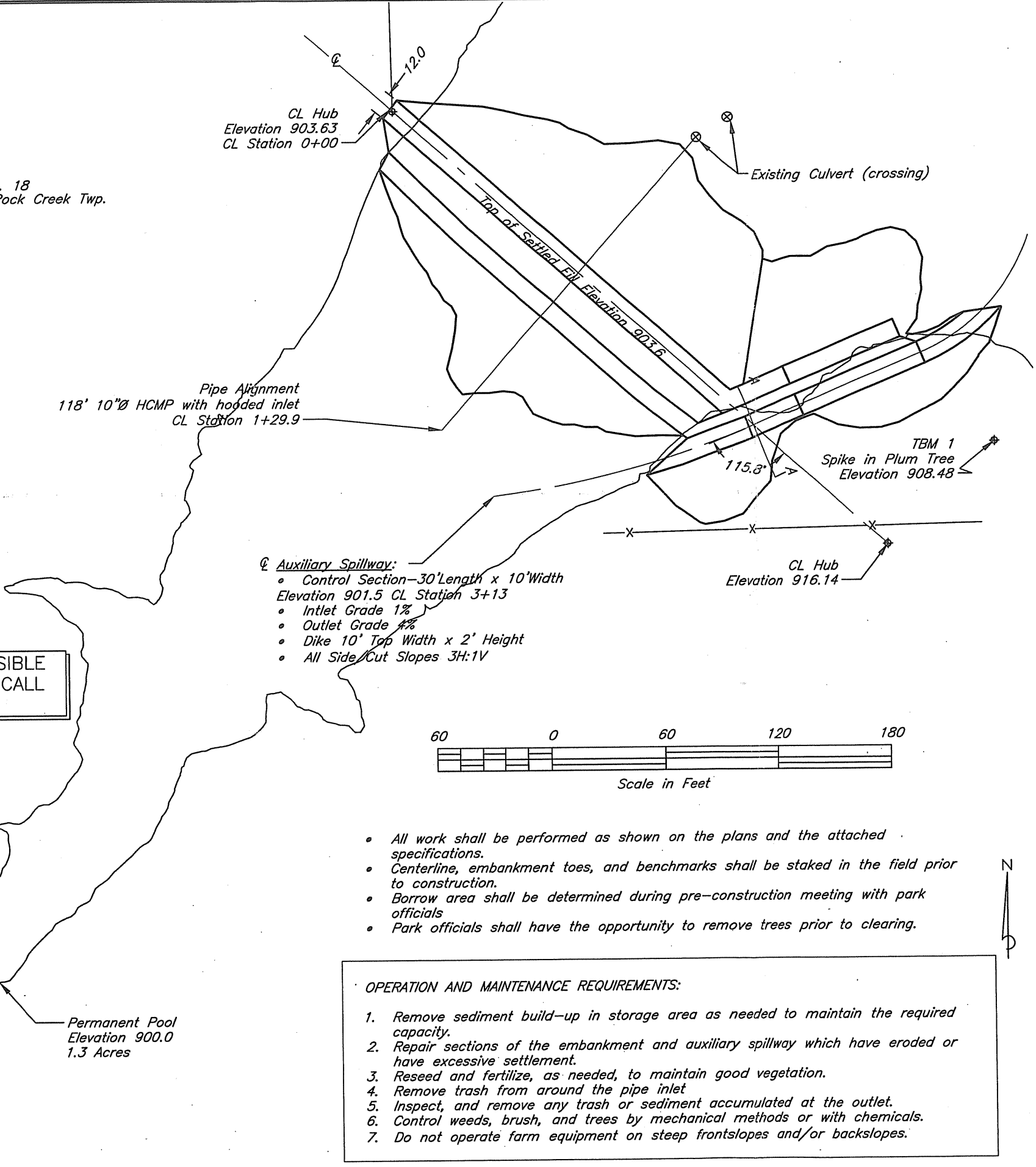


SHEET INDEX	
Sheet #1	Plan View/Location
Sheet #2	Auxiliary and Centerline Detail
Sheet #3	Pipe Profile and Bill of Materials
Sheet #4	Details of Hood Inlet and Bedding and Backfill

CONTRACTOR IS RESPONSIBLE FOR CALLING IOWA ONE CALL 1-800-292-8989

NRCS does not guarantee that this structure will fill and/or remain filled with water to the principal spillway crest elevation.

If a cultural resource is identified during construction, stop immediately and notify the Natural Resources Conservation Service Archeologist at (515) 284-4370.



- Auxiliary Spillway:**
- Control Section—30' Length x 10' Width Elevation 901.5 CL Station 3+13
 - Inlet Grade 1%
 - Outlet Grade 4%
 - Dike 10' Top Width x 2' Height
 - All Side/Cut Slopes 3H:1V

- All work shall be performed as shown on the plans and the attached specifications.
- Centerline, embankment toes, and benchmarks shall be staked in the field prior to construction.
- Borrow area shall be determined during pre-construction meeting with park officials
- Park officials shall have the opportunity to remove trees prior to clearing.

