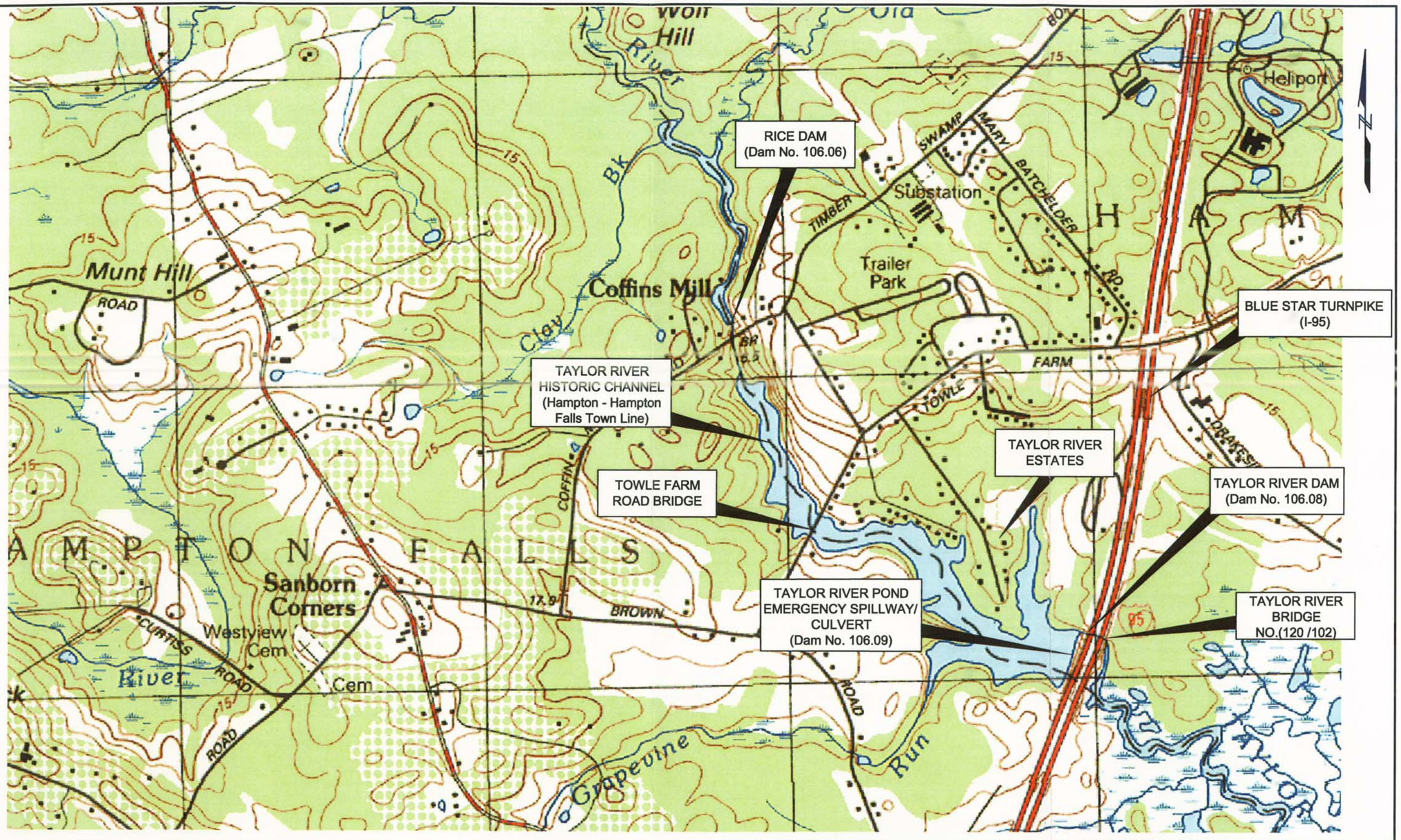
# FIGURES




**NOTES:**

1. BASE MAP IS FROM THE EXETER, NH QUADRANGLE, 1992, CONTOUR INTERVAL 3 METERS, PROVIDED BY MAPTECH, TERRAIN NAVIGATOR.

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APPROXIMATE SCALE, FEET

Replacement of I-95 Bridge (No. 120 /102)
over Taylor River Dam
Hampton and Hampton Falls, New Hampshire

The Louis Berger Group
Manchester, New Hampshire

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SITE
VICINITY
MAP

June 2010

FIGURE 1

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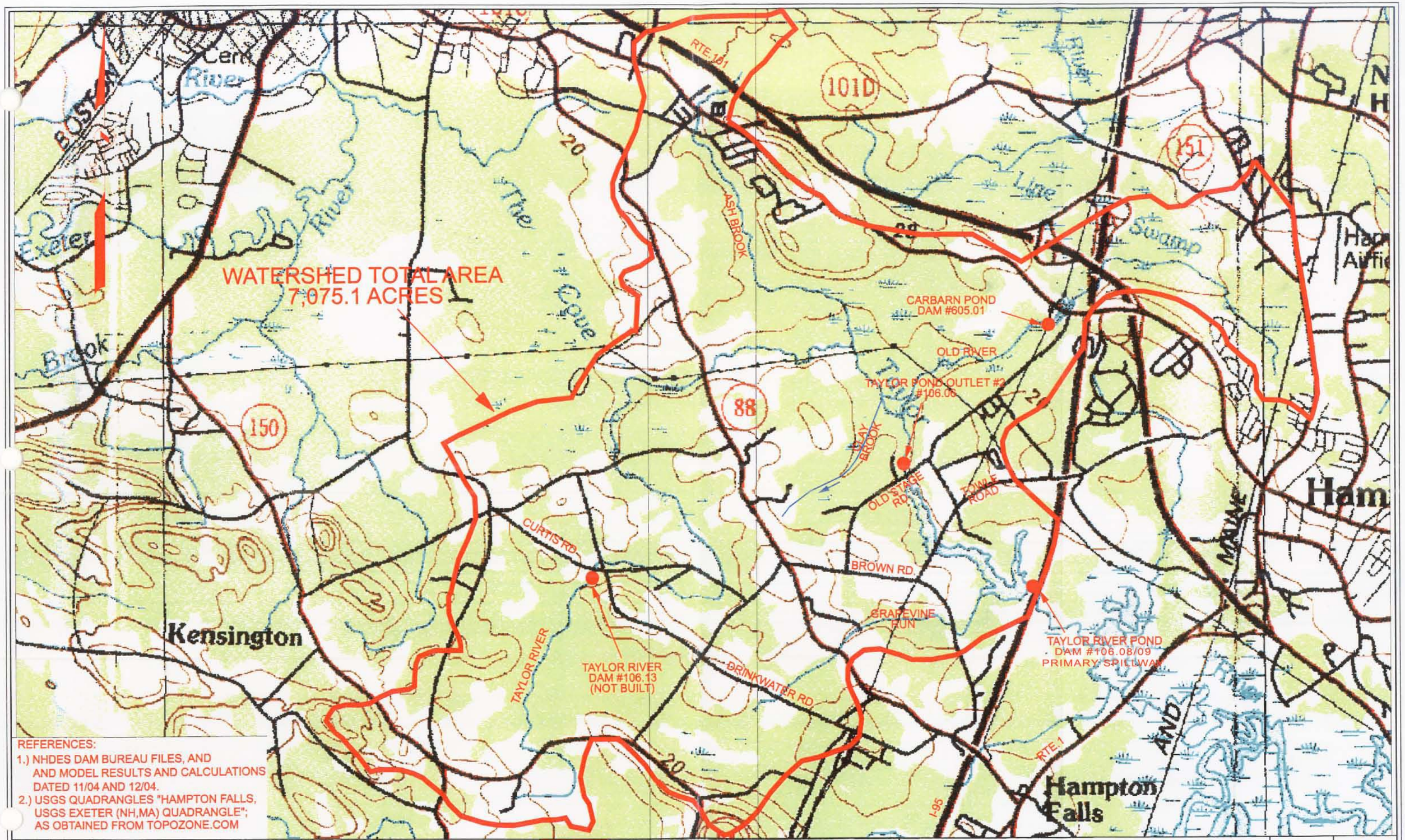
LAST SAVED: 07/23/09 11:30AM BY:EDHIMA
DRAWING: V:\1586_TAYLOR RIVER\CAD\GRAPHS FOR REPORT 7-22-09\FIG 1.DWG [FEASIBILITY STUDY]




REFERENCES:

1.) NHDES DAM BUREAU FILES, AND AND MODEL RESULTS AND CALCULATIONS DATED 11/04 AND 12/04.

2.) USGS QUADRANGLES "HAMPTON FALLS, USGS EXETER (NH,MA) QUADRANGLE"; AS OBTAINED FROM TOPOZONE.COM

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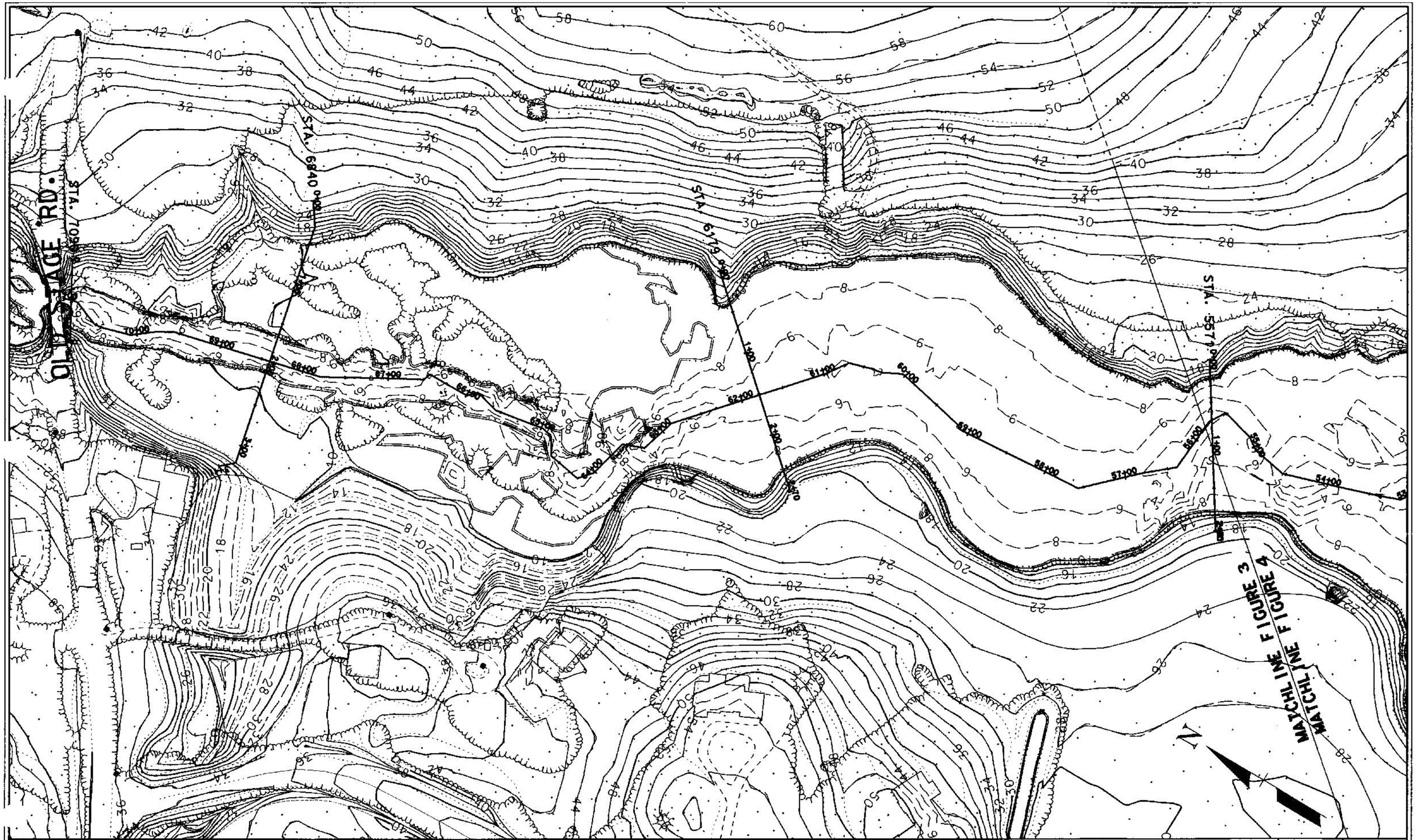
TAYLOR RIVER DAM
WATERSHED AREA
HAMPTON FALLS-HAMPTON, NH

DATE June 2010

JOB No CM 1586

FIGURE No 2

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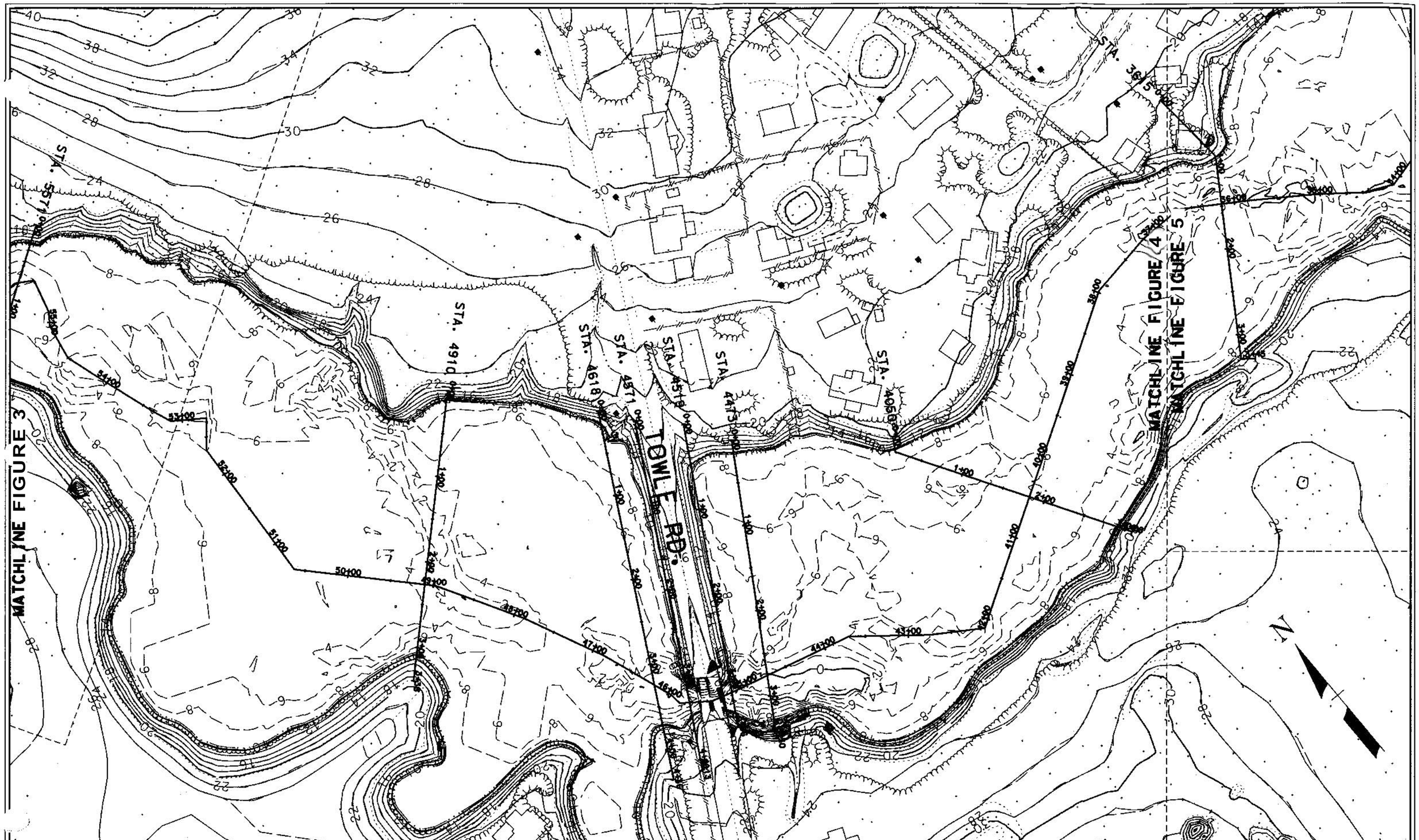
*REPLACEMENT OF I-95 BRIDGE (No. 120/102)*
*OVER TAYLOR RIVER*
***HYDRAULIC MODEL CROSS SECTIONS***
***HAMPTON FALLS-HAMPTON, NH***

