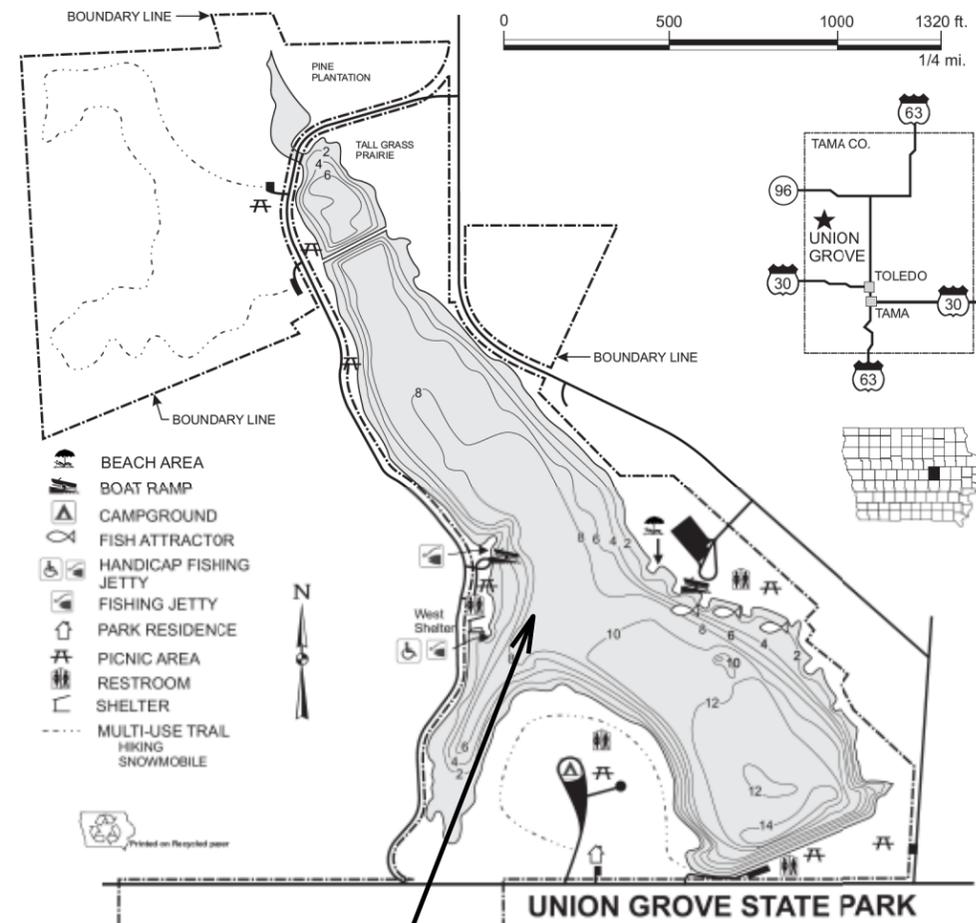


PROJECT LOCATION



UNION GROVE STATE PARK

CONSULTANT:

IOWA DEPARTMENT OF
NATURAL RESOURCES

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



PROJECT LOCATION MAP

VALVE REPLACEMENT AND FISH BARRIER FOR:

UNION GROVE STATE PARK

TAMA COUNTY

NO.	BY	REVISION

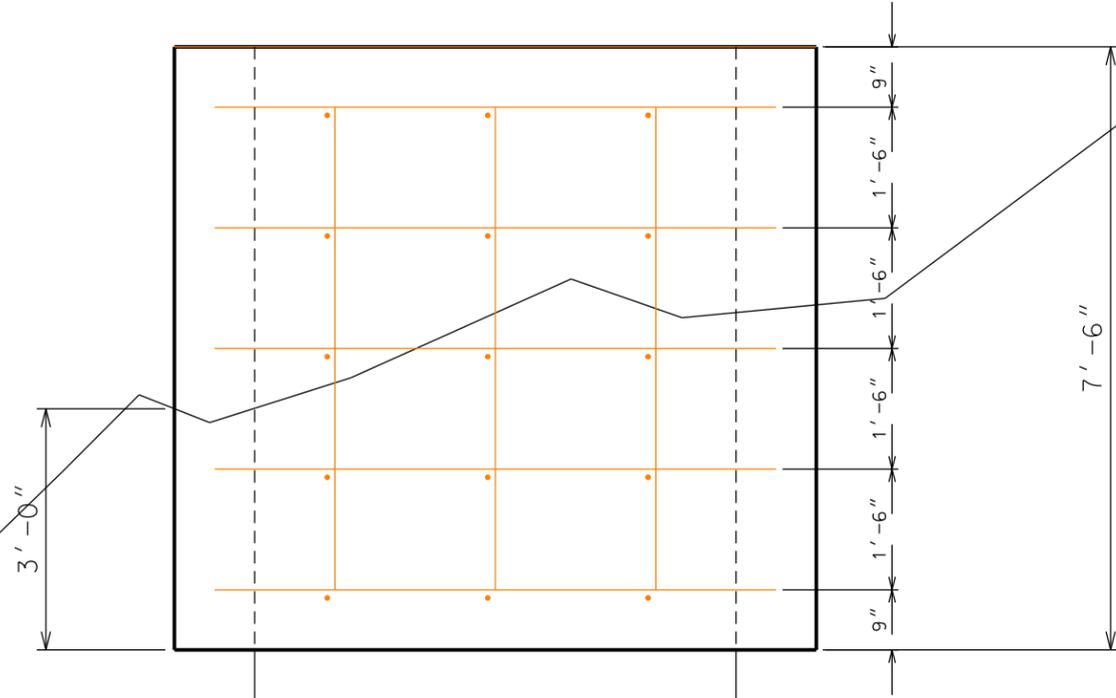
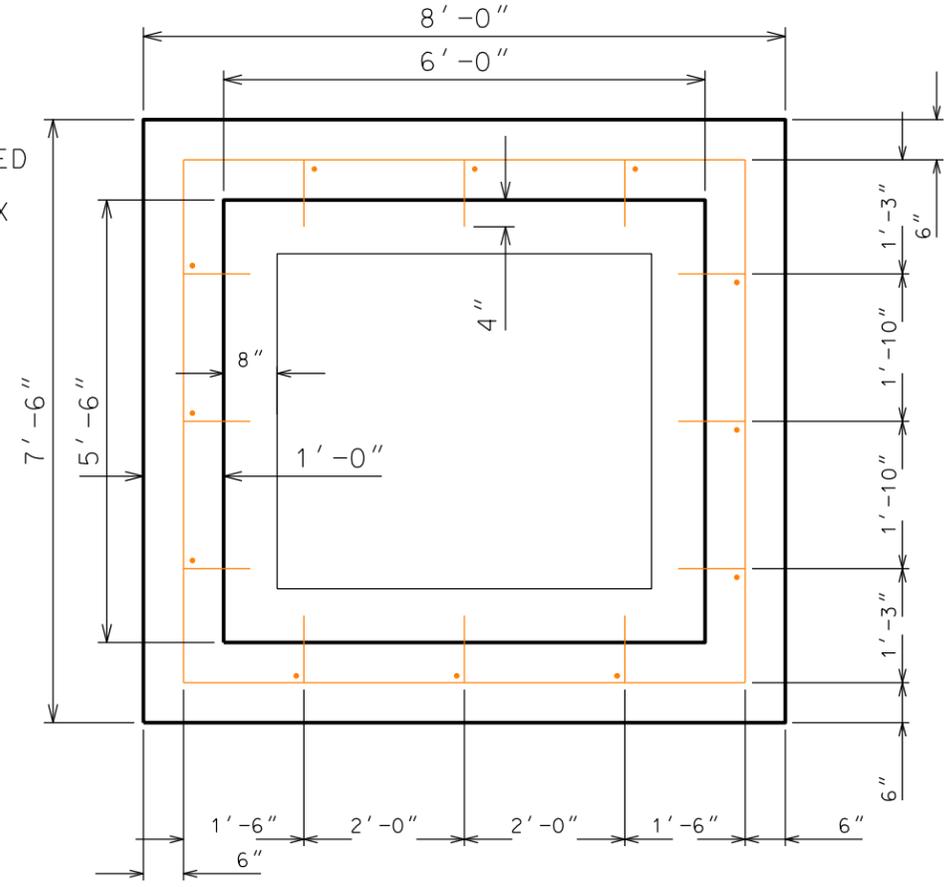
DRAWN BY: PROJECT NUMBER:
14-05-86-01

CHK'D BY: DATE:

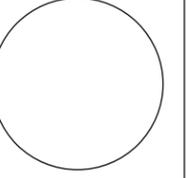
SHEET NO:

A.02

NOTE:
 REINFORCING STEEL - #4 - GRADE 40 - DEFORMED
 ALL CONCRETE SHALL CONFORM TO CLASS "C" MIX
 I.D.O.T. SPECIFICATION SERIES 2015
 MINIMUM OVERLAP - 24 BAR DIAMETERS.
 DOWELED BARS SHALL BE EPOXIED IN EXISTING
 CONCRETE.