- OPERATION AND MAINTENANCE REQUIREMENTS:**
1. Remove sediment build-up in storage area as needed to maintain the required capacity.
 2. Repair sections of the embankment and auxiliary spillway which have eroded or have excessive settlement.
 3. Reseed and fertilize, as needed, to maintain good vegetation.
 4. Remove trash from around the pipe inlet
 5. Inspect, and remove any trash or sediment accumulated at the outlet.
 6. Control weeds, brush, and trees by mechanical methods or with chemicals.
 7. Do not operate farm equipment on steep front-slopes and/or back-slopes.

Date: R/hathcock 03/2010
Designed: R/hathcock 03/2010
Drawn: D/Baker 3/10
Checked: D/Baker 3/10
Approved: R/hathcock 4/10

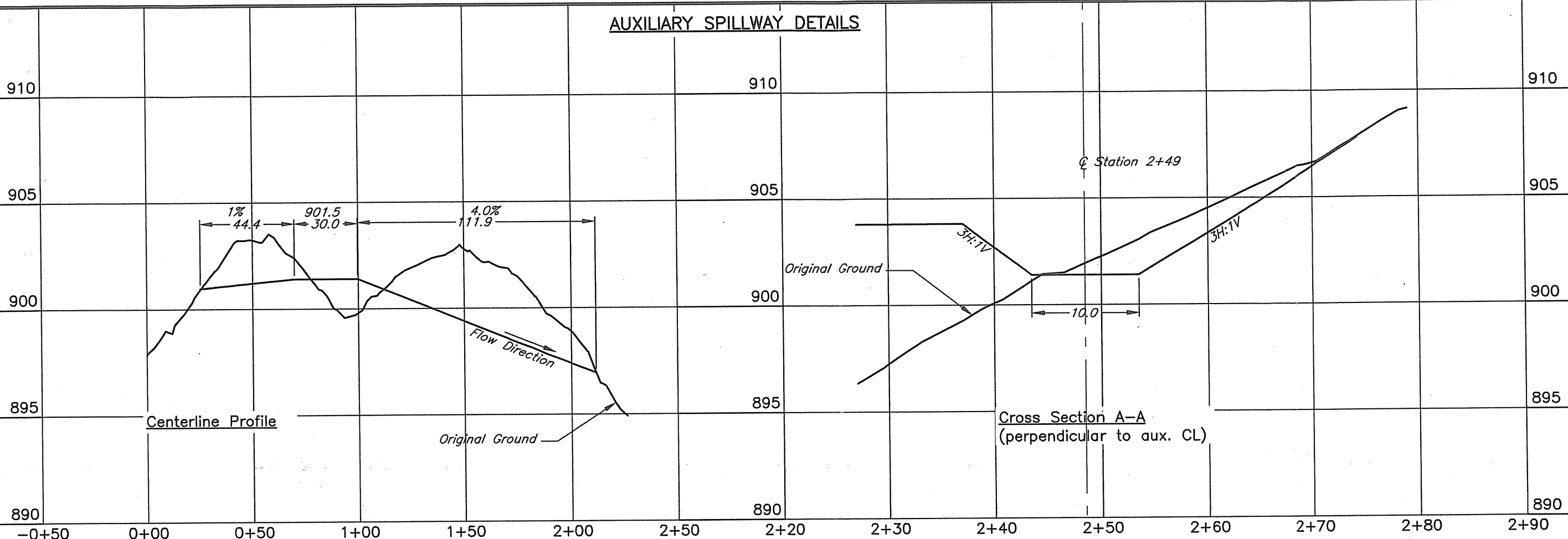
PLAN VIEW
Job Class III

Rock Creek Lake, Site 2

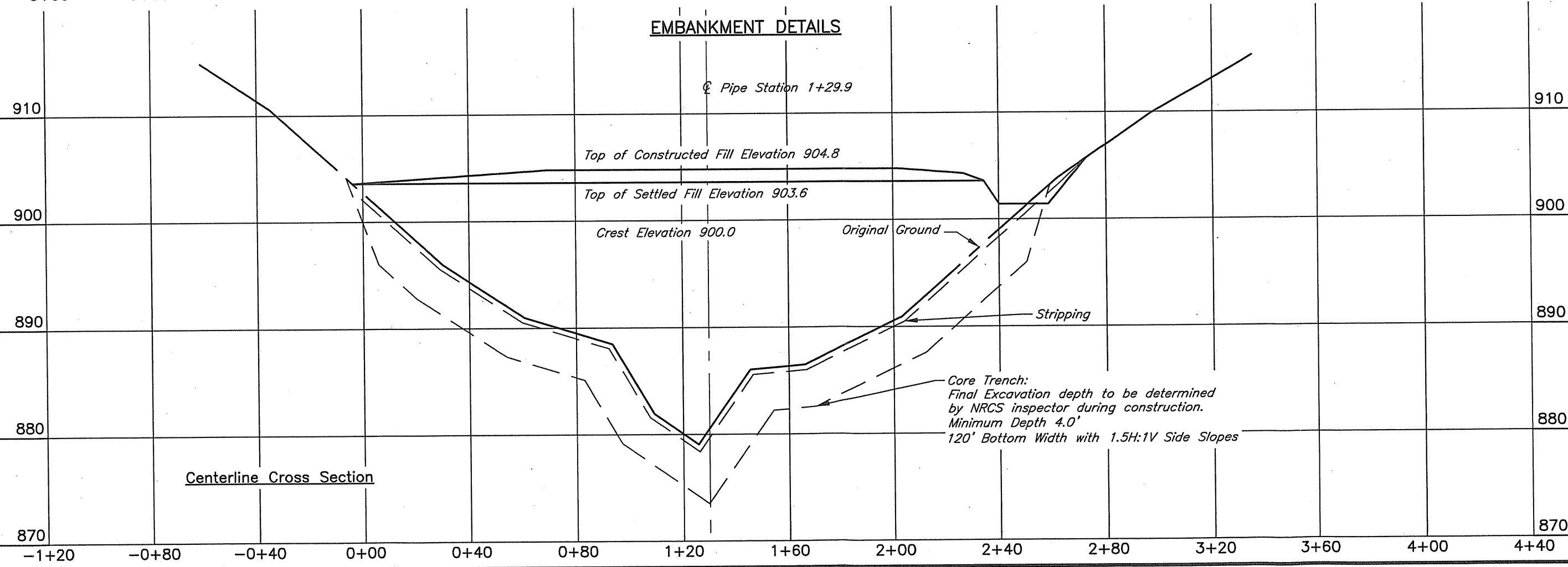