DATE June 2010
JOB No CM 1586
FIGURE 3

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*OVER TAYLOR RIVER*
*HYDRAULIC MODEL CROSS SECTIONS*
*HAMPTON FALLS-HAMPTON, NH*

DATE
June 2010
JOB No
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FIGURE
4

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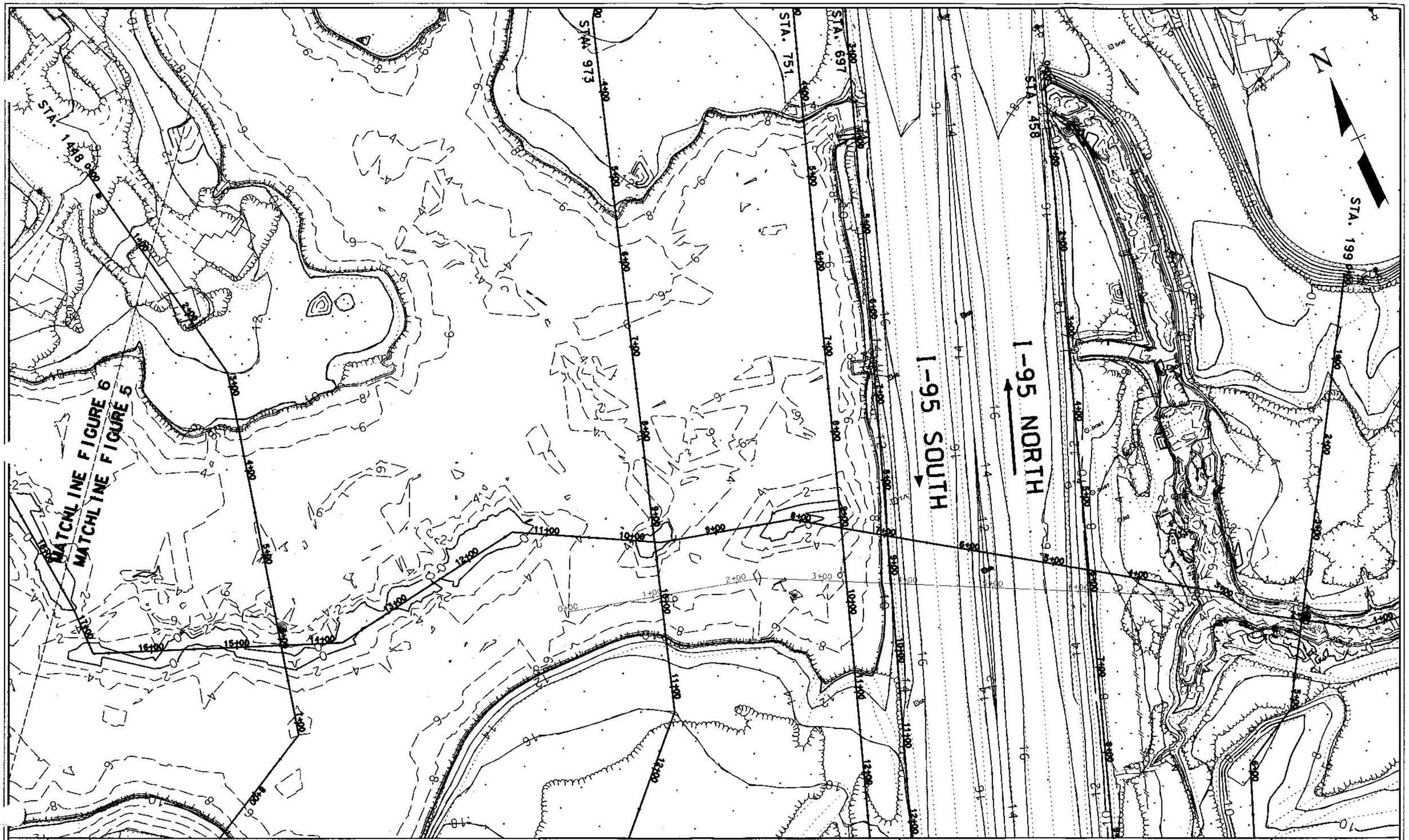
REPLACEMENT OF I-95 BRIDGE (No. 120/102)
OVER TAYLOR RIVER
*HYDRAULIC MODEL CROSS SECTIONS*
*HAMPTON FALLS-HAMPTON, NH*

DATE June 2010
JOB No CM 1586
FIGURE No 5

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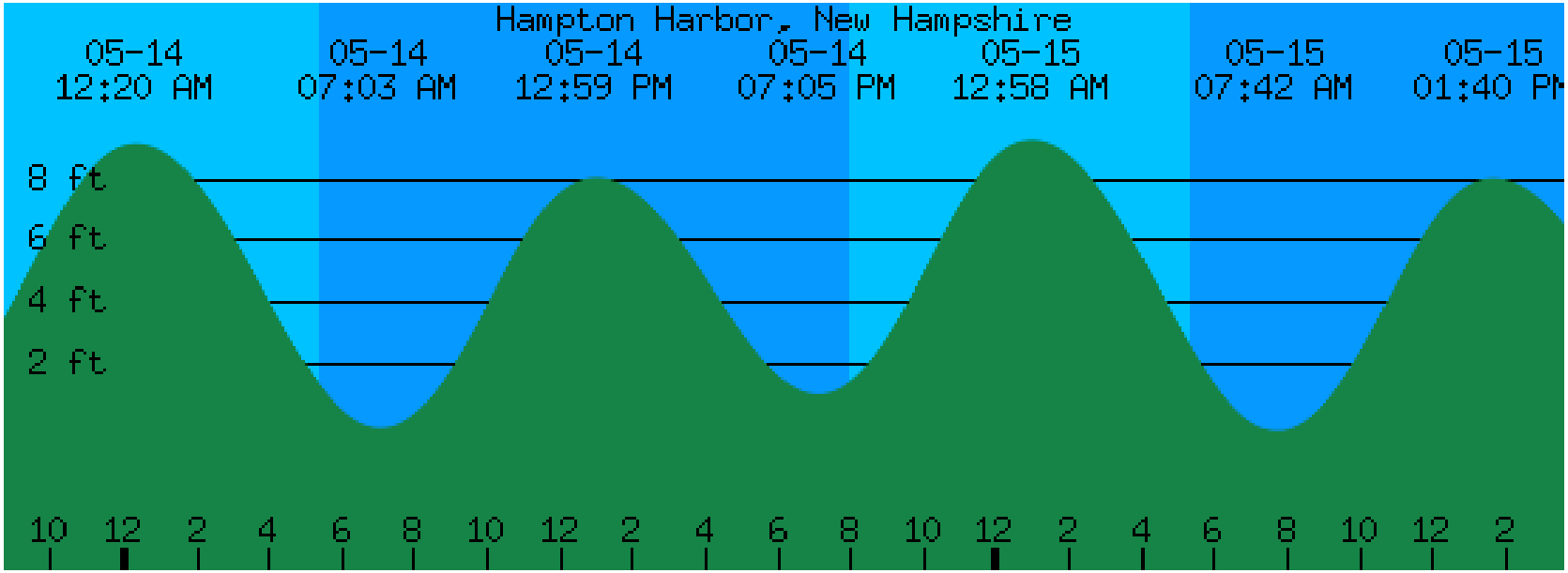
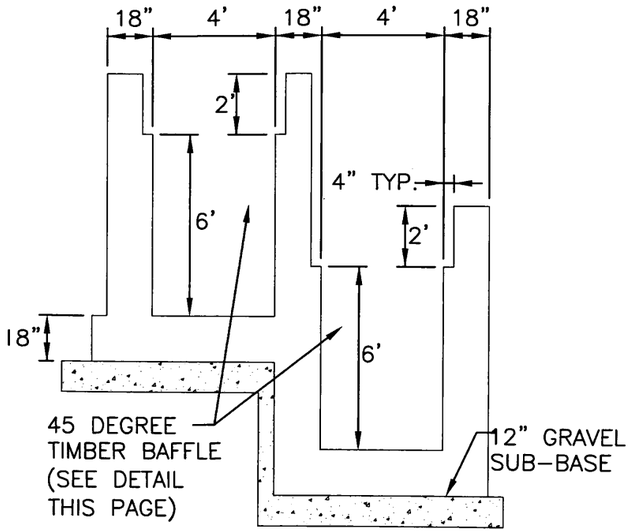
REPLACEMENT OF I-95 BRIDGE (No. 120/102
OVER TAYLOR RIVER
*HYDRAULIC MODEL CROSS SECTIONS*
*HAMPTON FALLS-HAMPTON, NH*

DATE June 2010
JOB No CM 1586
FIGURE 6

**Figure 7: Taylor River**
**Tides at Hampton Harbor, NH**

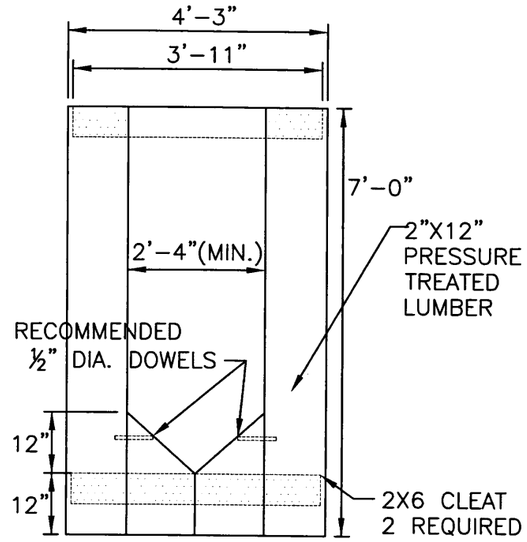



(Source: http://zen.surfline.com/cgi-bin/tidepredictor.pl)




*SECTION A-A*

NOT TO SCALE




*TIMBER BAFFLE DETAIL*

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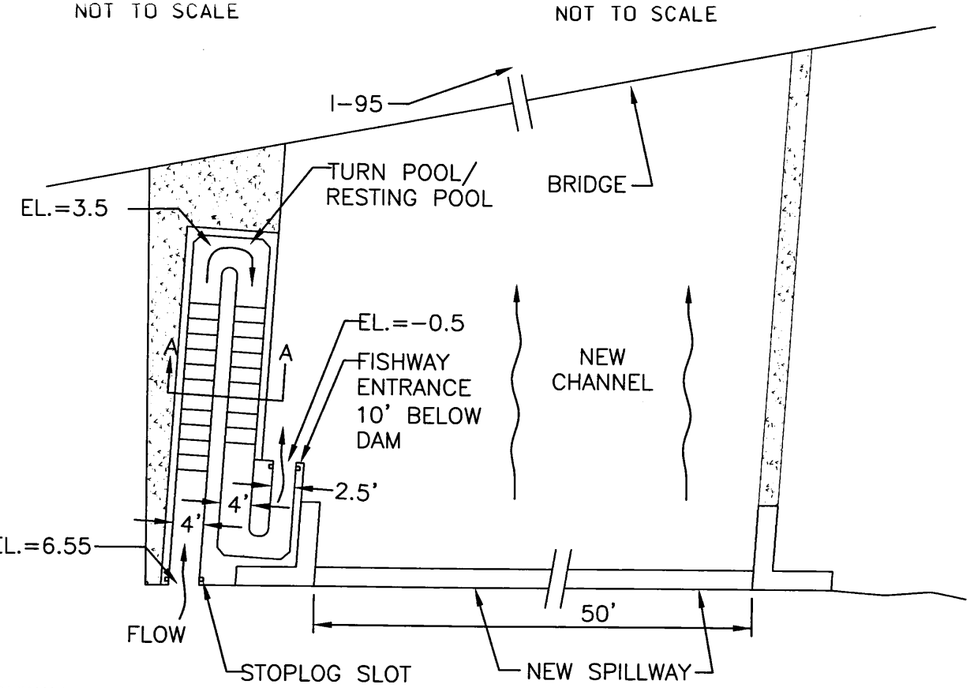


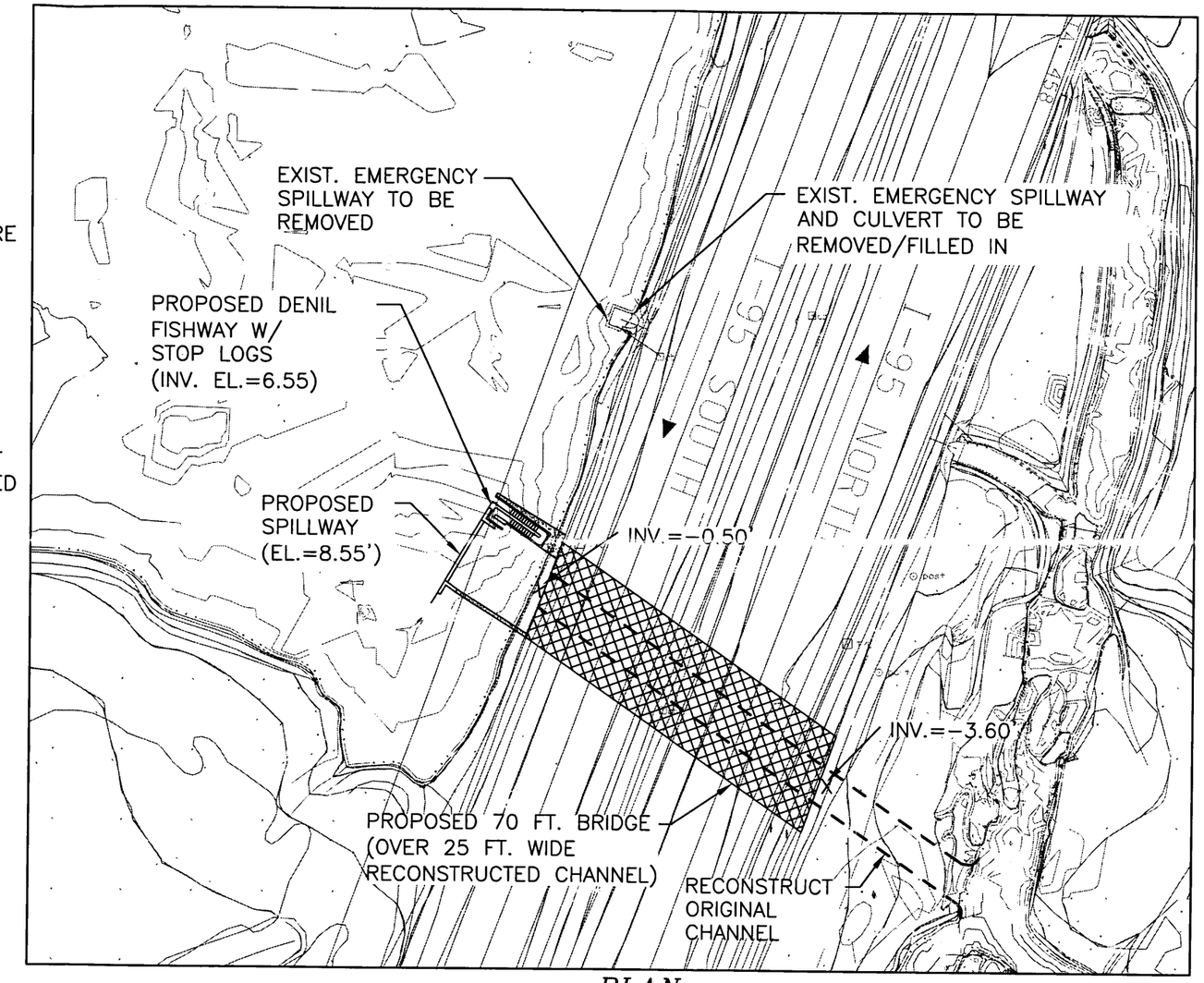

DENIL FISHWAY
- -2.5FT WIDE-DOWNSTREAM ENTRANCE
- -SLOPE OF 1:6
- -SPACE BETWEEN BAFFLES-30"
- -WATER DEPTH IN FISHWAY: 2FT-4FT