CONSULTANT:



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TYPICAL CROSS SECTIONS AND DETAILS

VALVE REPLACEMENT AND FISH BARRIER FOR:
 UNION GROVE STATE PARK

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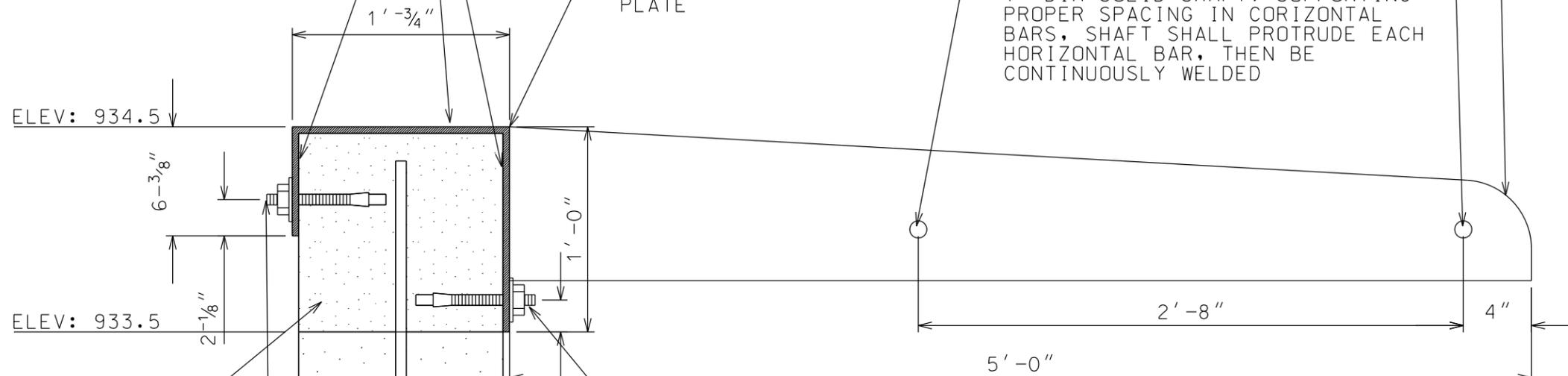
B.01

$\frac{3}{8}$ " ALUMINUM BASE PLATE. WELDED CONTINUOUSLY. PLATE SHALL REST FLUSH WITH CONCRETE WEIR WALL.

$\frac{1}{4}$ " ALUMINUM PLATE WITH ROUNDED END. WELD TO $\frac{3}{8}$ " X 12" END PLATE AND 1" DIA. SOLID SHAFTS

CONTINUOUSLY WELD FINGERS TO BASE PLATE

1" DIA SOLID SHAFT, SUPPORTING PROPER SPACING IN CORIZONTAL BARS, SHAFT SHALL PROTRUDE EACH HORIZONTAL BAR, THEN BE CONTINUOUSLY WELDED



CAST IN PLACE WEIR CAP 1' X 1' X APPROX. 60'

EXISTING CONCRETE WEIR

ANCHOR 3#8" ALUMINUM BASE PLATE TO CAST-IN-PLACE WEIR CAP USING 5#8" DIA. STAINLESS STEEL ANCHOR BOLTS, 5-1#8" MINIMUM EMBEDMENT. 24" MAXIMUM SPACING. BOLT HOLES IN ALUMINUM PLATE TO BE LONG SLOTTED.

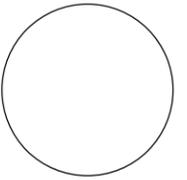
#5 REBAR EPOXIED IN PLACE, 8" MINIMUM EMBEDMENT. TOP OF REBAR SHALL HAVE A STANDARD 90 DEGREE HOOK.

ANCHOR $\frac{3}{8}$ " ALUMINUM BASE PLATE TO CAST-IN-PLACE WEIR CAP USING $\frac{5}{8}$ " DIA. STAINLESS STEEL ANCHOR BOLTS, 5- $\frac{1}{8}$ " MINIMUM EMBEDMENT. 24" MAXIMUM SPACING. BOLT HOLES IN ALUMINUM PLATE TO BE LONG SLOTTED.

NOTE:
BASE PLATES SHALL SADDLE CAST-IN-PLACE CONCRETE WEIR WALL WITH A SNUG FIT. CONTRACTOR SHALL VERIFY ACTUAL AS-BUILT DIMENSION PRIOR TO FINAL FABRICATION.

BASE PLATE SECTIONS SHALL NOTE EXCEED 16'

CONSULTANT:



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TYPICAL CROSS SECTIONS AND DETAILS

VALVE REPLACEMENT AND FISH BARRIER FOR:

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14-05-86-01

CHK'D BY: DATE:

SHEET No:

B.03