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Drawing No.
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Sheet 1 of 4

AUXILIARY SPILLWAY DETAILS



EMBANKMENT DETAILS



Date: 03/2010
 Designed: RHathcock
 Drawn: RHathcock
 Checked: /s/DVBaker
 Approved: _____

**AUXILIARY DETAILS
 EMBANKMENT DETAILS**

Rock Creek Lake, Site 2
 Jasper County, IA



File No: 097.DWG
 Drawing No.:
 3/15/10 9:47 AM
 Sheet 2 of 4

BILL OF MATERIALS

118-10"Ø, 16 gauge Helical Corrugated Metal Pipe (HCMP) with hooded inlet. Pipe shall be galvanized, lock seam, spiral pipe with 1-1/2" x 1/4" corrugations with flanged connections. To include: 1-32' hooded inlet section; 2-32' intermediate sections and 1-22' outlet section with a 9.5' elbow fabricated 2' from the upper end.

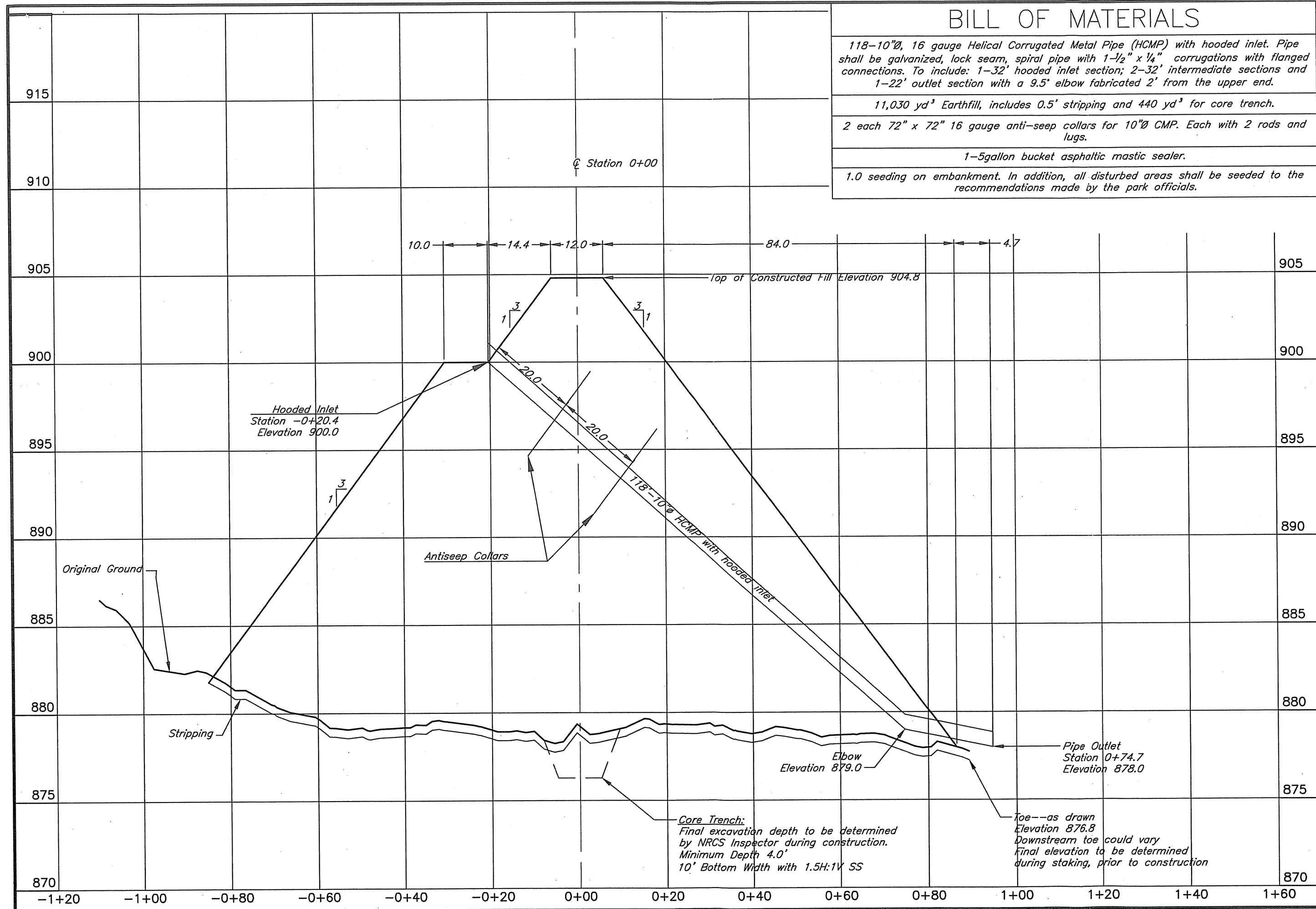
11,030 yd³ Earthfill, includes 0.5' stripping and 440 yd³ for core trench.