TAYLOR POND

WSEL ELEV. = 8.55'

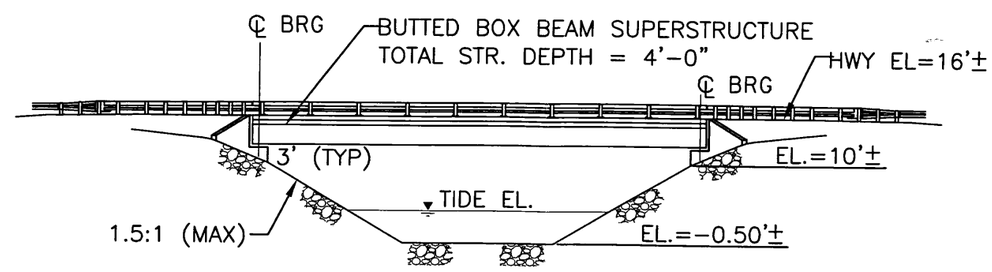
*FISHWAY DETAIL*

NOT TO SCALE




*PLAN*

1"=100'




*BRIDGE ELEVATION*

1"=20'

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REPLACEMENT OF I-95 BRIDGE (NO.120/102)
OVER TAYLOR RIVER
PROPOSED BRIDGE / SPILLWAY & FISHWAY SCHEMATIC
*HAMPTON FALLS-HAMPTON, NH*

DATE June 2010

JOB No CM 1586

FIGURE 8

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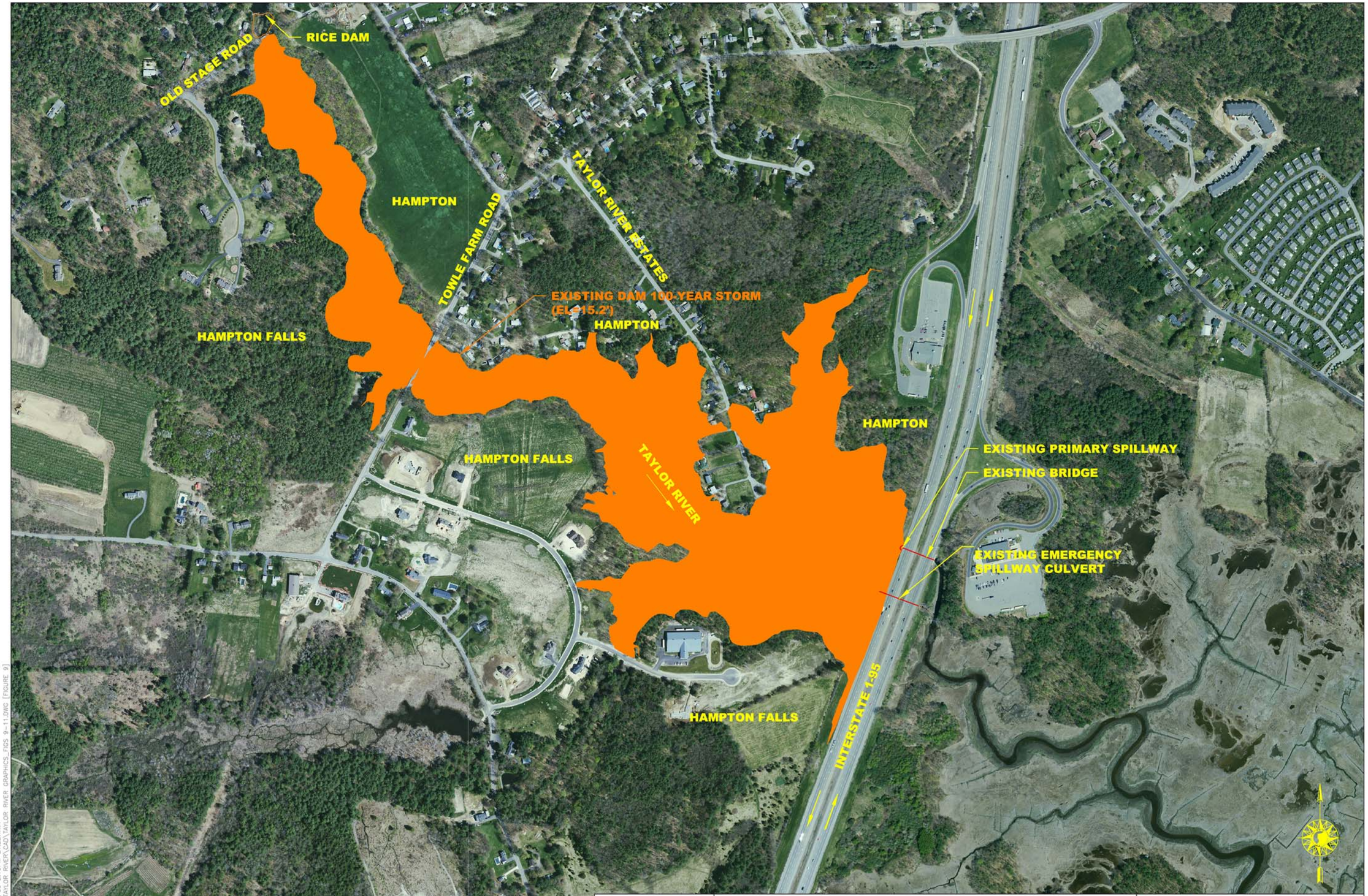


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200 0 100 200 400
Scale in Feet

TAYLOR RIVER HAMPTON FALLS-HAMPTON

FIGURE 9 ALTERNATIVE A
EXISTING BRIDGE AND SPILLWAYS - NO ACTION

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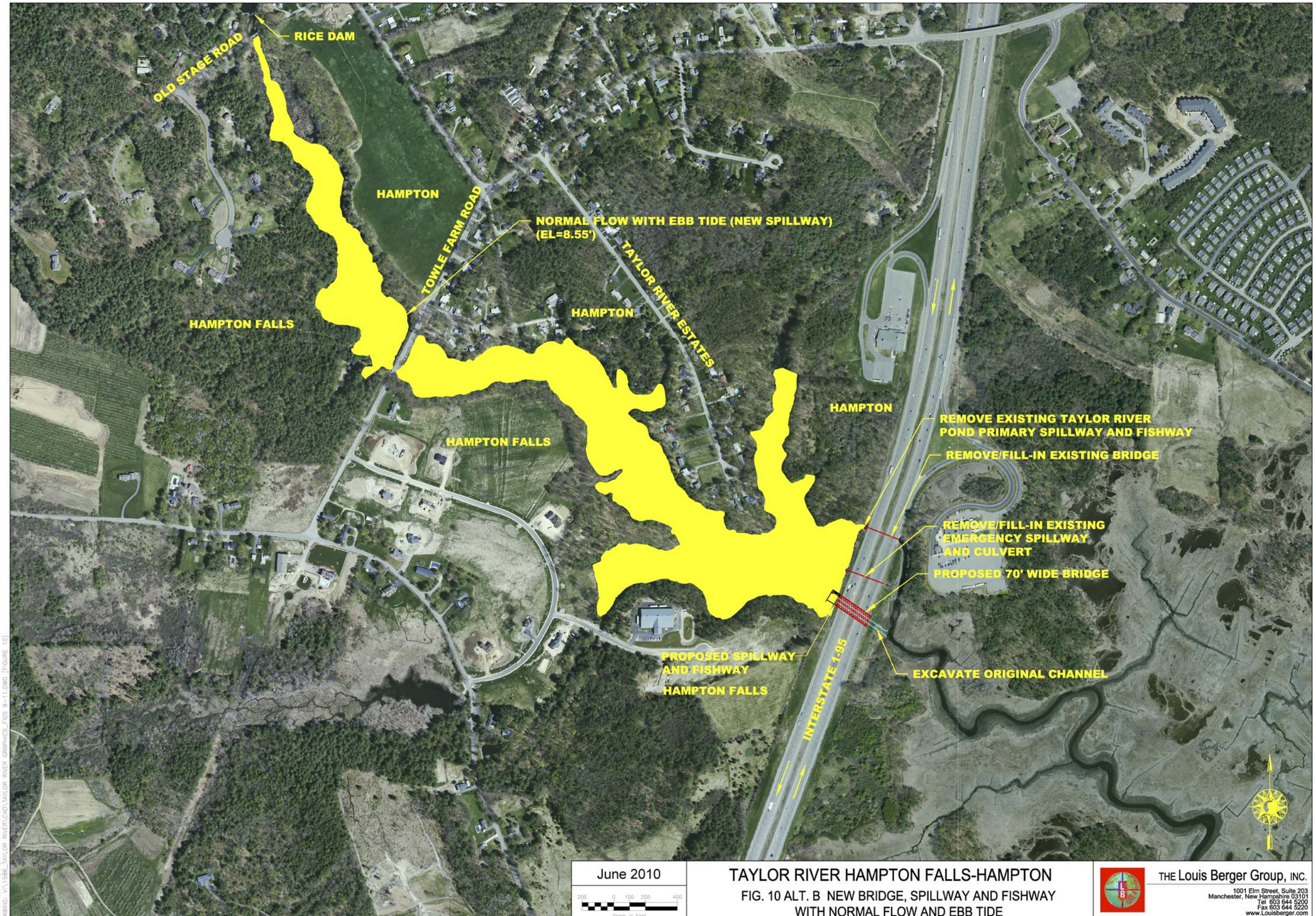
DRAWING: V:\1586_TAYLOR RIVER\CAD\TAYLOR RIVER GRAPHICS_FIGS 9-11.DWG [FIGURE 9]




June 2010

200 0 100 200 400
Scale in Feet

TAYLOR RIVER HAMPTON FALLS-HAMPTON

FIG. 10 ALT. B NEW BRIDGE, SPILLWAY AND FISHWAY
WITH NORMAL FLOW AND EBB TIDE

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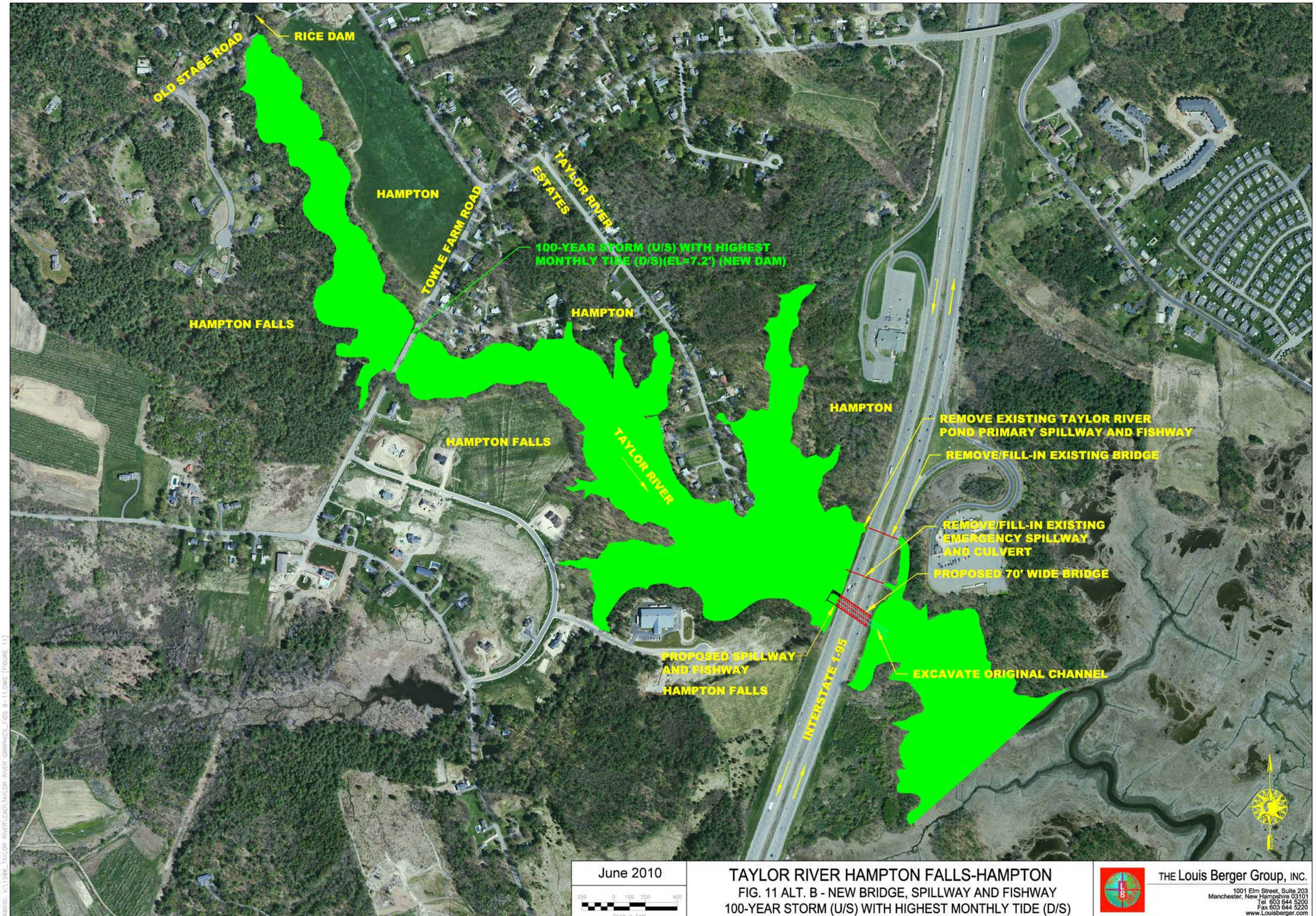


June 2010

Scale in Feet

TAYLOR RIVER HAMPTON FALLS-HAMPTON

FIG. 11 ALT. B - NEW BRIDGE, SPILLWAY AND FISHWAY

100-YEAR STORM (U/S) WITH HIGHEST MONTHLY TIDE (D/S)

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June 2010

200 0 100 200 400
Scale in Feet

TAYLOR RIVER HAMPTON FALLS-HAMPTON

FIG. 12 ALT. C - NEW BRIDGE WITHOUT SPILLWAY
NORMAL FLOW AT EBB TIDE

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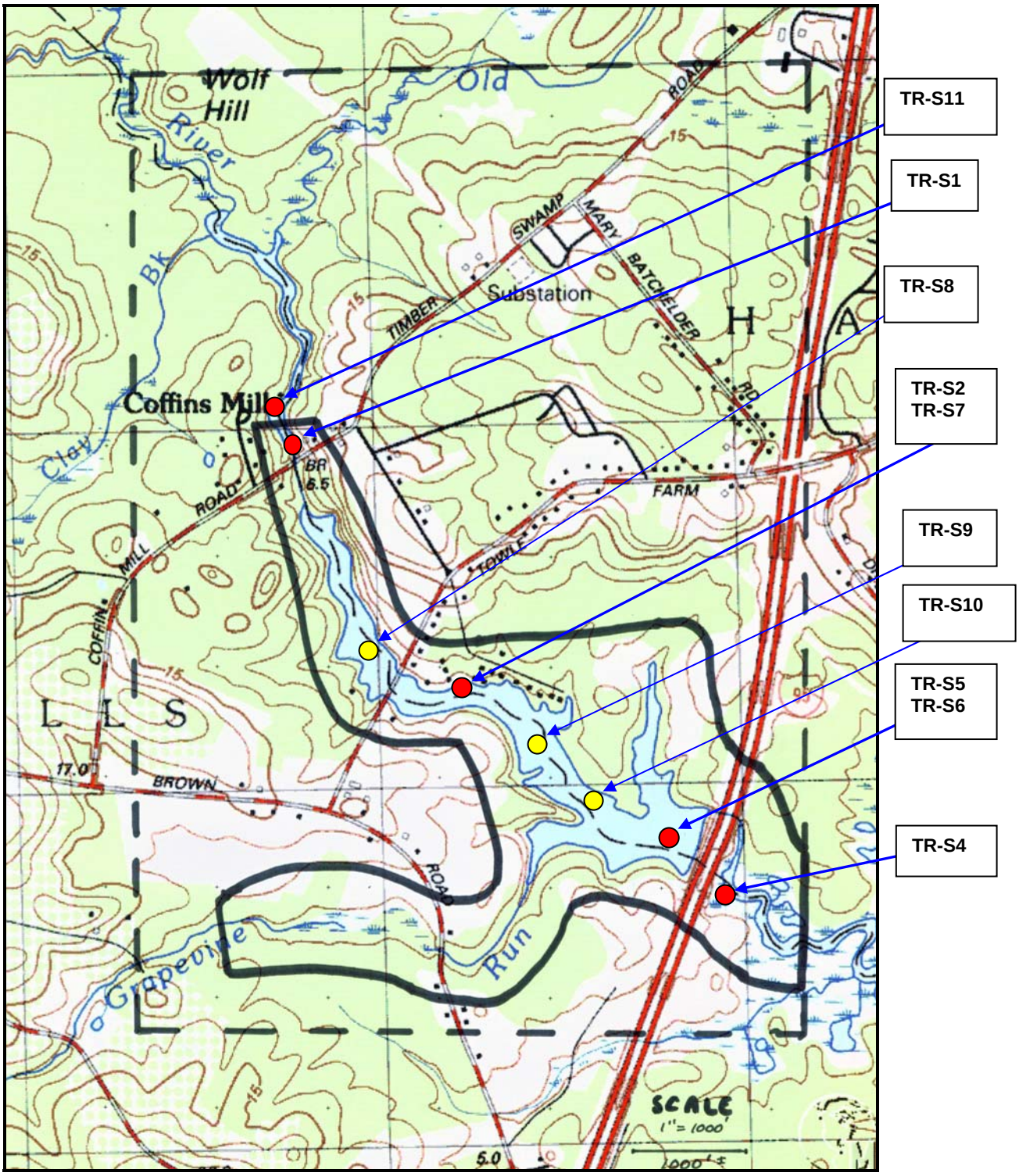



**Figure 13: Taylor River Pond Dam Impoundment Sediment Sampling Stations**

[Yellow dots indicate stations for only grain size analyses. Red dots indicate stations with grain size and chemistry analyses.]

**Figure 13A**
**Sediment Accumulation in Taylor River Pond Dam Impoundment**

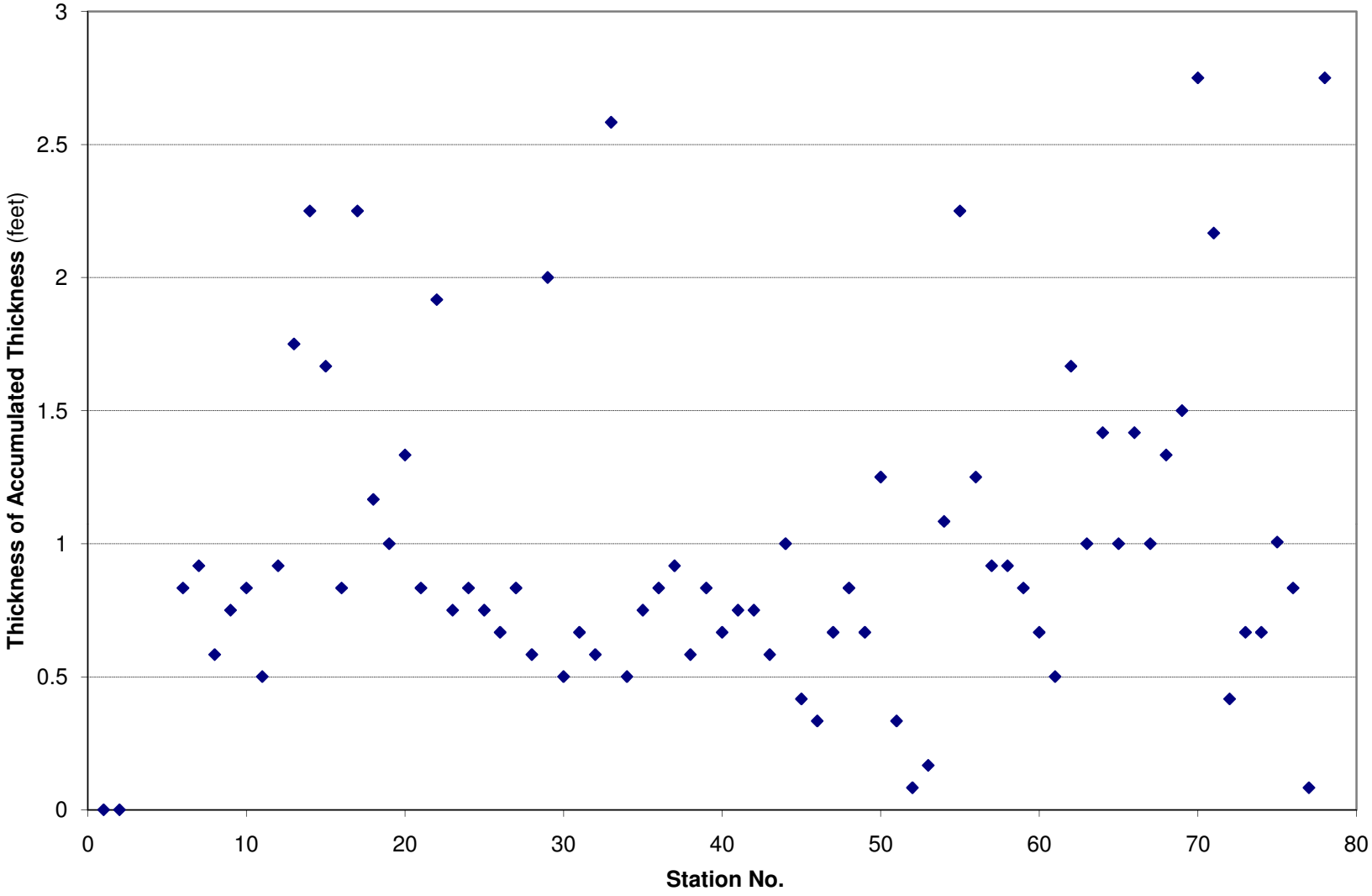
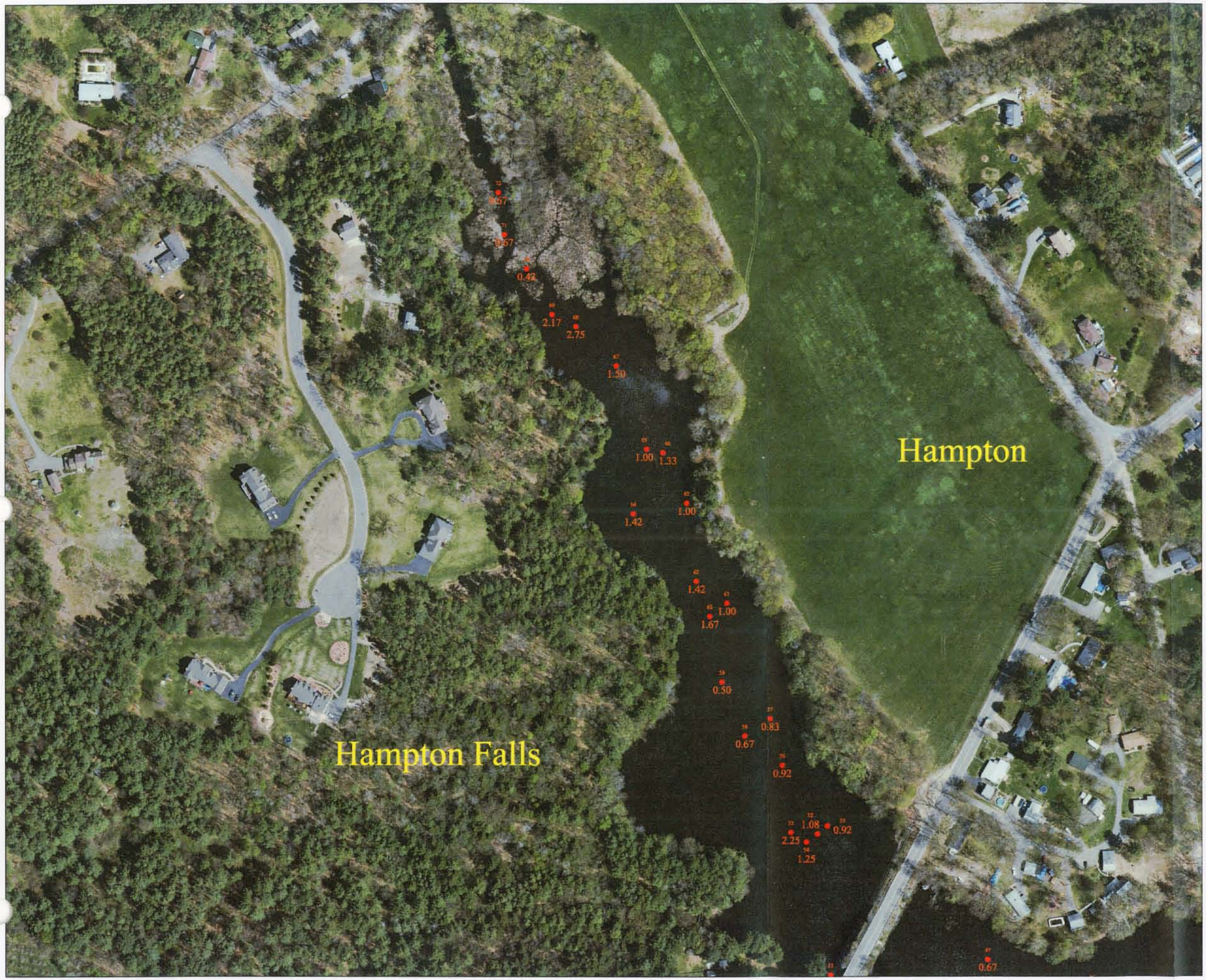



Figure13A_Sediment Accumulation.xlsxSediment Thickn.




## LEGEND

- Sample Location
- ID Number
- 1.33 Thickness of Sediment (feet)

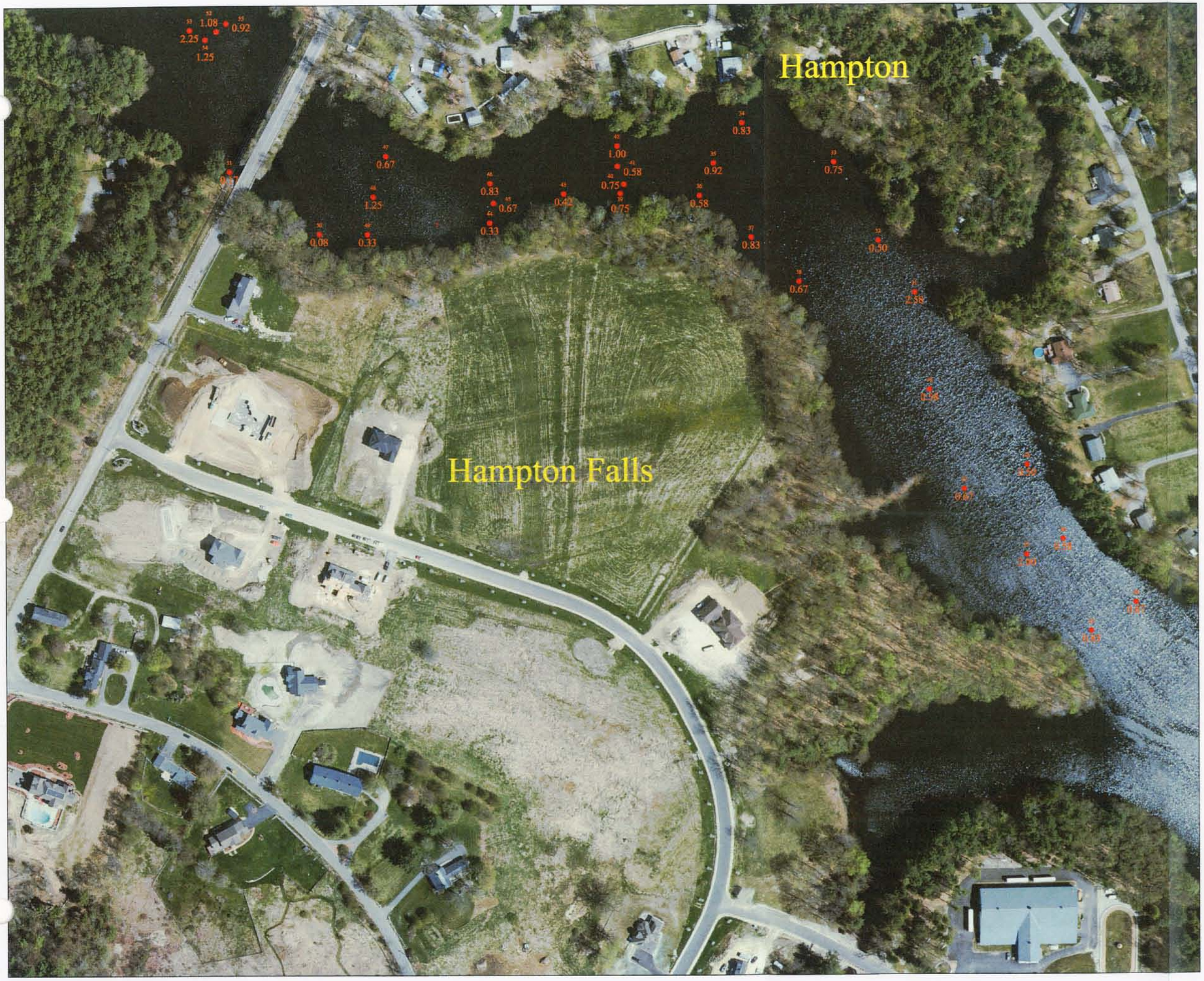
50 0 50 100
SCALE IN FEET

**FIGURE 14**

Thickness of Accumulated Sediment
Taylor River Pond
10-23-07

The Louis Berger Group Inc.