2 each 72" x 72" 16 gauge anti-seep collars for 10"Ø CMP. Each with 2 rods and lugs.

1-5gallon bucket asphaltic mastic sealer.

1.0 seeding on embankment. In addition, all disturbed areas shall be seeded to the recommendations made by the park officials.

Date
R/hathcock 03/2010
Designed
R/hathcock 03/2010
Drawn
/s/DVBaker 03/2010
Checked
Approved
Jasper County, IA

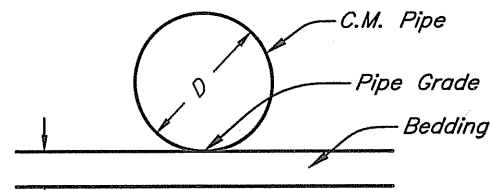


PIPE PROFILE BILL OF MATERIALS

Rock Creek Lake, Site 2



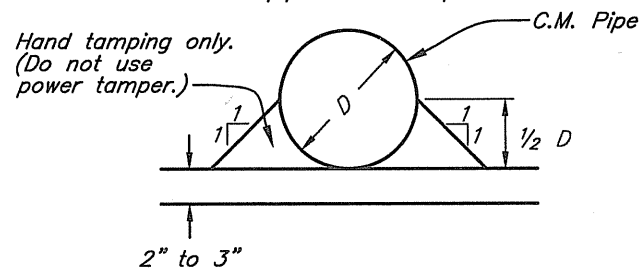
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Sheet 3 of 4



Excavate 2 to 3 inches below pipe grade. Then backfill with damp friable soil free from lumps and raked or graded to a true plane before placing C.M. Pipe. No compaction of bedding is required.

CORRUGATED OR SMOOTH METAL PIPE PRINCIPAL SPILLWAY BEDDING DETAIL

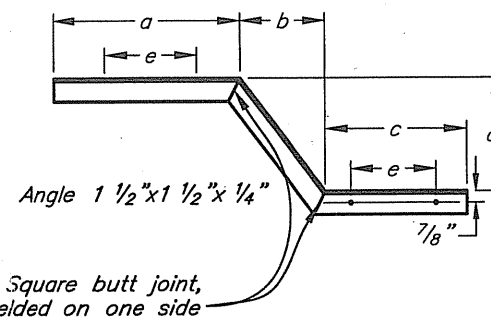
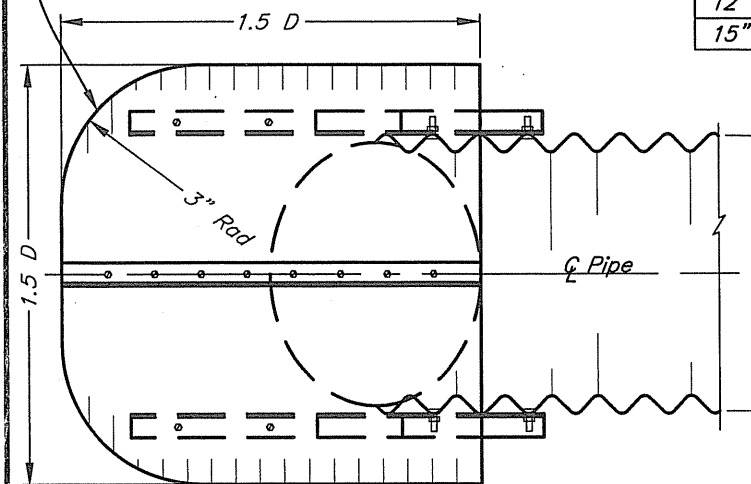
Note
Begin backfill immediately after pipe has been placed.