...\nhoitt\dms20751\WRKIIM0001.dgn 10/23/2007 4:40:17 PM nhoitt"




## LEGEND

- Sample Location
- ID Number
- 1.33 Thickness of Sediment (feet)

50 0 50 100
SCALE IN FEET

**FIGURE 15**

Thickness of Accumulated Sediment
Taylor River Pond
10-23-07

The Louis Berger Group Inc.

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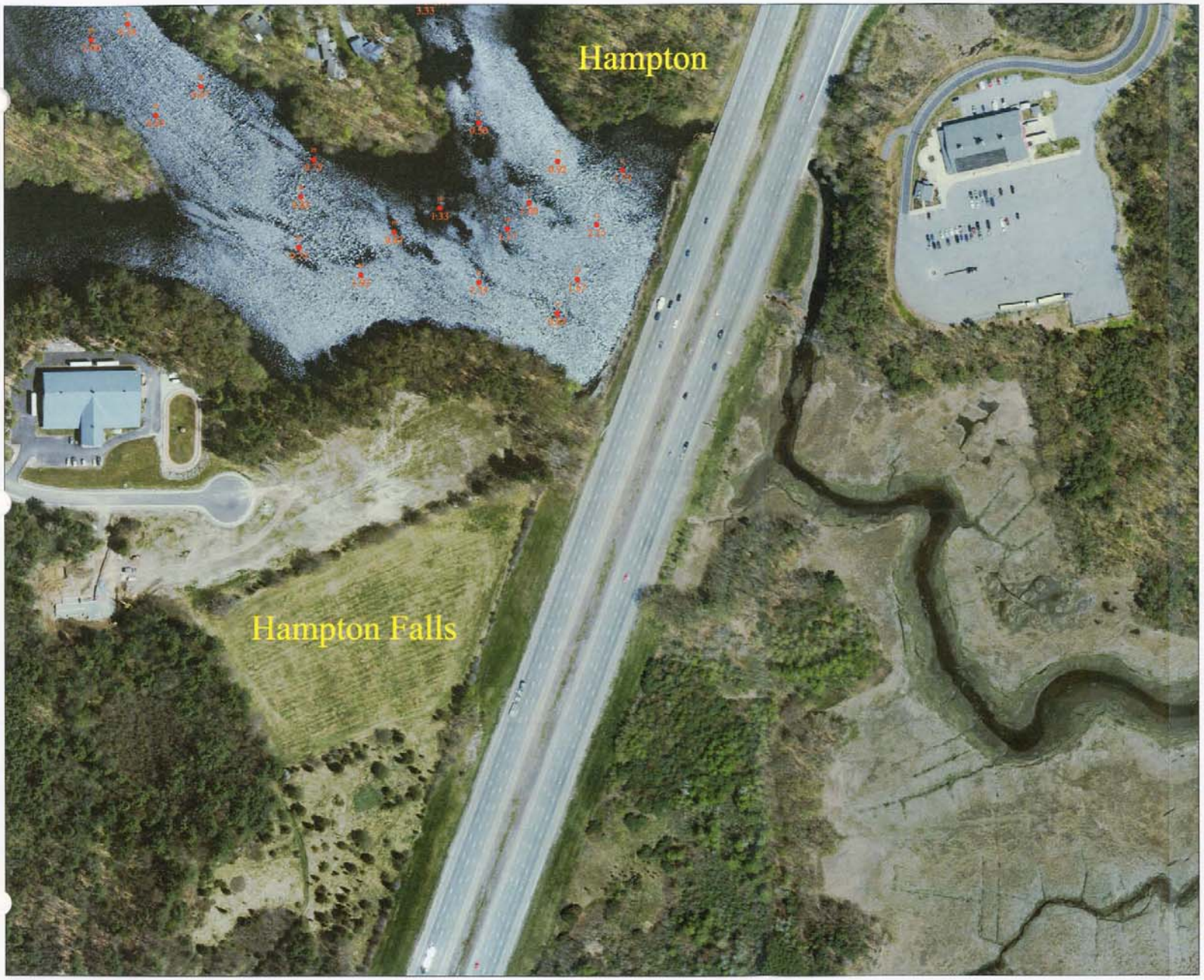


LEGEND

- Sample Location
- ID Number
- 1.33 Thickness of Sediment (feet)

50 0 50 100
SCALE IN FEET

**FIGURE 16**

Thickness of Accumulated Sediment
Taylor River Pond
10-23-07

The Louis Berger Group Inc.

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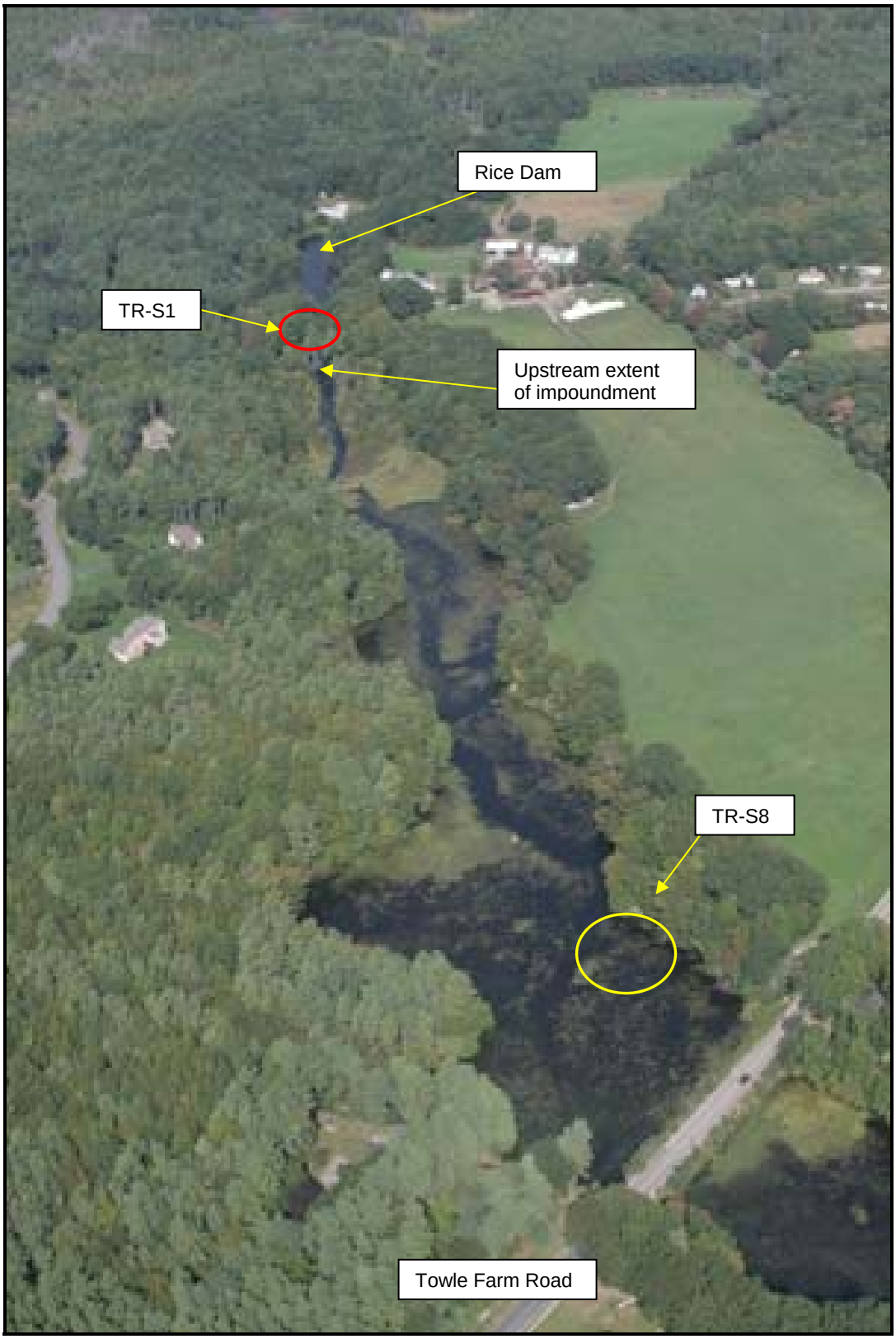



**Figure 17: Upper Taylor River Pond Dam Impoundment Stations TR-S1 (chemistry) and TR-S8 (grain size only)**

**Figure 18: Sediment Sampling Station TR-S1 Location (View 1)**
[Looking to the northwest from Old Stage Road bridge. Three subsamples were collected: 1 of 3 (right side), 2 of 2 (center), and 3 of 3 (left). Rice Dam is in the background.]

**Figure 19: Sediment Sampling Station TR-S1 Location (View 2)**
[Looking west from the northern shore. The three subsamples are again marked: 1 of 3 (foreground), 2 of 2 (center), and 3 of 3 (background). ]

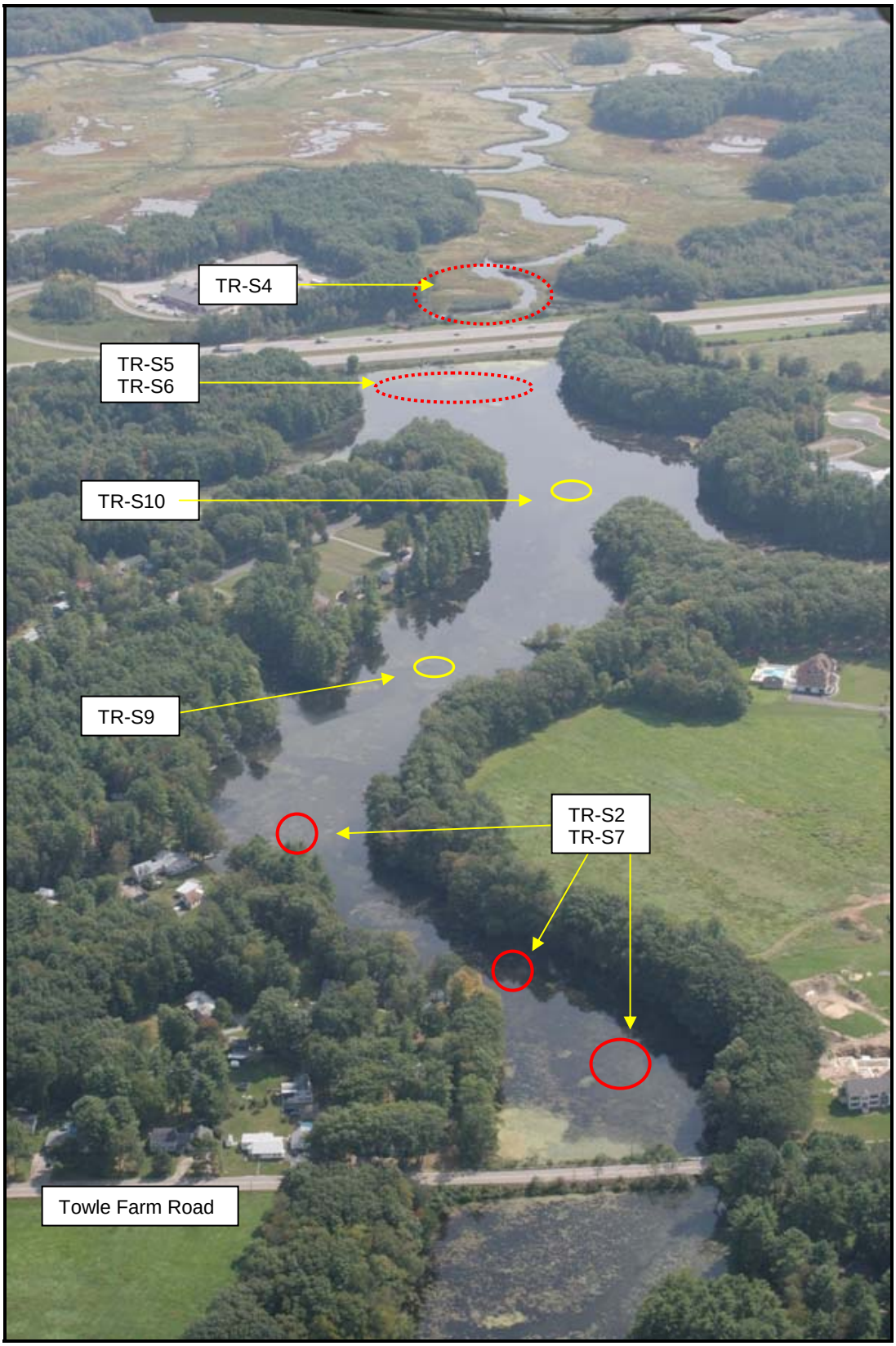



**Figure 20: Mid-Section of the Taylor River Pond Dam Impoundment - TR-S2 and TR-S7 Sediment Sampling Sub-Sample Locations**

[Additional grain size stations were TR-S9 and TR-S10.]

**Figure 21: Sediment Sample Taken from TR-S2 (Sub-Sample 3 of 3)**

[Fine-grained sediment collected from the upper 7 inches at Station TR-S2.]

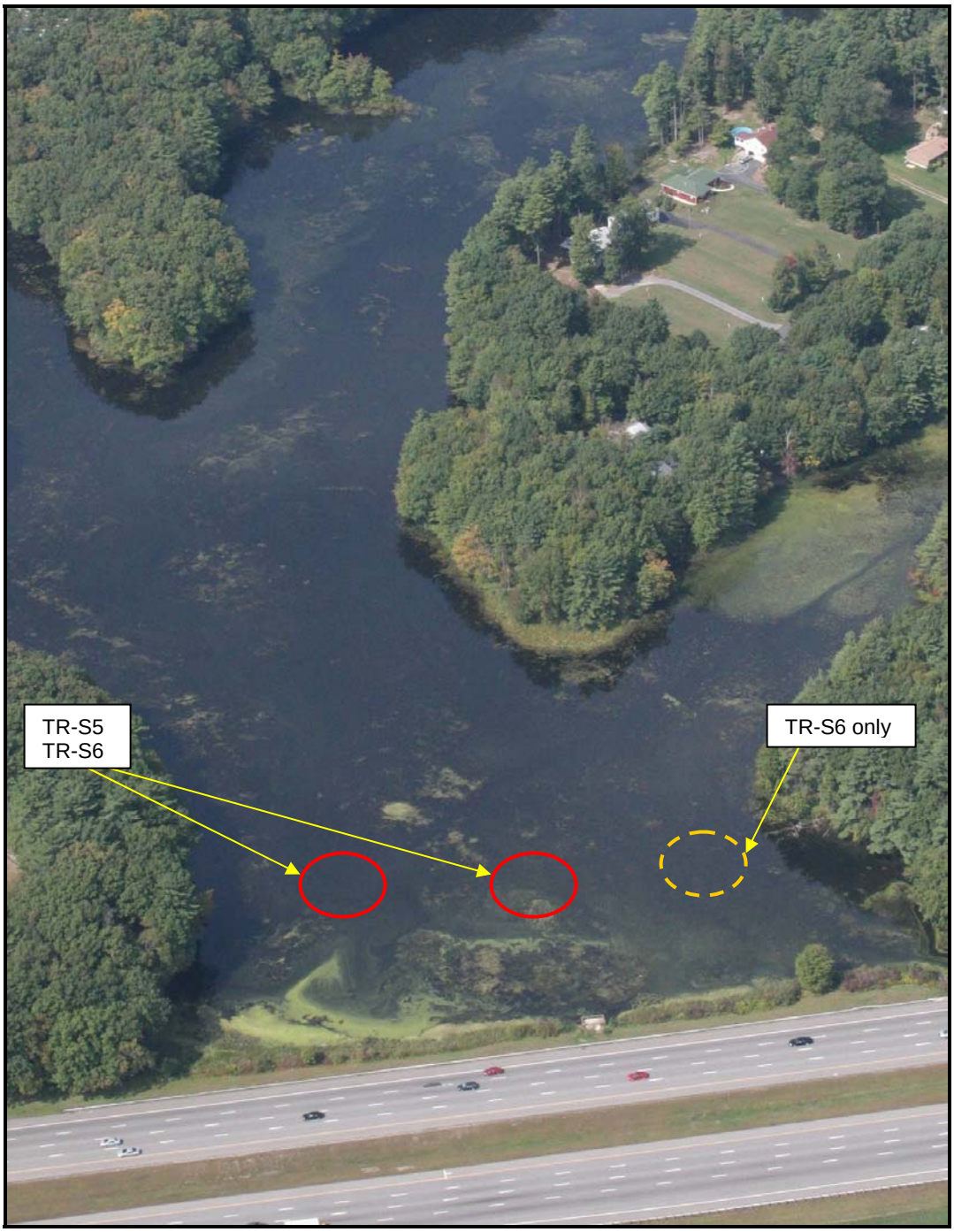



**Figure 22: Lower Taylor River Pond Dam Impoundment Sediment Sampling Location TR-S5 and TR-S6**

[Sample TR-S5 consisted of two composited sub-samples. Sample TR-S6 consisted of three composited sub-samples.]

**Figure 23: Sediment Sample Taken from Station TR-S5 (Sub-Sample 1 of 2)**

[Fine-grained sediment collected from the upper 7 inches at Station TR-S5. The sediment contained hardly any vegetation such as roots.]

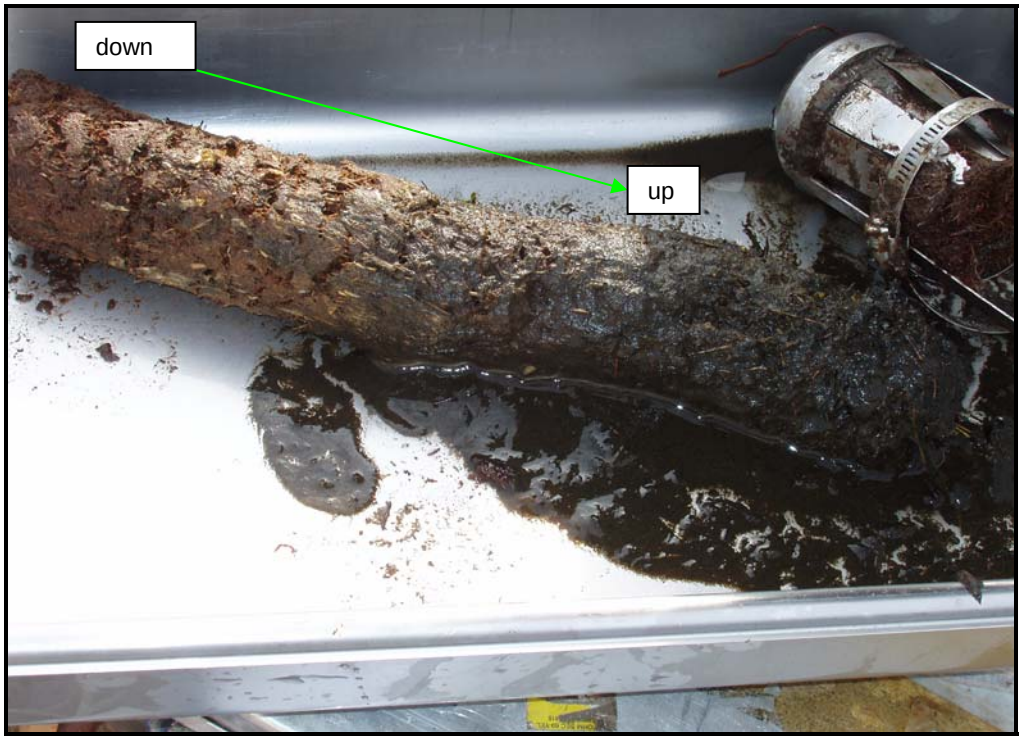



**Figure 24: Sediment core at Station TR-S5**

[Collected by core from underneath the upper fine-grained sediment layer. The sediment contained a high density of vegetation and likely represents the pre-impoundment marsh surface.]

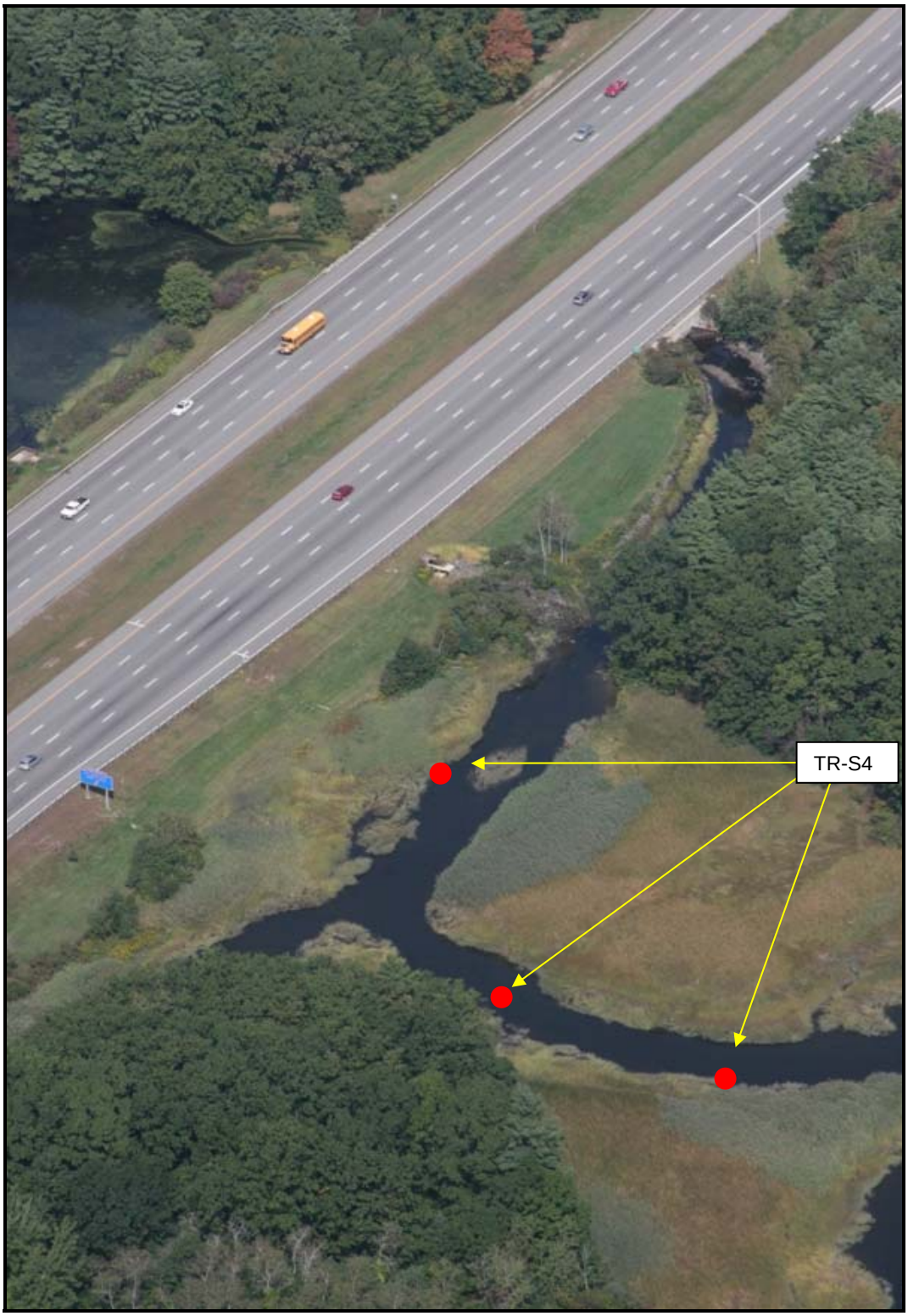



**Figure 25: Sediment Sampling Station TR-S4 and Sub-Sampling Locations**

[Along the estuary downstream of the Taylor River impoundment. The subsample on the left was located 6 feet to the south of the station of the salinity meter deployment. Samples were collected from the inter-tidal zone at low tide.]

**Figure 26: Sediment Sampling Station TR-S4 (Sub-Sample 2 of 3)**

[View 1 - Looking to the west.]

**Figure 27: Sediment Sampling Station TR-S4 (Sub-Sample 2 of 3)**

[View 2 - looking to the east.]

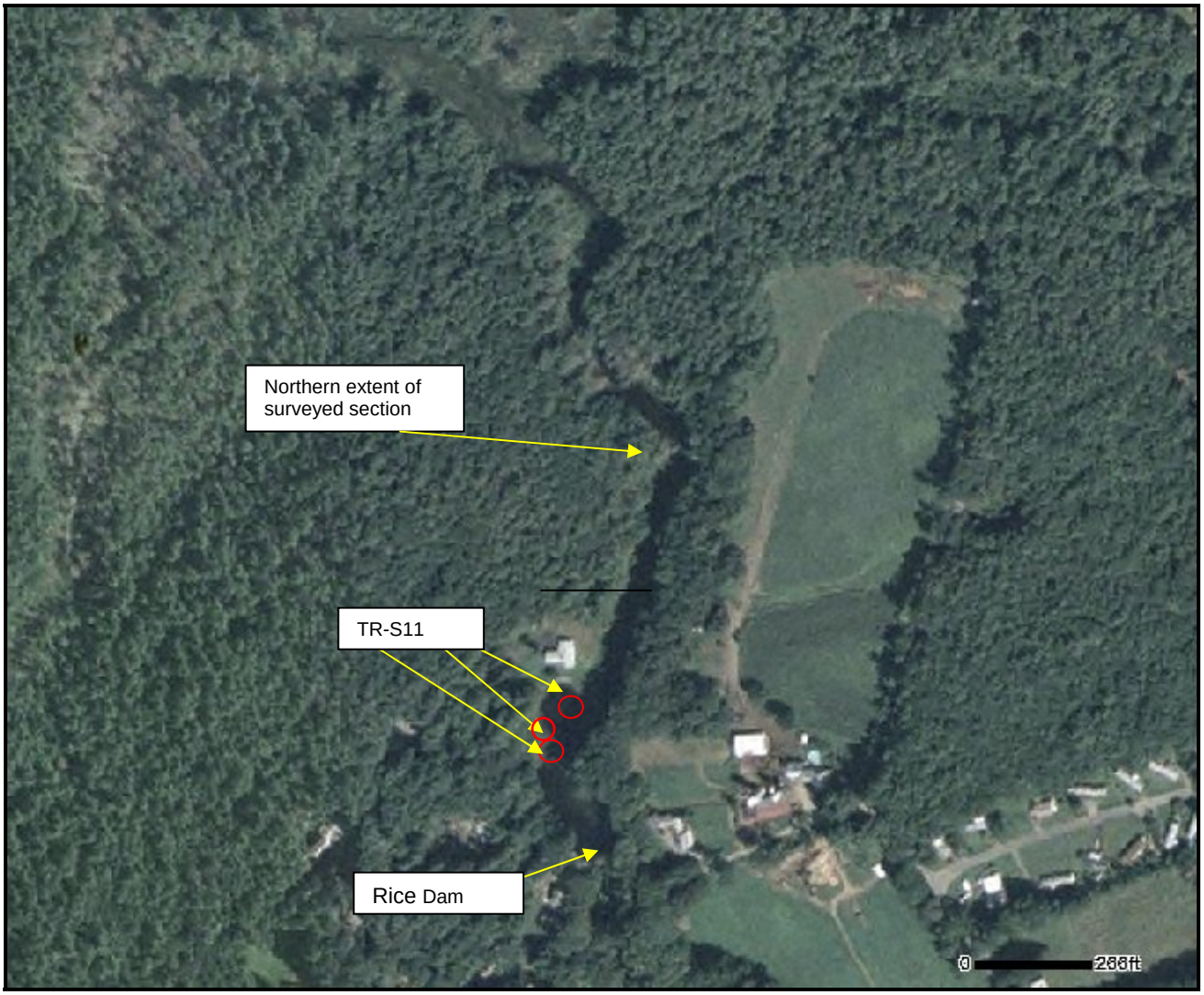



**Figure 28: Rice Dam Impoundment and Sediment Sampling Station TR-S11 Location**

[Two sub-samples were collected in the vicinity of the southern circle; one sub-sample was collected from the northern circle.]