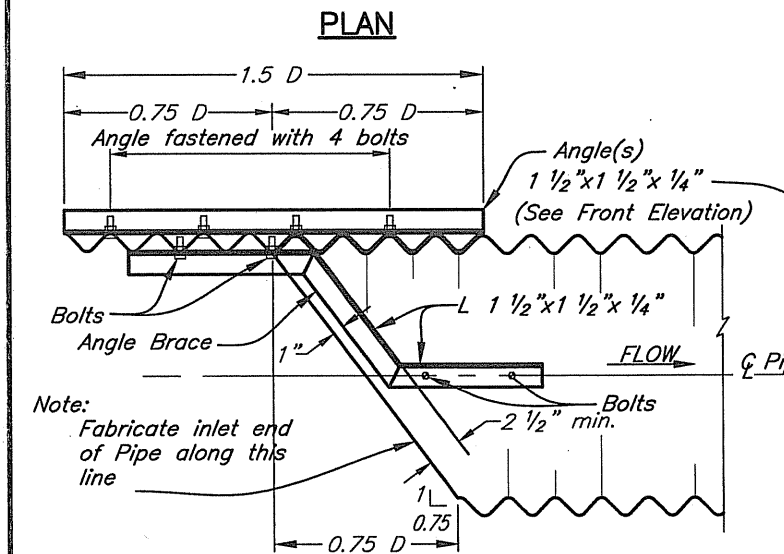
CORRUGATED OR SMOOTH METAL PIPE PRINCIPAL SPILLWAY BACKFILL DETAIL

Metal Baffle shall have the same coating as the pipe to which it is attached. Where Metal Baffle is fabricated of more than one piece of metal, the separate pieces shall be securely fastened to each other. Sharp corners shall be removed. At contractors option, Metal Baffle may be made of corrugated or sheet metal and shaped circular, square or as shown.

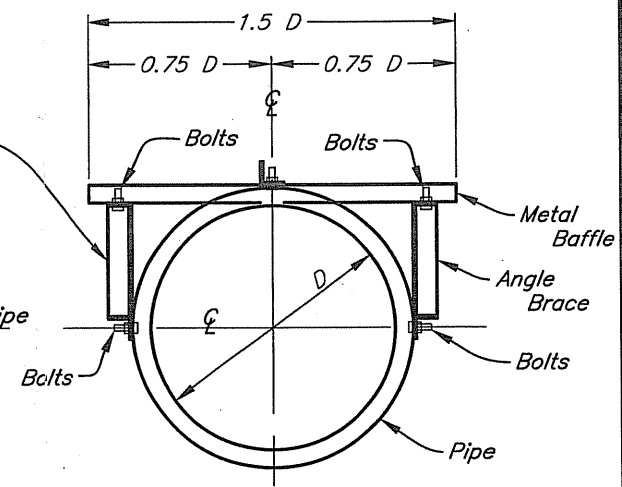
GAGE OF METAL BAFFLE AND DIMENSIONS OF ANGLE BRACE							
Diam. of Pipe	Sheet Thick. of Baffle		Angle Brace Dimensions (Inches)				
	Steel	Al.	a	b	c	d	e
6"	.064	.105	Not Required				
8"	.064	.105					
10"	.064	.105					
12"	.064	.105	8	3 3/4	9	5	5 1/3
15"	.064	.105	9	4 7/8	9	6 1/2	5 1/3



ANGLE BRACE DETAIL
(1 left and 1 right required for each baffle)



SIDE ELEVATION



FRONT ELEVATION

Note:
Fabricate inlet end of Pipe along this line

Notes:
USE ALUMINUM BAFFLE AND ANGLES WITH ALUMINUM PIPE.
USE STEEL BAFFLE AND ANGLES WITH STEEL OR IRON PIPE.
All bolts shall be 3/8" x 1 1/2" with nut and split washers.
All holes for bolts shall be drilled 7/16" diameter.
All nuts, bolts and washers shall be galvanized, cadmium plated, or stainless steel.
All cuts shall be saw or shear cuts.
Holes in the angle brace shall be spaced and located to match corrugations in pipe and baffle.
Steel angles shall be galvanized.