**Figure 29 - Gill net and electrofishing boat fish sampling areas for public and wildlife risk assessment sampling in the Taylor River Pond in 2007, Hampton-Hampton Falls, NH.**

* *The area designating gill net sets only indicate general area of positioning and not true positions.*

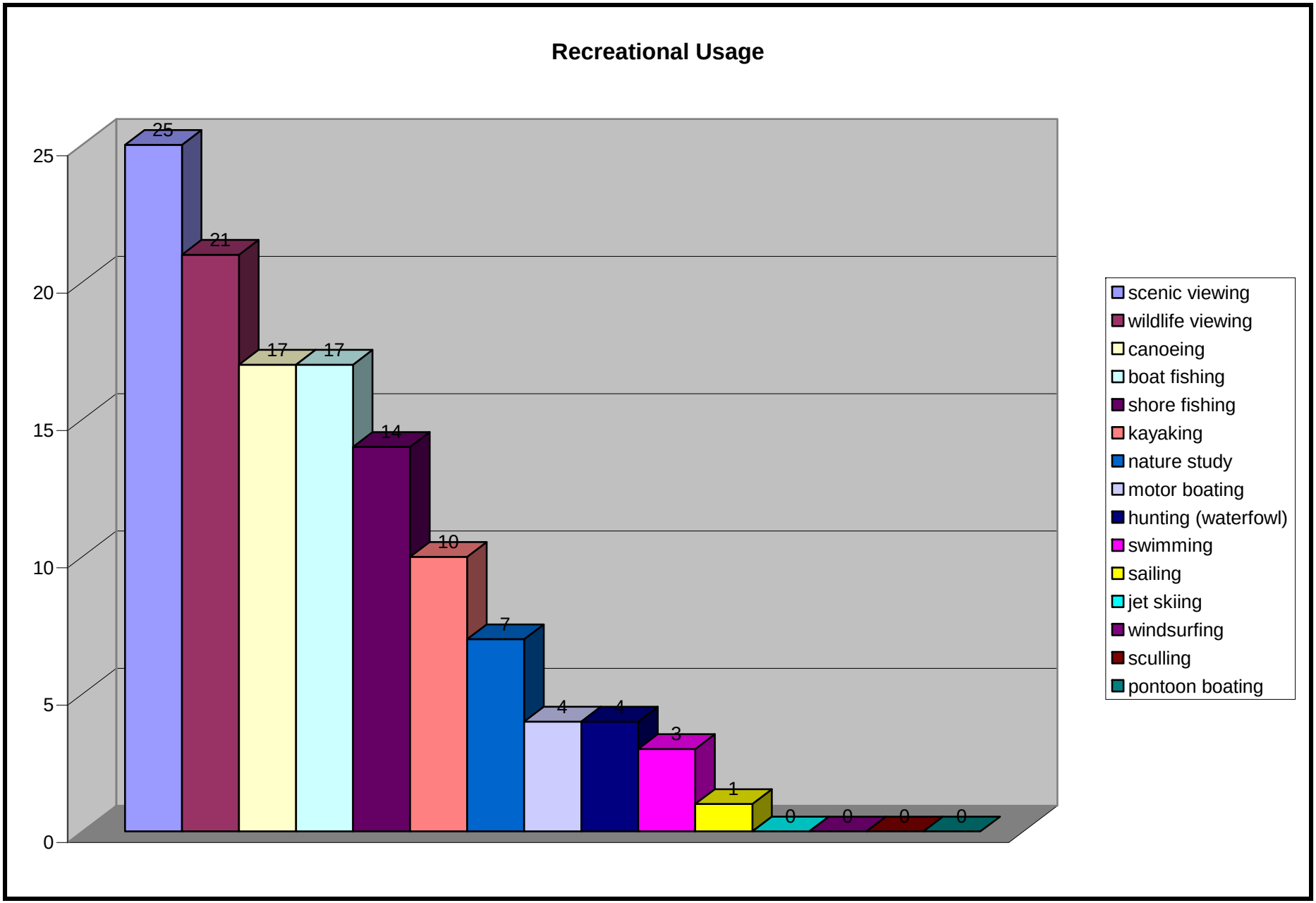



**Figure 30 - Types of Recreational Uses within the Taylor River Pond and Number of Respondents**

**Figure 31 - Dissolved Oxygen Concentration Statistics for the Taylor River**
**August 31 - September 5, 2006, NHDES VRAP**

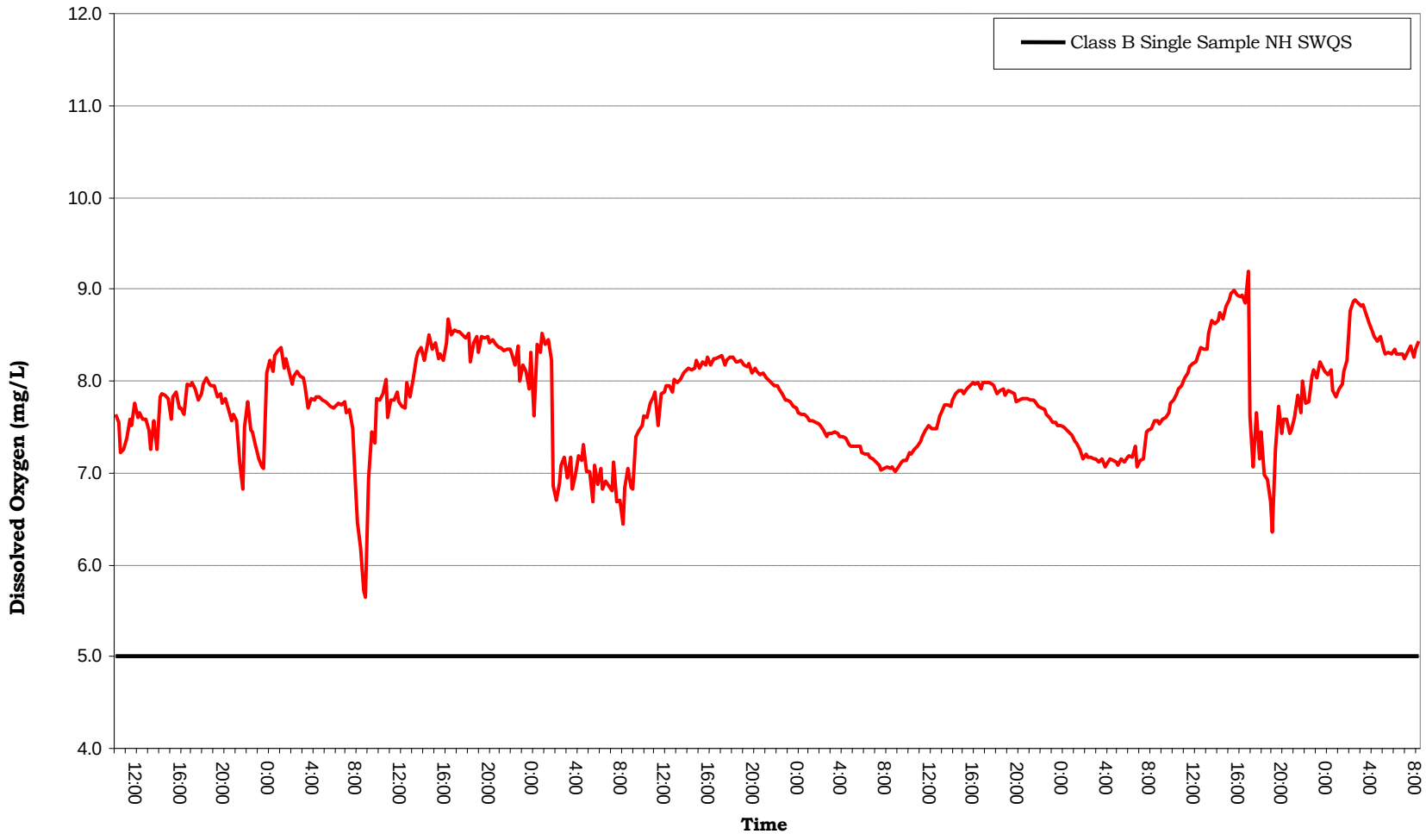


**Figure 32: Vertical dissolved oxygen concentrations profiles at Station W-06. This station was located in the lower third of the Taylor River Pond, just upstream of the confluence with the Grapevine Run.**

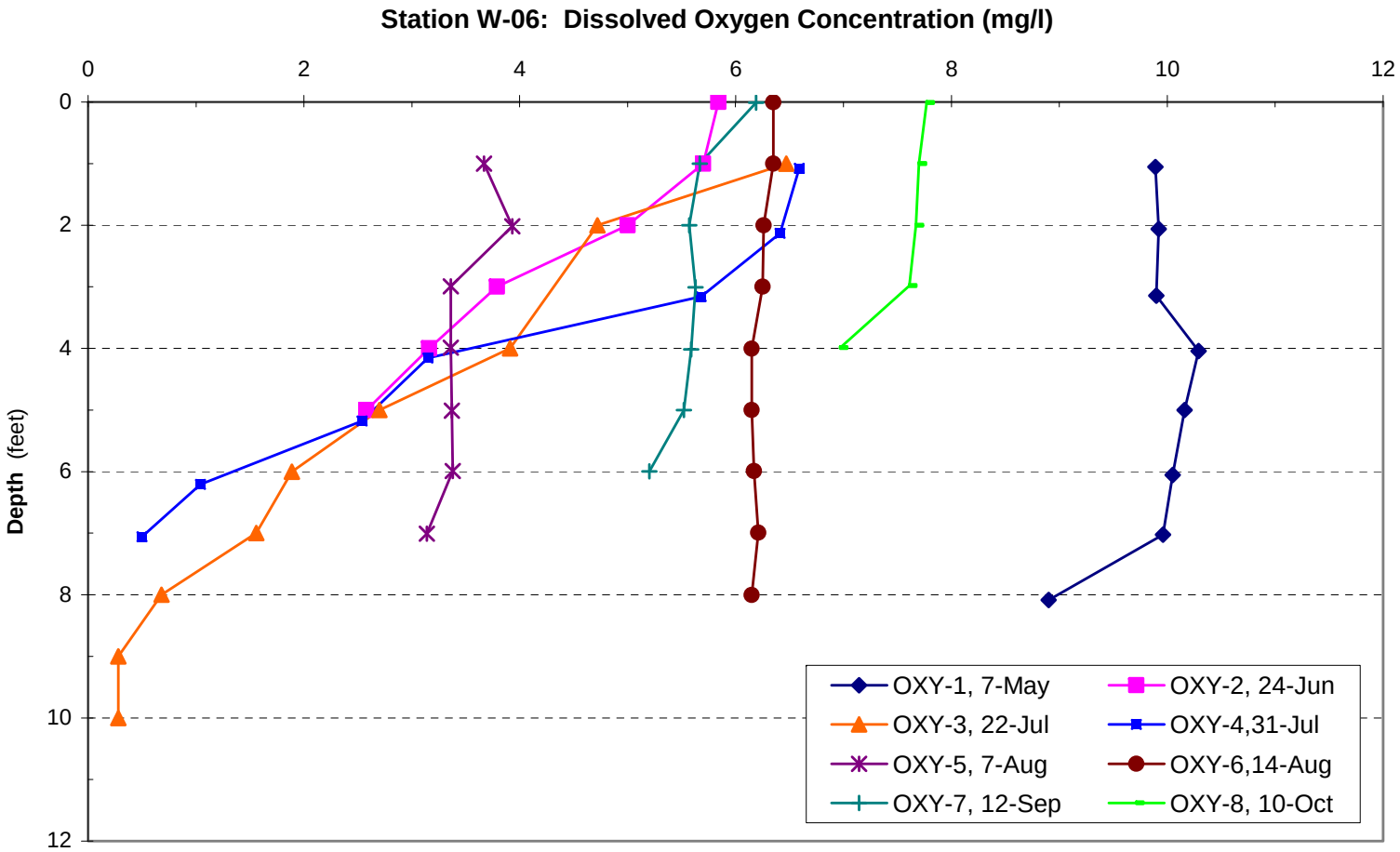
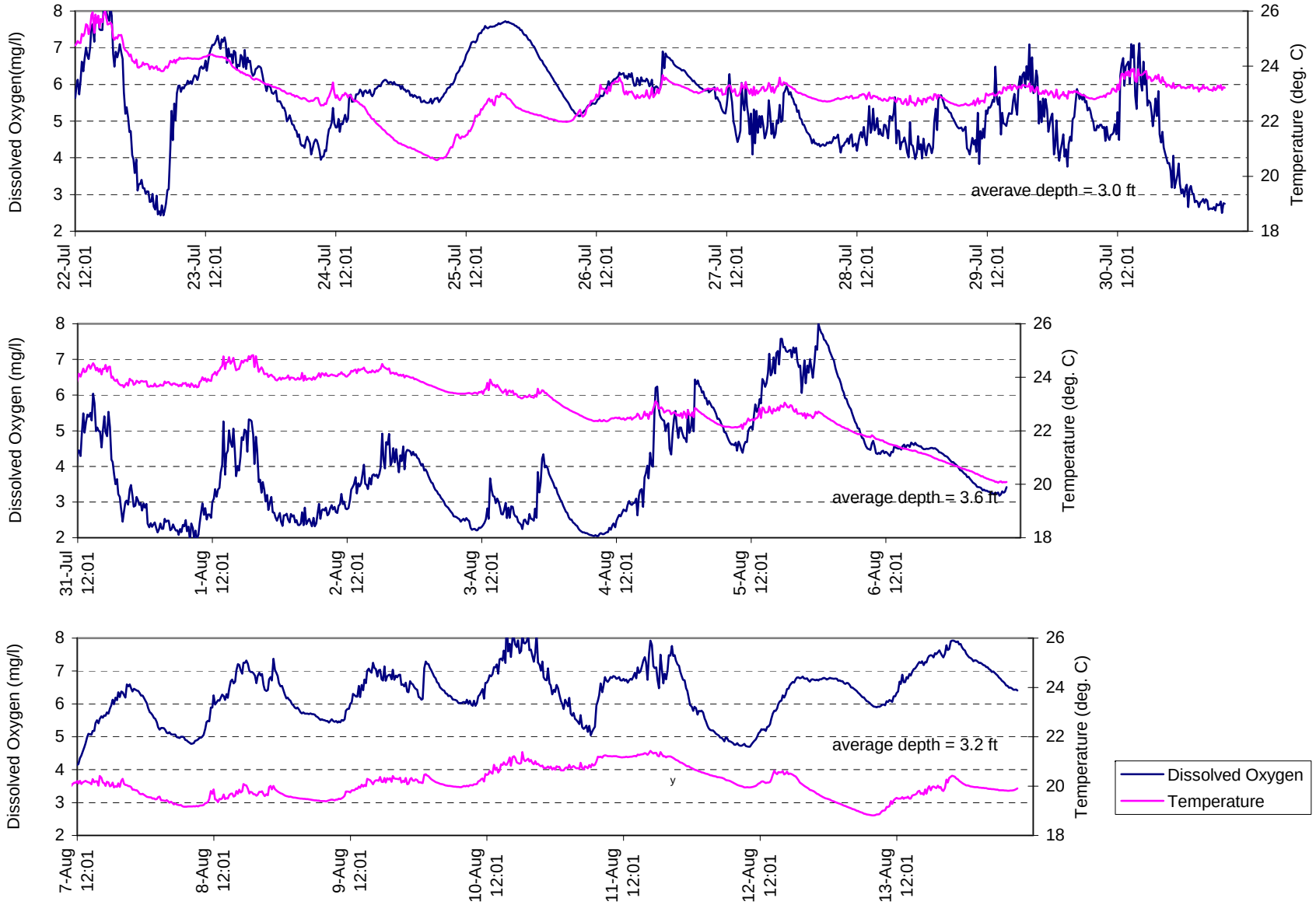