STANDARD DWG. IA-1205

DATE July 2008 SHEET 1 OF 1



DETAILS OF CORRUGATED OR SMOOTH METAL PIPE PRINCIPAL SPILLWAY BEDDING AND BACKFILL

Designed _____ Date _____
 Drawn _____ Drawing Name _____
 Checked _____
 Approved _____ Sheet of _____

STANDARD DWG. IA-1210

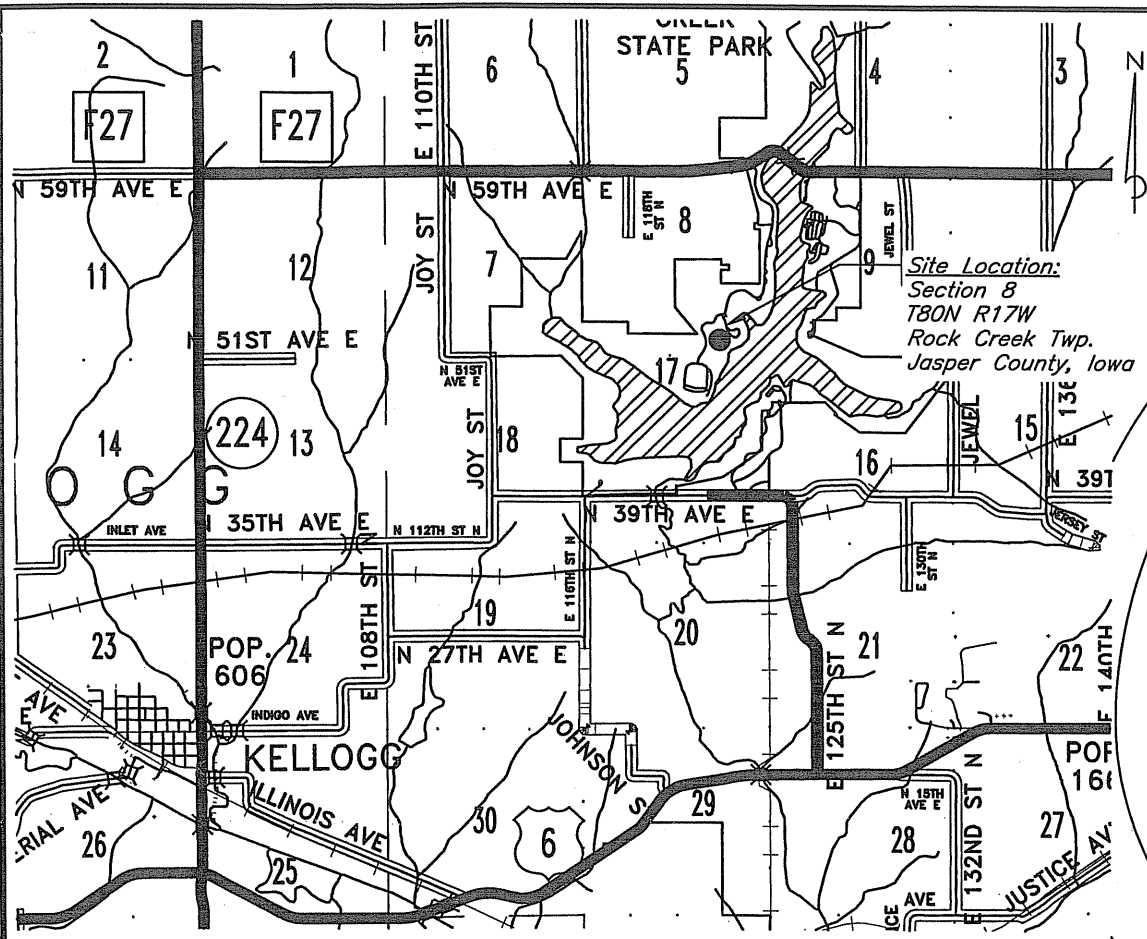
DATE July 2008 SHEET 1 OF 1



DETAILS OF HOOD INLET FOR ANNULAR OR SPIRAL C.M. PIPE 6-15 INCH DIAM.

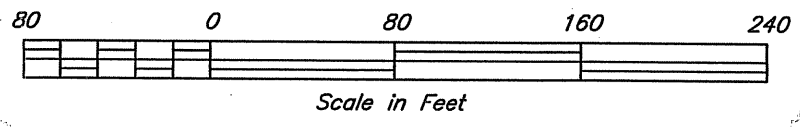
Rock Creek Lake, Site #5

Designed RLH Date 03/2010
 Drawn _____ Drawing Name _____
 Checked DV Baker 3/10
 Approved _____ Sheet 4 of 4



NRCS does not guarantee that this structure will fill and/or remain filled with water to the principal spillway crest elevation.

Site Location:
Section 8
T80N R17W
Rock Creek Twp.
Jasper County, Iowa



CONTRACTOR IS RESPONSIBLE FOR CALLING IOWA ONE CALL 1-800-292-8989

- Park officials shall have the opportunity to remove trees prior to clearing.
- Specifications can be found attached to these plans.
- Operation and Maintenance Recommendations are found at the end of the specifications.
- Centerline embankment toes and benchmarks shall be staked in the field prior to constructions. If conditions have changed since survey additional pipe lengths could be necessary.
- Work shall be performed as described in the plans and specifications unless otherwise approved by NRCS Inspector

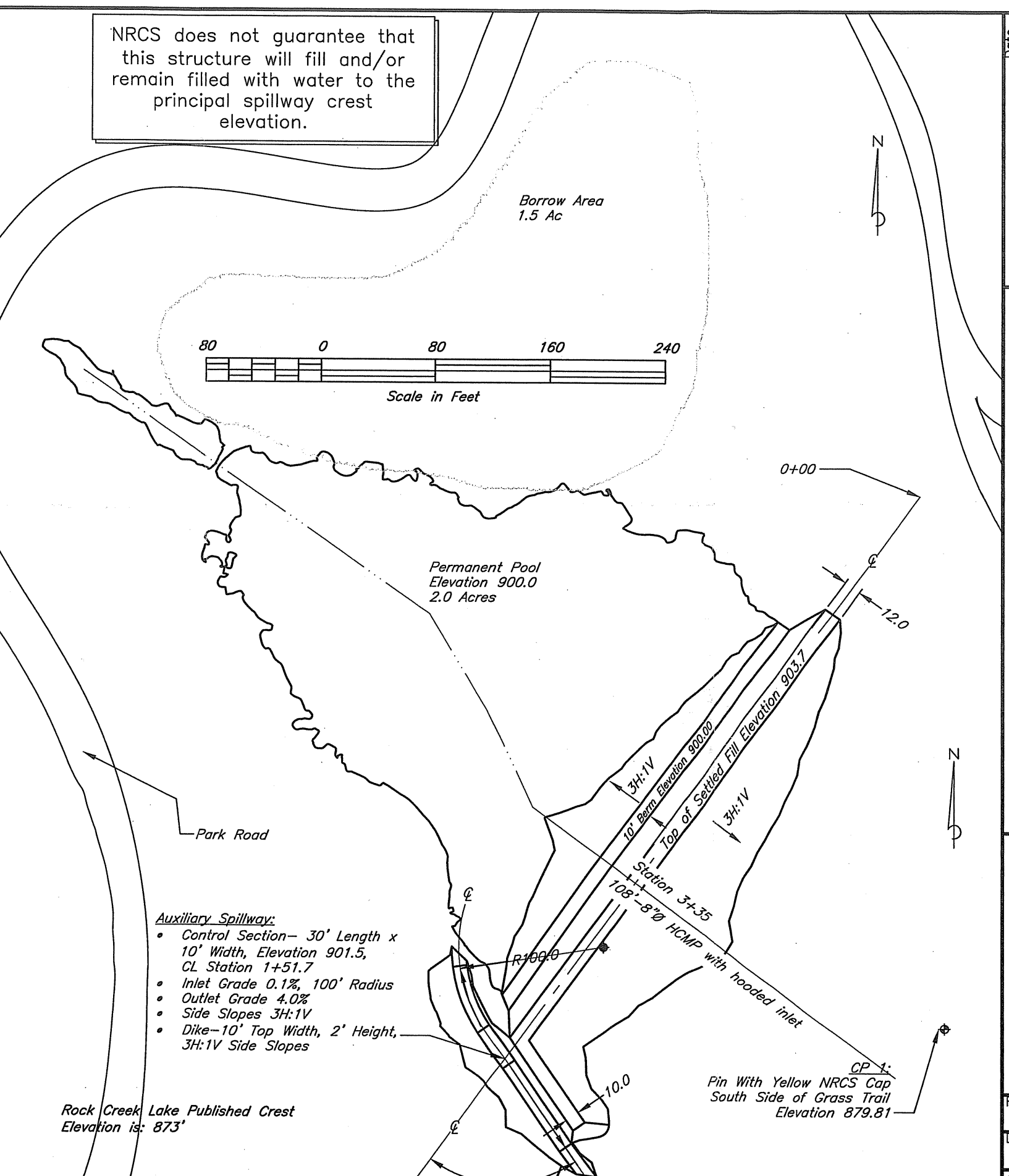
SHEET INDEX

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Sheet #4	Pipe Details and Bedding Detail

If a cultural resource is identified during construction, stop immediately and notify the Natural Resources Conservation Service Archeologist at (515) 284-4370.

- Auxiliary Spillway:**
- Control Section— 30' Length x 10' Width, Elevation 901.5, CL Station 1+51.7
 - Inlet Grade 0.1%, 100' Radius
 - Outlet Grade 4.0%
 - Side Slopes 3H:1V
 - Dike—10' Top Width, 2' Height, 3H:1V Side Slopes

Rock Creek Lake Published Crest Elevation is: 873'



NRCS
Natural Resources Conservation Service
United States Department of Agriculture