**Figure 33: Taylor River Pond - Continuous dissolved oxygen concentration and temperature at Station W-06.**



## Figure 34

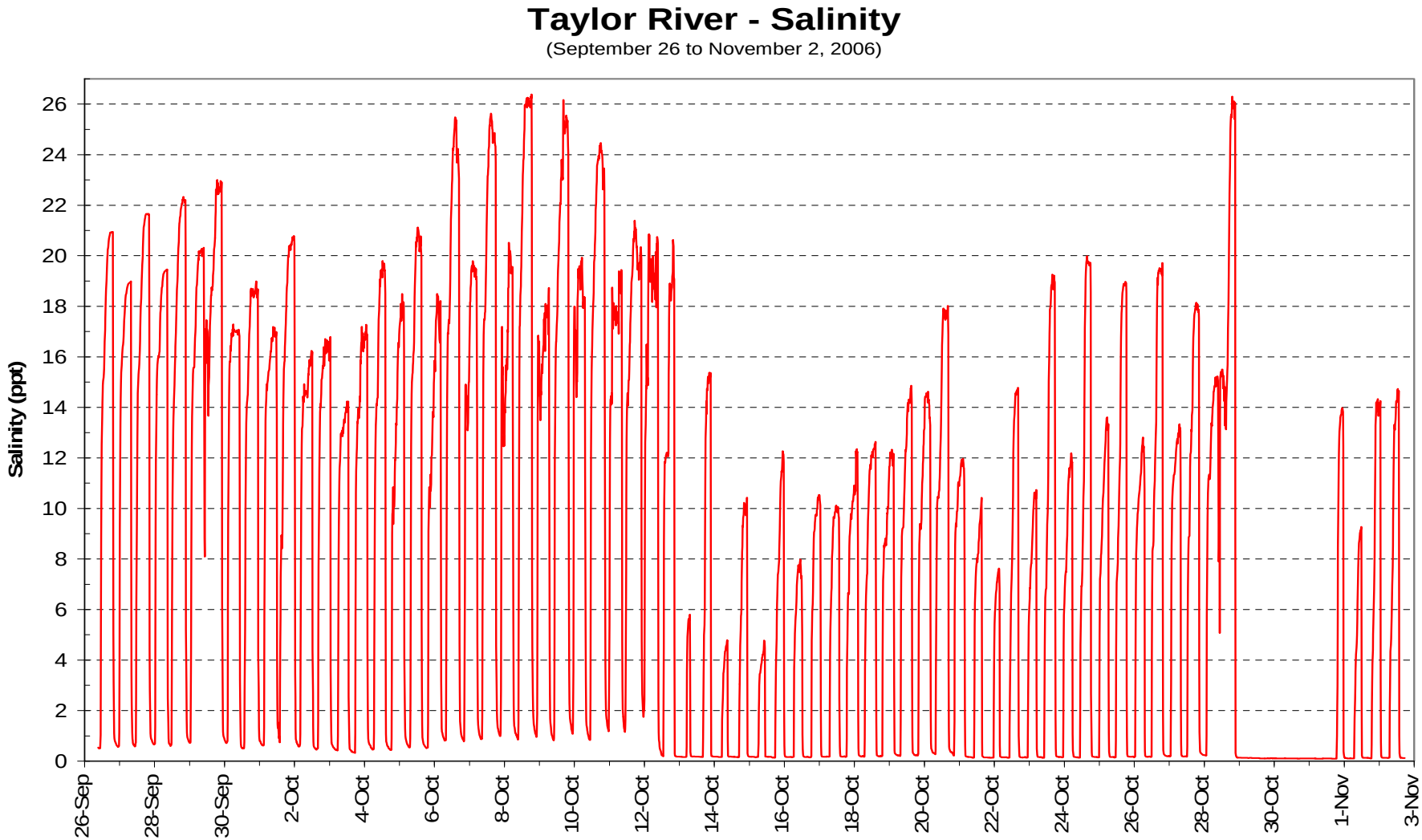

Taylor River - Salinity
(September 26 to November 2, 2006)
Salinity (ppt)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
26-Sep
28-Sep
30-Sep
2-Oct
4-Oct
6-Oct
8-Oct
10-Oct
12-Oct
14-Oct
16-Oct
18-Oct
20-Oct
22-Oct
24-Oct
26-Oct
28-Oct
30-Oct
1-Nov
3-Nov

**Figure 35**

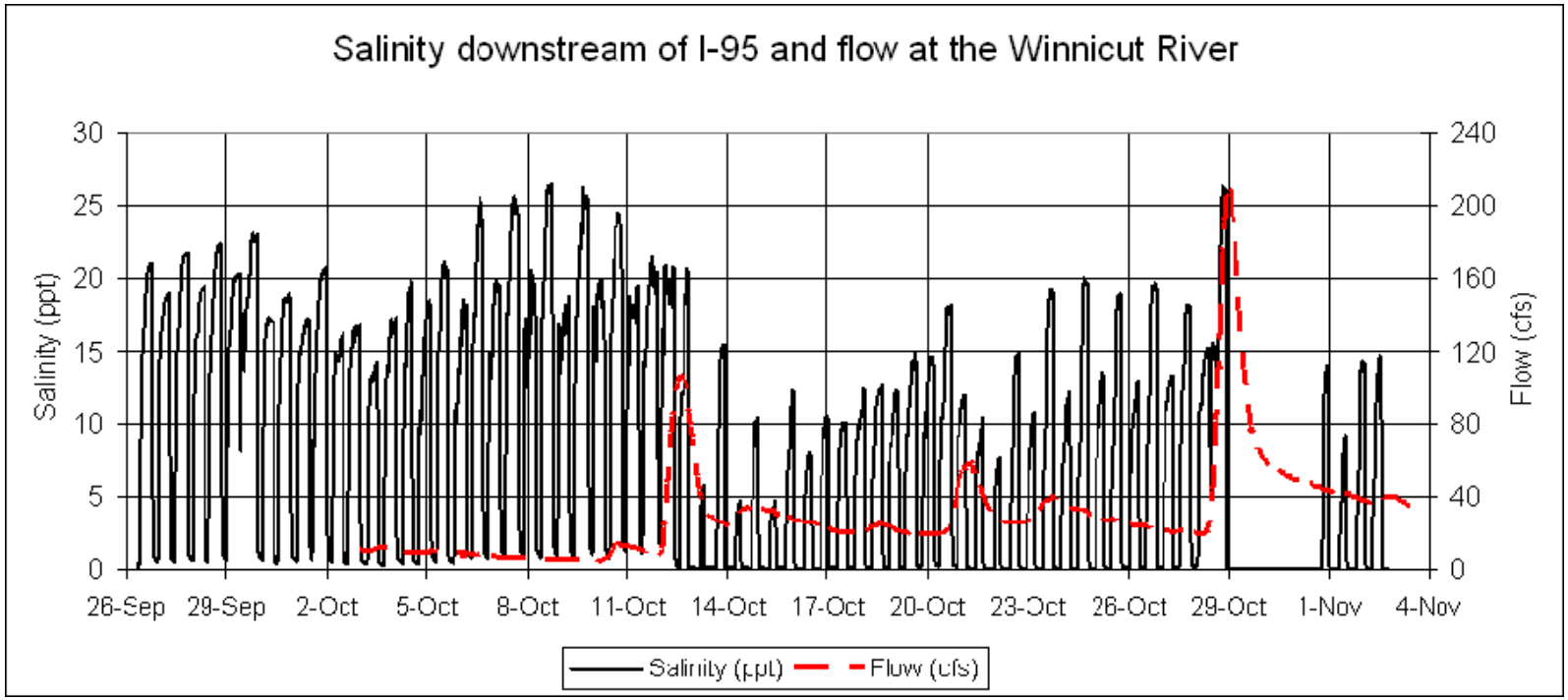
# Taylor River - Water Elevation (feet)

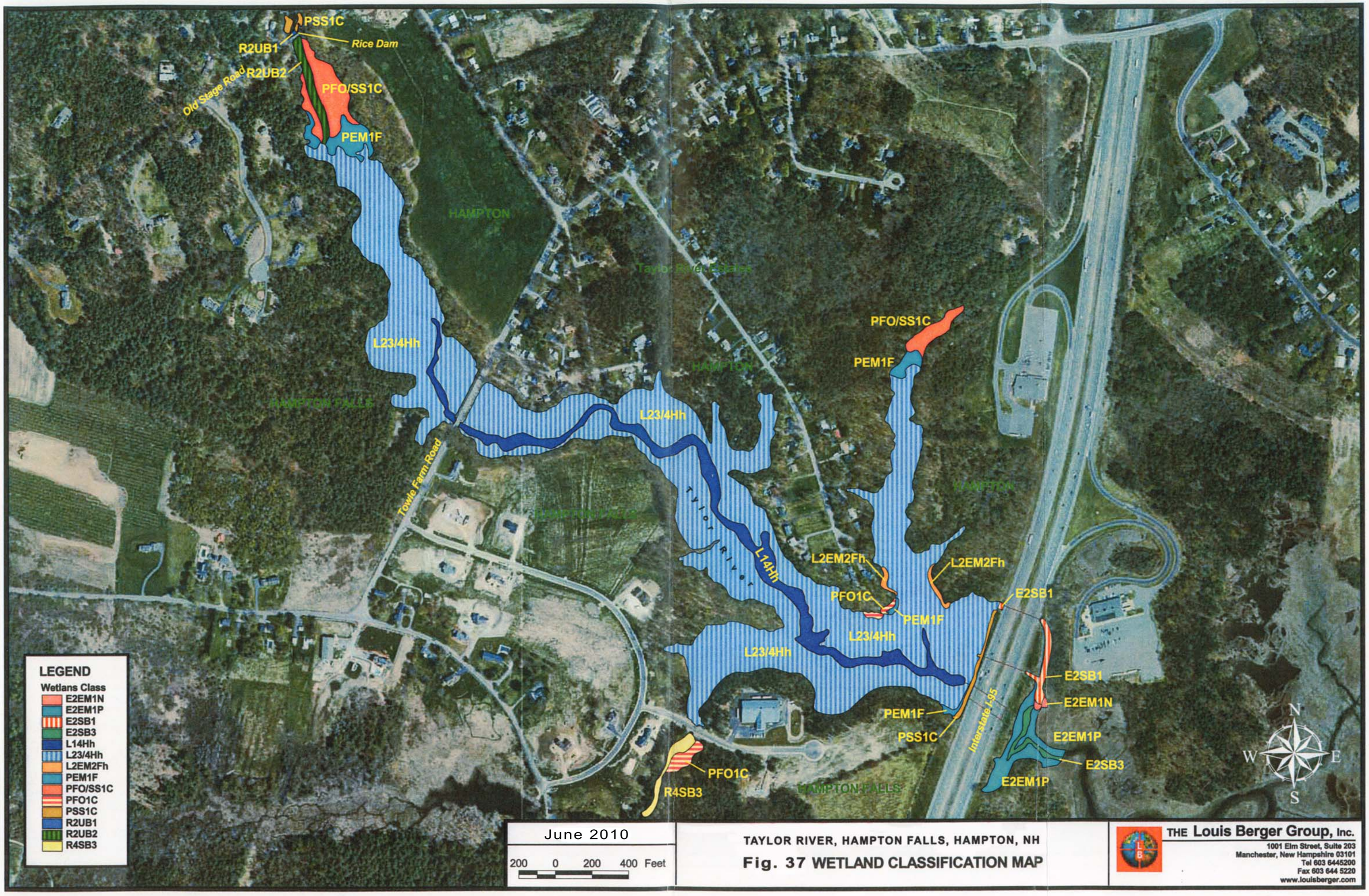
(September 26 to November 2, 2006)

THE **Louis Berger Group,** INC.

Figure35_Water_EL.docx

**Figure 36: Salinity downstream of Taylor River Dam.**
**The flow in Winnicut River identifies periods of rainfall; continuous flow data are not available for Taylor River.**




PSS1C
Rice Dam
R2UB1
R2UB2
Old Stage Road
PFO/SS1C
PEM1F
HAMPTON
Taylor River Estates
L23/4Hh
HAMPTON FALLS
Towle Farm Road
L23/4Hh
HAMPTON
PFO/SS1C
PEM1F
HAMPTON
HAMPTON FALLS
TAYLOR RIVER
L14Hh
L2EM2Fh
L2EM2Fh
PFO1C
PEM1F
L23/4Hh
L23/4Hh
E2SB1
E2SB1
E2EM1N
Interstate I-95
PEM1F
PSS1C
E2EM1P
E2SB3
E2EM1P
PFO1C
R4SB3
HAMPTON FALLS
LEGEND
Wetlans Class
E2EM1N
E2EM1P
E2SB1
E2SB3
L14Hh
L23/4Hh
L2EM2Fh
PEM1F
PFO/SS1C
PFO1C
PSS1C
R2UB1
R2UB2
R4SB3
N
W
E
S
June 2010
200 0 200 400 Feet
TAYLOR RIVER, HAMPTON FALLS, HAMPTON, NH
Fig. 37 WETLAND CLASSIFICATION MAP
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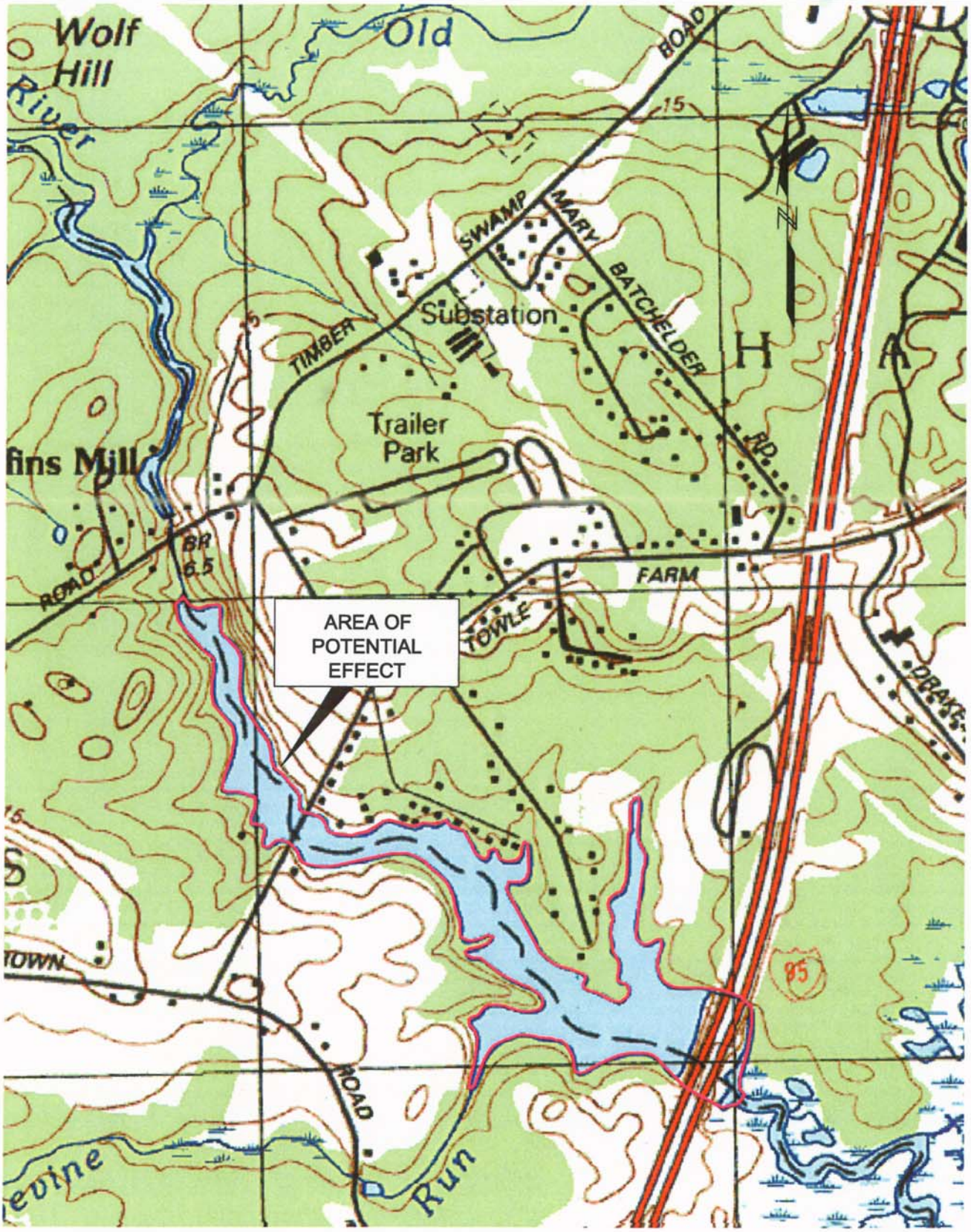


| | |
|---|---|
| REPLACEMENT OF 1-95 BRIDGE (NO.120/102) OVER TAYLOR RIVER<br>HAMPTON AND HAMPTON FALLS, NEW HAMPSHIRE | Scale<br>1" ~ 1000' |
| THE Louis Berger Group INC.<br>1001 Elm Street., Suite 203<br>Manchester, NH 03101 | AREA OF POTENTIAL EFFECT FOR CULTURAL RESOURCES | June 2010<br>FIGURE 38 |

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