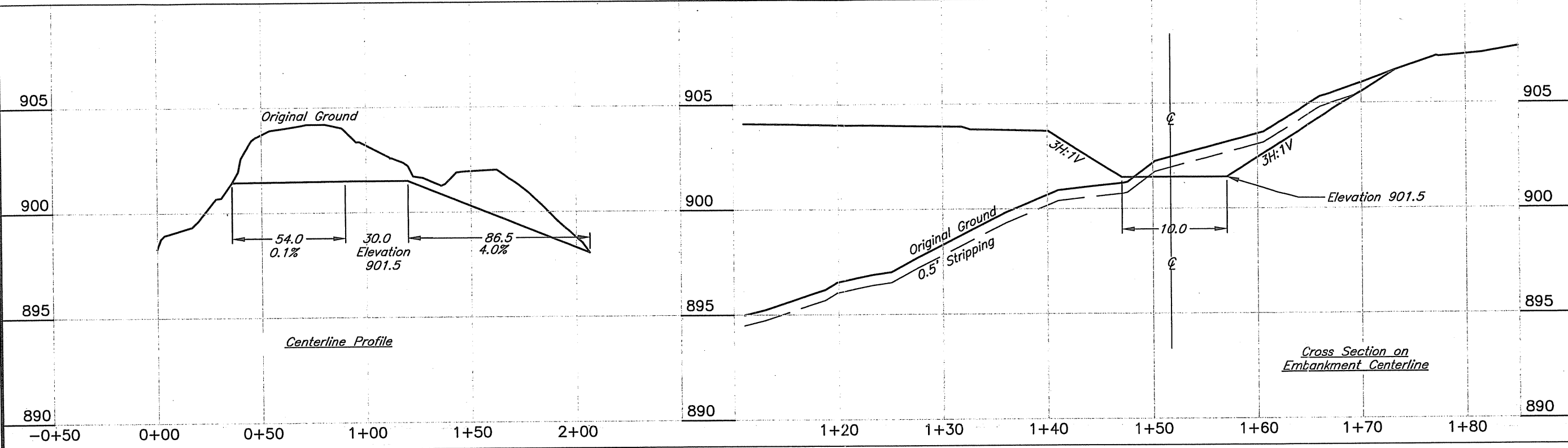
PLAN VIEW
Site 3
Job Class III; Hazard Class A

Rock Creek Lake, Site 3
Jasper County, IA

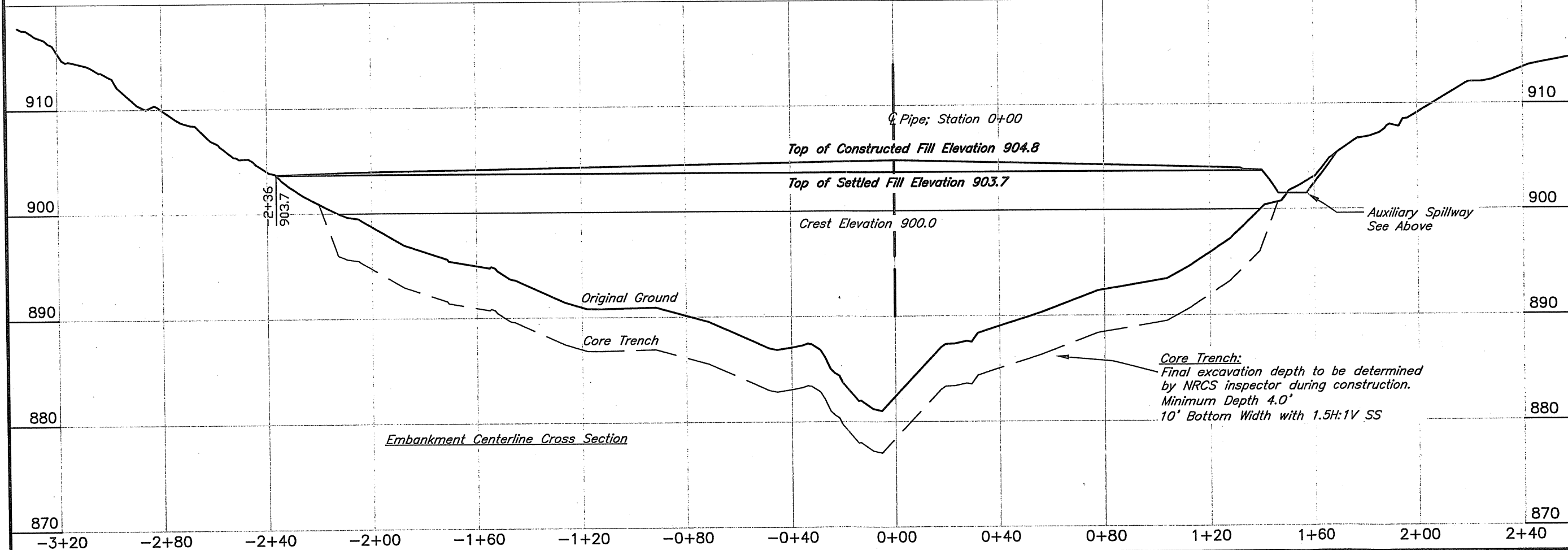
Date: RLH 03-2009
Designed: RLH 03-2009
Drawn: DLB
Checked: DLB
Approved: [Signature]

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6/22/09 9:33 AM
Sheet 1 of 4

Auxiliary Spillway Details



Embankment Details



Date
RLH 03-2009
Designed
RLH 03-2009
Drawn
DK Baker
Checked
S/DJ
Approved

AUXILIARY DETAILS
EMBANKMENT DETAIL

Jasper County, IA
Rock Creek Lake, Site 3



File No.
og1.DWG
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6/22/09 9:33 AM
Sheet 2 of 4